

# LMAZ/MASB/MAS/MAB/MA Mud sill Anchors

The LMAZ offers a higher lateral load capacity in a lighter gauge.

The MASB is designed for installation on concrete masonry units.

MAS—For slab or stemwall construction. Fast for the finisher—install before pouring concrete by nailing into form, or insert into concrete after pour. No anchor bolts to hand trowel around. Fast for the framer—eliminates plate drilling.

MAB—Anchors mudsill to concrete block, poured walls or slab foundation.

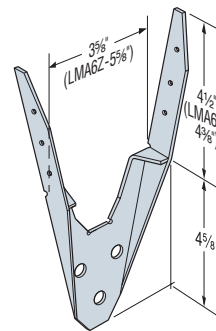
**MATERIAL:** MASB, MAS, MA—16 gauge; LMAZ, MAB—18 gauge

**FINISH:** Galvanized. Some products available in ZMAX®; LMAZ—ZMAX only.

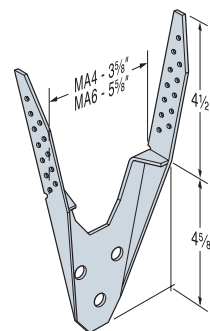
See Corrosion Information, page 10-11.

**INSTALLATION:** • Use all specified fasteners. See General Notes.

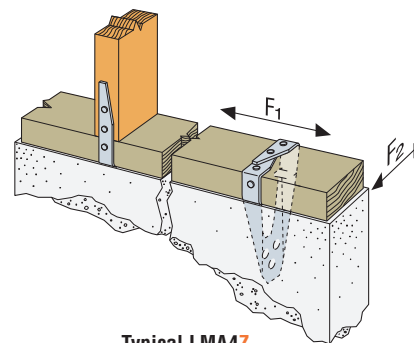
- Not for use where (a) a horizontal cold joint exists between the slab and foundation wall or footing beneath, unless provisions are made to transfer the load, or (b) anchors are installed in slabs poured over foundation walls formed of concrete block. All grout and concrete must have a minimum  $f'_c$  of 2000 psi (13.8 MPa).
- MASB—First fill CMU cell with concrete grout. Place MASB into the grouted cell, and adjust into position. Attach mudsill to anchor after the concrete cures.
- MAB—When used in monolithic slab or stemwall construction, prior to installation, spread the MAB legs to accommodate mudsill. Immediately after pouring and screeding, insert into the concrete or grout. Attach the mudsill to the anchor with 10dx1½" nails after the concrete cures. When installed in grouted concrete block or solid pour for a centre hole installation, drill a ¾" hole through the mudsill and install straps through the hole. Wrap MAB straps around the mudsill and install 10dx1½" nails.
- For MAS installations where concrete spalling has occurred, the MAS achieves full published capacity when the maximum height of spall is limited to 1¼" and the maximum depth is no deeper than 7⁄8". Any exposed portion of the MAS must be protected against possible corrosion.



**LMA4Z**  
(LMA6Z similar)



**MA4 and MA6**



**Typical LMA4Z and LMA6Z Installation**  
(in concrete with framing)

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

Model No.	Sill Size	Fasteners		Factored Resistance ( $K_D=1.15$ )					
				D.Fir-L			S-P-F		
				Uplift <sup>2</sup>	Parallel to Plate ( $F_1$ )	Perp. to Plate ( $F_2$ )	Uplift <sup>2</sup>	Parallel to Plate ( $F_1$ )	Perp. to Plate ( $F_2$ )
lbs	lbs	lbs	lbs	lbs	lbs				
kN	kN	kN	kN	kN	kN				
MAS <sup>3</sup>	2x4,6	2-10dx1½	4-10dx1½	1470	720	295	1055	515	210
				6.55	3.21	1.31	4.70	2.29	0.94
MASB <sup>4</sup>	2x4,6,8	2-10dx1½	6-10dx1½	190	1395	920	135	1000	655
				0.85	6.21	4.10	0.60	4.45	2.92
LMA4Z <sup>5</sup>	2x4	2-10dx1½	4-10dx1½	1555	1010	755	1110	725	540
				6.93	4.50	3.36	4.94	3.23	2.41
LMA6Z <sup>5</sup>	2x6	2-10dx1½	4-10dx1½	1555	1010	755	1110	725	540
				6.93	4.50	3.36	4.94	3.23	2.41
MA4	2x4	2-10dx1½	2-10dx1½	1085	855	625	775	615	445
				4.83	3.81	2.78	3.45	2.74	1.98
MA6	2x6	2-10dx1½	4-10dx1½	1435	855	625	1030	615	445
				6.39	3.81	2.78	4.59	2.74	1.98
MAB15	2x4,6	2-10dx1½	4-10dx1½	850	725	750	610	520	535
				3.79	3.23	3.34	2.72	2.32	2.38
MAB23	2x4,6	2-10dx1½	4-10dx1½	850	725	750	610	520	535
				3.79	3.23	3.34	2.72	2.32	2.38

