MiTek®

STRUCTURAL PRODUCTS CATALOG

62ND EDITION



Updated 5/13/2025

MiTek®

INTEGRATED BUILDING SOLUTIONS



SERVICES

Scale your business and outputs (take-offs, estimating, job quotes, and more) with the comfort of fixed overhead costs.



AUTOMATED SOLUTIONS

Optimize your entire prefabrication facilities workflow with off-site solutions that enable better on-site building.



SOFTWARE

Enhance your operational performance with software solutions that connect the entire supply chain.



ENGINEERED SYSTEMS & PRODUCTS

Accelerate your building process with a full range of advanced solutions that save on labor and installation costs.



Expand your capabilities and address labor challenges

MiTek Services offers a dedicated staff model, supporting you consistently while fueling your growth. Our team provides a diverse set of services so you can focus on managing your business.

SCALABLE RESOURCE BENEFITS

- Extension of your existing team, dedicated exclusively to your business
- Follows your process and trained as your employee
- Proprietary information kept secure
- Reduces labor costs ssociated with benefits, HR expenses , and infrastructure
- Utilizes 100+ of the most popular and widely used design, CAD, BIM, and estimating packages

Services Available

- Estimating & Takeoffs
- Design Support & BIM
- Drafting
- Software Training
- And More

MII.COM/SERVICES

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New Products

FWHL LIGHT-DUTY FIRE WALL HANGERS



14-gauge labor-saving solution for attaching I-Joists or dimension lumber to 2-hour fire rated walls in wood frame construction. Load tested without sheathing for complete installation before the drywall is attached. Skewed options up to 70°. See pages 188-189.

LSS SLOPE/SKEW HANGERS



Ideal for connecting rafters to ridge and hip beams in vaulted roof structures. This series is field adjustable to meet a variety of skew and/or slope applications. Slopes and skews 0° to 45°. This 18GA series fits between MiTek's current LS and LSSH series. The LS hanger slopes only and the LSSH hanger slopes and skews like the LSS, but the LSSH is heavy-duty.
See page 170.

LSRR LIGHT-DUTY SLOPE RAFTER / RETROFIT HANGER



Sloped Hanger adjusts in the field for solid sawn rafters. It may be installed after the rafters are in place allowing flexible installation sequencing and retrofit options. Slopes up or down to 45°.
See page 169.

PAF POST ANCHORS

Innovative one-piece design maintaining 1" stand-off between wood posts and concrete. See pages 78-79.



Discontinued Products

Discontinued MiTek Product	Discontinued MiTek Product Description	Recommended Replacement
Anchoring Epoxy		
CIA-GEL 7000-C	Epoxy	No replacement
CIA-EA	Epoxy Acrylate	
CIA-GEL 7000	Epoxy	
DUC	Ductile Undercut Anchors	
Fasteners		
TECO Nails	33° Collated Nails	No replacement
Angles & Straps		
LJQ (width 1-9/16" to 2-9/16")	Lateral Joist Connector	No replacement
Concrete & Masonry		
SFA8	Foundation Anchor	No replacement
Caps & Bases		
PA nominal sizes	Post Anchor (G90)	PAF-TZ (G-185)
PAE nominal sizes	Post Anchor (G90)	PAF-TZ (G-185)
WE46R	Wet Post Anchor, Rough Sawn	No replacement
PBES	Post Cap (G90)	PBES-TZ (G-185)
PB	Post Cap (G90)	PB-TZ (G-185)
Hangers		
BPH	Beam & Purlin Hangers	BPHA

MiTek's product line continues to evolve along with ongoing research and trends that continue to move our industry forward. To keep you informed of ongoing product line changes the table to the left identifies the best substitute for each discontinued product where appropriate. Products identified with a recommended replacement is a better fit to current market demand. Other products have been replaced by new technology, eliminating the need in the marketplace.

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Directory of Products

Code Evaluation Information 11
Corrosion Information 12-18
Design Notes 20-21
Discontinued Products 4
Installation Notes 21
New Products 4
Product Information 19
Product Notes 20
Reference Number Index 9-10
MiTek index 6-8

Angles & Straps 102-131
Angles 104-107, 109-111
Clips 108, 114
Header Hangers 114
Knee Braces 131
Lateral Joist Connectors 116
Ornamental Connectors 122
Straps 117-130
Stud Plate Ties 112-113
Ties 115

Caps & Bases 76-101
Column Bases 86-89
Column Caps 96-101
Post Anchors 78-81
Post Bases 82-85
Post Caps 90-95

Cold-Formed Steel 328-339
Angles 334
Fastening Information 330
Girder Tiedowns 338
Hangers 336-338
Holdowns 331-333
Hurricane Ties 339
Straps 335
Stud Plate Ties 339

Concrete & Masonry 42-59
Anchor Bolts 51-53
Anchor Rod Chairs 55
Beam Seats 59
Bearing Plates 53
Concrete Form Ties & Wedge 56
Coupler Nuts 57
Foundation Anchors 46-50
Hangers 58
Hex Nuts 56
Retro Connectors 44-45
Retro Plates 46
Threaded Rods 54-55
Washers 57

Deck & Fences 296-305
Angles 302
Deck Connectors 298-300
Fence Hardware 303-305
Stair Angles 301

EWP Hangers 198-229
Adjustable Connectors 228
EWP Hanger Selector Guide 200
EWP Installation 198-199
Face Mount Hangers 201-212, 226
Top Mount Hangers 213-225, 227
Slope/Skew Hangers 229

Fasteners 22-41
Bolts 41
Fastening Identification/Features 27
Nails 24-26
Screws 28-40

Fire Wall Hangers 188-197
Face Mount Hangers 196-197
Top Mount Hangers 188-195

General Hardware 306-317
Bridging 314-315
Corner Tie 316
D.I.Y. Products 309
Drywall Clip 308
Insulation Supports 308
Mending Plates 317
Nail Plates 317
Plywood Clips 308
Protection Plates 310
Shelf Brackets 316
Straps 311-312
Stud Shoes 312
Wall Bracing 313
Wall Ties 316

Glulam Beam Connectors 230-241
Face Mount Hangers 230-233
Hinge Connectors 240-241
Seismic Straps 241
Top Mount Hangers 234-239

Holdowns 60-75
Foundation Straps 69-73
Holdowns 62-64, 66-67
Purlin Anchors 74-75
Tension Ties 65, 68

Lateral Systems 350-354
Hardy Frame® Shear Walls 352
Hardy Frame® Moment Frames 353
Z4 Tie-Down Systems 354

Lumber Hangers 132-187
Face Mount Hangers 135-161
Hanger Selection Guide 134
Masonry Hangers 178-187
Panel & Purlin Hangers 174-178
Slope/Skew Hangers 169-173
Strap Hangers 168
Top Mount Hangers 162-167

Manufactured Housing 340-349
Foundation Anchor 343
Hangers 344
Installation Notes 342
Nail Plates 348
Plate Tie 347
Post Anchors 348
Protection Plates 349
Rafter Ties 345-346
Stud Plate Ties 346

Plated Truss 266-295
Alternate Installations 286-287
Blocking Supports 289
Drag Strut Connectors 281
Face Mount Hangers 268-271
Field Splice Kits 295
Girder Hangers 282-285
Hip/Jack Connectors 280-281
Hoist Plates 294
Skewed Nail Plate 279
Spacers/Braces 288-289
Strap Hangers 272-278
Supplementary Bearing Plates 290
Truss Clips 291-294

Specialty Options 318-327
Face Mount Hanger 322
Open Top Flange Hanger 323
Part Number System 327
Solid Top Flange Hanger 324
Specialty Options & General Notes . . 320-321
Top Flange Nailer Options 325-326
Welded Top Flange Hanger 327

Truss & Rafter 242-265
Angles 253-254
Girder Tiedowns 251-252, 255-259
Hurricane Ties 253, 262-265
Moisture Barrier Plates 244
Strap Connector 260
Truss Anchors 244-250
Truss Structural Wood Screw 260-261

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MiTek Products Alphabetical Index

A

A Angle Clip 104-105
AB Anchor Bolts 53
AC Angle Clips 104-105
ADTT Adj. Deck Tension Tie 298
Alternate Installations 286-287
ANJ Heavy Angles 111
ARC Anchor Rod Chairs. 55
ATR All Thread Rod 54

B

B Bolts 41
B Corner Braces 110
BC Post Cap 90
BCS Post Caps 90
BD Bolt Down 305
BL Corner Braces 110
BN Breakfast Nook Hangers 281
BP Bearing Plates 53
BPHA Beam & Purlin Hangers 163, 165-166, 214, 217-225

C

C Post Caps 90
CBE Column Bases 87
CBSQ Column Bases 86
CLPBF Butterfly Hanger 268
CMST/CMSTC Coiled Strapping
Angles and Straps 120-121
CFS Connectors. 335
CNW Coupler Nuts 57
CPB Composite Post Bases 85
CSH Concealed Stringer Hanger 300

D

D Post Anchors
Caps & Bases 81
MH Connectors. 348
DC Drywall Clip 308
DHTA Truss Anchors 248
DSC Drag Strut Connectors. 281
DTB Deck Tie Back
Deck & Fences. 299
Holdowns. 63
DTC Truss Anchor 249
DTUS Undersaddle Hanger 177

E

EBG Elevated Post Base 82
EPB Elevated Post Bases 82-83
EPBH Elevated Post Bases 82
EPCM End Post Caps 94-95
ERB Fence Bracket 304
EWP Hanger Selector Guide 200
EWP Installation 198-199

F

FA Foundation Anchors
Concrete & Masonry. 48-49
MH Connectors 343
FB Fence Brackets 304
FHD Panel Hanger 178
FRB Fence Brackets 304
FS Truss Field Splice Kits 295
FSS Truss Field Splice Kits 295
FT Concrete Form Ties 56
FTC Floor Truss Clips 291
FTCF Floor Truss Clips 291
FWAN Foundation Wall Anchor 47
FWH Fire Wall Hangers 190-191
FWH/S CFS Fire Wall Hangers 337-338
FWHBP Fire Wall Hangers Beam Purlin . 192-193
FWHFM Face Mount Fire Wall Hangers . 196-197
FWHH Fire Wall Hangers 194-195
FWHL Fire Wall Hangers 188-189

G

GHF Glulam Face Mount Hangers 231-232
GT Girder Truss Hangers 283-284
GTD Girder Truss Hangers 283-284
GTQ/GTQM Girder Truss Hangers 285
GTS Girder Truss Hangers 283-284
GTWS Girder Truss Hangers 282

H

Hanger Selector Guide 134
Hardy Frame® Moment Frames 353
Hardy Frame® Shear Walls 352
HBPH Top Mount Hangers 214, 219-225
HBPS Bearing Plates 53
HC Hurricane/Seismic Anchor 262-265
HCPRS Hurricane/Seismic Anchors 262-265
HD/HDIF Face Mount Hangers
EWP 204, 209-212
Glulam Beam Connectors 230-231
Lumber Hangers 137-161, 150-161
Masonry Hangers. 179-180
HDO Top Mount Hangers 162, 165-167
HDO/S CFS Top Mount Hangers 336
HDOL/S CFS Top Mount Hangers 336
HDQIF Inverted Flange Hangers
EWP 204, 210-212
Glulam Beam Connectors 230-231
Lumber Hangers 137, 140-148, 152-160
HFS Straps 124, 311
HGA Hurricane Gusset Angles 254
HGAM Hurricane Gusset Angles 254
HGU Girder Hangers
EWP 226
Glulam Beam Connectors 233
HGUM Masonry Girder Hangers 181
HH Header Hangers. 114
HHC Hip/Hip Connectors 280
HHCP Hurricane Ties 262-265
HHTA Truss Anchors 246-247
HJC Hip/Jack Connectors 280
HJHC Hip/Jack Connectors 280
HL Light Gauge Purlin Hangers 162, 165
HLBH Beam Hangers 215, 219-221, 223-225
HLPTA Truss Anchor 245
HN Hex Nuts 56
HPA Purlin Anchors 74-75
HPAHD Foundation Straps 72-73
HRS Strap Ties 117-119
HTA/HTAR Truss Anchors 246-247
HTC Heavy Truss Clip 294
HTHJ Hip/Jack Connectors 280
HTP Strap Ties 117-118
HTT Tension Ties 65
HTT14S CFS Holddown 332
HTW Twist Straps 125-126
HTWM Twist Straps 129
HUGT Girder Tiedowns 258
HUS Slant Nail Hangers
EWP 205, 210
Lumber Hangers 136, 138-139, 141, 145-146, 150-151, 153, 157-158
Plated Truss 268
HWUH Top Flange Hangers 184-185

I

ICPL Protection Plates 310, 349
IHF Face Mount Hangers 202, 207-210
IHFL Face Mount Hangers 202, 207-210
IS Insulation Supports 308

J

JA Joist Angles 104-105
JDS Purlin Hangers 176
JH Multi-Purpose Joist Hangers 168
JL Face Mount Joist Hangers 135, 138-139, 150-151
JLIF Inverted Flange Hangers 135, 138-139, 150-151
JN/JNE Hangers 344
JNP Mending Plates 317
JPF Purlin Hangers 175
JUS Slant Nail Joist Hangers 136, 138-146, 150-158

K

KB Beam & Purlin Hangers 163, 166-167
KCB Column Base 89
KCBQ Column Bases 88

Continued on next page

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MiTek Products Alphabetical Index

KCC Column Caps 99-101
KCCC Column Caps 101
KCCO Column Caps 101
KCCOB Column Caps 101
KCCT Column Caps 101
KCCQC Column Caps 98
KCCQO Column Caps 98
KCCQOB Column Caps 98
KCCQ Column Caps 96-98
KCCQT Column Caps 98
KECC End Column Caps 99-101
KECCL End Column Caps 101
KECCQL End Column Caps 98
KECCQO End Column Caps 98
KECCO End Column Caps 101
KECCQ End Column Caps 96-98
KEG Glulam Beam Hangers 235
KEGQ Glulam Beam Hangers 227
KF Panel Hangers 174
KGB Glulam Hangers 236
KGH Floor Girder Hangers 58
KGLB Laminated Beam Seats 59
KGLBT Laminated Beam Seats 59
KGLS Glulam Saddle Hangers 238-239
KGLST Glulam Saddle Hangers 238-239
KGLT Glulam Beam Hangers 237-238
KHC Hinge Connectors 240-241
KHCCT Hinge Connectors 240
KHCST/KHCSTR Seismic Straps 241
KHCT Hinge Connectors 240
KHGB Glulam Hangers 236
KHGLB Laminated Beam Seats 59
KHGLS Glulam Saddle Hangers 238-239
KHGLST Glulam Saddle Hangers 238-239
KHGLT Glulam Beam Hangers 237-238
KHHB Glulam Hangers 236
KHL Heavy Angles 110
KHSA Connector Straps 130
KHST Strap Ties 127
KHW Top Flange Hangers
Glulam Beam Connectors 234
Lumber Hangers 164, 166-167
KLB Beam & Purlin Hangers 163, 165
KLCC Lally Column Caps 93
KLEG Glulam Beam Hangers 235
KMEG Glulam Beam Hangers 235
KNS Protection Plate
General Hardware 310
MH Connectors 349
KRPS Strap Ties 127, 312
KSA Connector Straps 130
KSCT Corner Tie 316
KST Strap Ties 117-119
KSTI Strap Ties 117-119
KTS Twist Straps 125-126
KVB Knee Braces 131
KVBI Knee Braces 131

L

L Straps 122
LBP Bearing Plates 53
LBPS Bearing Plates 53
LDSC Drag Strut Connectors 281
LFTA Strap 125-126, 262-265
LGU Girder Hanger
EWP 226
Glulam Beam Connectors 233
LGUM Masonry Girder Hangers 181
LH Straps 122
LJC Lateral Joist Connector 116
LJQ Lateral Joist Connectors 116
LL LumberLok Screws 39-40
LPTA Embedded Truss Anchors 244
LS Light Slope Rafter Hangers 169
LSS Slope/Skew Hangers 170
LSSH Slope/Skew Hangers 171, 229
LSRR Slope Rafter / Retrofit Hanger 169
LSTA Strap Ties 117-118
LSTAD Foundation Straps 70-71
LSTI Strap Ties 117-118
LTS Tension Ties
CFS Connectors 332
Holdowns 68
LTTI Tension Tie 68
LTW Twist Straps 125-126
LUGT Girder Tiedowns
CFS Connectors 338
Truss & Rafter 255-256

M

MB Bridging 315
MBG Bridging 315
MGU Girder Hanger
EWP 226
Glulam Beam Connectors 233
ML Angles 109, 302
MP Framing Angles 104-107
MP/S CFS Framing Angles 334
MPA Framing Angles 106-107
MPF Multi-Lateral Plate Ties
Angles & Straps 106-107
MH Connectors 347
MPH Masonry Hangers 182-183
MRT Rafter Tie 346
MSH Strap Hangers 272-274
MSHL/R Skewed Truss Hanger 275
MSHA Adjustable Strap Skewed Hangers
. 277-278
MSSHL/R Skewed Hanger 276
MSTA Strap Ties 117-118
MSTAM Masonry Straps 128
MSTC Strap Ties 117-119
MSTCB Pre-Bent Strap 123
MSTCM Masonry Straps 128
MTHF Hanger 344
MTW Twist Straps 125-126
MUGT Girder Tiedown 257
MUS Slant Nail Joist Hangers
Lumber Hangers 136, 138-139, 150-151
Plated Truss 268

N

N Bridging 314
N Nails 24-26
NA Nails 24-26
Nailer Options 325-326
NFM Masonry Hangers 186-187
NOP Moisture Barrier Plates 244
NP Mending Plates
General Hardware 317
MH Connectors 348

O

O Bridging 314
Ornamental series 122

P

PA Post Anchors 78-79
PA Purlin Anchors 74-75
PAE Post Anchors 78-79
PAF Post Anchors 78-79
PAHD Foundation Strap 72-73
PAI Purlin Anchors 74-75
Part Number System 327
PAU Post Anchors 78-79
PB Post Caps 91
PBC Post Beam Corner 92
PBES Post Caps 91
PBS Post Caps 91
PC Plywood Clips 308
PCM Post Caps 94-95
PCP Plastic Post Caps 305
PHD Predeflected Holdowns 63
PHG Panel Hangers 174
PHM Top Flange Hangers 216-225
PHXU Top Flange Hangers
. . . . . .216-217, 219-221, 223-225
PL Protection Plate
General Hardware 310
MH Connectors 349
PRT Pipe Rail Ties 303
PS Strap Ties 127

Continued on next page

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MiTek Products Alphabetical Index

R

RBC Roof Boundary Clip 108
RC Plywood Clips 308
RFUS Uplift Girder Tie 251
RP Retro Plate 46
RPB Retrofit Post Base 84
RR Ridge Rafter. 168
RS Coiled Strapping
Angles & Straps... 120-121
CFS Connectors... 335
RSPT Stud Plate Ties 112
RST Rafter Tie 345
RT Hurricane Ties 262-265
RT/S CFS Hurricane Ties. 339
RTM Hurricane Retrofit Connector 253
RUSC Strap Connector 260
RW Round Washers. 57
RWB Wall Bracing 313

S

S/PHD CFS Holdowns 331
SB Shelf Bracket 316
SBP Bearing Plates 290
SCA Stair Angles 111, 301
SDJT Joist Tie 115
SDPT Strap Post Ties 115
SFC Framing Clip 114
SFJA Foundation Anchor 46
SFP Fence Post Connectors 305
SHA Masonry Uplift Connectors 253
SKH Skewed 45° Hangers 172-173
SKHH Skewed 45° Hangers 172-173
SMP Fence Post Connectors 305
SNP Skewed Nail Plate 279
Specialty Options 320-324
SPT Stud Plate Ties
Angles & Straps. 112-113
CFS Connectors. 339
SPTH Stud Plate Ties 113
SPTHW Stud Plate Ties
Angles & Straps. 113
MH Connectors 346
SRCP Sill Retrofit Connector Plate 45
SRC Sill Retro Connector 44
ST Foundation Anchors 50
ST Strap Ties 117-118
Stabilizer 288
STAD Foundation Straps 70-71
STB Anchor Bolts 51-52
STBL Anchor Bolts 51-52
STC Scissor Truss Clips 293
STS Stud Shoes 312
SUH Joist Hangers .135, 138-147, 149-159, 161
SW Top Flange Hangers 164-166
SWH Top Flange Hangers 164-167

T

T Hoist Plates 294
T Straps 122
TA Foundation Straps 69
TA Truss Anchors 250
TAR Truss Anchors 250
TD Holdowns 66-67
TDL Concrete Angles 109
TDS CFS Holdowns 333
TDX Holdowns 66-67
TFI Top Mount Hangers 213, 218, 220-221
TFL Top Mount Hangers 213, 217-218, 221
TH Straps 122
THD Face Mount Hangers
EWP 206, 211-212
Plated Truss 269
THDH Face Mount Hangers
EWP 206, 210-212
Glulam Beam Connectors 230-231
Plated Truss 270
THDHQ Girder Truss Hangers
EWP 205, 211
Plated Truss 271
THF Face Mount Hangers 203, 209
THFI Face Mount Hangers. 201, 208
THO Top Mount Hangers 213, 217-222
THR Threaded Rods 55
TMP Rafter-To-Plate Connectors 228
TMPH Rafter-To-Plate Connectors 228
TPP Mending Plates 317
TR Roof Truss Ties 293
TS Truss Spacer 289
TSP Stud Plate Tie 112, 262-265
TSX Truss Spacers 289
TT D.I.Y. Products 309
TTA Corner Bracket. 309
TTC Corner Tie 309
TTF Bracket 309
TTR Clip 309
TTU Clip 309
TUS Undersaddle Hanger 177

U

UGTQ Girder Tiedown 259
UGTS Uplift Girder Ties 252
UMH Universal Masonry Hangers 178
UPHD Holdowns 64
USC Uplift Girder Ties 252

V

VTT Valley Truss Tie 292

W

WAS Wet Set Post Anchors 80
WB Wall Bracing 313
WBC Wall Bracing 313
WBT Wall Bracing 313
WE Wet Set Post Anchors 80
Welded Top Flange 327
WG Concrete Form Wedge 56
WS Hex Head Screws 28
WS-EXT Hex Head Screws 35, 37
WSBH-EXT Bugle Head Screws 38
WSTS Truss Screws 260-261
WSWH Washer Head Screws 29-34
WSWH-EXT Washer Head Screws 36-37
WT Wall Ties 316

Z

Z4™ Tie-Down Systems. 354
ZC Blocking Supports 289

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WARRANTY

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Reference Number Index

About the Reference Numbers
Reference numbers shown throughout the tables in this catalog are part numbers which may be more familiar to customers in various regions of the United States. These are included for the convenience of our new customers who have recently switched from a competitor's product line to MiTek.

The reference numbers in this catalog are for general application comparison only and should not be used as a substitution tool. The user is responsible to compare specific load values, fastener schedules, material specifications, and other factors to determine suitability of use for any particular product.

A Angle 105, 109-110
A34/A35 Anchor 105, 107
ABA/ABU Post Base 79
ABL Anchor Bolt Locator 55
AC Post Cap 91
ATR All Thread Rod 54
BA Hanger 166, 217-222
BC Base 81, 348
BC/BCS Cap 90
BP Bearing Plate 53
BPS Bearing Plate 53
BT Brick Tie 316
CB Column Base 89
CBSQ Column Base 86
CC Column Cap 99-100
CCQ Column Cap 96-97
CHC Component Hoist Clip 294
CMST Coiled Strap 120, 335
CMSTC Coiled Strap 120, 335
CNW Coupler Nut 57
CPS Composite Standoff 85
CS Coiled Strap 121, 335
DETAL Truss Anchor 248
DJT Deck Tie 115
DPPC Decorative Post Cover 305
DPT Deck Tie 115
DS Drywall Stop 308
DSC Drag Strut Connector 281
DSP Double Stud Plate 112
DTC Roof Truss Clip 293
DTT Deck Tension Tie 63, 298-299
ECC/ECCU Column Cap 100
ECCQ Column Cap 97
EG Hanger 235
EGQ Hanger 227
EPB Post Base 82
F Hanger 174
FB Fence Bracket 304
FBR Fence Bracket 304
FGTR Girder Tiedown 251
FJA Anchor 46
FPBB44 E-Z Base™ 305
FPBM44 E-Z Mender™ 305
FPBS44 E-Z Spike™ 305
FRFP Foundation Plate 45
FSC Strap 299
FWANZ Foundation Wall Angle 47
GA Angle 105
GBC Gable Bracing 265
GH Hanger 58
GLB Beam Seat 59
GLS Hanger 239
H Hurricane Ties 126, 265
HB Hanger 219-225
HCA Hinge Connector 240-241
HCP Hip Corner Plate 265
HCSTR Strap 241
HD Holdown 67
HDB Holdown 67
HDQ Holdown 64
HDU Holdown 63-64
HETA Truss Anchor 246-247
HETAL Truss Anchor 249
HFN Hanger 174
HGA Gusset Angle 254
HGAM Gusset Angle 254
HGLB Beam Seat 59
HGLS Hanger 239
HGLT Hanger 220-221, 237
HGLTV Hanger 219-220, 223-235, 237
HGT Girder Tiedown 258
HGU Girder Hanger 226, 233
HGUM Girder Hanger 181
HGUS Hanger 211-212, 230, 270
HH Hanger 114
HHDQ Holdown 64
HHETA Truss Anchor 247
HHUS Hanger 211-212, 269
HIT Hanger 218, 220-221
HL Heavy Angle 110
HL Strap Tie 122
HM Hurricane Tie 253
HPA Purlin Anchor 75
HRS Strap Tie 119
HS Hurricane Tie 256, 338
HST Strap 127
HSULC/HSURC Hanger 173
HSUR/HSUL Hanger 173
HT Strap Tie 122
HTC Heavy Truss Clip 294
HTPZ Strap Tie 118
HTS Twist Strap 126
HTSM Twist Strap 129
HTT Tension Tie 65
HTU Hanger 269
HU/HUC Hanger 138-161, 180, 209-212, 230
HUCTF Concealed Hanger 166
HUCQ Hanger . . . 140-148, 152-160, 210-212, 230
HUS Hanger
. . . 138-141, 145-146, 150-153, 157-158, 210, 268
HUSC Concealed Hanger
. . . . . .140-141, 145-146, 152-153, 157-158
HUSCTF Concealed Hanger 166
HUSTF Hanger 165-166
HUTF Hanger 165-167
HWP Hanger 219-221, 223-225
HWPH Hanger 220-221, 223-225
IS Insulation Supports 308
ITS Hanger 217-220
IUS Hanger 207-210
JB Hanger 165
JBA Hanger 165
L Angle 105
L Strap Tie 122
LB/LBA Hanger 165
LBP Bearing Plate 53
LCC Lally Column Cap 93
LCE Post Cap 91
LEG Hanger 235
LGT Girder Tiedown 256
LGU Girder Hanger 226, 233
LGUM Girder Hanger 181
LPCZ Post Cap 91
LRUZ Face-Mount Rafter Hanger 169
LS Face-Mount Rafter Hanger 169
LSC Light Stair Stringer Connector 300
LSTA Strap Tie 118
LSTI Strap Tie 118
LSTHD Holdown 71
LTA Truss Anchor 244
LTB Bridging 314
LTHJA Hanger 280
LTP Framing Anchor 107, 347
LTS Twist Strap 126
LTT/LTTI Tension Tie 68
LU Hanger 38-139, 150-151, 161
LUC Hanger 138-139, 150-151
LUS Hanger 138-146, 150-158
MAB Mudsill Anchor 50
MASA Mudsill Anchor 49
MBHA Masonry Hanger 187
MBHU Masonry Beam Hanger 179
MEG Hanger 235
META Truss Anchor 247
MGT Girder Tiedown 257
MGU Girder Hanger 226, 233
MIT Hanger 217-222
MIU Hanger 207-210
ML Angles 109, 302
MMH Rafter Tie 346
MMLU Hanger 344
MMLUI Hanger 344
MP Mending Plate 317
MST Strap Tie 119
MSTA Strap Tie 118
MSTAM Strap Tie 128
MSTC Strap Tie 118-119
MSTCB Strap Tie 123
MSTCM Strap Tie 128
MSTI Strap Tie 119
MTS Twist Strap 126
MTSM Twist Strap 129
MUS Hanger 138-139, 150-151, 268
Nails 26
NCA Nailless Bridging 315
NS Nail Stopper 310, 349
NUT 56

Continued on next page

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Reference Number Index

OHA Hanger 122
OL/OT/OHL/OHT Hangers 122
OS/OHS Hangers 122
PA Holdown 69
PA Purlin Anchor 74-75
PAI Purlin Anchor 75
PB/PBS Post Base 80
PF Hanger 175
PFB/PFDB Hanger 176
PFDS Hanger. 178
PGT Pipe GripTie 303
PGTIC Pipe GripTie 303
PS Strap 127
PSCA Sheathing Clip 308
PSCL Sheathing Clip 308
PSPNZ Protective Plate 310, 349
RBC Roof Boundary Clip 108
RCWB Wall Bracing. 313
RFB Retrofit Bolt. 55
RP Retro Plate 46
RPBZ Retrofit Post Base 84
RPS Strap Tie 127, 312
RR Connector 169
RSP Stud Plate Tie 112
RST Rafter Tie 345
RTA/RTC/RTF/RTR/RTU Rigid Tie® 309
S/B Hanger 336
S/H Hurricane Tie 339
S/HD Holdown 333
S/HDU Holdown 331
S/HTT Holdown. 332
S/LBV Hanger 336
S/LS Angle 334
S/LTT Holdown 332
SA Strap Connector 130
SBV Shelf Bracket 316
SD Connector Screw 39
SDS Heavy-Duty Connector Screw 35
SDW Multi-Ply Wood Screw 29
SDWC Screw. 261
SDWS Timber Screw. 36
SP Stud Plate Tie 112-113, 339
SPECANGLE 110
SPH Stud Plate Tie 113, 346
SSP Single Stud Plate 112
SSTB Anchor Bolt 52
ST Strap Tie 118
STC Roof Truss Clip 293
STCT Roof Truss Clip. 293
STHD Holdown 71
SUR/SUL Hanger 172-173
T Strap Tie 122
TA Staircase Angle 111, 301
TB Tension Bridging 314
TBE Truss Enhancer 290
TBP Truss Seat 244
TC Truss Connector 293
THA Hanger 273-274
THAC Hanger 273-274
THAI Hanger 273-274
THAL/R Hanger 275
THASR/L Truss Hanger. 278
THGB/THGBH Hanger 283-284
THGQ/THGQH Hanger 285
THJA Hanger 280
THJM Hanger 281
THJU Hanger 280
TJC Truss Connector 279
TP Tie Plate 317, 348
TSBR Truss Spacer 288
TSF Truss Spacer 289
TSP Stud Plate Tie 112, 265
TSS Truss Seat 244
TWB Wall Bracing 313
U Hanger 138-147, 149-159, 161, 210
URFP Foundation Anchor 44
VB Knee Brace 131
VGT Girder Tiedown 259
VPA Connector 228
VTCR Valley Truss Clip 292
W Wedge 56
WASHER. 57
WB/WBC Wall Bracing 313
WMU Hanger 182-183
WP Hanger 165-167, 217-222
WT Wedge Form Tie 56
Z Clip 289

⚠ THIS IS A REQUIREMENT ONLY FOR THE STATE OF CALIFORNIA

Based on our experience, we do not believe that our products when used as intended present an exposure risk of ingestion, inhalation or by absorption through the skin to any of Prop 65's current list of chemicals. Nonetheless, out of an abundance of caution, and in the event our MiTek products are misused or used in ways we do not foresee, we are taking the precaution of placing a short-form Prop 65 warning on the labels of our retail packaged products, and in some instances, on signs posted in the California retail locations where our products are sold to consumers without labels.

MiTek manufactures and supplies some products that are not intended as consumer products, and are sold through professional construction supply channels and/or delivered directly to job sites. These products will not carry the Prop 65 warning. To learn more about the California Proposition 65, visit www.P65Warning.ca.gov. For MiTek specific questions please contact MiTek Customer Service at 800-328-5934 with any questions or visit our website, MiTek-US.com.

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Code Evaluation Information

Code Reference Column Table Listing

Most structural products shown in this catalog are listed in a current code evaluation report from the code evaluation agencies listed.

The load values shown in this catalog were current at the time of printing but we are continually improving our products through better engineering design and development so some of the evaluation reports may have been updated with better load values after the catalog was printed.

In a few cases, we have submitted a formal independent test report from an approved lab to the code evaluation agency and are awaiting on an evaluation report.

We recommend visiting our web site: **MiTek-US.com** or, the specified code evaluation agency's web site, shown below, to obtain the latest load values from the most current evaluation report.

ICC-ES (ESR): icc-es.org

IAPMO UES (ER): iapmoes.org

Florida (Florida Product Approval No.): floridabuilding.org

City of Los Angeles, California: products have a supplement on their ICC-ES or IAPMO UES evaluation report, see icc-es.org or iapmoes.org as applicable

Some code jurisdictions may require additional load reductions and/or use limitations for some products listed in this catalog. In those cases, the products may not be approved or may need further review for approval.

We recommend contacting the code jurisdiction having authority for your project to confirm they accept the evaluation reports, or contact our Engineering Department for further assistance.

Code Reference Table

Code Reference	Code Evaluation Agency	Building Code Coverage
IBC	ICC-ES IAPMO UES	International Building Code (IBC) International Residential Code (IRC)
FL	State of Florida Product Approvals	Florida Building Code (FBC)
LA	LA City - City of Los Angeles, California	Los Angeles Building Code (LABC) Los Angeles Residential Code (LARC)
PC	Prescriptive Code	Satisfies prescriptive construction requirements: no code evaluation report necessary
--	None	No Code Listing

Code Evaluation Labeling Requirements:

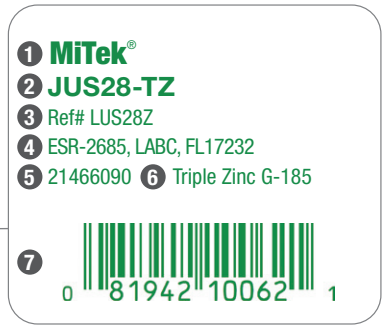
Labeling products for field identification is part of our quality assurance program. Code evaluation agencies require that the label include the manufacturer's name or trademark, the model number, and code evaluation identification number. In addition, there must also be a number to trace the product back to the steel used in manufacturing.

The primary intent of this labeling is to allow confirmation that the connector being examined at on the jobsite is code approved. This can be verified by checking that code evaluation identification number on the code evaluation agencies website or MiTek-US.com.

Product Identification and Labeling



Labels are positioned on products so they can be seen after installation



Typical Product Label

Each MiTek connector is identified with the following information:

1. **Product Brand:** MiTek®
2. **MiTek Stock Number:** Shows stock number as it appears in MiTek's literature and code evaluation reports.
3. **Reference Number:** Product number of a competitor that may be specified.
4. **Code Evaluation Identification Number:** The code evaluation identification number(s) are listed here. ESR-2685 is a general index report from ICC Evaluation Service, Inc. (ICC-ES) and provides a convenient cross-reference to many of our ESR reports.
5. **Work Order Number:** For structural product traceability.
6. **Corrosion Information:** Shows the corrosion resistant finish of the product.
7. **UPC Code**

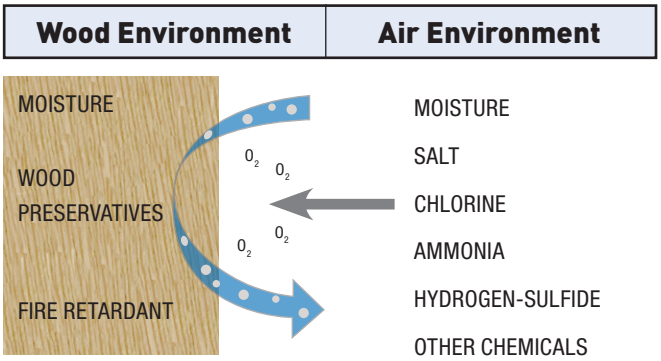
Color Coding: Black print indicates standard G90 finish.
Green print indicates corrosion resistant finish.

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For the majority of applications, metal hangers and connectors are used in interior, above ground, dry service conditions. They are typically not being exposed to corrosive environments which can significantly reduce their strength and longevity.

What is Corrosion?

Corrosion is the destructive degradation of steel due to its interaction with the environment. Here the steel is the connector and the environment is whatever the connector interacts with, namely wood and air. Each environment may contain one or more corrodents (substances that cause corrosion) acting independently or in combination to degrade the strength of the connectors.



Electrochemical oxidation is the most common type of corrosion affecting metal connectors. It is a process in which iron (Fe) reacts with oxygen (0_2) in the presence of an electrolyte such as water (H_2O) to form iron oxide (Fe_2O_3), a brown and flaky by-product commonly known as rust.

$$\text{Iron} + \text{Oxygen} \xrightarrow[(\text{Electrolyte})]{\text{Water}} \text{Rust}$$

Steel is an iron-based metal alloy which is susceptible to this type of corrosion, even when exposed to normal atmospheric air, since air contains oxygen and water as part of its normal composition. While steel is very strong, rust is not. Over time, the continuous formation of rust eats away the base metal and reduces the strength of the connector. The rate of oxidation generally increases with increasing moisture content, the presence of salt, or when galvanic corrosion is a contributing factor.

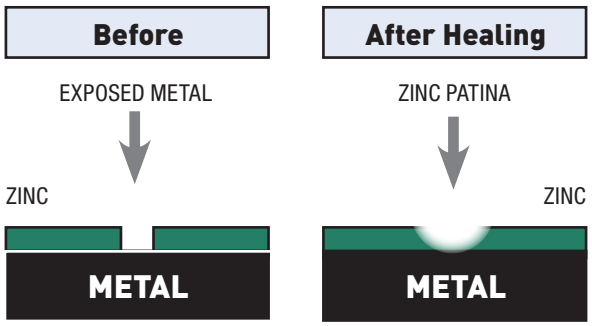
Galvanic Series (Abbreviated)
More Active (Anodic-)
Zinc
Aluminum
Steel
Brass
Copper Nickel
Stainless Steel - Type 304
Stainless Steel - Type 316
More Passive (Cathodic +)

Galvanic corrosion occurs when there is an interaction between dissimilar metals that are in contact with one another. The degree of corrosion depends on where the metals reside in the galvanic series, which is a compilation of known metals and their relative reactivity. The more active metal (anode) will corrode preferentially while shielding the more passive metal (cathode) from further degradation. For example, with galvanized steel, zinc is used as a coating on the steel because it sacrificially corrodes to protect the steel substrate underneath. The coupling between zinc and steel is said to have a lower galvanic potential than the coupling between zinc and stainless steel because zinc and steel are closer to each other in the galvanic series. In general, the coupling with a lower galvanic potential would result in a slower corrosion rate.

Corrosion Protection Options

Zinc Galvanizing:

Most connectors are manufactured from pre-galvanized sheet steel or coiled steel, which is typically made by the hot-dip process in accordance with ASTM A653 and ASTM A924 standards. Fasteners are galvanized in accordance with ASTM A153. In the manufacturing of the connectors, the punching and shearing processes create exposed bare metal surfaces. Thankfully, zinc has an incredible ability to 'heal' itself; the zinc around the exposed metal corrodes and deposits a layer of zinc corrosion by-product called zinc patina (white powdery appearance) over the exposed metal to further protect it.



By being more reactive than steel, zinc sacrificially corrodes at a steady rate over time to shield the steel from the effect of corrosion. The protection ability of zinc is proportional to its thickness, which is proportional to the amount of zinc applied. Zinc coating is specified as the total weight on both sides of the sheet steel, measured in ounces per square foot (oz/ft2). For example, G90 means that there are 0.90 oz/ft2; G185 has 1.85 oz/ft2 and would last about two times longer than G90. G90 is the minimum protection for connectors and is standard in MiTek connectors.

Design Guidelines:

Where there are governing national or local building code requirements, they should be used in the selection of the connectors and their protection against corrosion. In the absence of such requirements, the decision rests on the experience and judgment of the building designer/engineer. Design guidelines are presented in this section to aid the building designer/engineer in this selection process, but it is the responsibility of the building designer/engineer to determine the most viable solution based on an evaluation of the connectors to the specific corrosive environment(s). The guidelines consist of best practices, recommended protection levels for the connectors, and strength modification factors for the lumber/connectors.

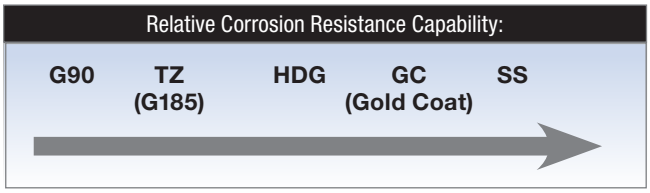
Where there are multiple options suggested, do not automatically default to the lowest protection level. The lower protection level is intended to address less severe conditions while the higher protection level is meant to address more severe conditions. Select the option that eliminates or adequately reduces the vulnerability of the connectors to the corrodents. When in doubt, use a higher level of protection than anticipated or seek professional consultation.

Continued on next page

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Corrosion Information

Relative Corrosion Resistance Capability:
The table below ranks the available options in terms of their relative effectiveness against corrosion. As expected, the ability to resist corrosion increases with increasing zinc thickness, so G185 is the most durable pre-galvanized product available. Gold Coat offers enhanced protection compared to G185 while stainless steel offers the best protection for most applications.



Galvanic Corrosion:
The simplest and most practical solution to minimize galvanic corrosion is to make sure that the components that are in direct contact with each other are made of the same material or coating. Once this is achieved, there is no net galvanic potential between the components and galvanic corrosion is eliminated or significantly reduced. For example, use galvanized nails for galvanized connectors and stainless steel nails for stainless steel connectors.

Wet Service Condition:
For lumber, this refers to any service condition in which the average equilibrium moisture content is 15% or more over a year or may exceed 19% at any time. For lumber to get above 19% moisture, the relative humidity in the air needs to reach above 80%. Unfortunately, this is above the critical humidity level for the electrochemical oxidation of steel, which is around 70%. Beyond 70%, the rate of corrosion in the connectors increases rapidly due to the abundant availability of moisture.

G90 may not be suitable for use in wet service condition.

Preservative (Pressure) Treated Wood:
There are many preservative wood treatment formulations available on the market today. The element that is common to most of them is the presence of copper in the formulation which can contribute to the corrosion of steel connectors and fasteners.

Of the copper based preservatives, the two types are micronized copper and soluble copper. Micronized copper formulations MCA (micronized copper azole) and MCQ (micronized copper quat) are sold under different brand names and are the most predominant formulation in today's preservative treated wood industry. Soluble copper formulations CA (copper azole) and ACQ (alkaline copper quat) have also been very popular since they replaced CCA (chromated copper arsenate) which was phased out in 2004. Some "metal free" preservatives are still used for above ground and sill plate applications, but are not as common. One of the main criterion affecting the selection of one preservative treatment over another is the type of wood being treated and how well it can be penetrated by the treatment.

While many of the advanced wood treatment formulations containing copper used today have proven to be less corrosive to steel, especially micronized copper, MiTek recommends a higher level of corrosion protection for connectors in contact with copper based wood treatments.

Connectors and fasteners in contact with metal free wood preservatives do not require additional corrosion protection due to the preservative itself, however all factors that can create the corrosive environment should be considered when selecting the appropriate finish. If unsure as to whether a particular treatment is corrosive to steel fasteners, check with the supplier of the preservative treated wood product for their recommendation.

Fire Retardant Treated (FRT) Wood:
Although most common FRT products are not corrosive to metal connectors, not all products are non-corrosive. Additionally, they typically require proprietary strength reductions applied to the lumber in accordance with the manufacturer's specifications. Since the lumber strength is lower, the lateral and withdrawal resistance of nails must also be reduced accordingly. It is important to note that some fire retardants cause the wood to absorb more moisture from the air than untreated lumber. Consequently, the connector may be exposed to a higher level of moisture, resulting in more corrosion.

Swimming Pools:
This is one of the most hazardous environments for steel connectors due to continuous exposure to high temperature, high moisture content, and corrosive chemicals such as chlorine, bromine, and other disinfectants. The combination of all these factors can lead to accelerated corrosion and premature structural failure. The connections should be periodically inspected. This environment is so corrosive that all possible preventive measures should be employed to prevent the hanger from being exposed to the pool water. These include the use of a vapor barrier and a ventilation system that does not take the air from the pool environment.

Additionally, it has been known that certain grades of stainless steel (316 and others) are susceptible to a mode of structural failure known as stress corrosion cracking (SCC) when exposed to a swimming pool environment. SCC is usually localized near areas of high residual stress and small cracks can rapidly propagate and cause catastrophic failures. The connections should be periodically inspected. See warning below.

⚠ WARNING

Stainless steel connectors and fasteners shall not be used for metal hangers over swimming pools due to stress corrosion cracking. SCC has been known to occur under the following conditions:

- Use of certain grades of stainless steel (grades 316 and others).
- Structural members subjected to high tensile stress.
- Presence of certain chemicals, including chlorine and bromine.

Gold Coat may be the best choice in this environment.

Continued on next page

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Corrosion Information

The **Structural Connectors Coating Recommendations** table below was developed by reviewing field service performance and accelerated corrosion test results. They are offered as general guidelines and are not intended to cover all possible service conditions. Additional consideration may also be needed for:

wet service conditions
preservation treated lumber
fire retardant treated lumber
strength reducing chemicals
building near salt water coastal areas

Additionally, the **Corrosion Protection Guidelines** to the right may also be used to assist in making the proper choice of corrosion protection.

The building designer/engineer has the ultimate responsibility of selecting the most viable protective coating based on knowledge of project specific corrosive environments and local building code requirements.

Corrosion Protection Guidelines:

- MiTek recommends stainless steel connectors for the highest level of corrosion protection. As an economical alternative to stainless steel our new Gold Coat connectors are specifically designed for exterior application when in contact with preservative treated wood.
- For connectors in contact with preservative treated wood, the Triple Zinc option provides the minimum G-185 coating thickness required by code and is an economical alternative for exterior applications.
- The use of correct fastener with the connector is critical. Stainless steel connectors require stainless steel fasteners. For exterior applications, hot-dip galvanized fasteners (HDG) or exterior coat (EXT) must be used with both Triple Zinc, hot-dip galvanized or EXT finishes. Gold Coat connectors require gold coat or hot-dip galvanized fasteners.
- MiTek's zinc dichromate WS Structural Wood Screws are not recommended for use with preservative or fire-retardant treated wood. Some wood structural screws are available in Gold Coat or exterior coat.
- MiTek clearly differentiates standard interior G90 connectors from the corrosion resistant connectors. Gold Coat connectors are distinguishable from other connectors due to their gold color. Triple Zinc (TZ) connectors are affixed with a label containing green text indicating G-185 finish.

Structural Connectors Coating Recommendations

AWPA[9] Use Category	Service Conditions	Use Environment	Example Applications	Preservatives and Retentions[6,7,10]	Minimum Coating Requirements[1,2,3,4]
UC1 Interior/Dry	Interior construction, Above ground, Dry	Continuously protected from weather or other sources of moisture	General framing, interior construction	Untreated, SBX-DOT, Zinc Borate, Organic	Primer, G90
UC2 Interior/Damp	Interior construction, Above ground, Damp	Protected from weather, but may be subject to sources of moisture	Sill plates	SBX-DOT, Zinc Borate, Organic	Primer, G90
				ACQ-D (0.15), CA-B (0.10), CA-C (0.06), MCQ (0.06), µCA-C (0.05)	Triple Zinc (G-185)[8,9], HDG (post hot dipped), Exterior Coat[12]
UC3A Above Ground Protected	Exterior construction, Above ground, Rapid water runoff	Exposed to all weather cycles, not exposed to prolonged wetting	Exposed exterior beams or columns in an open, covered structure	ACQ-D (0.25), MCQ (0.15), CA-B (0.10), CA-C (0.06), µCA-C (0.05), Organic	Triple Zinc (G-185), HDG (post hot dipped), Exterior Coat[12] or MiTek Gold Coat
UC3B Above Ground Exposed	Exterior construction, Above ground, Poor water runoff	Exposed to all weather cycles, including prolonged wetting	Deck beams and joists	ACQ-D (0.25), MCQ (0.15), CA-B (0.10), CA-C (0.06), µCA-C (0.05), Organic	Triple Zinc (G-185), HDG (post hot dipped), or MiTek Gold Coat
UC4A Ground Contact General Use	Ground contact, Fresh water; includes above ground applications	Ground contact or fresh water exposed to all weather cycles, Normal exposure	Deck posts, beams and joists. Fresh water docks[11]	ACQ-D (0.40), MCQ (0.23), CA-B (0.21), CA-C (0.15), µCA-C (0.14)	Triple Zinc (G-185), HDG (post hot dipped), or MiTek Gold Coat[5]
UC4B Ground Contact Heavy Duty	Exterior construction, Ground contact, Critical components	Ground contact, fresh/salt water water splash exposed to all weather cycles	Permanent wood foundations, critical structural members	ACQ-D (0.60), MCQ (0.23), CA-B (0.31), CA-C (0.25), µCA-C (0.23)	Stainless Steel

1) G90 and G-185 refer to galvanization requirements for ASTM A653 material.
2) Connectors galvanized to ASTM A123 may be used in place of either G90 or G185 coatings.
3) Other coating may be suitable for a given environment if the conditions are known and predictable.
4) For G185 connectors use fasteners galvanized per ASTM A153 or EXT finish. For Gold Coat connectors, use Gold Coat fasteners and for stainless steel connectors, use stainless steel fasteners.
5) If the enviroment has the potential to contain elements which may make it more corrosive, the use of stainless steel is recommended.
6) MCQ is a micronized copper treatment such as *Micro Pro* by Koppers. µCA-C is a dispersed copper treatment manufactured by Arch Treatment Technologies. Organic preservatives include L^3 from Arch Treatment Technologies and EcoLife II from Viance, LLC.
7) For wood treatments not shown, contact MiTek or the wood preservative manufacturer for recommended coatings.
8) Testing by MiTek has found that in interior applications where the treated wood will remain relatively dry during its service life the use of G90 connectors with MCQ or µCA-C treated wood is appropriate.
9) American Wood Protection Assocation Standard U1-16.
10) SBX/DOT= Sodium Borate; ACQ-D = Alkaline Copper Quat Type D; CA-B = Copper Azole Type B; CA-C = Copper Azole Type C; MCQ = Micronized Copper Quat; µCA-C = Dispersed Copper Azole Type C. The number listed in the parenthesis is the required retention level in pounds per cubic foot, or PCF.
11) Deck joists and beams must be treated to Use Category UCA4 when they are difficult to maintain, repair or replace and are critical to the performance and safety of the deck.
12) Users must perform periodic inspection and provide regular maintenance to ensure the satisfactory performance of the structure.

Continued on next page

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Corrosion Information

Corrosion Resistant Finishes

MiTek offers several corrosion resistant finishes to cover a range of corrosion performance. For products available in corrosion resistant finishes, reference the "Corrosion Finish" column in the tables and Corrosion Key located by the table footnotes or pages 16-18 for a complete listing of corrosion resistant products.

Corrosion Protection Level	Finish / Material	Description	Required Fastener	Ordering
CONNECTORS				
	Primer	Primer paint is used to protect steel during shipping and installation but is not considered a corrosion protection method when installed in corrosive environments	Bright fasteners	Stock number as listed in the table
	G90 Galvanizing	Galvanizing provides a prefabrication coating of 0.90 ounces of zinc per square foot of surface area (both sides) measured in accordance with ASTM A653	Bright fasteners	Stock number as listed in the table
	Triple Zinc (TZ) (G-185 Galvanizing)	TZ galvanizing provides a prefabrication coating of 1.85 (G-185) ounces of zinc per square foot of surface area (both sides) measured in accordance with ASTM A653	Hot-dip galvanized or Exterior Coat fasteners	To order, add TZ to stock number, as in C44-TZ
	Hot-Dip Galvanized (HDG)	HDG coating provides an after-fabrication hot-dipped zinc coating. The coating thickness is dependent on the connector material, but generally ranges from 1.2 to 2.3 ounces of zinc per square foot of surface area (both sides). Hot-dip products meet requirements set forth in ASTM A123	Hot-dip galvanized or Exterior Coat fasteners	To order, add HDG to stock number, as in KCC44-HDG
	Gold Coat (GC)	Gold Coat is a proprietary multi-layer protection system. It is comprised of a top coat barrier layer and a galvanized layer placed over a steel substrate	Gold Coat or Hot-dip galvanized fasteners	To order, add GC to stock number, as in AC7-GC
	Stainless Steel (SS)	Best option for corrosion protection. Quality stainless steel (316SS grade steel) is used to fabricate connectors. Although costs are higher, some applications may need the virtual corrosion proof quality of stainless steel	Stainless Steel fasteners	To order, add SS to stock number, as in PBES44-SS
FASTENERS				
	Yellow Zinc	Zinc yellow chromate finish		Stock number as listed in the table
	Hot-Dip Galvanized (HDG)	HDG coating provides an after-fabrication hot-dipped zinc coating. The coating thickness is dependent on the connector material, but generally ranges from 1.2 to 2.3 ounces of zinc per square foot of surface area (both sides). Hot-dip products meet requirements set forth in ASTM A153		Stock number as listed in the table
	Exterior Coat (EXT)	EXT finish is a double barrier coating over zinc outperforming HDG		Stock number as listed in the table
	Gold Coat (GC)	Gold Coat is a proprietary multi-layer protection system. It is comprised of a top coat barrier layer and a galvanized layer placed over a steel substrate		Stock number as listed in the table
	Stainless Steel (SS)	Best option for corrosion protection		Stock number as listed in the table

DISCLAIMER – The general information and guidelines provided in this MiTek Product Catalog shall not be used as a substitute for competent professional examination and verification. It is the responsibility of the building designer/engineer to determine the applicability and suitability of the information provided. Anyone making use of this information assumes all responsibility and liability arising from such use.

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Corrosion Information

Corrosion Resistant Product Offering

MiTek Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Exterior Coat (EXT)	Gold Coat (GC)	Stainless Steel (SS)
Fasteners / Anchors					
AB1212-HDG					
AB126-HDG					
AB128-HDG					
AB5812-HDG					
BP12					
BP583					
HBPS12					
HBPS12-412					
HBPS58					
HBPS58-412					
HBPS34-412					
LBP12-TZ					
LBP58-TZ					
LBPS12-TZ					
LBPS58-TZ					
LL915-GC					
LL930-GC					
N10C					
N10-GC					
N16C					
N8-GC					
NA11					
NA16D					
NA20D					
NA9D					
SSN10C					
SSN16C					
SSN8C					
SSNA10D					
SSNA8D					
THR1218-HDG					
THR1224-HDG					
THR1236-HDG					
THR125-HDG					
THR126-HDG					
THR128-HDG					
THR5812-HDG					
THR5816-HDG					
THR588-HDG					
WS15					
WS2					
WS25					
WS3					
WS35					
WS45					
WS5					
WS6					
WS8					
WSBH25-EXT					
WSBH4-EXT					
WSBH6-EXT					
WSBH8-EXT					
WSBH10-EXT					
WSWH278					
WSWH358-EXT					
WSWH45					
WSWH5					
WSWH6					
WSWH8-EXT					
Holdowns / Foundation Anchors					
FA3					
FA4					
FWAN-TZ					
LTS19-TZ					
RP6					
ST1-TZ					
ST2-TZ					
STB16					
STB20					
STB24					
STB28					
STB34					

MiTek Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
Holdowns / Foundation Anchors				
STB36				
STBL24				
TA51				
TDL5				
TDX2-TZ				
Column / Post Caps				
BC400-TZ				
BCS22-4				
BCS23-6				
C44				
C46				
C46R				
C66				
C66R				
EPCM4416				
EPCM4616				
EPCM6616				
EPCM66				
KCC325-4				
KCC325-6				
KCC44				
KCC46				
KCC48				
KCC525-4				
KCC525-6				
KCC64				
KCC66				
KCC68				
KCC88				
KCCQ325-4				
KCCQ325-6				
KCCQ44				
KCCQ46				
KCCQ48				
KCCQ525-4				
KCCQ525-6				
KCCQ525-8				
KCCQ64				
KCCQ66				
KCCQ71-4				
KCCQ71-6				
KCCQ74				
KCCQ76				
KECC325-4				
KECC325-6				
KECC44				
KECC46				
KECC525-4				
KECC525-6				
KECC64				
KECC66				
KECC68				
KECC88				
KECCQ325-4				
KECCQ325-6				
KECCQ44				
KECCQ46				
KECCQ48				
KECCQ525-4				
KECCQ525-6				
KECCQ525-8				
KECCQ64				
KECCQ66				
KECCQ71-4				
KECCQ71-6				
KECCQ74				
KECCQ76				
PB44-6TZ				
PB66-6TZ				
PBC44-TZ				
PBC66-TZ				
PBES44-TZ				

Corrosion Finish Key

- Stainless Steel
- Gold Coat
- Exterior Coat
- HDG
- Triple Zinc

Continued on next page

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Corrosion Information

Corrosion Resistant Product Offering

MiTek Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
Column / Post Caps				
PBES66-TZ	■			■
PBS44-TZ	■			■
PBS66-TZ	■			■
PBS66R-TZ	■			
PCM44	■			
PCM4416	■			
PCM46	■			
PCM4616	■			
PCM4816	■			
PCM66	■			
PCM6616	■			
Column / Post Bases				
CBSQ44-TZ	■	■		
CBSQ46-TZ	■	■		
CBSQ66-TZ	■	■		
D44-TZ	■			■
D46	■			
D46R-TZ	■			
D66	■			
D66R	■			
EBG44-TZ	■			
EBP44T-TZ	■			
EPB4408		■		
EPB4608		■		
EPB6608		■		
EPBH44		■		
EPBH46R		■		
EPBH66		■		
EPBH66R		■		
KCB44		■		
KCB46		■		
KCB48		■		
KCB66		■		
KCB68		■		
KCB88		■		
KCB1010		■		
KCB1212		■		
KCBQ44		■		
KCBQ46		■		
KCBQ66		■		
KCBQ88		■		
PA55R-TZ	■			
PA66ER-TZ	■			
PA66R	■			
PAF44-TZ	■		■	
PAF46-TZ	■		■	
PAF66-TZ	■		■	
PAU1010	■			
PAU1010R	■			
PAU1212	■			
PAU1212R	■			
PAU44	■			■
PAU46	■			■
PAU66	■			■
PAU66R-TZ	■			
PAU88	■			■
RPB-TZ	■			
WAS44	■	■		
WAS46	■			
WAS66	■	■		
WE44	■	■		
WE46	■			
WE66	■			
Framing Plates & Angles				
A3	■			
AC5	■			
AC7	■		■	
AC9	■			
ANJ44S-HDG		■		
JA1	■			
KHL33		■		
KHL35		■		
KHL37		■		

MiTek Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
Framing Plates & Angles				
KHL43		■		
KHL46		■		
KHL55		■		
KHL57		■		
KHL76		■		
ML24-TZ	■			■
ML26-TZ	■			■
MP3	■			
MP34	■			■
MP4F	■			
MP5	■			■
MP6F				■
MP7	■			■
MP9	■			
MPA1	■		■	■
Stud Plate Ties				
RSPT6	■			
RSPT6-2	■			
SPT22	■			
SPT24	■			
SPT4	■			
SPT6	■			
SPT8	■			
SPTH4	■			
SPTH6	■			
SPTH8	■			
Lateral Joist Connectors				
LJC-TZ	■			
LJQ35-TZ	■			
Twist Straps				
HTW20	■			
LTW12				■
LTW18				■
MTW12	■			
MTW16	■			
MTW20	■			■
MTW30	■			
Straps				
HRS416-TZ	■			
HTP37-TZ	■			
KHST2		■		
KHST3		■		
KRPS22	■			
KRPS28	■			
KST227		■		
KST237		■		
KST248		■		
KST260		■		
L6	■			
LH12		■		
MSTA12	■			■
MSTA15	■			
MSTA18	■			■
MSTA21	■			
MSTA24	■			■
MSTA30	■			
MSTA36	■			■
MSTA9	■			
MSTAM24	■			
MSTAM36	■			
PS218-HDG		■		
PS418-HDG		■		
PS720-HDG		■		
RS150	■			■
RS16-R				■
T6	■			
TH12-HDG		■		
Hangers				
HD210-2IF	■	■		■
HD210-4IF	■			
HD210-3IF	■	■		
HD28-2IF	■			
HD410	■			

Corrosion Finish Key
- Stainless Steel
- Gold Coat
- Exterior Coat
- HDG
- Triple Zinc

Continued on next page

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Corrosion Information

Corrosion Resistant Product Offering

MiTek Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
Hangers				
HD410IF	■			
HD412	■			
HD412IF	■			
HD44IF	■			
HD46	■			
HD46IF	■			
HD48	■			
HD48IF	■			
HD610	■			
HD610IF	■			
HD612	■			
HD612IF	■			
HD68	■			
HD68IF	■			
HDQ210-2IF				■
HDQ210-3IF				■
HDQ310IF				■
HDQ410IF				■
HDQ412IF				■
HDQ610IF	■			■
HDQ612IF	■			■
HUS210	■			
HUS210-2IF	■			
HUS212-2				■
HUS26	■			
HUS28	■			
HUS28-2IF	■			
JL210IF-TZ	■			■
JL24IF-TZ	■			
JL26IF-TZ	■			■
JL28IF-TZ	■			
JPF24	■			
JUS210	■		■	■
JUS210-2	■		■	■
JUS210-3	■			■
JUS24	■		■	■
JUS24-2	■			
JUS26	■		■	■
JUS26-2	■		■	■
JUS28	■		■	■
JUS28-2	■			■
JUS28-3	■			
JUS36	■			
JUS410	■			
JUS44	■			
JUS46	■			
JUS48	■			
KLB210	■			
KLB212	■			
LSRR26-TZ	■			
LSRR28-TZ	■			
LSRR210-TZ	■			
LSRR212-TZ	■			
LSS210L-TZ	■			
LSS210R-TZ	■			
LSS26L-TZ	■			
LSS26R-TZ	■			
LSS28L-TZ	■			
LSS28R-TZ	■			
LSSH15-TZ	■			■
LSSH210-TZ	■			■
LSSH179-TZ	■			
LSSH20-TZ	■			
LSSH23-TZ	■			
LSSH25-TZ	■			
LSSH26-TZ	■			
LSSH31-TZ	■			
LSSH35-TZ	■			
MSH422	■			
SKH210L	■		■	■
SKH210L-2	■			
SKH210R	■		■	■
SKH210R-2	■			

MiTek Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
Hangers				
SKH26L	■			■
SKH26R	■			■
SKH28L	■			
SKH28R	■			
SKHH210L-2	■			
SKHH210L-2IF	■			
SKHH210R-2	■			
SKHH210R-2IF	■			
SKHH410L	■			
SKHH410LIF	■			
SKHH410R	■			
SKHH410RIF	■			
SKHH414LIF	■			
SKHH414RIF	■			
SKHH46L	■			
SKHH46LIF	■			
SKHH46R	■			
SKHH46RIF	■			
SUH210	■			
SUH210-2		■		
SUH210-3		■		
THD28-2	■			
THD410	■			
THD46	■			
THD48	■			
THDH412	■			
THDH610	■			
Hurricane Ties				
HHCP2	■			
HHCP4-TZ	■			
LFTA6	■			
RT10	■			■
RT15	■		■	
RT16-2	■			■
RT16A	■			■
RT20	■			
RT3A	■			■
RT4	■			■
RT5	■			■
RT7	■			■
RT7A	■		■	■
RT8A	■			■
Embedded Truss Anchors				
HTA20	■			■
Deck & Fences				
ADTT-TZ	■			
CSH-TZ	■			■
DTB-TZ	■			■
ERB24-TZ	■			
FB14-TZ	■			
FB23-TZ	■			
FB24-TZ	■			■
FB26-TZ	■			
FRB24-TZ	■			
PRT15-TZ	■			
PRT2H-TZ	■			
PRT2-TZ	■			
PRTIC2-TZ	■			
SCA10-TZ	■			■
SCA9-TZ	■		■	
SDJT14-TZ	■			
SDPT5-TZ	■			
SDPT7-TZ	■			
General Hardware				
ICPL516-TZ	■			
ICPL58	■			
TTA12-TZ	■			
TTA2-TZ	■			
TTC42-TZ	■			
TTF22-TZ	■			
TTR-TZ	■			
TTU2-TZ	■			
WT22				■

Corrosion Finish Key ■ Stainless Steel ■ Gold Coat ■ Exterior Coat ■ HDG ■ Triple Zinc

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U.S. Standard Steel Gauge Equivalents in Nominal Dimensions

Gauge	Approximate Dimensions		Decimals (inches)		
	Inches	Millimeters	Uncoated Steel	Galvanized Steel (G90)	Triple Zinc (G-185)
3	1/4	6.0	0.238	--	--
7	3/16	4.5	0.171	0.186	--
10	9/64	3.4	0.129	0.138	0.140
11	1/8	3.0	0.114	0.123	0.125
12	7/64	2.7	0.099	0.108	0.110
14	5/64	2.0	0.070	0.078	0.080
16	1/16	1.5	0.055	0.063	0.065
18	3/64	1.2	0.044	0.052	0.054
20	1/32	1.0	0.033	0.040	0.042
22	1/32	0.8	0.029	0.033	0.036

*Actual steel dimensions will vary from nominal dimensions according to industry tolerances.

Maximum Shear Capacity of Joist or Rafter

The table below indicates the calculated shear capacity of different dimensional lumber sizes for various wood species in accordance with Section 3.4.2 of the 2018 NDS®.

Wood Species	Allowable Shear on Bending Member[1,2,3]											
	Joist or Rafter											
	2 x 4			2 x 6			2 x 8			2 x 10		
	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%
DF	630	725	788	990	1139	1238	1305	1501	1631	1665	1915	2081
SP	613	704	766	963	1107	1203	1269	1459	1586	1619	1862	2023
S-P-F	473	544	590	743	854	928	979	1126	1223	1249	1436	1561
Hem Fir	525	604	656	825	949	1031	1088	1251	1359	1388	1596	1734

1) Applies to nominally dimensioned joists as listed, where moisture content < 19% and temperature <100° F.
2) Loads apply to: DF: Douglas Fir-Larch (G=0.50), Fv=180 psi; SP: Southern Pine (G=0.55), Fv=175psi; S-P-F: Spruce-Pine-Fir (G=0.42), Fv=135psi; Hem Fir (G=0.43), Fv=150psi.
3) 115% and 125% loads are increased for short-term loading in accordance to the code.

Roof Pitch

If common Rafter Roof Pitch is . . .

Rise / Run (inches)	Slope (degrees)
1/12	5
2/12	10
3/12	14
4/12	18
5/12	23
6/12	27
7/12	30
8/12	34
9/12	37
10/12	40
11/12	42
12/12	45

Then Hip/Valley Rafter Roof Pitch becomes . . .

Rise / Run (inches)	Slope (degrees)
1/17	3
2/17	7
3/17	10
4/17	13
5/17	16
6/17	19
7/17	22
8/17	25
9/17	28
10/17	30
11/17	33
12/17	35

Slope Conversion Table

Rise / Run (inches)	Slope (degrees)
0/12	Flat
1/12	5
2/12	10
3/12	14
4/12	18
5/12	23
6/12	27
7/12	30
8/12	34
9/12	37
10/12	40
11/12	42
12/12	45

1) Use this conversion table only for hip/valley rafters that are skewed 45° right or left. All other skews or dual pitch roofs will cause the slope to change from that listed above.

Special & Custom Connectors

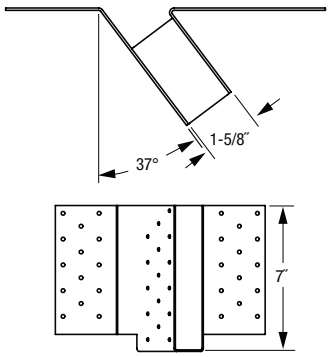
MiTek is committed to meeting every need you have and we understand that stock connectors will not meet all application or design requirements. Our Technical Assistance Representatives will work with you to develop and fabricate the Special or Custom connector you need.

What is the difference between a "Special" and a "Custom" connector?

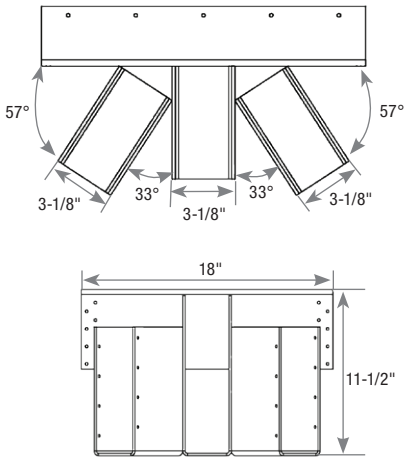
A "Special" is a stock MiTek connector that is modified within the limits listed in the Specialty Options table for that connector. A summary of Specialty Options can be found on page 320-321 of this catalog.

A "Custom" is a connector that does not closely resemble a stock or special part offered in our catalog. Also, a "Custom" connector may be a stock connector that is modified outside of the limits listed in the Specialty Options tables or is not listed in the catalog as having a specialty option available. Product drawings must be provided by the customer and will be manufactured by MiTek in accordance to customer specifications. Customs should be verified prior to ordering, are not refundable and may not support published catalog loads.

See page 320-324 for additional information.



Special Order EXAMPLE: Skewed HD < 45°



Custom Order EXAMPLE: 3 Pocket Girder Truss Hanger

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Product Notes

1) This catalog reflects the most current information available at the time of printing. However, we are continually improving our products through better engineering design and development and recommend visiting our website for the latest on-line version of the catalog at MiTek-US.com. MiTek reserves the right to change specifications, designs, and models at any time without notice and liability for such changes. This catalog may not be reproduced in whole or in part without the prior written approval of MiTek.
2) This catalog reflects changes to product design and allowable loads to some MiTek products. The information presented in this publication supersedes all previously published Product Catalogs.
3) This Product Catalog was designed as a general reference for the MiTek Product Line. Various specialized publications have also been developed for design professionals, truss manufacturers, contractors, and building material distributors. Consequently, product information may vary from one publication to another due to product development testing and revisions to code evaluation report upgrades. We recommend visiting our website for the latest on-line version of these specialized publications.
4) The type and quantity of fasteners used to install MiTek products is critical to connector performance. To achieve the allowable loads presented in this catalog, all specified fasteners must be used and proper installation procedures observed. Verify that the dimensions of the supporting members are sufficient to receive the specified fasteners. All product modifications will void the warranty unless prior written consent from MiTek has been obtained.
5) Some connector models are listed more than once to indicate installation and/or fastener options.
6) New products or updated product information are designated in **blue**.
7) Throughout this catalog, dimensions are expressed in inches and loads in pounds unless specifically noted otherwise.
8) Some MiTek products show both nail fastening and bolt schedules. In those cases, specific loads for each has been identified. Nail and bolt values cannot be combined unless noted otherwise.
9) Load values for 8d, 10d, 16d, and 20d designations in the fastener schedules throughout this catalog refer to common wire nails unless noted otherwise. Nails shall conform to a recognized national standard, such as ASTM F1667, as prescribed by the model building codes.
10) Diamond holes are for optional nailing for maximum listed capacity or for temporary hanger fastening during installation.
11) Fastener installation may cause wood to split and reduce a fastener's ability to transfer loads into the supporting member. **If wood splitting occurs, consider pre-drilling holes not exceeding 75% of the nail diameter (per the National Design Specification for Wood Construction (NDS) Section 12.1.5.3).**
12) Bolts specified in this catalog are through-bolts and must conform to requirements for ASTM A307 Grade A, or ASME SAE Grade 2, or better unless noted otherwise.
13) Anchor Bolts must conform to ASTM F1554.
14) MiTek connectors listed in this catalog are manufactured for specific sizes of standard dimensional lumber, plated trusse or structural composite lumber. **For applications involving unusual supporting conditions environments, contact MiTek. Wood shrinkage or expansion, caused by lack of moisture or excessive moisture, may adversely affect connector installation. Evaluate potential shrinkage or expansion to ensure proper connector installation and performance.**
15) The load values listed in this catalog are based on installation to wood with a moisture content of less than 19%, and used in dry service conditions. Load reductions, in accordance with the applicable local Building Code, shall be taken where wood moisture content is greater than 19% at the time of installation or where used in wet service conditions.
16) Unless otherwise noted, MiTek products may not be bent or cut for any reason unless prior written consent from MiTek has been obtained. **Field alterations may significantly reduce the published allowable load values in this catalog.**

Design Notes

1) Some products have allowable loads that can be applied in several directions (F1, F2, and uplift is a common example). When these products have F1, F2 and/or uplift loads applied simultaneously, it is necessary to make the following check:

$$\frac{F_1 \text{ applied}}{F_1 \text{ allowable}} + \frac{F_2 \text{ applied}}{F_2 \text{ allowable}} + \frac{\text{Uplift applied}}{\text{Uplift allowable}} \leq 1.0$$

As an alternative check for simultaneous loads in more than one direction for embedded truss anchors (pages 244-250), LUGT girder tiedowns (pages 255-256), hurricane angles and connectors (pages 253-254), and hurricane ties (pages 262-265); the applied load in each direction shall not exceed 75% of the listed allowable load in the corresponding direction.

2) Unless otherwise noted, the allowable loads shown in this catalog are based on Allowable Stress Design methodology. **Multiply seismic and wind ASD load values by 1.4 or 1.6 respectively to obtain LRFD values.**
3) Connector capacities may exceed the allowable capacity of the wood members involved in the connection. A qualified designer should verify that all wood members (supporting and supported) have been properly designed for the connector.
4) Verify that the size of the supporting member can accommodate the connector's specified fasteners.
5) Some illustrations in this catalog may not reflect additional mechanical reinforcements which may be required to reduce cross grain tension or wood member bending under loading. The design professional is responsible for determining if additional mechanical reinforcement is required during construction.
6) MiTek recommends the hanger height be 60% of the joist height for stability during construction.
7) Allowable loads of different connector models cannot be combined to resist loads at a single connection location. For special considerations, consult MiTek Customer Service

National Design Specification (NDS) Standard

Unless otherwise noted, the allowable load values presented in this catalog reflect the calculation criteria set forth in the 2018 National Design Specification for Wood Construction (NDS®) published by the American Forest and Paper Association; with the methodology prescribed in ICC-ES AC13 or other relevant acceptance criteria applied.

Material

MiTek selects steel for its various products in accordance with application needs and steel properties, including tensile strength, ductility, corrosion resistance, gauge, and weldability. See specific code evaluation reports or consult MiTek for additional steel information on specific products. products are manufactured from steel which meets ASTM A653, ASTM A1011, or ASTM A36, ASTM A1018 or ASTM A666 standards.

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Testing and Product Design Loads

On all structurally-rated products, MiTek performs calculations and full-scale testing in accordance with ICC-ES AC13, ASTM D7147, and other applicable ICC-ES acceptance criteria and standards recognized by model code agencies. All testing is conducted or verified by an approved IAS accredited third-party testing laboratory which generates an independent test report. In accordance to these standards the design loads for joist hangers and similar devices listed are the lowest results obtained from one of the following methods:

1) The lowest ultimate tested load divided by three.
2) Average load producing 1/8" deflection.
3) Calculations based on NDS and applicable Standards.

The allowable loads for some products have been increased in accordance with the NDS® by applying a Load Duration Factor, C_D for fasteners in wood. Stress increases have not been applied to steel components of the products.

Floor / Design Load .....100% (no increase).

Roof Snow.....115% of design load for 2-month duration of load

Roof Non-Snow .....125% of design load for 7-day duration of load.

Uplift .....160% of design load for wind/seismic loading

Adjustment Factors for Alternate Wood Species

The design values published by MiTek by default, pertain to connecting Douglas Fir-Larch (DF) and Southern Pine (SP) lumber. We also have Spruce-Pine-Fir (SPF) design values integrated into a portion of the allowable load tables. In instances where the MiTek fasteners and connectors are installed with alternate lumber species not published, use the tables below as a guide for assigning adjustment factors to determine design values.

Product Type	Loading Type	Reduction Factor Applied to DF/SP Published Value[1,2]
Straps Hurricane Ties Holdowns Embedded Straps/Anchors	Uplift	$\frac{G}{0.5}$
Caps and Bases	Uplift	$\frac{G}{0.5}$
	Download	Lesser of: $\frac{Fc\perp}{625}$ & $\frac{G}{0.5}$
Joist Hangers	Uplift	$\frac{G}{0.5}$
	Download	Lesser of: $\frac{Fc\perp}{625}$ & $\frac{G}{0.5}$
All Other Connectors	Any	Lesser of: $\frac{Fc\perp}{625}$ & $\frac{G}{0.5}$

1) Obtain Specific Gravity "G" and Fc⊥ values from 2018 National Design Specification for Wood (NDS) Table 4A. See table below also.
2) Adjustment factors must be less than or equal to 1. Published values cannot be raised.

Wood Properties of Common Alternate Wood Species[1]		
Species	**Specific Gravity (G)**	**F_{CPERP} - Fc⊥**
Douglas Fir-South	0.46	520
Hem-Fir	0.43	405
Hem Fir North	0.46	405
Spruce-Pine-Fir (SPF)	0.42	425
Spruce-Pine-Fir South	0.36	335
Western Cedars	0.36	425
Northern White Cedar	0.31	370
Redwood	0.37	425

1) Values in this table are from 2018 NDS® Table 4A.

Installation Notes

1) Use proper safety equipment during connector installations. Always wear gloves when handling connectors.
2) All welding should be done in accordance with the American Welding Society (AWS) Standard by a certified welder. **Caution: Welding galvanized steel may produce harmful fumes and should only be performed in well-ventilated environments.**
3) The proper type and quantity of fasteners must be used to install MiTek products. To achieve the published allowable loads, install with the fasteners specified for that particular product. Some products allow for alternate nail installations. Refer to the "Optional Nails for Face Mount Hangers and Straight Straps" table on page 25 of this catalog for load adjustments when using alternate nailing. All specified fasteners must be properly installed prior to applying load to the connection.
4) Drill bolt holes a minimum of 1/32" and a maximum of 1/16" larger than the diameter of the bolt to be installed (per the 2018 NDS®, Section 11.1.3).
5) Washers should always be used under the head or nut of a bolt when not in contact with the connector unless noted otherwise.
6) It is permissible to use gun nails to install some connectors as long as the nail length and diameter are the same and installed through all pre-punched holes. MiTek recommends the use of nail guns featuring hole-locating mechanisms. Please note that many nail guns use fasteners that are shorter than the common nail size and load reductions will result. Contact MiTek Engineering. **Caution: Always follow nail gun manufacturer's safety guidelines.**
7) Joists installed in hangers should bear fully on the connector seat and shall be cut to fit against the header with a gap no greater than 1/8" between the joist end and header face.
8) Multiple-ply members must be properly fastened together to distribute loads as a single member.
9) Top mount hangers shall be installed with the back of the hanger tight to the face of the header.
10) Top mount hangers installed in floor systems may produce unevenness. This will vary based on thickness of the top flange and nail heads. **If a problem is anticipated, the effects can be mitigated by dapping or notching the beam or cutting the subfloor at hanger locations. Face mount hangers will eliminate this problem.**

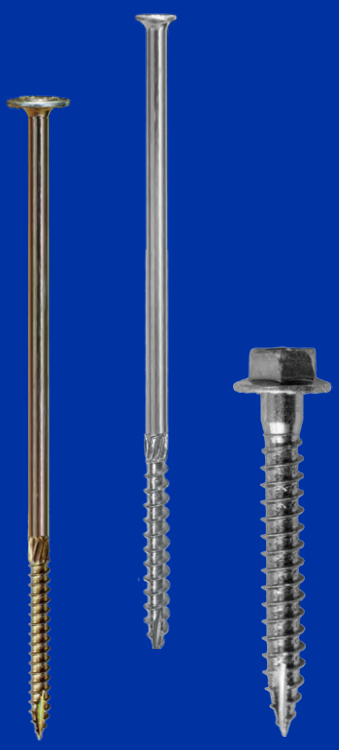
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FASTENERS



MiTek®

FASTENERS	22-41
Nails	24-26
Fastening Identification / Features	27
Screws	28-40
Bolts	41



N / NA Nails

Proper fasteners are a critical component in a sound wood frame structure. To ensure successful installations of its connectors, MiTek offers a full range of structurally-rated nails. All galvanized nails supplied by MiTek are Hot-dipped for greater corrosion resistance. Any MiTek connector requiring a NA16D-RS or NA20D nail is shipped with the nails attached to the connector in convenient poly bags.

Finish: See Nail Specification Table on page 26
Materials: ASTM A 123; ASTM A 153 (HDG)

Installation:

- Allowable shear values assume nail embedment into the wood of the entire nail or 10 nail diameters (whichever is less). Otherwise, the nail must be embedded at least 6 nail diameters, with the load reduced using the equation below:

$$\text{Reduced Load} = \frac{\text{Published Load x Actual Penetration}}{\text{Nail Diameter x 10}}$$

- Load reductions may occur if nails are used other than those specified. See the table Optional Nails for Face Mount Hangers below for load reduction factors regarding nail substitutions.
- For pneumatic nail use, see Installation Notes on page 21 and reference MiTek's technical bulletins.

NA11
.131 x 1-1/2"



N8-GC
.131 x 1-1/2"



NA9D
.148 x 1-1/2"



N10-GC
.148 x 1-1/2"



N10C
.148 x 3"



N10C-GC
.148 x 3"



NA16D-RS
.148 x 3-1/2"



NA16D
.162 x 2-1/2"



N16C
.162 x 3-1/2"



N16C-GC
.162 x 3-1/2"



NA20D
.192 x 2-1/2"



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Continued on next page

Optional Nails for Face Mount Hangers and Straight Straps

Reductions are taken from appropriate DF value found in the load table.

Catalog Nail	Replacement Fastener[1]	Allowable Load Adjustment Factor		
		DF	SP	S-P-F
8d x 1-1/2 (0.131" x 1-1/2")	8d x 1-1/2 (0.131" x 1-1/2")	1.00	1.00	0.87
	No. 8 (0.164") x 1-1/2 Wood Screw	0.96	1.00	0.83
8d common (0.131" x 2-1/2")	8d Box (0.113" x 2-1/2")	0.77	0.83	0.67
	8d x 1-1/2 (0.131" x 1-1/2")	1.00	1.00	0.87
	No. 8 (0.164") x 1-1/2 Wood Screw	0.96	1.00	0.83
10d x 1-1/2 (0.148" x 1-1/2")	8d x 1-1/2 (0.131" x 1-1/2")	0.83	0.90	0.72
	No. 8 (0.164") x 1-1/2 Wood Screw	0.80	0.87	0.69
10d common (0.148" x 3")	8d Box (0.113" x 2-1/2")	0.64	0.69	0.55
	10d Sinker (0.120" x 2-7/8")	0.71	0.76	0.61
	8d common (0.131" x 2-1/2")	0.83	0.90	0.72
	10d Box (0.128" x 3")	0.80	0.87	0.69
	8d x 1-1/2 (0.131" x 1-1/2")	0.83	0.90	0.72
	10d x 1-1/2 (0.148" x 1-1/2")	1.00	1.00	0.87
	10d x 2-1/2 (0.148" x 2-1/2")	1.00	1.00	0.87
	16d Sinker (0.148" x 3-1/4")	1.00	1.00	0.87
	No. 8 (0.164") x 1-1/2 Wood Screw	0.80	0.87	0.69
12d common (0.148" x 3-1/4")	10d x 1-1/2 (0.148" x 1-1/2")	1.00	1.00	0.87
	16d Sinker (0.148" x 3-1/4")	1.00	1.00	0.87
	No. 8 (0.164") x 1-1/2 Wood Screw	0.80	0.87	0.69
16d common (0.162" x 3-1/2'')	8d common (0.131" x 2-1/2")	0.70	0.76	0.61
	10d Box (0.128" x 3")	0.67	0.73	0.58
	10d common (0.148" x 3")	0.84	0.91	0.73
	12d common (0.148" x 3-1/4")	0.84	0.91	0.73
	10d x 1-1/2 (0.148" x 1-1/2")	0.84	0.91	0.73
	10d x 2-1/2 (0.148" x 2-1/2")	0.84	0.91	0.73
	10d Sinker (0.120" x 2-7/8")	0.60	0.65	0.52
	16d Box (0.135" x 3-1/2")	0.74	0.80	0.65
	16d Sinker (0.148" x 3-1/4")	0.84	0.91	0.73
	16d x 2-1/2 (0.162" x 2-1/2")	1.00	1.00	0.86
	No. 8 (0.164") x 1-1/2 Wood Screw	0.67	0.73	0.58

1) No. 8 x 1-1/2 Wood Screw shall conform to ANSI/ASME Standard B18.6.1-1981.
2) Reductions for slant nail hangers (HUS, JDS, JH, JPF, JUS, MSH, MUS or THDH) are only applicable when full length joist/slant nails are used.

How to Use:

The base value is the catalog listed nail in Douglas Fir-Larch and the adjustment factor is the multiplier for the applicable replacement nail and wood combination.

- Adjustment factors may vary with some custom hangers or steel thicker than 10 gauge. Contact MiTek for exceptions.
- Roofing nails shall not be substituted for any nail size or type.

⚠ Optional Nails Example:

JL210 – listed load is 1650 lbs. @ 100% for 10d common nails.

If substituting:
8d common nails with DF-L or LVL:
1650 lbs. x .83 = 1369 lbs.

8d common nails with SP:
1650 lbs. x .90 = 1485 lbs.

8d common nails with S-P-F:
1650 lbs. x .72 = 1188 lbs.

No further reductions are required.

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Nail Specification Table

Finish[3,7]	Size	MiTek Stock No.[7]	Ref. No.	Dimensions (in)		Nails Per Lb.	DF/SP Allowable Shear per Nail (Lbs.)[1,2,4,5] Steel Gauge									Withdrawal Load (Lbs/in)[6]	Corrosion Finish
				Nail Diameter	Length		3	7	10	12	14	16	18	20	22		
HDG	8d x 1-1/2	NA11	N8	0.131	1-1/2	152	--	--	--	--	--	98	96	95	95	31	
	10d x 1-1/2	NA9D	N10	0.148	1-1/2	100	--	--	147	133	122	118	116	115	114	35	
	10d Common	N10C	10DHDG	0.148	3	70	--	161	147	133	122	118	116	115	114	36	
	16d x 2-1/2	NA16D	N16, N16EG	0.162	2-1/2	66	194	193	169	155	144	140	138	137	--	39	
	16d Common	N16C	16DHDG	0.162	3-1/2	48	194	193	169	155	144	140	138	137	--	39	
	20d x 2-1/2	NA20D	--	0.192	2-1/2	41	234	220	196	181	171	--	--	--	--	46	
GC	8d x 1-1/2	N8-GC	--	0.131	1-1/2	152	--	--	--	--	--	98	96	95	95	31	
	10d x 1-1/2	N10-GC	--	0.148	1-1/2	118	--	--	147	133	122	118	116	115	114	35	
	10d Common	N10C-GC	--	0.148	3	70	--	161	147	133	122	118	116	115	114	36	
	16d Common	N16C-GC	--	0.162	3-1/2	48	194	193	169	155	144	140	138	137	--	39	
SS[8]	8d x 1-1/2	SSNA8D	SSN8	0.131	1-1/2	147	--	--	--	--	--	98	96	95	95	31	
	10d x 1-1/2	SSNA10D	SSN10	0.148	1-1/2	126	--	--	147	133	122	118	116	115	114	24	
	8d Common	SSN8C	SS8D	0.131	2-1/2	94	--	--	--	--	102	98	96	95	95	21	
	10d Common	SSN10C	SS10D	0.148	3	67	--	161	147	133	122	118	116	115	114	24	
	16d Common	SSN16C	SS16D	0.162	3-1/2	44	194	193	169	155	144	140	138	137	--	26	
Bright	8d Common	8d Common	--	0.131	2-1/2	126	--	--	--	--	102	98	96	95	95	32	
	10d Common	10d Common	--	0.148	3	70	--	161	147	133	122	118	116	115	114	36	
	16d Sinker	16d Sinker	--	0.148	3-1/4	60	162	161	147	133	122	118	116	115	--	36	
	16d Ring Shank	NA16D-RS	--	0.148	3-1/2	57	183	180	158	--	--	--	--	--	--	36	
	16d Common	16d Common	--	0.162	3-1/2	48	194	193	169	155	144	140	138	137	--	40	
	20d Common	20d Common	--	0.192	4	29	234	220	196	181	171	--	--	--	--	47	

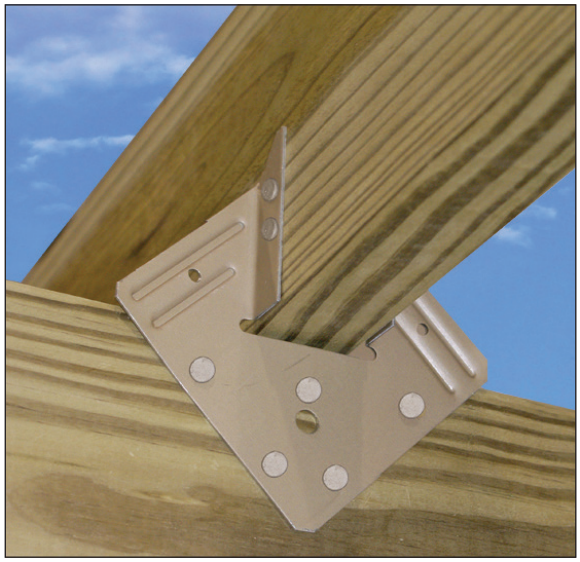
1) Loads are calculated to specifications of Part 12 of the National Design Specifications for Wood Construction (NDS®), 2018 Edition.
2) Loads apply to Douglas Fir (G=0.50) and Southern Pine (G=0.55). For Spruce-Pine-Fir (G=0.42) multiply above values by 0.86. For other wood types refer to NDS or consult MiTek.
3) HDG = Hot-Dip Galvanized; SS = Stainless Steel; GC = Gold Coat; Bright = No Finish.
4) For 3 gauge steel with Fu=58,000 psi and 7 gauge thru 22 gauge steel with Fu=55,000 psi. Shear values assumes full penetration of at least 10 nail diameters.
5) Fastener values may be increased for duration of load.
6) Withdrawal loads are in pounds (lbs) per linear inch of embedment into main member.
7) Bright finish common and sinker nails are listed in table for reference only. MiTek does not stock these type nails.
8) Stainless steel 8d x 1-1/2 nails are ring shank. Other stainless steel nail sizes in table are smooth shank, and withdrawal values are in accordance with Table 12.2D of the 2018 NDS.

Corrosion Finish Key
Stainless Steel · Gold Coat · HDG · Triple Zinc

Minimum Fastener Penetration Table

Nail Penny	Wire Gauge	Shank Diameter (in)	Minimum Penetration for Full Shear Load (in)	Minimum Penetration for Reduced Shear Load[1] (in)
6d	11-1/2	.113	1.13	0.68
8d	10-1/4	.131	1.31	0.79
10d	9	.148	1.48	0.89
12d	9	.148	1.48	0.89
16d Sinker	9	.148	1.48	0.89
16d	8	.162	1.62	0.97
20d	6	.192	1.92	1.15

1) For penetration less than this distance, the nail has no value.
2) Penetrations are derived according to the NDS.



Reduced Fastener Penetration Example (See table above):

HD210 (Min) – listed load is 1540 lbs. @ 100% for 16d common nails.

Reduced HD210 capacity if using a 2x DF-L or SP header:

$$\frac{1540 \text{ lbs.} \times 1.5}{1.62} = 1425 \text{ lbs. @ } 100\%$$

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Round Holes:
Always fill all (normal-size) round nail holes, unless otherwise noted.

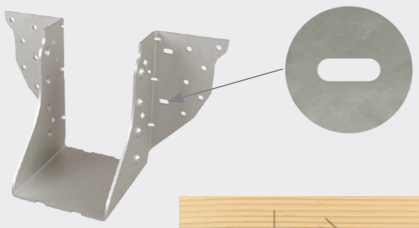


Diamond Holes:
Optional nailing for maximum listed capacity or for temporary hanger fastening during installation.

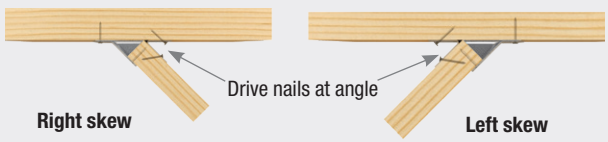
When there are **MIN** and **MAX** values:
MIN: fill all round nail holes
MAX: fill all round and diamond holes

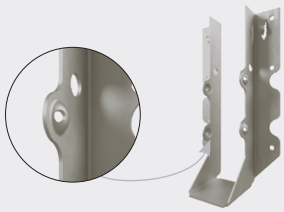


Large Round Holes:
For concrete/masonry installation; no need to be filled when connected to wood. Large round holes may be used for manufacturing which do not require a fastener. Verify fastener schedule in catalog.

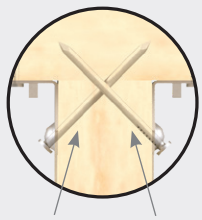


Obround Holes:
For ease of nailing at a tight location; always fill.

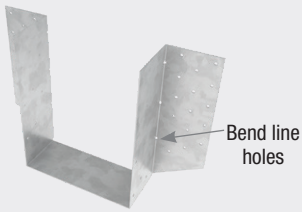


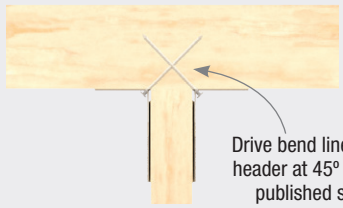


Dimple Holes:
Guide double shear nails into the joist and header at a 30° to 45° angle

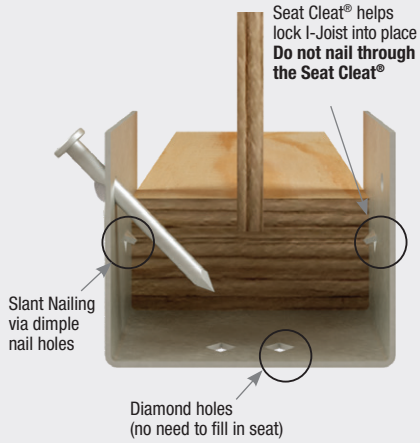


Use specified standard length common nails. 16d common and 10d common nails are 3-1/2"and 3" long respectively.





Typical I-Joist Nailing



Common Nailing Errors



Wrong Angle
When a nail is driven into the bottom flange of the wood I-Joist parallel to the glue lines, separation of veneers can occur which substantially reduces the design loads of the connection.



Nail Too Long
When using nails longer than MiTek's recommended nails, bottom flange splitting may occur. Also, this can raise the wood I-Joist off the seat, resulting in uneven surfaces and squeaky floors along with reduced design load.

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WS Hex Head Interior Structural Wood Screws

The WS Wood Screw is a self-drilling screw used for numerous interior framing applications. For use in wood-to-wood and steel-to-wood applications. Head stamped to indicate length for easy inspection.



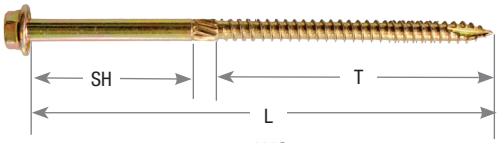
Features and Benefits:

- No predrilling
- Type 17 point reduces installation torque and splitting
- 3/8" Hex Drive
- Length identification stamps on all WS heads
- 1/4" shank diameter, 0.54" head diameter

Materials: 1/4" diameter Grade 5 steel
Finish: Yellow Zinc
Codes: IBC, FL, LA

Installation:

- Screws are self-drilling.
- Install using a low speed clutch drill with 3/8" hex head driver. The washer head should be flat to the surface and the serrations will oppose turning and release the clutch. Do not over-tighten the screws.
- Care should be given to ensure the fastener is installed perpendicular to the plane of the side plate.



WS
(Yellow Zinc finish)



Specification Table

Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in) L	SH	T	Finish[1]	DF/SP Allowable Loads (Lbs.)[2,4] Shear (100%) Wood-to-Wood[3]	Steel-to-Wood Gauge 14	10	7	3	Withdrawal Capacity (Lbs/in of thread) 100%	Steel-to-Wood Withdrawal Capacity (Lbs.)[5] 100%	S-P-F Allowable Loads (Lbs.)[2,4] Shear (100%) Wood-to-Wood[3]	Steel-to-Wood Gauge 14	10	7	3	Withdrawal Capacity (Lbs/in. of thread 100%	Steel-to-Wood Withdrawal Capacity (Lbs.)[5] 100%	Code Ref.
1/4 x 1-1/2	WS15	--	1-1/2	1/4	1-1/4	Zinc	--	230	261	259	266	164	206	--	188	211	190	217	103	129	
1/4 x 2	WS2	--	2	1/4	1-3/4	Zinc	--	306	307	289	316	160	281	--	215	244	249	248	117	204	
1/4 x 2-1/2	WS25	--	2-1/2	1/4	2	Zinc	--	362	352	338	369	199	398	--	256	292	286	294	141	281	
1/4 x 3	WS3	--	3	3/4	2	Zinc	268	418	396	387	457	199	398	227	297	340	322	365	141	281	IBC,
1/4 x 3-1/2	WS35	--	3-1/2	3/4	2-1/2	Zinc	398	451	460	454	481	208	520	311	338	380	356	370	154	385	FL,
1/4 x 4-1/2	WS45	--	4-1/2	1-1/4	3	Zinc	415	516	588	589	531	214	642	364	421	460	425	379	163	489	LA
1/4 x 5	WS5	--	5	1-3/4	3	Zinc	415	516	588	589	531	214	642	364	421	460	425	379	163	489	
1/4 x 6	WS6	--	6	1-3/4	4	Zinc	415	516	588	589	531	214	856	364	421	460	425	652	163	489	
1/4 x 8	WS8	--	8	4-3/4	3	Zinc	415	516	588	589	531	214	642	364	421	460	425	379	163	489	

1) Zinc = Yellow Zinc Dichromate.
2) Allowable shear loads assume a side plate tensile strength of 45 ksi for 14 gauge and 10 gauge, 52 ksi for 7 gauge and 58 ksi for 3 gauge.
3) Shear loads for wood-to-wood connections assume a side member thickness of 1-1/2".
4) Loads are for 100% duration of load factors, and may be increased for other duration factors in accordance with the NDS.
5) Withdrawal loads for steel-to-wood connections assume a side plate thickness of 1/4" or less.

Packaging Table

Use	Size (in)	Retail Box Offering MiTek Stock No.	Retail Box Offering Box/Ctn Qty	Mini Bulk Offering MiTek Stock No.	Mini Bulk Offering Box/Ctn Qty	Bulk Offering MiTek Stock No.	Bulk Offering Box/Ctn Qty
Interior for wood-to-wood connections	1/4 x 1-1/2	WS15-R25	12-pack/25-ea	WS15-MB	3-box/300-ea	WS15-BP	1500-ea
	1/4 x 2	WS2-R25	12-pack/25-ea	WS2-MB	3-box/250-ea	WS2-BP	1300-ea
	1/4 x 2-1/2	WS25-R25	12-pack/25-ea	WS25-MB	3-box/200-ea	WS25-BP	1100-ea
	1/4 x 3	WS3-R25	12-pack/25-ea	WS3-MB	3-box/150-ea	WS3-BP	950-ea
	1/4 x 3-1/2	WS35-R10	12-pack/10-ea	WS35-MB	3-box/125-ea	WS35-BP	900-ea
	1/4 x 4-1/2	WS45-R10	12-pack/10-ea	WS45-MB	3-box/100-ea	WS45-BP	800-ea
	1/4 x 5	WS5-R10	12-pack/10-ea	WS5-MB	3-box/100-ea	WS5-BP	500-ea
	1/4 x 6	WS6-R10	12-pack/10-ea	WS6-MB	3-box/100-ea	WS6-BP	600-ea
	1/4 x 8	WS8-R10	12-pack/10-ea	--	--	WS8-BP	400-ea

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WSWH Washer Head Interior Structural Wood Screws

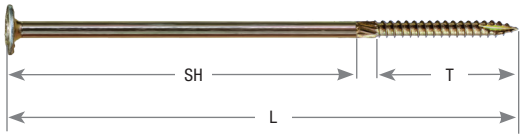
The MiTek Washer Head is the ideal screw for interior Multi-Ply EWP and dimensional wood connections. The specific lengths of the WSWH allow for one-sided connections on multi-ply beams and girder trusses.



Features and Benefits:
- No predrilling
- Flat head style allows for less interference after installation
- Type 17 point reduces installation torque and splitting
- T30* drive eliminates cam-out
- Nibs under head seat head flush to wood surface
- Length identification stamps on all WSWH heads
- 1/4" shank diameter, 0.75" head diameter

Materials: 1/4" diameter Grade 5 steel
Finish: Yellow Zinc
Codes: IBC, FL, LA

Installation:
- For best results, install the MiTek Washer Head using a high torque, 1/2" variable speed drill.
- Bring the washer portion of head flush to the surface of the wood. **Do not overdrive.**



WSWH
(Yellow Zinc finish)



Specification Table

Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in) L	SH	T	Finish[1]	DF/SP Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	DF/SP Wood-to-Wood Withdrawal[3] 100%	SPF Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	SPF Wood-to-Wood Withdrawal[3] 100%	LVL Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	LVL Wood-to-Wood Withdrawal[3] 100%	Code Ref.
Wood-to-Wood Connections													
1/4 x 2-7/8	WSWH278	SDW22300	2-7/8	5/8	2	Zinc	268	274	227	194	--	--	IBC, FL, LA
1/4 x 4-1/2	WSWH45	SDW22458	4-1/2	2-1/4	2	Zinc	415	398	364	282	358	382	
1/4 x 5	WSWH5	SDW22500	5	2-3/4	2	Zinc	415	398	364	282	358	382	
1/4 x 6	WSWH6	SDW22600	6	3-3/4	2	Zinc	415	398	364	282	358	382	
Multi-Ply EWP Connections													
1/4 x 3-3/8	WSWH338	SDW22338	3-3/8	1-1/8	2	Zinc	398	373	311	264	319	310	IBC, FL, LA
1/4 x 5	WSWH5	SDW22500	5	2-3/4	2	Zinc	415	398	364	282	358	382	
1/4 x 6-3/4	WSWH634	SDW22634	6-3/4	4-1/2	2	Zinc	415	398	364	282	358	382	
Multi-Ply Dimensional Connections													
1/4 x 2-7/8	WSWH278	SDW22300	2-7/8	5/8	2	Zinc	268	274	227	194	--	--	IBC, FL, LA
1/4 x 4-1/2	WSWH45	SDW22458	4-1/2	2-1/4	2	Zinc	415	398	364	282	358	382	
1/4 x 6	WSWH6	SDW22600	6	3-3/4	2	Zinc	415	398	364	282	358	382	
1/4 x 6-3/8	WSWH638	SDW22638	6-3/8	4-1/8	2	Zinc	415	398	364	282	358	382	

1) Zinc = Yellow Dichromate.
2) Shear and withdrawal loads for wood-to-wood connections assume a side member thickness of 1-1/2" for DF/SP and SPF allowable loads and 1-3/4" for LVL allowable loads.
3) Withdrawal loads are derived from the minimum of head pull through tests and withdrawal capacity of threaded portion in main member.
4) Load are for 100% duration of load, and may be increased for the other duration factors in accordance with the NDS.

Packaging Table

Use	Size (in)	50-count Pack[1] MiTek Stock No.	50-count Pack[1] Box/Ctn Qty	Mini Bulk Offering[1] MiTek Stock No.	Mini Bulk Offering[1] Box/Ctn Qty	Bulk Offering[1] MiTek Stock No.	Bulk Offering[1] Box Qty
Interior for Multi-Ply EWP & Multi-Ply Truss Girders	1/4 x 2-7/8	WSWH278-R50	5-box/50-ea	--	--	WSWH278-BP	500-ea
	1/4 x 3-3/8	WSWH338-R50	5-box/50-ea	WSWH338-MB	200-ea	--	--
	1/4 x 4-1/2	WSWH45-R50	5-box/50-ea	--	--	WSWH45-BP	400-ea
	1/4 x 5	WSWH5-R50	5-box/50-ea	WSWH5-MB	200-ea	--	--
	1/4 x 6	WSWH6-R50	5-box/50-ea	--	--	WSWH6-BP	300-ea
	1/4 x 6-3/8	WSWH638-R50	5-box/50-ea	--	--	WSWH638-BP	300-ea
	1/4 x 6-3/4	WSWH634-R50	5-box/50-ea	WSWH634-MB	200-ea	--	--

1) T30* drive is included in packaging.

* T30 is a trademark of Acument

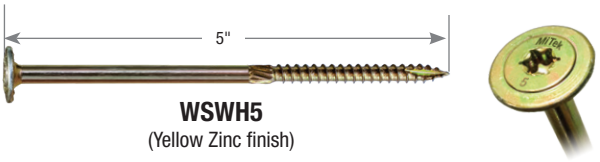
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Attaching 2x Ledger-to-Wall Studs Application

MiTek's WSWH Washer Head Structural Wood Screw can be used to attach a ledger to studs directly, through 1/2" APA rated sheathing or through one or two layers of 5/8" gypsum wallboard (drywall). Screws are to be installed into the wide face of the single 2x ledger, through the gypsum board and into the center of the narrow face of the 2x stud.

Installation:

- Ledger design to be performed by a certified design professional.
- Locate studs in wall where ledger is to be installed.
- Install MiTek's WSWH5 structural wood screws through ledger and 5/8" gypsum wallboard into wall framing using a T30* drive.
- Follow the minimum edge distance guidelines in images shown below.
- Wall design must be performed by certified design professional.
- Care should be taken to install the ledger only where studs are plumb and free of any defects.
- **WSWH45 should be used when no gypsum wallboard is present.**



WSWH5
(Yellow Zinc finish)

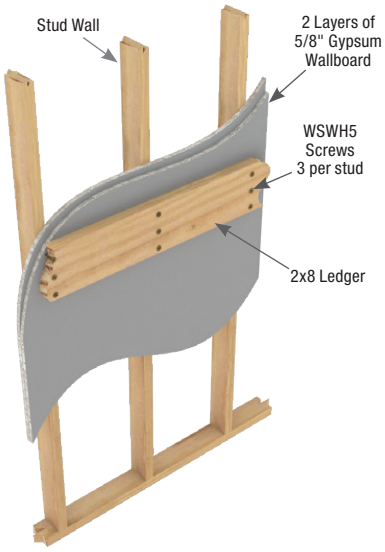


WSWH45
(Exterior Coat finish)

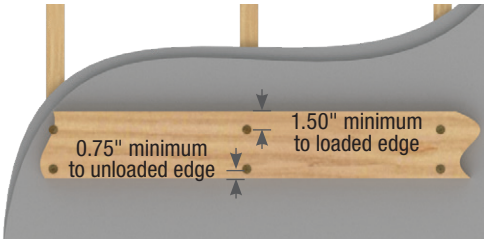
MiTek Stock No.		Ledger Size[9]	Number of Screws per Stud[4,8]	Allowable Shear Per Stud (Lbs.)[2,5,6,7]	
Zinc Finish[1]	EXT Finish[1]			DF/SP SG ≥ 0.50	S-P-F/HF 0.42 ≤ SG < 0.50
WSWH45 WSWH5	WSWH45-EXT WSWH5-EXT	2x6	2	520	455
		2x8 or 2x10	3	860	750
		2x12	4	1040	900

1) Zinc = Yellow Zinc Dichromate; EXT = Exterior Coat.
2) Allowable loads are based on DF or equivalent wood members with a specific gravity ≥ 0.50, or SPF/HF members with specific gravity in the following range: 0.42 ≤ SG < 0.50.
3) Gypsum board must be attached per building code requirements.
4) Screws must be installed in the center of the 2x stud, with a tolerance of 3/16" to either side. Minimum loaded end distance for the stud is 3" and 6" when loaded away from the end. Ledger end distance must be 6" or greater for full values. For ledger end distances between 2" and 6" use 50% of the load table, for end distance between 2" and 4" predrill with a 5/32" bit.
5) The values above can be used when designing a ledger connection with (1) or (2) layers of 5/8" gypsum board, a direct connection with no gypsum between the ledger and studs, or a ledger connection with a single layer of APA rated 1/2" OSB.
6) Allowable loads are shown above at a load duration factor of C_D = 1.00. Loads may be increased where applicable to the current NDS. When in-service moisture content is greater than 19%, use C_M = 0.70.
7) For LRFD values, the values above should be adjusted in accordance with the 2018 NDS, Section 11.3.
8) Main members (stud) shall be loaded parallel to grain with a minimum penetration of 2-1/4" while side members (ledger) shall be loaded perpendicular to grain with a minimum penetration of 1-1/2".

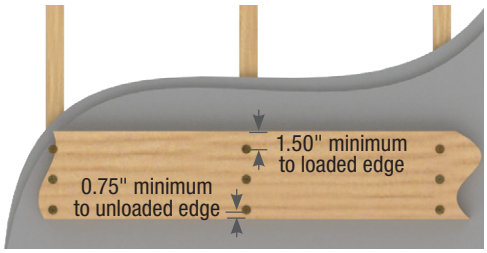
* T30 is a trademark of Acument



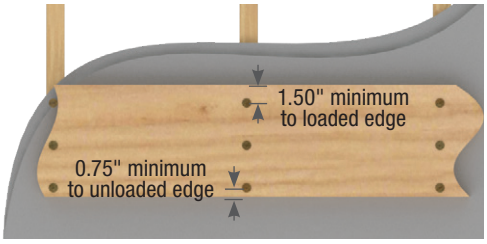
Typical 2x8 Ledger attached through 2 layers of 5/8" Gypsum Wallboard installation



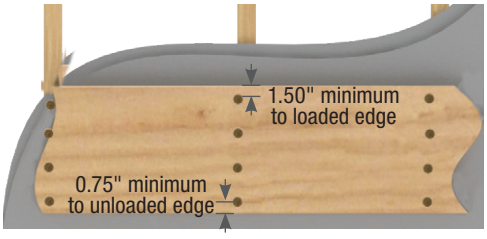
2x6 Detail



2x8 Detail



2x10 Detail

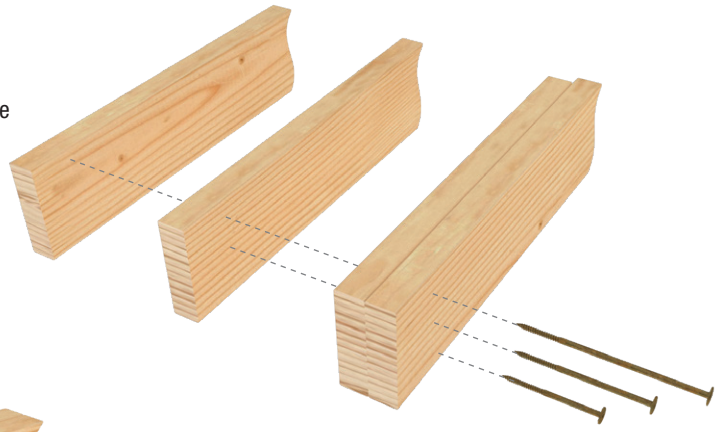


2x12 Detail

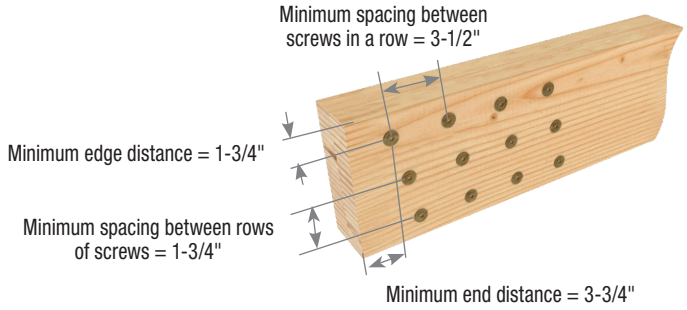
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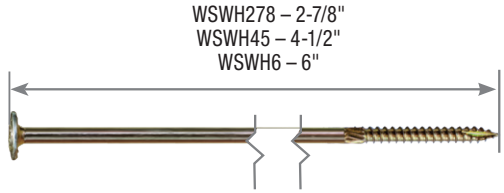
Joining Multi-Ply Dimensional Lumber Beams Application

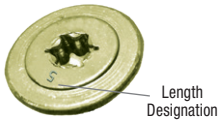
The MiTek WSWH Structural Wood Screws have been designed specifically for use in joining wood members of multiple-ply dimensional lumber beams. Using a standard 1/2'' low speed/high torque drill, install screws into the side of the outermost ply. As the threads fully engage the final ply, allow the underside of the washer head to pull the plies firmly together. Washer head will install flush with the surface of the wood, but do not overdrive as this may damage the beam. Refer to the information on page 32 for proper WSWH screw size selection and fastening pattern.



Minimum Spacing Requirements:





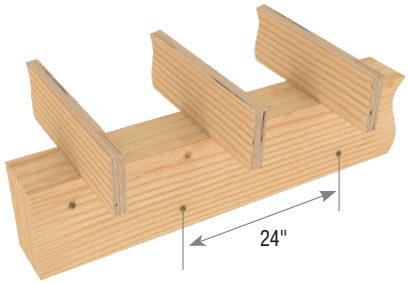


Fastener Identification

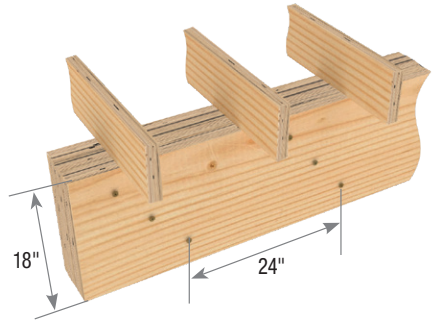
For easier selection and post installation inspection, all MiTek Structural Wood Screws carry an identifying head marking.

Top Loaded Beams

Where floor joists rest on all plies of the beam, WSWH screws should be installed in two staggered rows at 24" O.C. spacing. Maintain the minimum end and edge distance as indicated above.



For beam depths of 18" or more, this pattern should be increased to three staggered rows of WSWH screws every 24" on center.



General Guidelines:

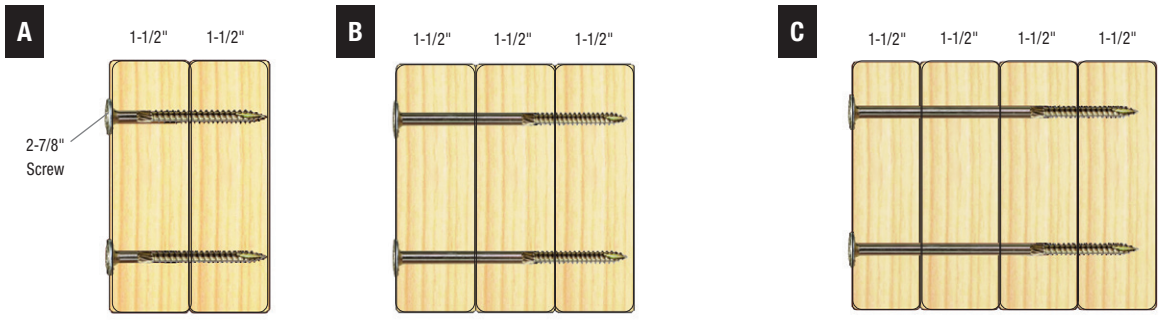
- Excessively warped or curved lumber should never be forced into alignment by use of clamps, screws or bolts as splitting may occur, potentially decreasing the carrying capacity of the beam.
- The WSWH278, WSWH45, and WSWH6 are not designed for use with engineered wood. Refer to MiTek's Joining Multi-Ply Engineered Wood (EWP) Beams Application information on page 33.
- A qualified designer or engineer should always be consulted for critical assemblies and fastening requirements.

Continued on next page

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Fastener Size Selection by Assembly Type

(2 rows shown)



WSWH278
2-7/8"

WSWH45
4-1/2"

WSWH6
6"

Side Loaded Beams

Where floor joists are joined to the side of the beam (typically using a joist hanger), this load table must be used to establish the proper pattern based on the design load as determined by the engineer and noted on the plans.

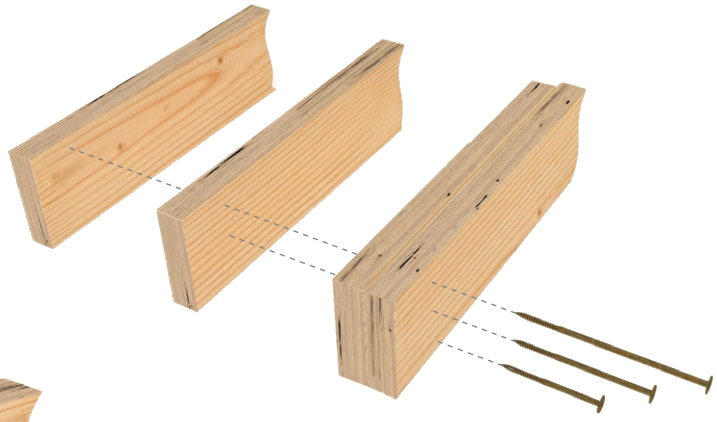
Length (in)	MiTek Stock No.	No. of Screws Vertical Column	Spacing Between Screws in a Row (in)	Allowable Uniform Load Applied to Either Outside Member by Assembly Type (lbs/lineal ft) (See Graphics) [1,2,3,4,5,6]					
				DF/SP			SPF		
				A	B	C	A	B	C
2-7/8	WSWH278	2	24	535	--	--	455	--	--
			19.2	670			570		
			16	805			680		
		3	24	805	--	--	680	--	--
			19.2	1005			850		
			16	1205			1020		
4-1/2	WSWH45	2	24	--	430	--	--	325	--
			19.2		535			410	
			16		645			490	
		3	24	--	645	--	--	490	--
			19.2		805			615	
			16		965			735	
6	WSWH6	2	24	--	--	380	--	--	290
			19.2			475			365
			16			570			435
		3	24	--	--	570	--	--	435
			19.2			715			545
			16			860			655
Head Side Multiplier [7]				1.00	1.45	1.45	1.00	1.67	1.67

1) Allowable loads are derived from tested fastener values as reported in ICC-ES ESR-2761.
2) All numbers in this table are based on Douglas Fir-Larch (DF), Southern Pine (SP), and Spruce-Pine-Fir (SPF). The DF/SP values are based on SG ≥ 0.50. The SPF values are based on 0.42 ≤ SG < 0.50.
3) The uniform loads in this table relate only to the capacity of the fastener to transfer shear loads between plies. The capacity of the beam may be less and should be verified by design professional.
4) Values listed reflect 100% load duration. (C_D=1.0) The designer may apply adjustment factors to increase or decrease these loads per the NDS based on conditions for each assembly.
5) To minimize rotation, 6" wide beams shall be side loaded only when loads are applied to both sides of the beam, with the lesser loaded side bearing at least 25% of the overall design load.
6) Load values depicted assume all uniform load is applied to the outermost ply.
7) When the uniform load is applied to the outermost ply with the screw head, listed allowable loads can be multiplied by this value.

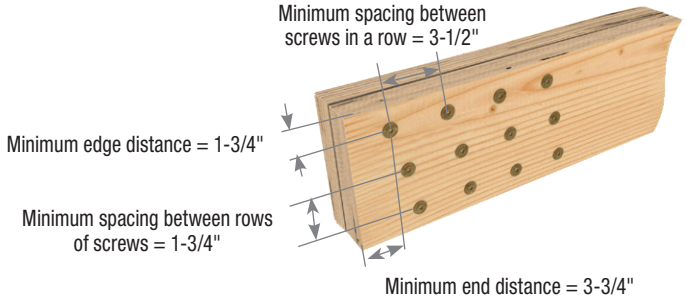
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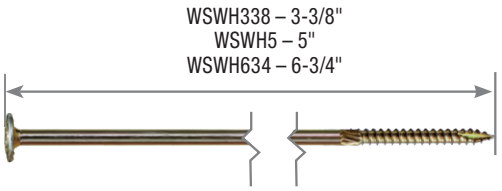
Joining Multi-Ply Engineered Wood (EWP) Beams Application

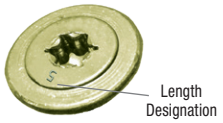
The MiTek WSWH Structural Wood Screws have been designed specifically for use in joining wood members of multiple-ply engineered wood beams (LVL, LSL & PSL). Using a standard 1/2'' low speed/high torque drill, install screws into the side of the outermost ply. As the threads fully engage the final ply, allow the underside of the washer head to pull the plies firmly together. Washer head will install flush with the surface of the wood, but do not overdrive as this may damage the beam. Refer to the information below for proper WSWH screw size selection and fastening pattern.



Minimum Spacing Requirements:





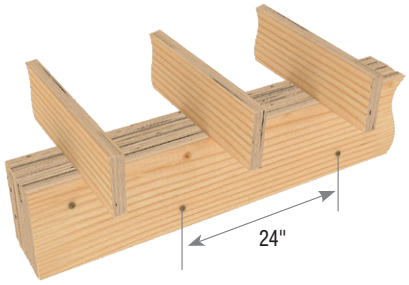


Fastener Identification

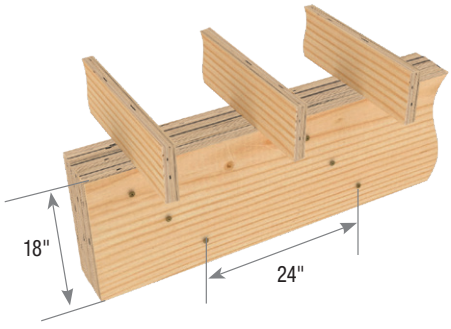
For easier selection and post installation inspection, all MiTek Wood Screws carry an identifying head marking.

Top Loaded Beams

Where floor joists rest on all plies of the beam, WSWH screws should be installed in two staggered rows at 24" O.C. spacing. Maintain the minimum end and edge distance as indicated above.



For beam depths of 18" or more, this pattern should be increased to three staggered rows of WSWH screws every 24" on center.



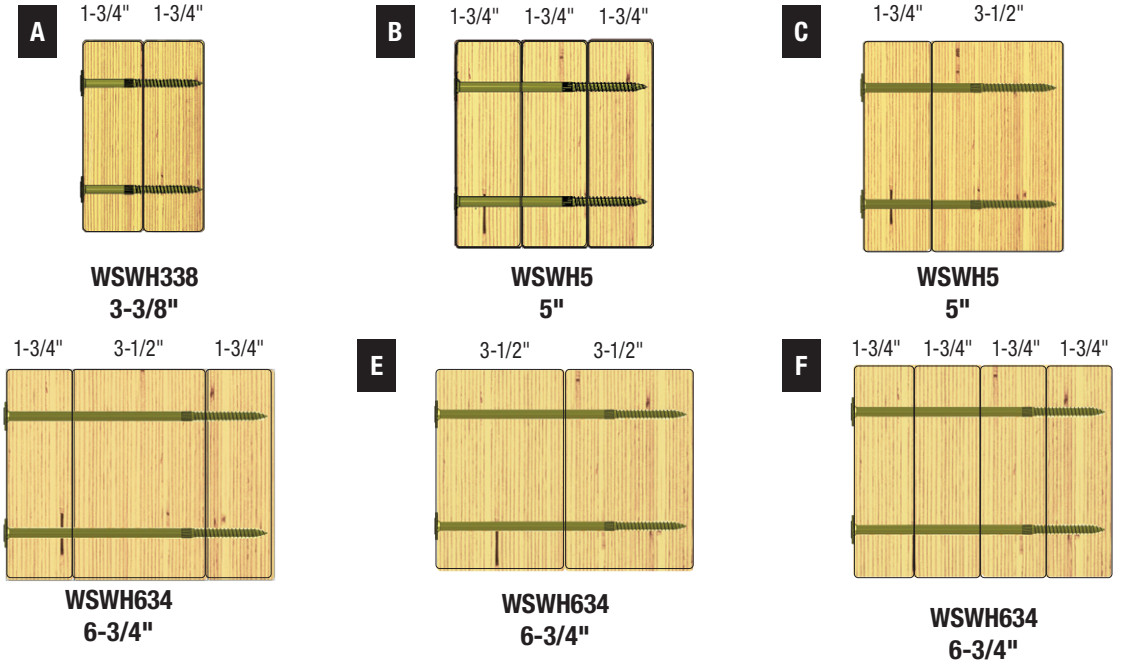
General Guidelines:

- Beams wider than 7" require special consideration by the design professional. The values on the next page do not apply.
- Excessively warped or curved LVL should never be forced into alignment by use of clamps, screws or bolts as splitting may occur, potentially decreasing the carrying capacity of the beam.
- The WSWH338, WSWH5, and WSWH634 are not designed for use with dimensional lumber. Refer to MiTek's Joining Multi-Ply Dimensional Lumber Beams Application information on page 31.
- A qualified designer or engineer should always be consulted for critical assemblies and fastening requirements.

Continued on next page

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Fastener Size Selection by Assembly Type (2 rows shown)



Side Loaded Beams

Where floor joists are joined to the side of the beam (typically using a joist hanger), this load table must be used to establish the proper pattern based on the design load as determined by the engineer and noted on the plans.

Length (in)	MiTek Stock No.	No. of Screws Vertical Column	Spacing Between Screws in a Row (in)	Allowable Uniform Load Applied to Either Outside Member by Assembly Type (lbs/lineal ft) (See Graphics) [1,2,3,4,5]											
				EWP Wood Specific Gravity G ≥ 0.50						EWP Wood Specific Gravity G ≥ 0.42					
				A	B	C	D	E	F	A	B	C	D	E	F
3-3/8	WSWH338	2	24	600	--	--	--	--	--	525	--	--	--	--	--
			19.2	755						655					
			16	905						785					
			12	1205						1050					
		3	24	905	--	--	--	--	--	785	--	--	--	--	--
			19.2	1130						985					
			16	1355						1180					
			12	1805						1570					
5	WSWH5	2	24	--	430	535	--	--	--	--	325	545	--	--	--
			19.2		535	670					410	685			
			16		645	805					490	820			
			12		860	1075					655	1090			
		3	24	--	645	805	--	--	--	--	490	820	--	--	--
			19.2		805	1005					615	1025			
			16		965	1210					735	1230			
			12		1285	1610					980	1640			
6-3/4	WSWH634	2	24	--	--	--	380	715	380	--	--	--	290	730	290
			19.2				475	895	475				365	910	365
			16				570	1075	570				435	1090	435
			12				765	1430	765				580	1455	580
		3	24	--	--	--	570	1075	570	--	--	--	435	1090	435
			19.2				715	1345	715				545	1365	545
			16				860	1610	860				655	1640	655
			12				1145	2150	1145				870	2185	870
Head Side Multiplier [6]				1.06	1.25	1	1.25	1	1.25	1.19	1.67	1	1.67	1	1.67

1) Allowable loads are derived from tested fastener values as reported in ICC-ES ESR-2761.
2) The uniform loads in this table relate only to the capacity of the fastener to transfer shear loads between plies. The equivalent specific gravity (SG) and the capacity of the EWP should be verified with manufacturer's literature.
3) Values listed reflect 100% load duration. (C_D=1.0) The designer may apply adjustment factors to increase or decrease these loads per the NDS based on conditions for each assembly.
4) Load values depicted assume all uniform load is applied to the outermost ply.
5) To minimize rotation, 7" wide beams shall be side loaded only when loads are applied to both sides of the beam with the lesser loaded side bearing at least 25% of the overall design load.
6) When the uniform load is applied to the outermost ply with the screw head, listed allowable loads can be multiplied by this value.

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WS-EXT Hex Head Exterior Structural Wood Screws

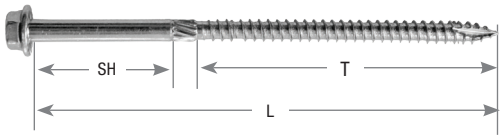
The MiTek Hex Head is the ideal screw for numerous framing applications. It can be used in wood-to-wood and steel-to-wood applications.



Features and Benefits:
- No predrilling
- Type 17 point reduces installation torque and splitting
- 3/8" hex drive
- Length identification stamps on all WS-EXT heads
- 1/4" shank diameter, 0.54" head diameter

Materials: 1/4" diameter Grade 5 steel
Finish: Exterior Coat
Codes: IBC, FL, LA

Installation:
- Screws are self-drilling.
- Install using a low speed clutch drill with 3/8" hex head driver. The washer head should be flat to the surface and the serrations will oppose turning and release the clutch. Do not over-tighten the screws.
- Care should be given to ensure the fastener is installed perpendicular to the plane of the side plate.
- Refer to page 37 for Attaching Deck Ledger to Rim Board Application.



WS-EXT
(Exterior Coat finish)



Specification Table

Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in) L	SH	T	Finish[1]	DF/SP Allowable Loads (Lbs.)[2,4] Shear (100%) Wood-to-Wood[3]	Steel-to-Wood Gauge 14	10	7	3	Withdrawal Capacity (Lbs/in. of thread) 100%	Steel to Wood Withdrawal Capacity (Lbs.)[5] 100%	S-P-F Allowable Loads (Lbs.)[2,4] Shear (100%) Wood-to-Wood[3]	Steel-to-Wood Gauge 14	10	7	3	Withdrawal Capacity (Lbs/in. of thread 100%	Steel to Wood Withdrawal Capacity (Lbs.)[5] 100%	Corrosion Finish	Code Ref.
1/4 x 1-1/2	WS15-EXT	SDS25112	1-1/2	1/4	1-1/4	EXT	--	230	261	259	266	164	206	--	188	211	190	217	103	129		IBC, FL, LA
1/4 x 2	WS2-EXT	SDS25200	2	1/4	1-3/4	EXT	--	306	307	289	316	160	281	--	215	244	249	248	117	204		
1/4 x 2-1/2	WS25-EXT	SDS25212	2-1/2	1/4	2	EXT	--	362	352	338	369	199	398	--	256	292	286	294	141	281		
1/4 x 3	WS3-EXT	SDS25300	3	3/4	2	EXT	268	418	396	387	457	199	398	227	297	340	322	365	141	281		
1/4 x 3-1/2	WS35-EXT	SDS25312	3-1/2	3/4	2-1/2	EXT	398	451	460	454	481	208	520	311	338	380	356	370	154	385		
1/4 x 4-1/2	WS45-EXT	SDS25412	4-1/2	1-1/4	3	EXT	415	516	588	589	531	214	642	364	421	460	425	379	163	489		
1/4 x 5	WS5-EXT	SDS25500	5	1-3/4	3	EXT	415	516	588	589	531	214	642	364	421	460	425	379	163	489		
1/4 x 6	WS6-EXT	SDS25600	6	1-3/4	4	EXT	415	516	588	589	531	214	642	364	421	460	425	379	163	489		
1/4 x 8	WS8-EXT	SDS25800	8	4-3/4	3	EXT	415	516	588	589	531	214	642	364	421	460	425	379	163	489		

1) EXT = Exterior Coat.
2) Allowable shear loads assume a side plate tensile strength of 45 ksi for 14 gauge and 10 gauge, 52 ksi for 7 gauge and 58 ksi for 3 gauge.
3) Shear loads for wood-to-wood connections assume a side member thickness of 1-1/2".
4) Loads are for 100% duration of load factors, and may be increased for other duration factors in accordance with the NDS.
5) Withdrawal loads for steel-to-wood connections assume a side plate thickness of 1/4" or less.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

Packaging Table

Use	Size (in)	Retail Box Offering[1] MiTek Stock No.	Box/Ctn Qty	50-count Pack[1] MiTek Stock No.	Box/Ctn Qty	Mini Bulk Offering[1] MiTek Stock No.	Box/Ctn Qty	Bulk Offering[1] MiTek Stock No.	Box Qty
Exterior for Deck Ledgers & other wood-to-wood connections	1/4 x 1-1/2	WS15-EXTR25 WS15-GCR25	10-pack/25-ea	--	--	WS15-EXTMB	2-box/200-ea	WS15-EXTBP	1500-ea
	1/4 x 2	WS2-EXTR25	10-pack/25-ea	--	--	WS2-EXTMB	2-box/200-ea	WS2-EXTBP	1300-ea
	1/4 x 2-1/2	WS25-EXTR25	10-pack/25-ea	--	--	WS25-EXTMB	2-box/200-ea	WS25-EXTBP	1100-ea
	1/4 x 3	WS3-EXTR25	10-pack/25-ea	WS3-EXTR50	5-box/50-ea	WS3-EXTMB	200-ea	WS3-EXTBP	950-ea
	1/4 x 3-1/2	WS35-EXTR12	10-pack/12-ea	WS35-EXTR50	5-box/50-ea	WS35-EXTMB	200-ea	WS35-EXTBP	900-ea
	1/4 x 4-1/2	WS45-EXTR12	10-pack/12-ea	WS45-EXTR50	5-box/50-ea	WS45-EXTMB	200-ea	WS45-EXTBP	800-ea
	1/4 x 5	WS5-EXTR12	10-pack/12-ea	WS5-EXTR50	5-box/50-ea	WS5-EXTMB	200-ea	WS5-EXTBP	600-ea
	1/4 x 6	WS6-EXTR12	10-pack/12-ea	WS6-EXTR50	5-box/50-ea	WS6-EXTMB	200-ea	WS6-EXTBP	500-ea
	1/4 x 8	WS8-EXTR12	10-pack/12-ea	WS8-EXTR50	5-box/50-ea	WS8-EXTMB	200-ea	--	--

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WSWH-EXT Washer Head Structural Exterior Wood Screws

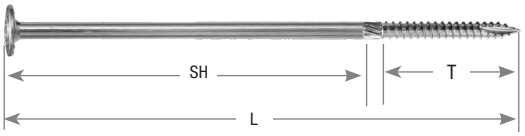
The WSWH is an ideal alternative for the Pro or DIYer to traditional lag screws and through-bolts, for installing deck ledgers and more. It is easy to install and reduces labor on the jobsite. The large, flat washer head maximizes bearing area and allows for less interference after installation.



Features and Benefits:

- No predrilling
- Flat head style allows for less interference after installation
- Type 17 point reduces installation torque and splitting
- T30* drive eliminates cam-out
- Large washer maximizes bearing area
- Nibs under head seat head flush to wood surface
- Length identification stamps on all WSWH-EXT heads
- 1/4" shank diameter, 0.75" head diameter

Materials: 1/4" diameter Grade 5 steel
Finish: Exterior Coat
Codes: IBC, FL, LA



WSWH-EXT
(Exterior Coat finish)



Installation:

- For best results, install the MiTek Washer Head using a high torque, 1/2" variable speed drill.
- Bring the washer portion of head flush to the surface of the wood. **Do not overdrive**.
- See page 37 for Attaching Deck Ledger to Rim Board Application, page 30 for Attaching 2x Ledger-to-Wall Studs Application, page 31 for Joining Multi-Ply Dimensional Lumber Beams Application and page 33 for Joining Multi-Ply Engineered Wood (EWP) Beams Application.

Specification Table

Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in) L	SH	T	Finish[1]	DF/SP Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	DF/SP Wood-to-Wood Withdrawal[3] 100%	SPF Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	SPF Wood-to-Wood Withdrawal[3] 100%	LVL Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	LVL Wood-to-Wood Withdrawal[3] 100%	Code Ref.
Deck Ledger and Other Wood-to-Wood Connections													
1/4 x 2-7/8	WSWH278-EXT	SDWS22300DB	2-7/8	5/8	2	EXT	268	274	227	194	--	--	IBC, FL, LA
1/4 x 3-5/8	WSWH358-EXT	--	3-5/8	1-3/8	2	EXT	398	398	311	282	319	358	
1/4 x 4-1/2	WSWH45-EXT	SDWS22400DB	4-1/2	2-1/4	2	EXT	415	398	364	282	358	382	
1/4 x 5	WSWH5-EXT	SDWS22500DB	5	2-3/4	2	EXT	415	398	364	282	358	382	
1/4 x 6	WSWH6-EXT	SDWS22600DB	6	3-3/4	2	EXT	415	398	364	282	358	382	
1/4 x 8	WSWH8-EXT	SDWS22800	8	5-3/4	2	EXT	415	398	364	282	358	382	

1) EXT = Exterior Coat.
2) Shear and withdrawal loads for wood-to-wood connections assume a side member thickness of 1-1/2" for DF/SP and SPF allowable loads and 1-3/4" for LVL allowable loads.
3) Withdrawal loads are derived from the minimum of head pull through tests and withdrawal capacity of threaded portion in main member.
4) Load are for 100% duration of load, and may be increased for the other duration factors in accordance the NDS.

Packaging Table

Use	Size (in)	Retail Box Offering[1] MiTek Stock No.	Retail Box Offering[1] Box/Ctn Qty	50-count Pack[1] MiTek Stock No.	50-count Pack[1] Box/Ctn Qty	Mini Bulk Offering[1] MiTek Stock No.	Mini Bulk Offering[1] Box/Ctn Qty
Exterior for Deck Ledgers & other wood-to-wood connections	1/4 x 2-7/8	WSWH278-EXTR25	10-pack/25-ea	WSWH278-EXTR50	5-box/50-ea	WSWH278-EXTMB	200-ea
	1/4 x 3-5/8	WSWH358-EXTR12	10-pack/12-ea	WSWH358-EXTR50	5-box/50-ea	WSWH358-EXTMB	200-ea
	1/4 x 4-1/2	WSWH45-EXTR12	10-pack/12-ea	WSWH45-EXTR50	5-box/50-ea	WSWH45-EXTMB	200-ea
	1/4 x 5	WSWH5-EXTR12	10-pack/12-ea	WSWH5-EXTR50	5-box/50-ea	WSWH5-EXTMB	200-ea
	1/4 x 6	WSWH6-EXTR12	10-pack/12-ea	WSWH6-EXTR50	5-box/50-ea	WSWH6-EXTMB	200-ea
	1/4 x 8	WSWH8-EXTR12	10-pack/12-ea	WSWH8-EXTR50	5-box/50-ea	WSWH8-EXTMB	200-ea

1) T30* drive is included in packaging.

* T30 is a trademark of Acument

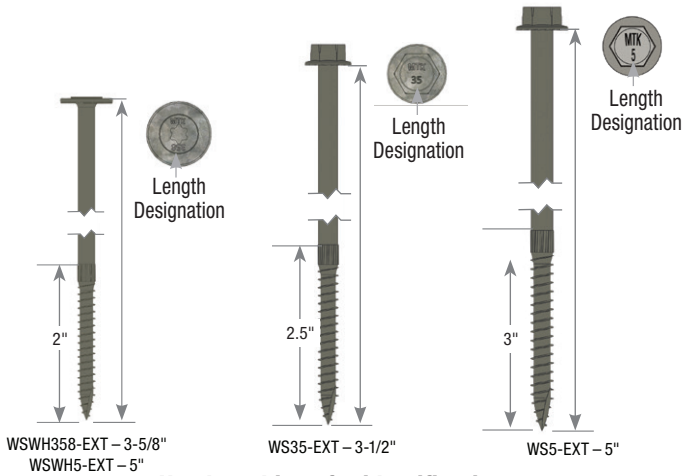
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Attaching Deck Ledger to Rim Board Application

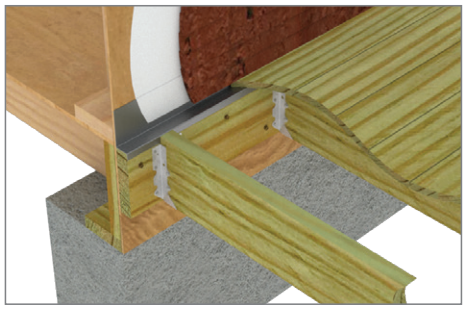
The MiTek WS structural wood screws can be used to fasten deck ledgers to the rim board (AKA band/rim joist) of structures to meet the connection requirements of the International Residential Building Code (IRC). Both the standard hex head (WS-EXT) and washer head (WSWH-EXT) styles may be used for this purpose. Table R507.9.1.3(1) of the 2021 IRC calls out lag screws for deck ledger attachment and the WS-EXT and WSWH-EXT may be used in place of the lag screws.

Installation:

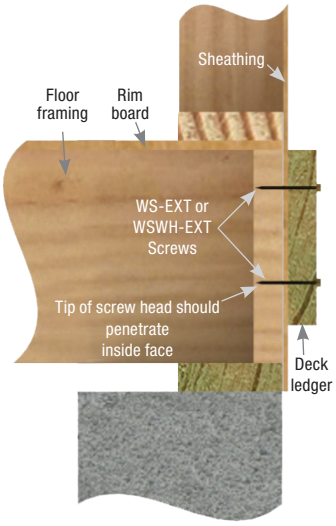
1. Select the proper MiTek's WS-EXT or WSWH-EXT screw length. The threads should have full engagement with the rim board with the tip of the screw protruding and visible beyond the inside face of the rim board member. See **Section View** image.
2. With appropriate screw length selected, drive the screw through the ledger, sheathing, and rim board with a high torque variable speed drill.
3. Drive screw so head is firm and flush with surface of deck ledger, but do not overdrive.
4. Repeat these steps and install the appropriate number of screws at the prescribed edge, end distance, and spacing as called out in the table below and **Figure 1**.



Head markings for identification



Perspective view



Section view

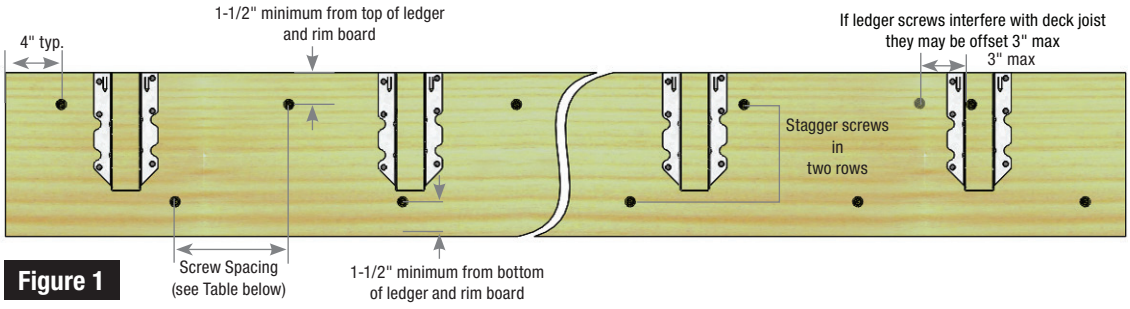


Figure 1

MiTek Stock No.	Ledger	Live Load	Rim Board	Spacing between WS-EXT / WSWH-EXT Screws based on Joist Span (in)						
				≤ 6-ft	≤ 8-ft	≤ 10-ft	≤ 12-ft	≤ 14-ft	≤ 16-ft	≤ 18-ft
WS35-EXT WSWH358-EXT	DF-L / SP / SPF	40 psf	1-1/2" Solid Sawn	23	17	13	11	10	8	7
			1" Min EWP	22	16	12	11	9	7	7
WS5-EXT WSWH5-EXT	DF-L / SP / SPF	60 psf	1-1/2" Solid Sawn	16	12	9	7	7	5	5
			1" Min EWP	15	11	8	7	6	5	5

1) Numbers are based on use of 3-1/2", 3-5/8" and 5" length screws.
2) Screw spacing based on requirements of 2021 IRC Section R507.9.1.3 and Table R507.9.1.3.(1) and equivalent spacing of 1/2" diameter lag bolts. Stagger screws into 2 rows.
3) Multiple ledger plies should be fastened together to act as one unit independent of the WS-EXT or WSWH-EXT ledger attachment screws.
4) Solid Sawn Rim Board shall be Douglas Fir-Larch (DF-L), Southern Pine (SP), or Spruce-Pine-Fir (SPF), G ≥ 0.42.
5) 5" length screw shall be used for all 2 ply 2x ledger members.

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WSBH-EXT Bugle Head Structural Exterior Wood Screws

The WSBH is a multi-purpose structural wood screw ideal for a low profile appearance in wood-to-wood connections. This structural wood screw allows the installer or DIYer to drive the head flush or countersink it below the wood surface. The WSBH is easy to install and a high strength alternative to traditional lags, bolts and pole barn nails.



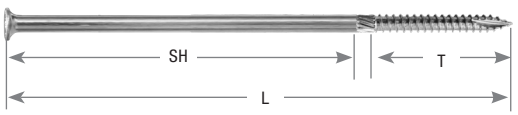
Features and Benefits:

- No predrilling
- Comparable to 1/2" Lag Screw
- Low profile head style can be driven flush or countersunk
- Type 17 point reduces installation torque and splitting
- T30* drive eliminates cam-out
- Length identification stamps on all WSBH-EXT heads
- 1/4" shank diameter, 0.46" head diameter

Materials: 1/4" diameter Grade 5 steel
Finish: Exterior Coat
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

- For best results, install the MiTek Bugle Head using a high torque, 1/2" variable speed drill. Bring the washer portion of head flush to the surface of the wood or countersink.



WSBH-EXT
(Exterior Coat finish)



Specification Table

Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in) L	SH	T	Finish[1]	DF/SP Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	DF/SP Wood-to-Wood Withdrawal[3] 100%	SPF Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	SPF Wood-to-Wood Withdrawal[3] 100%	LVL Allowable Loads (Lbs.)[2,4] Wood-to-Wood Shear 100%	LVL Wood-to-Wood Withdrawal[3] 100%	Code Ref.
1/4 x 2-1/2	WSBH25-EXT	--	2-1/2	1/4	2	EXT	179	199	151	141	--	--	IBC, FL, LA
1/4 x 4	WSBH4-EXT	--	4	1-3/4	2	EXT	315	282	246	208	252	339	
1/4 x 6	WSBH6-EXT	--	6	3-3/4	2	EXT	328	282	288	208	283	339	
1/4 x 8	WSBH8-EXT	--	8	5-3/4	2	EXT	328	282	288	208	283	339	
1/4 x 10	WSBH10-EXT	--	10	7-3/4	2	EXT	328	282	288	208	283	339	

1) EXT = Exterior Coat.
2) Shear and withdrawal loads for wood-to-wood connections assume a side member thickness of 1-1/2" for DF/SP and SPF allowable loads and 1-3/4" for LVL allowable loads.
3) Withdrawal loads are derived from the minimum of head pull through tests and withdrawal capacity of threaded portion in main member.
4) Load are for 100% duration of load, and may be increased for the other duration factors in accordance the NDS.

Packaging Table

Use	Size (in)	Retail Box Offering[1] MiTek Stock No.	Retail Box Offering[1] Box/Ctn Qty	50-count Pack[1] MiTek Stock No.	50-count Pack[1] Box/Ctn Qty	Mini Bulk Offering[1] MiTek Stock No.	Mini Bulk Offering[1] Box/Ctn Qty
Exterior for General Purpose wood-to-wood connections	1/4 x 2-1/2	WSBH25-EXTR25	10-pack/25-ea	WSBH25-EXTR50	5-box/50-ea	WSBH25-EXTMB	2-box/200-ea
	1/4 x 4	WSBH4-EXTR12	10-pack/12-ea	WSBH4-EXTR50	5-box/50-ea	WSBH4-EXTMB	200-ea
	1/4 x 6	WSBH6-EXTR12	10-pack/12-ea	WSBH6-EXTR50	5-box/50-ea	WSBH6-EXTMB	200-ea
	1/4 x 8	WSBH8-EXTR12	10-pack/12-ea	WSBH8-EXTR50	5-box/50-ea	WSBH8-EXTMB	200-ea
	1/4 x 10	WSBH10-EXTR12	10-pack/12-ea	WSBH10-EXTR50	5-box/50-ea	WSBH10-EXTMB	200-ea

1) T30* drive is included in packaging.

* T30 is a trademark of Acument

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The LumberLok Exterior Structural Connector Screw is a self-drilling screw that can be used with a number of MiTek connectors and also for wood-to-wood applications. The screws feature a T20* drive head with integral washer and gimlet point for ease of installation. The twin-lead threads drive in twice as fast as the single lead threads significantly reducing installation time. The MiTek head stamp identifies the screw length for easy inspection.

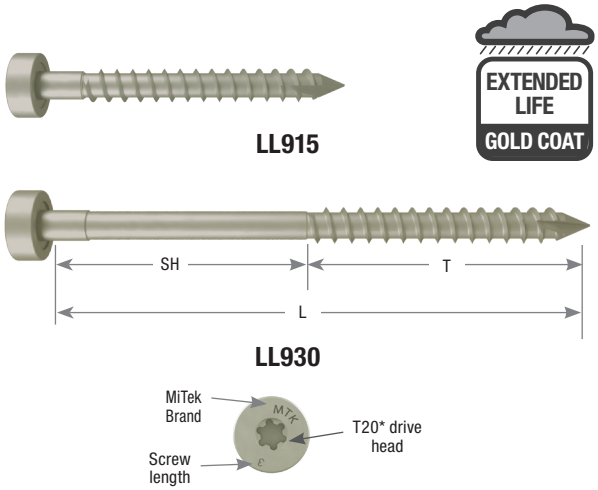
Screw shear capacities are based on a diameter of 0.162" when the shear plane is on the screw shank (SH) and 0.109" when the shear plane is on the threads (T). MiTek LumberLok Exterior Structural Connector Screws have a bending yield strength of 170,000 psi.



Materials: Low carbon hardened steel
Finish: Gold Coat
Codes: IBC, FL, LA

Installation:

- Screws are self-drilling.
- Install using a low speed clutch drill with T20* drive (not included). The washer head should be flat to the surface. Do not over-tighten the screws.
- Installing the screw at an angle may introduce additional bending and tension forces into the fastener if the screw head is not flat to the bearing surface. Care should be given to ensure the fastener is installed perpendicular to the plane of the fastener hole.
- **Impact drivers are not recommended for use with LumberLok Screws**
- Reference list of MiTek connectors compatible with LumberLok screws on page 40.



Specification Table

Size	MiTek Stock No.	Ref. No.	Dimensions (in)			Finish[1]	DF/SP Allowable (Lbs.)[2,5]				S-P-F Allowable (Lbs.)[2,5]				Code Ref.
							Shear Capacity			Withdrawal Capacity[3]	Shear Capacity			Withdrawal Capacity[3]	
			L	SH	T		Wood-to-Wood[4]	Steel-to-Wood 18 Ga	Steel-to-Wood 16 Ga		Wood-to-Wood[4]	Steel-to-Wood 18 Ga	Steel-to-Wood 16 Ga		
#9 x 1-3/8	LL915-GC	SD9112	1-3/8	1/4	1-1/8	GC	--	105	130	120	--	105	105	110	IBC, FL, LA
#9 x 2-7/8	LL930-GC	SD9212	2-7/8	1-3/8	1-1/2	GC	105	165	165	150	100	140	140	150	

1) GC = Gold Coat over Clear Zinc Trivalent.
2) Allowable shear loads assume a side plate tensile strength of 45 ksi.
3) Withdrawal loads are for steel-to-wood connections and assume a side plate thickness of 1/4" or less.
4) Shear loads for wood-to-wood connections assume a side member thickness of 1-1/2".
5) Loads are for 100% duration of load factors and may be increased for other duration factors in accordance with the NDS.

Packaging Table

Use	Size (in)	Retail Box Offering		100-count Pack	
		MiTek Stock No.	Box/Ctn Qty	MiTek Stock No.	Box/Ctn Qty
Exterior for Deck & other wood-to-wood connections	#9 x 1-3/8"	LL915-GCR50	50-pack/20-ea	LL915-GCR100	100-pack/10-ea
	#9 x 2-7/8"	LL930-GCR50	50-pack/20-ea	LL930-GCR100	100-pack/10-ea

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* T20 is a trademark of Acument

Continued on next page

Common Deck Connectors that are Compatible with LumberLok Connector Screws

This is not a complete list of MiTek connectors that are compatible with LumberLok Connector Screws. Most connectors that are installed with nails can also be installed with LumberLok Connector Screws. For the connectors shown below, the catalog allowable design values will not change when installed with MiTek's LumberLok Connector Screws shown.



LL915



LL930



MiTek Stock No.	LumberLok Screw LL915 Qty	LumberLok Screw LL930 Qty
Angles / Framing Plates		
AC5-TZ	--	6
AC7-GC	--	8
AC7-TZ	--	8
AC9-TZ	--	10
MPA1-GC	12	--
MPA1-TZ	12	--
MP34-TZ	8	--
MP4F-TZ	12	--
MP3-TZ	--	6
MP5-TZ	--	8
MP7-TZ	--	10
MP9-TZ	--	12
SDPT5-TZ	5	--
SDPT7-TZ	5	--
Hangers		
ADTT-TZ	10	--
CSH-TZ	10	--
JUS24-GC	--	6
JUS24-TZ	--	6
JUS24-2TZ	--	6
JUS26-GC	--	8
JUS26-TZ	--	8

MiTek Stock No.	LumberLok Screw LL915 Qty	LumberLok Screw LL930 Qty
Hangers		
JUS26-2GC	--	8
JUS26-2TZ	--	8
JUS28-GC	--	10
JUS28-TZ	--	10
JUS28-2TZ	--	10
JUS28-3TZ	--	10
JUS210-GC	--	12
JUS210-TZ	--	12
JUS210-2GC	--	14
JUS210-2TZ	--	14
JUS210-3TZ	--	14
JUS44-TZ	--	6
JUS46-TZ	--	8
JUS48-TZ	--	10
JUS410-TZ	--	14
SKH26L/R-TZ	6	6
SKH28L/R-TZ	8	10
SKH210L/R-GC	10	14
SKH210L/R-TZ	10	14
SKH210L/R-2TZ	--	24
Column / Post Caps		
PB44-6GC	--	16

MiTek Stock No.	LumberLok Screw LL915 Qty	LumberLok Screw LL930 Qty
Column / Post Caps		
PB44-6TZ	--	16
PB66-6GC	--	16
PB66-6TZ	--	16
PBES44-TZ	--	16
PBES66-TZ	--	16
Column / Post Bases		
PAU44-TZ	--	12
PAU46-TZ	--	12
PAU66-TZ	--	12
PAU88-TZ	--	14
Hurricane Ties		
RT3A-TZ	8	--
RT4-TZ	8	--
RT5-TZ	8	--
RT7-TZ	10	--
RT7A-GC	10	--
RT7A-TZ	10	--
RT8A-TZ	10	--
RT15-GC	10	--
RT15-TZ	10	--
RT16A-TZ	9	8
RT16-2TZ	16	--

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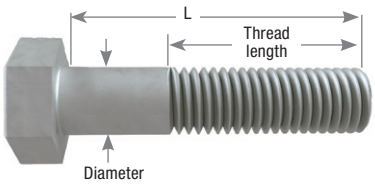
For customer convenience, we offer a wide range of bolts specified for the MiTek product line. Each bolt is shipped with two washers and one hex nut.

Materials: Bolts and nuts are standard hex head conforming to ASTM A 307 Grade A or SAE Grade 2 or better. Washers conform to American National Standard Type A plain steel, ANSI B.22.1.

Finish: Zinc plated

Installation:

- For installation into connectors in general, install with both washers unless otherwise directing in this catalog.



Bolt Specification Table

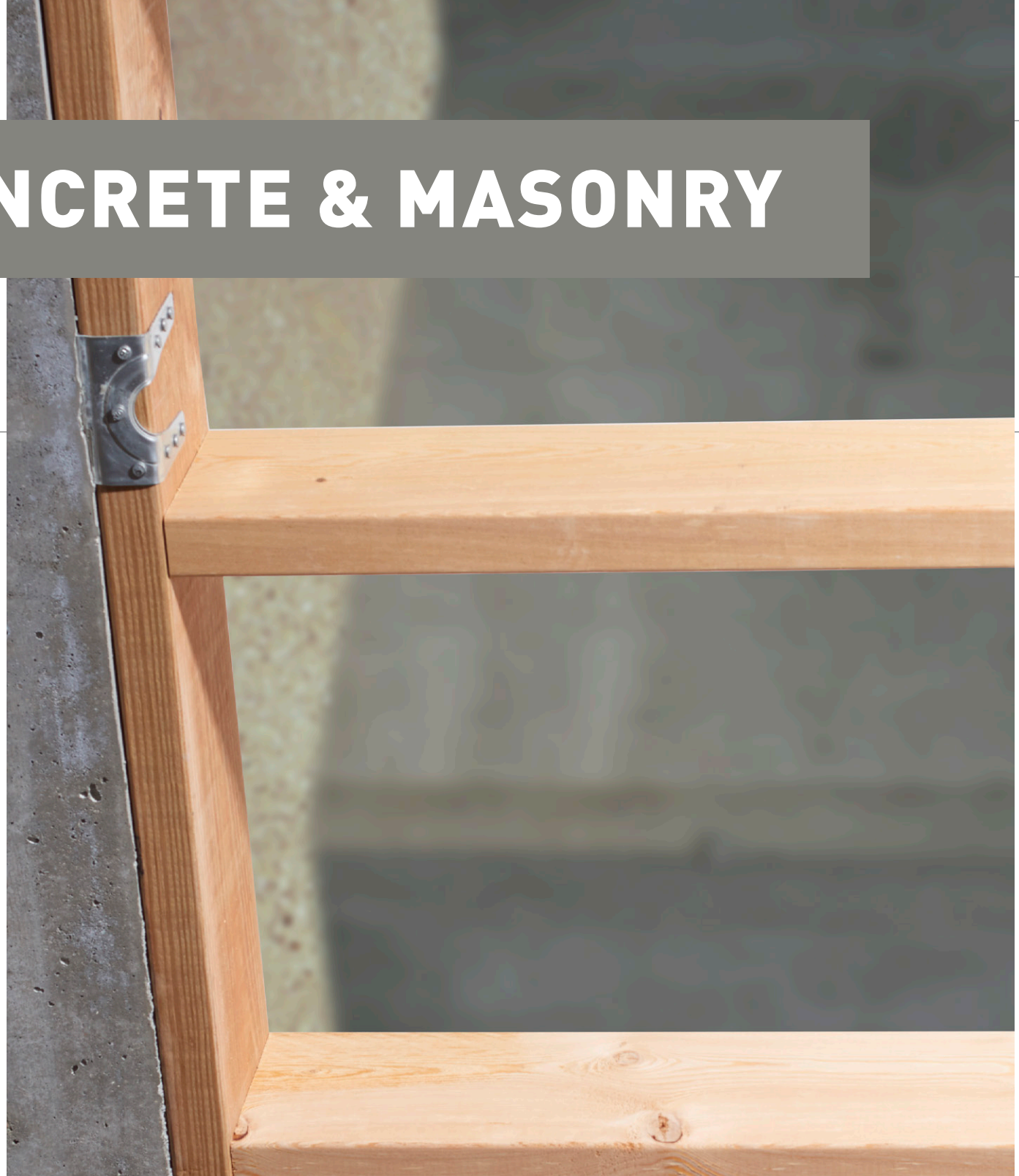
MiTek Stock No.	Description Dia. x L (in)	Thread Length (in)
B384	3/8 x 4	1
B125	1/2 x 5	1-1/4
B126	1/2 x 6	1-1/4
B127	1/2 x 7	1-1/2
B128	1/2 x 8	1-1/2
B583	5/8 x 3	1-1/2
B584	5/8 x 4	1-1/2
B585	5/8 x 5	1-1/2
B586	5/8 x 6	1-1/2
B587	5/8 x 7	1-3/4
B588	5/8 x 8	1-3/4
B589	5/8 x 9	1-3/4
B5810	5/8 x 10	1-3/4
B343	3/4 x 3	1-3/4
B344	3/4 x 4	1-3/4
B345	3/4 x 5	1-3/4
B346	3/4 x 6	1-3/4
B347	3/4 x 7	2
B348	3/4 x 8	2
B349	3/4 x 9	2
B3410	3/4 x 10	2
B3411	3/4 x 11	2
B785	7/8 x 5	2
B786	7/8 x 6	2
B787	7/8 x 7	2-1/4
B788	7/8 x 8	2-1/4
B7810	7/8 x 10	2-1/4
B103	1 x 3	2-1/4
B104	1 x 4	2-1/4
B105	1 x 5	2-1/4
B106	1 x 6	2-1/4
B107	1 x 7	2-1/2
B108	1 x 8	2-1/2

Metric Conversion

Bolt Diameter Conversion	
Inches	Millimeters
3/8	9.50
1/2	12.70
5/8	15.90
3/4	19.10
7/8	22.20
1	25.40
1-1/8	28.58
1-1/4	31.75

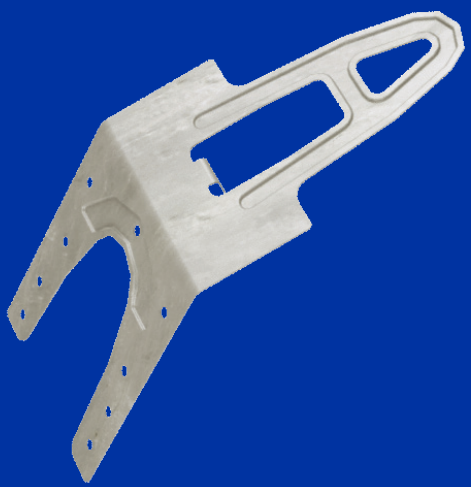
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CONCRETE & MASONRY



MiTek®

CONCRETE & MASONRY	42-59
Retro Connectors	44-45
Foundation Anchors	46-50
Retro Plates	46
Anchor Bolts	51-53
Bearing Plates	53
Threaded Rods	54-55
Anchor Rod Chairs	55
Hex Nuts	56
Concrete Form Ties & Wedge	56
Coupler Nuts	57
Washers	57
Hangers	58
Beam Seats	59



SRC Sill Retrofit Connector

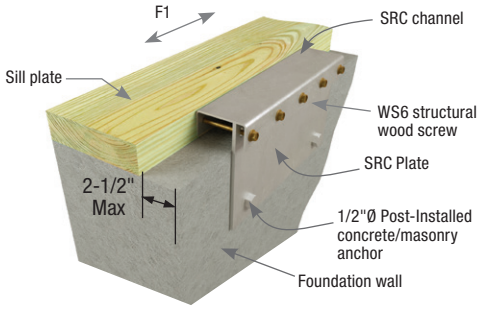
The SRC Sill Retrofit Connector has been engineered as a ductile retrofit for older buildings in high seismic zone regions that require additional reinforcement. It can be installed where there is minimal space between the floor framing and top of the foundation wall. The SRC can also be used to reinforce buildings in high velocity wind zones.

