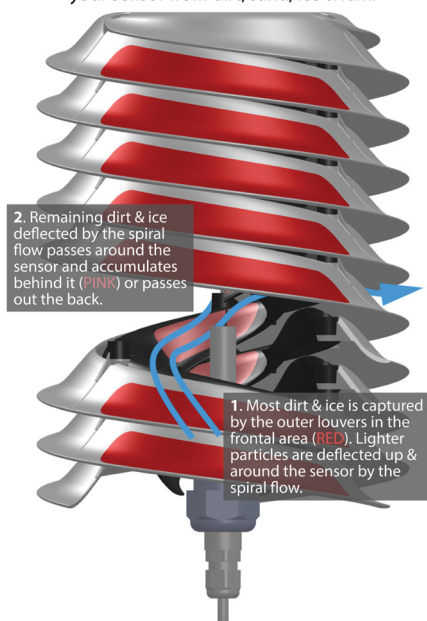


- AGRICULTURE
- AIRPORTS
- BUOY & MARINE
- COASTAL
- HYDROLOGY
- INDUSTRIAL & PLC
- INTRINSICALLY SAFE
- IOT
- METEOROLOGY
- OCEANOGRAPHY
- ROAD MANAGEMENT
- POLAR AND WINTER
- SHIPS
- SKI LIFT & SNOW MAKING
- SMART CITIES
- WEATHER STATIONS

Temperature & Humidity

How the helical radiation shield protects your sensor from dirt, sand, ice & rain.



MeteoShield® - Professional

Naturally aspirated helical solar shield/screen. **Double-helix shape eliminates temperature errors** from solar radiation more effectively than conventional multi-plate shields while offering unsurpassed **protection from the sun, dirt, rain, snow, sand & dust**. Double-helix increases clean air flow and rejects dirt particles away from the sensor, while keeping sensors cleaner than traditional multi-plate and fan aspirated shields.

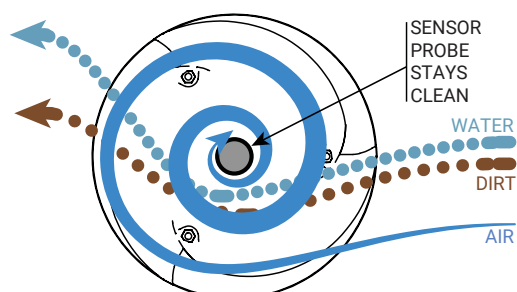
Especially well suited for harsh & extreme climates.

- WMO compliant temperature, humidity and dew point
- Fast response due to high ventilation rate even without a fan
- Protection from water spray and sensor dirt buildup
- Highly accurate temperature & humidity measurement
- Exceptional water shedding and return to accuracy after rain
- Superb performance in high-reflectivity environments: snow, desert, city, marine...

Higher reliability with better temperature accuracy than fan-aspirated shields in tough environments

Keeps your sensors clean

Heavier particles like water & dirt are expelled from the helical flow, thus keeping the sensor cleaner, dryer & ice-free.



Helical MeteoShield



Minimal dirt buildup over one winter season in a road-side weather station.

Competitor Multi-Plate Radiation Shield



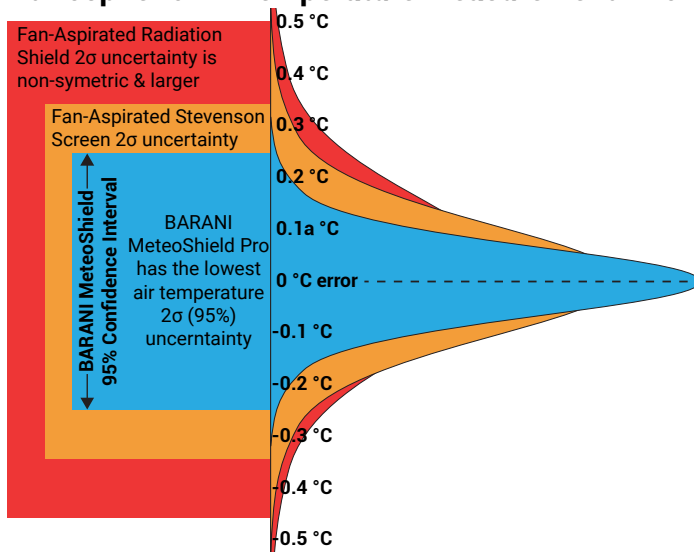
Significant dirt buildup common to all multi-plate solar radiation shields over the same time period.

Unbeatable combination of reliability and accuracy for critical applications where absolute temperature accuracy is important

UPGRADE TO HELICAL RADIATION SHIELDS



Atmospheric Air Temperature Measurement Error



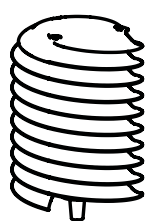
"Despite the fact that the BARANI shelters are not artificially ventilated, their performance is better than our artificially ventilated compact shelter."

"The BARANI helical shelters have shown excellent results with very limited heating under strong solar radiation. The mean overheating is as low as 0.2 °C for medium global solar radiation and low wind speed (<1 m/s).

