



## WITHDRAWAL (PULL OUT) CAPACITIES FOR SUNMODO'S ROOF ATTACHMENT PRODUCTS

EZ Roof Mount K10068 is certified for International Building Code and International Residential Codes (IRC) by IAPMO. Evaluation Report is 0248, structural test per ECo02-2011 and Rain Test per UL 441-96.



### Roof Attachment Products:

Roof Penetration Count	Kit Number	Product	5/16" Lag Bolt	Self-Tapping Screw
One Screw System	K10068-XXX	EZ Roof Mount Kits	X	
	K10070-XXX		X	
	K10082-XXX	EZ Metal Roof Mount Kits	X	
	K10064-XXX		X	
	K10211-001	RidgeBridge Mount Kits	X	
	K10212-001		X	
	K10213-001		X	
Two Screw System	K10142-001	EZ Metal Roof Mount Kits		X
	K10154-001			X
	K12002-001	EZ Corrugated Metal Mount Kits		X
	K10167-001	EZ Tile Hook Kits	X	
	K10168-001		X	
	K10169-001		X	
	K10170-001		X	
	K10171-001		X	
	K10172-001		X	
	K10173-001		X	
	K10174-001	X		
	K10211-XXX	Ridge Bridge Mount Kits		X
	K10212-XXX			X
	K10213-XXX			X
	Four Screw System	K10068-XXX	EZ Roof Mount Kits	
K10070-XXX				X
K12003-001		EZ Corrugated Metal Mount Kits		X

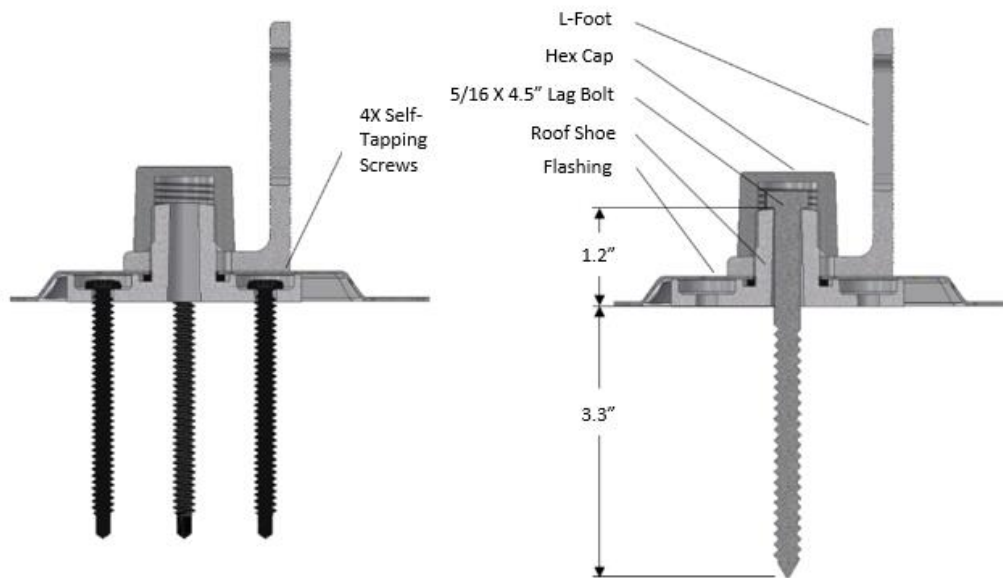
Lag reference withdrawal (pull out) design capacities (lbs.) in typical lumber:	Specific Gravity	5/16" Shaft per 1" thread depth	5/16" Shaft per 2-1/2" thread depth
Douglas Fir, Larch	.50	266	665
Douglas Fir, South	.46	235	588
Engelmann Spruce, Lodgepole Pine (MSR 1650 f & higher)	.46	235	588
Hem, Fir	.43	212	530
Hem, Fir (North)	.46	235	588
Southern Pine	.55	307	768
Spruce, Pine, Fir	.42	205	513
Spruce, Pine, Fir (E of 2 million psi and higher grades of MSR and MEL)	.50	266	665

Sources: American Wood Council, NDS 2005, Table 11.2 A, 11.3.2 A

Notes:

- 1) Actual test data in Southern Pine: Test Load at 0.250 inch deflection: 1,800 lbs. uplift (withdrawal); 240 lbs. lateral. Test Load at 0.125 inch deflection: 695 lbs. uplift (withdrawal); 130 lbs. lateral. See Uniform Evaluation Service Report 0248 for allowable load values and conditions.
- 2) Thread must be embedded in a rafter or other structural roof member.
- 3) See NDS Table 11.5.1 C for required spacing requirements, edge and end distances. See NDS Table 10.3.1 for all applicable adjustment factors.

The PSF Corporation, a Nationally Recognized Laboratory, has tested our 4 screw mounting using four #15 screws into 1/2" 3 ply CDX plywood deck. The average maximum withdrawal resistance, pull out, value reported is 1147 lbf. Screw manufacturers such as Simpson, OMG and most others have pull out values listed for their product. Consult your structural engineer to select the appropriate fasteners for your application.



Cross section of EZ Roof mount attachment for composite roofs. Self-tapping screw, deck mounting, shown on the left. 4.5" lag bolt, rafter mounting, shown on the right.