The two-piece design easily adjusts to foundations of varying thickness and can also be used where the sill plate may not be parallel to the face of the foundation wall.

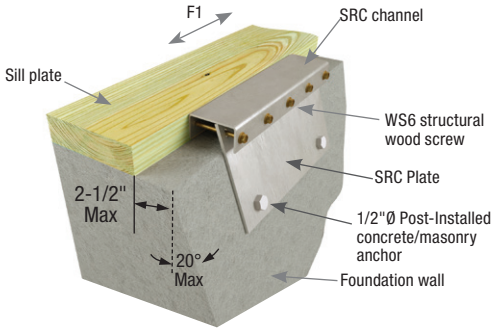
Materials: Channel - 12 gauge, Plate - 10 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

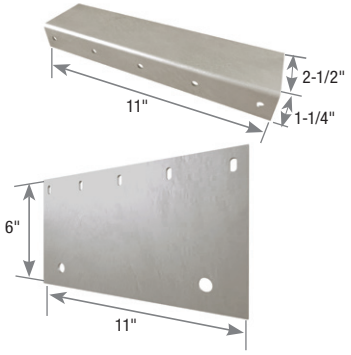
- Install the required fasteners according to the table.
- MiTek's WS6 structural wood screws are supplied with each SRC connector.
- **Contact Customer Service for offsets more than 2-1/2".**



Typical SRC installation on rectangular foundation

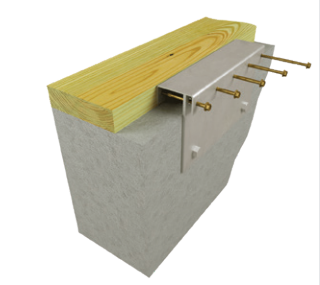


Typical SRC installation on trapezoidal foundation

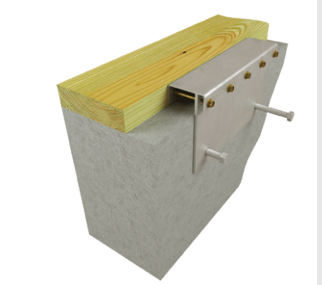


SRC components

Recommended Installation Sequence



1) Install 5 - WS6 structural wood screws



2) Drill and install concrete anchors

MiTek Stock No.	Ref. No.	Components	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Maximum Spacing to Replace 1/2" or 5/8" Anchor Bolt	Fastener Schedule: Concrete[3,4] Qty	Concrete[3,4] Dia.	Sill Plate[2] Qty	Sill Plate[2] Type	DF/SP Allowable Load (Lbs.)[1] F1 160%	Code Ref.
SRC	URFP	Channel	12	11	1-1/4	6'	2	1/2	5	WS6	1405	IBC, FL, LA
		Plate	10	11	6							

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS6 structural wood screws are 1/4" dia. x 6" long and are included with each connector.
3) Use 1/2" dia. Power-Stud® anchors with minimum 3" embedment or equivalent.
4) Minimum concrete strength f'c = 2,500 psi.

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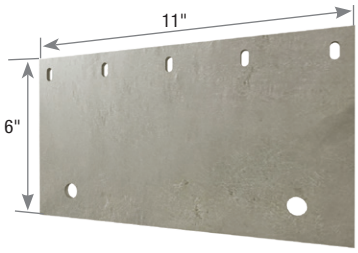
MiTek's SRCP Sill Retrofit Connector Plate is designed as a retrofit sill-to-foundation connection that can be installed where there is minimal space between the floor framing and top of the foundation wall. The economical design is targeted for use in seismic regions and yet is also suitable for use as a supplementary connection in high wind areas.

The SRCP Sill Retrofit Connector Plate can be installed without shims anywhere the face of the sill plate is within 1/2" of the face of the foundation wall.

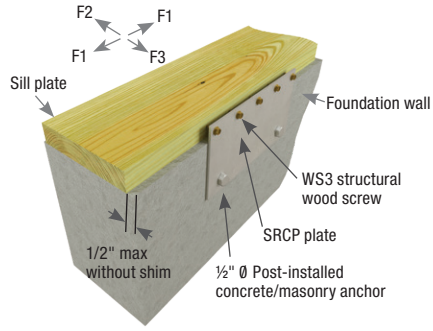
Materials: 10 gauge
Finish: G90 galvanizing
Codes: See table for code references

Installation:

- Install the required fasteners according to the table.
- For sill plate setbacks from 1/2" to 1-1/2", install a wood shim (a minimum of 15" long) tight against the sill plate and flush with the foundation wall. **See Figure 3**.
  Note: For any installations with a sill plate setback, a shim plate is required to transfer load in the F3 direction.
- Install the five MiTek WS3 structural wood screws (included) in the slotted holes of the SCRP plate, thru the shim (if applicable) and into the sill plate. MiTek's WS3 structural wood screws should be installed 3/4" above the bottom of the sill plate (i.e. centered in the narrow face for a 2x sill).
- Drill and install two 1/2" diameter Power-Stud® anchors (or equivalent) into the foundation wall. See manufacturer's literature for proper installation of post-installed anchors.

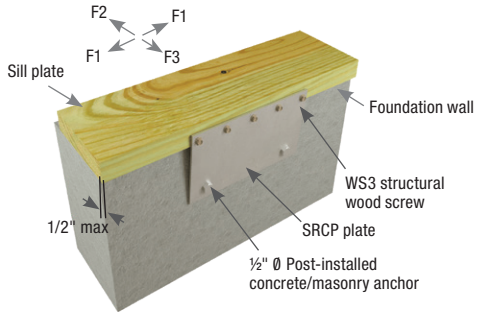


SRCP



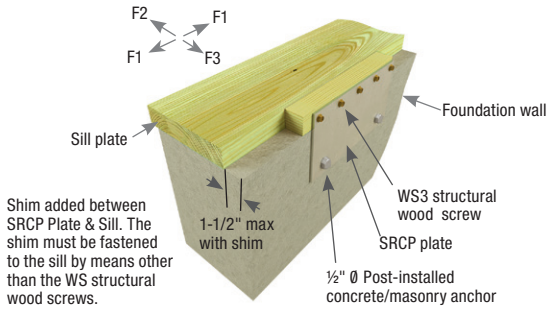
Typical SRCP installation without shim, 1/2" max setback

Figure 1



Typical SRCP installation without shim, 1/2" max overhang

Figure 2



Typical SRCP installation with shim, 1-1/2" max setback

Figure 3

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Maximum Spacing to Replace 1/2" or 5/8" Anchor Bolt	Fastener Schedule: Concrete[3,4] Qty	Concrete[3,4] Dia.	Sill Plate[2] Qty	Sill Plate[2] Type	Installation Type	DF/SP Allowable Load (Lbs.)[1] F1 160%	F2 160%	F3 160%	Code Ref.
SRCP	FRFP	10	11	6	6'	2	1/2	5	WS3	Figure 1	1560	360	--	--
										Figure 2	1560	--	360	
										Figure 3 [5]	1560	360	360	IBC, FL, LA

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with each SRCP connector.
3) Use 1/2" diameter Power-Stud® anchors with minimum 3" embedment or equivalent.
4) Minimum concrete strength f'c = 2,500 psi.
5) The shim must be fastened to the sill by means other than MiTek's WS3 structural wood screws.

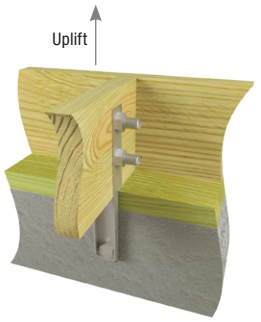
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SFJA Foundation Anchor

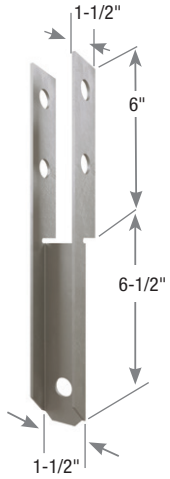
The SFJA ties floor joists directly to foundations with bolt fastening.

Materials: 12 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- A design professional must specify anchor bolt type, length, and embedment. Anchor bolts are laterally loaded. Follow installation instructions for epoxy adhesive.



Typical SFJA installation



SFJA

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule				DF/SP Allowable Loads (Lbs.)[1]	Code Ref.
			Anchor Bolts		Framing Bolts[2]			
			Qty	Dia.	Qty	Dia.	Uplift 160%	
SFJA	FJA	12	1	5/8	2	5/8	1305	--

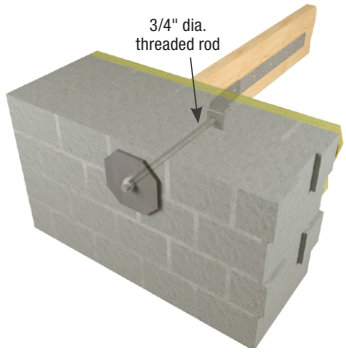
1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) All bolts shall meet or exceed the specifications of ASTM A 307.
3) Fasteners shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar or reinforced concrete (f'c = 2,500 psi at 28 days).

RP Retro Plate

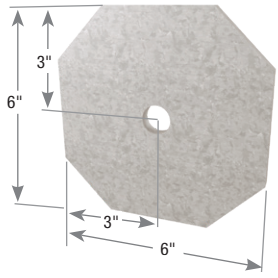
Uses heavy gauge HRPO steel and a large surface area to distribute seismic forces on masonry exteriors.

Materials: 3/8" plate
Finish: Primer
Options: See table for Corrosion Finish Options

Installation:
- Install with a 3/4" diameter steel threaded rod.



Typical RP6 installation



RP6

MiTek Stock No.	Ref. No.	Corrosion Finish	Code Ref.
RP6	RP6		--

Corrosion Finish Key Stainless Steel | Gold Coat | HDG | Triple Zinc

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MiTek's FWAN-TZ Foundation Wall Anchor is designed to transfer in-plane and out-of-plane foundation wall loads imposed by soil through the joist/blocking into the floor diaphragm. The unique design allows for installations that straddle the joist/blocking eliminating bending stresses in the rim board that result from offset installations.

The FWAN-TZ offers two methods of installation:

1. Centered Installation

- Compatible with joist/blocking up to 3-1/2" wide
- Highest load capacities for transfer of out-of-plane loads into floor framing
- Rim board splices allowed anywhere along the wall

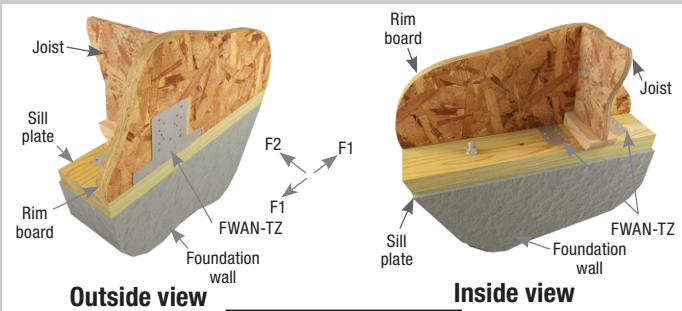
2. Offset Installation

- Installs in the space between the joists/blocking
- Out-of-plane loads are transferred thru the rim board into the floor framing
- Offsets up to 4"

Materials: 16 gauge
Finish: G-185 galvanizing
Codes: IBC, FL, LA

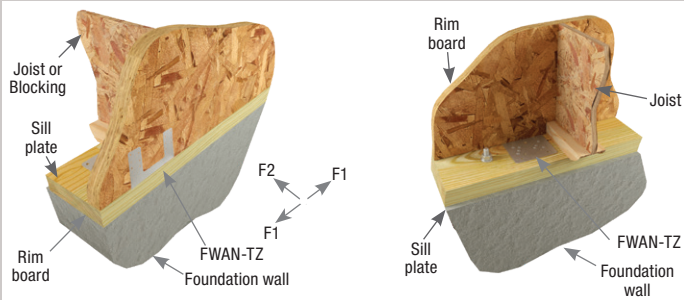
Installation:

- Install the required fasteners according to the table.
- **Centered Installation** – Fill only triangle holes when nailing to the rim board.
- **Offset Installation –** Fill only diamond holes when nailing to the rim board.
- FWAN-TZ must be installed tight to the outside face of the rim board.
- Minimum sill plate thickness is 1-1/2".
- Offset Installations require that the FWAN-TZ be installed within 4" of the joist/blocking.
- For Offset Installations, install with two narrow tabs against rim board. Splices in the rim board are not permitted in the space between the joists/blocking where the FWAN-TZ is installed.
- The designer must specify the anchor bolt size, spacing and embedment necessary to transfer the foundation loads into the sill plate. Stresses in the sill plate must be considered when determining the maximum spacing of the anchor bolts.



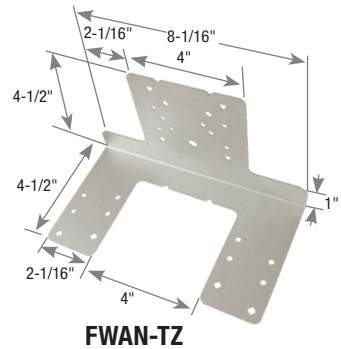
Centered Installation

Typical FWAN-TZ centered on joist/blocking



Offset Installation

Typical FWAN-TZ offset max 4" from joist/blocking



FWAN-TZ

MiTek Stock No.	Ref. No.	Sill Plate	Fastener Schedule[6] Sill Plate Qty	Sill Plate Type	Rim Board Qty	Rim Board Type	Rim Board Material	DF/SP Allowable Load (Lbs.)[1,2] F1[3,4] 90%	F1 100%	F1 160%	F2[3,4] 90%	F2 100%	F2 160%	Hem-Fir Allowable Load (Lbs.)[1,2] F1[3,4] 90%	F1 100%	F1 160%	F2[3,4] 90%	F2 100%	F2 160%	Corrosion Finish	Code Ref.
Centered on Joist/Blocking																					
FWAN-TZ	FWANZ	2x4, 2-2x4, 3x4, 4x4	8	10d x 1-1/2 HDG	4	10d x 1-1/2 HDG	1-1/8" OSB	415	415	415	915	1000	1070	330	330	330	800	855	855		IBC, FL, LA
							2x Rim	455	500	525	915	1000	1385	420	420	420	800	870	1110		
							1-3/4" LVL	455	500	525	915	1000	1385	420	420	420	800	870	1110		
		2x6, 2-2x6, 3x6, 4x6	12	10d x 1-1/2 HDG	4	10d x 1-1/2 HDG	1-1/8" OSB	415	415	415	1370	1500	1475	330	330	330	1180	1180	1180		
							2x Rim	455	500	525	1370	1500	1660	420	420	420	1200	1310	1330		
							1-3/4" LVL	455	500	525	1370	1500	1660	420	420	420	1200	1310	1330		
Offset from Joist Blocking (Max Offset 4")																					
		2x4, 2-2x4, 3x4, 4x4	8	10d x 1-1/2 HDG	4	10d x 1-1/2 HDG	1-1/8" OSB	415	415	415	525	525	525	330	330	330	420	420	420		
							2x Rim	455	500	525	915	995	995	420	420	420	795	795	795		
							1-3/4" LVL	455	500	525	915	995	995	420	420	420	795	795	795		
		2x6, 2-2x6, 3x6, 4x6	12	10d x 1-1/2 HDG	4	10d x 1-1/2 HDG	1-1/8" OSB	415	415	415	525	525	525	330	330	330	420	420	420		
							2x Rim	455	500	525	995	995	995	420	420	420	795	795	795		
							1-3/4" LVL	455	500	525	995	995	995	420	420	420	795	795	795		

1) Allowable loads have been reduced 10% for permanent sustained loads, no further reduction is required.
2) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) F1 loads are parallel to the sill plate.
4) F2 loads are perpendicular toward the sill plate.
5) The designer must specify the type, size and spacing of fasteners connecting the sill plate to the foundation wall.
6) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

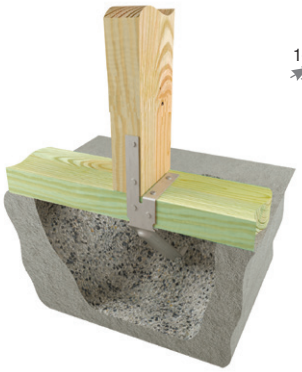
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For installation into concrete slabs and stemwalls. The FA3 features a split flange for nailing to both mudsill and stud for greater framing versatility.

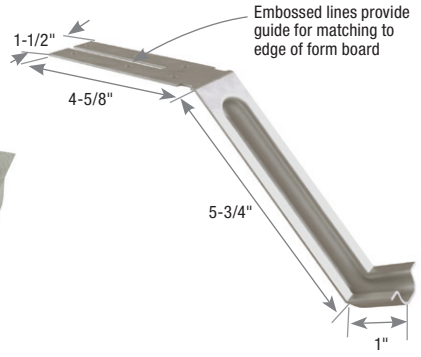
Materials: 16 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references

Installation:

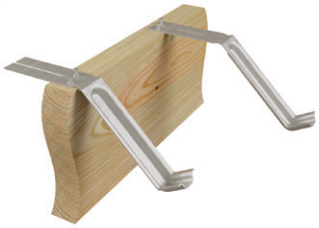
- Install the required fasteners according to the table.
- Use a minimum of two anchors per mudsill. An anchor should always be within 12" of the end of each mudsill section.
- Do not rely on these anchors to secure concrete sections together between cold joints.
- Insert into wet concrete (minimum strength of 2,500 psi). Place mudsill after concrete cures. Secure flanges to sill (and stud, if applicable), bending flanges as needed to achieve a tight fit. Fasten as directed in table.
- For installation in severe corrosion environments, see Corrosion Information on pages 12-18.



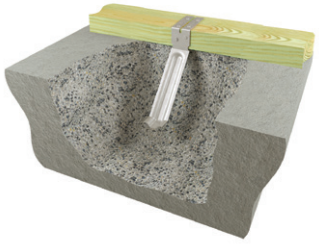
Typical FA3 one-tab-up installation



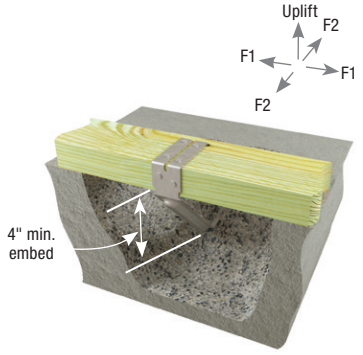
FA3



Typical FA3 form board installation



Alternate FA3 installation (concrete slab only)



FA3 standard installation in concrete

MiTek Stock No.	Ref. No.	Steel Gauge	Plate Size	Fastener Schedule[1,6] Sill Plate Side Qty	Sill Plate Top Qty	Stud Qty	Fastener Schedule[1,6] Type	Min Stemwall Thickness (in)	Installation Type	Concrete[5]	DF/SP Allowable Loads (Lbs.)[2,3,4] Uplift 160%	F1 160%	F2 160%	Corrosion Finish	Code Ref.
Wind and ASCE Seismic Design A & B															
FA3	--	16	Single 2x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	1350	750	1015		IBC, FL, LA
										Cracked	945	525	710		
				2	2	2			One-Tab-Up	Uncracked	1350	750	1015		
										Cracked	945	525	710		
			Single 3x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	--	515	--		--
										Cracked	--	475	--		
ASCE Seismic Design C-F															
FA3	--	16	Single 2x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	1120	550	890		IBC, FL, LA
										Cracked	830	460	625		
				2	2	2			One-Tab-Up	Uncracked	1120	550	890		
										Cracked	830	460	625		
			Single 3x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	--	515	--		--
										Cracked	--	405	--		

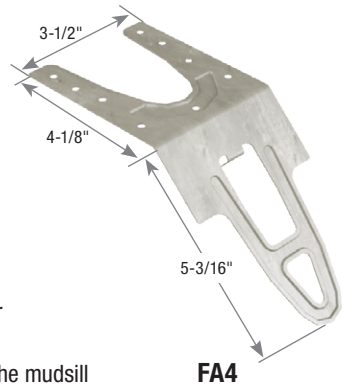
1) Predrilled holes are not required.
2) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
3) FA3 capacities are based on using a single-ply 2x sill plate.
4) Allowable loads are based on a minimum stemwall thickness of 6", minimum distance from the end of the concrete wall of 4" and minimum anchor spacing of 8".
5) Minimum concrete strength f'c = 2,500 psi.
6) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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FA4 foundation anchors can be installed as a replacement for 5/8" or 1/2" diameter anchor bolts while achieving the same load capacity.

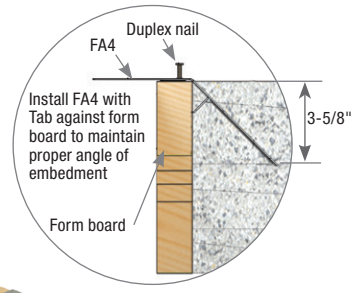
Materials: 16 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references



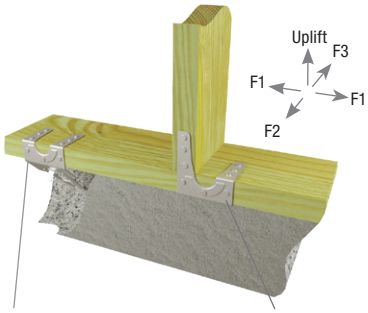
FA4

Installation:

- Install the required fasteners according to the table.
- The FA4 can be mounted to the form board before placing the concrete or inserted into the wet concrete after it is poured. See Detail A installation.
- Place the mudsill in position after the concrete cures. Secure the FA4 to the mudsill (and stud, if applicable) by bending the flanges as needed for a tight fit and nailing into place with the size and quantity of fasteners specified in the table.
- For installation in severe corrosion environments, see Corrosion Information on pages 12-18.

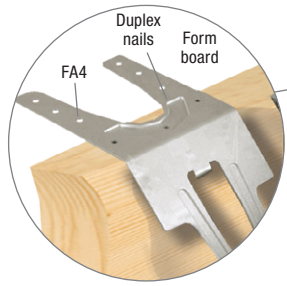


Detail B



Typical FA4 standard installation

Typical FA4 one-tab-up installation



Detail A



Typical FA4 form board installation

MiTek Stock No.	Ref. No.	Steel Gauge	Plate Size	Fastener Schedule[4] Sill Plate Side Qty	Sill Plate Top Qty	Stud Qty	Type	Installation Type	Concrete[3]	DF/SP Allowable Loads (Lbs.)[1,2] Uplift 160%	F1 160%	F2 160%	F3 160%	Corrosion	Finish	Code Ref.
Wind and ASCE Seismic Design A & B																
FA4	MASA	16	Single 2x	3	6	--	10d x 1-1/2	Standard	Uncracked	905	1460	1070	655			IBC, FL, LA
									Cracked	750	1225	750	585			
				3	3	3		One-Tab-Up	Uncracked	780	955	1070	515			
									Cracked	750	955	755	515			
			Single 3x	5	4	--	10d x 1-1/2	Standard	Uncracked	1070	1130	--	--			--
									Cracked	750	1130	--	--			
			Varies	9	--	--	10d x 1-1/2	Two-Tabs-Up	Uncracked	1070	650	650	400			
									Cracked	750	650	650	400			
ASCE Seismic Design C-F																
FA4	MASA	16	Single 2x	3	6	--	10d x 1-1/2	Standard	Uncracked	875	1460	875	655			IBC, FL, LA
									Cracked	655	1075	655	510			
				3	3	3		One-Tab-Up	Uncracked	780	955	875	515			
									Cracked	655	955	655	510			
			Single 3x	5	4	--	10d x 1-1/2	Standard	Uncracked	875	1130	--	--			--
									Cracked	655	1075	--	--			
			Varies	9	--	--	10d x 1-1/2	Two-Tabs-Up	Uncracked	875	650	650	400			
									Cracked	655	650	650	400			

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) Allowable loads are based on a minimum stemwall thickness of 6", minimum distance from the end of the concrete wall of 4" and minimum anchor spacing of 8".
3) Minimum concrete strength f'c = 2,500 psi.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key
Stainless Steel Gold Coat
HDG Triple Zinc

Prescriptive Spacing to Replace 1/2" or 5/8" Diameter Bolts

Anchor Bolt Diameter	Anchor Bolt Spacing	DF/SP 2x Mudsill O.C. Spacing Wind	DF/SP ASCE Seismic Design A & B	DF/SP ASCE Seismic Design C-E	Hem-Fir 2x Mudsill O.C. Spacing Wind	Hem-Fir ASCE Seismic Design A & B	Hem-Fir ASCE Seismic Design C-E	Min End Distance	Min C-C Spacing
1/2"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"	5-1/2"	7-1/4"
	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"		
5/8"	6'-0"	5'-4"	5'-4"	5'-4"	5'-0"	5'-0"	5'-0"	5-1/2"	7-1/4"
	4'-0"	3'-7"	3'-7"	3'-7"	3'-4"	3'-4"	3'-4"		

1) Place anchors not more than 12" from end of each mudsill per code.
2) Spacing is based on parallel to mudsill load direction only.
3) Concrete shall have a minimum f'c = 2,500 psi.
4) Spacing applies to a maximum of 1 in 4 FA4 Foundation Anchors being installed to mudsill and stud.
5) Spacing requirements are based on lateral load capacities of anchor bolts published in the NDS.

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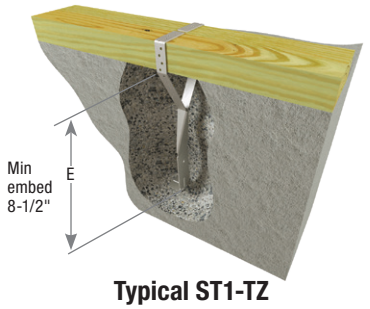
ST1-TZ – For installation into concrete slab or poured stemwalls. The ST1-TZ features a prebent base flange to assure proper anchoring into concrete

ST2-TZ – For installation into concrete slab, poured stemwalls or concrete/masonry. The ST2-TZ features a prebent base flange to assure proper anchoring into concrete

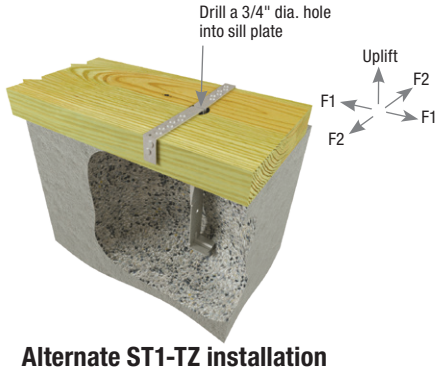
Materials: 18 gauge
Finish: G-185 galvanizing

Installation:

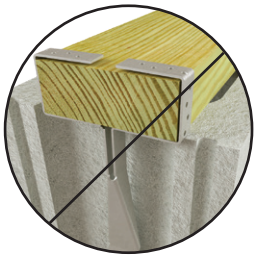
- Install the required fasteners according to the table.
- Use a minimum of two anchors per mudsill. An anchor should always be within 12" of the end of each mudsill section. Follow spacing guidelines in table.
- Do not rely on these anchors to secure concrete sections together between cold joints.
- Spread sill flanges to mudsill width prior to insertion into wet concrete (minimum strength of 2,500 psi). Alternate installation is possible by inserting unbent flanges through 3/4" center hole pre-drilled in mudsill. Foundation anchors may also be attached to mudsill and then inserted into wet concrete. When installing ST2-TZ into concrete block, fill cells with grout with a minimum strength of 2,500 psi. Concrete block edges may need to be beveled to facilitate installation.
- ST2-TZ in masonry construction shall be installed in the core of the block and grouted with concrete grout designed for that purpose. In no case, shall they be installed in a mortar joint.
- Do not use in red clay brick.



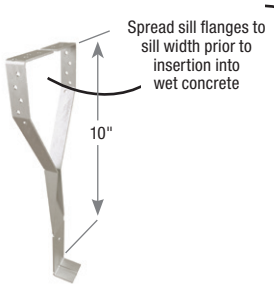
Typical ST1-TZ installation in concrete



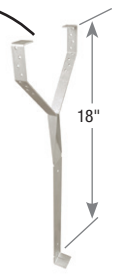
Alternate ST1-TZ installation with 3/4" center hole



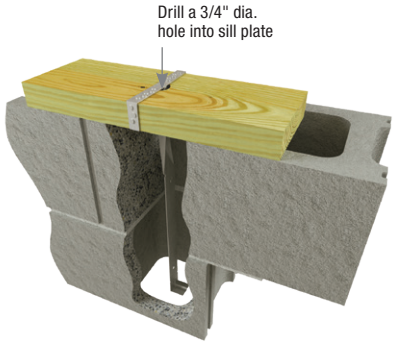
DO NOT install ST1-TZ and ST2-TZ without pre-bending sill flanges in "Y" configuration



ST1-TZ



ST2-TZ



Alternate ST2-TZ installation with 3/4" center hole in mudsill

Plate Size	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[4]				Min. Embed.[3] (E)	Max. Spacing[2] (Feet)	DF/SP Allowable Loads (Lbs.)[1]			Corrosion Finish		Code Ref.
				Mudsill Top		Mudsill Side				Uplift	F1	F2			
				Qty	Type	Qty	Type			160%	160%	160%			
2 x 4 - 6	ST1-TZ	MAB15, MAB15Z	18	4	8d x 1-1/2 HDG	4	8d x 1-1/2 HDG	8-1/2"	*3'-3"	825	565	745			--
	ST2-TZ	--	18	4	8d x 1-1/2 HDG	4	8d x 1-1/2 HDG	16-1/2"	*3'-3"	825	565	745			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Anchor spacing and design loads assume treated Douglas Fir-Larch with Fc perpendicular @ 625 psi; replaces code prescribed 1/2" anchor bolt with standard washer, spaced 6 ft. on center.
3) If installed in the alternate configuration, the ST1-TZ shall be embedded 7-1/4" and ST2-TZ 15".
4) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long.
*When a 2 x 8 mudsill is used for ST1-TZ or ST2-TZ, maximum spacing is 3 feet unless alternate installation is used.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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Embossed ends provide guides for embedment angle and depth. An embedment line is embossed on the shaft for easy installation. Features rolled threads for high tensile strength.

STB – For monolithic slabs and concrete stem walls
STBL – Designed for use with 3x sill plates. Excellent choice for use with taller holdown washers like those in the PHD series

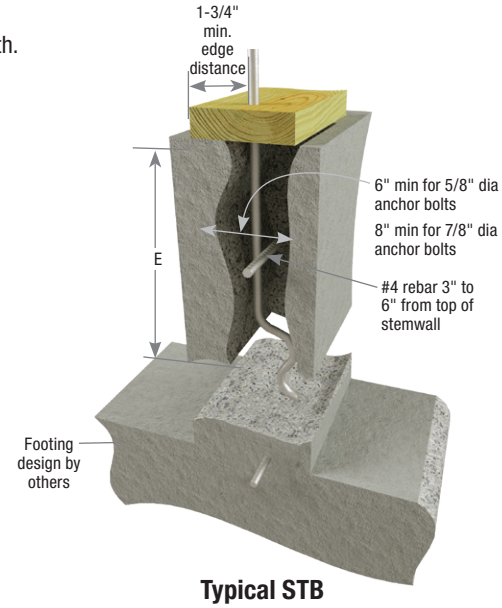
Materials: ASTM A 36 steel, also conforms to ASTM F1554 and ASTM A 307 Grade A requirements for bolts
Finish: None
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:
- Select appropriate STB or STBL Anchor Bolt.
- Use normal weight concrete with minimum compressive strength of 2,500 psi.
- Minimum center-to-center spacing between bolts is 3x embedment (E) for anchors acting simultaneously in tension.
- Match embedment depth with embedment line on the STB or STBL shaft.
- The STB or STBL does not need to be tied to the rebar.
- Nuts and washers are not included.

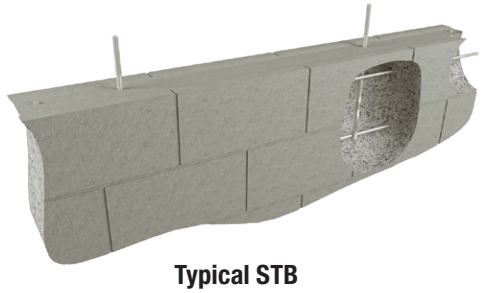
Compatibility Table

MiTek Holdown Stock No.	2x, 3x, (2) 2x Sill Plates[1] Mono Pour
PHD2A	STB16 STBL16
TDX2-TZ	
LTS20B [2]	
HTT16	
HTT45	
PHD4A	STB20 STBL20
HTT45	
TD5 [2]	
HTT45	STB24 STBL24
PHD5A	
PHD8	STB28 STBL28
UPHD8	
TD7 [2]	
TD9 [2]	
TD12 [2]	

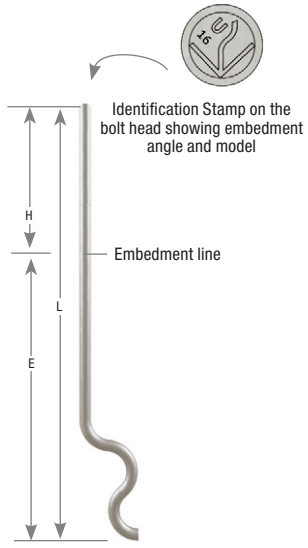
1) STBL model are recommended for use with PHD and UPHD8 holdowns on (2) 2x and 3x sill plates.
2) Recommend installation of washer under nut of anchor bolt.



Typical STB anchor bolt installation



Typical STB concrete block installation



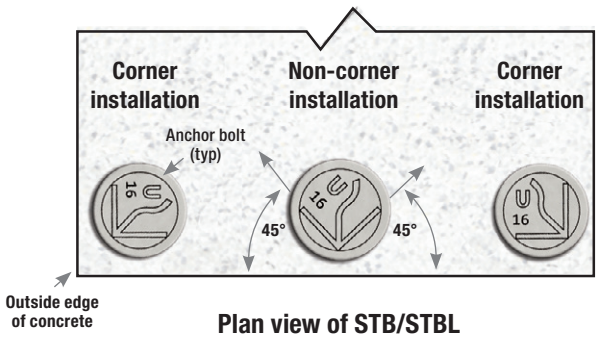
STB/STBL

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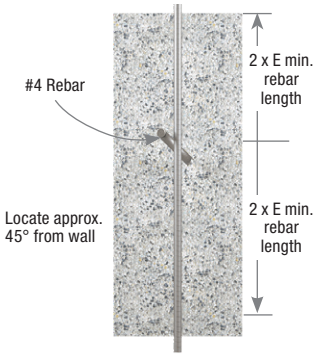
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Monolithic or Stem Wall Foundations – Prior to pour, install the STB or STBL in an upright position and at required angle using embossed angle guide. (See illustrations.) Embossments are a guideline to position "S" shaped embedded portion of anchor away from edge or corner of wall. Install one horizontal #4 rebar at a depth of 4" (minimum).

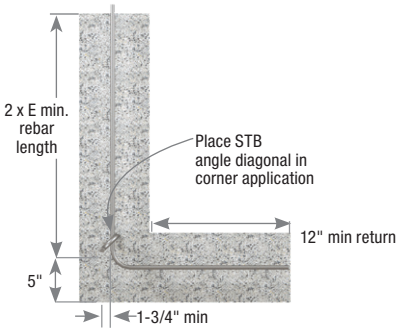
Concrete Block Applications – Prior to cell pour, install the STB or STBL in an upright position and at required angle using embossed angle guide. (See illustrations.) Embossments are a guideline to position "S" shaped embedded portion of anchor away from edge or corner of wall. Install one horizontal #4 rebar at a depth of 4" and one vertical #4 rebar maximum 48" spacing. Fill all cells with concrete having a minimum 2,500 psi compressive strength.



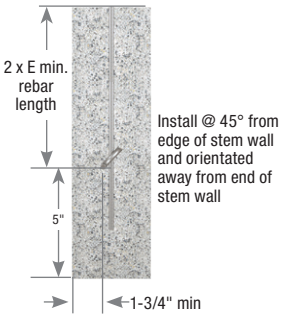
Plan view of STB/STBL placement in concrete stemwall



Plan view along continuous stem wall installation



Plan view of corner of stem wall installation



Plan view of end of stem wall installation

MiTek Stock No.	Ref. No.	Dimensions (in)					Allowable Tension Loads (Lbs)[1,2]									Corrosion Finish	Code Ref.
		Stem-wall Width	Dia.	L	H	Min. Embed (E)	ASCE Seismic Design Category A&B			Wind			ASCE Seismic Design Category C - F				
							Midwall	Corner	End Wall	Midwall	Corner	End Wall	Midwall	Corner	End Wall		
STB16	SSTB16	6	5/8	17-13/16	5	12-13/16	4230	4230	4230	4230	4230	4230	3525	3525	3525		
STB20	SSTB20	6	5/8	21-13/16	5	16-13/16	5120	4740	4740	5115	4230	4230	4265	3555	3555		
STB24	SSTB24	6	5/8	25-13/16	5	20-13/16	5990	5915	5915	5990	5570	5570	4990	4675	4675		
STB28	SSTB28	8	7/8	31	5	26	10100	9490	9490	9110	9110	9110	7650	7650	7650		
STB34	SSTB34	8	7/8	36	6	30	11415	10525	10250	11390	10525	9405	9515	8770	7900		IBC, FL, LA
STB36	SSTB36	8	7/8	38	8	30	11415	10525	10250	11390	10525	9405	9515	8770	7900		
STBL16	SSTB16L	6	5/8	19-9/16	6-3/4	12-13/16	4230	4230	4230	4230	4230	4230	3525	3525	3525		
STBL20	SSTB20L	6	5/8	23-9/16	6-3/4	16-13/16	5120	4740	4740	5115	4230	4230	4265	3555	3555		
STBL24	SSTB24L	6	5/8	27-9/16	6-3/4	20-13/16	5990	5915	5915	5990	5570	5570	4990	4675	4675		
STBL28	SSTB28L	8	7/8	32-3/4	6-3/4	26	10100	9490	9490	9110	9110	9110	7650	7650	7650		

1) Loads may not be increased for short term loading.
2) Minimum center to center spacing between bolts is 3(E) for anchors acting in tension simultaneously.
3) Minimum edge distance is 1-3/4".
4) Concrete stemwall shall be a minimum of 6" thick for 5/8" anchor bolts and 8" for 7/8" anchor bolts.
5) End distance shall be no less than 5".
6) Connection is limited by lowest of bolt or holdown capacity.
7) Concrete block shall be minimum 10" block.
8) See ICC-ES ESR-2266 for additional information.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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AB Anchor Bolts

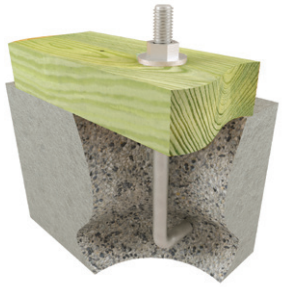
The AB anchor bolt provides an economical way to meet the prescriptive requirements of the 2021 IRC for securing mudsill plates to a concrete or masonry foundation. The bolt is manufactured from ASTM 1554 steel and has a hot-dip galvanized finish. A nut (ASTM A 563) and washer (ASTM F 844) are included. In some jurisdictions, a plate washer may be required. Check with your local Building Official.

Materials: Bolt: ASTM F 1554, Nut: ASTM A 563, Washers: ASTM F 844
Finish: Hot-dip galvanized
Codes: See IRC R403.1.6, IBC 2308.3.1, 2308.3.1.1, 2308.3.1.2 for minimum diameter and embedment into masonry or concrete

Installation:
- Select appropriate AB Anchor Bolt.
- Use concrete with minimum compressive strength of 2,500 psi at 28 days.
- Nuts and washers are included.
- Anchor bolts intended for use to satisfy code prescribed anchoring of mudsill plates, and shall be installed as defined in the code.
- Allowable loads shall be derived in accordance with the code.
- Plate washers may be required in some jurisdictions.

MiTek Stock No.	Ref. No.	Bolt Dia.	L (in)	Corrosion Finish	Code Ref.
AB126-HDG	--	1/2	6		PC
AB128-HDG	--	1/2	8		
AB1212-HDG	--	1/2	12		
AB5812-HDG	--	5/8	12		

Corrosion Finish Key
- Stainless Steel
- Gold Coat
- HDG
- Triple Zinc



Typical AB128-HDG installation



AB128-HDG

BP / HBPS / LBP / LBPS Bearing Plates

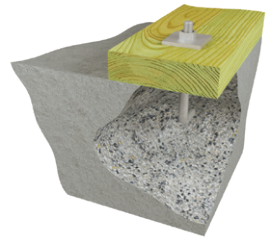
BP / LBP – Designed to meet code requirements for mudsill-to-foundation
HBPS / LBPS – Offers anchor bolt adjustment slots

Materials: See table
Finish: BP / HBPS – none; LBP / LBPS – G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: See IRC R602.11.1, IBC 2308.3.1.1 for minimum plate size requirements

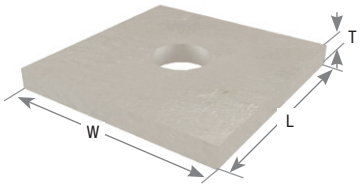
Installation:
- Bolt holes are sized 1/16" larger than Bolt Dia. shown in table.

MiTek Stock No.	Ref. No.	Plate Thickness (T)		Dimensions (in) W	Dimensions (in) L	Bolt Dia.	Corrosion Finish	Code Ref.
LBP12-TZ	LBP1/2, LBP1/2Z	10 Ga	9/64	2	2	1/2		--
LBP58-TZ	LBP5/8, LBP5/8Z	10 Ga	9/64	2	2	5/8		PC
LBPS12-TZ	LBPS1/2, LBPS1/2Z	10 Ga	9/64	3	3	1/2		--
LBPS58-TZ	LBPS5/8, LBPS5/8Z	10 Ga	9/64	3	3	5/8		
HBPS12	BPS1/2-3	3 Ga	1/4	3	3	1/2		PC
HBPS34	BPS3/4-3	3 Ga	1/4	3	3	3/4		
HBPS58	BPS5/8-3	3 Ga	1/4	3	3	5/8		
HBPS12-412	BPS1/2-6	3 Ga	1/4	3	4-1/2	1/2		
HBPS58-412	BPS5/8-6	3 Ga	1/4	3	4-1/2	3/4		
HBPS34-412	BPS3/4-6	3 Ga	1/4	3	4-1/2	5/8		
BP12	BP1/2	7 Ga	3/16	2	2	1/2		
BP582	BP5/8-2	7 Ga	3/16	2	2	5/8		
BP583	BP5/8, BP5/8-3	3 Ga	1/4	3	3	5/8		
BP343	BP3/4-3	3 Ga	1/4	3	3	3/4		

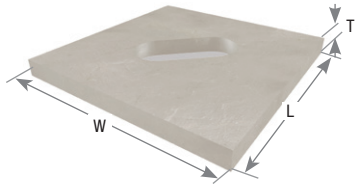
Corrosion Finish Key
- Stainless Steel
- Gold Coat
- HDG
- Triple Zinc



Typical Bearing Plate installation



BP / LBP Standard Bearing Plate



HBPS / LBPS Slotted Bearing Plate

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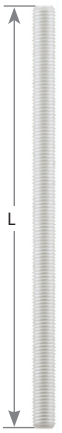
ATR All Thread Rod is a continuously threaded low carbon steel rod that may be used for anchoring MiTek's holdowns, tension ties and wood structural panel shear walls to concrete. They can also be used for many other general purpose tension transfer fastening needs.

Materials: ASTM A307 Grade A

Finish: None or Zinc Plated (See Table)

Installation:

- ATR All Thread Rod can be cast-in-place or epoxied into concrete following epoxy manufacturer's instructions.



ATR

Dia. x L (in)	Plain		Zinc Plated		Code Ref.
	MiTek Stock No.	Ref. No.	MiTek Stock No.	Ref. No.	
3/8 x 5	ATR385	--	ATR385-ZP	--	--
3/8 x 8	ATR388	--	ATR388-ZP	--	
3/8 x 10	ATR3810	--	ATR3810-ZP	--	
3/8 x 12	ATR3812	ATR3/8X12	ATR3812-ZP	--	
3/8 x 16	ATR3816	--	ATR3816-ZP	--	
3/8 x 18	ATR3818	--	ATR3818-ZP	--	
3/8 x 24	ATR3824	ATR3/8X24	ATR3824-ZP	--	
3/8 x 36	ATR3836	ATR3/8X36	ATR3836-ZP	--	
3/8 x 48	ATR3848	ATR3/8X48	ATR3848-ZP	ATR3/8X48ZP	
3/8 x 72	ATR3872	ATR3/8X72	--	--	
1/2 x 5	ATR125	--	ATR125-ZP	--	
1/2 x 8	ATR128	--	ATR128-ZP	--	
1/2 x 10	ATR1210	--	ATR1210-ZP	--	
1/2 x 12	ATR1212	ATR1/2X12	ATR1212-ZP	--	
1/2 x 16	ATR1216	--	ATR1216-ZP	--	
1/2 x 18	ATR1218	ATR1/2X18	ATR1218-ZP	--	
1/2 x 24	ATR1224	ATR1/2X24	ATR1224-ZP	--	
1/2 x 36	ATR1236	ATR1/2X36	ATR1236-ZP	--	
1/2 x 48	ATR1248	ATR1/2X48	ATR1248-ZP	--	
1/2 x 72	ATR1272	ATR1/2X72	--	--	
5/8 x 5	ATR585	--	ATR585-ZP	--	
5/8 x 8	ATR588	ATR5/8X8	ATR588-ZP	ATR5/8X8ZP	
5/8 x 10	ATR5810	--	ATR5810-ZP	--	
5/8 x 12	ATR5812	ATR5/8X12	ATR5812-ZP	ATR5/8X12ZP	
5/8 x 16	ATR5816	--	ATR5816-ZP	--	
5/8 x 18	ATR5818	ATR5/8X18	ATR5818-ZP	ATR5/8X18ZP	
5/8 x 24	ATR5824	ATR5/8X24	ATR5824-ZP	ATR5/8X24ZP	
5/8 x 36	ATR5836	ATR5/8X36	ATR5836-ZP	ATR5/8X36ZP	
5/8 x 48	ATR5848	ATR5/8X48	ATR5848-ZP	ATR5/8X48ZP	
5/8 x 72	ATR5872	ATR5/8X72	--	--	
3/4 x 5	ATR345	--	ATR345-ZP	--	
3/4 x 8	ATR348	ATR3/4X8	ATR348-ZP	ATR3/4X8ZP	
3/4 x 10	ATR3410	--	ATR3410-ZP	--	
3/4 x 12	ATR3412	ATR3/4X12	ATR3412-ZP	ATR3/4X12ZP	
3/4 x 16	ATR3416	--	ATR3416-ZP	--	
3/4 x 18	ATR3418	ATR3/4X18	ATR3418-ZP	ATR3/4X18ZP	
3/4 x 24	ATR3424	ATR3/4X24	ATR3424-ZP	ATR3/4X24ZP	
3/4 x 36	ATR3436	ATR3/4X36	ATR3436-ZP	ATR3/4X36ZP	
3/4 x 48	ATR3448	ATR3/4X48	ATR3448-ZP	ATR3/4X48ZP	
3/4 x 72	ATR3472	ATR3/4X72	--	--	

Dia. x L (in)	Plain		Zinc Plated		Code Ref.
	MiTek Stock No.	Ref. No.	MiTek Stock No.	Ref. No.	
7/8 x 5	ATR785	--	ATR785-ZP	--	--
7/8 x 8	ATR788	--	ATR788-ZP	--	
7/8 x 10	ATR7810	--	ATR7810-ZP	--	
7/8 x 12	ATR7812	ATR7/8X12	ATR7812-ZP	ATR7/8X12ZP	
7/8 x 16	ATR7816	--	ATR7816-ZP	--	
7/8 x 18	ATR7818	--	ATR7818-ZP	ATR7/8X18ZP	
7/8 x 24	ATR7824	ATR7/8X24	ATR7824-ZP	ATR7/8X24ZP	
7/8 x 36	ATR7836	ATR7/8X36	ATR7836-ZP	ATR7/8X36ZP	
7/8 x 48	ATR7848	ATR7/8X48	ATR7848-ZP	ATR7/8X48ZP	
7/8 x 72	ATR7872	ATR7/8X72	--	--	
1 x 5	ATR15	--	ATR15-ZP	--	
1 x 8	ATR18	--	ATR18-ZP	--	
1 x 10	ATR110	--	ATR110-ZP	--	
1 x 12	ATR112	ATR1X12	ATR112-ZP	ATR1/2X12ZP	
1 x 16	ATR116	--	ATR116-ZP	--	
1 x 18	ATR118	--	ATR118-ZP	--	
1 x 24	ATR124	ATR1X24	ATR124-ZP	ATR1/2X24ZP	
1 x 36	ATR136	ATR1X36	ATR136-ZP	ATR1X36ZP	
1 x 48	ATR148	ATR1X48	ATR148-ZP	--	
1 x 72	ATR172	ATR1X72	--	--	
1-1/8 x 5	ATR1185	--	ATR1185-ZP	--	
1-1/8 x 8	ATR1188	--	ATR1188-ZP	--	
1-1/8 x 10	ATR11810	ATR1-1/8X10	ATR11810-ZP	ATR1-1/8X10ZP	
1-1/8 x 12	ATR11812	--	ATR11812-ZP	--	
1-1/8 x 16	ATR11816	--	ATR11816-ZP	--	
1-1/8 x 18	ATR11818	--	ATR11818-ZP	--	
1-1/8 x 24	ATR11824	--	ATR11824-ZP	--	
1-1/8 x 36	ATR11836	--	ATR11836-ZP	--	
1-1/8 x 48	ATR11848	ATR1-1/8X48	ATR11848-ZP	--	
1-1/8 x 72	ATR11872	--	--	--	
1-3/8 x 18	ATR13818	--	--	--	
1-3/8 x 24	ATR13824	--	--	--	
1-3/8 x 36	ATR13836	--	--	--	

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THR Threaded Rods

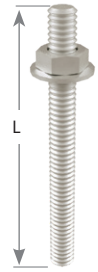
THR's support the deck oriented code requirements for mechanically reinforced railing post and deck to house ledger board attachments.

Materials: ASTM A36 steel, also conforms to ASTM F1554, Grade 36
Finish: Hot-dip galvanized

Installation:
- Nut and washer included.
- Install into wet concrete with nut embedded or drill minimum 1/16" – 1/8" oversized hole depending on rod size and secure with anchor epoxy.



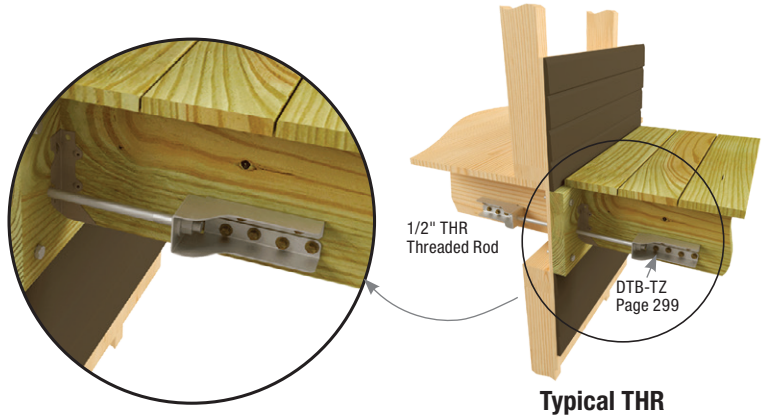
Typical THR installation



THR

MiTek Stock No.	Ref. No.	Bolt Dia.	L (in)	Corrosion Finish	Code Ref.
THR125-HDG	RFB#4X5HDG	1/2	5		
THR126-HDG	RFB#4X6HDG	1/2	6		
THR128-HDG	RFB#4X8HDG	1/2	8		
THR1218-HDG	--	1/2	18		
THR1224-HDG	--	1/2	24		--
THR1236-HDG	--	1/2	36		
THR588-HDG	RFB#5X8HDG	5/8	8		
THR5812-HDG	RFB#5X12HDG	5/8	12		
THR5816-HDG	RFB#5X16HDG	5/8	16		

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



Typical THR deck to ledger installation

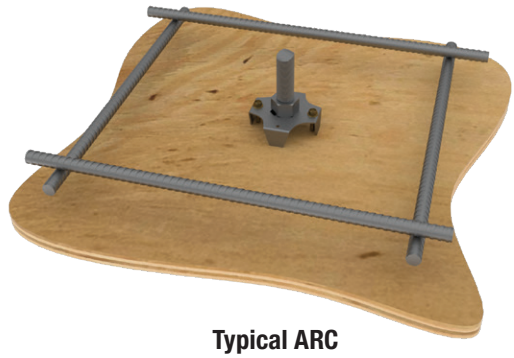
ARC Anchor Rod Chairs

When attached to the forms, the ARC allows for easy and precise placement of anchor rods prior to pouring concrete. The "chair" and nut are pre-assembled for quick installation.

Features:
- Positive stop for threaded rod at the bottom of the nut
- Base allows for easy flow of concrete during placement
- Nibbled out corners allows for potentially tighter positioning on inside corner of form
- 1" stand-off base to meet code requirement for concrete cover

Materials: Nut: Heavy Hex; Chair: 16 gauge
Finish: Nut: None; Chair: Rolled Steel

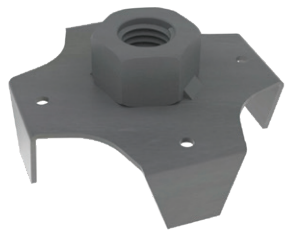
Installation:
- Installs with nails or screws. Threaded rod can then be screwed in to desired depth.



Typical ARC installation

MiTek Stock No.	Ref. No.	Dia. (in)	Code Ref.
ARC4	ABL4-1	1/2	
ARC5	ABL5-1	5/8	
ARC6	ABL6-1	3/4	--
ARC7	ABL7-1	7/8	
ARC8	ABL8-1	1	
ARC9	ABL9-1	1-1/8	

MiTek Stock No.	Ref. No.	Dia. (in)	Code Ref.
ARC10	ABL10-1	1-1/4	
ARC11	--	1-3/8	
ARC12	--	1-1/2	--
ARC14	--	1-3/4	
ARC16	--	2	



ARC6

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HN Hex Nuts

The HN nut is a standard hex nut manufactured from low carbon ASTM A563 Grade A steel (Proof Load = 90 ksi) which makes it applicable for many common ASTM steel threaded rods of equivalent or lower strength.

Materials: ASTM A563 Grade A
Finish: See table



HN

Finish	MiTek Stock No.	Ref. No.	Dia. (in)	Code Ref.
None	HN38	--	0.375	--
	HN12	--	0.500	
	HN58	--	0.625	
	HN34	--	0.750	
	HN78	--	0.875	
	HN1	--	1.000	
	HN118	--	1.125	

Finish	MiTek Stock No.	Ref. No.	Dia. (in)	Code Ref.
Zinc Plated	HN38-ZP	NUT3/8	0.375	--
	HN12-ZP	NUT1/2	0.500	
	HN58-ZP	NUT5/8	0.625	
	HN34-ZP	NUT3/4	0.750	
	HN78-ZP	NUT7/8	0.875	
	HN1-ZP	NUT1	1.000	
	HN118-ZP	NUT1-1/8	1.125	

FT / WG Concrete Form Ties & Wedge

The FT form tie and WG wedge system allows concrete wall forms to be made from 2x nominal form lumber by accurately securing them in place while the concrete is poured. This product is intended for a maximum wall height of 4 feet.

FT – Connect 1x and 2x nominal form lumber in low foundation walls up to 4 feet high
WG – V-shaped wedge assures rigidity and consistent form spacing

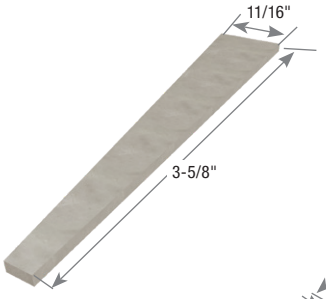
Materials: FT – 18 gauge, WG – 14 gauge
Finish: G90 galvanizing



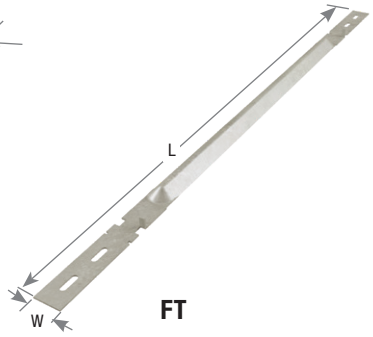
Typical FT/WG installation

Installation:

- Use the Spacing Guide table to determine spacing between FT units. Each level in table assumes 12" form boards. Wall thickness from 6" to 12".
- Install with “V” facing up.
- Use (2) WG wedges for each tie. Insert wedge into inside slots for 1x nominal forms and outside slots for 2x nominal forms.
- No walers or stiff-backs are used.
- Vertical ties to keep forms from separating are not included.
- Form deflection may be substantial. Check deflection, if it is critical, and move ties to compensate.
- Forming lumber is assumed to have fb of 1,000 psi.
- **Not recommended for pours greater than 4 feet in height.**



WG Wedge
must order separately



FT

Spacing Guide Table

Concrete Lift Height	Level 1		Level 2		Level 3		Level 4	
	1x	2x	1x	2x	1x	2x	1x	2x
12" or Less	2' 6"	4' 0"	--	--	--	--	--	--
12" – 24"	1' 6"	3' 0"	2' 6"	4' 0"	--	--	--	--
24" – 36"	1' 0"	2' 0"	1' 6"	3' 0"	2' 6"	4' 0"	--	--
36" – 48"	0' 9"	1' 6"	1' 0"	2' 0"	1' 6"	3' 0"	2' 6"	4' 0"

1) Factor of safety against tensile failure of tie is 1.5 or more.

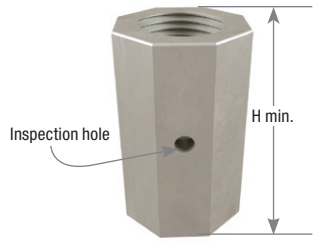
MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Wedge Qty	Footing Width or Wall Thickness	Code Ref.
			W	L			
FT6	WT6	18	5/8	10-5/8	2	6	--
FT8	WT8	18	5/8	12-5/8	2	8	
FT10	WT10	18	5/8	14-5/8	2	10	
FT12	WT12	18	5/8	16-5/8	2	12	
WG	W1	14	11/16	3-5/8	--	--	

1) May be used with either 3/4" or 1-1/2" forming materials.
2) Breaking strength is approximately 775 pounds. Space as necessary to prevent form blow-out.

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CNW Coupler Nuts

The MiTek CNW coupler nut is designed to join threaded rods to embedded anchor rods. They are also used in the Z4 Tie Down system to attach Z-Rods together (See Z4 Product Catalog). The coupler nut has an inspection hole with an internal positive stop that allows easy verification that the ends of both rods have been fully threaded. The CNW coupler is made from low carbon ASTM A563 Grade A steel (Proof Load = 90 ksi) which makes it applicable for many common ASTM steel threaded rods of equivalent or lower strength.

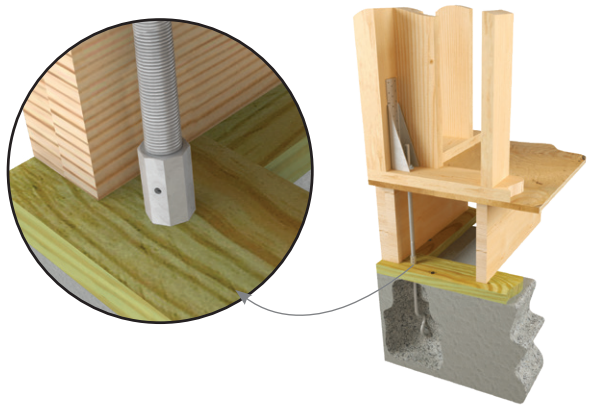


CNW

Materials: ASTM A563 Grade A
Finish: Zinc Plated

Installation:
- Inspection hole is provided to assure easy inspection.
- Tighten rods until they are visible in the inspection hole.
- Works with all thread rods of specified diameter except hot-dip galvanized.

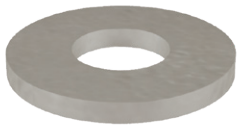
MiTek Stock No.	Ref. No.	Dimensions (in)		Allowable Tension (Lbs.)	Code Ref.
		Rod Diameter	H Min	100%	
CNW38-ZP	CNW3/8	0.375	1-1/8	2400	
CNW12-ZP	CNW1/2	0.500	1-1/4	4265	
CNW58-ZP	CNW5/8	0.625	2-1/8	6675	
CNW34-ZP	CNW3/4	0.750	2-1/4	9610	--
CNW78-ZP	CNW7/8	0.875	2-1/2	13080	
CNW1-ZP	CNW1	1.000	2-3/4	17080	
CNW118-ZP	--	1.125	3	21620	



Typical CNW installation

RW Round Washers

Washers are an important component of a threaded rod assembly and should be properly sized for the intended application. They distribute load from the tightened nut and reduce bearing stresses to prevent crushing of the supporting material. This is especially important when tightening over wood.



RW

Materials: ASTM/ANSI B18.22
Finish: None or Zinc Plated (See Table)

Finish	MiTek Stock No.	Ref. No.	Inner Dia. (in)	Code Ref.
None	RW38	--	0.375	
	RW12	--	0.500	
	RW58	--	0.625	
	RW34	--	0.750	
	RW78	--	0.875	
	RW1	--	1.000	
	RW118	--	1.125	--
Zinc Plated	RW38-ZP	WASHER3/8-ZP	0.375	
	RW12-ZP	WASHER1/2-ZP	0.500	
	RW58-ZP	WASHER5/8-ZP	0.625	
	RW34-ZP	WASHER3/4-ZP	0.750	
	RW78-ZP	WASHER7/8-ZP	0.875	
	RW1-ZP	WASHER1-ZP	1.000	
	RW118-ZP	WASHER1-1/8-ZP	1.125	

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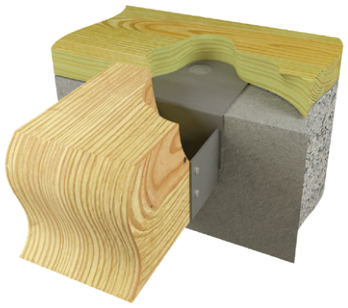
KGH Floor Girder Hangers

Connects girder beams to foundation walls and eliminates the need to block out pockets or inserts while forming foundation.

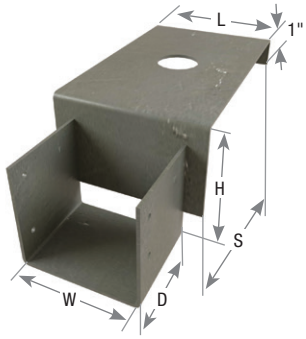
Materials: 12 gauge
Finish: Primer
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- H dimension assumes 2x mudsill. For 3x or larger mudsill, please contact factory.
- The 1-1/2" hole, centered in the saddle, allows for installation over any protruding foundation bolts. This is not required.
- Placement of a wood sill over the top of the KGH top flange is required to achieve allowable loads.



Typical KGH installation



KGH

Girder Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	L	D	S	H	Fastener Schedule[1] Qty	Type	DF/SP Allowable Loads (Lbs.) 100%	125%	S-P-F Allowable Loads (Lbs.) 100%	125%	Code Ref.
4 x 6	KGH46-6	GH46-6	12	3-9/16	5	3-1/4	6	4	4	16d	2200	2200	1725	1725	IBC, FL, LA
4 x 6	KGH46-8	GH46-8	12				8								
4 x 8	KGH48-6	GH48-6	12	3-9/16	5	3	6	6	4	16d	2200	2200	1725	1725	
4 x 8	KGH48-8	GH48-8	12				8								
6 x 6	KGH66-6	GH66-6	12	5-1/2	6-1/4	3	6	4	4	16d	3070	3070	2410	2410	
6 x 6	KGH66-8	GH66-8	12				8								
6 x 8	KGH68-6	GH68-6	12	5-1/2	6-1/4	3	6	6	4	16d	3070	3070	2410	2410	
6 x 8	KGH68-8	GH68-8	12				8								

1) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.



KGH saddle Specialty Option

Specialty Options Table –
refer to Specialty Options pages 320-321, 324 for additional details.

Option	Skewed[1,2]	Saddle
Range	1˚ to 45˚	--
Allowable Loads	100% of table load.	100% of table load per side.
Ordering	Add *SK*, angle required, right (*R*) or left (*L*), and square cut (*SQ*) or bevel cut (*BV*) to product number. Ex. KGH46-6_SK45R_BV	Add SA, and saddle width required to product number. Ex. KGH46-6_SA=5-1/2"

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

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KGLB – Single bolt, bearing only

KGLBT – Double bolt with structural tee provides uplift and horizontal resistance

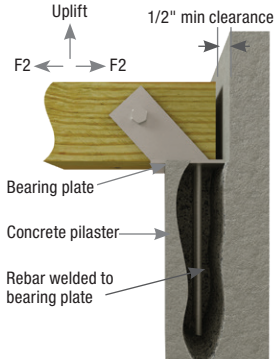
KHGLB – Double bolt design provides uplift and horizontal resistance

Materials: Flanges – 1/4" steel
Bearing Plate – See table for "T" dimension
Anchor Dowels – 3/4" x 12" rebar

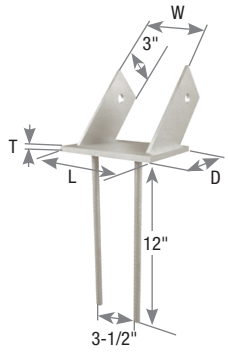
Finish: Primer

Installation:

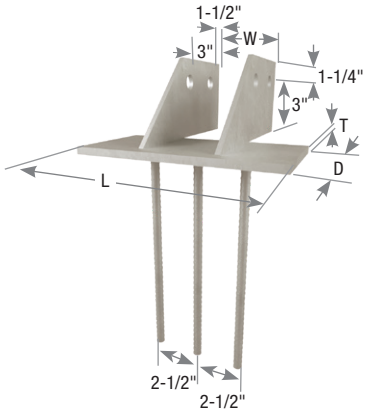
- Install the required fasteners according to the table.
- Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter.
- Concrete or masonry walls must be checked by a design professional for adequacy to resist lateral or uplift loads transferred from the beam seat anchor.



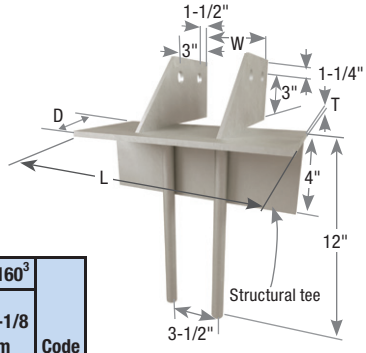
Typical KGLB installation



KGLB



KHGLB



KGLBT

KGLB Table

MiTek Stock No.	Ref. No.	Dimensions (in) W	Plate L	Plate T	Plate D	Bolt Schedule Qty	Bolt Schedule Dia	Allowable Bearing Loads (Lbs.)[1,4,5] Masonry @ 375 psi[2]	Allowable Bearing Loads (Lbs.)[1,4,5] Concrete[3]	Code Ref.
KGLB5A	GLB5A	5-1/4	7	1/4	5	1	5/8	11790	11790	--
KGLB5B	GLB5B	5-1/4	7	3/8	6	1	5/8	14145	14145	
KGLB5C	GLB5C	5-1/4	7	3/8	7	1	5/8	16505	16505	
KGLB5D	GLB5D	5-1/4	7	3/8	8	1	5/8	18860	18860	
KGLB7A	GLB7A	6-7/8	9	1/4	5	1	3/4	15525	15525	
KGLB7B	GLB7B	6-7/8	9	3/8	6	1	3/4	18630	18630	
KGLB7C	GLB7C	6-7/8	9	3/8	7	1	3/4	21735	21735	
KGLB7D	GLB7D	6-7/8	9	3/8	8	1	3/4	24840	24840	

1) Beams must fully bear on plates.
2) The loads are based on the bearing value listed times the bearing area equal to W x D. (Note that full bearing plate area is not used.) Bearing loads shall be reduced where limited by wood bearing on the plate.
3) The loads on concrete are based on allowable wood bearing stress perpendicular to the grain of 460 psi and actual beam width times beam bearing length.
4) Designer shall specify minimum edge and spacing requirements in masonry or concrete structure.
5) Concrete or masonry support structure is assumed adequate to support loads listed.

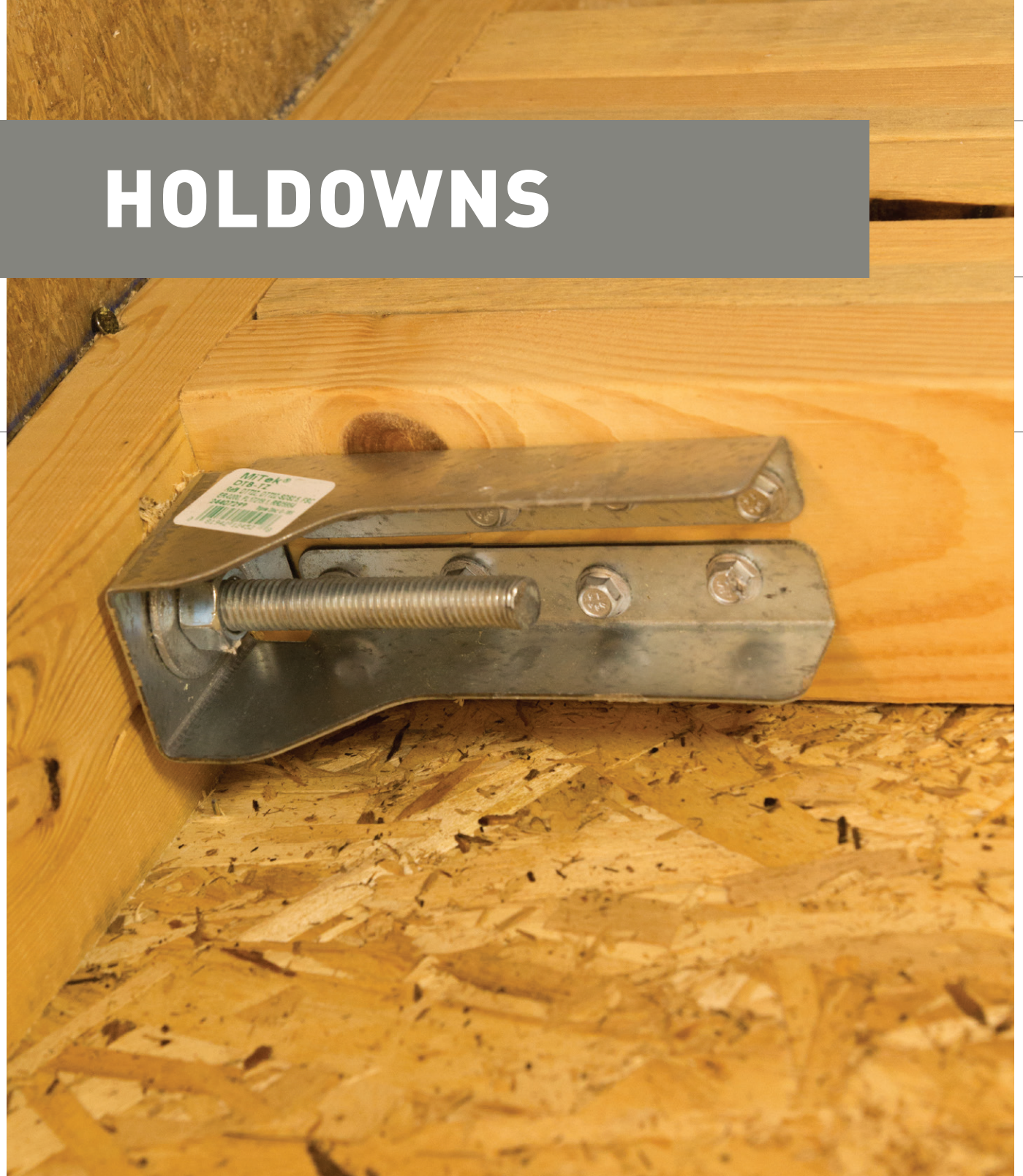
KHGLB / KGLBT Table

MiTek Stock No.	Ref. No.	Dimensions (in) Range W	Plate D	Plate L	Plate T	Bolt Schedule Qty	Bolt Schedule Dia. (in)	Allowable Bearing Loads (Lbs.)[1,5] Masonry @ 375 psi	On Concrete with Beam Width[2] 5-1/8	6-3/4	8-3/4	10-3/4	F2[3,4] 160%	Uplift 160[3] Min. 3-1/8 Beam Width (W)	Code Ref.
KHGLBA	HGLBA	3-1/4 to 9	5	10	3/8	2	3/4	18750	11790	15525	20125	--	9870	3905	--
KHGLBB	HGLBB	3-1/4 to 9	6	10	3/8	2	3/4	22500	14145	18630	24150	--	9870	3905	
KHGLBC	HGLBC	3-1/4 to 9	7	10	3/8	2	3/4	26250	16505	21735	28175	--	9870	3905	
KHGLBD	HGLBD	3-1/4 to 9	8	10	3/8	2	3/4	30000	18860	24840	32200	--	9870	3905	
KGLBT512	--	3-1/4 to 11	5-1/4	12	5/16	2	3/4	24750	12965	17080	22140	27200	9870	3905	
KGLBT612	--	3-1/4 to 11	6-1/2	12	3/8	2	3/4	29250	15325	20185	26165	32145	9870	3905	
KGLBT516	--	3-1/4 to 15	5-1/4	16	5/16	2	3/4	27200	12965	17080	22140	27200	9870	3905	
KGLBT616	--	3-1/4 to 15	6-1/2	16	3/8	2	3/4	32145	15325	20185	26165	32145	9870	3905	
KGLBT520	--	3-1/4 to 19	5-1/4	20	5/16	2	3/4	27200	12965	17080	22140	27200	9870	3905	
KGLBT620	--	3-1/4 to 19	6-1/2	20	3/8	2	3/4	32145	15325	20185	26165	32145	9870	3905	

1) Beams must fully bear on plates.
2) The loads on concrete are based on allowable wood bearing stress perpendicular to the grain of 460 psi and actual beam width times beam bearing length.
3) Allowable loads have been increased 60% for wind or seismic loads and are based on bolt in wood values only. Loads assume concrete or masonry structure is adequate to resist loads in those directions.
4) Loads must be be reduced if the allowable lateral load (F2) for masonry or concrete column governs.
5) Designer shall specify minimum edge and spacing requirements in masonry or concrete structure.

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HOLDOWNS



MiTek®

HOLDOWNS 60-75

Holdowns	62-64, 66-67
Tension Ties	65, 68
Foundation Straps	69-73
Purlin Anchors	74-75



Holdown Offset Anchor Bolt Notes

Allowable loads and deflection values for holdowns such as TD, PHD, TDX, HTT and UPHD are based on installation with the anchor bolt aligned directly below the centerline of the holdown. The maximum tolerances for anchor bolt offset are described below.

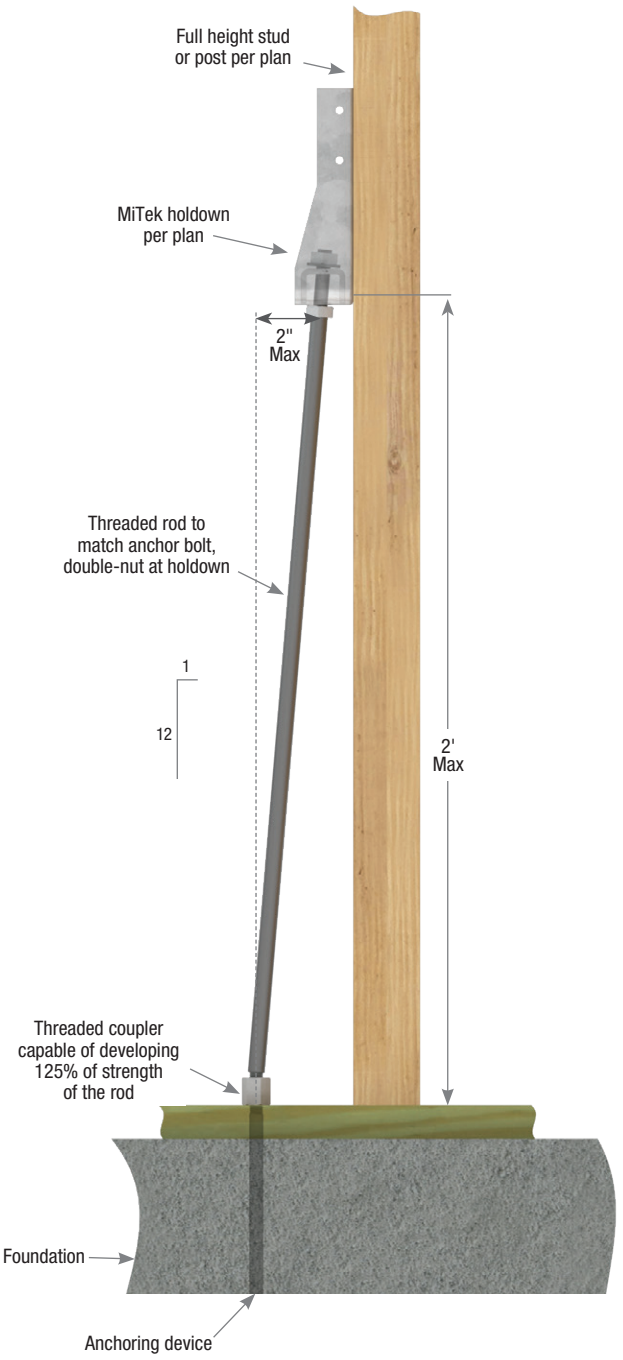
Designer should consider that installation of a holdown raised above the sill plate may result in higher deflections. These deflections are different for every installation and should be calculated by a certified designer.

Installation:

- Holdown installed at maximum of 2' above the bottom plate.
- Anchor bolt installed at maximum 2" away from the centerline of the holdown.
- Threaded rod angle must not exceed 5 degrees or a pitch of 1/12.
- A threaded coupler must be used at the anchor bolt connection capable of developing 125% of strength of the rod.

Alternate installations:

1. Install additional full-height member(s) to the existing stud(s) or post to reduce the horizontal distance between the anchor bolt and the vertical member(s).
   - Multi-ply studs/posts must be fastened together to act as a single unit. Holdown fasteners must not be considered to contribute to fastening multiple members together.
   - Added members shall be of equivalent wood species.
   - Designer must consider any effect of additional eccentricity introduced on the connection.
2. Using a threaded rod epoxied into place at the proper location in lieu of cast-in anchor bolts. These can be installed after the rough framing is completed.



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PHD predeflected holdowns feature the predeflected base, minimizing deflection while providing uplift resistance. Installs with screws eliminating the need for predrilling and potential fastener slip. No thru bolts to countersink.

DTB-TZ is a light capacity holdown

Materials: See table

Finish: G90 galvanizing; DTB-TZ – G-185 galvanizing

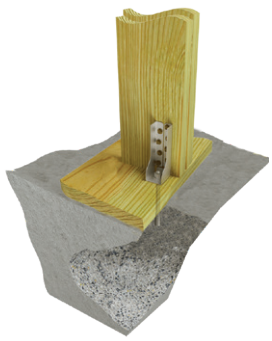
Codes: IBC, FL, LA

Installation:

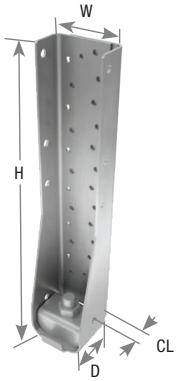
- Install the required fasteners according to the table.
- **Washer is required on DTB installations. No washer is required for the PHD.**
- Install with MiTek's code evaluated WS15-EXT (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws, which are provided with the holdown.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- **PHD Predeflected Holdowns may be installed off sill plate with no load reduction.** Reference page 62 for more information.
- The design engineer may specify any alternate anchorage calculated to resist the tension load for a specific application. Anchorage exposure length should take the bearing plate height of 1-5/8" into account, anchor bolt thread should visibly extend above nut.
- If used to anchor a built-up post, such as a double 2x4, the post component shall be designed to act as a single unit. Holdown fasteners specified shall not be considered to attach multiple plies together.
- For anchorage options see STB/STBL Anchor Bolt section on pages 51-52.



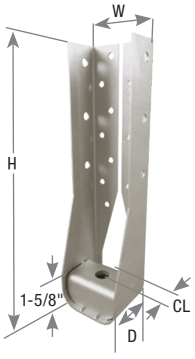
Typical PHD5A installation



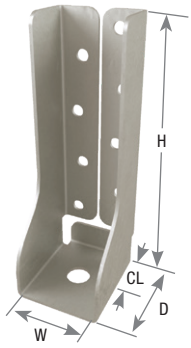
Typical DTB-TZ installation



PHD8



PHD5A
(PHD2A / PHD4A similar)



DTB-TZ

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule				Allowable Loads (Lbs.)[1,4,7]			Corrosion Finish	Code Ref.
							Anchor Bolts[2]		Screws[6]		DF/SP	S-P-F			
			W	H	D	CL[8]	Qty	Dia.	Qty	Type	Tension 160%	Tension 160%	Deflection Δ (in) at 160%[3,5]		
DTB-TZ	DTT2Z	14	1-13/16	6	2-1/4	1-1/8	1	1/2	8	WS15-EXT	1835	1510	0.119		IBC, FL, LA
PHD2A	HDU2-SDS2.5	14	3	7-3/4	2-5/8	1-3/8	1	5/8	6	WS3	3215	2700	0.155		
PHD4A	HDU4-SDS2.5	14	3	9-3/4	2-5/8	1-3/8	1	5/8	10	WS3	5215	4380	0.137		
PHD5A	HDU5-SDS2.5	14	3	11-11/16	2-5/8	1-3/8	1	5/8	14	WS3	6525	5480	0.135		
PHD8	HDU8-SDS2.5	12	3-1/4	16-1/2	3	1-3/8	1	7/8	24	WS3	8185	6875	0.062		

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) The designer must specify anchor bolt type, length, and embedment.
3) Deflections are derived from static, monotonic load tests of devices connected to DF-L wood members with specified fasteners.
4) The designer shall consider the effect of compression, bearing, tension, and combined bending due to device eccentricity when applicable.
5) The PHD/PHDA may be elevated off the sill and may increase deflection. Reference page 62 for more information.
6) MiTek's WS15-EXT (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are included with holdowns.
7) For PHD holdowns, minimum post thickness is 3". Consult MiTek for installations less than 3".
8) "CL" denotes the distance between the post and center of the anchor bolt.
New products or updated product information are designated in **blue font.**

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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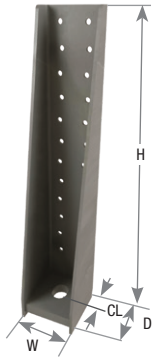
Engineered for high capacity with minimum deflection and low eccentricity. Installs with screws eliminating the need for predrilling and potential fastener slip. No through bolts to countersink.

Materials: See table
Finish: Primer
Codes: IBC, FL, LA

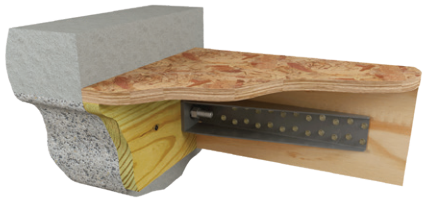
Installation:
- Install the required fasteners according to the table.
- Place holdown over anchor bolt and drive screws into post.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- Holdown may be installed off of the plate with no load reduction. Reference page 62 for more information.
- If used to anchor a built-up post, such as a double 2x4, the post component shall be designed to act as a single unit. Holdown fasteners specified shall not be considered to attach multiple plies together.



Typical UPHD installation



UPHD



Typical UPHD concrete wall installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule				Minimum Wood Thickness (in)[6]	Minimum Wood Width (in)	Allowable Loads (Lbs.)[1,5,7]			Code Ref.
							Anchor Bolts[2]		Wood Screws[8]				DF/SP	S-P-F		
			W	H	D	CL	Qty	Dia. (in)	Qty	Type			Tension 160%	Tension 160%	Deflection Δ (in) at 160%[3]	
UPHD8	HDQ8-SDS3	10	3-1/4	17-1/2	3-1/8	1-3/8	1	7/8	24	WS3	3	3-1/2	9165	7695	0.075	IBC, FL, LA
UPHD9	HDU11-SDS2.5	10	3-1/4	17-1/4	3-1/2	1-1/2	1	1	24	WS3	3	5-1/2	11270	9465	0.057	
UPHD11	HHDQ11-SDS2.5	7	3	15-1/8	3-1/2	1-1/2	1	1	24	WS3	4-1/2	5-1/2	14395	12090	0.077	
UPHD14	HDU14-SDS2.5, HHDQ14-SDS2.5	7	3	18-3/4	3-1/2	1-1/2	1	1	30	WS3	4-1/2	5-1/2	16695	14020	0.082	

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) The designer must specify anchor bolt type, length, and embedment.
3) Deflections are derived from static, monotonic load tests of devices connected to DF-L wood members with specified fasteners.
4) The designer shall consider the effect of compression, bearing, tension, and combined bending due to device eccentricity when applicable.
5) The UPHD may be elevated off the sill and may increase deflection. Reference page 62 for more information.
6) Where post is consisted of multiple 2x members, members must be fastened securely together to act as one member.
7) Minimum post thickness is 3" or greater. Consult MiTek for installations less than 3".
8) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with UPHD models.
New products or updated product information are designated in **blue font**.

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Secures multi-ply studs or posts to foundation. Nail fastening makes for a convenient connection to studs or posts.

Materials: 10 gauge
Finish: G90 galvanizing
Codes: See table for code references

Installation:

- Install the required fasteners according to the table.
- Use all specified fasteners to attach the strap portion of the connector to the side of stud, post, joist, purlin, or beam. Secure the base to the concrete or masonry wall with specified anchor bolt. A design professional shall specify the type, length, and embedment of the anchor bolt.
- HTT45 Max – Fill all round and diamond nail holes.
- Washers are not required on transfer plates that fit over the anchor bolt.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- MiTek's LL930 (#9 X 2-7/8" long) LumberLok Screws are included with HTT45KT.



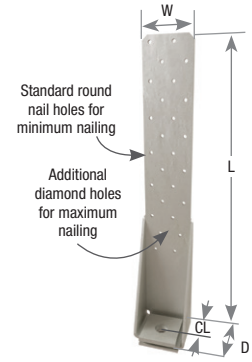
Typical HTT16 installation



Typical HTT45 max installation



HTT16



HTT45

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule						DF/SP Allowable Tension Loads (Lbs.)[1]		Code Ref.
								Anchor Bolt[3]		Strap[2,7]					
			W	L	D	CL	Min/ Max	Qty	Dia.	Qty	Type	Nail Spacing	160%	Δ (in)[4,5]	
HTT16	HTT4	10	2-1/2	16	2	1-3/8	--	1	5/8	18	10d	1-3/4	3610	0.142	IBC, FL, LA
HTT45	HTT4, HTT5	10	2-1/2	16	2	1-3/8	Min	1	5/8	18	10d	1-3/4	4215	0.115	
											16d x 2-1/2		4160	0.108	
							Max	1	5/8	26	10d		5795	0.101	
											16d x 2-1/2		5005		
HTT45KT[6]	HTT5KT	10	2-1/2	16	2	1-3/8	--	1	5/8	26	LL930	1-3/4	5865	0.113	--

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) 16d sinkers may be substituted for the specified 10d common nails with no load reduction.
16d common nails may be substituted for the specified 16d x 2-1/2" nails with no load reduction.
3) The designer must specify anchor bolt type, length and embedment depth.
4) Deflections are derived from static, monotonic load tests of devices connected to DF wood members with specified fasteners.
5) HTT holdowns raised off of the sill plate may have higher deflection values.
6) HTT45KT is sold as a kit and includes (1) HTT45 and (26) LL930 screws.
7) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d x 2-1/2" nails are 0.162" dia. x 2-1/2" long, 16d sinkers are 0.148" dia. x 3-1/4" long.

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TD – Different welded configurations and sizes achieve a great deal of versatility within the TD series.

TDX – The TDX2-TZ and TDX5 feature formed designs, all others are welded. All are self-jigging.

TDX features a self-jigging design with code required end distances built in. (End distance = 7 bolt diameters from the top of the sill to the center of the first bolt hole in the studs or post.)

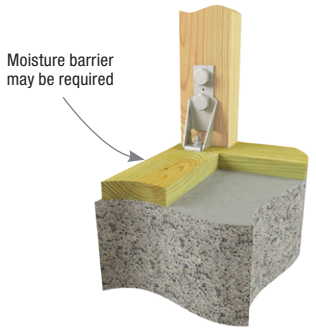
Materials: See table
Finish: TDX5– G90 galvanizing; TDX2-TZ – G-185 galvanizing; All others – Primer
Codes: IBC, FL, LA
Patents: U.S. Patent No. 5,092,097 – TDX2-TZ

Installation:

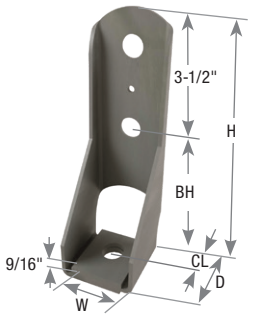
- Install the required fasteners according to the table.
- Do not use lag bolts. Washers are not required for anchor bolts or between holdown and bolt hex head, but standard washers should be used against stud or post under the nut. See page 53 for BP/LBP Bearing Plates.
- Bolt holes should be a minimum of 1⁄32" to a maximum of 1⁄16" larger than the bolt diameter (as per NDS® specifications).
- See pages 51-52 for STB Anchor Bolt section for anchorage options. A design professional may specify alternate anchorage with conventional anchor bolts.
- A design professional shall determine the adequacy of the stud to resist published loads. Holdown fasteners specified shall not be considered to attach multiple plies together.
- Self-jigging models are designed to provide the required minimum end distance of 7 bolt diameters from the bottom of the stud or post to the centerline of the first bolt hole.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench. Wood members may shrink over time; if possible, nut tightness should be checked periodically.
- If used to anchor a built-up post, such as a double 2x4, the post component shall be designed to act as a single unit.



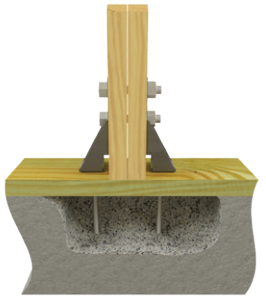
Typical TDX6 installation



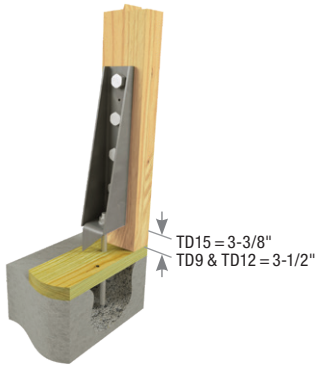
Typical TDX2-TZ installation



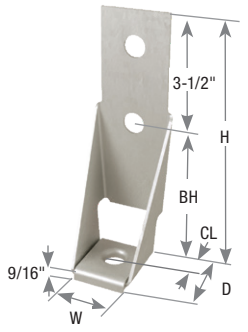
TDX6



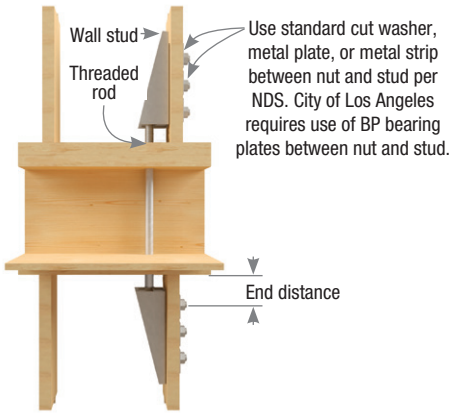
Typical TDX2-TZ back-to-back installation



Typical TD15 installation



TDX2-TZ



Holdown installation between floors

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[4]			Min. Required Bolt End Distance[5]	Length of Bolt in Vertical Member	DF/SP Allowable Tension Loads (Lbs.)[1,2,3]		Corrosion Finish	Code Ref.
			W	H	D	BH	CL	Anchor Bolt Dia.	Bolts Qty	Bolts Dia.			160%	Δ (in)[8]		
TD5	--	7	3	6-3/8	3-3/4	1-1/4	2-1/8	3/4	2	3/4	5-1/4	1-1/2"	2405	0.122 [6]		IBC, FL, LA
												3"	4040	0.140 [6]		
												3-1/2"	4040	0.140 [6]		
												5-1/2"	4040	0.140 [6]		
TD7	--	3	3-3/8	11-7/8	3-5/8	3-3/8	2-1/8	1-1/8	3	7/8	6-1/8	1-1/2"	4600	0.095 [6]		
												3"	8195	0.125 [6]		
												3-1/2"	9420	0.139 [6]		
												5-1/2"	10510	0.152 [6]		
TD9	--	3	3-3/8	16-1/2	4-1/4	4-1/8	2-1/8	1-1/8	3	1	7	3"	9330	0.146 [6]		
												3-1/2"	10715	0.160 [6]		
												4-1/2"	13370	0.169 [6]		
												5-1/2"	13500	0.170 [6]		
TD12	HD12	3	3-1/2	20-1/2	4-1/4	4-1/8	2-1/8	1-1/8	4	1	7	3"	12070	0.132 [6]		
												3-1/2"	13960	0.142 [6]		
												4-1/2"	16550	0.185 [6]		
												5-1/2"	16550	0.185 [6]		
TD15	HD19	3	3-1/2	25	4-3/8	4-1/4	2-1/8	1-1/4	5	1	7	3"	14505	0.167 [6]		
												3-1/2"	16845	0.178 [6]		
												4-1/2"	17755	0.202 [6]		
												5-1/2"	17755	0.202 [6]		
TDX2-TZ	HD3B	12	2-1/16	8-1/8	2-3/4	4-1/2	1-1/2	5/8	2	5/8	4-1/2	1-1/2"	1920	0.150 [6]		IBC, FL, LA
												3"	3295	0.169 [6]		
												3-1/2"	3295	0.169 [6]		
												5-1/2"	3295	0.169 [6]		
TDX5	--	10	2-1/2	9-3/8	3-7/8	6	2	3/4	2	3/4	5-1/4	1-1/2"	2340	0.079 [6]		
												3"	4515	0.151 [6]		
												3-1/2"	4530	0.151 [6]		
												4-1/2"	4530	0.151 [6]		
TDX6	HD5B	7	3-1/2	11-1/8	3-3/4	6-1/8	2	7/8	2	7/8	6-1/8	1-1/2"	2835	0.093 [6]		
												3"	5350	0.128 [6]		
												3-1/2"	5805	0.138 [6]		
												4-1/2"	5805	0.138 [6]		
TDX8	--	7	3-1/2	14-5/8	3-3/4	6-1/8	2	7/8	3	7/8	6-1/8	1-1/2"	4160	0.060 [6]		
												3"	7870	0.132 [6]		
												3-1/2"	9125	0.172 [6]		
												4-1/2"	9125	0.172 [6]		
TDX10	HD7B	7	3-1/2	18-1/8	3-3/4	6-1/8	2	7/8	4	7/8	6-1/8	3"	10140	0.128 [6]		
												3-1/2"	10570	0.137 [6]		
												4-1/2"	10570	0.137 [6]		
												5-1/2"	10570	0.137 [6]		
TDX14	HD9B	3	3-1/2	20-1/2	3-5/8	7	2-1/8	1	4	1	7	3"	11995	0.117 [6]		
												3-1/2"	13895	0.146 [6]		
												4-1/2"	15015	0.166 [6]		
												5-1/2"	15015	0.166 [6]		

1) Allowable loads shown are for single shear connections and may be doubled for back-to-back installations. The designer must verify post and anchor bolt capacities.
2) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) The designer must specify stud or post to resist published load values.
4) The designer must specify anchor bolt type, length, and embedment.
5) TD models - install TD holdown raised off of bottom plate if the BH dimension is less than end distance dimension.
6) Deflections are derived from static, monotonic load tests of devices connected to DF wood members and consider both the deflection of the holdown and fastener slippage.
7) The designer shall consider the effect of compression, bearing, tension, and combined bending due to device eccentricity when applicable.
8) The TD/TDX may be elevated off the sill which may increase deflection. Reference page 62 for more information.
New products or updated product information are designated in **blue font.**

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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LTS series – The LTS19 is designed for nail-on installation to 2x joists or studs, and the LTS20B provides a nail or bolt fastening option. The LTS20B will accommodate wood I-Joists if 10d (0.148") x 1-1/2" nails are used instead of the specified 16d nails.

LTTI31 – An open web joist tension tie designed for use with masonry or concrete construction.

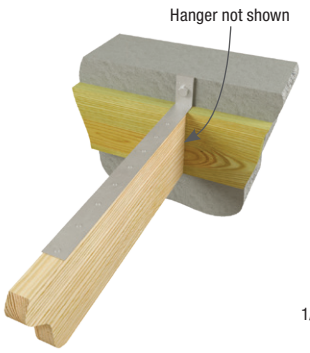
Materials: See table

Finish: G90 galvanizing; LTS19-TZ – G-185 galvanizing

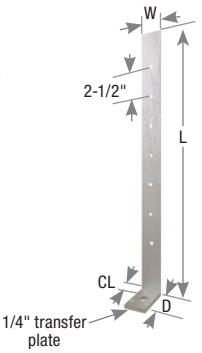
Codes: IBC, FL, LA

Installation:

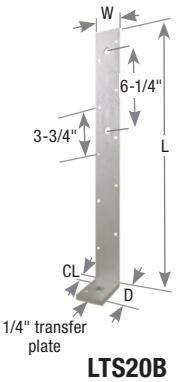
- Use all specified fasteners to attach the strap portion of the connector to the side of stud, post, joist, purlin, or beam. Secure the base to the concrete or masonry wall with specified anchor bolt. A design professional shall specify the type, length, and embedment of the anchor bolt.
- Washers are not required on transfer plates that fit over the anchor bolt.
- LTTI31 and LTS connectors must be mounted flush to the mudsill.
- Allowable loads are based on either nail or bolt fastening; nail and bolt values cannot be combined.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- Refer to MiTek's LTS19-TZ Deck Lateral Load Connector Technical Bulletin for deck rail reinforcement at MiTek-US.com.



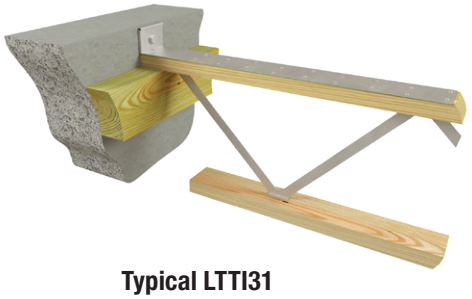
Typical LTS installation



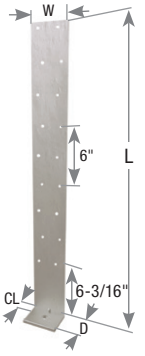
LTS19-TZ



LTS20B



Typical LTTI31 installation



LTTI31

MiTek Stock No.[6]	Ref. No.	Steel Gauge		Dimensions (in)				Nail Spacing	Fastener Schedule				DF/SPAllowable Tension Loads (Lbs.)[1]		Corrosion Finish	Code Ref.
									Anchor Bolt[4]		Strap[2,3,7]					
		Strap	Plate	W	L	D	CL		Qty	Dia.	Qty	Type	160%	Δ (in)[5]		
LTTI31	LTTI31	18	3	3-3/4	31	2-5/8	1-3/8	3	1	5/8	18	10d x 1-1/2	2805	0.175		
LTS19-TZ	LTT19	16	3	1-3/4	22-1/4	3	1-1/2	2-1/2	1	3/4	8	10d HDG	1205	0.132		IBC, FL, LA
LTS20B	LTT20B	12	3	2	20	3	1-1/2	3-3/4	1	3/4	10	10d x 1-1/2	1100	0.128		
											10	16d	1105	0.128		
											2	1/2 Bolt	1175	0.128		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) LTS20B bolted installation requires a minimum 1-1/2" wood member thickness.
3) 16d sinkers may be substituted for the specified 10d common nails with no load reduction.
4) The designer must specify anchor bolt type, length and embedment depth.
5) Deflections are derived from static, monotonic load tests of devices connected to DF wood members with specified fasteners.
6) LTTI and LTS holdowns shall be installed tight to the sill plate.
7) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d sinkers are 0.148" dia. x 3-1/4" long.

New products or updated product information are designated in **blue font**.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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Foundation Straps offer an economical, one-piece method of achieving a continuous load path from a 2 x 8 or 2 x 14 dimensional rim joist through concrete block to foundation. All models require a 6" embedment into concrete footings.

Materials: 12 gauge

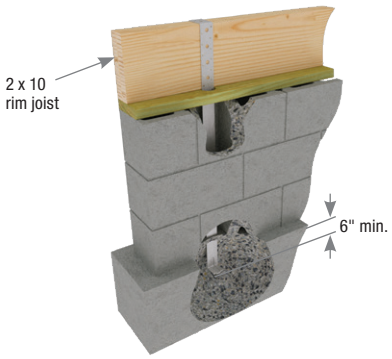
Finish: G90 galvanizing

Options: See table for Corrosion Finish Options

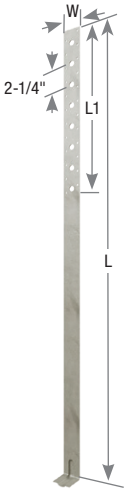
Codes: IRC R404.1.5

Installation:

- Install the required fasteners according to the table.
- Allowable loads are based on either nail fastening or bolt fastening; nail and bolt values cannot be combined.
- Install by inserting product into footing's wet concrete. All models require a 6" embedment into concrete foundations. Courses of concrete block must be laid over connector. Notch mudsill at connector locations. Wrap strap over rim joist and fasten.
- Do not rely on these straps to secure concrete sections together between cold joints; take other measures to transfer the load. If there is a cold joint between block and foundation, the minimum embedment must be made into the foundation.
- Based on product embedment the exposed number of fastener holes may be reduced. Using fewer fasteners will reduce allowable loads. Reduce allowable loads by the code prescribed allowable load per fastener, for each fastener not installed.
- Allowable loads are based on a minimum concrete compressive strength of 2,500 psi at 28 days.



Typical TA rim joist to foundation installation



TA

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			DF/SP Allowable Loads (Lbs.)												Corrosion Finish	Code Ref.
						2 x 8			2 x 10			2 x 12			2 x 14				
						Fastener Schedule[1,4]		Uplift[2] 160%	Fastener Schedule[1,3,4]		Uplift[2] 160%	Fastener Schedule[1,3,4]		Uplift[2] 160%	Fastener Schedule[1,3,4]		Uplift[2] 160%		
			W	L	L1	Qty	Type		Qty	Type		Qty	Type		Qty	Type			
TA51	PA51	12	2-1/16	48-1/4	17-5/8	2	1/2 Bolt	1340	3	1/2 Bolt	1950	4	1/2 Bolt	2475	5	1/2 Bolt	3230		
						8	16d x 2-1/2	1905	10	16d x 2-1/2	2385	14	16d x 2-1/2	3230	16	16d x 2-1/2	3230		
TA71	PA68	12	2-1/16	68-1/4	22-1/8	2	1/2 Bolt	1340	3	1/2 Bolt	1950	4	1/2 Bolt	2475	5	1/2 Bolt	3230		--
						8	16d x 2-1/2	1905	10	16d x 2-1/2	2385	14	16d x 2-1/2	3230	16	16d x 2-1/2	3230		

1) Bolt values are for 3" thick rim joist loaded perpendicular to grain.
2) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
3) Minimum of (9) 16d nails per strap is required to meet IRC R404.1.5.
4) **NAILS:** 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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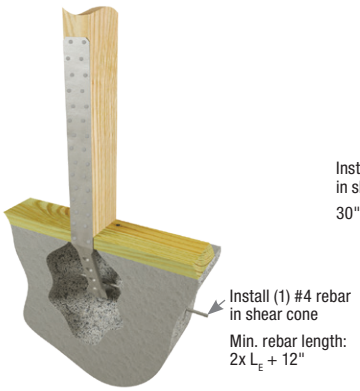
The embossments below the embedment line allow for increased concrete bonding. These holdowns retain high uplift capacity even when installed at corners of foundation stemwalls. Ideal for use with built up 2x end posts.

RJ after the model indicates LSTAD or STAD for rim joist applications as in **STAD8RJ**. Rim joist models provide for a 17" clear span without the loss of strap nailing.

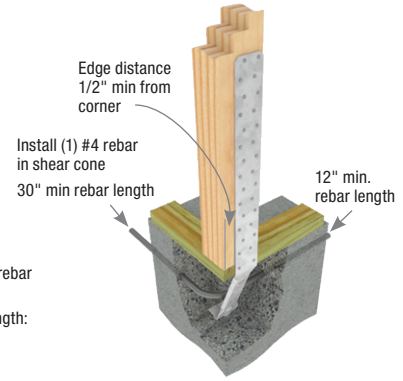
Materials: LSTAD-14 gauge; STAD-12 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

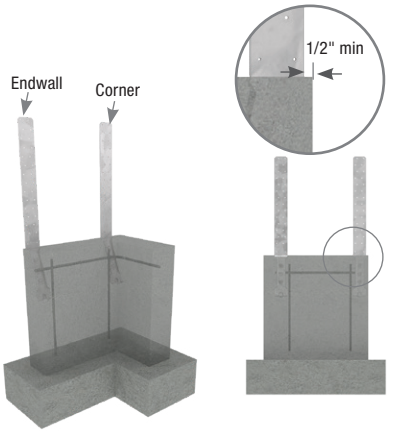
- Install the required fasteners according to the table. The bottom (2) nails are for form board attachment only and do not contribute to fastener schedule requirements.
- Embed holdown in concrete to the embedment line (bend line).
- See illustrations for requirements on rebar, edge distances, and clear spans.
- Bending the strap horizontally 90° to facilitate wall placement may cause concrete behind the embedded strap to break away at the top edge (spalling). If the spall is 1" or less from the top edge of the concrete, no load reduction is necessary. If the spall is between 1" and 4" the allowable load is 0.90 of the published table load.
- When installing on lumber less than 3-1/2" wide, wood splitting may occur. To reduce splitting, use 10d (0.148") x 1-1/2" nails or fill every other hole with 16d (0.162" x 3-1/2") common nails. Reduce allowable loads per code requirements accordingly.
- These straps do not secure concrete sections together at cold joints; take other measures to transfer the load. If there is a cold joint between slab and foundation, the minimum embedment must be made into the foundation. Fastening opportunities may be reduced because the slab pour level may be higher than some nail holes. Using fewer fasteners will reduce allowable loads. Reduce allowable load by the code capacity for each fastener not installed.
- To achieve full table loads the minimum center-to-center spacing is twice the embedment depth (l_E) when resisting tension loads at the same time.
- Where fewer fasteners are used in the structural wood member, reduce loads according to the code.
- There may be an increase in the amount of deflection if the strap is installed on the outside of the sheathing, versus directly to the framing members.
- Strap may be bent one complete cycle to aid installation.
- For installation in severe corrosion environments, see Corrosion Information on pages 12-18.



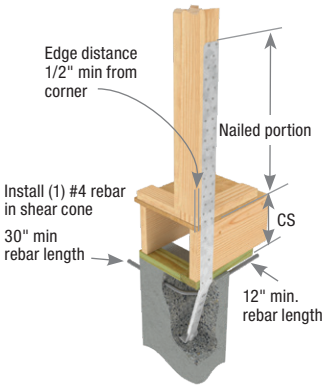
Typical STAD10 midwall installation



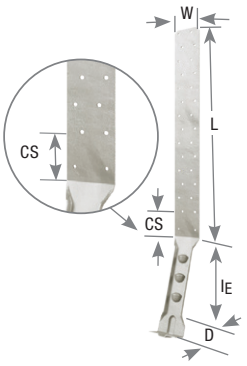
Typical STAD10 corner installation



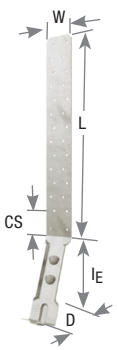
Typical STAD corner and endwall installation



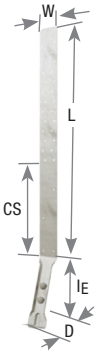
Typical STAD14RJ corner rim joist installation



STAD



LSTAD



STAD_RJ

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Concrete Stemwall Minimum Thickness (in)	Fastener Schedule[1,12]		Allowable Tension Loads (Lbs.)[6,7]						Code Ref.
											Uncracked			Cracked			
			W	L	I_E	D	CS		Qty[8]	Type	Corner[3]	Midwall[4,5]	Endwall[3]	Corner[3]	Midwall[4,5]	Endwall[3]	
Wind and ASCE Seismic Design A & B - Allowable Tension Loads (Lbs.)																	
LSTAD8	LSTHD8	14	3	21-5/8	8	5	4-5/8	6	20	16d Sinker	2280	2950	--	1820	2950	--	IBC, FL, LA
LSTAD8RJ	LSTHD8RJ			35-1/8			18-1/8										
STAD8	--	12	3	21-5/8	8	5	4-5/8	6	22	16d Sinker	2265	3675	2175	1905	3175	1865	
STAD8RJ	--			35-1/8			18-1/8										
STAD10	STHD10	12	3	21-5/8	10	5	1-5/8	6	28	16d Sinker	3135	4675	2540	2540	4480	2550	
STAD10RJ	STHD10RJ			36			16-1/8										
STAD14	STHD14	12	3	32-1/8	14	5	4-5/8	6	30	16d Sinker	4745	5010	2910	4745	5010	2890	
STAD14RJ	STHD14RJ			39-5/8			12-1/8										
ASCE Seismic Design C-F - Allowable Tension Loads (Lbs.)																	
LSTAD8	LSTHD8	14	3	21-5/8	8	5	4-5/8	6	20	16d Sinker	1995	3125	--	1595	2735	--	IBC, FL, LA
LSTAD8RJ	LSTHD8RJ			35-1/8			18-1/8										
STAD8	--	12	3	21-5/8	8	5	4-5/8	6	18	16d Sinker	1985	2945	1730	1665	2780	1635	
STAD8RJ	--			35-1/8			18-1/8										
STAD10	STHD10	12	3	21-5/8	10	5	1-5/8	6	24	16d Sinker	2740	4275	2435	2220	3920	2235	
STAD10RJ	STHD10RJ			36			16-1/8										
STAD14	STHD14	12	3	32-1/8	14	5	4-5/8	6	24	16d Sinker	3880	4185	2300	3880	4185	2300	
STAD14RJ	STHD14RJ			39-5/8			12-1/8										

1) Predrilled holes are not required.
2) Wood thickness shall be no less than 3" (2 - 2x members).
3) Corner and Endwall strap location implies that the distance from the wall corner or endwall end to the edge of the strap is no less than 1/2".
4) Midwall strap location implies that the minimum distance from the corner of the wall to the centerline of the strap is no less than 1.5 times the embedment depth (l_E).
5) For edge distances between 1/2" and 1.5 x l_E calculate loads using straight line interpolation.
6) Minimum anchor spacing for full capacity is 2 x l_E. For spacing less than that reduce capacity proportionally.
7) Allowable tension loads are for Doug-Fir, Southern Pine, Spruce-Pine-Fir and Hem Fir.
8) The strap should be fastened with nails starting from lowest pair of nail holes and working up towards the top of the strap. In many cases, not all nail holes are needed to be filled.
9) Minimum concrete strength f'c = 2,500 psi.
10) Minimum 1-#4 rebar shall be installed in the shear cone.
11) Deflection at highest allowable loads for installation over wood double studs are as follows:
LSTAD8 = 0.025", STAD8 = 0.045", STAD10 = 0.051", STAD14 = 0.099".
LSTAD8RJ = 0.032", STAD8RJ = 0.050", STAD10RJ = 0.058", STAD14RJ = 0.103".
12) **NAILS:** 16d sinkers are 0.148" dia. x 3-1/4" long. 10d common (0.148" dia. x 3" long) nails may be substituted with no load reduction.

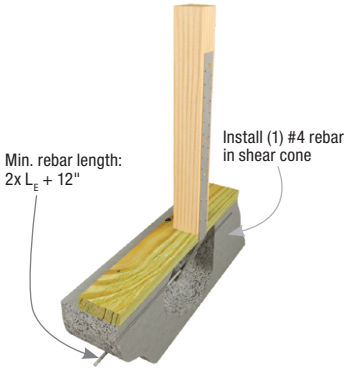
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Designed to anchor wood framing to poured concrete foundations.

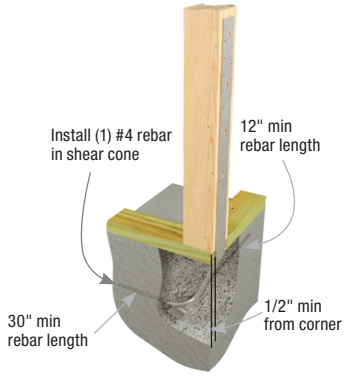
Materials: See table
Finish: G90 galvanizing
Codes: See table for code references

Installation:

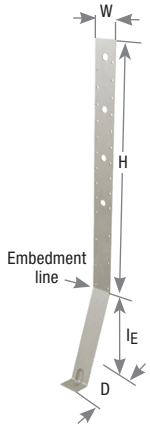
- Install the required fasteners according to the table.
- Bending the strap horizontally 90° to facilitate wall placement may cause concrete behind the embedded strap to break away at the top edge (spalling). If the spall is 1" or less from the top edge of the concrete, no load reduction is necessary. If the spall is between 1" and 4", the allowable load is 0.90 of the published table load.
- When installing on lumber less than 3-1/2" wide, wood splitting may occur. To reduce splitting, use 10d (0.148") x 1-1/2" nails or fill every other hole with 16d (0.162" x 3-1/2") common nails. Reduce allowable loads in accordance with code requirements.
- Straps are to be installed at the edge of concrete. Install prior to pour by nailing to form. Drive temporary nails through lowest two nail holes into form. Concrete level should reach embedment line; minimum embedment depths are listed in table.
- Do not rely on these straps to secure concrete sections together between cold joints; take other measures to transfer the load. If there is a cold joint between slab and foundation, the minimum embedment must be made into the foundation. Fastening opportunities may be reduced because the slab pour level may be higher than some nail holes. Using fewer fasteners will reduce allowable loads. Reduce allowable load by the code capacity for each fastener not installed.
- Allowable loads based on a minimum concrete compressive strength of 2,500 psi at 28 days, with one #4 horizontal rebar in the shear cone. Rebar should be a minimum length of 2x embedment depth plus 12" (see table for exceptions in corner installations).
- Where fewer fasteners are used in the structural wood member, reduce loads according to the code.
- There may be an increase in the amount of deflection if the strap is installed on the outside of the sheathing, versus directly to the framing members.
- Strap may be bent one complete cycle to aid installation.
- For installation in severe corrosion environments, see Corrosion Information on pages 12-18.



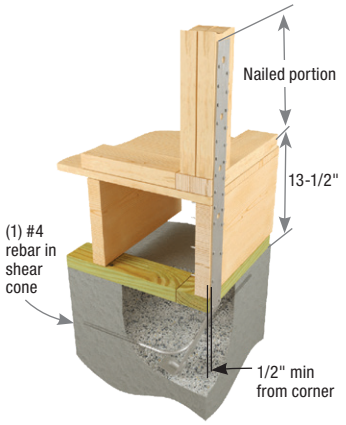
Typical HPAHD22 single pour midwall installation



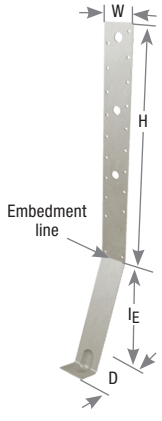
Typical HPAHD22 single pour corner and endwall installation



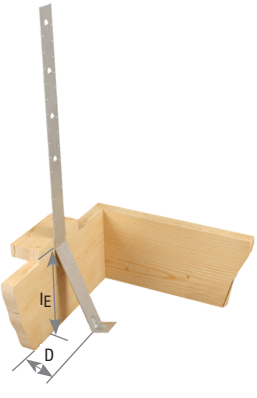
HPAHD



Typical HPAHD22 single pour rim joist corner installation



PAHD42



HPAHD22 form board installation

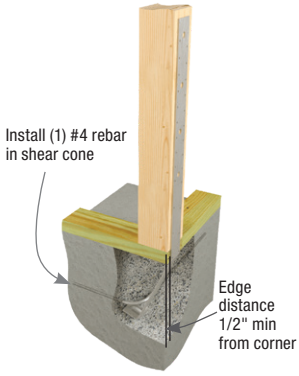
Continued on next page

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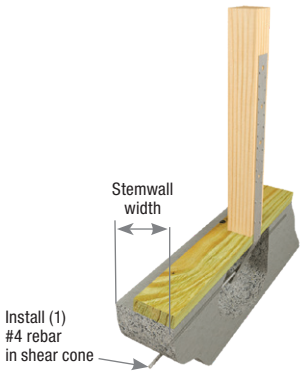
HPAHD22 / PAHD42 Load Table

MiTek Stock No.	Ref. No.	Ga.	Dimensions (in) W	L	l_E	D	Concrete Stemwall Minimum Thickness (in)	Fastener Schedule[1] Qty[6]	Type[10]	DF/SP Allowable Tension Loads (Lbs.)[5] Uncracked Corner[2]	Uncracked Midwall[3,4]	Cracked Corner[2]	Cracked Midwall[3,4]	Code Ref.
Wind and ASCE Seismic Design A & B														
HPAHD22	--	10	2-1/16	24-3/4	9-1/2	4-1/8	6	23	16d	3110	3265	2175	2285	IBC, FL, LA
PAHD42	--	12	2-1/16	16-5/8	8	5-3/4	6	15	16d	1155	2465	810	1725	
ASCE Seismic Design C-F														
MiTek Stock No.	Ref. No.	Ga.	Dimensions (in) W	L	l_E	D	Concrete Stemwall Minimum Thickness (in)	Fastener Schedule[1] Qty[6]	Type[10]	DF/SP Allowable Tension Loads (Lbs.)[5] Uncracked Corner[2]	Uncracked Midwall[3,4]	Cracked Corner[2]	Cracked Midwall[3,4]	Code Ref.
HPAHD22	--	10	2-1/16	24-3/4	9-1/2	4-1/8	6	23	16d	2280	2855	1905	2000	IBC, FL, LA
PAHD42	--	12	2-1/16	16-5/8	8	5-3/4	6	15	16d	1010	1850	705	1510	

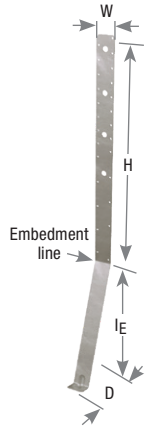
1) Predrilled holes are not required.
2) Corner strap location implies that the distance from the corner of the wall to the edge of the strap is no less than 1/2".
3) Midwall strap location implies that the minimum distance from the corner of the wall to the centerline of the strap is no less than 1.5 times the embedment depth (l_E).
4) For edge distances between 1/2" and 1.5 x l_E calculate loads using straight line interpolation.
5) Minimum anchor spacing for full capacity is 2 x l_E. For spacing less than that reduce capacity proportionally.
6) The strap should be fastened with nails starting from lowest pair of nail holes and working up towards the top of the strap. In many cases, not all nail holes are needed to be filled.
7) Minimum concrete strength f'c = 2,500 psi.
8) Minimum 1-#4 rebar shall be installed in the shear cone.
9) Deflection at highest allowable loads for installation over wood double studs are as follows: HPAHD22 = 0.118", PAHD42 = 0.095".
10) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.



Typical HPAHD22-2P corner installation



Typical HPAHD22-2P midwall installation



HPAHD22-2P

HPAHD22-2P Load Table

MiTek Stock No.	Steel Gauge	Dimensions (in) W	H	l_E	D	Stemwall Width	Fastener Schedule[2,5] Min Qty[4]	Nail	DF/SP Allowable Tension Loads (Lbs.)[1] 160%	Code Ref.
MIDWALL INSTALLATION - 2,500 psi Concrete										
8" min from corner										
HPAHD22-2P	10	2-1/16	26-1/4	14	6-1/4	6 8	24	16d	5170	--
CORNER INSTALLATION - 2,500 psi Concrete										
1/2" min from corner										
HPAHD22-2P	10	2-1/16	26-1/4	14	6-1/4	6 8	24	16d	4095	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) 16d sinkers (0.148" dia. x 3-1/4" long) or 10d common (0.148" dia. x 3" long) nails may be substituted for the specified 16d common nails provided the listed allowable loads are reduced 15%.
3) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.
4) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

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HPA series – For installation into poured concrete walls, foundations, or masonry. The HPA is the heavy-duty version of the PA anchor.

PA series – For installation into poured concrete or concrete block walls and foundations.

PAI series – For wood I-Joist applications. An expanded 3" on-center nail spacing reduces splitting along I-Joist flange.

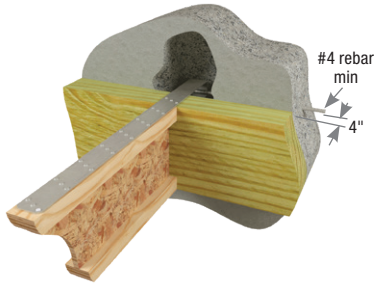
Materials: HPA – 10 gauge; PA / PAI – 12 gauge
Finish: G90 galvanizing

Installation:

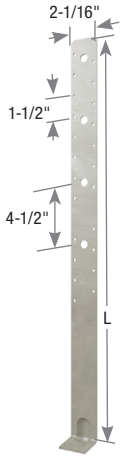
- Install the required fasteners according to the table.
- Minimum concrete strength is 2,500 psi.
- The allowable loads for bolts are based on parallel to grain loading with a 3" minimum member thickness, except the HPA which requires a 3-1/2" thick wood member. Reduce load per code requirements when minimum member thickness is not achieved.
- Minimum concrete end/edge distance is 4" for PA / PAI series, and 6" for HPA series.
- Minimum CMU end/edge distance is 20".
- Designer may specify alternate fastening schedules. Refer to Nail Specification Table on page 26 for nail shear values. Load values shall not exceed published allowable loads.
- No anchor bolts are needed for achieving efficient stress transfer from framing to concrete walls or foundations.



Typical PA purlin installation



Typical PAI I-Joist purlin face installation



PA / HPA



PAI

Wind and ASCE Seismic Design A & B

MiTek Stock No.	Ref. No.	L (in)	Min Embed Depth (in)		Ledger / Plate Size	Nails							Bolts						Code Ref.
						Fastener Schedule[5,6,8]		Allowable Tension 160%[1,3,4]					Fastener Schedule[5,6,8]		Allowable Tension 160%[1,2,3,4]				
			Concrete	Masonry		Min Qty[7]	Type	Uncracked Concrete	Cracked Concrete	Min Qty[4,5,7,8]	Type	Masonry	Min Qty[7]	Bolt Dia. (in)	Uncracked Concrete	Cracked Concrete	Masonry		
PA18	PA18	18-1/2	4	6	None	12	16d	2975	2770	12	16d	2680	2	1/2	2240	2240	2240		--
					2x & 3x					11									
					4x					10		2480					2000		
PA23	PA23	23-3/4	4	6	None	15	16d	3720	2770	12	16d	2680	3	1/2	3360	2770	2680		
					2x & 3x														
					4x												2240		
PA28	PA28	29	4	6	None, 2x, 3x, 4x	15	16d	3720	2770	12	16d	2680	4	1/2	3960	2770	2680		
PA35	PA35	35	4	6	None, 2x, 3x, 4x	15	16d	3720	2770	12	16d	2680	4	1/2	3960	2770	2680		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads for bolts are based on parallel-to-grain loading with 3" minimum member thickness, except HPA which requires a 3-1/2" thick wood member.
3) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
4) Allowable tension loads are for Doug-Fir, Southern Pine, Spruce-Pine-Fir, Hem Fir and I-Joist installations.
5) 16d sinkers or 10d common nails may be substituted for the specified 16d common nails at 0.85 of the table loads.
6) For alternate nail schedule and load values consult MiTek.
7) Minimum quantity of fasteners to be installed. Product may have additional fastener holes not needed to meet published allowable load of product.
8) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d sinkers are 0.148" dia. x 3-1/4" long.

Continued on next page

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Wind and ASCE Seismic Design A & B

MiTek Stock No.	Ref. No.	L (in)	Min Embed Depth (in)		Ledger / Plate Size	Nails							Bolts					Code Ref.
						Fastener Schedule[5,6,8]		Allowable Tension 160%[1,3,4]					Fastener Schedule[5,6,8]		Allowable Tension 160%[1,2,3,4]			
			Concrete	Masonry		Min Qty[7]	Type	Uncracked Concrete	Cracked Concrete	Min Qty[4,5,7,8]	Type	Masonry	Min Qty[7]	Bolt Dia. (in)	Uncracked Concrete	Cracked Concrete	Masonry	
HPA28	HPA28	29	6	8	None, 2x, 3x, 4x	21	16d	4715	3300	12	16d	2680	4	1/2	4545	3300	2680	--
HPA35	HPA35	35	6	8	None, 2x, 3x, 4x	23	16d	4715	3300	12	16d	2680	4	1/2	4545	3300	2680	
PAI18	PAI18	18-1/2	4	6	None	12	10d x 1-1/2	2555	2555	12	10d x 1-1/2	2555	--	--	--	--	--	
					2x & 3x					9		1915						
					4x	10		2130	2130									
PAI23	PAI23	23-1/2	4	6	None	18	10d x 1-1/2	3830	2770	18	10d x 1-1/2	3830	--	--	--	--	--	
					2x & 3x	16		3405		15		3190						
					4x	15		3190		13		2680						
PAI28	PAI28	28-1/2	4	6	None	21	10d x 1-1/2	3960	2770	22	10d x 1-1/2	4680	--	--	--	--	--	
					2x & 3x					21		4470						
					4x					18		2680						
PAI35	PAI35	35-1/2	4	6	None	26	10d x 1-1/2	3960	2770	26	10d x 1-1/2	5535	--	--	--	--	--	
					2x & 3x					25		5320						
					4x					23		2680						

ASCE Seismic Design C-F

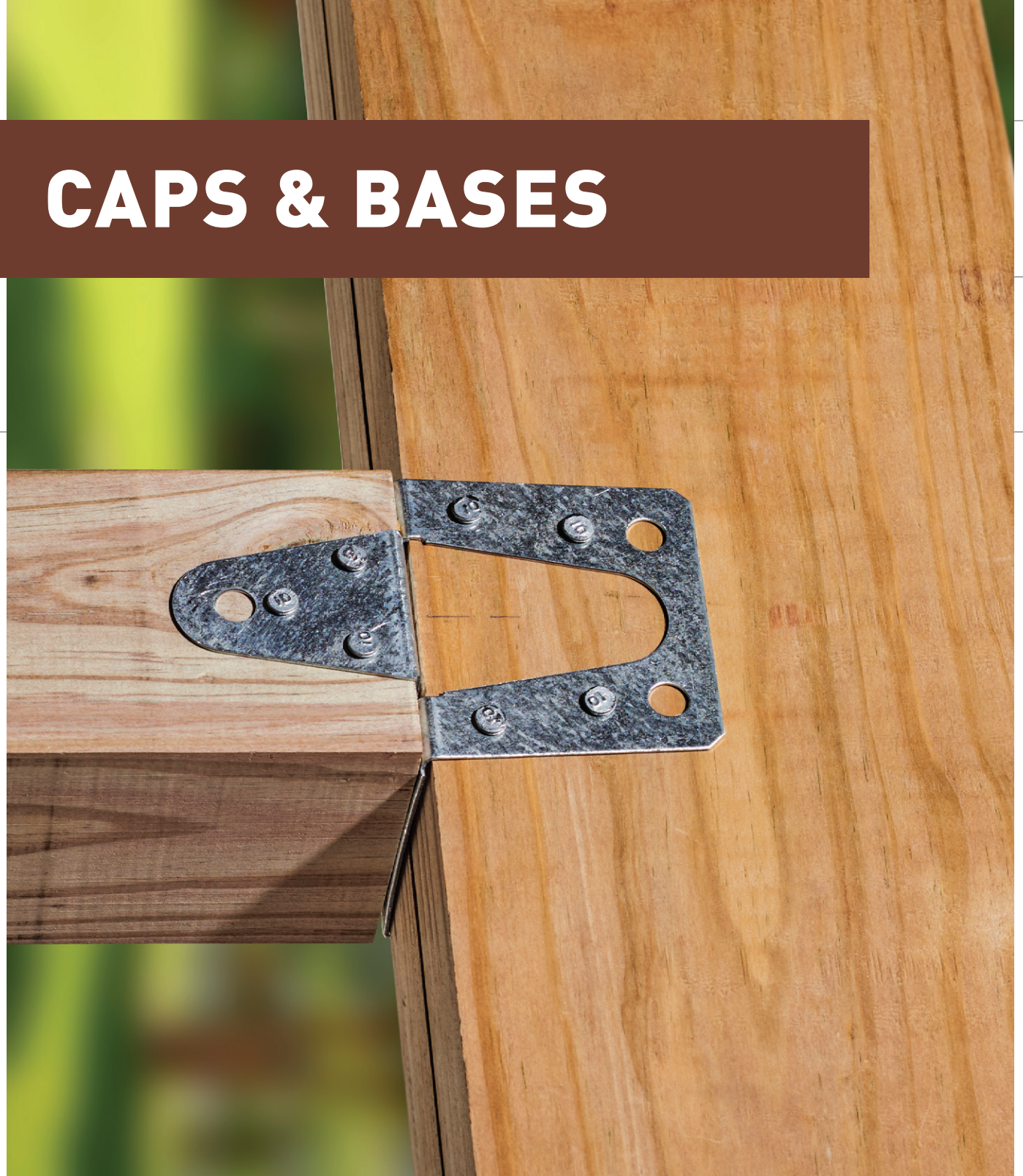
MiTek Stock No.	Ref. No.	L (in)	Min Embed Depth (in)		Ledger / Plate Size	Nails							Bolts					Code Ref.
						Fastener Schedule[5,6,8]		Allowable Tension 160%[1,3,4]					Fastener Schedule[5,6,8]		Allowable Tension 160%[1,2,3,4]			
			Concrete	Masonry		Min Qty[7]	Type	Uncracked Concrete	Cracked Concrete	Min Qty[4,5,7,8]	Type	Masonry	Min Qty[7]	Bolt Dia. (in)	Uncracked Concrete	Cracked Concrete	Masonry	
PA18	PA18	18-1/2	4	6	None	12	16d	2975	2425	12	16d	2680	2	1/2	2240	2240	2240	--
					2x & 3x					11								
					4x					10		2480					2000	
PA23	PA23	23-3/4	4	6	None	15	16d	3365	2425	12	16d	2680	3	1/2	3360	2425	2680	
					2x & 3x													
					4x												2240	
PA28	PA28	29	4	6	None, 2x, 3x, 4x	15	16d	3365	2425	12	16d	2680	4	1/2	3365	2425	2680	
PA35	PA35	35	4	6	None, 2x, 3x, 4x	15	16d	3365	2425	12	16d	2680	4	1/2	3365	2425	2680	
HPA28	HPA28	29	6	8	None, 2x, 3x, 4x	21	16d	4125	2890	12	16d	2680	4	1/2	4125	2890	2680	
HPA35	HPA35	35	6	8	None, 2x, 3x, 4x	23	16d	4125	2890	12	16d	2680	4	1/2	4125	2890	2680	
PAI18	PAI18	18-1/2	4	6	None	12	10d x 1-1/2	2555	2425	12	10d x 1-1/2	2555	--	--	--	--	--	
					2x & 3x					9		1915						
					4x	10		2130	2130									
PAI23	PAI23	23-1/2	4	6	None	18	10d x 1-1/2	3365	2425	18	10d x 1-1/2	3830	--	--	--	--	--	
					2x & 3x	16				15		3190						
					4x	15				13		2680						
PAI28	PAI28	28-1/2	4	6	None	21	10d x 1-1/2	3365	2425	22	10d x 1-1/2	4680	--	--	--	--	--	
					2x & 3x					21		4470						
					4x					18		2680						
PAI35	PAI35	35-1/2	4	6	None	26	10d x 1-1/2	3365	2425	26	10d x 1-1/2	5535	--	--	--	--	--	
					2x & 3x					25		5320						
					4x					23		2680						

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads for bolts are based on parallel-to-grain loading with 3" minimum member thickness, except HPA which requires a 3-1/2" thick wood member.
3) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
4) Allowable tension loads are for Doug-Fir, Southern Pine, Spruce-Pine-Fir, Hem Fir and I-Joist installations.
5) 16d sinkers or 10d common nails may be substituted for the specified 16d common nails at 0.85 of the table loads.
6) For alternate nail schedule and load values consult MiTek.
7) Minimum quantity of fasteners to be installed. Product may have additional fastener holes not needed to meet published allowable load of product.
8) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d sinkers are 0.148" dia. x 3-1/4" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

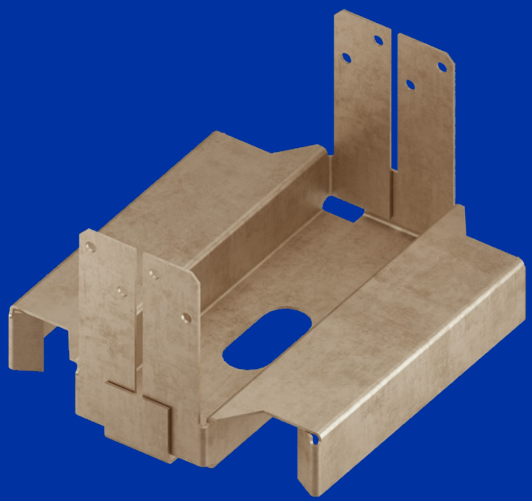
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CAPS & BASES



MiTek®

CAPS & BASES	76-101
Post Anchors	78-81
Post Bases	82-85
Column Bases	86-89
Post Caps	90-95
Column Caps	96-101



PA / PAE / PAF / PAU Post Anchors

Post Anchors are used to secure wood posts to concrete footings. These post anchors also provide moisture damage protection and feature a 1" stand-off plate to elevate wood posts above concrete surfaces as required by building code.

PAE – 2-sided post anchors with high uplift and bearing capacity

PA – High capacity utilizing 4-sided design

PAF – Innovative one-piece design maintaining a 1" stand-off

PAU – Higher uplift resistance and optional bolt fastening to post

Materials: See table

Finish: PAU, PA, PAE – G90 galvanizing;
PAF, PA55R-TZ, PAU66R-TZ, PA66ER-TZ – G-185 galvanizing

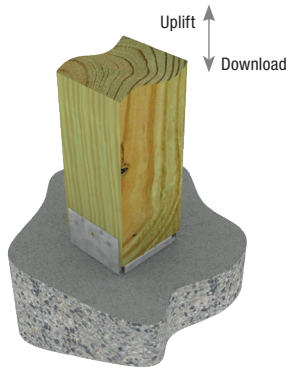
Options: See table for Corrosion Finish Options

Codes: See table for code references
IRC R317.1.4, IBC 2304.12.2.2,
IRC R407.3, IBC 2304.10.7

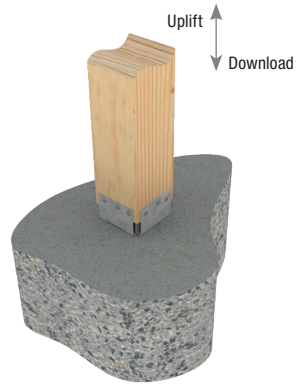
Installation:

- Install the required fasteners according to the table.
- Anchor bolts, washers and nuts are not supplied with the connector.
- **For cured concrete or retrofit installations** – use specified diameter threaded rod with adhesive epoxy, following manufacturer's installation instructions.
- **Anchor bolt installation** – place specified diameter anchor bolt at desired location with minimum 4" embedment into minimum 2,500 psi concrete. A minimum 2" edge distance from the outermost edge of the post base to the edge of the concrete is required to achieve allowable loads. Tighten the anchor bolt to PAF base with nut and washer.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**

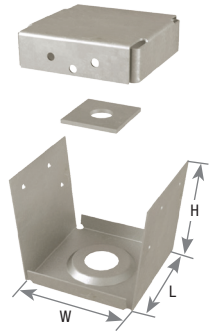
AVAILABLE IN GOLD COAT



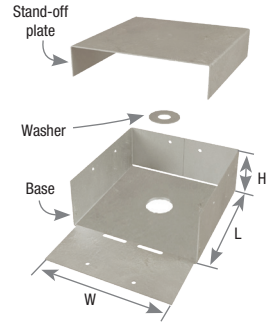
Typical PA66ER-TZ installation



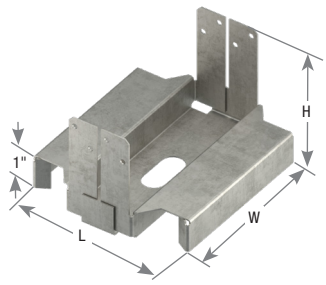
Typical PA installation



PAE



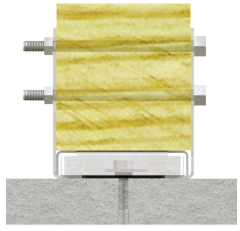
PA



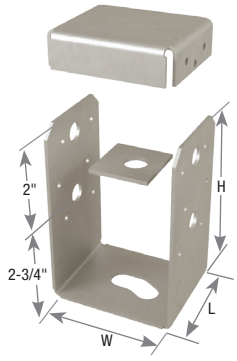
PAF



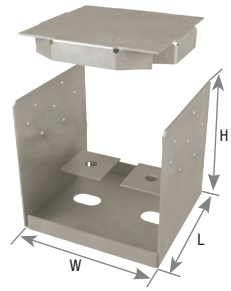
Typical PAF installation



PAU cross-section



PAU



PAU88

Continued on next page

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Post/ Column Size	MiTek Stock No.	Ref. No.	Steel Gauge		Dimensions (in)			Fastener Schedule[2,4]						DF/SP Allowable Loads (Lbs.)[3]			Corrosion	Finish	Code Ref.
								Anchor Bolt		Post									
										Nails		Bolts			Uplift[1]				
			Base	Stand-off Plate	W	H	L	Qty	Dia. (in)	Qty	Type	Qty	Dia. (in)	Bearing 100%	Nails 160%	Bolts 160%			
4 x 4	PA44-TZ	--	18	12	3-9/16	2-1/4	3-1/2	1	1/2	8	16d	--	--	4155	455	--			IBC, FL, LA
	PA44E-TZ	--	18	16	3-9/16	3-1/2	3-1/2	1	1/2	6	16d	--	--	6775	1035	--			
	PAF44-TZ	ABA44Z	14	--	3-11/16	2-11/16	3-5/16	1	1/2	8	10d HDG	--	--	7245	810	--			
	PAU44	ABU44	12	16	3-9/16	5-7/16	3	1	5/8	12	16d	2	1/2	6775	2535	2265			
4 x 4 Rough	PA44R-TZ	--	18	12	4-1/16	2-1/2	4	1	1/2	12	16d	--	--	4155	455	--			
4 x 6	PA46	--	18	12	3-9/16	2-1/4	5-1/2	1	1/2	14	16d	--	--	4155	455	--			
	PA46E	--	18	12	3-9/16	3-1/2	5-1/2	1	5/8	8	16d	--	--	6775	1035	--			
	PAF46-TZ	ABA46Z	14	--	3-11/16	3-1/4	4-15/16	1	5/8	8	**10d HDG**	--	--	**8490**	**1365**	--			
											16d HDG	--	--	**8835**					
	PAU46	ABU46	10	12	3-9/16	6	5	1	5/8	12	16d	2	1/2	13815	2535	2265			
4 x 6 Rough	PA46R	--	18	10	4-1/16	3-1/2	6	1	1/2	14	16d		--	4155	455	--			
5 x 5 Rough	PA55R-TZ	--	16	12	5	3-5/8	5	1	1/2	8	16d HDG	--	--	4155	455	--			--
6 x 6	PA66	--	18	12	5-1/2	2-7/8	5-1/2	1	1/2	16	16d	--	--	5930	250	--			IBC, FL, LA
	PA66E	--	14	12	5-1/2	3-1/2	5-1/2	1	5/8	8	16d	--	--	16005	1130	--			
	PAF66-TZ	ABA66Z	14	--	5-11/16	3-1/4	4-15/16	1	5/8	8	**10d HDG**	--	--	**10870**	**1375**	--			
											16d HDG	--	--	**12040**					
	PAU66	ABU66	10	12	5-1/2	6	5	1	5/8	12	16d	2	1/2	16005	2455	2265			
6 x 6 Rough	PA66R	--	18	12	6-1/16	3-1/4	6-1/16	1	1/2	16	16d	--	--	5930	250	--			
	PA66ER-TZ	ABA66R	14	12	6	3-1/4	5-1/2	1	5/8	8	16d HDG	--	--	16005	1130	--			
	PAU66R-TZ	ABU66RZ	10	12	6-1/16	5-3/4	5	1	5/8	12	16d HDG	2	1/2	16005	1475	1475			
8 x 8	PAU88	ABU88	12	12	7-1/2	7-3/16	7-1/16	2	5/8	14	16d	--	--	24900	3315	--			
8 x 8 Rough	PAU88R	ABU88R	12	12	8-1/16	6-15/16	7-1/16	2	5/8	14	16d	--	--	24900	3315	--			
10 x 10	PAU1010	ABU1010	12	16	9-1/2	7-3/16	9-1/2	2	5/8	14	16d	2	5/8	27095	1495	1495			
10 x 10 Rough	PAU1010R	--	12	16	10-1/16	7-3/16	10	2	5/8	14	16d	2	5/8	27095	1495	1495			
12 x 12	PAU1212	ABU1212	12	12	11-1/2	6-7/8	11-1/2	2	5/8	18	16d	2	5/8	64015	1180	1180			
12 x 12 Rough	PAU1212R	--	12	12	12-1/8	6-7/8	12-1/8	2	5/8	18	16d	2	5/8	64015	1180	1180			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) All bolts shall meet or exceed the specifications of ASTM A 307.
3) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
New products or updated product information are designated in **blue font.**

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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WAS / WE Wet Set Post Anchors

WAS – A formed base providing a 1" stand-off with high bearing capacity.

WE – A formed, one-piece design. Includes embossing for additional lateral strength.

Materials: See table

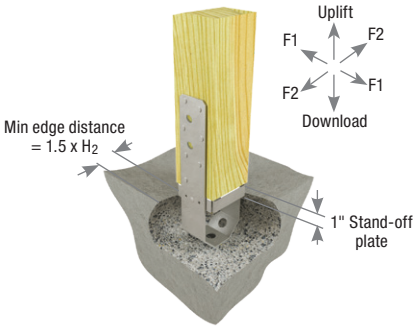
Finish: G90 galvanizing

Options: See table for Corrosion Finish Options

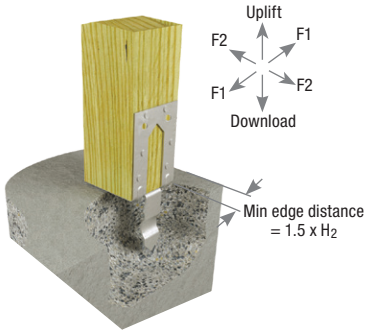
Codes: IBC, FL, LA
IRC R317.1.4, IBC 2304.12.2.2,
IRC R407.3, IBC 2304.10.7

Installation:

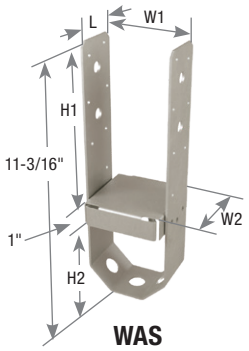
- Install the required fasteners according to the table.
- Insert into wet concrete after the pour. For the **WE**, embed the anchor so that the base plate is flush with the surface of the concrete. For the **WAS**, embed the anchor until the concrete surface meets the bottom edge of the stand off base legs. This will provide a 1" stand-off where required.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**



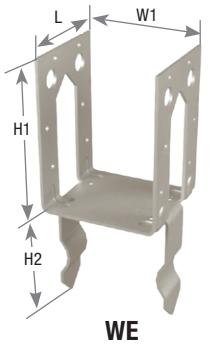
Typical WAS installation



Typical WE installation



WAS



WE

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge Base	Steel Gauge Strap	Dimensions (in) W1	W2	H1	H2[3]	L	Fastener Schedule[5,6] Qty	Type	DF/SP Allowable Loads (Lbs.)[2,4] Download 100%	Uncracked Concrete Uplift[1] 160%	Uncracked Concrete F1 160%	Uncracked Concrete F2 160%	Cracked Concrete Uplift[1] 160%	Cracked Concrete F1 160%	Cracked Concrete F2 160%	Corrosion Finish	Code Ref.
ASCE Seismic Design A & B																				
4 x 4	WE44	PB44	12	12	3-1/2	--	4-3/4	3-3/8	3-1/4	12	16d	15335	1405	860	970	1245	600	680		IBC, FL, LA
										2	1/2		1430	860	970	1245	600	680		
	WAS44	PBS44A	16	14	3-9/16	3-1/2	6-3/4	3-1/2	2-1/4	14	16d	6775	3090	1365	1095	2165	955	770		
										2	1/2		3075	1365	1095	2165	955	770		
4 x 4 Rough	WE44R	PB44R	12	12	4	--	5	3-5/8	3-3/8	12	16d	15335	1405	860	970	1245	600	680		
4 x 6	WE46	PB46	12	12	5-1/2	--	4-3/4	3-3/8	3-1/4	12	16d	24130	1405	860	970	1245	600	680		
										2	1/2		1430	860	970	1245	600	680		
	WAS46	PBS46	12	14	3-9/16	5-1/2	6-3/4	3-1/2	2-1/4	14	16d	13815	3090	1365	1095	2165	955	770		
										2	1/2		3075	1365	1095	2165	955	770		
6 x 6	WE66	PB66	12	12	5-1/2	--	5	3-5/8	5-3/8	12	16d	29565	1405	860	970	1245	600	680		
	WAS66	PBS66	12	12	5-1/2	5-1/2	6-3/4	5	2-1/4	14	16d	16005	3365	1955	1685	2505	1370	1685		
										2	1/2		3575	1955	1685	2505	1370	1685		
6 x 6 Rough	WE66R	PB66R	12	12	6	--	5	3-5/8	5-3/8	12	16d	29565	1405	860	970	1245	600	680		
ASCE Seismic Design C-F																				
4 x 4	WE44	PB44	12	12	3-1/2	--	4-3/4	3-3/8	3-1/4	12	16d	15335	1255	755	850	1090	525	595		IBC, FL, LA
										2	1/2		1255	755	850	1090	525	595		
	WAS44	PBS44A	16	14	3-9/16	3-1/2	6-3/4	3-1/2	2-1/4	14	16d	6775	2705	1195	960	1895	835	675		
										2	1/2		2705	1195	960	1895	835	675		
4 x 4 Rough	WE44R	PB44R	12	12	4	--	5	3-5/8	3-3/8	12	16d	15335	1255	755	850	1090	525	595		
4 x 6	WE46	PB46	12	12	5-1/2	--	4-3/4	3-3/8	3-1/4	12	16d	24130	1255	755	850	1090	525	595		
										2	1/2		1255	755	850	1090	525	595		
	WAS46	PBS46	12	14	3-9/16	5-1/2	6-3/4	3-1/2	2-1/4	14	16d	13815	2705	1195	960	1895	835	675		
										2	1/2		2705	1195	960	1895	835	675		
6 x 6	WE66	PB66	12	12	5-1/2	--	5	3-5/8	5-3/8	12	16d	29565	1255	755	850	1090	525	595		
	WAS66	PBS66	12	12	5-1/2	5-1/2	6-3/4	5	2-1/4	14	16d	16005	3135	1715	1685	2195	1200	1665		
										2	1/2		3135	1715	1685	2195	1200	1665		
6 x 6 Rough	WE66R	PB66R	12	12	6	--	5	3-5/8	5-3/8	12	16d	29565	1255	755	850	1090	525	595		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
3) H2 is mimimum embedment length of anchor into concrete.
4) Minimum concrete strength f'c = 2,500 psi.
5) All bolts shall meet or exceed the specifications of ASTM A 307.
6) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel Gold Coat
HDG Triple Zinc

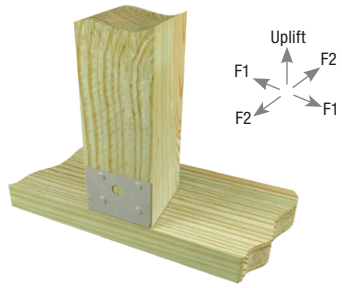
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Secures nominal sized posts to wood surfaces for light-duty applications.

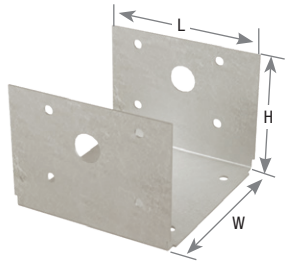
Materials: 18 gauge
Finish: G90 galvanizing; D44-TZ & D46R-TZ - G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- While D series post anchors offer lateral and uplift resistance, they are not recommended as a primary means of anchorage for posts in railings.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**



Typical D installation



D

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]			S-P-F Allowable Loads (Lbs.)[1]			Corrosion	Finish	Code Ref.
							Post		Beam										
				W	H	L	Qty	Type	Qty	Type	Uplift 160%	F1 160%	F2 160%	Uplift 160%	F1 160%	F2 160%			
4 x 4	D44-TZ	BC40, BC40Z	18	3-9/16	2-1/2	3-3/8	8	16d HDG	4	16d HDG	700	885	885	565	760	760			IBC, FL, LA
4 x 4 Rough	D44R	BC40R	18	4	3	3-3/4	8	16d	4	16d	700	885	885	565	760	760			
4 x 6	D46	BC460	18	3-9/16	3	5-3/8	10	16d	5	16d	700	995	1095	585	840	920			
4 x 6 Rough	D46R-TZ	--	18	4	3	5-3/8	10	16d HDG	5	16d HDG	700	995	1095	585	840	920			
6 x 6	D66	BC60	18	5-1/2	3	5-3/8	10	16d	5	16d	700	995	1095	585	840	920			
6 x 6 Rough	D66R	BC60R	18	6	3	5-3/8	10	16d	5	16d	700	995	1095	585	840	920			
8 x 8	D88	BC80	18	7-1/2	3	7-3/8	12	16d	5	16d	700	995	1095	585	840	920			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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EBG / EPB / EPBH Elevated Post Bases

These post bases allow installers to pre-align posts and preset post heights above concrete floors or footings. By eliminating post-to-concrete contact, moisture damage is reduced. Elevated post bases are ideal for building carports, decks or porches. All series feature convenient nail fastening to post.

Materials: See table

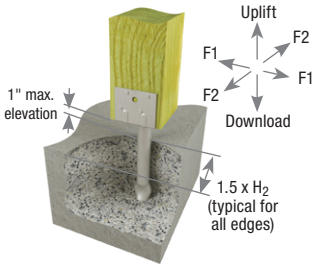
Finish: EPB – Primer;
EBG44-TZ – G-185 galvanizing;
EPBH – Hot-dip galvanized

Options: See table for Corrosion Finish Options

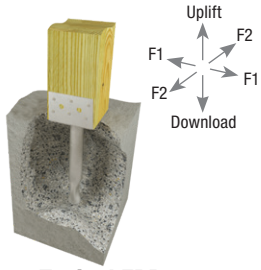
Codes: See table for code references
IRC R317.1.4, IBC 2304.11.2.7, IRC R407.3, IBC 2304.9.7

Installation:

- Install the required fasteners according to the table.
- **Not recommended for fence post or other fixed post applications. These anchors are not designed to resist overturning (moment) loads.**



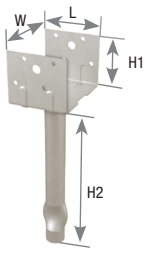
Typical EBG44-TZ installation



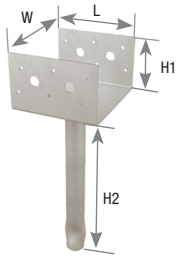
Typical EPB installation



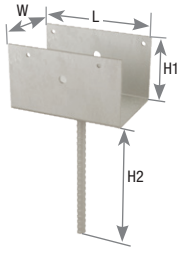
Typical EPBH installation



EBG44-TZ



EPB



EPBH

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge Base	Steel Gauge Tube	Dimensions (in) W	L	H1	H2	Fastener Schedule[4] Qty	Nail	DF/SP Allowable Loads (Lbs.)[3] Download 100%	Uncracked Concrete Uplift[2] 160%	Uncracked Concrete F1[1] 160%	Uncracked Concrete F2[1] 160%	Cracked Concrete Uplift[2] 160%	Cracked Concrete F1[1] 160%	Cracked Concrete F2[1] 160%	Corrosion	Finish	Code Ref.
Wind and ASCE Seismic Design A & B																				
4 x 4	EBG44-TZ	EPB44A	14	16	3-9/16	2-3/4	2-3/8	7-1/2	8	16d HDG	4615	1085	1440	1295	800	1010	905			IBC, FL, LA
	EPB4408	EPB44, EPB44-12	12	--	3-9/16	3	3	8	8	16d	3045	1110	1440	1295	775	1010	905			
	EPBH44	--	12	--	3-1/2	3-3/8	2-3/4	7	4	16d HDG	2485	990	990	975	990	845	845			--
4 x 6	EPB4608	EPB46, EPB46-12	12	--	3-9/16	5	3	8	12	16d	3045	1110	1440	1295	775	1010	905			IBC, FL, LA
4 x 6 Rough	EPBH46R	--	12	--	4-1/8	5-3/8	3	7	4	16d HDG	4615	990	990	975	990	845	845			--
6 x 6	EPB6608	EPB66, EPB66-12	12	--	5-9/16	5	3-3/16	8	12	16d	4665	1110	1440	1295	775	1010	905			IBC, FL, LA
	EPBH66	--	12	--	5-1/2	5-3/8	3	7	4	16d HDG	4615	990	990	975	990	845	845			--
6 x 6 Rough	EPBH66R	--	12	--	6-1/8	5-3/8	3	7	4	16d HDG	4615	990	990	975	990	845	845			
ASCE Seismic Design C-F																				
4 x 4	EBG44-TZ	EPB44A	14	16	3-9/16	2-3/4	2-3/8	7-1/2	8	16d HDG	4615	1000	1260	1135	700	885	795			IBC, FL, LA
	EPB4408	EPB44, EPB44-12	12	--	3-9/16	3	3	8	8	16d	3045	970	1260	1135	680	885	795			
	EPBH44	--	12	--	3-1/2	3-3/8	2-3/4	7	4	16d HDG	2485	990	990	975	990	725	725			--
4 x 6	EPB4608	EPB46, EPB46-12	12	--	3-9/16	5	3	8	12	16d	3045	970	1260	1135	680	885	795			IBC, FL, LA
4 x 6 Rough	EPBH46R	--	12	--	4-1/8	5-3/8	3	7	4	16d HDG	4615	990	990	975	990	725	725			--
6 x 6	EPB6608	EPB66, EPB66-12	12	--	5-9/16	5	3-3/16	8	12	16d	4665	970	1260	1135	680	885	795			IBC, FL, LA
	EPBH66	--	12	--	5-1/2	5-3/8	3	7	4	16d HDG	4615	990	990	975	990	725	725			--
6 x 6 Rough	EPBH66R	--	12	--	6-1/8	5-3/8	3	7	4	16d HDG	4615	990	990	975	990	725	725			

1) Lateral loads (F1 and F2) are for conditions where pipe extends no more than 1" above the concrete surface.
2) Uplift Loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
3) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
4) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel | Gold Coat
HDG | Triple Zinc

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The EBP44T-TZ Elevated Post Base is an economical solution for supporting 4x4 posts at the minimum 1" above the concrete foundation as required by the building code. For applications where uplift loads are not present, the EPB44T-TZ can be installed directly into a hole predrilled in a pier block or concrete foundation as shown in Figure A below. To resist uplift loading, the EPB44T-TZ must be cast into concrete or epoxied into place as shown in Figure B below.

Materials: 12 gauge

Finish: G-185 galvanizing U-bracket; Hot-dip galvanized threaded rod, nuts, washers

Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- **Drilled Hole – No Uplift Resistance**
  - Drill 5/8" diameter hole into cured concrete 4" deep.
  - Insert threaded rod of EPB44T-TZ into hole and adjust nut to desired height.
  - Install 4x4 post and fasten with (8) 10d common nails.
- **Embedded In Concrete – Uplift Resistance Installation**
  - Adjust nut for desired height.
  - Insert threaded rod with nut and washer into wet concrete.
  - Provide temporary support to post base (if needed) to maintain vertical and horizontal position.
  - After concrete has cured, install 4x4 post and fasten with (8) 10d common nails.
- **Epoxied Into Place – Uplift Resistance Installation**
  - Install epoxy in accordance with manufacturer's specification.
  - Insert threaded rod with nut and washer into hole, pressing down until the washer is firmly seated on the concrete.
  - After epoxy has cured, install 4x4 post and fasten with (8) 10d common nails.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**

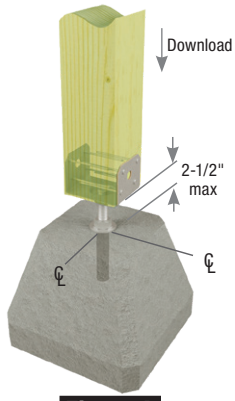
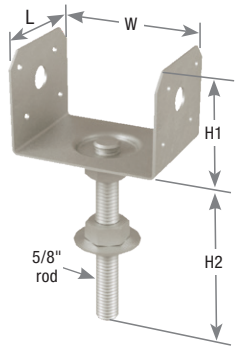


Figure A

Typical EPB44T-TZ pier block installation



EPB44T-TZ

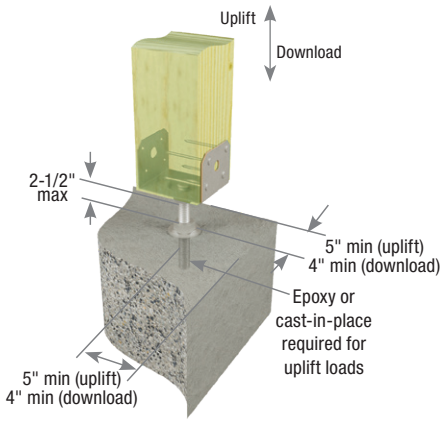


Figure B

Typical EPB44T-TZ installation with epoxy

MiTek Stock No.	Ref. No.	Steel Gauge (U-bracket)	Dimensions (in) W	L	H1	H2	Wood Post Size	Fastener Schedule[8] Qty	Type	Installation Type	DF/SP Allowable Loads (Lbs.)[1,5] Uncracked Concrete[5] ASCE Seismic Design A & B Download 100%[4]	Uplift 160%[2,3]	Cracked Concrete[5] ASCE Seismic Design C-F Download 100%[4]	Corrosion	Finish	Code Ref.
EPB44T-TZ	--	12	3-9/16	2-7/8	2-7/16	4-7/8	4x4	8	10d	Pier Block[6]	5525	--	5525			IBC, FL, LA
										Embedded	5525	790	5525			
										Epoxy[7]	5525	790	5525			

1) Allowable loads are based on a maximum distance of 2-1/2" between the concrete foundation and the bottom of the post base.
2) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
3) Uplift capacity requires the post base to be cast-in-place or epoxy post-installed in a concrete member capable of resisting the upward force.
4) Download is based on the bearing of the wood in the post base and the bearing of the washer on the concrete.
5) Minimum concrete strength f'c = 2,500 psi.
6) Pier Block installation, drill a 5/8" diameter hole a minimum of 4" deep.
7) Epoxy installation, install in accordance with manufacturer's specification.
8) **NAILS:** 10d nails are 0.148" dia. x 3" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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RPB Retrofit Post Base

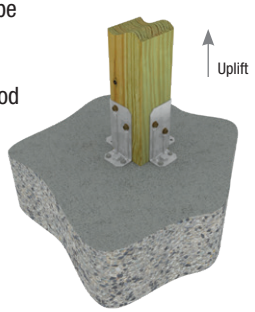
RPB-TZ post base attaches 4x4 or larger wood posts to concrete or wood surfaces after the post is in place. Can be installed with 1 or 2 RPB-TZs (single or double). Post may also be installed on our CPB composite post base product which provides a 1" stand off as required in untreated wood installations. Installs with concrete screws, so no more mis-installed, mis-located anchor bolts!