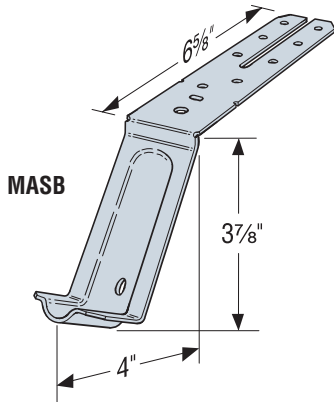
1. Factored resistances have been increased for short term loading. No further increase is allowed.
2. For factored uplift resistance, provide attachment from mudsill to buildings structural components to prevent cross-grain bending.
3. MAS installed with one leg attached to the stud has a factored uplift resistance of 815 lbs (3.63 kN) for D.Fir-L and 585 lbs (2.61 kN) for S-P-F, factored parallel to plate resistances of 1015 lbs (4.52 kN) for D.Fir-L and 725 lbs (3.23 kN) for S-P-F, and factored perpendicular to plate resistance of 535 lbs (2.38 kN) D.Fir-L and 380 lbs (1.69 kN) for S-P-F.
4. MASB installed with one leg attached to the stud has a factored parallel to plate resistance of 1355 lbs (6.04 kN) for D.Fir-L and 970 lbs (4.32 kN) for S-P-F and a factored perpendicular to plate resistance of 685 lbs (3.05 kN) for D.Fir-L and 490 lbs (2.19 kN) for S-P-F.
5. LMA installed attached to stud has a factored perpendicular to plate resistance of 900 lbs (4.00 kN) for D.Fir-L and 645 lbs (2.87 kN) for S-P-F, a factored parallel to plate resistance of 1085 lbs (4.43 kN) for D.Fir-L and 775 lbs (3.16 kN) for S-P-F and a factored uplift resistance of 1085 lbs (4.83 kN) or D.Fir-L and 775 lbs (3.45 kN) for S-P-F.
6. **NAILS:** 10dx1½" = 0.148" dia. x 1½" long. See page 16-17 for other nail sizes and information.

## MAS/MASB Installed To Rim Board or Blocking Over Max. ½" Plywood or OSB

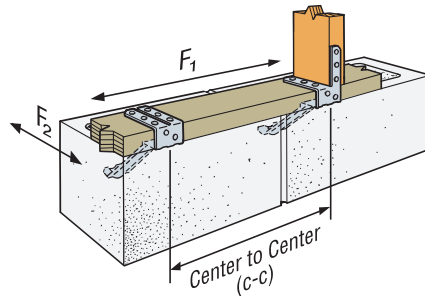
Model No.	Sill Size	Fasteners		Factored Resistance ( $K_D=1.15$ )					
				D.Fir-L			S-P-F		
				Uplift	F <sub>1</sub>	F <sub>2</sub>	Uplift	F <sub>1</sub>	F <sub>2</sub>
lbs	lbs	lbs	lbs	lbs	lbs				
kN	kN	kN	kN	kN	kN				
MAS	2x4,6	6-10dx1½	1035	1080	375	740	775	270	
			4.61	4.81	1.67	3.30	3.45	1.20	
MASB	2x4,6,8	8-10dx1½	65	430	30	45	310	20	
			0.29	1.92	0.13	0.20	1.38	0.09	

1. Rim board or blocking shall be a minimum of 1½" thick.

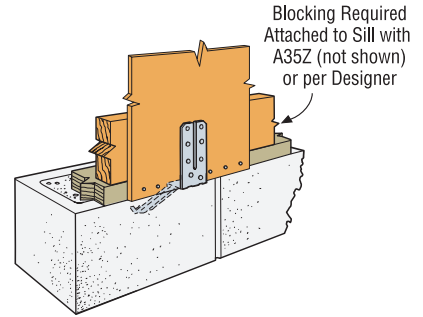
**LMAZ/MASB/MAS/MAB/MA** MudSill Anchors



