

MODEL 41003

MULTI-PLATE RADIATION SHIELD

The Multi-Plate Radiation Shield protects temperature and relative humidity sensors from error-producing solar radiation and precipitation. Compact size and light weight make this shield useful for many applications.

The multiple plates have a unique profile that blocks direct and reflected solar radiation, yet permits easy passage of air. Enlarged top plate and steep edge profile minimize moisture accumulation from precipitation and dew. The plate material is specially formulated for high reflectivity, low thermal conductivity, and maximum weather resistance. The rugged U-bolt mounting clamp attaches easily to any vertical pipe up to 2 inches diameter.



SPECIFICATIONS

Sensor types:

Accommodates temperature and humidity sensors up to 26 mm (1 in) diameter

Radiation error:

@ 1080 W/m² intensity- Dependent on wind speed
 0.4° C (0.7° F) RMS @ 3 m/s (6.7 mph)
 0.7° C (1.3° F) RMS @ 2 m/s (4.5 mph)
 1.5° C (2.7° F) RMS @ 1 m/s (2.2 mph)

Construction:

UV stabilized white thermoplastic plates
 Aluminum mounting bracket, white powder coated
 Stainless steel U-bolt clamp

Dimensions

13 cm (5.1 in) diameter x 26 cm (10.2 in) high
 Mounting fits vertical pipe 25-50 mm (1-2 in) diameter

Weight:

Net weight: 0.7 kg (1.5 lb)
 Shipping weight: 1.4 kg (3 lb)

MODEL 43502

ASPIRATED RADIATION SHIELD

The Aspirated Radiation Shield provides maximum sensor protection from incoming short wave solar radiation and outgoing long wave radiation.

The shield employs a triple-walled intake tube and multiple canopy shades to isolate the sensor from precipitation and solar radiation. A continuous duty blower draws ambient air through the intake tubes and across the sensor, minimizing radiation errors. Compact shield components reduce radiation absorption and improve aspiration efficiency. Specially selected plastic materials provide high reflectivity, low conductivity, and maximum weatherability.

The versatile DC blower is designed for continuous duty of more than 80,000 hours (9 years) at 25° C (77° F). Brushless electronic commutation is achieved using dependable solid state circuitry.



SPECIFICATIONS:

Sensor types:

Accommodates temperature and humidity sensors up to 24 mm (.94 in) diameter

Radiation error:

Ambient Temperature: 0.2°C (0.4°F) rms @ 1000 w/m² intensity
 Delta T: 0.05°C (0.1°C) RMS with like shields

Aspiration Shields:

5 to 11 m/s (16 to 35 fps) depending on sensor size

Power Requirement:

12-24 VDC @ 500 mA for blower
 AC adapter included.

Construction:

UV stabilized white thermoplastic shields and blower housing
 Aluminum mounting bracket, white coated
 Stainless steel U-bolt clamp

Dimensions

Overall Height: 33 cm (13 in)
 Overall Diameter: 20 cm (8 in)
 Shield: 70 mm (2.8 in) dia. x 12 cm (4.7 in) length
 Blower Housing: 17 cm (6.7 in) dia. x 11 cm (4.3 in)

Mounting:

V-Block and U-bolt fits vertical post or tower members 25-50 mm dia

Weight:

Net weight: 1.1 kg (2.5 lb)
 Shipping weight: 2.7 kg (6 lb)