# Proline t-mass 65

Endress+Hauser

## Thermal Mass Flow Measurement of Gases with integrated 'Gas Engine'

Thermal mass flowmeters have gained wide industry acceptance due to their ability to measure an ever increasing range of gases.

Whenever low flow rates, high turndown or low pressure losses are important in gas-metering applications, thermal mass flowmeters offer a real alternative to many other flowmeters.

*Compact and Remote Versions with Flanged and Insertion Sensors*

With a measuring turndown up to 100:1, E+H's new **Proline t-mass 65** accurately measures the mass flowrate of a wide range of gas types, including minute flowrates and off line leakage, e.g:

- Compressed air
- Natural gas flow to boilers / dryers
- Carbon Dioxide flow in breweries
- WWTP biogas and aeration air
- Gas production eg. Ar, N2, CO2, He, O2

As well as direct mass flow measurement it also provides a temperature or process density output. The sensors offer negligible pressure drop/loss and pressure or temperature compensation is not required.

### Integrated 'Gas Engine'

Proline t-mass 65 pushes the technology boundary with its integrated Gas Selection Database 'Gas Engine'.

This allows users to select from 15 gases and also up to 8 component gas mixtures from an expanded list of 23 gases.

Gas type and properties can be changed in the field without recalibration.

Pre-set device parameters can speed commissioning. E.g. gas type/mixture, analogue and pulse values, operating pressure and temperature, gas density, pipe diameter or duct dimensions.

### Proline Advantage

The Proline modular concept is now a feature of most E+H Flowmeters. It offers distinct advantages and standardised set-up, operation and troubleshooting tools.

The Proline t-mass 65 system consists of a transmitter and an insertion or flanged sensor. Two versions are available:

**Compact version:** transmitter and sensor form a single mechanical unit

**Remote version:** transmitter and sensor are separate from one another

Time-saving 'Quick Setup' operating menus and 'Quick Check' diagnostics provide cost-saving commissioning and troubleshooting.

E+H Applicator software enables optimum, application-specific selection of flowmeters while Fieldtool and FieldCare provide easy parameterisation.

The E+H Fieldcheck simulation and verification tool allows easy commissioning and maintenance.

### Typical features

- rugged, reliable and sensitive - especially at low gas pressures
- 2-line, backlit display with push-button user interface
- analogue and relay outputs
- flow rate: up to 12,000 kg/h
- nominal diameters:
  flange: DN15 - 100
  insertion: for DN80 - 1500
- sensors and electronics are field replaceable. S-DAT and T-DAT store sensor calibration & parameterising data for easy exchange
- each device individually calibrated (with traceable certificate). Insitu-Calibration is possible with a reference meter input
- connection to all common process control systems: HART, PROFIBUS DP, MODBUS RS485
- world-wide accepted Ex-approvals include ATEX, FM, CSA

Proline t-mass 65 with its many features offers a maintenance friendly and time-saving direct gas mass flow measurement. Check it out!

**More information?**

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### Customer-Specific Factory Calibration

Endress+Hauser have impressive calibration rigs for all their flowmeters.

Characteristics of the Thermal Mass Flowmeter calibration rig are:

- Calibration with air
- Repeatable / stable ambient conditions
- Controlled temperature and humidity
- Undisturbed, fully developed flow profile
- Automated positioning of the Device Under Test (DUT)
- Revolvers for Flange versions
- Straight pipe section for insertion type
- Master meters: turbines, rotary pistons
- Measurement uncertainty ±0.5%
- DIN17025 accredited

*Endress+Hauser calibration rig for thermal flow measuring devices*