Materials: 12 gauge

Finish: G-185 galvanizing

Installation:

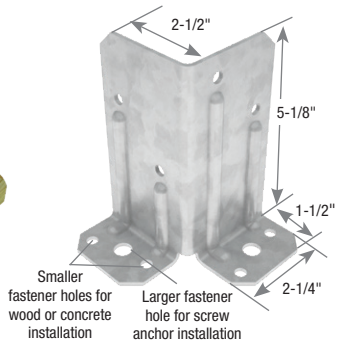
- Install the required fasteners according to the table.
- MiTek's WS structural wood screws and screw anchors are not included with RPB bases.
- **Concrete Installation:**
  1. Place RPB-TZ over one corner of post flush to both concrete and post surfaces and mark hole locations in concrete. Place aside.
  2. Drill holes for concrete screws using appropriate bit and hammer drill.
  3. Place RPB-TZ in position and install with specified screw anchors as listed in table below.
  4. Repeat for RPB-TZ on other side of post for double installations.
- **Wood-to-Wood Installation:**
  1. Place RPB-TZ over one corner of post flush to wood base and post surfaces.
  2. Install all specified MiTek WS structural wood screws as listed in the table below.
  3. Repeat for RPB-TZ on other side of post for double installations.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**



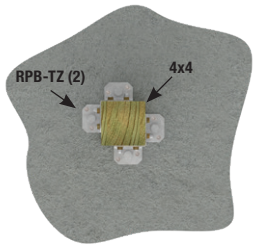
Typical double RPB-TZ concrete installation



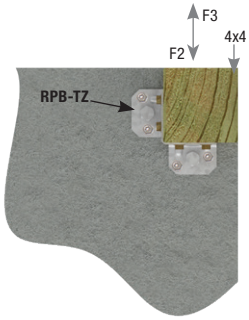
Typical double RPB-TZ wood-to wood installation



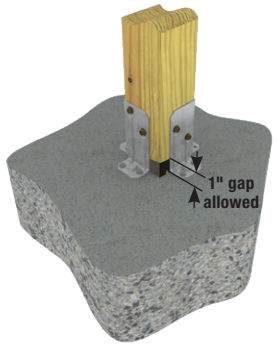
RPB-TZ



Typical double RPB-TZ concrete installation Min 2-1/2" from any concrete edge
(Top view)



Typical single RPB-TZ installation at concrete corner, flush to edge
(Top view)



Typical double RPB-TZ installation with CPB composite post base
(CPB ordered separately)

MiTek Stock No.	Ref. No.	Steel Gauge	Qty of RPBs	Fastener Schedule[10,11] Post Qty	Post Wood Screw	Base Qty	Base Type[2,3]	DF/SP Allowable Loads (Lbs.)[1,5] Uplift 160%	F2 160%	F3 160%	Corrosion Finish	Code Ref.
RPB-TZ	RPBZ	12	**Concrete Base with Post Flush to Corner[6]**									
			1	4	WS3	2	3/8" x 2-1/2"	1525	710	495		
						4	Tapper+	735	655			
			1	4	WS15	2	3/8" x 2-1/2"	1470	710	495		
						4	Tapper+	735	655			
			Concrete Base with Post 2-1/2" from Concrete Edge[4,6]									
			1	4	WS15 or WS3	2	3/8" x 2-1/2"	1470 [9]	710	495		--
						4	Tapper+	865	655			
			2 [4]	8	WS15 or WS3	4	3/8" x 2-1/2"	2295	990	990		
						8	Tapper+	1735				
			LVL Base/SP Base[7,8]									
			1	4	WS15 or WS3	4	WS15	1110	960	495		
			2	8	WS15 or WS3	8		2220				

Corrosion Finish Key
- Stainless Steel
- Gold Coat
- HDG
- Triple Zinc

1) Allowable loads are for DF/SP 4x4, 6x6, or larger posts. For SPF/HF loads, multiply the allowable load by 0.86.
2) Use DeWalt 3/8" x 2-1/2" Screw-Bolt™+ screw anchor; or equal, installed in accordance with manufacturer's specification. Screw anchors are not supplied.
3) Use Powers 1/4" x 1-3/4" Tapper+ concrete screw anchor (not supplied); or equal, installed in accordance with manufacturer's specification.
4) When installing connectors in pairs, the post must be a minimum of 2-1/2" from the edge of the concrete.
5) Allowable loads have been increased 60% for wind and seiesmic loads; no futher increase shall be permitted.
6) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
7) LVL framing base shall be at least 1-3/4" thick.
8) SP framing base shall be at least 1-1/2" thick.
9) Allowable uplift for single RPB-TZ using WS3 structural wood screws with Screw-Bolt™+ screw anchors for concrete base with post 2-1/2" from concrete edge is 1,525 lbs.
10) MiTek's structural wood screws and DeWalt screw anchors should be used only in interior-dry and non-corrosive environments.
11) Use MiTek's WS15-EXT or WS3-EXT structural wood screws when installing to treated wood.

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CPB Composite Post Bases

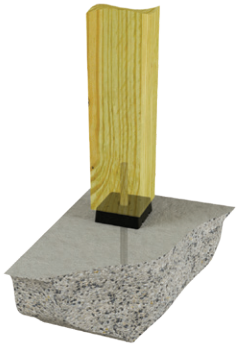
The CPB is made of corrosion resistant composite material compatible with preservative treated lumber. Provides code required 1" stand-off and can be used with rough lumber sizes.

Materials: High strength composite

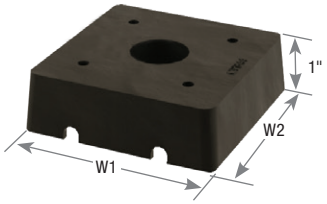
Codes: IRC R317.1.4, IBC 2304.12.2.2, IRC R407.3, IBC 2304.10.7

Installation:

- Install the required fasteners according to the table.
- Attach base to post with (4) 10d HDG nails.
- Attach post to concrete using 1/2" diameter rod into concrete and extend into wood member.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**



Typical CPB installation



CPB

Post Size	MiTek Stock No.	Ref. No.	Dimensions (in) W1	Dimensions (in) W2	Bottom Surface Bearing Area	Fastener Schedule[5] Qty	Fastener Schedule[5] Type	Post Base Allowable Capacity[1,2]	Concrete Design Bearing Strength[3,4]	Code Ref.
4 x 4	CPB44	CPS4	3-1/4	3-1/4	2.2	4	10d HDG	5235	6545	
4 x 6	CPB46	CPS46	3-5/16	5-5/16	3.3	4	10d HDG	6810	9820	
5 x 5	CPB55	CPS5	4-1/8	4-1/8	3.0	4	10d HDG	6295	8925	PC
6 x 6	CPB66	CPS6	5-5/16	5-5/16	3.9	4	10d HDG	8570	11600	
8 x 8	CPB88	CPS7	7-1/4	7-1/4	6.4	4	10d HDG	12490	19040	

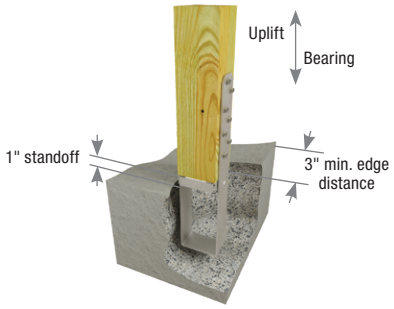
1) Loads shall not be increased for short-term loading.
2) Loads require a minimum 650 psi wood compressive strength.
3) Concrete Design Bearing Strength = Ø (0.85 f'_c A_1) with f'_c = 2,500 psi. ACI 318-14, Section 22.8.3.
4) Design Bearing Strength has been increased assuming $(A_2 / A_1)^{0.5}$ per ACI 318-14, Section 22.8.3.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long.

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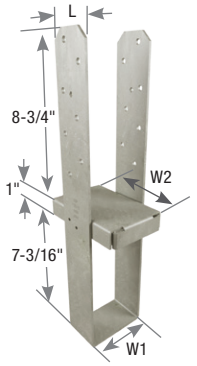
These column bases install using MiTek's WS2-EXT structural wood screws, reducing installation time and cost. Designed for high uplift in high wind or seismic applications. Includes a stand-off plate to protect the wood from ground contact moisture as required by building code.

Materials: See table
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IRC R317.1.4, IBC 2304.12.2.2, IRC R407.3, IBC 2304.10.7

Installation:
- Install the required fasteners according to the table.
- MiTek's WS2-EXT structural wood screws, 1/4" dia. x 2" long, are supplied with CBSQ Bases.
- Maintain 3" minimum edge distance between post and edge of concrete.
- Embed the column base until the concrete surface meets the bottom edge of the stand-off plate.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These bases are not designed to resist overturning (moment) loads.**



Typical CBSQ installation



CBSQ

Column Size	MiTek Stock No.	Ref. No.	Steel Gauge		Dimensions (in)				Fastener Schedule[2]		DF/SP Allowable Loads (Lbs.)[3]				Corrosion Finish		Code Ref.
											Uncracked Concrete		Cracked Concrete				
			Strap	Base	W1	W2	L	Embed[4]	Qty	Wood Screws	Download 100%	Uplift 160%[1]	Download 100%	Uplift 160%[1]			
ASCE Seismic Design A & B																	
4 x 4	CBSQ44-TZ	CBSQ44-SDS2	10	16	3-9/16	3-1/2	2-1/4	7-3/16	14	WS2-EXT	11950	5955	11950	4165			
4 x 6	CBSQ46-TZ	CBSQ46-SDS2	10	12	3-9/16	5-7/16	2-1/4	7-3/16	14	WS2-EXT	11955	5955	11955	4165			--
6 x 6	CBSQ66-TZ	CBSQ66-SDS2	10	12	5-1/2	5-7/16	3	7-3/16	14	WS2-EXT	11955	6870	11955	5280			
ASCE Seismic Design C-F																	
4 x 4	CBSQ44-TZ	CBSQ44-SDS2	10	16	3-9/16	3-1/2	2-1/4	7-3/16	14	WS2-EXT	11950	5100	11950	3570			
4 x 6	CBSQ46-TZ	CBSQ46-SDS2	10	12	3-9/16	5-7/16	2-1/4	7-3/16	14	WS2-EXT	11955	5100	11955	3570			--
6 x 6	CBSQ66-TZ	CBSQ66-SDS2	10	12	5-1/2	5-7/16	3	7-3/16	14	WS2-EXT	11955	6465	11955	4525			

1) Uplift loads have been increased 60% for wind and seismic loads, no further increase shall be permitted.
2) MiTek's WS2-EXT structural wood screws are 1/4" dia. x 2" long and are included with CBSQ Column Bases.
3) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
4) The CBSQ shall be embedded into concrete up to specified depth. The minimum side cover is 3".

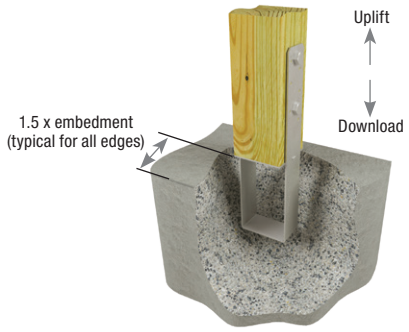
Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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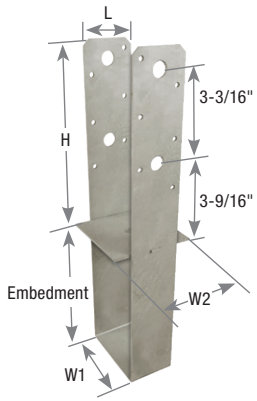
12 gauge base for carports, patios, or other residential framing.

Materials: 12 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA
IRC R407.3, IBC 2304.10.7

Installation:
- Install the required fasteners according to the table.
- Embed column base with bottom of base plate flush to concrete.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These bases are not designed to resist overturning (moment) loads.**



Typical CBE installation



CBE

Column Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W1	W2	H	L	Embedment[5]	Fastener Schedule[2,6] Qty	Type	DF/SP Allowable Loads (Lbs.)[3,4] Download 100%	Uncracked Concrete Uplift 160%[1] ASCE Seismic Design A & B	Uncracked Concrete Uplift 160%[1] ASCE Seismic Design C-F	Cracked Concrete Uplift 160%[1] ASCE Seismic Design A & B	Cracked Concrete Uplift 160%[1] ASCE Seismic Design C-F	Code Ref.
4 x 4	CBE44	--	12	3-9/16	3-1/2	7-1/2	2	6-1/2	12	16d	16835	2975	2975	2975	2770	IBC, FL, LA
									2	1/2		4090	3605	3160		
4 x 6	CBE46	--	12	3-9/16	5-1/2	7-1/2	2	6-1/2	12	16d	26450	2975	2975	2975	2770	
									2	1/2		4090	3605	3160		
6 x 6	CBE66	--	12	5-1/2	5-1/2	7-1/2	2	5-1/2	12	16d	30250	2975	2975	2975	2770	
									2	1/2		4090	3605	3160		

1) Uplift Loads have been increased 60% for wind and seismic loads, no further increase shall be permitted.
2) All bolts shall meet or exceed the specifications of ASTM A 307.
3) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
4) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
5) CBE column base shall be embedded into concrete up to this depth.
6) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

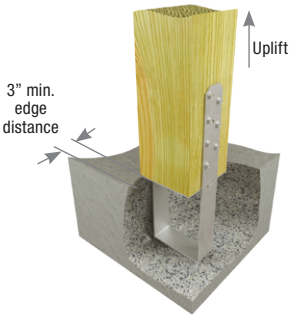
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High capacity column base fastens to column with MiTek's WS structural wood screws.

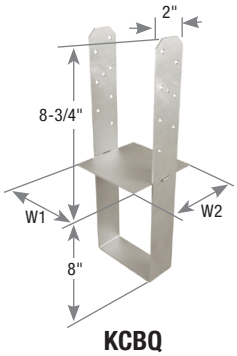
Materials: 10 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IRC R407.3, IBC 2304.10.7

Installation:

- Install the required fasteners according to the table.
- MiTek's WS2 structural wood screws, 1/4" dia. x 2" long, are supplied with KCBQ Column Bases.
- Maintain 3" minimum edge distance between post and edge of concrete.
- Embed column base with bottom of base plate flush to concrete.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These bases are not designed to resist overturning (moment) loads.**



Typical KCBQ installation



KCBQ

Column Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W1	Dimensions (in) W2[4]	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	DF/SP Allowable Loads (Lbs.)[3] Uncracked Concrete Uplift 160%[1] ASCE Seismic Design A & B	DF/SP Allowable Loads (Lbs.)[3] Uncracked Concrete Uplift 160%[1] ASCE Seismic Design C-F	DF/SP Allowable Loads (Lbs.)[3] Cracked Concrete Uplift 160%[1] ASCE Seismic Design A & B	DF/SP Allowable Loads (Lbs.)[3] Cracked Concrete Uplift 160%[1] ASCE Seismic Design C-F	Corrosion Finish	Code Ref.
4 x 4	KCBQ44	--	10	3-9/16	3-1/2	14	WS2	6870	6530	5330	4570		
4 x 6	KCBQ46	--	10	3-9/16	5-1/2	14	WS2	6870	6530	5330	4570		
4 x 8	KCBQ48	--	10	3-9/16	7-1/2	14	WS2	6870	6530	5330	4570		
6 x 4	KCBQ64	--	10	5-1/2	3-1/2	14	WS2	6870	6530	5330	4570		
6 x 6	KCBQ66	--	10	5-1/2	5-1/2	14	WS2	6870	6530	5330	4570		
6 x 8	KCBQ68	--	10	5-1/2	7-1/2	14	WS2	6870	6530	5330	4570		
7-1/8 x 3-1/2	KCBQ71-4	--	10	7-1/8	3-1/2	14	WS2	6870	6530	5330	4570		
7-1/8 x 5-1/2	KCBQ71-6	--	10	7-1/8	5-1/2	14	WS2	6870	6530	5330	4570		
7-1/8 x 7-1/8	KCBQ71-7	--	10	7-1/8	7-1/8	14	WS2	6870	6530	5330	4570		
8 x 6	KCBQ86	--	10	7-1/2	5-1/2	14	WS2	6870	6530	5330	4570		
8 x 8	KCBQ88	--	10	7-1/2	7-1/2	14	WS2	6870	6530	5330	4570		
10 x 10	KCBQ1010	--	10	9-1/2	9-1/2	14	WS2	6870	6530	5330	4570		
10 x 12	KCBQ1012	--	10	9-1/2	11-1/2	14	WS2	6870	6530	5330	4570		
12 x 12	KCBQ1212	--	10	11-1/2	11-1/2	14	WS2	6870	6530	5330	4570		
Glulam Sizes													
5-1/8	KCBQ5	--	10	5-1/4	Specify	14	WS2	6870	6530	5330	4570		
6-3/4	KCBQ7	--	10	6-7/8	Specify	14	WS2	6870	6530	5330	4570		
8-3/4	KCBQ9	--	10	8-7/8	Specify	14	WS2	6870	6530	5330	4570		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS2 structural wood screws are 1/4" dia. x 2" long and are included with KCBQ Column Bases.
3) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
4) "Specify" denotes the required width that must be specified at the time of ordering.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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KCB Column Bases

Provides high structural capacity and installs with bolts providing an architectural appearance.

Materials: See table

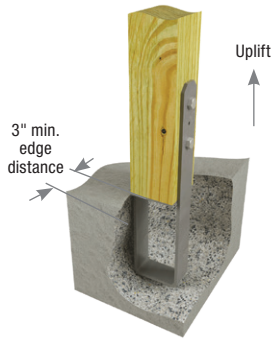
Finish: KCB (5/8" bolt models) – G90 galvanizing;
KCB (3/4" bolt models) – Primer

Options: See table for Corrosion Finish Options

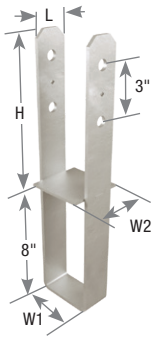
Codes: IRC R407.3, IBC 2304.10.7

Installation:

- Install the required fasteners according to the table.
- Maintain 3" minimum edge distance between post and edge of concrete.
- KCB column bases feature diamond holes for temporary nail fastening to facilitate drilling and bolting.
- Embed column base with bottom of base plate flush to concrete.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These bases are not designed to resist overturning (moment) loads.**



Typical KCB installation



KCB

Column Size	MiTek Stock No.	Ref. No.	Steel Gauge		Dimensions (in)				Fastener Schedule[2]		DF/SP Allowable Loads (Lbs.)[3]				Corrosion Finish	Code Ref.
											Uncracked Concrete		Cracked Concrete			
									Bolts		Uplift 160%[1]		Uplift 160%[1]			
			Strap	Base	W1	W2[4]	H	L	Qty	Type	ASCE Seismic Design A & B	ASCE Seismic Design C-F	ASCE Seismic Design A & B	ASCE Seismic Design C-F		
4 x 4	KCB44	CB44	7	7	3-9/16	3-9/16	8-7/8	2	2	5/8	5525	5100	4165	3570		
4 x 6	KCB46	CB46	7	7	3-9/16	5-1/2	8-7/8	2	2	5/8	5525	5100	4165	3570		
4 x 8	KCB48	CB48	7	7	3-9/16	7-1/2	8-7/8	2	2	5/8	5525	5100	4165	3570		
6 x 4	KCB64	CB64	7	7	5-1/2	3-1/2	8-7/8	3	2	5/8	6700	6465	5280	4525		
6 x 6	KCB66	CB66	7	7	5-1/2	5-1/2	8-7/8	3	2	5/8	6700	6465	5280	4525		
6 x 8	KCB68	CB68	7	7	5-1/2	7-1/2	8-7/8	3	2	5/8	6700	6465	5280	4525		
6 x 10	KCB610	CB610	7	7	5-1/2	9-1/2	8-7/8	3	2	5/8	6700	6465	5280	4525		
7 x 3-1/2	KCB74	CB7-1/8-4	3	7	7-1/8	3-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		--
7 x 5-1/2	KCB76	CB7-1/8-6	3	7	7-1/8	5-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		
7 x 7	KCB77	CB7-1/8-7	3	7	7-1/8	7-1/8	9-3/4	3	2	3/4	6700	6465	5280	4525		
8 x 6	KCB86	CB86	3	7	7-1/2	5-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		
8 x 8	KCB88	CB88	3	7	7-1/2	7-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		
10 x 10	KCB1010	CB1010	3	7	9-1/2	9-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		
10 x 12	KCB1012	CB1012	3	7	9-1/2	11-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		
12 x 12	KCB1212	CB1212	3	7	11-1/2	11-1/2	9-3/4	3	2	3/4	6700	6465	5280	4525		
Glulam Sizes																
5-1/8	KCB5	CB5-4.5, CB5-6	3	7	5-1/4	Specify	9-3/4	3	2	3/4	6700	6465	5280	4525		
6-3/4	KCB7	CB7-6, CB7-7.5, CB7-9, CB7-10.5	3	7	6-7/8	Specify	9-3/4	3	2	3/4	6700	6465	5280	4525		--
8-3/4	KCB9	CB9-6, CB9-7.5, CB9-9, CB9-10.5	3	7	8-7/8	Specify	9-3/4	3	2	3/4	6700	6465	5280	4525		

1) Uplift Loads have been increased 60% for wind and seismic loads, no further increase shall be permitted.
2) All bolts shall meet or exceed the specifications of ASTM A 307.
3) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
4) "Specify" denotes the required width that must be specified at the time of ordering.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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BC / BCS / C Post Caps

BC – One-piece design for double 2x's to a 4x post

BCS – One-piece design connects 2-ply or 3-ply beams to the tops of 4x4 or 6x6 post. Slant nailing reduces the amount of nails required

C – One-piece design

Materials: 18 gauge

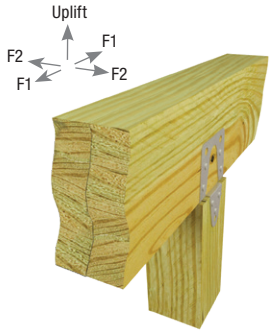
Finish: G90 galvanizing;
BC400-TZ – G-185 galvanizing

Options: See table for Corrosion Finish Options

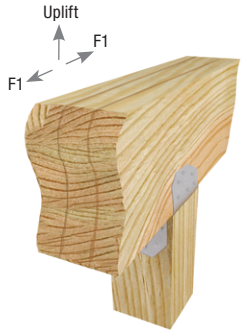
Codes: See table for code references

Installation:

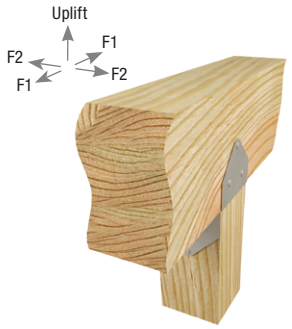
- Install the required fasteners according to the table.
- Place post cap on top of post and fasten cap to post using specified nails.
- Place beam between top flanges of the cap and install all specified nails into beam.
- **BCS** – Slant nails must be installed through dimple holes at a 30° to 45° angle through the beam into the post to achieve listed loads. **Slant/double shear nails must be used to achieve listed load values.**



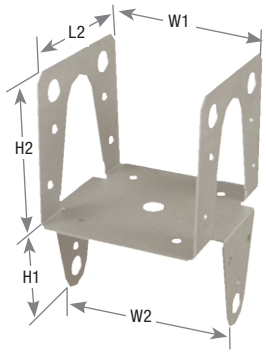
Typical BC400-TZ installation



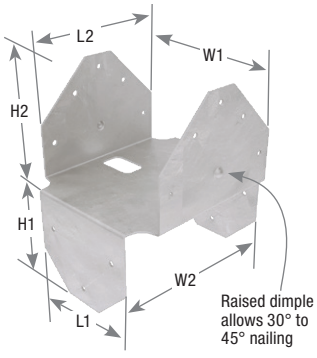
Typical BCS23-6 installation



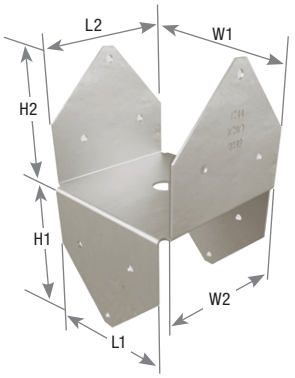
Typical C44 installation



BC400-TZ



BCS23-6



C44

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)						Fastener Schedule[2,3]				DF/SP Allowable Loads (Lbs.)[1]			Corrosion Finish		Code Ref.
										Post		Beam							
				W1	W2	H1	H2	L1	L2	Qty	Type	Qty	Type	Uplift 160%	F1 160%	F2 160%			
4 x 4	BCS22-4	BCS2-2/4	18	3-1/8	3-9/16	2-15/16	2-15/16	2-7/8	2-7/8	6	10d	8	10d	865	1065	--			--
	BC400-TZ	--	18	3-1/8	3-9/16	2-3/8	3	3-1/2	3-5/16	10	10d x 1-1/2 HDG	8	10d x 1-1/2 HDG	615	780	580			
	C44	BC4	18	3-9/16	3-9/16	2-7/8	2-7/8	3-1/4	3-1/4	6	16d	6	16d	925	1105	1105			IBC, FL, LA
4 x 4 Rough	C44R	BC4R	18	4	4	2-5/8	2-5/8	3-1/4	3-1/4	8	16d	8	16d	925	1105	1105			
4 x 6	C46	BC46	18	3-9/16	5-1/2	2-9/16	2-5/8	3-3/8	5-1/4	6	16d	10	16d	925	1105	1105			
4 x 6 Rough	C46R	--	18	4	6	2-3/4	2-3/4	3-1/4	5-1/4	8	16d	10	16d	925	1105	1105			
6 x 6	BCS23-6	BCS2-3/6	18	4-5/8	5-5/8	3	3-3/8	3-1/2	4-3/8	6	16d	12	16d	1120	1625	--			--
	C66	BC6	18	5-1/2	5-1/2	2-7/8	2-7/8	5-1/4	5-1/4	12	16d	12	16d	1195	2100	2100			IBC, FL, LA
6 x 6 Rough	C66R	BC6R	18	6	6	2-13/16	2-13/16	5-1/4	5-1/4	12	16d	12	16d	955	2210	2210			
8 x 8	C88	BC8	18	7-1/2	7-1/2	5	5	7-3/8	7-3/8	16	16d	16	16d	1195	2260	2260			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) BCS23-6: Substituting 16d x 2-1/2" nails for 16d common nails is not permitted for slant nailing.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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PB – Two-piece design

PBES / PBS – Two-piece design with extended side plates and wrap around post design. Easy retrofit installations

Materials: 18 gauge

Finish: G90 galvanizing; PB44-6TZ & PB66-6TZ – G-185 galvanizing

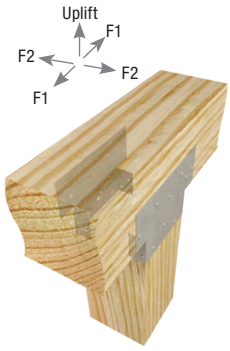
Options: See table for Corrosion Finish Options

Codes: IBC, FL, LA

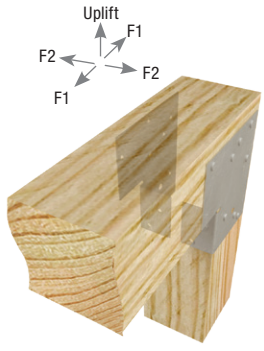
Installation:

- Install the required fasteners according to the table.
- These products are designed for single, solid-sawn beams with matching post width. Multi-ply beams must have same width as post. Use shims as required.
- PB, PBES, PBS post caps are sold per piece and must be installed in pairs to achieve allowable loads.

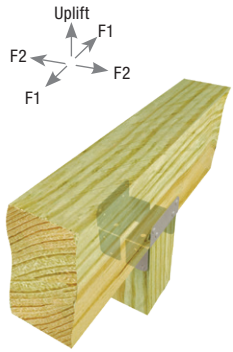
AVAILABLE IN GOLD COAT



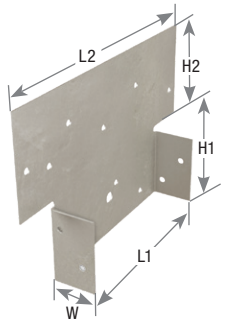
Typical PBS installation



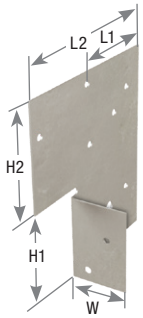
Typical PBES installation



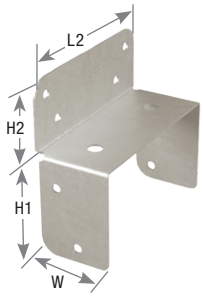
Typical PB-TZ installation



PBS



PBES



PB44-6TZ

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[2,3]				DF/SP Allowable Loads (Lbs.)[1,2]			Corrosion Finish		Code Ref.
									Post		Beam							
				W	H1	H2	L1	L2	Qty	Type	Qty	Type	Uplift 160%	F1 160%	F2 160%			
4 x 4	PB44-6TZ	LPC4Z	18	1-1/2	2-1/8	1-1/2	--	3-5/8	8	16d HDG	8	16d HDG	585	1760	1015			IBC, FL, LA
	PBES44-TZ	LCE4, LC4Z	18	1-1/2	2-3/8	2-3/4	3-1/4	4-3/4	8	16d HDG	8	16d HDG	1765	920	810			
	PBS44-TZ	AC4, AC4Z	18	1-7/16	2-5/16	2-13/16	3-9/16	6-1/2	12	16d HDG	12	16d HDG	2650	1860	1110			
4 x 4 Rough	PBS44R-TZ	AC4RZ	18	1-1/2	2-5/16	2-3/16	4	7	8	16d HDG	8	16d HDG	1765	920	810			
6 x 6	PB66-6TZ	LPC6Z	18	1-1/2	2-1/2	3	--	5-9/16	8	16d HDG	8	16d HDG	585	1760	1015			
	PBES66-TZ	--	18	1-1/2	2-3/8	2-1/8	5-1/2	7	8	16d HDG	8	16d HDG	1670	1190	1235			
	PBS66-TZ	AC6, AC6Z	18	1-1/4	2-5/16	2-7/8	5-1/2	8	14	16d HDG	12	16d HDG	2015	1865	1300			
6 x 6 Rough	PBS66R-TZ	AC6RZ	18	1-1/4	2-5/16	2-3/16	6	8-1/2	10	16d HDG	10	16d HDG	1670	1190	1235			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.

2) **Allowable Loads and Fastener Schedules for a pair of post caps.**

3) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

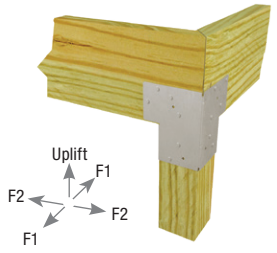
Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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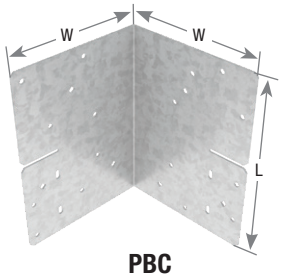
The PBC series is a one-piece connector designed to secure two mitered beams on a corner post while providing uplift capacity.

Materials: 18 gauge
Finish: G-185 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- Install PBC on outside corner of post forming tabs to inner side of post.
- Assumes beam members are bevel cut at corner.



Typical PBC installation



PBC

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]			S-P-F Allowable Loads (Lbs.)[1]			Corrosion Finish		Code Ref.
						Post		Beam										
				W	L	Qty	Type	Qty	Type	Uplift 160%	F1 160%	F2 160%	Uplift 160%	F1 160%	F2 160%			
4 x 4	PBC44-TZ	--	18	4-15/16	6-1/2	8	16d HDG	8	16d HDG	1765	1520	1520	1525	1275	1275			IBC, FL, LA
6 x 6	PBC66-TZ	--	18	6-15/16	6-1/2	8	16d HDG	8	16d HDG	1765	1520	1520	1525	1275	1275			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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KLCC Lally Column Caps

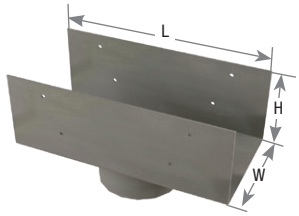
Lally Column Caps connect lally columns to wood beams. Fits 3-1/2" and 4" diameter lally columns.

Materials: 12 gauge
Finish: Primer

Installation:
- Install the required fasteners according to the table.
- Fit KLCC onto lally column. Position wood beam in KLCC saddle and fasten.



Typical KLCC installation



KLCC

MiTek Stock No.	Ref. No.	Steel Gauge	Girder	Dimensions (in)			Fastener Schedule[5]		Column Outside Dia. (in)	DF/SP Allowable Loads (Lbs.)[1,2,3,4]	S-P-F Allowable Loads (Lbs.)[1,2,3,4]	LVL / PSL Allowable Loads (Lbs.)[1,2,3,4]	Code Ref.
				W	H	L	Qty	Type					
KLCC45-35	LCC4.5-3.5	12	Triple 2x10/12	4-5/8	4	11-1/2	8	16d	3-1/2	16000	16000	--	
KLCC45-4	LCC4.5-4	12	Triple 2x10/12	4-5/8	4	11-1/2	8	16d	4	21000	21000	--	
KLCC6-35	LCC6-3.5	12	Quad 2x10/12	6-1/8	4	11-1/2	8	16d	3-1/2	16000	16000	--	
KLCC6-4	LCC6-4	12	Quad 2x10/12	6-1/8	4	11-1/2	8	16d	4	21000	21000	--	
KLCC35-35	LCC3.5-3.5	12	3.5 LVL / PSL	3-5/8	4	11-1/2	8	16d	3-1/2	--	--	16000	--
KLCC35-4	LCC3.5-4	12	3.5 LVL / PSL	3-5/8	4	11-1/2	8	16d	4	--	--	21000	
KLCC525-35	LCC5.25-3.5	12	5.25 LVL / PSL	5-3/8	4	11-1/2	8	16d	3-1/2	--	--	16000	
KLCC525-4	LCC5.25-4	12	5.25 LVL / PSL	5-3/8	4	11-1/2	8	16d	4	--	--	21000	
KLCC7-35	LCC7-3.5	12	7 LVL / PSL	7-1/8	4	11-1/2	8	16d	3-1/2	--	--	16000	
KLCC7-4	LCC7-4	12	7 LVL / PSL	7-1/8	4	11-1/2	8	16d	4	--	--	21000	

1) Loads may not be increased for short-term loading.
2) Loads are for a continuous beam.
3) Allowable loads are determined using the lowest of the bearing loads. Use Fc-perp equal to 425 psi for SPF, 625 psi for DF and 700 psi for LVL/PSL, or the lally column capacity.
4) Spliced conditions must be detailed by the designer to transfer tension loads between spliced members by means other than the lally column. The splice condition load is 6750 lbs. per beam side and the lally cap must be evenly loaded.
5) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

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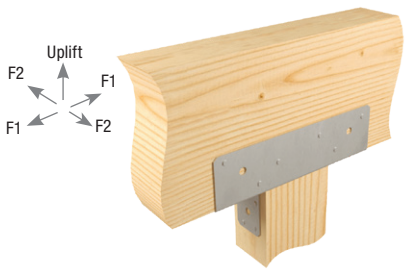
EPCM / PCM Post Caps

PCM – Provides a positive connection for medium-duty, post-to-beam applications

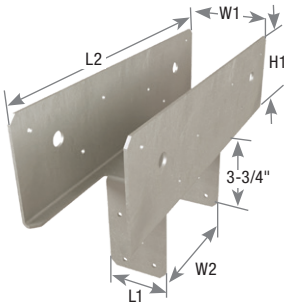
EPCM – End column caps

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

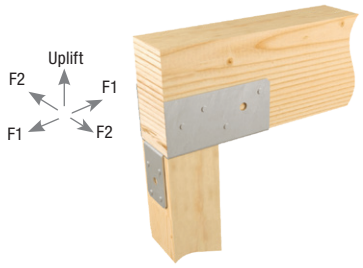
Installation:
- Install the required fasteners according to the table.
- PCM 16 gauge post caps should not be substituted for PCM 12 gauge post caps unless approved by the design professional.



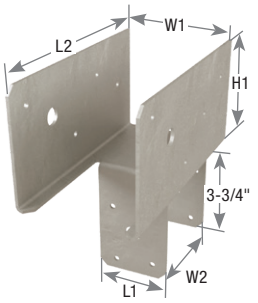
Typical PCM46 center cap installation



PCM



Typical EPCM end cap installation



EPCM

MiTek Stock No.	Ref. No.	Steel Gauge	Beam	Post	Dimensions (in) W1	W2	H1	L1	L2	Fastener Schedule[2] Post Qty	Post Type	Beam Qty	Beam Type	DF/SP Allowable Loads (Lbs.) Uplift[1] 160%	F1 160%	F2 160%	Corrosion Finish	Code Ref.
Center Column Caps																		
PCM4416	--	16	4x	4x	3-9/16	3-9/16	3-9/16	2-7/16	11	8	16d	12	16d	970	1115	1335		IBC, FL, LA
PCM44	--	12	4x	4x	3-9/16	3-9/16	3-9/16	2-7/16	11	8	16d	12	16d	1665	1350	1890		
PCM46	--	12	4x	6x	3-9/16	5-9/16	3-9/16	2-7/16	13	8	16d	12	16d	1665	1350	1890		
PCM4616	--	16	4x	6x	3-9/16	5-9/16	3-9/16	2-7/16	13	8	16d	12	16d	970	1115	1335		
PCM4816	--	16	4x	8x	3-9/16	7-9/16	3-9/16	2-7/16	15	8	16d	12	16d	970	1115	1335		
PCM48	--	12	4x	8x	3-9/16	7-9/16	3-9/16	2-7/16	15	8	16d	12	16d	1665	1350	1890		
PCM6416	--	16	6x	4x	5-1/2	3-9/16	3-1/2	3-13/16	11	8	16d	12	16d	950	1545	1675		
PCM64	--	12	6x	4x	5-1/2	3-9/16	3-1/2	3-13/16	11	8	16d	12	16d	1500	1875	1915		
PCM6616	--	16	6x	6x	5-1/2	5-9/16	3-1/2	3-13/16	13	8	16d	12	16d	950	1545	1675		
PCM66	--	12	6x	6x	5-1/2	5-9/16	3-1/2	3-13/16	13	8	16d	12	16d	1500	1875	1915		
PCM6816	--	16	6x	8x	5-1/2	7-9/16	3-1/2	3-13/16	15	8	16d	12	16d	950	1545	1675		
PCM68	--	12	6x	8x	5-1/2	7-9/16	3-1/2	3-13/16	15	8	16d	12	16d	1500	1875	1915		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Stainless Steel Gold Coat HDG Triple Zinc

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Beam	Post	Dimensions (in)					Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)			Corrosion Finish	Code Ref.
										Post		Beam						
					W1	W2	H1	L1	L2	Qty	Type	Qty	Type	Uplift[1] 160%	F1 160%	F2 160%		
Center Column Caps																		
PCM77	--	12	7-1/8	7-1/8	7-1/8	7-1/8	3-11/16	5-5/8	14-9/16	8	16d	12	16d	1500	1875	1915		IBC, FL, LA
PCM8416	--	16	8x	4x	7-1/2	3-9/16	3-1/2	5-5/8	11	8	16d	12	16d	950	1545	1675		
PCM84	--	12	8x	4x	7-1/2	3-9/16	3-1/2	5-5/8	11	8	16d	12	16d	1500	1875	1915		
PCM8616	--	16	8x	6x	7-1/2	5-9/16	3-3/8	5-5/8	13	8	16d	12	16d	950	1545	1675		
PCM86	--	12	8x	6x	7-1/2	5-9/16	3-1/2	5-5/8	13	8	16d	12	16d	1500	1875	1915		
PCM8816	--	16	8x	8x	7-1/2	7-9/16	3-1/2	5-5/8	15	8	16d	12	16d	950	1545	1675		
PCM88	--	12	8x	8x	7-1/2	7-9/16	3-1/2	5-5/8	15	8	16d	12	16d	1500	1875	1915		
End Column Caps																		
EPCM4416	--	16	4x	4x	3-9/16	3-9/16	3-9/16	2-7/16	7-1/4	8	16d	8	16d	970	1115	1335		IBC, FL, LA
EPCM44	--	12	4x	4x	3-9/16	3-9/16	3-9/16	2-7/16	7-1/4	8	16d	8	16d	1665	1350	1890		
EPCM46	--	12	4x	6x	3-9/16	5-9/16	3-9/16	2-7/16	9-1/4	8	16d	8	16d	1665	1350	1890		
EPCM4616	--	16	4x	6x	3-9/16	5-9/16	3-9/16	2-7/16	9-1/4	8	16d	8	16d	970	1115	1335		
EPCM4816	--	16	4x	8x	3-9/16	7-9/16	3-9/16	2-7/16	11-1/4	8	16d	8	16d	970	1115	1335		
EPCM48	--	12	4x	8x	3-9/16	7-9/16	3-9/16	2-7/16	11-1/4	8	16d	8	16d	1665	1350	1890		
EPCM6416	--	16	6x	4x	5-1/2	3-9/16	3-1/2	3-13/16	7-1/4	8	16d	8	16d	950	1545	1675		
EPCM64	--	12	6x	4x	5-1/2	3-9/16	3-1/2	3-13/16	7-1/4	8	16d	8	16d	1500	1875	1915		
EPCM6616	--	16	6x	6x	5-1/2	5-9/16	3-1/2	3-13/16	9-1/4	8	16d	8	16d	950	1545	1675		
EPCM66	--	12	6x	6x	5-1/2	5-9/16	3-1/2	3-13/16	9-1/4	8	16d	8	16d	1500	1875	1915		
EPCM6816	--	16	6x	8x	5-1/2	7-9/16	3-1/2	3-13/16	11-1/4	8	16d	8	16d	950	1545	1675		
EPCM68	--	12	6x	8x	5-1/2	7-9/16	3-1/2	3-13/16	11-1/4	8	16d	8	16d	1500	1875	1915		
EPCM77	--	12	7-1/8	7-1/8	7-1/8	7-1/8	3-11/16	5-5/8	10-13/16	8	16d	8	16d	1500	1875	1915		
EPCM8416	--	16	8x	4x	7-1/2	3-9/16	3-1/2	5-5/8	7-1/4	8	16d	8	16d	950	1545	1675		
EPCM84	--	12	8x	4x	7-1/2	3-9/16	3-1/2	5-5/8	7-1/4	8	16d	8	16d	1500	1875	1915		
EPCM8616	--	16	8x	6x	7-1/2	5-9/16	3-3/8	5-5/8	9-1/4	8	16d	8	16d	950	1545	1675		
EPCM86	--	12	8x	6x	7-1/2	5-9/16	3-1/2	5-5/8	9-1/4	8	16d	8	16d	1500	1875	1915		
EPCM8816	--	16	8x	8x	7-1/2	7-9/16	3-1/2	5-5/8	11-1/4	8	16d	8	16d	950	1545	1675		
EPCM88	--	12	8x	8x	7-1/2	7-9/16	3-1/2	5-5/8	11-1/4	8	16d	8	16d	1500	1875	1915		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Stainless Steel Gold Coat HDG Triple Zinc

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KCCQ / KECCQ Column Caps

Designed to be installed without the need to drill bolt holes, simplifying installation and maintaining the wood cross section. Installs with MiTek's WS structural wood screws offering high uplift capacity.

KCCQ – Standard column cap

KECCQ – End column version

Materials: See table

Finish: Primer

Options: See table for Corrosion Finish Options and Specialty Options on page 98.

Codes: IBC, FL, LA

Installation:

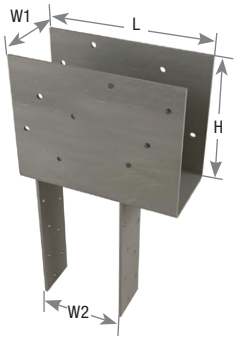
- Install the required fasteners according to the table.
- MiTek's WS3 structural wood screws, 1/4" dia. x 3" long, are supplied with Column Caps.
- Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device. A design professional shall determine the adequacy of the post to resist published loads.



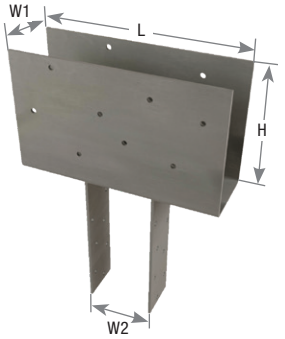
Typical KECCQ44 end cap installation



Typical KCCQ44 center cap installation



KECCQ44



KCCQ44

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W1	W2	H	L	Fastener Schedule[3] Beam Qty	Beam Type	Column or Post Qty	Column or Post Type	DF/SP Allowable Loads (Lbs.) Bearing[1] 100%	Uplift[2,7] 160%	Corrosion Finish	Code Ref.
Center Column Caps														
KCCQ325-4	CCQ3-4SDS2.5	7	3-1/4	3-5/8	6-1/2	11	16	WS3	14	WS3	21485	7065		IBC, FL, LA
KCCQ325-6	CCQ3-6SDS2.5	7	3-1/4	5-1/2	6-1/2	11	16	WS3	14	WS3	21485	7065		
KCCQ44	CCQ44SDS2.5	7	3-5/8	3-5/8	6-1/2	11	16	WS3	14	WS3	24065	7065		
KCCQ45	--	7	3-5/8	5-3/8	6-1/2	11	16	WS3	14	WS3	24065	7065		
KCCQ46	CCQ46SDS2.5	7	3-5/8	5-1/2	6-1/2	11	16	WS3	14	WS3	24065	7065		
KCCQ47	--	7	3-5/8	7-1/8	6-1/2	11	16	WS3	14	WS3	24065	7065		
KCCQ47X	--	7	3-5/8	7-1/8	8	13	16	WS3	14	WS3	28440	7065		
KCCQ48	CCQ48SDS2.5	7	3-5/8	7-1/2	6-1/2	11	16	WS3	14	WS3	24065	7065		
KCCQ525-4	CCQ5-4SDS2.5	3	5-1/4	3-5/8	8	13	16	WS3	14	WS3	41640	7065		
KCCQ525-6	CCQ5-6SDS2.5	3	5-1/4	5-1/2	8	13	16	WS3	14	WS3	41640	7065		
KCCQ525-8	CCQ5-8SDS2.5	3	5-1/4	7-1/2	8	13	16	WS3	14	WS3	41640	7065		
KCCQ57	--	7	5-3/8	7-1/8	6-1/2	11	16	WS3	14	WS3	36095	7065		
KCCQ64	CCQ64SDS2.5	7	5-1/2	3-5/8	6-1/2	11	16	WS3	14	WS3	37815	7065		
KCCQ66	CCQ66SDS2.5	7	5-1/2	5-1/2	6-1/2	11	16	WS3	14	WS3	37815	7065		
KCCQ67X	CCQ6-7.13SDS2.5	7	5-1/2	7-1/8	6-1/2	11	16	WS3	14	WS3	37815	7065		
KCCQ68	CCQ68SDS2.5	7	5-1/2	7-1/2	6-1/2	11	16	WS3	14	WS3	37815	7065		
KCCQ74	CCQ74SDS2.5	3	6-7/8	3-5/8	6-1/2	11	16	WS3	14	WS3	46405	7065		
KCCQ76	CCQ76SDS2.5	3	6-7/8	5-1/2	6-1/2	11	16	WS3	14	WS3	46405	7065		
KCCQ77	CCQ77SDS2.5	3	6-7/8	6-7/8	6-1/2	11	16	WS3	14	WS3	46405	7065		
KCCQ78	CCQ78SDS2.5	3	6-7/8	7-1/2	6-1/2	11	16	WS3	14	WS3	46405	7065		

1) Bearing loads are based on 625 psi perpendicular to grain loading; no further increase for duration of load is permitted.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) MiTek WS3 structural wood screws are 1/4" dia. x 3" long and are included with KCCQ and KECCQ column caps.
4) Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device.
5) The designer shall check post for required loads.
6) Spliced conditions must be detailed by the specifier to transfer tension loads between spliced members by means other than the column cap.
7) Uplift loads do no apply to splice conditions.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[3]				DF/SP Allowable Loads (Lbs.)		Corrosion Finish	Code Ref.
							Beam		Column or Post					
			W1	W2	H	L	Qty	Type	Qty	Type	Bearing[1] 100%	Uplift[2,7] 160%		
Center Column Caps														
KCCQ71-4	CCQ7.1-4SDS2.5	3	7-1/4	3-5/8	6-1/2	11	16	WS3	14	WS3	48125	7065		
KCCQ71-6	CCQ7.1-6SDS2.5	3	7-1/4	5-1/2	6-1/2	11	16	WS3	14	WS3	48125	7065		
KCCQ71-71	CCQ7.1-7.1SDS2.5	3	7-1/4	7-1/4	6-1/2	11	16	WS3	14	WS3	48125	7065		
KCCQ71-8	CCQ7.1-8SDS2.5	3	7-1/4	7-1/2	6-1/2	11	16	WS3	14	WS3	48125	7065		
KCCQ84	CCQ84SDS2.5	7	7-1/2	3-5/8	6-1/2	11	16	WS3	14	WS3	51565	7065		IBC, FL, LA
KCCQ86	CCQ86SDS2.5	7	7-1/2	5-1/2	6-1/2	11	16	WS3	14	WS3	51565	7065		
KCCQ88	CCQ88SDS2.5	7	7-1/2	7-1/2	6-1/2	11	16	WS3	14	WS3	51565	7065		
KCCQ94	CCQ94SDS2.5	7	8-7/8	3-5/8	6-1/2	11	16	WS3	14	WS3	60155	7065		
KCCQ96	CCQ96SDS2.5	7	8-7/8	5-1/2	6-1/2	11	16	WS3	14	WS3	60155	7065		
KCCQ98	CCQ98SDS2.5	7	8-7/8	7-1/2	6-1/2	11	16	WS3	14	WS3	60155	7065		
KCCQ106	CCQ106SDS2.5	7	9-1/2	5-1/2	6-1/2	11	16	WS3	14	WS3	65315	7065		
End Column Caps														
KECCQ325-4	ECCQ3-4SDS2.5	7	3-1/4	3-5/8	6-1/2	7-1/2	16	WS3	14	WS3	14650	6860		
KECCQ325-6	ECCQ3-6SDS2.5	7	3-1/4	5-1/2	6-1/2	7-1/2	16	WS3	14	WS3	14650	6860		
KECCQ44	ECCQ44SDS2.5	7	3-5/8	3-5/8	6-1/2	8-1/2	16	WS3	14	WS3	16965	6860		
KECCQ45	--	7	3-5/8	5-3/8	6-1/2	7-1/2	16	WS3	14	WS3	16405	6860		
KECCQ46	ECCQ46SDS2.5	7	3-5/8	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	18595	6860		
KECCQ47	--	7	3-5/8	7-1/8	6-1/2	9-1/2	16	WS3	14	WS3	20780	6860		
KECCQ47X	--	7	3-5/8	7-1/8	8	9-1/2	16	WS3	14	WS3	20780	6860		
KECCQ48	ECCQ48SDS2.5	7	3-5/8	7-1/2	6-1/2	8-1/2	16	WS3	14	WS3	18595	6860		
KECCQ525-4	ECCQ5-4SDS2.5	3	5-1/4	3-5/8	8	9-1/2	16	WS3	14	WS3	22330	6860		
KECCQ525-6	ECCQ5-6SDS2.5	3	5-1/4	5-1/2	8	9-1/2	16	WS3	14	WS3	27300	6860		
KECCQ525-8	ECCQ5-8SDS2.5	3	5-1/4	7-1/2	8	9-1/2	16	WS3	14	WS3	30430	6860		
KECCQ57	--	7	5-3/8	7-1/8	6-1/2	9-1/2	16	WS3	14	WS3	31170	6860		
KECCQ64	ECCQ64SDS2.5	7	5-1/2	3-5/8	6-1/2	8-1/2	16	WS3	14	WS3	23535	6860		
KECCQ66	ECCQ66SDS2.5	7	5-1/2	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	28910	6860		
KECCQ67X	ECCQ6-7.13SDS2.5	7	5-1/2	7-1/8	6-1/2	8-1/2	16	WS3	14	WS3	29220	6860		IBC, FL, LA
KECCQ68	ECCQ68SDS2.5	7	5-1/2	7-1/2	6-1/2	8-1/2	16	WS3	14	WS3	29220	6860		
KECCQ74	ECCQ74SDS2.5	3	6-7/8	3-5/8	6-1/2	8-1/2	16	WS3	14	WS3	27465	6860		
KECCQ76	ECCQ76SDS2.5	3	6-7/8	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	35860	6860		
KECCQ77	ECCQ77SDS2.5	3	6-7/8	6-7/8	6-1/2	8-1/2	16	WS3	14	WS3	35860	6860		
KECCQ78	ECCQ78SDS2.5	3	6-7/8	7-1/2	6-1/2	8-1/2	16	WS3	14	WS3	35860	6860		
KECCQ71-4	ECCQ7.1-4SDS2.5	3	7-1/4	3-5/8	6-1/2	8-1/2	16	WS3	14	WS3	28240	6860		
KECCQ71-6	ECCQ7.1-6SDS2.5	3	7-1/4	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	35285	6860		
KECCQ71-71	ECCQ7.1-7.1SDS2.5	3	7-1/4	7-1/4	6-1/2	8-1/2	16	WS3	14	WS3	37190	6860		
KECCQ71-8	ECCQ7.1-8SDS2.5	3	7-1/4	7-1/2	6-1/2	8-1/2	16	WS3	14	WS3	37190	6860		
KECCQ84	ECCQ84SDS2.5	7	7-1/2	3-5/8	6-1/2	8-1/2	16	WS3	14	WS3	29785	6860		
KECCQ86	ECCQ86SDS2.5	7	7-1/2	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	37390	6860		
KECCQ88	ECCQ88SDS2.5	7	7-1/2	7-1/2	6-1/2	8-1/2	16	WS3	14	WS3	39845	6860		
KECCQ94	ECCQ94SDS2.5	7	8-7/8	3-5/8	6-1/2	8-1/2	16	WS3	14	WS3	33595	6860		
KECCQ96	ECCQ96SDS2.5	7	8-7/8	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	42630	6860		
KECCQ98	ECCQ98SDS2.5	7	8-7/8	7-1/2	6-1/2	8-1/2	16	WS3	14	WS3	46485	6860		
KECCQ106	ECCQ106SDS2.5	7	9-1/2	5-1/2	6-1/2	8-1/2	16	WS3	14	WS3	45760	6860		

1) Bearing loads are based on 625 psi perpendicular to grain loading; no further increase for duration of load is permitted.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) MiTek WS3 structural wood screws are 1/4" dia. x 3" long and are included with KCCQ and KECCQ column caps.
4) Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device.
5) The designer shall check post for required loads.
6) Spliced conditions must be detailed by the specifier to transfer tension loads between spliced members by means other than the column cap.
7) Uplift loads do no apply to splice conditions.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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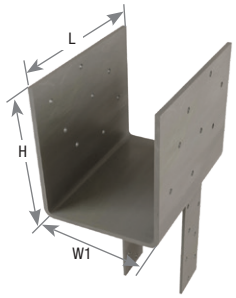
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Specialty Options:

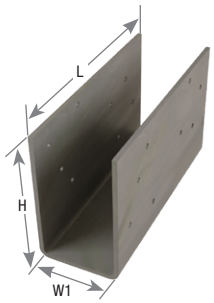
- **KCCQ/KECCQ** – Straps may be rotated 90° with no reduction in published capacity on special orders where the W2 dimension is less than or equal to the W1 dimension. When W2 is greater than W1 uplift loads may be reduced, consult MiTek Engineering support.
- **KCCQO/KECCQO** – Cap only, no strap design for field welding to pipe or other columns.
- **KCCQOB** – For cross beam connections. Any two buckets can be welded together for a wide variety of applications. Allowable load shall be the lesser of the two components.
- **KCCQT** – For T beam intersections, consult MiTek. Specify beam/column conditions, dimensions, and loading requirements.
- **KCCQC** – For X beam intersections, consult MiTek. Specify beam/column conditions, dimensions, and loading requirements.
- **KECCQL** – For L beam intersections, consult MiTek. Specify left (L) or right (R) beam/column conditions, dimensions, and loading requirements.

Dimension call-outs not shown in the table must be specified at time of ordering for specialty options, non-catalog, or rough/full size lumber sizes.

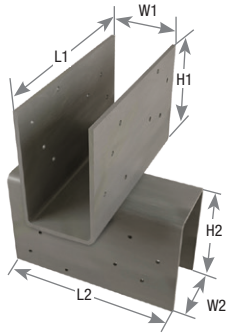
Refer to Options for Multiple-Beam Column Caps Special Order Worksheet for ordering instructions at MiTek-US.com on KCCQ/KECCQ Column Caps web page.



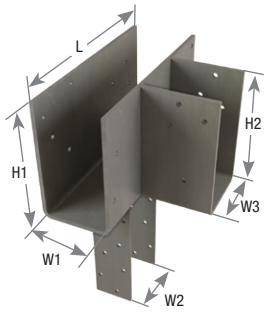
Optional KECCQ rotated straps 90°



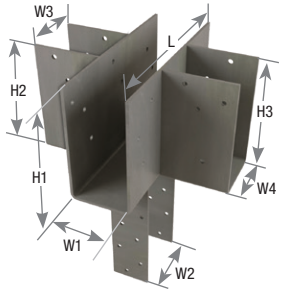
KCCQO



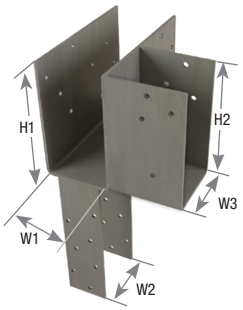
KCCQOB



KCCQT



KCCQC



KECCQLL left shown

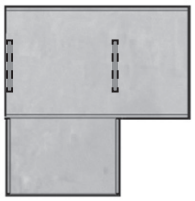
Top View of Specialty Options Column Cap Configurations



KECCQLL rotated 90°



KECCQLR rotated 90°



KECCQLL



KECCQLR



KECCQ offset left



KECCQ offset right



KCCQ offset left



KCCQ offset right



KCCQ rotated 45° left



KCCQ rotated 45° right

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KCC – Standard column cap.

KECC – End column version.

Materials: See table
Finish: Primer
Options: See table for Corrosion Finish Options.
See page 101 for Specialty Options.
Codes: IBC, FL, LA

Installation:

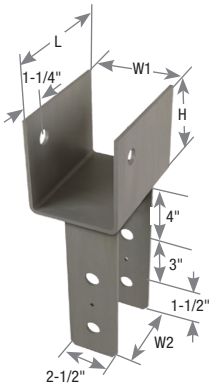
- Install the required fasteners according to the table.
- Bolt holes should be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter.
- Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device. A design professional shall determine the adequacy of the post and beam to resist published loads.



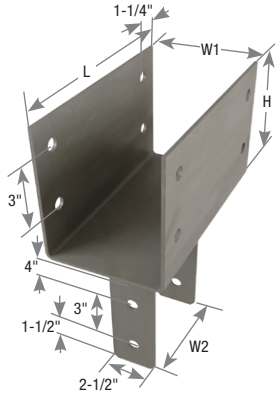
Typical KECC44 end cap installation



Typical KCC center cap installation



KECC44



KCC

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W1	W2	H	L	Fastener Schedule[3] Beam	Column or Post	DF/SP Allowable Loads (Lbs.) Bearing[1] 100%	Uplift[2,7] 160%	Corrosion Finish	Code Ref.
Center Column Caps												
KCC325-4	CC31/4-4	7	3-1/4	3-5/8	6-1/2	11	(4) 5/8	(2) 5/8	21485	3505		IBC, FL, LA
KCC325-6	CC31/4-6	7	3-1/4	5-1/2	6-1/2	11	(4) 5/8	(2) 5/8	21485	3505		
KCC44	CC44	7	3-5/8	3-5/8	4	7	(2) 5/8	(2) 5/8	15315	3920		
KCC45	--	7	3-5/8	5-3/8	6-1/2	11	(4) 5/8	(2) 5/8	24065	3920		
KCC46	CC46	7	3-5/8	5-1/2	6-1/2	11	(4) 5/8	(2) 5/8	24065	3920		
KCC47	--	7	3-5/8	7-1/8	6-1/2	11	(4) 5/8	(2) 5/8	24065	3920		
KCC48	CC48	7	3-5/8	7-1/2	6-1/2	11	(4) 5/8	(2) 5/8	24065	3920		
KCC525-4	CC51/4-4	3	5-1/4	3-5/8	8	13	(4) 3/4	(2) 3/4	41640	8155		
KCC525-6	CC51/4-6	3	5-1/4	5-1/2	8	13	(4) 3/4	(2) 3/4	41640	8155		
KCC525-8	CC51/4-8	3	5-1/4	7-1/2	8	13	(4) 3/4	(2) 3/4	41640	8155		
KCC57	CC6-71/8	7	5-3/8	7-1/8	6-1/2	11	(4) 5/8	(2) 5/8	36095	4210		
KCC64	CC64	7	5-1/2	3-5/8	6-1/2	11	(4) 5/8	(2) 5/8	37815	4210		
KCC66	CC66	7	5-1/2	5-1/2	6-1/2	11	(4) 5/8	(2) 5/8	37815	4210		
KCC68	CC68	7	5-1/2	7-1/2	6-1/2	11	(4) 5/8	(2) 5/8	37815	4210		

1) Bearing loads are based on 625 psi perpendicular to grain loading; no further increase for duration of load is permitted.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) All bolts shall meet or exceed the specifications of ASTM A 307.
4) Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device.
5) The designer shall check post for required loads.
6) Spliced conditions must be detailed by the specifier to transfer tension loads between spliced members by means other than the column cap.
7) Uplift loads do not apply to splice conditions.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

Continued on next page

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KCC / KECC Column Caps

Installation:

- Install the required fasteners according to the table.
- Bolt holes should be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter.
- Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device. A design professional shall determine the adequacy of the post and beam to resist published loads.

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W1	W2	H	L	Fastener Schedule[3] Beam	Column or Post	DF/SP Allowable Loads (Lbs.) Bearing[1] 100%	Uplift[2,7] 160%	Corrosion Finish	Code Ref.
Center Column Caps												
KCC74	CC74	3	6-7/8	3-5/8	8	13	(4) 3/4	(2) 3/4	54845	8155		
KCC76	CC76	3	6-7/8	5-1/2	8	13	(4) 3/4	(2) 3/4	54845	8155		
KCC77	CC77	3	6-7/8	6-7/8	8	13	(4) 3/4	(2) 3/4	54845	8155		
KCC78	CC78	3	6-7/8	7-1/2	8	13	(4) 3/4	(2) 3/4	54845	8155		
KCC75X	CC71/8-6	3	7-1/8	5-1/2	8	13	(4) 3/4	(2) 3/4	56875	8155		
KCC77X	CC71/8-71/8	3	7-1/8	7-1/8	8	13	(4) 3/4	(2) 3/4	56875	8155		IBC,
KCC84	CC84	3	7-1/2	3-5/8	8	13	(4) 3/4	(2) 3/4	60940	8155		FL,
KCC86	CC86	3	7-1/2	5-1/2	8	13	(4) 3/4	(2) 3/4	60940	8155		LA
KCC88	CC88	3	7-1/2	7-1/2	8	13	(4) 3/4	(2) 3/4	60940	8155		
KCC94	CC94	3	8-7/8	3-5/8	8	13	(4) 3/4	(2) 3/4	71095	8155		
KCC96	CC96	3	8-7/8	5-1/2	8	13	(4) 3/4	(2) 3/4	71095	8155		
KCC98	CC98	3	8-7/8	7-1/2	8	13	(4) 3/4	(2) 3/4	71095	8155		
KCC106	CC106	3	9-5/8	5-1/2	8	13	(4) 3/4	(2) 3/4	77190	8155		
End Column Caps												
KECC325-4	ECC31/4-4	7	3-1/4	3-5/8	6-1/2	7-1/2	(2) 5/8	(2) 5/8	14650	1750		
KECC325-6	ECC31/4-6	7	3-1/4	5-1/2	6-1/2	7-1/2	(2) 5/8	(2) 5/8	14650	1750		
KECC44	ECC44	7	3-5/8	3-5/8	4	5-1/2	(1) 5/8	(2) 5/8	12030	1960		
KECC45	--	7	3-5/8	5-3/8	6-1/2	7-1/2	(2) 5/8	(2) 5/8	16405	1960		
KECC46	ECC46	7	3-5/8	5-1/2	6-1/2	8-1/2	(2) 5/8	(2) 5/8	18595	1960		
KECC47	--	7	3-5/8	7-1/8	6-1/2	9-1/2	(2) 5/8	(2) 5/8	20780	1960		
KECC48	ECC48	7	3-5/8	7-1/2	6-1/2	9-1/2	(2) 5/8	(2) 5/8	20780	1960		
KECC525-4	ECC51/4-4	3	5-1/4	3-5/8	8	9-1/2	(2) 3/4	(2) 3/4	30430	6050		
KECC525-6	ECC51/4-6	3	5-1/4	5-1/2	8	9-1/2	(2) 3/4	(2) 3/4	30430	6050		
KECC525-8	ECC51/4-8	3	5-1/4	7-1/2	8	9-1/2	(2) 3/4	(2) 3/4	30430	6050		
KECC57	ECC6-71/8	7	5-3/8	7-1/8	6-1/2	9-1/2	(2) 5/8	(2) 5/8	31170	2105		
KECC64	ECC64	7	5-1/2	3-5/8	6-1/2	7-1/2	(2) 5/8	(2) 5/8	25780	2105		
KECC66	ECC66	7	5-1/2	5-1/2	6-1/2	7-1/2	(2) 5/8	(2) 5/8	25780	2105		IBC,
KECC68	ECC68	7	5-1/2	7-1/2	6-1/2	9-1/2	(2) 5/8	(2) 5/8	32655	2105		FL,
KECC74	ECC74	3	6-7/8	3-5/8	8	10-1/2	(2) 3/4	(2) 3/4	44295	6050		LA
KECC76	ECC76	3	6-7/8	5-1/2	8	10-1/2	(2) 3/4	(2) 3/4	44295	6050		
KECC77	ECC77	3	6-7/8	6-7/8	8	10-1/2	(2) 3/4	(2) 3/4	44295	6050		
KECC78	ECC78	3	6-7/8	7-1/2	8	10-1/2	(2) 3/4	(2) 3/4	44295	6050		
KECC75X	ECC71/8-6	3	7-1/8	5-1/2	8	10-1/2	(2) 3/4	(2) 3/4	45940	6050		
KECC77X	ECC71/8-71/8	3	7-1/8	7-1/8	8	10-1/2	(2) 3/4	(2) 3/4	45940	6050		
KECC84	ECC84	3	7-1/2	3-5/8	8	10-1/2	(2) 3/4	(2) 3/4	49220	6050		
KECC86	ECC86	3	7-1/2	5-1/2	8	10-1/2	(2) 3/4	(2) 3/4	49220	6050		
KECC88	ECC88	3	7-1/2	7-1/2	8	10-1/2	(2) 3/4	(2) 3/4	49220	6050		
KECC94	ECC94	3	8-7/8	3-5/8	8	10-1/2	(2) 3/4	(2) 3/4	57420	6050		
KECC96	ECC96	3	8-7/8	5-1/2	8	10-1/2	(2) 3/4	(2) 3/4	57420	6050		
KECC98	ECC98	3	8-7/8	7-1/2	8	10-1/2	(2) 3/4	(2) 3/4	57420	6050		
KECC106	ECC106	3	9-5/8	5-1/2	8	10-1/2	(2) 3/4	(2) 3/4	62345	6050		

1) Bearing loads are based on 625 psi perpendicular to grain loading; no further increase for duration of load is permitted.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) All bolts shall meet or exceed the specifications of ASTM A 307.
4) Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed loads for device.
5) The designer shall check post for required loads.
6) Spliced conditions must be detailed by the specifier to transfer tension loads between spliced members by means other than the column cap.
7) Uplift loads do not apply to splice conditions.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

Continued on next page

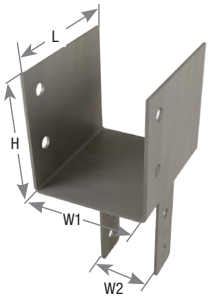
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Specialty Options:

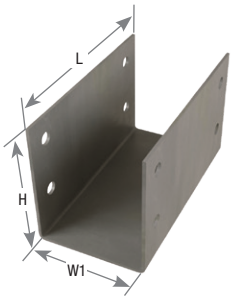
- **KCC/KECC** – Straps may be rotated 90° on special order where the W2 dimension is less than or equal to the W1 dimension. Unless specified W3 and W4 dimensions are equal to the W1 dimension, and H2 and H3 dimensions are equal to the H1 dimension.
- **KCCO/KECCO** – Cap only, no strap design for field welding to pipe or other columns.
- **KCCOB** – For cross beam connections. Any two buckets can be welded together for a wide variety of applications. Allowable load shall be the lesser of the two components.
- **KCCT** – For T beam intersections, consult MiTek. Specify beam/column conditions, dimensions, and loading requirements.
- **KCCC** – For X beam intersections, consult MiTek. Specify beam/column conditions, dimensions, and loading requirements.
- **KECCL** – For L beam intersections, consult MiTek. Specify left (L) or right (R) beam/column conditions, dimensions, and loading requirements.

Dimension call-outs not shown in the table must be specified at time of ordering for specialty options, non-catalog, or rough/full size lumber sizes.

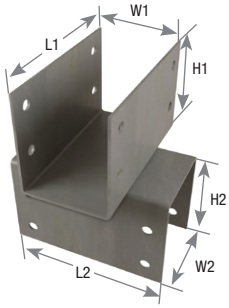
Refer to Options for Multiple-Beam Bolted Column Caps Special Order Worksheet for ordering instructions at MiTek-US.com on KCC/KECC Column Caps web page.



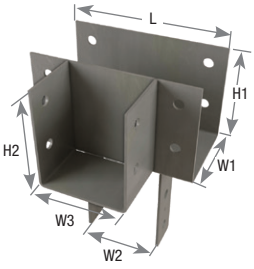
Optional KECC rotated straps 90°



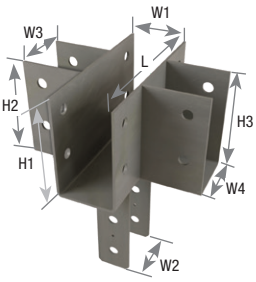
KCCO



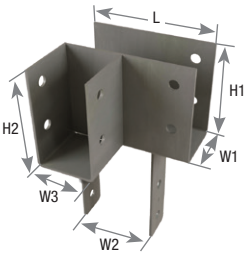
KCCOB



KCCT



KCCC



KECCLL left shown

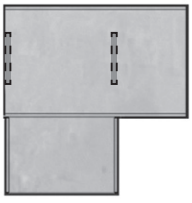
Top View of Specialty Options Column Cap Configurations



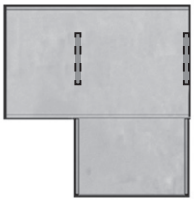
KECCLL rotated 90°



KECCLR rotated 90°



KECCLL



KECCLR



KECC offset left



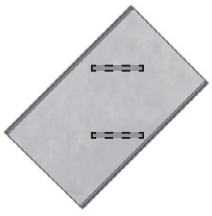
KECC offset right



KCC offset left



KCC offset right



KCC rotated 45° left



KCC rotated 45° right

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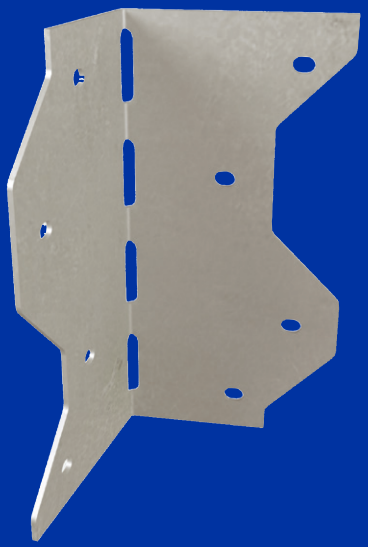
ANGLES & STRAPS



MiTek®

ANGLES & STRAPS 102-131

Angles	104-107, 109-111
Clips	108, 114
Stud Plate Ties	112-113
Header Hangers	114
Ties	115
Lateral Joist Connectors	116
Straps	117-130
Ornamental Connectors	122
Knee Braces	131



A / AC / JA / MP Framing Angles

MP34 – 18 gauge. Framing angle for 90° connections

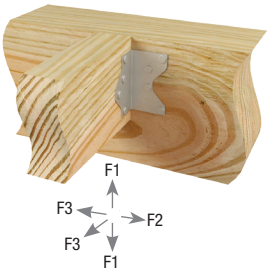
A3 – 18 gauge. Eliminates toenailing and increases strength

AC – 16 gauge. Features staggered nail patterns which reduces wood splitting and allows installation on both sides of the supported member

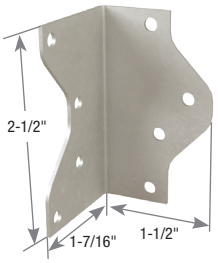
JA – 14 or 16 gauge. Heavier capacity framing angle for joist support

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

AVAILABLE IN GOLD COAT



Typical MP34 joist / header installation

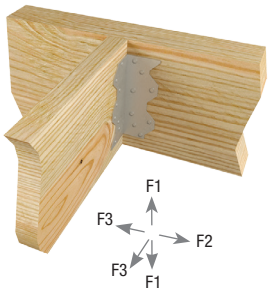


MP34

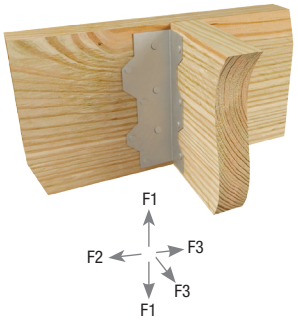
Installation:
• Install the required fasteners according to the table.



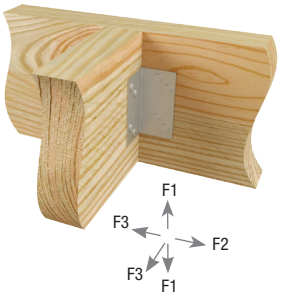
Typical JA1 installation



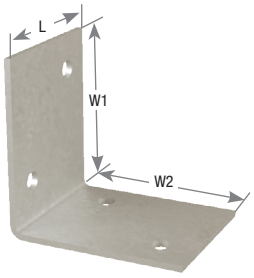
Typical JA7 installation



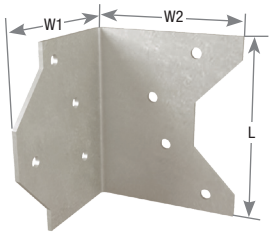
Typical AC installation



Typical A3 installation



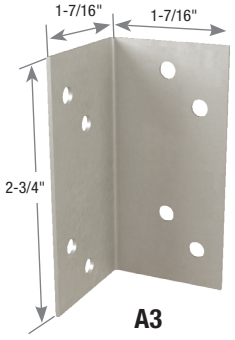
JA1



JA3



AC



A3

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[3,5]				Direction of Load	DF/SP Allowable Loads (Lbs.)[1,2]				S-P-F Allowable Loads (Lbs.)[1,2]				Corrosion Finish	Code Ref.
						Header		Joist												
			W1	W2	L	Qty	Type	Qty	Type		100%	115%	125%	160%	100%	115%	125%	160%		
A3	A23, GA1, GA2, L30	18	1-7/16	1-7/16	2-3/4	4	10d x 1-1/2	4	10d x 1-1/2	F1	480	545	590	740	410	470	510	520		
										F2	480	545	590	605	410	470	485	505		
										F3	375	375	375	375	145	165	180	230		
MP34	A34	18	1-7/16	1-1/2	2-1/2	4	8d x 1-1/2	4	8d x 1-1/2	F1	400	455	490	525	345	390	420	440		
										F2	400	455	490	590	345	390	420	495		
										F3	185	215	230	295	120	140	150	190		
AC5	L50	16	1-5/16	2-3/8	4-7/8	3	10d	3	10d	F1	375	420	455	565	330	370	400	500		
										F2	375	420	455	565	330	370	400	475		
										F3	155	180	195	250	105	120	135	170		
						3	16d	3	16d	F1	440	500	540	670	385	440	475	590		
										F2	440	500	540	595	385	440	475	475		
										F3	175	205	220	280	120	140	150	190		
AC7	L70	16	1-5/16	2-3/8	6-15/16	4	10d	4	10d	F1	500	560	605	755	440	495	530	665		
										F2	500	560	605	755	440	495	530	665		
										F3	210	240	260	335	140	165	175	225		
						4	16d	4	16d	F1	590	665	720	895	515	585	630	785		
										F2	590	665	720	895	515	585	630	735		
										F3	235	270	295	375	160	185	200	255		
AC9	L90	16	1-5/16	2-3/8	8-7/8	5	10d	5	10d	F1	625	700	755	945	550	615	665	830		IBC, FL, LA
										F2	625	700	755	900	550	615	665	715		
										F3	260	300	325	415	175	205	220	285		
						5	16d	5	16d	F1	735	835	900	1120	645	730	790	985		
										F2	735	835	900	900	645	720	720	720		
										F3	295	340	370	470	200	230	250	320		
JA1	A21	16	1-1/2	1-1/2	1-1/4	2	10d x 1-1/2	2	10d x 1-1/2	F1	220	220	220	220	195	195	195	195		
										F2	--	--	--	300	--	--	--	235		
										F3	--	--	--	150	--	--	--	100		
JA3	--	14	2-1/2	2-1/2	3	4	16d	4	10d x 1-1/2	F1	495	495	495	495	445	445	445	445		
										F2	--	--	--	465	--	--	--	365		
										F3	--	--	--	330	--	--	--	225		
JA5	--	14	2-1/2	2-1/2	5	6	16d	6	10d x 1-1/2	F1	790	825	825	825	715	740	740	740		
										F2	--	--	--	890	--	--	--	695		
										F3	--	--	--	495	--	--	--	335		
JA7	--	14	2-1/2	2-1/2	7	8	16d	8	10d x 1-1/2	F1	1055	1185	1270	1560	955	1070	1145	1410		
										F2	--	--	--	1450	--	--	--	1135		
										F3	--	--	--	490	--	--	--	335		
JA9	--	14	2-1/2	2-1/2	9	10	16d	10	10d x 1-1/2	F1	1320	1485	1590	1950	1190	1340	1430	1760		
										F2	--	--	--	1465	--	--	--	1150		
										F3	--	--	--	775	--	--	--	530		

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) Loads are shown per angle, and may be doubled if installed in pairs. When using a single angle, joist must be constrained from rotation.
3) Stainless steel ring shank nails must be used with stainless steel connectors to achieve tabulated allowable loads.
4) **MP34: When attached to 1-1/4" EWP LSL Rimboard, multiply F1 and F2 table values by a reduction factor of 0.92.**
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
New products or updated product information are designated in **blue font**.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

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MP – Field adjustable from 45° to 180° (flat)"

MPA1 – Tabs enable two and three-way connections

MP4F – Connects 2x framing with floor sheathing up to 5/8"

MP6F – Connects 3x framing with floor sheathing up to 3/4". Better choice for connections where floor sheathing is between sole plate and rim board

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MP Framing Angles are fabricated at 100° and may be field adjusted by hand from 45° to 180° (flat)."
- **Bend tabs only once.**

AVAILABLE IN GOLD COAT



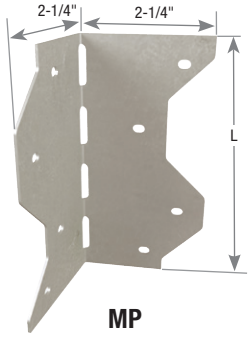
Typical MP rafter support installation



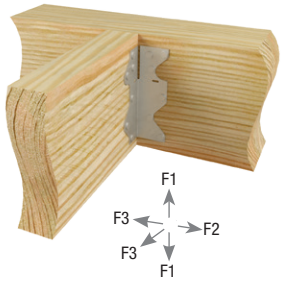
MPA1



MPA1-GC

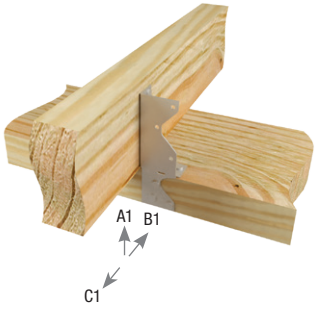


MP



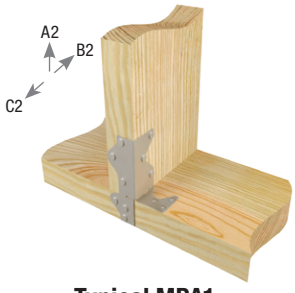
Typical MPA1 joist / header installation

Figure 1



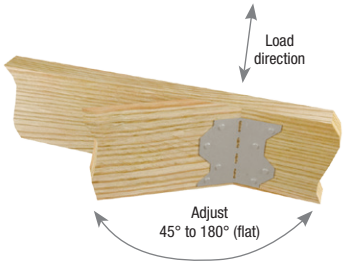
Typical MPA1 rafter / plate installation

Figure 2



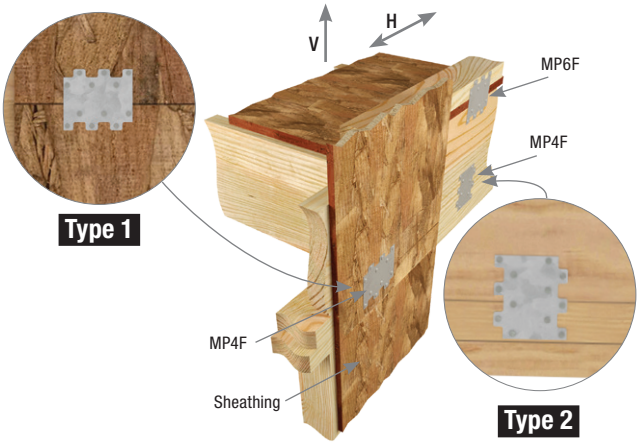
Typical MPA1 stud / plate installation

Figure 3

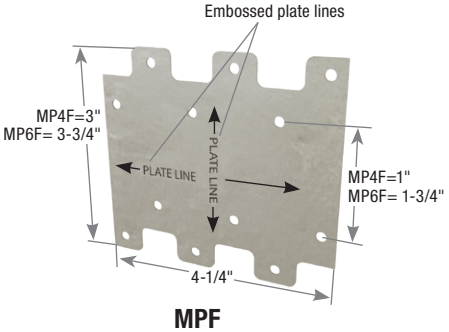


Typical MP joist / header installation

Figure 4



Typical MPF installation



MPF

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Installation Type[2,4]	Fastener Schedule[5,7]				Direction of Load[2]	DF/SP Allowable Loads (Lbs.)[1,3,4]				S-P-F Allowable Loads (Lbs.)[1,3,4]				Corrosion Finish	Code Ref.
				Header or Stud		Joist or Plate												
				Qty	Type	Qty	Type		100%	115%	125%	160%	100%	115%	125%	160%		
MPA1	A35	18	Figure 1	6	8d x 1-1/2	6	8d x 1-1/2	F1	600	615	615	615	515	515	515	515		IBC, FL, LA
								F2	600	685	735	750	515	585	630	630		
								F3	280	320	350	435	180	205	225	290		
			Figure 2	6	8d x 1-1/2	3	8d x 1-1/2	A1	300	340	370	370	260	295	310	310		
								B1	300	340	370	385	260	295	315	325		
								C1	255	255	255	255	215	215	215	215		
			Figure 3	6	8d x 1-1/2	6	8d x 1-1/2	A2	440	440	440	440	350	370	370	370		
								B2	240	240	240	240	200	200	200	200		
								C2	330	330	330	330	280	280	280	280		
MP3	LS30	18	Figure 4	3	10d	3	10d	F1	360	410	445	455	310	350	380	380		
MP5	LS50	18		4	10d	4	10d	F1	480	545	590	740	410	470	505	640		
MP7	LS70	18		5	10d	5	10d	F1	600	685	740	930	515	585	630	800		
MP9	LS90	18		6	10d	6	10d	F1	720	820	885	1115	620	705	760	960		
MP4F	LTP4	20	Type 1	6	8d x 1-1/2	6	8d x 1-1/2	V	590	670	720	750	505	575	615	645		
								H	590	670	720	750	505	575	615	645		
			Type 2	6	8d x 1-1/2	6	8d x 1-1/2	V	590	670	720	750	505	575	615	645		
								H	585	585	585	585	500	500	500	500		
			Type 1	6	8d	6	8d	V	590	670	720	750	505	575	615	645		
								H	590	670	720	750	505	575	615	645		
			Type 2	6	8d	6	8d	V	590	670	720	750	505	575	615	645		
								H	585	585	585	585	500	500	500	500		
MP6F	LTP5	20	Type 1	6	8d x 1-1/2	6	8d x 1-1/2	V	590	595	595	595	505	510	510	510		
								H	590	595	595	595	505	510	510	510		
			Type 2	6	8d x 1-1/2	6	8d x 1-1/2	V	590	595	595	595	505	510	510	510		
								H	590	595	595	595	505	510	510	510		
			Type 1	6	8d	6	8d	V	590	595	595	595	505	510	510	510		
								H	590	595	595	595	505	510	510	510		
			Type 2	6	8d	6	8d	V	590	595	595	595	505	510	510	510		
								H	590	595	595	595	505	510	510	510		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Refer to drawings for installation type and definition of the various load directions.
3) If installing MP4F or MP6F over plywood, use 8d common nails for 100% of table load.
4) Loads are shown per angle. When using a single anchor, joist must be constrained from rotation.
5) Stainless steel ring shank nails must be used with stainless steel connectors to achieve tabulated allowable loads.
6) **MPA1: When attached to 1-1/4" EWP LSL Rimboard, multiply F1 and F2 table values by a reduction factor of 0.92.**
7) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long, 8d nails are 0.131" dia. x 2-1/2" long
New products or updated product information are designated in **blue font**.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

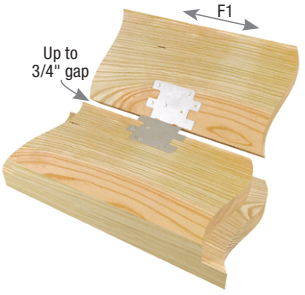
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RBC Roof Boundary Clip

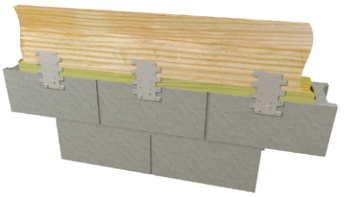
Framing plate designed to connect roof blocking to top of the wall.

Materials: 20 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

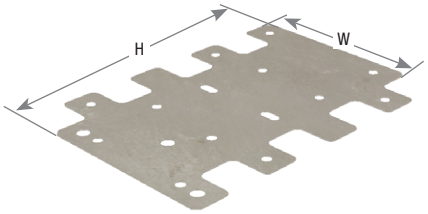
Installation:
- Install the required fasteners according to the table.
- Field adjustable from 0º to 45º.
- **Bend angle only once.**



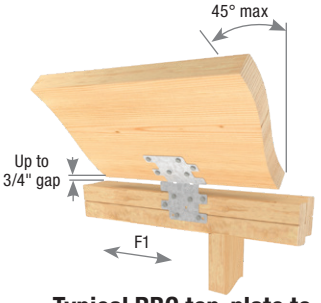
Typical RBC top-plate to inside of blocking installation



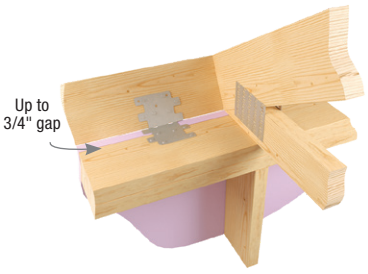
Typical RBC concrete block wall to blocking installation



RBC



Typical RBC top-plate to outside of blocking installation



Typical RBC 1" foamboard installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Installation Type	Fastener Schedule[3,4] Top Plate Qty	Fastener Schedule[3,4] Top Plate Type	Fastener Schedule[3,4] Blocking Qty	Fastener Schedule[3,4] Blocking Type	DF/SP Allowable Loads (Lbs.)[1,2] F1 160%	S-P-F Allowable Loads (Lbs.)[1,2] F1 160%	Code Ref.
RBC	RBC	20	4-1/4	6	Wood	6	10d x 1-1/2	6	10d x 1-1/2	505	440	IBC, FL, LA
					CMU	3	1/4" Tapcon	6	10d x 1-1/2	425	370	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Loads shown are for a single roof boundary clip.
3) Use ITW-Buildex 1/4" x 2-1/4" Tapcons; or equal, installed in accordance with manufacturer's specifications.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" diameter by 1-1/2" long.

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ML Angles

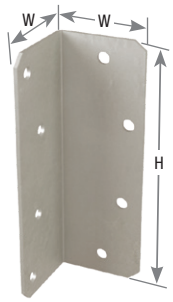
ML angles are multi-purpose angles that install easily with MiTek's WS15-EXT structural wood screws. The staggered fastener pattern allows for back-to-back installations.

Materials: 12 gauge
Finish: G-185 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek WS15-EXT structural wood screws (1/4" dia. x 1-1/2" long) are not supplied with ML angles.



Typical ML26-TZ installation
(ML24-TZ similar)



ML26-TZ
(ML24-TZ similar)

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Fastener Schedule[2,3] Header Qty	Fastener Schedule[2,3] Joist Qty	Fastener Schedule[2,3] Type	DF/SP Allowable Loads (Lbs.)[1] F1 100%	DF/SP F1 115%	DF/SP F1 125%	DF/SP F1 160%	S-P-F Allowable Loads (Lbs.)[1] F1 100%	S-P-F F1 115%	S-P-F F1 125%	S-P-F F1 160%	Corrosion	Finish	Code Ref.
ML24-TZ	ML24Z	12	2	4	3	3	WS15-EXT	655	655	655	655	565	650	655	655			IBC, FL, LA
ML26-TZ	ML26Z	12	2	6	4	4	WS15-EXT	920	1060	1090	1090	755	865	940	1090			

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) MiTek's WS15 structural wood screws are 1/4" dia. x 1-1/2" long and are not included with angles.
3) For interior applications, use MiTek's WS15 structural wood screws with yellow zinc finish.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

TDL Concrete Angles

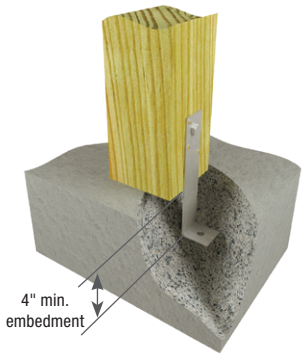
These angles secure wood posts to concrete or wood floors in light-duty applications.

Materials: 12 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options

Installation:
- Install the required fasteners according to the table.
- The TDL10 can be embedded into concrete. Minimum embedment depth is 4" to achieve allowable loads.
- **Moisture barrier may be required.**



Typical TDL5 nail installation



Typical TDL10 embedded installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Dimensions (in) D	Fastener Schedule Anchor Bolt[4] Qty	Fastener Schedule Anchor Bolt[4] Dia. (in)	Fastener Schedule Strap Qty	Fastener Schedule Strap Type[5]	DF/SP Allowable Loads (Lbs.)[1,2,3] Uplift 160%	Corrosion	Finish	Code Ref.
TDL5	A24	12	2	5-3/16	2-1/4	1	1/2	4	16d	955			--
								1	1/2 bolt	1105			
TDL10	A311	12	2	9-3/4	2-1/4	1	1/2	4	16d	955			
								1	1/2 bolt	1105			

1) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
2) The bolt values are based on single shear with a minimum member thickness of 3-1/2".
3) Allowable loads have been increased in accordance with the code; no further increase shall be permitted.
4) Designer must specify anchor bolt type, length, and embedment.
5) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



TDL10

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B / BL Corner Braces

These multi-purpose braces are designed to provide reinforcement for 90° wood-to-wood connections.

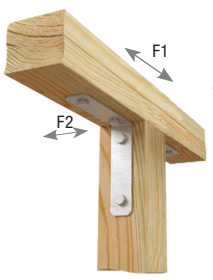
Materials: 12 gauge
Finish: G90 galvanizing
Codes: IBC, LA

Some model designs may vary from illustration shown

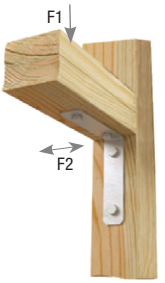
Installation:
• Install the required fasteners according to the table.

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Fastener Schedule[4] Nails[6] Qty	Nails[6] Type	Bolts[5] Qty	Bolts[5] Type	DF/SP Allowable Loads (Lbs.)[1,2] F1[3] 160%	F2 160%	Code Ref.
B23	--	12	2	2-5/8	6	16d	--	--	--	--	--
B24	--	12	2	3-5/8	8	16d	--	--	--	--	
BL3	A33	12	1-1/4	3-1/16	8	10d	--	--	735	285	IBC, LA
BL4	A44	12	1-1/4	4-13/16	10	10d	--	--	720	275	
BL6	--	12	1-1/4	6-9/16	12	16d	--	--	--	--	--
BL8	--	12	1-1/4	8-5/16	14	16d	--	--	--	--	
B66	A66	12	1-1/2	6	--	--	4	3/8	710	335	IBC, FL
B88	A88	12	2	8	--	--	6	3/8	620	305	

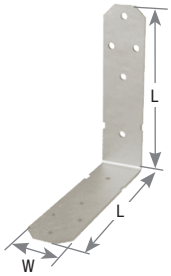
1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Loads shown are for a single corner brace.
3) Corner braces are required on both sides to achieve F1 loads in both directions.
4) Minimum member thickness is 3".
5) Bolts shall conform to ASTM A 307 or better.
6) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.



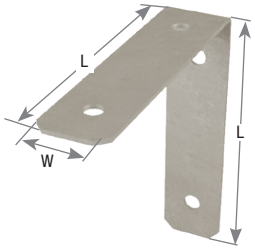
Typical B66 double installation



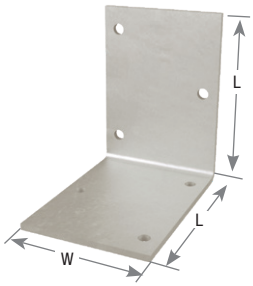
Typical B66 single installation



BL4



B66



B23

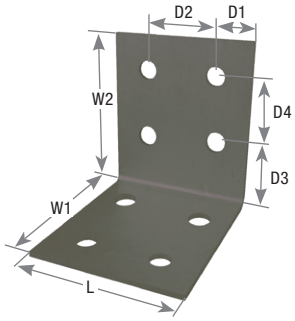
KHL Heavy Angles

Designed for heavy-duty reinforcement of 90° framing intersections.

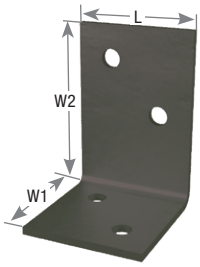
Materials: See table
Finish: Primer
Options: See table for Corrosion Finish Options

Installation:
• Install the required fasteners according to the table.
• **Connectors are not load rated.**


Typical KHL35 installation



KHL55

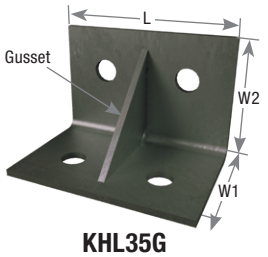


KHL335

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W1	W2	L	D1	D2	D3	D4	Fastener Schedule Bolts[1] Qty	Dia.	Gussets	Corrosion Finish	Code Ref.
KHL33	HL33	7	3-1/4	3-1/4	2-1/2	1-1/4	--	2	--	2	5/8	--		--
KHL35	HL35	7	3-1/4	3-1/4	5	1-1/4	2-1/2	2	--	4	5/8	--		
KHL35G	HL35G	7	3-1/4	3-1/4	5	1-1/4	2-1/2	2	--	4	5/8	1		
KHL37	HL37	7	3-1/4	3-1/4	7-1/2	1-1/4	2-1/2	2	--	6	5/8	--		
KHL335	SPECANGLE	3	3-1/2	5-1/4	3-1/2	--	--	--	--	4	1/2	--		
KHL43	HL43	3	4-1/4	4-1/4	3	1-1/2	--	2-3/4	--	2	3/4	--		
KHL46	HL46	3	4-1/4	4-1/4	6	1-1/2	3	2-3/4	--	4	3/4	--		
KHL49	HL49	3	4-1/4	4-1/4	9	1-1/2	3	2-3/4	--	6	3/4	--		
KHL53	HL53	7	5-3/4	5-3/4	2-1/2	1-1/4	--	2	2-1/2	4	5/8	--		
KHL55	HL55	7	5-3/4	5-3/4	5	1-1/4	2-1/2	2	2-1/2	8	5/8	--		
KHL57	HL57	7	5-3/4	5-3/4	7-1/2	1-1/4	2-1/2	2	2-1/2	12	5/8	--		
KHL73	HL73	3	7-1/4	7-1/4	3	1-1/2	--	2-3/4	3	4	3/4	--		
KHL76	HL76	3	7-1/4	7-1/4	6	1-1/2	3	2-3/4	3	8	3/4	1		
KHL79	HL79	3	7-1/4	7-1/4	9	1-1/2	3	2-3/4	3	12	3/4	2		

1) All bolts shall meet or exceed the specifications of ASTM A 307.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



KHL35G

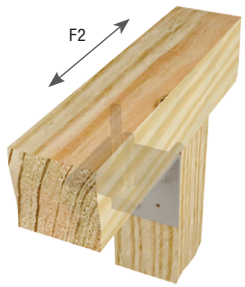
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ANJ Heavy Angles

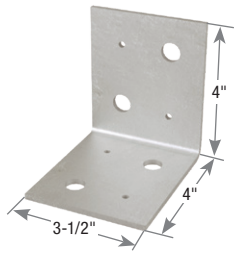
The ANJ44S is a 7 gauge heavy duty angle intended to securely attach a post and beam together.

Materials: 7 gauge
Finish: Hot-dip galvanized

Installation:
- Install with (2) 1/2" x 2-1/2" HDG lag screws into each leg.



Typical ANJ44S-HDG installation



ANJ44S-HDG

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	L	Fastener Schedule[1] Header Qty	Header Lag Screw	Joist Qty	Joist Lag Screw	DF/SP Allowable Loads (Lbs.) F2 100%	F2 115%	F2 125%	Corrosion Finish	Code Ref.
ANJ44S-HDG	--	7	3-1/2	4	4	2	1/2" HDG	2	1/2" HDG	510	585	640		--

1) Loads based on use of (2) 1/2" x 2-1/2" lag screws, loaded parallel to grain, in Douglas Fir-Larch (G=0.50).

Corrosion Finish Key
- Stainless Steel
- Gold Coat
- HDG
- Triple Zinc

SCA Stair Angles

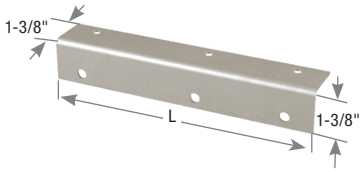
Stair angles simplify stair construction. There is no need to calculate and notch stair stringers. Stronger and safer than wood blocking, and the angle and fasteners are hidden from view.

Materials: 12 gauge
Finish: G-185 galvanizing

Installation:
- Install the required fasteners according to the table.
- MiTek WS15-EXT (1/4" dia. x 1-1/2" long) structural wood screws are not supplied with SCA angles.
- Use the SCA9-TZ for single 2x10 stair treads. Use the SCA10-TZ for double 2 x 6 stair treads.
- To calculate stair construction do the following:
  1. Find the number of steps needed by dividing the vertical drop in inches from the deck surface to grade by 7. Round off to the nearest whole number. (Ex: Vertical drop of 39" divided by 7" equals 5.57 rounded off is 6)
  2. Find the step rise by dividing the vertical drop by the number of steps (39" divided by 6 = 6.5")
  3. Find the step run by measuring the depth of your tread board (Ex: (2) 2x6s with 1/4" gap will have a run of 11-1/4")
  4. Find the stairway span by multiplying the run by the number of treads minus one (Ex: 11-1/4" x 5 = 56-1/4")
- Using the above calculations, mark stair angle locations on each stringer. Attach a stair angle to the inside of each stringer at the marked locations. Attach stringers to deck rim joist and railing posts. Position tread-boards on angles and fasten from below.



Typical SCA9-TZ installation



SCA9-TZ



Typical SCA10-TZ installation

AVAILABLE IN GOLD COAT

MiTek Stock No.	Ref. No.	Steel Gauge	L (in)	Fastener Schedule[2,3] Qty	Fastener Schedule[2,3] Type	DF/SP Allowable Loads (Lbs.)[1] Download 100%	Corrosion Finish	Code Ref.
SCA9-TZ	TA9Z	12	9	6	WS15-EXT	445		--
SCA10-TZ	TA10Z	12	10	8	WS15-EXT	595		

1) Loads assume rise over run of 7/11.
2) MiTek's WS15-EXT structural wood screws are 1/4" dia. x 1-1/2" long and are not included with SCA angles.
3) HDG lag screws may be substituted for specified MiTek WS15-EXT structural wood screws with no load reduction.

Corrosion Finish Key Stainless Steel, Gold Coat, HDG, Triple Zinc

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RSPT / SPT / TSP Stud Plate Ties

RSPT – 18 or 20 gauge

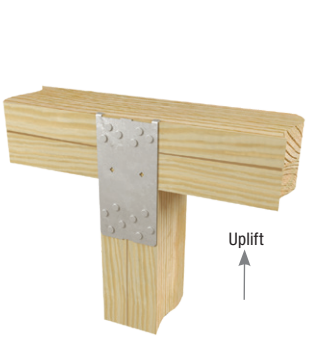
SPT – 20 gauge

TSP – 16 gauge. Optional diamond holes for various uplift capacities with Min and Max nailing configurations

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

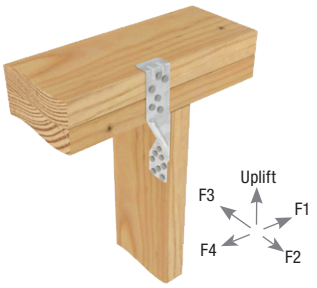
- Install the required fasteners according to the table.
- **TSP Min Nailing** – Fill all round holes.
- **TSP Max Nailing** – Fill all round and diamond holes.
- HDG nails may be required when fastening to treated sill plates.



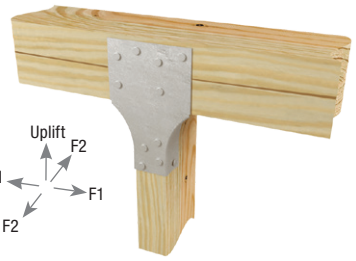
Typical RSPT6-2 installation



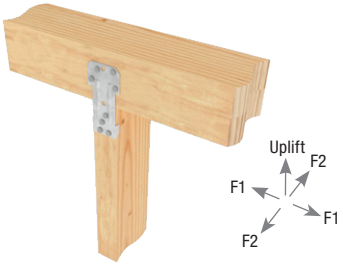
Typical RSPT4 single plate installation



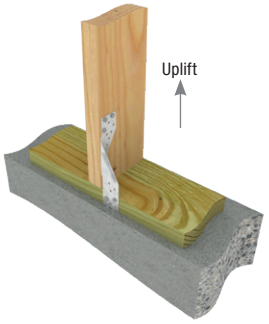
Typical TSP top plate installation (max nailing)



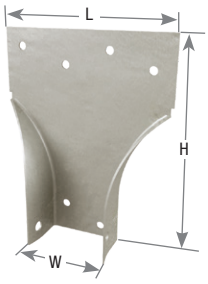
Typical SPT24 installation



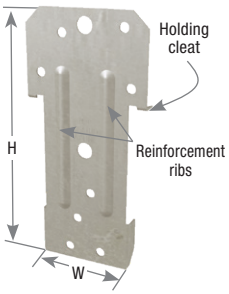
Typical RSPT4 double plate installation



Typical TSP mudsill installation (min nailing)



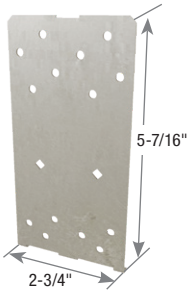
SPT22



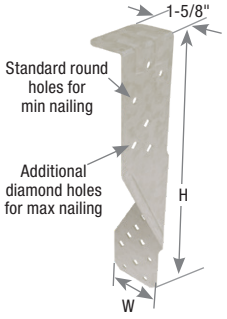
RSPT4



RSPT6



RSPT6-2



TSP

MiTek Stock No.[2]	Ref. No.	Steel Gauge	Dimensions (in) W	H	L	Fastener Schedule[3] Min/ Max	Stud Qty	Stud Type	Plate Qty	Plate Type	DF/SP Allowable Loads (Lbs.) Uplift[1] 160%	F1 160%	F2 160%	F3 160%	F4 160%	Corrosion Finish	Code Ref.
RSPT4	RSP4	20	1-1/2	4-1/8	--	--	4	8d x 1-1/2	4	8d x 1-1/2	460	255	300	--	--		
SPT22	SP1	20	1-9/16	4-3/8	3-1/2	--	4	10d	4	10d	735	535	275	--	--		
SPT24	SP2	20	1-9/16	5-5/8	3-1/2	--	6	10d	6	10d	1090	535	275	--	--		
SPT44	--	20	3-9/16	6-3/4	6-1/2	--	6	16d	6	16d	1315	845	275	--	--		
RSPT6	SSP	18	1-1/2	5-7/16	--	--	4	10d x 1-1/2	4	10d x 1-1/2	650	--	--	--	--		
RSPT6-2	DSP	18	2-3/4	5-7/16	--	--	8	10d x 1-1/2	6	10d x 1-1/2	900	--	--	--	--		
TSP	TSP	16	1-5/8	7-7/8	--	Min	3	10d x 1-1/2	3	10d x 1-1/2	465	--	--	--	--		
						Max	9	10d x 1-1/2	6	10d x 1-1/2	830	365	190	210	235		
										10d	870						

IBC, FL, LA

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) SPT22, SPT24, and SPT44: the nails fastened to the wide face of the stud must be driven 30° from the perpendicular on the horizontal plane.
3) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long, 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

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SPT / SPTH / SPTHW Stud Plate Ties

SPT – Ties single and double plates to studs

SPTH – Heavier version of SPT

SPTHW – Attaches plate to studs over 1/2" structural sheathing

Materials: SPT – 20 gauge, SPTH / SPTHW – 18 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

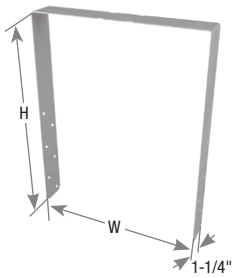
Installation:
• Install the required fasteners according to the table.



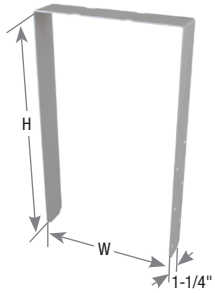
Typical SPTHW installation



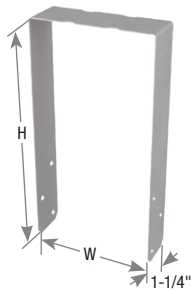
Typical SPT4 installation



SPTHW



SPTH



SPT

Stud Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	DF/SP Allowable Loads (Lbs.) Uplift[1] 160%	Corrosion Finish	Code Ref.
4x	SPT4	SP4	20	3-9/16	6-7/8	6	10d x 1-1/2	875		IBC, FL, LA
	SPTH4	SPH4	18	3-9/16	8-5/8	12	10d x 1-1/2	2195		
	SPTHW4	SPH4R	18	4-1/16	8-3/8	12	10d x 1-1/2	2195		
6x	SPT6	SP6	20	5-9/16	7-5/8	6	10d x 1-1/2	875		
	SPTH6	SPH6	18	5-9/16	9-3/8	12	10d x 1-1/2	2195		
	SPTHW6	SPH6R	18	6-1/16	9-1/8	12	10d x 1-1/2	2195		
8x	SPT8	SP8	20	7-5/16	8-1/2	6	10d x 1-1/2	875		
	SPTH8	SPH8	18	7-5/16	8-1/2	12	10d x 1-1/2	2195		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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SFC Framing Clips

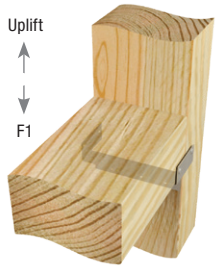
Framing clips replace end cripples under window sills.

Materials: 16 gauge
Finish: G90 galvanizing

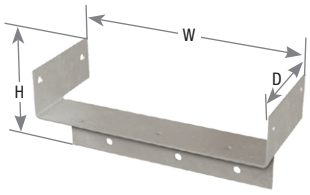
Installation:
• Install the required fasteners according to the table.

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]				Code Ref.
						Sill		Stud		F1			Uplift	
			W	H	D	Qty	Type	Qty	Type	100%	115%	125%	160%	
SFC6	--	16	5-1/2	2-1/2	2-1/2	5	16d	5	16d	690	795	865	750	--

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.



Typical SFC6 installation



SFC6

HH Header Hangers

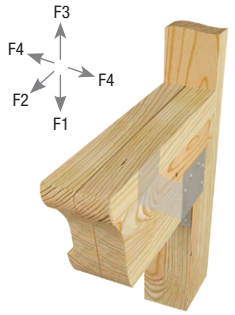
Header Hangers support headers in door and window framing and help eliminate cracks in drywall, plaster, or stucco over windows and doors. These products also provide anchorage and support for heavy fence rails, struts, or gate post cross brackets.

Materials: 16 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

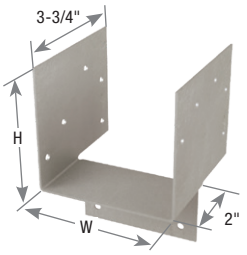
Installation:
• Install the required fasteners according to the table.

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)						Code Ref.
					Header		Stud		F1			F2[1]	F3[1]	F4[1]	
			W	H	Qty	Type	Qty	Type	100%	115%	125%	160%	160%	160%	
HH44	HH4	16	3-9/16	3-1/4	4	16d	9	16d	1325	1500	1620	835	895	1390	IBC, FL, LA
HH66	HH6	16	5-1/2	5-1/4	6	16d	12	16d	1765	2000	2160	1025	1345	2400	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.



Typical HH44 installation



HH44

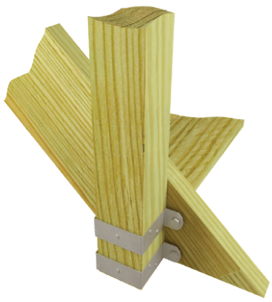
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SDPT Strap Post Ties

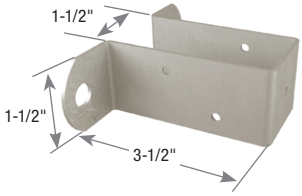
Connects 2x4 stair posts and 4x4 posts to deck rim joist or stair stringers.

Materials: 14 gauge
Finish: G-185 galvanizing

Installation:
- Install the required fasteners according to the table.
- Install units in pairs on 2x4 (SDPT5-TZ) or 4x4 (SDPT7-TZ) post. Space the connectors 5" apart from center to center on the post. Use through bolts to fasten connectors to rim joist or stringer. Do not use lag bolts.
- **Connectors are not load rated.**



Typical SDPT7-TZ installation

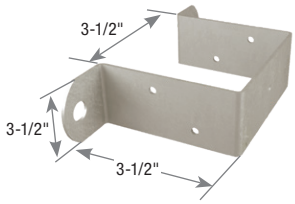


SDPT5-TZ

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule				Corrosion Finish	Code Ref.
				Nails[2]		Bolts[1]			
				Qty	Type	Qty	Dia.		
2 x 4	SDPT5-TZ	DPT5Z	14	5	10d x 1-1/2 HDG	2	3/8 HDG		--
4 x 4	SDPT7-TZ	DPT7Z	14	5	10d x 1-1/2 HDG	2	3/8 HDG		

1) Bolts shall conform to ASTM A 307 or better.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



SDPT7-TZ

SDJT Joist Tie

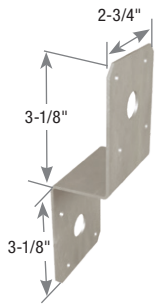
Secures 2x joists to posts.

Materials: 14 gauge
Finish: G-185 galvanizing

Installation:
- Install the required fasteners according to the table.
- Use with 2x lumber for joists (minimum height is 2x4). Install with either specified nails or through bolts. Do not use lag bolts. To ease installation, attach to 4x4 post first.



Typical SDJT14-TZ installation



SDJT14-TZ

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule				DF/SP Allowable Loads (Lbs.)						Corrosion Finish	Code Ref.
				Nails[2]		Bolts[1]		Nails			Bolts				
				Qty	Type	Qty	Dia.	100%	115%	125%	100%	115%	125%		
4 x 4	SDJT14-TZ	DJT14Z	14	8	16d HDG	2	3/8 HDG	1120	1290	1400	1400	1400	1400		--

1) Bolts shall conform to ASTM A 307 or better.
2) **NAILS:** 16d HDG nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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LJC / LJQ Lateral Joist Connectors

The LJC-TZ and LJQ-TZ Lateral Joist Connectors transfer lateral loads at the top foundation to the floor joists. The fastening patterns meet I-joist manufacturer recommendations.

LJC-TZ – fastens the top side of the sill plate to the underside of the floor joist preventing splitting of the bottom chord flanges, and can be installed after the floor system has been installed. The product is load rated for use with dimensional lumber floor joists as well as I-joist. It can also be used with cantilevered floor joists.

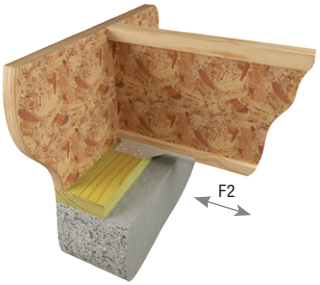
LJQ-TZ – is a higher capacity connector designed for higher loads. It is similar in design to a joist hanger with a seat for the floor joist to bear against and utilizes wood screws to fasten to the sill plate. MiTek's WS15-EXT structural wood screws (included) provide quick installation without the need to predrill holes.

Materials: See table

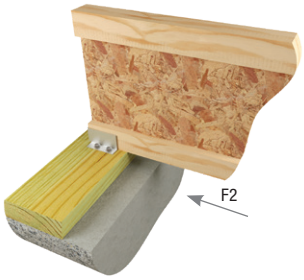
Finish: G-185 galvanizing

Installation:

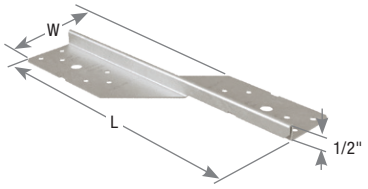
- Install the required fasteners according to the table.
- **LJC-TZ** – Installs after the floor joist has been placed with a minimum of (12) 8d (0.131") x 1-1/2" HDG nails.
- **LJ35-TZ** – Installs with (4) MiTek WS15-EXT structural wood screws. WS15-EXT structural wood screws are 1/4" dia. x 1-1/2" long and are included with connectors.



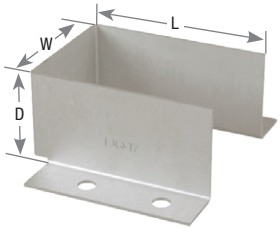
Typical LJC-TZ installation



Typical LJQ35-TZ installation



LJC-TZ



LJQ-TZ

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	L	D	Fastener Schedule[3,4] Plate Qty	Joist Qty	Type	SP Plate[1,2] Allowable Loads (Lbs.) F2 90%	F2 100%	F2 160%	Corrosion Finish	Code Ref.
LJC-TZ	--	18	3-3/16	8	--	6	6	8d x 1-1/2 HDG	515	570	670		--
LJQ35-TZ	--	16	3-9/16	3	1-1/2	4	--	WS15-EXT	915	1015	1260		

1) LJC-TZ: DF Plate may be substituted for SP Plate with no load reduction.
2) Allowable loads apply to DF/SP dimensional lumber floor joists or EWP I-joists with DF or equivalent bottom chords.
3) MiTek's WS15-EXT structural wood screws are 1/4" dia. x 1-1/2" long and are included with LJQ35-TZ connector.
4) **NAILS:** 8d x 1-1/2 HDG nails are 0.131" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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HRS / HTP / KST / KSTI / LSTA / LSTI / MSTA / MSTC / ST Strap Ties

HRS – 12 gauge, 1-3/8" or 3-1/4" wide strapping

LSTA – 20 or 18 gauge, light-capacity 1-1/4" wide strapping

LSTI – 3-3/4" wide strap ties provide tension load path for truss top chords. The nail pattern accommodates open web trusses with double top chord

MSTA – 18 or 16 gauge, medium-capacity 1-1/4" wide strapping

HTP – 16 gauge, medium-capacity 3" wide strapping

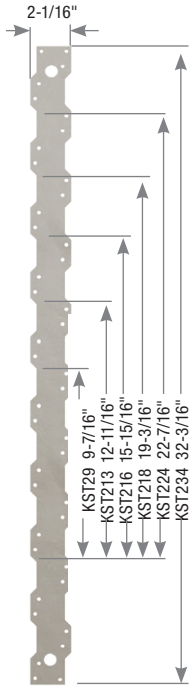
ST – 16 gauge, medium-capacity 1-1/4" wide strapping

MSTC – 3" wide strapping. Slotted hole design allows for higher load capacities and reduces splitting of lumber when attached to multiple 2x members

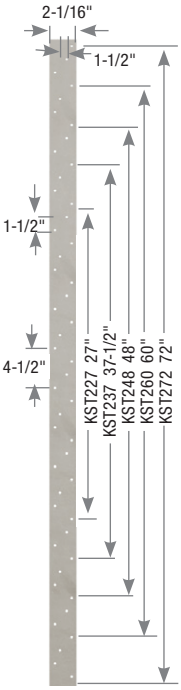
KST – 3/4" or 2-1/16" wide strapping. Straps can be fastened using either nails or bolts. Some KST straps install only with nails

KSTI – 2-1/16" wide strapping. Straps are designed for installation to wood I-Joist flanges

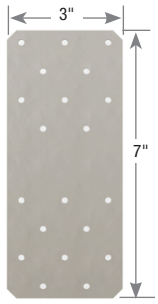
Some model designs may vary from illustration shown



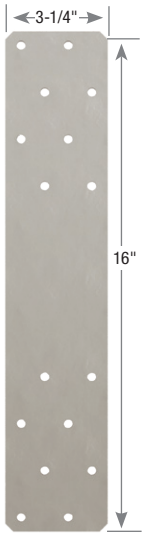
KST scalloped design



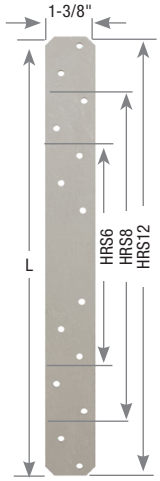
KST straight edge design



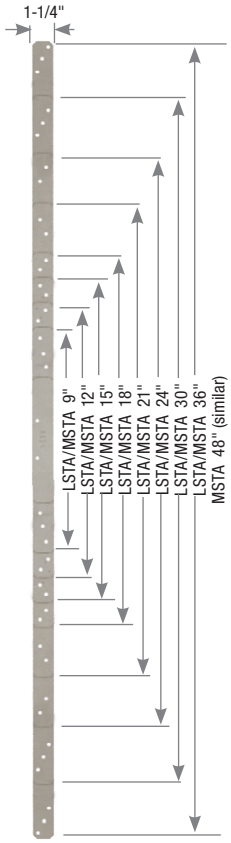
HTP37-TZ



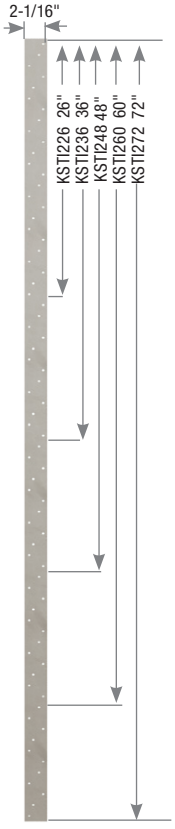
HRS416-TZ



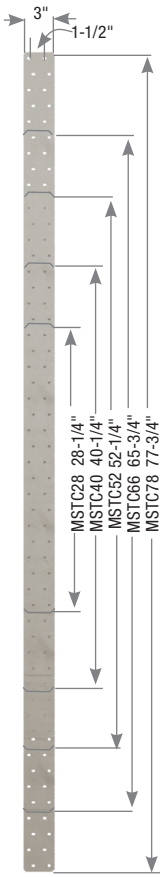
HRS



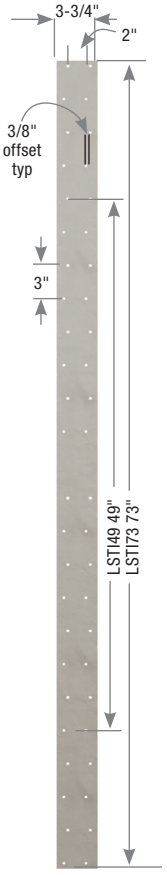
LSTA/MSTA



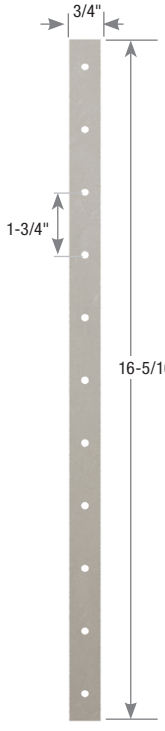
KSTI



MSTC



LSTI



KST116



ST

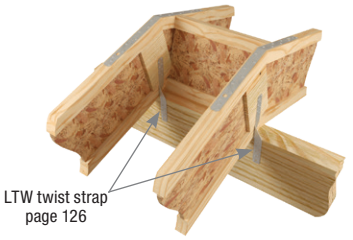
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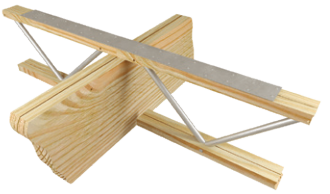
Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references

Installation:

- Install the required fasteners according to the table.
- Designer may specify alternate nailing schedules. Refer to Nail Specification Table on page 126 for nail shear values.
- The quantity of nails installed shall be equally distributed to both ends of the strap.
- Unless specified otherwise by the panel manufacturer, straps may be installed over wood structural panels. Use full length nails of specified nail diameter to ensure adequate penetration into the main member is achieved (10 times the diameter minimum).



Typical LSTA/MSTA I-Joist on ridge beam installation



Typical LSTI open web truss installation

MiTek Stock No.	Ref No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Fastener Schedule[4,5] Total Qty[2]	Fastener Schedule[4,5] Min Qty[3]	Fastener Schedule[4,5] Type	DF/SP Allowable Tension Loads (Lbs.)[1] 160%	S-P-F/HF Allowable Tension Loads (Lbs.)[1] 160%	Corrosion Finish	Code Ref.
KST116	ST2115	20	3/4	16-5/16	10	8	16d	665	665		
LSTA9	LSTA9	20	1-1/4	9	8	8	10d	740	635		
LSTA12	LSTA12	20	1-1/4	12	10	10	10d	930	790		
LSTA15	LSTA15	20	1-1/4	15	12	12	10d	1115	950		
LSTA18	LSTA18	20	1-1/4	18	14	14	10d	1235	1110		
LSTA21	LSTA21	20	1-1/4	21	16	16	10d	1235	1235		
LSTA24	LSTA24	20	1-1/4	24	18	16	10d	1235	1235		
KST29	ST292	20	2-1/16	9-7/16	14	14	16d	1545	1320		
KST213	ST2122	20	2-1/16	12-11/16	18	18	16d	1785	1700		
KST216	ST2215	20	2-1/16	15-15/16	22	18	16d	1785	1700		
LSTA30	LSTA30	18	2-1/16	30	22	22	10d	1640	1640		
LSTA36	LSTA36	18	1-1/4	36	26	22	10d	1640	1640		
MSTA9	MSTA9	18	1-1/4	9	8	8	10d	750	645		
MSTA12	MSTA12	18	1-1/4	12	10	10	10d	935	810		IBC, FL, LA
MSTA15	MSTA15	18	1-1/4	15	12	12	10d	1125	970		
MSTA18	MSTA18	18	1-1/4	18	14	14	10d	1310	1130		
MSTA21	MSTA21	18	1-1/4	21	16	16	10d	1500	1295		
MSTA24	MSTA24	18	1-1/4	24	18	18	10d	1640	1455		
LSTI49	LSTI49	18	3-3/4	49	32	32	10d x 1-1/2	2970	2560		
LSTI73	LSTI73	18	3-3/4	73	48	48	10d x 1-1/2	4130	3840		
ST9	ST9	16	1-1/4	9	8	8	16d	895	775		
ST12	ST12	16	1-1/4	11-5/8	10	10	16d	1120	970		
ST18	ST18	16	1-1/4	17-3/4	14	14	16d	1570	1355		
ST22	ST22	16	1-1/4	21-5/8	18	18	16d	1705	1705		
MSTA30	MSTA30	16	1-1/4	30	22	22	10d	2065	1815		
MSTA36	MSTA36	16	1-1/4	36	26	26	10d	2065	2065		
MSTA48	MSTA49	16	1-1/4	48	32	26	10d	2045	2045		
KST218	ST6215	16	2-1/16	19-3/16	26	26	16d	2955	2540		
KST224	ST6224	16	2-1/16	22-7/16	30	30	16d	2960	2930		
HTP37-TZ	HTP37Z	16	3	7	20	20	10d x 1-1/2	1855	1600		--
MSTC28	MSTC28	16	3	28-1/4	36	36	10d	3455	2965		
					36	34	16d	3860	3320		
MSTC40	MSTC40	16	3	40-1/4	52	52	10d	4715	4285		
					52	46	16d	4715	4490		
MSTC52	MSTC52	16	3	52-1/4	70	60	10d	4715	4715		IBC, FL, LA
					70	52	16d	4715	4715		
KST234	ST6236	14	2-1/16	32-3/16	42	36	16d	3775	3660		
MSTC66	MSTC66	14	3	65-3/4	88	72	10d	6015	6015		
					88	62	16d	6015	6015		
MSTC78	MSTC78	14	3	77-3/4	104	76	10d	6015	6015		
					104	66	16d	6015	6015		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Total number of nail and/or bolt holes provided in the strap.
3) Minimum quantity of fasteners to be installed with equal fasteners at each end of the connection. Product may have additional nail holes not needed to meet published allowable load of product.
4) 16d sinker nails may be substituted for 10d nails with no reduction in load.
5) **NAILS:** 10d x 1-1/2 nails are 0.148"dia. x 1-1/2"long, 10d nails are 0.148"dia. x 3"long, 16d nails are 0.162"dia. x 3-1/2"long, 16d sinkers are 0.148" dia. x 3-1/4" long.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Fastener Schedule[6,7] Nails Total Qty[3]	Nails Min Qty[4]	Nails Type	Bolts Min Qty[4]	Bolts Dia.	DF/SP Allowable Tension Loads (Lbs.)[1,2] Nails 160%	DF/SP Allowable Tension Loads (Lbs.)[1,2] Bolts[5] 160%	S-P-F/HF Allowable Tension Loads (Lbs.)[1,2] Nails 160%	S-P-F/HF Allowable Tension Loads (Lbs.)[1,2] Bolts[5] 160%	Corrosion Finish	Code Ref.
HRS6	HRS6	12	1-3/8	6	6	6	10d	--	--	640	--	550	--		--
HRS8	HRS8	12	1-3/8	8	10	10	10d	--	--	1065	--	920	--		
HRS12	HRS12	12	1-3/8	12	14	14	10d	--	--	1490	--	1290	--		
KST227	MST27	12	2-1/16	27	34	34	16d	4	1/2	4215	2190	3645	2020		IBC, FL, LA
KST237	MST37	12	2-1/16	37-1/2	48	48	16d	6	1/2	5140	3105	5140	2875		
KST248	MST48	12	2-1/16	48	62	54	16d	8	1/2	5140	3825	5140	3555		
KSTI226	MSTI26	12	2-1/16	26	26	26	10d x 1-1/2	--	--	2765	--	2390	--		
KSTI236	MSTI36	12	2-1/16	36	36	36	10d x 1-1/2	--	--	3830	--	3310	--		
KSTI248	MSTI48	12	2-1/16	48	48	48	10d x 1-1/2	--	--	5105	--	4415	--		
KSTI260	MSTI60	12	2-1/16	60	60	60	10d x 1-1/2	--	--	5140	--	5140	--		
KSTI272	MSTI72	12	2-1/16	72	72	60	10d x 1-1/2	--	--	5140	--	5140	--		
HRS416-TZ	HRS416Z	12	3-1/4	16	16	16	WS15-EXT	--	--	2945	--	2410	--		--
KST260	MST60	10	2-1/16	60	72	64	16d	10	1/2	6720	4695	6720	4425		IBC, FL, LA
KST272	MST72	10	2-1/16	72	72	64	16d	10	1/2	6720	4695	6720	4425		

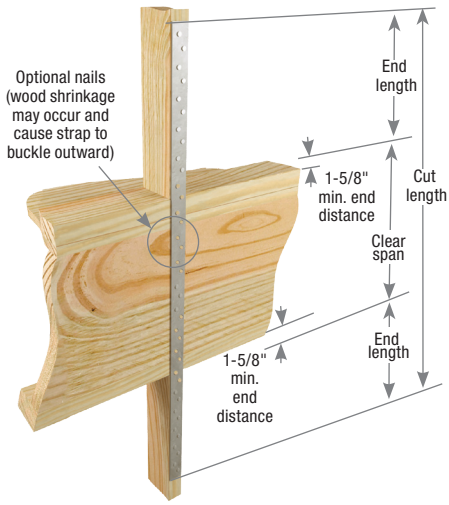
1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
3) Total number of nail and/or bolt holes provided in the strap.
4) Minimum quantity of fasteners to be installed with equal quantity of fasteners at each end of the connection. Product may have additional nail holes not needed to meet published allowable load of product.
5) Allowable bolt loads are based on parallel-to-grain loading, minimum of 2-1/2" thick.
6) MiTek's WS15-EXT structural wood screws are 1/4" dia. x 1-1/2" long.
7) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel · Gold Coat · HDG · Triple Zinc

Clear Span Table

MiTek Stock No.	Ref. No.	Clear Span	10d x 1-1/2 Fasteners[3] Total[2] Qty	10d x 1-1/2 Fasteners[3] DF/SP Tension 160%[1]	10d Fasteners[3] Total[2] Qty	10d Fasteners[3] DF/SP Tension 160%[1]	16d Fasteners[3] Total[2] Qty	16d Fasteners[3] DF/SP Tension 160%[1]
MSTC28	MSTC28	18	12	1150	12	1150	12	1365
		16	16	1535	16	1535	14	1590
MSTC40	MSTC40	18	28	2690	28	2690	24	2725
		16	32	3070	32	3070	30	3410
MSTC52	MSTC52	18	44	4225	44	4225	38	4315
		16	48	4610	48	4610	42	4715
MSTC66	MSTC66	18	62	6015	62	6015	54	6015
		16	64	6015	64	6015	54	6015
MSTC78	MSTC78	18	64	6015	64	6015	54	6015
		16	66	6015	66	6015	56	6015
KST237	MST37	18	22	2340	22	2340	20	2480
		16	24	2555	24	2555	22	2730
KST248	MST48	18	34	3620	34	3620	32	3970
		16	38	4045	38	4045	34	4215
KST260	MST60	18	52	6115	52	6115	46	6255
		16	54	6350	54	6350	48	6530
KST272	MST72	18	52	6225	52	6225	46	6255
		16	54	6350	54	6350	48	6530
KSTI236	MSTI36	18	14	1410	14	1410	--	--
		16	16	1615	16	1615		
KSTI248	MSTI48	18	26	2620	26	2620		
		16	28	2820	28	2820		
KSTI260	MSTI60	18	38	3830	38	3830		
		16	40	4030	40	4030		
KSTI272	MSTI72	18	50	5040	50	5040		
		16	52	5240	52	5240		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Total quantity of nails used.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.



Typical KST237 floor-to-floor installation

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CMST / CMSTC / RS Coiled Strapping

Coiled strapping enables cut-to-length convenience for a variety of immediate job site needs.

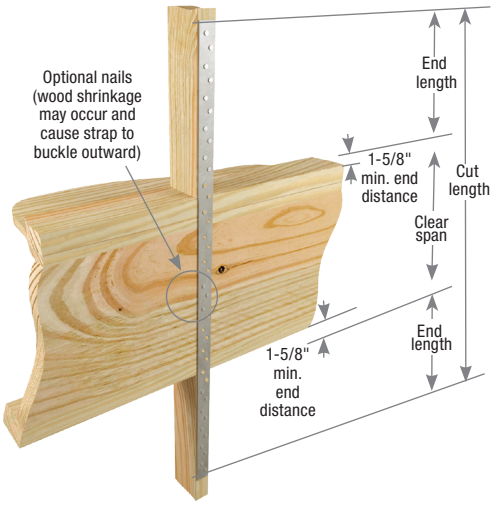
CMST – 3" wide strapping features diamond nail holes to provide nailing options and reduce wood splitting

CMSTC – 3" wide strapping is engineered to reduce wood splitting

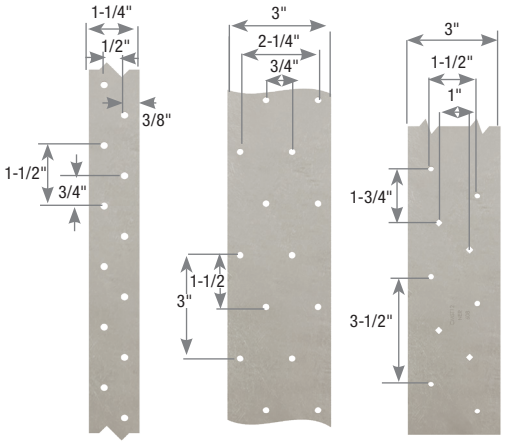
RS – 1-1/4" wide strapping packaged in cartons containing 25-foot or longer coils

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options and Strap Lap Splice information on page 121
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- For safety, always wear gloves when handling or cutting coiled strapping.
- **CMST/CMSTC** installations: Install to a minimum 2-ply 2x edge. Increase nail spacing if wood begins to split.
- Designer may specify alternate nailing schedules. Refer to Nail Specification Table on page 26 for nail shear values. Load values shall not exceed published allowable loads.
- Unless specified otherwise by the panel manufacturer, straps may be installed over wood structural panels. Use full length nails of specified nail diameter to ensure adequate penetration into the main member is achieved (10 times the diameter minimum).



Typical RS rim joist installation



RS **CMSTC16** **CMST**

MiTek Stock No.	Ref. No.	Steel Gauge	Coil Length	DF/SP						S-P-F / Hem Fir						Code Ref.
				Rim Joist Installation		Fastener Schedule[3,4]		Nail Spacing O.C.	Allowable Tension (Lbs.)[1] 160%	Rim Joist Installation		Fastener Schedule[3,4]		Nail Spacing O.C.	Allowable Tension (Lbs.)[1] 160%	
				Cut Length	End Length	Min Qty.[2]	Type			Cut Length	End Length	Min Qty.[2]	Type			
CMSTC16	CMSTC16	16	54'	Clear Span + 46"	23"	60	10d	1-1/2"	4715	Clear Span + 58"	29"	74	10d	1-1/2"	4715	IBC, FL, LA
				Clear Span + 90"	45"	60	10d	3"		Clear Span + 112"	56"	74	10d	3"		
				Clear Span + 40"	20"	50	16d	1-1/2"		Clear Span + 48"	24"	62	16d	1-1/2"		
				Clear Span + 76"	38"	50	16d	3"		Clear Span + 94"	47"	62	16d	3"		
CMST14	CMST14	14	52-1/2'	Clear Span + 58"	29"	64	16d	1-3/4"	6630	Clear Span + 72"	36"	80	16d	1-3/4"	6630	
				Clear Span + 130"	65"	74	10d	3-1/2"		Clear Span + 164"	82"	94	10d	3-1/2"		
				Clear Span + 256"	128"	74	10d	7"		Clear Span + 326"	163"	94	10d	7"		
CMST12	CMST12	12	40'	Clear Span + 74"	37"	82	16d	1-3/4"	9320	Clear Span + 90"	45"	102	16d	1-3/4"	9320	
				Clear Span + 168"	84"	96	10d	3-1/2"		Clear Span + 206"	103"	118	10d	3-1/2"		
				Clear Span + 332"	166"	96	10d	7"		Clear Span + 410"	205"	118	10d	7"		
RS300	--	22	300'	Clear Span + 12"	6"	12	10d	1-1/2"	925	Clear Span + 14"	7"	16	10d	1-1/2"	925	
						14	8d	1-1/2"		Clear Span + 16"	8"	18	8d	1-1/2"		
RS22-R	--		25'			12	10d	1-1/2"		Clear Span + 14"	7"	16	10d	1-1/2"		
						14	8d	1-1/2"		Clear Span + 16"	8"	18	8d	1-1/2"		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Minimum quantity of fasteners to be installed with equal fasteners at each end of the connection. Fasteners must be installed a minimum 1" distance from the end of the studs. Product may have additional nail holes not needed to meet published allowable load.
3) 10d (0.148") x 1-1/2" nails can replace 10d nails and 16d (0.162") x 2-1/2" nails can replace 16d nails with no load reduction.
4) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Coil Length	DF/SP						S-P-F / Hem Fir						Corrosion Finish	Code Ref.
				Rim Joist Installation		Fastener Schedule[3,4]		Nail Spacing O.C.	Allowable Tension (Lbs.)[1] 160%	Rim Joist Installation		Fastener Schedule[3,4]		Nail Spacing O.C.	Allowable Tension (Lbs.)[1] 160%		
				Cut Length	End Length	Min Qty.[2]	Type			Cut Length	End Length	Min Qty.[2]	Type				
RS300	--	22	300'	Clear Span + 12"	6"	12	10d	1-1/2"	925	Clear Span + 14"	7"	16	10d	1-1/2"	925		IBC, FL, LA
						14	8d	1-1/2"		Clear Span + 16"	8"	18	8d	1-1/2"			
RS22-R	--		25'			12	10d	1-1/2"		Clear Span + 14"	7"	16	10d	1-1/2"			
						14	8d	1-1/2"		Clear Span + 16"	8"	18	8d	1-1/2"			
RS250	CS20	20	250'	Clear Span + 12"	6"	14	10d	1-1/2"	1045	Clear Span + 16"	8"	18	10d	1-1/2"	1045		
				Clear Span + 14"	7"	16	8d	1-1/2"		Clear Span + 18"	9"	20	8d	1-1/2"			
RS20-R	CS20-R		25'	Clear Span + 12"	6"	14	10d	1-1/2"		Clear Span + 16"	8"	18	10d	1-1/2"			
				Clear Span + 14"	7"	16	8d	1-1/2"		Clear Span + 18"	9"	20	8d	1-1/2"			
RS200	--	18	200'	Clear Span + 16"	8"	18	10d	1-1/2"	1375	Clear Span + 18"	9"	22	10d	1-1/2"	1375		
				Clear Span + 18"	9"	22	8d	1-1/2"		Clear Span + 22"	11"	26	8d	1-1/2"			
RS100	--		100'	Clear Span + 16"	8"	18	10d	1-1/2"		Clear Span + 18"	9"	22	10d	1-1/2"			
				Clear Span + 18"	9"	22	8d	1-1/2"		Clear Span + 22"	11"	26	8d	1-1/2"			
RS18-R	--		25'	Clear Span + 16"	8"	18	10d	1-1/2"		Clear Span + 18"	9"	22	10d	1-1/2"			
				Clear Span + 18"	9"	22	8d	1-1/2"		Clear Span + 22"	11"	26	8d	1-1/2"			
RS150	CS16	16	150'	Clear Span + 18"	9"	22	10d	1-1/2"	1730	Clear Span + 24"	12"	28	10d	1-1/2"	1730		
				Clear Span + 22"	11"	26	8d	1-1/2"		Clear Span + 26"	13"	32	8d	1-1/2"			
RS16-R	CS16-R		25'	Clear Span + 18"	9"	22	10d	1-1/2"		Clear Span + 24"	12"	28	10d	1-1/2"			
				Clear Span + 22"	11"	26	8d	1-1/2"		Clear Span + 26"	13"	32	8d	1-1/2"			
RS14-100	CS14	14	100'	Clear Span + 24"	12"	28	10d	1-1/2"	2610	Clear Span + 30"	15"	36	10d	1-1/2"	2610		
				Clear Span + 28"	14"	34	8d	1-1/2"		Clear Span + 34"	17"	42	8d	1-1/2"			
RS14-R	CS14-R		25'	Clear Span + 24"	12"	28	10d	1-1/2"		Clear Span + 30"	15"	36	10d	1-1/2"			
				Clear Span + 28"	14"	34	8d	1-1/2"		Clear Span + 34"	17"	42	8d	1-1/2"			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Minimum quantity of fasteners to be installed with equal fasteners at each end of the connection. Fasteners must be installed a minimum 1" distance from the end of the studs. Product may have additional nail holes not needed to meet published allowable load.
3) 8d (0.131") x 1-1/2" nails can replace 8d nails and 10d (0.148") x 1-1/2" nails can replace 10d nails with no load reduction.
4) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 10d nails are 0.148" dia. x 3" long.

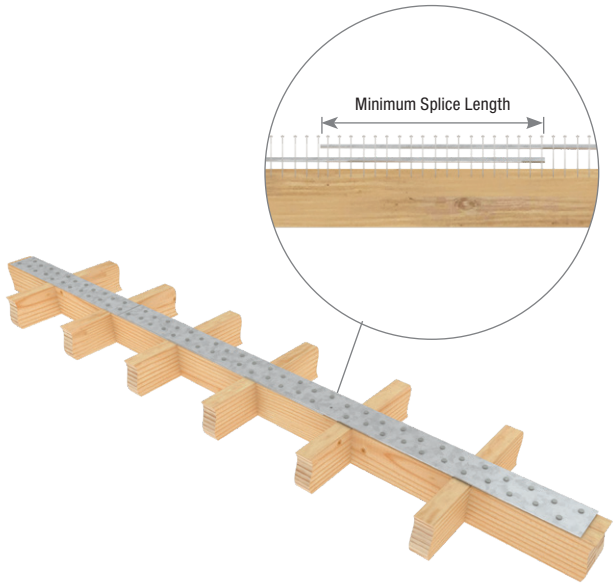
Corrosion Finish Key
Stainless Steel · Gold Coat · HDG · Triple Zinc

Strap Lap Splice Table

Multiple straps can be used as a single tension member by overlapping the straps and aligning the fastener holes. See table below for minimum splice length and fasteners needed to transfer the straps maximum tensile capacity.

MiTek Stock No.	Steel Gauge	Fastener Type[3]	Strap Lap Splice[2]	
			Minimum Fasteners per Splice[1]	Minimum Splice Length (in)
CMST12	12	10d	33	30
		16d	27	25
CMST14	14	10d	23	21
		16d	20	19
CMSTC16	16	10d	17	14
		16d	14	11
RS150	16	8d	8	6
		10d	6	5

1) All fasteners must be installed in existing nail holes.
2) Minimum edge distance and end distance must be followed per applicable code.
3) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.



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L / LH / T / TH Straps

L / T – 14 gauge medium-capacity straps fasten with either nails or bolts

LH / TH – 7 gauge heavy-capacity bolt-on strap

Materials: See table

Finish: G90 galvanizing; LH / TH – Primer; TH12-HDG – Hot-dip galvanized

Options: See table for Corrosion Finish Options. Available for special order in black primer coated finish.

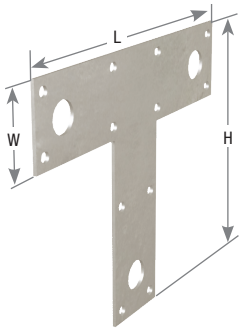
Installation:

- Install the required fasteners according to the table.
- **Straps are not load rated.**

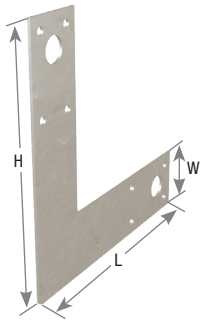
MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[1,2]				Corrosion Finish	Code Ref.
						Bolts		Nails			
			W	H	L	Qty	Dia.	Qty	Type		
T6	66T	14	1-1/2	5	6	3	1/2	12	16d		
T8	--	14	2	8	8-1/2	3	1/2	12	16d		
T12	128T	14	2	8	12	3	1/2	12	16d		
T1212	1212T	14	2	12	12	3	1/2	12	16d		
L6	66L	14	1-1/2	6	6	2	1/2	8	16d		
L8	88L	14	2	8	8	2	1/2	8	16d		
L12	1212L	14	2	12	12	3	1/2	12	16d		
TH12-HDG	1212HT, 1212HTHDG	7	2-1/2	12	12	6	5/8	--	--		
TH16	1616HT	7	2-1/2	16	16-1/4	6	5/8	--	--		
LH12	1212HL	7	3	12	12	5	5/8	--	--		
LH16	1616HL	7	2-1/2	16	16	7	5/8	--	--		

1) All bolts shall meet or exceed the specifications of ASTM A 307.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

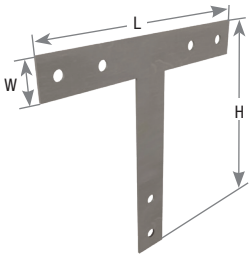
Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



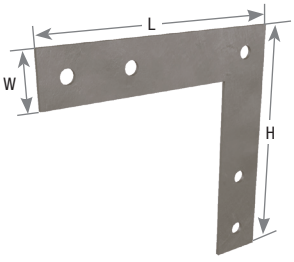
T6



L6



TH16



LH12

Ornamental

Ornamental notching provides architectural appearance for exposed applications.

Materials: See table

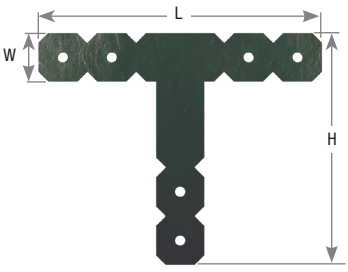
Finish: Black primer

Installation:

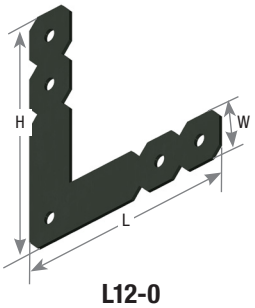
- Install the required fasteners according to the table.
- **Connectors are not load rated.**

MiTek Stock No.	Ref. No.	Steel Gauge	Description	Dimensions (in)			Bolt Schedule[1]		Code Ref.
				W	H	L	Qty	Dia.	
KHL33-0	OHA33	7	Heavy Angle	3-1/4	--	2-1/2	2	5/8	
KHL36-0	OHA36	7	Heavy Angle	3-1/4	--	6	4	5/8	
KHST64-0	OHS135	7	Strap Tie	6	--	13-1/2	4	3/4	
ST12-0	OS	12	Strap Tie	2	--	12	4	1/2	
L12-0	OL	12	'L' Strap	2-1/2	11-7/8	11-7/8	5	1/2	--
LH12-0	OHL	7	'L' Strap	2-1/2	11-7/8	11-7/8	5	5/8	
T1212-0	OT	12	'T' Strap	2-1/2	11-7/8	14-1/2	6	1/2	
TH12-0	OHT	7	'T' Strap	2-1/2	11-7/8	11-1/8	4	5/8	
TH16-0	--	7	'T' Strap	2-1/2	11-7/8	16-1/8	6	5/8	

1) All bolts shall meet or exceed the specifications of ASTM A 307.

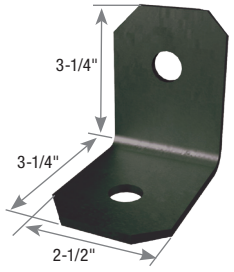


T1212-0



L12-0

Some model designs may vary from illustration shown



KHL33-0

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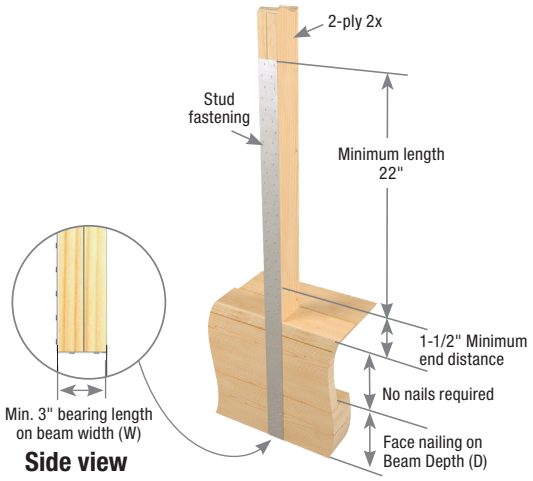
The MSTCB Pre-Bent Strap is designed to fasten vertical studs to a beam or ridge beam member below where the beam depth will not allow complete fastener attachments with a standard product.

Materials: 14 gauge

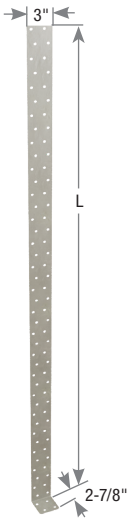
Finish: G90 galvanizing

Installation:

- Multiple-ply studs must be fastened together to act as a single unit, independent of the strap fasteners.
- Install the required fasteners according to the table.



Typical MSTCB installation



MSTCB

MiTek Stock No.	Ref. No.	Steel Gauge	L (in)	Min. Beam Dimensions (in)		Fastener Schedule[5]					DF/SP Allowable Loads (Lbs.)[1]	S-P-F Allowable Loads (Lbs.)[1]	Code Ref.
						Beam			Stud/ Post[2,3,4]				
				W	D	Face Qty	Bottom Qty	Type	Qty	Type	Tension 160%	Tension 160%	
MSTC48B3	MSTC48B3	14	44-7/8	3	9-1/4	12	4	10d	24	10d	4800	3905	--
MSTC66B3	MSTC66B3	14	62-7/8	3	11-1/4	14	4	10d	28	10d	5375	4250	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) The 3" wide beam may be 2-ply 2x member.
3) Fewer fasteners in the stud/post than listed will reduce the capacity of the connection.
4) Nails in the stud/post to be installed symmetrically in pairs starting a minimum of 1-1/2" from the end.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long.

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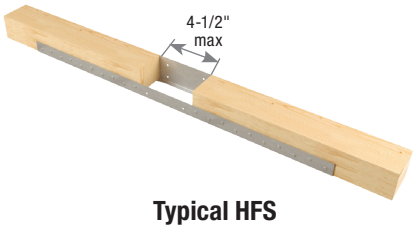
HFS Compression & Tension Straps

The HFS Hardy Frame® Saddle is a 14 gauge steel channel intended to be used as a splice at locations where plumbing or other vertical penetrations destroy the structural integrity of a wall's top plates.

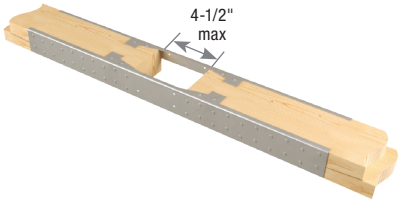
Materials: 14 gauge
Finish: G60 galvanizing
Codes: IBC, FL, LA

Installation:

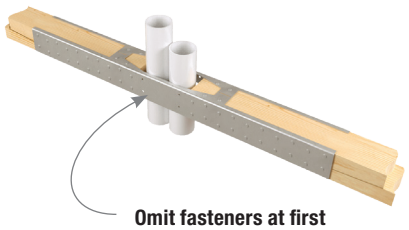
- Install the required fasteners according to the table.
- The Saddle can be installed over the top or from the underside of the top plates, and is capable of resisting both tension and compression loads in a clearspan of up to 4-1/2".
- For wall depths greater than 3-1/2", or to install after plumbing lines have been run, the product can be separated into two "L" shapes by gripping the legs of the channel and flexing the top surface along the serration lines.



Typical HFS installation to underside of double top plates.



For wall depth larger than 3-1/2", separate HFS into two pieces (L shape) at the two slot holes



Omit fasteners at first holes when the end distance is less than 1"

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Notch Width	Fastener Schedule Qty[2]	Fastener Schedule Type[4]	DF/SP Allowable Loads (Lbs.)[1,3] Tension 100%	DF/SP Allowable Loads (Lbs.)[1,3] Compression 100%	S-P-F Allowable Loads (Lbs.)[1,3] Tension 100%	S-P-F Allowable Loads (Lbs.)[1,3] Compression 100%	Code Ref.
HFS24	--	14	3-5/8	24	≤ 4-1/2	24	16d	2950	2500	2537	2500	IBC, FL, LA
HFS36	--	14	3-5/8	36	≤ 4-1/2	32	16d	4280	2500	3681	2500	

1) Allowable tension loads are for normal duration. The values may be adjusted for other durations, such as for seismic and wind loading in accordance with the NDS.
2) Fastener quantity is the number of 16d common nails to be installed into each of the members to be joined. When the end distance from the clear span the first nail hole is less than 1", omit the (2) nails in the 3" side-plate and the (1) nail in the 1-1/2" side-plate that are nearest the clear span.
3) There is no reduction in double top plate capacity provided the HFS24 is installed with minimum (22) 16d common nails in each member being joined (44 total) and the HFS36 is installed with (31) 16d common nails in each member (62 total).
4) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

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HTW / KTS / LFTA / LTW / MTW Twist Straps

Twist straps tie framing members to resist tension forces.

LFTA6 – 16 gauge

LTW – 18 gauge, light-capacity

MTW – 16 gauge, medium-capacity

KTS – 16 gauge, medium-capacity with angled twist

HTW – 14 gauge, heavy-capacity

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references



Typical LTW12 / MTW12 truss-to-top plate installation



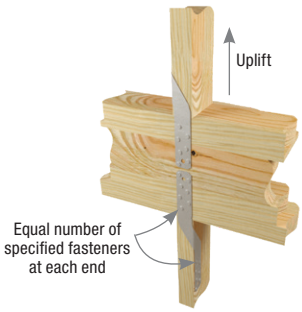
Typical LFTA6 stud-to-top plate installation



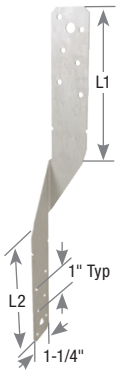
Typical LFTA6 truss-to-top plate installation

Installation:

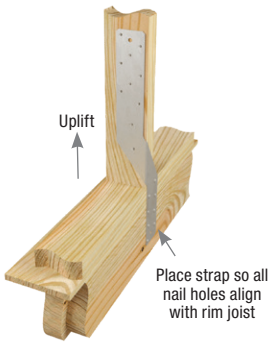
- Install the required fasteners according to the table.
- Consult I-Joist manufacturer for web stiffener requirements, and uplift limitations on joist and application.



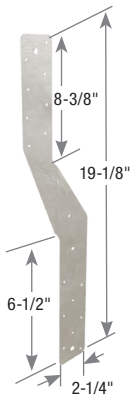
Typical LTW12 / MTW12 stud-to-rim joist installation



LTW12/MTW12



Typical LFTA6 stud-to-rim joist installation



LFTA6



Typical MTW20 I-joist rafter installation



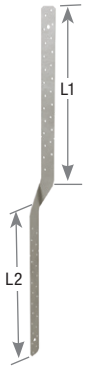
LTW18/MTW18
(other models similar)



Typical MTW30 installation



MTW30/ HTW30



MTW30C



KTS

Continued on next page

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MiTek Stock No.[4]	Ref. No.	Steel Gauge	Dimensions (in) W	L	L1	L2	Fastener Schedule[2,3,6] Qty	Type	DF/SP Allowable Loads (Lbs.)[1] Uplift 160%[1] Stud-to-Rim Joist Installation	DF/SP Truss-to-Top Plate Installation	S-P-F Allowable Loads (Lbs.)[1] Uplift 160%[1] Stud-to-Rim Joist Installation	S-P-F Truss-to-Top Plate Installation	Corrosion Finish	Code Ref.
LTW12	LTS12	18	1-1/4	12	4-1/2	4-1/2	12	10d x 1-1/2	770	625	650	525		IBC, FL, LA
							12	10d						
LTW16	LTS16	18	1-1/4	16	6-1/2	6-1/2	12	10d x 1-1/2	770	625	650	525		
							12	10d						
LTW18	LTS18	18	1-1/4	18	7-1/2	7-1/2	12	10d x 1-1/2	770	625	650	525		
							12	10d						
LTW20	LTS20	18	1-1/4	20	8-1/2	8-1/2	12	10d x 1-1/2	770	625	650	525		
							12	10d						
KTS9	--	16	1-1/4	9	--	--	8	16d	785	785	660	660		--
KTS12	--	16	1-1/4	11-1/2	--	--	10	16d	1065	1065	895	895		
MTW12	MTS12	16	1-1/4	12	4-1/2	4-1/2	14	10d x 1-1/2	1185	965	995	810		IBC, FL, LA
							14	10d						
MTW16	MTS16	16	1-1/4	16	6-1/2	6-1/2	14	10d x 1-1/2	1185	965	995	810		
							14	10d						
KTS17	--	16	1-1/4	17-1/2	--	--	14	16d	1100	1100	925	925		--
MTW18	MTS18	16	1-1/4	18	7-1/2	7-1/2	14	10d x 1-1/2	1185	965	995	810		
							14	10d						
LFTA6[5]	H6	16	2-1/4	19-1/8	8-3/8	6-1/2	16	8d	980	980	825	825		IBC, FL, LA
							16	8d x1-1/2						
MTW20	MTS20	16	1-1/4	20	8-1/2	8-1/2	14	10d x 1-1/2	1185	965	995	810		
							14	10d						
KTS24	--	16	1-1/4	21-3/4	--	--	18	16d	1650	1650	1385	1385		--
MTW24C	MTS24C	16	1-1/4	24	10-7/16	10-7/16	14	10d x 1-1/2	1185	965	995	810		IBC, FL, LA
							14	10d						
MTW28C	--	16	1-1/4	28	12-7/16	12-7/16	14	10d x 1-1/2	1185	965	995	810		
							14	10d						
MTW30	MTS30	16	1-1/4	30	8-5/16	18-9/16	14	10d x 1-1/2	1185	965	995	810		
							14	10d						
MTW30C	MTS30C	16	1-1/4	30	13-7/16	13-7/16	14	10d x 1-1/2	1185	965	995	810		
							14	10d						
HTW16	HTS16	14	1-1/4	16	5-1/8	5-1/8	16	10d x 1-1/2	1115	1355	940	1140		
							16	10d	1300		1090			
HTW20	HTS20	14	1-1/4	20	7-1/8	7-1/8	24	10d x 1-1/2	1555	1355	1305	1140		
							20	10d	1355		1140			
HTW24	HTS24	14	1-1/4	24	9-1/8	9-1/8	24	10d x 1-1/2	1555	1355	1305	1140		
							20	10d	1355		1140			
HTW28	--	14	1-1/4	28	11-1/8	11-1/8	24	10d x 1-1/2	1555	1355	1305	1140		
							20	10d	1355		1140			
HTW30	HTS30	14	1-1/4	30	7	17-1/4	24	10d x 1-1/2	1555	1355	1305	1140		
							20	10d	1355		1140			
HTW30C	HTS30C	14	1-1/4	30	12-1/8	12-1/8	24	10d x 1-1/2	1555	1355	1305	1140		
							20	10d	1355		1140			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) 10d (0.148") x 1-1/2" nails can replace 10d nails and 16d (0.162") x 2-1/2" nails can replace 16d nails with no load reduction.
3) Fasteners shall be distributed equally on each end of the connection.
4) "C" after the model number designates center twist as in MTW30C.
5) LFTA6: F1 is 745 lbs and F2 is 120 lbs. To achieve F1 lateral loads, three nails must be installed on each side on the strap located closest to the bend line. Lateral F1 and F2 load directions do not apply to roof truss-to-top plate installations.
6) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long, 8d nails are 0.131" dia. x 2-1/2" long, 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
- Stainless Steel
- Gold Coat
- HDG
- Triple Zinc

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KRPS – Meets IBC, IRC, & City of Los Angeles requirements for notched plates where pipes placed in partitions

PS – Piling Straps connect wood pilings to floor girders

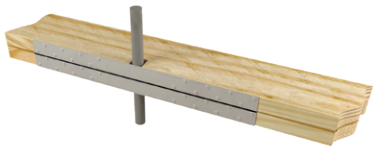
KHST – Heavy-capacity strap that utilizes bolts

Materials: See table

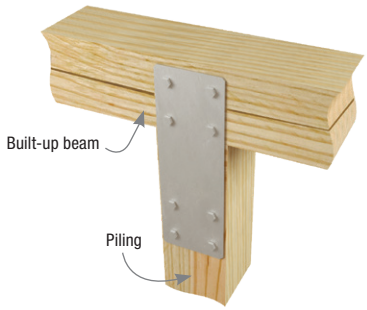
Finish: KHST – Primer; KRPS – G90 galvanizing; PS – Hot-dip galvanized

Options: See table for Corrosion Finish Options

Codes: See table for code references
IRC R602.6.1, IBC 2308.5.8



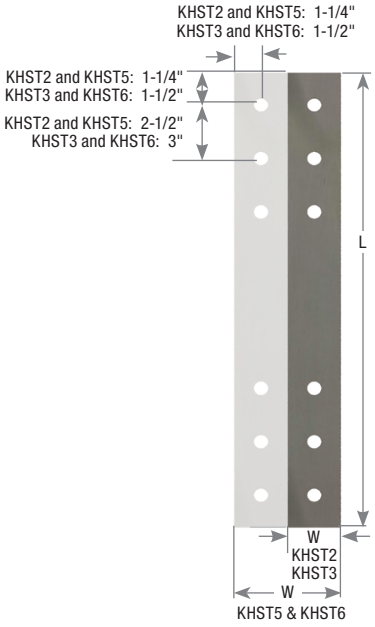
Typical KRPS installation



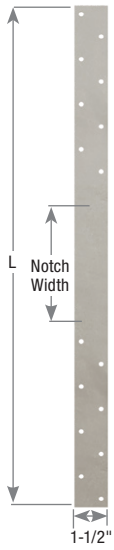
Typical PS720-HDG installation

Installation:

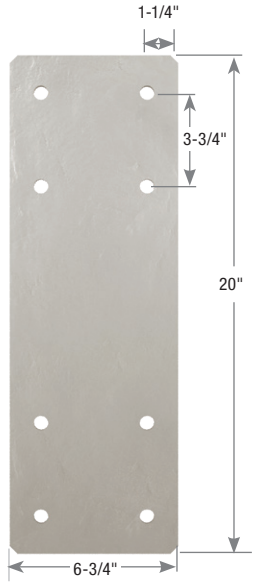
- Install the required fasteners according to the table.
- Install one strap tie for each 2x plate.



