

Proline t-mass B 150 thermal mass flowmeter

The flowmeter for cost-effective measurement
and easy monitoring of utility gases



Benefits:

- Suitable for air, nitrogen, carbon dioxide and argon in circular piping or rectangular ducts
- Optimal process monitoring – easy measurement even at low pressures and flow velocities
- Cost-effective measurement – easy installation, negligible pressure loss and maintenance-free
- Reliable flow trending – multivariable measurement
- Fast and efficient commissioning – guided operating menus
- High plant availability – self-diagnostics and error monitoring
- Automatic recovery of data for servicing

Specs at a glance

- **Max. measurement error** 3 % o.r. 4 % o.r. 5 % o.f.s. (depending on chosen option of ordering feature "Calibration flow")
- **Measuring range** 20 to 720 000 kg/h (45 to 1 587 600 lb/h) 20 to 1 080 000 kg/h (45 to 2 381 400 lb/h) (for air, depending on chosen option of ordering feature "Calibration flow")
- **Medium temperature range** -40 to +100 °C (-40 to +212 °F)
- **Max. process pressure** 20 bar g (290 psi g)
- **Wetted materials** Transducer: 1.4404 (316L) Insertion tube: 1.4404 (316L); 1.4435 (316L) Connection: Compression fitting: 1.4404 (316L) Sealing ring: EPDM; HNBR; 1.4401 (316) Clamping ring: PEEK 450G

Field of application: The t-mass B 150 insertion version is suitable for large pipelines or rectangular ventilation ducts. It is designed for the cost-effective measurement of utility gases, in particular compressed air. It is a trending device aimed at sub-metering applications. Its 4-wire

technology is contained within a rugged compact aluminum housing. Customer-specific settings are saved on the display and can be transferred from one device to another by means of the display.

Features and specifications

Gas

Measuring principle

Thermal

Product headline

The flowmeter for cost-effective measurement and easy monitoring of utility gases.

Suitable for air, nitrogen, carbon dioxide and argon in circular piping or rectangular ducts.

Sensor features

Optimal process monitoring – easy measurement even at low pressures and flow velocities. Cost-effective measurement – easy installation, negligible pressure loss and maintenance-free. Reliable flow trending – multivariable measurement.

Insertion version for nominal diameter DN 80 to 1500 (3 to 60").

Installation and removal of sensor without process interruption. Easy installation.

Transmitter features

Fast and efficient commissioning – guided operating menus. High plant availability – self-diagnostics and error monitoring. Automatic recovery of data for servicing.

Device in compact version with DC 24 V power supply. 4-20 mA HART, pulse/frequency/switch output. Compact and robust transmitter.

Nominal diameter range

DN 80 to 1500 (3 to 60")

Gas**Wetted materials**

Transducer: 1.4404 (316L)

Insertion tube: 1.4404 (316L); 1.4435 (316L)

Connection:

Compression fitting: 1.4404 (316L)

Sealing ring: EPDM; HNBR; 1.4401 (316)

Clamping ring: PEEK 450G

Measured variablesMass flow, temperature, corrected volume flow, FAD volume flow

Max. measurement error

3 % o.r.

4 % o.r.

5 % o.f.s.

(depending on chosen option of ordering feature "Calibration flow")

Measuring range

20 to 720 000 kg/h (45 to 1 587 600 lb/h)

20 to 1 080 000 kg/h (45 to 2 381 400 lb/h)

(for air, depending on chosen option of ordering feature "Calibration flow")

Max. process pressure20 bar g (290 psi g)

Medium temperature range-40 to +100 °C (-40 to +212 °F)

Ambient temperature range-40 to +60 °C (-40 to +140 °F)

Transmitter housing materialAlSi10Mg, coated

Degree of protectionIP66/67, type 4X enclosure

Gas	Display/Operation 4-line display with push Buttons Configuration via local display and operating tools possible
	Outputs 4-20 mA HART (active) Pulse/frequency/switch output (passive)
	Inputs Status input
	Digital communication HART
	Power supply DC 18 to 30 V
	Hazardous area approvals ATEX, IECEx, cCSAus
	Metrological approvals and certificates Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR
	Pressure approvals and certificates CRN



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