

2-Piece Standoff Technical Datasheet

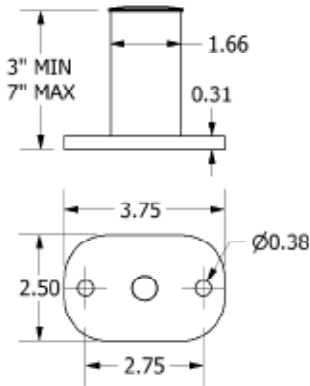
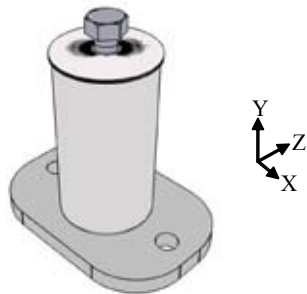
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Standoffs

2-Piece Aluminum Standoffs

Part No. 310503, 310504, 310506, 310507, 310553, 310554, 310556, 310557, 310603, 310604, 310606, 310607, 310653, 310654, 310656, 310657



Dimensions specified in inches unless noted

Standoff and Base Material:

- One of the following extruded aluminum alloys: 6005-T5, 6105-T5, 6061-T6
- Ultimate tensile: 38 ksi; Yeild: 35 ksi
- Clear or Dark anodized

Weight:

- 3" Standoff (as shown): 0.522 pounds (237 g)
- Add 0.086 pounds per inch (39 g/ inch)

Allowable and design loads are valid for a Unirac 2-piece aluminum standoff

Attach with zinc plated carbon steel or stainless steel fasteners

Resistance and safety factors are determined according to Part 1A section 9 of the 2005 Aluminum Design Manual

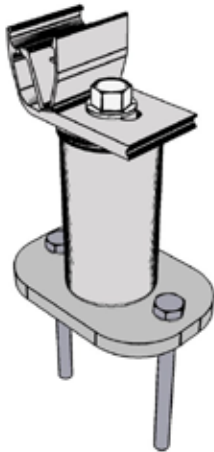
NOTE: Loads are given for the standoff only. Check load limits for lag screw or other attachment method.

Applied Load Direction	Average Ultimate Load lbs (N)	Allowable Load lbs (N)	Safety Factor, W	Design Load lbs (N)	Resistance Factor, F
Tension/Compression, Y±	3266 (14528)	1089 (4844)	3.00	1633 (7264)	0.500
∪Z Bending, Applied Moment*	559 ft lbs (758 Nm)	250 ft lbs (339 Nm)	2.24	378 ft lbs (512 Nm)	0.676

*Example: If the module is mounted 6" (0.5 ft) from the base of the standoff, the allowable side load is 250 ft*lbs/ 0.5 ft = 500 lbs

2-Piece Aluminum Standoff with SolarMount-I 1-flange connection

Part No. 05013C, 05014C, 05016C, 05017C



Reference the SolarMount-I series datasheet for 1-flange connection specifications.

For the 1-flange connection to standoff:

- Use included 1 3/4" EPDM washer between the 1-flange connection and standoff
- Assemble with included 300 series stainless steel 5/8"-16 flanged hex head screw
- Use anti-seize and tighten to 30 ft-lbs of torque

Allowable and design loads are valid when components are assembled according to authorized Unirac documents.

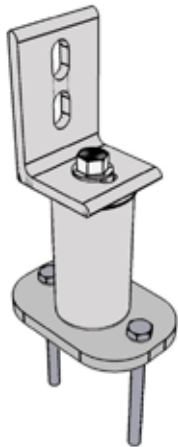
1-Flange connections are compatible with SolarMount-I series beams.

Resistance factors and allowable loads are determined according to part 1A section 9 of the 2005 Aluminum Design Manual.

NOTE: Loads are for the connection and standoff only. Check load limits for the lag screw or other attachment method.

Applied Load Direction	Average Ultimate lbs (N)	Allowable Load lbs (N)	Safety Factor, FS	Design Loads lbs (N)	Resistance Factor, Φ
Tension, Y+	1415 (6294)	635 (2825)	2.23	960 (4270)	0.679
Compression, Y-	1949 (8670)	873 (3883)	2.23	1320 (5872)	0.677
Transverse, X-, downhill	635 (2825)	313 (1392)	2.03	473 (2104)	0.745
Transverse, X+, uphill	42 (187)	20 (89)	2.15	30 (133)	0.705
∪Z Bending, Applied Moment	559 ft lbs (758 Nm)	250 ft lbs (339 Nm)	2.24	378 ft lbs (512 Nm)	0.676

2-Piece Aluminum Standoff with L-foot connection



Reference the SolarMount datasheet for L-foot specifications.

For the L-foot to standoff connection:

- Use included 1 3/4" EPDM washer between the L-foot and standoff
- Assemble with included 300 series stainless steel 5/8"-16 flanged hex head screw
- Use anti-seize and tighten to 30 ft-lbs of torque

Allowable and design loads are valid when components are assembled according to authorized Unirac documents.

L-feet are compatible with SolarMount, SolarMount Heavy Duty, and SunFrame rails.

Resistance factors and allowable loads are determined according to part 1A section 9 of the 2005 Aluminum Design Manual.

NOTE: Loads are for the connection and standoff only. Check load limits for the lag screw or other attachment method.

Applied Load Direction	Average Ultimate lbs (N)	Allowable Load lbs (N)	Safety Factor, FS	Design Loads lbs (N)	Resistance Factor, Φ
Tension, Y+	1859 (8269)	707 (3144)	2.63	1069 (4755)	0.575
Compression, Y-	3258 (14492)	1325 (5893)	2.46	2004 (8913)	0.615
Sliding, Z±	1766 (7856)	755 (3356)	2.34	1141 (5077)	0.646
Transverse, X±	486 (2162)	213 (949)	2.28	323 (1436)	0.664
∪Z Bending, Applied Moment	559 ft lbs (758 Nm)	250 ft lbs (339 Nm)	2.24	378 ft lbs (512 Nm)	0.676

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