

Foundation Anchor FA4

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

Features:

- Tested to meet the requirements of ICC-ES Acceptance Criteria AC-308 for uncracked and cracked concrete. ICC-ES evaluation report pending.
- Use as a replacement for 5/8" or 1/2" anchor bolts with cut or plate washers and nuts.
- Embedded leg with flow-thru design reduces spalling by minimizing the size of the concrete fracture plane.

Materials: 16 gauge

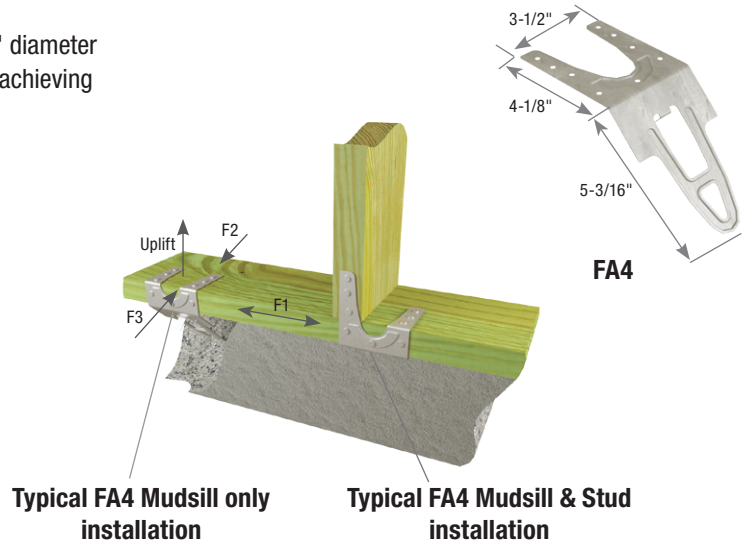
Finish: G90 galvanizing

Options: FA4 is available in Triple Zinc. To order, add TZ to stock number, as in FA4-TZ.

Codes: ICC-ES ESR-2787, FL17249, COLA RR 26017

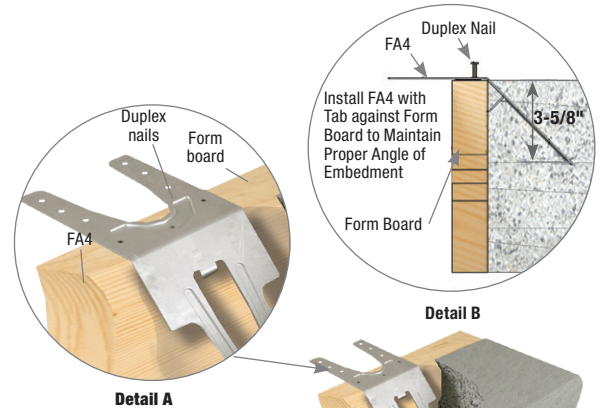
Installation:

- The FA4 can be mounted to the form board before placing the concrete or inserted into 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 chart.



Typical FA4 Mudsill only installation

Typical FA4 Mudsill & Stud installation



Detail A

Detail B



Typical FA4 form board installation

Plate Size	USP Stock No.	Ref. No.	Steel Ga.	Fastener Schedule ⁶				Installation Type	Concrete ⁵	DF/SP Allowable Loads (Lbs.) ^{1,2,3}								Ctn Qty	
				Sill Plate		Stud	Type			Uplift		F1		F2		F3			
				Side Qty	Top Qty					Qty	160%	Δ_{ASD} (in) ⁴	160%	Δ_{ASD} (in) ⁴	160%	Δ_{ASD} (in) ⁴	160%		Δ_{ASD} (in) ⁴
Wind and SDC A & B														50					
2 x4 or 2 x6	FA4	MASA	16	3	6	--	10d x 1-1/2	Mudsill Only	Uncracked	905	0.033	1460	0.020		1115	0.132	655	0.130	
				Cracked	780			1280		780		610							
2 x4 or 2 x6	FA4	MASA	16	3	3	3	10d x 1-1/2	Mudsill & Stud	Uncracked	780	0.041	955	0.008		1115	0.130	515	0.122	
				Cracked	780			955		780		515							
SDC C-F															50				
2 x4 or 2 x6	FA4	MASA	16	3	6	--	10d x 1-1/2	Mudsill Only	Uncracked	875	0.033	1460	0.020			875	0.132	655	0.130
				Cracked	670			1095		670		520							
2 x4 or 2 x6	FA4	MASA	16	3	3	3	10d x 1-1/2	Mudsill & Stud	Uncracked	780	0.041	955	0.008	875		0.130	515	0.122	
				Cracked	670			955		670		515							

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) Allowable loads are based on a single-ply 2x mudsill with a minimum specific gravity of 0.50 and a moisture content of 19% or less.
 4) Deflections are derived from static, monotonic load tests of FA4 connected to DF wood members with the specified fasteners.
 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.

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

Anchor Bolt Dia. (in)	Anchor Bolt Spacing	DF/SP 2x Mud sill O.C. Spacing			Hem-Fir 2x Mud sill O.C. Spacing			Min End Distance	Min C-C Spacing
		Wind	SDC A & B	SDC C-E	Wind	SDC A & B	SDC C-E		
		1/2"	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"		
5/8"	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"			
5/8"	4'-0"	3'-7"	3'-7"	3'-7"	3'-4"	3'-4"			

1) Place anchors not more than 1'-0" from end of each mudsill per code.
 2) Spacing is based on parallel to mudsill load direction only.
 3) Concrete shall have a minimum $f'c = 2500$ 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 2012 National Design Specification.