

S/PHD Holdowns for CFS Construction

The S/PHD holdowns are high performance ductile holdowns 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 screws making installation an ease, saving time and labor.

Materials: S/PHD4, S/PHD6 – 14 gauge; S/PHD9 – 12 gauge

Finish: G90 galvanizing

Codes: ER-0566

Installation:

- Use all specified fasteners.
- 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 built up studs shall be designed to act as a single unit. Holddown fasteners specified shall not be considered to attach multiple CFS members together.
- For anchorage options see STBL Anchor Bolt series or ATR threaded rod series products epoxied into place at required depth.



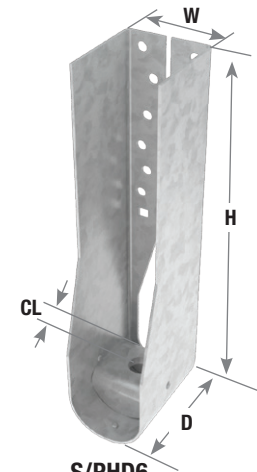
Typical S/PHD installation



Typical S/PHD Corner installation



S/PHD4



S/PHD6

USP Stock No.	Ref. No.	Steel Gauge	Dimensions (in)				Fastener Schedule					Metal Stud Member ⁴ Mils (Gauge)	ASD (Lbs.)		LRFD (Lbs.)		Ctn Qty
			W	H	D	CL	Anchor Bolt ¹		Stud		Tension Load		Deflection at ASD Load (in)	Tension Load	Deflection at LRFD Load (in)		
							Qty	Dia (in)	Min/Max	Qty						Type ³	
S/PHD4	S/HDU4	14	2-3/8	7-3/4	3-1/4	1-3/8	1	5/8	Min	6	#14	2-33 (20Ga)	2255	0.080	3605	0.118	10
												2-43 (18Ga)	3145	0.103	5035	0.148	
												2-54 (16Ga)	4355	0.140	6970	0.205	
												2-33 (20Ga)	2960	0.088	4740	0.133	
												2-43 (18Ga)	4345	0.076	6950	0.131	
S/PHD6	S/HDU6	14	2-3/8	10-3/8	3-1/4	1-3/8	1	5/8	Min	12	#14	2-33 (20Ga)	4965	0.102	7945	0.177	10
												2-43 (18Ga)	5490	0.104	8785	0.160	
												2-54 (16Ga)	7345	0.120	11750	0.214	
												2-33 (20Ga)	5440	0.088	8700	0.168	
												2-43 (18Ga)	6275	0.096	10040	0.156	
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	6
												2-43 (18Ga)	8875	0.112	14195	0.191	
												2-54 (16Ga)	10850	0.103	17365	0.165	

1) The designer must specify the anchor bolt type, length and embedment.
 2) Deflections are derived from static, monotonic load tests of device connected to a 2-ply cold formed steel stud and include fastener slip, holdown elongation and anchor bolt elongation (L = 4").
 3) #14 screws are self-drilling tapping screws for cold-formed steel construction.
 4) The designer must specify the metal stud size and mil thickness.