

Field Enclosure

*Weatherproof,
thermally stabilized
instrument enclosure*

*Plug-and-play solution to deploy
state-of-the-art instrumentation
in the field*



Features

- Weatherproof design: IP54 enclosure with IP67 electrical connectors.
- Wide ambient temperature range: -20 °C to +40 °C.
- Ideal for TILDAS trace gas monitors.
- Internal valve system: handles gas flow (optional).
- Internal Nafion dryer: removes H₂O from sample gas (optional).
- Internal circulation scrubber: removes H₂O to avoid condensation in humid areas (optional).

Advantages

- Rugged, weatherproof, field-ready design allows immediate field deployment.
- *Field Enclosure* minimizes your engineering efforts so you can focus on your measurements.
- Internal valves (optional) allow automated calibration and zeroing gas flows.
- Turn-key design allows unattended operation.

Rugged, field-ready enclosure.

Very high temperature stability ensures lowest drift for internal instrumentation.

Corrosion-free design.

Ideal for long-term deployment.

Minimal perturbation on site wind flow.

Applications

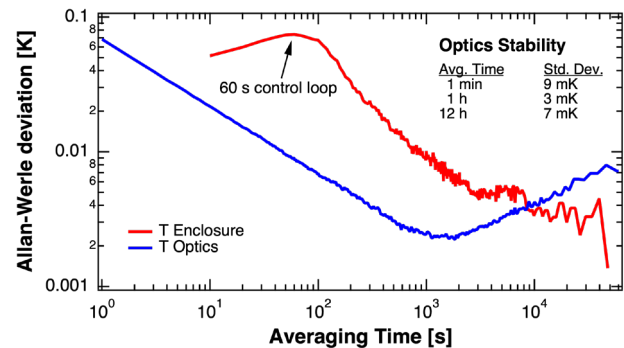
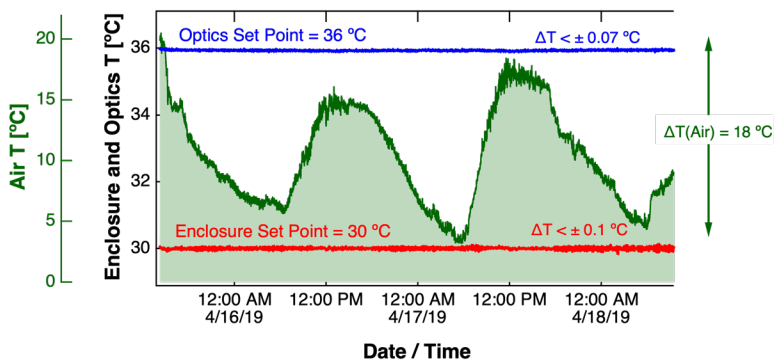
- Eddy-flux measurement sites.
- Remote sites with limited infrastructure.
- Measurements that require advanced thermal management.

Field Enclosure

Performance

Field Enclosure offers exceptional temperature stability for your instrumentation while protecting it from the elements. This is demonstrated in the figure below for an outdoor performance test using an Aerodyne Research Single Laser Trace Gas Monitor.

The temperature setpoint is typically maintained to within $\pm 0.1^\circ\text{C}$ (short and long term).



Enclosure temperature (red trace) and laser trace gas monitor optics temperature (blue trace) show excellent stability for large ambient temperature variation.

The Allan-Werle deviation quantifies the excellent temperature stability for both short and long time constants.

Related Instruments

- All Aerodyne Research single laser trace gas monitors
- All Aerodyne Research dual laser trace gas monitors
- All instrumentation with 56 cm x 100 cm x 65 cm (W x D x H) and P < 200 W

Input/Output (IP67)

Power, RS-232, USB, ethernet, DVI
Sample and calibration gases

Size, Weight, Power

Dimensions: 165 cm x 75 cm x 68 cm (W x D x H)

Weight: 75 kg

Electrical Power: 500 W (max), 120/240 V, 50/60 Hz
(without instrumentation or pump)

Installation

Directly at field site*

Operation

Operating temperature: -20°C to 40°C

Sample flow rate: 0 to 20 slpm
(depending on pump)

Components

Weatherproof enclosure
Thermoelectric cooler/heater
Electrical connectors (IP67)
Valve system
Nafion dryer (optional)
Internal H₂O scrubber (optional)

* FieldEnclosure requires a flat, level and draining surface.

Aerodyne specializes in collaboration and custom design. Please contact us if you would like to discuss additional measurement options and applications.