

**PA/HPA Strap Tie Holdowns**

Cold Formed Steel-to-concrete and concrete block connectors that satisfy code requirements.

The PA's Dual Embedment Line allows installation in concrete or concrete block.

**MATERIAL:** See table

**FINISH:** Galvanized. PA's available HDG or ZMAX®.

See Corrosion Information page 12-13.

**INSTALLATION:** • Minimum concrete strength is 2000 psi.

- Use all specified fasteners; some models have extra fastener holes. See General Notes.
- Purlin Anchor must hook around rebar.

**EDGE DISTANCE**—Minimum concrete edge distance is 5".

Minimum concrete block left-to-right edge distance is 20".

**CONCRETE BLOCK WALL**—The masonry embedment line on the PA allows for 4" of grout embedment in a standard 8" concrete masonry unit. The minimum wall specifications are:

- A** One #4 vertical rebar, 32" long, 16" each side of anchor;
- B** Two courses of grout filled block above and below the anchor (*no cold joints allowed*);
- C** A horizontal bond beam with two #4 rebars, 40" long, a maximum of two courses above or below the anchor.

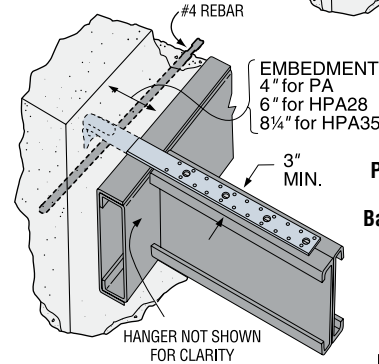
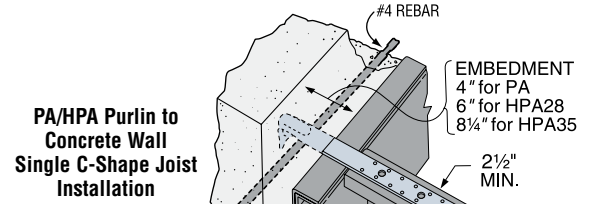
All cells grouted with 2000 psi 3/8" aggregate grout. Grout shall be vibrated per the Code. Rebar quantities, sizes and lengths are minimum requirements and may be increased per any additional wall design requirements.

**OPTIONS:** See S/LTT and S/HTT Tension Ties.

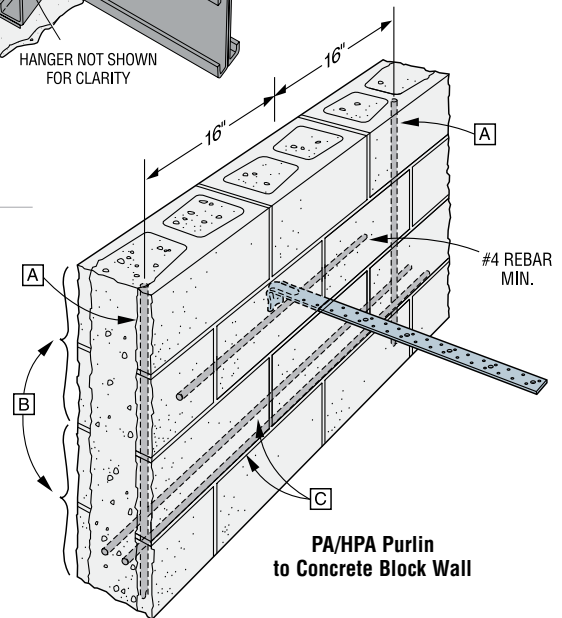
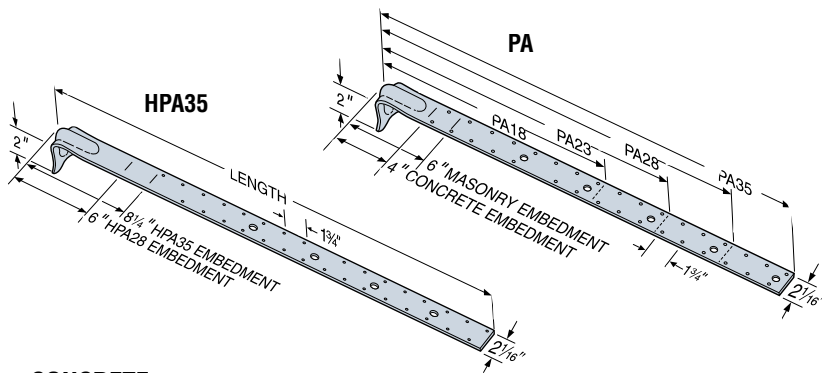
**CODES:** See page 8 for Code Listing Key Chart.

