

RAD 01 & RAD 02 Unaspirated Radiation Shields



Radiation Shields

Metspec Radiation Shields have an innovative design to reduce overheating when solar radiation is high and windspeed is low. This is also effective in the winter when the sun's angle is low or there is reflection off snow.

The design of the shield has a white outer reflective surface combined with an inner barrier of non-reflective, black louvres. This prevents sunlight and reflected radiation reaching the sensor whilst still allowing air to flow across the sensor. This design is based on the Metspec Stevenson Screen which is now established as an industry standard and sold to National Meteorological Services worldwide.

Trials carried out over the past year have confirmed that errors under adverse conditions are typically half those compared to similar shields.

Introducing our new range of Radiation Shields, designed to house temperature and humidity probes and protect them from the heating effects of solar radiation and direct exposure to rain and snow.

Benefits over existing models on the market include:

- Improved accuracy proven in recent comparison trials
- Unique double louvered construction
- Highly durable, non yellowing, UV stable plastic
- Accommodates complete range of sensor sizes

Key Features

- Accuracy in trials comparable to Stevenson Screens
- Less sensitive to rainfall
- Improved protection against wind blown precipitation
- Secure sensor installation with stable mounting mechanism
- Durable UV stable plastic
- No power required



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RAD 01 & RAD 02

Unaspirated Radiation Shields

METSPEC

SPECIALIST METEOROLOGICAL EQUIPMENT



A cross-sectional cutaway showing the external and internal louvers of a RAD 01 shield

Accuracy

Testing of these Shields has been carried out by Campbell Scientific Ltd, UK and the results are published with their kind permission:

Typical solar heating errors:

In conditions of high solar radiation and wind speeds less than 1 m/s the readings were compared with an aspirated shield

RAD 01 Small version: +0.75 °C

RAD 02 Large version: +0.5 °C

These errors are less than half those recorded from other similar shields on the market and the performance is comparable to the Stevenson screens, although the time constant of our new shields is shorter.

[Detailed report on the trial is available from Metspec](#)

Specifications

- Double louvred high impact thermoplastic
- White external layer, with U.V. stabiliser for long-term weather resistance
- Extra black internal layer
- Aluminium arm with durable white powder coating
- A4 grade (316), stainless steel 'V' bolt, and securing nuts to fit a pole of between 25-51 mm diameter
- Black acetal plastic locating clamp

Probe compatibility

RAD 01:

Houses probes from 5-12 mm in diameter with up to 120 mm of the probe inside the shield.

RAD 02:

Houses larger probes 14-25 mm.

Dimensions and weight:

RAD 01:

Overall 165 mm diameter x 172 mm height (Shield only); 303 mm including bracket. Weight 1.05 kg

RAD 02:

Overall 165 diameter x 274 mm height (Shield only); 405 mm including bracket. Weight 1.34 kg