

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.
- PAI is designed for wood I-joists with LVL flanges 2½" or wider. Nail spacing is 3" on center with 10dx1½" nails, to minimize the chance of wood splitting. Maximum ledger width for full loads is 1½".
- MPAI is designed for open web trusses and I-joists with solid sawn or LVL chords/flanges 3½" or wider. For SPF chords/flanges reduce loads by 0.86.

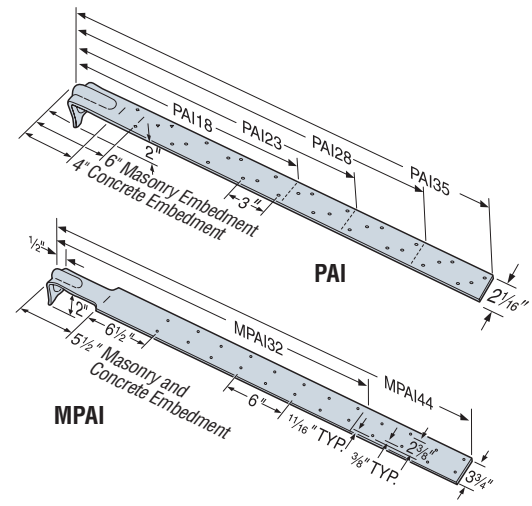
EDGE DISTANCE—Minimum concrete edge distance is 5". Minimum concrete block left-to-right edge distance is 20".

CONCRETE BLOCK WALLS—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.
- D** Minimum masonry compressive strength, $f'_m = 1500$ psi.

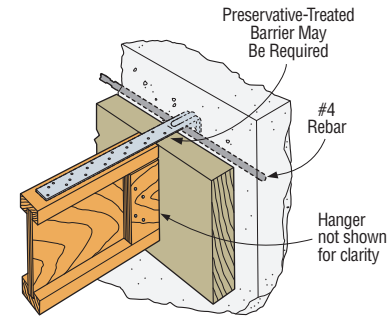
OPTIONS: See LTT and HTT Tension Ties.

CODES: See page 20 for Code Reference Key Chart.



ASCE 7-05 12.11.2.2.5 states:

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 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. Structural composite lumber beams have sides that show either the wide face or the lumber strands/veneers. Values in the tables reflect installation in the wide face.
4. **NAILS:** 10dx1½" = 0.148" dia. x 1½" long. See page 24-25 for other nail sizes and information.

Model No.	L	Fasteners		Allowable Loads		Code Ref.
		Masonry	Concrete	Masonry (160)	Concrete (160)	
2x Ledger						
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	
1½ LVL and 3x Ledger						
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	
4x Ledger						
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

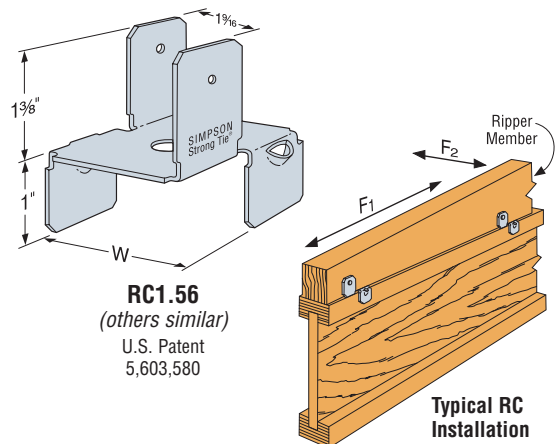
INSTALLATION: • Use all specified fasteners. Refer to General Notes.

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

CODES: See page 20 for Code Reference Key Chart.

Model No.	W	Fasteners		Allowable Uplift Load (160)	F ₁	F ₂	Code Ref.
		Ripper	Joist				
RC1.56	1"	2-10dx1½"	2-10dx1½"	205	240	205	170
RC1.81	1½"						
RC2.1	2"						

1. Allowable loads are for DFL ripper members.
2. Uplift loads have been increased for wind or earthquake loading with no other increase allowed. Reduce where other loads govern.
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 24-25 for other nail sizes and information.



RC1.56
(others similar)
U.S. Patent
5,603,580

Typical RC Installation