It is unclear why the (MeteoShield® Professional) overheating is lower for higher global solar radiation."

- quoted from an independent comparison by the Royal Meteorological Institute of Belgium

Helical MeteoShield with a standard precision sensor maintains WMO accuracy requirements over 99 % of the time.

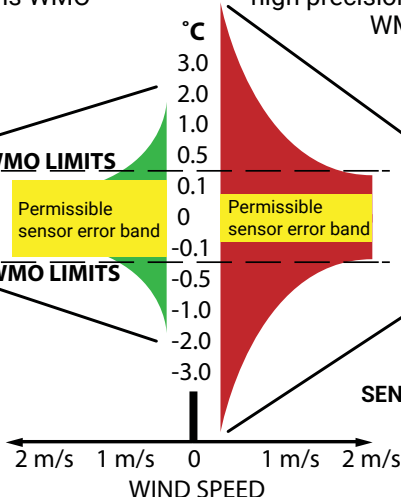
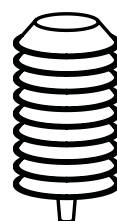


WMO LIMITS

Permissible sensor error band

WMO LIMITS

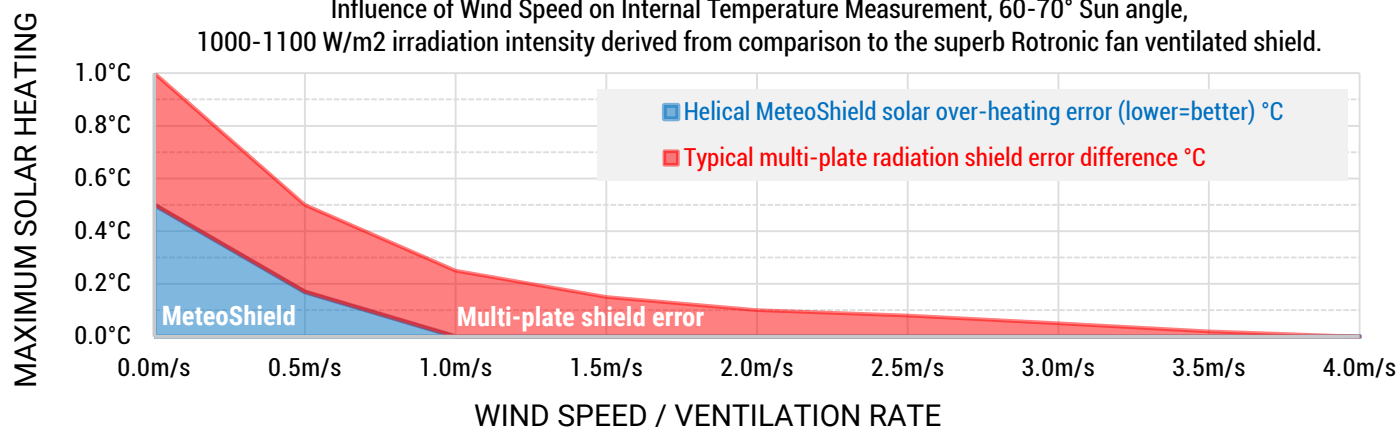
Multi-plate solar shields with expensive high precision sensors cannot maintain WMO accuracy requirements over 95 % of the time.



- New improved robust construction
- Design based on WMO testing
- Reduce sensor maintenance
- Maintain long-term WMO precision
- Made in Slovakia & Made in USA versions

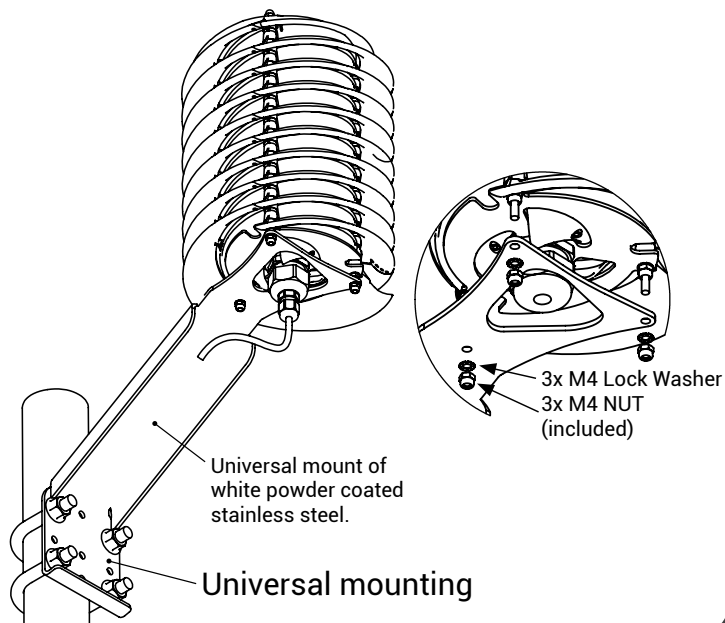
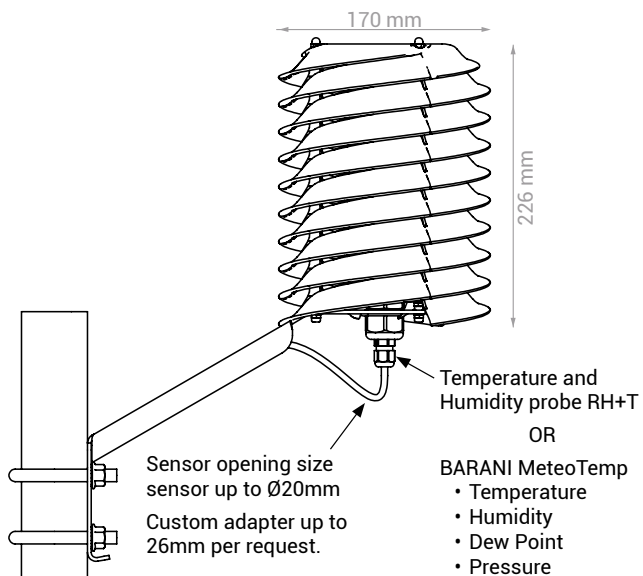
Helical MeteoShield SOLAR RADIATION ERROR

