

# Proline t-mass T 150 thermal mass flowmeter

The flowmeter for reliable and easy monitoring of liquids



More information and current pricing:

[www.mx.endress.com/6TAB](http://www.mx.endress.com/6TAB)

## Benefits:

- Dedicated to the monitoring of conductive and non-conductive liquids
- High process safety – high repeatability and linearity due to integrated temperature compensation
- 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** Flow:  $\pm 5\%$  o.f.s.
- **Measuring range** 226 to 14 100 000 l/h (60 to 3 730 000 gal/h) (under reference conditions)
- **Medium temperature range**  $-20$  to  $+100\text{ }^{\circ}\text{C}$  ( $-4$  to  $+212\text{ }^{\circ}\text{F}$ )
- **Max. process pressure** PN 40
- **Wetted materials** Transducer: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022) Insertion tube: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022) Connection: - Compression fitting: 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022) - Threadolet: 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022) - Clamping ferrule: PEEK 450G; 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022) - Tri - Clamp; DN40 DIN 11851, DN50 DIN 11851; DN40 DIN 11864 - 1A, DN50 DIN 11864 - 1A: 1.4404 (316L)

**Field of application:** The t-mass T 150 is the first thermal mass device from Endress+Hauser for measuring liquids. t-mass T 150 is designed chiefly for water applications. As it measures independently of the

electrical conductivity of a fluid and can be used in a variety of water-based and non-water-based liquids for the purpose of monitoring and trending. 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

### Liquids

#### Measuring principle

Thermal

#### Product headline

The flowmeter for reliable and easy monitoring of liquids. Dedicated to the monitoring of conductive and non - conductive liquids.

#### Sensor features

High process safety – high repeatability and linearity due to integrated temperature compensation. Cost - effective measurement – easy installation, negligible pressure loss and maintenance - free. Reliable flow trending – multivariable measurement. Insertion version for nominal diameter DN 40 to 1000 (1½ to 40"). Sensor in standard or hygienic version.

#### 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.

#### Nominal diameter range

DN 40 to 1000 (1½ to 40")

## Liquids

### Wetted materials

Transducer: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

Insertion tube: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

Connection:

- Compression fitting: 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022)
- Threadolet: 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022)
- Clamping ferrule: PEEK 450G; 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022)
- Tri - Clamp; DN40 DIN 11851, DN50 DIN 11851; DN40 DIN 11864 - 1A, DN50 DIN 11864 - 1A: 1.4404 (316L)

### Measured variables

Mass flow, temperature, volume flow

### Max. measurement error

Flow:  $\pm 5$  % o.f.s.

### Measuring range

226 to 14 100 000 l/h (60 to 3 730 000 gal/h)

(under reference conditions)

### Max. process pressure

PN 40

### Medium temperature range

-20 to +100 °C (-4 to +212 °F)

### Ambient temperature range

-40 to +60 °C (-40 to +140 °F)

### Transmitter housing material

AlSi10Mg, coated

### Degree of protection

IP66/67, type 4X enclosure

## Liquids

### Display/Operation

4 - line display with push buttons

Configuration via local display and operating tools possible

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### Outputs

4 - 20 mA HART (active)

Pulse/frequency/switch output (passive)

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### Inputs

Status input

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### Digital communication

HART

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### Power supply

DC 18 to 30 V

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### Hazardous area approvals

ATEX, IECEx, cCSAus

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### Other approvals and certificates

3.1 material, calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

Hygienic approvals: EHEDG, 3-A

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### Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

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### Pressure approvals and certificates

CRN

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### Material certificates

3.1 material

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### Hygienic approvals and certificates

Sanitary approval: 3-A, EHEDG

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