



PRO Series | TCMP 230K Coriolis Mass Flow Meter

FEATURES

- Robust, no moving parts
- Customized installation length
- Excellent repeatability (better than $\pm 0.05\%$), accuracy ($\pm 0.1\%$)
- Advanced transmitter technology
Upgrade/modernize in place

BENEFITS

- ▶ Increased productivity
- ▶ Considerable cost savings for installation
- ▶ Increased product quality
- ▶ Optimized lifecycle management

FLOW RATE

Mass Flow Rate (max.):	230,000 kg/h [8,450 lb/min]
Volumetric Flow Rate (max.):	230,000 l/h [1,013 gpm, 34,720 oil bbl/d (US)]
Nominal Meter Size:	DN80 [3"]

PRESSURE RATING

100 bar [1,450 psi]

ACCURACY (LIQUIDS)¹⁾

Basic Accuracy (Mass Flow):	$\pm 0.1\%$ of flow rate
Repeatability (Mass Flow):	better than $\pm 0.05\%$ of flow rate
Basic Accuracy (Volume Flow):	$\pm 0.15\%$ of flow rate
Repeatability (Volume Flow):	better than $\pm 0.05\%$ of flow rate
Zero Stability:	$\pm 0.01\%$ of full scale

ACCURACY (GASES)

Basic Accuracy (Mass Flow):	$\pm 0.5\%$ of flow rate
Repeatability (Mass Flow):	$\pm 0.25\%$ of flow rate

DENSITY

Density Range:	up to 2,500 kg/m ³ [2.5 g/cm ³]
Density Accuracy ²⁾ :	± 1.0 kg/m ³ [± 0.001 g/cm ³]
Density Repeatability:	± 0.5 kg/m ³ [± 0.0005 g/cm ³]

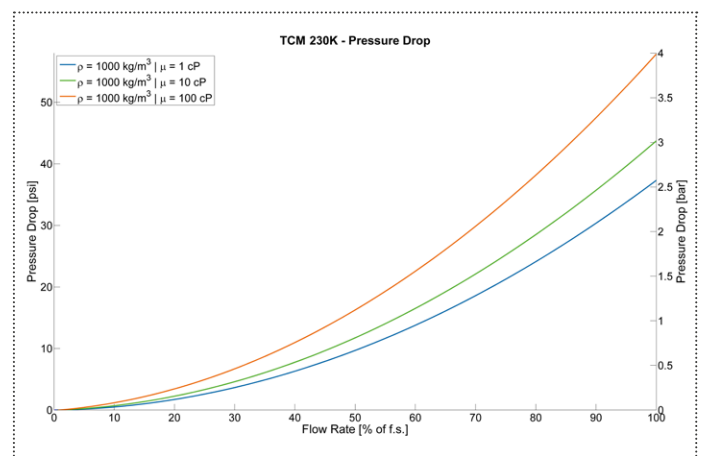
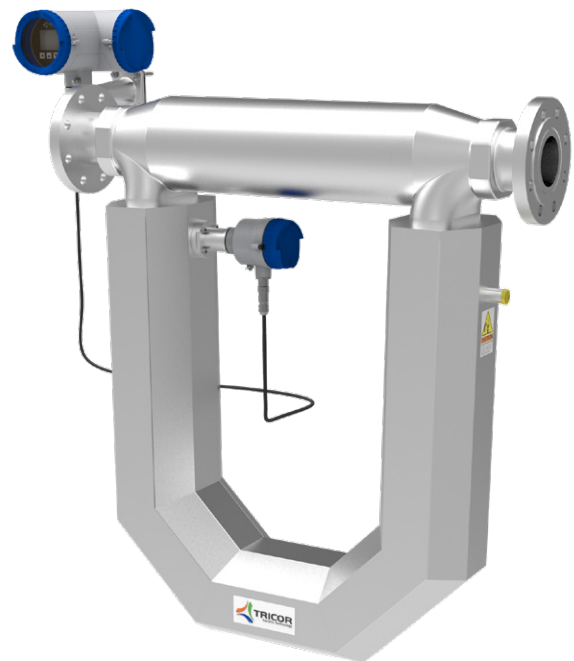
TEMPERATURE