Influence of Wind Speed on Internal Temperature Measurement, 60-70° Sun angle, 1000-1100 W/m² irradiation intensity derived from comparison to the superb Rotronic fan ventilated shield.

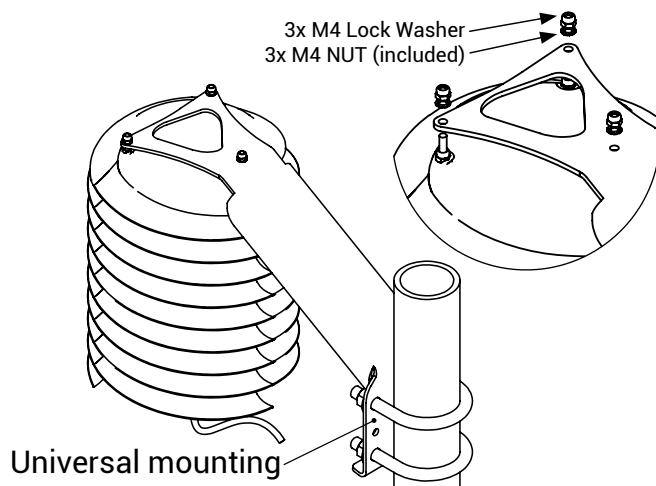
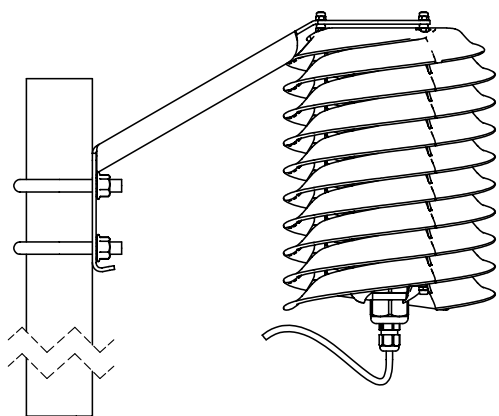


MeteoShield offers practically zero temperature error in >1 m/s wind conditions, which occur over 99% of the time. blue)

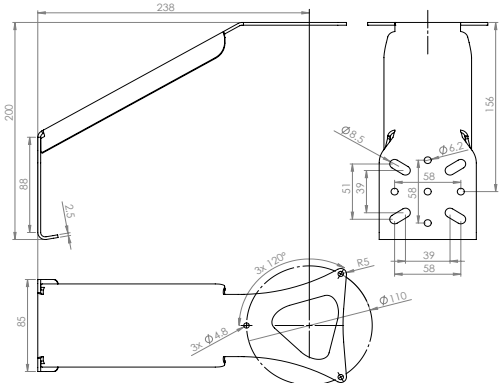
Bottom mount (default)



Top mount (special request)



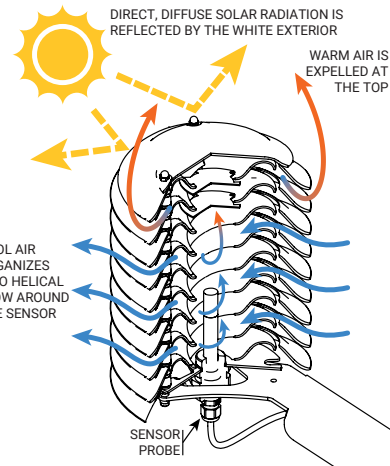
Universal radiation shield mount
2.5mm white powder coated stainless steel



Double-Helix Ventilation

Helical radiation shield shape ventilates better than multi-plate radiation shields while maintaining better temperature sensor protection from dirt, sand, dust, rain, snow and ice, thus extending sensor life and long-term measurement stability.

It performs better than many fan-ventilated radiation shields in high reflectivity environments.



Reach your Gold Standard of measurement with BARANI sensors. ISO:9001 quality.



PATENTED / REGISTERED: EUIPO 002979179-0001...0006 + more IP protection worldwide

Copyright©2017 BARANI DESIGN TECHNOLOGIES s.r.o. www.baranidesign.com +421 948 067 125 sales@baranidesign.com