t-mass 65I

Benefits:

- Measurement of gases and gas mixtures in circular piping or rectangular ducts
- Plant safety – high accuracy and repeatability for a wide range of utility and process gases
- 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** Gas: 1.5% o.r. (10 to 100% o.f.s.), 0.15% o.f.s. (1 to 10% o.f.s.)
- **Measuring range** 20 to 720000 kg/h (44 to 1587328 lb/h)
- **Medium temperature range** -40 °C to +130 °C (-40 °F to +266 °F)
- **Max. process pressure** -0.5 to 20 bar gauge (-7.25 to 290 psi gauge)
- **Wetted materials** Transducer: 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022) Insertion tube: 1.4404 (316/316L); Alloy C22, 2.4602 (on request) Transducer guard: 1.4404 (316L) Compression fitting: 1.4404 (316/316L) Ferrules: PEEK 450G, PVDF Bonded seals: EPDM, Kalrez 6375, Nitrile and 316/316L

Field of application: The t-mass 65I was designed for the direct mass flow measurement of industrial gases and compressed air. With a turndown of typically 100:1 it can measure accurately operational flow rates and off line leakage. The integrated gas engine allows the customer to configure the device for 20 freely selectable gases. The t-mass 65I insertion version is suitable for large pipelines or rectangular ventilation ducts.
Features and specifications

Gas

**Measuring principle**
Thermal

**Product headline**
std_productprofile_product_usp_12715.
std_productprofile_product_field_of_application_12716.

**Sensor features**
std_productprofile_product_benefits_12717. Cost-effective measurement, negligible pressure loss and maintenance-free. Reliable flow measurement.
std_successorproducts_product_differentiating_tech_features_41642_1
std_successorproducts_product_differentiating_tech_features_41640_1
std_successorproducts_product_differentiating_tech_features_41641_1

**Transmitter features**
std_productprofile_product_benefits_12703.
std_productprofile_product_benefits_12704. Automatic recovery of data for servicing.
std_successorproducts_product_differentiating_tech_features_41643_1
std_successorproducts_product_differentiating_tech_features_41645_1
std_successorproducts_product_differentiating_tech_features_41644_1

**Nominal diameter range**
DN 80 to 1500 (3 to 60”)

**Wetted materials**
Transducer: 1.4404 (316L); Alloy C22, 2.4602 (UNS N06022)
Insertion tube: 1.4404 (316/316L); Alloy C22, 2.4602 (on request)
Transducer guard: 1.4404 (316L)
Compression fitting: 1.4404 (316/316L)
Ferrules: PEEK 450G, PVDF
Bonded seals: EPDM, Kalrez 6375, Nitrile and 316/316L

**Measured variables**
Mass flow, temperature, volume flow, energy flow
### Gas

**Max. measurement error**  
Gas: 1.5% o.r. (10 to 100% o.f.s.), 0.15% o.f.s. (1 to 10% o.f.s.)

**Measuring range**  
20 to 720000 kg/h (44 to 1587328 lb/h)

**Max. process pressure**  
-0.5 to 20 bar gauge (-7.25 to 290 psi gauge)

**Medium temperature range**  
-40 °C to +130 °C (-40 °F to +266 °F)

**Ambient temperature range**  
-20 °C to +60 °C (-4 °F to +140 °F)  
Optional: -40 °C to +60 °C (-40 °F to +140 °F)

**Transmitter housing material**  
Transmitter housing:  
Compact: powder coated die-cast aluminium  
Wall-mount: powder coated die-cast aluminium  
Remote field: powder coated die-cast aluminium  
Connection housing (remote version): powder coated die-cast aluminium

**Degree of protection**  
IP67 (NEMA 4X) for transmitter and sensor

**Display/Operation**  
Liquid crystal: back-lit, two lines with 16 characters per line  
Configuration via local display and operating tools possible

**Outputs**  
4-20mA HART (active/passive selectable), pulse, frequency, status

**Inputs**  
4-20mA, status input

**Digital communication**  
Profibus DP, Profibus PA, Foundation Fieldbus, Modbus
Gas

**Power supply**
- 85 to 260 VAC, 45 to 65 Hz
- 20 to 55 VAC, 45 to 65 Hz
- 16 to 62 VDC

**Hazardous area approvals**
- ATEX, FM, CSA, NEPSI

**Product safety**
- CE, C-Tick, EAC marking

More information [www.us.endress.com/65I](http://www.us.endress.com/65I)