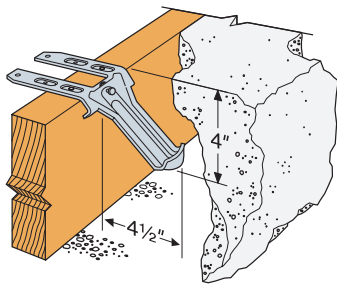
MASB



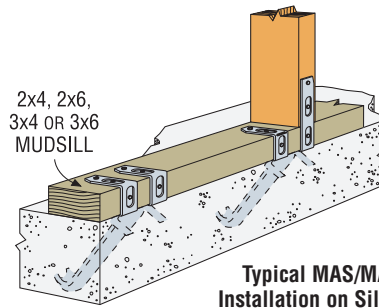
Typical MASB Installation



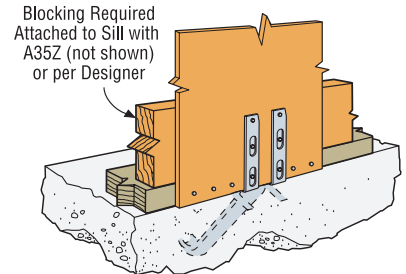
MASB Rim Joist or Blocking Installation in Concrete over Max. 1/2" Sheathing



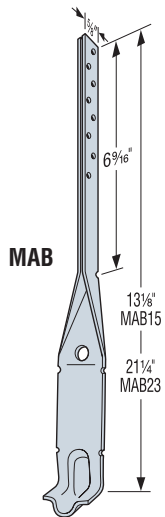
Typical MAS Installation in Concrete



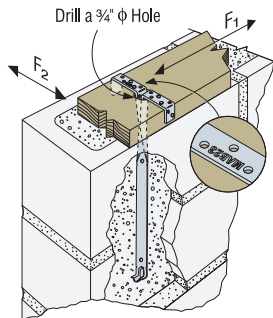
Typical MAS/MASP Installation on Sill Plate



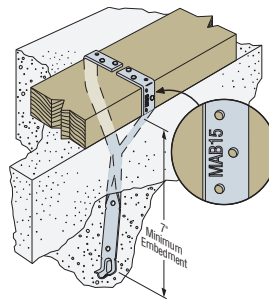
MAS/MASP Rim Joist or Blocking Installation in Concrete over Max. 1/2" Sheathing



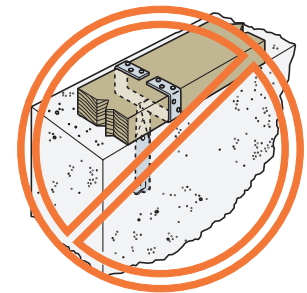
MAB



Typical MAB23 Installation in Concrete Block (MAB15 similar)  
MAB23 provides a two block embedment, if required by the local code jurisdiction

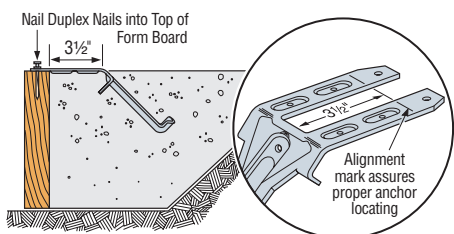


Typical MAB15 Installation in Concrete (MAB23 similar, with 15" minimum embedment)  
Not applicable for concrete block installation

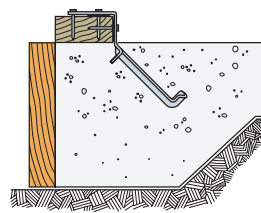


MAB Misinstallation (MAB straps must be separated before the concrete is poured)

**ALTERNATE INSTALLATION FOR INSIDE OF WALL CONTINUITY**

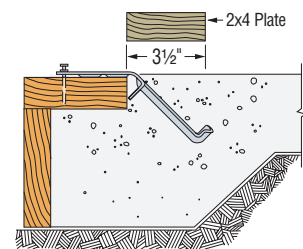


**1 STEP 1:** Attach MAS 3 1/2" from inside of form. After concrete cures, remove nails and bend straps up 90°



**2 STEP 2:** Place mudsill on concrete and nail MAS over mudsill

**ALTERNATE INSTALLATION FOR BRICK LEDGES**



Alternate MAS Installation for Brick Ledges