Process Temperature Range:	-60 °C ... +200 °C [-76 °F ... +392 °F]
Temperature Accuracy:	± 1 °C $\pm 0.5\%$ of reading [± 1.8 °F $\pm 0.5\%$ of reading]
Temperature Repeatability:	± 0.2 °C [± 0.36 °F]

MATERIALS (WETTED PARTS)

Tubes:	1.4404 [AISI 316L]
Case:	1.4404 [AISI 316L]
Flow Splitter:	CF3M [1.4409]

Option: NACE MR 0175/0103 compliant

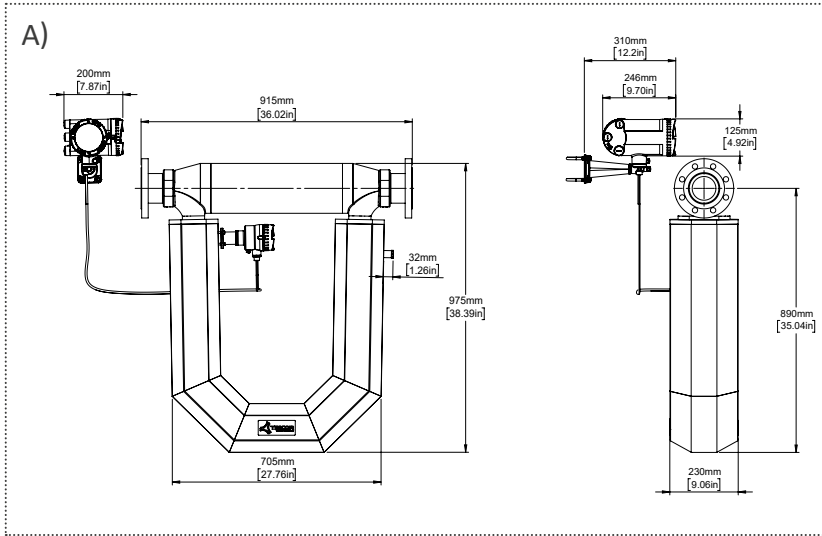


¹⁾ Stated flow accuracy combines the effects of repeatability, linearity and hysteresis.

²⁾ The specifications refer to standard conditions (for further information see TCMP PRO series manual).



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METER DIMENSIONS³⁾ AND WEIGHTS

A) Remote Version

Weight: 90.2 kg [98.9 lb]

With junction box and remote field mount

Standard Process Connection

DN80 PN40 [3" ANSI CL 300] (others on request)

EX-CERTIFICATIONS⁴⁾

ATEX	Zone 1: II (2)1 Ex db ia [ia Ga] IIC T* Gb ⁵⁾
	Zone 2: 3G Ex nR nA IIC T4
IECEX	Ex db ia [ia Ga] IIC T* Gb ⁵⁾
cCSAus	Class 1, Div. 1: Group A - D, T* ⁵⁾

BASIC TRANSMITTER⁶⁾



REMOTE MOUNT



COMPACT MOUNT



DISPLAY ELECTRONICS

Power Supply: 20 ... 27 V DC
100 ... 240 V AC

Graphical Display: 240 x 160 pixels

Configurable I/O: Analog, Digital, Frequency, Relay

Interfaces: PROFIBUS PA, PROFIBUS DP, HART 7.5, Modbus RTU

Enclosure Material: Aluminum

Cable Gland: 1/2" NPT

³⁾ Drawing of the meter dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).

⁴⁾ Version dependent.

⁵⁾ T* refer to Ex-certificate.

⁶⁾ Specification basic transmitter: see special TCD 9010 spec sheet.

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