KHST



KRPS



PS720-HDG

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Notch Width (in)	Fastener Schedule[3] Nails Qty	Nails Type	Bolts Qty	Bolts Type	DF/SP Allowable Loads (Lbs.)[1,2] Tension 160%	Corrosion Finish	Code Ref.
KHST2	HST2	7	2-1/2	21-1/4	--	--	--	6	5/8	5345		IBC, FL, LA
KHST3	HST3	3	3	25-1/2	--	--	--	6	3/4	7920		
KHST5	HST5	7	5	21-1/4	--	--	--	12	5/8	10825		
KHST6	HST6	3	6	25-1/2	--	--	--	12	3/4	15935		
PS218-HDG	PS218	7	2	18	--	--	--	4	5/8	--		--
PS418-HDG	PS418	7	4	18	--	--	--	4	5/8	--		
PS720-HDG	PS720	7	6-3/4	20	--	--	--	8	5/8	--		
KRPS18	RPS18	16	1-1/2	18-5/16	≤ 5-1/2	12	16d	--	--	1345		IBC, FL, LA
KRPS22	RPS22	16	1-1/2	22-5/16	≤ 5-1/2	12	16d	--	--	1345		IBC, FL
						16				1790		IBC, FL, LA
KRPS28	RPS28	16	1-1/2	28-5/16	≤ 12	12	16d	--	--	1345		IBC, FL
						16				1790		IBC, FL, LA

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on single shear, parallel to grain loading with a 3-1/2" minimum member thickness for KHST2 and KHST5, and 4-1/2" minimum member thickness for KHST3 and KHST6.
3) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



PS218-HDG
(PS418-HDG similar)

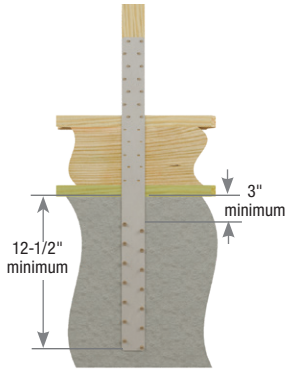
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MSTAM / MSTCM Masonry Straps

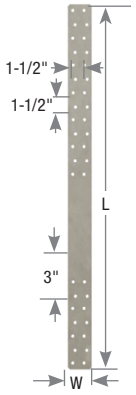
The MSTAM and MSTCM Strap Ties are designed to connect a wood structure above to a masonry wall below.

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: FL

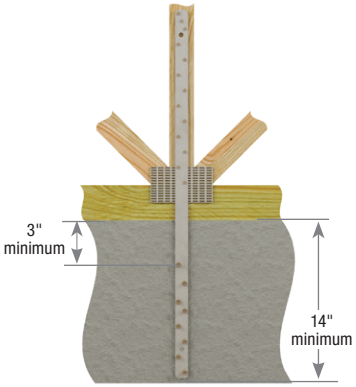
Installation:
• Install the required fasteners according to the table.



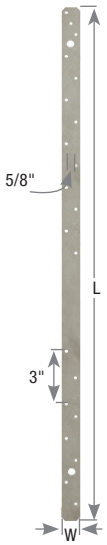
Typical MSTCM40 installation



MSTCM40
(MSTCM60 similar)



Typical MSTAM36 installation



MSTAM36
(MSTAM24 similar)

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Fastener Schedule CMU/Concrete Wall[3] Qty	Fastener Schedule CMU/Concrete Wall[3] Type	Fastener Schedule Nails[4] Qty	Fastener Schedule Nails[4] Type	DF/SP Allowable Tension Loads (Lbs.)[1,2] 160%	S-P-F Allowable Tension Loads (Lbs.)[1,2] 160%	Corrosion Finish	Code Ref.
MSTAM24	MSTAM24	18	1-1/4	24	5	1/4" Tapcon	9	10d	1495	1455		FL
MSTAM36	MSTAM36	16	1-1/4	36	8	1/4" Tapcon	13	10d	1885	1885		
MSTCM40	MSTCM40	16	3	40-1/4	14	1/4" Tapcon	24	10d	4225	3955		
							20	16d		3905		
MSTCM60	MSTCM60	16	3	60	14	1/4" Tapcon	24	10d	4225	3955		
							20	16d		3905		

Corrosion Finish Key
- Stainless Steel
- Gold Coat
- HDG
- Triple Zinc

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are derived from tests performed using grout-filled ASTM C90 concrete block.
3) Use ITW Buildex 1/4" dia. x 2-1/4" long Tapcon fasteners; or equal, installed in accordance with manufacturer's specification.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Clear Span Table

MiTek Stock No.	Clear Span	Fastener Schedule CMU[1] Qty	CMU[1] Type	Concrete[1] Qty	Concrete[1] Type	Nails[3] Qty	Nails[3] Type	DF/SP Allowable Loads (Lbs.)[2] Tension 160%	S-P-F Allowable Loads (Lbs.)[2] Tension 160%
MSTAM36	16	5	1/4" Tapcon	5	1/4" Tapcon	8	10d	1305	1305
	18	5	1/4" Tapcon	5	1/4" Tapcon	7	10d	1305	1155
MSTCM40	16	12	1/4" Tapcon	12	1/4" Tapcon	16	16d	3135	3125
	18	12	1/4" Tapcon	12	1/4" Tapcon	14	16d	3135	2735
MSTCM60	16	14	1/4" Tapcon	12	1/4" Tapcon	20	16d	3660	3660
	18	14	1/4" Tapcon	12	1/4" Tapcon	20	16d	3660	3660

1) Use ITW Buildex 1/4" x 2-1/4" Tapcon fasteners; or equal, installed in accordance with manufacturer's specification.
2) Allowable loads are derived from tests performed using grout-filled ASTM C90 concrete block.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

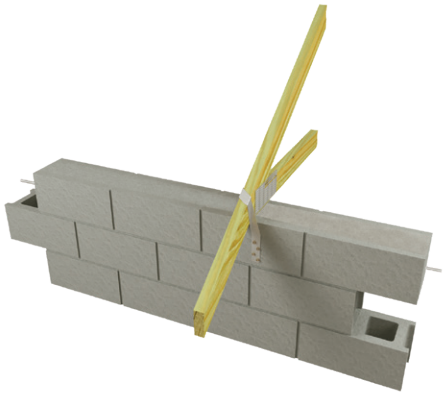
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HTWM Masonry Twist Straps

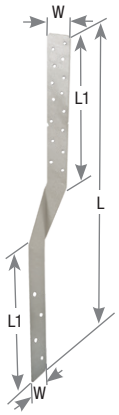
The HTWM Twist Straps are designed for truss to concrete or masonry connections. Offers uplift resistance with variable heel height and positioning applications.

Materials: 14 gauge
Finish: G90 galvanizing
Codes: FL

Installation:
- Install the required fasteners according to the table.
- Strap may be attached to either side of grouted masonry or concrete wall with a minimum of (1) #5 horizontal rebar.
- Twist straps do not have to be wrapped over the truss to achieve the allowable loads.
- **Moisture barrier may be required.**



Typical HTWM installation



HTWM

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule				DF/SP Allowable Loads (Lbs.)	S-P-F Allowable Loads (Lbs.)	Code Ref.
						CMU/Concrete Wall[4]		Truss/Rafter				
			W	L	L1	Qty	Screw Anchor[2,3]	Qty	Type[5]	Uplift 160%[1]	Uplift 160%[1]	
HTWM16	HTSM16, MTSM16	14	1-1/4	16	5-3/4	4	1/4" x 1-3/4"	8	10d x 1-1/2	1225	1145	FL
HTWM20	HTSM20, MTSM20	14	1-1/4	20	7-3/4	4	1/4" x 1-3/4"	8	10d x 1-1/2	1225	1145	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Use DeWalt 1/4" x 1-3/4" Screw-Bolt™+; or equal, installed in accordance with manufacturer's specification.
3) DeWalt 1/4" x 1-3/4" Screw-Bolt™+ are not supplied with HTWM straps.
4) Grout or concrete compressive strength shall be 2,500 psi or greater at 28 days.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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KHSA / KSA Connector Straps

KSA – Seismic horizontal tension tie

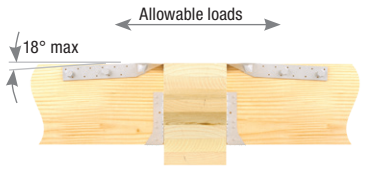
KHSA – Designed for installation with bolts

Materials: KSA – 12 gauge; KHSA – 3 gauge

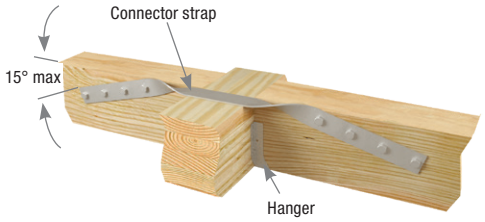
Finish: KSA – G90 galvanizing;
KHSA – Primer

Codes: IBC, FL, LA

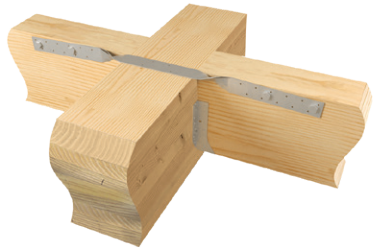
Installation:
- Install the required fasteners according to the table.
- KSA36 can be field adjusted for smaller beam widths.



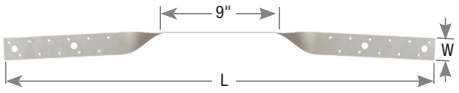
Typical KSA installation



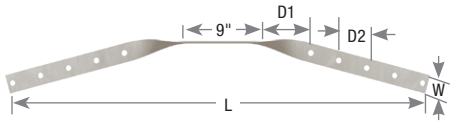
Typical KHSA4 installation



Typical KSA installation



KSA36



KHSA5

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	L	D1	D2	Fastener Schedule[3,4,5] Qty	Type	DF/SP Allowable Tension Loads (Lbs.)[1,2] 160%	Code Ref.
KSA36	SA36	12	2-1/16	37-7/8	6-11/16	4-1/2	22	16d	2620	IBC, FL, LA
							4	1/2 Bolt	2015	
KHSA1	--	3	3	30	10	--	2	3/4 Bolt	2435	
KHSA2	--	3	3	38-1/2	10	4-1/2	4	3/4 Bolt	4810	
KHSA3	--	3	3	47	10	4-1/2	6	3/4 Bolt	7005	
KHSA4	--	3	3	56	10	4-1/2	8	3/4 Bolt	8920	
KHSA5	--	3	3-1/2	64-1/2	10	4-1/2	10	3/4 Bolt	10785	

1) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
2) Bolt values assume wood member thickness of 3-1/2" with bolts in single shear.
3) Bolts shall be loaded parallel to grain.
4) All bolts shall meet or exceed specifications of ASTM A 307.
5) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

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KVB / KVBI Knee Braces

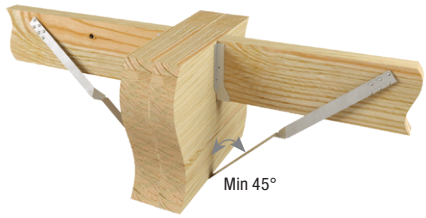
KVB – Installs with MiTek's WS3 structural wood screws for higher load capacity. It can be retrofit into existing framing

KVBI – Installs with common nails. Designed to be used with I-Joist purlins

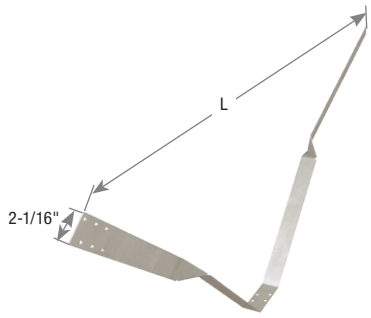
Materials: 12 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- MiTek's WS3 structural wood screws are included with KVB shipments.
- Install flanges at angles of 45° or more to the vertical plane to ensure proper lateral resistance.



Typical KVB7 installation



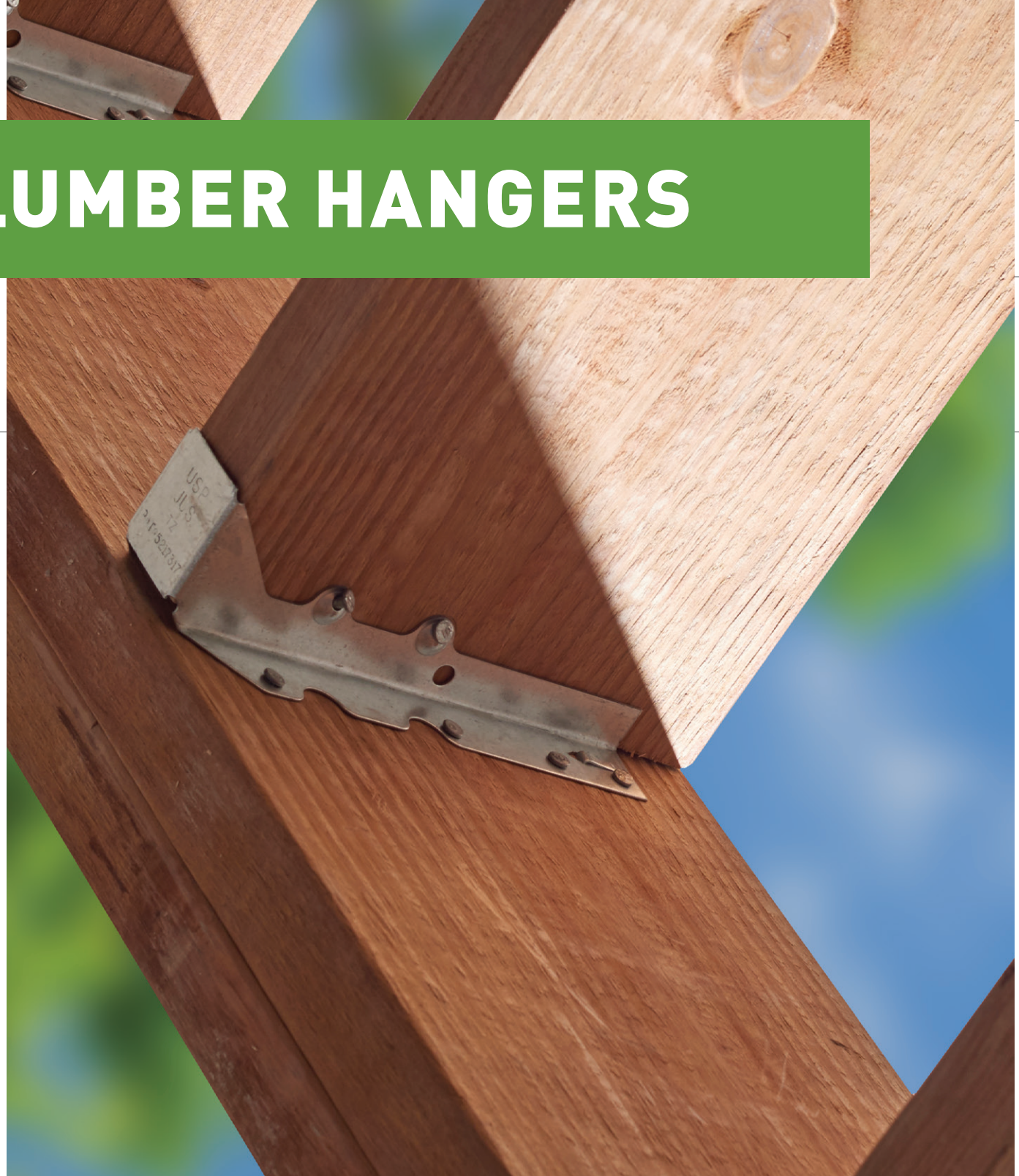
KVB5

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[3,4]				DF/SP Allowable Tension Loads (Lbs.)[1]			Code Ref.
					Beam		Joist					
			Beam Depth	L [2]	Qty	Type	Qty	Type	100%	125%	160%	
KVB5	VB5	12	10 – 15	60	4	WS3	12	WS3	1920	1920	1920	IBC, FL, LA
KVB7	VB7	12	15 – 22-1/2	84	4	WS3	12	WS3	1920	1920	1920	
KVB8	VB8	12	22-1/2 – 28-1/2	96	4	WS3	12	WS3	1920	1920	1920	
KVB10	VB10	12	28-1/2 – 36	120	4	WS3	12	WS3	1920	1920	1920	
KVB12	VB12	12	36 – 42	144	4	WS3	12	WS3	1920	1920	1920	
KVBI5	--	12	10 – 15	60	4	10d	12	10d	895	1060	1275	
KVBI7	--	12	15 – 22-1/2	84	6	10d	12	10d	895	1060	1275	
KVBI8	--	12	22-1/2 – 28-1/2	96	6	10d	12	10d	895	1060	1275	
KVBI10	--	12	28-1/2 – 36	120	6	10d	12	10d	895	1060	1275	
KVBI12	--	12	36 – 42	144	6	10d	12	10d	895	1060	1275	

1) Allowable loads apply to tensile loads along the length of the strap.
2) "L" is length prior to bending.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with specified KVB models.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long.

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LUMBER HANGERS



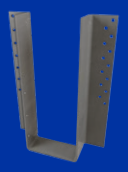
MiTek®

HANGERS	132-241
LUMBER HANGERS	**132-187**
Hanger Selection Guide	134
Face Mount Hangers	135-161
Top Mount Hangers	162-167
Strap Hangers	168
Slope/Skew Hangers	169-173
Panel & Purlin Hangers	174-178
Masonry Hangers	178-187
FIRE WALL HANGERS	**188-197**
Top Mount Fire Wall Hangers	188-195
Face Mount Fire Wall Hangers	196-197
EWP HANGERS	**198-229**
EWP Installation	198-199
EWP Hanger Selector Guide	200
Face Mount Hangers	201-212, 226
Top Mount Hangers	213-225, 227
Adjustable Connectors	228
Slope/Skew Hangers	229
GLULAM BEAM HANGERS	**230-241**
Face Mount Hangers	230-233
Top Mount Hangers	234-239
Hinge Connectors	240-241
Seismic Straps	241









Hanger Type	MiTek Series	Steel Gauge	Style		Supporting / Header Member										Supported / Joist Member						Allowable Loads (Lbs.) Range		MiTek Series Catalog Page Reference
																					Header Material		
			Formed	Welded	Beam/Joist/Rafter (rect shapes)	I-Joist	Truss (2x)	Floor Truss 4x	Nailer	Glulam	Wall	Post	Rim Joist		Beam/Joist/Rafter (rect shapes)	I-Joist	Truss (2x)	Floor Truss 4x	Glulam	Stringer	DF/SP 100%	Masonry 100%	
Face Mount	JL	20	•		•		•			•					•		•				470 - 1,960	--	135, 138-139, 150-151
	JUS	18	•		•		•			•					•	•	•	•			675 - 2,420	--	136, 138-146, 150-158
	MUS	18	•		•		•			•				•	•	•	•	•	•		1,310 - 1,745	--	136, 138-139, 150-151
	JLIF	18	•		•		•					•			•		•				480 - 1,575	--	135, 138-139, 150-151
	SUH	16	•		•		•			•					•		•	•			500 - 2,645	--	135, 138-147, 149-159, 161
	HUS	16 or 14	•		•		•			•				•	•		•		•		850 - 5,455	--	136, 138-141, 145-146, 150-153, 157-158
	HD	14	•		•		•			•	•			•	•	•	•	•	•		615 - 4,620	335 - 5750	137-161
	HDQIF	14	•		•		•			•		•	•	•	•	•	•	•	•		3,340 - 5,605	--	137, 140-148, 152-160
Fire Wall	FWHL	14	•		•		•	•	•	•	•			•	•	•					1,350 - 1,555	--	188-189
	FWH	14		•	•		•	•	•	•	•			•	•	•	•	•	•		2,045 - 2,980	--	190-191
	FWHBP	12		•				•			•				•	•	•	•	•		5,660 - 8,005	--	192-193
	FWHFM	12		•						•		•			•	•	•	•	•		5,960	--	196-197
	FWHH	12		•	•					•					•	•	•	•	•		6,005 - 7,650	--	194-195
Top Mount	HL	18	•		•					•				•	•		•	•	•		1,255 - 1,490	--	162, 165
	JH	18	•		•		•			•					•		•				1,910 - 2,555	--	168
	KLB	14	•		•					•					•		•		•		1,670 - 2,140	--	163, 165
	HDO	12	•		•					•					•		•	•	•		2,405 - 5,845	--	162, 165-167
	SW	12		•	•				•	•					•		•	•			2,315 - 2,520	--	164-166
	KB	12	•		•					•					•		•	•	•		4,075 - 4,795	--	163, 166-167
	BPHA	12			•		•	•	•	•	•			•	•	•	•	•	•		4,985 - 5,270	--	163, 165-166
	SWH	7 - Top Flange; 12 - Stirrup		•	•				•	•					•		•	•			3,305	--	164-167
	KHW	3 - Top Flange; 10 - Stirrup		•	•				•	•					•		•	•	•		5,535	--	164, 166--167
Slope and Skew	RR	18	•		•		•	•		•					•		•				365 - 380	--	168
	LS	18	•		•		•			•					•		•			•	840 - 1,285	--	169
	LSRR	18	•		•										•				•		870 - 1,310	--	169
	LSS	18	•		•		•	•		•				•	•	•				•	480 - 1,310	--	170
	LSSH	18 or 16	•		•	•	•			•					•	•	•	•	•	•	620 - 2,645	--	171
	SKH	16 or 14	•		•	•	•			•					•	•	•	•			510 - 3,170	--	172-173
	SKHH	14	•		•	•	•			•					•	•	•	•			1,765 - 4,005	--	172-173
Panel and Purlin	JPF	20	•		•		•			•					•		•				1,035 - 1,305	--	175
	DTUS	20	•		•		•								•		•				485 - 580	--	177
	TUS	20	•		•		•	•		•					•		•				485 - 580	--	177
	KF	18	•		•		•			•				•	•			•			695 - 810	--	174
	PHG	18	•		•		•			•				•	•		•				580 - 650	--	174
	FHD	18	•		•		•								•		•				960	--	178
	JDS	18	•		•		•			•				•	•		•				500 - 1,675	--	176
Masonry	HD	14	•		•		•			•	•			•	•	•	•	•	•		615 - 4,620	335 - 5750	179-180
	MPH	12		•							•				•	•	•	•	•		--	2,610 - 4,490	182-183
	LGUM	12		•							•				•			•	•		--	6,065 - 9,905	181
	HGUM	7		•							•				•		•	•	•		--	16,680	181
	HWUH	1/4" - Top Flange; 7 - Stirrup		•	•			•		•	•				•		•	•	•		--	3,060 - 5,265	184-185
	UMH	1/4"		•							•				•		•	•	•		--	3,550 - 6,380	178
	NFM	3/8" - Top Flange; 7 - Stirrup		•							•				•		•	•	•		--	6,720 - 10,310	186-187

• Represents common applications and product configurations.

1) When an I-Joist is used as a header, designer must evaluate if a web stiffener or backer block is required.

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JL / JLIF / SUH Face Mount Joist Hangers

MiTek offers a wide variety of light-gauge face mount joist hangers to accommodate application and installation preferences.

JL series – 20 gauge, 2x dimensional joist hangers

JLIF series – 18 gauge, 2x dimensional joist hangers. For installation at end of post or beam or where inverted flange is needed

SUH series – 16 gauge steel construction for more demanding applications and light truss support. Rough sawn sizes available.

Materials: See table

Finish: G90 galvanizing; JLIF – G-185 galvanizing

Options: See table for Corrosion Finish Options. See SUH Specialty Options Table

Codes: IBC, FL, LA

Installation:

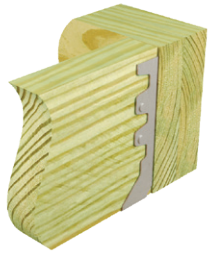
- Install the required fasteners according to the table.



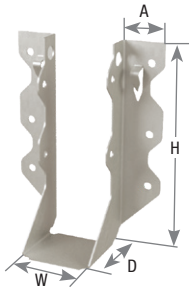
Typical JL26 installation



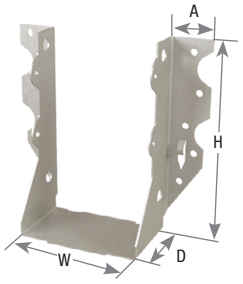
Typical SUH26-2 installation



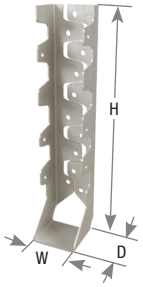
Typical JL210IF-TZ inverted flange installation



JL26



SUH26-2



JLIF

SUH Specialty Options Table

Refer to Specialty Options pages 320-322 for additional details.

Option[4]	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]
Range	1˚ to 67-1/2˚ when width is 1-3/4" or less. 1˚ to 50˚ on all others.	1˚ to 45˚	See Sloped Seat and Skewed
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.
Ordering	Add *SK* angle required, right *(R)* or left *(L),* and square cut (*SQ*) or bevel cut (*BV*) to product number. Ex. SUH210_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. SUH210_SL30D	See Sloped Seat and Skewed. Ex. SUH210_SK45R_SQ_SL30D

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

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The HUS, JUS and MUS hanger series offer double shear nailing. MiTek's dimple allows for 30° to 45° nailing through the joist into the header resulting in higher loads and less nailing. Slant nailing allows for higher load values, fewer nails, and faster installation.

Materials: JUS – 18 gauge; MUS – 18 gauge; HUS – 14 or 16 gauge

Finish: G90 galvanizing

Options: See table for Corrosion Finish Options. See HUS Specialty Options Table.

Codes: IBC, FL, LA

Installation:

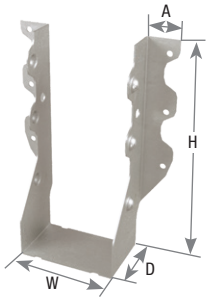
- Install the required fasteners according to the table.
- **Slant / double shear joist nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.**
- JUS / MUS – 16d sinkers (0.148" x 3-1/4") may be used where 10d commons are specified with no load reduction.



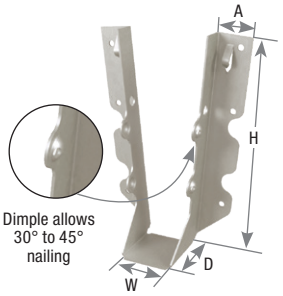
Typical HUS46 installation



Typical JUS26 installation

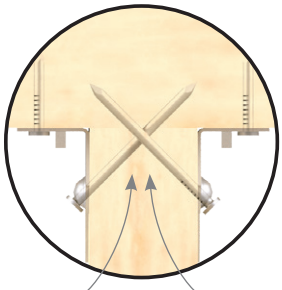


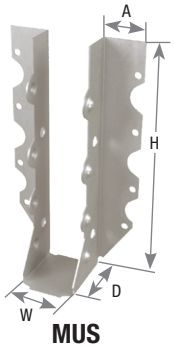
HUS28-2



JUS28

AVAILABLE IN GOLD COAT





MUS

HUS Specialty Options Table

Refer to Specialty Options pages 320-322 for additional details.

Option	Inverted Flange
Range	Not available in widths less than 2-1/4".
Allowable Loads	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *IF* to product number. Ex. HUS410_IF



Typical HUS410IF inverted flange installation

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HD Heavy-Duty Face Mount Hangers

HD hangers are heavy-duty face mount hangers offering min/max nailing utilizing round and diamond holes to achieve design flexibility and maximum loads for use with headers, joists, and trusses.

Materials: 14 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options and Specialty Options Table
Codes: IBC, FL, LA



Typical HD610 installation

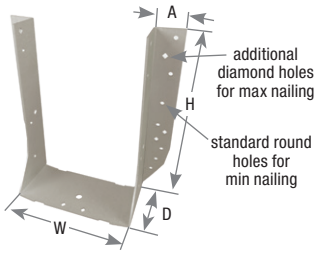


Typical HD210-2 installation

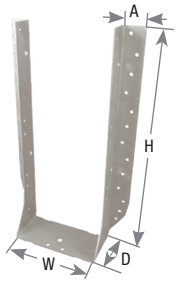


Typical HD3212 glulam installation

Installation:
- Install the required fasteners according to the table.
- **Min Nailing** – Fill all round nail holes.
- **Max Nailing** – Fill all round and diamond nail holes.



HD610



HD51135

Specialty Options Table
Refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Inverted Flange
Range	1˚ to 67-1/2˚ when width is 1-3/4" or less. 1˚ to 50˚ on all others.	1˚ to 45˚	See Sloped Seat and Skewed	2-1/4" widths or greater (Widths < 2-1/4" may be available as a Custom, contact MiTek)
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Example: HD410_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Example: HD410_SL30D	See Sloped Seat and Skewed Example: HD410_SK45R_SL30D_SQ	Add *IF,* to product number. Example: HD410_IF

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.



Typical HD210-2IF inverted flange installation

HDQIF Inverted Flange Face Mount Hangers

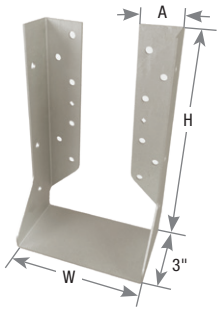
HDQIF inverted flange hangers install with wood screws eliminating the need to drill bolt holes, simplifying installation.

Materials: 14 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek's WS15 (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are supplied with HDQIF hangers.



Typical HDQIF inverted flange installation



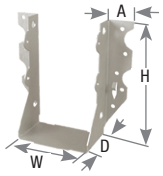
HDQIF

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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
2 x 4	JL24	LU24	20	1-9/16	3	1-1/2	15/16	--	4	10d	2	10d x 1-1/2	470	540	580	295		IBC, FL, LA
										16d			560	640	695			
	JL24IF-TZ	--	18	1-9/16	3-1/8	1-1/2	--	--	4	10d HDG	2	10d x 1-1/2 HDG	480	545	590	265		
										16d HDG			570	600	600			
	JUS24	LUS24	18	1-9/16	3-1/8	1-3/4	1	--	4	10d	2	10d	675	775	835	660		
	SUH24	U24	16	1-9/16	3-1/4	2	1-3/16	--	4	10d	2	10d x 1-1/2	500	560	605	380		
										16d			590	665	720			
	HD26	HU26	14	1-9/16	3-1/2	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	615	695	745	335		
								Max			4					585		
2 x 6	JL26	LU26	20	1-9/16	4-3/4	1-1/2	15/16	--	6	10d	4	10d x 1-1/2	710	805	870	600		
										16d			840	960	1045			
	JL26IF-TZ	LUC26Z	18	1-9/16	4-1/2	1-1/2	--	--	6	10d HDG	4	10d x 1-1/2 HDG	720	820	885	740		
										16d HDG			860	975	1060			
	JUS26	LUS26	18	1-9/16	4-13/16	1-3/4	1	--	4	10d	4	10d	870	1000	1080	1050		
	MUS26	MUS26	18	1-9/16	5-1/16	2	1	--	6	10d	6	10d	1310	1495	1620	865		
	SUH26	U26	16	1-9/16	5-1/8	2	1-3/16	--	6	10d	4	10d x 1-1/2	750	840	910	755		
										16d			880	1000	1080			
	HUS26	HUS26	16	1-5/8	5-7/16	3	2	--	14	16d	6	16d	2760	3140	3400	2045		
	HD26	HU26	14	1-9/16	3-1/2	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	615	695	745	335		
								Max			4					585		
	HD28	HU28	14	1-9/16	5-1/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1230	1390	1490	760		
2 x 8	JL26	LU26	20	1-9/16	4-3/4	1-1/2	15/16	--	6	10d	4	10d x 1-1/2	710	805	870	600		
										16d			840	960	1045			
	JL26IF-TZ	LUC26Z	18	1-9/16	4-1/2	1-1/2	--	--	6	10d HDG	4	10d x 1-1/2 HDG	720	820	885	740		
										16d HDG			860	975	1060			
	JL28	LU28	20	1-9/16	6-3/8	1-1/2	15/16	--	10	10d	6	10d x 1-1/2	1180	1345	1450	815		
										16d			1400	1600	1740			
	JL28IF-TZ	--	18	1-9/16	6-1/8	1-1/2	--	--	8	10d HDG	4	10d x 1-1/2 HDG	960	1095	1180	740		
										16d HDG			1145	1195	1195			
	JUS26	LUS26	18	1-9/16	4-13/16	1-3/4	1	--	4	10d	4	10d	870	1000	1080	1050		
	JUS28	LUS28	18	1-9/16	6-5/8	1-3/4	1	--	6	10d	4	10d	1110	1270	1375	1050		
	MUS26	MUS26	18	1-9/16	5-1/16	2	1	--	6	10d	6	10d	1310	1495	1620	865		
	MUS28	MUS28	18	1-9/16	7-1/16	2	1	--	8	10d	8	10d	1745	1995	2160	1230		
	SUH26	U26	16	1-9/16	5-1/8	2	1-3/16	--	6	10d	4	10d x 1-1/2	750	840	910	755		
										16d			880	1000	1080			
	SUH28	--	16	1-9/16	6-5/8	2	1-3/16	--	8	10d	6	10d x 1-1/2	1000	1120	1210	875		
										16d			1175	1335	1440			
	HUS26	HUS26	16	1-5/8	5-7/16	3	2	--	14	16d	6	16d	2760	3140	3400	2045		
	HUS28	HUS28	16	1-5/8	7-3/16	3	2	--	22	16d	8	16d	4170	4745	5125	2990		
	HD28	HU28	14	1-9/16	5-1/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1230	1390	1490	760		
	HD210	HU210	14	1-9/16	7-3/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS, HUS, and MUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



Continued on next page

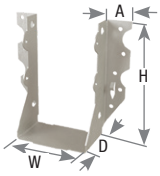
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Floor 115%	Roof 125%	Uplift[1] 160%	Corrosion	Finish	Code Ref.
2 x 10	JL28	LU28	20	1-9/16	6-3/8	1-1/2	15/16	--	10	10d	6	10d x 1-1/2	1180	1345	1450	815			IBC, FL, LA
										16d			1400	1600	1740				
	JL28IF-TZ	--	18	1-9/16	6-1/8	1-1/2	--	--	8	10d HDG	4	10d x 1-1/2 HDG	960	1095	1180	740			
										16d HDG			1145	1195	1195				
	JL210	LU210	20	1-9/16	8-1/4	1-1/2	15/16	--	14	10d	8	10d x 1-1/2	1650	1885	2030	1030			
										16d			1960	2040	2040				
	JL210IF-TZ	LUC210Z	18	1-9/16	8-1/4	1-1/2	--	--	11	10d HDG	6	10d x 1-1/2 HDG	1320	1505	1625	1115			
										16d HDG			1575	1785	1940				
	JUS28	LUS28	18	1-9/16	6-5/8	1-3/4	1	--	6	10d	4	10d	1110	1270	1375	1050			
	JUS210	LUS210	18	1-9/16	7-3/4	1-3/4	1	--	8	10d	4	10d	1350	1545	1670	1050			
	MUS28	MUS28	18	1-9/16	7-1/16	2	1	--	8	10d	8	10d	1745	1995	2160	1230			
	SUH28	--	16	1-9/16	6-5/8	2	1-3/16	--	8	10d	6	10d x 1-1/2	1000	1120	1210	875			
										16d			1175	1335	1440				
	SUH210	U210	16	1-9/16	8	2	1-3/16	--	10	10d	6	10d x 1-1/2	1250	1405	1515	1135			
										16d			1470	1670	1800				
	HUS28	HUS28	16	1-5/8	7-3/16	3	2	--	22	16d	8	16d	4170	4745	5125	2990			
	HUS210	HUS210	16	1-5/8	9-3/16	3	2	--	30	16d	10	16d	5455	5825	6060	4110			
	HD210	HU210	14	1-9/16	7-3/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760			
								Max	14		6		2155	2430	2610	1170			
2 x 12	JL210	LU210	20	1-9/16	8-1/4	1-1/2	15/16	--	14	10d	8	10d x 1-1/2	1650	1885	2030	1030			
										16d			1960	2040	2040				
	JL210IF-TZ	LUC210Z	18	1-9/16	8-1/4	1-1/2	--	--	11	10d HDG	6	10d x 1-1/2 HDG	1320	1505	1625	1115			
										16d HDG			1575	1785	1940				
	JUS210	LUS210	18	1-9/16	7-3/4	1-3/4	1	--	8	10d	4	10d	1350	1545	1670	1050			
	SUH210	U210	16	1-9/16	8	2	1-3/16	--	10	10d	6	10d x 1-1/2	1250	1405	1515	1135			
										16d			1470	1670	1800				
	HUS210	HUS210	16	1-5/8	9-3/16	3	2	--	30	16d	10	16d	5455	5825	6060	4110			
	HD210	HU210	14	1-9/16	7-3/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760			
								Max	14		6		2155	2430	2610	1170			
	HD212	HU212	14	1-9/16	9-13/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1510			
	HD212IF	HUC212	14	1-9/16	9-1/4	2-1/2	1-1/8	--	16	16d	8	10d x 1-1/2	2465	2780	2980	1180			
2 x 14	SUH214	U214	16	1-9/16	10	2	1-1/8	--	12	10d	8	10d x 1-1/2	1500	1685	1815	1510			
										16d			1765	2000	2160				
	HD212	HU212	14	1-9/16	9-13/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1510			
	HD212IF	HUC212	14	1-9/16	9-1/4	2-1/2	1-1/8	--	16	16d	8	10d x 1-1/2	2465	2780	2980	1180			
	HD214	HU214	14	1-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190			
								Max	24		12		3695	4125	4250	1510			
2 x 16	SUH214	U214	16	1-9/16	10	2	1-1/8	--	12	10d	8	10d x 1-1/2	1500	1685	1815	1510			
										16d			1765	2000	2160	1510			
	HD212	HU212	14	1-9/16	9-13/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1510			
	HD212IF	HUC212	14	1-9/16	9-1/4	2-1/2	1-1/8	--	16	16d	8	10d x 1-1/2	2465	2780	2980	1180			
	HD214	HU214	14	1-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190			
								Max	24		12		3695	4125	4250	1510			
	HD216	HU216	14	1-9/16	12-3/4	2-1/2	1-1/8	Min	18	16d	8	10d x 1-1/2	2770	3125	3355	1510			
								Max	26		12		3930	4125	4250	1900			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS, HUS, and MUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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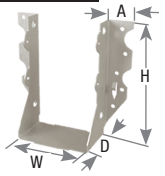


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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
(2) 2 x 4	JUS24-2	LUS24-2	18	3-1/8	3-7/16	2	1	--	4	16d	2	16d	805	900	900	660		IBC, FL, LA
	SUH24-2	U24-2	16	3-1/8	3-1/8	2	1-1/8	--	6	10d	2	10d	750	840	910	380		
										16d			880	1000	1080			
	HD24-2	HU24-2	14	3-1/8	3-1/2	2-1/2	1-1/8	--	4	16d	2	10d	615	695	745	365		
	HUS24-2	--	14	3-1/8	3-7/16	2	1	--	4	16d	2	16d	850	965	1040	765		
	HUS24-2IF	--	14	3-1/8	3-7/16	2	1	--	4	16d	2	16d	850	965	1040	765		
(2) 2 x 6	JUS26-2	LUS26-2	18	3-1/8	5-1/4	2	1	--	4	16d	4	16d	1040	1185	1290	1270		
	SUH26-2	U26-2	16	3-1/8	5-1/16	2	1-1/8	--	10	10d	4	10d	1250	1405	1515	755		
										16d			1470	1670	1800			
	HUS26-2	HUS26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HUS26-2IF	HUSC26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HD26-2	HU26-2	14	3-1/8	5-1/4	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD26-2IF	HUC26-2	14	3-1/8	5-1/4	2-1/2	--	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
(2) 2 x 8	JUS26-2	LUS26-2	18	3-1/8	5-1/4	2	1	--	4	16d	4	16d	1040	1185	1290	1270		
	JUS28-2	LUS28-2	18	3-1/8	7-1/8	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	SUH26-2	U26-2	16	3-1/8	5-1/16	2	1-1/8	--	10	10d	4	10d	1250	1405	1515	755		
										16d			1470	1670	1800			
	SUH28-2	--	16	3-1/8	6-1/4	2	1-1/8	--	12	10d	4	10d	1500	1685	1815	755		
										16d			1765	2000	2000			
	HUS26-2	HUS26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HUS26-2IF	HUSC26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HUS28-2	HUS28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HUS28-2IF	HUSC28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HD26-2	HU26-2	14	3-1/8	5-1/4	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD26-2IF	HUC26-2	14	3-1/8	5-1/4	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD28-2	HU28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD28-2IF	HUC28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
(2) 2 x 10	JUS28-2	LUS28-2	18	3-1/8	7-1/8	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	JUS210-2	LUS210-2	18	3-1/8	9-1/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		
	SUH28-2	--	16	3-1/8	6-1/4	2	1-1/8	--	12	10d	4	10d	1500	1685	1815	755		
										16d			1765	2000	2000			
	SUH210-2	U210-2	16	3-1/8	8-9/16	2	1-1/8	--	16	10d	6	10d	2000	2245	2420	1135		
										16d			2350	2670	2880			
	HUS28-2	HUS28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HUS28-2IF	HUSC28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HD28-2	HU28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD28-2IF	HUC28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HUS210-2	HUS210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420		
	HUS210-2IF	HUSC210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420		
	HD210-2	HU210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HD210-2IF	HUC210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



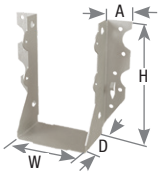
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion	Finish	Code Ref.
(2) 2 x 12	JUS210-2	LUS210-2	18	3-1/8	9-1/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345			IBC, FL, LA
	SUH210-2	U210-2	16	3-1/8	8-9/16	2	1-1/8	--	16	10d	6	10d	2000	2245	2420	1135			
										16d			2350	2670	2880				
	HUS210-2	HUS210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420			
	HUS210-2IF	HUSC210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420			
	HD210-2	HU210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1950			
	HD210-2IF	HUC210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1950			
	HUS212-2	HUS212-2	14	3-1/8	11-1/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615			
	HUS212-2IF	HUSC212-2	14	3-1/8	11-1/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615			
	HD212-2	HU212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305			
								Max	24		12		3695	4170	4470	2340			
	HD212-2IF	HUC212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305			
								Max	24		12		3695	4170	4470	2340			
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975			
(2) 2 x 14	JUS210-2	LUS210-2	18	3-1/8	9-1/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345			
	JUS214-2	LUS214-2	18	3-1/8	13-1/8	2	1	--	12	16d	6	16d	2420	2755	2830	2345			
	SUH210-2	U210-2	16	3-1/8	8-9/16	2	1-1/8	--	16	10d	6	10d	2000	2245	2420	1135			
										16d			2350	2670	2880				
	HD210-2	HU210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1950			
	HD210-2IF	HUC210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170			
								Max	20		10		3080	3475	3725	1950			
	HUS210-2	HUS210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420			
	HUS210-2IF	HUSC210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420			
	HUS212-2	HUS212-2	14	3-1/8	11-1/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615			
	HUS212-2IF	HUSC212-2	14	3-1/8	11-1/8	2	1		10	16d	10	16d	2710	3080	3325	3615			
	HD212-2	HU212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305			
								Max	24		12		3695	4170	4470	2340			
	HD212-2IF	HUC212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305			
								Max	24		12		3695	4170	4470	2340			
	HD214-2	HU214-2	14	3-1/8	13	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510			
								Max	26		12		4005	4515	4845	2340			
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975			
(2) 2 x 16	JUS214-2	LUS214-2	18	3-1/8	13-1/8	2	1	--	12	16d	6	16d	2420	2755	2830	2345			
	HD212-2	HU212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305			
								Max	24		12		3695	4170	4470	2340			
	HD212-2IF	HUC212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305			
								Max	24		12		3695	4170	4470	2340			
	HD214-2	HU214-2	14	3-1/8	13	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510			
								Max	26		12		4005	4515	4845	2340			
	HD216-2	HU216-2	14	3-1/8	14	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950			
								Max	30		14		4620	5035	5035	2735			
3 x 4	SUH34	U34	16	2-9/16	3-3/8	2	1-1/8	--	6	10d	2	10d x 1-1/2	750	840	910	380			
										16d			880	1000	1080				
	HD34	HU34	14	2-9/16	3	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	615	695	745	335			
								Max			4					585			
	HD34IF	HUC34	14	2-9/16	3	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	615	695	745	335			
								Max			4					585			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS15 (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are included with HDQIF hangers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



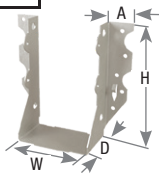
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
3 x 6	JUS36	LUS36	18	2-9/16	5-1/4	2	1	--	4	16d	4	16d	1040	1185	1290	1270		IBC, FL, LA
	SUH36	U36	16	2-9/16	5-5/16	2	1-1/8	--	10	10d	4	10d x 1-1/2	1250	1405	1515	755		
										16d			1470	1670	1800			
	HD36	HU36	14	2-9/16	4-3/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1230	1390	1490	760		
	HD36IF	HUC36	14	2-9/16	4-3/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1230	1390	1490	760		
3 x 8	JUS38	--	18	2-9/16	6-3/4	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	SUH36	U36	16	2-9/16	5-5/16	2	1-1/8	--	10	10d	4	10d x 1-1/2	1250	1405	1515	755		
										16d			1470	1670	1800			
	HD38	HU38	14	2-9/16	6-11/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HD38IF	HUC38	14	2-9/16	6-11/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
3 x 10	JUS310	LUS310	18	2-9/16	9-1/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		
	SUH310	U310	16	2-9/16	8-7/8	2	1-1/8	--	16	10d	6	10d x 1-1/2	2000	2245	2420	1135		
										16d			2350	2585	2585			
	HD38	HU38	14	2-9/16	6-3/4	2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HD38IF	HUC38	14	2-9/16	6-3/4	2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HD310	HU310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HD310IF	HUC310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HDQ310IF	HUCQ310	14	2-9/16	9	3	1-3/16	--	8	WS3	4	WS15	3340	3605	3605	1140		
3 x 12	SUH310	U310	16	2-9/16	8-7/8	2	1-1/8	--	16	10d	6	10d x 1-1/2	2000	2245	2420	1135		
										16d			2350	2585	2585			
	HD310	HU310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HD310IF	HUC310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1540	1735	1865	760		
								Max	14		6		2155	2430	2610	1170		
	HDQ310IF	HUCQ310	14	2-9/16	9	3	1-3/16	--	8	WS3	4	WS15	3340	3605	3605	1140		
	HD312	HU312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1510		
	HD312IF	HUC312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1510		
3 x 14	SUH314	U314	16	2-9/16	10-9/16	2	1-1/8	--	18	10d	6	10d x 1-1/2	2250	2525	2725	1135		
										16d			2645	3000	3240			
	HDQ310IF	HUCQ310	14	2-9/16	9	3	1-3/16	--	8	WS3	4	WS15	3340	3605	3605	1140		
	HD312	HU312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1510		
	HD312IF	HUC312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1510		
	HD314	HU314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190		
								Max	24		12		3695	4170	4435	1900		
	HD314IF	HUC314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190		
								Max	24		12		3695	4170	4435	1900		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS15 (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are included with HDQIF hangers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



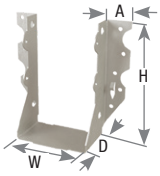
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
3 x 16	SUH314	U314	16	2-9/16	10-9/16	2	1-1/8	--	18	10d	6	10d x 1-1/2	2250	2525	2725	1135		IBC, FL, LA
										16d			2645	3000	3240			
	HD314	HU314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190		
								Max	24		12		3695	4170	4435	1900		
	HD314IF	HUC314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190		
								Max	24		12		3695	4170	4435	1900		
	HD316	HU316	14	2-9/16	13-5/16	2-1/2	1-1/8	Min	18	16d	8	10d x 1-1/2	2770	3125	3355	1510		
								Max	26		12		4005	4435	4435	1900		
	HD316IF	HUC316	14	2-9/16	13-5/16	2-1/2	1-1/8	Min	18	16d	8	10d x 1-1/2	2770	3125	3355	1510		
								Max	26		12		4005	4435	4435	1900		
(2) 3 x 8	HD38-2	HU38-2	14	5-1/8	6-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
(2) 3 x 10	HD38-2	HU38-2	14	5-1/8	6-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD310-2	HU310-2	14	5-1/8	8	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1510		
(2) 3 x 12	HD312-2	HU312-2	14	5-1/8	10	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
(2) 3 x 14	HD312-2	HU312-2	14	5-1/8	10	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
(3) 2 x 6	JUS26-3	LUS26-3	18	4-5/8	4-1/2	2	1	--	4	16d	4	16d	1040	1185	1290	1270		
	SUH26-3	U26-3	16	4-5/8	5-1/4	2	1	--	8	10d	2	10d	1000	1120	1210	380		
										16d			1175	1335	1440			
	HD26-3	HU26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD26-3IF	HUC26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
(3) 2 x 8	JUS26-3	LUS26-3	18	4-5/8	4-1/2	2	1	--	4	16d	4	16d	1040	1185	1290	1270		
	JUS28-3	LUS28-3	18	4-5/8	6-3/8	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	SUH26-3	U26-3	16	4-5/8	5-1/4	2	1	--	8	10d	2	10d	1000	1120	1210	380		
										16d			1175	1335	1440			
	HD26-3	HU26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD26-3IF	HUC26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD28-3	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD28-3IF	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
(3) 2 x 10	JUS28-3	LUS28-3	18	4-5/8	6-3/8	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	JUS210-3	LUS210-3	18	4-5/8	8-3/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		
	SUH210-3	U210-3	16	4-5/8	8-3/8	2	1	--	14	10d	6	10d	1750	1965	2000	1135		
										16d			2000	2000				
	HD28-3	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD28-3IF	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD210-3	HU210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HD210-3IF	HUC210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HDQ210-3IF	HUCQ210-3	14	4-5/8	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



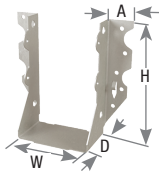
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Min/ Max	Fastener Schedule[3,4] Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
(3) 2 x 12	JUS210-3	LUS210-3	18	4-5/8	8-3/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		IBC, FL, LA
	SUH210-3	U210-3	16	4-5/8	8-3/8	2	1	--	14	10d 16d	6	10d	1750 2000	1965 2000	2000	1135		
	HD210-3	HU210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HD210-3IF	HUC210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HDQ210-3IF	HUCQ210-3	14	4-5/8	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		
	HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD212-3IF	HUC212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
(3) 2 x 14	JUS210-3	LUS210-3	18	4-5/8	8-3/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		
	SUH210-3	U210-3	16	4-5/8	8-3/8	2	1	--	14	10d 16d	6	10d	1750 2000	1965 2000	2000	1135		
	HDQ210-3IF	HUCQ210-3	14	4-5/8	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		
	HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD212-3IF	HUC212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD214-3	HU214-3	14	4-5/8	12-1/4	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4845	2340		
(3) 2 x 16	HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD212-3IF	HUC212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD214-3	HU214-3	14	4-5/8	12-1/4	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4845	2340		
	HD216-3	HU216-3	14	4-5/8	13-1/4	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950		
								Max	30		14		4620	5035	5035	2735		
(4) 2 x 8	HD28-4	HU28-4	14	6-1/8	7	2-1/2	1-3/4	Min	10	16d	4	16d	1540	1735	1865	870		
								Max	14		6		2155	2430	2610	1305		
(4) 2 x 10-14	HD210-4	HU210-4	14	6-1/8	9-1/4	2-1/2	2	Min	14	16d	6	16d	2155	2430	2610	1305		
								Max	18		8		2770	3125	3355	1845		
4 x 4	JUS44	LUS44	18	3-5/8	3-1/4	2	1	--	4	16d	2	16d	780	780	780	660		
	SUH44	U44	16	3-9/16	2-7/8	2	1-1/8	--	6	10d 16d	2	10d	750 880	840 1000	910 1080	380		
	HD44	HU44	14	3-9/16	3-5/16	2-1/2	1-1/8	--	4	16d	2	10d	615	695	745	390		
	HD44IF	HUC44	14	3-9/16	3-5/16	2-1/2	1-1/8	--	4	16d	2	10d	615	695	745	390		

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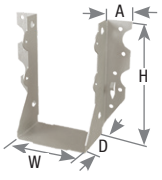
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
4 x 6	JUS46	LUS46	18	3-5/8	5	2	1	--	4	16d	4	16d	1040	1185	1290	1270		IBC, FL, LA
	SUH46	U46	16	3-9/16	4-13/16	2	1-1/8	--	10	10d	4	10d	1250	1405	1515	755		
										16d			1470	1670	1800			
	HUS46	HUS46	14	3-5/8	5	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HUS46IF	HUSC46	14	3-5/8	5	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HD46	HU46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD46IF	HUC46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
4 x 8	JUS46	LUS46	18	3-5/8	5	2	1	--	4	16d	4	16d	1040	1185	1290	1270		
	JUS48	LUS48	18	3-5/8	6-7/8	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	SUH46	U46	16	3-9/16	4-13/16	2	1-1/8	--	10	10d	4	10d	1250	1405	1515	755		
										16d			1470	1670	1800			
	HUS46	HUS46	14	3-5/8	5	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HUS46IF	HUSC46	14	3-5/8	5	2	1	--	4	16d	4	16d	1085	1235	1330	1170		
	HUS48	HUS48	14	3-5/8	7	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HUS48IF	HUSC48	14	3-5/8	7	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HD46	HU46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD46IF	HUC46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1230	1390	1490	760		
								Max	12		6		1850	2085	2235	1170		
	HD48	HU48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD48IF	HUC48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
4 x 10	JUS48	LUS48	18	3-5/8	6-7/8	2	1	--	6	16d	4	16d	1325	1510	1645	1270		
	JUS410	LUS410	18	3-5/8	8-7/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		
	SUH410	U410	16	3-9/16	8-3/8	2	1-1/8	--	16	10d	6	10d	2000	2245	2420	1135		
										16d			2350	2670	2880			
	HUS48	HUS48	14	3-5/8	7	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HUS48IF	HUSC48	14	3-5/8	7	2	1	--	6	16d	6	16d	1625	1850	1880	2420		
	HD48	HU48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HD48IF	HUC48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1540	1735	1865	780		
								Max	14		6		2155	2430	2610	1170		
	HUS410	HUS410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420		
	HUS410IF	HUSC410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420		
	HD410	HU410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HD410IF	HUC410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HDQ410IF	HUCQ410	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



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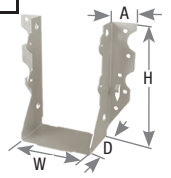
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
4 x 12	JUS410	LUS410	18	3-5/8	8-7/8	2	1	--	8	16d	6	16d	1845	2105	2290	2345		IBC, FL, LA
	SUH410	U410	16	3-9/16	8-3/8	2	1-1/8	--	16	10d	6	10d	2000	2245	2420	1135		
										16d			2350	2670	2880			
	HUS410	HUS410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420		
	HUS410IF	HUSC410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	2170	2465	2660	2420		
	HD410	HU410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HD410IF	HUC410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HDQ410IF	HUCQ410	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		
	HUS412	HUS412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615		
	HUS412IF	HUSC412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615		
	HD412	HU412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD412IF	HUC412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HDQ412IF	HUCQ412	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
4 x 14	JUS414	LUS414	18	3-5/8	12-7/8	2	1	--	12	16d	6	16d	2405	2405	2405	2345		
	SUH414	U414	16	3-9/16	10-1/16	2	1-1/8	--	18	10d	6	10d	2250	2525	2725	1135		
										16d			2645	3000	3240			
	HD410	HU410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HD410IF	HUC410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170		
								Max	20		10		3080	3475	3725	1950		
	HDQ410IF	HUCQ410	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		
	HUS412	HUS412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615		
	HUS412IF	HUSC412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2710	3080	3325	3615		
	HDQ412IF	HUCQ412	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD412	HU412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD412IF	HUC412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD414	HU414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4815	2340		
	HD414IF	HUC414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4815	2340		
4 x 16	JUS414	LUS414	18	3-5/8	12-7/8	2	1	--	12	16d	6	16d	2405	2405	2405	2345		
	SUH414	U414	16	3-9/16	10-1/16	2	1-1/8	--	18	10d	6	10d	2250	2525	2725	1135		
										16d			2645	3000	3240			
	HD412	HU412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HD412IF	HUC412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2340		
	HDQ412IF	HUCQ412	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD414	HU414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4815	2340		
	HD414IF	HUC414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4815	2340		
	HD416	HU416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950		
								Max	30		14		4620	4990	4990	2245		
	HD416IF	HUC416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950		
								Max	30		14		4620	4990	4990	2245		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
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3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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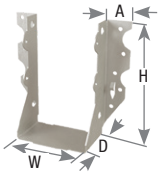


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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
4 x 18	HD414	HU414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		IBC, FL, LA
								Max	26		12		4005	4515	4815	2340		
	HD414IF	HUC414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510		
								Max	26		12		4005	4515	4815	2340		
	HD416	HU416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950		
								Max	30		14		4620	4990	4990	2245		
	HD416IF	HUC416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950		
								Max	30		14		4620	4990	4990	2245		
	HD418	--	14	3-9/16	16-1/2	2-1/2	1-1/4	--	28	16d	8	10d	4310	4815	4815	1560		
6 x 6	SUH66	U66	16	5-1/2	5	2	1	--	8	10d	4	10d	1000	1120	1210	755		
										16d			1175	1335	1440			
	HD66	HU66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1230	1390	1490	870		
								Max	12		6		1850	2085	2235	1305		
	HD66IF	HUC66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1230	1390	1490	870		
								Max	12		6		1850	2085	2235	1305		
6 x 8	SUH66	U66	16	5-1/2	5	2	1	--	8	10d	4	10d	1000	1120	1210	755		
										16d			1175	1335	1440			
	HD66	HU66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1230	1390	1490	870		
								Max	12		6		1850	2085	2235	1305		
	HD66IF	HUC66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1230	1390	1490	870		
								Max	12		6		1850	2085	2235	1305		
	HD68	HU68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920		
								Max	14		6		2155	2430	2610	1305		
	HD68IF	HUC68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920		
								Max	14		6		2155	2430	2610	1305		
6 x 10	SUH610	U610	16	5-1/2	9	2	1	--	14	10d	6	10d	1750	1965	2120	1135		
										16d			2060	2335	2520			
	HD68	HU68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920		
								Max	14		6		2155	2430	2610	1305		
	HD68IF	HUC68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920		
								Max	14		6		2155	2430	2610	1305		
	HD610	HU610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	2155	2430	2610	1305		
								Max	20		10		3080	3475	3725	2305		
	HD610IF	HUC610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	2155	2430	2610	1305		
								Max	20		10		3080	3475	3725	2305		
	HDQ610IF	HUCQ610	14	5-1/2	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		
6 x 12	SUH610	U610	16	5-1/2	9	2	1	--	14	10d	6	10d	1750	1965	2120	1135		
										16d			2060	2335	2520			
	HD610	HU610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	2155	2430	2610	1305		
								Max	20		10		3080	3475	3725	2305		
	HD610IF	HUC610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	2155	2430	2610	1305		
								Max	20		10		3080	3475	3725	2305		
	HDQ610IF	HUCQ610	14	5-1/2	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		
	HD612	HU612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2765		
	HD612IF	HUC612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2765		
	HDQ612IF	HUCQ612	14	5-1/2	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



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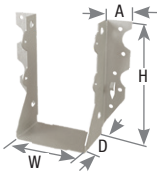
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Min/ Max	Fastener Schedule[2,3] Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
6 x 14	HDQ610IF	HUCQ610	14	5-1/2	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975		IBC, FL, LA
	HD612	HU612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2765		
	HD612IF	HUC612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2765		
	HDQ612IF	HUCQ612	14	5-1/2	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD614	HU614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845		
								Max	26		12		4005	4515	4845	2765		
	HD614IF	HUC614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845		
								Max	26		12		4005	4515	4845	2765		
6 x 16	HD612	HU612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2765		
	HD612IF	HUC612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305		
								Max	24		12		3695	4170	4470	2765		
	HDQ612IF	HUCQ612	14	5-1/2	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD614	HU614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845		
								Max	26		12		4005	4515	4845	2765		
	HD614IF	HUC614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845		
								Max	26		12		4005	4515	4845	2765		
	HD616	HU616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	3390	3820	4100	2305		
								Max	30		14		4620	4990	4990	3225		
	HD616IF	HUC616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	3390	3820	4100	2305		
								Max	30		14		4620	4990	4990	3225		
6 x 18	HD614	HU614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845		
								Max	26		12		4005	4515	4845	2765		
	HD614IF	HUC614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845		
								Max	26		12		4005	4515	4845	2765		
	HD616	HU616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	3390	3820	4100	2305		
								Max	30		14		4620	4990	4990	3225		
	HD616IF	HUC616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	3390	3820	4100	2305		
								Max	30		14		4620	4990	4990	3225		
8 x 6	HD86	--	14	7-1/2	4-15/16	2-1/2	1-1/8	Min	8	16d	4	16d	1230	1390	1490	870		
								Max	10		4		1540	1735	1865	920		
	HD86IF	--	14	7-1/2	5-1/8	2-1/2	1-1/16	--	10	16d	4	16d	1540	1735	1865	920		
8 x 8	HD88	HU88	14	7-1/2	6-13/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920		
								Max	14		6		2155	2430	2610	1305		
	HD88IF	HUC88	14	7-1/2	6-13/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920		
								Max	14		6		2155	2430	2610	1305		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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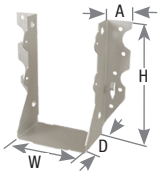
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[2]					DF/SP Allowable Loads (Lbs.)				Code Ref.
									Header		Joist		Floor	Roof		Uplift[1]	
				W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	160%	
8 x 10	HD810	HU810	14	7-1/2	8-9/16	2-1/2	1-1/16	Min	14	16d	6	16d	2155	2430	2610	1305	IBC, FL, LA
								Max	18		8		2770	3125	3355	1845	
	HD810IF	HUC810	14	7-1/2	8-9/16	2-1/2	1-1/16	Min	14	16d	6	16d	2155	2430	2610	1305	
								Max	18		8		2770	3125	3355	1845	
8 x 12	HD812	HU812	14	7-1/2	10-1/2	2-1/2	1-1/16	Min	16	16d	6	16d	2465	2780	2980	1305	
								Max	22		8		3390	3820	4100	1845	
	HD812IF	HUC812	14	7-1/2	10-1/2	2-1/2	1-1/16	Min	16	16d	6	16d	2465	2780	2980	1305	
								Max	22		8		3390	3820	4100	1845	
8 x 14	HD814	HU814	14	7-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845	
								Max	24		12		3695	4170	4435	2765	
	HD814IF	HUC814	14	7-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845	
								Max	24		12		3695	4170	4435	2765	
8 x 16	HD816	HU816	14	7-1/2	12-13/16	2-1/2	1-1/16	Min	20	16d	8	16d	3080	3475	3725	1845	
								Max	26		12		4005	4435	4435	2765	
	HD816IF	HUC816	14	7-1/2	13-5/8	2-1/2	1-1/16	--	26	16d	12	16d	4005	4435	4435	2765	
ROUGH LUMBER SIZES																	
2 x 4	SUH24R	LU24R-18, U24R	16	2	3-1/16	2	1-1/8	--	4	10d	2	10d x 1-1/2	500	560	605	380	IBC, FL, LA
										16d			590	665	720		
2 x 6 - 8	SUH26R	LU26R-18, U26R	16	2	4-15/16	2	1-3/16	--	6	10d	4	10d x 1-1/2	750	840	910	755	
										16d			880	1000	1080		
2 x 8 - 10	SUH28R	LU28R-18	16	2	6-7/16	2	1-1/8	--	8	10d	6	10d x 1-1/2	1000	1120	1210	875	
										16d			1175	1335	1440		
2 x 10 - 12	SUH210R	LU210R-18, U210R	16	2	7-13/16	2	1-1/8	--	10	10d	6	10d x 1-1/2	1250	1405	1515	1135	
										16d			1470	1670	1800		
2 x 14 - 16	SUH214R	--	16	2	9-13/16	2	1-1/8	--	12	10d	8	10d x 1-1/2	1500	1685	1815	1510	
										16d			1765	2000	2160		
4 x 4	SUH44R	U44R	16	4	2-11/16	2	1-1/8	--	6	10d	2	16d	750	840	910	450	
										16d			880	1000	1080		
4 x 6	SUH46R	U46R	16	4	4-11/16	2	1-1/8	--	8	10d	4	16d	1000	1120	1210	875	
										16d			1175	1335	1440		
4 x 10 - 12	SUH410R	U410R	16	4	8-3/16	2	2	--	14	10d	6	16d	1750	1965	2120	1220	
										16d			2060	2335	2520		
6 x 8	SUH66R	U66R	16	6	5	2	1	--	8	10d	4	16d	1000	1120	1210	875	
										16d			1175	1335	1440		
6 x 10 - 12 - 14	SUH610R	U610R	16	6	9	2	1	--	14	10d	6	16d	1750	1965	2120	1220	
										16d			2060	2335	2520		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

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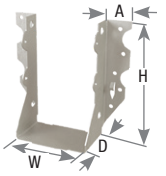


Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Floor 115%	Floor 125%	Roof Uplift[1] 160%	Corrosion Finish	Code Ref.
2 x 4	JL24	LU24	20	1-9/16	3	1-1/2	15/16	--	4	10d	2	10d x 1-1/2	415	475	510	235		IBC, FL, LA
										16d			495	560	565			
	JL24IF-TZ	--	18	1-9/16	3-1/8	1-1/2	--	--	4	10d HDG	2	10d x 1-1/2 HDG	430	490	495	220		
										16d HDG			495	495	495			
	JUS24	LUS24	18	1-9/16	3-1/8	1-3/4	1	--	4	10d	2	10d	595	680	735	525		
	SUH24	U24	16	1-9/16	3-1/4	2	1-3/16	--	4	10d	2	10d x 1-1/2	440	495	530	310		
										16d			515	585	635			
	HD26	HU26	14	1-9/16	3-1/2	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	540	610	655	265		
								Max			4					465		
2 x 6	JL26	LU26	20	1-9/16	4-3/4	1-1/2	15/16	--	6	10d	4	10d x 1-1/2	625	710	765	485		
										16d			740	845	915			
	JL26IF-TZ	LUC26Z	18	1-9/16	4-1/2	1-1/2	--	--	6	10d HDG	4	10d x 1-1/2 HDG	645	735	790	665		
										16d HDG			770	870	945			
	JUS26	LUS26	18	1-9/16	4-13/16	1-3/4	1	--	4	10d	4	10d	765	880	950	840		
	MUS26	MUS26	18	1-9/16	5-1/16	2	1	--	6	10d	6	10d	1235	1415	1530	785		
	SUH26	U26	16	1-9/16	5-1/8	2	1-3/16	--	6	10d	4	10d x 1-1/2	660	740	800	665		
										16d			775	880	950			
	HUS26	HUS26	16	1-5/8	5-7/16	3	2	--	14	16d	6	16d	2430	2765	2990	1640		
	HD26	HU26	14	1-9/16	3-1/2	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	540	610	655	265		
								Max			4					465		
	HD28	HU28	14	1-9/16	5-1/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1085	1220	1310	610		
2 x 8	JL26	LU26	20	1-9/16	4-3/4	1-1/2	15/16	--	6	10d	4	10d x 1-1/2	625	710	765	485		
										16d			740	845	915			
	JL26IF-TZ	LUC26Z	18	1-9/16	4-1/2	1-1/2	--	--	6	10d HDG	4	10d x 1-1/2 HDG	645	735	790	665		
										16d HDG			770	870	945			
	JL28	LU28	20	1-9/16	6-3/8	1-1/2	15/16	--	10	10d	6	10d x 1-1/2	1040	1185	1275	665		
										16d			1230	1405	1530			
	JL28IF-TZ	--	18	1-9/16	6-1/8	1-1/2	--	--	8	10d HDG	4	10d x 1-1/2 HDG	860	980	990	665		
										16d HDG			990	990	990			
	JUS26	LUS26	18	1-9/16	4-13/16	1-3/4	1	--	4	10d	4	10d	765	880	950	840		
	JUS28	LUS28	18	1-9/16	6-5/8	1-3/4	1	--	6	10d	4	10d	980	1120	1210	840		
	MUS26	MUS26	18	1-9/16	5-1/16	2	1	--	6	10d	6	10d	1235	1415	1530	785		
	MUS28	MUS28	18	1-9/16	7-1/16	2	1	--	8	10d	8	10d	1615	1850	2000	1090		
	SUH26	U26	16	1-9/16	5-1/8	2	1-3/16	--	6	10d	4	10d x 1-1/2	660	740	800	665		
										16d			775	880	950			
	SUH28	--	16	1-9/16	6-5/8	2	1-3/16	--	8	10d	6	10d x 1-1/2	880	990	1065	705		
										16d			1035	1175	1265			
	HUS26	HUS26	16	1-5/8	5-7/16	3	2	--	14	16d	6	16d	2430	2765	2990	1640		
	HUS28	HUS28	16	1-5/8	7-3/16	3	2	--	22	16d	8	16d	3670	4035	4130	2410		
	HD28	HU28	14	1-9/16	5-1/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1085	1220	1310	610		
	HD210	HU210	14	1-9/16	7-3/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	610		
								Max	14		6		1895	2140	2295	955		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS, HUS, and MUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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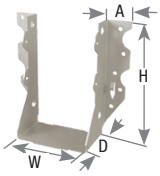


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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Floor 115%	Floor 125%	Roof 160%	Uplift[1]	Corrosion Finish	Code Ref.
2 x 10	JL28	LU28	20	1-9/16	6-3/8	1-1/2	15/16	--	10	10d	6	10d x 1-1/2	1040	1185	1275	665			IBC, FL, LA
										16d			1230	1405	1530				
	JL28IF-TZ	--	18	1-9/16	6-1/8	1-1/2	--	--	8	10d HDG	4	10d x 1-1/2 HDG	860	980	990	665			
										16d HDG			990	990	990				
	JL210	LU210	20	1-9/16	8-1/4	1-1/2	15/16	--	14	10d	8	10d x 1-1/2	1455	1655	1675	845			
										16d			1675	1675	1675				
	JL210IF-TZ	LUC210Z	18	1-9/16	8-1/4	1-1/2	--	--	11	10d HDG	6	10d x 1-1/2 HDG	1140	1305	1405	965			
										16d HDG			1360	1545	1675				
	JUS28	LUS28	18	1-9/16	6-5/8	1-3/4	1	--	6	10d	4	10d	980	1120	1210	840			
	JUS210	LUS210	18	1-9/16	7-3/4	1-3/4	1	--	8	10d	4	10d	1190	1360	1395	840			
	MUS28	MUS28	18	1-9/16	7-1/16	2	1	--	8	10d	8	10d	1745	1995	2160	1230			
	SUH28	--	16	1-9/16	6-5/8	2	1-3/16	--	8	10d	6	10d x 1-1/2	880	990	1065	705			
										16d			1035	1175	1265				
	SUH210	U210	16	1-9/16	8	2	1-3/16	--	10	10d	6	10d x 1-1/2	1100	1235	1330	990			
										16d			1295	1465	1585				
	HUS28	HUS28	16	1-5/8	7-3/16	3	2	--	22	16d	8	16d	3670	4035	4130	2410			
	HUS210	HUS210	16	1-5/8	9-3/16	3	2	--	30	16d	10	16d	4235	4565	4780	3410			
	HD210	HU210	14	1-9/16	7-3/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	610			
								Max	14		6		1895	2140	2295	955			
2 x 12	JL210	LU210	20	1-9/16	8-1/4	1-1/2	15/16	--	14	10d	8	10d x 1-1/2	1455	1655	1675	845			
										16d			1675	1675	1675				
	JL210IF-TZ	LUC210Z	18	1-9/16	8-1/4	1-1/2	--	--	11	10d HDG	6	10d x 1-1/2 HDG	1140	1305	1405	965			
										16d HDG			1360	1545	1675				
	JUS210	LUS210	18	1-9/16	7-3/4	1-3/4	1	--	8	10d	4	10d	1190	1360	1395	840			
	SUH210	U210	16	1-9/16	8	2	1-3/16	--	10	10d	6	10d x 1-1/2	1100	1235	1330	990			
										16d			1295	1465	1585				
	HUS210	HUS210	16	1-5/8	9-3/16	3	2	--	30	16d	10	16d	4235	4565	4780	3410			
	HD210	HU210	14	1-9/16	7-3/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	610			
								Max	14		6		1895	2140	2295	955			
	HD212	HU212	14	1-9/16	9-13/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	955			
								Max	20		10		2710	2900	2990	1225			
	HD212IF	HUC212	14	1-9/16	9-1/4	2	1-1/8	--	16	16d	8	10d x 1-1/2	2165	2320	2390	960			
2 x 14	SUH214	U214	16	1-9/16	10	2	1-1/8	--	12	10d	8	10d x 1-1/2	1320	1480	1595	1330			
										16d			1550	1760	1900				
	HD212	HU212	14	1-9/16	9-13/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	955			
								Max	20		10		2710	2900	2990	1225			
	HD212IF	HUC212	14	1-9/16	9-1/4	2	1-1/8	--	16	16d	8	10d x 1-1/2	2165	2320	2390	960			
	HD214	HU214	14	1-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2165	2445	2620	960			
								Max	24		12		2985	3160	3270	1230			
2 x 16	SUH214	U214	16	1-9/16	10	2	1-1/8	--	12	10d	8	10d x 1-1/2	1320	1480	1595	1330			
										16d			1550	1760	1900				
	HD212	HU212	14	1-9/16	9-13/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	955			
								Max	20		10		2710	2900	2990	1225			
	HD212IF	HUC212	14	1-9/16	9-1/4	2	1-1/8	--	16	16d	8	10d x 1-1/2	2165	2320	2390	960			
	HD214	HU214	14	1-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2165	2445	2620	960			
								Max	24		12		2985	3160	3270	1230			
	HD216	HU216	14	1-9/16	12-3/4	2-1/2	1-1/8	Min	18	16d	8	10d x 1-1/2	2440	2640	2710	1220			
								Max	26		12		2985	3160	3270	1550			

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3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



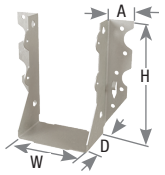
Continued on next page

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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Min/ Max	Fastener Schedule[3,4] Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion	Finish	Code Ref.
(2) 2 x 4	JUS24-2	LUS24-2	18	3-1/8	3-7/16	2	1	--	4	16d	2	16d	710	715	715	520			IBC, FL, LA
	SUH24-2	U24-2	16	3-1/8	3-1/8	2	1-1/8	--	6	10d	2	10d	660	740	800	330			
										16d			775	880	950				
	HD24-2	HU24-2	14	3-1/8	3-1/2	2-1/2	1-1/8	--	4	16d	2	10d	540	610	655	290			
	HUS24-2	--	14	3-1/8	3-7/16	2	1	--	4	16d	2	16d	750	825	825	605			
	HUS24-2IF	--	14	3-1/8	3-7/16	2	1	--	4	16d	2	16d	750	825	825	605			
(2) 2 x 6	JUS26-2	LUS26-2	18	3-1/8	5-1/4	2	1	--	4	16d	4	16d	915	1045	1135	1010			
	SUH26-2	U26-2	16	3-1/8	5-1/16	2	1-1/8	--	10	10d	4	10d	1100	1235	1330	665			
										16d			1295	1465	1585				
	HUS26-2	HUS26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	910	1035	1115	850			
	HUS26-2IF	HUSC26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	955	1085	1170	930			
	HD26-2	HU26-2	14	3-1/8	5-1/4	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605			
								Max	12		6		1625	1835	1965	1030			
	HD26-2IF	HUC26-2	14	3-1/8	5-1/4	2-1/2	--	Min	8	16d	4	10d	1085	1220	1310	605			
								Max	12		6		1625	1835	1965	1030			
(2) 2 x 8	JUS26-2	LUS26-2	18	3-1/8	5-1/4	2	1	--	4	16d	4	16d	915	1045	1135	1010			
	JUS28-2	LUS28-2	18	3-1/8	7-1/8	2	1	--	6	16d	4	16d	1165	1330	1445	1010			
	SUH26-2	U26-2	16	3-1/8	5-1/16	2	1-1/8	--	10	10d	4	10d	1100	1235	1330	665			
										16d			1295	1465	1585				
	SUH28-2	--	16	3-1/8	6-1/4	2	1-1/8	--	12	10d	4	10d	1320	1480	1595	665			
										16d			1550	1660	1660				
	HUS26-2	HUS26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	910	1035	1115	850			
	HUS26-2IF	HUSC26-2	14	3-1/8	5-1/4	2	1	--	4	16d	4	16d	955	1085	1170	930			
	HUS28-2	HUS28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1430	1500	1500	1935			
	HUS28-2IF	HUSC28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1430	1500	1500	1935			
	HD26-2	HU26-2	14	3-1/8	5-1/4	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605			
								Max	12		6		1625	1835	1965	1030			
	HD26-2IF	HUC26-2	14	3-1/8	5-1/4	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605			
								Max	12		6		1625	1835	1965	1030			
	HD28-2	HU28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685			
								Max	14		6		1895	2140	2295	1030			
	HD28-2IF	HUC28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685			
								Max	14		6		1895	2140	2295	1030			
(2) 2 x 10	JUS28-2	LUS28-2	18	3-1/8	7-1/8	2	1	--	6	16d	4	16d	1165	1330	1445	1010			
	JUS210-2	LUS210-2	18	3-1/8	9-1/8	2	1	--	8	16d	6	16d	1625	1850	1925	1875			
	SUH28-2	--	16	3-1/8	6-1/4	2	1-1/8	--	12	10d	4	10d	1320	1480	1595	665			
										16d			1550	1660	1660				
	SUH210-2	U210-2	16	3-1/8	8-9/16	2	1-1/8	--	16	10d	6	10d	1760	1975	2130	975			
										16d			2070	2345	2535				
	HUS28-2	HUS28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1430	1500	1500	1935			
	HUS28-2IF	HUSC28-2	14	3-1/8	7-1/8	2	1	--	6	16d	6	16d	1430	1500	1500	1935			
	HD28-2	HU28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685			
								Max	14		6		1895	2140	2295	1030			
	HD28-2IF	HUC28-2	14	3-1/8	7-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685			
								Max	14		6		1895	2140	2295	1030			
	HUS210-2	HUS210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	1905	2170	2340	1945			
	HUS210-2IF	HUSC210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	1905	2170	2340	1945			
	HD210-2	HU210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030			
								Max	20		10		2710	3055	3195	1715			
	HD210-2IF	HUC210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030			
								Max	20		10		2710	3055	3195	1715			
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	4480	4600	4600	2665			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



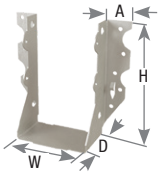
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
(2) 2 x 12	JUS210-2	LUS210-2	18	3-1/8	9-1/8	2	1	--	8	16d	6	16d	1625	1850	1925	1875		IBC, FL, LA
	SUH210-2	U210-2	16	3-1/8	8-9/16	2	1-1/8	--	16	10d	6	10d	1760	1975	2130	975		
										16d			2070	2345	2535			
	HUS210-2	HUS210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	1905	2170	2340	1945		
	HUS210-2IF	HUSC210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	1905	2170	2340	1945		
	HD210-2	HU210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3195	1715		
	HD210-2IF	HUC210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3195	1715		
	HUS212-2	HUS212-2	14	3-1/8	11-1/8	2	1	--	10	16d	10	16d	2385	2710	2885	2915		
	HUS212-2IF	HUSC212-2	14	3-1/8	11-1/8	2	1	--	10	16d	10	16d	2385	2710	2885	2915		
	HD212-2	HU212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1045		
								Max	24		12		3250	3665	3865	2060		
	HD212-2IF	HUC212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1045		
								Max	24		12		3250	3665	3865	2060		
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	4480	4600	4600	2665		
(2) 2 x 14	JUS210-2	LUS210-2	18	3-1/8	9-1/8	2	1	--	8	16d	6	16d	1625	1850	1925	1875		
	JUS214-2	LUS214-2	18	3-1/8	13-1/8	2	1	--	12	16d	6	16d	2125	2260	2260	1875		
	SUH210-2	U210-2	16	3-1/8	8-9/16	2	1-1/8	--	16	10d	6	10d	1760	1975	2130	975		
										16d			2070	2345	2535			
	HD210-2	HU210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3195	1715		
	HD210-2IF	HUC210-2	14	3-1/8	9	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3195	1715		
	HUS210-2	HUS210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	1905	2170	2340	1945		
	HUS210-2IF	HUSC210-2	14	3-1/8	9-1/8	2	1	--	8	16d	8	16d	1905	2170	2340	1945		
	HUS212-2	HUS212-2	14	3-1/8	11-1/8	2	1	--	10	16d	10	16d	2385	2710	2885	2915		
	HUS212-2IF	HUSC212-2	14	3-1/8	11-1/8	2	1		10	16d	10	16d	2385	2710	2885	2915		
	HD212-2	HU212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1045		
								Max	24		12		3250	3665	3865	2060		
	HD212-2IF	HUC212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1045		
								Max	24		12		3250	3665	3865	2060		
	HD214-2	HU214-2	14	3-1/8	13	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3970	4045	2060		
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	4480	4600	4600	2665		
(2) 2 x 16	JUS214-2	LUS214-2	18	3-1/8	13-1/8	2	1	--	12	16d	6	16d	2125	2260	2260	1875		
	HD212-2	HU212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1045		
								Max	24		12		3250	3665	3865	2060		
	HD212-2IF	HUC212-2	14	3-1/8	11	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1045		
								Max	24		12		3250	3665	3865	2060		
	HD214-2	HU214-2	14	3-1/8	13	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3970	4045	2060		
	HD216-2	HU216-2	14	3-1/8	14	2-1/2	1-1/8	Min	22	16d	10	10d	2980	3360	3605	1715		
								Max	30		14		4060	4060	4060	2405		
3 x 4	SUH34	U34	16	2-9/16	3-3/8	2	1-1/8	--	6	10d	2	10d x 1-1/2	660	740	800	330		
										16d			775	880	950			
	HD34	HU34	14	2-9/16	3	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	540	610	655	265		
								Max			4					465		
	HD34IF	HUC34	14	2-9/16	3	2-1/2	1-1/8	Min	4	16d	2	10d x 1-1/2	540	610	655	265		
								Max			4					465		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS15 (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are included with HDQIF hangers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



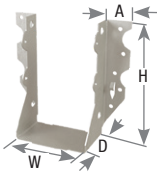
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
3 x 6	JUS36	LUS36	18	2-9/16	5-1/4	2	1	--	4	16d	4	16d	915	1045	1135	1015		IBC, FL, LA
	SUH36	U36	16	2-9/16	5-5/16	2	1-1/8	--	10	10d	4	10d x 1-1/2	1100	1235	1330	665		
										16d			1295	1465	1585			
	HD36	HU36	14	2-9/16	4-3/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1085	1220	1310	610		
	HD36IF	HUC36	14	2-9/16	4-3/4	2-1/2	1-1/8	--	8	16d	6	10d x 1-1/2	1085	1220	1310	610		
3 x 8	JUS38	--	18	2-9/16	6-3/4	2	1	--	6	16d	4	16d	1165	1330	1445	1015		
	SUH36	U36	16	2-9/16	5-5/16	2	1-1/8	--	10	10d	4	10d x 1-1/2	1100	1235	1330	665		
										16d			1295	1465	1585			
	HD38	HU38	14	2-9/16	6-11/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HD38IF	HUC38	14	2-9/16	6-11/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
3 x 10	JUS310	LUS310	18	2-9/16	9-1/8	2	1	--	8	16d	6	16d	1625	1850	1930	1880		
	SUH310	U310	16	2-9/16	8-7/8	2	1-1/8	--	16	10d	6	10d x 1-1/2	1760	1975	2130	980		
										16d			2070	2070	2070			
	HD38	HU38	14	2-9/16	6-3/4	2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HD38IF	HUC38	14	2-9/16	6-3/4	2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HD310	HU310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HD310IF	HUC310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HDQ310IF	HUCQ310	14	2-9/16	9	3	1-3/16	--	8	WS3	4	WS15	3215	3350	3350	1060		
3 x 12	SUH310	U310	16	2-9/16	8-7/8	2	1-1/8	--	16	10d	6	10d x 1-1/2	1760	1975	2130	980		
										16d			2070	2070	2070			
	HD310	HU310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HD310IF	HUC310	14	2-9/16	7-7/16	2-1/2	1-1/8	Min	10	16d	4	10d x 1-1/2	1355	1525	1640	605		
								Max	14		6		1895	2140	2295	950		
	HDQ310IF	HUCQ310	14	2-9/16	9	3	1-3/16	--	8	WS3	4	WS15	3215	3350	3350	1060		
	HD312	HU312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	950		
								Max	20		10		2710	3055	3210	1215		
	HD312IF	HUC312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	950		
								Max	20		10		2710	3055	3210	1215		
3 x 14	SUH314	U314	16	2-9/16	10-9/16	2	1-1/8	--	18	10d	6	10d x 1-1/2	1980	2220	2395	980		
										16d			2325	2640	2850			
	HDQ310IF	HUCQ310	14	2-9/16	9	3	1-3/16	--	8	WS3	4	WS15	3215	3350	3350	1060		
	HD312	HU312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	950		
								Max	20		10		2710	3055	3210	1215		
	HD312IF	HUC312	14	2-9/16	9-5/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	1895	2140	2295	950		
								Max	20		10		2710	3055	3210	1215		
	HD314	HU314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2165	2445	2620	955		
								Max	24		12		3250	3665	3930	1535		
	HD314IF	HUC314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2165	2445	2620	955		
								Max	24		12		3250	3665	3930	1535		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS15 (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are included with HDQIF hangers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



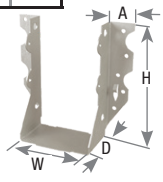
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
3 x 16	SUH314	U314	16	2-9/16	10-9/16	2	1-1/8	--	18	10d	6	10d x 1-1/2	1980	2220	2395	980		IBC, FL, LA
										16d			2325	2640	2850			
	HD314	HU314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2165	2445	2620	955		
								Max	24		12		3250	3665	3930	1535		
	HD314IF	HUC314	14	2-9/16	11-5/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2165	2445	2620	955		
								Max	24		12		3250	3665	3930	1535		
	HD316	HU316	14	2-9/16	13-5/16	2-1/2	1-1/8	Min	18	16d	8	10d x 1-1/2	2440	2750	2950	1210		
								Max	26		12		3520	3950	3950	1535		
	HD316IF	HUC316	14	2-9/16	13-5/16	2-1/2	1-1/8	Min	18	16d	8	10d x 1-1/2	2440	2750	2950	1210		
								Max	26		12		3520	3950	3950	1535		
(2) 3 x 8	HD38-2	HU38-2	14	5-1/8	6-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
(2) 3 x 10	HD38-2	HU38-2	14	5-1/8	6-1/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HD310-2	HU310-2	14	5-1/8	8	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	945		
								Max	20		10		2710	3055	3275	1200		
(2) 3 x 12	HD312-2	HU312-2	14	5-1/8	10	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2060		
(2) 3 x 14	HD312-2	HU312-2	14	5-1/8	10	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2060		
(3) 2 x 6	JUS26-3	LUS26-3	18	4-5/8	4-1/2	2	1	--	4	16d	4	16d	915	1045	1135	1005		
	SUH26-3	U26-3	16	4-5/8	5-1/4	2	1	--	8	10d	2	10d	880	990	1065	330		
										16d			1035	1175	1265			
	HD26-3	HU26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	600		
								Max	12		6		1625	1835	1965	1030		
	HD26-3IF	HUC26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	600		
								Max	12		6		1625	1835	1965	1030		
(3) 2 x 8	JUS26-3	LUS26-3	18	4-5/8	4-1/2	2	1	--	4	16d	4	16d	915	1045	1135	1005		
	JUS28-3	LUS28-3	18	4-5/8	6-3/8	2	1	--	6	16d	4	16d	1165	1330	1445	1005		
	SUH26-3	U26-3	16	4-5/8	5-1/4	2	1	--	8	10d	2	10d	880	990	1065	330		
										16d			1035	1175	1265			
	HD26-3	HU26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	600		
								Max	12		6		1625	1835	1965	1030		
	HD26-3IF	HUC26-3	14	4-5/8	4-1/2	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	600		
								Max	12		6		1625	1835	1965	1030		
	HD28-3	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HD28-3IF	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
(3) 2 x 10	JUS28-3	LUS28-3	18	4-5/8	6-3/8	2	1	--	6	16d	4	16d	1165	1330	1445	1005		
	JUS210-3	LUS210-3	18	4-5/8	8-3/8	2	1	--	8	16d	6	16d	1625	1850	1910	1865		
	SUH210-3	U210-3	16	4-5/8	8-3/8	2	1	--	14	10d	6	10d	1540	1660	1660	970		
										16d			1660					
	HD28-3	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HD28-3IF	--	14	4-5/8	6-3/8	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HD210-3	HU210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3275	1715		
	HD210-3IF	HUC210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3275	1715		
	HDQ210-3IF	HUCQ210-3	14	4-5/8	9	3	1-1/2	--	12	WS3	6	WS3	4480	4575	4575	2650		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



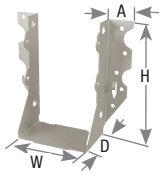
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
(3) 2 x 12	JUS210-3	LUS210-3	18	4-5/8	8-3/8	2	1	--	8	16d	6	16d	1625	1850	1910	1865		
	SUH210-3	U210-3	16	4-5/8	8-3/8	2	1	Min	14	10d	6	10d	1540	1660	1660	970		
								Max		16d			1660					
	HD210-3	HU210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3275	1715		
	HD210-3IF	HUC210-3	14	4-5/8	8-1/4	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3275	1715		
	HDQ210-3IF	HUCQ210-3	14	4-5/8	9	3	1-1/2	--	12	WS3	6	WS3	4480	4575	4575	2650		
	HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3625	3625	2060		
	HD212-3IF	HUC212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3625	3625	2060		
(3) 2 x 14	JUS210-3	LUS210-3	18	4-5/8	8-3/8	2	1	--	8	16d	6	16d	1625	1850	1910	1865		
	SUH210-3	U210-3	16	4-5/8	8-3/8	2	1	Min	14	10d	6	10d	1540	1660	1660	970		
								Max		16d			1660					
	HDQ210-3IF	HUCQ210-3	14	4-5/8	9	3	1-1/2	--	12	WS3	6	WS3	4480	4575	4575	2650		
	HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3625	3625	2060		
	HD212-3IF	HUC212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3625	3625	2060		
	HD214-3	HU214-3	14	4-5/8	12-1/4	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1200		
								Max	26		12		3520	3970	4025	2060		
(3) 2 x 16	HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3625	3625	2060		
	HD212-3IF	HUC212-3	14	4-5/8	10-1/4	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3625	3625	2060		
	HD214-3	HU214-3	14	4-5/8	12-1/4	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1200		
								Max	26		12		3520	3970	4025	2060		
	HD216-3	HU216-3	14	4-5/8	13-1/4	2-1/2	1-1/8	Min	22	16d	10	10d	2980	3360	3605	1715		
								Max	30		14		4035	4035	4035	2405		
(4) 2 x 8	HD28-4	HU28-4	14	6-1/8	7	2-1/2	1-3/4	Min	10	16d	4	16d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1035		
(4) 2 x 10-14	HD210-4	HU210-4	14	6-1/8	9-1/4	2-1/2	2	Min	14	16d	6	16d	1895	2140	2295	1035		
								Max	18		8		2440	2750	2950	1620		
4 x 4	JUS44	LUS44	18	3-5/8	3-1/4	2	1	--	4	16d	2	16d	615	615	615	520		
	SUH44	U44	16	3-9/16	2-7/8	2	1-1/8	Min	6	10d	2	10d	660	740	800	330		
								Max		16d			775	880	950			
	HD44	HU44	14	3-9/16	3-5/16	2-1/2	1-1/8	--	4	16d	2	10d	540	610	655	345		
	HD44IF	HUC44	14	3-9/16	3-5/16	2-1/2	1-1/8	--	4	16d	2	10d	540	610	655	345		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



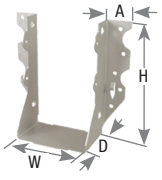
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[3,4]					SPF Allowable Loads (Lbs.)[2]				Corrosion Finish	Code Ref.
									Header		Joist		Floor	Roof		Uplift[1]		
				W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	160%		
4 x 6	JUS46	LUS46	18	3-5/8	5	2	1	--	4	16d	4	16d	915	1045	1135	1010		IBC, FL, LA
	SUH46	U46	16	3-9/16	4-13/16	2	1-1/8	--	10	10d	4	10d	1100	1235	1330	665		
										16d			1295	1465	1585			
	HUS46	HUS46	14	3-5/8	5	2	1	--	4	16d	4	16d	955	1085	1170	930		
	HUS46IF	HUSC46	14	3-5/8	5	2	1	--	4	16d	4	16d	955	1085	1170	930		
	HD46	HU46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605		
								Max	12		6		1625	1835	1965	1030		
	HD46IF	HUC46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605		
								Max	12		6		1625	1835	1965	1030		
4 x 8	JUS46	LUS46	18	3-5/8	5	2	1	--	4	16d	4	16d	915	1045	1135	1010		
	JUS48	LUS48	18	3-5/8	6-7/8	2	1	--	6	16d	4	16d	1165	1330	1445	1010		
	SUH46	U46	16	3-9/16	4-13/16	2	1-1/8	--	10	10d	4	10d	1100	1235	1330	665		
										16d			1295	1465	1585			
	HUS46	HUS46	14	3-5/8	5	2	1	--	4	16d	4	16d	955	1085	1170	930		
	HUS46IF	HUSC46	14	3-5/8	5	2	1	--	4	16d	4	16d	955	1085	1170	930		
	HUS48	HUS48	14	3-5/8	7	2	1	--	6	16d	6	16d	1430	1500	1500	1930		
	HUS48IF	HUSC48	14	3-5/8	7	2	1	--	6	16d	6	16d	1430	1500	1500	1930		
	HD46	HU46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605		
								Max	12		6		1625	1835	1965	1030		
	HD46IF	HUC46	14	3-9/16	5-1/16	2-1/2	1-1/8	Min	8	16d	4	10d	1085	1220	1310	605		
								Max	12		6		1625	1835	1965	1030		
	HD48	HU48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HD48IF	HUC48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
4 x 10	JUS48	LUS48	18	3-5/8	6-7/8	2	1	--	6	16d	4	16d	1165	1330	1445	1010		
	JUS410	LUS410	18	3-5/8	8-7/8	2	1	--	8	16d	6	16d	1625	1850	1920	1870		
	SUH410	U410	16	3-9/16	8-3/8	2	1-1/8	--	16	10d	6	10d	1760	1975	2130	975		
										16d			2070	2345	2535			
	HUS48	HUS48	14	3-5/8	7	2	1	--	6	16d	6	16d	1430	1500	1500	1930		
	HUS48IF	HUSC48	14	3-5/8	7	2	1	--	6	16d	6	16d	1430	1500	1500	1930		
	HD48	HU48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HD48IF	HUC48	14	3-9/16	6-15/16	2-1/2	1-1/8	Min	10	16d	4	10d	1355	1525	1640	685		
								Max	14		6		1895	2140	2295	1030		
	HUS410	HUS410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	1905	2170	2340	1935		
	HUS410IF	HUSC410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	1905	2170	2340	1935		
	HD410	HU410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3190	1715		
	HD410IF	HUC410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3190	1715		
	HDQ410IF	HUCQ410	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	4480	4590	4590	2655		

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Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



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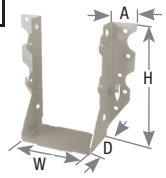
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3,4] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
4 x 12	JUS410	LUS410	18	3-5/8	8-7/8	2	1	--	8	16d	6	16d	1625	1850	1920	1870		IBC, FL, LA
	SUH410	U410	16	3-9/16	8-3/8	2	1-1/8	--	16	10d	6	10d	1760	1975	2130	975		
										16d			2070	2345	2535			
	HUS410	HUS410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	1905	2170	2340	1935		
	HUS410IF	HUSC410	14	3-5/8	8-7/8	2	1	--	8	16d	8	16d	1905	2170	2340	1935		
	HD410	HU410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3190	1715		
	HD410IF	HUC410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3190	1715		
	HDQ410IF	HUCQ410	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	4480	4590	4590	2655		
	HUS412	HUS412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2385	2710	2875	2910		
	HUS412IF	HUSC412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2385	2710	2875	2910		
	HD412	HU412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3665	3860	2060		
	HD412IF	HUC412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3665	3860	2060		
	HDQ412IF	HUCQ412	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
4 x 14	JUS414	LUS414	18	3-5/8	12-7/8	2	1	--	12	16d	6	16d	1920	1920	1920	1870		
	SUH414	U414	16	3-9/16	10-1/16	2	1-1/8	--	18	10d	6	10d	1980	2220	2395	975		
										16d			2325	2640	2850			
	HD410	HU410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3190	1715		
	HD410IF	HUC410	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	1895	2140	2295	1030		
								Max	20		10		2710	3055	3190	1715		
	HDQ410IF	HUCQ410	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	4480	4590	4590	2655		
	HUS412	HUS412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2385	2710	2875	2910		
	HUS412IF	HUSC412	14	3-5/8	10-7/8	2	1	--	10	16d	10	16d	2385	2710	2875	2910		
	HDQ412IF	HUCQ412	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD412	HU412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3665	3860	2060		
	HD412IF	HUC412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3665	3860	2060		
	HD414	HU414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3860	3860	2060		
	HD414IF	HUC414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3860	3860	2060		
4 x 16	JUS414	LUS414	18	3-5/8	12-7/8	2	1	--	12	16d	6	16d	1920	1920	1920	1870		
	SUH414	U414	16	3-9/16	10-1/16	2	1-1/8	--	18	10d	6	10d	1980	2220	2395	975		
										16d			2325	2640	2850			
	HD412	HU412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3665	3860	2060		
	HD412IF	HUC412	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2165	2445	2620	1040		
								Max	24		12		3250	3665	3860	2060		
	HDQ412IF	HUCQ412	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD414	HU414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3860	3860	2060		
	HD414IF	HUC414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3860	3860	2060		
	HD416	HU416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	2980	3360	3605	1715		
								Max	30		14		4015	4015	4015	1805		
	HD416IF	HUC416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	2980	3360	3605	1715		
								Max	30		14		4015	4015	4015	1805		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For JUS and HUS hangers: Nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve the table loads.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
4) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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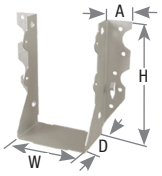


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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Min/ Max	Fastener Schedule[3] Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
4 x 18	HD414	HU414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		IBC, FL, LA
								Max	26		12		3520	3860	3860	2060		
	HD414IF	HUC414	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2440	2750	2950	1205		
								Max	26		12		3520	3860	3860	2060		
	HD416	HU416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	2980	3360	3605	1715		
								Max	30		14		4015	4015	4015	1805		
	HD416IF	HUC416	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	2980	3360	3605	1715		
								Max	30		14		4015	4015	4015	1805		
	HD418	--	14	3-9/16	16-1/2	2-1/2	1-1/4	--	28	16d	8	10d	3795	3835	3835	1375		
6 x 6	SUH66	U66	16	5-1/2	5	2	1	--	8	10d	4	10d	880	990	1065	665		
										16d			1035	1175	1265			
	HD66	HU66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1085	1220	1310	685		
								Max	12		6		1625	1835	1965	1035		
	HD66IF	HUC66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1085	1220	1310	685		
								Max	12		6		1625	1835	1965	1035		
6 x 8	SUH66	U66	16	5-1/2	5	2	1	--	8	10d	4	10d	880	990	1065	665		
										16d			1035	1175	1265			
	HD66	HU66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1085	1220	1310	685		
								Max	12		6		1625	1835	1965	1035		
	HD66IF	HUC66	14	5-1/2	4-1/16	2-1/2	1-1/8	Min	8	16d	4	16d	1085	1220	1310	685		
								Max	12		6		1625	1835	1965	1035		
	HD68	HU68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1355	1525	1640	760		
								Max	14		6		1895	2140	2295	1035		
	HD68IF	HUC68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1355	1525	1640	760		
								Max	14		6		1895	2140	2295	1035		
6 x 10	SUH610	U610	16	5-1/2	9	2	1	--	14	10d	6	10d	1540	1730	1865	970		
										16d			1810	2055	2215			
	HD68	HU68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1355	1525	1640	760		
								Max	14		6		1895	2140	2295	1035		
	HD68IF	HUC68	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1355	1525	1640	760		
								Max	14		6		1895	2140	2295	1035		
	HD610	HU610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	1895	2140	2295	1035		
								Max	20		10		2710	3055	3275	2025		
	HD610IF	HUC610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	1895	2140	2295	1035		
								Max	20		10		2710	3055	3275	2025		
	HDQ610IF	HUCQ610	14	5-1/2	9	3	1-1/2	--	12	WS3	6	WS3	4480	4565	4565	2645		
6 x 12	SUH610	U610	16	5-1/2	9	2	1	--	14	10d	6	10d	1540	1730	1865	970		
										16d			1810	2055	2215			
	HD610	HU610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	1895	2140	2295	1035		
								Max	20		10		2710	3055	3275	2025		
	HD610IF	HUC610	14	5-1/2	7-13/16	2-1/2	1-1/8	Min	14	16d	6	16d	1895	2140	2295	1035		
								Max	20		10		2710	3055	3275	2025		
	HDQ610IF	HUCQ610	14	5-1/2	9	3	1-1/2	--	12	WS3	6	WS3	4480	4565	4565	2645		
	HD612	HU612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2430		
	HD612IF	HUC612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2430		
	HDQ612IF	HUCQ612	14	5-1/2	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



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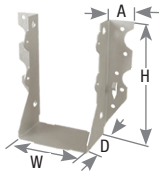
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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	SPF Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
6 x 14	HDQ610IF	HUCQ610	14	5-1/2	9	3	1-1/2	--	12	WS3	6	WS3	4480	4565	4565	2645		IBC, FL, LA
	HD612	HU612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2430		
	HD612IF	HUC612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2430		
	HDQ612IF	HUCQ612	14	5-1/2	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD614	HU614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620		
								Max	26		12		3520	3970	4020	2430		
	HD614IF	HUC614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620		
								Max	26		12		3520	3970	4020	2430		
6 x 16	HD612	HU612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2430		
	HD612IF	HUC612	14	5-1/2	9-13/16	2-1/2	1-1/8	Min	16	16d	8	16d	2165	2445	2620	1035		
								Max	24		12		3250	3665	3930	2430		
	HDQ612IF	HUCQ612	14	5-1/2	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280		
	HD614	HU614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620		
								Max	26		12		3520	3970	4020	2430		
	HD614IF	HUC614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620		
								Max	26		12		3520	3970	4020	2430		
	HD616	HU616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	2980	3360	3605	2025		
								Max	30		14		3990	3990	3990	2835		
	HD616IF	HUC616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	2980	3360	3605	2025		
								Max	30		14		3990	3990	3990	2835		
6 x 18	HD614	HU614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620		
								Max	26		12		3520	3970	4020	2430		
	HD614IF	HUC614	14	5-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620		
								Max	26		12		3520	3970	4020	2430		
	HD616	HU616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	2980	3360	3605	2025		
								Max	30		14		3990	3990	3990	2835		
	HD616IF	HUC616	14	5-1/2	13-13/16	2-1/2	1-1/8	Min	22	16d	10	16d	2980	3360	3605	2025		
								Max	30		14		3990	3990	3990	2835		
8 x 6	HD86	--	14	7-1/2	4-15/16	2-1/2	1-1/8	Min	8	16d	4	16d	1085	1220	1310	685		
								Max	10		4		1355	1525	1640	760		
	HD86IF	--	14	7-1/2	5-1/8	2-1/2	1-1/16	--	10	16d	4	16d	1355	1525	1640	760		
8 x 8	HD88	HU88	14	7-1/2	6-13/16	2-1/2	1-1/8	Min	10	16d	4	16d	1355	1525	1640	760		
								Max	14		6		1895	2140	2295	1030		
	HD88IF	HUC88	14	7-1/2	6-13/16	2-1/2	1-1/8	Min	10	16d	4	16d	1355	1525	1640	760		
								Max	14		6		1895	2140	2295	1030		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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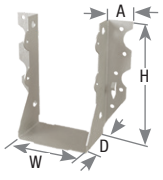


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Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[2]					SPF Allowable Loads (Lbs.)				Code Ref.
									Header		Joist		Floor	Roof		Uplift[1]	
				W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	160%	
8 x 10	HD810	HU810	14	7-1/2	8-9/16	2-1/2	1-1/16	Min	14	16d	6	16d	1895	2140	2295	1030	IBC, FL, LA
								Max	18		8		2440	2750	2950	1620	
	HD810IF	HUC810	14	7-1/2	8-9/16	2-1/2	1-1/16	Min	14	16d	6	16d	1895	2140	2295	1030	
								Max	18		8		2440	2750	2950	1620	
8 x 12	HD812	HU812	14	7-1/2	10-1/2	2-1/2	1-1/16	Min	16	16d	6	16d	2165	2445	2620	1030	
								Max	22		8		2980	3360	3605	1620	
	HD812IF	HUC812	14	7-1/2	10-1/2	2-1/2	1-1/16	Min	16	16d	6	16d	2165	2445	2620	1030	
								Max	22		8		2980	3360	3605	1620	
8 x 14	HD814	HU814	14	7-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620	
								Max	24		12		3250	3665	3885	2430	
	HD814IF	HUC814	14	7-1/2	11-13/16	2-1/2	1-1/8	Min	18	16d	8	16d	2440	2750	2950	1620	
								Max	24		12		3250	3665	3885	2430	
8 x 16	HD816	HU816	14	7-1/2	12-13/16	2-1/2	1-1/16	Min	20	16d	8	16d	2710	3055	3155	1620	
								Max	26		12		3520	3885	3885	2430	
	HD816IF	HUC816	14	7-1/2	13-5/8	2-1/2	1-1/16	--	26	16d	12	16d	3520	3885	3885	2430	
ROUGH LUMBER SIZES																	
2 x 4	SUH24R	LU24R-18, U24R	16	2	3-1/16	2	1-1/8	--	4	10d	2	10d x 1-1/2	440	495	530	310	IBC, FL, LA
										16d			515	585	635		
2 x 6 - 8	SUH26R	LU26R-18, U26R	16	2	4-15/16	2	1-3/16	--	6	10d	4	10d x 1-1/2	660	740	800	665	
										16d			775	880	950		
2 x 8 - 10	SUH28R	LU28R-18	16	2	6-7/16	2	1-1/8	--	8	10d	6	10d x 1-1/2	880	990	1055	705	
										16d			1035	1175	1265		
2 x 10 - 12	SUH210R	LU210R-18, U210R	16	2	7-13/16	2	1-1/8	--	10	10d	6	10d x 1-1/2	1100	1235	1330	980	
										16d			1295	1465	1585		
2 x 14 - 16	SUH214R	--	16	2	9-13/16	2	1-1/8	--	12	10d	8	10d x 1-1/2	1320	1480	1595	1330	
										16d			1550	1760	1900		
4 x 4	SUH44R	U44R	16	4	2-11/16	2	1-1/8	--	6	10d	2	16d	660	740	800	370	
										16d			775	880	950		
4 x 6	SUH46R	U46R	16	4	4-11/16	2	1-1/8	--	8	10d	4	16d	880	990	1065	695	
										16d			1035	1175	1265		
4 x 10 - 12	SUH410R	U410R	16	4	8-3/16	2	2	--	14	10d	6	16d	1540	1730	1865	975	
										16d			1810	2055	2215		
6 x 8	SUH66R	U66R	16	6	5	2	1	--	8	10d	4	16d	880	990	1065	690	
										16d			1035	1175	1265		
6 x 10 - 12 - 14	SUH610R	U610R	16	6	9	2	1	--	14	10d	6	16d	1540	1730	1865	970	
										16d			1810	2055	2215		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

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HL Light Gauge Purlin Hangers

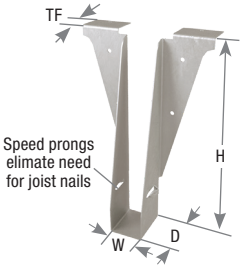
These top mount hangers are designed for supporting floor joists or 2x dimensional lumber. The top mount style allows builders to drop in joists or purlins quickly.

Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.



Typical HL210 installation



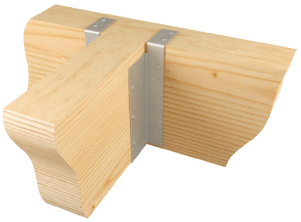
HL210

HDO Heavy-Duty Top Mount Hangers

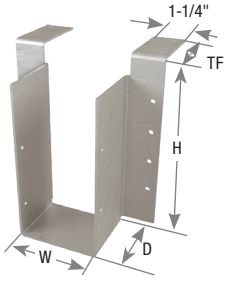
Primarily used to hang joists or headers in medium load conditions. These hangers provide higher load values with less nailing.

Materials: 12 gauge
Finish: G90 galvanizing
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- Check top flange dimensions to ensure compatibility with header widths.
- **Do not use for welded or nailer applications. Reference Specialty Options table below for hanger options.**



HDO standard installation



HDO28-2



Typical HDO410IF inverted flange installation



Typical HDO skewed option installation

Specialty Options Table
Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Inverted Flange
Range	1˚ to 67-1/2˚ when width is 1-3/4" or less. 1˚ to 50˚ on all others.	1˚ to 45˚	See Sloped Seat and Skewed	Not available in widths less than 3-1/8"
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut (*SQ*) or bevel cut (*BV*) to product number. Ex. HDO210_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. HDO210_SL30D	See Sloped Seat and Skewed. Ex. HDO210_SK45R_SL30D_SQ	Add *IF* to product number. Ex. HDO610_IF

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

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BPHA / KB / KLB Beam & Purlin Hangers

Top mount hangers cover medium-to-heavy beam and purlin applications.

Materials: BPHA – 12 gauge; KB – 12 gauge; KLB – 14 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options. See BPHA Nailer Options Table and BPHA Specialty Options Table
Codes: IBC, FL, LA

Installation:

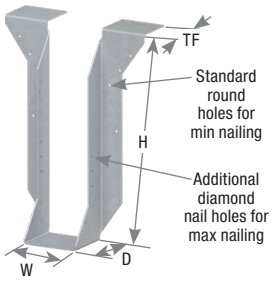
- Install the required fasteners according to the table.
- NA20D nails are included with KB hangers.
- **BPHA Min Nailing** – Fill all round nail holes.
- **BPHA Max Nailing** – Fill all round and diamond nail holes.
- For welded installations, see page 327.
- **KB / KLB models are not recommended for use with LVL, PSL, or LSL members.**



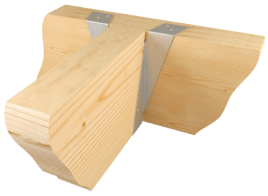
Typical BPHA max nailing installation



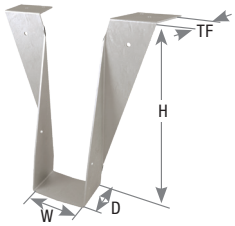
Typical BPHA min nailing installation



BPHA



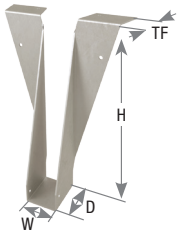
Typical KB installation



KB



Typical KLB installation



KLB

BPHA Nailer Options

– Table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[4]					DF/SP Allowable Loads (Lbs.)[3]		S-P-F Allowable Loads (Lbs.)[3]	
		Header			Joist					
		Top Qty	Face Qty	Type	Qty	Type	Download[2] 100%	Uplift[1] 160%	Download[2] 100%	Uplift[1] 160%
BPHA	2X	6	--	10d x 1-1/2	8	10d x 1-1/2	2170	405	1825	340
	3X	6	2	16d x 2-1/2	8	10d x 1-1/2	3370	845	2830	710
	(2) 2X	6	4	10d	8	10d x 1-1/2	2620	1155	2200	970
	4X	6	4	16d	8	10d x 1-1/2	4005	1155	3045	970

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Listed download shall not be increased.
3) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.

BPHA Specialty Options Table

– Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]
Range	1° to 50°	1° to 45°	See Sloped Seat and Skewed	0° to 45°
Allowable Loads	100% of table load	100% of table load	100% of table load	100% of table load
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Example: BPHA410_SK45R_SQ	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Example: BPHA410_SL30D	See Sloped Seat and Skewed. Example: BPHA410_SK45R_SL30D_SQ	Add *SLTF*, angle required and right *(R)* or left *(L)*, to product number. Example: BPHA410_SLTF30L

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.
4) Sloped top flanges with slopes greater than 15° may have additional header nails.

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SW – Light-duty hanger

SWH – Medium-duty hanger

KHW – Heavy-duty hanger installs with NA20D nails for higher load capacities

Materials: SW top flange - 12 gauge; stirrup - 12 gauge;
SWH top flange - 7 gauge; stirrup - 12 gauge;
KHW top flange - 3 gauge; stirrup - 10 gauge

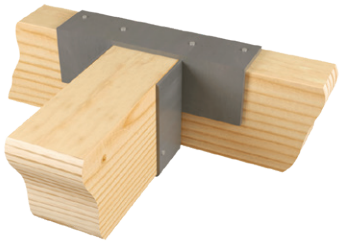
Finish: Primer

Options: See Specialty Options below

Codes: IBC, FL, LA

Installation:

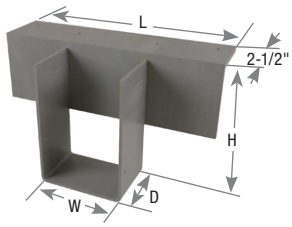
- Install the required fasteners according to the table.
- NA20D nails are supplied with KHW hangers.
- For welded installations see page 327.
- **KHW models are not recommended for use with LVL, PSL, or LSL headers.**



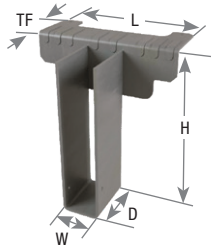
Typical KHW46 installation



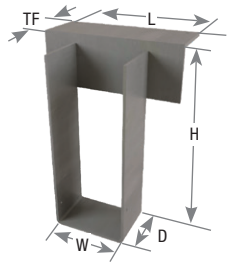
Typical SW210 installation



KHW46



SW210



SWH410

Nailer Options

Table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[4]				DF/SP Allowable Loads (Lbs.)[1,3]	SPF Allowable Loads (Lbs.)[1,3]
		Nailer		Joist			
		Top Qty	Type	Qty	Type	Download 100%	Download 100%
SW [2] widths ≥ 2-9/16"	2X	2	10d x 1-1/2	2	10d x 1-1/2	1635	1115
	3x	2	16d x 2-1/2	2	10d x 1-1/2	2390	2010
	(2) 2x	2	16d x 2-1/2	2	10d x 1-1/2	2390	2010
	4x	2	16d x 2-1/2	2	10d x 1-1/2	2390	2010
SWH	2X	2	10d x 1-1/2	2	10d x 1-1/2	2600	1770
	3X	2	16d x 2-1/2	2	10d x 1-1/2	3305	2280
	(2) 2x	2	16d x 2-1/2	2	10d x 1-1/2	3305	2280
	4x	2	16d x 2-1/2	2	10d x 1-1/2	3305	2280
KHW	3X	4	16d x 2-1/2	2	10d	4415	3525

1) Listed loads shall not be increased.
2) SW hangers with a width of less than 2-9/16" are limited to 2,315 lbs. of download.
3) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.

Specialty Options Table – Refer to Specialty Options pages 320-321, 324 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]	Top Flange Offset		Saddle	Ridge
Range	1° to 84°	1° to 45°	See Sloped Seat and Skewed	0° to 35°	--		--	0° to 45°
Allowable Loads	100% of table load	100% of table load	100% of table load	100% of table load	**Hanger Width** 3-1/2" or less 3-9/16" to 5-1/2" 5-9/16" to 7-1/2"	**% of table load:** 60% 75% 85%	100% of table load per side	100% of table load
Ordering	Add *SK,* angle required, right (*R*) or left (*L*), and square cut (*SQ*) or bevel cut (*BV*) to product number. Ex. SW212_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. SW212_SL30D	See Sloped Seat and Skewed. Ex. SW212_SK45R_SL30D_SQ	Add *SLTF,* angle required, and right *(R)* or left *(L),* to product number. Ex. SW212_SLTF30L	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. SW212_OSL		Add *SA,* and saddle width required to product number. Ex. SW212_SA=5.5	Add *DA,* angle required to product number. Ex. SW212_DA30

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.
4) Sloped top flanges with greater than 15° may have additional header nails.

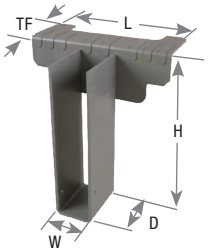
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Top Mount Hanger Tables

Beam/ Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[2]						DF/SP Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
										Header			Joist		Floor	Roof		Uplift[1]		
				W	H	D	L	TF	Min/ Max	Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%		
2 x 4	HDO24	HU24TF	12	1-9/16	3-7/16	2-1/4	--	2-1/2	--	4	2	16d	2	10d x 1-1/2	2405	2440	2460	330		
2 x 6	HL26	JB26	18	1-9/16	5-3/8	1-1/2	--	1-5/16	--	2	4	16d	2	prongs	1255	1255	1255	--		
	KLB26	LB26	14	1-9/16	5-3/8	1-1/2	--	1-3/8	--	2	4	16d	2	10d x 1-1/2	1670	1705	1725	390		
	SW26	--	12	1-9/16	5-3/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2315	2315	2315	135		
	HDO26	HU26TF	12	1-9/16	5-3/8	2-1/4	--	2-1/2	--	4	6	16d	4	10d x 1-1/2	2705	2770	2815	825		
2 x 8	HL28	JB28	18	1-9/16	7-5/16	1-3/4	--	1-5/16	--	2	4	16d	2	prongs	1490	1490	1490	--		
	KLB28	LB28	14	1-9/16	7-1/4	1-3/4	--	1-3/8	--	2	4	16d	2	10d x 1-1/2	1905	1935	1960	390		
	SW28	--	12	1-9/16	7-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2315	2315	2315	135		
	HDO28	HU28TF	12	1-9/16	7-1/8	2-1/4	--	2-1/2	--	4	6	16d	4	10d x 1-1/2	2705	2770	2815	825		
2 x 10	HL210	JB210A	18	1-9/16	9-5/16	2	--	1-5/16	--	2	4	16d	2	prongs	1490	1490	1490	--		
	KLB210	LB210A	14	1-9/16	9-1/4	2	--	1-3/8	--	2	4	16d	2	10d x 1-1/2	2140	2170	2195	390		
	SW210	--	12	1-9/16	9-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2315	2315	2315	135		
	HDO210	HU210TF	12	1-9/16	9-1/8	2-1/4	--	2-1/2	--	4	8	16d	4	10d x 1-1/2	2705	2770	2815	825		
2 x 12	HL212	JB212A	18	1-9/16	11-1/4	2-5/16	--	1-5/16	--	2	4	16d	2	prongs	1490	1490	1490	--		
	KLB212	LB212A	14	1-9/16	11-1/8	2	--	1-3/8	--	2	4	16d	2	10d x 1-1/2	2140	2170	2195	390		
	SW212	--	12	1-9/16	11-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2315	2315	2315	135		
	HDO212	HU212TF	12	1-9/16	11	2-1/4	--	2-1/2	--	4	10	16d	6	10d x 1-1/2	3005	3105	3165	1190		
2 x 14	HL214	JB214A	18	1-9/16	13-1/8	2	--	2-1/2	--	2	6	16d	2	10d x 1-1/2	1490	1490	1490	250		
	SW214	--	12	1-9/16	13-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2315	2315	2315	135		
	HDO214	HU214TF	12	1-9/16	13	2-1/4	--	2-1/2	--	4	12	16d	6	10d x 1-1/2	3005	3105	3140	1190		
2 x 16	SW216	--	12	1-9/16	15-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2315	2315	2315	135		IBC, FL, LA
	HDO216	HU216TF, LB216	12	1-9/16	15	2-1/4	--	2-1/2	--	4	14	16d	8	10d x 1-1/2	3300	3435	3520	1700		
3 x 4	HDO34	HU34TF	12	2-9/16	3-7/16	2-1/2	--	2-1/2	--	4	4	16d	2	10d x 1-1/2	2965	2965	2965	330		
3 x 6	SW36	--	12	2-9/16	5-3/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2520	2520	2520	135		
	HDO36	HU36TF	12	2-9/16	5-3/8	2-1/2	--	2-1/2	--	4	6	16d	4	10d x 1-1/2	4125	4320	4450	825		
3 x 8	SW38	--	12	2-9/16	7-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2520	2520	2520	135		
	HDO38	HU38TF	12	2-9/16	7-1/8	2-1/2	-- --	2-1/2	--	4	8	16d	4	10d x 1-1/2	4465	4570	4575	825		
3 x 10	SW310	--	12	2-9/16	9-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d x 1-1/2	2520	2520	2520	135		
	HDO310	HU310TF	12	2-9/16	9-1/8	2-1/2	--	2-1/2	--	4	10	16d	6	10d x 1-1/2	4575	4575	4575	1065		
	BPHA310	BA310	12	2-9/16	9-1/8	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4985	5020	5040	245		
									Max				8		5270	5270	5270	1665		
3 x 12	SWH312	--	7/12	2-9/16	11-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d x 1-1/2	3305	3305	3305	135		
	HDO312	HU312TF	12	2-9/16	11	2-1/2	--	2-1/2	--	4	12	16d	6	10d x 1-1/2	4800	4900	4965	1115		
3 x 14	SWH314	--	7/12	2-9/16	13-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d x 1-1/2	3305	3305	3305	135		
	HDO314	HU314TF	12	2-9/16	13	2-1/2	--	2-1/2	--	4	14	16d	8	10d x 1-1/2	5100	5230	5315	1115		
3 x 16	SWH316	--	7/12	2-9/16	15-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d x 1-1/2	3305	3305	3305	135		
	HDO316	HU316TF	12	2-9/16	15	2-1/2	--	2-1/2	--	4	16	16d	8	10d x 1-1/2	5100	5230	5315	1700		
(2) 2 x 4	HDO24-2	HU24-2TF	12	3-1/8	3-7/16	2-1/4	--	2-1/2	--	4	4	16d	2	10d	2965	2965	2965	400		
(2) 2 x 6	SWH26-2	WP26-2	7/12	3-1/8	5-3/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135		
	HDO26-2	HU26-2TF, HUS26-2TF	12	3-1/8	5-3/8	2-1/4	--	2-1/2	--	4	6	16d	4	10d	4125	4320	4450	825		
(2) 2 x 8	SWH28-2	WP28-2	7/12	3-1/8	7-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135		
	HDO28-2	HU28-2TF, HUS28-2TF	12	3-1/8	7-1/8	2-1/4	--	2-1/2	--	4	8	16d	4	10d	4465	4575	4575	825		

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
New products or updated product information are designated in **blue font.**

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

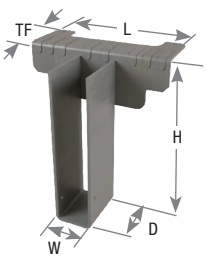


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Beam/ Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[2]						DF/SP Allowable Loads (Lbs.)				Code Ref.
										Header			Joist		Floor	Roof		Uplift[1]	
				W	H	D	L	TF	Min/ Max	Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%	
(2) 2 x 10	SWH210-2	WP210-2	7/12	3-1/8	9-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	IBC, FL, LA
	HDO210-2	HU210-2TF, HUS210-2TF	12	3-1/8	9-1/8	2-1/4	--	2-1/2	--	4	10	16d	6	10d	4575	4575	4575	1275	
	HDO210-2IF	HUC210-2TF, HUSC210-2TF	12	3-1/8	9-1/8	2-1/4	--	2-1/2	--	4	10	16d	6	10d	4575	4575	4575	1275	
	BPHA210-2	BA210-2	12	3-1/8	9-1/8	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	245	
									Max				8					1665	
(2) 2 x 12	SWH212-2	WP212-2	7/12	3-1/8	11-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	HDO212-2	HU212-2TF, HUS212-2TF	12	3-1/8	11	2-1/2	--	2-1/2	--	4	12	16d	6	10d	5155	5465	5675	1275	
(2) 2 x 14	SWH214-2	WP214-2	7/12	3-1/8	13-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	HDO214-2	HU214-2TF, HUS214-2TF	12	3-1/8	13	2-1/2	--	2-1/2	--	4	14	16d	8	10d	5500	5845	6080	1510	
(2) 2 x 16	SWH216-2	WP216-2	7/12	3-1/8	15-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	HDO216-2	HU216-2TF	12	3-1/8	15	2-1/2	--	2-1/2	--	4	16	16d	8	10d	5845	6010	6100	1700	
4 x 4	HDO44	HU44TF	12	3-9/16	3-7/16	2-1/4	--	2-1/2	--	4	4	16d	2	10d	2965	2965	2965	400	
4 x 6	SW46	WP46	12	3-9/16	5-3/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d	2520	2520	2520	135	
	HDO46	HU46TF	12	3-9/16	5-3/8	2-1/4	--	2-1/2	--	4	6	16d	4	10d	4125	4320	4450	825	
	KHW46	--	3/10	3-9/16	5-3/8	2-1/2	10	2-1/2	--	4	--	NA20D	2	10d	5535	5535	5535	135	
4 x 8	SW48	WP48	12	3-9/16	7-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d	2520	2520	2520	135	
	HDO48	HU48TF	12	3-9/16	7-1/8	2-1/4	--	2-1/2	--	4	8	16d	4	10d	4465	4575	4575	825	
	BPHA48	BA48	12	3-9/16	7-1/8	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	245	
									Max				8					1665	
	KHW48	--	3/10	3-9/16	7-1/8	2-1/2	10	2-1/2	--	4	--	NA20D	2	10d	5535	5535	5535	135	
4 x 10	SW410	--	12	3-9/16	9-1/8	2-1/2	6-1/2	2-1/2	--	2	--	10d	2	10d	2520	2520	2520	135	
	HDO410	HU410TF	12	3-9/16	9-1/8	2-1/4	--	2-1/2	--	4	10	16d	6	10d	4785	4785	4785	1275	
	SWH410	WP410	7/12	3-9/16	9-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	BPHA410	BA410	12	3-9/16	9-1/8	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	245	
									Max				8					1665	
	KHW410	--	3/10	3-9/16	9-1/8	2-1/2	10	2-1/2	--	4	--	NA20D	2	10d	5535	5535	5535	135	
4 x 12	KB412	--	12	3-9/16	11-1/8	2-3/8	--	2-1/2	--	4	2	NA20D	2	NA20D	4075	4155	4185	580	
	HDO412	HU412TF	12	3-9/16	11	2-1/4	--	2-1/2	--	4	12	16d	6	10d	5155	5465	5675	1275	
	SWH412	WP412	7/12	3-9/16	11-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	BPHA412	BA412	12	3-9/16	11	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	245	
									Max				8					1665	
	KHW412	--	3/10	3-9/16	11-1/8	2-1/2	10	2-1/2	--	4	--	NA20D	2	10d	5535	5535	5535	135	
4 x 14	HDO414	HU414TF	12	3-9/16	13	2-1/2	--	2-1/2	--	4	14	16d	8	10d	5500	5845	6080	1510	
	SWH414	WP414	7/12	3-9/16	13-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	KHW414	--	3/10	3-9/16	13-1/8	2-1/2	10	2-1/2	--	4	--	NA20D	2	10d	5535	5535	5535	135	
4 x 16	HDO416	HU416TF	12	3-9/16	15	2-1/2	--	2-1/2	--	4	16	16d	8	10d	5845	6230	6460	1700	
	SWH416	WP416	7/12	3-9/16	15-1/8	2-1/2	7	2-1/2	--	2	--	16d	2	10d	3305	3305	3305	135	
	KHW416	--	3/10	3-9/16	15-1/8	2-1/2	10	2-1/2	--	4	--	NA20D	2	10d	5535	5535	5535	135	

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, NA20D nails are 0.192" dia. x 2-1/2" long and are included with KB and KHW hangers.
New products or updated product information are designated in **blue font.**



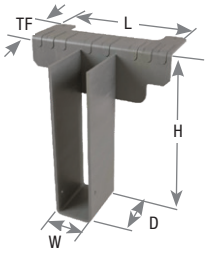
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Top Mount Hanger Tables

Beam/ Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[2]					DF/SP Allowable Loads (Lbs.)				Code Ref.
									Header			Joist		Floor	Roof		Uplift[1]	
				W	H	D	L	TF	Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%	
(3) 2 x 10	HDO210-3	HU210-3TF	12	4-11/16	9-1/8	2-1/2	--	2-1/2	4	10	16d	6	16d	4575	4575	4575	1450	IBC, FL, LA
(3) 2 x 12	HDO212-3	HU212-3TF	12	4-11/16	11	2-1/2	--	2-1/2	4	12	16d	6	16d	5155	5465	5675	1490	
(3) 2 x 14	HDO214-3	HU214-3TF	12	4-11/16	13	2-1/2	--	2-1/2	4	14	16d	8	16d	5500	5845	6080	1985	
(3) 2 x 16	HDO216-3	HU216-3TF	12	4-11/16	15	2-1/2	--	2-1/2	4	16	16d	8	16d	5845	6230	6460	1985	
6 x 6	HDO66	HU66TF	12	5-1/2	5-3/8	2-1/2	--	2-1/2	4	6	16d	4	16d	4125	4320	4450	990	
	SWH66	WP66	7/12	5-1/2	5-3/8	2-1/2	7	2-1/2	2	--	16d	2	10d	3305	3305	3305	135	
	KHW66	--	3/10	5-1/2	5-3/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
6 x 8	HDO68	HU68TF	12	5-1/2	7-1/8	2-1/2	--	2-1/2	4	8	16d	4	16d	4465	4575	4575	990	
	SWH68	WP68	7/12	5-1/2	7-1/8	2-1/2	7	2-1/2	2	--	16d	2	10d	3305	3305	3305	135	
	KHW68	--	3/10	5-1/2	7-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
6 x 10	KB610	--	12	5-1/2	9-1/4	2-3/8	--	2-1/2	4	6	NA20D	2	NA20D	4795	4920	4920	580	
	HDO610	HU610TF	12	5-1/2	9-1/8	2-1/2	--	2-1/2	4	10	16d	6	16d	4575	4575	4575	1450	
	SWH610	WP610	7/12	5-1/2	9-1/8	2-1/2	7	2-1/2	2	--	16d	2	10d	3305	3305	3305	135	
	KHW610	--	3/10	5-1/2	9-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
6 x 12	KB612	--	12	5-1/2	11-1/8	2-3/8	--	2-1/2	4	6	NA20D	2	NA20D	4795	4920	4920	580	
	HDO612	HU612TF	12	5-1/2	11	2-1/2	--	2-1/2	4	12	16d	6	16d	5155	5465	5675	1365	
	KHW612	--	3/10	5-1/2	11-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
6 x 14	HDO614	HU614TF	12	5-1/2	13	2-1/2	--	2-1/2	4	14	16d	8	16d	5500	5845	6080	1510	
	KHW614	--	3/10	5-1/2	13-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
6 x 16	HDO616	HU616TF	12	5-1/2	15	2-1/2	--	2-1/2	4	16	16d	8	16d	5845	6230	6460	1830	
	KHW616	--	3/10	5-1/2	15-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
8 x 6	KHW86	--	3/10	7-1/2	5-3/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
8 x 8	KHW88	--	3/10	7-1/2	7-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
8 x 10	KHW810	--	3/10	7-1/2	9-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
8 x 12	KHW812	--	3/10	7-1/2	11-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
8 x 14	KHW814	--	3/10	7-1/2	13-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	
8 x 16	KHW816	--	3/10	7-1/2	15-1/8	2-1/2	10	2-1/2	4	--	NA20D	2	10d	5535	5535	5535	135	

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, NA20D nails are 0.192" dia. x 2-1/2" long and are included with KB and KHW hangers.



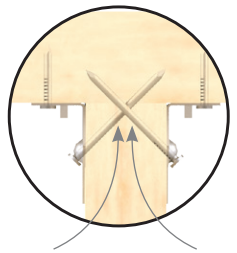
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JH Multi-Purpose Strap Hanger

These strap-style hangers are designed to support trusses, joists, or purlins. JH models may be bent along the flange allowing builders to use the hangers in top mount, face mount, or combination applications.

Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- **Slant / double shear joist nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.**
- If installing in top mount configuration, field bend top flange over header.
- 16d sinkers (0.148" dia. x 3-1/4") may be used where 10d common are specified with no load reduction.

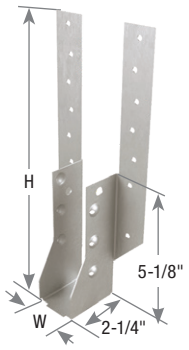


Double shear nail design features fewer nails and faster installation

Uses standard length common nails



Typical JH20 installation



JH20

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Header Size	Fastener Schedule[2,3] Header Top Qty	Header Face Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Uplift[1] 160%	Code Ref.
2 x 6 - 12	JH20	--	18	1-9/16	10-1/16	2 x 6	2	4	10d	6	10d	1910	2070	2175	1300	1510	1650	1740	1050	IBC, FL, LA
						2 x 8	2	8	10d	6	10d	2555	2780	2935	1300	2040	2240	2375	1050	
						2 x 10	2	12	10d	6	10d	2295	2595	2790	1300	1955	2220	2395	1050	
						2 x 12	--	14	10d	6	10d	2210	2545	2765	1300	1945	2240	2435	1050	

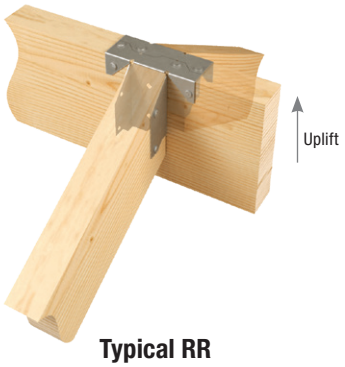
1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Nails must be driven at a 30° to 45° angle through the joist or truss into header to achieve the table loads.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long. 16d sinkers (0.148" dia. x 3-1/4" long) may be used where 10d commons are specified with no reduction in load.

RR Ridge Rafter Hanger

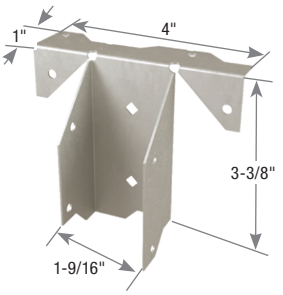
The RR Ridge Rafter supports rafter pitches up to 7:12 (30°). Nesting top flange for back-to-back installation on 2x support beams.

Materials: 18 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- The rafter end at the ridge must be plumb cut to achieve published loads.
- Optional diamond nail holes can be used to fasten RR to end of rafter before setting rafter into place.



Typical RR installation



RR

MiTek Stock No.	Ref. No.	Steel Gauge	Min Rafter Size	Fastener Schedule[2] Header Qty	Header Type	Rafter Qty	Rafter Type	DF/SP Allowable Loads (Lbs.)[1] Download 100%	Download 115%	Download 125%	Uplift 160%	S-P-F Allowable Loads (Lbs.)[1] Download 100%	Download 115%	Download 125%	Uplift 160%	Code Ref.
RR	RR	18	2 x 6	4	10d x 1-1/2	4	10d x 1-1/2	365	365	365	205	290	290	290	160	--
				4	LL915	4	LL915	380	380	380	180	320	320	320	150	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long and LL915 denotes a MiTek LumberLok Screw, #9 x 1-3/8" long.

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LS Light Slope Rafter Hangers

A field-adjustable seat gives the LS hanger application flexibility.

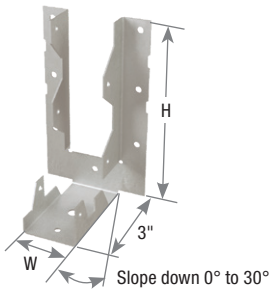
The LS hanger slopes from 0° to 30° down (0 to 7:12 pitch down).

Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- The LS can be field adjusted to slopes from 0° to 30° down.



Typical LS268 installation



LS268

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)					S-P-F Allowable Loads (Lbs.)				Code Ref.
						Header		Joist		Download			Uplift[1]		Download			Uplift[1]	
				W	H	Qty	Type	Qty	Type	100%	115%	125%	160%		100%	115%	125%	160%	
2 x 6 - 8	LS268	--	18	1-9/16	5-1/2	7	10d x 1-1/2	7	10d x 1-1/2	840	960	1035	660		740	850	925	530	IBC, FL, LA
						7	16d			1000	1135	1170	660		880	940	940	530	
2 x 10	LS210	--	18	1-9/16	7-7/8	9	10d x 1-1/2	9	10d x 1-1/2	1080	1230	1330	1035		950	1085	1085	835	
						9	16d			1285	1350	1350	1035		1085	1085	1085	835	

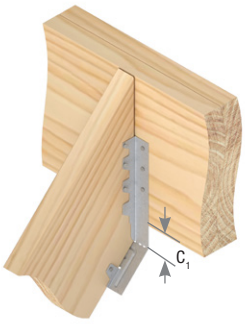
1) Uplift loads are increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

LSRR Light-Duty Slope Rafter / Retrofit Hanger

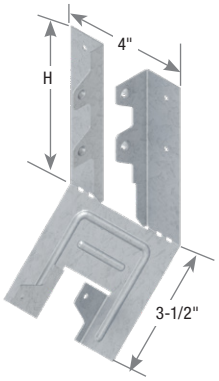
The LSRR is a sloped hanger that can be adjusted in the field for solid sawn rafters. This innovative hanger allows the carried member to be installed flush with the bottom of supporting member or with the bottom of carried member extended below the supporting member. This hanger installs will fewer nails when compared to similar connectors. The LSRR may be installed after the rafters are in place allowing flexible installation sequencing and retrofit options. Slopes up or down to 45°.

Materials: 18 gauge
Finish: G-185 galvanizing
Codes: IBC, FL, LA

Installation:
- Place solid sawn rafter in the installation position.
- Slide the LSRR into position from below and install 10d nails into header.
- Bend bottom flange to match rafter and drive 10d x 1-1/2" nails squarely into rafter.
- Install 10d common slant nails at a 30° angle, allowing them to penetrate supporting member.



Typical LSRR installation



Typical LSRR installation

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2,3]					DF/SP Allowable Loads (Lbs.)					S-P-F Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
									Rafter Flange		Floor	Roof		Uplift[1]		Floor	Roof		Uplift[1]		
				H	Max C_1	Header Qty	Slant Nails Qty	Type	Qty	Type	100%	115%	125%	160%		100%	115%	125%	160%		
2 x 6-8	LSRR26-TZ	LRU26Z	18	5	1-3/4	4	4	10d	2	10d x 1-1/2	870	1000	1080	1020		765	880	950	810		IBC, FL, LA
2 x 8-10	LSRR28-TZ	LRU28Z	18	6-7/8	3	6	4	10d	2	10d x 1-1/2	1110	1270	1340	1190		980	1085	1085	945		
2 x 10-14	LSRR210-TZ	LRU210Z	18	8-1/2	3	6	6	10d	2	10d x 1-1/2	1310	1495	1620	1560		1150	1120	1210	1250		
2 x 12-16	LSRR212-TZ	LRU212Z	18	10-5/16	4-1/2	6	6	10d	2	10d x 1-1/2	1310	1495	1620	1560		1150	1245	1245	1305		

1) Uplift loads are increased 60% for wind or seismic loads; no further increase shall be permitted.
2) For exterior applications, hot-dip galvanized (HDG) fasteners must be used.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font.**

Corrosion Finish Key
Stainless Steel Gold Coat
HDG Triple Zinc

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LSS Slope/Skew Hangers

The LSS series is ideal for connecting rafters to ridge and hip beams in vaulted roof structures. This series is field adjustable to meet a variety of skew and/or slope applications. Slopes and skews 0° to 45°.

Materials: 18 guage
Finish: G-185 galvanizing
Codes: IBC, FL, LA

Installation:

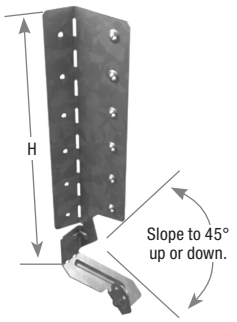
- Install the required fasteners according to the table.
- Hot-dip galvanized fasteners are required for exterior applications.
- Toe-nailing the rafter into place for temporary support may help with installation.
- LSS is available in left (L) and right (R) versions. Illustrations show left and right skews.

Steps:

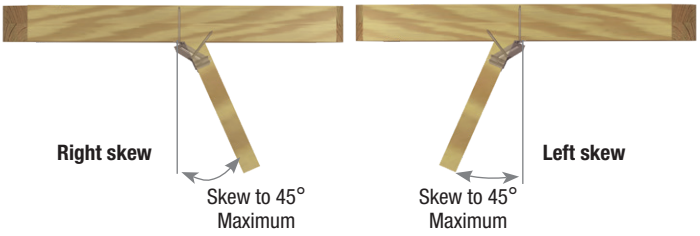
1. Bend the back flange of the LSS to match the skew angle of the rafter.
2. Position the LSS against the rafter and bend the seat (bottom) of the LSS to match the slope of the rafter.
3. With the LSS held tight to the side and bottom of the rafter, install the prescribed nails into the ridge or hip beam.
4. Install the prescribed nails through the dimple nail holes into the rafter.
5. Install the prescribed nails through the seat into the rafter.



Typical LSS210L-TZ installation
left skew



LSS210R-TZ
right skew



Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) H	Fastener Schedule[4,5] Header Qty	Header Type	Joist Qty	Joist Type[3]	DF/SP Allowable Loads (Lbs.)[1,2] Download 100%	Download 115%	Download 125%	Uplift 160%	S-P-F Allowable Loads (Lbs.)[1,2] Download 100%	Download 115%	Download 125%	Uplift 160%	Corrosion Finish	Code Ref.
2 x 6-8	LSS26L/R-TZ	LSSJ26L/RZ	18	5-3/8	4	10d x 1-1/2	6	10d x 1-1/2	480	520	520	520	420	430	430	430		IBC, FL, LA
					4	10d	6	10d	870	1000	1110	1110	765	875	970	920		
2 x 8-10	LSS28L/R-TZ	LSSJ28L/RZ	18	7-1/8	5	10d x 1-1/2	7	10d x 1-1/2	600	685	740	740	525	600	645	615		
					5	10d	7	10d	1090	1250	1385	1385	955	1095	1215	1150		
2 x 10-14	LSS210L/R-TZ	LSSJ210L/RZ	18	9-1/8	6	10d x 1-1/2	8	10d x 1-1/2	720	820	885	885	630	720	775	740		
					6	10d	8	10d	1310	1495	1600	1600	1145	1315	1335	1335		

1) Allowable loads apply to hangers skewed 0°-45° from perpendicular with the hanger bucket sloped 0°-45° down from horizontal.
2) Uplift loads are increased 60% for wind or seismic loads; no further increase shall be permitted.
3) 10d x 1-1/2 nails may be substituted for 10d common nails in the two lowermost joist bucket nail holes for all installations with no reduction in allowable loads.
4) For exterior applications, hot-dip galvanized (HDG) fasteners must be used.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

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The LSSH series connects rafters to ridge beams in vaulted roof structures. This series is field adjustable to meet a variety of skew and/or slope applications. Slopes and skews 0° to 45°.

Materials: See table
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

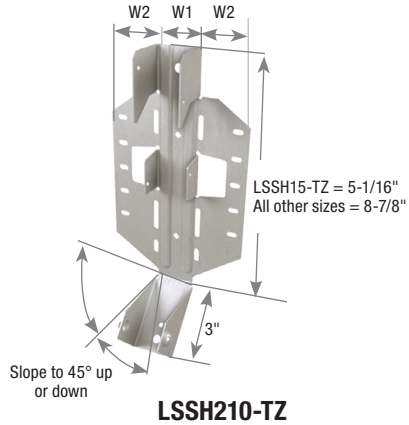
Installation:
- Install the required fasteners according to the table.

Steps:
1. Position LSSH connector against plumb-cut end of joist. Fasten joist side flanges on both sides with 10d (0.148") x 1-1/2" nails. Bend seat up to fit against joist bottom and drive (1) 10d (0.148") x 1-1/2" nail through bottom seat into rafter bottom. Drive (2) 10d (0.148") x 1-1/2" nails at downward angle through dimpled nailing guides.
2. Lean connector and rafter end against ridge beam at desired position. Install specified 10d (0.148" dia. x 3") or 16d (0.162 x 3-1/2") nails through nail holes into ridge beam at right 90° angle. If skewing the rafter, only drive nails into ridge beam on inside flange.
3. Bend flange to desired angle.
4. Hammer outside flange until edge touches header. Fasten outside flange to ridge by driving specified 10d (0.148" dia. x 3") or 16d (0.162 x 3-1/2") nails through nail holes.

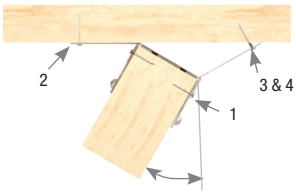
- Web stiffeners are required for all wood I-Joist installations.
- Designer may consider adding a tension restraint for the supported member for roof slopes exceeding 6/12. Refer to page 118.



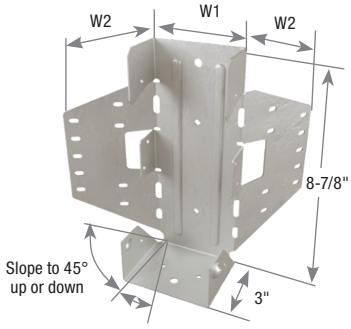
Typical LSSH179-TZ installation



LSSH210-TZ



Skew to 45° maximum



LSSH35-TZ

Rafter Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2,3,4]				DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Corrosion	Finish	Code Ref.
						Header		Rafter		Floor	Roof		Uplift[1]	Floor	Roof		Uplift[1]			
				W1	W2	Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%			
SLOPED ONLY HANGERS																				
1-1/2	LSSH15-TZ	--	18	1-9/16	1-3/4	6	10d	7	10d x 1-1/2	720	820	885	565	640	730	785	440			
1-1/2	LSSH210-TZ	--	18	1-9/16	1-3/4	10	10d	7	10d x 1-1/2	1200	1370	1395	410	1065	1090	1090	320			
1-3/4	LSSH179-TZ	--	18	1-13/16	1-5/8	10	10d	7	10d x 1-1/2	1200	1370	1395	880	1065	1090	1090	690			
2 - 2-1/8	LSSH20-TZ	--	18	2-1/8	2-1/2	10	10d	7	10d x 1-1/2	1200	1370	1395	795	1065	1085	1085	620			IBC, FL, LA
2-1/4 - 2-5/16	LSSH23-TZ	--	18	2-5/16	2-3/8	10	10d	7	10d x 1-1/2	1200	1370	1395	795	1065	1085	1085	620			
2-1/2	LSSH25-TZ	--	16	2-9/16	2-3/4	18	16d	12	10d x 1-1/2	2095	2095	2095	945	1640	1640	1640	740			
2-5/8	LSSH26-TZ	--	16	2-11/16	2-5/8	18	16d	12	10d x 1-1/2	2095	2095	2095	945	1640	1640	1640	740			
3	LSSH31-TZ	--	16	3-1/8	3-3/4	18	16d	12	10d x 1-1/2	2645	3000	3090	1310	2345	2415	2415	1025			
3-1/2	LSSH35-TZ	--	16	3-9/16	3-1/2	18	16d	12	10d x 1-1/2	2645	3000	3090	1310	2345	2405	2405	1020			
SKEWED HANGERS or SLOPED & SKEWED HANGERS																				
1-1/2	LSSH15-TZ	--	18	1-9/16	1-3/4	6	10d	7	10d x 1-1/2	620	620	620	510	485	485	485	400			
1-1/2	LSSH210-TZ	--	18	1-9/16	1-3/4	10	10d	7	10d x 1-1/2	1200	1370	1395	880	1065	1090	1090	690			
1-3/4	LSSH179-TZ	--	18	1-13/16	1-5/8	10	10d	7	10d x 1-1/2	1200	1370	1395	880	1065	1090	1090	690			
2 - 2-1/8	LSSH20-TZ	--	18	2-1/8	2-1/2	10	10d	7	10d x 1-1/2	1200	1230	1230	795	960	960	960	620			IBC, FL, LA
2-1/4 - 2-5/16	LSSH23-TZ	--	18	2-5/16	2-3/8	10	10d	7	10d x 1-1/2	1200	1230	1230	795	955	955	955	620			
2-1/2	LSSH25-TZ	--	16	2-9/16	2-3/4	14	16d	12	10d x 1-1/2	1610	1610	1610	945	1260	1260	1260	740			
2-5/8	LSSH26-TZ	--	16	2-11/16	2-5/8	14	16d	12	10d x 1-1/2	1610	1610	1610	945	1260	1260	1260	740			
3	LSSH31-TZ	--	16	3-1/8	3-3/4	14	16d	12	10d x 1-1/2	1610	1610	1610	1310	1260	1260	1260	1025			
3-1/2	LSSH35-TZ	--	16	3-9/16	3-1/2	14	16d	12	10d x 1-1/2	1610	1610	1610	1310	1255	1255	1255	1020			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Stainless steel ring shank nails must be used with stainless steel connectors to achieve tabulated allowable loads.
3) For exterior applications, hot-dip galvanized (HDG) fasteners must be used.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

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SKH / SKHH Skewed 45° Hangers

SKH – Standard 45° skew hanger

SKHH– 45° skew hanger for heavier applications

AVAILABLE IN GOLD COAT

Materials: 14 or 16 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references

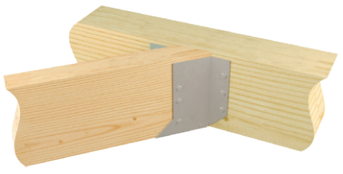
Installation:

- Install the required fasteners according to the table.
- The hangers listed are for standard sizes and will accommodate a 40° to 50° skew range.
- Most sizes do not require a miter cut for installation. Refer to table footnote identified with an asterisk.
- SKH / SKHH is available in left (L) and right (R) versions. Illustrations show left and right skews.
- For I-Joist installations, web stiffeners are required.
- Refer to illustration for staggered I-Joist application for double 2", 2-5/16", and 2-1/2" models.
- For double I-Joist installations, web stiffeners between I-Joists are required.

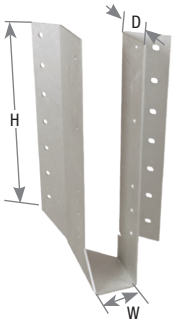




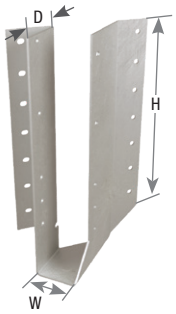
SKH26R
right skew



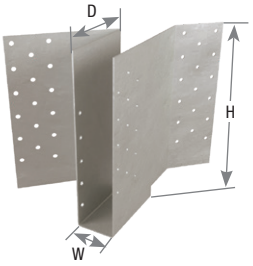
SKH26L
left skew



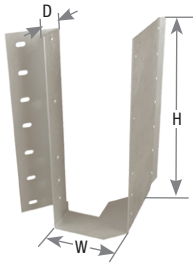
SKH210R



SKH210L



SKHH210L
left skew



SKHH210L-2
left skew



Typical SKH26L
installation
left skew

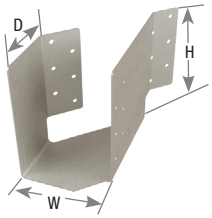
Beam/Joist Size	MiTek Stock No.	Ref. No.	Ga.	Dimensions (in) W	H	D	Fastener Schedule[2] Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
2 x 4	SKH24L/R	SUR/L24	16	1-9/16	3-1/4	1-7/8	4	16d	4	10d x 1-1/2	510	510	510	545	395	395	395	425		IBC, FL, LA
2 x 6-8	SKH26L/R	SUR/L26	16	1-9/16	5-1/4	1-7/8	6	16d	6	10d x 1-1/2	840	890	890	1135	700	700	700	980		
	SKHH26L/R	--	16	1-5/8	5-1/8	3-1/4	18	16d	12	10d x 1-1/2	1765	1795	1795	795	1450	1450	1450	645		--
2 x 8-12	SKH28L/R	--	16	1-9/16	7-1/4	1-7/8	10	16d	8	10d x 1-1/2	1400	1465	1465	1350	1160	1160	1160	1070		IBC, FL, LA
	SKHH28L/R	--	16	1-5/8	7	3-1/4	26	16d	16	10d x 1-1/2	2350	2525	2525	1155	2055	2055	2055	940		--
2 x 10-14	SKH210L/R	SUR/L210, SUR/L214	16	1-9/16	9-1/4	1-7/8	14	16d	10	10d x 1-1/2	1790	1790	1790	1530	1425	1425	1425	1220		IBC, FL, LA
	SKHH210L/R	--	16	1-5/8	9	4-1/4	34	16d	20	10d x 1-1/2	2625	2625	2625	1420	2150	2150	2150	1160		--
1-3/4 x 9-1/4 - 14	SKH1720L/R	SUR/L1.81/9	16	1-13/16	9-1/8	1-7/8	14	10d	10	10d x 1-1/2	1650	1760	1760	1530	1400	1400	1400	1220		IBC, FL, LA
1-3/4 x 11-1/4 - 18	SKH1724L/R	SUR/L1.81/11, SUR/L1.81/14	16	1-13/16	11-1/8	1-7/8	16	10d	10	10d x 1-1/2	1890	2170	2360	1530	1635	1880	2035	1220		
2 - 2-1/8 x 9-1/4 - 14	SKH2020L/R	SUR/L2.06/9, SUR/L2.1/9	16	2-1/8	9	1-7/8	14	10d	10	10d x 1-1/2	1650	1760	1760	1530	1390	1390	1390	1210		
2 - 2-1/8 x 11-1/4 - 18	SKH2024L/R	SUR/L2.06/11, SUR/L2.1/11	16	2-1/8	11	1-7/8	16	10d	10	10d x 1-1/2	1890	2170	2360	1530	1635	1880	2020	1210		
2-1/4 - 2-5/16 x 9-1/4 - 14	SKH2320L/R	SUR/L2.37/9	16	2-3/8	8-7/8	1-7/8	14	10d	10	10d x 1-1/2	1650	1760	1760	1530	1390	1390	1390	1210		
2-1/4 - 2-5/16 x 11-1/4 - 18	SKH2324L/R	SUR/L2.37/11, SUR/L2.37/14	16	2-3/8	10-7/8	1-7/8	16	10d	10	10d x 1-1/2	1890	2170	2360	1530	1635	1880	2020	1210		

1) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel Gold Coat
HDG Triple Zinc

Continued on next page

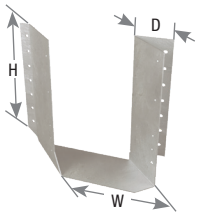
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SKHH46LIF left skew



Typical SKH2520R-2 staggered I-Joist installation right skew



SKH2520R-2 right skew

Beam/Joist Size	MiTek Stock No.	Ref. No.	Ga.	Dimensions (in)			Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
							Header		Joist		Floor	Roof		Uplift[1]	Floor	Roof		Uplift[1]		
				W	H	D	Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%		
3 x 6-8	SKH36L/R	--	16	2-9/16	4-3/4	1-3/8	6	16d	6	10d x 1-1/2	840	965	1050	1135	725	830	830	980		IBC, FL, LA
3 x 8-12	SKH38L/R	--	16	2-9/16	6-3/4	1-3/8	10	16d	8	10d x 1-1/2	1400	1550	1550	1510	1210	1230	1230	1215		
3 x 10-14	SKH310L/R	--	16	2-9/16	8-3/4	1-3/8	14	16d	10	10d x 1-1/2	2060	2365	2465	1530	1780	2045	2090	1220		
3 x 12 - 14 - 16	SKH312L/R	--	16	2-9/16	10-3/4	1-3/8	16	16d	10	10d x 1-1/2	2350	2705	2750	1530	2035	2190	2190	1220		
2-1/2 x 9-1/4 - 14	SKH2520L/R	SUR/L2.56/9	16	2-9/16	8-5/8	1-7/8	14	10d	10	10d x 1-1/2	1650	1760	1760	1530	1380	1380	1380	1205		
2-1/2 x 11-1/4 - 16	SKH2524L/R	SUR/L2.56/11, SUR/L2.56/14	16	2-9/16	10-3/4	1-7/8	16	10d	10	10d x 1-1/2	1890	2170	2360	1530	1635	1880	2010	1205		
2-5/8 x 9-1/4 - 14	SKH2620L/R	--	16	2-11/16	8-11/16	1-7/8	14	10d	10	10d x 1-1/2	1650	1760	1760	1530	1380	1380	1380	1205		
2-5/8 x 11-1/4 - 16	SKH2624L/R	--	16	2-11/16	10-11/16	1-7/8	16	10d	10	10d x 1-1/2	1890	2170	2360	1530	1635	1880	2010	1205		
(2) 2 x 6-8	SKH26L/R-2 *	SUR/L26-2	16	3-1/16	4-1/2	1-3/8	6	16d	6	10d	840	965	1050	1135	725	835	865	980		
	SKHH26L/R-2	HSUR/L26-2	14	3-1/16	5-1/4	2	12	16d	4	16d x 2-1/2	1850	1905	1905	795	1525	1525	1525	635		--
	SKHH26L/R-2IF	HSUR/LC26-2	14	3-1/16	5-1/4	2	12	16d	4	16d x 2-1/2										
(2) 2 x 8-12	SKH28L/R-2 *	--	16	3-1/16	6-1/2	1-3/8	10	16d	8	10d	1400	1610	1750	1350	1210	1395	1515	1060		IBC, FL, LA
(2) 2 x 10-14	SKH210L/R-2 *	SUR/L210-2	16	3-1/16	8-1/2	1-3/8	14	16d	10	10d	1960	2255	2450	1530	1695	1950	2120	1210		
	SKHH210L/R-2	HSUR/L210-2, HSUR/L214-2	14	3-1/16	8-1/2	2	20	16d	6	16d x 2-1/2	3080	3330	3330	2115	2685	2685	2685	1710		--
	SKHH210L/R-2IF	HSUR/LC210-2	14	3-1/16	8-1/2	2	20	16d	6	16d x 2-1/2										
(2) 2 x 12-16	SKH212L/R-2 *	SUR/L214-2	16	3-1/16	10-1/2	1-3/8	16	16d	10	10d	2240	2575	2800	1530	1940	2230	2405	1210		IBC, FL
3-1/2 x 8-14	SKH410L/R *	SUR/L410	14	3-9/16	8-1/2	2-1/2	16	16d	10	16d	2305	2650	2865	1530	1995	2225	2225	1190		IBC, FL, LA
3-1/2 x 12-18	SKH414L/R *	SUR/L414	14	3-9/16	12-1/2	2-1/2	22	16d	10	16d	3170	3645	3960	1530	2740	3150	3425	1190		
4 x 6-8	SKH46L/R *	SUR/L46	14	3-9/16	4-3/4	2-1/2	10	16d	6	16d	1440	1590	1590	1350	1225	1225	1225	1040		
	SKHH46L/R	HSUR/L46	14	3-9/16	5-1/4	2-1/2	12	16d	6	16d	1850	1905	1905	795	1520	1520	1520	635		--
	SKHH46L/RIF	HSUR/LC46	14	3-9/16	5-1/4	2-1/2	12	16d	6	16d										
4 x 10-14	SKH410L/R *	SUR/L410	14	3-9/16	8-1/2	2-1/2	16	16d	10	16d	2305	2650	2865	1530	1995	2225	2225	1190		IBC, FL, LA
	SKHH410L/R	HSUR/L410	14	3-9/16	8-1/2	2-1/2	20	16d	10	16d	3080	3330	3330	2115	2680	2680	2680	1705		--
	SKHH410L/RIF	HSUR/LC410	14	3-9/16	8-1/2	2-1/2	20	16d	10	16d										
4 x 14-18	SKH414L/R *	SUR/L414	14	3-9/16	12-1/2	2-1/2	24	16d	10	16d	3170	3645	3960	1530	2740	3150	3425	1190		IBC, FL, LA
	SKHH414L/R	HSUR/L414	14	3-9/16	12-1/2	2-1/2	26	16d	10	16d	4005	4115	4115	2115	3310	3310	3310	1705		--
	SKHH414L/RIF	HSUR/LC414	14	3-9/16	12-1/2	2-1/2	26	16d	10	16d										
(2) 2 - 2-1/8 x 9-1/4 - 14	SKH2020L/R-2 *	HSUR/L4.12/9, HSUR/L4.28/9	14	4-3/16	9-1/4	3-1/2	14	10d	10	10d	1710	1965	2135	1645	1480	1700	1850	1265		IBC, FL, LA
(2) 2 - 2-1/8 x 11-1/4 - 18	SKH2024L/R-2 *	HSUR/L4.12/11, HSUR/L4.12/14, HSUR/L4.12/16, HSUR/L4.28/11	14	4-3/16	11-1/4	3-1/2	16	10d	10	10d	1950	2245	2440	1680	1690	1945	2110	1295		
(2) 2-5/16 x 9-1/4 - 14	SKH2320L/R-2 *	HSUR/L4.75/9	14	4-7/8	9-1/4	3-1/2	14	10d	10	10d	1710	1965	2135	1645	1480	1700	1850	1265		
(2) 2-5/16 x 11-1/4 - 18	SKH2324L/R-2 *	HSUR/L4.75/11, HSUR/L4.75/14, HSUR/L4.75/16	14	4-7/8	11-1/4	3-1/2	16	10d	10	10d	1950	2245	2440	1680	1690	1945	2110	1295		
(2) 2-1/2 x 9-1/4 - 14	SKH2520L/R-2 *	HSUR/L5.12/9	14	5-1/8	9-1/4	3-1/2	14	10d	10	10d	1710	1965	2135	1645	1480	1700	1850	1265		
(2) 2-1/2 x 11-1/4 - 16	SKH2524L/R-2 *	HSUR/L5.12/11, HSUR/L5.12/14, HSUR/L5.12/16	14	5-1/8	11-1/4	3-1/2	16	10d	10	10d	1950	2245	2440	1680	1690	1945	2110	1295		

1) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.
*Miter cut required on the end of supported joist.

