

**PAI/MPAI** Purlin Anchors

Wood-to-concrete and wood-to-CMU connectors that satisfy code requirements. The PA's dual embedment line allows installation in concrete or concrete block.

**MATERIAL:** MPAI—14 gauge; PAI—12 gauge

**FINISH:** Galvanized. Some products available HDG or ZMAX® coating.

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

- Use all specified fasteners; some models have extra fastener holes. See General Notes.
- Wood splitting may occur when anchor is nailed to wood less than 3½" wide. To reduce splitting for widths less than 3½", fill every other nail hole with 10dx1½" nails. Reduce the allowable load based on the size and quantity of fasteners used. (See nail table on page 16-17.)
- PAI is designed for wood I-joists. Nail spacing is for 10dx1½" nails 3" on center, to minimize the chance of wood splitting. Maximum ledger width for full loads is 1½".

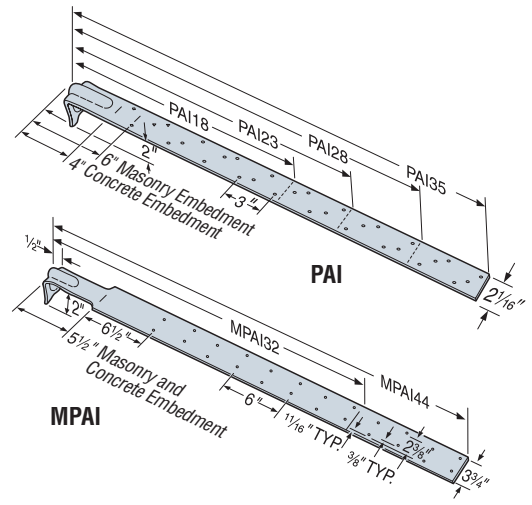
**EDGE DISTANCE**—Minimum concrete edge distance is 5".

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

**CONCRETE BLOCK WALLS**—The masonry embedment line on PAI, MPAI allows for 4" of grout embedment in a standard 8" concrete masonry unit. The minimum wall specifications are: one #4 vertical rebar, 32" long, at 32" o.c.; two courses of block above and below the anchor; 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 ¾" aggregate grout. Grout shall be vibrated per the 1997 UBC section 2104.6.2.

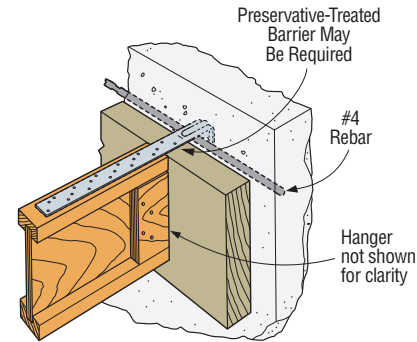
**OPTIONS:** See LTT and HTT Tension Ties.

**CODES:** See page 12 for Code Reference Key Chart.



**Note:** IBC 1613.1 refers to ASCE7 for seismic design procedures which states in Section 12.11.2.2.5:

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



**PAI Purlin to Concrete Wall**  
(MPAI similar)

1. Allowable loads have been increased 60% for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
2. Allowable loads are for a horizontal installation into the side of a concrete or masonry wall.
3. **NAILS:** 10dx1½" = 0.148" dia. x 1½" long. See page 16-17 for other nail sizes and information.

Model No.	L	Fasteners		Allowable Loads		Code Ref.
		Masonry	Concrete	Masonry (160)	Concrete (160)	
<b>Maximum Capacity</b>						
PAI18	18	10-10dx1½"	12-10dx1½"	1505	1805	IL8
PAI23	23	15-10dx1½"	17-10dx1½"	2255	2560	
PAI28	29	21-10dx1½"	23-10dx1½"	2815	3460	
PAI35	35	26-10dx1½"	29-10dx1½"	2815	3685	
MPAI32	32	16-10dx1½"	16-10dx1½"	2355	2355	
MPAI44	44	24-10dx1½"	24-10dx1½"	2865	2865	
<b>1½" LVL and 3x Ledger</b>						
PAI18	18	8-10dx1½"	10-10dx1½"	1205	1505	IL8
PAI23	23	13-10dx1½"	15-10dx1½"	1955	2255	
PAI28	29	19-10dx1½"	21-10dx1½"	2815	3160	
PAI35	35	24-10dx1½"	27-10dx1½"	2815	3685	
MPAI32	32	16-10dx1½"	16-10dx1½"	2355	2355	
MPAI44	44	24-10dx1½"	24-10dx1½"	2865	2865	
<b>4x Ledger</b>						
PAI18	18	7-10dx1½"	9-10dx1½"	1055	1355	IL8
PAI23	23	12-10dx1½"	14-10dx1½"	1805	2105	
PAI28	29	18-10dx1½"	20-10dx1½"	2705	3010	
PAI35	35	23-10dx1½"	26-10dx1½"	2815	3685	
MPAI32	32	16-10dx1½"	16-10dx1½"	2355	2355	
MPAI44	44	24-10dx1½"	24-10dx1½"	2865	2865	

**RC** Ripper Clip

The Ripper Clip is designed to connect ripped 2x framing to the top of another wood joist.

**MATERIAL:** 20 gauge **FINISH:** Galvanized

**INSTALLATION:** • Use all specified fasteners. Refer to General Notes.

- Attach RC to ripper, then attach ripper/RC assembly to roof joist.

**CODES:** See page 12 for Code Reference Key Chart.

Model No.	W	Fasteners		Allowable Uplift Load (160)	F <sub>1</sub>	F <sub>2</sub>	Code Ref.
		Ripper	Joist				
RC1.56	1⅞"	2-10dx1½"	2-10dx1½"	205	240	205	170
RC1.81	1⅞"						
RC2.1	2⅞"						

1. Allowable loads are for DFL ripper members.
2. Uplift loads have been increased 60% for wind or earthquake loading with no other increase allowed. Reduce by 60% for normal loading.
3. Designer to consider stability/blocking requirements for system, if necessary.
4. Spacing of RC per Designer.
5. **NAILS:** 10dx1½" = 0.148" dia. x 1½" long. See page 16-17 for other nail sizes and information.

