

Technical Bulletin

Bulletin #0705 July 2010

Lifting and Rigging

The most common method of lifting roof panels is to use lifting plates. They can be attached and detached from the top side of the panel. Using a wrap-around sling on panels can damage the SIP edges if not blocked, is difficult to release, and is not recommended. Through bolting with eye bolts, though safe and effective, requires access to the bottom side for attaching and detaching.

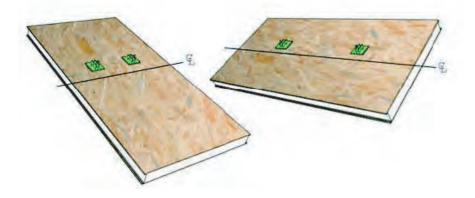
Always use at least two points for lifting. Install two lifting plates approximately 6" closer to the top of the SIP panel. This will ensure that the panel is hung at an angle that matches the roof slope. If necessary, relocate lifting plates to better match the roof slope.

Attach the lifting plates with screws to the top OSB surface. Use #10 coarse thread deck screws (16) per plate. Take care not to "over drive" the lift plate screws.



Lifting a SIP with Lifting Plates

Lifting Plate



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Screw Capacity Calculation:

REF: APA-051B				REF: APA-051B				LIFT PLATE
OSB THICK	ULT PULL (LBS)	FACTOR SAFETY 6 (LBS)	NORMAL DURATION INC 10% (LBS)	OSB THICK	ULT PULL (LBS)	FACTOR SAFETY 6 (LBS)	NORMAL DURATION INC 10% (LBS)	USE LOWEST (LBS)
7/16"	241	40.1	44.1	7/16"	0.19	0.45	48.0	44.1

Plate Capacity Calculation:

	LIFTING CAPACITY							
MAX WIDTH (FT)	MAX LENGTH (FT)	WEIGHT 12.25" (PSF)	MAX PANEL WEIGHT	PLATES PER PANEL	SCREWS PER PLATE	#10 SCREW CAPACITY	TOTAL FOR PLATE	TOTAL FOR TWO
8	24	3.81	731.52	2	16	44.1	705.6	1411.2

NOTES:

- = Screws are to be #10 with threads extending to head to ensure full embedment in OSB
- = Screw length must ensure full penetration of 7/16" OSB skin
- = All holes to be filled prior to lifting the panel
- = Lift plates must be used in pairs for large panels
- = Designed for a factor safety more than 10, based on the weight of the heaviest panel
- = Must ensure a minimum factor of safety of 6 when using the plates

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