Corrosion Finish Key
Stainless Steel, Gold Coat, HDG, Triple Zinc

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KF – Fastens to joist ends with nails

PHG – Features a gripper design to hold the joist in place without nailing during the assembly process

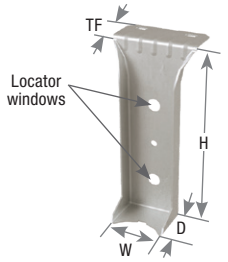
Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- In panelized construction, installers are allowed to nail through both the sheathing and the hanger top flange with (1) 10d nail. The nail should be centered in the top flange and be no closer than 1/4" from the back or front edge of the top flange.
- Use locator window to center hanger on purlin center line.
- **KF / PHG – These hangers do not provide uplift resistance.**



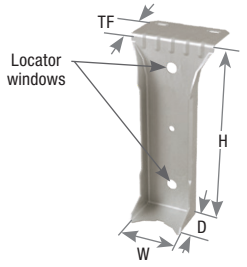
Typical KF installation



KF



Typical PHG26 installation



PHG26

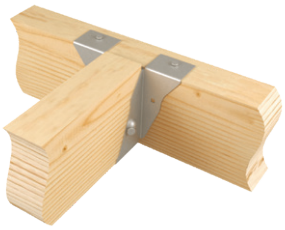
Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[1]				DF/SP Allowable Loads (Lbs.)	Code Ref.
								Header		Joist			
				W	H	D	TF	Qty	Type	Qty	Type	125%	
2 x 4	PHG24	HF24N	18	1-9/16	3-1/2	1-3/16	1-1/16	2	8d	--	--	580	IBC, FL, LA
2 x 6	PHG26	HF26N	18	1-9/16	5-3/8	1	1-1/16	2	10d	--	--	650	
3 x 4	PHG34	HF34N	18	2-9/16	3-1/2	1	1-1/8	2	10d	--	--	650	
3 x 6	PHG36	HF36N	18	2-9/16	5-3/8	1	1-1/8	2	10d	--	--	650	
(2) 2 x 4	PHG24-2	F24-2	18	3-1/8	3-1/2	1	1-1/8	2	10d	--	--	650	
(2) 2 x 6	PHG26-2	F26-2	18	3-1/8	5-3/8	1	1-1/8	2	10d	--	--	650	
4 x 4	KF44	--	18	3-9/16	3-3/8	1	1-1/8	2	10d	1	10d x 1-1/2	695	
4 x 6	KF46	--	18	3-9/16	5-3/8	1	1-1/8	2	10d	1	10d x 1-1/2	810	

1) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

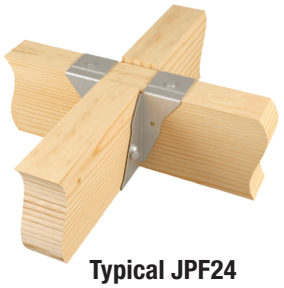
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Materials: 20 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

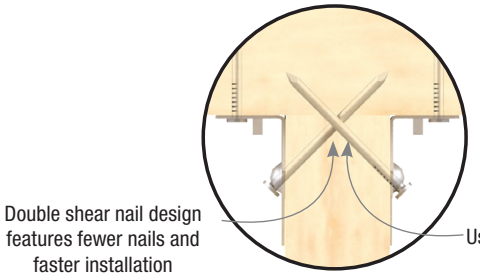
Installation:
- Install the required fasteners according to the table.
- Diamond holes allow optional header nailing.
- **Slant / double shear joist nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.**
- 16d sinkers (0.148" dia. x 3-1/4") may be used where 10d commons are specified with no load reduction.

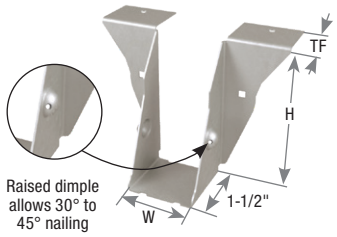


Typical JPF24 installation



Typical JPF24 back-to-back installation





JPF24

Purlin Size	MiTek Stock No.	Ref. No.	GA	Dimensions (in)			Fastener Schedule[3]						DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
								Header[2]			Joist		Floor	Roof		Uplift[1]	Floor	Roof		Uplift[1]		
				W	H	TF	Min/ Max	Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%		
2 x 4	JPF24	PF24	20	1-9/16	3-3/8	1-1/16	Min	2	--	10d	2	10d	1035	1035	1035	315	815	815	815	255		IBC, FL, LA
							Max	2	2	10d	2	10d	1305	1305	1305	425	995	1040	1040	340		
2 x 6	JPF26	PF26	20	1-9/16	5-3/8	1-1/16	Min	2	--	10d	2	10d	1035	1035	1035	315	815	815	815	255		
							Max	2	2	10d	2	10d	1305	1305	1305	425	995	1040	1040	340		

1) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) JPF cannot be used back-to-back on a single ply header in max nailing installations.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

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Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

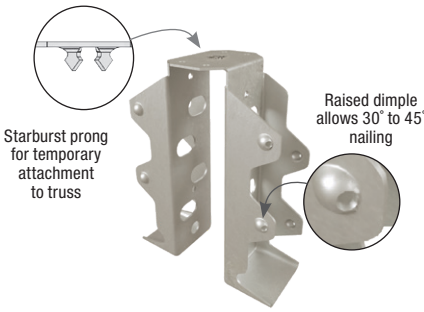
- Install the required fasteners according to the table.
- **Slant / double shear joist nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.**



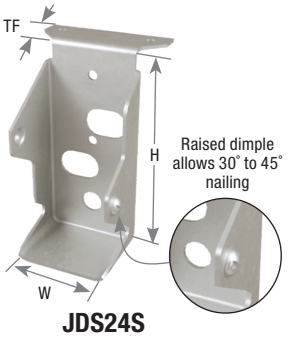
Typical JDS26 installation



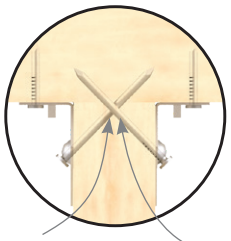
Typical JDS24S installation

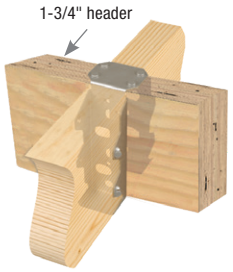


JDS26
(JDS24 similar)



JDS24S





JDS26-175 installation



JDS26-175

Purlin Size	MiTek Stock No.	Ref. No.	GA	Dimensions (in) W	H	D	TF	Min/ Max	Fastener Schedule[2] Header Top Qty	Face Qty	Type	Each Purlin Qty	Type	DF/SP Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Code Ref.
2 x 4 single	JDS24S	PF24B	18	1-9/16	3-1/2	1-1/4	3/4	Min	2	2	10d x 1-1/2	2	10d x 1-1/2	500	500	500	325	400	400	400	260	IBC, FL, LA
								Max	2	--		2	10d	575	605	625	450	535	535	535	355	
2 x 6 single	JDS26S	PF26B	18	1-9/16	5-1/2	1-1/4	3/4	Min	2	2	10d x 1-1/2	4	10d x 1-1/2	615	615	615	420	500	500	500	340	
								Max	2	--		4	10d	775	830	870	745	745	745	745	585	
2 x 4 saddle	JDS24	PFD24B	18	1-9/16	3-1/2	1-1/4	1-9/16	Min	4	4	10d x 1-1/2	2	10d x 1-1/2	1000	1000	1000	370	795	795	795	325	
								Max	4	--		2	10d	1185	1245	1285	900	1065	1065	1065	710	
2 x 6 saddle	JDS26-175	--	18	1-9/16	5-7/16	1-1/4	1-3/4	Min	4	4	10d x 1-1/2	4	10d x 1-1/2	1235	1235	1235	740	995	995	995	655	
								Max	4	--		4	10d	1675	1790	1870	1490	1485	1485	1485	1170	
	JDS26	PFD26B	18	1-9/16	5-1/2	1-1/4	1-9/16	Min	4	4	10d x 1-1/2	4	10d x 1-1/2	1235	1235	1235	740	995	995	995	655	
								Max	4	--		4	10d	1575	1695	1775	1490	1485	1485	1485	1170	

1) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

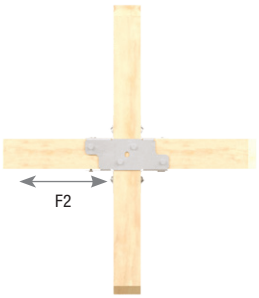
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TUS – For a single-ply purlin

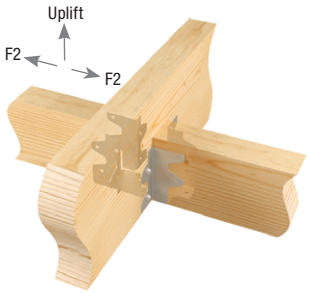
DTUS – For a single-ply purlin with a 2-ply saddle dimension

Materials: 20 gauge
Finish: G90 galvanizing
Patents: U.S. Patent No. 8,966,857

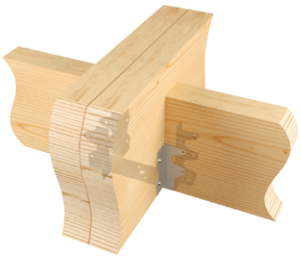
Installation:
- Install the required fasteners according to the table.
- Attaches with standard 1-1/2" joist hanger nails that can be installed with a positive placement nail gun or be hand driven.



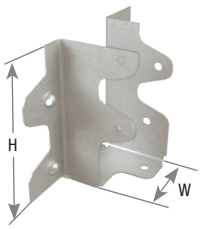
Bottom View



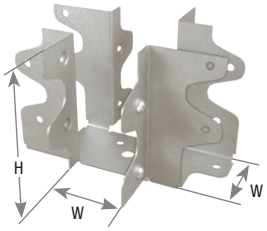
Typical TUS24 installation



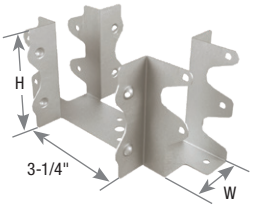
Typical DTUS24 installation



TUS24S



TUS24



DTUS24

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2,3]						DF/SP Allowable Loads (Lbs.)[1]					Code Ref.
						Header			Joist								
				W	H	Face Qty	Bottom Qty	Type	Face Qty	Bottom Qty	Type	100%	115%	125%	Uplift[1] 160%	F2 160%	
2 x 4 - 6 Single	TUS24S	--	20	1-9/16	3	4	1	8d x 1-1/2	4	1	8d x 1-1/2	485	550	595	505	205	--
								10d x 1-1/2			10d x 1-1/2	580	620	620	505	205	
								LL915			LL915	580	620	620	505	205	
2 x 4 - 6 Saddle	TUS24	--	20	1-9/16	3	4	1	8d x 1-1/2	4	1	8d x 1-1/2	485	550	595	505	645	
								10d x 1-1/2			10d x 1-1/2	580	620	620	505	645	
								LL915			LL915	580	620	620	505	645	
	DTUS24	--	20	1-9/16	3	4	1	8d x 1-1/2	4	1	8d x 1-1/2	485	550	595	505	645	
								10d x 1-1/2			10d x 1-1/2	580	620	620	505	645	
								LL915			LL915	580	620	620	505	645	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) LL915 denotes a MiTek LumberLok screw (#9 x 1-3/8" long) and must be ordered seperately.
3) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long, 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

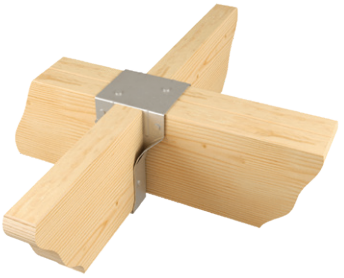
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FHD Panel Hangers

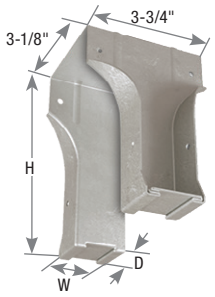
The FHD26 hanger straddles the header and receives a joist from both sides.

Materials: 18 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- In panelized construction, installers are allowed to nail through both the sheathing and the hanger top flange with (1) 10d nail. The nail should be centered in the top flange and be no closer than 1/4" from the back or front edge of the top flange.



Typical FHD26 installation



FHD26

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	Fastener Schedule[3] Header Top Qty	Top Type	Face Qty	Face Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[1] 125%	DF/SP Uplift[2] 160%	S-P-F Allowable Loads (Lbs.)[1] 125%	S-P-F Uplift[2] 160%	Code Ref.
2 x 6	FHD26	PFDS26	18	1-9/16	5-3/8	1-1/2	2	16d	2	16d	2	10d x 1-1/2	960	175	760	140	--

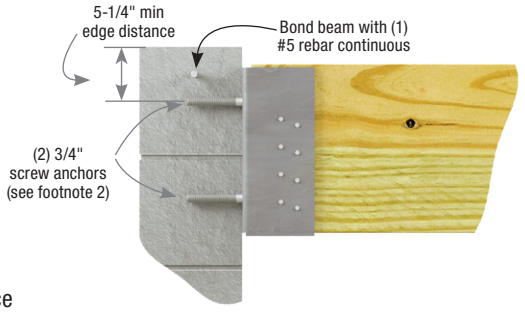
1) Loads listed are per side.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
10d x 1-1/2 nails may be substituted for 16d header nails with a maximum load of 960 lbs.

UMH Universal Masonry Hangers

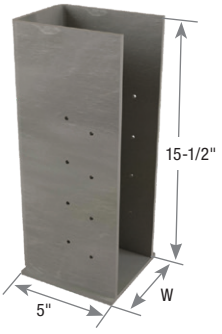
A versatile solution for hanging beams from masonry walls. Face mount design allows hanger to be used with beam heights from 16" to 24". Available in a variety of widths for solid sawn, glulam, or engineered lumber beams.

Materials: 3 gauge
Finish: Primer
Codes: FL

Installation:
- Install the required fasteners according to the table.
- Fully grouted and reinforced concrete block or cast-in-place concrete with a minimum of (1) #5 rebar continuous to footing with standard hook at bolt locations.



Typical UMH installation



UMH

MiTek Stock No.	Ref. No.	Steel Gauge	W (in)	Fastener Schedule Header[2] Qty	Screw Anchor	Joist[3] Qty	Type	DF/SP Allowable Loads (Lbs.) Masonry - 2,500 psi Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Cast in Place Concrete - 3,000 psi Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Code Ref.
UMH358	MBHU3.56/16KT, MBHU3.56/18KT	3	3-5/8	2	3/4	16	16d	3550	3550	3550	3550	6380	6380	6380	4815	
UMH458	--	3	4-5/8	2	3/4	16	16d	3550	3550	3550	3550	6380	6380	6380	4815	
UMH538	--	3	5-3/8	2	3/4	16	16d	3550	3550	3550	3550	6380	6380	6380	4815	FL
UMH558	MBHU5.50/16KT, MBHU5.50/18KT	3	5-5/8	2	3/4	16	16d	3550	3550	3550	3550	6380	6380	6380	4815	
UMH718	--	3	7-1/8	2	3/4	16	16d	3550	3550	3550	3550	6380	6380	6380	4815	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Fasten UMH hanger to concrete structure with (2) 3/4" dia. DeWalt Screw-Bolt™+ screw anchors or equal with 5" minimum embedment. Screw anchors shall be installed in masonry with grouted cells in accordance with manufacturer's installation specifications.
3) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

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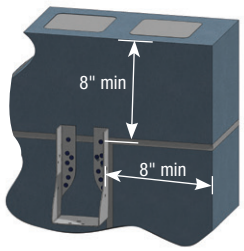
HD Masonry Face Mount Hangers

The HD series Face Mount Hangers can be used to connect framing members, including but not limited to roof trusses, floor joists and EWP members to concrete masonry unit (CMU) and concrete walls.

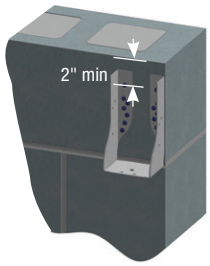
Materials: 14 gauge
Finish: G90 galvanizing

Installation:

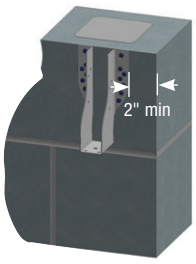
- Install the required fasteners according to the table.
- Masonry screws shall be Powers® Tapper+® HWH 3/16" x 1-3/4" or equivalent.
- Minimum 6" wide grout-filled concrete masonry units with a minimum compressive strength of 1,500 psi (10.3 MPa).
- Minimum 6" wide concrete wall with a minimum compressive strength of 2,500 psi (17.3 MPa).



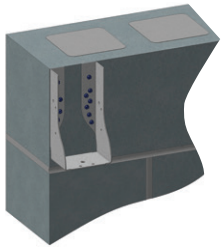
Typical HD inverted flange field installation



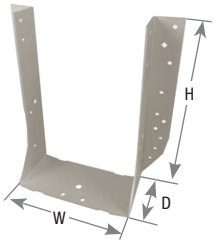
Typical HD inverted flange edge installation (flush to edge only)



Typical HD top installation (flush to top only)



Typical HD inverted flange corner installation (flush to edge and top)



HD610

Specialty Options Table – Refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Inverted Flange
Range	1˚ to 67-1/2˚ when width is 1-3/4" or less. 1˚ to 50˚ on all others.	1˚ to 45˚	See Sloped Seat and Skewed	2-1/4" widths or greater (Widths < 2-1/4" may be available as a Custom, contact MiTek)
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Example: HD410_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Example: HD410_SL30D	See Sloped Seat and Skewed Example: HD410_SK45R_SL30D_SQ	Add *IF,* to product number. Example: HD410_IF

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

Continued on next page

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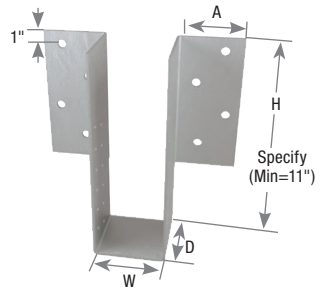
MiTek Stock No.	Ref No.	Steel Gauge	Dimensions (in)			Fastener Schedule[3]				DF/SP Allowable Load (Lbs.)[1,2,4,5,6,7]								Code Ref.
						Masonry		Joist/Beam		Download (100%)				Uplift (160%)				
			W	H	D	Qty	Tapper+® HWH Screw Anchor	Qty	Type[8]	Field	Edge	Top	Corner	Field	Edge	Top	Corner	
HD26	HU26	14	1-9/16	3-1/2	2-1/2	4	3/16" x 1-3/4"	4	10d x 1-1/2	1000	495	670	335	145	70	145	45	
HD28	HU28	14	1-9/16	5-1/4	2-1/2	8	3/16" x 1-3/4"	6	10d x 1-1/2	2000	990	1340	665	595	295	595	195	
HD210	HU210	14	1-9/16	7-3/16	2-1/2	14	3/16" x 1-3/4"	6	10d x 1-1/2	3110	1545	2085	1035	595	295	595	195	
HD212	--	14	1-9/16	9-13/16	2-1/2	20	3/16" x 1-3/4"	10	10d x 1-1/2	3640	1805	2440	1210	595	295	595	195	
HD26-2	HU26-2	14	3-1/8	5-1/4	2-1/2	12	3/16" x 1-3/4"	6	10d	3000	1490	2015	1000	1170	580	850	380	
HD28-2	HU28-2	14	3-1/8	7-1/8	2-1/2	14	3/16" x 1-3/4"	6	10d	3500	1735	2350	1165	1170	580	850	380	
HD210-2	HU210-2	14	3-1/8	9	2-1/2	20	3/16" x 1-3/4"	10	10d	5000	2480	3355	1665	1950	645	850	420	
HD212-2	HU212-2	14	3-1/8	11	2-1/2	24	3/16" x 1-3/4"	12	10d	5750	2850	3860	1915	2340	645	850	420	
HD44	HU44	14	3-9/16	3-5/16	2-1/2	4	3/16" x 1-3/4"	2	10d	1000	495	670	335	145	70	145	45	
HD46	HU46	14	3-9/16	5-1/16	2-1/2	12	3/16" x 1-3/4"	6	10d	3000	1490	2015	1000	1170	580	850	380	
HD48	HU48	14	3-9/16	6-15/16	2-1/2	14	3/16" x 1-3/4"	6	10d	3500	1735	2350	1165	1170	580	850	380	
HD410	HU410	14	3-9/16	8-13/16	2-1/2	20	3/16" x 1-3/4"	10	10d	5000	2480	3355	1665	1950	645	850	420	--
HD412	--	14	3-9/16	10-13/16	2-1/2	24	3/16" x 1-3/4"	12	10d	5750	2850	3860	1915	2340	645	850	420	
HD26-3	HU26-3	14	4-5/8	4-1/2	2-1/2	12	3/16" x 1-3/4"	6	10d	3000	1490	2015	1000	1170	580	850	380	
HD28-3	--	14	4-5/8	6-3/8	2-1/2	14	3/16" x 1-3/4"	6	10d	3500	1735	2350	1165	1170	580	850	380	
HD210-3	HU210-3	14	4-5/8	8-1/4	2-1/2	20	3/16" x 1-3/4"	10	10d	5000	2480	3355	1665	1950	645	850	420	
HD212-3	HU212-3	14	4-5/8	10-1/4	2-1/2	24	3/16" x 1-3/4"	12	10d	5750	2850	3860	1915	2340	645	850	420	
HD5210	--	14	5-3/8	7-7/8	2-1/2	20	3/16" x 1-3/4"	10	10d	5000	2480	3355	1665	2305	645	850	420	
HD5212	--	14	5-3/8	9-7/8	2-1/2	24	3/16" x 1-3/4"	12	10d	5750	2850	3860	1915	2765	645	850	420	
HD66	HU66	14	5-1/2	4-1/16	2-1/2	12	3/16" x 1-3/4"	6	10d	2350	1165	1575	780	1380	645	850	420	
HD68	HU68	14	5-1/2	5-15/16	2-1/2	14	3/16" x 1-3/4"	6	10d	3500	1735	2350	1165	1380	645	850	420	
HD610	HU610	14	5-1/2	7-13/16	2-1/2	20	3/16" x 1-3/4"	10	10d	5000	2480	3355	1665	2305	645	850	420	
HD612	HU612	14	5-1/2	9-13/16	2-1/2	24	3/16" x 1-3/4"	12	10d	5750	2850	3860	1915	2765	645	850	420	

1) Allowable loads assume the use of Powers® Tapper+® HWH 3/16" x 1-3/4" or equivalent.
2) Allowable loads assume wood members have a minimum specific gravity of 0.50 or greater.
3) Fasteners to be installed per manufacturer's recommendations.
4) Field installation indicates that the uppermost and outermost fasteners are a minimum of 8" from the top and side of the masonry wall.
5) Edge installation indicates that the hanger is installed flush with the edge of the masonry wall.
6) Top installation indicates that the hanger is installed with the hanger flush with the top of the masonry wall.
7) Corner installation indicates that the hanger is installed in the corner of the masonry wall flush to the edge, and the top fastener is less than 2" from the top.
8) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2 long, 10d nails are 0.148 dia. x 3" long.

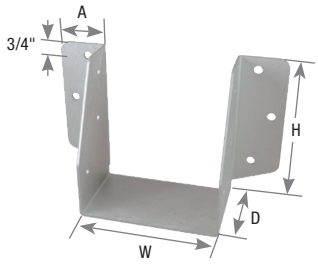
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LGUM and HGUM Masonry Girder Hangers are high-capacity beam/girder hangers designed for installation to masonry or concrete walls. The LGUM and HGUM hangers use MiTek's WS structural wood screws (supplied) to attach the beam to hanger and screw anchors (supplied) to attach to the masonry or concrete wall. These hangers eliminate the need for constructing beam pockets.

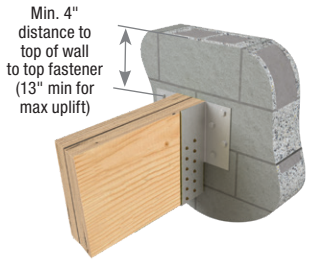
Materials: LGUM – 12 gauge; HGUM – 7 gauge
Finish: G90 galvanizing
Options: See Specialty Options table



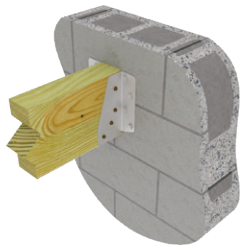
HGUM



LGUM



Typical HGUM installation



Typical LGUM installation

Installation:

- Install the required fasteners according to the table.
- MiTek's WS3 structural wood screws and screw anchors are supplied with hangers.
- Beams comprised of multiple plies must be adequately fastened to act as a single member.
- Beam height dimension (H) must be specified when ordering HGUM hangers.
- Moisture barrier between beam and wall may be required by local jurisdiction.

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in.) W	Dimensions (in.) H[3]	Dimensions (in.) D	Dimensions (in.) A	Fastener Schedule CMU/Concrete Qty	Fastener Schedule CMU/Concrete Screw Anchor[4]	Fastener Schedule Joist Qty	Fastener Schedule Joist Type[5]	DF Allowable Loads (Lbs.)[2] Download (100/115/125%) CMU 1,500psi	DF Allowable Loads (Lbs.)[2] Download (100/115/125%) Concrete 2,000 psi	DF Allowable Loads (Lbs.)[2] Uplift (160%)[1] CMU / Concrete 4" Min. to Top of Wall	DF Allowable Loads (Lbs.)[2] Uplift (160%)[1] CMU / Concrete 13" Min. to Top of Wall	Code Ref.
Double 2x Sizes															
LGUM26-2	LGUM26-2-SDS	12	3-5/16	5-7/16	4	2-3/8	4	3/8" x 4"	4	WS3	6065	6425	2125	2125	--
LGUM28-2	LGUM28-2-SDS			7-3/16			6		6		8155	8155	2770	2770	
LGUM210-2	LGUM210-2-SDS			9-3/16			8		8		9905	9905	3350	3350	
Triple 2x Sizes															
LGUM26-3	LGUM26-3-SDS	12	4-15/16	5-1/2	4	2-3/8	4	3/8" x 4"	4	WS3	6065	6425	2125	2125	--
LGUM28-3	LGUM28-3-SDS			7-1/4			6		6		8155	8155	2770	2770	
LGUM210-3	LGUM210-3-SDS			9-1/4			8		8		9905	9905	3350	3350	
Quadruple 2x Sizes															
LGUM26-4	LGUM26-4-SDS	12	6-9/16	5-7/16	4	2-3/8	4	3/8" x 4"	4	WS3	6065	6425	2125	2125	--
LGUM28-4	LGUM28-4-SDS			7-3/16			6		6		8155	8155	2770	2770	
LGUM210-4	LGUM210-4-SDS			9-3/16			8		8		9905	9905	3350	3350	
4x Sizes															
LGUM46	LGUM46-SDS	12	3-5/8	4-7/8	4	2-3/8	4	3/8" x 4"	4	WS3	6065	6425	2125	2125	--
LGUM48	LGUM48-SDS			6-7/8			6		6		8155	8155	2770	2770	
LGUM410	LGUM410-SDS			8-7/8			8		8		9905	9905	3350	3350	
Engineered Wood & Structural Lumber Sizes (Heavy Duty)															
HGUM525	HGUM5.25-SDS	7	5-1/4	Specify 11 to 30	5-1/2	4-3/4	8	5/8" x 5"	24	WS3	16680	16680	4470	10130	--
HGUM550	HGUM5.50-SDS		5-1/2												
HGUM700	HGUM7.00-SDS		7												
HGUM725	HGUM7.25-SDS		7-1/4												
HGUM900	HGUM9.00-SDS		9												

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads assume top header fasteners are a minimum of 4" from the top of the wall.
3) "Specify" denotes the required supported beam height that must be specified at the time of ordering.
4) Use DeWalt Screw-Bolt™+ (included); or equivalent, installed in accordance with manufacturer's specification.
5) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with hangers.

Specialty Options Table – Refer to Specialty Options pages 320-322 for additional details.

Option	Inverted Flange
Range	One Inverted-Flange option available
Allowable Loads	50% of table download 75% of table uplift load
Ordering	Add *IF* and right *(R)* or left *(L)* to product number. Ex. HGUM525_H=18_IFL



Typical HGUM one inverted flange, left shown

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These hangers are designed to support standard lumber joists, I-Joists, or beams. Easy installation into concrete block walls makes the MPH an attractive alternative to fabricating seats in masonry (or attaching ledgers) to support joists or beams.

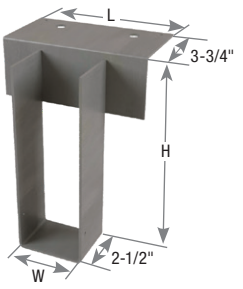
Materials: 12 gauge
Finish: Primer
Options: See Specialty Options Table on page 183
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- 16d duplex nails are not supplied with MPH hangers.
- Place hanger into position on top of concrete block. Install (2) 16d duplex nails (0.162" dia. x 3-1/2" double head) through the top flange nail holes. Then continue laying the next course of block.
- A minimum of one course shall be laid over hanger top flange and one course below hanger top flange. Courses adjacent to the top flange shall be subsequently grouted.
- **These products do not provide uplift resistance.**



Typical MPH single-ply installation



MPH



Typical MPH double-ply installation

Beam/ Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]			Code Ref.
							Block		Joist		Floor	Roof		
				W	H	L	Qty	Type	Qty	Type	100%	115%	125%	
Standard Lumber Sizes														
2 x 10	MPH210	WMU1.56/9.25	12	1-9/16	9-1/4	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
2 x 12	MPH212	WMU1.56/11.25	12	1-9/16	11-1/4	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
2 x 14	MPH214	WMU1.56/14	12	1-9/16	13-1/8	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
2 x 16	MPH216	WMU1.56/16	12	1-9/16	15-1/8	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
(2) 2 x 10	MPH210-2	WMU3.12/9.25	12	3-1/8	9-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
(2) 2 x 12	MPH212-2	WMU3.12/11.25	12	3-1/8	11-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
(2) 2 x 14	MPH214-2	WMU3.12/14	12	3-1/8	13-1/8	7	2	16d duplex	2	10d	4430	4430	4430	
(2) 2 x 16	MPH216-2	WMU3.12/16	12	3-1/8	15-1/8	7	2	16d duplex	2	10d	4430	4430	4430	IBC, FL, LA
3 x 10	MPH310	WMU2.56/9.25	12	2-9/16	9-1/4	7	2	16d duplex	2	10d x 1-1/2	3295	3295	3295	
3 x 12	MPH312	WMU2.56/11.25	12	2-9/16	11-1/4	7	2	16d duplex	2	10d x 1-1/2	3295	3295	3295	
3 x 14	MPH314	WMU2.56/13.25	12	2-9/16	13-1/8	7	2	16d duplex	2	10d x 1-1/2	3295	3295	3295	
3 x 16	MPH316	WMU2.56/15.25	12	2-9/16	15-1/8	7	2	16d duplex	2	10d x 1-1/2	3295	3295	3295	
4 x 10	MPH410	WMU3.56/9.25	12	3-9/16	9-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
4 x 12	MPH412	WMU3.56/11.25	12	3-9/16	11-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
4 x 14	MPH414	WMU3.56/13.25	12	3-9/16	13-1/8	7	2	16d duplex	2	10d	4430	4430	4430	
4 x 16	MPH416	WMU3.56/15.25	12	3-9/16	15-1/8	7	2	16d duplex	2	10d	4430	4430	4430	
6 x 10	MPH610	WMU5.50/9.5	12	5-9/16	9-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
Engineered Lumber Sizes														
1-1/2 x 9-1/4	MPH210	WMU1.56/9.25	12	1-9/16	9-1/4	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
1-1/2 x 9-1/2	MPH1595	WMU1.56/9.5	12	1-9/16	9-1/2	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
1-1/2 x 11-1/4	MPH212	WMU1.56/11.25	12	1-9/16	11-1/4	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
1-1/2 x 11-7/8	MPH15118	WMU1.56/11.88	12	1-9/16	11-7/8	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	IBC, FL, LA
1-1/2 x 14	MPH1514	WMU1.56/14	12	1-9/16	14	7	2	16d duplex	2	10d x 1-1/2	2610	2650	2675	
1-3/4 x 9-1/2	MPH1795	WMU1.81/9.5	12	1-13/16	9-1/2	7	2	16d duplex	2	10d x 1-1/2	3000	3040	3065	
1-3/4 x 11-7/8	MPH17118	WMU1.81/11.88	12	1-13/16	11-7/8	7	2	16d duplex	2	10d x 1-1/2	3000	3040	3065	
1-3/4 x 14	MPH1714	WMU1.81/14	12	1-13/16	14	7	2	16d duplex	2	10d x 1-1/2	3000	3040	3065	
1-3/4 x 16	MPH1716	WMU1.81/16	12	1-13/16	16	7	2	16d duplex	2	10d x 1-1/2	3000	3040	3065	

1) Masonry compressive strength shall be minimum 1,500 psi.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d duplex nails are 0.162" dia. x 3-1/2" long, double headed nails and shall be installed in grouted cells in accordance to manufacturer's installation specifications.

Continued on next page

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Beam/ Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[3]				DF/SP Allowable Loads (Lbs.)[1]			Code Ref.
							Block		Joist		Floor	Roof		
				W	H[2]	L	Qty	Type	Qty	Type	100%	115%	125%	
Engineered Lumber Sizes														
2-5/16 x 9-1/2	MPH2395	WMU2.37/9.5	12	2-3/8	9-1/2	7	2	16d duplex	2	10d x 1-1/2	3880	3920	3945	
2-5/16 x 11-7/8	MPH23118	WMU2.37/11.88	12	2-3/8	11-7/8	7	2	16d duplex	2	10d x 1-1/2	3880	3920	3945	
2-5/16 x 14	MPH2314	WMU2.37/14	12	2-3/8	14	7	2	16d duplex	2	10d x 1-1/2	3880	3920	3945	
2-5/16 x 16	MPH2316	WMU2.37/16	12	2-3/8	16	7	2	16d duplex	2	10d x 1-1/2	3880	3920	3945	
2-5/16 x 18	MPH2318	WMU2.37/18	12	2-3/8	18	7	2	16d duplex	2	10d x 1-1/2	3880	3920	3945	
2-5/16 x 20	MPH2320	WMU2.37/20	12	2-3/8	20	7	2	16d duplex	2	10d x 1-1/2	3880	3920	3945	
2-1/2 x 9-1/4	MPH25925	WMU2.56/9.25	12	2-1/2	9-1/4	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 9-1/2	MPH2595	WMU2.56/9.5	12	2-1/2	9-1/2	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 11-1/4	MPH25112	WMU2.56/11.25	12	2-1/2	11-1/4	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 11-7/8	MPH25118	WMU2.56/11..88	12	2-1/2	11-7/8	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 14	MPH2514	WMU2.56/14	12	2-1/2	14	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 16	MPH2516	WMU2.56/16	12	2-1/2	16	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 18	MPH2518	WMU2.56/18	12	2-1/2	18	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 20	MPH2520	WMU2.56/20	12	2-1/2	20	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 22	MPH2522	WMU2.56/22	12	2-1/2	22	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 24	MPH2524	WMU2.56/24	12	2-1/2	24	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
2-1/2 x 26	MPH2526	WMU2.56/26	12	2-1/2	26	7	2	16d duplex	2	10d x 1-1/2	4170	4210	4240	
3 x 9-1/4	MPH210-2	WMU3.12/9.25	12	3-1/8	9-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
3 x 9-1/2	MPH1595-2	WMU3.12/9.5	12	3-1/8	9-1/2	7	2	16d duplex	2	10d	4430	4430	4430	
3 x 11-1/4	MPH15112-2	WMU3.12/11.25	12	3-1/8	11-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
3 x 11-7/8	MPH15118-2	WMU3.12/11.88	12	3-1/8	11-7/8	7	2	16d duplex	2	10d	4430	4430	4430	IBC,
3-1/2 x 12	MPH3512	WMU3.62/12	12	3-1/2	12	7	2	16d duplex	2	10d	4430	4430	4430	FL,
3-1/2 x 14	MPH3514	WMU3.62/14	12	3-1/2	14	7	2	16d duplex	2	10d	4430	4430	4430	LA
3-1/2 x 16	MPH3516	WMU3.62/16	12	3-1/2	16	7	2	16d duplex	2	10d	4430	4430	4430	
3-1/2 x 18	MPH3518	WMU3.62/18	12	3-1/2	18	7	2	16d duplex	2	10d	4430	4430	4430	
3-1/2 x 20	MPH3520	WMU3.62/20	12	3-1/2	20	7	2	16d duplex	2	10d	4430	4430	4430	
3-1/2 x 9-1/4	MPH410	WMU3.56/9.25	12	3-9/16	9-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
3-1/2 x 11-1/4	MPH412	WMU3.56/11.25	12	3-9/16	11-1/4	7	2	16d duplex	2	10d	4430	4430	4430	
3-1/2 x 9-1/2	MPH1795-2	WMU3.56/9.5	12	3-5/8	9-1/2	7	2	16d duplex	2	10d	4430	4430	4430	
3-1/2 x 11-7/8	MPH17118-2	WMU3.56/11.88	12	3-5/8	11-7/8	7	2	16d duplex	2	10d	4430	4430	4430	
4-5/8 x 11-7/8	MPH23118-2	WMU4.75/11.88	12	4-5/8	11-7/8	7	2	16d duplex	2	10d	4430	4430	4430	
4-5/8 x 14	MPH2314-2	WMU4.75/14	12	4-5/8	14	7	2	16d duplex	2	10d	4430	4430	4430	
4-5/8 x 16	MPH2316-2	WMU4.75/16	12	4-5/8	16	7	2	16d duplex	2	10d	4430	4430	4430	
4-5/8 x 18	MPH2318-2	WMU4.75/18	12	4-5/8	18	7	2	16d duplex	2	10d	4430	4430	4430	
4-5/8 x 20	MPH2320-2	WMU4.75/20	12	4-5/8	20	7	2	16d duplex	2	10d	4430	4430	4430	
5-1/4 x 9-1/2	MPH5595	WMU5.50/9.5	12	5-5/8	9-1/2	7	2	16d duplex	2	10d	4430	4430	4430	
5-1/4 x 11-7/8	MPH55118	WMU5.50/11.88	12	5-5/8	11-7/8	7	2	16d duplex	2	10d	4430	4430	4430	
7 x 9-1/2	MPH3595-2	WMU7.12/9.5	12	7-1/8	9-1/2	8	2	16d duplex	2	10d	4490	4490	4490	
7 x 11-1/4	MPH35112-2	WMU7.12/11.25	12	7-1/8	11-1/4	8	2	16d duplex	2	10d	4490	4490	4490	
7 x 11-7/8	MPH35118-2	WMU7.12/11.88	12	7-1/8	11-7/8	8	2	16d duplex	2	10d	4490	4490	4490	
7 x 14	MPH3514-2	WMU7.12/14	12	7-1/8	14	8	2	16d duplex	2	10d	4490	4490	4490	
7 x 16	MPH3516-2	WMU7.12/16	12	7-1/8	16	8	2	16d duplex	2	10d	4490	4490	4490	
7 x 18	MPH3518-2	WMU7.12/18	12	7-1/8	18	8	2	16d duplex	2	10d	4490	4490	4490	
Glulam Sizes														
3-1/8 x glulam	MPH325	WMU3.25X	12	3-1/4	Specify	7	2	16d duplex	2	10d	4430	4430	4430	IBC,
5-1/8 x glulam	MPH525	WMU5.25X	12	5-1/4	Specify	7	2	16d duplex	2	10d	4430	4430	4430	FL, LA

1) Masonry compressive strength shall be minimum 1,500 psi.
2) "Specify" denotes the required supported beam height must be specified at the time of ordering.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d duplex nails are 0.162" dia. x 3-1/2" long, double headed nails and shall be installed in grouted cells in accordance to manufacturer's installation specifications.

Specialty Options Table – Refer to Specialty Options pages 320-321, 324 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Top Flange Offset	
Range	1˚ to 60˚	1˚ to 45˚	See Sloped Seat and Skewed	--	
Allowable Loads	100% of table load	100% of table load	100% of table load	**Hanger Width** 3-1/2" or less 3-9/16" to 5-1/2" 5-9/16" to 7-1/2"	**% of table load:** 60% 75% 85%
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. MPH210_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. MPH210_SL30D	See Sloped Seat and Skewed. Ex. MPH210_SK45R_SL30D_SQ	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. MPH210_OSL	

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

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HWUH Heavy-Duty Welded Universal Hangers

Versatile heavy-duty top flange hanger attaches to both wood and masonry. Unique design allows builders to use one style hanger on the job when the structure has a variety of support materials.

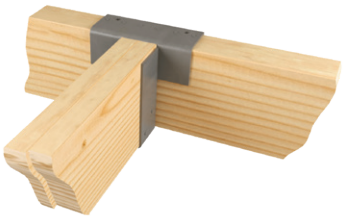
Materials: Top Flange – 3 gauge; Stirrup – 7 gauge

Finish: Primer

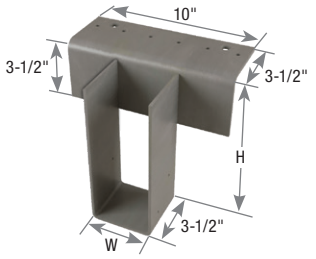
Options: See Specialty Options Table on page 185

Installation:

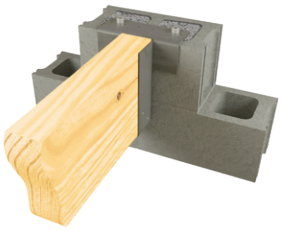
- Install the required fasteners according to the table.
- Masonry design load values apply to both solid concrete tie beams and grout-filled CMU walls.
- Alternate installation – Use (2) 1/2" x 4" DeWalt Screw-Bolt+™ or equal for loads up to 2,400 lbs. when attaching to CMU.



Typical HWUH410 wood-to-wood installation



HWUH



Typical HWUH410 wood-to-masonry installation

Beam/ Joist Size	MiTek Stock No.	Ref. No.	Dimensions (in) W	Dimensions (in) H	Installation Type	Fastener Schedule[2,3] Supporting Member Qty	Supporting Member Type	Supported Member Qty	Supported Member Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Uplift[1] 160%	Code Ref.
2 x 4 - 6	HWUH26	--	1-5/8	5-3/8	Wood	6	10d	4	10d x 1-1/2	3930	4025	4090	955	2795	2880	2940	845	--
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
2 x 8	HWUH28	--	1-5/8	7-1/8	Wood	6	10d	4	10d x 1-1/2	3930	4025	4090	955	2795	2880	2940	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
2 x 10	HWUH210	--	1-5/8	9-1/8	Wood	6	10d	4	10d x 1-1/2	3930	4025	4090	955	2795	2880	2940	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
2 x 12	HWUH212	--	1-5/8	11	Wood	6	10d	4	10d x 1-1/2	3930	4025	4090	955	2795	2880	2940	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
2 x 14	HWUH214	--	1-5/8	13	Wood	6	10d	4	10d x 1-1/2	3930	4025	4090	955	2795	2880	2940	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
2 x 16	HWUH216	--	1-5/8	16	Wood	6	10d	4	10d x 1-1/2	3930	4025	4090	955	2795	2880	2940	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
3 x 6	HWUH36	--	2-5/8	5-3/8	Wood	6	10d	4	10d	4615	4615	4615	955	4285	4370	4425	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
3 x 8	HWUH38	--	2-5/8	7-1/8	Wood	6	10d	4	10d	4615	4615	4615	955	4285	4370	4425	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
3 x 10	HWUH310	--	2-5/8	9-1/8	Wood	6	10d	4	10d	4615	4615	4615	955	4285	4370	4425	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
3 x 12	HWUH312	--	2-5/8	11	Wood	6	10d	4	10d	4615	4615	4615	955	4285	4370	4425	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
3 x 14	HWUH314	--	2-5/8	13	Wood	6	10d	4	10d	4615	4615	4615	955	4285	4370	4425	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
3 x 16	HWUH316	--	2-5/8	16	Wood	6	10d	4	10d	4615	4615	4615	955	4285	4370	4425	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
(2) 2 x 6	HWUH26-2	--	3-1/8	5-3/8	Wood	6	10d	4	10d	4615	4615	4615	955	4615	4615	4615	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
(2) 2 x 8	HWUH28-2	--	3-1/8	7-1/8	Wood	6	10d	4	10d	4615	4615	4615	955	4615	4615	4615	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
(2) 2 x 10	HWUH210-2	--	3-1/8	9-1/8	Wood	6	10d	4	10d	4615	4615	4615	955	4615	4615	4615	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
(2) 2 x 12	HWUH212-2	--	3-1/8	11	Wood	6	10d	4	10d	4615	4615	4615	955	4615	4615	4615	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
(2) 2 x 14	HWUH214-2	--	3-1/8	13	Wood	6	10d	4	10d	4615	4615	4615	955	4615	4615	4615	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
(2) 2 x 16	HWUH216-2	--	3-1/8	16	Wood	6	10d	4	10d	4615	4615	4615	955	4615	4615	4615	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Alternate installation – Use (2) 1/2" x 4" DeWalt Screw-Bolt+™ or equivalent for loads up to 2,400 lbs. when attaching to CMU.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Continued on next page

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Beam/ Joist Size	MiTek Stock No.	Ref. No.	Dimensions (in) W	Dimensions (in) H	Installation Type	Fastener Schedule[2,3] Supporting Member Qty	Supporting Member Type	Supported Member Qty	Supported Member Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Uplift[1] 160%	Code Ref.
4 x 6	HWUH46	--	3-9/16	5-3/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	--
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
4 x 8	HWUH48	--	3-9/16	7-1/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
4 x 10	HWUH410	--	3-9/16	9-1/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
4 x 12	HWUH412	--	3-9/16	11	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
4 x 14	HWUH414	--	3-9/16	13	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
4 x 16	HWUH416	--	3-9/16	16	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
6 x 6	HWUH66	--	5-1/2	5-3/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
6 x 8	HWUH68	--	5-1/2	7-1/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
6 x 10	HWUH610	--	5-1/2	9-1/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
6 x 12	HWUH612	--	5-1/2	11	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
6 x 14	HWUH614	--	5-1/2	13	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
6 x 16	HWUH616	--	5-1/2	16	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
8 x 6	HWUH86	--	7-1/2	5-3/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
8 x 8	HWUH88	--	7-1/2	7-1/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
8 x 10	HWUH810	--	7-1/2	9-1/8	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
8 x 12	HWUH812	--	7-1/2	11	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
8 x 14	HWUH814	--	7-1/2	13	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	
8 x 16	HWUH816	--	7-1/2	16	Wood	6	16d	4	10d	5265	5265	5265	1035	4135	4135	4135	845	
					Masonry	2	1/2" x 6" J-Bolt			3060	3060	3060	1035	2400	2400	2400	845	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Alternate installation – Use (2) 1/2" x 4" DeWalt Screw-Bolt+™ or equivalent for loads up to 2,400 lbs. when attaching to CMU.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Specialty Options Table

Refer to Specialty Options pages 320-321, 324 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Top Flange Offset		Saddle
Range	1° to 45°	1° to 45°	See Sloped Seat and Skewed	--		--
Allowable Loads	100% of table load	100% of table load	100% of table load	**Hanger Width** 3-1/2" or less 3-9/16" to 5-1/2" 5-9/16" to 7-1/2"	**% of table load:** 60% 75% 85%	100% of table load per side
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut (*SQ*) or bevel cut (*BV*) to product number. Ex. HWUH410_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. HWUH410_SL30D	See Sloped Seat and Skewed. Ex. HWUH410_SK45R_SL30D_SQ	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. HWUH410_OSL		Add *SA,* and saddle width required to product number. Ex. HWUH410_SA=5.5

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

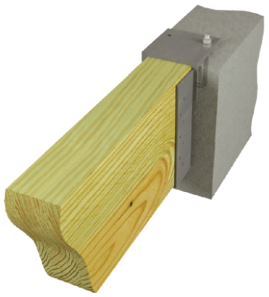
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NFM – Standard design

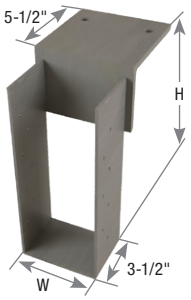
NFM_U – High uplift design

Materials: Top Flange – 3/8" steel; U-strap – 7 gauge
Finish: Primer
Options: See Specialty Options Table below
Codes: See table for code references

Installation:
- Install the required fasteners according to the table.
- Designed for both concrete walls and grout-filled reinforced CMU walls.



Typical NFM installation



NFM3



Typical NFM_U installation



NFM3X12U

Specialty Options Table
Refer to Specialty Options pages 320-321, 324 for additional details.

Option	MiTek Series	Skewed[1,2]
Range	NFM / NFMU	1° to 45°
Allowable Loads	NFM / NFMU	100% of table load
Ordering	NFM	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. NFM3_SK45R_BV
	NFMU	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. NFM35X8U_SK45R_SQ

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

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Continued on next page

MiTek Stock No.	Ref. No.	Steel Gauge		Dimensions (in)		Fastener Schedule				DF/SP Allowable Loads (Lbs.)[1]				Code Ref.
						Header[2,3]		Joist[4,5]		Floor	Roof		Uplift	
		Top Flange	U-Strap	W	H	Qty	Type	Qty	Type	100%	115%	125%	160%	
NFM3X8	--	3/8	7	3-1/8	7-1/4	1	1/2" J-Bolt	10	10d	6720	6720	6720	1415	FL
NFM3X10	--	3/8	7	3-1/8	9-1/4	1	1/2" J-Bolt	12	10d	6720	6720	6720	1415	
NFM3X10U	MBHA3.12/9.25	3/8	7	3-1/8	9-1/4	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM3X12	--	3/8	7	3-1/8	11-1/4	1	1/2" J-Bolt	14	10d	6720	6720	6720	1415	
NFM3X12U	MBHA3.12/11.25	3/8	7	3-1/8	11-1/4	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM3	--	3/8	7	3-3/8	11-3/4	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM35X8	--	3/8	7	3-5/8	7-1/4	1	1/2" J-Bolt	10	10d	7510	7510	7510	1415	
NFM35X8U	MBHA3.56/7.25	3/8	7	3-5/8	7-1/4	1	1/2" J-Bolt	3	1/2" Bolt	7130	7130	7130	2580	
NFM35X10	--	3/8	7	3-5/8	9-1/4	1	1/2" J-Bolt	12	10d	7510	7510	7510	1415	
NFM35X10U	MBHA3.56/9.25	3/8	7	3-5/8	9-1/4	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM35X12	--	3/8	7	3-5/8	11-1/4	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM35X12U	MBHA3.56/11.25	3/8	7	3-5/8	11-1/4	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM35X1178	--	3/8	7	3-5/8	11-7/8	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM35X1178U	MBHA3.56/11.88	3/8	7	3-5/8	11-7/8	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM35X14	--	3/8	7	3-5/8	14	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	--
NFM35X14U	MBHA3.56/14	3/8	7	3-5/8	14	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	FL
NFM35X16	--	3/8	7	3-5/8	16	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM35X16U	MBHA3.56/16	3/8	7	3-5/8	16	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM35X18	--	3/8	7	3-5/8	18	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM35X18U	MBHA3.56/18	3/8	7	3-5/8	18	1	1/2" J-Bolt	5	1/2" Bolt	7130	7130	7130	2580	
NFM6X8U	MBHA5.50/7.25	3/8	7	5-5/8	7-1/4	1	1/2" J-Bolt	3	1/2" Bolt	10310	10310	10310	2580	
NFM6X10U	MBHA5.50/9.25	3/8	7	5-5/8	9-1/4	1	1/2" J-Bolt	5	1/2" Bolt	10310	10310	10310	2580	
NFM6X12U	MBHA5.50/11.25	3/8	7	5-5/8	11-1/4	1	1/2" J-Bolt	5	1/2" Bolt	10310	10310	10310	2580	
NFM6X1178	--	3/8	7	5-5/8	11-7/8	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM6X1178U	MBHA5.50/11.88	3/8	7	5-5/8	11-7/8	1	1/2" J-Bolt	5	1/2" Bolt	10310	10310	10310	2580	
NFM6X14U	MBHA5.50/14	3/8	7	5-5/8	14	1	1/2" J-Bolt	5	1/2" Bolt	10310	10310	10310	2580	
NFM6X16	--	3/8	7	5-5/8	16	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM6X16U	MBHA5.50/16	3/8	7	5-5/8	16	1	1/2" J-Bolt	5	1/2" Bolt	10310	10310	10310	2580	
NFM6X18	--	3/8	7	5-5/8	18	1	1/2" J-Bolt	14	10d	7510	7510	7510	1415	
NFM6X18U	MBHA5.50/18	3/8	7	5-5/8	18	1	1/2" J-Bolt	5	1/2" Bolt	10310	10310	10310	2580	

1) Allowable loads are based on 2,500 psi concrete or masonry.
2) J-Bolt shall be cast-in-place and have a minimum 6" embedment and not less than 4" from the edge of concrete.
3) In addition to the J-Bolt, "U" models also require a 3/4" dia. ITW Ramset/Redhead Dyna Bolt sleeve anchor or equal with minimum 5" embedment depth installed in the face. Bolt shall be installed in accordance with installation specifications provided by ITW Ramset.
4) Bolts shall conform to ASTM A 307 or better.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long

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FWHL Light-Duty Fire Wall Hangers

MiTek's Light-Duty Firewall Hangers are designed to provide an economic between wood framed fire walls and I-joists or dimension lumber. The advanced design allows the installation of the FWHL **before** the 5/8" gypsum wallboard (drywall) is attached and permits the building project to be completely framed-up, and weather-tight before the gypsum wallboard sheathing work starts.

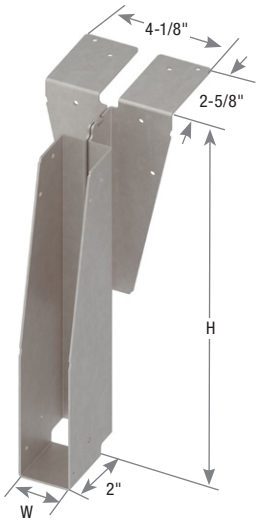
Materials: 14 gauge
Finish: G90 galvanizing
Options: See Specialty Options table and Nailer Options on page 189
Codes: IBC, FL, LA
Patents: U.S. Patent No. 11,649,626

Installation:

- Install the face of hanger flanges tight to stud wall framing.
- The FWHL does not need to be installed at stud locations.
- The end of the joist should measure no more than 1-5/8" from the face of the supporting wall. See Figure 1.
- The joist should bear fully on the FWHL seat with a gap no greater than 1/8" between the end of the supported member and the hanger. See Figure 1.
- **Gypsum Wallboard Installation** – Use the FWH-T template to slot cut the gypsum wallboard. See FWH-T Installation Sequence. Slide the gypsum wallboard into position and fasten to the framing members meeting the minimum requirements specified by code.
- Web stiffeners are required for I-Joist Installations.

2 Hour Fire-Rating

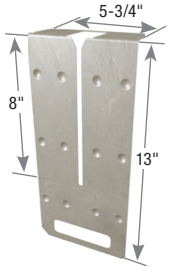
FWH hangers are tested per ASTM E814 standards. When installed on one side of a maximum 2 hour fire-rated wall assembly, the penetration of the MiTek Fire Wall Hangers through the gypsum wallboard will not reduce the fire resistive rating of the 2 hour fire resistive assembly.



FWHL



Typical FWHL solid sawn installation
(I-Joist similar)



FWH-T
(must be ordered separately)

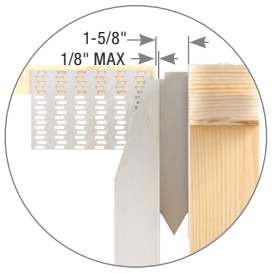
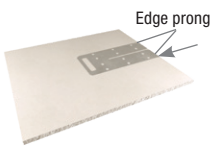


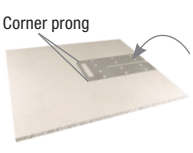
Figure 1
Typical FWHL Side View

FWH-T Installation Sequence

1) Align the FWH-Template slot with the mark in the gypsum wallboard and engage the prongs into edge of gypsum wallboard



2) Rotate the template and press down on the end to engage the corner prongs



3) Run the gypsum wallboard cutter down the template to cut the slot



Continued on next page

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Fastener / Allowable Load Table

Joist Size (in)	MiTek Stock No.	Steel Gauge	Dimensions (in)		Fastener Schedule[4]					DF/SP Allowable Loads (Lbs.)[3]				S-P-F Allowable Loads (Lbs.)[3]				Code Ref.
					Header			Joist		Download			Uplift 160%[1]	Download			Uplift 160%[1]	
			W	H	Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%		100%	115%	125%		
Installation with carried Solid Sawn Joist																		
2 x 8	FWHL28	14	1-9/16	7-3/16	4	4	10d	8	10d x 1-1/2	1555	1555	1555	475	1235	1235	1235	380	IBC, FL, LA
2 x 10	FWHL210			9-3/16														
2 x 12	FWHL212			11-3/16														
Installation with carried I-Joist [2]																		
1-3/4 x 9-1/2	FWHL1795	14	1-13/16	9-7/16	4	4	10d	8	10d x 1-1/2	1350	1350	1350	380	1265	1265	1265	305	
1-3/4 x 11-7/8	FWHL17118			11-13/16														
2 - 2-1/8 x 11-7/8	FWHL20118	14	2-1/8	11-13/16	4	4	10d	8	10d x 1-1/2	1350	1350	1350	380	1265	1265	1265	305	
2-5/16 x 11-7/8	FWHL23118	14	2-3/8	11-13/16	4	4	10d	8	10d x 1-1/2	1350	1350	1350	380	1265	1265	1265	305	
2-1/2 x 11-7/8	FWHL25118	14	2-9/16	11-13/16	4	4	10d	8	10d x 1-1/2	1350	1350	1350	380	1265	1265	1265	305	

1) Uplift loads have been increased 60% for wind or seismic loads. No further increase shall be permitted.
2) Web stiffeners are required on I-Joist applications. Install per I-Joist manufacturer specifications.
3) The tabulated allowable loads are for hangers prior to the attachment of wall and floor sheathing.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Nailer Options – table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

Joist Type	Nailer Size	Fastener Schedule[4]					DF/ SP Allowable Loads (Lbs.)[2,3]		S-P-F Allowable Loads (Lbs.)[2,3]	
		Nailer			Joist					
		Top Qty	Face Qty	Type	Qty	Type	Download 100%	Uplift[1] 160%	Download 100%	Uplift[1] 160%
Solid Sawn Joist	2X	4	2	10d x 1-1/2	8	10d x 1-1/2	1400	240	1175	200
	3X	4	2	10d x 1-1/2	8	10d x 1-1/2				
	(2) 2X	4	4	10d	8	10d x 1-1/2	1555	475	1185	400
	4X	4	4	10d	8	10d x 1-1/2				
I-Joist	2X	4	2	10d x 1-1/2	8	10d x 1-1/2	1215	190	1020	160
	3X	4	2	10d x 1-1/2	8	10d x 1-1/2				
	(2) 2X	4	4	10d	8	10d x 1-1/2	1350	380	1025	320
	4X	4	4	10d	8	10d x 1-1/2				

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable download shall not be increased for other load durations.
3) **Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.**
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

Specialty Options Table – Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1]	Top Flange Offset
Range	1° to 70°	--
Allowable Loads	80% of table load on skews up to 45°. 70% of table load on skews 46° to 70°.	70% of table download. 180 lbs. Max uplift.
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. FWHL1795_SK45R_SQ	Add *OS,* and right or left *(L),* to product number. Ex. FWHL1795_OSR

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.

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FWH Fire Wall Hangers

The Fire Wall Hanger is designed for attaching truss, I-joist, solid sawn lumber, or engineered wood floor framing members to double wall top plates or minimum 2-ply 2x solid sawn header fire rated wood frame walls. The advanced design allows the installation of the FWH **before** the 5/8" gypsum wallboard (drywall) is attached and permits the building project to be completely framed-up, and weather-tight before the gypsum wallboard sheathing work starts.

Materials: 14 gauge
Finish: G90 galvanizing
Options: See Specialty Options table and Nailer Options on 191
Codes: IBC, FL, LA
Patents: U.S. Patent No. 11,649,626

Installation:

- Install the face of hanger flanges tight to stud wall framing.
- For typical installations, the FWH does not need to be installed at stud locations. An increase in capacity can be achieved by installing the FWH at a stud. See the Allowable Load Table on page 195.
- The end of the truss/joist should measure 1-5/8" from the face of the supporting wall. See Figure 1.
- The truss/joist should bear fully on the FWH seat with a gap no greater than 1/8" between the end of the supported member and the hanger. See Figure 1.
- **Gypsum Wallboard Installation** – Use the FWH-T template to slot cut the gypsum wallboard. See FWH-T Installation Sequence. Slide the gypsum wallboard into position and fasten to the framing members meeting the minimum requirements specified by code.

2 Hour Fire-Rating

FWH hangers are tested per ASTM E814 standards. When installed on one side of a maximum 2 hour fire-rated wall assembly, the penetration of the MiTek Fire Wall Hangers through the gypsum wallboard will not reduce the fire resistive rating of the 2 hour fire resistive assembly.

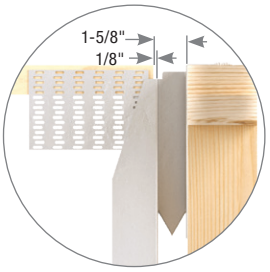
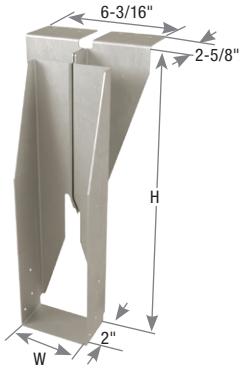
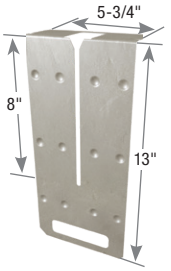


Figure 1
Typical FWH Side View



FWH



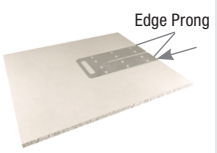
FWH-T
(must be ordered separately)

Geometry Table

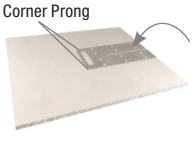
Joist Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in) W	Dimensions (in) H	Code Ref.
2 x 8	FWH28	--	1-9/16	7-1/8	
2 x 10	FWH210	--	1-9/16	9-1/8	
2 x 12	FWH212	--	1-9/16	11-1/8	
1-3/4 x 9-1/2	FWH1795	--	1-13/16	9-7/16	
1-3/4 x 11-7/8	FWH17118	--	1-13/16	11-13/16	
1-3/4 x 14	FWH1714	--	1-13/16	13-15/16	
1-3/4 x 16	FWH1716	--	1-13/16	15-15/16	
2 - 2-1/8 x 9-1/2	FWH2095	--	2-1/8	9-7/16	
2 - 2-1/8 x 11-7/8	FWH20118	--	2-1/8	11-13/16	
2 - 2-1/8 x 14	FWH2014	--	2-1/8	13-15/16	
2 - 2-1/8 x 16	FWH2016	--	2-1/8	15-15/16	
2-5/16 x 9-1/2	FWH2395	--	2-3/8	9-7/16	
2-5/16 x 11-7/8	FWH23118	--	2-3/8	11-13/16	
2-5/16 x 14	FWH2314	--	2-3/8	13-15/16	
2-5/16 x 16	FWH2316	--	2-3/8	15-15/16	IBC, FL, LA
2-5/16 x 18	FWH2318	--	2-3/8	17-15/16	
2-5/16 x 20	FWH2320	--	2-3/8	19-15/16	
2-1/2 x 9-1/2	FWH2595	--	2-9/16	9-7/16	
2-1/2 x 11-7/8	FWH25118	--	2-9/16	11-13/16	
2-1/2 x 14	FWH2514	--	2-9/16	13-15/16	
2-1/2 x 16	FWH2516	--	2-9/16	15-15/16	
2-1/2 x 18	FWH2518	--	2-9/16	17-15/16	
2-1/2 x 20	FWH2520	--	2-9/16	19-15/16	
3-1/2 x 9-1/2	FWH3595	--	3-9/16	9-7/16	
3-1/2 x 11-7/8	FWH35118	--	3-9/16	11-13/16	
3-1/2 x 14	FWH3514	--	3-9/16	13-15/16	
3-1/2 x 16	FWH3516	--	3-9/16	15-15/16	
3-1/2 x 18	FWH3518	--	3-9/16	17-15/16	
3-1/2 x 20	FWH3520	--	3-9/16	19-15/16	
3-1/2 x 22	FWH3522	--	3-9/16	21-15/16	
3-1/2 x 24	FWH3524	--	3-9/16	23-15/16	

New products or updated product information are designated in **blue font**.

FWH-T Installation Sequence



1) Align the FWH-Template slot with the mark in the gypsum wallboard and engage the prongs into edge of gypsum wallboard



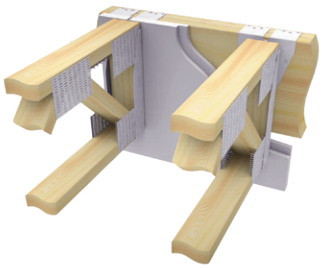
2) Rotate the template and press down on the end to engage the corner prongs



3) Run the gypsum wallboard cutter down the template to cut the slot

Continued on next page

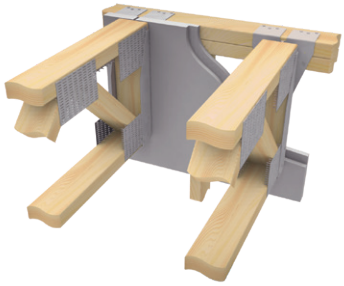
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Typical FWH solid sawn header installation



Typical FWH stud wall installation



Typical FWH stud wall with (2) layers of 5/8" gypsum wallboard installation

Fastener / Allowable Load Table

Installation Type	Fastener Schedule[5]					DF/SP Allowable Loads (Lbs.)					
	Header			Joist		Solid Sawn Header		2-Ply, 2x Wall Top Plate		2-Ply 2x Wall Top Plate with Stud Below	
	Top Qty	Face Qty	Type	Qty	Type	Download (100/115/125%)	Uplift[1] 160%	Download (100/115/125%)	Uplift[1] 160%	Download[2] (100/115/125%)	Uplift[1] 160%
Without 5/8" gypsum wallboard or structural sheathing	6	--	10d	6	10d x 1-1/2	2240	180	2045	180	--	--
	6	2	10d	6	10d x 1-1/2	2625	380	2045	380	--	--
		4								2980 [3]	380
After (1) layer of 5/8" gypsum wallboard is installed	6	--	10d	6	10d x 1-1/2	2400	180	2400	180	--	--
	6	2	10d	6	10d x 1-1/2	2625	380	2400	380	--	--
		4								2980 [3]	380
After (2) layers of 5/8" gypsum wallboard are installed	6	--	10d	6	10d x 1-1/2	2400	180	2400	180	--	--
	6	2	10d	6	10d x 1-1/2	2625	380	2400	380	--	--
		4								2980 [3]	380
Two-sided after (2) layers of 5/8" gypsum wallboard are installed (min. 2x6 wall)	6	--	10d	6	10d x 1-1/2	2400	180	2400	180	--	--
	6	2	10d	6	10d x 1-1/2	2625	380	2400	380	--	--
		4								2980 [3]	380
After (1) layer of structural sheathing & (1) layer of 5/8" gypsum wallboard is installed	6	--	10d	6	10d x 1-1/2	2400	180	2400	180	--	--
	6	2	10d	6	10d x 1-1/2	2625	380	2400	380	--	--
		4								2980 [3]	380

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable downloads require at least one 2x stud at each hanger location and 4 face nails into 2-ply top plate.
3) FWH 1-9/16" wide hangers have an allowable download of 2,665 lb. at 100%, 2,765 lb. at 115% and 2,830 lb. at 125%.
4) Web stiffeners are required on I-Joist applications. Install per I-Joist manufacturer specifications.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

Nailer Options – table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[5]					DF/ SP Allowable Loads (Lbs.)[2,4]	
		Nailer			Joist			
		Top Qty	Face Qty	Type	Qty	Type	Download 100%	Uplift[1] 160%
FWH	2X	6	2	10d x 1-1/2	2	10d x 1-1/2	1845	380
	3X	6	2	10d x 1-1/2	2	10d x 1-1/2	1845	380
	(2) 2X	6	4	10d	2	10d x 1-1/2	2980 [3]	380
	4X	6	4	10d	2	10d x 1-1/2	2980 [3]	380

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Listed loads shall not be increased.
3) FWH hangers with 1-9/16" joist width have an allowable download of 2,665 lb in DF.
4) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

Specialty Options Table – Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1]	Top Flange Offset
Range	1° to 70°	--
Allowable Loads	80% of table load on skews up to 45°. 70% of table load on skews 46° to 70°.	70% of table download. 180 lbs. Max uplift.
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. FWH3514_SK45R_SQ	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. FWH3595_OSR

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.

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FWHBP Fire Wall Hangers for Beams and Purlins

MiTek has expanded the FWH Fire Wall Hanger series to include the higher load carrying capacity FWHBP, the Fire Wall Hanger for Beams and Purlins. The FWHBP transfers the load into the supporting wall through bearing on the top plates and directly attaching to the stud pack or post below. The advanced design allows the installation of the FWHBP **before** the 5/8" gypsum wallboard (drywall) is attached and permits the building project to be completely framed-up, and weather-tight before the gypsum wallboard sheathing work starts.

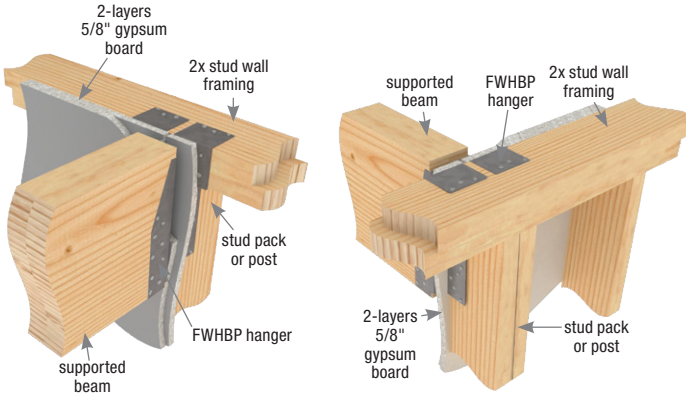
Materials: 12 gauge
Finish: Primer
Options: See Specialty Options table on page 193
Codes: IBC, FL, LA
Patents: U.S. Patent No. 10,179,992

Installation:

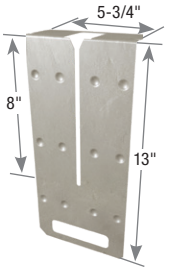
- Install the face of hanger flanges tight to stud wall framing.
- The end of the truss/joist should measure 1-5/8" from the face of the supporting wall.
- The truss/joist should bear fully on the FWHBP seat with a gap no greater than 1/8" between the end of the supported member and the hanger.
- **Gypsum Wallboard Installation** – Use the FWH-T template to slot cut the gypsum wallboard. See FWH-T Installation Sequence. Slide the gypsum wallboard into position and fasten to the framing members meeting the minimum requirements specified by code.

2 Hour Fire-Rating

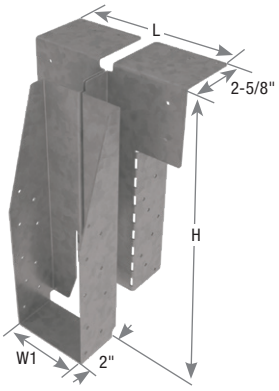
FWH hangers are tested per ASTM E814 standards. When installed on one side of a maximum 2 hour fire-rated wall assembly, the penetration of the MiTek Fire Wall Hangers through the gypsum wallboard will not reduce the fire resistive rating of the 2 hour fire resistive assembly.



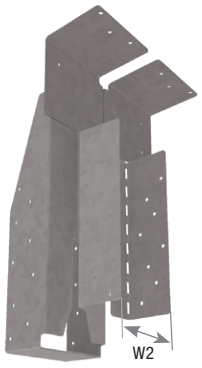
Typical FWHBP attachment to top plate/beam and stud pack/post



FWH-T
(must be ordered separately)



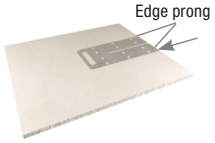
FWHBP Hanger



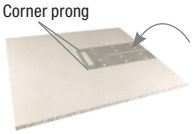
FWHBP Stud Pack Width

FWH-T Installation Sequence

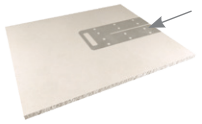
1) Align the FWH-Template slot with the mark in the gypsum wallboard and engage the prongs into edge of gypsum wallboard



2) Rotate the template and press down on the end to engage the corner prongs



3) Run the gypsum wallboard cutter down the template to cut the slot



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Continued on next page

Fastener / Allowable Load Table

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[5]					DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Code Ref.
								Header					Download 2-Ply 2x Wall Top Plate[1]			Uplift 160%[2]	Download 2-Ply 2x Wall Top Plate[1]			Uplift 160%[2]	
				W1	W2[3]	H	L[4]	Top Qty	Face Qty	Stud Qty	Joist Qty	Type	100%	115%	125%		100%	115%	125%		
3-1/2 x 11-7/8	FWHBP35118					11-7/8															
3-1/2 x 14	FWHBP3514					13-15/16															
3-1/2 x 16	FWHBP3516					15-15/16															
3-1/2 x 18	FWHBP3518	--	12	3-9/16	3-1/8	17-15/16	7-1/8	6	4	16	18	10d	7055	7355	7550	3045	5335	5600	5765	2410	
3-1/2 x 20	FWHBP3520					19-15/16															
3-1/2 x 22	FWHBP3522					21-15/16															
3-1/2 x 24	FWHBP3524					23-15/16															
5-1/4 x 11-7/8	FWHBP52118					11-7/8															
5-1/4 x 14	FWHBP5214					13-15/16															
5-1/4 x 16	FWHBP5216					15-15/16															
5-1/4 x 18	FWHBP5218	--	12	5-3/8	3-1/8	17-15/16	7-15/16	6	4	16	18	10d	8005	8005	8005	3045	6330	6330	6330	2410	IBC, FL, LA
5-1/4 x 20	FWHBP5220					19-15/16															
5-1/4 x 22	FWHBP5222					21-15/16															
5-1/4 x 24	FWHBP5224					23-15/16															
7 x 11-7/8	FWHBP71118					11-7/8															
7 x 14	FWHBP7114					13-15/16															
7 x 16	FWHBP7116					15-15/16															
7 x 18	FWHBP7118	--	12	7-1/8	3-1/8	17-15/16	9-11/16	6	4	16	18	10d	5660	5660	5660	3045	4470	4470	4470	2405	
7 x 20	FWHBP7120					19-15/16															
7 x 22	FWHBP7122					21-15/16															
7 x 24	FWHBP7124					23-15/16															

1) Download allowable load is for a 2-Ply Top Plate with stud pack (or post) below without wall and floor sheathing attached.
2) Uplift loads have been increased 60% for wind or seismic loads. No further increase shall be permitted.
3) Other W2 widths are available upon request.
4) Larger "W2" widths will result in a larger length "L".
5) **NAILS:** 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Specialty Options Table – Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1]
Range	1° to 70°
Allowable Loads	70% of table load
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. FWHBP3514_SK45L_SQ

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.

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FWHH Heavy-Duty Fire Wall Hangers

The MiTek FWHH Heavy-Duty Fire Wall Hanger is designed to support beams and purlins at header locations. The higher capacity of the FWHH is achieved through top flange bearing along with added face and beam/purlin nailing. The advanced design allows the installation of the FWHH **before** the 5/8" gypsum wallboard (drywall) is attached and permits the building project to be completely framed-up, and weather-tight before the gypsum wallboard sheathing work starts.

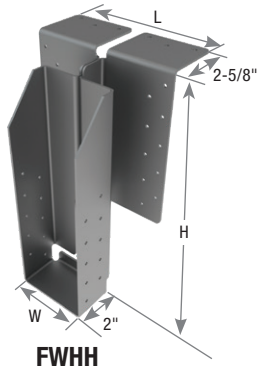
Materials: 12 gauge
Finish: Primer
Options: See Specialty Options table on page 195
Codes: IBC, FL, LA
Patents: U.S. Patent No. 11,649,626

Installation:

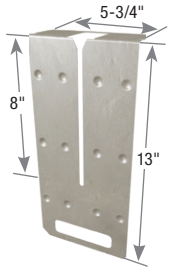
- Install the FWHH hanger flanges tight to the face of the header.
- A minimum 2-ply 2x10 header is required for installation.
- The beam/purlin should bear fully on the FWHH seat with a gap no greater than 1/8" between the end of the supported member and the hanger.
- **Gypsum Wallboard Installation** - Use the FWH-T template to slot cut the gypsum wallboard. See FWH-T Installation Sequence. Slide the gypsum wallboard into position and fasten to the framing members meeting the minimum requirements specified by code.

2 Hour Fire-Rating

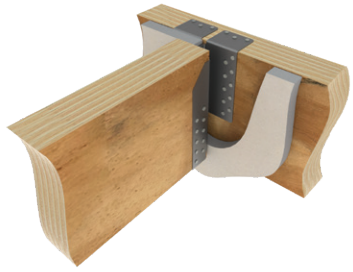
FWH hangers are tested per ASTM E814 standards. When installed on one side of a maximum 2 hour fire-rated wall assembly, the penetration of the MiTek Fire Wall Hangers through the gypsum wallboard will not reduce the fire resistive rating of the 2 hour fire resistive assembly.



FWHH



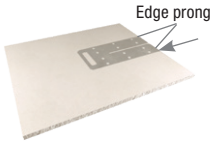
FWH-T
(must be ordered separately)



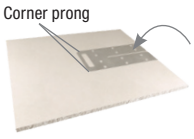
Typical FWHH installation

FWH-T Installation Sequence

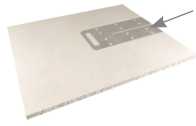
1) Align the FWH-Template slot with the mark in the gypsum wallboard and engage the prongs into edge of gypsum wallboard



2) Rotate the template and press down on the end to engage the corner prongs



3) Run the gypsum wallboard cutter down the template to cut the slot



Fastener / Allowable Load Table

Joist Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	L	Fastener Schedule[2] Header Top Qty	Header Face Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Download 100%	Download 115%	Download 125%	Uplift 160%[1]	S-P-F Allowable Loads (Lbs.) Download 100%	Download 115%	Download 125%	Uplift 160%[1]	Code Ref.
3-1/2 x 9-1/2	FWHH3595	--	12	3-9/16	9-7/16	7-3/16	6	20	10d	20	10d x 1-1/2	7355	7650	7650	3360	5595	5890	6075	2725	IBC, FL, LA
3-1/2 x 11-7/8	FWHH35118				11-13/16															
3-1/2 x 14	FWHH3514				13-15/16															
3-1/2 x 16	FWHH3516				15-15/16															
3-1/2 x 18	FWHH3518				17-15/16															
3-1/2 x 20	FWHH3520				19-15/16															
3-1/2 x 22	FWHH3522				21-15/16															
3-1/2 x 24	FWHH3524				23-15/16															

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Continued on next page

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Fastener / Allowable Load Table

Joist Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2]					DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Code Ref.
							Header			Joist		Download			Uplift	Download			Uplift	
				W	H	L	Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%[1]	100%	115%	125%	160%[1]	
5-1/4 x 9-1/4	FWHH52925				9-1/8															
5-1/4 x 9-1/2	FWHH5295				9-7/16															
5-1/4 x 11-7/8	FWHH52118				11-13/16															
5-1/4 x 14	FWHH5214				13-15/16															
5-1/4 x 16	FWHH5216	--	12	5-3/8	15-15/16	8-1/2	6	20	10d	20	10d x 1-/2	7650	7650	7650	3360	6170	6170	6170	2710	
5-1/4 x 18	FWHH5218				17-15/16															
5-1/4 x 20	FWHH5220				19-15/16															
5-1/4 x 22	FWHH5222				21-15/16															
5-1/4 x 24	FWHH5224				23-15/16															
5-1/2 x 9-1/4	FWHH55925				9-1/8															
5-1/2 x 9-1/2	FWHH5595				9-7/16															
5-1/2 x 11-7/8	FWHH55118				11-13/16															
5-1/2 x 14	FWHH5514				13-15/16															
5-1/2 x 16	FWHH5516	--	12	5-9/16	15-15/16	8-1/2	6	20	10d	20	10d x 1-/2	7615	7615	7615	3360	6170	6170	6170	2710	IBC, FL, LA
5-1/2 x 18	FWHH5518				17-15/16															
5-1/2 x 20	FWHH5520				19-15/16															
5-1/2 x 22	FWHH5522				21-15/16															
5-1/2 x 24	FWHH5524				23-15/16															
7 x 11-7/8	FWHH71118				11-13/16															
7 x 14	FWHH7114				13-15/16															
7 x 16	FWHH7116				15-15/16															
7 x 18	FWHH7118	--	12	7-1/8	17-15/16	10-1/4	6	20	10d	20	10d x 1-1/2	6005	6005	6005	3360	5825	5825	5825	2695	
7 x 20	FWHH7120				19-15/16															
7 x 22	FWHH7122				21-15/16															
7 x 24	FWHH7124				23-15/16															

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Specialty Options Table – Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1]
Range	1˚ to 70˚
Allowable Loads	70% of table load
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. FWHH3516_SK60R_SQ

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.

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The MiTek FWHH Heavy-Duty Fire Wall Hanger is designed to support beams and purlins at header locations. The higher capacity of the FWHH is achieved through top flange bearing along with added face and beam/purlin nailing. The advanced design allows the installation of the FWHFM **before** the 5/8" gypsum wallboard (drywall) is attached and permits the building project to be completely framed-up, and weather-tight before the gypsum wallboard sheathing work starts.

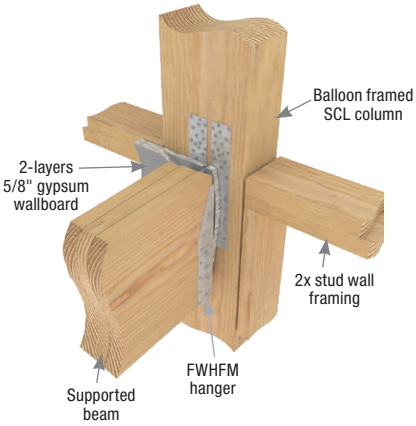
Materials: 12 gauge
Finish: Primer
Options: See Specialty Options table on page 197
Codes: IBC, FL, LA

Installation:

- Install the face of hanger flanges tight to SCL column/framing.
- The end of the truss/joist should measure 1-5/8" from the face of the supporting column.
- The truss/joist should bear fully on the FWHFM seat with a gap no greater than 1/8" between the end of the supported member and the hanger.
- **Gypsum Wallboard Installation** – Use the FWH-T template to slot cut the gypsum wallboard. See FWH-T Installation Sequence. Slide the gypsum wallboard into position and fasten to the framing members meeting the minimum requirements specified by code.

2 Hour Fire-Rating

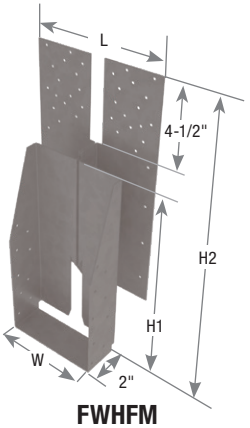
FWH hangers are tested per ASTM E814 standards. When installed on one side of a maximum 2 hour fire-rated wall assembly, the penetration of the MiTek Fire Wall Hangers through the gypsum wallboard will not reduce the fire resistive rating of the 2 hour fire resistive assembly.



Typical FWHFM installation



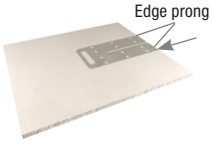
FWH-T
(must be ordered separately)



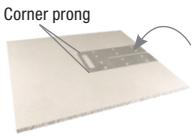
FWHFM

FWH-T Installation Sequence

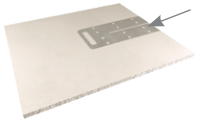
1) Align the FWH-Template slot with the mark in the gypsum wallboard and engage the prongs into edge of gypsum wallboard



2) Rotate the template and press down on the end to engage the corner prongs



3) Run the gypsum wallboard cutter down the template to cut the slot



Continued on next page

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Fastener / Allowable Load Table

Joist Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H1	H2	L	Fastener Schedule[4] Header Face Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Download[1] 100%	115%	125%	Uplift 160%[2]	S-P-F Allowable Loads (Lbs.) Download[1] 100%	115%	125%	Uplift 160%[2]	Code Ref.
3-1/2 x 9-1/4	FWHFM35925				9-1/16	13-9/16														
3-1/2 x 9-1/2	FWHFM3595				9-5/16	13-13/16														
3-1/2 x 11-7/8	FWHFM35118				11-11/16	16-3/16														
3-1/2 x 14	FWHFM3514				13-13/16	18-5/16														
3-1/2 x 16	FWHFM3516	--	12	3-9/16	15-13/16	20-5/16	4-11/16	40	10d	18	10d x 1-1/2	5960	6625	7050	2820	5245	5600	5765	2290	
3-1/2 x 18	FWHFM3518				17-13/16	22-5/16														
3-1/2 x 20	FWHFM3520				19-13/16	24-5/16														
3-1/2 x 22	FWHFM3522				21-13/16	26-5/16														
3-1/2 x 24	FWHFM3524				23-13/16	28-5/16														
4 - 4-3/16 x 9-1/4	FWHFM42925				9-1/16	13-9/16														
4 - 4-3/16 x 9-1/2	FWHFM4295				9-5/16	13-13/16														
4 - 4-3/16 x 11-7/8	FWHFM42118				11-7/16	15-15/16														
4 - 4-3/16 x 14	FWHFM4214				13-5/8	18-1/8														
4 - 4-3/16 x 16	FWHFM4216	--	12	4-3/16	15-5/8	20-1/8	5-5/16	40	10d	18	10d x 1-1/2	5960	6625	7050	2820	5245	5830	6205	2280	
4 - 4-3/16 x 18	FWHFM4218				17-5/8	22-1/8														
4 - 4-3/16 x 20	FWHFM4220				19-5/8	24-1/8														
4 - 4-3/16 x 22	FWHFM4222				21-5/8	26-1/8														
4 - 4-3/16 x 24	FWHFM4224				23-5/8	28-1/8														
5-1/4 x 9-1/4	FWHFM52925				9-1/16	13-9/16														
5-1/4 x 9-1/2	FWHFM5295				9-5/16	13-13/16														
5-1/4 x 11-7/8	FWHFM52118				11-5/8	16-1/8														
5-1/4 x 14	FWHFM5214				13-13/16	18-5/16														
5-1/4 x 16	FWHFM5216	--	12	5-3/8	15-13/16	20-5/16	6-1/2	40	10d	18	10d x 1-1/2	5960	6625	7050	2820	5245	5830	6205	2270	
5-1/4 x 18	FWHFM5218				17-13/16	22-5/16														
5-1/4 x 20	FWHFM5220				19-23/28	24-5/16														
5-1/4 x 22	FWHFM5222				21-13/16	26-5/16														
5-1/4 x 24	FWHFM5224				23-13/16	28-5/16														
7 x 11-7/8	FWHFM71118				11-11/16	16-3/16														
7 x 14	FWHFM7114				13-13/16	18-5/16														
7 x 16	FWHFM7116				15-13/16	20-5/16														
7 x 18	FWHFM7118	--	12	7-1/8	17-13/16	22-5/16	8-1/4	40	10d	18	10d x 1-1/2	5960	6085	6085	2820	5245	5605	5605	2260	
7 x 20	FWHFM7120				19-13/16	24-5/16														
7 x 22	FWHFM7122				21-13/16	26-5/16														
7 x 24	FWHFM7124				23-13/16	28-5/16														

IBC, FL, LA

1) Download allowable load is for attachment to the wide face of a supporting column.
2) Uplift loads have been increased 60% for wind or seismic loads. No further increase shall be permitted.
3) Distance from the supported member to the edge of the header support flange is 9/16".
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Specialty Options Table – Refer to Specialty Options pages 320 and 322 for additional details.

Option	Skewed[1]
Range	1˚ to 70˚
Allowable Loads	70% of table load
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. FWHFM5214_SK60L_SQ

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.

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Wood I-Joist Installation to Wood

Sloped I-Joists
Use sloped seat hangers and beveled web stiffeners whenever the slope exceeds the following: 1/2:12 for seat bearing lengths of 2-1/2" or less; 3/8:12 for bearing lengths between 2-1/2" and 3-1/2"; and 1/4:12 for bearing lengths in excess of 3-1/2".

Multiple I-Joist Plies
Fasten together multiple plies of wood I-Joists, in accordance with the manufacturer's installation guidelines, such that the joists act as a single unit.

I-Joist Rotation
It may be necessary to install blocking, sheathing or MiTek bridging to restrain torsional rotation of a supporting wood I-Joist when using I-Joist hangers

Fasteners
Install only the specified nails. The flanges of wood I-Joists may split if larger diameter nails or longer nails are installed. Do not install nails larger than 16d common wire nails (0.162" diameter) into the web stiffeners in the wood I-Joist.

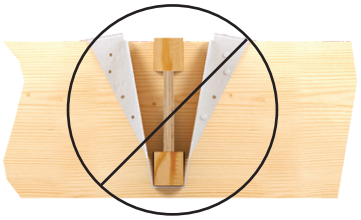
Backer Blocks
Pattern the nails used to install backer blocks or web stiffeners in wood I-Joists to avoid splitting the block. The nail pattern should be sufficiently spaced to avoid the same grain line, particularly with solid sawn backer blocks. Backer blocks must be installed on wood I-Joist acting as the header, or supporting member. Install in accordance with the I-Joist manufacturer's installation guidelines. The nails used to install hangers mounted to an I-Joist header must penetrate through the web and into the backer block on the opposite side.

Top Flange Hangers

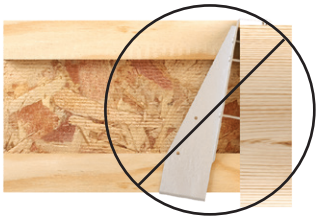
The thickness of the hanger metal and nail heads on top mount hangers must be evaluated for the effect on subsequent sheathing. Ensure that the top mount hanger is installed so the flanges of the hanger are not over-spread which tends to elevate the supported I-Joist causing uneven floor surfaces and squeaking. Similarly, ensure that the hanger is installed plumb such that the face flanges of the hanger are mounted firmly against the wide-face surface of the header.



Flush framing



Hanger over-spread



Hanger not plumb

Correct Slant Nail Installation



Always secure wood I-Joist using 10d x 1-1/2" nail driven at a 30° to 45° angle and firmly seated



Common Nailing Errors

Wrong Angle
When a nail is driven into the bottom flange of the wood I-Joist parallel to the glue lines, separation of veneers can occur which substantially reduces the design loads of the connection.



Nail Too Long
When using nails longer than MiTek's recommended nails, bottom flange splitting may occur. Also, this can raise the wood I-Joist off the seat, resulting in uneven surfaces and squeaky floors along with reduced allowable loads.

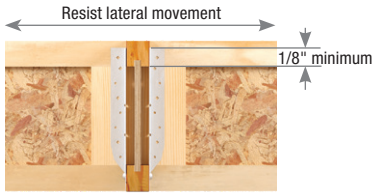
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Support Height & Lateral Stability

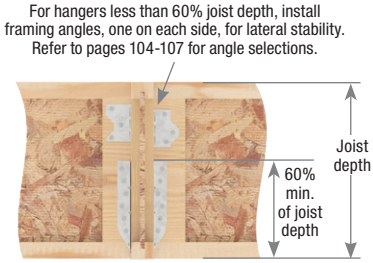
Hangers for joists **without web stiffeners** must support the I-Joist's top flange and provide lateral resistance with no less than 1⁄8" contact.

MiTek recommends that hangers for joist **with web stiffeners** should be 60% of the joist height for stability during construction. If this cannot be accomplished, potential joist rotation must be resolved by other means. Refer to web stiffeners reqd. column in EWP tables.







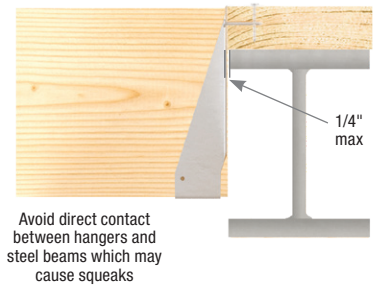


Nailer Installations

Correct Hanger Attachment to Nailer
A nailer or sill plate is considered to be any wood member attached to a steel beam, concrete block wall, concrete stem wall, or other structure unsuitable for nailing, which is used as a nailing surface for top mount hangers to hold beams or joists.

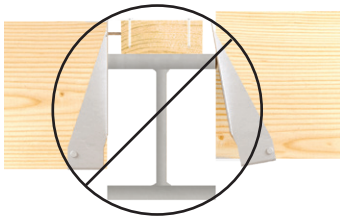
Nailer Sized Correctly
Top flange of hanger is fully supported and recommended nails have full penetration into nailer, resulting in a carried member hanging safely at the proper height.

The nailer must be sized to fit the support width as shown and be of sufficient thickness to satisfy recommended top flange nailing requirements. A design professional must specify nailer attachment to steel beams.



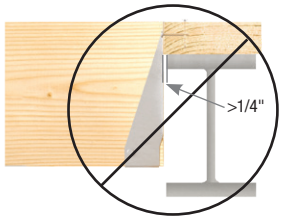
Correct Attachment

Wrong Nailer Size Causes Component Failure



Too Narrow

Top flange not fully supported can cause nail breakout. Or, by fully supporting top flange, hanger is tilted back, causing lifting of carried member which results in uneven surfaces and squeaky floors.



Too Wide

Loading can cause cross grain breaking of nailer. The recommended nailer overhang is 1⁄4" maximum per side.



Too Thin

Top flange nailing cannot fully penetrate nailer, causing reduced allowable loads. Never use hangers which require multiple face nails since the allowable loads are dependent on all nail holes being used.

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Hanger Type	MiTek Series	Steel Gauge	Supporting Member									Supported Member						Allowable Loads (Lbs.) Range		MiTek Series Product Catalog Page Reference
																		Header Material		
			Beam/Joist/Rafter (rect shapes)	I-Joist	Truss (2x)	Floor Truss 4x	Nailer	Glulam	Wall	Post	Rim Joist	Beam/Joist/Rafter (rect shapes)	I-Joist	Truss (2x)	Floor Truss 4x	Glulam	Stringer	LVL 100%	DF/SP 100%	
Face Mount	THF	16 or 12	•	•				•				•	•	•	•			1,890 - 3,190	1,890 - 3,190	203, 209
	THFI	18	•	•				•				•	•	•	•			960 - 1,680	960 - 1,680	201, 208
	IHFL	18	•	•	•			•			•		•			•		960 - 1,920	960 - 1,920	202, 207-210
	IHF	16	•	•	•			•					•			•		1,000 - 4,410	1,000 - 4,410	202, 207-210
	HUS	16	•		•			•			•	•		•		•		2,760 - 5,580	2,760 - 5,580	205, 210
	HD	14	•	•	•			•			•	•	•	•	•	•		1,540 - 4,620	1,540 - 4,620	204, 209-212
	HDQIF	14	•		•			•		•	•	•	•	•	•	•		3,340 - 5,605	3,340 - 5,605	204, 210-212
	THD	14 or 12	•		•			•				•	•	•	•	•		2,770 - 8,285	2,770 - 8,285	206, 211-212
	THDH	12	•		•			•				•	•	•	•	•		4,375 - 11,325	4,375 - 11,325	206, 210-212
	THDHQ	12	•		•			•				•		•	•			5,015 - 10,880	5,015 - 10,880	205, 211
Top Mount	TFL	18	•	•		•	•	•				•	•	•	•			1,585	1,585	213, 217-218, 221
	THO	18, 16 or 12	•	•		•	•	•				•	•	•	•			1,235 - 5,660	1,235 - 5,000	213, 217-222
	TFI	16	•	•		•	•	•				•	•	•	•			2,715 - 2,820	2,715 - 2,820	213, 218, 220-221
	BPHA	12	•		•	•	•	•	•		•	•	•	•	•	•		3,675 - 5,270	3,110 - 5,270	214, 217-225
	HBPH	10	•		•	•	•				•	•	•	•	•			6,185 - 6,310	6,185 - 6,310	214, 219-225
	LGU	10	•		•			•				•		•	•	•		7,135	7,135	226
	MGU	10	•					•				•		•		•		9,515	9,515	226
	HGU	7	•		•			•				•		•	•	•		14,705	14,705	226
	PHXU	7	•			•	•	•				•	•	•	•	•		4,350 - 5,910	4,350 - 5,910	216-217, 219-221, 223-225
	HLBH	7	•				•					•		•	•	•		10,045	10,045	215, 219-221, 223-225
	PHM	7 - Top Flange; 10 - Stirrup	•			•	•	•				•	•	•	•	•		3,265 - 3,390	3,060 - 3,390	216-225
	KEGQ	3 - Top Flange; 7 - U-Strap	•					•				•				•		17,265	17,265	227
Glulam	HD	14	•		•			•			•	•	•	•	•	•		2,465 - 4,310	2,465 - 4,310	230-231
	HDQIF	14	•		•			•		•	•	•	•	•	•	•		5,015 - 5,605	5,015 - 5,605	230-231
	THDH	12	•		•			•				•	•	•	•	•		9,020 - 11,325	9,020 - 11,325	230-231
	GHF	12 or 7	•					•				•				•		2,740 - 13,000	2,740 - 13,000	231-232
	LGU	10	•		•			•				•		•	•	•		7,135	7,135	233
	MGU	10	•					•				•		•		•		9,515	9,515	233
	HGU	7	•		•			•				•		•	•	•		14,705	14,705	233
	KLEG[1]	7	•					•				•				•		11,980	11,980	235
	KMEG[1]	7	•					•				•				•		12,635	12,635	235
	KHHB	7	•					•				•				•		6,480	6,480	236
	KGB	7	•					•				•		•		•		6,480	6,480	236
	KHGB	7	•					•				•		•		•		6,480	6,480	236
	KHW	3 - Top Flange; 10 - Stirrup	•				•	•				•		•	•	•		5,295 - 5,535	5,295 - 5,535	234
	KEG[1]	7	•					•				•				•		17,615 - 21,145	17,615 - 21,145	235
	KGLT	3 - Top Flange; 7 - Stirrup	•				•	•				•		•		•		10,555	10,555	237-238
	KHGLT	3 - Top Flange; 7 - Stirrup	•					•				•				•		12,495	12,495	237-238
	KGLS	3 - Top Flange; 7 - Stirrup	•					•				•		•		•		11,070 - 21,220	11,070 - 21,220	238-239
	KHGLS	3 - Top Flange; 7 - Stirrup	•					•				•				•		21,750 - 23,195	21,750 - 23,195	238-239
	KGLST	3 - Top Flange; 7 - Stirrup	•					•				•		•		•		13,695 - 26,890	13,695 - 26,890	238-239
	KHGLST	3 - Top Flange; 7 - Stirrup	•					•				•				•		20,315 - 28,975	20,315 - 28,975	238-239
Slope / Skew	LSSH	18 or 16	•	•	•			•				•	•	•	•	•	•	620 - 2,645	620 - 2,645	229
Variable Pitch	TMP	18	•		•	•		•	•		•	•	•	•	•			--	1,705	228
	TMPH[3]	16	•									•		•	•			--	1,905	228

1) KEG, KLEG, KMEG hangers assume allowable loads with top flange.
2) When an I-Joist is used as a header, designer must evaluate if a web stiffener or backer block is required.
3) TMPH connectors assume allowable loads based on a 14/12 pitch.
• Represents common applications and product configurations. Consult MiTek for additional applications and/or optional product configurations.

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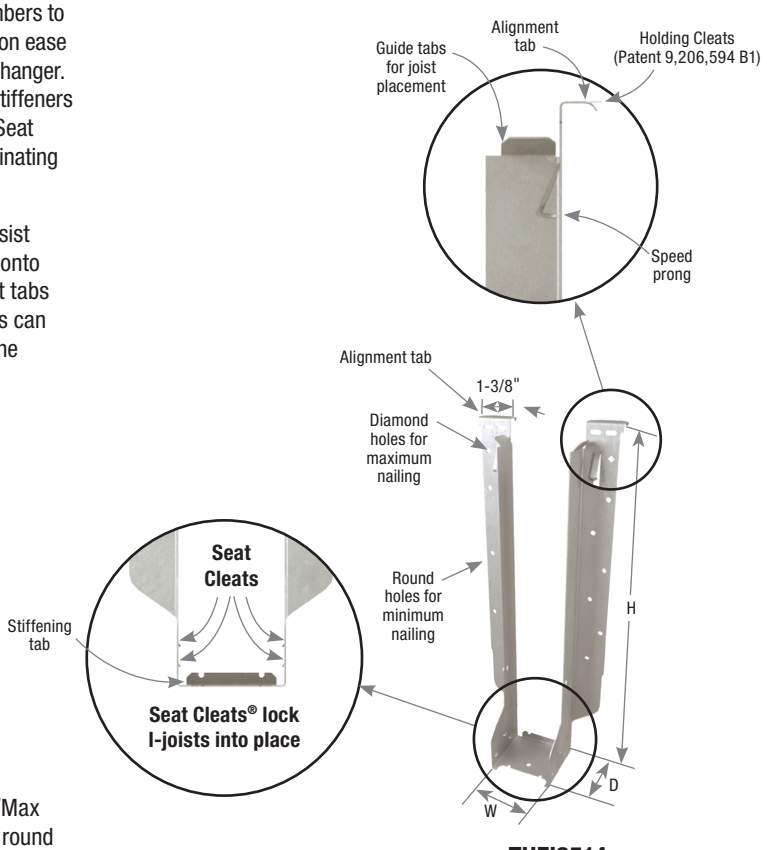
The THFI is a face mount hanger designed to attach EWP I-joist members to wood headers. The unique design of the THFI combines the installation ease of a top mount hanger with the installation flexibility of a face mount hanger. Because the side flanges extend to the top chord of the I-joist, web stiffeners are not required. The THFI hangers also feature strategically placed Seat Cleats® which lock the bottom flange of the I-joist to the hanger eliminating the need for joist nails to be installed.

The innovative top flange alignment tabs with the holding cleats assist the placing and alignment of the hanger prior to nailing by hanging onto the header with holding cleats biting into the wood. If the alignment tabs are not desired or a deeper height member is to be carried, the tabs can be easily bent out of the way. Alignment tabs do not contribute to the allowable design values of the THFI hangers.

Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA
Patents: U.S. Patent No. 5,564,248 & U.S. Patent No. 9,206,594

Installation:

- Install the required fasteners according to the table.
- Alignment tabs are not structural and can be bent back or removed to assist hanger placement.
- Web stiffeners are not required for THFI hangers unless specified by the I-joist manufacturer. Web stiffeners are not required for lateral stability.
- THFI2514 model has diamond holes in the header flange for Min/Max nailing option. For the Max nailing option, install nails in both the round and diamond shaped header holes.



THFI2514



Typical THFI installation

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IHFL / IHF Face Mount I-Joist Hangers

IHFL (18GA) and IHF (16GA) series face mount hangers feature speed prongs for temporary placement and seat cleats to grab the bottom flange of the supported I-joist. Diamond holes in header and joist allow for optional Max nailing for customized fastening to match allowable load needed. Install nails in all fastener holes when the Max allowable load is needed while lighter load capacities can be achieved with a quick installation of round holes only, saving time and money on the jobsite.

Features:
- Seat Cleats lock bottom chord of I-joist eliminating need for joist nails.
- Dimples with diamond nail holes for optional joist nailing when higher uplift loads are needed.
- Min/Max nailing provide flexible installation options.

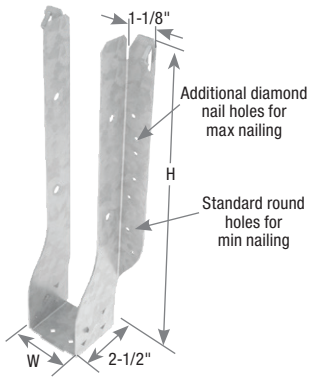
Materials: IHFL – 18 gauge; IHF – 16 gauge
Finish: G90 galvanizing
Options: See Specialty Options table
Codes: IBC, FL, LA
Patents: U.S. Patent No. #5,564,248

Installation:
- Install the required fasteners according to the table.
- Position I-joist into hangers and tap or push into place to fully seat joist and engage cleats.
- Web stiffeners are not required unless specified by the I-joist manufacturer.
- **Min Nailing** – Fill all round nail holes.
- **Max Nailing** – Fill all round and diamond holes.

Uplift Capacity Options:
- **IHFL** (18GA) – For additional uplift capacity, install (2) 10d (0.148") x 1-1/2" nails through diamond dimple holes into the bottom chord of I-joist member for a total uplift of 220 lbs.
- **IHF** (16GA)– Uplift capacity for hangers installed without joist nails is 65 lbs.



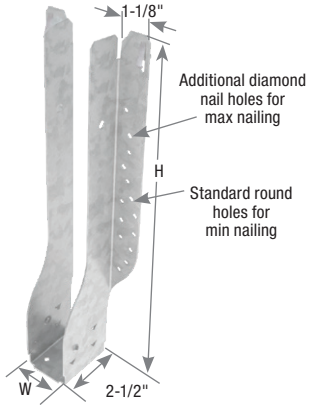
Typical IHFL2514 min nailing installation



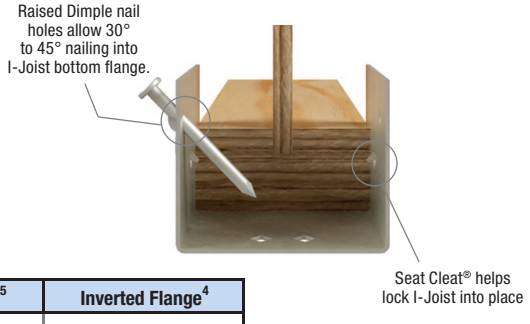
IHFL2514



Typical IHF1714 max nailing installation



IHF1714



Specialty Options Table – refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3,4,5]	Sloped Seat[2,3,4]	Sloped / Skewed[1,2,3,4,5]	Inverted Flange[4]
Range	1˚ to 67-1/2˚ when width is 1-3/4" or less. 1˚ to 50˚ on all others.	1˚ to 45˚	See Sloped Seat and Skewed	Not available in widths less than 2-1/4"
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Example: IHF23925_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Example: IHF23925_SL30D	See Sloped Seat and Skewed Example: IHF23925_SK45R_SL30D_BV	Add *IF,* to product number. Example: IHF23925_IF

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.
4) Modifications to IHFL or IHF hangers do not feature seat cleats or optional nailing.
5) Skewed hangers may require web stiffeners to be installed in order to facilitate joist nail installation.

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THF Face Mount I-Joist Hangers

The THF is a face mount hanger designed to attach EWP I-joist members to wood headers.

Materials: See EWP Face Mount Hangers tables, page 209
Finish: G90 galvanizing
Options: See Specialty Options table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- Web stiffeners are required for I-Joist installations.



Typical THF double I-Joist installation

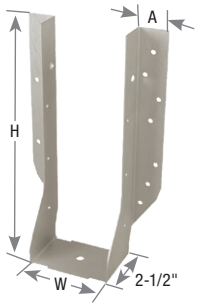


Typical THF I-Joist to I-Joist installation

Specialty Options Table – refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Inverted Flange
Range	1˚ to 50˚	1˚ to 45˚	See Sloped Seat and Skewed	One or two flanges available on all sizes.
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Example: THF23118-2_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Example: THF23118-2_SL30D	See Sloped Seat and Skewed Example: THF23118-2_SK45R_SL30D_BV	Add *IF,* to product number. Example: THF23118-2_IF

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.



THF

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HD Face Mount Hangers

Designed to support LVL, LSL, and PSL beams and headers in medium load conditions.

Materials: 14 gauge
Finish: G90 galvanizing
Options: See Specialty Options table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- **Min Nailing** – Fill all round nail holes.
- **Max Nailing** – Fill all round and diamond nail holes.



Typical HD installation



HD

Specialty Options Table – refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Inverted Flange
Range	1˚ to 67-1/2˚ when width is 1-3/4" or less. 1˚ to 50˚ on all others.	1˚ to 45˚	See Sloped Seat and Skewed	2-1/4" widths or greater (Widths < 2-1/4" may be available as a Custom, contact MiTek)
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK,* angle required, right *(R)* or left *(L), and* square cut *(SQ) or* bevel cut *(BV)* to product number. Example: HD410_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Example: HD410_SL30D	See Sloped Seat and Skewed Example: HD410_SK45R_SL30D_SQ	Add *IF,* to product number. Example: HD5216_IF

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

HDQIF Inverted Flange Face Mount Hangers

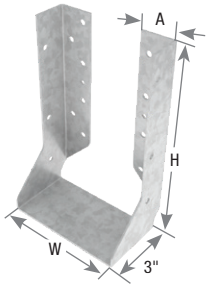
Inverted flange face mount hangers designed to support LVL, LSL and PSL beams and headers with MiTek's WS Structural Wood Screws.

Materials: 14 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek's WS15 (1/4" dia. x 1-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are supplied with HDQIF hangers.



Typical HDQIF inverted flange installation



HDQIF

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HUS Face Mount Hangers

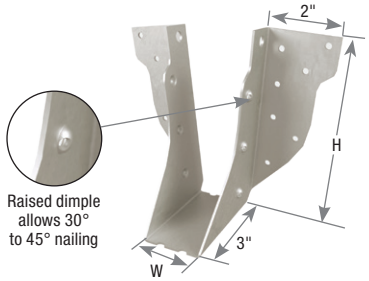
Designed for medium load conditions. Extended 3" deep seat provides enhanced bearing.

Materials: 16 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

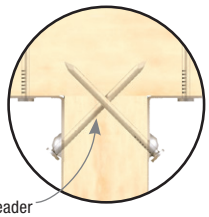
Installation:
- Install the required fasteners according to the table.
- Slant / double shear joist nails must be driven at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.
- Slant/double shear nails must be full length to achieve listed load values.



Typical HUS installation



HUS



Typical HUS double shear installation

THDHQ Girder Truss Hangers

The THDHQ hangers are designed to attach LVL, LSL and PSL beams and headers using MiTek's WS structural wood screws for higher design load capacity.

Materials: 12 gauge
Finish: G90 galvanizing
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek's WS structural wood screws are supplied with THDHQ hangers.



Typical THDHQ48 installation



THDHQ48

Specialty Options Table
– refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Inverted Flange [4]
Range	1° to 45°	1° to 45°	See Sloped Seat and Skewed	One flange option available on all sizes. Two flange option available on widths = 6-9/16"
Allowable Loads	100% of table allowable load. 75% of table uplift load.	100% of table allowable load	100% of table allowable load. 75% of table uplift load.	100% of table value. May not be installed into the support members endgrain.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. THDHQ410_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. THDHQ410_SL30D	See Sloped Seat and Skewed. Ex. THDHQ410_SK45R_SL30D_BV	One flange option: Add *IF,* and right *(R)* or left *(L),* to product number. Ex. THDHQ46_IFR Two flange option: Add *IF,* to product number. Ex. THDHQ26-4_IF

1) Skewed THDHQ hangers with skews greater than 15° always have all joist fasteners on one side of the outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist fasteners.
3) Skewed hangers typically require a bevel cut however, a square cut option may be available as a custom when requested. Some square cut hangers will require custom pricing due to welded back plate.
4) The inverted flange option is not available on skewed THDHQ hangers.

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THD / THDH Face Mount Hangers

THD – Medium capacity hanger for LVL, LSL, and PSL beams

THDH – Heavy capacity hanger for LVL, LSL, and PSL beams

Materials: See EWP Face Mount Hangers tables, pages 210-212
Finish: G90 galvanizing
Options: See Specialty Options table
Codes: IBC, FL, LA

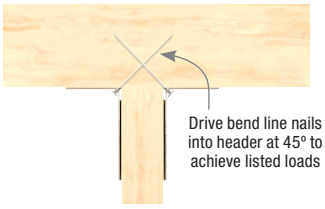
Installation:
- Install the required fasteners according to the table.
- **THD** – Drive bend line nails into header at 45° to achieve listed loads.
- **THDH** – Drive joist nails into header at 30° to 45° to achieve listed loads.



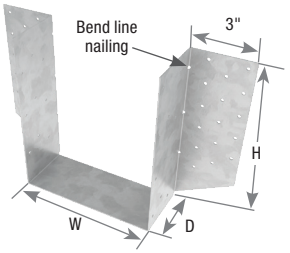
Typical THD installation



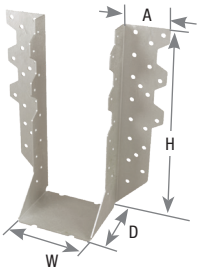
Typical THDH installation



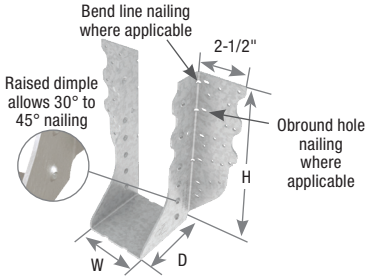
Typical bend line nailing installation



THD7210

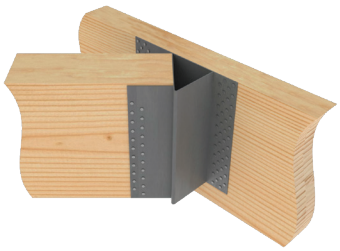


THD410



THDH

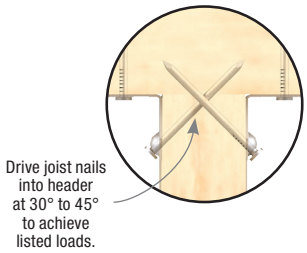
Some model designs may vary from illustration shown



Typical THDH614_SK45L_SQ installation



THDH614_SK45R_SQ



Typical THDH double shear installation

Specialty Options Table
– refer to Specialty Options pages 320-322 for additional details.

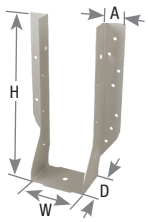
Option	MiTek Series	Skewed[1,3,4]	Sloped Seat[2]	Sloped / Skewed[1,2,3,4]	Inverted Flange
Range	THD	1˚ to 45˚	1˚ to 45˚	See Sloped Seat and Skewed	THD410 – THD414 One flange THD610 – THD7210 Two flange
	THDH				N/A
Allowable Loads	THD	85% of table load	65% of table load	65% of table load	100% of table load 65% of table load when nailing into the support members end grain
	THDH	85% of table load 50% of table uplift load	85% of table load	52% of table load 50% of table uplift load	N/A
Ordering	THD	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. THDH410_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex: THDH410_SL30D	See Sloped Seat and Skewed Ex. THDH410_SK45R_SL30D_BV	**One flange option:** Add *IF,* and right *(R)* or left *(L),* to product number. Ex. THD410_IFR **Two flange option:** Add *IF,* to product number. Ex. THD610_IF
	THDH				N/A

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange. All skewed THDH hangers have joist nails on one side only.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) THDH models - Skewed hangers typically require a bevel cut. A square cut option may be available as a custom.
4) THD models - For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.

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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Steel Gauge	Dimensions (in)				Fastener Schedule[4]					DF/SP Header Allowable Loads (Lbs.)				S-P-F Header Allowable Loads (Lbs.)				Code Ref.
										Header		Joist[2]										
					W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	Uplift[1,2] 160%	100%	115%	125%	Uplift[1,2] 160%	
1-1/2 x 9-1/4 - 9-1/2	IHFL15925	IUS1.56/9.5	--	18	1-1/2	9-1/16	2-1/2	1-1/8	--	8	10d	--	--	960	1095	1180	50	830	945	1020	40	IBC, FL, LA
	IHF15925	MIU1.56/9	--	16	1-1/2	9-1/16	2-1/2	1-1/8	Min	8	10d	2	10d x 1-1/2	1000	1120	1210	330	880	990	1065	260	
									Max	20	16d			2905	2905	2905		1815	1840	1860		
1-1/2 x 11-1/4 - 11-7/8	IHFL15112	IUS1.56/11.88	--	18	1-1/2	11-1/16	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
	IHF15112	MIU1.56/11	--	16	1-1/2	11-1/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3065	3095	3115		1815	1840	1860		
1-1/2 x 14	IHF1514	--	--	16	1-1/2	13-1/2	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			3065	3095	3115		1815	1840	1860		
1-5/8 x 9-1/4 - 9-1/2	IHF16925	--	--	16	1-5/8	9	2-1/2	1-1/8	Min	8	10d	2	10d x 1-1/2	1000	1120	1210	330	880	990	1065	260	
									Max	20	16d	2		2905	2905	2905		1945	1975	1995		
1-5/8 x 11-1/4 - 12	IHF16112	--	--	16	1-5/8	11	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3295	3325	3350		1945	1975	1995		
1-5/8 x 14	IHF1614	--	--	16	1-5/8	13-7/16	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			3295	3325	3350		1945	1975	1995		
1-3/4 x 9-1/4 - 9-1/2	IHFL17925	IUS1.81/9.5	--	18	1-3/4	8-15/16	2-1/2	1-1/8	--	8	10d	--	--	960	1095	1180	50	830	945	1020	40	
	IHF17925	MIU1.81/9	--	16	1-3/4	8-15/16	2-1/2	1-1/8	Min	8	10d	2	10d x 1-1/2	1000	1120	1210	330	880	990	1065	260	
									Max	20	16d			2905	2905	2905		2080	2105	2125		
1-3/4 x 11-7/8	IHFL17112	IUS1.81/11.88	--	18	1-3/4	10-15/16	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
	IHF17112	MIU1.81/11	--	16	1-3/4	10-15/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3560	3585		2080	2105	2125		
1-3/4 x 14	IHFL1714	IUS1.81/14	--	18	1-3/4	13-3/8	2-1/2	1-1/8	Min	12	10d	--	--	1440	1640	1770	50	1245	1420	1530	40	
									Max	14				1680	1915	2065		1455	1660	1785		
	IHF1714	MIU1.81/14	--	16	1-3/4	13-3/8	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			3530	3560	3585	330	2080	2105	2125	260	
1-3/4 x 16	IHFL1716	IUS1.81/16	--	18	1-3/4	15-7/8	2-1/2	1-1/8	Min	14	10d	--	--	1680	1915	2065	50	1455	1660	1785	40	
									Max	16				1920	2190	2360		1660	1895	2040		
	IHF1716	MIU1.81/16	--	16	1-13/16	15-3/4	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			3530	3560	3585		2080	2105	2125		
2 x 9-1/2	IHFL20925	IUS2.06/9.5	--	18	2-1/16	8-3/4	2-1/2	1-1/8	--	8	10d	--	--	960	1095	1180	50	830	945	1020	40	
	IHF20925	--	--	16	2-1/16	8-7/8	2-1/2	1-1/8	Min	8	10d	2	10d x 1-1/2	1000	1120	1210	330	880	990	1065	260	
									Max	20	16d			2905	2905	2905		2410	2440	2460		
2 x 11-7/8	IHFL20112	IUS2.06/11.88	--	18	2-1/16	11-5/16	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
	IHF20112	MIU2.1/11	--	16	2-1/16	11-3/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3960	3960		2410	2440	2460		
2 x 14	IHFL2014	IUS2.06/14	--	18	2-1/16	13-3/16	2-1/2	1-1/8	Min	12	10d	--	--	1440	1640	1770	50	1245	1420	1530	40	
									Max	14				1680	1915	2065		1455	1660	1785		
	IHF2014	--	--	16	2-1/16	13-1/4	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			4115	4150	4170		2410	2440	2460		
2 x 16	IHFL2016	IUS2.06/16	--	18	2-1/16	15-11/16	2-1/2	1-1/8	Min	14	10d	--	--	1680	1915	2065	50	1455	1660	1785	40	
									Max	16				1920	2190	2360		1660	1895	2040		
2-5/16 x 9-1/2	IHFL23925	IUS2.37/9.5	--	18	2-5/16	9-3/16	2-1/2	1-1/8	--	8	10d	--	--	960	1095	1180	50	830	945	1020	40	
	IHF23925	MIU2.37/9	--	16	2-5/16	9-3/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	4000	4320		2675	2705	2725		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) IHFL (18GA) — install (2) 10d (0.148") x 1-1/2" nails through diamond dimple holes into the bottom chord of I-Joist member for a total uplift of 220 lbs.
IHF (16GA) — uplift capacity for hangers installed without joist nails is 65 lbs.
3) Web stiffeners may be required by I-Joist manufacturers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.

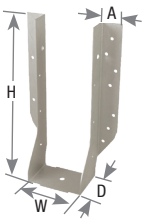


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Steel Gauge	Dimensions (in)				Fastener Schedule[4]					DF/SP Header Allowable Loads (Lbs.)				S-P-F Header Allowable Loads (Lbs.)				Code Ref.
										Header		Joist[2]										
					W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	Uplift[1,2] 160%	100%	115%	125%	Uplift[1,2] 160%	
2-5/16 x 11-7/8	IHFL23112	IUS2.37/11.88	--	18	2-5/16	11-3/16	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	IBC, FL, LA
	IHF23112	MIU2.37/11	--	16	2-5/16	11-3/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3960	3960		2675	2705	2725		
2-5/16 x 14	IHFL2314	IUS2.37/14	--	18	2-5/16	13-1/2	2-1/2	1-1/8	Min	12	10d	--	--	1440	1640	1770	50	1245	1420	1530	40	
									Max	14				1680	1915	2065		1455	1660	1785		
	IHF2314	MIU2.37/14	--	16	2-5/16	13-1/2	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			4115	4440	4440		2675	2705	2725		
2-5/16 x 16	IHFL2316	IUS2.37/16	--	18	2-5/16	15-9/16	2-1/2	1-1/8	Min	14	10d	--	--	1680	1915	2065	50	1455	1660	1785	40	
									Max	16				1920	2190	2360		1660	1895	2040		
	IHF2316	MIU2.37/16	--	16	2-5/16	15-9/16	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			4410	4440	4440		2675	2705	2725		
2-5/16 x 18	IHF2318	MIU2.37/18	--	16	2-5/16	17-1/8	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			4410	4440	4440		2675	2705	2725		
2-1/2 x 9-1/4 - 9-1/2	THFI2595	IUS2.56/9.25, IUS2.56/9.5	--	18	2-5/8	9-1/2	2-1/2	1-3/8	--	8	10d	--	--	960	1095	1180	125	845	965	995	100	
	IHFL25925	--	--	18	2-1/2	9-1/8	2-1/2	1-1/8	--	8	10d	--	--	960	1095	1180	50	830	945	1020	40	
	IHF25925	MIU2.56/9	--	16	2-1/2	9-1/8	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	4000	4320		2875	2905	2920		
2-1/2 x 11-1/4 - 11-7/8	THFI25118	IUS2.56/11.88	--	18	2-5/8	11-7/8	2-1/2	1-3/8	--	10	10d	--	--	1200	1265	1265	125	995	995	995	100	
	IHFL25112	--	--	18	2-1/2	11-1/8	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
	IHF25112	MIU2.56/11	--	16	2-1/2	11-1/8	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	3960	3960		2875	2905	2920		
2-1/2 x 14	THFI2514	IUS2.56/14	--	18	2-5/8	14	2-1/2	1-3/8	Min	12	10d	--	--	1440	1640	1770	125	1265	1445	1555	100	
									Max	14	10d	--	--	1680	1915	2065		1480	1685	1815		
	IHFL2514	--	--	18	2-1/2	13-7/16	2-1/2	1-1/8	Min	12	10d	--	--	1440	1640	1770	50	1245	1420	1530	40	
									Max	14	10d			1680	1915	2065		1455	1660	1785		
	IHF2514	MIU2.56/14	--	16	2-1/2	13-7/16	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			4115	4440	4440		2875	2905	2920		
2-1/2 x 16	IHFL2516	IUS2.56/16	--	18	2-1/2	15-1/2	2-1/2	1-1/8	Min	14	10d	--	--	1680	1915	2065	50	1455	1660	1785	40	
									Max	16				1920	2190	2360		1660	1895	2040		
	IHF2516	MIU2.56/16	--	16	2-1/2	15-1/2	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			4410	4440	4440		2875	2905	2920		
2-5/8 x 9-1/4 - 9-1/2	IHF26925	--	--	16	2-5/8	9-1/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	4000	4320		3010	3035	3055		
2-5/8 x 11-1/4 - 11-7/8	IHF26112	--	--	16	2-5/8	11-1/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	3960	3960		3010	3035	3055		
2-5/8 x 14	IHF2614	--	--	16	2-5/8	13-3/8	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			4115	4440	4440		3010	3035	3055		
2-5/8 x 16	IHF2616	--	--	16	2-5/8	15-7/16	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			4410	4440	4440		3010	3035	3055		
3 x 9-1/4	IHF15925-2	MIU3.12/9	--	16	3	9-3/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	4000	4320		3105	3435	3455		
3 x 11-1/4	IHF15112-2	MIU3.12/11	--	16	3	10-13/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	3960	3960		3105	3125	3125		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) IHFL (18GA) — install (2) 10d (0.148") x 1-1/2" nails through diamond dimple holes into the bottom chord of I-Joist member for a total uplift of 220 lbs.
IHF (16GA) — uplift capacity for hangers installed without joist nails is 65 lbs.
3) Web stiffeners may be required by I-Joist manufacturers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.

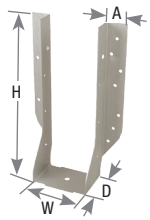


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Steel Gauge	Dimensions (in)				Fastener Schedule[4]					DF/SP Header Allowable Loads (Lbs.)				S-P-F Header Allowable Loads (Lbs.)				Code Ref.
										Header		Joist[2]										
					W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	Uplift[1,2] 160%	100%	115%	125%	Uplift[1,2] 160%	
3-1/4 x 9-1/4	IHF16925-2	--	--	16	3-1/4	9-1/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	4000	4320		3105	3520	3720		
3-1/4 x 11-1/4	IHF16112-2	--	--	16	3-1/4	10-3/4	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	3960	3960		3105	3125	3125		
3-1/2 x 9-1/4 - 9-1/2	IHFL35925	IUS3.56/9.5	--	18	3-1/2	8-5/8	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
	IHF35925	MIU3.56/9	--	16	3-1/2	8-5/8	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d	2	10d x 1-1/2	3530	4000	4320		3105	3520	3800		
3-1/2 x 11-1/4 - 11-7/8	IHFL35112	IUS3.56/11.88	--	18	3-1/2	10-5/8	2-1/2	1-1/8	Min	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
									Max	12				1440	1640	1770		1245	1420	1530		
	IHF35112	MIU3.56/11	--	16	3-1/2	10-5/8	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1375	1375	330	1085	1085	1085	260	
									Max	24	16d			3530	3960	3960		3105	3125	3125		
3-1/2 x 14	IHFL3514	IUS3.56/14	--	18	3-1/2	12-15/16	2-1/2	1-1/8	Min	12	10d	--	--	1440	1640	1770	50	1245	1420	1530	40	
									Max	14				1680	1915	2065		1455	1660	1785		
	IHF3514	MIU3.56/14	--	16	3-1/2	12-15/16	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			4115	4440	4440		3620	3965	3985		
3-1/2 x 16	IHFL3516	IUS3.56/16	--	18	3-1/2	15	2-1/2	1-1/8	Min	14	10d	--	--	1680	1915	2065	50	1455	1660	1785	40	
									Max	16				1920	2190	2360		1660	1895	2040		
	IHF3516	MIU3.56/16	--	16	3-1/2	15	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			4410	4440	4440		3880	3965	3985		
	THF17157-2	--	x	12	3-5/8	15-3/4	2-1/2	1-1/4	--	22	10d	6	10d	2925	3365	3660	1275	2560	2945	3200	1115	
3-1/2 x 18	IHF3518	MIU3.56/18	--	16	3-1/2	16-9/16	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
									Max	30	16d			4410	4440	4440		3880	3965	3985		
4 - 4-3/16 x 9-1/2	IHF20925-2	MIU4.12/9, MIU4.28/9	--	16	4-3/16	8-11/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	IBC, FL, LA
									Max	24	16d			3530	3960	3960		3105	3120	3120		
4 - 4-3/16 x 11-7/8	IHF20112-2	MIU4.12/11, MIU4.28/11	--	16	4-3/16	11	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3960	3960		3105	3120	3120		
4 - 4-3/16 x 14	IHF2014-2	MIU4.12/14, MIU4.28/14	--	16	4-3/16	13-5/8	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
									Max	28	16d			3960	3960	3960		3120	3120	3120		
4-5/8 x 9-1/4	IHF23925-2	MIU4.75/9	--	16	4-3/4	8-3/8	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3960	3960		3105	3120	3120		
4-5/8 x 11-1/4	THF23118-2	MIU4.75/11	x	16	4-3/4	10-11/16	2-1/2	1-1/4	--	16	10d	6	10d	1890	2170	2360	1135	1650	1900	2065	990	
4-5/8 x 14	THF23140-2	MIU4.75/14	x	12	4-3/4	13-5/16	2-1/2	1-1/4	--	20	10d	6	10d	2660	3060	3325	1275	2325	2675	2910	1115	
4-5/8 x 16	THF23160-2	MIU4.75/16	x	12	4-3/4	15-15/16	2-1/2	1-1/4	--	24	10d	6	10d	3190	3670	3990	1275	2790	3165	3165	1115	
5 x 9-1/4	IHF25925-2	MIU5.12/9	--	16	5-1/8	8-3/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3960	3960		3105	3120	3120		
5 x 11-1/4	IHF25112-2	MIU5.12/11	--	16	5-1/8	10-7/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
									Max	24	16d			3530	3960	3960		3105	3120	3120		
5 x 14	THF25140-2	MIU5.12/14	x	12	5-1/8	13-1/8	2-1/2	1-1/4	--	20	10d	6	10d	2660	3060	3325	1275	2340	2690	2925	1015	
5 x 16	THF25160-2	MIU5.12/16	x	12	5-1/8	15-3/4	2-1/2	1-1/4	--	24	10d	6	10d	3190	3670	3990	1275	2810	3160	3160	1015	
7 x 9-1/4	HD7100	HU410-2	x	14	7-1/8	9	2-1/2	1-1/16	Min	14	16d	6	16d	2155	2430	2610	1305	1895	2140	2295	1035	
									Max	18		8		2770	3125	3355	1845	2440	2750	2950	1620	
7 x 11-1/4	HD7120	HU412-2	x	14	7-1/8	10-11/16	2-1/2	1-1/16	Min	16	16d	6	16d	2465	2780	2980	1305	2165	2445	2620	1035	
									Max	22		8		3390	3820	4100	1845	2980	3360	3605	1620	
7 x 14	HD7140	HU414-2	x	14	7-1/8	13	2-1/2	1-1/16	Min	20	16d	8	16d	3080	3475	3725	1845	2710	3055	3160	1620	
									Max	26		12		4005	4435	4435	2765	3520	3885	3885	2430	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) IHFL (18GA) — install (2) 10d (0.148") x 1-1/2" nails through diamond dimple holes into the bottom chord of I-Joist member for a total uplift of 220 lbs.
IHF (16GA) — uplift capacity for hangers installed without joist nails is 65 lbs.
3) Web stiffeners may be required by I-Joist manufacturers.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.

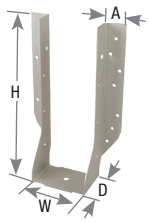


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Joist Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[2,3]					DF/SP Header Allowable Loads (Lbs.)				S-P-F Header Allowable Loads (Lbs.)				Code Ref.
									Header		Joist										
				W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	Uplift[1] 160%	100%	115%	125%	Uplift[1] 160%	
1-1/2 x 9-1/4 - 9-1/2	IHFL15925	IUS1.56/9.5	18	1-1/2	9-1/16	2-1/2	1-1/8	--	8	10d	--	--	960	1095	1180	50	830	945	1020	40	IBC, FL, LA
1-1/2 x 11-1/4 - 11-7/8	IHFL15112	IUS1.56/11.88	18	1-1/2	11-1/16	2-1/2	1-1/8	--	10	10d	--	--	1200	1370	1475	50	1040	1185	1275	40	
1-1/2 x 14	IHF1514	--	16	1-1/2	13-1/2	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
								Max	28	16d			3065	3095	3115		1815	1840	1860		
1-3/4 x 5-1/2	HUS175	HU1.81/5	16	1-13/16	5-3/8	3	2	--	14	16d	6	16d	2760	3140	3400	2045	2430	2765	2990	1640	
1-3/4 x 7-1/4	HD1770	HU7	14	1-13/16	7-1/8	2-1/2	1-1/8	Min	12	16d	4	10d x 1-1/2	1850	2085	2235	760	1625	1835	1900	610	
								Max	16		8		2465	2780	2980	1190	2165	2445	2620	960	
	HUS177	--	16	1-13/16	7-1/8	3	2	--	22	16d	8	16d	4170	4745	5125	2990	3670	4130	4130	2410	
1-3/4 x 9-1/2	IHF17925	MIU1.81/9	16	1-3/4	8-15/16	2-1/2	1-1/8	Min	8	10d	2	10d x 1-1/2	1000	1120	1210	330	880	990	1065	260	
								Max	20	16d			2905	2905	2905		2080	2105	2125		
	HD17925	HU9	14	1-13/16	9-1/8	2-1/2	1-1/8	Min	18	16d	6	10d x 1-1/2	2770	3125	3355	1170	2440	2645	2695	955	
								Max	24		10		3695	4170	4320	1900	3020	3165	3255	1545	
	HD17925IF	--	14	1-13/16	9-1/8	--	1-1/8	--	18	16d	6	10d x 1-1/2	2770	3125	3355	1170	2440	2645	2695	950	
	HDQ179IF	HUCQ1.81/9-SDS	14	1-13/16	9	3	13/16	--	8	WS3	4	WS15	3340	3605	3605	1140	3080	3210	3295	1055	
	HUS179	HUS1.81/10	16	1-13/16	9-1/8	3	2	--	30	16d	10	16d	5580	6060	6060	4110	4555	4880	4910	3410	
1-3/4 x 11-1/4 - 11-7/8	IHF17112	MIU1.81/11	16	1-3/4	10-15/16	2-1/2	1-1/8	Min	10	10d	2	10d x 1-1/2	1250	1405	1515	330	1100	1235	1330	260	
								Max	24	16d			3530	3560	3585		2080	2105	2125		
	HD17112	HU11	14	1-13/16	11-3/8	2-1/2	1-1/8	Min	22	16d	6	10d x 1-1/2	3390	3625	3685	1170	2555	2645	2695	955	
								Max	30		12		4320	4515	4640	1900	3255	3425	3535	1550	
	HD17112IF	--	14	1-13/16	11-3/8	--	1-1/8	--	22	16d	6	10d x 1-1/2	3390	3625	3685	1170	2555	2645	2695	955	
	HDQ17112IF	HUCQ1.81/11-SDS	14	1-13/16	11	3	13/16	--	10	WS3	6	WS15	3605	3605	3605	1520	2915	2915	2915	1230	
	HUS179	HUS1.81/10	16	1-13/16	9-1/8	3	2	--	30	16d	10	16d	5580	6060	6060	4110	4555	4880	4910	3410	
1-3/4 x 14	IHF1714	MIU1.81/14	16	1-3/4	13-3/8	2-1/2	1-1/8	Min	12	10d	2	10d x 1-1/2	1500	1685	1815	330	1320	1480	1595	260	
								Max	28	16d			3530	3560	3585	330	2080	2105	2125	260	
	HD1714	HU14, U14	14	1-13/16	13-5/16	2-1/2	1-1/8	Min	28	16d	8	10d x 1-1/2	3790	3920	4005	1510	2790	2905	2975	1220	
								Max	36		14		4580	4810	4955	1900	3485	3685	3815	1555	
	HD1714IF	--	14	1-13/16	13-5/16	--	1-1/8	--	28	16d	8	10d x 1-1/2	3790	3920	4005	1510	2790	2905	2975	1220	
	HDQ1714IF	--	14	1-13/16	13-3/8	3	13/16	--	12	WS3	6	WS15	4660	4840	4840	1995	3335	3500	3610	1615	
	HUS179	HUS1.81/10	16	1-13/16	9-1/8	3	2	--	30	16d	10	16d	5580	6060	6060	4110	4555	4880	4910	3410	
1-3/4 x 16	IHF1716	MIU1.81/16	16	1-13/16	15-3/4	2-1/2	1-1/8	Min	14	10d	2	10d x 1-1/2	1750	1965	2120	330	1540	1730	1865	260	
								Max	30	16d			3530	3560	3585		2080	2105	2125		
	HD1714	HU14, U14	14	1-13/16	13-5/16	2-1/2	1-1/8	Min	28	16d	8	10d x 1-1/2	3790	3920	4005	1510	2790	2905	2975	1220	
								Max	36		14		4580	4810	4955	1900	3485	3685	3815	1555	
	HD1714IF	--	14	1-13/16	13-5/16	--	1-1/8	--	28	16d	8	10d x 1-1/2	3790	3920	4005	1510	2790	2905	2975	1220	
	HDQ1714IF	--	14	1-13/16	13-3/8	3	13/16	--	12	WS3	6	WS15	4660	4840	4840	1995	3335	3500	3610	1615	
2-11/16 x 9-1/4 - 14	HD27925	HU2.75/10	14	2-3/4	9-3/16	2-1/2	1-1/8	Min	14	16d	6	10d x 1-1/2	2155	2430	2610	1170	1895	2140	2295	950	
								Max	20		10		3080	3475	3725	1510	2710	3055	3200	1210	
	THDH27925	--	12	2-3/4	9-1/8	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7515	7850	7850	3480	
2-11/16 x 11-1/4 - 16	HD27112	HU2.75/12	14	2-3/4	11-3/16	2-1/2	1-1/8	Min	16	16d	8	10d x 1-1/2	2465	2780	2980	1190	2165	2445	2620	950	
								Max	24		12		3695	4170	4435	1900	3250	3665	3930	1530	
	THDH27112	--	12	2-3/4	10-7/8	4	2-1/2	--	56	16d	14	16d	9710	9710	9710	4345	7795	7795	7795	3490	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) WS15 structural wood screws are 1/4" dia. x 1-1/2" long, WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQ hangers.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.



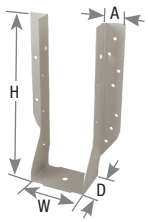
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Joist Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[2,3]					DF/SP Header Allowable Loads (Lbs.)				S-P-F Header Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
									Header		Joist											
				W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	Uplift[1] 160%	100%	115%	125%	Uplift[1] 160%		
2-11/16 x 14 - 16	HD2714	HU2.75/14	14	2-3/4	12-13/16	2-1/2	1-1/8	Min	28	16d	8	10d x 1-1/2	2770	3125	3355	1510	2440	2750	2950	1210		IBC, FL, LA
								Max	36		14		4005	4435	4435	1900	3520	3935	3935	1530		
	THDH2714	--	12	2-3/4	12-1/4	4	2-1/2	--	66	16d	16	16d	11185	11325	11325	5290	8530	9045	9115	4260		
3-1/4 x 9-1/2	THDH3210	HGUS3.25/10	12	3-1/4	9-3/8	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7830	7830	7830	3470		
3-1/4 x 10-5/8	THDH3212	HGUS3.25/12	12	3-1/4	10-5/8	4	2-1/2	--	56	16d	14	16d	9710	9710	9710	5290	7775	7775	7775	4235		
3-1/2 x 5-1/4	THD46	HHUS46	14	3-5/8	5-5/16	3	2	--	18	16d	12	10d	2770	3125	3355	2340	2440	2750	2950	2060		
	THDH46	HGUS46	12	3-5/8	5-5/16	4	2-1/2	--	20	16d	8	16d	4375	4895	5180	2805	3850	4115	4115	2225		
	THDHQ46	--	12	3-5/8	5-7/16	4	1-15/16	--	12	WS3	8	WS3	5015	5745	5745	2055	4405	4590	4590	1640		
3-1/2 x 7-1/4	THD48	HHUS48	14	3-5/8	7-1/16	3	2	--	28	16d	16	10d	4310	4860	5005	2595	3795	4020	4020	2080		
	THDH48	HGUS48	12	3-5/8	7-1/16	4	2-1/2	--	36	16d	10	16d	7360	8175	8175	3000	6475	6505	6505	2385		
	THDHQ48	--	12	3-5/8	7-3/16	4	2-13/16	--	20	WS3	8	WS3	8355	9540	9540	3645	7340	7625	7625	2910		
3-1/2 x 9-1/4 - 14	HD410	--	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170	1895	2140	2295	1030		
								Max	20		10		3080	3475	3725	1950	2710	3055	3190	1715		
	HD410IF	--	14	3-9/16	8-13/16	2-1/2	1-1/8	Min	14	16d	6	10d	2155	2430	2610	1170	1895	2140	2295	1030		
								Max	20		10		3080	3475	3725	1950	2710	3055	3190	1715		
	HDQ410IF	HUCQ410-SDS	14	3-9/16	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975	4480	4590	4590	2655		
	THD410	HHUS410	14	3-5/8	9-1/16	3	2	--	38	16d	20	10d	5850	6600	7045	3905	5145	5680	5680	3255		
	THDH410	HGUS410	12	3-5/8	9-1/16	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7820	7820	7820	3470		
	THDHQ410	--	12	3-5/8	9-3/16	4	2-13/16	--	28	WS3	8	WS3	10880	10880	10880	5270	8690	8690	8690	4210		
3-1/2 x 11-1/4 - 16	HD412	--	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305	2165	2445	2620	1040		
								Max	24		12		3695	4170	4470	2340	3250	3665	3860	2060		
	HD412IF	--	14	3-9/16	10-13/16	2-1/2	1-1/8	Min	16	16d	8	10d	2465	2780	2980	1305	2165	2445	2620	1040		
								Max	24		12		3695	4170	4470	2340	3250	3665	3860	2060		
	HDQ412IF	HUCQ412-SDS	14	3-9/16	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280	5605	5605	5605	3280		
	THD412	--	14	3-5/8	11	3	2	--	48	16d	20	10d	7045	7045	7045	3905	5680	5680	5680	3255		
	THDH412	HGUS412	12	3-5/8	11-1/16	4	2-1/2	--	56	16d	14	16d	9710	9710	9710	5290	7765	7765	7765	4230		
3-1/2 x 14 - 20	HD414	--	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510	2440	2750	2950	1205		
								Max	26		12		4005	4515	4815	2340	3520	3860	3860	2060		
	HD414IF	--	14	3-9/16	12-13/16	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510	2440	2750	2950	1205		
								Max	26		12		4005	4515	4815	2340	3520	3860	3860	2060		
	THD414	--	14	3-5/8	12-7/8	3	2	--	58	16d	20	10d	7045	7045	7045	3905	5680	5680	5680	3255		
	THDH414	HGUS414	12	3-5/8	13-1/16	4	2-1/2	--	66	16d	16	16d	11325	11325	11325	5305	9075	9075	9075	4250		
3-1/2 x 16 - 22	HD416	--	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950	2980	3360	3605	1715		
								Max	30		14		4620	4990	4990	2245	4015	4015	4015	1805		
	HD416IF	--	14	3-9/16	14-13/16	2-1/2	1-1/8	Min	22	16d	10	10d	3390	3820	4100	1950	2980	3360	3605	1715		
								Max	30		14		4620	4990	4990	2245	4015	4015	4015	1805		
3-1/2 x 18 - 26	HD418	--	14	3-9/16	16-1/2	2-1/2	1-1/8	--	28	16d	8	10d	4310	4815	4815	1560	3795	3835	3835	1375		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQ and THDQ hangers.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



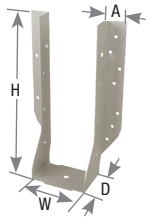
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Joist Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[2,3]					DF/SP Header Allowable Loads (Lbs.)				S-P-F Header Allowable Loads (Lbs.)				Corrosion	Finish	Code Ref.
									Header		Joist												
				W	H	D	A	Min/ Max	Qty	Type	Qty	Type	100%	115%	125%	Uplift[1] 160%	100%	115%	125%	Uplift[1] 160%			
5-1/4 x 7-1/4	HD68	--	14	5-1/2	5-15/16	2-1/2	1-1/8	Min	10	16d	4	16d	1540	1735	1865	920	1355	1525	1640	760			IBC, FL, LA
								Max	14		6		2155	2430	2610	1305	1895	2140	2295	1035			
	HD68IF	--	14	5-1/2	5-15/16	2-1/2	--	Min	10	16d	4	16d	1540	1735	1865	920	1355	1525	1640	760			
								Max	14		6		2155	2430	2610	1305	1895	2140	2295	1035			
5-1/4 x 9-1/4 - 11-7/8	HD5210	--	14	5-3/8	7-7/8	2-1/2	1-1/8	Min	14	16d	6	16d	2155	2430	2610	1305	1895	2140	2295	1035			
								Max	20		10		3080	3475	3725	2305	2710	3055	3275	2025			
	HDQ5210IF	HUCQ5.25/9-SDS	14	5-1/4	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975	4480	4570	4570	2645			
	THD610	HHUS5.50/10	12	5-1/2	9	3	2	--	38	16d	20	10d	6535	7255	7745	4035	5750	6380	6630	3230			
	THDH610	HGUS5.25/10, HGUS5.50/10	12	5-1/2	9	4	2-1/2	--	46	16d	16	16d	9020	9020	9020	5290	7805	7805	7805	4210			
5-1/4 x 11-1/4 - 16	HD5212	--	14	5-3/8	9-7/8	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305	2165	2445	2620	1040			
								Max	24		12		3695	4170	4470	2765	3250	3665	3930	2430			
	HDQ5212IF	HUCQ5.25/11-SDS	14	5-1/4	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280	5605	5605	5605	3280			
	THD612	--	12	5-1/2	11	3	2	--	48	16d	20	10d	8255	8285	8285	4035	6630	6630	6630	3230			
	THDH612	HGUS5.25/12, HGUS5.50/12	12	5-1/2	11	4	2-1/2	--	56	16d	20	16d	9530	9530	9530	5290	7610	7610	7610	4225			
5-1/4 x 14 - 20	HD5214	--	14	5-3/8	11-7/8	2-1/2	1-1/8	Min	18	16d	8	16d	2770	3125	3355	1845	2440	2750	2950	1620			
								Max	26		12		4005	4515	4845	2765	3520	3970	4020	2430			
	THD614	--	12	5-1/2	12-7/8	3	2	--	58	16d	20	10d	8285	8285	8285	4035	6630	6630	6630	3230			
	THDH614	HGUS5.50/14	12	5-1/2	13	4	2-1/2	--	66	16d	22	16d	11325	11325	11325	5305	9055	9055	9055	4245			
5-1/4 x 16 - 22	HD5216	--	14	5-3/8	13-7/8	2-1/2	1-1/8	Min	22	16d	10	16d	3390	3820	4100	2305	2980	3360	3605	2025			
								Max	30		14		4620	4990	4990	3225	3995	3995	3995	2835			
6-3/4 x 9 - 14	THDH6710	HGUS210-4, HGUS6.88/10	12	6-7/8	8-13/16	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7765	7765	7765	3445			
6-3/4 x 11 - 18	THDH6712	HGUS212-4, HGUS6.88/12	12	6-7/8	10-13/16	4	2-1/2	--	56	16d	14	16d	9020	9020	9020	5290	7775	7775	7775	4195			
6-3/4 x 13 - 20	THDH6714	HGUS214-4, HGUS6.88/14	12	6-7/8	12-13/16	4	2-1/2	--	66	16d	16	16d	11325	11325	11325	5305	8995	8995	8995	4215			
7 x 9-1/4 - 14	HD7100	HU410-2	14	7-1/8	9	2-1/2	1-1/16	Min	14	16d	6	16d	2155	2430	2610	1305	1895	2140	2295	1035			
								Max	18		8		2770	3125	3355	1845	2440	2750	2950	1620			
	THD7210	HHUS7.25/10	12	7-1/4	9	3	3	--	38	16d	20	10d	6535	7255	7745	4035	5750	6380	6605	3220			
	THDH7210	HGUS7.25/10	12	7-1/4	9	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7760	7760	7760	3440			
7 x 11-1/4 - 16	HD7120	HU412-2	14	7-1/8	10-11/16	2-1/2	1-1/16	Min	16	16d	6	16d	2465	2780	2980	1305	2165	2445	2620	1035			
								Max	22		8		3390	3820	4100	1845	2980	3360	3605	1620			
	THDH7212	HGUS7.25/12	12	7-1/4	10-1/2	4	2-1/2	--	56	16d	14	16d	9020	9020	9020	5290	7770	7770	7770	4195			
7 x 14 - 20	HD7140	HU414-2	14	7-1/8	13	2-1/2	1-1/16	Min	20	16d	8	16d	3080	3475	3725	1845	2710	3055	3160	1620			
								Max	26		12		4005	4435	4435	2765	3520	3885	3885	2430			
	THDH7214	HGUS7.25/14	12	7-1/4	12-1/4	4	2-1/2	--	66	16d	16	16d	11325	11325	11325	5305	8990	8990	8990	4215			
7 x 16 - 22	HD7160	--	14	7-1/8	15-5/8	2-1/2	1-1/16	--	24	16d	8	10d	3695	4170	4435	1560	3250	3665	3870	1375			
7 x 18 - 26	HD7180	--	14	7-1/8	17-3/4	2-1/2	1-1/16	--	28	16d	8	10d	4310	4860	4940	1560	3795	3910	3910	1375			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQ hangers.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc



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TFI / TFL / THO Top Mount Hangers

TFI / THO – Engineered for I-Joist to header applications. Offers full lateral support of the I-Joist top chord, eliminating the need for web stiffeners in most applications. Raised dimple nailing guides help assure correct 45° nailing into the I-Joist bottom flange. The THO features the patented Seat Cleat® that allows for quick, positive seating. The Seat Cleat® will hold the I-Joist in place, eliminating spring back during nailing in the bottom flange.

TFL – Features 1-1/2" top flange depth that accommodates all header types as well as back-to-back installations. Also features MiTek's patented Seat Cleat® for quick, positive seating.

Materials: See EWP Top Mount Hangers tables, pages 217-222
Finish: G90 galvanizing
Options: See Nailer Options Table
Codes: IBC, FL, LA
Patents: U.S. Patent No. 5,564,248 – THO & TFL

Installation:

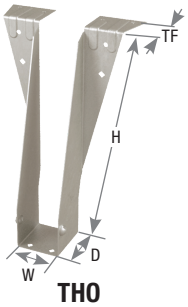
- Install the required fasteners according to the table.
- Refer to the top mount table for applications requiring web stiffeners.
- Requirements for web stiffener from the I-Joist manufacturer should be followed, even if web stiffeners are not required in MiTek literature.
- Uplift capacity for THO and TFL single-ply hangers installed without joist nails = 85 lbs. Refer to THO, TFL, & THF Single-Ply I-Joist Hangers Technical Bulletin.



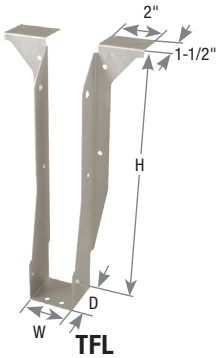
Typical THO installation



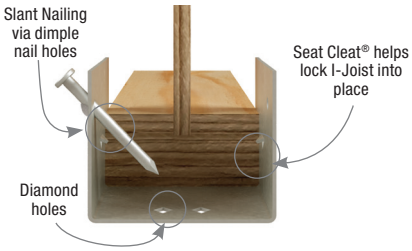
Typical TFL installation

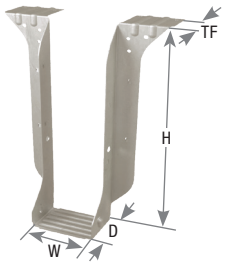


THO



TFL





TFI

Nailer Options
– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[3] Nailer Top Qty	Nailer Face Qty	Nailer Type	Joist Qty	Joist Type	DF/ SP Allowable Loads (Lbs.)[3] Download[2] 100%	DF/ SP Uplift[1] 160%	SPF Allowable Loads (Lbs.)[3] Download[2] 100%	SPF Uplift[1] 160%
TFL	2X	4	2	10d x 1-1/2	2	10d x 1-1/2	1270	130	1090	110
	3X	4	2	16d x 2-1/2	2	10d x 1-1/2	1600	130	1260	110
	(2) 2X	4	2	10d	2	10d x 1-1/2	1280	130	1100	110
	4X	4	2	16d	2	10d x 1-1/2	1745	130	1260	110
THO	2X	4	2	10d x 1-1/2	2	10d x 1-1/2	1235	230	950	195
	3X	4	2	16d x 2-1/2	2	10d x 1-1/2	1235	230	950	195
	(2) 2X	4	2	16d x 2-1/2	2	10d x 1-1/2	1235	230	950	195
	4X	4	2	16d	2	10d x 1-1/2	1235	230	950	195
THO (Double)	2X	4	2	10d x 1-1/2	2	10d x 1-1/2	1455	230	1250	195
	3X	4	2	16d x 2-1/2	2	10d x 1-1/2	2335	230	1815	195
	(2) 2X	4	2	10d	2	10d x 1-1/2	2370	230	1815	195
	4X	4	2	16d	2	10d x 1-1/2	2525	230	1815	195
TFI	2X	4	2	10d x 1-1/2	2	10d x 1-1/2	1985	215	1665	180
	3X	4	6	16d x 2-1/2	2	10d x 1-1/2	2715	215	2075	180
	(2) 2X	4	6	10d	2	10d x 1-1/2	2715	215	2075	180
	4X	4	2	16d	2	10d x 1-1/2	2560	215	2075	180
	4X	4	6	16d	2	10d x 1-1/2	2715	215	2075	180

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Listed download shall not be increased.
3) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.
New products or updated product information are designated in **blue font**.

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BPHA / HBPH Top Mount Hangers

These hangers are used to support LVL, LSL, and PSL beams and headers in medium-to-heavy load conditions.

Materials: BPHA – 12 gauge; HBPH – 10 gauge
Finish: G90 galvanizing
Options: See Nailer Options and Specialty Options Table
Codes: IBC, FL, LA

Installation:

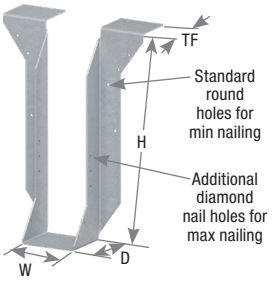
- Install the required fasteners according to the table.
- **BPHA Min Nailing** – Fill all round nail holes.
- **BPHA Max Nailing** – Fill all round and diamond holes.
- Refer to the top mount table for applications requiring web stiffeners.
- Requirements for web stiffener from the I-Joist manufacturer should be followed, even if web stiffeners are not required in MiTek literature.
- For welded installations, see page 327.



Typical BPHA max nailing installation



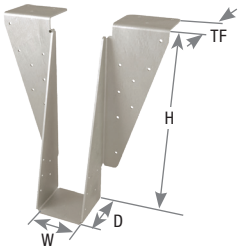
Typical BPHA min nailing installation



BPHA



Typical HBPH installation



HBPH

Nailer Options

– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[4] Header Top Qty	Header Face Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[3] Download[2] 100%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.)[3] Download[2] 100%	S-P-F Uplift[1] 160%
BPHA	2X	6	--	10d x 1-1/2	8	10d x 1-1/2	2170	405	1825	340
	3X	6	2	16d x 2-1/2	8	10d x 1-1/2	3370	845	2830	710
	(2) 2X	6	4	10d	8	10d x 1-1/2	2620	1155	2200	970
	4X	6	4	16d	8	10d x 1-1/2	4005	1155	3045	970
HBPH	2X	6	2	10d x 1-1/2	10	16d	2540	--	2135	--
	3X	6	6	16d x 2-1/2	10	10d	4500	--	3780	--
	(2) 2X	6	8	10d	10	16d	4140	1610	3480	1350
	4X	6	10	16d	10	16d	5745	1610	4825	1350

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Listed download shall not be increased.
3) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.
New products or updated product information are designated in **blue font**.

Specialty Options Table

– refer to Specialty Options pages 320 and 323 for additional details

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]
Range	1° to 50°	1° to 45°	See Sloped Seat and Skewed	0° to 45°
Allowable Loads	100% of table load	100% of table load	100% of table load	100% of table load
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Example: BPHA3595_SK45R_SQ	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Example: BPHA3595_SL30D	See Sloped Seat and Skewed. Example: BPHA3595_SK45R_SL30D_SQ	Add *SLTF*, angle required and right *(R)* or left *(L)*, to product number. Example: BPHA3595_SLTF30L

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.
4) Sloped top flanges with slopes greater than 15° may have additional header nails.

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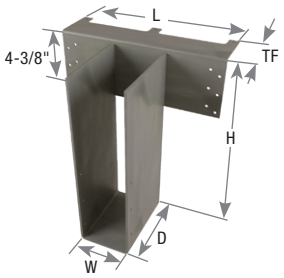
Heavy-duty hanger for LVL, LSL, and PSL beams.

Materials: 7 gauge
Finish: Primer
Options: See Nailer Options and Specialty Options Table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- For welded installations, see page 327.
- NA16D-RS nails are supplied with HLBH hangers.



Typical HLBH installation



HLBH

Nailer Options

– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[4] Nailer Top Qty	Nailer Face Qty	Nailer Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[3] Download[2] 100%	DF/SP Uplift[1] 160%	SPF Allowable Loads (Lbs.)[3] Download[2] 100%	SPF Uplift[1] 160%
HLBH	2x	3	4	10d x 1-1/2	6	10d x 1-1/2	6115	--	5135	--
	3x	3	6	16d x 2-1/2	6	10d	6825	--	5735	--
	(2) 2x	3	8	10d	6	10d x 1-1/2	4385	--	3685	--
	4X	3	8	NA16D-RS	6	10d x 1-1/2	9600	1115	6900	935
	4X	3	8	NA16D-RS	6	16d	9600	1115	6900	935

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Listed download shall not be increased.
3) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148 dia, x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

Specialty Options Table

– refer to Specialty Options pages 320 and 324 for additional details

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]	Top Flange Offset	Saddle[5]	Ridge
Range	1° to 50°	1° to 45°	See Sloped Seat and Skewed	0° to 45°	--	--	0° to 45°
Allowable Loads	8070 lbs. Max. 50% of uplift load on skew greater than 15°.	7000 lbs. Max.	6650 lbs. Max. 50% of uplift load on skew greater than 15°.	100% of table load	45% of table load	100% of table load per side. **See footnote 5.**	100% of table load
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. HLBH3595_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. HLBH3595_SL30D	See Sloped Seat and Skewed. Ex. HLBH3595_SK45R_SL30D_BV	Add *SLTF,* angle required, and right *(R)* or left *(L),* to product number. Ex. HLBH3595_SLTF30L	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. HLBH3595_OSL	Add *SA,* and saddle width required to product number. Ex. HLBH3595_SA=7.125	Add *DA,* and angle required to product number. Ex. HLBH3595_DA30

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) Skewed hangers typically require a bevel cut however, a square cut option may be available as a custom when requested.
4) Sloped top flanges with slopes greater than 15° may have additional header nails.
5) Minimum header thickness shall be double the top flange (TF) dimension for 100% table load.

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PHM / PHXU Top Flange Hangers

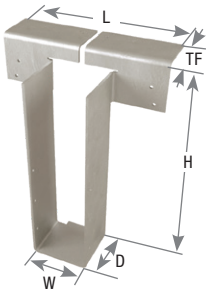
Used to connect LVL, LSL, and PSL beams to headers in medium load conditions using standard nails.

Materials: See EWP Top Mount Hangers tables, pages 217-225
Finish: PHM – Primer; PHXU – G90 galvanizing
Options: See Nailer Options Table and Specialty Options Table
Codes: IBC, FL, LA
Patents: U.S. Patent No. 6,463,711 – PHXU

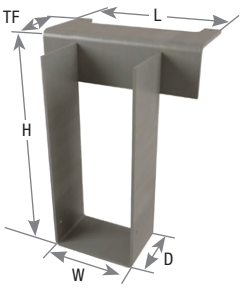
Installation:
- Install the required fasteners according to the table.
- For welded installations, see page 327.



