

S/PAHD & S/HPAHD Strap Tie Holdowns

Holdowns & Tension Ties

A variety of steel-to-concrete connectors that satisfy engineering and code requirements. Allowable loads include a tested three-times safety factor in concrete with a one-piece design and no separate anchors required.

MATERIAL: S/HPAHD, HPAHD—118mil (10 ga) x 2 1/16"; S/PAHD—97 mil (12 ga) x 2 1/16".

FINISH: Galvanized; see Corrosion Information, page 12–13.

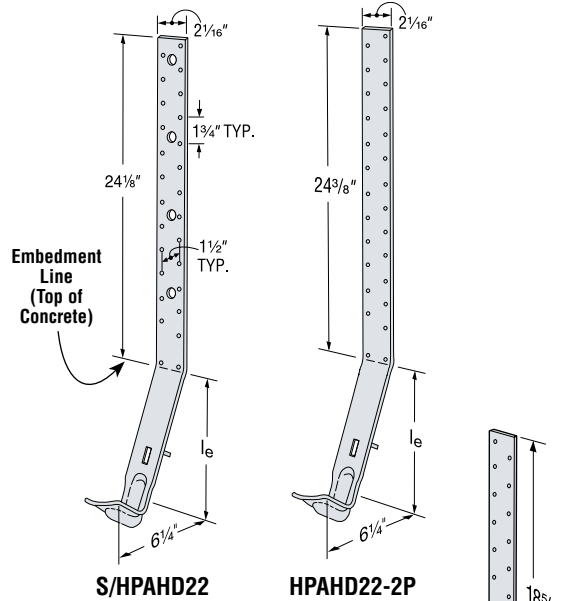
INSTALLATION: • Use all specified fasteners.

- Unless otherwise noted, do NOT install where:
 - (a) a horizontal cold joint exists within the embedment depth between the slab and foundation wall or footing beneath, unless provisions are made to transfer the load, or the slab is designed to resist the load imposed by the anchor; or
 - (b) slabs are poured over concrete block foundation walls.
- To get the full table load, the minimum center-to-center spacing is twice the embedment depth when resisting tension loads at the same time.
- **FOUNDATION CORNERS:** Screw quantities have been reduced when the load is limited by tested concrete pullout strength. Additional screw holes need not be filled.

FEATURES: Designed to be installed at the edge of concrete. Tests determined the pullout strength with one horizontal #4 rebar in the shear cone. Install before concrete pour with a StrapMate®, or other holding device. Pre-bent to control the embedment at the required angle; field-bending is not necessary. Installation holes allow nailing to the form, resulting in 1" deeper embedment; see illustration.

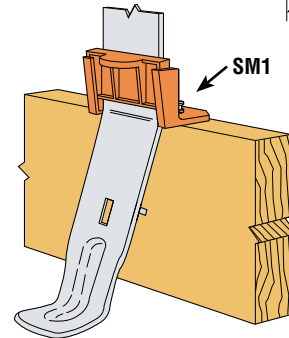
OPTIONS: See also S/HD Holdowns, S/LTT, S/HTT and HTT Tension Ties.

CODE: See page 8 for Code Listing Key Chart.



Model No.	Minimum Stemwall Width	Embed. Depth l_e	Screws	ASD Tension Loads 33 mil (20 ga)	Model No.	Minimum Stemwall Width	Embed. Depth l_e	Screws	ASD Tension Loads 33 mil (20 ga)	Code Ref.	
Edge Installation – 2500 psi Concrete					Corner Installation – 2500 psi Concrete						
Single Pour – see installation 1 (8" min from corner)					Single Pour – see installation 2 (1/2" min from corner)						
S/PAHD42	6	6 1/2"	10- #10	1765	S/PAHD42	6	6 1/2"	4- #10	1225	ILC1, FC1	
	8		13- #10	2300		5- #10		1400			
S/HPAHD22	6	10"	20- #10	3335	S/HPAHD22	6	10"	10- #10	1750		
	8		26- #10	4595		12- #10		2120			
Double Pour – see installation 3 (8" min from corner)					Double Pour – see installation 4 (1/2" min from corner)						
S/PAHD42	6	6 1/2"	10- #10	1765	S/PAHD42	6	6 1/2"	4- #10	1225		
	8		13- #10	2300		5- #10		1400			
S/HPAHD22	6	10"	20- #10	3335	S/HPAHD22	6	10"	10- #10	1750		
	8		26- #10	4595		12- #10		2120			
HPAHD22-2P	6	14 7/16"	20- #10	3335	HPAHD22-2P	6	14 7/16"	10- #10	1750		
	8		26- #10	4595		12- #10		2120			