**The UBC Section 1633.2.8 and IBC 1620.2.1 state:**

... Diaphragm to wall anchorage using embedded straps shall have the straps attached to or hooked around the reinforcing steel, or otherwise terminated to effectively transfer forces to the reinforcing steel.



**PA/HPA Purlin to Concrete Wall Back-to-back Joist Installation**



**PA/HPA Purlin to Concrete Block Wall**

**CONCRETE**

Available with additional corrosion protection. Check with factory.

Model No.	Material Thk. mil (ga)	L	W	Fasteners			Allowable Tension Load					Code Ref.	
				Rafter/Stud/Joist Thickness									
				33 mil (20 ga)	43 mil (18 ga)	54 mil (16 ga)	33 mil (20 ga) (100) (133)	43 mil (18 ga) (100) (133)	54 mil (16 ga) (100) (133)	33 mil (20 ga) (100) (133)	43 mil (18 ga) (100) (133)		54 mil (16 ga) (100) (133)
PA18	97 (12 ga)	18 1/2	2 1/16	16- #10	15- #10	10- #10	2830	3685	3685	3685	3685	3685	151
PA23		23 3/4		21- #10	18- #10	16- #10	3685	3685	3685	3685	3685	3685	
PA28		32 1/2		23- #10	22- #10	21- #10	3685	3685	3685	3685	3685	3685	
PA35		35		30- #10	29- #10	28- #10	3685	3685	3685	3685	3685	3685	
HPA28	118 (10 ga)	21 1/2	38 1/2	28- #10	26- #10	25- #10	4845	4845	4845	4845	4845	4845	
HPA35	21 1/2	32- #10		30- #10	27- #10	5420	5420	5420	5420	5420	5420		

**MASONRY**

Model No.	Material Thk. mil (ga)	L	W	Fasteners			Allowable Tension Load					Code Ref.	
				Rafter/Stud/Joist Thickness									
				33 mil (20 ga)	43 mil (18 ga)	54 mil (16 ga)	33 mil (20 ga) (100) (133)	43 mil (18 ga) (100) (133)	54 mil (16 ga) (100) (133)	33 mil (20 ga) (100) (133)	43 mil (18 ga) (100) (133)		54 mil (16 ga) (100) (133)
PA18	97 (12 ga)	18 1/2	2 1/16	14- #10	11- #10	9- #10	2475	2815	2815	2815	2815	2815	151
PA23		23 3/4		16- #10	15- #10	15- #10	2815	2815	2815	2815	2815	2815	
PA28		32 1/2		16- #10	11- #10	6- #10	2815	2815	2815	2815	2815	2815	
PA35		35		16- #10	11- #10	6- #10	2815	2815	2815	2815	2815	2815	

1. Allowable loads are for a horizontal installation into the side of a concrete or masonry wall.
2. Tabulated loads shown at (100) do not include steel stress increase. Tabulated loads shown at (133) include a 1/3 stress increase on the steel. Refer to page 12 for additional information.
3. The designer shall verify that the screw strength is adequate to resist the tabulated load.
4. Not all fastener holes need to be filled as additional fastener holes provided. Install fasteners symmetrically.