Typical PHXU installation



PHXU



PHM

Nailer Options

– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[5] Nailer Top Qty	Nailer Face Qty	Nailer Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[1,4] Download 100%	DF/SP Uplift 160%	SPF Allowable Loads (Lbs.)[1,4] Download 100%	SPF Uplift 160%
PHM	2X	2	--	10d x 1-1/2	2	10d x 1-1/2	3010	--	2140	--
	3X	2	--	16d x 2-1/2	2	10d x 1-1/2	3060	--	2140	--
	(2) 2X	2	--	10d	2	10d x 1-1/2	3060	--	2140	--
	4X	2	--	16d	2	10d x 1-1/2	3060	--	2140	--
PHXU widths < 3-1/2"	2X	4	--	10d x 1-1/2	6	10d x 1-1/2	2585	--	2170	--
	3X	4	2	16d x 2-1/2	6	10d x 1-1/2	3855	--	3150	--
	(2) 2X	4	2	10d	6	10d x 1-1/2	3590	--	3015	--
	4X	4	4	16d	6	10d x 1-1/2	4420 [3]	870	3150	730
PHXU [2] widths ≥ 3-1/2"	2X	4	--	10d x 1-1/2	6	10d	2765	--	2325	--
	3X	4	2	16d x 2-1/2	6	10d	3895	--	3270	--
	(2) 2X	4	2	10d	6	10d	3785	--	3180	--
	4X	4	4	16d	6	10d x 1-1/2	5285	970	4545	835
	4X	4	4	16d	6	10d	5285	1120	4545	940

1) Listed loads shall not be increased.
2) Loads valid for hanger height ≤ 20". For hanger height > 20", consult MiTek Engineering.
3) PHXU hangers with a width of less than 2-3/4" on 4x nailers are 4,350 lbs of download.
4) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.

Specialty Options Table

– refer to Specialty Options pages 320-321, 324 for additional details.

Option	MiTek Series	Skewed[1,3,5]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]	Top Flange Offset[5]	Saddle[5,6]	Ridge
Range	PHM	1° to 84°	1° to 45°	See Sloped Seat and Skewed	0° to 35°	--	--	0° to 45°
	PHXU	1° to 60°						N/A
Allowable Loads	PHM	100% of table load	100% of table load	100% of table load up to Max. load of 2500 lbs.	100% of table load	Hanger Width / % of table load: 3-1/2" or less 60%; 3-9/16" to 5-1/2" 75%; 5-9/16" to 7-1/2" 85%	100% of table load. **See footnote 6.**	100% of table load
	PHXU			100% of table load up to Max. load of 3900 lbs.				
Ordering	PHM	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex: PHXU1795_SK45R_SQ	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Ex: PHXU1795_SL30D	See Sloped Seat and Skewed. Ex: PHXU1795_SK45R_SL30D_SQ	Add *SLTF*, angle required, and right *(R)* or left *(L)*, to product number. Ex: PHXU1795_SLTF30L	Add *OS*, and right *(R)* or left *(L)*, to product number. Ex: PHXU1795_OSL	Add *SA*, and saddle width required to product number. Ex: PHXU1795_SA=5.5	Add *DA*, and angle required to product number. Ex. PHXU1795_DA30
	PHXU							N/A

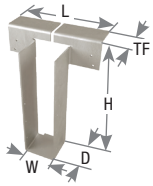
1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped/skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.
4) Sloped top flanges with slopes greater than 15° may have additional header nails.
5) Skewed, top flange offset, or saddle options will have a solid, welded top flange.
6) Minimum header thickness shall be double the top flange (TF) dimension for 100% table load.

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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in)					Min/ Max	Fastener Schedule[5]					Allowable Loads Header Type (Lbs.)[1,3]							Code Ref.
											Header			Joist		Download 100%						Uplift[2]	
					W	H	D	L	TF		Top Qty	Face Qty	Type	Qty	Type	LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	DF/SP 160%	
1-1/2 x 9-1/4	TH015925	--	--	18	1-9/16	9-1/4	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	955	1005	1235	230	IBC, FL, LA
	BPHA15925	--		12	1-9/16	9-1/8	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	3675	3675	3675	2175	--	3110	245	
										Max				8		4565	4565	4565	2965	--	4005	1665	
1-1/2 x 9-1/2	TH015950	--	--	18	1-1/2	9-1/2	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	955	1090	1235	230	
	BPHA1595	BA1.56/9.5		12	1-9/16	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	3675	3675	3675	2175	--	3110	245	
										Max				8		4565	4565	4565	2965	--	4005	1665	
1-1/2 x 11-1/4	BPHA15112	--		12	1-9/16	11-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	3675	3675	3675	2175	--	3110	245	
										Max				8		4565	4565	4565	2965	--	4005	1665	
1-1/2 x 11-7/8	TH015118	ITS1.56/11.88	--	18	1-1/2	11-7/8	2	--	1-9/16	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	955	1205	1235	230	
	BPHA15118	BA1.56/11.88		12	1-9/16	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	3675	3675	3675	2175	--	3110	245	
										Max				8		4565	4565	4565	2965	--	4005	1665	
1-1/2 x 14	TH015140	--	--	16	1-9/16	14	2-3/8	--	1-1/2	--	4	6	10d	2	10d x 1-1/2	1235	1235	1235	950	1030	1235	230	
	BPHA1514	--		12	1-9/16	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	3675	3675	3675	2175	--	3110	245	
										Max				8		4565	4565	4565	2965	--	4005	1665	
1-5/8 x 9-1/2	TH016950	--	--	18	1-11/16	9-1/2	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	955	1005	1235	230	
1-5/8 x 11-1/4	TH016112	--	--	16	1-11/16	11-1/4	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	955	1030	1235	230	
1-5/8 x 11-7/8	TH016118	--	--	16	1-11/16	11-7/8	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	955	1030	1235	230	
1-5/8 x 14	TH016140	--	--	16	1-11/16	14	3	--	1-3/4	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2185	1030	2370	230	
1-3/4 x 7-1/4	PHXU17725	WP1.81 H=7.25	x	7	1-13/16	7-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	4350	4350	4350	3245	--	4350	930	
	BPHA17725	BA1.81/7.25		12	1-13/16	7-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	--
										Max				8		5130	5130	5130	3285	--	4475	1665	
1-3/4 x 9-1/4	BPHA17925	BA1.81/9.25		12	1-13/16	9-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	
										Max				8		5130	5130	5130	3285	--	4475	1665	
	PHM17925	WP1.81 H=9.25	x	7/10	1-13/16	9-1/4	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2140	--	3060	--	
	PHXU17925	--	x	7	1-13/16	9-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	4350	4350	4350	3245	--	4350	930	
1-3/4 x 9-1/2	TH017950	ITS1.81/9.5	--	18	1-3/4	9-1/2	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	950	1235	1235	230	
	BPHA1795	BA1.81/9.5, MIT9.5		12	1-13/16	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	
										Max				8		5130	5130	5130	3285	--	4475	1665	
	PHM1795	WP1.81 H=9.5	x	7/10	1-13/16	9-1/2	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2140	--	3060	--	
	PHXU1795	--	x	7	1-13/16	9-1/2	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	4350	4350	4350	3245	--	4350	930	
1-3/4 x 11-1/4	BPHA17112	BA1.81/11.25		12	1-13/16	11-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	
										Max				8		5130	5130	5130	3285	--	4475	1665	
	PHM17112	WP1.81 H=11.25	x	7/10	1-13/16	11-1/4	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2140	--	3060	--	
	PHXU17112	--	x	7	1-13/16	11-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	4350	4350	4350	3245	--	4350	930	
1-3/4 x 11-7/8	TH017118	ITS1.81/11.88	--	18	1-3/4	11-7/8	2	--	1-9/16	--	4	2	10d	2	10d x 1-1/2	1235	1235	1235	950	1235	1235	230	
	BPHA17118	BA1.81/11.88		12	1-13/16	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	
										Max				8		5130	5130	5130	3285	--	4475	1665	
	PHM17118	WP1.81 H=11.875	x	7/10	1-13/16	11-7/8	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2140	--	3060	--	
	PHXU17118	--	x	7	1-13/16	11-7/8	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	4350	4350	4350	3245	--	4350	930	
1-3/4 x 14	TFL1714	ITS1.81/14	--	18	1-3/4	14	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA1714	BA1.81/14, MIT1.81/14		12	1-13/16	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	
										Max				8		5130	5130	5130	3285	--	4475	1665	
	PHM1714	WP1.81 H=14	x	7/10	1-13/16	14	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2140	--	3060	--	
	PHXU1714	--	x	7	1-13/16	14	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	4350	4350	4350	3245	--	4350	930	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font.**

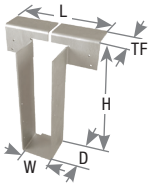
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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in)					Min/ Max	Fastener Schedule[5]					Allowable Loads Header Type (Lbs.)[1,3]							Code Ref.
											Header			Joist		Download 100%						Uplift[2]	
					W	H	D	L	TF		Top Qty	Face Qty	Type	Qty	Type	LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	DF/SP 160%	
1-3/4 x 16	TFL1716	ITS1.81/16	--	18	1-3/4	16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	IBC, FL, LA
	BPHA1716	BA1.81/16, MIT1.81/16		12	1-13/16	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4235	4235	4235	2495	--	3580	245	
										Max				8		5130	5130	5130	3285	--	4475	1665	
	PHM1716	WP1.81 H=16	x	7/10	1-13/16	16	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2140	--	3060	--	
2 - 2-1/8 x 9-1/2	TFL2095	ITS2.06/9.5	--	18	2-1/8	9-1/2	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA2095	BA2.1/9.5		12	2-1/8	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4800	4800	4800	2815	--	4050	245	
										Max				8		5270	5270	5270	3600	--	4940	1665	
2 - 2-1/8 x 11-7/8	TFL20118	ITS2.06/11.88	--	18	2-1/8	11-7/8	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA20118	BA2.1/11.88		12	2-1/8	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4800	4800	4800	2815	--	4050	245	
										Max				8		5270	5270	5270	3600	--	4940	1665	
2 - 2-1/8 x 14	TFL2014	ITS2.06/14	--	18	2-1/8	14	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA2014	BA2.1/14		12	2-1/8	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4800	4800	4800	2815	--	4050	245	
										Max				8		5270	5270	5270	3600	--	4940	1665	
2 - 2-1/8 x 16	TFL2016	ITS2.06/16	--	18	2-1/8	16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA2016	BA2.1/16		12	2-1/8	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	4800	4800	4800	2815	--	4050	245	
										Max				8		5270	5270	5270	3600	--	4940	1665	
2-1/4 - 2-5/16 x 9-1/2	TFL2395	ITS2.37/9.5	--	18	2-5/16	9-1/2	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA2395	BA2.37/9.5		12	2-3/8	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3210	--	4635	245	
										Max				8		5270	5270	5270	4000	--	5270	1665	
2-1/4 - 2-5/16 x 11-7/8	TFL23118	ITS2.37/11.88	--	18	2-5/16	11-7/8	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA23118	BA2.37/11.88		12	2-3/8	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3210	--	4635	245	
										Max				8		5270	5270	5270	4000	--	5270	1665	
2-1/4 - 2-5/16 x 14	TFL2314	ITS2.37/14	--	18	2-5/16	14	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	THO23140	--	--	18	2-3/8	14	2-3/8	--	2	--	4	8	10d	2	10d x 1-1/2	2400	2400	2400	1840	2400	2400	230	
	TFI3514	MIT3514	--	16	2-3/8	14	2-1/2	--	2-1/16	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2314	BA2.37/14		12	2-3/8	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3210	--	4635	245	
										Max				8		5270	5270	5270	4000	--	5270	1665	
	PHM2314	WP2.37 H=14	x	7/10	2-3/8	14	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2535	--	3335	--	
2-1/4 - 2-5/16 x 16	TFL2316	ITS2.37/16	--	18	2-5/16	16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	TFI3516	MIT3516	--	16	2-3/8	16	2-1/2	--	2-1/16	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2316	BA2.37/16		12	2-3/8	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3210	--	4635	245	
										Max				8		5270	5270	5270	4000	--	5270	1665	
	PHM2316	WP2.37 H=16	x	7/10	2-3/8	16	2-1/2	7	3		2	--	16d	2	10d x 1-1/2	3335	3335	3335	2535	--	3335	--	
2-1/4 - 2-5/16 x 18	TFI3518	MIT3518	--	16	2-3/8	18	2-1/2	--	2-1/16	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2318	BA2.37/18		12	2-3/8	17-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3210	--	4635	245	
										Max				8		5270	5270	5270	4000	--	5270	1665	
	PHM2318	WP2.37 H=18	x	7/10	2-3/8	18	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2535	--	3335	--	
2-1/4 - 2-5/16 x 20	TFI3520	MIT3520	--	16	2-3/8	20	2-1/2	--	2-1/16	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2320	BA2.37/20		12	2-3/8	19-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3210	--	4635	245	
										Max				8		5270	5270	5270	4000	--	5270	1665	
	PHM2320	WP2.37 H=20	x	7/10	2-3/8	20	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2535	--	3335	--	
2-1/2 x 9-1/4	TFL25925	--	--	18	2-1/2	9-1/4	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA25925	BA2.56/9.25		12	2-9/16	9-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 9-3/8	TFL25938	--	--	18	2-1/2	9-3/8	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
2-1/2 x 9-1/2	TFL2595	ITS2.56/9.5	--	18	2-9/16	9-7/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA2595	BA2.56/9.5		12	2-9/16	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 11-1/4	TFL25112	--	--	18	2-1/2	11-1/4	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	BPHA25112	BA2.56/11.25		12	2-9/16	11-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 11-7/8	TFL25118	ITS2.56/11.88	--	18	2-9/16	11-13/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	THO25118	MIT311.88	--	16	2-9/16	11-7/8	2-3/8	--	1-15/16	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2095	1835	2370	230	
	BPHA25118	BA2.56/11.88		12	2-9/16	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font**.



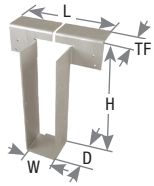
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Top Mount Hanger Tables

Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in) W	H	D	L	TF	Min/ Max	Fastener Schedule[5] Header Top Qty	Face Qty	Type	Joist Qty	Type	Allowable Loads Header Type (Lbs.)[1,3] Download 100% LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	Uplift[2] DF/SP 160%	Code Ref.
2-1/2 x 13	TFL2513	--	--	18	2-1/2	13	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	IBC, FL, LA
2-1/2 x 14	TFL2514	ITS2.56/14	--	18	2-9/16	13-15/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	TH025140	MIT314	--	18	2-9/16	14	2-3/8	--	2	--	4	8	10d	2	10d x 1-1/2	2400	2400	2400	1835	2400	2400	230	
	TFI314	--	--	16	2-9/16	14	2-1/2	--	2	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2514	BA2.56/14		12	2-9/16	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
	PHM2514	WP2.56 H=14	--	7/10	2-9/16	14	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2535	--	3335	--	
2-1/2 x 16	TFL2516	ITS2.56/16	--	18	2-9/16	15-15/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
	TFI316	MIT316	--	16	2-9/16	16	2-1/2	--	2	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2516	BA2.56/16		12	2-9/16	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
	PHM2516	WP2.56 H=16	--	7/10	2-9/16	16	2-1/2	7	3	--	2	--	16d	2	10d x 1-1/2	3335	3335	3335	2535	--	3335	--	
2-1/2 x 18	TFI318	HIT318, MIT318	--	16	2-9/16	18	2-1/2	--	2	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2518	BA2.56/18		12	2-9/16	17-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 20	TFI320	HIT320, MIT320	--	16	2-9/16	20	2-1/2	--	2	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2080	--	2715	215	
	BPHA2520	BA2.56/20		12	2-9/16	19-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 22	TFI322	HIT322, WP2.56 H=22	--	16	2-9/16	22	2-1/2	--	2	--	4	6	16d	2	10d x 1-1/2	2820	2820	2820	2485	--	2820	215	
	BPHA2522	BA2.56/22		12	2-9/16	21-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 24	TFI324	HIT324, WP2.56 H=24	--	16	2-9/16	24	2-1/2	--	2	--	4	6	16d	2	10d x 1-1/2	2820	2820	2820	2485	--	2820	215	
	BPHA2524	BA2.56/24		12	2-9/16	23-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 26	TFI326	WP2.56 H=26	--	16	2-9/16	26	2-1/2	--	2	--	4	6	16d	2	10d x 1-1/2	2820	2820	2820	2485	--	2820	215	
	BPHA2526	BA2.56/26		12	2-9/16	25-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-1/2 x 28	**BPHA2528**	BA2.56/28		12	2-9/16	27-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	3450	--	4985	245	
										Max				8					4210	--	5270	1665	
2-9/16 x 9-1/2	TFL2595	ITS2.56/9.5	--	18	2-9/16	9-7/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
2-9/16 x 11-7/8	TFL25118	ITS2.56/11.88	--	18	2-9/16	11-13/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
2-9/16 x 14	TFL2514	ITS2.56/14	--	18	2-9/16	13-15/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
2-9/16 x 16	TFL2516	ITS2.56/16	--	18	2-9/16	15-15/16	2	--	1-1/2	--	4	2	10d	2	10d x 1-1/2	1585	1585	1585	1215	1245	1585	130	
2-5/8 x 9-1/2	TH026950	ITS2.56/9.5	--	18	2-11/16	9-1/2	2-3/8	--	2	--	4	6	10d	2	10d x 1-1/2	2525	2525	2525	2070	1625	2525	230	
2-5/8 x 11-7/8	TH026118	ITS2.56/11.88	--	16	2-11/16	11-7/8	2-3/8	--	2	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2115	1835	2370	230	
2-5/8 x 14	TH026140	ITS2.56/14	--	18	2-11/16	14	2-3/8	--	2	--	4	8	10d	2	10d x 1-1/2	2400	2400	2400	1835	2400	2400	230	
2-5/8 x 16	TH026160	ITS2.56/16	--	18	2-11/16	16	2-3/8	--	2	--	4	8	10d	2	10d x 1-1/2	2400	2400	2400	1835	2400	2400	230	
2-11/16 x 9-1/4	PHXU27925	--	--	7	2-3/4	9-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
	HLBH27925	--	x	7	2-3/4	9-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	10d x 1-1/2	10045	10045	10045	6900	--	10045	1115	
2-11/16 x 9-1/2	PHXU2795	--	--	7	2-3/4	9-1/2	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
	HLBH2795	--	x	7	2-3/4	9-1/2	6	12	2-3/4	--	3	12	NA16D-RS	6	10d x 1-1/2	10045	10045	10045	6900	--	10045	1115	
2-11/16 x 11-1/4	PHXU27112	--	--	7	2-3/4	11-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
	HLBH27112	--	x	7	2-3/4	11-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	10d x 1-1/2	10045	10045	10045	6900	--	10045	1115	
2-11/16 x 11-7/8	PHXU27118	--	--	7	2-3/4	11-7/8	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
	HLBH27118	--	x	7	2-3/4	11-7/8	6	12	2-3/4	--	3	12	NA16D-RS	6	10d x 1-1/2	10045	10045	10045	6900	--	10045	1115	
2-11/16 x 14	PHXU2714	--	--	7	2-3/4	14	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
	HLBH2714	--	x	7	2-3/4	14	6	12	2-3/4	--	3	12	NA16D-RS	6	10d x 1-1/2	10045	10045	10045	6900	--	10045	1115	
2-11/16 x 16	PHXU2716	--	--	7	2-3/4	16	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
	HLBH2716	--	x	7	2-3/4	16	6	12	2-3/4	--	3	12	NA16D-RS	6	10d x 1-1/2	10045	10045	10045	6900	--	10045	1115	
3 x 9-1/4	**BPHA31925**	--		12	3-1/8	9-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4090	--	5270	245	
										Max				8					4200	--		1665	
	PHXU31925	--	x	7	3-1/8	9-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font.**

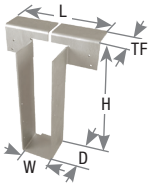


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in)					Min/ Max	Fastener Schedule[5]					Allowable Loads Header Type (Lbs.)[1,3]							Code Ref.
											Header			Joist		Download 100%						Uplift[2]	
					W	H	D	L	TF		Top Qty	Face Qty	Type	Qty	Type	LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	DF/SP 160%	
3 x 9-1/2	TH015950-2	--	x	16	3-1/16	9-1/2	2-3/8	--	1-1/2	--	4	6	16d	6	10d	2525	2525	2525	1905	2525	2525	1135	
	BPHA3195	--		12	3-1/8	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4090	--	5270	245	
										Max				8					4200	--		1665	
	PHXU3195	--	x	7	3-1/8	9-1/2	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
3 x 11-1/4	BPHA31112	--		12	3-1/8	11-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4090	--	5270	245	
										Max				8					4200	--		1665	
	PHXU31112	--	x	7	3-1/8	11-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
3 x 11-7/8	TH015118-2	--	x	16	3-1/16	11-7/8	2-3/8	--	1-1/2	--	4	6	16d	6	10d	2525	2525	2525	1890	2525	2525	1135	
	BPHA31118	--		12	3-1/8	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4090	--	5270	245	
										Max				8					4200	--		1665	
	PHXU31118	--	x	7	3-1/8	11-7/8	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
3 x 14	BPHA3114	--		12	3-1/8	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4090	--	5270	245	
										Max				8					4200	--		1665	
	PHXU3114	--	x	7	3-1/8	14	3-1/4	10	2-1/2	--	4	4	16d	6	10d x 1-1/2	5370	5370	5370	4120	--	5370	870	
3-1/2 x 7-1/4	PHXU35725	--	x	7	3-9/16	7-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
3-1/2 x 9-1/4	TH035925	--	--	16	3-9/16	9-1/4	2-3/8	--	2-1/2	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2370	2050	2370	230	
	BPHA35925	BA3.56/9.25		12	3-9/16	9-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH35925	HB3.56/9.25	x	10	3-9/16	9-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM35925	WP3.56 H=9.25	x	7/10	3-5/8	9-1/4	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU35925	HWP3.56 H=9.25	x	7	3-9/16	9-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH35925	--	x	7	3-5/8	9-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 9-3/8	TH035938	--	--	16	3-9/16	9-3/8	2-3/8	--	2-9/16	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2215	2050	2370	230	
3-1/2 x 9-1/2	TH035950	ITS3.56/9.5	--	16	3-9/16	9-1/2	2-3/8	--	2-7/16	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2370	2050	2370	230	IBC, FL, LA
	TH017950-2	MIT49.5	x	16	3-9/16	9-1/2	2-3/8	--	1-9/16	--	4	6	16d	6	10d	2920	2920	2920	1955	2630	2630	1135	
	BPHA3595	BA3.56/9.5		12	3-9/16	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3595	HB3.56/9.5	x	10	3-9/16	9-1/2	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3595	WP3.56 H=9.5	x	7/10	3-5/8	9-1/2	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3595	HWP3.56 H=9.5	x	7	3-9/16	9-1/2	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH3595	--	x	7	3-5/8	9-1/2	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 10-1/2	BPHA3510	BA3.56/10.5		12	3-9/16	9-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
3-1/2 x 11-1/4	TH035112	--	--	16	3-9/16	11-1/4	2-3/8	--	2-1/2	--	4	6	10d	2	10d x 1-1/2	2370	2370	2370	2370	2050	2370	230	
	BPHA35112	BA3.56/11.25		12	3-9/16	11-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH35112	HB3.56/11.25	x	10	3-9/16	11-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHXU35112	WP3.56 H=11.25, HWP3.56 H=11.25	x	7	3-9/16	11-1/4	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH35112	--	x	7	3-5/8	11-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 11-7/8	TH035118	ITS3.56/11.88	--	18	3-9/16	11-7/8	2-3/8	--	2-1/2	--	4	6	10d	2	10d x 1-1/2	2525	2525	2525	2265	2050	2525	230	
	TH017118-2	MIT411.88	x	16	3-9/16	11-7/8	2-3/8	--	1-9/16	--	4	6	16d	6	10d	2740	2860	2920	1815	2430	2430	1135	
	BPHA35118	BA3.56/11.88		12	3-9/16	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH35118	HB3.56/11.88	x	10	3-9/16	11-7/8	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM35118	WP3.56 H=11.875	x	7/10	3-5/8	11-7/8	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU35118	HWP3.56 H=11.875, HWPH3.56 H=11.875	x	7	3-9/16	11-7/8	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH35118	HGLT4 H=11.875, HGLTV3.511	x	7	3-5/8	11-7/8	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
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New products or updated product information are designated in **blue font.**

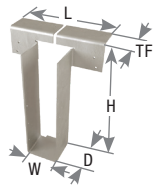


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in)					Min/ Max	Fastener Schedule[5]					Allowable Loads Header Type (Lbs.)[1,3]							Code Ref.
											Header			Joist		Download 100%						Uplift[2]	
					W	H	D	L	TF		Top Qty	Face Qty	Type	Qty	Type	LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	DF/SP 160%	
3-1/2 x 12	TH035120	--	--	18	3-9/16	12	2-3/8	--	2-1/2	--	4	6	10d	2	10d x 1-1/2	2525	2525	2525	2265	2050	2525	230	IBC, FL, LA
	BPHA3512	--		12	3-9/16	11-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3512	--	x	10	3-9/16	12	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHXU3512	--	x	7	3-9/16	12	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH3512	--	x	7	3-5/8	12	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 13	TH035130	--	--	18	3-9/16	13	2-3/8	--	2-1/2	--	4	6	10d	2	10d x 1-1/2	2525	2525	2525	2265	2050	2525	230	
3-1/2 x 14	TH035140	ITS3.56/14	--	18	3-9/16	14	2-3/8	--	2-1/2	--	4	8	10d	2	10d x 1-1/2	2400	2400	2400	1835	2400	2400	230	
	TFI414	MIT414	--	16	3-9/16	14	2-1/2	--	2-1/8	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2075	--	2715	215	
	BPHA3514	BA3.56/14		12	3-9/16	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3514	HB3.56/14	x	10	3-9/16	14	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3514	WP3.56 H=14	x	7/10	3-5/8	14	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3514	HWP3.56 H=14, HWPH3.56 H=14	x	7	3-9/16	14	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH3514	HGLT4 H=14, HGLTV3.514	x	7	3-5/8	14	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 16	TH035160	ITS3.56/16	--	18	3-9/16	16	2-3/8	--	2-1/2	--	4	8	10d	2	10d x 1-1/2	2400	2400	2400	1835	2400	2400	230	
	TFI416	MIT416	--	16	3-9/16	16	2-1/2	--	2-1/8	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2075	--	2715	215	
	BPHA3516	BA3.56/16		12	3-9/16	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3516	HB3.56/16	x	10	3-9/16	16	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3516	WP3.56 H=16	x	7/10	3-5/8	16	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3516	HWP3.56 H=16, HWPH3.56 H=16	x	7	3-9/16	16	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH3516	HGLTV4 H=16, HGLTV3.516	x	7	3-5/8	16	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 18	TFI418	HIT418, MIT418	--	16	3-9/16	18	2-1/2	--	2-1/8	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2075	--	2715	215	
	BPHA3518	BA3.56/18		12	3-9/16	17-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3518	HB3.56/18	x	10	3-9/16	18	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3518	WP3.56 H=18	x	7/10	3-5/8	18	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3518	HWP3.56 H=18, HWPH3.56 H=18	x	7	3-9/16	18	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH3518	HGLTV4 H=18, HGLTV3.518	x	7	3-5/8	18	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 20	TFI420	HIT420, MIT420	--	16	3-9/16	20	2-1/2	--	2-1/8	--	4	2	16d	2	10d x 1-1/2	2715	2715	2715	2075	--	2715	215	
	BPHA3520	BA3.56/20		12	3-9/16	19-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3520	HB3.56/20	x	10	3-9/16	20	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3520	WP3.56 H=20	x	7/10	3-5/8	20	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3520	HWP3.56 H=20, HWPH3.56 H=20	x	7	3-9/16	20	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
	HLBH3520	HGLT4 H=20	x	7	3-5/8	20	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7705	--	10045	1420	
3-1/2 x 22	TFI422	HIT422	--	16	3-9/16	22	2-1/2	--	2-1/8	--	4	6	16d	2	10d x 1-1/2	2820	2820	2820	2480	--	2820	215	
	BPHA3522	BA3.56/22		12	3-9/16	21-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3522	HB3.56/22	x	10	3-9/16	22	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3522	WP3.56 H=22	x	7/10	3-5/8	22	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3522	HWP3.56 H=22, HWPH3.56 H=22	x	7	3-9/16	22	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
3-1/2 x 24	TFI424	HIT424	--	16	3-9/16	24	2-1/2	--	2-1/8	--	4	6	16d	2	10d x 1-1/2	2820	2820	2820	2480	--	2820	215	
	BPHA3524	BA3.56/24		12	3-9/16	23-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3524	HB3.56/24	x	10	3-9/16	24	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3524	WP3.56 H=24	x	7/10	3-5/8	24	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3524	HWP3.56 H=24, HWPH3.56 H=24	x	7	3-9/16	24	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font.**

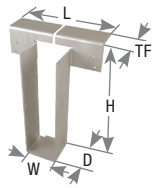


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in) W	H	D	L	TF	Min/ Max	Fastener Schedule[5] Header Top Qty	Face Qty	Type	Joist Qty	Type	Allowable Loads Header Type (Lbs.)[1,3] Download 100% LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	Uplift[2] DF/SP 160%	Code Ref.
3-1/2 x 26	TFI426	--	--	16	3-9/16	26	2-1/2	--	2-1/8	--	4	6	16d	2	10d x 1-1/2	2820	2820	2820	2480	--	2820	215	IBC, FL, LA
	BPHA3526	BA3.56/26		12	3-9/16	25-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3526	HB3.56/26	x	10	3-9/16	26	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3526	WP3.56 H=26	x	7/10	3-5/8	26	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3526	HWP3.56 H=26, HWPH3.56 H=26	x	7	3-9/16	26	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
3-1/2 x 28	BPHA3528	BA3.56/28		12	3-9/16	27-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3528	HB3.56/28	x	10	3-9/16	28	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3528	WP3.56 H=28	x	7/10	3-5/8	28	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3528	HWP3.56 H=28, HWPH3.56 H=28	x	7	3-9/16	28	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
3-1/2 x 30	BPHA3530	BA3.56/30		12	3-9/16	29-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	HBPH3530	HB3.56/30	x	10	3-9/16	30	3-1/2	--	3	--	6	16	16d	10	16d	6310	6310	6310	5035	--	6310	2705	
	PHM3530	WP3.56 H=30	x	7/10	3-5/8	30	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3530	HWP3.56 H=30, HWPH3.56 H=30	x	7	3-9/16	30	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
3-1/2 x 32	BPHA3532	--		12	3-9/16	31-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4190	--		1665	
	PHM3532	--	x	7/10	3-5/8	32	2-1/2	7	3	--	2	--	16d	2	10d	3335	3335	3335	2535	--	3335	--	
	PHXU3532	--	x	7	3-9/16	32	3-1/4	10	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4535	--	5910	1120	
4 - 4-3/16 x 9-1/2	THO20950-2	MIT4.12/9.5	x	16	4-3/16	9-1/2	3	--	2	--	4	6	16d	6	10d	2920	2920	2920	2245	2630	2920	1135	
	BPHA4295	BA4.12/9.5, BA4.28/9.5		12	4-3/8	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4185	--		1665	
	PHM4295	WP4.12 H=9.5	x	7/10	4-3/16	9-1/2	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4 - 4-3/16 x 11-7/8	THO20118-2	MIT4.12/11.88	x	16	4-3/16	11-7/8	3	--	2	--	4	6	16d	6	10d	2920	2920	2920	2245	2630	2920	1135	
	BPHA42118	BA4.12/11.88, BA4.28/11.88		12	4-3/8	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4185	--		1665	
	PHM42118	WP4.12 H=11.875	x	7/10	4-3/16	11-7/8	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4 - 4-3/16 x 14	THO20140-2	MIT4.28/14	x	12	4-3/16	14	3	--	1-15/16	--	4	6	16d	6	10d	3640	3640	3640	2800	2630	3640	1145	
	BPHA4214	BA4.12/14, BA4.28/14		12	4-3/8	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4185	--		1665	
	PHM4214	WP4.12 H=14	x	7/10	4-3/16	14	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4 - 4-3/16 x 16	THO20160-2	--	x	12	4-3/16	16	3	--	1-15/16	--	4	6	16d	6	10d	3640	3640	3640	2800	2630	3640	1145	
	BPHA4216	BA4.12/16, BA4.28/16		12	4-3/8	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4185	--		1665	
	PHM4216	WP4.12 H=16	x	7/10	4-3/16	16	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4-1/2 - 4-5/8 x 9-1/2	THO23950-2	MIT4.28/9.5	x	12	4-3/4	9-1/2	3	--	2	--	4	6	16d	6	10d	3640	3640	3640	2790	2630	3640	1145	
	BPHA2395-2	BA4.75/9.5		12	4-3/4	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4180	--		1665	
	PHM2395-2	WP4.28X H=9.5	x	7/10	4-3/4	9-1/2	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4-1/2 - 4-5/8 x 11-7/8	THO23118-2	MIT4.28/11.88	x	12	4-3/4	11-7/8	3	--	2-1/8	--	4	6	16d	6	10d	3640	3640	3640	2795	2630	3640	1145	
	BPHA23118-2	BA4.75/11.88		12	4-3/4	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4180	--		1665	
	PHM23118-2	WP4.28X H=11.875	x	7/10	4-3/4	11-7/8	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4-1/2 - 4-5/8 x 14	THO23140-2	MIT4.28/14	x	12	4-3/4	14	3	--	2-1/8	--	4	8	16d	6	10d	4420	4420	4420	3390	2630	4420	1145	
	BPHA2314-2	BA4.75/14		12	4-3/4	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4180	--		1665	
4-1/2 - 4-5/8 x 16	THO23160-2	MIT4.75/16	x	12	4-3/4	16	3	--	2-1/8	--	4	8	16d	6	10d	4420	4420	4420	3390	2630	4420	1145	
	BPHA2316-2	BA4.75/16		12	4-3/4	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4180	--		1665	
	PHM2316-2	WP4.75 H=16	x	7/10	4-3/4	16	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font**.

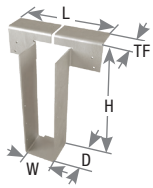


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in) W	H	D	L	TF	Min/ Max	Fastener Schedule[5] Header Top Qty	Face Qty	Type	Joist Qty	Type	Allowable Loads Header Type (Lbs.)[1,3] Download 100% LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	Uplift[2] DF/SP 160%	Code Ref.
4-1/2 - 4-5/8 x 18	THO23180-2	--	x	12	4-3/4	18	3	--	2-1/8	--	4	10	16d	6	10d	5660	5760	5760	3720	2630	5000	1145	IBC, FL, LA
	BPHA2318-2	BA4.75/18		12	4-3/4	17-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4180	--		1665	
	PHM2318-2	WP4.75 H=18	x	7/10	4-3/4	18	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
4-1/2 - 4-5/8 x 20	THO23200-2	--	x	12	4-3/4	20	3	--	2-1/8	--	4	10	16d	6	10d	5660	5760	5760	3720	2630	5000	1145	
	BPHA2320-2	BA4.75/20		12	4-3/4	19-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4150	--	5270	245	
										Max				8					4180	--		1665	
	PHM2320-2	WP4.75 H=20	x	7/10	4-3/4	20	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 9-1/4	THO25925-2	--	x	12	5-1/8	9-1/4	3	--	2-11/16	--	4	6	16d	6	10d	3640	3640	3640	2790	2630	3640	1145	
5 x 9-1/2	THO25950-2	MIT39.5-2	x	12	5-1/8	9-1/2	3	--	2-1/8	--	4	6	16d	6	10d	3640	3640	3640	2790	2630	3640	1145	
	PHM2595-2	WP5.12 H=9.5	x	7/10	5-1/8	9-1/2	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 11-1/4	THO25112-2	--	x	12	5-1/8	11-1/4	3	--	2-1/8	--	4	6	16d	6	10d	3640	3640	3640	2790	2630	3640	1145	
5 x 11-7/8	THO25118-2	MIT311.88-2, WP5.12 H=11.875	x	12	5-1/8	11-7/8	3	--	2-1/8	--	4	6	16d	6	10d	3640	3640	3640	2790	2630	3640	1145	
5 x 14	THO25140-2	MIT314-2	x	12	5-1/8	14	3	--	2-1/8	--	4	8	16d	6	10d	4420	4420	4420	3390	2630	4420	1145	
	PHM2514-2	WP5.12 H=14	x	7/10	5-1/8	14	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 16	THO25160-2	MIT5.12/16	x	12	5-1/8	16	3	--	2-1/8	--	4	8	16d	6	10d	4420	4420	4420	3390	2630	4420	1145	
	HBPH5116	HB5.12/16	x	10	5-1/8	16	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM2516-2	WP5.12 H=16	x	7/10	5-1/8	16	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 18	THO25180-2	--	x	12	5-1/8	18	3	--	2-1/8	--	4	10	16d	6	10d	5660	5760	5760	3720	2630	5000	1145	
	HBPH5118	HB5.12/18	x	10	5-1/8	18	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM2518-2	WP5.12 H=18	x	7/10	5-1/8	18	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 20	THO25200-2	--	x	12	5-1/8	20	3	--	2-1/8	--	4	10	16d	6	10d	5660	5760	5760	3720	2630	5000	1145	
	HBPH5120	HB5.12/20	x	10	5-1/8	20	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM2520-2	WP5.12 H=20	x	7/10	5-1/8	20	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 22	HBPH5122	HB5.12/22	x	10	5-1/8	22	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM2522-2	WP5.12 H=22	x	7/10	5-1/8	22	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 24	HBPH5124	HB5.12/24	x	10	5-1/8	24	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM2524-2	WP5.12X H=24	x	7/10	5-1/8	24	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 26	HBPH5126	HB5.12/26	x	10	5-1/8	26	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM2526-2	WP5.12 H=26	x	7/10	5-1/8	26	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
5 x 28	HBPH5128	HB5.12/28	x	10	5-1/8	28	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
5 x 30	HBPH5130	--	x	10	5-1/8	30	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
5-1/4 x 7-1/4	HBPH55725	--	x	10	5-1/2	7-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	BPHA55725	--		12	5-9/16	7-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
5-1/4 x 9-1/4	BPHA55925	BA5.12/9.25		12	5-9/16	9-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH55925	HB5.50/9.25	x	10	5-1/2	9-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHXU55925	HWP5.37 H=9.25, HWPH5.37 H=9.25	x	7	5-1/2	9-1/4	3-1/4	11-1/2	3	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH55925	HGLTV5.37 H=9.25	x	7	5-9/16	9-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 9-1/2	BPHA5595	BA5.12/9.5		12	5-9/16	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH5595	HB5.50/9.5	x	10	5-1/2	9-1/2	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM5595	--	x	7/10	5-5/8	9-1/2	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
	PHXU5595	HWP5.37 H=9.5, HWPH5.37 H=9.5	x	7	5-1/2	9-1/2	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH5595	HGLTV5.37 H=9.5	x	7	5-9/16	9-1/2	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 11-1/4	HBPH55112	HB5.50/11.25	x	10	5-1/2	11-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHXU55112	HWP5.37 H=11.25, HWPH5.37 H=11.25	x	7	5-1/2	11-1/4	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH55112	HGLTV5.37 H=11.25	x	7	5-9/16	11-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 11-1/2	HLBH55115	--	x	7	5-9/16	11-1/2	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 11-7/8	BPHA55118	BA5.12/11.88		12	5-9/16	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH55118	HB5.50/11.88	x	10	5-1/2	11-7/8	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM55118	--	x	7/10	5-5/8	11-7/8	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
	PHXU55118	HWP5.37 H=11.875, HWPH5.37 H=11.875	x	7	5-1/2	11-7/8	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH55118	HGLTV5.37 H=11.875	x	7	5-9/16	11-7/8	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font.**

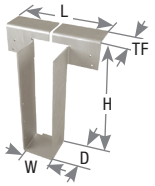


Continued on next page

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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in)					Min/ Max	Fastener Schedule[5]					Allowable Loads Header Type (Lbs.)[1,3]							Code Ref.
											Header			Joist		Download 100%						Uplift[2]	
					W	H	D	L	TF		Top Qty	Face Qty	Type	Qty	Type	LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	DF/SP 160%	
5-1/4 x 12	HBPH5512	--	x	10	5-1/2	12	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	IBC, FL, LA
	PHXU5512	--	x	7	5-1/2	12	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH5512	--	x	7	5-9/16	12	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 14	**BPHA5514**	BA5.12/14		12	5-9/16	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH5514	HB5.50/14	x	10	5-1/2	14	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM5514	--	x	7/10	5-5/8	14	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
	PHXU5514	HWP5.37 H=14, HWPH5.37 H=14	x	7	5-1/2	14	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH5514	HGLTV5.37 H=14	x	7	5-9/16	14	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 16	**BPHA5516**	BA5.12/16		12	5-9/16	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH5516	HB5.50/16	x	10	5-1/2	16	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM5516	--	x	7/10	5-5/8	16	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
	PHXU5516	HWP5.37 H=16, HWPH5.37 H=16	x	7	5-1/2	16	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH5516	HGLTV5.37 H=16	x	7	5-9/16	16	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 18	**BPHA5518**	BA5.12/18		12	5-9/16	17-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH5518	HB5.50/18	x	10	5-1/2	18	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHM5518	--	x	7/10	5-5/8	18	2-1/2	7	3	--	2	--	16d	2	10d	3265	3265	3265	2480	--	3265	--	
	PHXU5518	HWPH5.37 H=18	x	7	5-1/2	18	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH5518	HGLTV5.37 H=18	x	7	5-9/16	18	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 20	**BPHA5520**	BA5.12/20		12	5-9/16	19-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
	HBPH5520	HB5.50/20	x	10	5-1/2	20	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4910	--	6185	2705	
	PHXU5520	HWPH5.37 H=20	x	7	5-1/2	20	3-1/4	11-1/2	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4530	--	5910	1120	
	HLBH5520	HGLTV5.37 H=20	x	7	5-9/16	20	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7680	--	10045	1580	
5-1/4 x 22	**BPHA5522**	BA5.12/22		12	5-9/16	21-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
5-1/4 x 24	**BPHA5524**	BA5.12/24		12	5-9/16	23-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
5-1/4 x 26	**BPHA5526**	BA5.12/26		12	5-9/16	25-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4175	--		1665	
7 x 7-1/4	PHXU71725	--	x	7	7-1/8	7-1/4	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
7 x 9-1/4	**BPHA71925**	--		12	7-1/8	9-3/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH71925	--	x	10	7-1/8	9-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM35925-2	--	x	7/10	7-1/8	9-1/4	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU71925	--	x	7	7-1/8	9-1/4	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH71925	--	x	7	7-1/8	9-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 9-1/2	**BPHA7195**	--		12	7-1/8	9-7/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7195	HB7.12/9.5	x	10	7-1/8	9-1/2	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM3595-2	--	x	7/10	7-1/8	9-1/2	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU7195	HWP7.12 H=9.5	x	7	7-1/8	9-1/2	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7195	--	x	7	7-1/8	9-1/2	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 11-1/4	**BPHA71112**	--		12	7-1/8	11-1/8	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH71112	--	x	10	7-1/8	11-1/4	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHXU71112	--	x	7	7-1/8	11-1/4	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH71112	--	x	7	7-1/8	11-1/4	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font.**

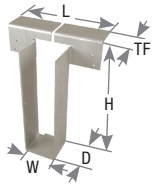


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Joist Size (in)	MiTek Stock No.	Ref. No.	Web Stiff Reqd	Ga	Dimensions (in)					Min/ Max	Fastener Schedule[5]					Allowable Loads Header Type (Lbs.)[1,3]							Code Ref.
											Header			Joist		Download 100%						Uplift[2]	
					W	H	D	L	TF		Top Qty	Face Qty	Type	Qty	Type	LVL	PSL	LSL	SPF	DF I-Joist[4]	DF/SP	DF/SP 160%	
7 x 11-7/8	**BPHA71118**	--		12	7-1/8	11-13/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	IBC, FL, LA
										Max				8					4165	--		1665	
	HBPH71118	HB7.12/11.88	x	10	7-1/8	11-7/8	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM35118-2	--	x	7/10	7-1/8	11-7/8	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU71118	HWP7.12 H=11 875	x	7	7-1/8	11-7/8	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH71118	--	x	7	7-1/8	11-7/8	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 14	**BPHA7114**	--		12	7-1/8	13-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7114	HB7.12/14	x	10	7-1/8	14	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM3514-2	--	x	7/10	7-1/8	14	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU7114	HWP7.12 H=14	x	7	7-1/8	14	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7114	--	x	7	7-1/8	14	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 16	**BPHA7116**	--		12	7-1/8	15-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7116	HB7.12/16	x	10	7-1/8	16	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM3516-2	--	x	7/10	7-1/8	16	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU7116	HWP7.12 H=16	x	7	7-1/8	16	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7116	--	x	7	7-1/8	16	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 18	**BPHA7118**	--		12	7-1/8	17-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7118	HB7.12/18	x	10	7-1/8	18	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM3518-2	--	x	7/10	7-1/8	18	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU7118	HWP7.12 H=18, HWPH7.12 H=18	x	7	7-1/8	18	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7118	--	x	7	7-1/8	18	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 20	**BPHA7120**	--		12	7-1/8	19-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7120	HB7.12/20	x	10	7-1/8	20	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHM3520-2	--	x	7/10	7-1/8	20	2-1/2	10	3	--	2	--	16d	2	10d	3390	3390	3390	2580	--	3390	--	
	PHXU7120	HWP7.12 H=20, HWPH7.12 H=20	x	7	7-1/8	20	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7120	--	x	7	7-1/8	20	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 22	**BPHA7122**	--		12	7-1/8	21-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7122	HB7.12/22	x	10	7-1/8	22	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHXU7122	HWP7.12 H=22, HWPH7.12 H=22	x	7	7-1/8	22	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7122	HGLTV7.12/22	x	7	7-1/8	22	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 24	**BPHA7124**	--		12	7-1/8	23-15/16	3	--	2-7/16	Min	6	8	16d	2	10d x 1-1/2	5270	5270	5270	4145	--	5270	245	
										Max				8					4165	--		1665	
	HBPH7124	HB7.12/24	x	10	7-1/8	24	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHXU7124	HWP7.12 H=24, HWPH7.12 H=24	x	7	7-1/8	24	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7124	HGLTV7.12/24	x	7	7-1/8	24	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 26	HBPH7126	HB7.12/26	x	10	7-1/8	26	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHXU7126	HWP7.12 H=26, HWPH7.12 H=26	x	7	7-1/8	26	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7126	HGLTV426-2	x	7	7-1/8	26	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 28	HBPH7128	HB7.12/28	x	10	7-1/8	28	3-1/2	--	3	--	6	16	16d	10	16d	6185	6185	6185	4895	--	6185	2705	
	PHXU7128	HWP7.12 H=28, HWPH7.12 H=28	x	7	7-1/8	28	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7128	HGLTV428-2	x	7	7-1/8	28	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 30	PHXU7130	HWPH7.12 H=30	x	7	7-1/8	30	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7130	HGLTV430-2	x	7	7-1/8	30	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	
7 x 32	PHXU7132	--	x	7	7-1/8	32	3-1/4	13-1/8	2-1/2	--	4	4	16d	6	10d	5910	5910	5910	4525	--	5910	1120	
	HLBH7132	--	x	7	7-1/8	32	6	12	2-3/4	--	3	12	NA16D-RS	6	16d	10045	10045	10045	7670	--	10045	1580	

1) When I-joist is used as a header, all header nails must be 10d (0.148") x 1-1/2.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted
3) Some listed loads may be increased for short-term loading. Refer to MiTek code evaluation reports for details.
4) The reduction factors for I-Joist headers with 1-1/4" thick flanges is 0.69 and 0.84 for 1-3/8" flange.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.
Vertical downward loads address hanger/header/fastener limitations only. Refer to the EWP manufacturer for joist limitations.
New products or updated product information are designated in **blue font.**



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LGU / MGU / HGU Face Mount Heavy Duty SCL Hangers

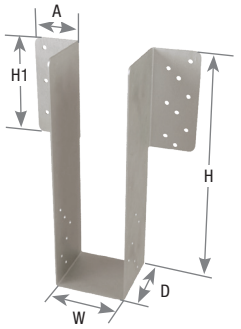
LGU, MGU, and HGUs are high capacity girder to girder face mount connectors. Fastens with MiTek's WS structural wood screws for ease of installation. Fasteners are placed high on connector to permit the connection of a deep carried member to a shallower carrying member; useful where tops of beams must be flush.

Materials: LGU / MGU – 10 gauge; HGU – 7 gauge
Finish: G90 galvanizing
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- Install with MiTek's WS structural wood screws supplied with connector.
- Beams comprised of multiple plies must be laminated to act as a single member.
- Multi-ply carrying beams may require additional connection of laminations at connector.
- Beam height dimension (H) must be specified when ordering.



Typical LGU, MGU, HGU installation



LGU, MGU, HGU

Beam Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[3]				DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Code Ref.
									Header		Truss		Floor	Roof		Uplift[1]	Floor	Roof		Uplift[1]	
				W	H[2] (min)	H1	D	A	Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%	
3-1/2	LGU363	LGU3.63-SDS	10	3-5/8	8	7-3/8	4-1/2	3-1/4	18	WS3	12	WS3	7135	7410	7410	3975	5945	5945	5945	3190	IBC, FL, LA
	MGU363	MGU3.63-SDS	10	3-5/8	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9610	9705	4085	
	HGU363	HGU3.63-SDS	7	3-5/8	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12175	12175	12175	5990	
5-1/4	MGU550	MGU5.50-SDS	10	5-1/2	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9610	9635	4055	
	HGU550	HGU5.50-SDS	7	5-1/2	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12060	12060	12060	5930	
7	HGU725	HGU7.25-SDS	7	7-1/4	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12000	12000	12000	5905	
8-3/4	HGU900	HGU9.00-SDS	7	9	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	11960	11960	11960	5885	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) H denotes minimum hanger height. Specify height when ordering.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with hangers.

Specialty Options Table

– Refer to Specialty Options pages 320-322 for additional details

Option	MiTek Series	Skewed[1,4,5]	Inverted Flange[2,3]
Range	LGU, MGU, HGU	1˚ to 45˚	One Inverted Flange option available on some sizes. See footnotes 2 and 3.
Allowable Loads	LGU	55% of table value. 30% of uplift.	100% of table value
	MGU	65% of table value. 30% of uplift.	
	HGU	70% of table value. 30% of uplift.	
Ordering	LGU, MGU, HGU	Add *SK*, angle required, right *(R)* or left *(L)*, and bevel cut *(BV)* to product number. Ex. MGU550_H=18_SK45R_BV	Add *IF* and right *(R)* or left *(L)* to product number. Ex. MGU550_H=18_IFR

1) Skewed hangers with skews greater than 15° may have all joist fasteners on outside flange.
2) One inverted flange (IF) is available on the following sizes: LGU363, MGU550, HGU550, HGU725, HGU900.
3) The inverted flange option is not available on skewed LGU, MGU or HGU hangers.
4) Bevel cut required on skewed parts to meet table loads.
5) Square cut option may be available as a custom, contact MiTek.

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KEGQ Heavy Duty SCL Hangers

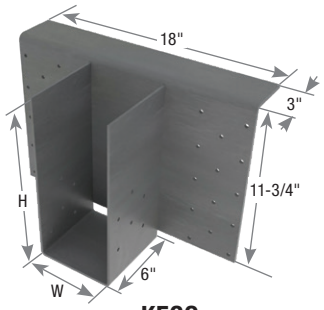
KEGQ hangers have high load capacities attributable to wood screw fastening, heavy steel construction, and a continuous top flange.

Materials: Top Flange – 3 gauge; U-Strap – 7 gauge
Finish: Primer
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek's WS3 structural wood screws, 1/4" dia. x 3" long, are supplied with KEGQ hangers.
- **Minimum supporting height (H) is 11-7/8".**
- Beam height dimension (H) must be specified when ordering.



Typical KEGQ550 installation



KEGQ

Joist / Purlin Size	MiTek Stock No.	Ref. No	Steel Gauge		Dimensions (in)		Fastener Schedule[3]				DF/SP Allowable Loads (Lbs.)[1]				S-P-F Allowable Loads (Lbs.)[1]				Code Ref.
							Header		Joist		Download			Uplift[1]	Download			Uplift[1]	
			Top Flange	U-Strap	W	H[2]	Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%	
3-1/2	KEGQ362	EGQ3.62-SDS3	3	7	3-5/8	Specify	28	WS3	12	WS3	17265	17265	17265	4695	13005	13615	13795	3750	IBC, FL, LA
5-1/4	KEGQ550	EGQ5.25-SDS3	3	7	5-1/2	Specify	28	WS3	12	WS3	17265	17265	17265	7430	13720	13720	13720	6525	
7	KEGQ725	EGQ7.25-SDS3	3	7	7-1/4	Specify	28	WS3	12	WS3	17265	17265	17265	7430	13680	13680	13680	6525	

1) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) "Specify" denotes the required supported beam height that must be specified at the time of ordering, with 11" being the minimum.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with KEGQ hangers.

Specialty Options Table – refer to Specialty Options pages 320 and 322-323 for additional details.

Option	Skewed[1,2,3]	Sloped Seat[3]
Range	1° to 45°	1° to 45°
Allowable Loads[4]	100% of table load up to Max. load of 13,965 lbs.	100% of table load up to Max. load of 9,470 lbs.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* to product number. Ex. KEGQ362_H=11_SK45R_SQ	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Ex. KEGQ362_H=11_SL30D

1) Carried member must have square cut end on skewed option.
2) Skewed hangers with skews greater than 15° may have all joist fastening on outside flange.
3) KEGQ hangers cannot be a combination of sloped and skewed.
4) Allowable loads are based on wood members with a specific gravity of 0.50 or greater.

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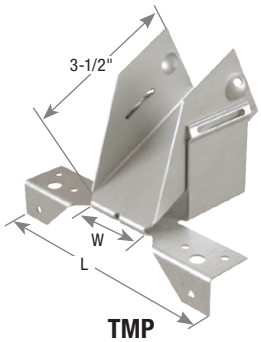
TMP / TMPH Adjustable Rafter-To-Plate Connectors

The TMP and TMPH are designed to make rafter-to-plate connections and eliminate time-consuming bird's-mouth notching or bevel plate installation. Both series are available in I-Joists sizes, as well as standard 2x sizes.

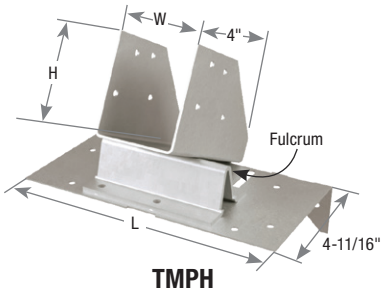
TMP – Adjusts to pitches from 1/12 to 6/12

TMPH – Adjusts to pitches from 6/12 to 14/12

Materials: TMP – 18 gauge;
TMPH – 16 gauge, Fulcrum – 12 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA



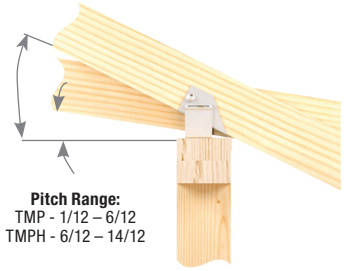
TMP



TMPH

Installation:

- Install the required fasteners according to the table.
- Position connector on top plate. Fasten connector to outside of top plate with specified nails. Insert rafter into rafter pocket. Adjust rafter and pocket to correct pitch. Fasten rafter to connector with specified nails. Installing the **TMP** requires driving specified nails through the opposing slots in the pocket. **TMPH** installation involves sliding the fulcrum until it supports the pocket at the desired pitch and nailing down through the fulcrum base into the top plate to lock the fulcrum into position.




Typical TMP installation


Typical TMPH installation

TMP Table

Rafter Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]		S-P-F Allowable Loads (Lbs.)[1]		Code Ref.
						Plate		Rafter		Download	Uplift	Download	Uplift	
				W	L	Qty	Type	Qty	Type	(100/115/125)	160%	(100/115/125)	160%	
1-1/2	TMP2	VPA2	18	1-9/16	5-9/16	6	10d	4	10d x 1-1/2	1705	245	1705	190	IBC, FL, LA
1-3/4	TMP175	VPA25	18	1-13/16	5-9/16	6	10d	4	10d x 1-1/2	1705	245	1705	185	
2 or 2-1/8	TMP21	VPA2.06, VPA2.1	18	2-1/8	6-3/8	6	10d	4	10d x 1-1/2	1705	245	1705	185	
2-5/16	TMP23	VPA35	18	2-3/8	6-3/8	6	10d	4	10d x 1-1/2	1705	245	1705	185	
2-1/2 or 2-5/8	TMP25	VPA3	18	2-11/16	6-3/8	6	10d	4	10d x 1-1/2	1705	245	1705	185	
3	TMP31	--	18	3-1/8	7-5/16	6	10d	4	10d x 1-1/2	1705	245	1705	185	
3-1/2	TMP4	VPA4	18	3-9/16	7-5/16	6	10d	4	10d x 1-1/2	1705	245	1705	185	

1) Allowable loads may not be increased for duration of load adjustments.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

TMPH Table

Rafter Width (in)	MiTek Stock No.	Ref. No.	Dimensions (in)			Fastener Schedule[3]					DF/SP Allowable Loads (Lbs.)[1]										Code Ref.
						Plate			Rafter[2]		According to Pitch									Uplift 160%	
			W	H	L	Top Qty	Side Qty	Type	Qty	Type	6/12	7/12	8/12	9/12	10/12	11/12	12/12	13/12	14/12		
1-1/2	TMPH2	VPA2	1-9/16	2-1/2	6-9/16	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	IBC, FL, LA
1-3/4	TMPH175	VPA25	1-13/16	2-3/8	6-9/16	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	
2 or 2-1/8	TMPH21	VPA2.06, VPA2.1	2-1/8	2-5/8	7-3/8	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	
2-5/16	TMPH23	VPA35	2-3/8	2-1/2	7-3/8	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	
2-1/2 or 2-5/8	TMPH25	VPA3	2-11/16	2-5/16	7-3/8	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	
3	TMPH31	--	3-1/8	2-11/16	8-9/16	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	
3-1/2	TMPH4	VPA4	3-9/16	2-1/2	8-9/16	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	330	

1) Allowable loads may not be increased for duration of load adjustments.
2) Web stiffeners are required for all Wood I-Joist installations.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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The LSSH series connects rafters to ridge beams in vaulted roof structures. This series is field adjustable to meet a variety of skew and/or slope applications. Slopes and skews 0° to 45°.

Materials: See table
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.

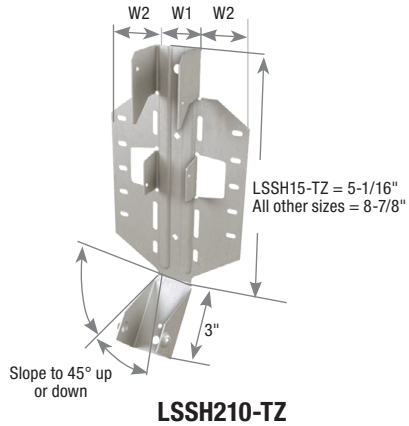
Steps:

1. Position LSSH connector against plumb-cut end of joist. Fasten joist side flanges on both sides with 10d (0.148") x 1-1/2" nails. Bend seat up to fit against joist bottom and drive (1) 10d (0.148") x 1-1/2" nail through bottom seat into rafter bottom. Drive (2) 10d (0.148") x 1-1/2" nails at downward angle through dimpled nailing guides.
2. Lean connector and rafter end against ridge beam at desired position. Install specified 10d (0.148" x 3") or 16d (0.162" x 3-1/2") nails through nail holes into ridge beam at right 90° angle. If skewing the rafter, only drive nails into ridge beam on inside flange.
3. Bend flange to desired angle.
4. Hammer outside flange until edge touches header. Fasten outside flange to ridge by driving specified 10d (0.148" x 3) or 16d (0.162" x 3-1/2") nails through nail holes.

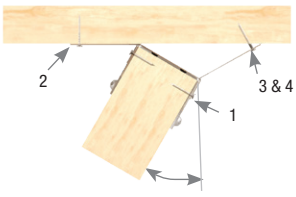
- Web stiffeners are required for all wood I-Joist installations.
- Designer may consider adding a tension restraint for the supported member for roof slopes exceeding 6/12. Refer to page 118.



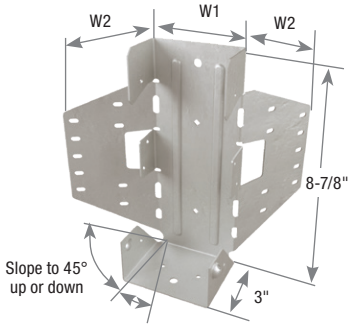
Typical LSSH179-TZ installation



LSSH210-TZ



Skew to 45° maximum



LSSH35-TZ

Rafter Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2,3,4]				DF/SP Allowable Loads (Lbs.)					S-P-F Allowable Loads (Lbs.)				Corrosion	Finish	Code Ref.
						Header		Rafter		Floor	Roof		Uplift[1]		Floor	Roof		Uplift[1]			
				W1	W2	Qty	Type	Qty	Type	100%	115%	125%	160%		100%	115%	125%	160%			
SLOPED ONLY HANGERS																					
1-1/2	LSSH15-TZ	--	18	1-9/16	1-3/4	6	10d	7	10d x 1-1/2	720	820	885	565		640	730	785	440			
1-1/2	LSSH210-TZ	--	18	1-9/16	1-3/4	10	10d	7	10d x 1-1/2	1200	1370	1395	410		1065	1090	1090	320			
1-3/4	LSSH179-TZ	--	18	1-13/16	1-5/8	10	10d	7	10d x 1-1/2	1200	1370	1395	880		1065	1090	1090	690			
2 - 2-1/8	LSSH20-TZ	--	18	2-1/8	2-1/2	10	10d	7	10d x 1-1/2	1200	1370	1395	795		1065	1085	1085	620			IBC,
2-1/4 - 2-5/16	LSSH23-TZ	--	18	2-5/16	2-3/8	10	10d	7	10d x 1-1/2	1200	1370	1395	795		1065	1085	1085	620			FL,
2-1/2	LSSH25-TZ	--	16	2-9/16	2-3/4	18	16d	12	10d x 1-1/2	2095	2095	2095	945		1640	1640	1640	740			LA
2-5/8	LSSH26-TZ	--	16	2-11/16	2-5/8	18	16d	12	10d x 1-1/2	2095	2095	2095	945		1640	1640	1640	740			
3	LSSH31-TZ	--	16	3-1/8	3-3/4	18	16d	12	10d x 1-1/2	2645	3000	3090	1310		2345	2415	2415	1025			
3-1/2	LSSH35-TZ	--	16	3-9/16	3-1/2	18	16d	12	10d x 1-1/2	2645	3000	3090	1310		2345	2405	2405	1020			
SKEWED HANGERS or SLOPED & SKEWED HANGERS																					
1-1/2	LSSH15-TZ	--	18	1-9/16	1-3/4	6	10d	7	10d x 1-1/2	620	620	620	510		485	485	485	400			
1-1/2	LSSH210-TZ	--	18	1-9/16	1-3/4	10	10d	7	10d x 1-1/2	1200	1370	1395	880		1065	1090	1090	690			
1-3/4	LSSH179-TZ	--	18	1-13/16	1-5/8	10	10d	7	10d x 1-1/2	1200	1370	1395	880		1065	1090	1090	690			
2 - 2-1/8	LSSH20-TZ	--	18	2-1/8	2-1/2	10	10d	7	10d x 1-1/2	1200	1230	1230	795		960	960	960	620			IBC,
2-1/4 - 2-5/16	LSSH23-TZ	--	18	2-5/16	2-3/8	10	10d	7	10d x 1-1/2	1200	1230	1230	795		955	955	955	620			FL,
2-1/2	LSSH25-TZ	--	16	2-9/16	2-3/4	14	16d	12	10d x 1-1/2	1610	1610	1610	945		1260	1260	1260	740			LA
2-5/8	LSSH26-TZ	--	16	2-11/16	2-5/8	14	16d	12	10d x 1-1/2	1610	1610	1610	945		1260	1260	1260	740			
3	LSSH31-TZ	--	16	3-1/8	3-3/4	14	16d	12	10d x 1-1/2	1610	1610	1610	1310		1260	1260	1260	1025			
3-1/2	LSSH35-TZ	--	16	3-9/16	3-1/2	14	16d	12	10d x 1-1/2	1610	1610	1610	1310		1255	1255	1255	1020			

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Stainless steel ring shank nails must be used with stainless steel connectors to achieve tabulated allowable loads.
3) For exterior applications, hot-dip galvanized (HDG) fasteners must be used.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel | Gold Coat | HDG | Triple Zinc

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HD / HDQIF / THDH Glulam Face Mount Hangers

HD – 14 gauge hangers utilizing round and diamond holes to achieve design flexibility and maximum loads

HDQIF– 14 gauge inverted flange hanger installs with wood screws

THDH – 12 gauge heavy capacity hanger

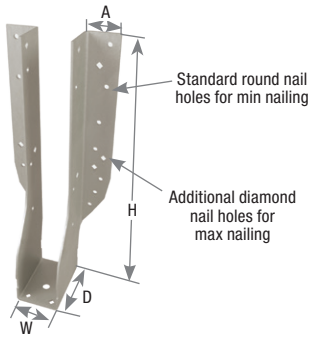
Materials: HD/HDQIF — 14 gauge; THDH — 12 gauge
Finish: G90 galvanizing
Options: See HD/THDH Specialty Options Table on page 231
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- **HD Min Nailing** – Fill all round nail holes.
- **HD Max Nailing** – Fill all round and diamond nail holes.
- MiTek WS3 (1/4" dia. x 3" long) structural wood screws are supplied with HDQIF hangers.
- **THDH** – Drive joist nails into header at 30° to 45° to achieve listed loads.



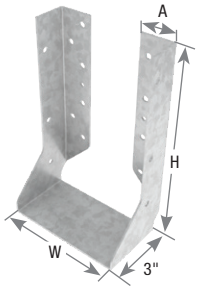
Typical HD installation



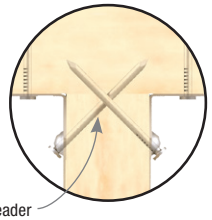
HD



Typical HDQIF inverted flange installation



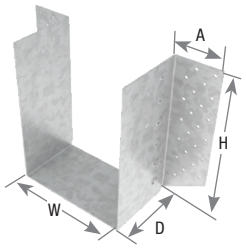
HDQIF



Typical THDH double shear installation



Typical THDH installation



THDH6710

Glulam Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[2,3] Min/ Max	Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	SPF Allowable Loads (Lbs.) Floor 100%	SPF Roof 115%	SPF Roof 125%	SPF Uplift[1] 160%	Code Ref.
3-1/8	HD32105	HU3.25/10.5	14	3-1/4	9-15/16	2-1/2	1-1/8	Min	16	16d	6	10d	2465	2780	2980	1170	2165	2445	2620	945	IBC, FL, LA
								Max	22		10		3390	3820	4100	1950	2980	3360	3605	1715	
	HD3212	HU3.25/12	14	3-1/4	11-7/8	2-1/2	1-1/8	Min	18	16d	8	10d	2770	3125	3355	1510	2440	2750	2950	1205	
								Max	26		12		4005	4515	4845	2340	3520	3970	4045	2060	
	HDQ210-2IF	HUCQ210-2	14	3-1/4	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975	4480	4600	4600	2665	
	THDH3210	HGUS3.25/10	12	3-1/4	9-3/8	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7830	7830	7830	3470	
	THDH3212	HGUS3.25/12	12	3-1/4	10-5/8	4	2-1/2	--	56	16d	14	16d	9710	9710	9710	5290	7775	7775	7775	4235	
5-1/8	HD5112	HU5.125/12	14	5-1/4	9-15/16	2-1/2	1-1/8	Min	16	16d	8	16d	2465	2780	2980	1305	2165	2445	2620	1040	
								Max	24		12		3695	4170	4470	2765	3250	3625	3625	2430	
	HD51135	HU5.125/13.5	14	5-1/4	12-15/16	2-1/2	1-1/8	Min	20	16d	10	16d	3080	3475	3725	2305	2710	3055	3175	2025	
								Max	28		14		4310	4860	5035	3225	3795	4030	4030	2835	
	HDQ5210IF	HUCQ5.25/9-SDS	14	5-1/4	9	3	1-1/2	--	12	WS3	6	WS3	5015	5145	5145	2975	4480	4570	4570	2645	
	HDQ5212IF	HUCQ5.25/11-SDS	14	5-1/4	11	3	1-1/2	--	14	WS3	6	WS3	5605	5605	5605	3280	5605	5605	5605	3280	
6-3/4	THDH6710	HGUS6.88/10	12	6-7/8	8-13/16	4	2-1/2	--	46	16d	12	16d	9020	9020	9020	4345	7765	7765	7765	3445	
	THDH6712	HGUS6.88/12	12	6-7/8	10-13/16	4	2-1/2	--	56	16d	14	16d	9020	9020	9020	5290	7775	7775	7775	4195	
	THDH6714	HGUS6.88/14	12	6-7/8	12-13/16	4	2-1/2	--	66	16d	16	16d	11325	11325	11325	5305	8995	8995	8995	4215	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) WS3 structural wood screws are 1/4" dia. x 3" long and are included with HDQIF hangers.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Continued on next page

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HD / THDH Specialty Options Table – Refer to Specialty Options pages 320-322 for additional details

Option	MiTek series	Skewed[1,3,4]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3,4]
Range	HD	1˚ to 50˚	1˚ to 45˚	See Sloped Seat and Skewed
	THDH	1˚ to 45˚		
Allowable Loads	HD	100% of table load. 75% of uplift load on skews greater than 15˚	100% of table load	80% of table load. 75% of uplift load on skews greater than 15˚
	THDH	85% of table load. 50% of table uplift load	85% of table load	52% of table load. 50% of table uplift load
Ordering	HD / THDH	Add *SK,* angle required, right *(R)* or left *(L), and* square cut *(SQ) or* bevel cut *(BV)* to product number. Example: THDH3210_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Example: HD5112_SL30D	See Sloped Seat and Skewed Example: HD3212_SK45R_BV_SL30D

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger.
4) Some square cut hangers will require custom pricing due to welded back plate. Welded products have a primer finish.

GHF Glulam Face Mount Hangers

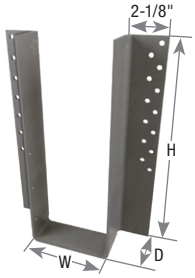
An architectural choice for exposed glulam purlin applications. The GHF features heavy load capacity and a multitude of optional designs for unusual applications. Header fasteners are positioned high and joist flange fasteners low for best design with glulam members.

Materials: See table
Finish: Primer
Options: See Specialty Options Table on page 232

Installation:
- Install the required fasteners according to the table.
- MiTek's WS structural wood screws are supplied with GHF hangers.



Typical GHF51135 installation



GHF

Glulam Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	Fastener Schedule[2] Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[1] Floor 100%	Roof 115%	Roof 125%	Uplift[3] 160%	Code Ref.
3-1/8 x 6	GHF31600	--	12	3-3/16	5-7/8	2-3/8	10	WS25	4	WS25	2740	2740	2740	1400	
3-1/8 x 7-1/2	GHF31750	--	12	3-3/16	7-3/8	2-3/8	12	WS25	4	WS25	3285	3285	3285	1400	
3-1/8 x 9	GHF31900	--	12	3-3/16	8-7/8	2-3/8	16	WS25	5	WS25	4380	4380	4380	1750	
3-1/8 x 10-1/2	GHF31105	--	12	3-3/16	10-3/8	2-3/8	20	WS25	6	WS25	5475	5475	5475	2100	
3-1/8 x 12	GHF31120	--	12	3-3/16	11-7/8	2-3/8	22	WS25	6	WS25	5800	5800	5800	2100	
3-1/8 x 13-1/2	GHF31135	--	12	3-3/16	13-3/8	2-3/4	24	WS25	6	WS25	5800	5800	5800	2100	
3-1/8 x 15	GHF31150	--	12	3-3/16	14-7/8	2-3/4	26	WS25	7	WS25	6730	6730	6730	2455	
3-1/8 x 16-1/2	GHF31165	--	12	3-3/16	16-3/8	2-3/4	28	WS25	9	WS25	7275	7275	7275	3155	
3-1/8 x 18	GHF31178	--	12	3-3/16	17-3/4	2-3/4	30	WS25	11	WS25	7825	7825	7825	3855	--
3-1/4 x 9	GHF32900	--	12	3-5/16	8-7/8	2-3/8	16	WS25	5	WS25	4380	4380	4380	1750	
3-1/4 x 12	GHF32120	--	12	3-5/16	11-7/8	2-3/8	22	WS25	6	WS25	5800	5800	5800	2100	
5-1/8 x 6	GHF51600	--	12	5-3/16	5-7/8	2-3/8	10	WS3	4	WS3	2740	2740	2740	1400	
5-1/8 x 7-1/2	GHF51750	--	12	5-3/16	7-3/8	2-3/8	14	WS3	4	WS3	3835	3835	3835	1400	
5-1/8 x 9	GHF51900	--	12	5-3/16	8-7/8	2-3/8	18	WS3	5	WS3	4930	4930	4930	1750	
5-1/8 x 10-1/2	GHF51105	--	12	5-3/16	10-3/8	2-3/8	22	WS3	6	WS3	6025	6025	6025	2100	
5-1/8 x 12	GHF51120	--	12	5-3/16	11-7/8	2-3/8	24	WS3	6	WS3	6570	6570	6570	2100	
5-1/8 x 13-1/2	GHF51135	--	7	5-3/16	13-3/8	2-3/8	26	WS3	6	WS3	8125	8125	8125	2400	

1) Allowable loads based on seat bearing calculated at 560 psi perpendicular to grain.
2) MiTek's WS25 (1/4" dia. x 2-1/2" long) and WS3 (1/4" dia. x 3" long) structural wood screws are included with GHF hangers.
3) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.

Continued on next page

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GHF Glulam Face Mount Hangers

Glulam Size (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]				Code Ref.
							Header		Joist		Floor	Roof		Uplift[3]	
				W	H	D	Qty	Type	Qty	Type	100%	115%	125%	160%	
5-1/8 x 15	GHF51150	--	7	5-3/16	14-7/8	2-3/4	28	WS3	7	WS3	8750	8750	8750	2800	
5-1/8 x 16-1/2	GHF51165	--	7	5-3/16	16-3/8	2-3/4	30	WS3	7	WS3	9375	9375	9375	2800	
5-1/8 x 18	GHF51178	--	7	5-3/16	17-3/4	2-3/4	32	WS3	8	WS3	10000	10000	10000	3200	
5-1/8 x 19-1/2	GHF51192	--	7	5-3/16	19-1/8	2-3/4	34	WS3	8	WS3	10395	10395	10395	3200	
5-1/8 x 21	GHF51205	--	7	5-3/16	20-3/8	2-3/4	36	WS3	9	WS3	10705	10705	10705	3600	
5-1/8 x 24	GHF51233	--	7	5-3/16	23-1/4	2-3/4	40	WS3	11	WS3	11330	11330	11330	4400	
5-1/4 x 9	GHF52900	--	12	5-5/16	8-7/8	2-3/8	18	WS3	5	WS3	4930	4930	4930	1750	
5-1/4 x 12	GHF52120	--	12	5-5/16	11-7/8	2-3/8	24	WS3	6	WS3	6570	6570	6570	2100	
6-3/4 x 6	GHF67600	--	12	6-7/8	5-7/8	2-3/8	12	WS3	4	WS3	3285	3285	3285	1400	
6-3/4 x 7-1/2	GHF67750	--	12	6-7/8	7-3/8	2-3/8	16	WS3	5	WS3	4380	4380	4380	1750	
6-3/4 x 9	GHF67900	--	12	6-7/8	8-7/8	2-3/8	20	WS3	6	WS3	5475	5475	5475	2100	--
6-3/4 x 10-1/2	GHF67105	--	12	6-7/8	10-3/8	2-3/8	24	WS3	8	WS3	6570	6570	6570	2805	
6-3/4 x 12	GHF67120	--	7	6-7/8	11-7/8	2-3/4	28	WS3	8	WS3	8750	8750	8750	3200	
6-3/4 x 13-1/2	GHF67135	--	7	6-7/8	13-3/8	2-3/4	30	WS3	8	WS3	9375	9375	9375	3200	
6-3/4 x 15	GHF67150	--	7	6-7/8	14-7/8	2-3/4	32	WS3	10	WS3	10000	10000	10000	4000	
6-3/4 x 16-1/2	GHF67165	--	7	6-7/8	16-3/8	2-3/4	34	WS3	10	WS3	10625	10625	10625	4000	
6-3/4 x 18	GHF67180	--	7	6-7/8	17-3/4	2-3/4	36	WS3	12	WS3	11250	11250	11250	4800	
6-3/4 x 19-1/2	GHF67195	--	7	6-7/8	19-1/8	3	40	WS3	14	WS3	12500	12500	12500	5600	
6-3/4 x 21	GHF67210	--	7	6-7/8	20-3/8	3	44	WS3	18	WS3	13000	13000	13000	7200	
6-3/4 x 22-1/2	GHF67225	--	7	6-7/8	21-7/8	3	46	WS3	20	WS3	13000	13000	13000	8000	
6-3/4 x 24	GHF67240	--	7	6-7/8	23-1/4	3	48	WS3	22	WS3	13000	13000	13000	8800	

1) Allowable loads based on seat bearing calculated at 560 psi perpendicular to grain.
2) MiTek's WS3 (1/4" dia. x 3" long) structural wood screws are included with GHF hangers.
3) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.

Specialty Options Table

– refer to Specialty Options pages 320-322 for additional details

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2]	Inverted Flange
Range	1˚ to 50˚	1˚ to 45˚	See Sloped Seat and Skewed	Not available in widths less than 4-1/2"
Allowable Loads	100% of table load. 75% of uplift load on skews greater than 15˚.	100% of table load	80% of table load 75% of uplift load on skews greater than 15˚.	100% of table load. 65% of table load when fastening into the support members end grain.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. GHF31900_SK45R_BV	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Ex. GHF31900_SL30D	See Sloped Seat and Skewed. Ex. GHF31900_SK45R_BV_SL30D	Add *IF* to product number. Ex. GHF51135_IF

1) Skewed hangers with skews greater than 15° may have all joist fastening on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist fastening.
3) Skewed hangers typically require a bevel cut however, a square cut option may be available as a custom when requested.



Typical GHF51135IF inverted flange installation

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LGU, MGU, and HGUs are high capacity girder to girder face mount connectors. Fastens with MiTek's WS structural wood screws for ease of installation. Fasteners are located towards the top of connector to permit the connection of a deep carried member to a shallower carrying member; useful where tops of beams must be flush.

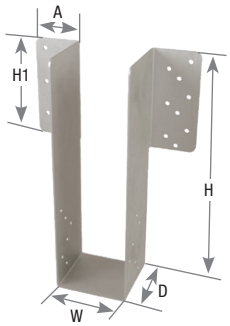
Materials: LGU / MGU – 10 gauge; HGU – 7 gauge
Finish: G90 galvanizing
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- Install with MiTek's WS structural wood screws supplied with connector.
- Beams comprised of multiple plies must be laminated to act as a single member.
- Multi-ply supporting beams may require additional connection of laminations at connector.
- Beam height dimension (H) must be specified when ordering.



Typical LGU, MGU, HGU installation



LGU, MGU, HGU

Beam Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Fastener Schedule[3]				DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Code Ref.
									Header		Truss		Floor	Roof		Uplift[1]	Floor	Roof		Uplift[1]	
				W	H[2] (min)	H1	D	A	Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%	
3-1/8	LGU325	LGU3.25-SDS	10	3-1/4	8	7-3/8	4-1/2	3-1/4	18	WS3	12	WS3	7135	7410	7410	3975	5960	5960	5960	3195	IBC, FL, LA
3-1/2	LGU363	LGU3.63-SDS	10	3-5/8	8	7-3/8	4-1/2	3-1/4	18	WS3	12	WS3	7135	7410	7410	3975	5945	5945	5945	3190	
	MGU363	MGU3.63-SDS	10	3-5/8	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9610	9705	4085	
	HGU363	HGU3.63-SDS	7	3-5/8	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12175	12175	12175	5990	
5-1/8	LGU525	LGU5.25-SDS	10	5-1/4	8	7-3/8	4-1/2	3-1/4	18	WS3	12	WS3	7135	7410	7410	3975	5910	5910	5910	3170	
	MGU525	MGU5.25-SDS	10	5-1/4	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9610	9640	4055	
	HGU525	HGU5.25-SDS	7	5-1/4	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12070	12070	12070	5935	
5-1/4	MGU550	MGU5.50-SDS	10	5-1/2	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9610	9635	4055	
	HGU550	HGU5.50-SDS	7	5-1/2	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12060	12060	12060	5930	
5-1/2	MGU562	MGU5.62-SDS	10	5-5/8	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9610	9625	4050	
	HGU562	HGU5.62-SDS	7	5-5/8	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12050	12050	12050	5930	
6-3/4	MGU700	MGU7.00-SDS	10	7	9-1/4	8-5/8	4-1/2	4	24	WS3	16	WS3	9515	10940	11890	5060	8355	9590	9590	4035	
	HGU700	HGU7.00-SDS	7	7	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12010	12010	12010	5910	
7	HGU725	HGU7.25-SDS	7	7-1/4	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	12000	12000	12000	5905	
8-3/4	HGU900	HGU9.00-SDS	7	9	11	10-3/8	5-1/4	4-3/4	38	WS3	24	WS3	14705	14990	14990	7375	11960	11960	11960	5885	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) H denotes minimum hanger height. Specify height when ordering.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with hangers.

Specialty Options Table

– refer to Specialty Options pages 320-322 for additional details

Option	MiTek Series	Skewed[1,4,5]	Inverted Flange[2,3]
Range	LGU MGU HGU	1° to 45°	One Inverted Flange option available on some sizes. See footnotes 2 and 3.
Allowable Loads	LGU	55% of table value. 30% of uplift.	100% of table value
	MGU	65% of table value. 30% of uplift.	
	HGU	70% of table value. 30% of uplift.	
Ordering	LGU MGU HGU	Add *SK*, angle required, right *(R)* or left *(L)*, and bevel cut *(BV)* to product number. Ex. LGU525_H=18_SK45R_BV	Add *IF* and right *(R)* or left *(L)* to product number. Ex. LGU525_H=18_IFR

1) Skewed hangers with skews greater than 15° may have all joist fasteners on outside flange.
2) One inverted-flange (IF) is available on the following sizes:
LGU363, LGU525
MGU525, MGU550, MGU563, MGU700
HGU525, HGU550, HGU562, HGU700, HGU725, HGU900
3) The inverted flange option is not available on skewed LGU, MGU or HGU hangers.
4) Bevel cut required on skewed parts to meet table loads.
5) Square cut option may be available as a custom, contact MiTek.

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KHW Welded Glulam Top Mount Hangers

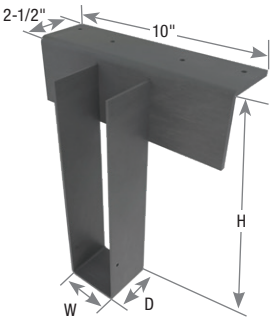
Heavy-duty hanger installs with NA20D nails for higher load capacities.

Materials: Top flange – 3 gauge; stirrup – 10 gauge
Finish: Primer
Options: See Nailer Options and Specialty Options Table
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- NA20D nails are supplied with KHW hangers.
- For Welded installations see page 327.
- **KHW models are not recommended for use with LVL, PSL or LSL headers**



Typical KHW installation



KHW

Beam Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	Fastener Schedule[3] Header Top Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[2] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Code Ref.
2-1/2	KHW26	--	3/10	2-11/16	specify	4	4	NA20D	2	10d x 1-1/2	5295	5295	5295	135	IBC, FL, LA
3-1/8	KHW3	--	3/10	3-1/4	specify	3	4	NA20D	2	10d	5535	5535	5535	135	
5-1/8	KHW5	--	3/10	5-1/4	specify	2-1/2	4	NA20D	2	10d	5535	5535	5535	135	

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) KHW load values are based on 560 psi perpendicular to grain loading.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, NA20D nails are 0.192" dia. x 2-1/2" long and are included with KHW hangers.

Nailer Options

– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[3] Nailer Top Qty	Nailer Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[1,2] Download 100%	SPF Allowable Loads (Lbs.)[1,2] Download 100%
KHW	3X	4	16d x 2-1/2	2	10d	4415	3525

1) Listed loads shall not be increased.
2) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.

Specialty Options Table

– refer to Specialty Options pages 320-321, 324 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]	Top Flange Offset		Saddle	Ridge
Range	1° to 84°	1° to 45°	See Sloped Seat and Skewed	0° to 35°	--		--	0° to 45°
Allowable Loads	100% of table load	100% of table load	100% of table load	100% of table load	**Hanger Width** 3-1/4" or less 5-1/4"	**% of table load:** 60% 75%	100% of table load per side	100% of table load
Ordering	Add *SK,* angle required, right (*R*) or left (*L*), and square cut (*SQ*) or bevel cut (*BV*) to product number. Ex. KHW5_H=16_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. KHW5_H=16_SL30D	See Sloped Seat and Skewed. Ex. KHW5_H=16_SK45R_SQ_SL30D	Add *SLTF,* angle required, and right *(R)* or left *(L),* to product number. Ex. KHW5_H=16_SLTF30L	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. KHW5_H=16_OSL		Add *SA,* and saddle width required to product number. Ex. KHW5_H=16_SA=5-1/2"	Add *DA,* angle required to product number. Ex. KHW5_H=16_DA30

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) For skewed hangers, the required cut type (square or bevel) of joist member may vary based on skew angle and width of hanger. Some square cut hangers will require custom pricing due to welded back plate.
4) Sloped top flanges with greater than 15° may have additional header nails.

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Bolt-only fastening, heavy steel construction, and a continuous top flange allow the KLEG, KMEG, and KEG products to have high load capacities.

KLEG – (4) bolt light capacity hanger

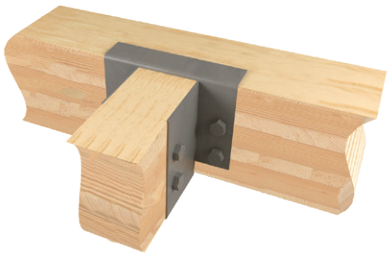
KMEG – (6) bolt medium capacity hanger

KEG – (8) bolt heavy capacity hanger

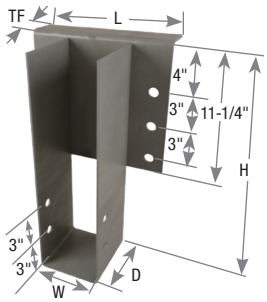
Materials: See table
Finish: Primer
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:

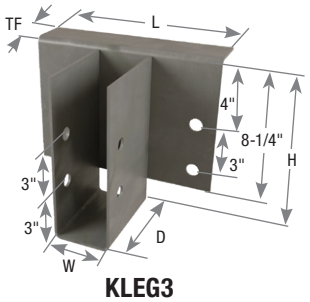
- Install the required fasteners according to the table.
- **Minimum supporting height is 10" for the KLEG; 13" for the KMEG; 20" for the KEG.**
- Supported beam height dimension (H) must be specified when ordering. Minimum supported height for KLEG and KMEG is 9" and 12" for KEG.



Typical KLEG5 installation



KMEG5



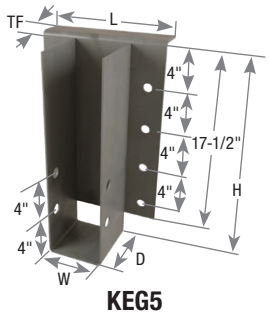
KLEG3



KLEG without top flange

Beam Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge		Dimensions (in)					Bolt Schedule				Allowable Loads (Lbs.)					Code Ref.
										Header		Joist		With Top Flange[1]		Without Top Flange[1,4]			
			Top Flange	U-Strap	W	H[3] Min	D	TF	L	Qty	Dia (in)	Qty	Dia (in)	Floor 100%	Roof 125%	Floor 100%	Roof 125%	Uplift 160%	
3-1/8	KLEG3	LEG3	7	7	3-1/4	9	6	2-1/2	12	4	3/4	2	3/4	11980	12165	3580	4470	3845	IBC, FL, LA
5-1/8	KLEG5	LEG5	7	7	5-1/4	9	6	2-1/2	12	4	3/4	2	3/4	11980	12165	3580	4470	4690	
	KMEG5	MEG5	7	7	5-1/4	9	6	2-1/2	12	6	3/4	2	3/4	12635	12635	5345	6685	4690	
	KEG5	EG5	3	7	5-1/4	12	6	2-1/2	12	8	1	2	1	17615	19920	9215	11520	7305	
6-3/4	KLEG7	LEG7	7	7	6-7/8	9	6	2-1/2	12	4	3/4	2	3/4	11980	12165	3580	4470	4690	
	KMEG7	MEG7	7	7	6-7/8	9	6	2-1/2	12	6	3/4	2	3/4	12635	12635	5345	6685	4690	
	KEG7	EG7	3	7	6-7/8	12	6	2-1/2	13-1/2	8	1	2	1	18695	21005	9245	11555	9275	
8-3/4	KEG9	EG9	3	7	8-7/8	12	6	2-1/2	15-1/2	8	1	2	1	20125	21145	9275	11595	9305	
10-3/4	KEG11	--	3	7	10-7/8	12	6	2-1/2	17-1/2	8	1	2	1	21145	21145	9295	11620	9325	

1) Allowable loads are based on wood members with a Fc⊥ of 560 psi or greater.
2) Uplift loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
3) H denotes minimum hanger height. Specify height when ordering.
4) To order hangers without top flange, add "NOTF" to end of stock number as in "KMEG5_H=16_NOTF".



KEG5

Specialty Options Table

– refer to Specialty Options pages 320-321, 324 for additional details

Option	Skewed[3]	Sloped Seat	Top Flange Offset[1,2]
Range	1˚ to 45˚	1˚ to 45˚	--
Allowable Loads[4]	KLEG – 10,000 lbs. Max KMEG – 10,000 lbs. Max KEG – 14,250 lbs. Max	KLEG – 9,665 lbs. Max KMEG – 9,665 lbs. Max KEG – 9,665 lbs. Max	KLEG – 5,665 lbs. Max KMEG – 5,665 lbs. Max
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* to product number. Ex. KLEG3_H=11_SK45R_SQ	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. KLEG3_H=11_SL30D	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. KLEG3_H=11_OSL

1) Top flange offset hangers may not be skewed.
2) Top flange offset option is not available for KEG models.
3) Carried member must have square cut end on skewed option.
4) Published loads in the table are for hangers with a top flange.
5) Maximum alllowable loads are based on wood members with a Fc⊥ of 560 psi or greater.

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KGB / KHGB / KHHB Glulam Top Mount Hangers

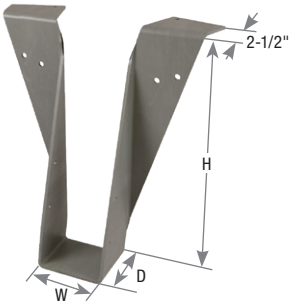
Hanger for glulam beam and purlin applications.

Materials: 7 gauge
Finish: Primer
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek's WS3 structural wood screws are supplied with hangers.
- Beam height dimension (H) must be specified when ordering.
- **Minimum height (H) is 7-1/2".**
- See welded installation table on page 327.



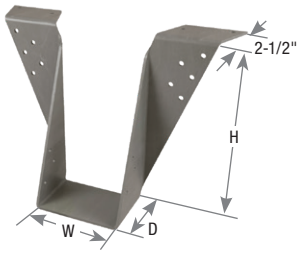
Typical KHHB installation



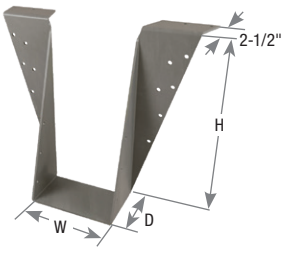
KHHB

Beam Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)[2] W	H	D	Fastener Schedule[4] Header[3] Top Qty	Face Qty	Type	Joist Qty	Type	Allowable Loads (Lbs.)[5] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Code Ref.
3-1/8	KHHB3	--	7	3-1/4	specify	3	4	6	WS3	6	WS3	6480	6480	6480	2215	IBC, FL, LA
	KGB3	--	7			3-1/2	4	10	WS3	6	WS3	6480	6480	6480	2215	
5-1/8	KHHB5	--	7	5-1/4	specify	3	4	6	WS3	6	WS3	6480	6480	6480	2215	
	KGB5	--	7			3-1/2	4	10	WS3	6	WS3	6480	6480	6480	2215	
	KHGB5	--	7			4	4	12	WS3	6	WS3	6480	6480	6480	2215	
6-3/4	KHHB7	--	7	6-7/8	specify	3	4	6	WS3	6	WS3	6480	6480	6480	2215	
	KGB7	--	7			3-1/2	4	10	WS3	6	WS3	6480	6480	6480	2215	
	KHGB7	--	7			4	4	12	WS3	6	WS3	6480	6480	6480	2215	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) "Specify" denotes the required supported beam height must be specified at the time of ordering.
3) Supporting header shall be no less than 3" thick.
4) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with hangers.
5) Allowable loads are based on wood members with a $F_{c\perp}$ of 625 psi or greater.



KGB



KHGB

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KGLT / KHGLT Glulam Beam Hangers

These heavy beam hangers are designed for use with glulam and timber beams. The continuous top mount flange offers high load capacity with minimal fastening.

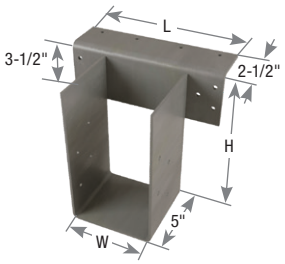
KGLT – Medium capacity hanger

KHGLT – Heavy capacity hanger

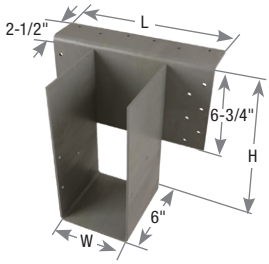
Materials: See table
Finish: Primer
Options: See Nailer Options table below and Specialty Options Table on page 238
Codes: IBC, FL, LA



Typical KGLT5 installation



KGLT



KHGLT

Installation:
- Install the required fasteners according to the table.
- Beam height dimension (H) must be specified when ordering.
- See welded installation table on page 327.
- **Minimum height (H) is 8-1/2" for KGLS and KGLST, 10-1/2" for KHGLS and KHGLST.**

Beam Width (in)	MiTek Stock No.	Ref. No.	Steel Gauge		Dimensions (in)			Fastener Schedule[4]					Allowable Loads (Lbs.)[2]				Code Ref.
								Header			Joist		Floor	Roof			
			Top Flange	U-Strap	W	H[3]	L	Top Qty	Face Qty	Type	Qty	Type	100%[3]	115%	125%	Uplift[1] 160%	
3-1/8	KGLT3	--	3	7	3-1/4	specify	10	4	6	WS3	8	WS3	10555	10965	11055	1935	IBC, FL, LA
	KHGLT3	HGLT3					12	6	12	WS3	6	WS3	12495	12495	12495	1935	
3-1/2	KGLT4	--	3	7	3-5/8	specify	10	4	6	WS3	8	WS3	10555	10965	11055	1935	
	KHGLT4	HGLT4, HGLTV4					12	6	12	WS3	6	WS3	12495	12495	12495	1935	
5-1/8	KGLT5	--	3	7	5-1/4	specify	10	4	6	WS3	8	WS3	10555	10965	11055	1935	
	KHGLT5	HGLT5, HGLTV5					12	6	12	WS3	6	WS3	12495	12495	12495	1935	
5-5/16	KHGLT537	HGLTV5.37	3	7	5-3/8	specify	12	6	12	WS3	6	WS3	12495	12495	12495	1935	
5-1/2	KGLT6	--	3	7	5-5/8	specify	12	4	6	WS3	8	WS3	10555	10965	11055	1935	
	KHGLT6	HGLT6, HGLTV6					12	6	12	WS3	6	WS3	12495	12495	12495	1935	
6-3/4	KGLT7	--	3	7	6-7/8	specify	12	4	6	WS3	8	WS3	10555	10965	11055	1935	
	KHGLT7	HGLT7, HGLTV7					12	6	12	WS3	6	WS3	12495	12495	12495	1935	
8-3/4	KGLT9	--	3	7	8-7/8	specify	14	4	6	WS3	8	WS3	10555	10965	11055	1935	
	KHGLT9	HGLT9					14	6	12	WS3	6	WS3	12495	12495	12495	1935	
10-3/4	KHGLT11	--	3	7	10-7/8	specify	16	6	12	WS3	6	WS3	12495	12495	12495	1935	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on wood members with a $F_{c\perp}$ of 625 psi.
3) "Specify" denotes the required supported beam height that must be specified at time of ordering, with 7-1/2" being the minimum.
4) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with the hangers.

KGLT Nailer Options

– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[2,3]					DF/SP Allowable Loads (Lbs.)[1,4]		SPF Allowable Loads (Lbs.)[1,4]	
		Nailer			Joist					
		Top Qty	Face Qty	Type	Qty	Type	Download 100%	Uplift 160%	Download 100%	Uplift 160%
KGLT	2x	4	--	WS15	8	WS15	5210	--	4375	--
	3x	4	2	WS15	8	WS15	6655	--	5590	--
	(2) 2x	4	4	WS3	8	WS3	6430	--	5400	--
	4X	4	6	WS3	8	WS3	6040	1925	5075	1615

1) Listed loads shall not be increased.
2) MiTek's WS15 structural wood screws are 1/4" dia. x 1-1/2" long and are not included with hangers.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with hangers.
4) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.

Continued on next page

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KGLT / KHGLT Glulam Beam Hangers

Specialty Options Table
– refer to Specialty Options pages 320-321, 324 for additional details

Option	Skewed[1,3]	Sloped Seat[2,3]	Sloped / Skewed[1,2,3]	Sloped Top Flange[4]	Top Flange Offset	Saddle
Range	1˚ to 50˚	1˚ to 45˚	See Sloped Seat and Skewed	0˚ to 45˚	--	--
Allowable Loads	50% of uplift load on skew greater than 15˚	KGLT – 4,110-lb Max KHGLT – 7,000-lb Max	KGLT – 4,110-lb Max KHGLT – 7,000-lb Max 50% of uplift load on skew greater than 15˚	100% of table load	60% of table load for KGLT. 45% of table load for KHGLT.	100% of table load per side
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. KGLT3_H=16_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. KGLT3_H=16_SL30D	See Sloped Seat and Skewed. Ex. KGLT3_H=16_SK45R_BV_SL30D	Add *SLTF,* angle required and right *(R)* or left *(L),* to product number. Ex. KGLT3_H=16_**SLTF**30L	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. KGLT3_H=16_OSL	Add *SA,* and saddle width required to product number. Ex. KGLT3_H=16_SA=5-1/2"

1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) Skewed hangers typically require a bevel cut however, a square cut option may be available as a custom when requested.
4) Sloped top flanges with slopes greater than 15° may have additional header nails.

KGLS / KGLST / KHGLS / KHGLST Glulam Saddle Hangers

KGLS – Saddle hanger

KGLST – Saddle hanger with seismic straps

KHGLS – Heavier version of KGLS

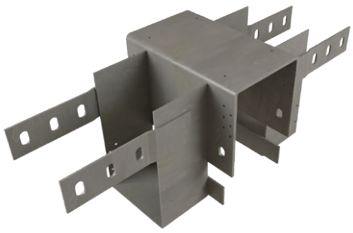
KHGLST – Heavier version of KGLST

Materials: Top flange - 3 gauge; Stirrup - 7 gauge
Finish: Primer
Options: See KGLS / KHGLS Specialty Options Table on page 239
Codes: IBC, FL, LA

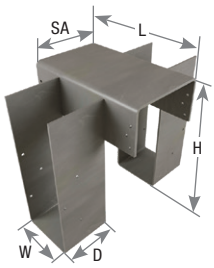
Installation:
- Install the required fasteners according to the table.
- Loads and nail schedule apply to each saddle hanger stirrup.
- **Minimum header height is 8-1/2" for the KGLS and KGLST; 10-1/2" for the KGLS and KGLST.**
- Beam height dimension (H) must be specified when ordering.
- **KGLST** and **KHGLST** models include seismic straps which must be installed with (3) 3⁄4" thru-bolts in each supported member and (2) 3⁄4" thru-bolts into the supporting beams.
- See welded installation table on page 327.



Typical KHGLST installation



KHGLST



KGLS

Continued on next page

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Supported Glulam Beam Size (in)	MiTek Stock No.	Ref. No.	Dimensions (in)[4]					Fastener Schedule								Allowable Loads (Lbs.)[1,5]					Code Ref.
								Header				Joist				Floor	Roof				
								Wood Screws[1,3]		Bolts		Wood Screws[1,3]		Bolts							
			W	H[2]	D	L	SA[4]	Qty	Type	Qty	Dia (in)	Qty	Type	Qty	Dia (in)	100%	115%	125%	Uplift 160%	Tension 160%	
3-1/8	KGLS35	GLS3-5	3-1/4	Specify	5	6	5-1/4	6	WS3	--	--	6	WS3	--	--	11070	11420	11650	2320	--	IBC, FL, LA
	KGLST35	--	3-1/4		6-1/2	10	5-1/4	6	WS3	2	3/4	6	WS3	3	3/4	13695	14045	14275	2320	15310	
	KGLS37	GLS3-7	3-1/4		5	6	6-7/8	6	WS3	--	--	6	WS3	--	--	11070	11420	11650	3715	--	
	KGLST37	--	3-1/4		6-1/2	10	6-7/8	6	WS3	2	3/4	6	WS3	3	3/4	13695	14045	14275	3715	15310	
	KGLS39	GLS3-9	3-1/4		5	6	8-7/8	6	WS3	--	--	6	WS3	--	--	11070	11420	11650	3715	--	
	KGLST39	--	3-1/4		6-1/2	10	8-7/8	6	WS3	2	3/4	6	WS3	3	3/4	13695	14045	14275	3715	15310	
5-1/8	KGLS55	GLS5-5	5-1/4	Specify	5	9	5-1/4	6	WS3	--	--	6	WS3	--	--	15655	16065	16340	3715	--	
	KGLST55	--	5-1/4		6-1/2	12	5-1/4	6	WS3	2	3/4	6	WS3	3	3/4	19960	20370	20645	3715	15310	
	KGLS57	GLS5-7	5-1/4		5	9	6-7/8	6	WS3	--	--	6	WS3	--	--	16670	17020	17250	3715	--	
	KGLST57	--	5-1/4		6-1/2	12	6-7/8	6	WS3	2	3/4	6	WS3	3	3/4	20975	21325	21555	3715	15310	
	KHGLS5	HGLS5	5-1/4		6-1/2	12	Specify	14	WS3	--	--	8	WS3	--	--	21750	22215	22525	4955	--	
	KHGLST5	--	5-1/4		6	12	Specify	14	WS3	2	3/4	8	WS3	3	3/4	20315	20780	21090	4955	15310	
6-3/4	KGLS77	GLS7-7	6-7/8	Specify	5	12	6-7/8	6	WS3	--	--	6	WS3	--	--	21220	21570	21800	3715	--	
	KGLST77	--	6-7/8		6-1/2	12	6-7/8	6	WS3	2	3/4	6	WS3	3	3/4	25420	25830	26105	3715	15310	
	KGLS79	GLS7-9	6-7/8		5	12	8-7/8	6	WS3	--	--	6	WS3	--	--	21220	21570	21800	3715	--	
	KGLST79	--	6-7/8		6-1/2	12	8-7/8	6	WS3	2	3/4	6	WS3	3	3/4	26890	27240	27470	3715	15310	
	KHGLS7	HGLS7	6-7/8		6	12	Specify	14	WS3	--	--	8	WS3	--	--	23195	24155	24795	4955	--	
	KHGLST7	--	6-7/8		6-1/2	14	Specify	14	WS3	2	3/4	8	WS3	3	3/4	25995	26955	27595	4955	15310	
8-3/4	KHGLS9	HGLS9	8-7/8	Specify	6	12	Specify	14	WS3	--	--	8	WS3	--	--	23195	24155	24795	4955	--	
	KHGLST9	--	8-7/8		6-1/2	16	Specify	14	WS3	2	3/4	8	WS3	3	3/4	28975	29755	30395	4955	15310	

1) Allowable loads and fastener schedules apply to each side of the saddled hanger.
2) Minimum header height is 8-1/2" for the KGLS and KGLST; 10-1/2" for the KHGLS and KHGLST.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with hangers.
4) Where "Specify" is called out for the saddle width, the minimum saddle width shall be 5".
5) Allowable loads are based on wood members with a $F_{c\perp}$ of 560 psi or greater.

KGLS / KHGLS Specialty Options Table – refer to Specialty Options pages 320-321, 324 for additional details

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2]	Sloped Top Flange[4]	Top Flange Offset
Range	1˚ to 50˚	1˚ to 45˚	See Sloped Seat and Skewed	0° to 30°	May not be skewed
Allowable Loads	KGLS – 6,500-lb Max KHGLS – 7,980-lb Max 50% of uplift load on skews greater than 15°.	KGLS – 6,500-lb Max KHGLS – 9,165-lb Max	KGLS – 5,500-lb Max **KHGLS – may not be sloped / skewed.** 50% of uplift load on skews greater than 15°.	100% of table load	50% of table load for KGLS. 45% of table load for KHGLS.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. KGLS35H=115_SK45R_BV	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Example: KGLS35H=115_SL30D	See Sloped Seat and Skewed. Example: KGLS35H=115_SK45R_BV_SL30D	Add *SLTF*, angle required, and right *(R)* or left *(L)*, to product number. Example: KGLS35H=115_SLTF30L	Add *OS to* product number. Example: KGLS35H=115_OS

1) Skewed hangers with skews greater than 15° may have all joist fasteners on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) Skewed hangers typically require a bevel cut however, a square cut option may be available as a custom when requested.
4) Sloped top flanges with greater than 15° may have additional header nails.

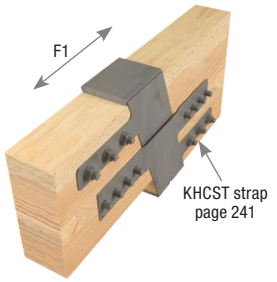
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KHC Hinge Connectors

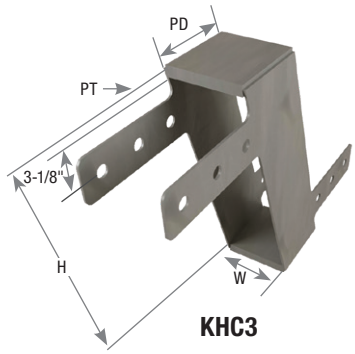
Supports a glulam beam off the end of another glulam beam. Refer to the Optional Horizontal Loading Table for design variations.

Materials: See table on page 241
Finish: Primer
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- To allow for wood shrinkage, position bolts in slots away from the bearing seat.
- For dapped beams, reduce the "H" dimension by the "PT" dimension for each dap.



Typical KHC installation



KHC3

Optional Horizontal Loading Table

MiTek Stock No. Prefix	Ref. No.	Min. H [3] (in)	Rotation Bolts[2]/Beam		Seismic Bolts[2]		DF/SP Allowable Loads (Lbs.)[1]
			Qty	Dia (in)	Qty	Dia (in)	F1 160%
* KHC	HCA	8	2	3/4	--	--	--
* KHC2T	--	9	2	3/4	2	3/4	--
KHC2CT	--	12	2	3/4	2	3/4	9445
KHCCT	HCCTA	12	2	3/4	3	3/4	14170
KHC4CT	--	12	2	3/4	4	3/4	18895
* KHC3	HC3A	8	3	3/4	--	--	--
* KHC3T	--	9	3	3/4	3	3/4	--
KHC2C3T	--	12	3	3/4	2	3/4	9445
KHCC3T	--	12	3	3/4	3	3/4	14170
KHC4C3T	HC4C3TA	12	3	3/4	4	3/4	18895

1) Loads are based on a 5-1/8" width Douglas-Fir Larch beam.
2) All bolts are 3/4", and shall meet or exceed the specifications of ASTM A 307.
3) Minimum H may be less than H required for listed loads; in which case, load reductions are required.
* When used with optional KHCST Seismic Strap, the minimum H is 12".



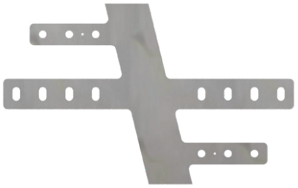
KHC3 side view



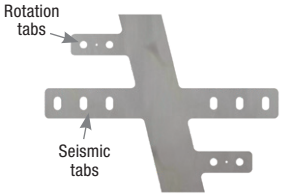
KHC3 top view



KHC4CT



KHC4C3T



KHCCT



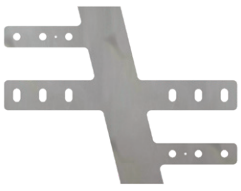
KHC2C3T



KHC2T



KHC3T



KHCC3T



KHC



KHC3



KHC2CT

Continued on next page

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Allowable Download Table

Beam Width (in)	MiTek Stock No. Suffix	Ref. No.	Steel Gauge	Dimensions (in)			(2) Rotation Bolts[3] Per Beam			(3) Rotation Bolts[3] Per Beam			Code Ref.
				W	PD	PT	H^2 (in)	DF/SP Allowable Download (Lbs.)[1] 410 psi	DF/SP Allowable Download (Lbs.)[1] 560 psi	H^2 (in)	DF/SP Allowable Loads (Lbs.)[1] 410 psi	DF/SP Allowable Loads (Lbs.)[1] 560 psi	
5-1/8	55	HCA5-5	7	5-1/4	5	3/4	17-1/2	10505	14350	14	10505	14350	IBC, FL, LA
	56	HCA5-6	7	5-1/4	6	3/4	22-3/4	12610	17220	17-1/2	12610	17220	
	57	HCA5-7	7	5-1/4	7	3/4	28-3/4	14710	20090	21-3/4	14710	20090	
	59	HCA5-9	7	5-1/4	9	3/4	43-1/2	18910	25830	32	18910	25830	
6-3/4	75	HCA7-5	7	6-7/8	5	1	20-3/4	13840	18900	16	13840	18900	
	76	HCA7-6	7	6-7/8	6	1	27-1/2	16605	22680	20-3/4	16605	22680	
	77	HCA7-7	7	6-7/8	7	1	35-1/2	19375	26460	26-1/4	19375	26460	
	79	HCA7-9	7	6-7/8	9	1	55	24910	34020	40	24910	34020	
8-3/4	95	HCA9-5	7	8-7/8	5	1-1/4	24-3/4	17940	24500	18-3/4	17940	24500	
	96	HCA9-6	7	8-7/8	6	1-1/4	33-1/2	21525	29400	24-3/4	21525	29400	
	97	HCA9-7	7	8-7/8	7	1-1/4	43-3/4	25115	34300	32	25115	34300	
	99	HCA9-9	7	8-7/8	9	1-1/4	69-1/4	32290	44100	49-3/4	32290	44100	
10-3/4	115	HCA11-5	3	10-7/8	5	1-1/2	27-1/4	22040	30100	20-1/4	22040	30100	
	116	HCA11-6	3	10-7/8	6	1-1/2	37-1/4	26445	36120	27	26445	36120	
	117	HCA11-7	3	10-7/8	7	1-1/2	49-1/4	30855	42140	35-1/4	30855	42140	
	119	HCA11-9	3	10-7/8	9	1-1/2	78-1/4	39670	54180	55-1/4	39670	54180	

1) Allowable download shall not be further increased for duration.
2) The minimum height is for loads shown. For heights less than the minimum shown reduce the allowable loads in direct proportion.
3) All bolts are 3/4", and shall meet or exceed the specifications of ASTM A 307.

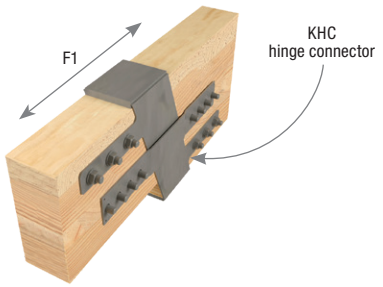
KHCST / KHCSTR Seismic Straps

Seismic straps can be installed during construction or added as a retrofit item.

Materials: See table
Finish: Primer
Codes: IBC, FL, LA

Installation:

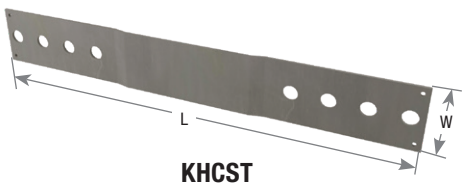
- Install the required fasteners according to the table.



Typical KHCST installation

MiTek Stock No.[3]	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Bolt Schedule Qty	Bolt Schedule Dia (in)	DF/SP Allowable Loads (Lbs.)[1,2] F1 160%	Code Ref.
KHCST2	--	7	3-1/2	25-5/8	4	3/4	10075	IBC, FL, LA
KHCSTR2	HCSTR2							
KHCST3	--	7	3-1/2	31-5/8	6	3/4	14685	
KHCSTR3	HCSTR3							
KHCST4	--	3	3-1/2	37-5/8	8	3/4	20145	
KHCSTR4	HCSTR4							

1) Allowable loads are for straps used in pairs, and are increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Loads are based on a 5-1/8" width Douglas-Fir-Larch beam.
3) Seismic straps shall be used with the KHC hinge connectors.



KHCST

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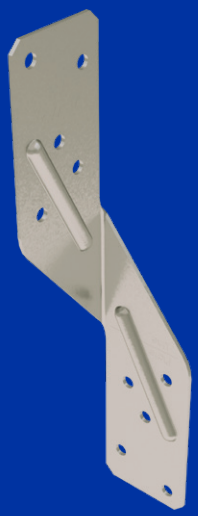
TRUSS & RAFTER



MiTek®

TRUSS & RAFTER 242-265

Moisture Barrier Plates	244
Truss Anchors	244-250
Uplift Girder Ties	251-252, 255-259
Angles	253-254
Hurricane Ties	253, 262-265
Strap Connector	260
Truss Structural Wood Screw	260-261



NOP Moisture Barrier Plates

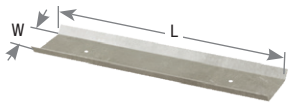
Moisture Barrier Plates protect the bottom chords of trusses from moisture damage caused by direct contact with concrete. These plates eliminate the need for more expensive treated wood plates.

Materials: See table
Finish: G90 galvanizing

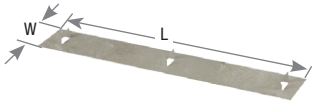
Installation:
- Install the required fasteners according to the table.
- Pre-attach to truss bottom chord or rafter using pre-punched prongs and/or 6d common nails to prevent wood-to-concrete contact.



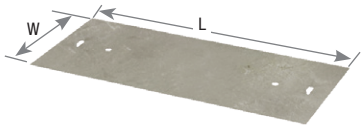
Typical NOP4 installation



NOP1



NOP2X



NOP4

Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[1]		Code Ref.
				W	L	Qty	Type	
2x	NOP2X	TSS2, TBP8	26	1-7/16	8	--	--	--
	NOP1	--	22	1-1/2	8	2	6d	
4x	NOP4	TSS2-2	26	3-1/2	8	2	6d	

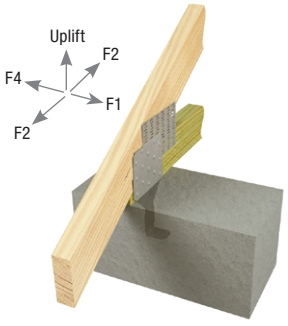
1) **NAILS:** 6d nails are 0.120" dia. x 2" long.

LPTA Embedded Truss Anchors

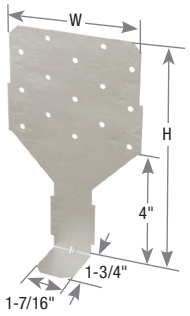
Low profile design attaches to 2x4 or larger bottom chords and provides uplift and lateral load resistance.

Materials: 18 gauge
Finish: G90 galvanizing
Codes: FL

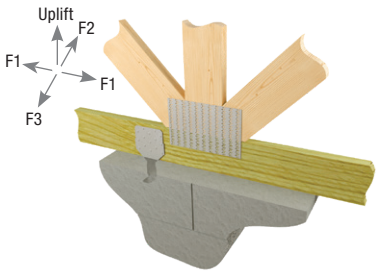
Installation:
- Install the required fasteners according to the table.
- Embed LPTA 4" into concrete tie beam or masonry bond beam.
- Anchors should be spaced no closer than 8" center-to-center.
- **Moisture barrier may be required.**



Typical LPTA perpendicular installation



LPTA



Typical LPTA parallel installation (view from inside of building)

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Load Direction to Wall Installation	Fastener Schedule[5] Per Anchor		DF/SP Allowable Loads (Lbs.)[1,2]					S-P-F Allowable Loads (Lbs.)[1,2]					Code Ref.
			W	H		Min Qty[3,4]	Type	Uplift 160%	F1 160%	F2 160%	F3 160%	F4 160%	Uplift 160%	F1 160%	F2 160%	F3 160%	F4 160%	
LPTA	LTA2	18	5	8-1/4	Perpendicular	10	10d x 1-1/2	1510	345	745	--	335	1510	345	745	--	280	FL
					Parallel			1470	750	335	1085	--	1470	750	280	975	--	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Connector shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar or reinforced concrete (f'_c = 2,500 psi at 28 days).
3) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.
4) The five nail holes nearest the embedment line must be filled to achieve the lateral loads listed in the table.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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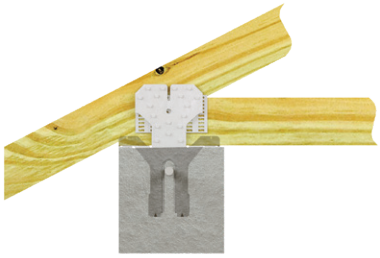
HLPTA Embedded Truss Anchor

The HLPTA75 is designed and tested to provide higher lateral capacity and uplift. Offers greater pullout resistance and is compatible with bond beam reinforcing.

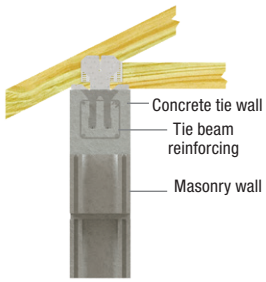
Materials: 18 gauge
Finish: G90 galvanizing
Codes: See table for code references
Patent: U.S. Patent No. 7,254,919

Installation:

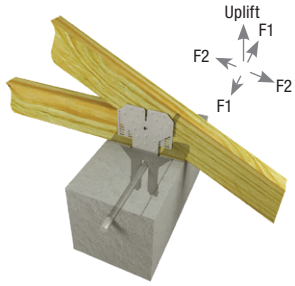
- Install the required fasteners according to the table.
- Embed in concrete tie beam or masonry bond beam until the seat is resting on the surface.
- Minimum of one #7 rebar or two #5 rebars through the shear cone is required.
- Minimum spacing between anchors is 10" to achieve full design load capacities on single anchors.
- Designer shall verify connector clearance when using in conjunction with stirrups and two rebar applications.
- Verify grout is not in contact with truss member. **Moisture barrier may be required.**



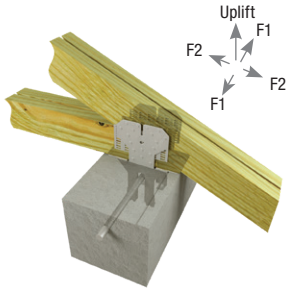
Typical HLPTA75 single rebar installation



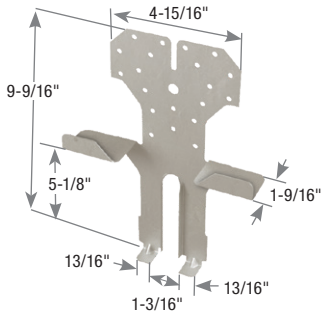
Typical HLPTA75 double rebar installation



Typical HLPTA75 single anchor installation



Typical HLPTA75 double anchor installation



HLPTA75

MiTek Stock No.	Ref. No.	Steel Gauge	Installation Type	Fastener Schedule[3]				DF/SP Allowable Loads (Lbs.)[1]			S-P-F Allowable Loads (Lbs.)[1]			Code Ref.
				Seat Plate		Truss/Rafter								
				Qty	Type	Qty	Type	Uplift 160%	F1 160%	F2 160%	Uplift 160%	F1 160%	F2 160%	
HLPTA75	--	18	Single Anchor	2	10d x 1-1/2	20	10d x 1-1/2	2125	1860	1715	2125	1860	1160	FL
			Double Anchor	--	--	40	10d x 1-1/2	3500	2040	2100	3500	2040	2100	--

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) Connector shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar or reinforced concrete (f'c = 2,500 psi at 28 days).
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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HTA – 16 or 18 gauge

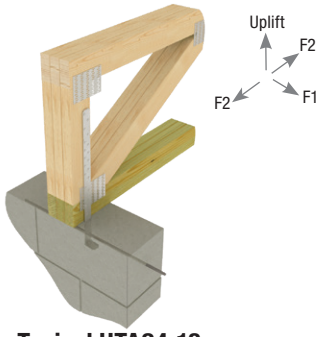
HTAR – 16 or 18 gauge with attached moisture barrier

HHTA – 14 gauge

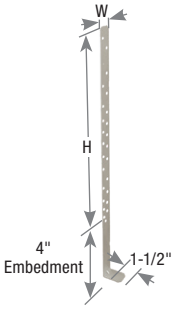
Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options on page 247
Codes: FL

Installation:

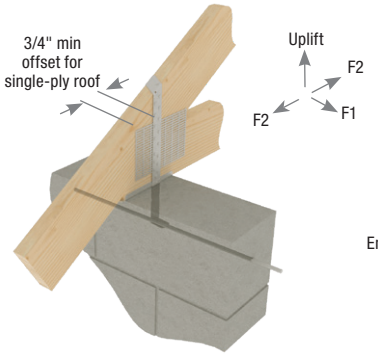
- Install the required fasteners according to the table.
- Embed 4" into concrete tie beam or masonry bond beam.
- **For double anchor installations:** anchors should be installed on opposite sides of wood member and offset a minimum 3/4" from each other in bond beam or concrete tie beam.
- Designer may specify alternative nailing schedules. Refer to Nail Specification table on page 26 for nail shear values, load values shall not exceed published allowable loads.
- When using alternative nailing schedules, lower-most holes in strap shall be filled progressing upward towards the top of the strap.
- Straps may be installed straight or wrapped over to achieve table loads.
- Moisture barrier will be required in HTA / HHTA unless another moisture remediation method is used.



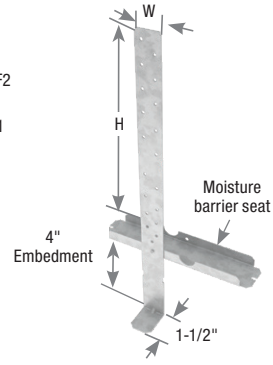
Typical HTA24-18 single anchor installation



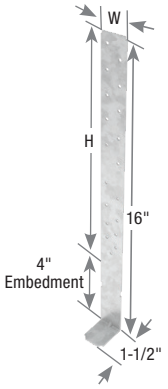
HTA24-18



Typical HTA16R double anchor installation



HTA16R



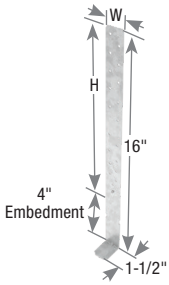
HHTA16

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule		Installation Type[8]	SP Allowable Loads (Lbs.)[1,2,3,4,5]						Code Ref.
					Per Anchor			Uplift 160%				Lateral Loads Masonry/Concrete (1 or 2 Ply)		
								Masonry		Concrete				
			W	H[7] (Out of Concrete)	Min Qty.[6]	Type[9]		1 Ply	2 Ply	1 Ply	2 Ply	F1 160%	F2 160%	
HTA12	HETA12	16	1-1/4	8	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	270	710	FL
							Double Anchor	2430	2430	2430	2430	1215	1310	
HTA12R	HETA12-TSS2	16	1-1/4	8	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	270	710	
							Double Anchor	2430	2430	2430	2430	1215	1310	
HTA12-2R	HETA12-TSS2-2	16	1-1/4	8	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	270	710	
							Double Anchor	2430	2430	2430	2430	1215	1310	

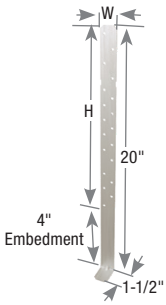
1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on anchorage to masonry/uncracked concrete.
3) DF Allowable Loads are identical to all SP Allowable Loads listed in the table with the exception of the HTA single anchor installation type uplift allowable load which is limited to 1730 lbs. in both masonry and concrete.
4) Minimum specified masonry or concrete compressive strength, f'm is 1,500 psi and f'c is 2,500 psi at 28 days respectively.
5) Testing conducted and design values based on unreinforced masonry. Rebar in wall specified by others.
6) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.
7) Height (H) is the distance the anchor extends out of concrete or masonry.
8) Double anchor installation is permitted on 1-ply roof members when anchors are offset from each other a minimum of 3/4". Do not install anchors directly back-to-back or nails will interfere with each other.
9) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Continued on next page

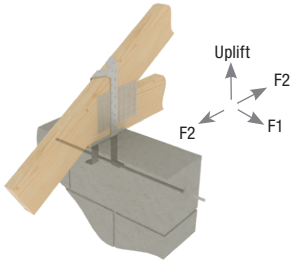
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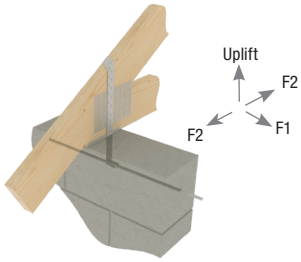
HHTA16



HHTA20



Double HHTA20 roof-truss installation



Single HHTA20 roof-truss installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H[7] (Out of Concrete)	Fastener Schedule Per Anchor Min Qty.[6]	Fastener Schedule Per Anchor Type[9,10]	Installation Type[8]	SP Allowable Loads (Lbs.)[1,2,3,4,5] Uplift 160% Masonry 1 Ply	Masonry 2 Ply	Concrete 1 Ply	Concrete 2 Ply	Lateral Loads Masonry/Concrete (1 or 2 Ply) F1 160%	F2 160%	Corrosion Finish	Code Ref.
HTA16-18	META12, META16	18	1-1/4	12	9	10d x 1-1/2	Single Anchor	1625	1625	1625	1625	250	570		
							Double Anchor	2430	2430	2430	2430	1085	1140		
HTA16-18R	META16-TSS2						Single Anchor	1625	1625	1625	1625	250	570		
							Double Anchor	2430	2430	2430	2430	1085	1140		
HTA16	HETA16	16	1-1/4	12	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA16R	HETA16-TSS2						Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA16-2R	HETA16-TSS2-2						Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HHTA16	HHETA16	14	1-1/4	12	11	10d x 1-1/2	Single Anchor	2375	2375	2375	2375	270	710		
							Double Anchor	2650	2650	2650	2770	1215	1310		
HTA20-18	META18, META20	18	1-1/4	16	9	10d x 1-1/2	Single Anchor	1625	1625	1625	1625	250	570		
							Double Anchor	2430	2430	2430	2430	1085	1140		
HTA20-18R	META20-TSS2						Single Anchor	1625	1625	1625	1625	250	570		
							Double Anchor	2430	2430	2430	2430	1085	1140		
HTA20	HETA20	16	1-1/4	16	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA20R	HETA20-TSS2						Single Anchor	1870	1870	1870	1870	270	710		FL
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA20-2R	HETA20-TSS2-2						Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HHTA20	HHETA20	14	1-1/4	16	11	10d x 1-1/2	Single Anchor	2375	2375	2375	2375	270	710		
							Double Anchor	2650	2650	2650	2650	1215	1310		
HTA24-18	META22, META24	18	1-1/4	20	9	10d x 1-1/2	Single Anchor	1625	1625	1625	1625	250	570		
							Double Anchor	2430	2430	2430	2430	1085	1140		
HTA24-18R	META24-TSS2						Single Anchor	1625	1625	1625	1625	250	570		
							Double Anchor	2430	2430	2430	2430	1085	1140		
HTA24	HETA24	16	1-1/4	20	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA24R	HETA24-TSS2						Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA24-2R	HETA24-TSS2-2						Single Anchor	1870	1870	1870	1870	270	710		
							Double Anchor	2430	2430	2430	2430	1215	1310		
HTA48R	--	16	1-1/4	42-1/2	9	10d x 1-1/2	Single Anchor	1870	1870	1870	1870	240	470		
							Double Anchor	2430	2430	2430	2430	955	940		
HTA48-2R	HETA40-TSS2-2					10d x 1-1/2	Single Anchor	1870	1870	1870	1870	240	470		
							Double Anchor	2430	2430	2430	2430	955	940		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on anchorage to masonry/uncracked concrete.
3) DF Allowable Loads are identical to all SP Allowable Loads listed in the table with the exception of the HTA single anchor installation type uplift allowable load which is limited to 1730 lbs. in both masonry and concrete.
4) Minimum specified masonry or concrete compressive strength, f'm is 1,500 psi and f'c is 2,500 psi at 28 days respectively.
5) Testing conducted and design values based on unreinforced masonry. Rebar in wall specified by others.
6) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.
7) Height (H) is the distance the anchor extends out of concrete or masonry.
8) Double anchor installation is permitted on 1-ply roof members when anchors are offset from each other a minimum of 3/4". Do not install anchors directly back-to-back or nails will interfere with each other.
9) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

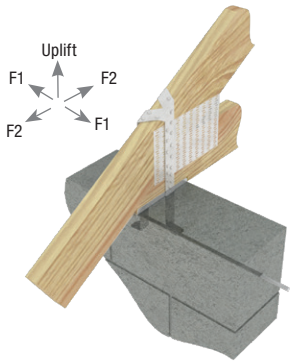
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DHTA Embedded Truss Anchors

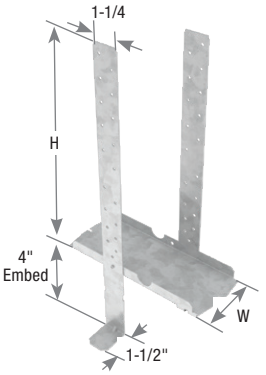
The DHTA embedded truss anchor series offer high uplift capacity with a two-strap design. The straps are attached to MiTek's NOP style plate which ensures proper placement of straps while also providing a moisture barrier between the top of the wall and the truss.

Materials: DHTAxx-18 – 18 gauge; DHTAxx – 16 gauge
Finish: G90 galvanizing
Codes: FL

Installation:
- Install the required fasteners according to the table.
- Embed 4" into concrete tie beam or masonry bond beam.
- Designer may specify alternative nailing schedules. Refer to Nail Specification table on page 26 for nail shear values, load values shall not exceed published allowable loads.
- When using alternative nailing schedules, lower-most holes in strap shall be filled progressing upward towards the top of the strap.
- Straps may be installed straight or wrapped over to achieve table loads.
- Moisture barrier plate may be under bent during shipping causing attached straps to be misaligned. Install straps vertically at 90° from the horizontal top surface of the wall.



Typical DHTA 1-Ply installation



DHTA



DHTA 1-Ply plan view
(DHTA 2-Ply application similar)

MiTek Stock No.	Ref. No.	Steel Gauge	Dimension (in) W	Dimension (in) H[8] (Out of Concrete)	Fastener Schedule Per Anchor Min Qty.[6]	Fastener Schedule Per Anchor Type[9]	No. of Plies	SP Allowable Loads (Lbs.)[1,2,3,4] Uplift 160% Masonry	Uplift 160% Concrete	Lateral Loads[5] F1 160%	Lateral Loads[5] F2 160%	Code Ref.
DHTA16-18	--	18	1-3/4	12	8	10d x 1-1/2	1 Ply	2430	2430	1085	1140	FL
DHTA16-18-2	--	18	3-5/16	12	8	10d x 1-1/2	2 Ply	2430	2770	1085	1140	
DHTA20-18	--	18	1-3/4	16	8	10d x 1-1/2	1 Ply	2430	2430	1085	1140	
DHTA20-18-2	--	18	3-5/16	16	8	10d x 1-1/2	2 Ply	2430	2770	1085	1140	
DHTA24-18	--	18	1-3/4	20	8	10d x 1-1/2	1 Ply	2430	2430	1085	1140	
DHTA24-18-2	--	18	3-5/16	20	8	10d x 1-1/2	2 Ply	2430	2770	1085	1140	
DHTA12	--	16	1-3/4	8	8	10d x 1-1/2	1 Ply	2430	2430	1215	1310	
DHTA12-2	--	16	3-5/16	8	8	10d x 1-1/2	2 Ply	2430	2770	1215	1310	
DHTA16	--	16	1-3/4	12	8	10d x 1-1/2	1 Ply	2430	2430	1215	1310	
DHTA16-2	--	16	3-5/16	12	8	10d x 1-1/2	2 Ply	2430	2770	1215	1310	
DHTA20	DETAL20	16	1-3/4	16	8	10d x 1-1/2	1 Ply	2430	2430	1215	1310	
DHTA20-2	--	16	3-5/16	16	8	10d x 1-1/2	2 Ply	2430	2770	1215	1310	
DHTA24	--	16	1-3/4	20	8	10d x 1-1/2	1 Ply	2430	2430	1215	1310	
DHTA24-2	--	16	3-5/16	20	8	10d x 1-1/2	2 Ply	2430	2770	1215	1310	
DHTA48	--	16	1-3/4	43	8	10d x 1-1/2	1 Ply	2430	2430	955	940	
DHTA48-2	--	16	3-5/16	43	8	10d x 1-1/2	2 Ply	2430	2430	955	940	

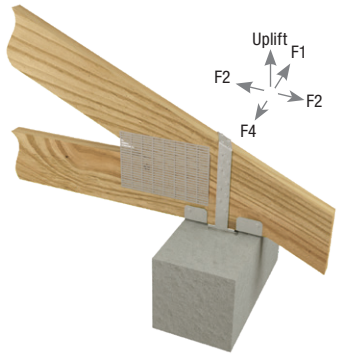
1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on anchorage to masonry/uncracked concrete.
3) DF lumber may be substituted for SP with no load reduction.
4) Minimum specified masonry or concrete compressive strength, f'm is 1,500 psi and f'c is 2,500 psi at 28 days respectively.
5) The five nail holes nearest the embedment line must be filled to achieve the lateral loads listed in the table.
6) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.
7) Install (8) nails into each anchor for the DHTA installation.
8) Height (H) is the distance the anchor extends out of concrete or masonry.
9) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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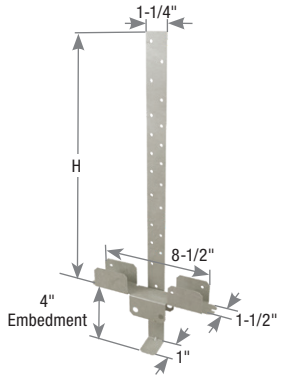
The DTC series attaches trusses to concrete or masonry walls. Innovative seat design gives added lateral resistance while still providing a moisture barrier.

Materials: 16 gauge
Finish: G90 galvanizing
Codes: FL

Installation:
- Install the required fasteners according to the table.
- Embed 4" into concrete tie beam or masonry bond beam.
- Installations should be spaced no closer together than 8" center-to-center.
- Straps may be installed straight or wrapped over to achieve table loads.
- Designer may specify alternative nailing schedules. Refer to Nail Specification table on page 26 for nail shear values, load values shall not exceed published allowable loads.



Typical DTC installation



DTC

MiTek Stock No.	Ref. No.	Steel Gauge	H [4] (in) (Out of Concrete)	Fastener Schedule[5]				DF/SP Allowable Loads (Lbs.)[1,2,3]				S-P-F Allowable Loads (Lbs.)[1,2,3]				Code Ref.
				Seat Plate		Truss/Rafter			Toward Strap	Away from Strap			Toward Strap	Away from Strap		
				Qty	Type	Qty	Type	Uplift 160%	F1 160%	F4 160%	F2 160%	Uplift 160%	F1 160%	F4 160%	F2 160%	
DTC	HETAL12, HETAL16, HETAL20	16	16	4	10d x 1-1/2	9	10d x 1-1/2	1825	840	1200	1290	1440	840	1200	1290	FL

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) Connector shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar or reinforced concrete (f'c = 2,500 psi at 28 days).
3) Allowable loads require a No. 5 rebar through the shear cone of the anchor.
4) Height (H) is the distance the anchor extends out of concrete or masonry.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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TA / TAR Embedded Truss Anchors

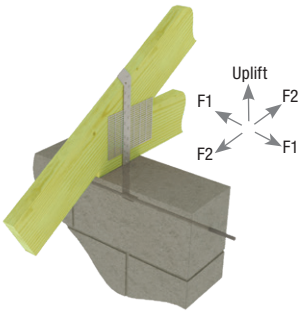
TA – Anchors are rated for both uplift and lateral loads. They can be installed straight or field-bent around truss or rafter members. An embossed embedment line assures accurate embedment depth.

TAR – Riveted anchors provide a moisture barrier in addition to uplift and lateral resistance all in one product.

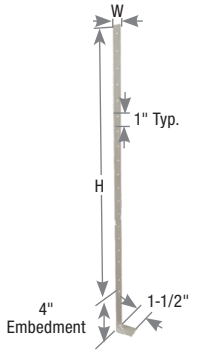
Materials: 14 gauge
Finish: G90 galvanizing

Installation:

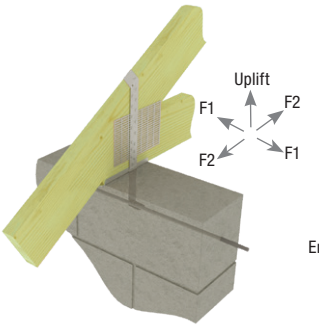
- Install the required fasteners according to the table.
- Embed 4" into concrete tie beam or masonry bond beam.
- **For double anchor installations:** anchors should be installed on opposite sides of wood member and offset a minimum 3/4" from each other in bond beam or concrete tie beam. See increased design values in table below.
- Designer may specify alternative nailing schedules. Refer to Nail Specification table on page 26 for nail shear values, load values shall not exceed published allowable loads.
- When using alternative nailing schedules, lower-most holes in strap shall be filled progressing upward towards the top of the strap.
- Straps may be installed straight or wrapped over to achieve table loads.
- Moisture barrier will be required in installations unless another moisture remediation method is used.



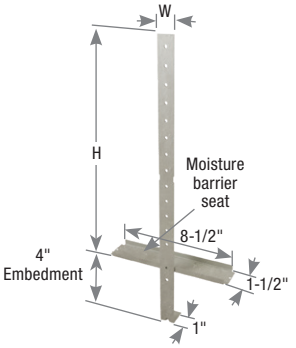
Typical TA18 installation



TA18



Typical TA16R installation



TA20R

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H [7] (Out of Concrete)	Fastener Schedule Per Anchor Min Qty.[6]	Fastener Schedule Per Anchor Type[10]	SP Allowable Loads (Lbs.)[1,2,3,4,5] Single Anchor Uplift 160% [9]	Single Anchor F1 160%	Single Anchor F2 160%	Double Anchor[8] Uplift 160% [10]	Double Anchor[8] F1 160%	Double Anchor[8] F2 160%	Code Ref.
TA12	--	14	1	6-3/4	5	10d x 1-1/2	990	245	335	1980	490	670	
TA14	--	14	1	8-3/4	7	10d x 1-1/2	1205	245	335	2410	490	670	
TA14R	--	14	1	8-3/4	7	10d x 1-1/2	1205	245	335	2410	490	670	
TA16	--	14	1	10-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA16R	--	14	1	10-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA18	--	14	1	12-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA18R	--	14	1	12-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA20	--	14	1	14-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	--
TA20R	--	14	1	14-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA22	--	14	1	16-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA22R	--	14	1	16-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA24	--	14	1	18-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA24R	--	14	1	18-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	
TA36	--	14	1	30-3/4	8	10d x 1-1/2	1205	245	335	2410	490	670	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are based on anchorage to masonry/uncracked concrete.
3) DF Allowable Loads are identical to all SP Allowable Loads listed in the table.
4) Minimum specified masonry or concrete compressive strength, f'm is 1,500 psi and f'c is 2,500 psi at 28 days respectively.
5) Allowable loads require a No. 4 rebar through the shear cones of the anchors.
6) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.
7) Height (H) is the distance the anchor extends out of concrete or masonry.
8) Double anchor installation is permitted on 1-ply roof members when anchors are offset from each other a minimum of 3/4". Do not install anchors directly back-to-back or nails will interfere with each other.
9) Allowable uplift capacity for TA/TAR models installed with (4) 10d x 1-1/2" nails is 780 lbs per anchor. Lateral loads do not apply.
10) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

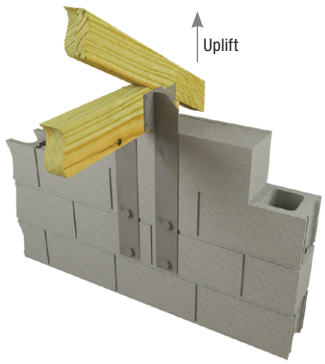
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RFUS Uplift Girder Ties

The RFUS is an engineered solution for attaching trusses to concrete or masonry walls. Screw anchor fastening eliminates mislocated cast-in-place anchor bolts and allows retrofit installations.

Materials: 10 gauge
Finish: Primer
Codes: FL

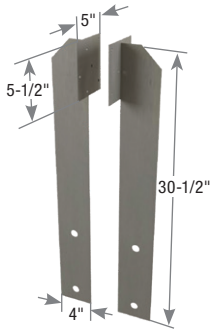
Installation:
- **Always install in pairs.**
- Install the required fasteners according to the table.
- Designer shall be responsible for design of masonry structure, including any required reinforcement.
- MiTek's WS structural wood screws are included with RFUS connector.
- For 1-ply applications, add filler block. Refer to page 286 for wood filler block installation.
- **Moisture barrier may be required.**



Typical RFUS installation

MiTek Stock No.	Ref. No.	Steel Gauge	No. of Plies[6]	Fastener Schedule[5]				DF/SP Allowable Loads (Lbs.)	Code Ref.
				Rafter/Truss		Concrete/Masonry[4]			
				Qty	Type[7]	Qty	Screw Anchor[2,3]	Uplift 160%[1]	
RFUS	FGTR	10	≥ 2 Ply	12	WS3	4	3/4" x 6"	7100	FL

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Use DeWalt 3/4" x 6" Screw-Bolt™+; or equal, installed in accordance with manufacturer's specifications.
3) DeWalt 3/4" x 6" Screw-Bolt™+ are not supplied with RFUS ties.
4) Fasteners shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar or reinforced concrete (f'c = 2,500 psi at 28 days).
5) Fastener shedule is for two straps used together.
6) Truss plies shall be fastened together to act as a single unit.
7) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are supplied with RFUS connector.



RFUS

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UGTS / USC Uplift Girder Ties

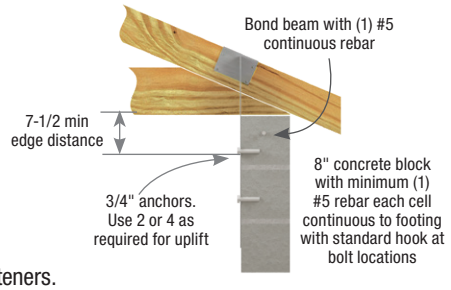
UGTS – 2-screw anchor shorter design when space is limited

USC – 4-screw anchor high load design

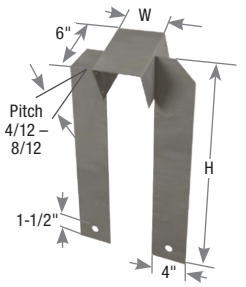
Materials: 10 gauge
Finish: Primer
Codes: FL

Installation:

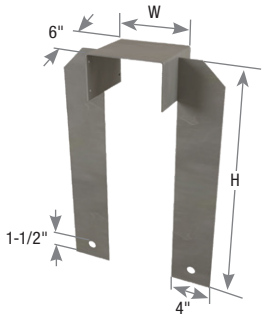
- Install the required fasteners according to the table.
- Place connector over truss or rafter and fasten with specified fasteners.
- Designer shall be responsible for design of masonry structure, including any required reinforcement.
- For 2-ply applications, add filler block. Refer to page 286 for wood filler block installation.
- Works with heel heights up to 14".
- **Moisture barrier may be required.**



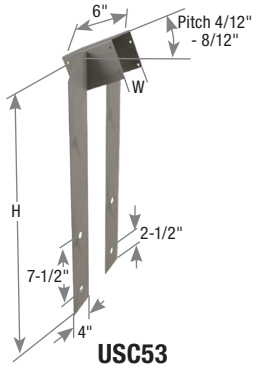
Typical USC53 installation
UGTS Similar



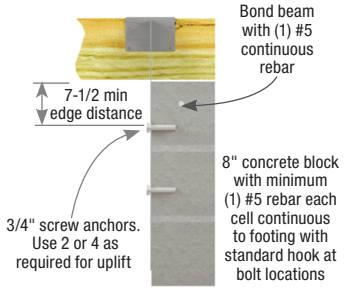
UGTS63



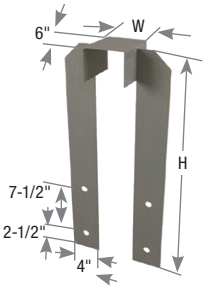
UGTS4F



USC53



Typical USC3F installation
UGTS similar



USC3F

Description	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Fastener Schedule: Rafter/ Truss Qty	Fastener Schedule: Rafter/ Truss Type[5]	Fastener Schedule: Concrete/ Masonry Wall Qty	Fastener Schedule: Concrete/ Masonry Wall Screw Anchor[2,3,4]	DF/SP Allowable Loads (Lbs.) Uplift 160%[1]	Code Ref.
3-Ply Flat	UGTS3F	--	10	4-3/4	23	8	16d	2	3/4" x 6"	7813	FL
	USC3F	--	10	4-3/4	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
4-Ply Flat	UGTS4F	--	10	6-1/2	23	8	16d	2	3/4" x 6"	7813	
	USC4F	--	10	6-1/2	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
4/12 pitch	UGTS43	--	10	4-3/4	23	8	16d	2	3/4" x 6"	7813	
	UGTS44	--	10	6-1/2	23	8	16d	2	3/4" x 6"	7813	
	USC43	--	10	4-3/4	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
	USC44	--	10	6-1/2	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
5/12 pitch	UGTS53	--	10	4-3/4	23	8	16d	2	3/4" x 6"	7813	
	UGTS54	--	10	6-1/2	23	8	16d	2	3/4" x 6"	7813	
	USC53	--	10	4-3/4	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
	USC54	--	10	6-1/2	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
6/12 pitch	UGTS63	--	10	4-3/4	23	8	16d	2	3/4" x 6"	7813	
	UGTS64	--	10	6-1/2	23	8	16d	2	3/4" x 6"	7813	
	USC63	--	10	4-3/4	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
	USC64	--	10	6-1/2	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
7/12 pitch	UGTS73	--	10	4-3/4	23	8	16d	2	3/4" x 6"	7813	
	UGTS74	--	10	6-1/2	23	8	16d	2	3/4" x 6"	7813	
	USC73	--	10	4-3/4	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
	USC74	--	10	6-1/2	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
8/12 pitch	UGTS83	--	10	4-3/4	23	8	16d	2	3/4" x 6"	7813	
	UGTS84	--	10	6-1/2	23	8	16d	2	3/4" x 6"	7813	
	USC83	--	10	4-3/4	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	
	USC84	--	10	6-1/2	30-1/2	8	16d	2	3/4" x 6"	7813	
								4		10133	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Use DeWalt 3/4" dia. x 6" Screw-Bolt™+; or equal, installed in accordance with manufacturer's specifications.
3) DeWalt 3/4" dia. x 6" Screw-Bolt™+ are not supplied with ties.
4) Fasteners shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar or reinforced concrete (f'c = 2,500 psi at 28 days).
5) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

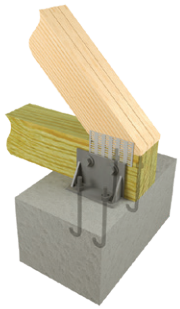
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SHA Masonry Uplift Connectors

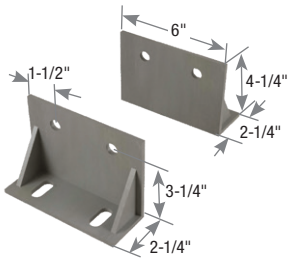
Connects trusses directly to masonry or concrete and features slotted base holes to ease installation.

Materials: Angle – 3 gauge; Gussets – 10 gauge
Finish: Primer

Installation:
- Install the required fasteners according to the table.
- Install flush to top of masonry wall.
- **The SHA series connectors shall be installed in pairs.**
- **Moisture barrier may be required.**



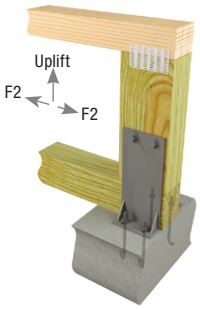
Typical SHA6 installation



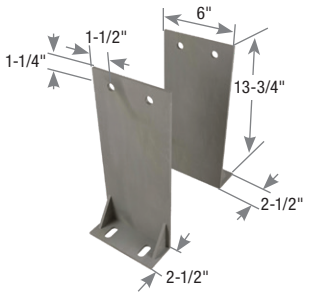
SHA6

MiTek Stock No.	Ref. No.	Fastener Schedule[3]				No. of Plies[6]	DF/SP Allowable Loads (Lbs.)[1,2]		Code Ref.
		Concrete Wall		Rafter/Truss[7]					
		J-Bolts[4,5,8]							
		Qty	Dia (in)	Qty	Bolt Dia (in)		Uplift 160%	F2 160%	
SHA6	--	4	1/2	2	3/4	2-Ply	3745	4005	--
						3-Ply or greater	5615	5565	
SHA6T	--	4	1/2	2	3/4	2-Ply	8370	1590	
						3-Ply or greater		2190	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are for a pair of SHA devices.
3) Fastener schedule is for a pair of SHA devices.
4) 1/2" x 8" J-Bolts or equivalent.
5) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
6) Multiple ply truss shall be fastened together to act as a single unit.
7) Bolts shall conform to ASTM A 307 or better.
8) The designer must specify anchor bolt type, length, and embedment.



Typical SHA6T installation



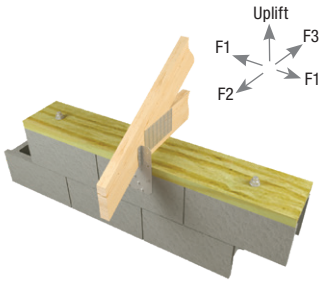
SHA6T

RTM Hurricane Retrofit Connector

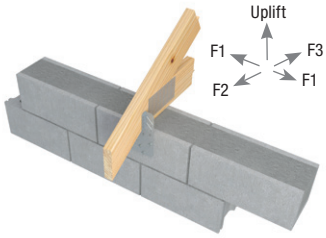
Designed as a retrofit connector for trusses installed to masonry walls with or without a top plate. Can also be used as a holdown for a roof or floor system.

Materials: 18 gauge
Finish: G90 galvanizing
Codes: FL

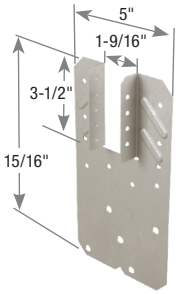
Installation:
- Install the required fasteners according to the table.
- Concrete screws are not supplied with RT16M connector.
- Install concrete screws in lower two holes for Single Top Plate or Conventional Raised Foundation or Modular Home Installations.
- **Moisture barrier may be required.**



Typical RT16M top plate installation



Typical RT16M no plate installation



RT16M

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule						DF/SP Allowable Loads (Lbs.)[1]				S-P-F Allowable Loads (Lbs.)[1]				Code Ref.
			Truss/Rafter[5]		Top Plate[5]		CMU/Concrete[2,3,4]										
			Qty	Type	Qty	Type	Qty	Screws (in)	Uplift 160%	F1 160%	F2 160%	F3 160%	Uplift 160%	F1 160%	F2 160%	F3 160%	
RT16M	HM9KT	18	9	10d x 1-1/2	--	--	4	1/4 x 1-3/4 Tapcon	1395	630	125	490	1225	515	125	490	FL
					4	16d	2		1360	630	125	490	1200	515	85	400	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Install with 1/4" x 1-3/4" Tapcon® Concrete Screws in accordance to manufacturer's installation specifications.
3) Fasteners to be installed to fully grouted and reinforced concrete masonry.
4) Concrete compressive strength shall be 2,500 psi or greater at 28 days.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

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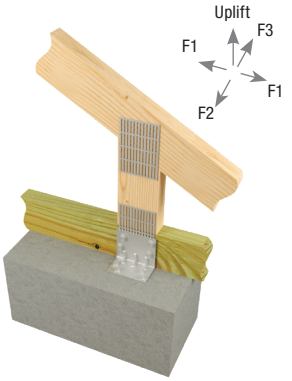
HGAM /HGA Hurricane Gusset Angles

HGAM10KT – Designed for attaching gable end trusses to masonry walls. For installation into grouted concrete tie beam or masonry bond beam. Provides lateral and uplift resistance.

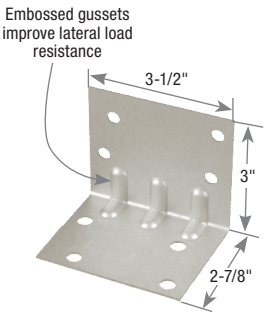
HGA10KT – Designed for attaching gable end trusses to wood top plates. Versatile wood-to-wood connector that satisfies high wind and seismic loading requirements.

Materials: 14 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references

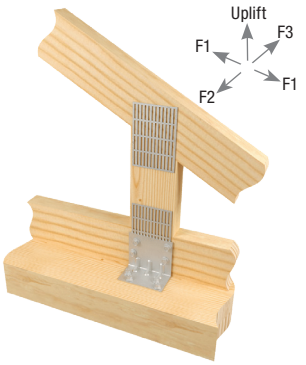
Installation:
- Install the required fasteners according to the table.
- **HGAM10KT:** Install MiTek's WS15 structural wood screws into the truss and drill holes for screw anchors. Install screw anchors into concrete block per manufacturer's recommendation.
- **HGA10KT:** Install MiTek's WS3 structural wood screws into top plate and WS15 structural wood screws into the truss.
- **Moisture barrier may be required.**



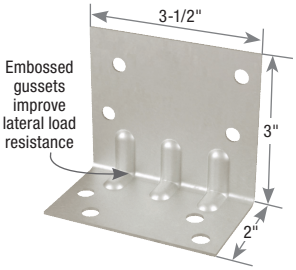
Typical HGAM10 installation



HGAM10



Typical HGA10 installation



HGA10

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2] Rafter/Truss Qty	Rafter/Truss Type	Plate Qty	Plate Screw Anchor[3]	Wall Framing	DF/SP Allowable Loads (Lbs.)[1] Uplift 160%	F1 160%	F2 160%	F3 160%	S-P-F Allowable Loads (Lbs.)[1] Uplift 160%	F1 160%	F2 160%	F3 160%	Corrosion Finish	Code Ref.
Concrete/Masonry Installation																	
HGAM10KT [4]	HGAM10KTA	14	4	WS15	4	1/4" x 1-3/4"	--	980	1075	1080	980	575	630	635	575		FL
Wood-to-Wood Installation																	
HGA10KT [3]	HGA10KT	14	4	WS15	4	WS3	2x4	790	1105	340	835	515	820	250	620		--
							2x6			1065				890			

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS15 structural wood screws are 1/4" dia. x 1-1/2" long and WS3 structural wood screws are 1/4" dia. x 3" long.
3) Use DeWalt 1/4" dia. x 1-3/4" long Screwbolt™+; or equal, installed in predrilled 1/4" hole into minimum 2,000 psi concrete compressive strength in accordance with manufacturer's specification.
4) The HGAM10KT is a kit with (10) HGAM10 angles packaged with MiTek's WS structural wood screws and 1-3/4" screw anchors.
5) The HGA10KT is a kit with (10) HGA10 angles packaged with MiTek's WS structural wood screws.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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The LUGT series is an adaptable tiedown for girder trusses and offers several installation options to accommodate different framing conditions. It is an ideal retrofit solution to reinforce truss connections to transfer high wind loads to supporting walls and can be used on either wood framed, concrete or CMU block walls. Sizes available for 2-ply, 3-ply and 4-ply trusses.

LUGT1 – is designed for wood framed walls

LUGTC2 – is designed for corner hip trusses on wood framed walls

LUGT2, LUGT3 & LUGT4 – are designed for wood frame, concrete or CMU block walls

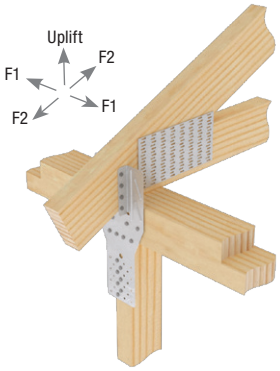
Materials: See table

Finish: G90 galvanizing

Codes: See table for code references

Installation:

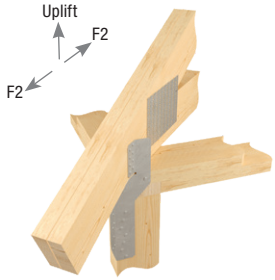
- Install the required fasteners according to the table.
- All large fastener holes must be filled with specified fasteners to achieve loads listed in the table. Smaller fastener holes are for girder-to-stud applications and do not need to be filled when used for concrete/masonry installations.
- MiTek's WS structural wood screws are included with LUGT3 and LUGT4.
- **For concrete and masonry applications, a moisture barrier may be required, check local building code.**



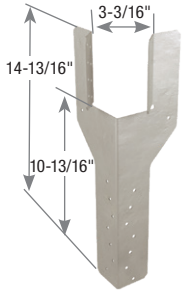
Typical LUGT1 installation



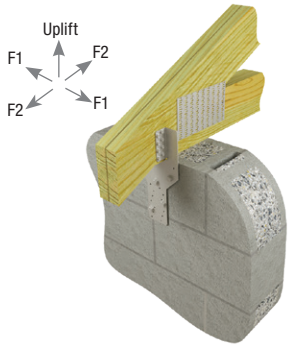
LUGT1



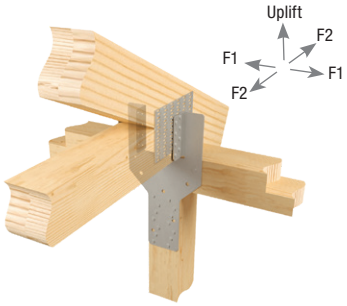
Typical LUGTC2 corner hip installation



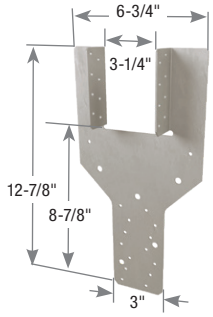
LUGTC2



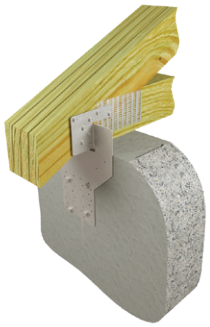
Typical LUGT2 masonry installation



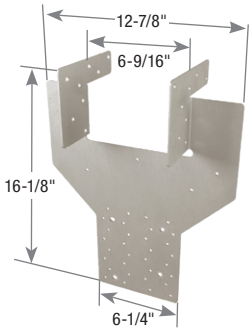
Typical LUGT2 installation



LUGT2



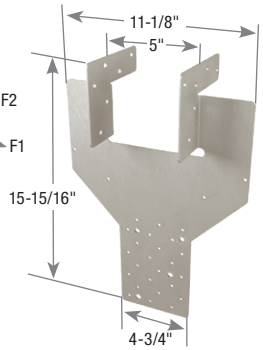
Typical LUGT4 masonry installation
(LUGT3 similar)



LUGT4



Typical LUGT3 installation
(LUGT4 similar)



LUGT3

Continued on next page

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No. of Plies	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2,3,7,8]								DF/SP Allowable Loads (Lbs.)[1]			S-P-F Allowable Loads (Lbs.)[1]			Code Ref.
				Rafter/Truss		Plate		Stud		CMU/Concrete Wall[5]								
				Qty	Type	Qty	Type	Qty	Type	Qty	Screw Anchor[6]	Uplift[4] 160%	F1 160%	F2 160%	Uplift[4] 160%	F1 160%	F2 160%	
Concrete/Masonry Installation																		
2	LUGT2	LGT2	14	16	10d	--	--	--	--	5	1/4" x 3"	1655	1015	475	1460	790	475	--
3	LUGT3	LGT3-SDS2.5	12	12	WS25	--	--	--	--	4	3/8" x 5"	3380	--	--	3380	--	--	
4	LUGT4	LGT4-SDS3	12	16	WS3	--	--	--	--	4	3/8" x 5"	3380	--	--	3380	--	--	
Wood-to-Wood Installation																		
1	LUGT1	H10S	18	8	8d x 1-1/2	8	8d x 1-1/2	7	8d x 1-1/2	--	--	1045	600	175	920	470	175	IBC, FL, LA
2	LUGT2	LGT2	14	16	10d	2	10d	14	10d	--	--	2020	880	495	1780	685	495	
	LUGTC2	--	14	16	10d	2	10d	14	10d	--	--	2020	--	455	1780	--	355	
3	LUGT3	LGT3-SDS2.5	12	12	WS25	4	16d Sinker	24	16d Sinker	--	--	3500	1980	890	3080	1575	665	--
4	LUGT4	LGT4-SDS3	12	16	WS3	5	16d Sinker	32	16d Sinker	--	--	4725	--	--	4160	--	--	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Designer shall be responsible for design of masonry structure, including any required reinforcement.
3) For proper installation, the number of studs must be equal-to or greater-than the number of roof truss plies.
4) The LUGT1 can be installed with the stud offset from the rafter a maximum of 1" (center-to-center) for a reduced allowable uplift load of 955-lb (DF/SP) and 840-lb (S-P-F).
5) Fasteners must be installed in fully grouted and reinforced concrete masonry (f'm = 1,500 psi) or reinforced concrete (f'c = 2,500 psi).
6) Use DeWalt Screw-Bolt™+ 1/4" dia. x 3" or 3/8" dia. x 5" screw anchors; or equal, installed in accordance with manufacturer's specification.
7) MiTek's WS25 structural wood screws are 1/4" dia. x 2-1/2" long (supplied with LUGT3) and WS3 structural wood screws are 1/4" dia. x 3" long (supplied with LUGT4).
8) **NAILS:** 8d x 1-1/2 are 0.131" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d Sinkers are 0.148" dia. x 3-1/4" long,

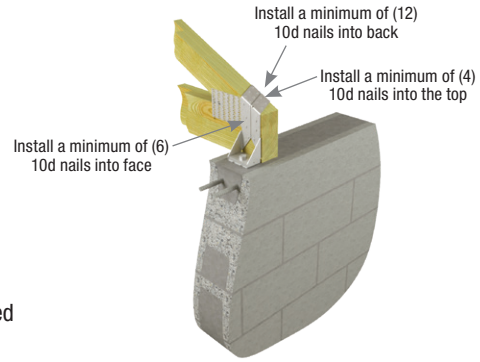
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MUGT15 Girder Tiedown

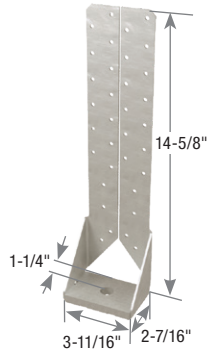
Designed for higher uplift resistance for wood frame and concrete block construction. The MUGT15 can accommodate variable truss bearing depths.

