



# CLASSIC Series | TCM 7900 Coriolis Mass Flow Meter

## FEATURES

- Robust, no moving parts for long life
- Custom flow connectors & installation lengths
- Excellent repeatability ( $\pm 0.05$  % of flow rate)
- Optional Net Oil functionality

## BENEFITS

- ▶ Increased productivity, less maintenance
- ▶ Lower installation cost
- ▶ Increased product quality
- ▶ Simpler whole solution for Net Oil without PLC/RTU

## FLOW RATE

Mass Flow Rate (max.):	7,900 kg/h [290 lb/min]
Volumetric Flow Rate (max.):	7,900 l/h [34.78 gpm, 1,193 oil bbl/d (US)]
Nominal Meter Size:	DN15 [ $\frac{1}{2}$ "]

PRESSURE RATING	100 bar [1,450 psi]
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## ACCURACY (LIQUIDS)<sup>1)</sup>

Basic Accuracy (Mass Flow) <sup>2)</sup> :	$\pm 0.3$ % (option: up to $\pm 0.1$ %) of flow rate
Repeatability (Mass Flow):	$\pm 0.05$ % of flow rate
Basic Accuracy (Volume Flow) <sup>2)</sup> :	$\pm 0.3$ % (option: up to $\pm 0.15$ %) of flow rate
Repeatability (Volume Flow):	$\pm 0.05$ % of flow rate
Zero Stability:	$\pm 0.01$ % of full scale

## ACCURACY (GASES)

Basic Accuracy (Mass Flow) <sup>2)</sup> :	$\pm 1$ % (option: up to $\pm 0.5$ %) of flow rate
Repeatability (Mass Flow):	$\pm 0.25$ % of flow rate

## DENSITY

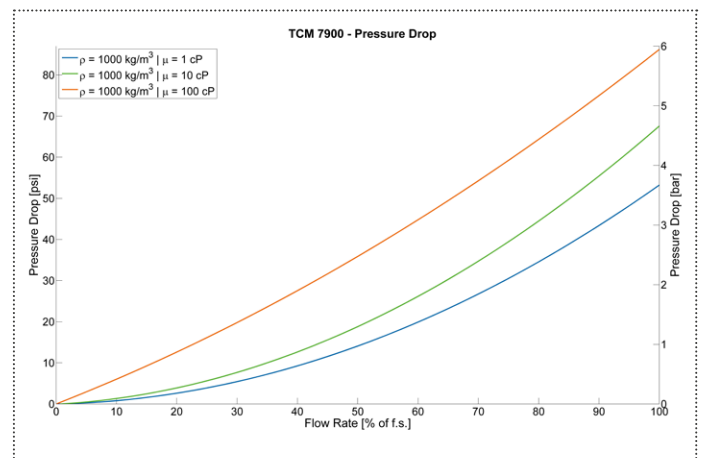
Density Range:	up to 2,500 kg/m <sup>3</sup> [2.5 g/cm <sup>3</sup> ]
Density Accuracy <sup>2)</sup> :	$\pm 1.0$ kg/m <sup>3</sup> [ $\pm 0.001$ g/cm <sup>3</sup> ]
Density Repeatability:	$\pm 0.5$ kg/m <sup>3</sup> [ $\pm 0.0005$ g/cm <sup>3</sup> ]

## TEMPERATURE

Process Temperature Range:	-40 °C ... +100 °C [-40 °F ... +212 °F] Option: -60 °C ... +200 °C [-76 °F ... +392 °F]
Temperature Accuracy:	$\pm 1$ °C $\pm 0.5$ % of reading [ $\pm 1.8$ °F $\pm 0.5$ % of reading]
Temperature Repeatability:	$\pm 0.2$ °C [ $\pm 0.36$ °F]

## MATERIALS (WETTED PARTS)

Tubes:	1.4404 [AISI 316L]
Case:	1.4404 [AISI 316L]
Flow Splitter:	1.4404 [AISI 316L]
Brazing Alloy:	BNi-2

