MODEL 41308P
MULTI-PLATE RADIATION SHIELD

INSTRUCTION SHEET 41308P-90
REV A110712

INTRODUCTION

The Multi-Plate Radiation Shield protects temperature and relative humidity sensors from error-producing solar radiation and precipitation. This shield relies on a combination of plate geometry, material and natural ventilation to provide effective shielding.

INSTALLATION

The Multi-Plate Radiation Shield is designed to be mounted on a relatively flat open area. For best performance, the shield should be placed in a location with the following characteristics:

- Good air circulation around shield.
- Away from large masses (asphalt, masts, solar panels) especially metal items.
- Away from building exhaust vents, electrical machiery and motors.
- Away from standing water, water fountains and sprinklers.

MAINTENANCE

The Multi-Plate Radiation Shield requires no regular maintenance in normal use. Dirt or dust accumulation on the plates and bracket can be cleaned with soap and water. ***Do not use solvents.***

SPECIFICATIONS

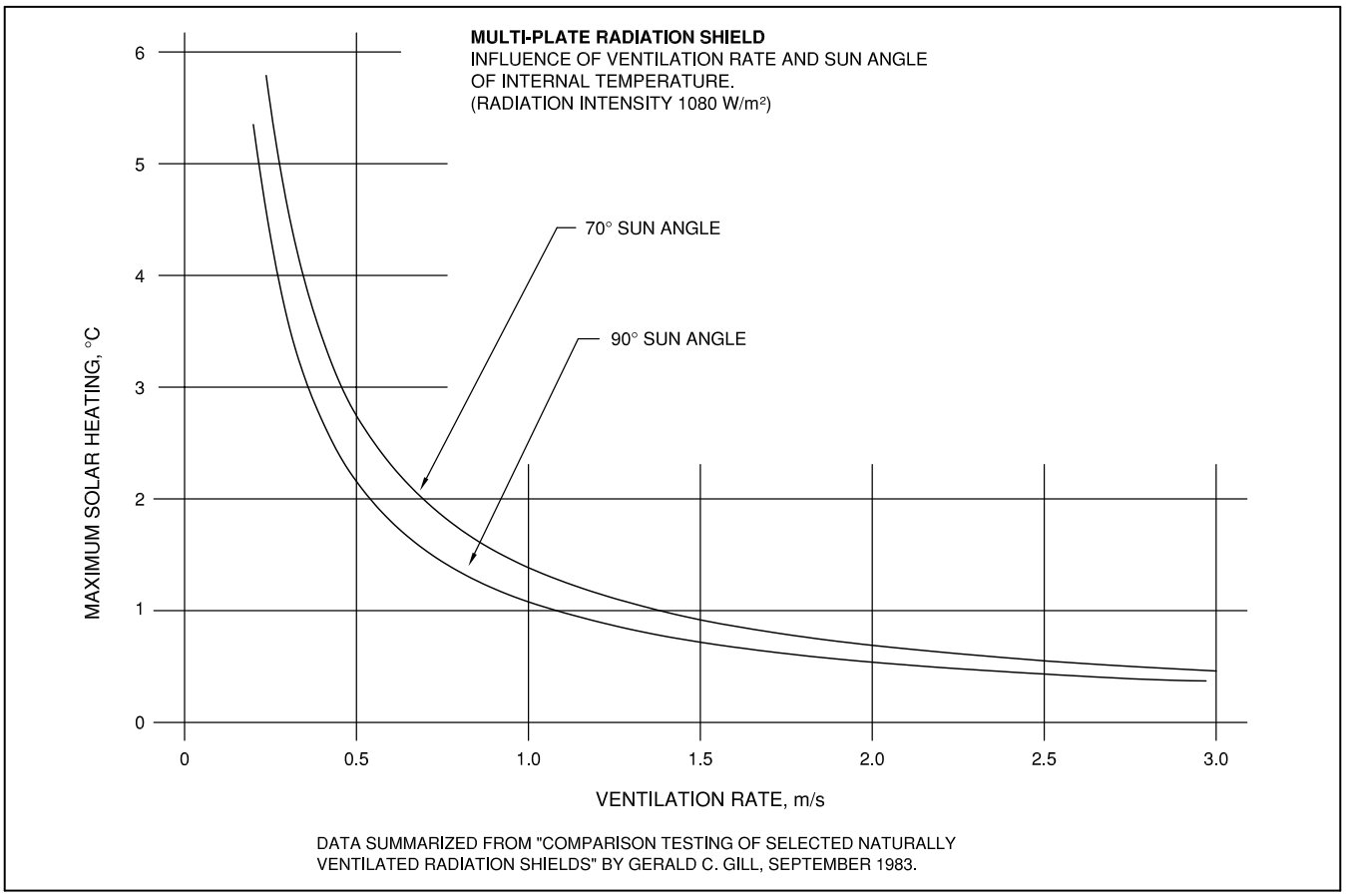
Sensor Mounting:
Model 41308P includes custom sensor adapter that can be machined for sensors up to 26mm diameter.

Radiation Error: 1080 W/m^2 intensity
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.
Stainless Steel Plate Studs.
Aluminum mounting bracket, white powder coated.
Stainless steel U-bolt mounting clamp.

Dimensions:
13 cm (5.1 in) D x 25 cm (9.8 in) H
Mounting fits vertical pipe 25-50 mm (1-2 in) diameter

Weight:
Net wt 0.6 kg (1.3 lb)
Ship wt 0.8 kg (2.0 lb)



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REFERENCES: MULTI- PLATE RADIATION SHIELD

References containing additional information about development and applications of the Multi-Plate Radiation Shield are listed below in chronological order:

Gill, G.C., "Development of a Small Rugged Radiation Shield for Air Temperature Measurements on Drifting Buoys", Report to NOAA Data Buoy Office for Development Contract #01 -7-038-827 (IF) 1979, 23 pp, 17 figs.

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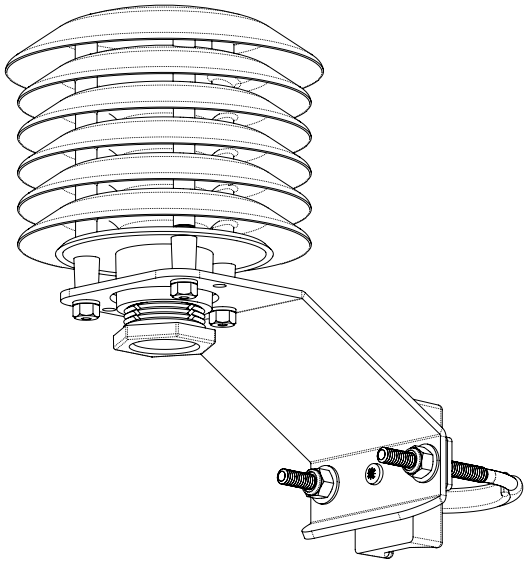
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