Materials: 12 gauge
Finish: G90 galvanizing, Base Plate 3/8”
Codes: IBC, FL, LA

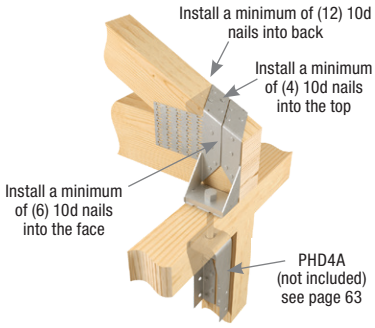
Installation:
- Install the required fasteners according to the table.
- Top-Min mounting condition: When straps are wrapped over the truss, install nails in backside of truss. See MUGT15 installation diagram for minimum nail requirements into the face, backside, and on top of the truss.
- Face-Max mounting condition: If installed straight-up with no wrap over the top of the truss, fill all nail holes.
- **Moisture barrier may be required.**



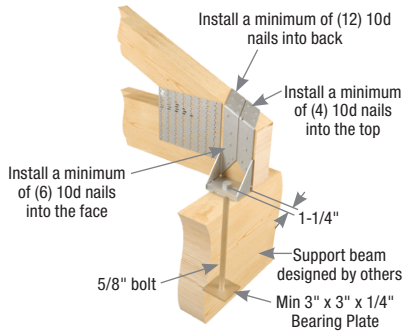
Typical MUGT15 installation



MUGT15



Typical MUGT15 top-min installation with PHD4A



Typical MUGT15 connection to support beam

MiTek Stock No.	Ref. No.	Steel Gauge	Mounting Condition	Fastener Schedule[2]						DF/SP Allowable Loads (Lbs.)[1]	S-P-F Allowable Loads (Lbs.)	Code Ref.
				Anchor Bolt[3]		Rafter/Truss[4]						
						Qty						
				Qty	Dia.	Top	Face	Back	Type	Uplift 160%	Uplift 160%	
Concrete/Masonry Installation												
MUGT15	MGT	12	Face-Max	1	5/8	--	28	--	10d	4240	3730	IBC, FL, LA
			Top-Min	1	5/8	4	6	12	10d	3945	3160	
Wood-to-Wood Installation												
MUGT15	MGT	12	Face-Max	1	5/8	--	28	--	10d	4240	3730	
			Top-Min	1	5/8	4	6	12	10d	3945	3160	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Epoxy be used to anchor 5/8" threaded rod when installed into an 8" wide reinforced masonry or concrete wall. With 12" minimum embedment, the MUGT15 will achieve loads listed in table. Reinforcement is to be specified by the certified designer.
3) Designer shall be responsible for design of masonry structure, including any required reinforcement.
4) Designer must specify anchor bolt type, length, and embedment.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long.

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The HUGT series can be installed on beams and top chords of trusses with slopes from 0˚ to 34˚.

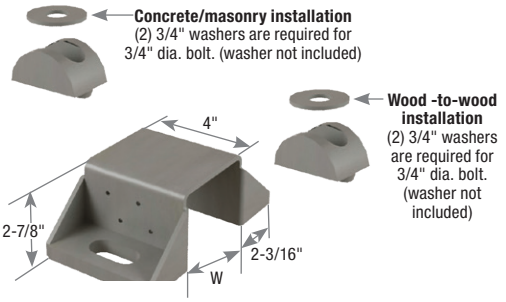
Materials: 7 gauge, Base Plate ½"
Finish: Primer
Codes: FL

Installation:

- Install the required fasteners according to the table.
- Install the HUGT over the beam or truss (see "W" dimension on table for appropriate width).
- Attached members shall be designed to resist applied loads.
- **Moisture barrier may be required.**
- Install (4) LBP58-TZ washers for (2) 5/8" tension rod/ bolts for wood-to-wood installations.



Typical HUGT3 installation



HUGT



Typical HUGT3 installation with HTT45's

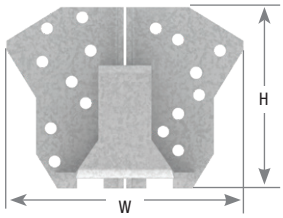
MiTek Stock No.	Ref. No.	Steel Gauge	W (in)	O.C. Dim Between Anchors (in)	Fastener Schedule[3,5]						DF/SP Allowable Loads (Lbs.)[1,2]	S-P-F Allowable Loads (Lbs.)[1,2]	Code Ref.
					Anchor Washers		Threaded Rod		Girder				
					Qty	Type	Qty	Dia (in)	Qty	Type	Uplift 160%	Uplift 160%	
Concrete/Masonry Installation													
HUGT2	HGT-2	7	3-5/16	5-3/4	--	--	2	3/4	8	10d	9575	6925	FL
HUGT3	HGT-3	7	4-15/16	7-3/8	--	--	2	3/4	8	10d	9860	7805	
HUGT4	HGT-4	7	6-7/8	9	--	--	2	3/4	8	10d	9860	7790	
Wood-to-Wood Installation													
HUGT2	HGT-2	7	3-5/16	5-3/4	4	LBP58-TZ	2	5/8	8	10d	9575	6925	--
HUGT3	HGT-3	7	4-15/16	7-3/8	4	LBP58-TZ	2	5/8	8	10d	9860	7805	
HUGT4	HGT-4	7	6-7/8	9	4	LBP58-TZ	2	5/8	8	10d	9860	7790	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Listed loads apply where roof pitch is between 0:12 and 8:12.
3) Designer shall be responsible for design of masonry structure, including any required reinforcement.
4) Designer must specify anchor bolt type, length, and holdown device.
5) **NAILS:** 10d nails are 0.148" dia. x 3" long.

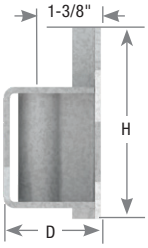
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UGTQ Universal Girder Tiedown

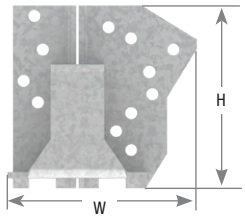
The Universal Girder Tiedown, UGTQ, is a high capacity tiedown designed to resist uplift loads on multi-ply roof trusses. The UGTQ installs with MiTek's WS structural wood screws and is fastened on one side for single connector installations or opposite sides for two connector installations. The UGTQ is available in left and right models for installation near the end of girders.



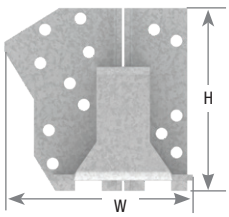
UGTQ



Side View



UGTQL



UGTQR

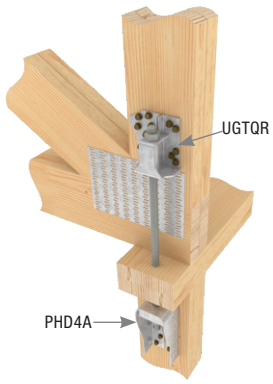
Features and Benefits:

- UGTQs may be installed as a single connector or in pairs
- May be installed elevated from top plate
- Can be installed on trusses and beams with top chord slopes up to 8/12
- May be used with holdown device, bearing plate or embedded/epoxy rod

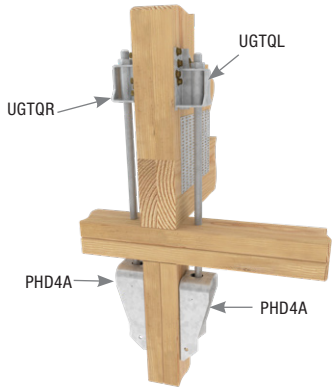
Materials: 10 gauge
Finish: G90 galvanizing
Codes: FL
Patents: U.S. Patent No. 11,821,199

Installation:

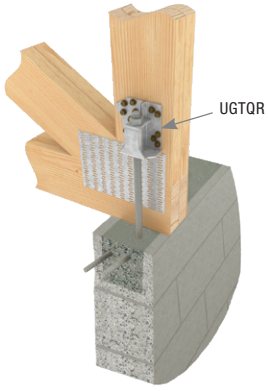
- Use all specified fasteners.
- MiTek's WS3 structural wood screws, 1/4" dia. x 3" long, are supplied with UGTQ tiedowns.
- Left and right connectors shall be installed as shown.
- UGTQL/R shall be installed a minimum 1/2" from the end of the supported member.



Typical UGTQR single installation with PHD4A



Typical UGTQL/R back-to-back installation with PHD4A



Typical UGTQR masonry installation (right shown)

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Installation Type	Min. No. of Plies[4]	Qty of UGTQs	Fastener Schedule				DF/SP Allowable Loads (Lbs)[1,2,5]	Code Ref.
									Connecting Rod		Truss/Rafter[4]			
			W	H	D				Qty	Type	Qty	Type[3]	Uplift 160%	
UGTQ	VGT	10	5-9/16	4-1/4	2-1/8	Single Installation	2	1	1	5/8" Rod	16	WS3	5175	FL
						Back-to-Back		2	2		32		9690	
UGTQL	VGTL	10	4-1/4	4-1/4	2-1/8	Single Installation	2	1	1	5/8" Rod	12	WS3	3070	
UGTQR	VGTR	10	4-1/4	4-1/4	2-1/8	Single Installation	2	1	1	5/8" Rod	13	WS3	3070	
UGTQL/R	VGTL/R	10	4-1/4	4-1/4	2-1/8	UGTQL + UGTQR Back-to-Back	2	2	2	5/8" Rod	25	WS3	7175	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Designer shall be responsible for design of masonry structure, including any required reinforcement.
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with UGTQ connectors.
4) Truss/rafter plies shall be fastened together to act as a single unit.
5) Anchorage into concrete/masonry must be designed by a designer.

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RUSC Retrofit Strap Connector

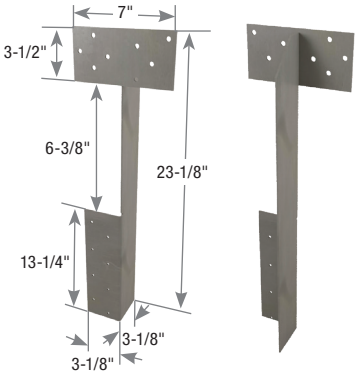
The RUSC Retro Uplift Strap Connector provides a wood-to-wood uplift connection attaching trusses with a minimum 2x4 bottom chord to a stud pack in the wall below. MiTek's WS3 structural wood screws are utilized for fast installation. The connector can be installed after roof sheathing has been installed.

Materials: 10 gauge
Finish: Primer
Codes: FL

Installation:
- Install the required fasteners according to the table.
- **The RUSC shall be installed in pairs.**
- Install on minimum 2-ply with equal wall studs centered directly below.



Typical RUSC installation



RUSC

MiTek Stock No.	Ref. No.	Steel Gauge	No. of Plies[6]	Fastener Schedule[4,5]				DF/SP Allowable Loads (Lbs.)[1]	S-P-F Allowable Loads (Lbs.)[1]	Code Ref.
				Qty	Rafter/ Truss	Qty	Stud	Uplift 160%	Uplift 160%	
RUSC	--	10	2-Ply or greater	16	WS3	16	WS3	6040	5225	FL

1) Allowable loads are for a pair of RUSC devices.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) Designer must specify stud or post to resist published load values.
4) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with RUSC connectors.
5) Fastener schedule is for two straps used together. The RUSC shall be installed in pairs with a minimum 2-ply truss and wall stud attachment.
6) Truss plies shall be fastened together to act as a single unit.

WSTS Truss Structural Wood Screw

The WSTS Truss Structural Wood Screw can be used to resist uplift and lateral loads for truss/rafter-to-plate and stud-to-plate connections.

Features and Benefits:
- Head Diameter 0.330"
- Reverse thread angle on opposite ends of screw creates increased withdrawal where it's needed for higher capacity and greater uplift resistance. The shank is fully threaded along its length for installation flexibility.
- Head design countersinks out of the way of finishing materials.
- Type-17 point engages the wood quickly for easier starting and driving the screw.
- Included 6" T30* Driver Bit and Angle Tool makes proper installations easier.
- WSTS can be installed on the inside eliminating difficult installations on the outside of wall.
- Included driver bit with installation guide holds screw firmly so screw may be installed with one hand.

Materials: 3/16" heat treated carbon steel
Finish: Exterior Coat
Codes: IBC, FL, LA
Patents: U.S. Patent No. 10,823,218 (WSTS screw); U.S. Patent No. 10,639,769 (Angle Tool)



Typical WSTS45-EXT stud to bottom plate installation



Typical WSTS6-EXT truss to top pate installation

*T30 is a trademark of Acument

Continued on next page

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Installation:

WSTS45-EXT Installation:

- Position screw point approximately 2-3/4" from the end of the stud on the narrow or wide face. The screw point should be no closer than 1/2" from the edge. Install the screw at an angle of 22° from vertical using the angle tool.
- Drive the WSTS screw head flush to the wood surface.
- Installation angle is 15° to 25°. Use the angle tool for optimal 22° angle.

WSTS6-EXT Installation:

- The removable angle tool comes attached to the bit. Install bit onto drill.
- **Truss aligned directly over wall stud:** Position screw point where bottom of top plate and top of stud meet. Install screw at 22° angle using the angle tool.
- **Truss between two wall studs:** On the underside of the top plate, position screw in the center of the top plate and truss bottom chord. Install the screw perpendicular through the double top plate to the truss bottom chord. Drive WSTS screw head flush to the wood surface.



WSTS45-EXT

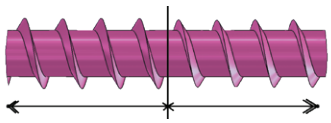


WSTS6-EXT



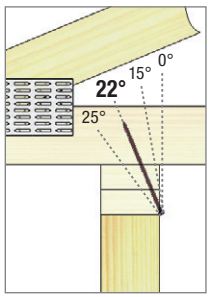
U.S. Patent No. 10,639,769

Angle Tool



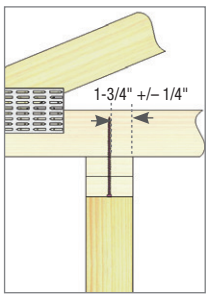
U.S. Patent No. 10,823,218

Both WSTS45 and WSTS6 products feature a reversing asymmetrical thread angle, adding withdrawal capacity



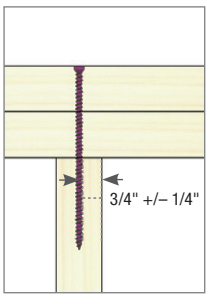
Typical WSTS6 truss aligned directly over wall stud installation

Figure 1A



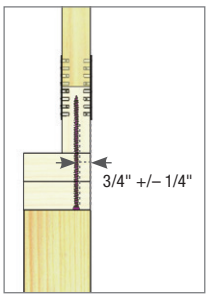
Typical WSTS6 truss between wall studs installation

Figure 1B



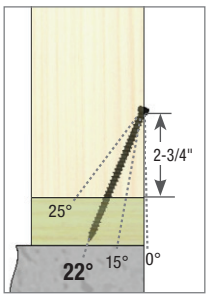
Typical WSTS6 double top plate-to-stud installation

Figure 2



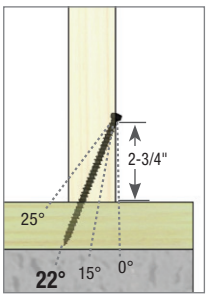
Typical WSTS6 top plate-to-end wall truss installation

Figure 3



Typical WSTS45 stud-to-single bottom plate installation

Figure 4



Typical WSTS45 stud-to-single bottom plate installation

Figure 5

Specification Table

MiTek Stock No.	Ref. No.	Length (in)	Installation Type [4]	DF Allowable Loads (Lbs.) [1,2,3,7]			SP Allowable Loads (Lbs.) [1,2,3,7]			S-P-F Allowable Loads (Lbs.) [1,2,3,7]			Code Ref.
				Uplift [6] 160%	F1 [5] 160%	F2 [5] 160%	Uplift [6] 160%	F1 [5] 160%	F2 [5] 160%	Uplift [6] 160%	F1 [5] 160%	F2 [5] 160%	
WSTS6-EXT	SDWC15600	6	Figure 1A	715	225	443	802	263	496	573	177	355	IBC, FL, LA
			Figure 1B										
			Figure 2	616	--	228	637	--	257	616	--	228	
			Figure 3	847	547	336	876	547	373	662	519	235	
WSTS45-EXT	SDWC15450	4-1/2	Figure 4	372	--	277	493	--	334	296	--	231	
			Figure 5	313	--	251	380	--	266	281	--	161	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Allowable loads are for WSTS screws installed in accordance with installation instructions.
3) When the screw is to be loaded in multiple directions simultaneously, refer to note 1 in Design Notes on pages 20-21.
4) Double top plates should be independently fastened together as required by applicable code.
5) F1 loading is parallel to the top or bottom plate. F2 loading is perpendicular to the top or bottom plate.
6) Designer must ensure that a continuous load path transfers the uplift loads to the foundation.
7) Table loads to do not apply to installations in trusses with end grain bearing.

Packaging Table

Use	Length (in)	Retail Box Offering[1]		Bulk Offering[1]	
		MiTek Stock No.	Box/Ctn Qty	MiTek Stock No.	Box Qty
Stud to Plate	4-1/2	WSTS45-EXTR50	5-pack/50-ea	WSTS45-EXTBP	500-ea
Plate to Truss	6	WSTS6-EXTR50	5-pack/50-ea	WSTS6-EXTBP	500-ea

1) 6" T30* driver bit and angle tool included in packaging.

*T30 is a trademark of Acument

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HC / HCPRS / HHCP / LFTA / RT / TSP Hurricane Ties

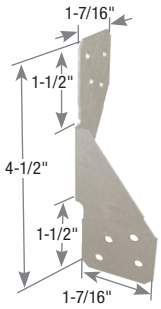
These ties connect trusses and rafters to top plates and may be used to tie wood framing members to resist uplift and lateral forces.

Materials: See table
Finish: G90 galvanizing; HHCP4-TZ – G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: See table for code references

AVAILABLE IN GOLD COAT

Installation:

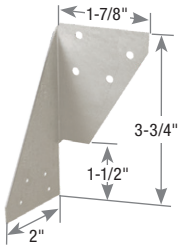
- Install the required fasteners according to the table.
- **TSP Min Nailing** – Fill all round holes.
- **TSP Max Nailing** – Fill all round and diamond holes.
- To achieve full allowable loads listed, fasteners must be installed as prescribed in the table.
- Depending on pitch, birdsmouth notching may be required with some models to enable installers to fill all nail holes.
- Designer shall determine if solid blocking is required.
- LFTA6, RT4, RT5, and RT7 ship in equal quantities of left and right versions. Left version images shown.



RT3A



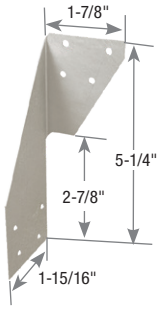
Typical RT3A truss/rafter to plate installation



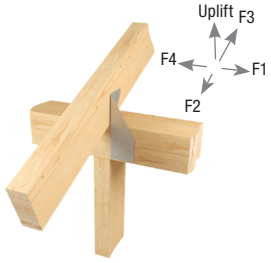
RT4
(left version shown)



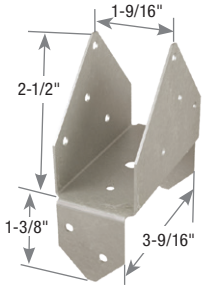
Typical RT4 truss/rafter to plate installation



RT5
(left version shown)



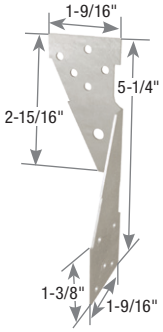
Typical RT5 truss/rafter to double plate installation



RT6



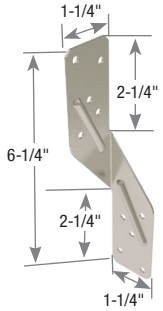
Typical RT6 truss/rafter to plate installation



RT7
(left version shown)



Typical RT7 truss/rafter to double plate installation



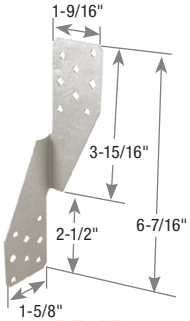
RT7A



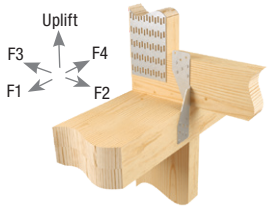
Typical RT7A truss/rafter to double plate installation

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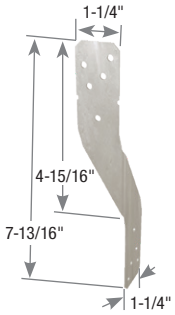
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RT7AT



Typical RT7AT 2x4 bottom chord installation



RT8A



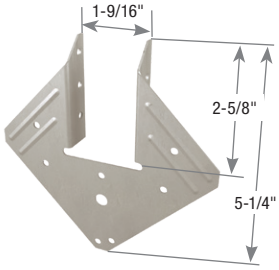
Typical RT8A I-joist to double plate installation



RT10



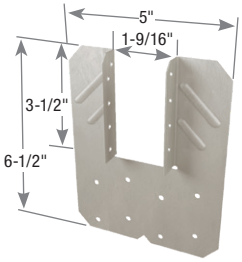
Typical RT10 truss/rafter to double plate to stud installation



RT15



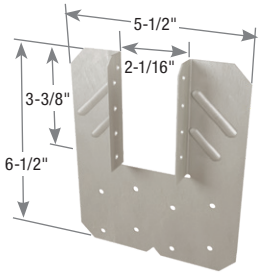
Typical RT15 truss/rafter to double plate installation



RT16A



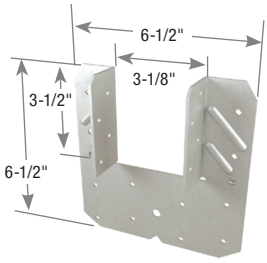
Typical RT16A truss/rafter to double plate installation



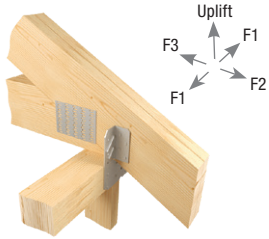
RT16AR



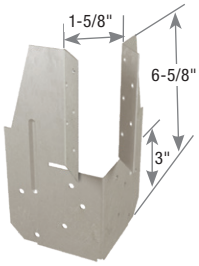
Typical RT16AR truss/rafter to double plate installation



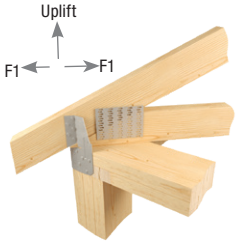
RT16-2



Typical RT16-2 truss/rafter to double plate installation



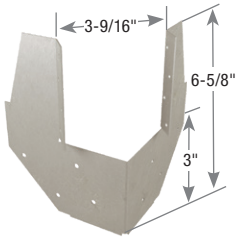
HHCP2



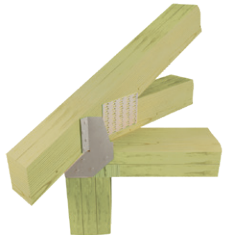
Typical HHCP2 truss/rafter to double plate corner installation

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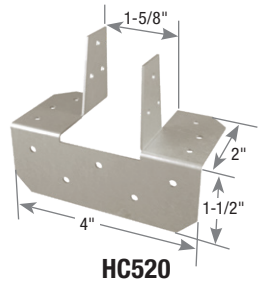
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HHCP4-TZ



Typical HHCP4-TZ truss/rafter to double plate corner installation



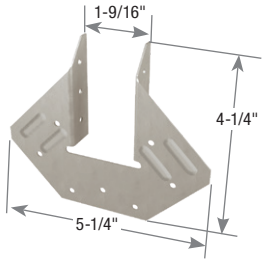
HC520



Typical HC520 stud to plate installation



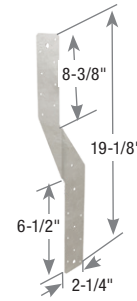
Typical HC520 gable brace installation



HCPRS



Typical HCPRS truss/rafter to plate installation



LFTA6
(left version shown)



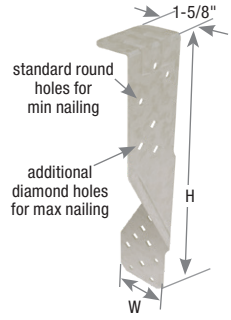
Typical LFTA6 stud to plate installation



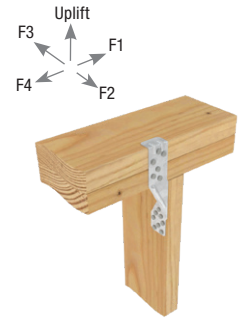
RT20



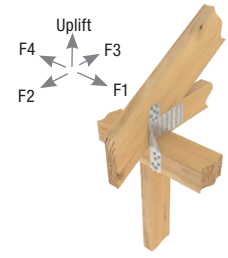
Typical RT20 truss/rafter to double plate to stud installation



TSP

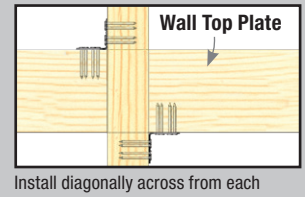


Typical TSP top plate installation
(max nailing)

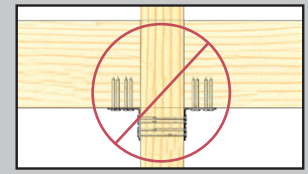


Typical TSP truss/rafter installation
(max nailing)

Anchor installation to achieve twice the load (using two identical anchors)



Install diagonally across from each other for minimum 1-1/2" truss/rafter.



Nailing into both sides of a single-ply 2x truss/rafter may cause damages in wood

Continued on next page

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MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[3,4,6]							DF/SP Allowable Loads (Lbs.)[1]					S-P-F Allowable Loads (Lbs.)[1]					Corrosion Finish	Code Ref.
			Min/ Max	Truss/Rafter		Plate		Stud			Lateral					Lateral						
				Qty	Type	Qty	Type	Qty	Type	Uplift 160%	F1 160%	F2 160%	F3 160%	F4 160%	Uplift 160%	F1 160%	F2 160%	F3 160%	F4 160%		
RT3A	H3	18	--	4	8d x 1-1/2	4	8d	--	--	350	190	65	130	90	310	155	65	130	90		IBC, FL, LA
				4	8d x 1-1/2	4	8d x 1-1/2	--	--	345	190	65	130	90	305	155	65	130	90		
RT4	--	18	--	4	8d x 1-1/2	4	8d	--	--	305	205	140	230	230	270	165	140	190	160		
RT5	--	18	--	4	8d x 1-1/2	4	8d	--	--	380	160	80	280	180	335	160	80	225	180		
RT6	HS24	18	--	8	8d x 1-1/2	6	8d	--	--	605	835	800	--	--	535	670	575	--	--		
RT7	--	18	--	5	8d x 1-1/2	5	8d	--	--	540	270	120	185	140	470	260	120	185	140		
				5	8d x 1-1/2	5	8d x 1-1/2	--	--	515					455						
RT7A	H2.5A	18	--	5	8d x 1-1/2	5	8d	--	--	640	340	215	220	160	565	270	215	220	160		
				5	8d x 1-1/2	5	8d x 1-1/2	--	--	630					510						
RT7AT	H2.5T	18	--	5	8d x 1-1/2	5	8d x 1-1/2	--	--	480	250	150	240	165	425	200	145	240	165		
RT8A	H8	18	--	5	10d x 1-1/2	5	10d x 1-1/2	--	--	750	265	100	225	150	660	265	100	225	150		
RT10	H2A	18	--	6	8d x 1-1/2	8	8d	6	8d	540	270	120	185	140	475	260	120	185	140		
				6	8d x 1-1/2	8	8d x 1-1/2	6	8d x 1-1/2	515	270	120	185	140	460	270	120	185	140		
RT15	H1A	18	--	5	8d x 1-1/2	5	8d	--	--	500	490	220	415	--	440	395	220	415	--		
				5	8d x 1-1/2	5	8d x 1-1/2	--	--	580	490	220	415	--	440	395	220	415	--		
RT16A	H10A, H14	18	--	9	10d x 1-1/2	8	10d	--	--	1025	805	490	455	--	900	660	345	455	--		
				9	8d x 1-1/2	8	8d x 1-1/2	--	--	935	805	490	455	--	820	660	345	455	--		
RT16AR	H10AR	18	--	9	10d x 1-1/2	8	10d	--	--	1025	805	490	455	--	900	660	345	455	--		
RT16-2	H10A-2	18	--	8	8d	8	8d	--	--	1060	780	410	405	--	935	625	330	320	--		
HHCP2	HCP2	18	--	10	10d x 1-1/2	10	10d x 1-1/2	--	--	680	405	--	--	--	595	355	--	--	--		
HHCP4-TZ	HCP4Z	16	--	8	10d	8	10d	--	--	1015	380	--	--	--	885	330	--	--	--		
HC520	GBC	18	--	--	--	11	8d	6	8d	515	470	430	--	--	445	405	370	--	--		--
				--	--	11	8d x 1-1/2	6	8d x 1-1/2	515	470	430	--	--	445	405	370	--	--		
HCPRS	--	18	--	6	8d	5	8d	--	--	490	525	345	570	--	315	350	275	385	--		IBC, FL, LA
LFTA6 [2]	H6	16	--	8	8d	8	8d	--	--	980	745	120	--	--	825	625	100	--	--		
				8	8d x 1-1/2	8	8d x 1-1/2	--	--	980	745	120	--	--	825	625	100	--	--		
RT20	H7	16	--	9	10d x 1-1/2	4	10d	9	10d x 1-1/2	1115	--	--	--	--	980	--	--	--	--		
TSP	TSP	16	Min	3	10d x 1-1/2	3	10d x 1-1/2	--	--	465	--	--	--	--	390	--	--	--	--		
			Max	9	10d x 1-1/2	6	10d x 1-1/2	--	--	830	365	190	210	235	700	305	160	175	200		
				9	10d x 1-1/2	6	10d	--	--	870	365	190	210	235	730	305	160	175	200		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) LFTA6: To achieve F1 lateral loads, three nails must be installed on each side on the strap located closest to the bend line.
Lateral F1 and F2 load directions do not apply to roof truss-to-top plate installations.
3) 8d common nails may be substituted for 8d x 1-1/2 nails, and 10d common nails may be substituted for 10d x 1-1/2 nails.
4) Stainless steel ring shank nails must be used with stainless steel connectors to achieve tabulated allowable loads.
5) Non-identical hurricane ties are not to be combined to resist the uplift force or lateral loads at a single connection location.
6) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long, 8d nails are 0.131" dia. x 2-1/2" long, 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
New products or updated product information are designated in **blue font**.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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PLATED TRUSS



MiTek®

PLATED TRUSS	266-295
Face Mount Hangers	268-271
Strap Hangers	272-278
Skewed Nail Plate	279
Hip/Jack Connectors	280-281
Drag Strut Connectors	281
Girder Hangers	282-285
Alternate Installations	286-287
Spacers/Braces	288-289
Blocking Supports	289
Supplementary Bearing Plates	290
Truss Clips	291-294
Hoist Plates	294
Field Splice Kits	295



MUS / HUS Slant Nail Truss Hangers

The MUS / HUS hanger series offer double shear nailing. MiTek's raised dimple allows for 30° to 45° nailing though the joist into header, resulting in increased load capacity with fewer nails.

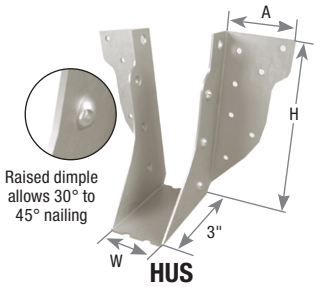
Materials: MUS – 18 gauge; HUS – 16 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

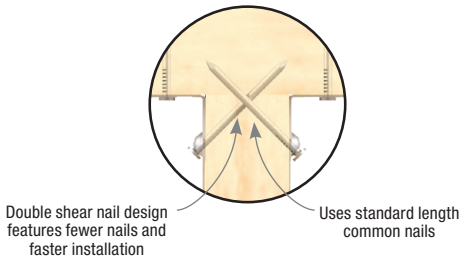
- Install the required fasteners according to the table.
- **Slant/double shear nails must be driven in at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.**
- See HUS EWP applications on page 210.

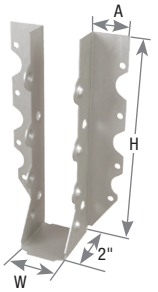


Typical HUS installation
(MUS similar)



HUS





MUS

Joist / Truss Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	A	Fastener Schedule[3] Header Qty	Header Type	Truss[2] Qty	Truss Type	DF/SP Allowable Loads (Lbs.)[3] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	S-P-F Allowable Loads (Lbs.)[3] Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Corrosion Finish	Code Ref.
2 x 6 - 8	MUS26	MUS26	18	1-9/16	5-1/16	1	6	10d	6	10d	1310	1495	1620	865	1235	1415	1530	785		IBC, FL, LA
	HUS26	HUS26	16	1-5/8	5-7/16	2	14	16d	6	16d	2760	3140	3400	2045	2430	2765	2990	1640		
2 x 8 - 10	MUS28	MUS28	18	1-9/16	7-1/16	1	8	10d	8	10d	1745	1995	2160	1230	1615	1850	2000	1090		
	HUS28	HUS28	16	1-5/8	7-3/16	2	22	16d	8	16d	4170	4745	5125	2990	3670	4035	4130	2410		
2 x 10 - 12	HUS210	HUS210	16	1-5/8	9-3/16	2	30	16d	10	16d	5455	5825	6060	4110	4235	4565	4780	3410		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Nails must be driven at a 30° to 45° angle through joist or truss into header to achieve the table loads.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel · Gold Coat · HDG · Triple Zinc

CLPBF Butterfly Hanger

The butterfly hanger's flared header flange design allows for added nailing. Excellent truss-to-truss hanger for 2x4 purlin or truss bottom chords.

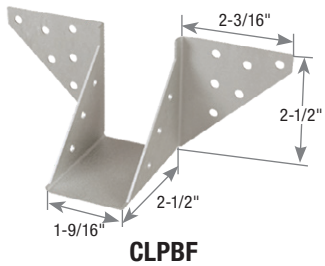
Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.



Typical CLPBF installation



CLPBF

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2] Header Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Code Ref.
2 x 4	CLPBF	--	18	12	10d	6	10d x 1-1/2	1340	1340	1340	195	IBC, FL, LA

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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THD Heavy-Duty Face Mount Truss Hangers

Medium-to-heavy capacity face mount hanger. Some THD models are available with a min/max installation option.

Materials: See table

Finish: G90 galvanizing

Options: See table for Corrosion Finish Options and Specialty Options Table

Codes: IBC, FL, LA

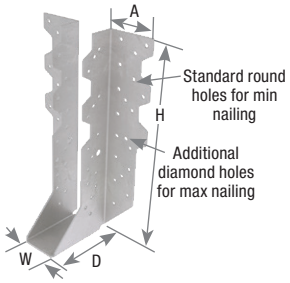
Installation:

- Install the required fasteners according to the table.
- Drive bend line nails into header at 45° to achieve listed loads.
- See EWP applications on pages 211-212
- **Min Nailing** – Fill all round nail holes.
- **Max Nailing** – Fill all round and diamond holes.

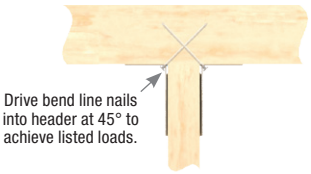
Some model designs may vary from illustration shown



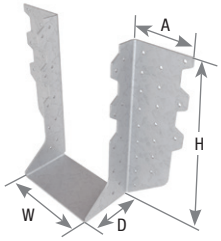
Typical THD28 installation



THD210



Typical bend line nail installation



THD210-3

Joist / Truss Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[2] Min/ Max	Header Qty	Header Type	Truss Qty	Truss Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Uplift[1] 160%	Corrosion Finish	Code Ref.
2 x 6 - 8	THD26	HTU26	16	1-5/8	5-1/16	3	2	Min	18	16d	12	10d x 1-1/2	2645	3000	3240	2265	2325	2640	2850	1875		IBC, FL, LA
								Max	20	16d	20	10d x 1-1/2	2940	3240	3240	2315	2585	2665	2665	1900		
2 x 8 - 10	THD28	HTU28	16	1-5/8	7	3	2	Min	28	16d	16	10d x 1-1/2	4115	4200	4200	2315	3435	3435	3435	1890		
								Max	28	16d	26	10d x 1-1/2	4115	4670	4975	2315	3620	4105	4120	1915		
2 x 10 - 12	THD210	HTU210	16	1-5/8	9	3	2	Min	38	16d	20	10d x 1-1/2	5315	5620	5660	3775	4110	4380	4575	3320		
								Max	38	16d	32	10d x 1-1/2	5585	6145	6145	4035	4915	5120	5120	3365		
(2) 2 x 6 - 8	THD26-2	HHUS26-2, HTU26-2	14	3-7/16	5-3/8	3	2	--	18	16d	12	10d	2770	3125	3355	2340	2440	2750	2950	2060		
(2) 2 x 8 - 10	THD28-2	HHUS28-2, HTU28-2	14	3-7/16	7-1/8	3	2	--	28	16d	16	10d	4310	4860	5005	2595	3795	4035	4035	2090		
(2) 2 x 10 - 12	THD210-2	HHUS210-2, HTU210-2	14	3-7/16	9-1/8	3	2	--	38	16d	20	10d	5850	6600	7045	3905	5145	5705	5705	3270		
(3) 2 x 10 - 12	THD210-3	HHUS210-3	12	5-1/8	9	3	3	--	38	16d	20	10d	6535	7255	7745	4035	5750	6380	6650	3240		
(4) 2 x 10 - 12	THD210-4	HHUS210-4	12	6-3/4	9	3	3	--	38	16d	20	10d	6535	7255	7745	4035	5750	6380	6620	3230		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

Specialty Options Table

– refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Inverted Flange
Range	1˚ to 45˚	1˚ to 45˚	See Sloped Seat and Skewed	THD26 – THD210 N/A THD26-2 – THD210-3 One flange
Allowable Loads	85% of table load.	65% of table load.	65% of table load.	100% of table load. 65% of table load when nailing into the support members end grain.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* to product number. Ex. THD28-2_SK45R_SQ	Add *SL*, slope required, and up *(U)* or down *(D)*, to product number. Ex. THD28-2_SL30D	See Sloped Seat and Skewed. Ex. THD28-2_SK45R_SQ_SL30D	**One flange option:** Add *IF*, and right *(R)* or left *(L)*, to product number. Ex. THD28-2_IFR

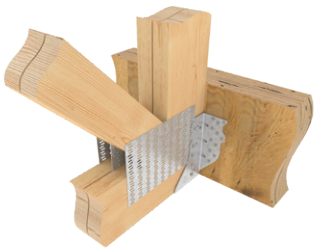
1) Skewed hangers with skews greater than 15° may have all joist nailing on outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) Some square cut hangers will require custom pricing due to welded back plate.

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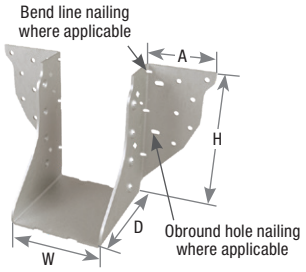
THDH Heavy-Duty Truss Hangers

Materials: 12 gauge
Finish: G90 galvanizing
Options: See Specialty Options Table on page 271
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- **Slant/double shear nails must be driven in at a 30° to 45° angle through the joist or truss into the header to achieve listed loads.**
- See EWP applications pages 210-212.

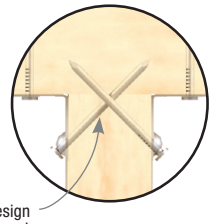


Typical THDH installation

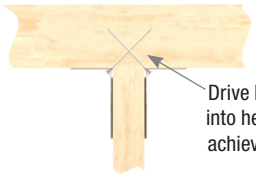


THDH

Some model designs may vary from illustration shown



Typical double shear installation



Typical bend line nail installation

Joist / Truss Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	A	Fastener Schedule[3] Header Qty	Header Type	Truss[2] Qty	Truss Type	DF/SP Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	Roof 115%	Roof 125%	Uplift[1] 160%	Code Ref.
2 x 6 - 8	THDH26	HGUS26	12	1-5/8	5-7/16	5	3-1/2	20	16d	8	16d	4375	4895	5180	2805	3850	4145	4145	2240	
2 x 8 - 10	THDH28	HGUS28	12	1-5/8	7-3/16	5	3-1/2	36	16d	12	16d	7595	8175	8175	4345	6240	6585	6585	3500	
2 x 10 - 12	THDH210	--	12	1-5/8	9-3/16	5	3-1/2	46	16d	16	16d	9310	9710	9710	5290	7255	7770	7870	4285	
(2) 2 x 6 - 8	THDH26-2	HGUS26-2	12	3-1/4	5-1/2	4	2-1/2	22	16d	8	16d	4375	4895	5180	2805	3850	4120	4120	2230	
(2) 2 x 8 - 10	THDH28-2	HGUS28-2	12	3-1/4	7-1/4	4	2-1/2	36	16d	10	16d	7360	8175	8175	3000	6475	6520	6520	2390	
(2) 2 x 10 - 12	THDH210-2	HGUS210-2	12	3-1/4	9-1/4	4	2-1/2	46	16d	12	16d	9020	9020	9020	4345	7835	7835	7835	3475	IBC,
(3) 2 x 6 - 8	THDH26-3	HGUS26-3	12	5-1/8	5-7/16	4	2-1/2	20	16d	8	16d	4375	4895	5180	2805	3850	4105	4105	2220	FL,
(3) 2 x 8 - 10	THDH28-3	HGUS28-3	12	5-1/8	7-3/16	4	2-1/2	36	16d	12	16d	7595	8175	8175	4345	6500	6500	6500	3455	LA
(3) 2 x 10 - 12	THDH210-3	HGUS210-3	12	5-1/8	9-3/16	4	2-1/2	46	16d	16	16d	9710	9710	9710	5290	7750	7750	7750	4225	
(3) 2 x 12 - 14	THDH212-3	HGUS212-3	12	5-1/8	11-3/16	4	2-1/2	56	16d	20	16d	9530	9530	9530	5290	7635	7635	7635	4235	
(3) 2 x 14 - 16	THDH214-3	HGUS214-3	12	5-1/8	13-3/16	4	2-1/2	66	16d	22	16d	11325	11325	11325	5305	9085	9085	9085	4255	
(4) 2 x 6 - 8	THDH26-4	HGUS26-4	12	6-9/16	5-7/16	4	2	20	16d	8	16d	4375	4895	5180	2805	3850	4095	4095	2215	
(4) 2 x 8 - 10	THDH28-4	HGUS28-4	12	6-7/16	7-9/16	4	2-1/2	36	16d	12	16d	7595	8175	8175	4345	6480	6480	6480	3445	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Joist nails need to be toe nailed at a 30° to 45° angle to achieve allowable loads shown.
3) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Specialty Options Table

– refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]
Range	1° to 45°	1° to 45°	See Sloped Seat and Skewed
Allowable Loads	85% of table allowable load. 50% of table uplift load.	85% of table allowable load.	52% of table allowable load. 50% of table uplift load.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* or bevel cut *(BV)* to product number. Ex. THDH28-2_SK45R_BV	Add SL, slope required, and up (U) or down (D), to product number. Ex. THDH28-2_SL30D	See Sloped Seat and Skewed. Ex. THDH28-2_SK45R_BV_SL30D

1) Skewed THDH hangers with skews greater than 15° always have all joist nailing on one side of the outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist nails.
3) Skewed hangers typically require a bevel cut however, a square cut option may be available as a custom when requested.
Inverted flange option is not available for THDH models.

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THDHQ Girder Truss Hangers

The THDHQ hangers are designed to attach multi-ply girder trusses together using MiTek's WS structural wood screws for higher design load capacity.

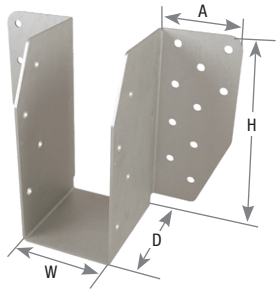
Materials: 12 gauge
Finish: G90 galvanizing
Options: See Specialty Options Table
Codes: IBC, FL, LA

Installation:

- Install the required fasteners according to the table.
- MiTek's WS structural wood screws are supplied with THDHQ hangers.
- See EWP applications on page 211.



Typical THDHQ28-2 truss installation



THDHQ28-2

Joist / Truss Size	MiTek Stock No.	Ref. No.	Dimensions (in)				Fastener Schedule[2,3]				DF/SP Allowable Loads (Lbs.)					S-P-F Allowable Loads (Lbs.)				Code Ref.
							Supporting Member[5]		Supported Member		Floor	Roof		Uplift[1]		Floor	Roof		Uplift[1]	
			W	H	D	A	Qty	Type	Qty[4]	Type	100%	115%	125%	160%		100%	115%	125%	160%	
Double 2x Sizes																				
(2) 2 x 6 - 8	THDHQ26-2	--	3-5/16	5-7/16	4	1-15/16	12	WS3	4	WS3	5015	5745	5745	2055		4405	4560	4560	1630	
(2) 2 x 8 - 10	THDHQ28-2	--	3-5/16	7-3/16	4	2-13/16	20	WS3	8	WS3	8355	9540	9540	3645		7340	7640	7640	2920	
(2) 2 x 10 - 12	THDHQ210-2	--	3-5/16	9-3/16	4	2-13/16	28	WS3	8	WS3	10840	10880	10880	5270		8035	8475	8715	4220	
Triple 2x Sizes																				
(3) 2 x 6 - 8	THDHQ26-3	--	4-15/16	5-7/16	4	1-15/16	12	WS45	4	WS45	5015	5745	5745	2055		4405	4545	4545	1625	IBC, FL, LA
(3) 2 x 8 - 10	THDHQ28-3	--	4-15/16	7-3/16	4	2-13/16	20	WS45	8	WS45	8355	9540	9540	3645		7340	7595	7595	2900	
(3) 2 x 10 - 12	THDHQ210-3	--	4-15/16	9-3/16	4	2-13/16	28	WS45	8	WS45	10880	10880	10880	5270		8665	8665	8665	4195	
Quadruple 2x Sizes																				
(4) 2 x 6 - 8	THDHQ26-4	--	6-9/16	5-7/16	4	1-15/16	12	WS6	4	WS6	5015	5745	5745	2490		4405	4535	4535	1965	
(4) 2 x 8 - 10	THDHQ28-4	--	6-9/16	7-3/16	4	2-13/16	20	WS6	8	WS6	8355	9540	9540	4530		7340	7570	7570	3595	
(4) 2 x 10 - 12	THDHQ210-4	--	6-9/16	9-3/16	4	2-13/16	28	WS6	8	WS6	10880	10880	10880	4200		8635	8635	8635	3335	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 (1/4" dia. x 3" long), WS45 (1/4" dia. x 4-1/2" long), and WS6 (1/4" dia. x 6" long) structural wood screws are included with THDHQ hangers.
3) MiTek's WS structural wood screws may be installed through metal truss connector plates as approved by truss designer per ANSI/TPI 1-2014 Section 7.5.3.4 and 8.9.2. Pre-drilling required through the plate using a maximum of 5/32" bit.
4) MiTek's WS structural wood screws specified for supported member must ALL be installed into the supported member while maintaining a minimum 5/8" edge distance where truss connector plates are not present.
5) When fastening to a multi-ply supporting truss: use MiTek's WS3 for 2-ply, WS45 for 3-ply and WS6 for 4-ply.

Specialty Options Table

– refer to Specialty Options pages 320-322 for additional details.

Option	Skewed[1,3]	Sloped Seat[2]	Sloped / Skewed[1,2,3]	Inverted Flange[4,5]
Range	1˚ to 45˚	1˚ to 45˚	See Sloped Seat and Skewed	One flange option available on all sizes. Two flange option available on widths ≥ 6-9/16"
Allowable Loads	100% of table allowable load. 75% of table uplift load.	100% of table allowable load.	100% of table allowable load. 75% of table uplift load.	100% of table value. May not be installed into the support member's end grain.
Ordering	Add *SK*, angle required, right *(R)* or left *(L)*, and square cut *(SQ)* to product number. Ex. THDHQ28-2_SK45R_BV	Add *SL,* slope required, and up *(U)* or down *(D),* to product number. Ex. THDHQ28-20_SL30D	See Sloped Seat and Skewed. Ex. THDHQ28-2_SK45R_BV_SL30D	One flange option: Add *IF,* and right *(R)* or left *(L),* to product number. Ex. THDHQ28-2_IFR Two flange option: Add *IF,* to product number. Ex. THDHQ26-3_IF

1) Skewed THDHQ hangers with skews greater than 15° always have all joist fasteners on one side of the outside flange.
2) Sloped or sloped / skewed hangers with slopes greater than 15° may have additional joist fasteners.
3) Some square cut hangers will require custom pricing due to welded back plate.
4) The inverted flange option is not available on skewed THDHQ hangers.
5) THDHQ26-3 is available with both flanges inverted.

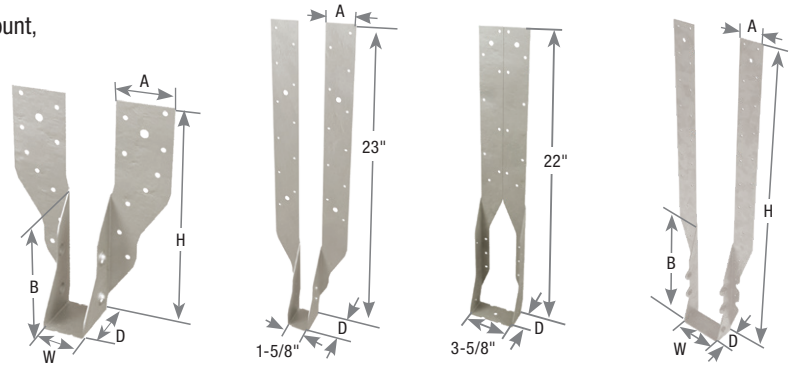
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MSH Adjustable Strap Hangers

The MSH is field adjustable. The flanges can be used in top mount, face mount, or combination installations. An open back design allows installation after a member is placed in position.

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options on pages 273-274 and Nailer Options Table below
Codes: IBC, FL, LA

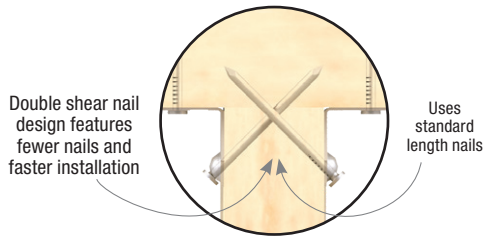
Installation:
- Install the required fasteners according to the table.
- Web stiffeners are required for I-Joist installations.



MSH | MSH222 | MSH422IF | MSH426

Nailer Options
– table represents maximum allowable loads for hangers used on wood nailers. Reference page 199.

MiTek Series	Nailer Size	Fastener Schedule[2] Nailer Top Qty	Nailer Face Qty	Nailer Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.)[1,3] Download 100%	SPF Allowable Loads (Lbs.)[1,3] Download 100%
MSH (18 gauge)	2X	4	--	10d x 1-1/2	4	10d x 1-1/2	1245	1045
	3X	4	--	10d x 1-1/2	4	10d x 1-1/2	1245	1045
	(2) 2X	4	2	10d	4	10d x 1-1/2	1950	1540
	4X	4	2	10d	4	10d x 1-1/2	1950	1540
MSH (16 or 14 gauge)	2X	4	2	10d x 1-1/2	6[4]	10d x 1-1/2	2355	1860
	3X	4	2	10d x 1-1/2	6[4]	10d x 1-1/2	2355	1860
	(2) 2X	4	2	16d x 2-1/2	6	10d x 1-1/2	2080	1745
	4X	4	2	16d x 2-1/2	6	10d x 1-1/2	2080	1745



1) Listed loads shall not be increased.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d x 2-1/2 nails are 0.162" dia. x 2-1/2" long.
3) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
4) Refer to load table on page 274 or 275 for gauge and joist nail quantity of desired MSH hanger.

Mounting Conditions

Face Max

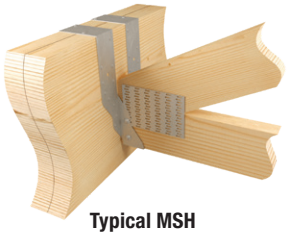
All header nails used should be driven into the wide face of the header.



Typical MSH face-max installation

Top-Max

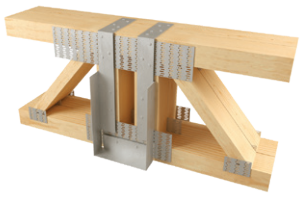
The hanger is installed in a top mount condition with at least six lowest header face nail holes filled, and four top flange nails filled. Refer to **Table 1** below for minimum top flange length requirements.



Typical MSH top-max installation

Top-Min

The hanger is installed in a top mount condition with at least the top two header face nail holes filled, and four top flange nail holes filled. Refer to **Table 1** below for minimum top flange length requirements. The joist nails shall be installed straight into the joist for all models.



Typical MSH top-min installation

Combination Face-Max / Top-Max

Face-Max values apply for the entire connection. Follow fastening directions for the applicable mounting condition for each individual flange strap.



Typical MSH combination installation

Table 1

Minimum Top Flange Length for Top Mount Installations[1]											
7/8"	1-1/8"	1-3/8"	1-1/2"	1-3/4"	1-7/8"	2"	2-3/16"		2-5/8"	2-3/4"	2-13/16"
MSH426	MSH29	MSH2322-2	MSH422-2	MSH426-2	MSH1713	MSH424	MSH222	MSH222-2	MSH218-2	MSH218	MSH213
MSH426IF	--	MSH2622-2	MSH422-2IF	--	--	--	MSH1722	MSH422IF	--	MSH413	--
--	--	--	--	--	--	--	MSH2322	MSH2022	--	MSH418	--
--	--	--	--	--	--	--	MSH322		--	MSH422	--

1) Total hanger height will be reduced by the top flange length. Carried member height must be accounted for accordingly.

Continued on next page

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Plated Truss Table

Joist Material & Width	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)					Mounting Condition	Fastener Schedule[2]					DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
										Header			Joist		Floor	Roof		Uplift[1]	Floor	Roof		Uplift[1]		
				W	D	H	A	B		Top Qty	Face Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%		
2x Lumber or Trusses	MSH29	THA29	18	1-5/8	2-1/4	8-3/4	2-7/16	5	face-max	--	18	10d	4	10d	2550	2640	2640	715	2115	2115	2115	575		IBC, FL, LA
									top-max	4	6	10d	4	10d	2945	2945	2945	715	2200	2315	2355	570		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1855	1890	1890	--		
	MSH213	THA213	18	1-5/8	2-1/4	12-3/4	2-3/8	5	face-max	--	20	10d	4	10d	2640	2640	2640	715	2115	2115	2115	575		
									top-max	4	6	10d	4	10d	2945	2945	2945	715	2200	2315	2355	570		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1855	1890	1890	--		
	MSH218	THA218	18	1-5/8	2-1/4	16-3/4	2-7/16	5	face-max	--	26	10d	4	10d	2640	2640	2640	715	2115	2115	2115	575		
									top-max	4	6	10d	4	10d	2945	2945	2945	715	2200	2315	2355	570		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1855	1890	1890	--		
	MSH222	THAI222	18	1-5/8	1-3/4	23	1-13/16	10-13/16	face-max	--	22	10d	4	10d x 1-1/2	2120	2190	2230	715	1540	1595	1635	575		
									top-max	4	6	10d	4	10d x 1-1/2	2120	2190	2230	715	1540	1595	1635	575		
									top-min	4	2	10d	4	10d x 1-1/2	2120	2190	2230	--	1540	1595	1635	--		
2-1/2" wide Floor Trusses	MSH322	THAI322	18	2-9/16	1-3/4	22-1/2	1-13/16	10-3/8	face-max	--	22	10d	4	10d x 1-1/2	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d x 1-1/2	3240	3240	3240	715	2330	2385	2425	570		
									top-min	4	2	10d	4	10d x 1-1/2	2395	2395	2395	--	1895	1895	1895	--		
(2) 2x Lumber or Trusses	MSH218-2	THA218-2	16	3-1/8	1-3/4	17-3/4	1-13/16	10-1/16	face-max	--	16	10d	4	10d	2000	2245	2420	675	1760	1975	2130	540		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	540		
									top-min	4	2	10d	4	10d	2435	2435	2435	--	2080	2105	2125	--		
	MSH222-2	THA222-2	16	3-1/8	1-3/4	22-1/4	1-13/16	10-1/16	face-max	--	22	10d	4	10d	2750	3085	3330	675	2420	2675	2675	540		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	540		
									top-min	4	2	10d	4	10d	2435	2435	2435	--	2080	2105	2125	--		
3-1/2" wide Floor Trusses	MSH413	THA413	16	3-9/16	1-3/4	14	1-7/8	7-5/8	face-max	--	14	10d	6	10d	2340	2640	2855	1815	2055	2325	2510	1450		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3035	3090	3090	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH418	THA418	16	3-9/16	1-3/4	17-1/2	1-7/8	7-5/8	face-max	--	18	10d	6	10d	2840	3200	3460	1815	2495	2815	3040	1450		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3035	3090	3090	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH422	THA422, THAI422	16	3-9/16	1-3/4	21-1/2	1-7/8	7-5/8	face-max	--	22	10d	6	10d	3340	3765	4065	1815	2935	3310	3320	1450		
									top-max	4	6	10d	6	10d	3525	3705	3830	1815	2665	2825	2935	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2005	2005	2005	--		
	MSH422IF	THAC418, THAC422	16	3-5/8	1-3/4	22	--	9-13/16	face-max	--	22	10d	6	10d	2750	3085	3330	675	2420	2715	2930	540		
									top-max	4	6	10d	6	10d	3485	3575	3640	675	2520	2600	2660	540		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH424	--	16	3-5/8	2	21-1/2	2-1/16	5-3/16	face-max	--	36	10d	6	10d	5090	5725	5975	1815	4150	4310	4420	1445		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3085	3085	3085	1445		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH426	THA426	14	3-5/8	1-3/4	26	1-13/16	8	face-max	--	38	16d	6	16d	5455	5675	5825	1815	4035	4230	4360	1455		
									top-max	4	8	16d	6	16d	3760	3760	3760	1795	3010	3010	3010	1435		
									top-min	4	2	16d	6	16d	2435	2435	2435	--	2160	2160	2160	--		
	MSH426IF	THAC426	14	3-5/8	1-3/4	26	--	8	face-max	--	38	16d	6	16d	5455	5675	5825	1815	4035	4230	4360	1455		
									top-max	4	8	16d	6	16d	3760	3760	3760	1795	3010	3010	3010	1435		
									top-min	4	2	16d	6	16d	2435	2435	2435	--	2160	2160	2160	--		
(2) 3-1/2" wide Floor Trusses	MSH422-2	THA422-2	14	7-1/4	2	22-1/8	2-1/8	11	face-max	--	26	16d	6	16d	4005	4515	4845	1380	3520	3970	4260	1215		
									top-max	4	10	16d	6	16d	4665	4860	4990	1380	3480	3650	3765	1215		
									top-min	4	4	16d	6	16d	3740	3820	3870	--	2665	2735	2780	--		
	MSH422-2IF	THAC422-2	14	7-1/4	2	22-1/8	--	11	face-max	--	26	16d	6	16d	4005	4515	4845	1380	3520	3970	4260	1215		
									top-max	4	10	16d	6	16d	4665	4860	4990	1380	3480	3650	3765	1215		
									top-min	4	4	16d	6	16d	3740	3820	3870	--	2665	2735	2780	--		
	MSH426-2	THA426-2	14	7-1/4	2	26-1/16	2-1/8	11	face-max	--	26	16d	6	16d	4005	4515	4845	1380	3520	3970	4260	1215		
									top-max	4	10	16d	6	16d	4665	4860	4990	1380	3480	3650	3765	1215		
									top-min	4	4	16d	6	16d	3740	3820	3870	--	2665	2735	2780	--		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

Continued on next page

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I-Joist, LVL, LSL & PSL Table

Joist Material & Width	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	D	H	A	B	Mounting Condition	Fastener Schedule[2] Header Top Qty	Header Face Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Uplift[1] 160%	Corrosion Finish	Code Ref.
2x Lumber or Trusses	MSH222	THAI222	18	1-5/8	1-3/4	23	1-13/16	10-13/16	face-max	--	22	10d	4	10d x 1-1/2	2120	2190	2230	715	1540	1595	1635	575		
									top-max	4	6	10d	4	10d x 1-1/2	2120	2190	2230	715	1540	1595	1635	575		
									top-min	4	2	10d	4	10d x 1-1/2	2120	2190	2230	--	1540	1595	1635	--		
1-3/4" LVL or I-Joist	MSH1713	--	18	1-13/16	1-3/4	14-7/16	1-13/16	10-3/4	face-max	--	12	10d	4	10d	1440	1640	1770	715	1265	1445	1555	575		
									top-max	4	6	10d	4	10d	2395	2460	2505	715	1725	1785	1820	575		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1725	1785	1820	--		
	MSH1722	THAI1.81/22	18	1-13/16	1-3/4	22-7/8	1-7/8	10-3/4	face-max	--	22	10d	4	10d x 1-1/2	2280	2280	2280	715	1725	1785	1820	575		
									top-max	4	6	10d	4	10d x 1-1/2	2395	2460	2505	715	1725	1785	1820	575		
									top-min	4	2	10d	4	10d x 1-1/2	2390	2390	2390	--	1725	1785	1820	--		
2" wide I-Joist	MSH2022	THAI2.06/22	18	2-1/16	1-3/4	22-5/8	1-13/16	10-7/16	face-max	--	22	10d	4	10d	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d	2670	2735	2780	715	1910	1970	2005	570		
									top-min	4	2	10d	4	10d	2390	2390	2390	--	1890	1890	1890	--		
2-5/16" wide I-Joist	MSH2322	THAI3522	18	2-3/8	1-3/4	22-5/8	1-13/16	10-7/16	face-max	--	22	10d	4	10d x 1-1/2	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d x 1-1/2	3010	3075	3120	715	2140	2200	2240	570		
									top-min	4	2	10d	4	10d x 1-1/2	2395	2395	2395	--	1895	1895	1895	--		
2-1/2" wide I-Joist	MSH322	THAI322	18	2-9/16	1-3/4	22-1/2	1-13/16	10-3/8	face-max	--	22	10d	4	10d x 1-1/2	2350	2350	2350	715	1875	1875	1875	570		
									top-max	4	6	10d	4	10d x 1-1/2	3240	3240	3240	715	2330	2385	2425	570		
									top-min	4	2	10d	4	10d x 1-1/2	2395	2395	2395	--	1895	1895	1895	--		
3-1/2" wide I-Joist or 2-Ply LVL	MSH413	THA413	16	3-9/16	1-3/4	14	1-7/8	7-5/8	face-max	--	14	10d	6	10d	2340	2640	2855	1815	2055	2325	2510	1450		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3035	3090	3090	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH418	THA418	16	3-9/16	1-3/4	17-1/2	1-7/8	7-5/8	face-max	--	18	10d	6	10d	2840	3200	3460	1815	2495	2815	3040	1450		IBC, FL, LA
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3035	3090	3090	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH422	THA422, THAI422	16	3-9/16	1-3/4	21-1/2	1-7/8	7-5/8	face-max	--	22	10d	6	10d	3340	3765	4065	1815	2935	3310	3320	1450		
									top-max	4	6	10d	6	10d	3525	3705	3830	1815	2665	2825	2935	1450		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2005	2005	2005	--		
	MSH422IF	THAC418, THAC422	16	3-9/16	1-3/4	22	--	9-13/16	face-max	--	22	10d	6	10d	2750	3085	3330	675	2420	2715	2930	540		
									top-max	4	6	10d	6	10d	3485	3575	3640	675	2520	2600	2660	540		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH424	--	16	3-5/8	2	21-1/2	2-1/16	5-3/16	face-max	--	36	10d	6	10d	5090	5725	5975	1815	4150	4310	4420	1445		
									top-max	4	6	10d	6	10d	3875	3875	3875	1815	3085	3085	3085	1445		
									top-min	4	2	10d	6	10d	2530	2530	2530	--	2000	2000	2000	--		
	MSH426	THA426	14	3-5/8	1-3/4	26	1-13/16	8	face-max	--	38	16d	6	16d	5455	5675	5825	1815	4035	4230	4360	1455		
									top-max	4	8	16d	6	16d	3760	3760	3760	1795	3010	3010	3010	1435		
									top-min	4	2	16d	6	16d	2435	2435	2435	--	2160	2160	2160	--		
	MSH426IF	THAC426	14	3-5/8	1-3/4	26	--	8	face-max	--	38	16d	6	16d	5455	5675	5825	1815	4035	4230	4360	1455		
									top-max	4	8	16d	6	16d	3760	3760	3760	1795	3010	3010	3010	1435		
									top-min	4	2	16d	6	16d	2435	2435	2435	--	2160	2160	2160	--		
(2) 2-5/16" wide I-Joist	MSH2322-2	--	16	4-3/4	1-3/4	22	1-7/8	9-1/4	face-max	--	46	10d	4	10d	5560	5620	5665	675	3880	3935	3970	535		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	535		
									top-min	4	2	10d	4	10d	2530	2530	2530	--	2000	2000	2000	--		
(2) 2-1/2" wide I-Joist	MSH2622-2	--	16	5-3/8	1-3/4	22	1-7/8	9-1/4	face-max	--	46	10d	4	10d	5560	5620	5665	675	3880	3935	3970	535		
									top-max	4	6	10d	4	10d	3485	3575	3640	675	2520	2600	2660	535		
									top-min	4	2	10d	4	10d	2530	2530	2530	--	2000	2000	2000	--		

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.

2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

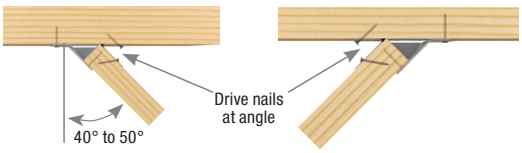
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The MSHL/R is a versatile 45° skewed hanger with multiple installation options. It can be installed on a supporting girder truss as well as solid-sawn and structural composite lumber headers.

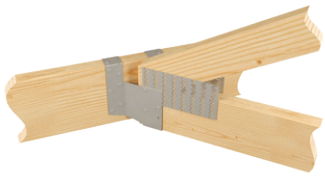
Materials: See table
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

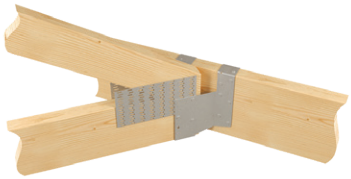
- Install the required fasteners according to the table.
- Install fasteners into the carrying members at the locations described below based on the proper "Mounting Condition."
- Web stiffeners are required for I-Joist installations.
- Hanger is factory skewed at 45° left or right.



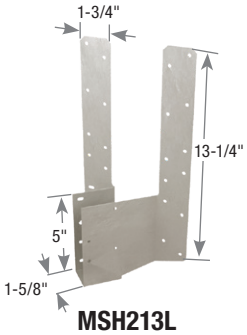
Right skew **Left skew**



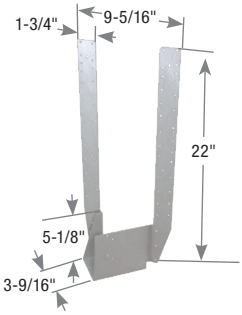
Typical MSH213R installation
Right skew



Typical MSH213L installation
Left skew



MSH213L
Left skew



MSH422L
Left skew



MSH422R
Right skew

Mounting Conditions

Face-Max

For MSH422L/R, the bottom six (6) fastener holes (three on each side of the bucket) must be filled. Install eight additional fasteners (four (4) in each strap) where applicable. For MSH213L/R, the bottom eight (8) fastener holes must be filled (four (4) in each strap). Install fourteen (14) additional fasteners, seven (7) in each strap. Min. 2x6 bottom chord required.



Typical MSHL/R face-max installation

Top-Max

The straps must be field-bent over the header a minimum of 2" to allow four (4) top flange nail holes to be filled (two in each strap). The bottom six (6) fastener holes (three on each side of the bucket) must be filled. Min. 2x6 bottom chord required.



Typical MSHL/R top-max installation

Top-Min

The straps must be field bent over the header a minimum of 2" to allow four (4) top flange nail holes to be filled (two in each strap). Also install the two (2) uppermost face nails (one on each strap) near the top of the header.



Typical MSHL/R top-min installation

Combination Face-Max/Top-Max

Follow the Face-Max installation for one side of the connector and the Top-Max installation for the opposite side of the connector. The Face-Max allowable loads apply to this type of installation. Min. 2x6 bottom chord required.



Typical MSHL/R combination installation

Joist Material & Width	MiTek Stock No.	Ref. No.	Steel Gauge	Mounting Condition	Fastener Schedule[2] Header Top Qty	Header Face Qty	Header Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) Download 100%	Download 115%	Download 125%	Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Download 100%	Download 115%	Download 125%	Uplift[1] 160%	Code Ref.
2x Lumber or Trusses	MSH213L/R	--	18	face-max	--	22	10d	6	10d x 1-1/2	1770	1770	1770	670	1430	1430	1430	540	IBC, FL, LA
				top-max	4	6	10d	6	10d x 1-1/2	1810	1810	1810	670	1460	1460	1460	540	
				top-min	4	2	10d	6	10d x 1-1/2	1325	1325	1325	--	1240	1240	1240	--	
				combination	2	14	10d	6	10d x 1-1/2	1770	1770	1770	670	1430	1430	1430	540	
3-1/2" LVL or Floor Trusses	MSH422L/R	THAL/R422	16	face-max	--	14	10d	6	10d	1750	1755	1755	560	1395	1395	1395	445	
				top-max	4	6	10d	6	10d	1820	1820	1820	560	1490	1490	1490	445	
				top-min	4	2	10d	6	10d	1385	1385	1385	--	1100	1100	1100	--	
				combination	2	10	10d	6	10d	1750	1755	1755	560	1395	1395	1395	445	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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MSSHL/R Severely Skewed Hangers

MiTek's MSSH217 hanger accommodates a skew range of 60° to 85° (30° maximum off the girder) without the need for a more expensive custom design hanger. Face nail to webs or bend the flange strap over the chord. Available in left (L) or right (R) configurations.

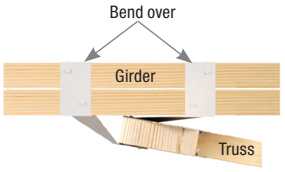
Materials: 18 gauge
Finish: G90 galvanizing

Installation:

- Install the required fasteners according to the table.
- The 3 lower holes on each strap are for top nailing when the strap is bent over the truss chord. These holes are not for face nailing.
- One or both straps may be bent over the bottom chord of the girder withtop or backside nailing.
- **Note:** Select the correct (right or left) hanger so that the strap on the outside of the angle will pass the end of the truss. When facing the hanger, the strap in the rear turns in the direction of the skew. The front strap turns to pass behind the end of the carried member.
- Attach the hanger at the end of the truss with a single 10d (0.148" dia.) x 1-1⁄2" nail into the side flange or bottom.
- Place the truss in position against the girder. Push the outside strap past the end of the truss to the girder web and face nail through the top 8 holes with 10d (0.148" dia.) x 1-1⁄2" nails for a 1-ply girder, or 10d (0.148" dia. x 3") common nails for multiple-ply girders.
- The strap inside the angle can be formed over diagonal webs (if design allows) or bend over the girder chord. Use two nails into the top and/or back side of the girder.
- If the outside strap does not contact a web, bend the strap tightly over the girder chord. Use two nails into the top and/or back side of the girder.
- For uplift resistance, other means of attachment are required. SNP3 may be used for uplift resistance, see SNP3 page 279 for installation options. Where verticals on truss and girder are aligned, SNP3 may be installed on verticals provided there is sufficient wood for fastening requirement



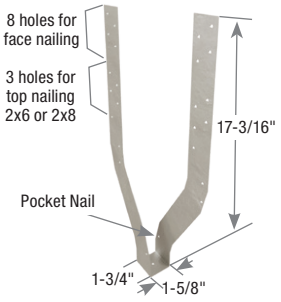
MSSH217L
Left shown attached to web and top of chord



Top view right shown



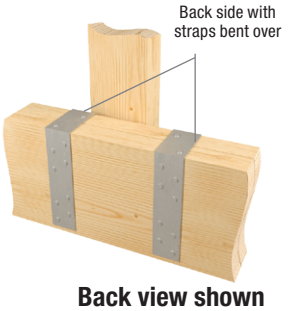
MSSH217R
Right shown attached to webs



MSSH217R
Right shown



MSSH217R shown bent over bottom chord



Back view shown

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2,3,5] Mounting Condition	Supporting Member Top Qty	Supporting Member Top Type	Face/Backside Qty	Face/Backside Type	Supported Member[4] Qty	Supported Member[4] Type	Girder Truss	DF/SP Allowable Loads (Lbs.)[1] Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	S-P-F Allowable Loads (Lbs.)[1] Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	Code Ref.
MSSH217L/R	--	18	face-max	--	--	16	10d	1	10d x 1-1/2	1 Ply	1755	1770	1770	1140	1155	1165	--
			top-min	4	10d	6	10d			1 Ply	1735	1735	1735	1140	1155	1165	

1) No uplift value with this hanger. Use other hardware or nailing higher on supported member to counteract uplift.
2) One or both straps may be bent over bottom chord of girder with top or backside nailing.
3) Maintain minimum 3/4" edge distance when installing nails.
4) The supported member shall be supported by blocking or other means to prevent rotation.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.
Note: The 3 lower holes on each strap are for top nailing when strap is bent. These holes are not for face nailing.

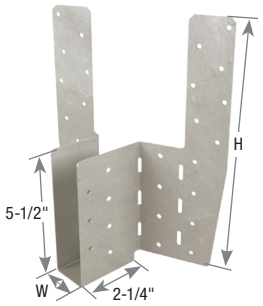
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MiTek's MSHA Series hanger offers the most flexible field solution for truss-to-truss connections accommodating a range of skews and challenging web-chord geometry often found in truss framing. Eliminating the need for special orders, the MSHA Series hanger provides economical solutions for 1-ply or 2-ply roof trusses and 1-ply floor trusses skewed between 22-1/2° to 75°. MSHA hangers can be installed in top-min, top-max, face-max, or combination mounting conditions as required.

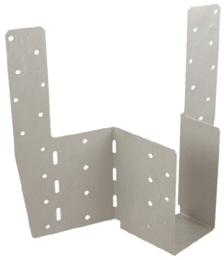
Materials: 16 gauge
Finish: G90 galvanizing

Installation:

- Install the required fasteners according to the table.
- Install fasteners into the carrying member at the locations described below based on the proper "Mounting Condition".
- Product is factory skewed 22-1/2° and may be field skewed from 22-1/2° to 75°. See installation sequence on page 279 for skews greater than 22-1/2°.
- Face-Max and Combination mounting conditions require a minimum chord or header height of 7-1/4". Top-Max and Top-Min mounting conditions require a minimum chord or header height of 5-1/2".



MSHA29L
Left Shown



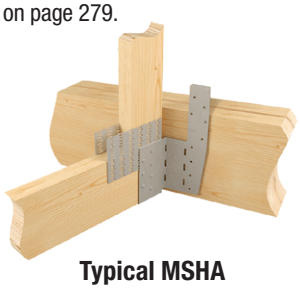
MSHA29R-2
Right Shown

CONNECTION TO CARRYING MEMBER
Mounting Conditions:

Face-Max

Fill the lowest four holes nearest each side of the bucket. For a 22-1/2° skew, fill the four diamond holes on one side and 4 round holes on the other. For skews greater than 22-1/2°, fill the 4 round holes on each side.

Add an equal amount of nails in each side of the hanger in any of the remaining nail holes to meet the minimum fastener requirements listed in the table on page 279.



Typical MSHA face-max installation

Top-Max

Field bend the strap over the supporting member. The bent strap must extend a minimum of 2" over the carrying member to allow for the four top flange nail holes to be filled.

Fill the lowest four nail holes nearest each side of the bucket. For a 22-1/2° skew, fill the four diamond holes on one side and 4 round holes on the other. For skews greater than 22-1/2°, fill the 4 round holes on each side.



Typical MSHA top-max installation

Top-Min

Field bend the strap over the supporting member. The bent strap must extend a minimum of 2" over the carrying member to allow for the four top flange nail holes to be filled.

Fill the four nail holes (two each strap) nearest the top of the carrying member.



Typical MSHA top-min installation

Combination Face-Max/Top-Max

Follow the Face-Max installation for one side of the connector. Follow the Top-Max installation for the opposite side of the connector. The Face-Max allowable loads apply to this type of installation.



Typical MSHA combination installation

CONNECTION TO CARRIED MEMBER
Mounting Conditions:

For the 22-1/2° skew installation, all round and diamond holes in the bucket must be filled. For skews greater than 22-1/2°, only the diamond holes in the bucket must be filled.

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Continued on next page

Installation Sequence for Skews greater than 22½°:



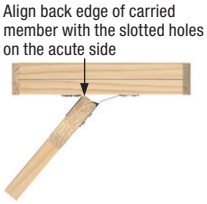
Step 1: Install acute side top and/or face header nails.



Step 2: Utilizing a piece of scrap fastened to the hanger on the obtuse side, bend the hanger to the desired angle.



Step 3: Bend the obtuse side of hanger back toward the header until the flange lies flat against the header, and install header top and/or face nails as noted below.



Step 4: Install carried truss and all required nails working from the bottom up.

Joist Material & Width	MiTek Stock No.	Ref. No.	Dimensions (in) W	Dimensions (in) H	Min H_{eff}[2] (in)	Mounting Condition[3]	Skew Angle (degrees)	Fastener Schedule[4] Carrying Member Top Qty	Carrying Member Face Qty	Carrying Member Type	Carried Member Qty	Carried Member Type	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Uplift[1] 160%	Code Ref.
2x Trusses	MSHA29L/R	THASR/L29	1-5/8	10-3/4	7-1/4	face-max	22-1/2	--	12	10d	7	10d x 1-1/2	1500	1615	1615	975	1250	1275	1275	770	
							23 to 45	--	12	10d	4	10d x 1-1/2	1485	1485	1485	560	1250	1350	1350	435	
							46 to 75	--	12	10d	4	10d x 1-1/2	1500	1615	1615	720	1250	1315	1315	560	
					5-1/2	top-max	22-1/2	4	8	10d	7	10d x 1-1/2	1985	1985	1985	975	1510	1510	1510	745	
							23 to 45	4	8	10d	4	10d x 1-1/2	1705	1705	1705	560	1255	1255	1255	415	
							46 to 75	4	8	10d	4	10d x 1-1/2	1605	1605	1605	720	1605	1605	1605	560	
						top-min	22-1/2	4	4	10d	7	10d x 1-1/2	1350	1350	1350	--	1045	1045	1045	--	
							23 to 45	4	4	10d	4	10d x 1-1/2	1335	1335	1335	--	1060	1060	1060	--	
							46 to 75	4	4	10d	4	10d x 1-1/2	695	695	695	--	695	695	695	--	
2-2x Trusses	MSHA29L/R-2	THASR/L29-2	3-1/8	10-3/4	7-1/4	face-max	22-1/2	--	12	10d	7	10d	1500	1615	1615	975	1215	1215	1215	735	--
							23 to 45	--	12	10d	4	10d	1485	1485	1485	560	1210	1260	1260	405	
							46 to 75	--	12	10d	4	10d	1500	1615	1615	720	1250	1300	1300	555	
					5-1/2	top-max	22-1/2	4	8	10d	7	10d	1985	1985	1985	975	1495	1495	1495	735	
							23 to 45	4	8	10d	4	10d	1705	1705	1705	560	1275	1275	1275	420	
							46 to 75	4	8	10d	4	10d	1605	1605	1605	720	1565	1565	1565	535	
						top-min	22-1/2	4	4	10d	7	10d	1350	1350	1350	--	1040	1040	1040	--	
							23 to 45	4	4	10d	4	10d	1335	1335	1335	--	1060	1060	1060	--	
							46 to 75	4	4	10d	4	10d	695	695	695	--	695	695	695	--	
4x Trusses	MSHA422L/R	THASR/L422	3-5/8	22	7-1/4	face-max	22-1/2	--	12	10d	7	10d	1500	1590	1590	960	1250	1250	1250	755	
							23 to 45	--	12	10d	4	10d	1485	1485	1485	550	1250	1335	1335	430	
							46 to 75	--	12	10d	4	10d	1500	1615	1615	705	1250	1300	1300	555	
					5-1/2	top-max	22-1/2	4	8	10d	7	10d	1955	1955	1955	960	1490	1490	1490	735	
							23 to 45	4	8	10d	4	10d	1680	1680	1680	550	1270	1270	1270	420	
							46 to 75	4	8	10d	4	10d	1605	1605	1605	705	1565	1565	1565	535	
						top-min	22-1/2	4	4	10d	7	10d	1330	1330	1330	--	1040	1040	1040	--	
							23 to 45	4	4	10d	4	10d	1335	1335	1335	--	1060	1060	1060	--	
							46 to 75	4	4	10d	4	10d	695	695	695	--	695	695	695	--	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) H_{eff} is the minimum distance from the top of the hanger seat to the top of the carrying member.
3) For tabulated top-mount installation loads, the straps must be wrapped over the header a minimum of 2".
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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The SNP3 Skewed Nail Plate is designed for connecting square cut corner jack trusses at skews from 0° to 90°, as depicted in standard installation below. An alternate installation for front side attachment at skews 0° to 45° is also depicted below.

Materials: 16 gauge

Finish: G90 galvanizing

Codes: See table for code references

Installation:

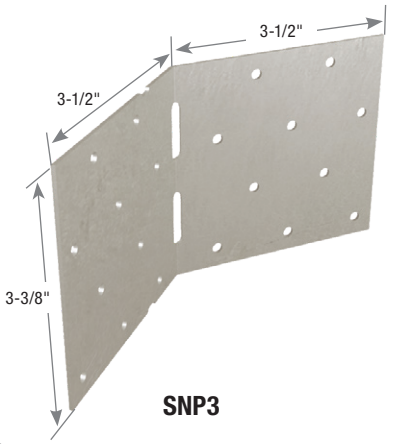
- Install the required fasteners according to the table.
- **Bend angle only once.**
- 8d common (0.131" dia. x 2-1/2" long) nails may be used in lieu of 8d (0.131") x 1-1/2" nails with no reduction in load.

Typical Installation:

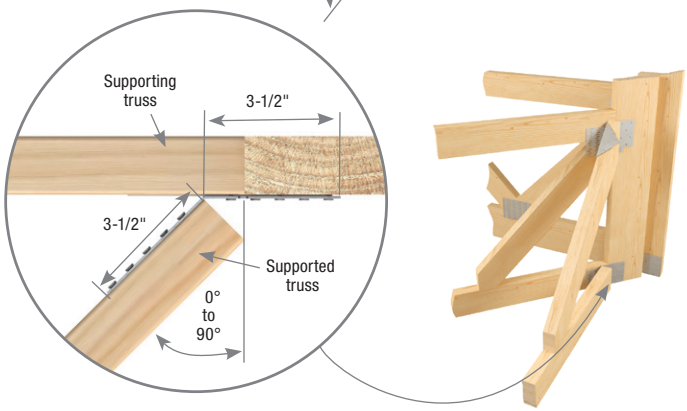
- Attach the SNP3 to the supported truss on the acute angle side so the SNP3 runs behind the end of the jack truss. Use all the specified fasteners listed in the table below. The fasteners should be installed nearest to bend line as possible then working to the opposite end of flange. Not all nail holes will be filled.
- Set the jack truss against the supporting truss and nail the exposed flange of the SNP3 into place. Use all the specified fasteners listed in the table below. The fasteners should be installed nearest to bend line as possible then working to the opposite end of flange. Not all nail holes will be filled.

Alternate Installation:

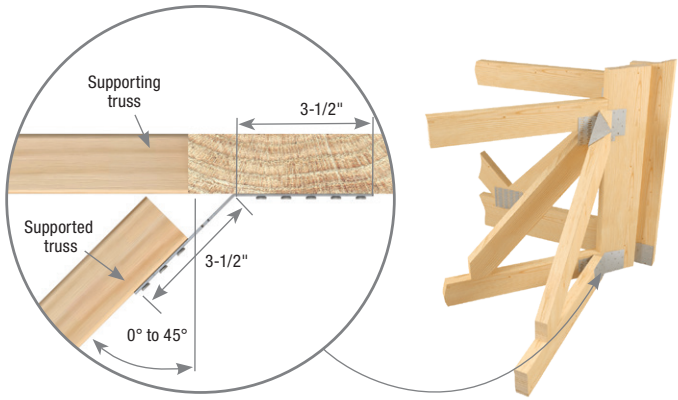
- Attach the SNP3 to the supported truss on the obtuse angle side so the SNP3 is on the front side of the jack truss. Use all the specified fasteners listed in the table below. The fasteners should be installed nearest to bend line as possible then working to the opposite end of flange but no closer than 5/8" from the end of the truss. Not all nail holes will be filled.
- Set the jack truss against the supporting truss and nail the exposed flange of the SNP3 into place. Use all the specified fasteners listed in the table below. The fasteners should be installed nearest to bend line as possible then working to the opposite end of flange. Not all nail holes will be filled.



SNP3



Typical SNP3 standard installation



Alternate SNP3 installation

MiTek Stock No.	Ref. No.	Steel Gauge	Installation Type[4]	Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]		S-P-F Allowable Loads (Lbs.)[1]		Code Ref.
				Supporting Member		Supported Member		Download	Upift 160%	Download	Upift 160%	
				Qty	Type	Qty	Type	(100/115/125)		(100/115/125)		
SNP3	TJC37	16	Standard	6	8d x 1-1/2	6	8d x 1-1/2	475	475	415	415	IBC, FL, LA
			Alternate	6	8d x 1-1/2	6	8d x 1-1/2	335	335	295	295	--

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Install specified fasteners from the bend line out from each end. Not all nail holes will be filled.
3) When installing SNP3's back to back, the table loads shall be multiplied by a reduction factor of 0.78.
4) Refer to images for installation type.
5) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long.

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HHC / HJC / HJHC / HTHJ Hip/Jack Connectors

HHC – Designed to support hip/hip truss/rafter. Contact MiTek when using in multi-ply applications

HJHC – Allows for hip/hip support and hip/jack/hip installations

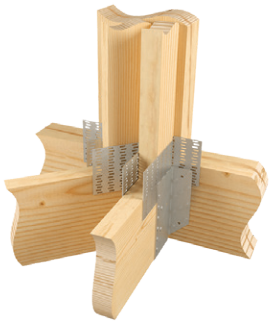
HJC / HTHJ – Used to simultaneously hang a combination of hips and jacks off girder trusses. These hangers fit both left-hand and right-hand applications. An open back design allows for retrofit installations

Materials: HHC/HJC/HJHC – 12 gauge, HTHJ –18 gauge

Finish: G90 galvanizing

Options: See HJC Specialty Options Table below

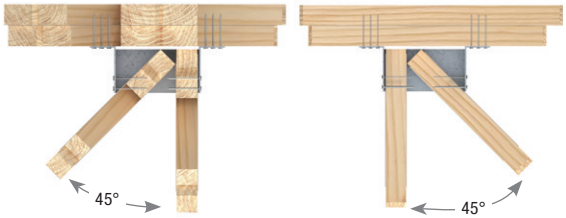
Codes: See table for code references



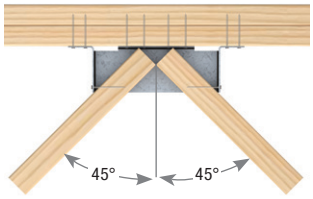
Typical HJC/HTHJ installation

Installation:

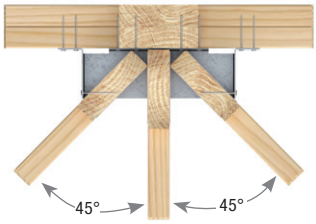
- Install the required fasteners according to the table.



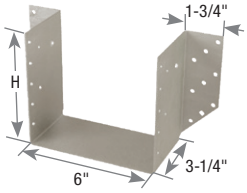
Typical HJC/HTHJ installation top view



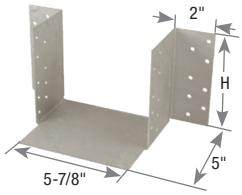
Typical HHC installation top view



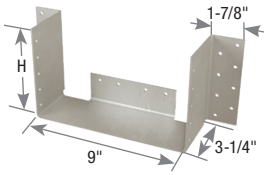
Typical HJHC installation top view



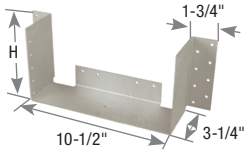
HJC



HTHJ



HHC



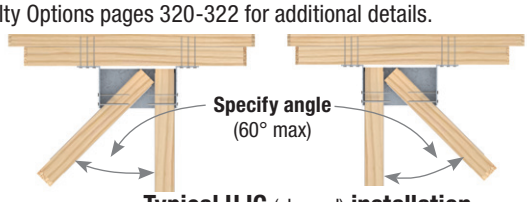
HJHC

Description	MiTek Stock No.	Ref. No.	Steel Gauge	H (in)	Fastener Schedule[3]					DF/SP Allowable Loads (Lbs.)[2]					S-P-F Allowable Loads (Lbs.)[2]				Code Ref.
					Supporting Member		Supported Member per Hip	Supported Member per Jack		Floor	Roof		Uplift[1]		Floor	Roof		Uplift[1]	
					Qty	Type	Qty	Qty	Type	100%	115%	125%	160%		100%	115%	125%	160%	
2 x 6 right / left	HJC26	LTHJA26, THJA26, THJU26	12	5-3/8	16	16d	5	7	10d	2750	3055	3265	2345		2420	2685	2750	1905	IBC, FL, LA
2 x 8 right / left	HJC28	--	12	7-1/8	20	16d	6	8	10d	3385	3385	3385	2345		2760	2760	2760	1910	
2 x 6 terminal	HHC26	LTHJA26, THJA26	12	5-7/16	20	16d	5	--	10d	3100	3505	3505	2130		2725	2800	2800	1870	--
2 x 8 terminal	HHC28	--	12	7-3/16	24	16d	6	--	10d	3505	3505	3505	2410		2805	2805	2805	1930	
2 x 6 terminal	HJHC26	--	12	5-7/16	20	16d	5	2	10d	3100	3505	3505	2410		2725	2815	2815	1935	
2 x 8 terminal	HJHC28	--	12	7-3/16	24	16d	6	2	10d	3505	3505	3505	2410		2820	2820	2820	1940	
2 x 6 terminal	HTHJ26-18	--	18	5	16	16d	7	5	16d	2295	2605	2695	1790		1985	2110	2110	1225	

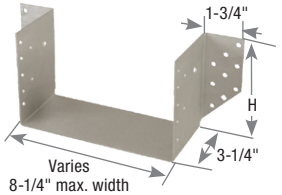
1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Table values are the total load of hip/jack combined, and assume that the allowable download and uplift of a single member are no more than 75% of the total hanger capacity.
3) **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3-1/2" long.

HJC Specialty Options Table – Refer to Specialty Options pages 320-322 for additional details.

Option	Hip Truss Skew
Range	30˚ to 60˚
Allowable Loads	100% of table load
Ordering	Add SK, angle of hip required, to product number. Ex. HJC26_SK55



Typical HJC (skewed) **installation with alternate skew angle top view**



HJC (skewed)

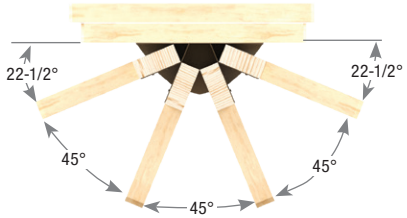
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BN Breakfast Nook Hangers

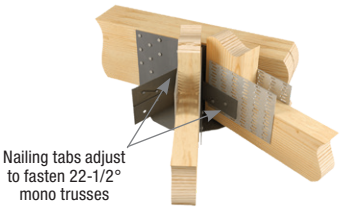
Designed to carry four mono trusses in one connector, it reduces installation time and cost. Provides a tested, load rated connection. Standard configuration spacing: 22-1/2°, 45°, 45°, 45°, 22-1/2°. The design also includes field adjustable nailing tabs.

Materials: 14 gauge
Finish: Primer
Codes: IBC, FL, LA

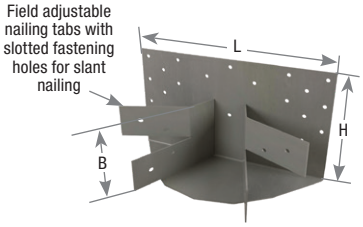
Installation:
- Install the required fasteners according to the table.
- Allow a 2" setback for each mono truss.
- For pitched ceiling, design mono trusses with end-vertical upset. Upset equals tangent of the ceiling slope times 5.6".
- **Bend tab only once.**



BN264
Standard configuration
(top view)



Typical BN264 installation



BN264

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[4]				DF/SP Allowable Loads (Lbs.)[3]				S-P-F Allowable Loads (Lbs.)[3]				Code Ref.
						Carrying Member		Carried Member per Mono Truss		Floor	Roof		Uplift[1,2]	Floor	Roof		Uplift[1,2]	
			L	H	B	Qty	Type	Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%	
BN264	THJM2-4-SDS3	14	10	5-3/8	3-1/4	20	10d	2	10d x 1-1/2	2640	3035	3145	585	2325	2635	2635	475	IBC, FL, LA
BN284	--	14	10	7-1/8	3-1/4	20	10d	2	10d x 1-1/2	2640	3035	3145	585	2325	2635	2635	475	

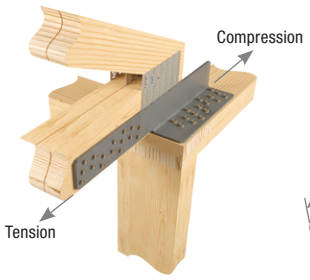
1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Maximum uplift per mono truss is 175-lb at 160% for DF/SP and 150-lb at 160% for S-P-F.
3) Loading published is for total load of connection.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

LDSC / DSC Drag Strut Connectors

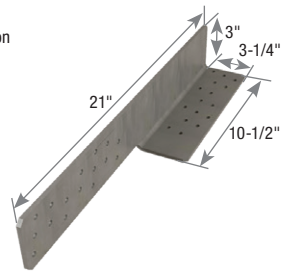
Transfers lateral loads from girder truss into bearing walls.

Materials: See table
Finish: Primer
Codes: IBC, FL, LA

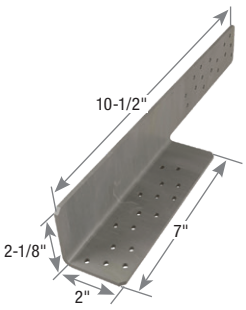
Installation:
- Install the required fasteners according to the table.
- MiTek's WS3 structural wood screws, 1/4" dia. x 3" long, are supplied with DSC4 connector.



Typical DSC4R installation



DSC4R right shown



LDSC4L left shown

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2,3]				DF/SP Allowable Loads (Lbs.)[1]		S-P-F Allowable Loads (Lbs.)[1]		Code Ref.
			Truss		Top Plate		Compression	Tension	Compression	Tension	
			Qty	Type	Qty	Type	160%	160%	160%	160%	
LDSC4L/R	--	14	9	10d x 1-1/2	9	10d x 1-1/2	1500	1505	1020	1025	IBC, FL, LA
DSC4L/R	DSC5R/L-SDS3	3	16	WS3	16	WS3	4965	4655	3380	3170	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with DSC4 connector.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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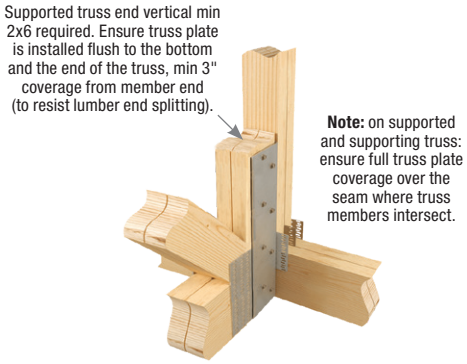
GTWS High Uplift Girder Truss Hangers

The GTWS series girder-to-girder hangers feature high uplift capacities along with high gravity load ratings.

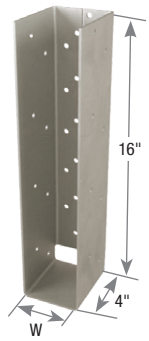
Materials: 10 gauge
Finish: G90 galvanizing
Codes: FL

Installation:

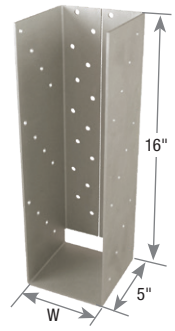
- Install the required fasteners according to the table.
- MiTek's WS structural wood screws are included with hangers where specified.
- **GTWS2T** shall be installed to a minimum 2x4 vertical member of a girder truss with no restriction on the size of the bottom chord.
- **GTWS3T** shall be installed to a minimum 2x6 vertical member of a girder truss with no restriction on the size of the bottom chord.
- **GTWS4T** shall be installed to a minimum 2x8 vertical member of a girder truss with no restriction on the size of the bottom chord.



Typical GTWS installation



GTWS2T



GTWS3T

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2,3,4]				No. of Plies	DF/SP Allowable Loads (Lbs.)				Code Ref.
						Supporting Truss		Supported Truss						Uplift[1]	
			W	H	D	Qty	Type	Qty	Type		100%	115%	125%	160%	
GTWS2T	--	10	3-1/4	16	4	22	WS3	16	WS3	2	8720	10030	10900	9770	FL
GTWS3T	--	10	4-7/8	16	5	28	WS3	24	WS3	3	11100	12470	12470	12490	
GTWS4T	--	10	6-1/2	16	5	28	WS3	24	WS3	4	11100	12470	12470	12490	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) MiTek's WS3 structural wood screws require a minimum 3" wood penetration.
3) MiTek's WS3 (1/4" dia. x 3" long) structural wood screws are included with the GTWS hangers.
4) MiTek's WS3 structural wood screws may be installed in both vertical and horizontal members.

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GT / GTD / GTS Girder Truss Hangers

The GT primarily hangs girder trusses off other girder trusses, although a wide variety of other heavy-duty installations apply.

Materials: Back Plate – 3 gauge; Strap – 7 gauge

Finish: Primer

Options: All models available in LVL sizes, use M in place of T, as in GT2M4B

Codes: See table for code references

Installation:

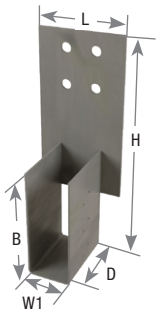
- Install the required fasteners according to the table.
- Minimum heel height is 9-1/4" for GT hangers.



Typical GT2T4B installation



GT top view



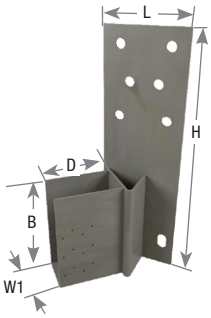
GT2T4B

Supported Member	MiTek Stock No.	Ref. No.	Dimensions (in)					Fastener Schedule[3]				No. of Supporting Plies	DF/SP Allowable Loads (Lbs.)			S-P-F Allowable Loads (Lbs.)			Code Ref.
								Supporting Truss[2]		Supported Truss			Supporting Member			Supporting Member			
			W1	L	H	D	B	Qty	Dia. (in)[1]	Qty	Type		100%	115%	Uplift 160%	100%	115%	Uplift 160%	
2-ply	GT2T2B	--	3-7/16	6	19	4-1/2	9-1/4	2	3/4	12	16d	2	2950	3390	2705	2515	2895	2270	IBC, FL, LA
												≥ 3	3340	3840		3085	3475		
	GT2T2BH	--	3-7/16	6	22-1/4	4-1/2	9-1/4	2	1	12	16d	2	3920	4510	2705	3330	3830	2270	
												≥ 3	5550	5550		4660	4660		
	GT2T3B	--	3-7/16	6	22	4-1/2	9-1/4	3	3/4	12	16d	2	4370	5025	2705	3710	4265	2270	
												≥ 3	4985	5730		4590	5220		
	GT2T4B	THGB2	3-7/16	7	19	5-1/2	9-1/4	4	3/4	12	16d	2	5905	6790	2705	5040	5795	2270	
												≥ 3	6680	7680		6175	7100		
	GT2T6B	--	3-7/16	7-1/4	22	6	9-1/4	6	3/4	12	16d	2	8860	10190	2705	7560	8695	2270	
												≥ 3	10020	11520		9260	9940		
	GT2T6BH	--	3-7/16	7-1/4	26-1/4	6	9-1/4	6	1	12	16d	2	11795	13565	2705	9640	9940	2270	
												≥ 3	13580	13925		9640	9940		
	GT2T8B	THGBH2	3-7/16	7-1/4	25	6	9-1/4	8	3/4	12	16d	2	11815	13585	2705	9640	9940	2270	
												≥ 3	13355	13925		9640	9940		
3-ply	GT3T3B	--	5-1/8	6	22	4-1/2	9-1/4	3	3/4	12	16d	2	4370	5025	2705	3710	4265	2270	
												≥ 3	4985	5730		4590	5275		
	GT3T3BH	--	5-1/8	6	26-1/4	4-1/2	9-1/4	3	1	12	16d	2	5740	6605	2705	4830	5555	2270	
												≥ 3	8490	8790		7160	7385		
	GT3T4B	THGB3	5-1/8	7	19	5-1/2	9-1/4	4	3/4	12	16d	2	5905	6790	2705	5040	5795	2270	
												≥ 3	6680	7680		6175	7100		
	GT3T4BH	--	5-1/8	7	22-1/4	5-1/2	9-1/4	4	1	12	16d	2	7865	9045	2705	6685	7690	2270	
												≥ 3	11435	13150		9720	11180		
	GT3T6B	--	5-1/8	7-1/4	22	6	9-1/4	6	3/4	12	16d	2	8860	10190	2705	7560	8695	2270	
												≥ 3	10020	11520		9260	10650		
	GT3T6BH	--	5-1/8	7-1/4	26-1/4	6	9-1/4	6	1	12	16d	2	11795	13565	2705	10030	11535	2270	
												≥ 3	14860	14860		13075	13075		
	GT3T8B	THGBH3	5-1/8	7-1/4	25	6	9-1/4	8	3/4	12	16d	2	11815	13585	2705	10080	11590	2270	
												≥ 3	13355	15360		12350	13090		
	GT3T8BH	--	5-1/8	7-1/4	30-1/4	6	9-1/4	8	1	12	16d	2	15725	18085	2705	13370	13765	2270	
												≥ 3	19205	19465		13465	13765		

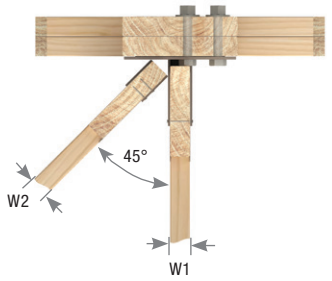
1) Bolts shall conform to ASTM A 307 Grade A or better.
2) GT series require 2 x 6 vertical member for 2, 3, and 4-bolt hangers and 2 x 8 for 6 and 8-bolt hangers. Center the hanger on the vertical supporting member.
3) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Continued on next page

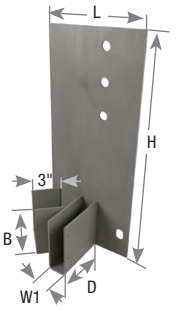
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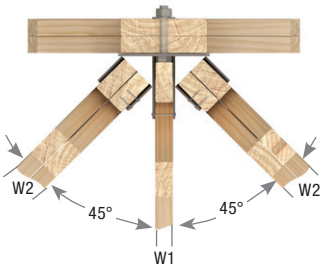
GT skewed



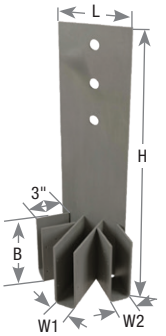
GTS
top view (left shown)



GTS1T2H3BSKL
(left shown)



GTD
top view



GTD1T1H3B

Supported Member	MiTek Stock No.[5]	Ref. No.	Dimensions (in) W1	W2[4]	L	H	D	B	Fastener Schedule[6] Supporting Truss[3] Qty	Bolt Dia.[2]	Supported Truss Qty	Type	Supported Hip Qty	Type	No. of Supporting Plies	DF/SP Allowable Loads (Lbs.)[1] Supporting Member 100%	115%	Uplift 160%	S-P-F Allowable Loads (Lbs.)[1] Supporting Member 100%	115%	Uplift 160%	Code Ref.
4-ply	GT4T4B	--	6-1/2	--	7-1/2	19	5-1/2	9-1/4	4	3/4	12	16d	--	--	2	5905	6790	2705	5040	5795	2270	IBC, FL, LA
															≥ 3	6680	7680		6175	7100		
	GT4T4BH	--	6-1/2	--	7-1/2	22-1/4	5-1/2	9-1/4	4	1	12	16d	--	--	2	7860	9040	2705	6685	7685	2270	
															≥ 3	11440	11555		9720	10100		
	GT4T6B	--	6-1/2	--	7-1/2	22	6	9-1/4	6	3/4	12	16d	--	--	2	8860	10185	2705	7560	8690	2270	
															≥ 3	10020	11525		9260	10650		
	GT4T6BH	--	6-1/2	--	7-1/2	26-1/4	6	9-1/4	6	1	12	16d	--	--	2	11790	13560	2705	10025	11530	2270	
															≥ 3	14860	14860		13075	13075		
	GT4T8B	THGBH4	6-1/2	--	7-1/2	25	6	9-1/4	8	3/4	12	16d	--	--	2	11810	13580	2705	10080	11590	2270	
															≥ 3	13360	15365		12345	13090		
5-ply	GT5T8BH	--	8-1/8	--	9-1/4	30-1/4	6	9-1/4	8	1	12	16d	--	--	2	15690	18045	2705	13340	15345	2270	
															≥ 3	19465	19465		16350	16350		
2-ply skewed 45°	GT2T2BSKL/R	--	3-7/16	--	6	19	4-1/2	9-1/4	3	3/4	12	16d	--	--	2	2920	3355	2000	2555	2715	1600	--
															≥ 3	3295	3785		3075	3075		
	GT2T4BSKL/R	--	3-7/16	--	7-1/4	19	4-1/2	9-1/4	5	3/4	12	16d	--	--	2	5835	6710	2000	5110	5875	1600	
															≥ 3	6585	7575		6220	6675		
1-ply hip & jack	GTS1T1H3BSKL/R	--	1-5/8	1-5/8	9-1/4	22	4-1/2	5-1/2	4	3/4	4	10d x 1-1/2	4	10d x 1-1/2	2	4215	4850	--	3690	4005	--	
															≥ 3	4755	5470		4495	4570		
	GTS1T1H4BSKL/R	--	1-5/8	1-5/8	9-1/4	19	4-1/2	5-1/2	5	3/4	4	10d x 1-1/2	4	10d x 1-1/2	2	5830	6705	--	5105	5760	--	
															≥ 3	6580	7565		5590	5760		
2-ply hip & 1-ply jack	GTS1T2H3BSKL/R	--	1-5/8	3-7/16	9-1/4	22	5-1/2	5-1/2	4	3/4	4	10d x 1-1/2	4	10d x 1-1/2	2	4215	4850	--	3690	3985	--	
															≥ 3	4755	5470		4495	4545		
1-ply terminal hip	GTD1T1H2B	--	1-5/8	1-5/8	6	19	4-1/2	5-1/2	2	3/4	4	10d x 1-1/2	4	10d x 1-1/2	2	2920	3360	--	2555	2940	--	
															≥ 3	3295	3790		3115	3295		
1-ply terminal hip	GTD1T1H3B	--	1-5/8	1-5/8	6	22	4-1/2	5-1/2	3	3/4	4	10d x 1-1/2	4	10d x 1-1/2	2	4240	4875	--	3710	3990	--	
															≥ 3	4785	5500		4520	4550		
2-ply terminal hip	GTD1T2H3B	--	1-5/8	3-7/16	8	22	5-1/2	5-1/2	3	3/4	4	10d x 1-1/2	4	10d x 1-1/2	2	4225	4855	--	3695	3975	--	
															≥ 3	4765	5480		4500	4535		

1) Allowable loads for GTS and GTD is the total of hip and jack connection.
2) Bolts shall conform to ASTM A 307 or better.
3) GT Series require 2 x 6 vertical member for 2, 3, and 4 bolt hangers and 2 x 8 for 6 and 8 bolt hangers.
4) All side pocket applications assume 45° angle.
5) Must specify right or left for all GTS and GT skewed.
6) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

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The GTQ / GTQM hangers connect to multi-ply girder truss with MiTek's WS structural wood screws offering high load capacities. Design features minimum and maximum fastening installation options to accommodate various sizes of vertical web. GTQMs are designed for LVL sizes, for example GTQM218.

Materials: 7 gauge

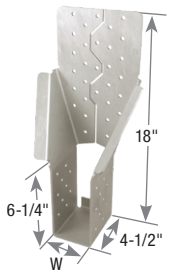
Finish: G90 galvanizing

Installation:

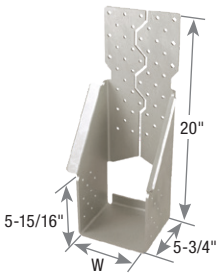
- Install all MiTek's WS structural wood screws as specified.
- Install hanger centered on vertical web.
- GTQs are designed to be installed on various sizes of vertical web. Maintain a minimum 5/8" fastener edge distance where truss connector plates are not present.
- Install MiTek's WS structural wood screws in all fastener holes including diamond holes for maximum values.
- Refer to Backer Block installation on page 287 if the length of the screws going into the supporting truss are longer than the thickness of the plies.



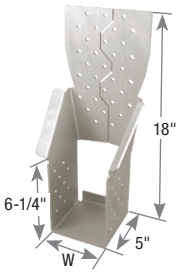
Typical GTQ218 installation
(GTQM218 similar)



GTQ218
(GTQM218 similar)



GTQ420
(GTQM420 similar)



GTQ318
(GTQM318 similar)

MiTek Stock No.	Ref. No.	W (in)	Install Type	Min Vert Web Size	Fastener Schedule[1,3] Supporting Truss[4,5] Qty	Supporting Truss Type[5]	Supporting Truss Min. No. of Plies	Supported Truss Qty[6]	Supported Truss Type	Supported Truss No. of Plies	DF/SP Allowable Loads (Lbs.) Floor 100%	DF/SP Roof 115%	DF/SP Roof 125%	DF/SP Wind[8] 160%	DF/SP Uplift[2] 160%	S-P-F Allowable Loads (Lbs.) Floor 100%	S-P-F Roof 115%	S-P-F Roof 125%	S-P-F Wind[8] 160%	S-P-F Uplift[2] 160%	Code Ref.
GTQ218	THGQ2-SDS3, THGQH2-SDS3	3-1/4	Min	2x6	18	WS3	2	20	WS3	2	6965	7900	7900	7900	4595	6225	6605	6605	6605	3845	--
			Max	2x8	30						11610	13160	13160	13160	4595	10375	11005	11005	11005	3845	
GTQM218[7]	THGQ3.62-SDS3, THGQH3.62-SDS3	3-5/8	Min	2x6	18						6965	7900	7900	7900	4595	6225	6605	6605	6605	3845	
			Max	2x8	30						11610	13160	13160	13160	4595	10375	11005	11005	11005	3845	
GTQ318	THGQ3-SDS4.5, THGQH3-SDS4.5	4-7/8	Min	2x6	25	WS45	3	20	WS45	3	11480	11480	11480	11480	4595	10240	10240	10240	10240	3810	
			Max	2x8	33						14665	14665	14665	14665	4760	14500	14500	14500	14500	3945	
GTQM318[7]	THGQ5.50-SDS4.5, THGQH5.50-SDS4.5	5-1/2	Min	2x6	25						11480	11480	11480	11480	4595	10240	10240	10240	10240	3810	
			Max	2x8	33						14665	14665	14665	14665	4760	14500	14500	14500	14500	3945	
GTQ420	THGQH4-SDS6	6-1/2	Min	2x8	41	WS6	4	20	WS6	4	14435	14435	14435	14435	4690	14435	14435	14435	14435	3745	
			Max	2x10	47						17600	17600	17600	17600	4690	15795	15795	15795	15795	3745	
GTQM420[7]	THGQH7.25-SDS6	7-1/4	Min	2x8	41						14435	14435	14435	14435	4690	14435	14435	14435	14435	3745	
			Max	2x10	47						17600	17600	17600	17600	4690	15795	15795	15795	15795	3745	

1) MiTek's WS3 (1/4" dia. x 3" long), WS45 (1/4" dia. x 4-1/2" long, and WS6 (1/4" dia. x 6" long) structural wood screws are included with GTQ and GTQM hangers.
2) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
3) MiTek's WS structural wood screws may be installed through metal truss connector plates as approved by truss designer per ANSI/TPI 1-2014 Section 7.5.3.4 and 8.9.2. Pre-drilling required through the plate using a maximum of 5/32" bit.
4) Truss plies of the supporting member must be fastened together to transfer the load (through all truss plies) that is not transferred by the hanger screws; fastening schedule is to be specified by the truss designer.
5) If the length of the screws going into the supporting truss are longer than the thickness of the plies, refer to the backer block installation on page 287.
6) MiTek's WS structural wood screws specified for supported member must all be installed into the supported member while maintaining a minimum 5/8" edge distance where truss connector plates are not present.
7) Supported members on GTQM hangers shall have specific gravity of not less than 0.46.
8) Wind (160%) is a download value.

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Design of Filler Blocking with MiTek Hangers

Filler blocking should only be used as a last resort, when the supported members width is less than the supporting hanger width. If possible a solid piece of the same species as the main supported member should be used, if this is not possible, APA rated plywood or OSB may be used.

MiTek allows for 1/8" of space between the supported member and the hanger sides.

The filler blocking should be attached with enough fasteners to support the bearing area of said member in the bucket. These fasteners are separate from the joist fasteners specified in the hanger connection. Please reference the fastener values and spacing below to aid in your design.

When possible filler blocking shall be placed on both sides of a multi-ply supported member in order to minimize eccentric loading of the connector. Filler blocks should not extend more than 12" from the supporting member. If you are unable to meet these requirements please reach out to MiTek customer service for assistance.

Nail	Filler Block Thickness (in)	Shear Strength (Lbs.)							
		Side member Specific gravity = 0.50				Side member Specific gravity = 0.42			
		Main Member Species or Equivalent SG				Main Member Species or Equivalent SG			
		0.42	0.46	0.50	0.55	0.42	0.46	0.50	0.55
10d Common (0.148")	3/8	78	82	85	88	71	74	76	79
	7/16	80	84	87	90	72	75	77	80
	15/32	82	85	88	91	72	75	78	80
	19/32	88	94	95	98	76	79	81	84
	23/32	96	100	103	106	81	84	86	89
	1	108	113	118	123	96	99	101	104
	1-1/2[4]	100	109	118	128	100	109	118	128
16d Common (0.162")	7/16	95	99	102	106	84	89	92	95
	15/32	96	100	104	108	86	89	92	95
	19/32	102	107	110	114	89	93	95	98
	23/32	110	115	118	122	94	98	100	103
	1	129	135	141	146	109	113	115	118

1) Nails need 10 times the diameter of embedment into main member.
2) Values are good for solid sawn lumber or SCL wood structural side members.
3) Data is derived from table 12Q, 12R & 12S of the 2018 NDS.
4) 1-1/2" side members assume a specific gravity equal to that of the main member.

Example:
2x12" filler block with a specific gravity 0.50 added to THDH26-2 supporting DF (SG = 0.50) truss. Supported member design reaction is 4000 lbs. Bearing width of the filler block as a percentage of the total bearing area of the supported member. @ 100% DOL.

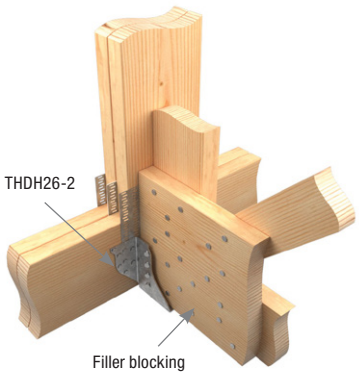
$$\frac{(1\text{-}1/2")}{3"} = 50\%$$

Filler bearing area percentage x total load applied to connector.

0.50 *4000 lbs. = 2000 lbs.

Nails selected are 10d common, number of nails needed to attach each filler block =

$$\frac{2000 \text{ lbs.}}{118 \text{ lbs. per nail}} = \textbf{17 additional} \text{ nails minimum to attach each filler block to main member.}$$



Load capacity of THDH26-2 with DF supporting member = 4375 lbs. @ 100%

End Distance: 15 x Diameter (Dia.)
Edge Distance: 2.5 x Dia.
Spacing Between fasteners in a Row: 15 x Dia.
Spacing Between staggered rows: 2.5 x Dia.

Nail spacing per NDS
Note: Dimensions on the figure are minimums and may not be to scale

Continued on next page

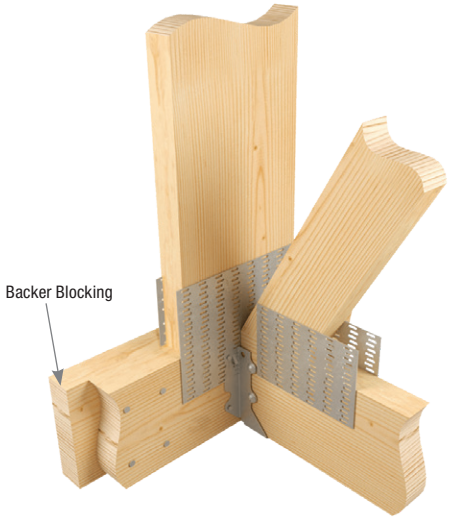
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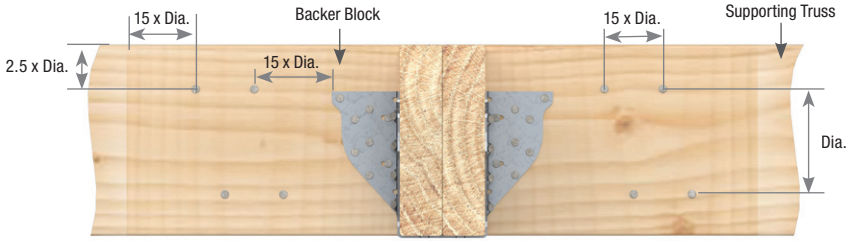
Design of Backer Blocking for MiTek Connectors and Trusses

Backer blocking is used when a supporting members thickness is less than the length of fastener specified in official MiTek literature. The purpose of this guide is to help the designer by specifying nail/screw quantities and minimum spacing distances. Backer blocking should be of the same species of lumber as the main member. The height of the backer blocking must be equal-to or greater-than the height of the hanger. When the backer block spans multiple connection points, and a splice in the backer block is required it should be placed between two connections.

For hangers installed with nails, attach backer block with a minimum of (8) - 10d common (0.148" x 3") nails. For hangers installed with MiTek Wood Screws (WS), attach backer block with one WS3 screw for every two WS screws attaching the hanger to the supporting member. For hangers installed with 16d common (0.162" x 3.5") nails using a backer block, the allowable load is reduced 15 percent.

Note: Backer block nails or screws can be installed from either face and should be split evenly between each side of connection. Backer blocking should be of adequate length to meet minimum distances as shown below.

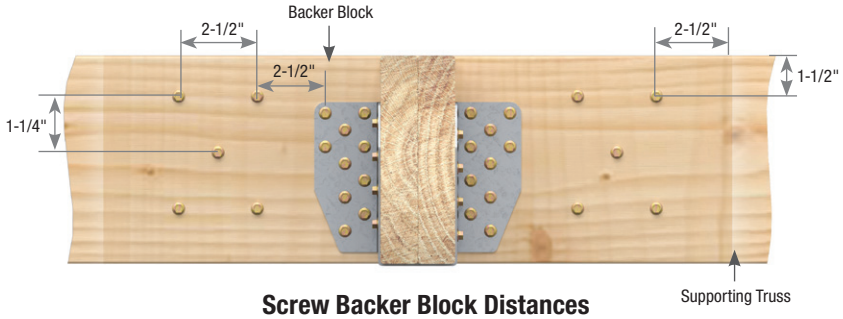




Nail Backer Block Distances

End Distance: 15 x Diameter (Dia.)
Edge Distance: 2.5 x Dia.
Spacing Between fasteners in a Row: 15 x Dia.
Spacing Between staggered rows: 2.5 x Dia.

Nail spacing per NDS
Note: Dimensions on the figure are minimums and may not be to scale



Screw Backer Block Distances

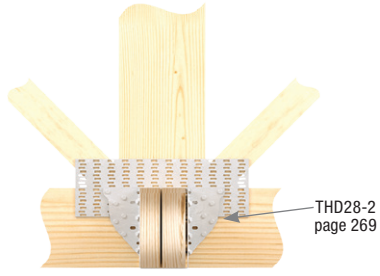
End Distance: 2-1/2"
Edge Distance: 1-1/2"
Spacing Between fasteners in a Row: 3"
Spacing Between staggered rows: 1-1/4"

Spacing per ICC-ESR #2761
Note: Dimensions on the figure are minimums and may not be to scale

Example: The THDHQ28-2 shown above has (20) WS3 screws connecting it to the supporting truss. Using the instructions detailed above, (10) WS3 screws must be attached from the supported truss to the backer block to be in compliance with the instructions above to support the applied allowable load of the THDHQ28-2.

Panel Point Installation

- Connection with face mount hanger attaching to a truss panel point.
- Ensure framing lumber is present behind connector plates. Nails that do not penetrate lumber will be neglected and will not contribute to the connection capacity.



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Truss Brace & Spacer (Stabilizer™)

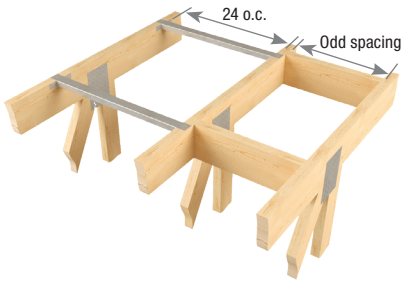
The Stabilizer™ Truss Brace & Spacer provides temporary construction bracing in the roof and ceiling planes, as well as permanent lateral bracing for webs as specified by the truss designer.

The Stabilizer™ is easily installed by embedding the patented MII 20 teeth on the top flange straight into the edge of the truss member to be braced with a framing hammer. The side tabs are then secured by driving the teeth into the face of the truss member being braced.

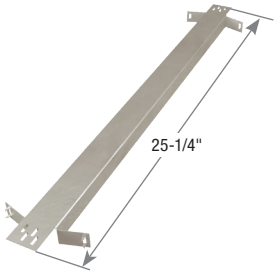
Materials: 20 gauge
Finish: G90 galvanizing
Codes: IBC, LA, FL

Installation:

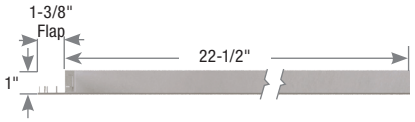
- Use 31-24 for standard 24" o.c. spacing. For odd spacing, cut and insert a solid block between the trusses.
- Typically, The Stabilizer™ is installed at 6'– 8' centers along the roof plane and 10'– 15' along the ceiling plane. (Refer to engineering specifications BCSI 1-03, published by The Truss Plate Institute for specific bracing requirements.)
- The Stabilizer™ must be supplemented with diagonal bracing in the roof and ceiling planes and cross bracing in the web plane at required intervals.
- Web forces are not to exceed 8000 lbs.
- The Stabilizer™ is properly installed when the top flap and side tabs are flush with the member being braced.



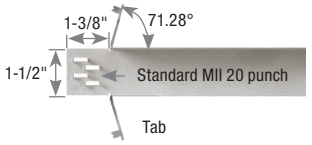
Temporary construction bracing installation



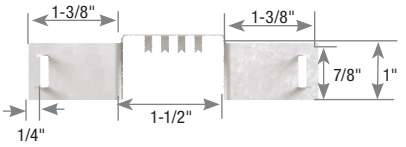
31-24 Stabilizer™



Side view

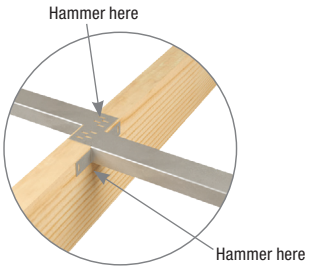


Top view



End view

Important: The erection contractor is responsible for determining and installing the temporary bracing for the structure, including the trusses. It is most important for the installer to provide adequate means for bracing the first truss installed. The performance of the entire bracing system depends on the adequacy of the ground bracing or other means of bracing the first group of trusses installed. The building designer is responsible for the permanent bracing design of the overall structure including the truss. This includes the design of required supplemental diagonal and cross bracing.



Chord attachment detail



Web bracing installation

MiTek Stock No.	Ref. No.	Steel Gauge	O.C. Spacing (in)	Allowable Axial Loads (Lbs.)			Code Ref.
				Tension	Tension with Fastener	Compression	
31-24	TSBR2-24	20	24	105	155	420	IBC, LA, FL

1) 1 pound = 4.448N.
2) Fastener shall be (1) 8d or 10d common wire nail inserted through nail slot.
3) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 10d nails are 0.148" dia. x 3" long.

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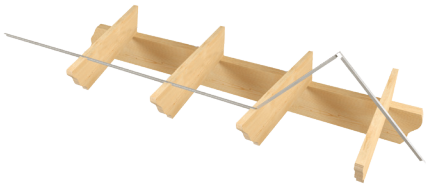
TS / TSX Truss Spacers

Truss spacers give framers fast and accurate spacing for trusses, rafters, or floor joists. The TS and TSX eliminate the need to mark layouts on bearing plates, improve installation speed, and help eliminate spacing errors. These spacers are light weight and compact.

Materials: See table
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- Use (1) 8d nail per end to fasten units to trusses, rafters, or floor joists.

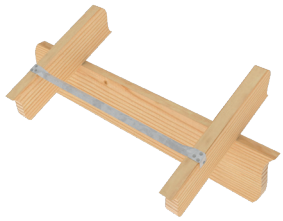
Important: These units provide spacing guides only. Do not rely on the TS or TSX for bracing.



Typical TSX installation



TSX multi-unit spacer



Typical TS installation



TS single-unit spacer

Joist Width (in)	MiTek Stock No.[1]	Ref. No.	Steel Gauge	O. C. Spacing	Overall Length	Sections Per Piece	Fastener Schedule		Code Ref.
							Qty	Type[2]	
1-1/2	TS	--	20	24	2-ft 1-1/2"	1	2	8d	--
1-1/2	TSX16	TSF2-16	22	16	8-ft	6	2	8d	
1-1/2	TSX24	TSF2-24	22	24	10-ft	5	2	8d	

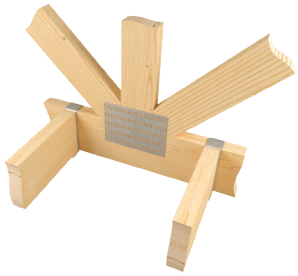
1) TSX spacers are shipped folded.
2) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long.

ZC Blocking Supports

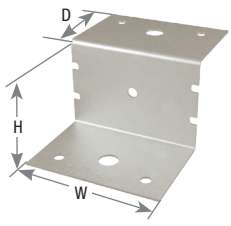
ZC clips secure blocking between joists or trusses which provides support for drywall or sheathing.

Materials: See table
Finish: G90 galvanizing

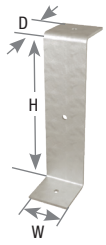
Installation:
- Install the required fasteners according to the table.



Typical ZC installation



ZC2



ZC4

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[2]				DF/SP Allowable Loads (Lbs.)[1]	Code Ref.
			W	H	D	Header		Blocking			
						Qty	Type	Qty	Type	Download 100%	
ZC2	Z2	20	2-1/4	1-9/16	1-1/2	2	10d x 1-1/2	2	10d x 1-1/2	490	--
ZC4	Z4	12	1-1/2	3-9/16	1-3/8	2	10d x 1-1/2	1	10d x 1-1/2	420	
ZC24	Z28	28	2-9/32	1-9/16	1-3/8	10d x 1-1/2		10d x 1-1/2		--	
ZC34	Z38	28	2-9/32	2-9/16	1-5/16	10d x 1-1/2		10d x 1-1/2		--	

1) Allowable load shall not be increased for other load duration factors.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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SBP Supplementary Bearing Plates

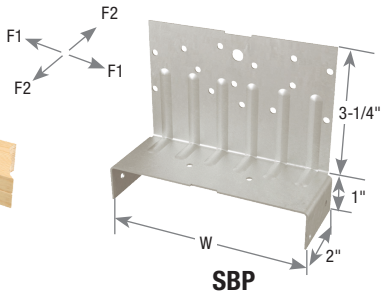
Use the SBP instead of extra truss plies or nail-on scabs to distribute concentrated truss reactions and avoid top plate crushing. The two-piece design accommodates any number of girder plies. A wraparound design gives superior uplift resistance, and reinforcement ribs effectively distribute bearing loads. Works with both single and double 2x4 or 2x6 top plates.

Materials: 16 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- **The SBP shall be installed in pairs.**



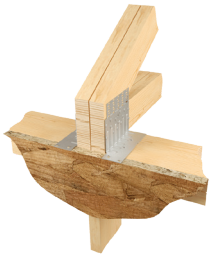
Typical SBP standard installation



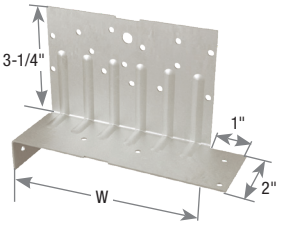
SBP



Typical SBP6 one tab up on a 2x8 top plate installation
(SBP4 similar)



Typical SBP one tab up alternate installation



SBP one tab up

No. of Truss Plies	Wood Species	F_c (psi)	SBP4 on 2 x 4 Top Plate (3-1/2" wide) Allowable Loads (Lbs.)[1,2,3]									SBP6 on 2 x 6 Top Plate (5-1/2" wide) Allowable Loads (Lbs.)[1,2,3]								
			SBPs Alone			SBP + Truss Bearing[4]						SBPs Alone			SBP + Truss Bearing[4]					
			100%	115%	125%	100%	EBL	115%	EBL	125%	EBL	100%	115%	125%	100%	EBL	115%	EBL	125%	EBL
1-Ply	DF	625	2500	2805	2955	5780	6.17	6085	6.49	6235	6.65	3500	3930	4235	8655	9.23	9085	9.69	9390	10.02
	SP	565	2745	2955	2955	5710	6.74	5920	6.99	5920	6.99	3845	4295	4295	8505	10.04	8955	10.57	8955	10.57
	S-P-F	425	2200	2365	2365	4430	6.95	4595	7.21	4595	7.21	3080	3415	3415	6585	10.33	6920	10.85	6920	10.85
	Hem Fir	405	2245	2445	2445	4370	7.19	4570	7.52	4570	7.52	3140	3525	3535	6480	10.67	6865	11.30	6875	11.32
2-Ply	DF	625	2500	2805	2955	9065	4.83	9370	5.00	9520	5.08	3500	3930	4235	13815	7.37	14245	7.60	14550	7.76
	SP	565	2745	2955	2955	8680	5.12	8890	5.24	8890	5.24	3845	4295	4295	13170	7.77	13620	8.04	13620	8.04
	S-P-F	425	2200	2365	2365	6665	5.23	6830	5.36	6830	5.36	3080	3415	3415	10095	7.92	10430	8.18	10430	8.18
	Hem Fir	405	2245	2445	2445	6500	5.35	6700	5.51	6700	5.51	3140	3525	3535	9825	8.09	10210	8.40	10220	8.41
3-Ply	DF	625	2500	2805	2955	12345	4.39	12650	4.50	12800	4.55	3500	3930	4235	18970	6.74	19400	6.90	19705	7.01
	SP	565	2745	2955	2955	11645	4.58	11855	4.66	11855	4.66	3845	4295	4295	17830	7.01	18280	7.19	18280	7.19
	S-P-F	425	2200	2365	2365	8895	4.65	9060	4.74	9060	4.74	3080	3415	3415	13600	7.11	13935	7.29	13935	7.29
	Hem Fir	405	2245	2445	2445	8625	4.73	8825	4.84	8825	4.84	3140	3525	3535	13165	7.22	13550	7.43	13560	7.44
4-Ply	DF	625	2500	2805	2955	15625	4.17	15930	4.25	16080	4.29	3500	3930	4235	24125	6.43	24555	6.55	24860	6.63
	SP	565	2745	2955	2955	14610	4.31	14820	4.37	14820	4.37	3845	4295	4295	22490	6.63	22940	6.77	22940	6.77
	S-P-F	425	2200	2365	2365	11125	4.36	11290	4.43	11290	4.43	3080	3415	3415	17105	6.71	17440	6.84	17440	6.84
	Hem Fir	405	2245	2445	2445	10750	4.42	10950	4.51	10950	4.51	3140	3525	3535	16505	6.79	16890	6.95	16900	6.95

1) Allowable loads are for a pair of SBP devices. SBPs shall be installed in pairs.
2) Multiple ply trusses shall be fastened together to act as a single unit.
3) EBL denotes effective bearing length and includes the actual bearing length in inches plus the contribution of the SBP device.
4) Assumes full seating of truss on top plate.

MiTek Stock No.	Ref. No.	W (in)	Truss/ Joist Thickness (in)	Fastener Schedule[2,7] Plate Top[5] Qty	Plate Sides Qty	Plate Type	Truss Qty	Truss Type	Application	DF/SP Allowable Loads (Lbs.)[2,3] Uplift[4] 160%	DF/SP F1 160%	DF/SP F2 160%	S-P-F Allowable Loads (Lbs.)[2,3] Uplift[4] 160%	S-P-F F1 160%	S-P-F F2 160%	Code Ref.
SBP4	TBE4	3-1/2	2-7/8 or less	4	8	10d	20	10d x 1-1/2	Standard Installation	1205	1530	1625	820	1195	1335	IBC, FL, LA
			3 or more					10d								
			2-7/8 or less	8	4	10d	20	10d x 1-1/2	One Tab Up (2x6 Top Plate)	785	1530	1530	660	1285	1190	--
			3 or more					10d								
			2-7/8 or less	4	4	10d	20	10d x 1-1/2	One Tab Up (Alternate)	755	1510	960	655	1190	730	--
			3 or more					10d						1285		
SBP6	TBE6	5-1/2	2-7/8 or less	4	8	10d	28	10d x 1-1/2	Standard Installation	1205	1530	1625	820	1195	1335	IBC, FL, LA
			3 or more					10d								
			2-7/8 or less	8	4	10d	28	10d x 1-1/2	One Tab Up (2x8 Top Plate)	925	1530	1530	775	1285	1285	--
			3 or more					10d								
			2-7/8 or less	4	4	10d	28	10d x 1-1/2	One Tab Up (Alternate)	755	1510	960	655	1285	730	--
			3 or more					10d								

1) Fastener Schedule is for a pair of SBP devices.
2) Allowable loads are for a pair of SBP devices. SBPs shall be installed in pairs.
3) Multiple ply trusses shall be fastened together to act as a single unit.
4) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
5) Where truss sits on a single top plate, 10d x 1-1/2 nails may be used on the top side of the top plate.
6) Other connector models are not to be combined with SBP to resist the uplift force or lateral loads. For special considerations, consult MiTek Engineering Services.
7) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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FTC / FTCF Floor Truss Clips

FTC clips slide easily onto the top or bottom chord and provides a guide to help position and support the second truss during assembly

FTCF clips easily install after the trusses are installed

Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA
Patents: U.S. Patent No. 5,653,079

Installation:

- Install the required fasteners according to the table.
- The truss designer must determine the number of clips required and the spacing between clips based on loading conditions.

Concentrated Load Condition: (side load attached to 2-ply truss):
The FTC clips shall be installed in pairs, or multiples of two, on either side of, and within 12" of a concentrated load.

Divide half of the concentrated load by the clip load transfer capacity to determine the number of clips required.

Example:
Concentrated (point) load = 3000 lbs, FTC1 capacity (DF/SP) = 865 lbs

$$\frac{1/2\ (3000\ \text{lbs})}{865\ \text{lbs}} = 1.73 = 2\ \text{clips}$$

Place 2 clips near concentrated load

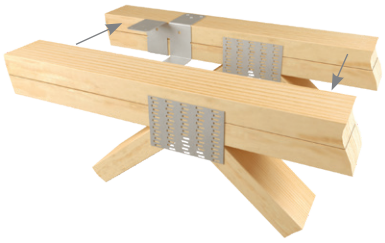
Uniform Load Condition: (side load attached to 2-ply truss):
To transfer uniform loads to the second ply, the FTC clips shall be installed at a regular interval along the loaded chord. Spacing between clips is limited to 24" maximum.

Divide the clip load transfer capacity by half the required load per lineal foot (PLF) to determine the spacing between clips.

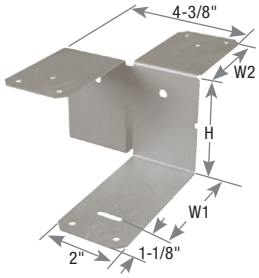
Example:
Uniformly (distributed) load = 500 PLF, FTC1 capacity (DF/SP) = 865 lbs

$$\frac{865\ \text{lbs}}{1/2\ (500)\ \text{PLF}} = 3.46'\ \text{spacing}$$

Since 3.46' is greater than 24" (MAX), space clips at 24" along the loaded chord.



Typical FTC installation



FTC



Typical FTC 2-ply metal web truss installation

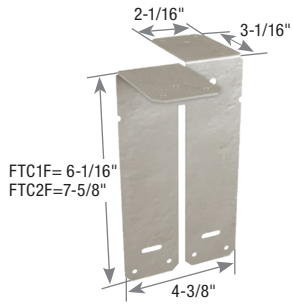


Step 1



Step 2

Typical FTC2F retrofit installation



FTCF

Truss Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule[3]		DF/SP Maximum Transfer Loads[1,2]	S-P-F Maximum Transfer Loads[1,2]	Code Ref.
				W1	W2	H	Qty	Type			
3 x 2	FTC32	--	18	2-1/16	2-1/2	1-1/2	10	10d x 1-1/2	680	590	IBC, FL, LA
4 x 2	FTC1	--	18	3-1/2	3-1/16	1-1/2	10	10d	865	750	
	FTC1F	--	18	3-1/16	--	4-3/8	10	10d	865	750	
(2) 4 x 2	FTC2	--	18	3-1/2	3-1/16	3	10	10d	865	750	
	FTC2F	--	18	3-1/16	--	4-3/8	10	10d	865	750	

1) Transfer loads are for 100% floor load, and shall not be increased for short term load duration.
2) Truss designer shall determine the number of clips for concentrated loads and the spacing for uniform loads.
3) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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VTT Valley Truss Tie

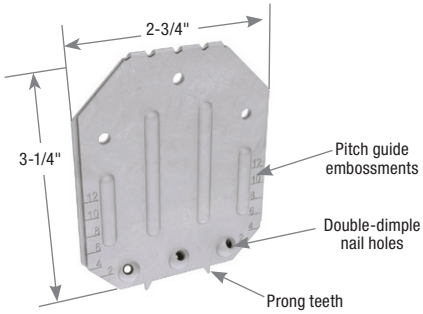
VTT Valley Truss Tie is designed to transfer loads from a valley truss into the supporting structure below. It also resists the sliding forces from downward loads when the valley truss is set upon a sloped lower roof. The ability to resist the sliding force eliminates the need for support wedges under the valley truss bottom chord or special order valley roof trusses with a bevel-cut bottom chord.

- Double-dimple nail holes assure the nails are driven in at the correct angle into the supporting member every time.
- Flat design requires no field bending to match the supporting roof pitch.
- 2-Ply steel with stiffening ribs provides a high resistance to sliding forces from downward loads.
- Prong teeth help hold the VTT in place while nailing.
- Accommodates supporting roof pitches from 0/12 to 12/12.
- Pitch guide embossments allow attachment to valley truss on ground.

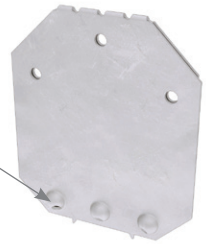
Materials: 18 gauge
Finish: G90 galvanizing
Patents: U.S. Patent No. 9,920,514 B1

Installation:
- Install the required fasteners according to the table.
- Mark the location of the supporting truss located below the lower roof sheathing.
- Place the VTT flat against the valley truss, centered over the top chord of the truss below. Tap the top edge down with a hammer to engage the prong teeth.
- Nail the VTT to the bottom chord of the valley truss using (3) 10d (0.148") x 1-1/2" nails.
- Install (3) 10d (0.148" x 3") common nails through the double-dimples and drive them through the sheathing into the top chord of the supporting truss below. One nail will be centered in the top chord below. The other two nails are driven in at preset angles guided by the dimple holes.

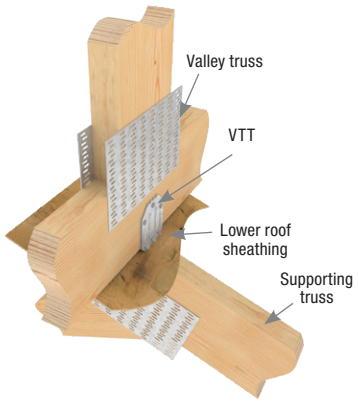
Alternate Installation for Ground/Pre-Placement of VTT
- Install the required fasteners according to the table.
- Mark the location of the supporting truss located below the lower roof sheathing. Center VTT horizontally on that mark.
- Use pitch guide embossments on part to locate the vertical position of VTT. Pitch numbers on connector are the numerator in the pitch slope ratio. (i.e. “6” indicates a 6/12 pitch, “12” indicates a 12/12 pitch, etc.)
- Secure the VTT to valley truss with (3) 10d (0.148") x 1-1/2" nails.
- When valley truss is hoisted into proper position on roof, install (3) 10d (0.148" x 3") common nails through the double-dimples and drive them through the sheathing into the top chord of the supporting truss below. One nail will be centered in the top chord below. The other two nails are driven in at a preset angles guided by the dimple holes.



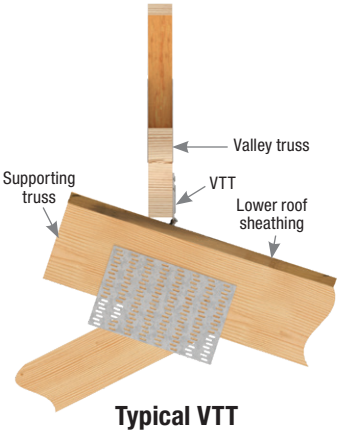
VTT Front View



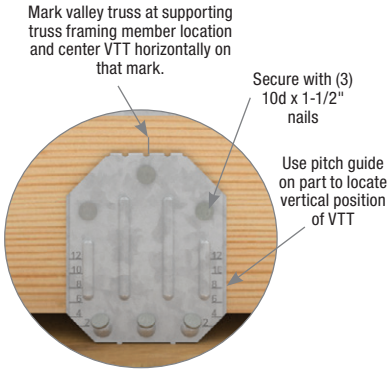
VTT Back View



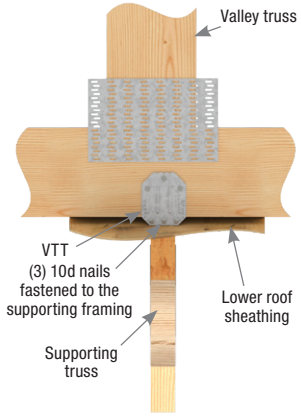
Typical VTT installation



Typical VTT side view installation



Alternate Installation for Ground / Pre-Placement installation



Typical VTT front view installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Fastener Schedule[4] Supporting Framing Qty	Supporting Framing Type	Valley Truss Qty	Valley Truss Type	Supporting Roof Pitch	DF/SP Allowable Loads (Lbs.) Download[3] 115%,125%,160%	DF/SP Uplift[1,2] 160%	S-P-F Allowable Loads (Lbs.) Download[3] 115%,125%,160%	S-P-F Uplift[1,2] 160%	Code Ref.
VTT	VTCR	18	2-3/4	3-1/4	3	10d	3	10d x 1-1/2	< 4/12	840	375	685	270	--
									4/12 to < 8/12	840	445	685	325	
									8/12 to 12/12	840	480	685	400	

1) Uplift Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Uplift loads are based on installation over 7/16" or 15/32" sheathing.
3) Downloads have been increased for snow, construction and wind loads; no further increase shall be permitted.
4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

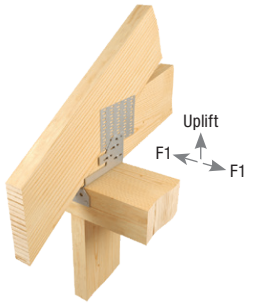
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STC Truss Clips

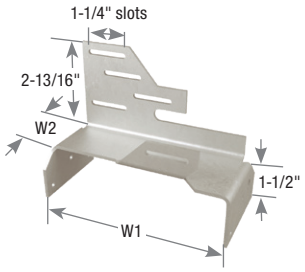
The STC provides uplift resistance by securing trusses to top plates. Slotted nail holes allow for horizontal movement as scissor trusses deflect.

Materials: 12 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- Do not fully set truss nails into slots.
- Install truss nails on interior edge of slot to allow horizontal movement up to 1-1/4".



Typical STC installation



STC

MiTek Stock No.	Ref. No.	Steel Gauge	Description	Dimensions (in) W1	Dimensions (in) W2	Fastener Schedule[2] Truss Qty	Fastener Schedule[2] Truss Type	Fastener Schedule[2] Plate Qty	Fastener Schedule[2] Plate Type	DF/SP Allowable Loads (Lbs.) Uplift[1] 160%	DF/SP Allowable Loads (Lbs.) F1 160%	S-P-F Allowable Loads (Lbs.) Uplift[1] 160%	S-P-F Allowable Loads (Lbs.) F1 160%	Code Ref.
STC24	TC24	12	2 x 4 top plate	3-9/16	1-5/8	5	10d x 1-1/2	6	10d x 1-1/2	465	605	410	470	IBC, FL, LA
STC26	TC26	12	2 x 6 top plate	5-1/2	1-5/8	5	10d x 1-1/2	6	10d x 1-1/2					
STC28	TC28	12	2 x 8 top plate	7-1/4	1-5/8	5	10d x 1-1/2	6	10d x 1-1/2					

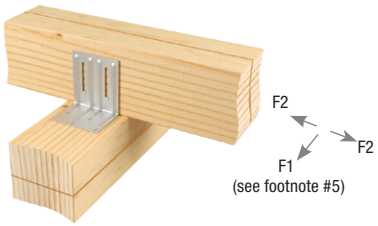
1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

TR Roof Truss Ties

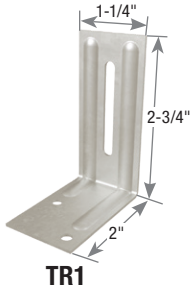
Slotted design allows truss to deflect without imposing load on wall below.

Materials: See table
Finish: G90 galvanizing

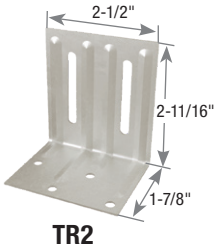
Installation:
- Install the required fasteners according to the table.
- Do not fully set truss nails into slots.
- Locate nails into the center of slots.
- **Due to the potential for squeaks, the TR series products are not recommended for floor applications.**



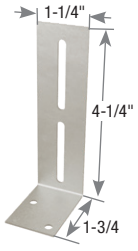
Typical TR2 installation



TR1



TR2



TR1T

MiTek Stock No.	Ref. No.	Steel Gauge	Description	Fastener Schedule[6] Truss Qty	Fastener Schedule[6] Truss Type	Fastener Schedule[6] Plate Qty	Fastener Schedule[6] Plate Type	DF/SP Allowable Loads (Lbs.)[1] Without Gap[2] F1[5] 160%	DF/SP Allowable Loads (Lbs.)[1] Without Gap[2] F2 160%	DF/SP Allowable Loads (Lbs.)[1] With 1/4" Gap[3] F1[5] 160%	DF/SP Allowable Loads (Lbs.)[1] With 1/4" Gap[3] F2 160%	DF/SP Allowable Loads (Lbs.)[1] With 1/2" Gap[4] F1[5] 160%	DF/SP Allowable Loads (Lbs.)[1] With 1/2" Gap[4] F2 160%	Code Ref.
TR1	STC	18	single slot	1	8d	2	8d	85	50	35	35	--	--	--
TR1T	STCT	16	single slot	1	8d	2	8d	240	--	130	--	80	--	
TR2	DTC	18	double slot	2	8d	4	8d	125	210	85	135	--	--	

1) Loads have been increased for short-term loading; no further increase allowed.
2) Truss must be bearing on top plate to achieve the allowable loads under "Without Gap".
3) Installed with maximum 1/4" space between rafter or truss and top plate under "With 1/4" Gap". Space is not limited to 1/4", where loads are not required.
4) Installed with maximum 1/2" space between rafter or truss and top plate under "With 1/2" Gap". Space is not limited to 1/2", where loads are not required.
5) To achieve F1 loads in both directions, clips must be installed on both sides of the truss and staggered to avoid nail interference.
6) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long.

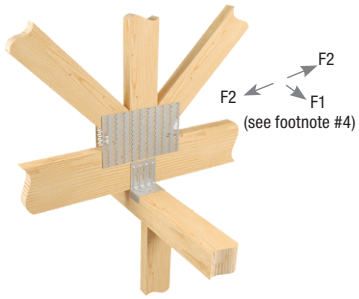
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HTC Heavy Truss Deflection Clip

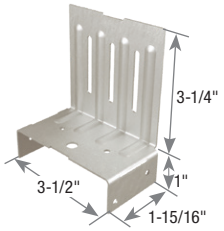
Slotted design allows truss to deflect without imposing load on wall below.

Materials: 16 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- Do not fully set truss nails into slots.



Typical HTC4 installation



HTC4

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[4] Plate Top Qty	Plate Side Qty	Truss/Rafter Qty	Type	DF/SP Allowable Loads (Lbs.)[1] Without Gap[2] F1[5] 160%	Without Gap[2] F2 160%	With 1-1/4" Gap[3] F1[5] 160%	With 1-1/4" Gap[3] F2 160%	Code Ref.
HTC4	HTC4	16	2	4	3	10d x 1-1/2	655	450	235	285	IBC, FL, LA

1) Loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Truss/Rafter must be bearing on top plate to achieve the allowable loads under "Without Gap".
3) When installed with maximum 1-1/4" space between truss/rafter and top plate, use loads under "With 1-1/4" Gap".
4) To achieve F1 loads in both directions, clips must be installed on both sides of the truss and nails staggered to avoid nail interference.
5) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

T10 Hoist Plates

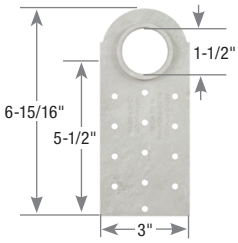
The T10 Hoist Plate is engineered with a reinforced collar around the hoist hole for added strength. Install with MiTek's LL930 LumberLok Exterior Structural Connector Screws for greater uplift while allowing for easy removal of the connection after the hoisted member is in place.

Materials: 14 gauge
Finish: G90 galvanizing

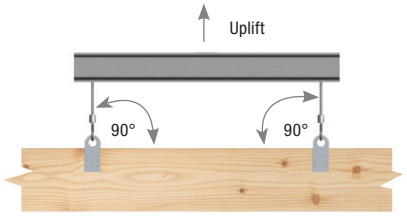
Installation:
- Install the required fasteners according to the table.
- Fill all fastener holes that align with the wood. The minimum quantity is listed in the table below.
- MiTek's LL930 screws are #9 (0.131" diameter) x 2-7/8" long.
- Install LL930 screws using a low speed clutch drill with T20* drive (not included). The washer head should be flat to the surface. Do not over-tighten the screws.
- **Impact drivers are not recommended for use with LumberLok Screws.**



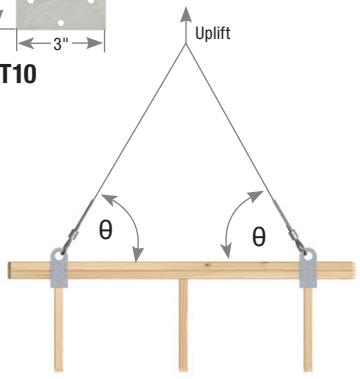
Typical T10 installation



T10



Typical 90° installation



Typical 60° installation

MiTek Stock No.	Ref. No.	Steel Gauge	Qty of T10s	Fastener Schedule Min. Qty	Fastener Schedule Type[2,3]	Angle from Horizontal θ (degrees)	DF/SP Allowable Load (Lbs.) Uplift 125%[1]	S-P-F/HF Allowable Loads (Lbs.) Uplift 125%[1]	Code Ref.
T10	CHC	14	1	10	8d	60	800	800	--
						90			
			2	8	LL930-GC	45 - 59	1180	1180	
						60 - 74	1440	1440	
						75 - 90	1620	1620	

1) Allowable load shall not be increased for other load duration factors.
2) LL930-GC denotes a LumberLok Screw (#9 x 2-7/8" long) sold by MiTek and must be ordered separately.
3) **NAILS:** 8d common nails are 0.131" dia. x 2-1/2" long.

*T20 is a trademark of Acument

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FS / FSS Truss Field Splice Kits

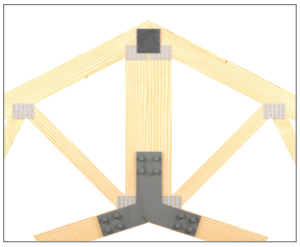
Job site splicing of long trusses is made easier with Truss Field Splice Kits. The FS and FSS (for scissors trusses) includes a pair of plates, bolts, nuts, and a Splice Clip for top chord alignment. Allowable loads are sometimes limited by tension in the net section of the wood. Choose the bottom chord size and species that will satisfy the tension requirement. Analyze tension in the web to determine the required size.

Materials: FS/FSS – See table, bolts, and nuts included Splice Clip – 12 gauge

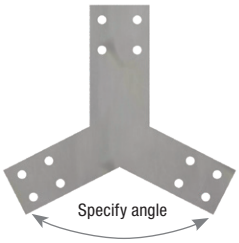
Finish: FS & FSS – Primer; Splice Clip – Primer; Bolts – zinc plating

Installation:

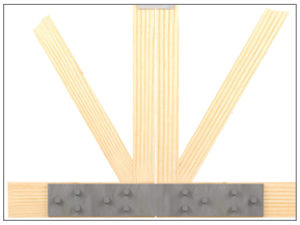
- Install the required fasteners according to the table.
- Position the two trusses, center one splice plate on the bottom chords and clamp in place for a drilling template. Install the Splice Clip at the top truss plate and fasten with (18) 10d (0.148" dia) x 1-1/2" nails. Drill through the bottom chord using splice plate as a template. Place splice plate on each side and bolt the connection firmly.



Typical FSS and Splice Clip installation



FSS



Typical FS installation



FS



Splice Clip

MiTek Stock No.	Ref. No.	Steel Gauge	Truss Plies	Bolt Schedule Qty	Bolt Schedule Size (in)	Chord Size	Allowable Loads (Lbs.)[1,2] DF 115%	SP 115%	S-P-F 115%	Code Ref.
FS8B	--	7	1	8	3/4 x 3	2 x 6	4995	4845	3910	
						2 x 8	6695	6305	5240	
						2 x 10	7195	7565	6030	
FS8B-2	--	7	2	8	3/4 x 5	2 x 6	9995	9690	7820	
						2 x 8	13390	12615	10480	
						2 x 10	14130	14725	12140	
FS8B-3	--	7	3	8	3/4 x 7	2 x 6	14120	14540	11730	
						2 x 8	14145	14740	13070	
						2 x 10	14130	14725	13075	
FS12B	--	3	1	12	3/4 x 3	2 x 6	4995	4845	3910	
						2 x 8	6695	6305	5240	
						2 x 10	8320	7565	6510	
FS12B-2	--	3	2	12	3/4 x 5	2 x 6	9995	9690	7820	
						2 x 8	13390	12615	10480	
						2 x 10	16640	15125	13020	
FS12B-3	--	3	3	12	3/4 x 7	2 x 6	14990	14540	11730	--
						2 x 8	20085	18920	15720	
						2 x 10	21770	22670	19530	
FSS8B	--	7	1	12	3/4 x 3	2 x 6	4995	4845	3910	
						2 x 8	6695	6305	5240	
						2 x 10	7195	7565	6030	
FSS8B-2	--	7	2	12	3/4 x 5	2 x 6	9995	9690	7820	
						2 x 8	13390	12615	10480	
						2 x 10	14130	14725	12140	
FSS12B	--	3	1	18	3/4 x 3	2 x 6	4995	4845	3910	
						2 x 8	6695	6305	5240	
						2 x 10	8320	7565	6510	
FSS12B-2	--	3	2	18	3/4 x 5	2 x 6	9995	9690	7820	
						2 x 8	13390	12615	10480	
						2 x 10	16640	15125	13020	

1) Allowable loads shall not be increased for other load duration factors.
2) Allowable loads are based on the lesser of the calculated bolt loads and the calculated wood tensile strength at the critical net section.
3) Wood tensile strengths are based on the Ft of 450 psi for S-P-F, 575 psi for DF-L, and approximately 540 psi for SP; and increased by the size factors in accordance with the NDS®.
4) Bolts shall confrom to ASTM A 307 Grade A or better.

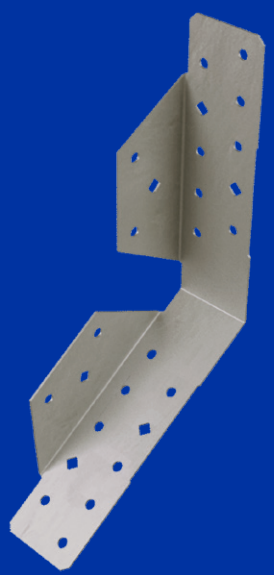
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DECK & FENCES



MiTek®

DECK & FENCES	296-305
Deck Connectors	298-300
Stair Angles	301
Angles	302
Fence Hardware	303-305



ADTT-TZ Adjustable Deck Tension Tie

ADTT-TZ is an Adjustable Deck Tension Tie designed to effectively transfer the out of plane lateral loads of the deck to the house structure exceeding "Hold-down Device" requirements per 2021 IRC, Section 507.9.2 [Figure R507.9.2(2)].

