

# Кориолисовые массовые расходомеры Promass E 100

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# Proline Promass E 100 Coriolis flowmeter

## Mid-range Coriolis flowmeter with an ultra-compact transmitter



### Benefits:

- Cost-effective – multipurpose device; an alternative to conventional volumetric flowmeters
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in-/outlet run needs
- Space-saving transmitter – full functionality on the smallest footprint
- Time-saving local operation without additional software and hardware – integrated web server
- Integrated verification – Heartbeat Technology

### Specs at a glance

- **Max. measurement error** Mass flow (liquid):  $\pm 0.15\%$  (standard),  $\pm 0.10\%$  (option) Volume flow (liquid):  $\pm 0.15\%$  Mass flow (gas):  $\pm 0.50\%$  Density (liquid):  $\pm 0.0005\text{ g/cm}^3$
- **Measuring range** 0 to 180 000 kg/h (0 to 6600 lb/min)
- **Medium temperature range**  $-40$  to  $+150\text{ }^\circ\text{C}$  ( $-40$  to  $+302\text{ }^\circ\text{F}$ )
- **Max. process pressure** PN 100, Class 600, 63K
- **Wetted materials** Measuring tube: 1.4539 (904L) Connection: 1.4404 (316/316L)

**Field of application:** The robust Promass E has a long-standing reputation as reliable solution accurately measuring liquids and gases in a wide range of standard applications. Its ultra-compact transmitter delivers full performance on the smallest footprint and enables seamless system integration, making Promass E 100 the preferred choice for skid builders, equipment manufacturers and system integrators. Heartbeat Technology enables measurement reliability and compliant verification.

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## Features and specifications

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### Liquids

**Measuring principle**

Coriolis

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**Product headline**

Flowmeter with minimized total cost of ownership and an ultra-compact transmitter.

Accurate measurement of liquids and gases for a wide range of standard applications.

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**Sensor features**

Cost-effective – multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Compact dual-tube sensor. Medium temperature up to +150 °C (+302 °F). Process pressure up to 100 bar (1450 psi).

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**Transmitter features**

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

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**Nominal diameter range**

DN 8 to 80 ( $\frac{3}{8}$  to 3")

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**Wetted materials**

Measuring tube: 1.4539 (904L)

Connection: 1.4404 (316/316L)

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**Measured variables**

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

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## Liquids

**Max. measurement error**

Mass flow (liquid):  $\pm 0.15\%$  (standard),  $\pm 0.10\%$  (option)

Volume flow (liquid):  $\pm 0.15\%$

Mass flow (gas):  $\pm 0.50\%$

Density (liquid):  $\pm 0.0005\text{ g/cm}^3$

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**Measuring range**

0 to 180 000 kg/h (0 to 6600 lb/min)

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**Max. process pressure**

PN 100, Class 600, 63K

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**Medium temperature range**

$-40$  to  $+150\text{ }^\circ\text{C}$  ( $-40$  to  $+302\text{ }^\circ\text{F}$ )

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**Ambient temperature range**

Standard:  $-40$  to  $+60\text{ }^\circ\text{C}$  ( $-40$  to  $+140\text{ }^\circ\text{F}$ )

Option:  $-50$  to  $+60\text{ }^\circ\text{C}$  ( $-58$  to  $+140\text{ }^\circ\text{F}$ )

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**Sensor housing material**

1.4301 (304), corrosion resistant

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**Transmitter housing material**

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

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**Degree of protection**

Standard: IP66/67, type 4X enclosure

Option: IP69

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**Display/Operation**

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

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**Outputs**

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

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**Liquids****Inputs**

None

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**Digital communication**

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

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**Power supply**

DC 20 to 30 V

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**Hazardous area approvals**

ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

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**Product safety**

CE, C-Tick, EAC marking

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**Metrological approvals and certificates**

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

Heartbeat Technology complies with the requirements for measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)

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**Marine approvals and certificates**

LR approval, DNV approval, ABS approval, BV approval, CCS approval

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**Pressure approvals and certificates**

PED, CRN

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**Material certificates**

3.1 material

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**Hygienic approvals and certificates**

3-A, EHEDG, cGMP

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**Gas****Measuring principle**

Coriolis

## Gas

**Product headline**

Flowmeter with minimized total cost of ownership and an ultra-compact transmitter.

Accurate measurement of liquids and gases for a wide range of standard applications.

---

**Sensor features**

Cost-effective – multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Compact dual-tube sensor. Medium temperature up to +150 °C (+302 °F). Process pressure up to 100 bar (1450 psi).

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**Transmitter features**

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

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**Nominal diameter range**

DN 8 to 80 ( $\frac{3}{8}$  to 3")

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**Wetted materials**

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Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

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**Max. measurement error**

Mass flow (liquid):  $\pm 0.15$  % (standard),  $\pm 0.10$  % (option)

Volume flow (liquid):  $\pm 0.15$  %

Mass flow (gas):  $\pm 0.50$  %

Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

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## Gas

**Measuring range**

0 to 180 000 kg/h (0 to 6600 lb/min)

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**Max. process pressure**

PN 100, Class 600, 63K

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**Medium temperature range**

-40 to +150 °C (-40 to +302°F)

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**Ambient temperature range**

Standard: -40 to +60 °C (-40 to +140 °F)

Option: -50 to +60 °C (-58 to +140°F)

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**Sensor housing material**

1.4301 (304), corrosion resistant

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**Transmitter housing material**

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

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**Degree of protection**

Standard: IP66/67, type 4X enclosure

Option: IP69

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**Display/Operation**

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

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**Outputs**

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

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**Inputs**

None

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**Digital communication**

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

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Gas

**Power supply**

DC 20 to 30 V

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**Hazardous area approvals**

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LR approval, DNV approval, ABS approval, BV approval, CCS approval

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**Pressure approvals and certificates**

PED, CRN

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**Material certificates**

3.1 material

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**Hygienic approvals and certificates**

3-A, EHEDG, cGMP

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