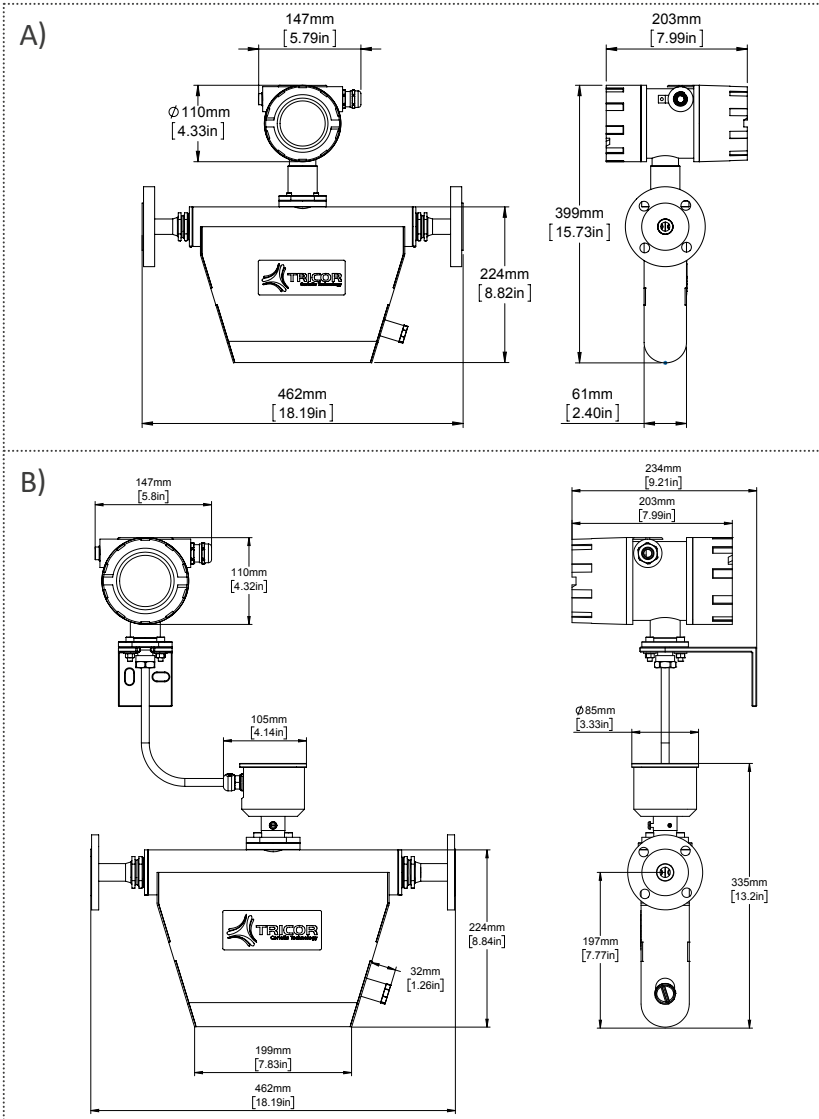


<sup>1)</sup> Stated flow accuracy combines the effects of repeatability, linearity and hysteresis.

<sup>2)</sup> The specifications refer to standard conditions (for further information see TCM CLASSIC series manual).



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## METER DIMENSIONS<sup>3)</sup> AND WEIGHTS

### A) Compact Version

Weight: 8.5 kg [18.7 lb]  
With meter mount in aluminum diecast housing

### B) Remote Version

Weight: 9.8 kg [21.6 lb]  
With junction box and remote field mount

### Standard Process Connection

DN15 PN40 [½" ANSI CL 300] (others on request)

## APPROVALS & CERTIFICATIONS

ATEX Zone 1 IECEX	<b>Compact version:</b> II 2G Ex db ia IIC T4 Gb <b>Remote version<sup>6)</sup>:</b> Sensor: II 1G Ex ia IIC T4...T2 Ga Transm.: II 2(1)G Ex db [ia Ga] IIC T4 Gb
Atex Zone 2 cCSAus <sup>5)</sup>	<b>All versions:</b> II 3G Ex nA IIC T4 <b>Compact version:</b> Cl. 1, Div. 1, Group A-D: T4 (US, Can) Ex db ia IIC T4 Gb (Can) <b>Remote version<sup>6)</sup>:</b> Sensor: Cl. 1, Div. 1, Group A-D: T4...T2 (US, Can) Ex ia IIC T4...T2 Ga (Can) Transm.: Cl. 1, Div. 1, Group A-D: T4 (US, Can) Ex db [ia Ga] IIC T4 Gb (Can)
EAC (TR-CU)	<b>Compact version:</b> 1Ex d ia IIC T4 Gb X <b>Remote version<sup>6)</sup>:</b> Sensor: 0Ex ia IIC T4...T2 Ga X Transm.: 1Ex d [ia Ga] IIC T4 Gb X
KGS (Korean)	<b>Compact version:</b> Ex d [ia] IIC T4 <b>Remote version<sup>6)</sup>:</b> Sensor: Ex ia IIC T4 Transm.: Ex d [ia] IIC T4

## PANEL MOUNT<sup>6)</sup>



## REMOTE MOUNT<sup>7)</sup>



## ELECTRONICS

Power Supply: 24 V DC or 100 ... 240 V AC (version dependent)  
Outputs: Analog, Frequency, Pulse, Status  
Interfaces: RS485 RTU (Modbus), HART®  
Cable Gland: M20 | ½" NPT

<sup>3)</sup> Drawing of the Meter Dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).

<sup>4)</sup> For cCSAus the electronic is only available in aluminum housing.

<sup>5)</sup> Only wall mounting, not panel mounting.

<sup>6)</sup> Weight: 0.4 kg [0.88 lb].

<sup>7)</sup> Weight with aluminum diecast housing: 3.8 kg [8.4 lb] with 3 m cable, Weight with 1.4404 [AISI 316L] housing: 6.15 kg [13.56 lb].

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