

GENERAL INFORMATION

STRESS PLATES

PRODUCT DESCRIPTION

Stress Plates are designed for use with Deck Screws and Spike anchors. For Powerlite specially designed stress plates are listed in the applicable product sections. Stress plates are used when attaching insulation and single ply materials to distribute load and prevent the material being fastened from pulling over the head of the fastener. In addition to the stress plates, a EPDM bonded stainless steel sealing washer is available for use with flashing and termination systems.

Insulation plates are used when mechanically attaching rigid form insulation to roof decks. They are manufactured in 3" diameter for use with No.12 Deck Screws and 1/4" Spike anchors. The design of the insulation plate allows it to flex during installation if a fastener is overdriven preventing fracturing of the insulation board and facer. Sharp edges which could protrude above the insulation surface are eliminated by the round design. For corrosion resistance, a Galvalume coating is applied to the carbon steel plates. This coating, comprised primarily of aluminum and zinc, provides a degree of corrosion resistance which allows the material to meet the corrosion resistance required by FM Global Standard 4470.

Membrane plates, sometimes called lap plates, are used when mechanically attaching single ply material in the area of the lap or seam. They are manufactured in a 2" diameter for use with No.12 Deck Screws and 1/4" Spike anchors. The 2" membrane plate is formed with four barbs to provide positive engagement with the membrane to reduce the possibility of tearing the single ply material under load. For corrosion resistance, a Galvalume coating as described above is applied to the plates.

APPROVALS AND LISTINGS

- FM Global (FM Approvals) - see listings
Steel, Wood and Structural Concrete Decks
Powers Stress Plates – J.I. 1RA3A1.AM
- Recover Construction
Powers Stress Plates – J.I. 1P3A9.AM

PERFORMANCE DATA

Ultimate Load Capacities for Spikes installed in Concrete and Deck Screws installed in Steel and Wood Deck^{1,2}

Plate Size	Tension lbs. (kN)	
	1/4" Spike	No. 12 Deck Screw
3" Round Galvalume	720 (3.2)	720 (3.2)
2" Round Galvalume	1,450 (6.5)	1,380 (6.2)

1. Powers Roofing Spikes and No. 12 Deck Screws have a Perma-Seal coating.
2. The ultimate load capacities are average pullover capacities based on testing the combination of listed plate size and fastener.

ORDERING INFORMATION

Insulation Plates

Cat. No.	Size	Plate Thickness	Material	Ctn Qty.
3880	3" Round	0.019"	Galvalume	500

Membrane Plates

Cat. No.	Size	Plate Thickness	Material	Ctn Qty.
3878	2" Round (barbed)	0.034"	Galvalume	1,000

EPDM Bonded Stainless Steel Sealing Washer

Cat. No.	Size	Box Qty.	Ctn Qty.
2896	5/16" (I.D.) x 1-1/8" (O.D.)	100	1,000

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INSULATION STRESS PLATE



MEMBRANE STRESS PLATE

ANCHOR MATERIALS

- Galvalume Stress Plates
- EPDM Bonded Stainless Steel Sealing Washer also available

SIZE RANGE (TYP.)

- 2" and 3" Round

SUITABLE BASE MATERIALS

- Insulation
- Single-Ply Roofing Materials