Features:

- Adjustable design allows lag screw installation at variable distance below deck joist
- 2-hole break-out washer (BO-W) will work with multiple screw sizes
- Blocking extensions not required

Materials: 14 gauge
Finish: G-185 galvanizing
Codes: See table for code references
Patents: U.S. Patent No. 9,809,974

Installation:

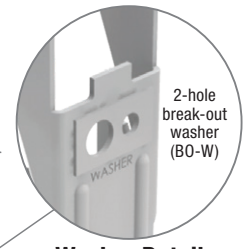
- Install the required fasteners according to the table.
- Install with MiTek WS8-EXT structural wood screw or 3/8" HDG lag screw. WS8-EXT or 3/8" HDG lag screws may be installed adjacent or up to 4-3/8" below deck joist (see Figure A).
- The WS8-EXT screw will utilize the smaller hole and a 3/8" HDG lag screw uses the larger hole. Thread the screw through BO-W and the large 7/16" hole at the base of the ADTT-TZ.
- Drive screw horizontally and aligned vertically with the deck joist into the wall top plate of the main (house) structure.
- Install four (4) of the specified joist fasteners into vertical legs. (Two (2) on each side of deck joist).
- Secure front brace with six (6) specified joist fasteners.
- Re-tighten the WS8-EXT or 3/8" HDG lag screw as needed to fully engage with the ADTT-TZ. **DO NOT OVERDRIVE.** Note: Minimum 3" thread penetration required for proper installation of WS8-EXT or HDG lag screw.
- **For detailed installation instructions refer to MiTek-US.com.**



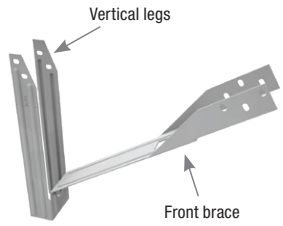
Typical ADTT-TZ extended installation



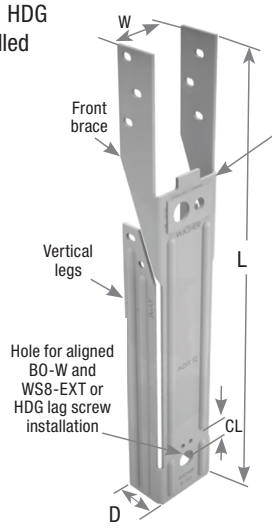
Typical ADTT-TZ contracted installation



Washer Detail



ADTT-TZ ready for installation



ADTT-TZ out of box

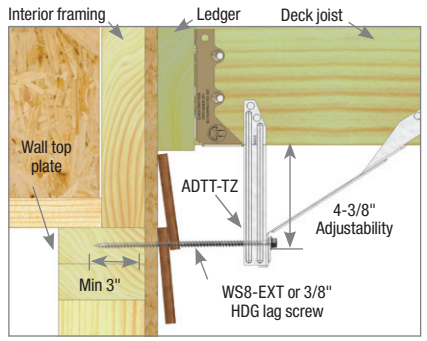


Figure A

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	L	D	CL	Fastener Schedule Wall Qty	Wall Type[3,4,5]	Joist Qty	Joist Type[6,8]	Installation Type[1]	DF/SP Allowable Tension (Lbs.) 160%	Δ (in) at 160%[2]	S-P-F Allowable Tension (Lbs.) 160%	Corrosion Finish	Code Ref.
ADTT-TZ	DTT1Z	14	1-9/16	10-1/2	15/16	3/8	1	3/8" HDG Lag Screw	10	10d x 1-1/2 HDG	Contracted	820	0.070	820		IBC, FL, LA
											Extended	850	0.117	810		
									10	LL915	Contracted	820	0.121	780		--
											Extended	790	0.114			
							1	WS8-EXT	10	10d x 1-1/2 HDG	Contracted	830	0.080	780		IBC, FL, LA
											Extended	835	0.113			
									10	LL915	Contracted	830	0.121	780		--
											Extended	790	0.114			
ADTT-TZKT[7]	DTT1Z-KT	14	1-9/16	10-1/2	15/16	3/8	1	WS8-EXT	10	LL915	Contracted	830	0.121	780		--
											Extended	790	0.114			

1) Allowable loads are for the ADTT-TZ installed tight to the bottom of the joist (Contracted) or 4" from bottom of joist to ADTT-TZ bend line (Extended).
2) Deflections are derived from static, monotonic load tests of devices connected to DF wood members with specified fasteners.
3) WS8-EXT is a 1/4" dia. x 8" long screw sold by MiTek and must be ordered separately if not purchasing the kit. The minimum thread penetration into the top plate of the wall framing is 3".
4) 3/8" HDG Lag Screw is an ASTM A307 Grade A lag screw with a thread diameter of 3/8" and is hot-dip galvanized to ASTM A153 standards. The minimum thread penetration into the top plate of the wall framing is 3". Lag screws are available at your local hardware store and must be purchased separately.
5) Check with your siding manufacturer for recommendations for fastening through your siding material.
6) LL915 denotes a MiTek LumberLok Screw (#9 x 1-3/8" long) and must be ordered separately if not purchasing the kit.
7) ADTT-TZKT is a kit with (4) ADTT-TZ packaged with MiTek WS8-EXT structural wood screws and LL915 LumberLok screws.
8) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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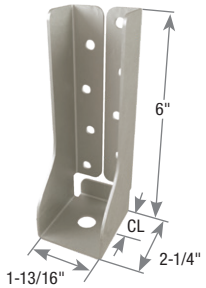
Deck Tie Back reinforces the connection of rail posts to a deck. Also provides lateral strength of deck through ledger attachment by securing deck to house framing.

Materials: 14 gauge
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA, IRC R507.1

Installation:
- Install the required fasteners according to the table.
- Install with MiTek's THR 1/2" threaded rod or equivalent.
- Drive MiTek's WS15-EXT structural wood screws into joist.
- Re-install threaded rod or anchor bolt. Secure with washer and nut.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with wrench.



Typical DTB-TZ rail post installation



DTB-TZ



Typical DTB-TZ deck through ledger installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule				Allowable Loads (Lbs.)			Corrosion	Finish	Code Ref.
							Wall		Joist		DF/SP	S-P-F				
			W	L	D	CL	Qty	Bolt[3]	Qty	Screws[1]	Tension 160%	Tension 160%	Deflection Δ (in) at 160%[2]			
DTB-TZ	DTT2Z, FSC	14	1-13/16	6	2-1/4	1-1/8	1	1/2	8	WS15-EXT	1835	1510	0.119			IBC, FL, LA

1) MiTek's WS15-EXT structural wood screws are 1/4" dia. x 1-1/2" long and are included with DTB-TZ Deck Tie-Backs.
2) Deflections are derived from static, monotonic load tests of devices connected to DF wood members with specified fasteners.
3) Minimum ASTM A307 bolt or 1/2" threaded rod with cut washer and hex nut.
New products or updated product information are designated in **blue font**.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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CSH Concealed Stringer Hanger

The CSH-TZ concealed stringer hanger provides a method of connecting a stair stringer with a hidden hanger. The seat of the hanger is adjustable to match the slope of the stair stringer.

The reversible design allows the connector to be used on the left, right, or interior stringers. The CSH-TZ may be used with MiTek's SCA Stair Angles for a complete, easy-to-use stair framing solution.

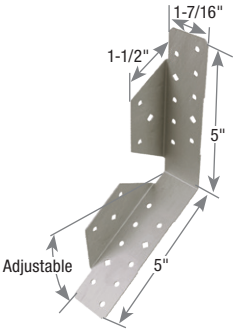
Materials: 18 gauge
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA
Patents: U.S. Patent No. 7,631,463

Installation:
- Install the required fasteners according to the table.
- **Bend angle only once.**

Steps:
1. Attach CSH-TZ to header with tabs positioned towards the inside of the stringer member.
2. Adjust the seat of the CSH-TZ to match the slope of the stringer member. Diamond shaped holes in the connector allow temporary installation of wood screws to aid in installation of the CSH-TZ.
3. Install 10d (0.148") x 1-1/2" HDG nails into the stringer and rim/band joist. Not all nail holes will be filled.



Typical CSH-TZ installation



CSH-TZ

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2,3]					DF/SP Allowable Loads (Lbs.)				S-P-F/Hem Fir Allowable Loads (Lbs.)				Corrosion Finish	Code Ref.
			Rim/Band Joist		Stringer												
			Qty	Type	Wide Face Qty	Narrow Face Qty	Type	100%	115%	125%	Uplift 160%	100%	115%	125%	Uplift 160%		
CSH-TZ	LSCZ	18	8	10d x 1-1/2 HDG	4	1	10d x 1-1/2 HDG	875	875	875	370	695	695	695	295		IBC, FL, LA

1) Uplift loads are increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Stainless steel ring shank nails must be used with stainless steel connectors to achieve tabulated allowable loads.
3) **NAILS:** 10d x 1-1/2 HDG nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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Stair angles simplify stair construction. There is no need to calculate and notch stair stringers. Stronger and safer than wood blocking, and the angle and fasteners are hidden from view.

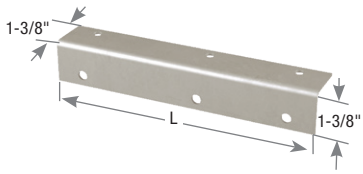
Materials: 12 gauge
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options

Installation:

- Install the required fasteners according to the table.
- MiTek WS15-EXT (1/4" dia. x 1-1/2" long) structural wood screws are not supplied with SCA angles.
- Use the SCA9-TZ for single 2x10 stair treads. Use the SCA10-TZ for double 2 x 6 stair treads.
- To calculate stair construction do the following:
  1. Find the number of steps needed by dividing the vertical drop in inches from the deck surface to grade by 7. Round off to the nearest whole number. (Ex: Vertical drop of 39" divided by 7" equals 5.57 rounded off is 6)
  2. Find the step rise by dividing the vertical drop by the number of steps (39" divided by 6 = 6.5")
  3. Find the step run by measuring the depth of your tread board (Ex: (2) 2x6s with 1/4" gap will have a run of 11-1/4"). Not all nail holes will be filled.
  4. Find the stairway span by multiplying the run by the number of treads minus one (Ex: 11-1/4" x 5 = 56-1/4")
- Using the above calculations, mark stair angle locations on each stringer. Attach a stair angle to the inside of each stringer at the marked locations. Attach stringers to deck rim joist and railing posts. Position treadboards on angles and fasten from below.



Typical SCA9-TZ installation



SCA9-TZ

AVAILABLE IN GOLD COAT



Typical SCA10-TZ installation

MiTek Stock No.	Ref. No.	Steel Gauge	L (in)	Fastener Schedule[2,3] Qty	Fastener Schedule[2,3] Type	DF/SP Allowable Loads (Lbs.)[1] Download 100%	Corrosion Finish	Code Ref.
SCA9-TZ	TA9Z	12	9	6	WS15-EXT	445		--
SCA10-TZ	TA10Z	12	10	8	WS15-EXT	595		

1) Loads assume rise over run of 7/11.
2) MiTek's WS15-EXT structural wood screws are 1/4" dia. x 1-1/2" long and are not included with SCA angles.
3) HDG lag screws may be substituted for specified WS15-EXT structural wood screws with no load reduction.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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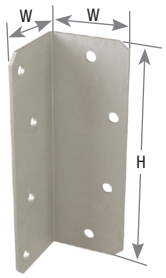
ML angles are multi-purpose angles that install easily with MiTek's WS15 structural wood screws. The staggered fastener pattern allows for back-to-back installations.

Materials: 12 gauge
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:
- Install the required fasteners according to the table.
- MiTek's WS15-EXT (1/4" dia x 1-1/2" long) structural wood screws are not supplied with ML angles.



Typical ML26-TZ installation
(ML24-TZ similar)



ML26-TZ
(ML24-TZ similar)

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Fastener Schedule[2,3] Header Qty	Fastener Schedule[2,3] Joist Qty	Fastener Schedule[2,3] Type	DF/SP Allowable Loads (Lbs.)[1] F1 100%	DF/SP F1 115%	DF/SP F1 125%	DF/SP F1 160%	S-P-F Allowable Loads (Lbs.)[1] F1 100%	S-P-F F1 115%	S-P-F F1 125%	S-P-F F1 160%	Corrosion Finish	Code Ref.
ML24-TZ	ML24Z	12	2	4	3	3	WS15-EXT	655	655	655	655	565	650	655	655		IBC,
ML26-TZ	ML26Z	12	2	6	4	4	WS15-EXT	920	1060	1090	1090	755	865	940	1090		FL, LA

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
2) MiTek's WS15 structural wood screws are 1/4" dia. x 1-1/2" long and are not included with angles.
3) For interior applications use MiTek's WS15 structural wood screws with interior coat finish.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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PRT15-TZ – is for 1-5/8" vertical pipe posts (1-7/8" outside pipe diameter). Can be field bent 90° for outside corner installations.

PRT2-TZ / PRT2H-TZ – is for 2" vertical pipe posts (2-3/8" outside pipe diameter). Can be field bent 90° for outside corner installations.

PRTIC2-TZ – is for inside corner installations. For 2" vertical pipe posts (2-3/8" outside pipe diameter).

Materials: See table

Finish: G-185 galvanizing

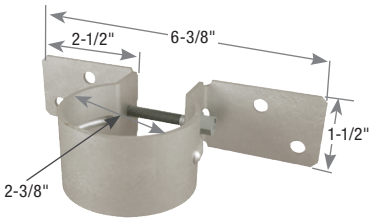
Options: See table for Corrosion Finish Options

Installation:

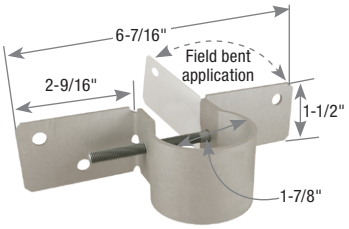
- Install the required fasteners according to the table.
- PRT15-TZ, PRT2H-TZ and PRTIC2-TZ - 1/4" Self Tapping Bolts are supplied with PRT models.
- Install self tapping bolts with 3/8" socket in predrilled holes.
- PRT2-TZ fastens with (1) 1/4" carriage bolt and nut (included) for tightening PRT2-TZ to pipe and (4) 1/4" HDG lag bolts for attaching tie to rail.
- Install 3 to 4 PRT's per pipe.
- PRT15-TZ, PRT2-TZ and PRT2H-TZ may be bent once to fit corner and angled conditions.
- **Bend angle only once.**



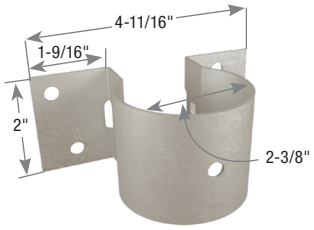
Typical PRT2H-TZ installation
PRT15-TZ & PRT2-TZ similar



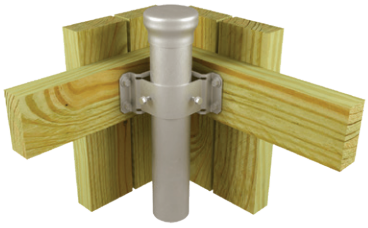
PRT2H-TZ



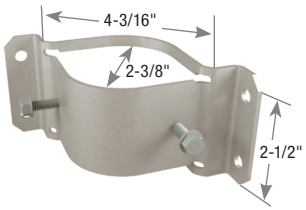
PRT15-TZ



PRT2-TZ



Typical PRTIC2-TZ installation



PRTIC2-TZ

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[1]				Corrosion Finish	Code Ref.
					Pipe		Rail			
			L	H	Qty	Type	Qty	Type		
PRT15-TZ	PGT1.5Z-R	12	6-7/16	1-1/2	1	1/4" Self Tapping Bolt	4	1/4" HDG Lag Bolt		
PRT2-TZ	PGT2E	16	4-11/16	2	1	1/4" HDG Carriage Bolt	4	1/4" HDG Lag Bolt		
PRT2H-TZ	PGT2Z-R, PGT2A	12	6-3/8	1-1/2	1	1/4" Self Tapping Bolt	4	1/4" HDG Lag Bolt		--
PRTIC2-TZ	PGTIC2Z-R	12	4-3/16	2-1/2	2	1/4" Self Tapping Bolt	4	1/4" HDG Lag Bolt		

1) MiTek's WS15-EXT (1/4" dia. x 1-1/2" long) structural wood screws can be substituted for specified lag bolts.
2) Install self tapping bolts (included) with 3/8" socket in predrilled holes.
3) Install 3 to 4 PRT's per pipe.
4) PRT15, PRT2 and PRT2H Pipe Rail Ties may be bent once to fit corner and angled conditions.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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ERB24 – Designed to mount prefabricated fence sections and works with 2x4 horizontal section rails

FB – Secures rails to wood posts

FRB24 – Secures continuous 2x4 rails to wood posts. Pre-punched holes allow installers to splice 2x4 rail ends within the bracket

Materials: See table

Finish: G-185 galvanizing

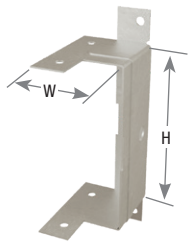
Options: See table for Corrosion Finish Options

Installation:

- Install the required fasteners according to the table.



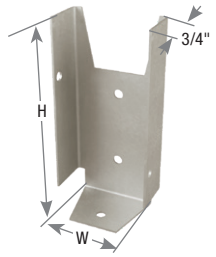
Typical ERB24-TZ installation



ERB24-TZ



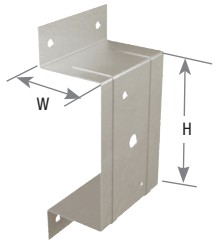
Typical FB24-TZ installation



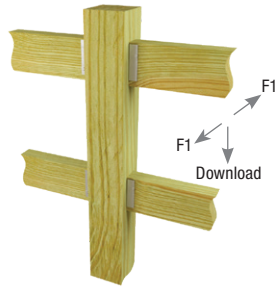
FB24-TZ



Typical FRB24-TZ installation



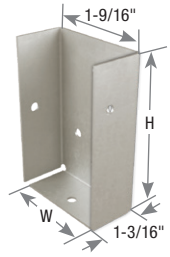
FRB24-TZ



Typical FB26-TZ installation



FB26-TZ



FB23-TZ



FB14-TZ

Rail Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Fastener Schedule[2] Rail Qty	Fastener Schedule[2] Rail Type	Fastener Schedule[2] Post Qty	Fastener Schedule[2] Post Type	DF/SP Allowable Loads (Lbs)[1] Download 100%	Download 115%	F1 100%	F1 115%	Corrosion Finish	Code Ref.
1 x 4	FB14-TZ	--	18	3/4	3-1/2	3	3/4 HDG Fastener	2	8d x 1-1/2 HDG	--	--	--	--		
2 x 3	FB23-TZ	--	20	1-9/16	2-3/8	3	8d x 1-1/2 HDG	4	8d x 1-1/2 HDG	--	--	--	--		
2 x 4	ERB24-TZ	--	18	1-1/2	3-9/16	4	8d x 1-1/2 HDG	3	8d HDG	--	--	--	--		
	FB24-TZ	FB24Z, FBR24Z	20	1-9/16	3-3/8	3	8d x 1-1/2 HDG	2	8d HDG	--	--	--	--		--
	FRB24-TZ	--	18	1-9/16	3-9/16	2	10d x 1-1/2 HDG	4	10d HDG	--	--	--	--		
2 x 6	FB26-TZ	FB26	18	1-9/16	5	4	10d x 1-1/2 HDG	4	10d x 1-1/2 HDG	330	330	350	400		
						4	LL915	4	LL915	315	360	315	360		

1) Allowable loads have been increased 15% for short duration loading. No further increase is permitted.

2) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long, 8d nails are 0.131" dia. x 2-1/2" long, 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, LL915 denotes a LumberLok screw #9 x 1-3/8" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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PCP Plastic Post Caps

These seamless caps keep water off post tops, protecting wood from moisture damage. The PCP's plastic construction is corrosion-proof and paintable.

Materials: Hi-impact plastic
Finish: Gray color

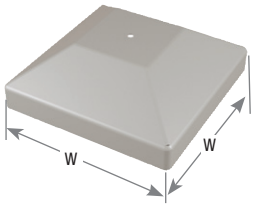
Installation:
- Fasten cap to post top with (1) 8d HDG or 10d HDG nail.

Post / Column Size[1]	MiTek Stock No.	Ref. No.	Dimension (in) W	Color	Code Ref.
4 x 4	PCP44	DPPC4BK	3-5/8	Gray	--
6 x 6	PCP66	DPPC6BK	5-5/8	Gray	

1) Not available in rough or full lumber sizes.



Typical PCP44 installation



PCP66

SFP / SMP Fence Post Connectors

Take the work out of fence post installation and repair with the Speedpost, SFP30, and Speedmender, SMP. The Speedpost is used to install 4x4 fence posts without digging post holes or pouring concrete. The Speedmender plates act as reinforcement brackets for rotted or damaged 4x4 fence posts.

SFP30 – For 6' nominally-sized 4x4 fence posts.

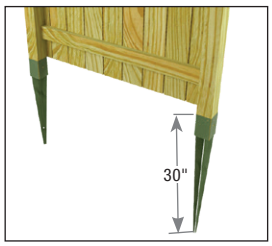
SMP – For nominally-sized 4x4 posts.

Materials: 13 gauge
Finish: Paint
Patent: U.S. Patent No. 7,152,841

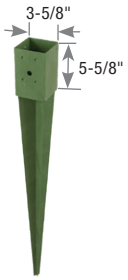
Installation:
- Install the required fasteners according to the table.
- Step-by-step installation instructions are labeled onto each product.

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	Code Ref.
4 x 4	SFP30	FPBS44	13	3	1/4" HDG Lag Bolt	--
4 x 4	SMP[1]	FPBM44	13	20	10d HDG	

1) Fastener schedule is per pair of SMPs.
2) **NAILS:** 10d nails are 0.148" dia. x 3" long.



Typical SFP30 installation



SFP30



Typical SMP installation



SMP

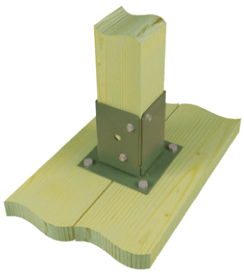
BD Bolt Down

Anchors 4x4 post to wood or concrete surfaces.

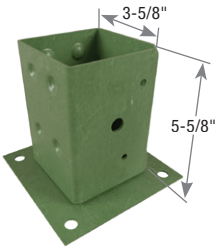
Materials: 13 gauge
Finish: Paint
Patents: U.S. Patent No. 7,152,841

Installation:
- Install the required fasteners according to the table.
- **Not rated for overturning resistance. Not recommended for unrestrained posts.**

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule Qty	Fastener Schedule Type (in)	Code Ref.
4 x 4	BD	FPBB44	13	3	1/4 x 1-1/2 HDG Lag Bolt	--



Typical BD installation



BD

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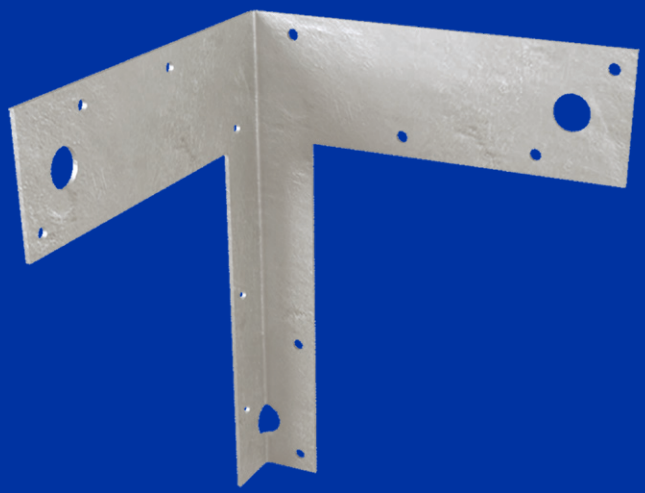
GENERAL HARDWARE



MiTek®

GENERAL HARDWARE 306-317

Plywood Clips	308
Drywall Clip	308
Insulation Supports	308
D.I.Y. Products	309
Protection Plates	310
Straps	311-312
Stud Shoes	312
Wall Bracing	313
Bridging	314-315
Shelf Brackets	316
Corner Tie	316
Wall Ties	316
Nail Plates	317
Mending Plates	317



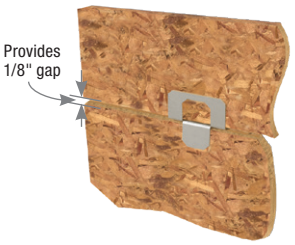
PC / RC Plywood Clips

Steel plywood clips. All models feature embossed dimples to provide 1/8" gap.

Materials: PC – 20 gauge; RC – 18 gauge
Finish: G90 galvanizing

Span Rating[1]	MiTek Stock No.	Ref. No.	Steel Gauge	Maximum Span[1] With PC	Maximum Span[1] Without PC	Plywood Thickness (in)	PC's Per Span	Code Ref.
24	RC38-250	PSCL3/8	18	24	20	3/8	1	
	PC716	PSCL7/16	20	24	24	7/16	1	
32	PC1532	PSCL15/32, PSCA15/32	20	32	28	15/32	1	
	PC12	PSCL1/2	20	32	28	1/2	1	--
40	PC1932	PSCL19/32	20	40	32	19/32	2	
	PC58	PSCL5/8	20	40	32	5/8	2	
48	PC34	PSCL3/4	20	48	36	3/4	2	

1) Based on code specified allowable spans for panel sheathing continuous over two or more spans with plywood strength axis perpendicular to supports.
2) Applicable to roof sheathing.
3) Applies to panels 24" or wider.
4) Uniform load deflection limitations 1/180 of span under live load plus dead load or 1/240 under live load only.



Typical PC installation


Typical RC installation


PC


RC

DC Drywall Clip

Drywall clips or "stops" help support drywall or wood paneling and reduce wood blocking on top plates, end walls, and corners.

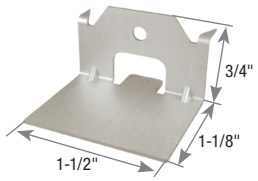
Materials: 20 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- Use 8d nails to install DC1, 16" on-center or less.

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[1] Qty	Fastener Schedule[1] Type	Code Ref.
DC1	DS	20	1	8d	--

1) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long.


Typical DC1 installation



DC1

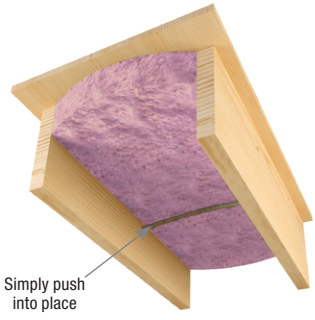
IS Insulation Supports

Insulation supports secure batt-type insulation in place between joists. Chisel-cut ends dig into joists for permanent holding. Easy to install in hard-to-reach crawl spaces.

Materials: 13 gauge carbon steel wire
Finish: None

Installation:
- Use IS16 for joist spaced 16" O.C. and IS24 for 24" O.C. spacing.
- Position insulation batt in place between joists. Hold IS unit at the center and push into place.
- Wear gloves and safety glasses during installation.

MiTek Stock No.	Ref. No.	Steel Gauge	Joist Spacing	Dimensions (in) Overall Length	Code Ref.
IS16	IS16-R100	13	16" O. C.	15-1/2"	--
IS24	IS24-R100	13	24" O. C.	23-1/2"	



Typical IS installation

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Connectors for homeowner / D.I.Y. Projects.

TTA12-TZ – an angle connects two 1x wood members at 90º angles.

TTA2-TZ – an angle connects two 2x wood members at 90º angles..

TTC42-TZ – a corner tie connects 2x wood members at 90º to the corner of a 4x4 post.

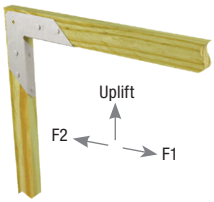
TTF22-TZ – a bracket connects 2x wood members to opposite sides of a 2x4 or 4x4 post.

TTR-TZ – a clip connects a 2x wood member to the face of another wood member.

TTU2-TZ – a U-clip connects 2x wood members crossing at 90º.

Materials: See table
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options

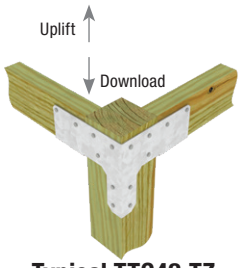
Installation:
- Install the required fasteners according to the table.
- Use all specified fasteners. See Product Notes, page 18.
- MiTek LumberLok LL915 (#9 x 1-3/8" long) wood screws are not supplied with connectors.



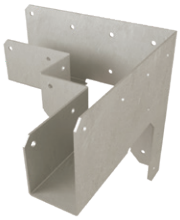
Typical TTA12-TZ installation



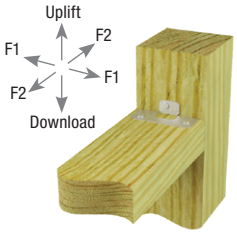
TTA12-TZ
(TTA2-TZ Similar)



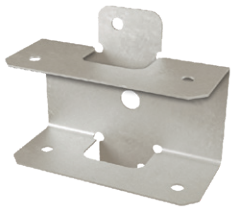
Typical TTC42-TZ installation



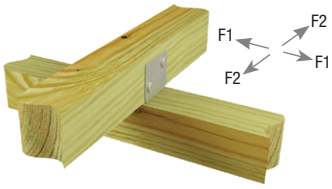
TTC42-TZ
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Typical TTR-TZ installation



TTR-TZ



Typical TTU2-TZ installation



TTU2-TZ



Typical TTF22-TZ installation



TTF22-TZ

MiTek Stock No.	Ref. No.	Steel Gauge	Post Size	Joist Size	Fastener Schedule[1] Post Qty	Post Type	Joist (Total) Qty	Joist (Total) Type	DF/SP Allowable Loads (Lbs.)[2,3] Download 100%	Uplift 100%	F1 100%	F2 100%	Corrosion Finish	Code Ref.
TTA12-TZ	RTA12	18	1x	1x	4	LL915	4	LL915	--	205	190	205		
TTA2-TZ	RTA2Z	16	2x	2x	4	LL915	4	LL915	--	185	255	185		
TTU2-TZ	RTU2	18	2x	2x	2	LL915	4	LL915	--	--	210	210		
TTR-TZ	RTR	20	2x	2x	2	LL915	4	LL915	210	210	210	155		--
TTF22-TZ	RTF2Z	18	2 x 4	2x	4	LL915	8	LL915	420	265	--	--		
TTC42-TZ	RTC42, RTC42Z	18	4 x 4	2x	14	LL915	8	LL915	735	420	--	--		

1) LL915 denotes a LumberLok Screw, #9 x 1-3/8" long.
2) TTF22-TZ: Allowable loads must be equally distributed on both joists.
3) TTC42-TZ: Allowable loads listed in this table are for each joist being carried by the post.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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ICPL / KNS / PL Protection Plates

Easy-to-install plates protect plumbing and power/communication wiring from nail or screw penetration. 16 gauge steel conforms to protection shield plate requirements of the National Electrical Code and International Plumbing Code.

ICPL58 – Installs with nails.

KNS1 / PL4 – Prongs allow for quick installation.

Materials: 16 gauge

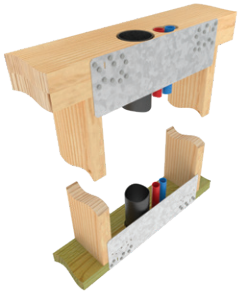
Finish: ICPL516-TZ – G-185 galvanizing;
All others – G90 galvanizing

Options: See table for Corrosion Finish Options

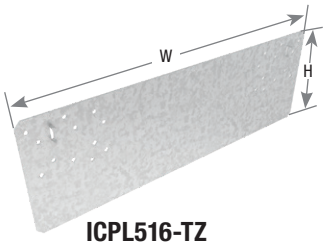
Codes: IRC P2603.2.1 & R602.6.1, IBC 2308.5.8, IPC 305.6

Installation:

- Use all specified fasteners. See Product Notes, page 18.



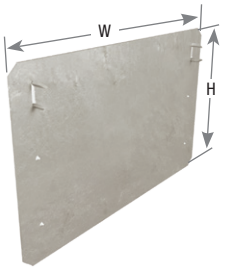
Typical ICPL516-TZ installation



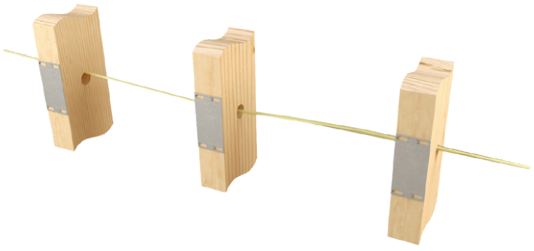
ICPL516-TZ



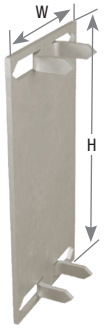
Typical ICPL58 installation



ICPL58



Typical KNS1 / PL4 installation



KNS1



PL4

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Installation Type	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	DF/SP Allowable Loads (Lbs.)[1] Tension 160%	S-P-F Allowable Loads (Lbs.)[1] Tension 160%	Corrosion Finish	Code Ref.
ICPL58	--	16	8-1/16	5	--	4	8d or prongs	--	--		PC
PL4	NS2	16	2	5	--	--	prongs	--	--		
KNS1	NS1	16	1-1/2	3	--	--	prongs	--	--		
ICPL516-TZ	PSPN516Z	16	16-1/4	5	Sill Plate	12	16d HDG + prongs	1355	1160		
					Double Top Plate	16	16d HDG + prongs	1805	1550		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

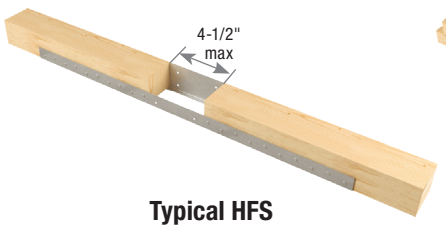
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The HFS Hardy Frame® Saddle is a 14 gauge steel channel intended to be used as a splice at locations where plumbing or other vertical penetrations destroy the structural integrity of a wall's top plates.

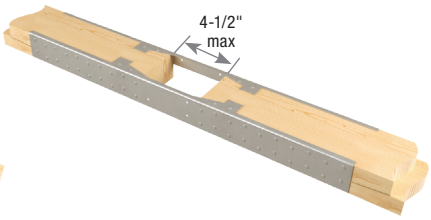
Materials: 14 gauge
Finish: G60 galvanizing
Codes: IBC, FL, LA

Installation:

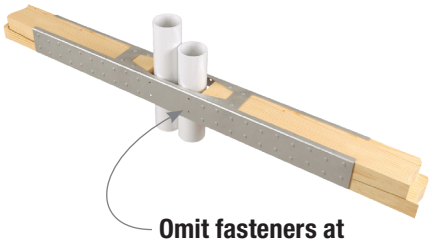
- Install the required fasteners according to the table.
- The Saddle can be installed over the top or from the underside of the top plates, and is capable of resisting both tension and compression loads in a clearspan of up to 4-1/2".
- For wall depths greater than 3-1/2", or to install after plumbing lines have been run, the product can be separated into two"L" shapes by gripping the legs of the channel and flexing the top surface along the serration lines.



Typical HFS installation to underside of double top plates.



For wall depth larger than 3-1/2", separate HFS into two pieces (L shape) at the two slot holes



Omit fasteners at first holes when the end distance is less than 1"

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Notch Width	Fastener Schedule Qty[2]	Fastener Schedule Type[4]	DF/SP Allowable Loads (Lbs.)[1,3] Tension 100%	DF/SP Allowable Loads (Lbs.)[1,3] Compression 100%	S-P-F Allowable Loads (Lbs.)[1,3] Tension 100%	S-P-F Allowable Loads (Lbs.)[1,3] Compression 100%	Code Ref.
HFS24	--	14	3-5/8	24	≤ 4-1/2	24	16d	2950	2500	2537	2500	IBC, FL, LA
HFS36	--	14	3-5/8	36	≤ 4-1/2	32	16d	4280	2500	3681	2500	

1) Allowable tension loads are for normal duration. The values may be adjusted for other durations, such as for seismic and wind loading in accordance with the NDS.
2) Fastener quantity is the number of 16d common nails to be installed into each of the members to be joined. When the end distance from the joint to the first nail hole is less than 1", omit the (2) nails in the 3" side-plate and the (1) nail in the 1-1/2" side-plate that are nearest the joint.
3) There is no reduction in double top plate capacity provided the HFS24 is installed with minimum (22) 16d common nails in each member being joined (44 total) and the HFS36 is installed with (31) 16d common nails in each member (62 total).
4) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

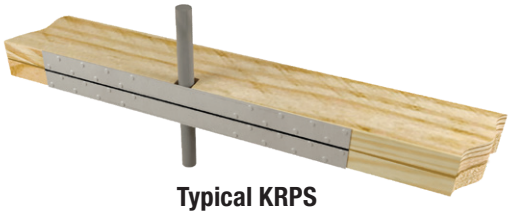
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KRPS Repair Straps

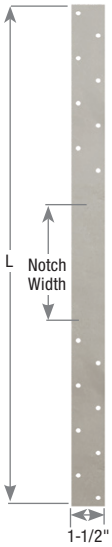
KRPS repair straps meet IBC, IRC, & L.A. City requirements for notched plates where placed in partitions.

Materials: See table
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: See tablet for code references
IRC R602.6.1, IBC 2308.5.8

Installation:
- Install the required fasteners according to the table.
- Install one strap tie for each 2x plate.



Typical KRPS installation



KRPS

MiTek Stock No.[3]	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Notch Width (in)	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	DF/SP Allowable Loads (Lbs.)[1] Tension 160%	Corrosion Finish	Code Ref.
KRPS18	RPS18	16	1-1/2	18-5/16	≤ 5-1/2	12	16d	1345		IBC, FL, LA
KRPS22	RPS22	16	1-1/2	22-5/16	≤ 5-1/2	12	16d	1345		IBC, FL
						16		1790		IBC, FL, LA
KRPS28	RPS28	16	1-1/2	28-5/16	≤ 12	12	16d	1345		IBC, FL
						16		1790		IBC, FL, LA

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

STS Stud Shoes

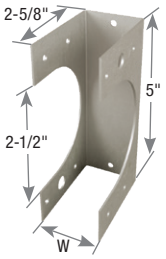
Stud shoes reinforce joists, plates, studs, or rafters which have been drilled or notched during construction.

Materials: 18 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- **STS units are not structurally rated and should not be used as a total member replacement in structural applications.**
- For use with 2" O.D. pipe.



Typical STS1 installation



STS

MiTek Stock No.	Ref. No.	Steel Gauge	Description	Dimension (in) W	Fastener Schedule[1,2] Qty	Fastener Schedule[1,2] Type
STS1	--	18	Single Stud	1-9/16	10	10d x 1-1/2
STS2	--	18	Double Stud	3-1/16	12	10d
STS3	--	18	Triple Stud	4-9/16	14	10d

1) Maximum hole size = 2".
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

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Wall bracing products are engineered to meet the prescriptive 1x4 let-in brace code requirements.

RWB – Flat bracing conveniently packaged in a handy roll out dispenser. Perfect for unexpected job site shortages. The 35-pound dispenser pack fits easily into a truck bed for transport. Pre-embossed snap-off points can be broken off by hand (wear gloves for safety).

WB – A flat style bracing engineered to easily nail to studs. No cutting or fitting needed.

WBC – L-shaped design for additional strength and rigidity.

WBT – Rolled edges and T-style design gives the WBT strength, rigidity, and eliminates sharp, sheared edges.

Materials: See table

Finish: G90 galvanizing

Codes: IBC, FL, LA, IRC Table 602.10.4, IBC Table 2308.6.3(1)

Installation:

- Install the required fasteners according to the table.
- Bracing is a framing aid, not a substitute for structural shear wall components.
- **RWB / WB** – Use with 16" or 24" o.c. studs. Install in pairs forming an "X" or opposing "V" at each end of a maximum 25-foot long wall panel.

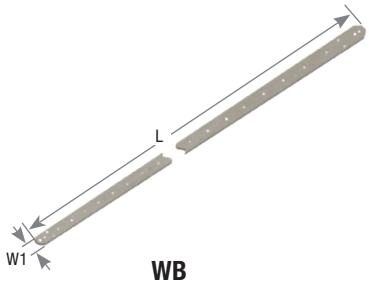
  Steps: Square the panel. Straighten any kinks in bracing caused by handling. Lay bracing on the panel flush to the top of top plate and flush to the bottom of the bottom plate. Secure bracing to the top plate and bottom plate using 16d nails (WB) or 8d nails (RWB). Position second bracing at an angle opposite to the first brace to form an "X" and secure to top and bottom plate as with the first bracing. Using 8d nails, secure bracing to all intersecting studs.
- **WBC / WBT** – Use with 16" or 12" o.c. studs. Install one brace at each end of wall section, not exceeding 25 feet, in an opposing "V" pattern. Use the web portion of a length of bracing as a straight edge to mark studs. Cut a saw kerf 5/8" deep (1" deep for WBC). Insert the bracing web into the saw kerf, and drive one nail into the top plate. Raise the wall section into place and plumb. Finish fastening according to the nail schedule.



RWB pre-embossed snap-off points



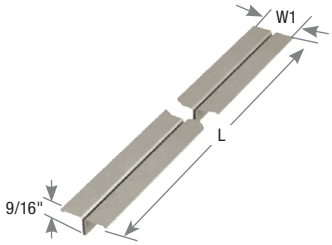
Typical RWB/WB installation



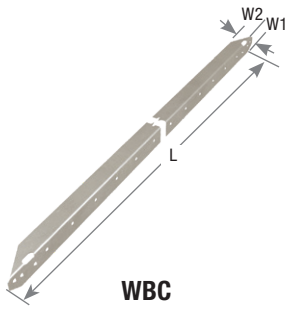
WB



Typical WBC/WBT installation



WBT



WBC

MiTek Stock No.[1]	Ref. No.	Steel Gauge	Dimensions (in)			Pieces Per Roll	Wall Height (ft)	Install Angle	Fastener Schedule[2]				Code Ref.
			W1	W2	L				Each Plate		Each Stud		
									Qty	Type	Qty	Type	
RWB96	WB106C	16	1-1/4	--	9' 6"	15	8'	60°	4	8d	1	8d	IBC, FL, LA
RWB114	WB126C	16	1-1/4	--	11' 4-3/8"	12	8'	45°	4	8d	1	8d	
RWB143	WB143C	16	1-1/4	--	14' 3"	10	10'	45°	4	8d	1	8d	
WBC10	RCWB10	18	7/8	1	9' 5-5/8"	--	8'	60°	2	16d	1	8d	
WBC12	RCWB12	18	7/8	1	11' 4-3/8"	--	8'	45°	2	16d	1	8d	
WBT10	TWB10	22	1-3/8	--	9' 3"	--	8'	60°	4	8d	1	8d	
WBT12	TWB12	22	1-3/8	--	11' 4"	--	8'	45°	4	8d	1	8d	
WBT14	RCWB14, TWB14	22	1-3/8	--	14' 2"	--	10'	45°	4	8d	1	8d	
WB106	WB106	16	1-1/4	--	9' 5-1/2"	--	8'	60°	3	16d	1	8d	
WB126	WB126	16	1-1/4	--	11' 4-1/4"	--	8'	45°	3	16d	1	8d	

1) These products are intended to be an alternative to the nominal 1 x 4 continuous diagonal wood brace as described in the prescriptive wall bracing provisions of the applicable code.

2) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

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O / N Bridging

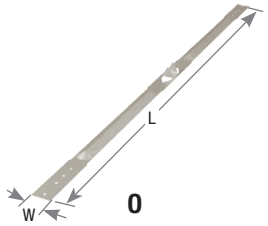
O – The O series spans three joists in under/over installation. Prong teeth in the center help reduce nailing. For 1-1/2" wide dimensional lumber only.

N – The N series spans two joists per unit. Can be used for bridging or bracing. See table.

Materials: See table
Finish: G90 galvanizing
Codes: IBC, FL, LA
IRC R502.7.1, IRC R802.8.1, IBC 2308.4.6, IBC 2308.7.8



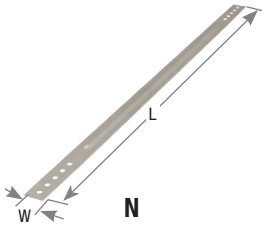
Typical O installation



O



Typical N installation



N

Installation:

- Install the required fasteners according to the table.
- For all models – Bridging should be installed on floor joists with a nominal depth-to-thickness ratio of 5 to 6 or more (2021 National Design Specification for Wood Construction; Section 4.4.1). Bridging units should be installed in pairs at intervals of 8' or less. Bridging pairs should form an "X" between joists; leave a slight space between the units to avoid noise-generating contact. Follow specific installation instructions below for particular models.
- Install prior to subfloor sheathing. Use (2) 8d (0.131") x 1-1/2" nails at each end. Fully seat nails to avoid any movement against the bridging and subsequent floor noise.
- Must be installed in cross pairs. Avoid bridging overlap, it may cause squeaks.

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[1]		Code Ref.
			W	L	Qty	Type	
N16	LTB20, TB20	22	3/4	19-3/4	4	8d x 1-1/2	IBC, FL, LA
O40	LTB40	22	3/4	39-3/4	4	8d x 1-1/2	
N27	TB27	20	3/4	26-13/16	4	8d x 1-1/2	
N30	TB30	20	3/4	29-13/16	4	8d x 1-1/2	
N36	TB36	20	3/4	35-13/16	4	8d x 1-1/2	
N42	TB42	20	3/4	42	4	8d x 1-1/2	
N48	TB48	20	3/4	48	4	8d x 1-1/2	
N54	TB54	20	3/4	54	4	8d x 1-1/2	
N56	TB56	20	1	56	4	8d x 1-1/2	
N60	TB60	20	1	60	4	8d x 1-1/2	

1) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long.

Joist Installations

Joist Type	Joist Height (in)	Joist Spacing[1]								
		12"	16"	19.2"	24"	30"	32"	36"	42"	48"
2x Dimensional Lumber	7-1/4	--	O40/N16	N27	N27/N30	N36	N36	N42	N48	N54/N56
	9-1/4	N16	O40/N16	N27	N30	N36	N36	N42	N48	N54/N56
	11-1/4	O40/N16	O40	N27	N30	N36	N36	N42	N48	N54/N56
1-3/4" SCL	9-1/2	N16	N16	N27	N30	N36	N36	N42	N48	N54/N56
	11-7/8	N16	N16	N27	N30	N36	N36	N42	N48	N54/N56
	14	N16	N27	N27/N30	N30	N36	N36	N42	N48	N54/N56
	16	N27	N27	N27/N30	N30	N36	N42	N42	N48	N54/N56
I-Joists: 2-1/2" & 3-1/2" wide	9-1/2	N16	N16	N16	N27/N30	N36	N36	N36	N42	N56
	11-7/8	N16	N16	N27	N30	N36	N36	N42	N48	N56
	14	N16	N16	N27	N30	N36	N36	N42	N48	N54/N56
	16	N16	N27	N27/N30	N30	N36	N36	N42	N48	N54/N56
	18	N27	N27	N30	N30	N36	N36	N42	N48	N54/N56
	20	N27	N30	N30	N36	N36	N42	N42	N48	N54/N56
	22	N30	N30	N30	N36	N42	N42	N42	N48	N54/N56/N60
	24	N30	N30	N36	N36	N42	N42	N48	N56	N56/N60

1) Grey shaded cells represent bridging installed on the face of the joist; web stiffeners required for I-Joists.
2) All bridging products require (2) 8d x 1-1/2 nails at each end, which are 0.131" dia. x 1-1/2" long.

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MBG – Grip tooth bridging. Features special teeth which grip joists and provide easy single-nail installation. Can be installed after subfloor is in place.

MB16 – Snap-on, no-nail bridging can be placed in existing floor systems where joist movement is suspected. Two-piece construction creates a solid diagonal brace against joist movement.

Materials: See table

Finish: G90 galvanizing

Codes: IBC, FL, LA
IRC R502.7.1, IRC R802.8.1, IBC 2308.4.6, IBC 2308.7.8



MB16



Typical MB16 installation

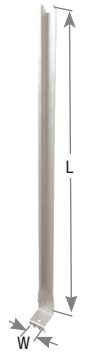
Installation:

- Install the required fasteners according to the table.
- For all models – Bridging should be installed on floor joists with a nominal depth-to-thickness ratio of 5 to 6 or more (2021 National Design Specification for Wood Construction; Section 4.4.1). Bridging units should be installed in pairs at intervals of 8' or less. Bridging pairs should form an "X" between joists; leave a slight space between the units to avoid noise-generating contact. Follow specific installation instructions below for particular models.
- **MBG** – May be installed before or after sheathing. Position the unbent end of the bridging unit near the top of the joist and drive prongs into wood with a hammer blow to the heel of the bent end. Wedge bent end near the lower edge of the opposite joist, set teeth into wood with hammer blow. Nail holes are provided at the bent end if prongs are damaged during installation. Fully seat nails to avoid any movement against the bridging and subsequent floor noise.
- **MB16** – Two-piece unit is shipped as one piece. Bend unit in center up and down to break into two pieces. Slide narrower piece inside wider piece, setting the end tab into slot appropriate for joist spacing. Setting one prong end near the top of one joist and the opposite prong end near the bottom of the opposite joist, pull down on the center of the bridging until the wider piece snaps into place over the narrow piece and creates a rigid, one-piece bridging unit. Wear gloves during installation.



Typical MBG installation

Joist Size	Joist Spacing O.C. (in)[1]	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2]		Code Ref.
					W	L	Qty	Type	
2 x 8	12	MBG812	NCA2X8-12	22	15/16	11-3/4	1	8d x 1-1/2	IBC, FL, LA
2 x 10	12	MBG1012	NCA2X10-12	22	15/16	12-3/4	1	8d x 1-1/2	
2 x 12	12	MBG1212	NCA2X12-12	22	15/16	14	1	8d x 1-1/2	
2 x 14	12	MBG1412	--	22	15/16	16	1	8d x 1-1/2	
2 x 16	12	MBG1612	--	22	15/16	17	1	8d x 1-1/2	
2 x 8-10-12	16	MB16	--	22	11/16	--	--	--	
2 x 8	16	MBG816	NCA2X8-16	22	15/16	15-9/16	1	8d x 1-1/2	
2 x 10	16	MBG1016	NCA2X10-16	22	15/16	16-5/16	1	8d x 1-1/2	
2 x 12	16	MBG1216	NCA2X12-16	22	15/16	17-1/4	1	8d x 1-1/2	
2 x 14	16	MBG1416	--	22	15/16	18-7/16	1	8d x 1-1/2	
2 x 16	16	MBG1616	--	22	15/16	19-5/8	1	8d x 1-1/2	
2 x 8	24	MBG824	--	22	1-5/16	23-1/2	1	8d x 1-1/2	
2 x 10	24	MBG1024	--	22	1-5/16	24	1	8d x 1-1/2	
2 x 12	24	MBG1224	--	22	1-5/16	24-3/4	1	8d x 1-1/2	
2 x 14	24	MBG1424	--	22	1-5/16	25-5/8	1	8d x 1-1/2	
2 x 16	24	MBG1624	--	22	15/16	26-5/8	1	8d x 1-1/2	



MBG

1) Joist spacing is based on a 1-1/2" joist, consult MiTek regarding wider joist applications.
2) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long.

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SB Shelf Brackets

This shelf bracket combines shelving capabilities and closet rod support in a one-piece design.

Materials: 13 gauge
Finish: Zinc Plated

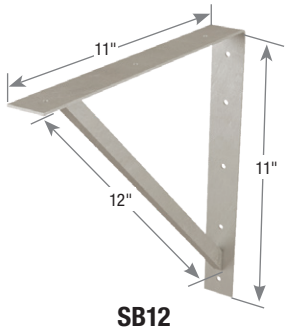
Installation:
- Install the required fasteners according to the table.

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[1]		Code Ref.
			Qty	Type	
SB12	SBV	13	8	10d	--

1) **NAILS:** 10d nails are 0.148" dia. x 3" long.



Typical SB12 installation



SB12

KSCT Corner Tie

The Corner Tie secures three-way wood-to-wood connections. Handy for building workbenches, utility tables, or shelving using 2x4 lumber.

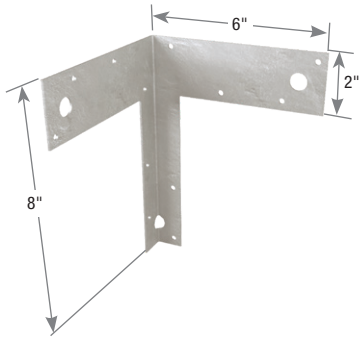
Materials: 14 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule		Code Ref.
			Qty	Screws	
KSCT68	--	14	12	#10 panhead	--



Typical KSCT68 installation

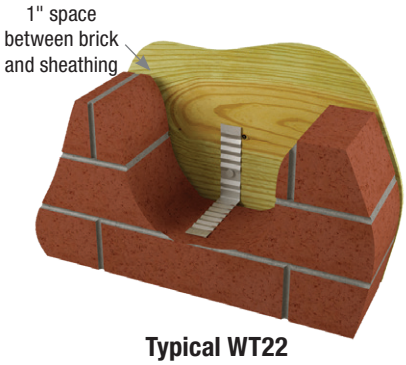


KSCT68

WT Wall Tie

Materials: 22 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options

Installation:
- Install the required fasteners according to the table.
- The opposite end must be bonded in the mortar joint of brick facade.
- Check local codes for spacing requirements.
- Wall tie shall be bent at nail, bonding into mortar joint.



Typical WT22 installation



WT22

MiTek Stock No.	Ref. No.	Description	Steel Gauge	Dimensions (in)		Fastener Schedule[1]		Corrosion Finish	Code Ref.
				W	L	Qty	Type		
WT22	BTB	Straight Edge - Duplex	22	7/8	6-1/2	1	10d		--

1) **NAILS:** 10d nails are 0.148" dia. x 3" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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NP Nail Plates

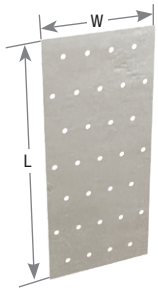
The NP Nail Plates are an ideal economical solution for attaching wooden members together in a non-structural connection. Also may be used as a prescriptive top plate splice per the International Residential Code (IRC). They are pre-punched for 8d common nails.

Materials: 20 gauge
Finish: G90 galvanizing
Codes: IRC R602.3.2

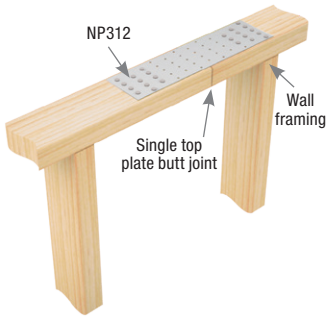
Installation:
- Use nails appropriate for intended use. Holes are sized for 8d common (0.131" dia. x 2-1/2" long) or 8d (0.131" dia.) x 1-1/2" nails.
- The designer shall determine appropriate load values.



Typical nail plate installation

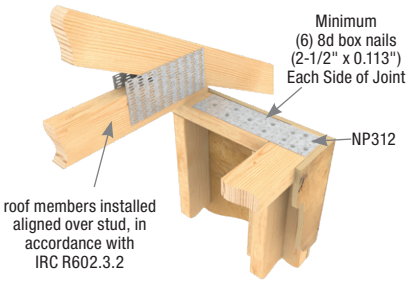


NP

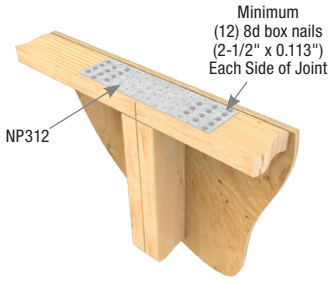


Typical NP312 prescriptive top plate splice installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Number of Nail Holes	Code Ref.
NP15	TP15	20	1-13/16	5	12	--
NP35	TP35	20	3-1/8	5	22	
NP37	TP37	20	3-1/8	7	31	
NP39	TP39	20	3-1/8	9	40	
NP311	TP311	20	3-1/8	11	49	
NP312	TP312	20	3-1/8	12	54	
NP315	TP316	20	3-1/8	15	67	
NP45	TP45	20	4-1/8	5	30	
NP47	TP47	20	4-1/8	7	42	
NP49	TP49	20	4-1/8	9	54	
NP411	TP411	20	4-1/8	11	66	
NP57	TP57	20	5-3/4	7	59	



Typical NP312 prescriptive top-plate wall corner connection



Typical NP312 prescriptive top-plate butt joint straight wall connection

JNP / TPP Mending Plates

TPP – Prong plates with straight prongs.

JNP – Prong plates with angled, hammer-in prongs.

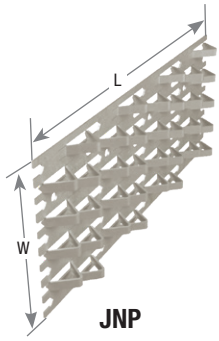
Materials: See table
Finish: G90 galvanizing

Installation:
- **These products are not intended for structural use. No load ratings are assigned. These plates are not intended for use in truss assembly.**

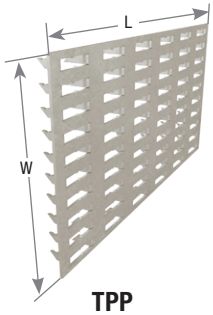
MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) L	Code Ref.
JNP24	--	18	1-1/2	4	--
JNP26	--	18	1-1/2	6	
JNP46	--	18	3-3/16	6	
JNP48	--	18	3-3/16	8	
TPP14	MP14	22	13/16	3-1/2	
TPP24	MP24	22	1-11/16	3-1/2	
TPP36	MP36	22	2-3/4	5-1/4	
TPP58	--	22	4-3/16	7-13/16	



Typical mending plate installation



JNP



TPP

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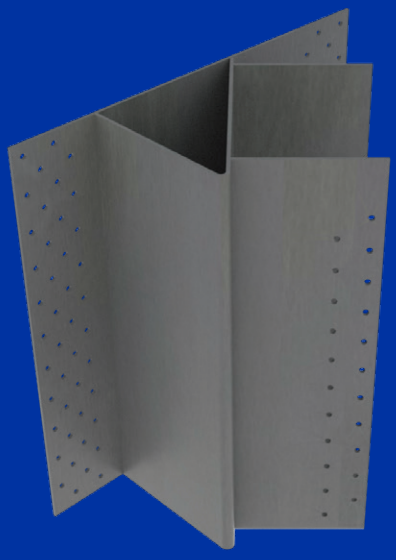
SPECIALTY OPTIONS



MiTek®

SPECIALTY OPTIONS 318-327

Specialty Options & General Notes	320 -321
Face Mount Hanger	322
Open Top Flange Hanger	323
Solid Top Flange Hanger	324
Top Flange Nailer Options	325-326
Welded Top Flange Hanger	327
Part Number System	327



The information listed only applies to hangers manufactured by MiTek® and installed according to the instructions listed in this catalog. The designer must always evaluate each connection, including the joist and header capacities, before specifying a specialty connector. MiTek sloped hangers are manufactured with the plumb cut of the joist already calculated. If a hanger with a different height is needed, it must be specified at the time of ordering.

Materials: Steel gauge may vary from that specified depending on the specialty option and manufacturing process used. Some formed hangers may be welded when modifying the hanger. Hanger configurations, special features, fastener schedules, and height may vary from the standard part depending on the joist size, skew, and slope.

Finish: See specific hanger option tables. Welded hangers are painted with gray primer. Non-catalog hangers available in Hot-dip galvanized, use HDG after product number.

Allowable Loads: For multiple options for the same connector, use the most conservative reduction to give the lowest design load. See specific hanger option tables for applicable load reductions and maximum tolerances. Reference Specialty Options Summary Table for MiTek series catalog page references.

Installation:

- Fill all nail holes with fasteners specified in the tables.
- Fastener quantities may increase from the amount listed in the tables depending on hanger option.
- NA16D-RS and NA20D nails are supplied with hangers.
- For bevel cut skewed hangers, the end of joist must be bevel cut; for square cut skewed hangers, the end of joist must be square cut.

Codes: Modified hangers are not code evaluated due to their numerous variations.

Specialty Options Summary Table

MiTek Series	Width	Skewed (Maximum)	Sloped Seat (Maximum)	Sloped / Skewed	Sloped Top Flange (Maximum)	Top Flange Offset	Saddle Hanger	Ridge Hanger (Maximum)	Inverted Flange	Uplift	Weldability	MiTek Series Catalog Page Reference
BPHA	all	50º	45º	•	45º					•	•	214
FWH	all	70º				•				•	•	191
FWHL	all	70º				•				•	•	189
FWH/S	all	70º				•						338
FWHBP	all	70º										193
FWHFM	all	70º										197
FWHH	all	70º										195
GHF	all	50º	45º	•					• width > 4-1/2"	•		232
HBPH	all	50º	45º	•	45º					•	•	214
HD[1,2]	1-3/4" or less	67-1/2º	45º	•					• width > 2-1/4"	•		137, 204, 231
	> 1-3/4"	50º										
HDO	1-3/4" or less	67-1/2º	45º	•					• width > 3-1/8"	•		163
	> 1-3/4"	50º										
HGU	all	45º							• one flange width > 5-1/4"	•		226, 233
HGUM	all								• one flange			181
HJC	all	60º								•		280
HLBH	all	50º	45º	•	45º	•	•	45º			•	215
HUS	all								• width > 2-1/4"	•		136
HWUH	all	45º	45º	•		•	•			•		185

1) Skews greater than 45° may require a square cut joist with back plate. Refer to Typical HLBH hanger skewed, left shown, square cut illustration on page 324.

Continued on next page

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Specialty Options Summary Table

MiTek Series	Width	Skewed (Maximum)	Sloped Seat (Maximum)	Sloped / Skewed	Sloped Top Flange (Maximum)	Top Flange Offset	Saddle Hanger	Ridge Hanger (Maximum)	Inverted Flange	Uplift	Weldability	MiTek Series Catalog Page Reference
IHFL/IHF	1-3/4" or less	67-1/2º	45º	•					• width > 2-1/4"	•		202
	> 1-3/4"	50º										
KB	all									•	•	162
KEG	all	45º	45º							•		235
KGB	all									•	•	236
KGH	all	45º					•					58
KGLS	all	50º	45º	•	30º	•	•			•	•	239
KGLST	all						•			•	•	238-239
KGLT	all	50º	45º	•	45º	•	•			•	•	238
KHGB	all									•	•	236
KHGLS	all	50º	45º		30º	•	•			•	•	239
KHGLST	all						•			•	•	238-239
KHGLT	all	50º	45º	•	45º	•	•			•	•	238
KHHB	all									•	•	236
KHW	all	84º	45º	•	35º	•	•	45º			•	164, 234
KLB	all										•	162
KLEG	all	45º	45º			•				•		235
KMEG	all	45º	45º			•				•		235
LGU	all	45º							• one flange width > 3-5/8"	•		226, 233
LGUM	all								• one flange			181
LSS	all	45º	45º							•		170
LSSH	all	45º	45º	•						•		171, 229
MGU	all	45º							• one flange width > 5-1/4"	•		226, 233
MPH	all	60º	45º	•		•						183
MSHA	all	75°								•		277
MSHL/R	all	45º								•		275
NFM	all	45º								•		187
PHM	all	84º	45º	•	35º	•	•	45º			•	216
PHXU	all	60º	45º	•	35º	•	•			•	•	216
SKH/SKHH	all	50º								•		172-173
SUH	1-3/4" or less	67-1/2º	45º	•						•		135
	> 1-3/4"	50º										
SW/SWH	all	84º	45º	•	35º	•	•	45º			•	164
THD	all	45º	45º	•					• one flange width > 3"	•		206, 269
THDH	all	45º	45º	•						•		206, 231, 270
THDHQ	all	45º	45º	•					• two flange width ≥ 6-9/16"	•		205, 271
THF	> 1-3/4"	50º	45º	•					• width > 2-1/4"	•		203

1) Skews greater than 45° may require a square cut joist with back plate. Refer to Typical HLBH hanger skewed, left shown, square cut illustration on page 324.

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Face Mount Hanger Specialty Details

Refer to the Specialty Options Table for each hanger series for load reductions and hanger maximum range of skew, slope, etc.

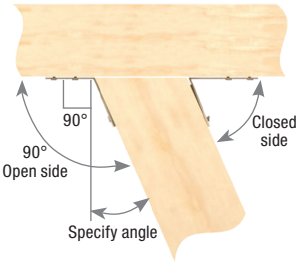
Skewed Hanger:
- Consider SKH or SKHH hangers for 40° to 50° skews.
- Joist nails on the closed side may be relocated to the open side by MiTek designer to ensure proper nailing.
- Specify skew angle, type (square cut or bevel cut), and direction when ordering.

Sloped Seat Hanger:
- Consider LSSH series for sloped applications.
- Additional nail holes may be added to joist flanges by MiTek designer.
- Specify slope angle and direction when ordering.

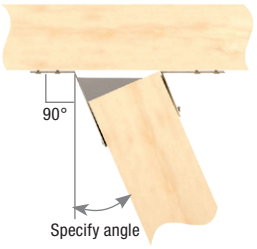
Sloped/Skewed Hanger:
- See nailing notes above for both skewed hanger and sloped seat hanger.
- Specify skew and slope angles as well as skew/slope directions and skew type (square cut or bevel cut) when ordering.

Inverted Flange Hanger:
- When fastening into the carrying member's end grain, consult MiTek designer.
- Specify right or left flange when inverting only one flange.

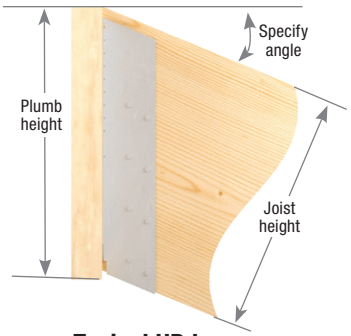
Refer to GHF, HD, SUH, THD, THDH, THF series Special Order Worksheet for ordering instructions at MiTek-US.com.



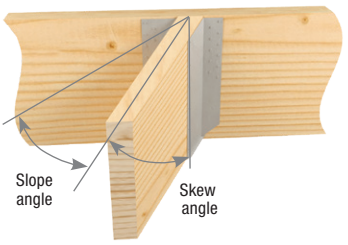
Typical SUH hanger skewed, right shown
(bevel cut)



Typical SUH formed hanger skewed, right shown
(square cut)



Typical HD hanger sloped seat, down shown



Typical HD hanger sloped down, skewed left shown



Typical GHF hanger one flange inverted, left shown



Typical HD hanger inverted flange

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Open Top Flange Hanger Specialty Details

Refer to Specialty Options Table for each hanger series for load reductions and hanger maximum range of skew, slope, etc.

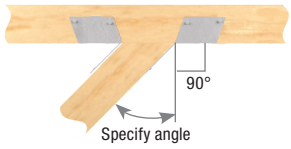
Skewed Hanger:
- Joist nails may be located on obtuse angle side by MiTek designer to ensure proper nailing.
- Specify skew angle, type (square cut or bevel cut), and direction when ordering.

Sloped Seat Hanger:
- Additional nail holes may be added to joist flanges by MiTek designer. All fastener holes must be filled.
- Specify slope angle, direction, and joist height when ordering.

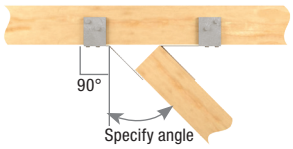
Sloped/Skewed Hanger:
- See nailing notes above for both skewed hanger and sloped seat hanger.
- Specify skew and slope angles as well as skew/slope directions, and skew type (square cut or bevel cut) when ordering.
- Specify if hanger is to be high side flush, low side flush, or center flush.

Sloped/Skewed/Sloped Top Flange Hanger:
- See nailing notes for both skewed and sloped hangers.
- Specify skew, slope, and top flange slope angles as well as skew/slope and top flange slope directions when ordering.
- Hangers may be made with solid top plate.

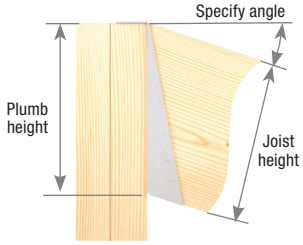
Refer to BPHA series Special Order Worksheet for ordering instructions at MiTek-US.com.



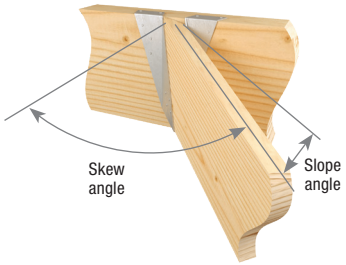
Typical BPHA hanger skewed, left shown
(bevel cut)



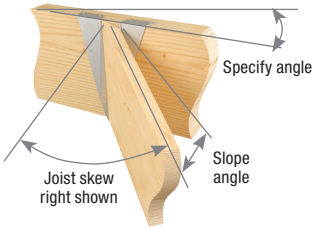
Typical HDO hanger skewed, right shown
(square cut)



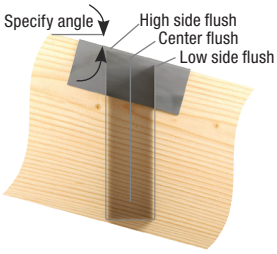
Typical BPHA hanger sloped seat, down shown



Typical BPHA hanger sloped down, skewed right, high side flush shown



Typical BPHA hanger skewed right, sloped down, top flange sloped



Typical BPHA hanger sloped down top flange right shown
(this configuration will not be open back)

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Solid Top Flange Hanger Specialty Details

Refer to Specialty Options Table for each hanger series for load reductions and hanger maximum range of skew, slope, etc.

Skewed Hanger:
- Joist nails may be located on obtuse angle side by MiTek designer to ensure proper nailing.
- Specify skew angle, type (square cut or bevel cut), and direction when ordering.

Sloped Seat Hanger:
- Additional nail holes may be added to joist flanges by MiTek designer.
- Specify slope angle, direction, and joist height when ordering.

Sloped/Skewed Hanger:
- See nailing notes above for both skewed hanger and sloped seat hanger.
- Specify skew and slope angles as well as skew/slope directions, and skew type (square cut or bevel cut) when ordering.
- Specify if hanger is to be high side flush, low side flush, or center flush.

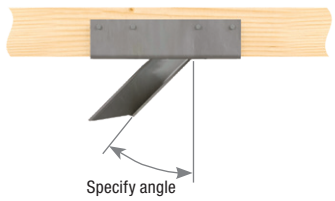
Sloped Top Flange Hanger:
- Additional nail holes may be added to top angle by MiTek designer.
- Specify top flange slope and direction when ordering.
- Specify if hanger is to be high side flush, low side flush, or center flush.

Ridge Hanger:
- Specify flush top of beam at center, right side, or left side.
- Specify angle of slope when ordering.

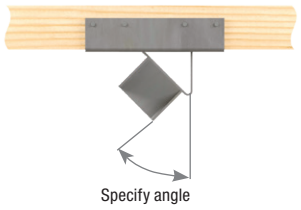
Top Flange Offset Hanger:
- Specify offset, left (L) or right (R), when ordering.

Saddle Hanger:
- Specify saddle width, "SA" when ordering. Allow clearance for saddled member.

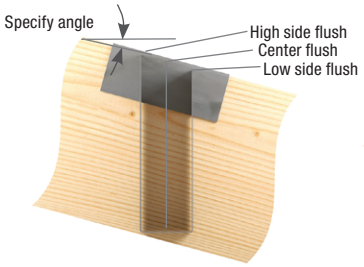
Refer to options for HLBH, KGLS, KGLT, KHGLS, KHGLT series or HWUH, KHW, PHM, PHXU, SW, SWH series Special Order Worksheet for ordering instructions at MiTek-US.com.



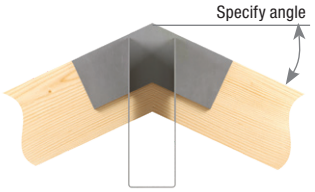
Typical HLBH hanger skewed, left shown
(bevel cut)



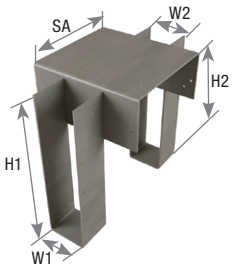
Typical HLBH hanger skewed, left shown
(square cut)



Typical HLBH hanger sloped down top flange, right shown



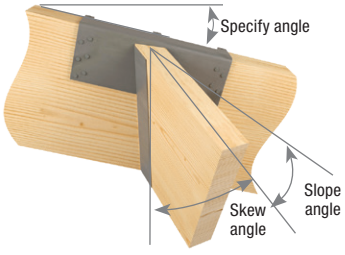
Typical HLBH hanger ridge, top flange slope



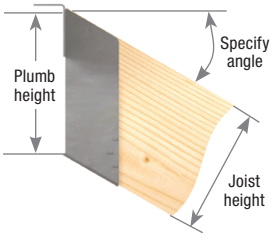
Typical PHXU hanger saddle option



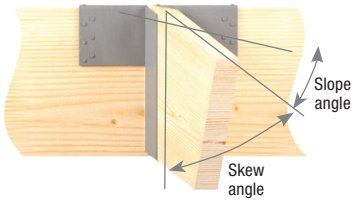
Typical HLBH hanger top flange offset, right shown



Typical HLBH hanger skewed right, sloped down right, top flange sloped



Typical HLBH hanger sloped seat, down shown



Typical HLBH hanger sloped down, skewed right, center flush shown

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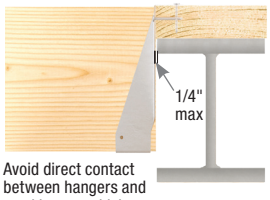
Top Flange Hanger Nailer Options

MiTek Top Mount Hangers have been tested installed to various nailers. Wood nailers may be installed to the top of steel beams, concrete and masonry walls. The table below represents maximum allowable loads for common top mount hangers installed on 2x, 2-ply 2x, 3x and 4x nailers.

For additional Nailer Installation information see page 199.

MiTek Series	Nailer Size	Fastener Schedule[5,6] Nailer Top Qty	Nailer Face Qty	Nailer Type	Joist Qty	Joist Type	DF/SP Allowable Loads (Lbs.) [1,4] Download 100%	DF/SP Uplift 160% [2]	SPF/HF Allowable Loads (Lbs.) [1,4] Download 100%	SPF/HF Uplift 160% [2]
BPHA	2x	6	--	10d x 1-1/2	8	10d x 1-1/2	2170	405	1825	340
	3x	6	2	16d x 2-1/2	8	10d x 1-1/2	3370	845	2830	710
	(2) 2x	6	4	10d	8	10d x 1-1/2	2620	1155	2200	970
	4x	6	4	16d	8	10d x 1-1/2	4005	1155	3045	970
FWH [3]	2X	6	--	10d x 1-1/2	6	10d x 1-1/2	1845	180	1405	150
	3X	6	--	10d x 1-1/2	6	10d x 1-1/2	1845	180	1405	150
	(2) 2X	6	4	10d	6	10d x 1-1/2	2980	380	2265	320
	4X	6	4	10d	6	10d x 1-1/2	2980	380	2265	320
FWHL widths = 1-9/16"	2X	4	2	10d x 1-1/2	8	10d x 1-1/2	1400	240	1175	200
	3X	4	2	10d x 1-1/2	8	10d x 1-1/2	1400	240	1175	200
	(2) 2X	4	4	10d	8	10d x 1-1/2	1555	475	1185	400
	4X	4	4	10d	8	10d x 1-1/2	1555	475	1185	400
FWHL widths > 1-13/16"	2X	4	2	10d x 1-1/2	8	10d x 1-1/2	1215	190	1020	160
	3X	4	2	10d x 1-1/2	8	10d x 1-1/2	1215	190	1020	160
	(2) 2X	4	4	10d	8	10d x 1-1/2	1350	380	1025	320
	4X	4	4	10d	8	10d x 1-1/2	1350	380	1025	320
HBPH	2x	6	2	10d x 1-1/2	10	16d	2540	--	2135	--
	3x	6	6	16d x 2-1/2	10	10d	4500	--	3780	--
	(2) 2x	6	8	10d	10	16d	4140	1610	3480	1350
	4x	6	10	16d	10	16d	5745	1610	4825	1350
HLBH	2x	3	4	10d x 1-1/2	6	10d x 1-1/2	6115	--	5135	--
	3x	3	6	16d x 2-1/2	6	10d	6825	--	5735	--
	(2) 2x	3	8	10d	6	10d x 1-1/2	4385	--	3685	--
	4x	3	8	NA16D-RS	6	10d x 1-1/2	9600	1115	6900	935
	4x	3	8	NA16D-RS	6	16d	9600	1115	6900	935
KGLT	2x	4	--	WS15	8	WS15	5210	--	4375	--
	3x	4	2	WS15	8	WS15	6655	--	5590	--
	(2) 2x	4	4	WS3	8	WS3	6430	--	5400	--
	4x	4	6	WS3	8	WS3	6040	1925	5075	1615
KHW	3x	4	--	16d x 2-1/2	2	10d	4415	--	3525	--
MSH (18 Gauge)	2x	4	--	10d x 1-1/2	4	10d x 1-1/2	1245	--	1045	--
	3x	4	--	10d x 1-1/2	4	10d x 1-1/2	1245	--	1045	--
	(2) 2x	4	2	10d	4	10d x 1-1/2	1950	--	1540	--
	4x	4	2	10d	4	10d x 1-1/2	1950	--	1540	--
MSH (16 or 14 Gauge)	2x	4	2	10d x 1-1/2	6	10d x 1-1/2	2355	--	1860	--
	3x	4	2	10d x 1-1/2	6	10d x 1-1/2	2355	--	1860	--
	(2) 2x	4	2	16d x 2-1/2	6	10d x 1-1/2	2080	--	1745	--
	4x	4	2	16d x 2-1/2	6	10d x 1-1/2	2080	--	1745	--

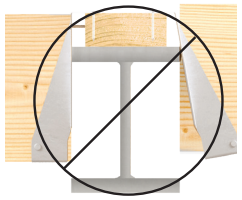
1) Allowable loads are valid for hanger height ≤ 20". For hanger height ≥ 20", consult MiTek Engineering.
2) Uplift loads have been inreased 60% for wind or seismic loads; no further increase shall be permitted.
3) FWH hangers with a width of 1-9/16" are limited to 2,665 lbs of download in DF and 1,955 in S-P-F.
4) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
5) **MiTek SCREWS:** WS15 structural wood screws are 1/4" dia. x 1-1/2" long and are not included with KGLT hangers. WS3 structural wood screws are 1/4" dia. x 3" long and are included with KGLT hangers.
6) **NAILS:** 10d x 1-1/2 nails are 0.148" x 1-1/2" long, 10d nails are 0.148" dia x 3" long, NA16D-RS nails are 0.148" x 3-1/2" long, 16d x 2-1/2" nails are 0.162" dia. x 2-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.



Avoid direct contact between hangers and steel beams which may cause squeaks

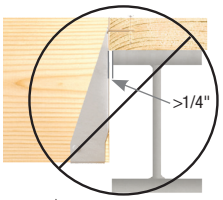
Correct Attachment

Improper Installation



Too Narrow

Top flange not fully supported can cause nail breakout. Or, by fully supporting top flange, hanger is tilted back, causing lifting of carried member which results in uneven surfaces and squeaky floors.



Too Wide

Loading can cause cross grain breaking of nailer. The recommended nailer overhang is 1/4" maximum per side.



Too Thin

Top flange nailing cannot fully penetrate nailer, causing reduced allowable loads. Never use hangers which require multiple face nails since the allowable loads are dependent on all nail holes being used.

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Continued on next page

Top Flange Hanger Nailer Options

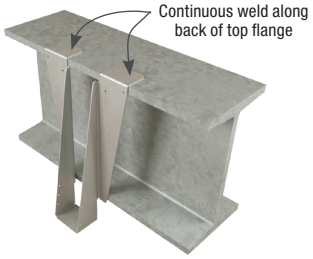
MiTek Series	Nailer Size	Fastener Schedule[6]					DF/SP Allowable Loads (Lbs.) [1,5]		SPF/HF Allowable Loads (Lbs.) [1,5]	
		Nailer			Joist					
		Top Qty	Face Qty	Type	Qty	Type	Download 100%	Uplift 160% [2]	Download 100%	Uplift 160% [2]
PHM	2x	2	--	10d x 1-1/2	2	10d x 1-1/2	3010	--	2140	--
	3x	2	--	16d x 2-1/2	2	10d x 1-1/2	3060	--	2140	--
	(2) 2x	2	--	10d	2	10d x 1-1/2	3060	--	2140	--
	4x	2	--	16d	2	10d x 1-1/2	3060	--	2140	--
PHXU [3] widths > 2-3/4" to < 3-1/2"	2x	4	--	10d x 1-1/2	6	10d x 1-1/2	2585	--	2170	--
	3x	4	2	16d x 2-1/2	6	10d x 1-1/2	3855	--	3150	--
	(2) 2x	4	2	10d	6	10d x 1-1/2	3590	--	3015	--
	4x	4	4	16d	6	10d x 1-1/2	4420	870	3150	730
PHXU widths ≥ 3-1/2"	2x	4	--	10d x 1-1/2	6	10d	2765	--	2325	--
	3x	4	2	16d x 2-1/2	6	10d	3895	--	3270	--
	(2) 2x	4	2	10d	6	10d	3785	--	3180	--
	4x	4	4	16d	6	10d x 1-1/2	5285	970	4545	835
	4x	4	4	16d	6	10d	5285	1120	4545	940
SW [4] widths ≥ 2-9/16"	2x	2	--	10d x 1-1/2	2	10d x 1-1/2	1635	--	1115	--
	3x	2	--	16d x 2-1/2	2	10d x 1-1/2	2390	--	2010	--
	(2) 2x	2	--	16d x 2-1/2	2	10d x 1-1/2	2390	--	2010	--
	4x	2	--	16d x 2-1/2	2	10d x 1-1/2	2390	--	2010	--
SWH	2x	2	--	10d x 1-1/2	2	10d	2600	--	1770	--
	3x	2	--	16d x 2-1/2	2	10d	3305	--	2280	--
	(2) 2x	2	--	16d x 2-1/2	2	10d	3305	--	2280	--
	4x	2	--	16d x 2-1/2	2	10d	3305	--	2280	--
TFI	2x	4	2	10d x 1-1/2	2	10d x 1-1/2	1985	215	1665	180
	3x	4	6	16d x 2-1/2	2	10d x 1-1/2	2715	215	2075	180
	(2) 2x	4	6	10d	2	10d x 1-1/2	2715	215	2075	180
	4x	4	2	16d	2	10d x 1-1/2	2560	215	2075	180
	4x	4	6	16d	2	10d x 1-1/2	3245	215	2075	180
TFL	2x	4	2	10d x 1-1/2	2	10d x 1-1/2	1270	130	1090	110
	3x	4	2	16d x 2-1/2	2	10d x 1-1/2	1600	130	1260	110
	(2) 2x	4	2	10d	2	10d x 1-1/2	1280	130	1100	110
	4x	4	2	16d	2	10d x 1-1/2	1745	130	1260	110
THO	2x	4	2	10d x 1-1/2	2	10d x 1-1/2	1235	230	950	195
	3x	4	2	16d x 2-1/2	2	10d x 1-1/2	1235	230	950	195
	(2) 2x	4	2	16d x 2-1/2	2	10d x 1-1/2	1235	230	950	195
	4x	4	2	16d	2	10d x 1-1/2	1235	230	950	195
THO (Double)	2x	4	2	10d x 1-1/2	2	10d	1455	230	1250	195
	3x	4	2	16d x 2-1/2	2	10d	2335	230	1815	195
	(2) 2x	4	2	10d	2	10d	2370	230	1815	195
	4x	4	2	16d	2	10d	2525	230	1815	195

1) Allowable loads are valid for hanger height ≤ 20". For hanger height ≥ 20", consult MiTek Engineering.
2) Uplift loads have been inreased 60% for wind or seismic loads; no further increase shall be permitted.
3) PHXU hangers with a width of less than 2-3/4" are limited to 4,350 lbs of download in DF and 3,245 lbs in S-P-F.
4) SW hangers with a width of less than 2-9/16" are limited to 2,315 lbs. of download in DF and 1,990 lbs in S-P-F.
5) Values in the table apply to standard top mount hangers without slope, skew or any other specialty options.
6) **NAILS:** 10d x 1-1/2 nails are 0.148" x 1-1/2" long, 10d nails are 0.148" dia x 3" long, 16d x 2-1/2" nails are 0.162" dia. x 2-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

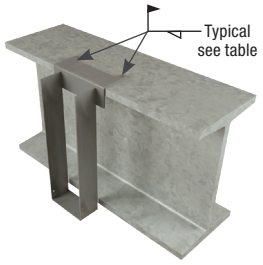
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Welded Top Flange

- Weld sizes and lengths shown on table.
- Weld-on applications produce maximum allowable load listed. **Uplift loads do not apply to this application.**
- All welding should be done in accordance with the American Welding Society (AWS) Standard by a certified welder. **Caution: Welding galvanized steel may produce harmful fumes and should only be performed in well-ventilated environments.**



Typical top flange welded installation



Typical top angle welded installation

Top Angle Weld Length Table

MiTek Welded Hanger Series	Minimum Weld Length
SW	3"
FWHL	3-1/2"
BPHA, FWH, HBPH, PHM, SWH	4"
FWHBP, FWHFM, FWHH, KLB, KHW, PHXU	6"
KB, KGB, KHGB, KHHB, KGLS, KGLST, KGLT, KHGLS, KHGLST	8"
HLBH, KHGLT	10"

Weld shall be distributed evenly.

Top Angle Steel Gauge	Weld Size
14 - 10 gauge	1/8"
7 gauge	3/16"
3 gauge	1/4"

Part Number System

Part Numbers assigned to TFL, THO, IHFL, IHF, THFI and THF I-Joist hangers reveal the I-Joist sizes to be used with the specific hanger. This guide will teach you how to recognize I-Joist dimensions in the part numbers.

1st, 3rd, and sometimes 4th digits are whole numbers
(This example denotes 2 and 11)
4th digit may be part of a decimal –

TFL 23118

2nd and 5th digits are decimals
(see guide below)
(This example denotes .3125 [5/16] and .875 [7/8])
5th digit may be (0) or dropped if height is even

Part Number Guide for Decimals

1 = .125	or	1/8 inch
2 or 25 = .25	or	1/4 inch
3 = .3125	or	5/16 inch
5 = .5	or	1/2 inch
6 = .625	or	5/8 inch
7 = .75	or	3/4 inch
8 = .875	or	7/8 inch

PHM 35 925 -2

PHM — **Letters** refer to **Hanger Series** ex.: THO

35 — **First (2) Digits** refer to **Member Width** ex.: 3.5 inches

925 — **Last (2) or (3) Digits** refer to **Member Height** ex.: 9.25 inches

-2 — **Digits after Dash** refer to **Number of Plies** ex.: 2-ply

Some Examples:

THO15950 ..... 1-1/2" x 9-1/2"

IHFL17925..... 1-3/4" x 9-1/4"

IHF16925-2..... double 1-5/8" x 9-1/4"

IHF23925-2..... double 2-5/16" x 9-1/4"

Note: MiTek's Product Catalog lists a range of heights for IHFL/IHF hangers. Face mount hangers can usually accommodate more than one I-Joist height. The hanger height must be tall enough to support the top chord of the I-Joist to eliminate web stiffener requirements for lateral stability. The IHFL/IHF hanger must be a minimum of 60% of the joist height.

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CFS CONNECTORS



MiTek®

CFS CONNECTORS 328-339

Fastening Information	330
Holdowns	331-333
Angles	334
Straps	335
Hangers	336-338
Girder Tiedowns	338
Stud Plate Ties	339
Hurricane Ties	339



MiTek recommends the use of hex head metal screws with a self-drilling tip, for ease of installation and strength. Screw diameter ranges from 0.190" to 0.250" and is specified for each connector in their corresponding load table.

An important factor to consider when selecting a self-drilling screw is the material thickness specifically the combined side and main member thickness. Care should be taken by the designer to verify that the drill point and thread length are long enough to appropriately fasten the members per the fasteners manufacturers specifications.

The drill point is the unthreaded section from the screw tip to the first thread. This length must be long enough to completely drill through the material before the threads engage. If the threads engage too early, they can cause the fastener to bind and break.



#10 x 1/2"



#12 x 3/4"



#14 x 3/4"

Specification Table

Screw Size	Nominal Diameter (in)	Washer Diameter (in)	Allowable Screw Shear Strength (P_{ss}/Ω)	Allowable Shear Connection Strength (P_{ns}/Ω, P_{ss}/Ω) Steel Thickness mil (gauge)					Allowable Screw Tension Strength (P_{ts}/Ω)	Allowable Tensile Pull-Out Strength (P_{not}/Ω, P_{ts}/Ω) Steel Thickness mil (gauge)				
				33–33	43–43	54–54	68–68	97–97		33	43	54	68	97
				(20–20)	(18–18)	(16–16)	(14–14)	(12–12)		(20)	(18)	(16)	(14)	(12)
#10 x 1/2"	0.190	0.375	548	177	263	370	523	548	386	84	109	137	173	246
#12 x 3/4"	0.216	0.375	775	188	280	394	557	775	777	95	124	156	196	280
#14 x 3/4"	0.250	0.500	1016	203	302	424	600	1016	1067	110	144	180	227	324

1) Allowable loads are per AISI S-100 and are for use when utilizing the traditional Allowable Stress Design methodology. The tabulated loads may be multiplied by a Factor of Safety (Ω) of 3 to determine the screw nominal strength. The LRFD load may be determined by multiplying the allowable screw load by the ASD safety factor of 3 then by Resistance Factor (ϕ) of 0.50.
2) Allowable loads may not be increased for wind or seismic load unless otherwise noted.
3) Allowable loads are based on cold-formed steel members with a minimum yield strength, Fy, of 33 ksi and tensile strength, with an Fu, of 45 ksi.
4) Allowable loads are based on design steel thickness for 33 mil = 0.036", 43 mil = 0.048", 54 mil = 0.060", 68 mil = 0.075", and 97 mil = 0.105" with the #10, #12 and #14 screws having of minimum nominal shear strength of 1650 lbs, 2325 lbs and 3050 lbs respectively.
5) Self-drilling tapping screw fasteners for steel-to-steel connections used for connectors in this catalog shall be in compliance with ASTM C1513.
6) Screw diameters used in the calculation of shear loads per ANSI/ASME standard.

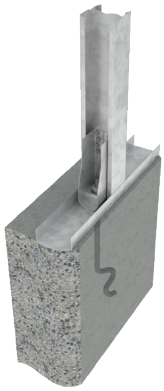
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The S/PHD holdowns are used for providing a tension connection between CFS framing members and the foundation or other structural members. The pre-deflected design keeps deflection low. The S/PHD holdowns attach with #14 self-drilling screwsmaking installation an ease, saving time and labor.

Materials: S/PHD4, S/PHD6 – 14 gauge; S/PHD9 – 12 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

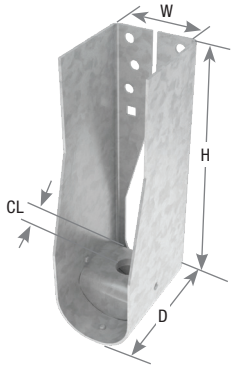
- Install the required fasteners according to the table.
- Place the S/PHD over the anchor bolt. No washer is required.
- Install with standard #14 self-drilling (tapping) screws to fasten to CFS framing members.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- S/PHD Holdowns installed elevated more than 4" off the base track may have higher deflection values.
- The design engineer may specify any alternate anchorage calculated to resist the tension load for a specific application. Anchor rod exposure length should take the bearing plate height of 1-5/8" into account, anchor bolt thread should visibly extend above nut.
- The 2-ply built up studs shall be designed to act as a single unit. Holdown specified shall not be considered to attach multiple CFS members together.
- For anchorage options see MiTek's STB/ STBL Anchor Bolt series or ATR threaded rod series products epoxied into place at required depth.



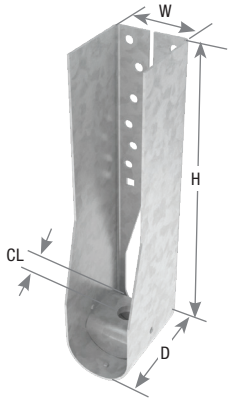
Typical S/PHD installation



Typical S/PHD corner installation



S/PHD4



S/PHD6

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	D	CL	Fastener Schedule Min/ Max	Anchor Bolt[1] Qty	Anchor Bolt[1] Dia (in)	Stud Qty	Stud Type[3]	2-Ply Metal Stud Member Mils (Gauge)[4]	ASD Tension Load (lbs.)	ASD Deflection[2] (in)	LRFD Tension Load (lbs.)	LRFD Deflection[2] (in)	Code Ref.
S/PHD4	S/HDU4	14	2-3/8	7-3/4	3-1/4	1-3/8	Min	1	5/8	6	#14	2-33 (20Ga)	2255	0.080	3605	0.118	IBC, FL, LA
												2-43 (18Ga)	3165	0.104	5070	0.149	
												2-54 (16Ga)	3955	0.132	6330	0.188	
							Max	1	5/8	8	#14	2-33 (20Ga)	2960	0.088	4740	0.133	
												2-43 (18Ga)	4375	0.076	7000	0.132	
												2-54 (16Ga)	4595	0.122	7355	0.183	
S/PHD6	S/HDU6	14	2-3/8	10-3/8	3-1/4	1-3/8	Min	1	5/8	12	#14	2-33 (20Ga)	4880	0.100	7805	0.173	
												2-43 (18Ga)	5525	0.105	8840	0.161	
												2-54 (16Ga)	6670	0.108	10670	0.188	
							Max	1	5/8	14	#14	2-33 (20Ga)	5390	0.087	8620	0.166	
												2-43 (18Ga)	6315	0.096	10105	0.157	
												2-54 (16Ga)	6435	0.112	10300	0.183	
S/PHD9	S/HDU9	12	2-3/8	12-3/4	3-1/4	1-3/8	--	1	7/8	18	#14	2-33 (20Ga)	6495	0.096	10390	0.154	
												2-43 (18Ga)	8875	0.112	14195	0.191	
												2-54 (16Ga)	10345	0.099	16345	0.152	

1) The designer must specify the anchor bolt type, length and embedment.
2) Deflections are derived from static, monotonic load tests and are a measurement of the displacement betweeen the anchor bolt and a point on the cold-formed steel studs just above the holdown location. This dispalcement at the tabulated load includes fastener slip, holdown elongation and elongation of an anchor bolt 4" in length. For every additional 1" in anchor bolt length, the defelction will increase 0.00010" (S/PHD4, S/PHD6) and 0.00006" (S/PHD9) for every 1,000 lbs. of applied load.
3) #14 screws are self-drilling 0.250" diameter hardened washer-head screws with a minimum nominal shear strength of 3,050 lbs. and to be installed in accordance with manufacturer's specifications.
4) The designer must specify the metal stud size and mil thickness.
New products or updated product information are designated in **blue font**.

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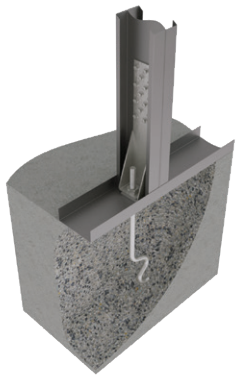
The **LTS20B** and the **HTT14S** tension ties are designed for both new construction and retrofit applications for concrete-to-steel connections and do not require an additional washer.

LTS20B is a light capacity tension tie strap with a 1/4" load transfer plate.

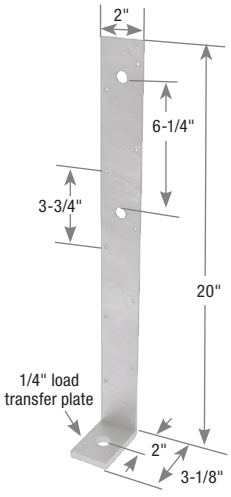
Materials: See table
Finish: Strap – G90 galvanizing; Plate – Primer

Installation:

- Install the required fasteners according to the table.
- Attach the strap portion of the connector to the steel stud. Secure the base to the foundation or wall with specified anchor bolt.
- A design professional shall specify the type, length, and embedment of the anchor bolt. No washers are required.



Typical HTT14S installation



LTS20B



HTT14S

MiTek Stock No.	Ref. No.	Steel Thickness		Fastener Schedule				Allowable Tension Loads (Lbs.)[1,2,4]						Code Ref.
				To Sill Plate		To Stud		2-33 mil (2-20ga) Back-to-Back Studs		2-43 mil (2-18ga) Back-to-Back Studs		2-54 mil (2-16ga) Back-to-Back Studs		
				Anchor Bolt[3]		Screws[5]								
		Strap Gauge	Plate (in)	Qty	Dia. (in)	Qty	Type	100%	160%	100%	160%	100%	160%	
LTS20B	S/LTT20	12	1/4	1	3/4	5	#10	885	1140	1090	1090	1210	1210	--
HTT14S	S/HTT14	10	--	1	5/8	14	#10	2480	3290	3680	4425	4825	4825	

1) Back-to-back stud members are required unless otherwise noted.
2) Allowable loads at 160% can only be used with codes that permit the use of alternate basic load combinations and when the referenced materials standard permits it.
3) Designer shall specify anchor embedment and configuration.
4) Designer shall verify the adequacy of the steel studs to transfer the required load.
5) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.

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The **TD8S, TD10S,** and **TD15S** are high capacity holdowns which are designed for attachment to cold formed steel (CFS) framing members.

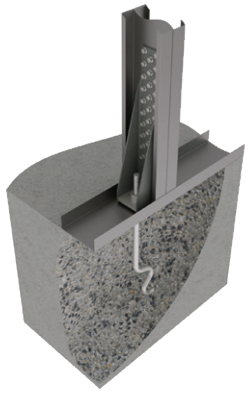
Materials: See table
Finish: Primer

Installation:

- Install the required fasteners according to the table.
- Use #10 self-tapping screws to attach the back or strap portion of the holdown to a steel stud. Install nut to secure the base of holdown to foundation with anchor bolt of specified diameter.
- A design professional shall specify the type, length, and embedment depth of the anchor bolt.
- Install anchor bolt nut to base of holdown until finger tight, then tighten an additional 1/3 to 1/2 turns with a wrench.



TD10S



Typical TD10S installation

MiTek Stock No.	Ref. No.	Steel Thickness		Dimensions (in)			Fastener Schedule			CFS Member		ASD		LRFD		Nominal Tension Load[6] (in)	Code Ref.
							Anchor Bolt[2]	Stud Screws[4]		2-Ply Stud[1,3]							
		Body Steel Gauge	Base (in)	W	L	CL	Dia. (in)	Qty	Type	Mils	Gr	Tension (Lbs.)	Deflection[5] (in)	Tension (Lbs.)	Deflection[5] (in)		
TD8S	S/HD8S	10	3/8	2-1/2	13-7/8	1-5/8	7/8	24	#10	33	33	8250	0.074	13200	0.164	22325	
										43	33	10115	0.109	16350	0.242	27650	
										54	50	10900	0.091	17435	0.205	29485	
TD10S	S/HD10S	10	3/8	2-1/2	16-1/8	1-5/8	7/8	30	#10	33	33	8690	0.071	13900	0.159	24575	
										43	33	9310	0.076	14900	0.195	26335	--
										54	50	9985	0.058	15975	0.146	28235	
TD15S	S/HD15S	7	1/2	2-5/8	21-1/2	1-11/16	1	48	#10	33	33	11780	0.075	18845	0.146	33410	
										43	33	13770	0.100	22035	0.192	39065	
										54	50	15920	0.096	25475	0.144	45160	

1) Back-to-back stud members are required.
2) The designer must specify anchor bolt type, length, and embedment.
3) Designer shall verify the adequacy of the steel studs to transfer the required load.
4) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.
5) Holdown deflection at ASD and LRFD static test load includes fastener slip, holdown deflection, and anchor bolt elongation.
6) The nominal tension load is based on the average of the ultimate tested values.

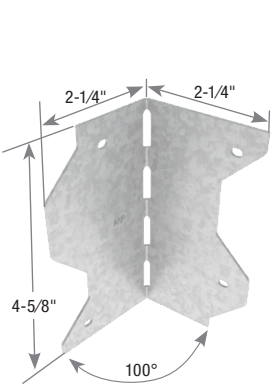
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MP/S angles are field-adjustable to attach members intersecting at angles. MP/S angles are load rated and provide an alternate to the field fabricated clip angles.

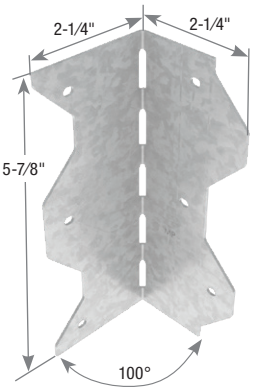
Materials: 18 gauge
Finish: G90 galvanizing

Installation:

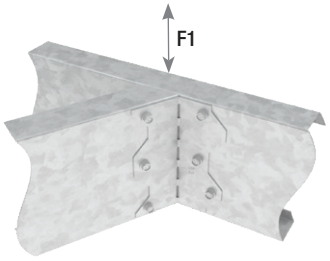
- Install the required fasteners according to the table.
- Field-adjustable from 45°-180° (flat). Bend angle only once.
- Joist must be constrained from rotation.



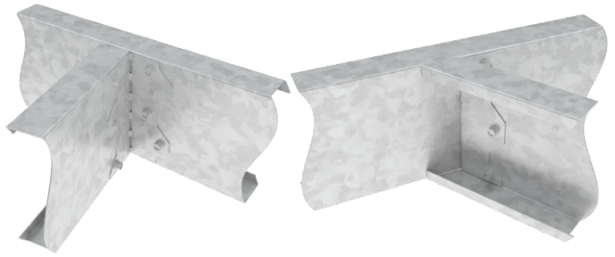
MP/S5



MP/S7



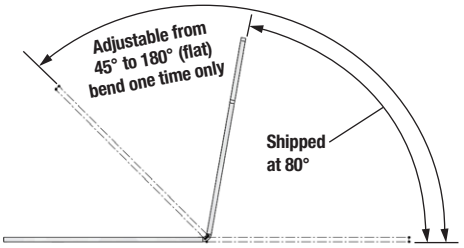
Typical MP/S7 installation
(MP/S5 similar)



Typical MP/S7 skew installation
(MP/S5 similar)

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule		Allowable F1 Loads (Lbs.)[1]			Code Ref.
			Qty	Type[3]	33 mil[2] (20ga)	43 mil[2] (18ga)	54 mil[2] (16ga)	
MP/S5	S/LS50	18	4	#10	310	410	480	--
MP/S7	S/LS70	18	6	#10	405	640	745	

1) Allowable loads are for one part only.
2) Member mils (33, 43, 54) has been considered as Grade 33.
3) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.



MP/S Top View

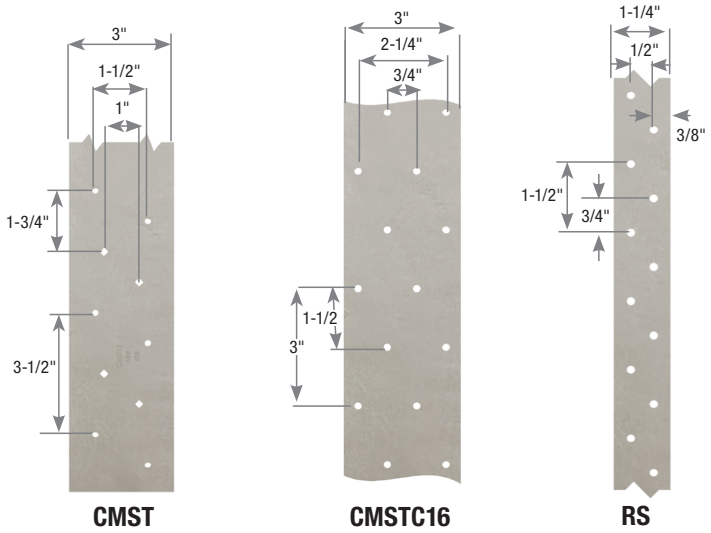
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MiTek straps may be used to create a tension connection between multiple CFS members with the use of self-tapping screws.

Materials: See table
Finish: G90 galvanizing

Installation:

- Install the required fasteners according to the table.
- Install equal amount of screws on each end of tension connection.



CMST **CMSTC16** **RS**

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener O.C. Spacing (in)	Fastener Schedule				Allowable Tension Loads (Lbs.)[1]			Code Ref.
			W (in)	Coil Length (ft)		Min Qty[3,4]			Type[2,5]				
						33 mil (20ga)	43 mil (18ga)	54 mil (16ga)		33 mil (20ga)	43 mil (18ga)	54 mil (16ga)	
CMST12	CMST12	12	3	40'	1-3/4	106	72	36	#10	9318			
CMST14	CMST14	14	3	52-1/2'	1-3/4	76	52	26	#10	6630			
CMSTC16	CMSTC16	16	3	54'	1-1/2	54	36	18	#10	4715			
RS20-R	CS20-R	20	1-1/4	25'	1-1/2	12	8	8	#10	1045			
RS250	CS20			250'									
RS18-R	CS18-R	18	1-1/4	25'	1-1/2	16	12	8	#10	1375			--
RS100	--			100'									
RS200	CS18			200'									
RS16-R	CS16-R	16	1-1/4	25'	1-1/2	20	14	8	#10	1732			
RS150	CS16			150'									
RS14-R	CS14-R	14	1-1/4	25'	1-1/2	30	20	10	#10	2612			
RS14-100	CS14			100'									

1) Allowable load is tension capacity of the strap based on the total quantity of screws installed in the strap to develop full tension strength.
2) Allowable loads are based on Grade 33 steel for 43 mil (18 ga) and thinner CFS members and Grade 50 steel for 54 mil (16 ga) and thicker CFS members.
3) Install half the total quantity of fasteners on each end of the strap to achieve full tension load of strap.
4) Minimum quantity of fasteners to be installed with equal fasteners at each end of the connection. Product may have additional holes not needed to meet the published allowable load of the strap.
5) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.

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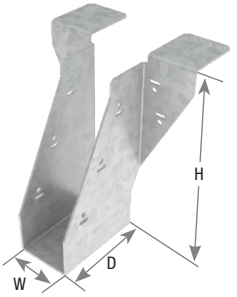
HDOL/S (14 ga) and HDO/S (12 ga) top mount hangers are available in a wide variety of stock sizes to match the most common framing needs with economical solutions where custom or special order hangers were required before. The revolutionary design utilizes shear lag slots designed to maximize the capacity of the hangers while providing a safe and ductile connection.

The HDOL/S and HDO/S hangers may be installed with screws, powder actuated, or welded to the header.

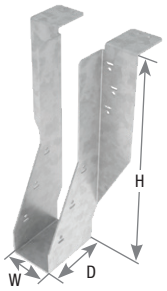
Materials: HDOL/S 68mil (14 gauge), HDO/S 97mil (12 gauge)
Finish: G90 galvanizing
Patents: U.S. Patent No. 10,662,641, U.S. Patent No. 10,072,412

Installation:

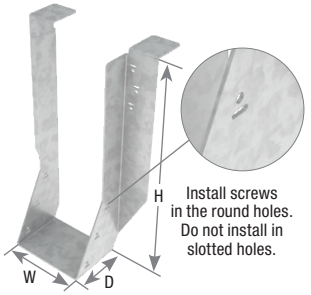
- Install the required fasteners according to the table.
- Install prescribed type and number of self-drilling screws in to the round holes of the hangers. Do not install screws in the shear lag slots.
- Powder actuated fasteners are permitted.
- Welding of the hangers is permitted. Place a minimum 1/8" x 2" fillet weld on each top flange of the hanger. Welding should be performed by a qualified welder using a qualified welding procedure while distributing the weld evenly across both flanges. Weld-on applications produce maximum allowable load listed.



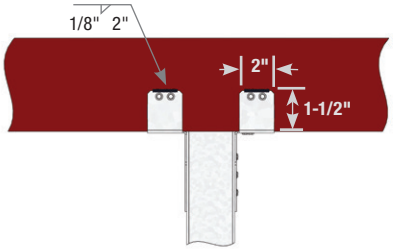
HDOL/S1606



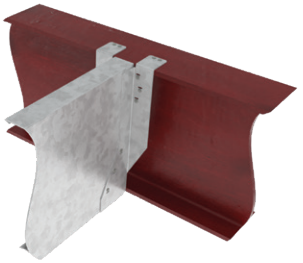
HDOL/S2010



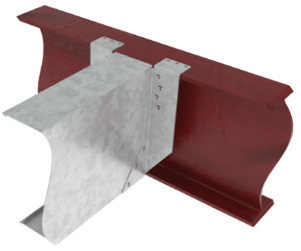
HDOL/S4012



Top view detail of welds


Typical HDOL/S1616 (I-beam) installation


Typical HDOL/S2010 (CFS Header) installation


Typical HDOL/S4012 (I-beam) installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)			Fastener Schedule					Allowable Loads[1,2,3]	Code Ref.
						Header			Joist			
			W	H	D	Top Qty	Face Qty	Type[4]	Qty	Type[4]	Down 100%	
HDOL/S1606	S/LBV1.68/6	14	1-5/8	6	3	4	6	#10	3	#10	2950	--
HDO/S1606	S/B1.68/6	12			3-1/2	6	8				6140	
HDOL/S1608	S/LBV1.68/8	14	1-5/8	8	3	4	6	#10	3	#10	2950	
HDO/S1608	S/B1.68/8	12			3-1/2	6	8				6140	
HDOL/S1610	S/LBV1.68/10	14	1-5/8	10	3	4	6	#10	3	#10	2950	
HDO/S1610	S/B1.68/10	12			3-1/2	6	8				6140	
HDOL/S1612	S/LBV1.68/12	14	1-5/8	12	3	4	6	#10	3	#10	2950	
HDO/S1612	S/B1.68/12	12			3-1/2	6	8				6140	
HDOL/S2006	S/LBV2.06/6	14	2	6	3	4	6	#10	3	#10	2950	
HDO/S2006	S/B2.06/6	12			3-1/2	6	8				6140	
HDOL/S2008	S/LBV2.06/8	14	2	8	3	4	6	#10	3	#10	2950	
HDO/S2008	S/B2.06/8	12			3-1/2	6	8				6140	
HDOL/S2010	S/LBV2.06/10	14	2	10	3	4	6	#10	3	#10	2950	
HDO/S2010	S/B2.06/10	12			3-1/2	6	8				6140	
HDOL/S2012	S/LBV2.06/12	14	2	12	3	4	6	#10	3	#10	2950	
HDO/S2012	S/B2.06/12	12			3-1/2	6	8				6140	
HDOL/S4006	S/LBV4.06/6	14	4	6	3	4	6	#10	3	#10	2950	
HDO/S4006	S/B4.06/6	12			3-1/2	6	8				6140	
HDOL/S4008	S/LBV4.06/8	14	4	8	3	4	6	#10	3	#10	2950	
HDO/S4008	S/B4.06/8	12			3-1/2	6	8				6140	
HDOL/S4010	S/LBV4.06/10	14	4	10	3	4	6	#10	3	#10	2950	
HDO/S4010	S/B4.06/10	12			3-1/2	6	8				6140	
HDOL/S4012	S/LBV4.06/12	14	4	12	3	4	6	#10	3	#10	2950	
HDO/S4012	S/B4.06/12	12			3-1/2	6	8				6140	

1) Testing of HDOL/S and HDO/S hangers was performed with framing members with minimum steel yield strengths of Fy=50 ksi.
2) Qualified designer shall design connection to ensure the header is designed to carry the load and the joist member is sufficient to transfer load to hanger.
3) Allowable loads based on testing with 68 mil (14ga) CFS members for the HDOL/S hanger and 97 mil (12ga) CFS members for the HDO/S hanger.
4) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.

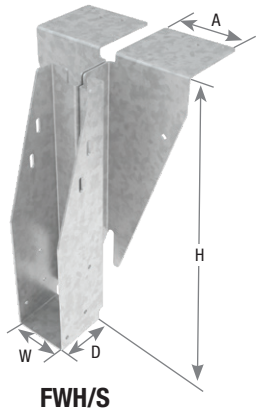
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The FWH/S Fire Wall Hanger attaches to cold-formed steel wall framing to support cold-formed steel joists.

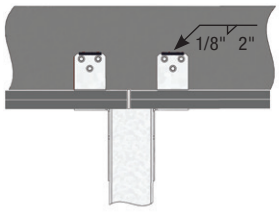
Materials: 14 gauge
Finish: G90 galvanizing
Options: See Specialty Options table

Installation:

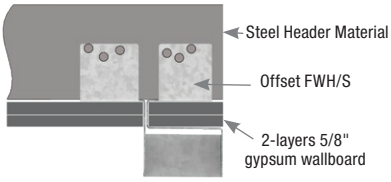
- Install the required fasteners according to the table.
- Install prescribed type and number of self-drilling screws through the round holes into the wall track. Install (5) self-drilling screws through the hanger into one side of the joist using the round and slotted holes.
- Powder actuated fasteners are permitted.
- Welding of the hangers is permitted. Place a minimum 1/8" x 2" fillet weld on each top flange of the hanger. Welding should be performed by a qualified welder using a qualified welding procedure while distributing the weld evenly across both flanges. Weld-on applications produce maximum allowable load listed. **Uplift loads do not apply to this application.**



FWH/S



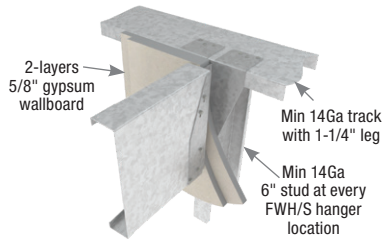
Top view detail of welds



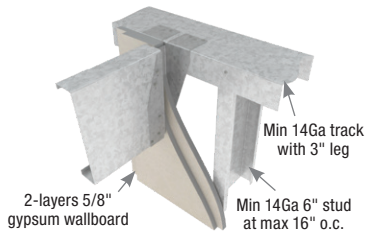
Typical FWH/S top flange offset, left shown (Top View)

Geometry Table

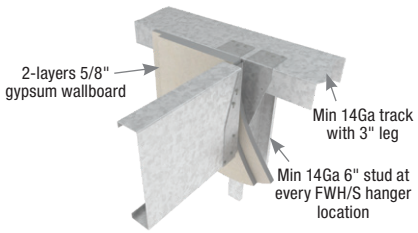
MiTek Stock No.	Ref. No.	Dimensions (in)				Code Ref.
		W	H	D	A	
FWH/S1608	--	1-11/16	7-15/16	2	2-3/4	
FWH/S1610	--	1-11/16	9-15/16	2	2-3/4	
FWH/S1612	--	1-11/16	11-15/16	2	2-3/4	
FWH/S2008	--	2-1/16	7-15/16	2	2-3/4	
FWH/S2010	--	2-1/16	9-15/16	2	2-3/4	--
FWH/S2012	--	2-1/16	11-15/16	2	2-3/4	
FWH/S2508	--	2-9/16	7-15/16	2	2-3/4	
FWH/S2510	--	2-9/16	9-15/16	2	2-3/4	
FWH/S2512	--	2-9/16	11-15/16	2	2-3/4	



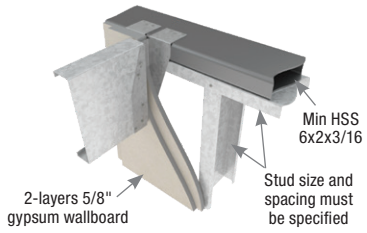
Typical FWH/S shallow-track-aligned installation
Figure 1



Typical FWH/S deep-track installation
Figure 2



Typical FWH/S deep-track aligned installation
Figure 3



Typical FWH/S continuous HSS installation
Figure 4

Continued on next page

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Fastener / Allowable Load Table

Installation Type	Description	Fastener Schedule				Joist Steel Thickness	Allowable Download (Lbs.)		
		Header		Joist Qty	Type[1,2]		Without Bearing Stiffeners	With[3] Bearing Stiffeners	Uplift
		Top Qty	Face Qty						
Figure 1	14Ga 6" CFS Track (1-1/4" Leg) with 14Ga 6" Stud Directly Below	6	--	5	#10	54 mil	625	1165	180
						68 mil	875	1800	
						97 mil	1750		
Figure 2	14Ga 6" CFS Deep Track (3" Leg) with No Stud Directly Below	6	2	5	#10	54 mil	625	1165	380
						68 mil	875	1220	
						97 mil	1750		
Figure 3	14Ga 6" CFS Deep Track (3" Leg) with 14Ga 6" Stud Directly Below	6	2	5	#10	54 mil	625	1165	380
						68 mil	875	2200	
						97 mil	1750		
Figure 4	HSS 6x2x3/16 on 14Ga CFS Track (1-1/4" Leg) with No Stud Directly Below	6	--	5	#10	54 mil	625	1165	180
						68 mil	875	2200	
						97 mil	1750		

1) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.
2) Larger self-drilling/tapping screws may be used with no reduction in load carrying capacity.
3) Tested with 400T125-68 bearing stiffener. Thicker gauge bearing stiffeners may also be used.

Specialty Options Table – Refer to Specialty Options pages 320 and 323 for additional details.

Option	Skewed[1]	Top Flange Offset
Range	1˚ to 70˚	--
Allowable Loads	70% of table load	70% of table download. 180 lbs. Max uplift
Ordering	Add *SK,* angle required, right *(R)* or left *(L),* and square cut *(SQ)* to product number. Ex. FWH/S2010_SK45R_SQ	Add *OS,* and right *(R)* or left *(L),* to product number. Ex. FWH/S2010_OSL

1) Skewed hangers with skews greater than 15° may have all joist fastening on outside flange.

LUGT Girder Tiedown

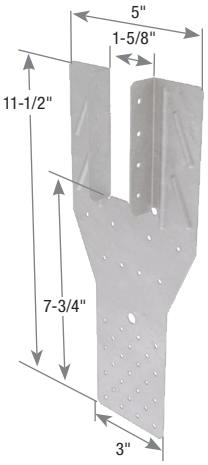
The LUGT is designed to transfer uplift loads from roof framing members to the wall studs.

Materials: 20 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule							Allowable Tension Loads (Lbs.)[2]			Code Ref.
			Min Qty[1,3]			Joist Qty[6]			Type[1,4,5]				
			33 mil (20ga)	43 mil (18ga)	54 mil (16ga)	33 mil (20ga)	43 mil (18ga)	54 mil (16ga)		33 mil (20ga)	43 mil (18ga)	54 mil (16ga)	
LUGT1	H10S	18	6	4	4	6	4	4	#10	1045			--

1) Install self-tapping screws symmetrically into CFS stud to prevent any eccentricity.
2) Allowable load is based on allowable tension capacity of truss to connector. Be sure to install all prescribed nails.
3) Minimum quantity of fasteners to be installed. Product may have additional holes not needed to meet the published allowable load.
4) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.
5) Allowable loads are based on Grade 33 steel for 43 mil (18 ga) and thinner CFS members and Grade 50 steel for 54 mil (16 ga) and thicker CFS members.
6) Joist fasteners must be distributed evenly.



LUGT1

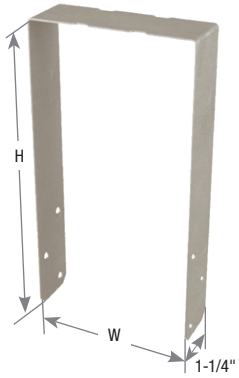
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SPT Stud Plate Ties

MiTek SPT4 and SPT6 Stud Plate Ties may be used to create a tension and bearing connection between multiple CFS members with self-tapping screws.

Materials: 20 gauge
Finish: G90 galvanizing

Installation:
- Install the required fasteners according to the table.
- Wrap SPT tie around top or bottom track.



SPT

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule		Allowable Uplift Loads 100% (Lbs.)[1]			Code Ref.
			W	H	Qty	Type[2]	33 mil (20 ga)	43 mil (18 ga)	54 mil (16 ga)	
SPT4	SP4	20	3-9/16	6-7/8	6	#10	530	830	985	--
SPT6	SP6	20	5-9/16	7-5/8	6	#10	530	830	985	

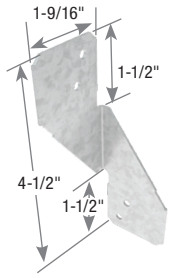
1) Allowable loads are based on Grade 33 steel for 43 mil (18 ga) or thinner CFS members and Grade 50 steel for 54 mil (16 ga) or thicker CFS members.
2) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.

RT/S Hurricane Ties

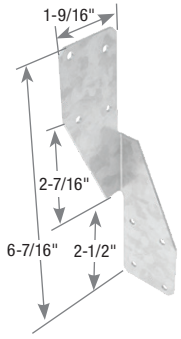
RT/S are designed to tie trusses and rafter to wall systems. RT/S are to resist uplift and lateral forces between framing members.

Materials: 18 gauge
Finish: G90 galvanizing

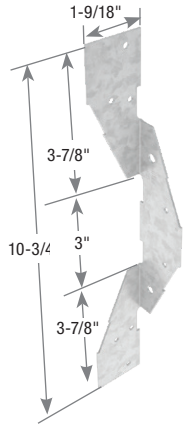
Installation:
- Install the required fasteners according to the table.
- Designer shall determine if solid blocking is required.



RT/S3A



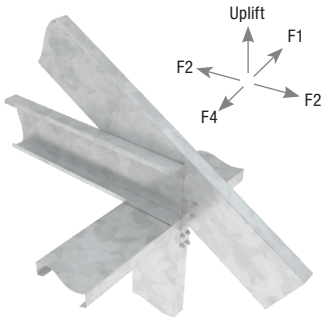
RT/S7A



RT/S10

MiTek Stock No.	Ref. No.	Steel Gauge	Fastener Schedule				Allowable Loads (Lbs.)[1,2]				Code Ref.
			Truss/Rafter[3]		Stud/Track[3]		33 mil (20 ga)				
								Lateral			
			Qty	Type[4]	Qty	Type[4]	Uplift	F1	F2	F4	
RT/S3A	S/H3	18	2	#10	2	#10	355[2]	230	185	85	--
RT/S7A	S/H2.5	18	4	#10	4	#10	465	145	160	115	
RT/S10	S/H2	18	3	#10	3	#10	455	--	--	--	

1) Allowable loads are for one part only.
2) Allowable uplift loads for the RT/S3A may be increased up to 375 lbs. when GR50 members are used.
3) 33 mil members have been evaluated as Grade 33.
5) #10 screws are self-drilling 0.190" diameter hardened washer-head screws with a minimum nominal shear strength of 1,650 lbs. and to be installed in accordance with manufacturer's specifications.



Typical RT/S7A installation

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MANUFACTURED HOUSING

MiTek®

MANUFACTURED HOUSING 340-349

Installation Notes	342
Foundation Anchor	343
Hangers	344
Rafter Ties	345-346
Stud Plate Ties	346
Plate Tie	347
Post Anchors	348
Nail Plates	348
Protection Plates	349



Catalog installation notes should be followed when installing pneumatic nail connectors using alternative nails. All fasteners should be installed into nailing zones and maintain minimum 1" center-to-center spacing. Alternative nail quantity required for installation of pneumatic nail hangers can be determined using the table below.

Alternative Nails for Installation of Pneumatic Nail Connectors

Fastener Description	Dimensions (in)		DF/SP Allowable Shear per Nail (Lbs.)[1,2,3,4,5,6]		S-P-F Allowable Shear per Nail (Lbs.)[1,2,3,4,5,6]	
			Steel Gauge		Steel Gauge	
	Diameter	Length	18	20	18	20
0.099 x 1-1/2"	0.099	1-1/2	58	56	50	48
0.100 x 1-3/8"	0.100	1-3/8	60	57	51	49
0.105 x 1-1/2"	0.105	1-1/2	65	63	56	54
0.113 x 2-3/8"	0.113	2-3/8	75	72	64	62
0.131 x 1-1/2"	0.131	1-1/2	98	96	85	83
0.131 x 3"		3				
0.148 x 1-1/2"	0.148	1-1/2	118	116	102	100

1) Nail allowable load values were calculated as specified by the 2018 NDS; Sections 11 & 12, and Appendix I and L.
2) The nail lateral loads are adjusted by the Penetration depth factors, C_D, based on the length of the nails and thickness of the steel side members. However, this assumes sufficient wood thickness to receive the full length of the nail or at least ten times the diameter of the nail, whichever is less.
3) Adjustment factors for duration of load, service conditions and installation shall be applied to the nail values in accordance with the provisions of the NDS delineated in Sections 2, 11 and 12.
4) The allowable load for any connector shall not exceed the catalog value.
5) Fastener bending yield strength based on ASTM F1667-18 Table S1.1.
6) Quantity of fasteners must be used symmetrically in header flanges and into each side of joist.

Example:

JN28E (20 gauge) using .105 x 1-1/2" fasteners

JN28E down load at 115% = 1055 lbs.

JN28E uplift load at 160% = 245 lbs.

Header material: S-P-F

Joist material: S-P-F

Nail Quantity Required for Down Load:

Allowable shear capacity at 100% load duration = 54 lbs.

$$54\left(\frac{\text{lbs}}{\text{nail}}\right) \times 1.15 = 62.1\left(\frac{\text{lbs}}{\text{nail}}\right)$$

$$\frac{1055 \text{ lbs}}{62.1\left(\frac{\text{lbs}}{\text{nail}}\right)} = 17 \text{ nails}$$

Use equal amount of fasteners in each side so use 9 nails in each flange for a total of 18.

Nail Quantity Required for Uplift:

$$54\left(\frac{\text{lbs}}{\text{nail}}\right) \times 1.60 = 86.4\left(\frac{\text{lbs}}{\text{nail}}\right)$$

$$\frac{245 \text{ lbs}}{86.4\left(\frac{\text{lbs}}{\text{nail}}\right)} = 3 \text{ nails}$$

Use equal amount of fasteners per side of joist so use 2 in each side for a total of 4.
Also make sure there are as many or more fasteners in the hanger to header connection.
18 nails in header ≥ 4 nails in joist.

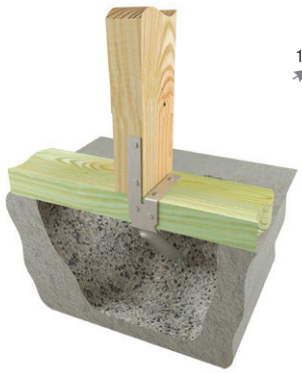
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For installation into concrete slabs and stemwalls. The FA3 features a split flange for nailing to both mudsill and stud for greater framing versatility.

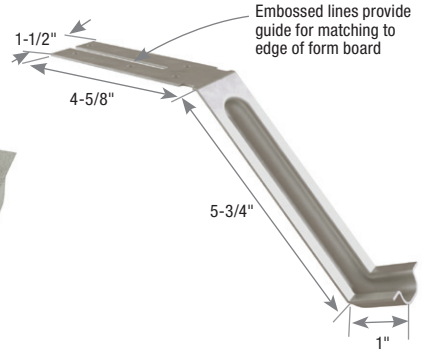
Materials: 16 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

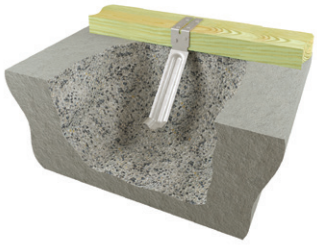
- Install the required fasteners according to the table.
- Use a minimum of two anchors per mudsill. An anchor should always be within 12" of the end of each mudsill section.
- Do not rely on these anchors to secure concrete sections together between cold joints.
- Insert into wet concrete (minimum strength of 2,500 psi). Place mudsill after concrete cures. Secure flanges to sill (and stud, if applicable), bending flanges as needed to achieve a tight fit. Fasten as directed in table.
- For installation in severe corrosion environments, see Corrosion Information on pages 12-18.



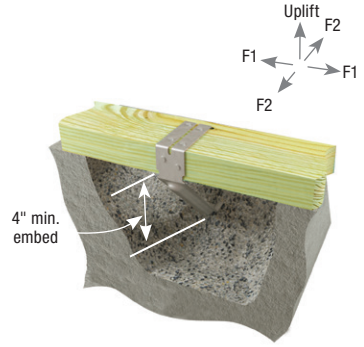
Typical FA3 one-tab-up installation



FA3



Alternate FA3 installation
(concrete slab only)



Typical FA3 standard installation in concrete

MiTek Stock No.	Ref. No.	Steel Gauge	Plate Size	Fastener Schedule[1,6] Sill Plate Side Qty	Sill Plate Top Qty	Stud Qty	Fastener Schedule Type	Min Stemwall Thickness (in)	Installation Type	Concrete[5]	DF/SP Allowable Loads (Lbs.)[2,3,4] Uplift 160%	F1 160%	F2 160%	Corrosion Finish	Code Ref.
Wind and ASCE Seismic Design A & B															
FA3	--	16	Single 2x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	1350	750	1015		IBC, FL, LA
										Cracked	945	525	710		
				2	2	2			One-Tab-Up	Uncracked	1350	750	1015		
										Cracked	945	525	710		
			Single 3x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	--	515	--		--
										Cracked	--	475	--		
ASCE Seismic Design C-F															
FA3	--	16	Single 2x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	1120	550	890		IBC, FL, LA
										Cracked	830	460	625		
				2	2	2			One-Tab-Up	Uncracked	1120	550	890		
										Cracked	830	460	625		
			Single 3x	2	4	--	10d x 1-1/2	6	Standard	Uncracked	--	515	--		--
										Cracked	--	405	--		

1) Predrilled holes are not required.
2) Allowable Stress Design (ASD) values have been adjusted for a load duration factor, CD, of 1.6 corresponding to a ten-minute load duration (i.e. wind or earthquake loading) in accordance with the NDS. The ASD loads do not apply to loads of other durations.
3) Allowable loads are based on a minimum stemwall thickness of 6", minimum distance from the end of the concrete wall of 4" and minimum anchor spacing of 8".
4) Uplift deformation based on wood connection strength.
5) Minimum concrete strength f'c = 2,500 psi.
6) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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MiTek's "no hole" connectors are engineered for wood frame structures built in a factory environment. These connectors feature embossed "nailing zones" for faster and safer fastener installation.

Materials: 18 or 20 gauge
Finish: G90 galvanizing
Codes: See table for code references

Installation:

- Install all specified fasteners using a pneumatic nailer.
- Nailing zones are distinguished by embossed pattern.
- Install fasteners with care not to overdrive fastener causing indentation of connector.
- Fastener quantities shall be installed symmetrically on both sides of connector.
- Installer should reduce risk of injury from rebounding fasteners by using personal eye protection during fastener installation.



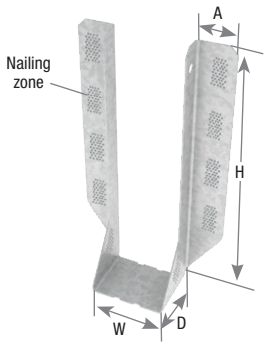
Typical MTHF installed with Engineered I-Joist



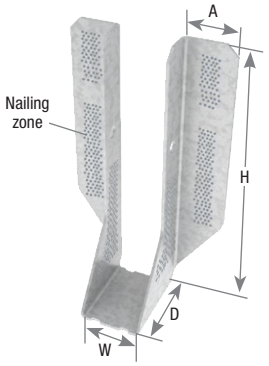
Typical MTHF installed with Floor Truss



Typical JNE installed with Solid Sawn Lumber



MTHF25925



JN28E

Joist Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule[1,2,3]			DF/SP Allowable Loads (Lbs.)				S-P-F Allowable Loads (Lbs.)				Code Ref.
											Floor	Roof		Uplift[4]	Floor	Roof		Uplift[4]	
				W	H	D	A	Header Qty	Joist Qty	Type	100%	115%	125%	160%	100%	115%	125%	160%	
2 x 6-8	JN26E	MMLU26	20	1-9/16	4-13/16	2	1-1/4	10	4	"P" nails	600	690	750	305	530	610	640	245	IBC, FL, LA
								16	4	"P" nails	960	1105	1200	305	845	975	1000	245	
								20	4	"P" nails	1200	1325	1325	305	1055	1055	1055	245	
2 x 8-10	JN28E	MMLU28	20	1-9/16	6-11/16	2	1-3/16	10	4	"P" nails	600	690	750	305	530	610	640	245	
								16	4	"P" nails	960	1105	1200	305	845	975	1000	245	
								20	4	"P" nails	1200	1325	1325	305	1055	1055	1055	245	
2 x 10-12	JN210E	MMLU210	20	1-9/16	7-15/16	2	1-5/16	10	4	"P" nails	600	690	750	305	530	610	640	245	
								16	4	"P" nails	960	1105	1200	305	845	975	1000	245	
								20	4	"P" nails	1200	1325	1325	305	1055	1055	1055	245	
(2) 2 x 6-8	JN26-2	MMLU26-2	18	3-1/8	5-3/8	2-1/8	1-1/4	10	6	"P" nails	610	700	765	585	540	610	610	515	
								16	6	"P" nails	975	1120	1220	585	860	990	1075	515	
								24	6	"P" nails	1465	1685	1830	585	1290	1485	1615	515	
(2) 2 x 8-10	JN28-2	MMLU28-2	18	3-1/8	7-1/8	2-1/8	1-1/4	10	6	"P" nails	610	700	765	585	540	610	610	515	
								16	6	"P" nails	975	1120	1220	585	860	990	1075	515	
								24	6	"P" nails	1465	1685	1830	585	1290	1485	1615	515	
2-1/2 x 9-1/4 - 9-1/2	MTHF25925	MMLUI39	20	2-9/16	9-1/8	2	1-1/4	10	4	"P" nails	600	690	750	305	530	610	635	245	--
								16	4	"P" nails	960	1105	1200	305	845	975	995	245	
2-1/2 x 11-7/8	MTHF25112	MMLUI311	20	2-9/16	11-1/8	2	1-1/4	10	4	"P" nails	600	690	750	305	530	610	635	245	
								16	4	"P" nails	960	1105	1200	305	845	975	995	245	

1) "P" nails denotes fasteners designed specifically to be installed with a pneumatic-powered nailer. The fasteners shall be either of a type with round heads, 0.105" diameter and 1-3/8" long; or a "T" shaped head, 0.097" diameter, 1-1/4" long and hardened; or a similar but larger fastener.
2) Fasteners shall be pneumatically driven in such a way as firmly seats the nail head against the hanger steel, without embedding the nail head completely through the plane of the metal surface, or otherwise punching through.
3) The quantity of nails installed shall be equally distributed to both sides of the hanger. The nails shall be located at 1" spacing in a row, with the vertical rows spaced at 3/8"; also no less than 5/16" from a sheared edge and no less than 5/16" from a formed edge.
4) Uplift loads have been increased 60% for wind or seismic load conditions; no further increase shall be permitted.

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The RST3 rafter tie is designed to anchor trusses and rafters directly to the stud below. The ability to field-bend the RST3 permits fastening to either the wide or narrow face of the stud.

Materials: 18 gauge
Finish: G90 galvanizing

Installation:

- Use all specified fasteners.
- If necessary, field bend the lower tab of the RST3 at 90° at the two bend slots.
- Not all fastener holes need to be filled.
- Fasteners in truss do not need to penetrate a nailing plate to achieve the uplift loads listed below.
- The RST3 can be installed in pairs (on opposite sides of the wall, to achieve twice the uplift capacity).



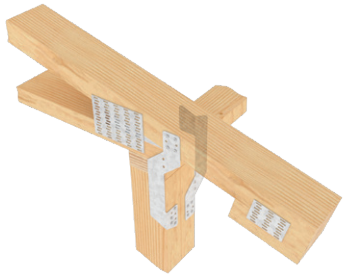
RST3



RST3 narrow face of stud to truss installation



RST3 wide face of stud to truss installation



RST3 stud pack to top chord of truss installation



RST3 stud pack to top chord of truss installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule				DF/SP Allowable Loads (Lbs.)[1]	S-P-F Allowable Loads (Lbs.)[1]	Code Ref.
					Rafter/Truss		Stud				
			W	L	Qty	Type[2]	Qty	Type[2]	Uplift 160%	Uplift 160%	
RST3	RST-3	18	1-1/2	10-5/16	4	#8 x 1-1/2	4	#8 x 1-1/2	555	465	--

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) #8 x 1-1/2 wood screw has a diameter of 0.164" and a length of 1-1/2".

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MRT7 Rafter Tie

The MRT7 Rafter Tie is engineered for wood frame structures built in a factory environment. These connectors feature embossed “nailing zones” for faster and safer fastener installation.

Materials: 18 gauge
Finish: G90 galvanizing

Installation:

- Install all specified fasteners using a pneumatic nailer.
- Nailing zones are distinguished by embossed pattern.
- Install fasteners with care not to overdrive fastener causing indentation of connector.
- Fastener quantities shall be installed symmetrically on both sides of connector.
- Installer should reduce risk of injury from rebounding fasteners by using personal eye protection during fastener installation.



Typical MRT7 installation



Typical knee wall set with MRT7 installation



MRT7

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[1,2,3]			DF/SP Allowable Loads (Lbs.)			S-P-F Allowable Loads (Lbs.)			Code Ref.
			W	L	Header Qty	Joist Qty	Type	Uplift[4] 160%	F1 160%	F2 160%	Uplift[4] 160%	F1 160%	F2 160%	
MRT7	MMH8	18	1-1/4	7-13/16	3	3	P or "T" nails	295	135	135	255	85	85	--
					4	4	P or "T" nails	390	180	180	340	115	115	
					5	5	P or "T" nails	490	195	195	425	145	145	
					6	6	P or "T" nails	585	195	195	510	175	175	

1) "P" nails denotes fasteners designed specifically to be installed with a pneumatic-powered nailer. The fasteners shall be either of a type with round heads, 0.105" diameter and 1-3/8" long; or a "T" shaped head, 0.097" diameter, 1-1/4" long and hardened; or a similar but larger fastener.
2) Fasteners shall be pneumatically driven in such a way as firmly seats the nail head against the hanger steel, without embedding the nail head completely through the plane of the metal surface, or otherwise punching through.
3) The quantity of nails installed shall be equally distributed to both sides of the hanger. The nails shall be located at 1" spacing in a row, with the vertical rows spaced at 3/8"; also no less than 5/16" from a sheared edge and no less than 5/16" from a formed edge.
4) Uplift loads have been increased 60% for wind or seismic load conditions; no further increase shall be permitted.

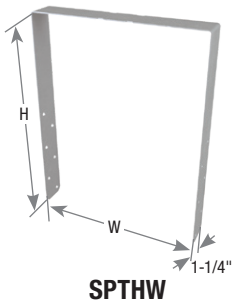
SPTHW Stud Plate Ties

MiTek’s SPTHW is a Stud Plate Tie that can be installed on the top and bottom of each stud at the manufacturing facility to stiffen for shipping and handling. Designed to be installed over 1/2" structural sheathing. Sheathing should be independently fastened to framing.

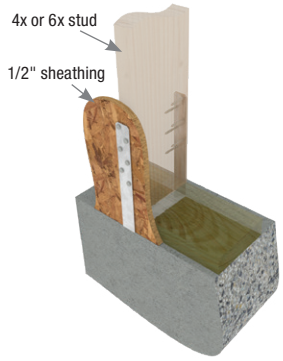
Materials: 18 gauge
Finish: G90 galvanizing
Codes: IBC, FL, LA

Installation:

- Install all specified fasteners.



SPTHW



Typical SPTHW installation

Stud Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in)		Fastener Schedule[2]		DF/SP Allowable Loads (Lbs.)	Code Ref.
				W	H	Qty	Type	Uplift 160%[1]	
4x	SPTHW4	SPH4R	18	4-1/16	8-3/8	12	10d x 1-1/2	2195	IBC, FL, LA
6x	SPTHW6	SPH6R	18	6-1/16	9-1/8	12	10d x 1-1/2	2195	

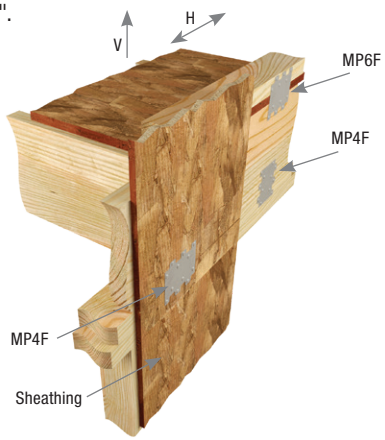
1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long.

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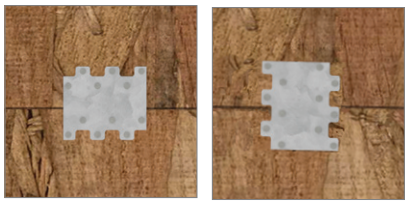
Connects 2x framing with floor sheathing up to 5/8".

Materials: 20 gauge
Finish: G90 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

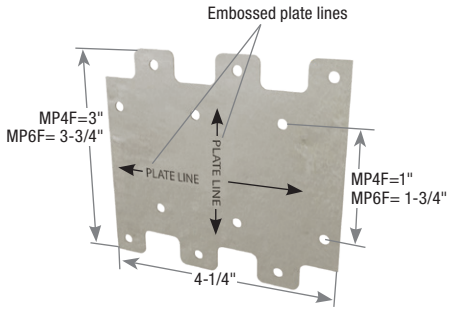
Installation:
- Use all specified fasteners.



Typical MPF installation



Type 1 **Type 2**



MPF

MiTek Stock No.	Ref. No.	Steel Gauge	Installation Type[2,4]	Fastener Schedule[4,6]				Direction of Load[2]	DF/SP Allowable Loads (Lbs.)[1,3]				S-P-F Allowable Loads (Lbs.)[1,3]				Corrosion Finish	Code Ref.
				Header or Stud		Joist or Plate												
				Qty	Type	Qty	Type		100%	115%	125%	160%	100%	115%	125%	160%		
MP4F	LTP4	20	Type 1	6	8d x 1-1/2	6	8d x 1-1/2	V	590	670	720	750	505	575	615	645		IBC, FL, LA
								H	590	670	720	750	505	575	615	645		
			Type 2	6	8d x 1-1/2	6	8d x 1-1/2	V	590	670	720	750	505	575	615	645		
								H	585	585	585	585	500	500	500	500		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Refer to drawings for installation type and definition of the various load directions.
3) If installing over plywood, use 8d common nails for 100% of table load.
4) 8d common (0.131" dia. x 2-1/2" long) nails may be substituted for 8d x 1-1/2" nails with no load reduction.
5) **NAILS:** 8d x 1-1/2 nails are 0.131" dia. x 1-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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Porch design for any structure must account for the wind exposure. Porches present lots of sail area to catch the wind and can develop very high wind uplift in ordinary wind events. They must be securely tied to the foundation. MiTek engineers and manufactures products intended to provide a load path from the porch components to the foundation.

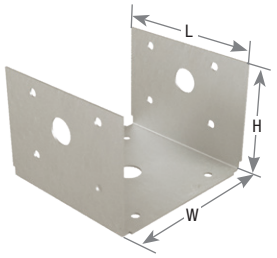
Materials: 18 gauge
Finish: G-185 galvanizing
Options: See table for Corrosion Finish Options
Codes: IBC, FL, LA

Installation:

- Use all specified fasteners.
- **Not recommended for fence posts or other unrestrained (not fixed or fastened at top) applications. These anchors are not designed to resist overturning (moment) loads.**
- D44-TZ offers lateral and uplift resistance: they are not recommended as a primary means of anchorage for posts in railings.



Typical D44-TZ installation



D44-TZ

Post Size	MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	H	L	Fastener Schedule[2] Post Qty	Post Type	Beam Qty	Beam Type	DF/SP Allowable Loads (Lbs.)[1] Uplift 160%	F1 160%	F2 160%	S-P-F Allowable Loads (Lbs.)[1] Uplift 160%	F1 160%	F2 160%	Corrosion Finish	Code Ref.
4 x 4	D44-TZ	BC40, BC40Z	18	3-9/16	2-1/2	3-3/8	8	16d HDG	4	16d HDG	700	885	885	565	760	760		IBC, FL, LA

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key
Stainless Steel · Gold Coat · HDG · Triple Zinc

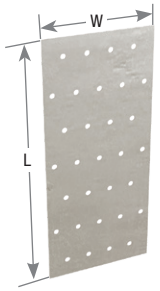
NP Nail Plates

The NP Nail Plates are an ideal economical solution for attaching wooden members together in a non-structural connection. Also may be used as a prescriptive top plate splice per the International Residential Code (IRC). They are pre-punched for 8d common nails.

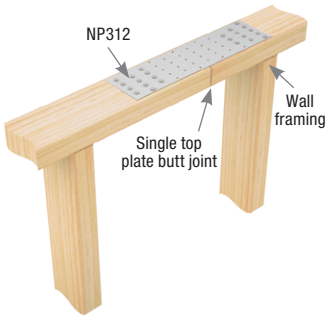
Materials: 20 gauge
Finish: G90 galvanizing
Codes: IRC R602.3.2

Installation:

- Use nails appropriate for intended use. Holes are sized for 8d common (0.131" dia. x 2-1/2" long) or 8d (0.131" dia.) x 1-1/2" nails.
- The designer shall determine appropriate load values.

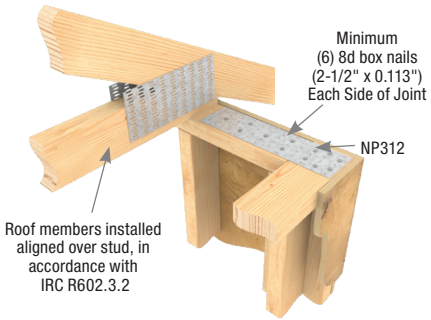


NP

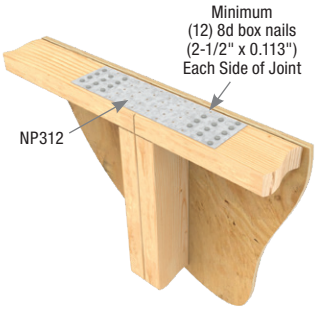


Typical NP312 prescriptive top plate splice installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	L	Number of Nail Holes	Code Ref.
NP15	TP15	20	1-13/16	5	12	
NP35	TP35	20	3-1/8	5	22	
NP37	TP37	20	3-1/8	7	31	
NP39	TP39	20	3-1/8	9	40	
NP311	TP311	20	3-1/8	11	49	
NP312	TP312	20	3-1/8	12	54	
NP315	TP316	20	3-1/8	15	67	--
NP45	TP45	20	4-1/8	5	30	
NP47	TP47	20	4-1/8	7	42	
NP49	TP49	20	4-1/8	9	54	
NP411	TP411	20	4-1/8	11	66	
NP57	TP57	20	5-3/4	7	59	



Typical NP312 prescriptive top-plate wall corner connection



Typical NP312 prescriptive top-plate butt joint straight wall connection

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Easy-to-install plates protect plumbing and power/communication wiring from nail or screw penetration.

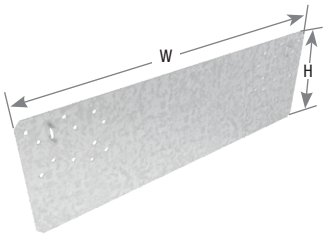
ICPL58 – Installs with nails

KNS1 / PL4 – Prongs allow for quick installation

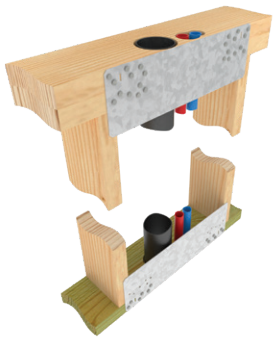
Materials: 16 gauge
Finish: ICPL516-TZ – G-185 galvanizing; All other – G90 galvanizing.
Options: See table for Corrosion Finish Options

Installation:

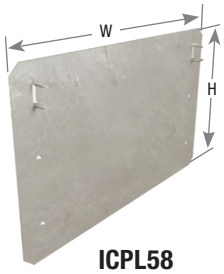
- Use all specified fasteners.
- 16 gauge steel conforms to protection shield plate requirements of the National Electrical Code and International Plumbing Code.



ICPL516-TZ



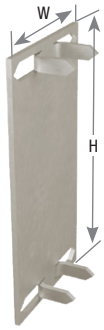
Typical ICPL516-TZ installation



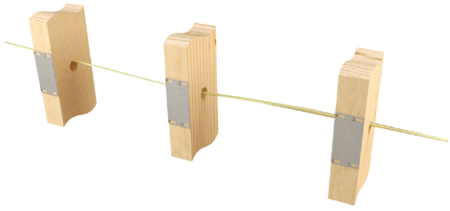
ICPL58



Typical ICPL58 installation



KNS1



Typical KNS1 / PL4 installation



PL4



Typical PL4 installation

MiTek Stock No.	Ref. No.	Steel Gauge	Dimensions (in) W	Dimensions (in) H	Installation Type	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	DF/SP Allowable Loads (Lbs.)[1] F1 160%	S-P-F Allowable Loads (Lbs.)[1] F1 160%	Corrosion Finish	Code Ref.
ICPL58	--	16	8-1/16	5	--	4	8d or prongs	--	--		PC
PL4	NS2	16	2	5	--	--	prongs	--	--		
KNS1	NS1	16	1-1/2	3	--	--	prongs	--	--		
ICPL516-TZ	PSPN516Z	16	16-1/4	5	Sill Plate	12	16d HDG + prongs	1355	1160		
					Double Top Plate	16	16d HDG + prongs	1805	1550		

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) **NAILS:** 8d nails are 0.131" dia. x 2-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

Corrosion Finish Key Stainless Steel Gold Coat HDG Triple Zinc

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LATERAL SYSTEMS

MiTek®

LATERAL SYSTEMS 350-354

Hardy Frame® Shear Walls	352
Hardy Frame® CFS Moment Frames	353
Hardy Frame® Moment Frames	353
Z4 Tie-Down Systems	354



Hardy Frame® Code Evaluation

Hardy Frames has been leading the pre-manufactured shear wall industry from its beginning. Hardy Frames were the first to be recognized by ICBO-ES and LA City, first to gain approval for multi-story applications, first Balloon Wall application that is fully assembled in the manufacturing plant and ships as a one piece unit and first to be recognized to comply with the 2003 and 2006 IBC and IRC Building Codes. Today we are the first and only to offer a 9" Panel width.

All Hardy Frame® Shear Walls are code listed under the 2021 IBC and IRC, 2022 CBC and CRC, 2023 LABC and LARC, and 2023 FBC codes and include installations on concrete, raised floor and upper floor systems.

Hardy Frame® Panels

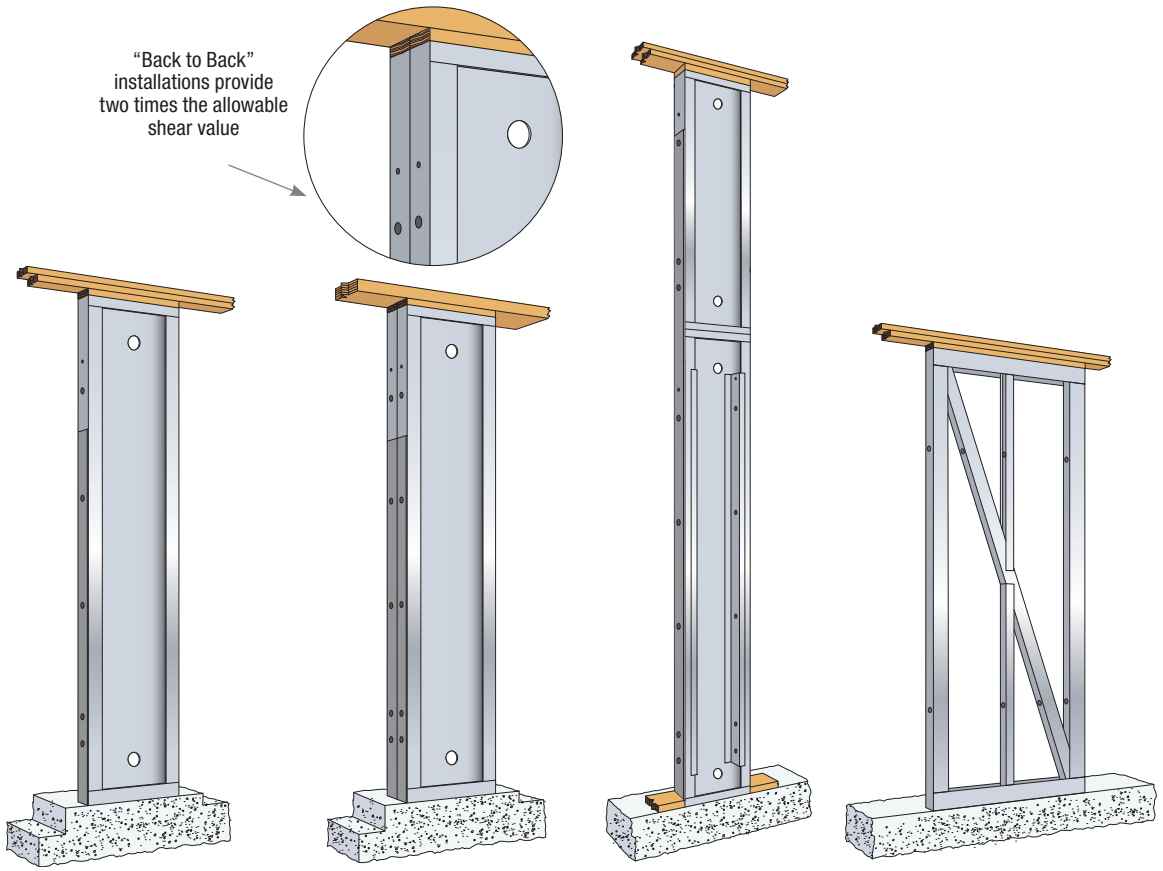
ICC-Evaluation Service ESR-2089

- Panels are available in 9, 12, 15, 18, 21 and 24" widths
- Standard Heights range from 78" for portal applications to 20' for Balloon Walls
- Custom heights are manufactured routinely
- R Value for design = 6.5, Cd = 4.0
- "Back to Back" installations provide two times the allowable shear value without increasing the wall length

Hardy Frame® Brace Frame

ICC-Evaluation Service ESR-2089

- Available in 32 and 44" widths
- Standard Heights range from nominal 8 to 13 feet
- Custom heights are manufactured routinely
- R Value for design = 6.5, Cd = 4.0
- For a given shear load, installing a wider shear wall results in reduced overturning



Hardy Frame® Panel

Hardy Frame® Panel "Back to Back"

Hardy Frame® Balloon Panel

Hardy Frame® Brace Frame

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The First and Only Cold Formed Steel (CFS) Moment Frames

MiTek® HARDY FRAME™

The MiTek Hardy Frame® CFS Moment Frame and CFS Picture Frame are the industry's first standardized, pre-engineered, pre-manufactured cold formed steel moment frames.

Lighter and less cost than structural steel moment frames, our CFS product line provides high capacities, ductility and cost economics that complete a spectrum of MiTek shear wall solutions.

Standard configurations are the Hardy Frame® CFS Moment Frame (portal applications) and the Hardy Frame® CFS Picture Frame for stacking in multi-story applications.



Hardy Frame® CFS Moment Frame

Code Report: ER-491

- Similar materials and installation as Hardy Frame Panels the industry leader for 20 years
- Available in standard designs and standard detailing
- Capacities that are equal to four or five Hardy Frame Panels of same width
- Can be installed "Back to Back" to double the capacity



Hardy Frame® CFS Picture Frame

- Sill beam that assembles at the bottom of the Frame distributes compression over wood below to significantly reduce crushing and maintain shear capacity
- Incorporates the MiTek Z4 Continuous Tie-Down System to transfer overturning and uplift forces to the foundation
- Narrow columns (12 through 21") and shallow beam depths (12 and 15") enable large openings and architectural freedom
- Ships as a "knock-down" unit: easy to handle, ship and field assemble
- Custom designs available, see CFS Moment Frame Design Manager at http://builderproducts.mii.com/cfsmomentframe

Hardy Frame® Moment Frames

MiTek Hardy Frame® Special Moment Frames are constructed of wide flange columns connected to hollow structural steel (HSS) beams with SidePlate special moment connections.

The SidePlate special moment connection is approved in the AISC 358 Prequalified Moment Connections Standard and the review included testing that confirmed lateral bracing to prevent twist and out-of-plane displacements is not required at the hollow structural section (HSS) beams. Standard configurations are the Hardy Frame® Moment Frame with a pinned base and the Hardy Frame® Picture Frame.



Hardy Frame® Moment Frame

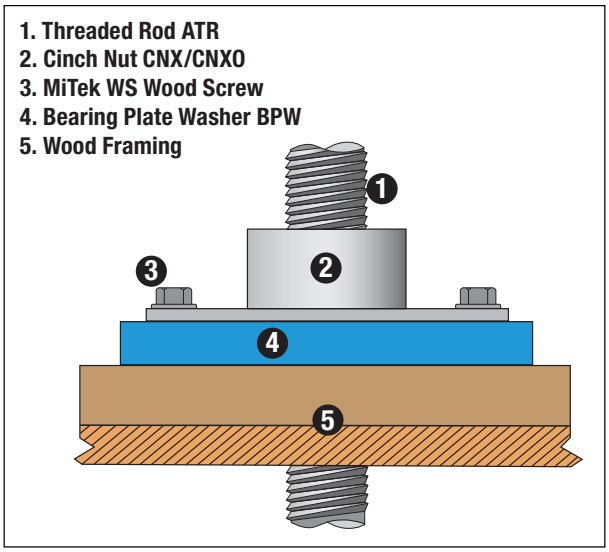
- Standard designs for nominal 6" through 14" column depths with pinned base anchorage are now available
- Delivery options for pre-assembled, bolted column splice or "knock-down"
- All standard designs fit in typical 8" wall framing
- New construction and retrofit applications
- Includes wood nailers at top & bottom of HSS beam and at all column flanges



Hardy Frame® Picture Frame

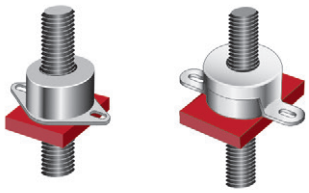
- Constructed with HSS beams at top and bottom of Frame, SidePlate special moment connections at all four corners
- HSS beam at bottom of Frame eliminates the engineering and field construction of costly grade beams
- Significant reductions in installation time result from elimination of field built grade beam
- Standard designs for nominal 6" through 14" column depths that fit into typical 8" wall framing with double the capacity of our pinned base option are now available
- All the same delivery options and wood nailer inclusions as the Hardy Frame® Moment Frame with pinned base
- Custom designs available, see HFSMF Special Moment Frame Design Manager at http://builderproducts.mii.com/specialmomentframe

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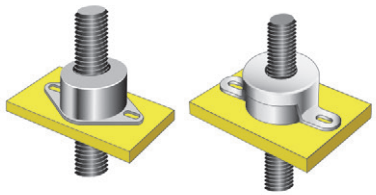


MiTek® Z4 Tie-Down Systems utilize CNX/CNXO-Series Cinch Nuts to compensate for wood shrinkage and building settlement that cause connections to loosen over time. The Cinch Nut uses a self-ratcheting action that permits the cinch nut to move or "travel" perpetually in one direction only down the rod (the rod doesn't move). Available for installation with threaded rods that are 3/8" through 1-1/2" diameter in 1/8" increments, the CNX/CNXO Cinch Nut has been code evaluated and published in ESR-2190.

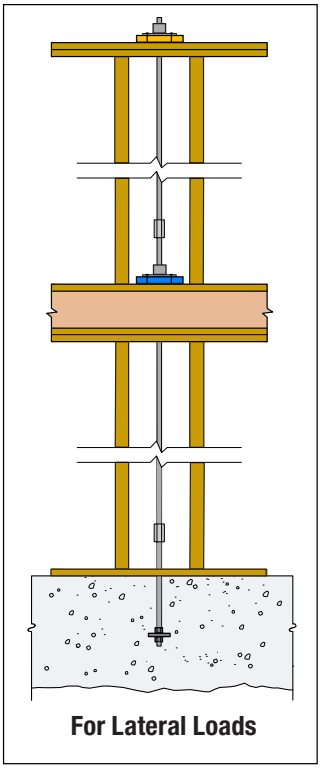
- Place the specified Bearing Plate Washer onto the bottom plate of a wood framed wall.
- With the "wings" oriented downward, place Cinch Nut over the ATR extending from below and push down until it seats firmly on the Bearing Plate Washer.
- Install 1/4" diameter MiTek® WS Screws through the wings, penetrating 1" (minimum) into the wood bottom plate.
- Model numbers BPW5 and BPW6 fit in-between the screws fastening the wings.
- Model numbers BPW7 (3-1/4" x 4-3/8") and larger are provided with two screw holes. Align the wing and the Bearing Plate Washer screw holes to allow installation of 1/4" diameter MiTek® WS Screws.



BPW5, BPW6 Installation



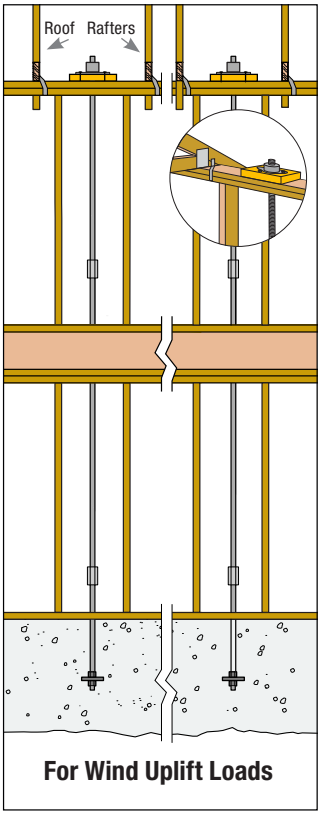
BPW7 and larger Installation



For Lateral Loads

MiTek® Z4 Tie-Down System for Lateral Load

To resist tension loads due to overturning moments in multi-story buildings the Cinch Nut is installed over a Bearing Plate Washer at each level in a fast and easy application. At the uppermost level a Cinch Nut is installed over a Bearing Plate Washer above the top plates. At walls below that bear on wood floor systems, the Cinch Nut and Bearing Plate Washer are installed over the bottom plate. Tension loads are gathered at each level and transferred into the foundation through a continuous system of Cinch Nuts, Bearing Plate Washers, ATRs and Couplers. All are available lines by MiTek.



For Wind Uplift Loads

MiTek® Z4 Tie-Down System for Wind Uplift

For resisting roof uplift loads resulting from wind the Z4 Cinch Nut is installed over a Bearing Plate Washer above the top plates with roof framing above to create a tie-down system. Uplift forces are transferred into a continuous system of ATRs and Couplers that form a load path to the foundation.

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MiTek®

INTEGRATED BUILDING SOLUTIONS



SERVICES

Scale your business and outputs (take-offs, estimating, job quotes, and more) with the comfort of fixed overhead costs.



AUTOMATED SOLUTIONS

Optimize your entire prefabrication facilities workflow with off-site solutions that enable better on-site building.



SOFTWARE

Enhance your operational performance with software solutions that connect the entire supply chain.



ENGINEERED SYSTEMS & PRODUCTS

Accelerate your building process with a full range of advanced solutions that save on labor and installation costs.



MADE IN AMERICA. DESIGNED TO LAST.

Our structural connector products are designed to last and manufactured and distributed in 10 strategic locations in the United States.

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