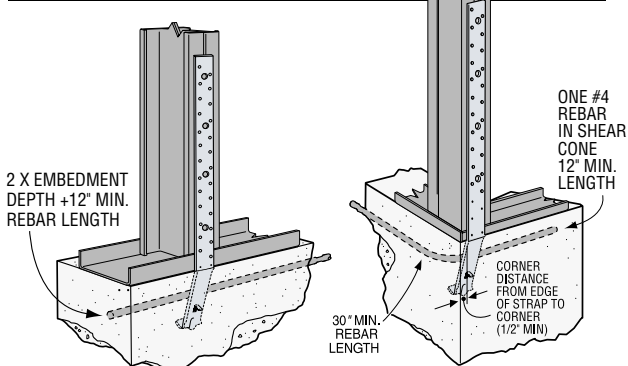
Typical S/PAHD42 before the Concrete Pour



Typical S/HPAHD22 before the Concrete Pour installed with SM1

1. S/HPAHD22 may be embedded 4" into the slab and 6" into the 8" stemwall beneath for a maximum load of 2810 lbs. at 8" minimum from the closest corner, and 1400 lbs. at 1/2" from the closest corner. See Installation 4.
2. Calculate the loads using straight line interpolation for corner distances between 1/2" and 8".
3. Loads are based on CFS members having a minimum thickness of 33 mil (20 ga).
4. Not all fastener holes need to be filled as additional fastener holes provided. Install fasteners symmetrically.
5. Strap may be bent one full cycle. (*Bent horizontal 90° then bent vertical.*) Bending the strap to aid wall placement may cause spalling behind the strap. Any portion of the strap exposed should be protected against corrosive conditions with industry standard practices.

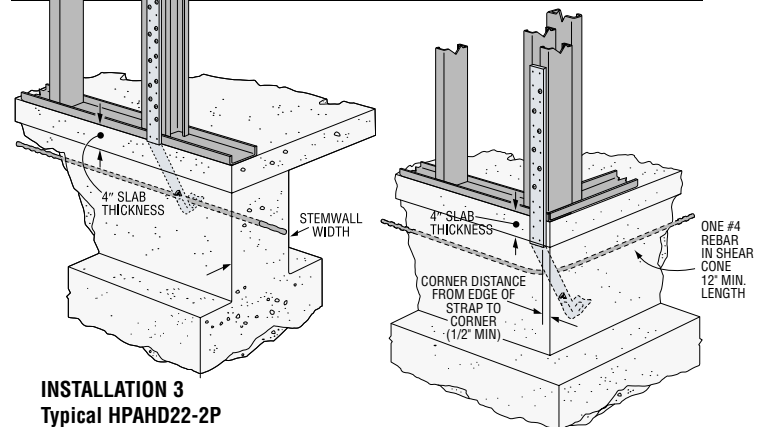
SINGLE POUR



INSTALLATION 1
Typical S/HPAHD Single-Pour Edge Installation

INSTALLATION 2
Typical S/HPAHD Single-Pour Corner Installation

DOUBLE POUR



INSTALLATION 3
Typical HPAHD22-2P Double-Pour Edge Installation.

Unless otherwise noted, all others must be installed with the bend embedment line at the cold joint between the slab and the foundation.

INSTALLATION 4
Typical S/HPAHD Double-Pour Corner Installation