



# CLASSIC Series | TCM 3100 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)
- High pressure option: 345 bar [5,000 psi]<sup>1)</sup>

## BENEFITS

- ▶ Increased productivity, lower maintenance
- ▶ Lower installation cost
- ▶ Increased product quality
- ▶ Broad applications: dosing, paint, chemical injection

## FLOW RATE

Mass Flow Rate (max.): 3,100 kg/h [114 lb/min]  
 Volumetric Flow Rate (max.): 3,100 l/h  
 [13.65 gpm, 468 oi bbl/d (US)]  
 Nominal Meter Size: DN6 [¼"]

## PRESSURE RATING

200 bar [2,900 psi]  
 (option: up to 345 bar [5,000 psi])<sup>1)</sup>

## ACCURACY (LIQUIDS)<sup>2)</sup>

Basic Accuracy (Mass Flow)<sup>3)</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>3)</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>3)</sup>:  $\pm 1\%$  (option: up to  $\pm 0.5\%$ ) of flow rate  
 Repeatability (Mass Flow):  $\pm 0.25\%$  of flow rate

## DENSITY

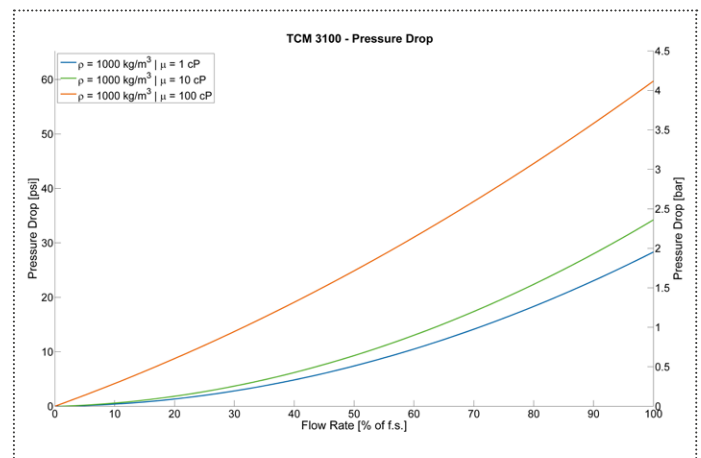
Density Range: up to 2,500 kg/m<sup>3</sup> [2.5 g/cm<sup>3</sup>]  
 Density Accuracy<sup>3)</sup>:  $\pm 1.0$  kg/m<sup>3</sup> [ $\pm 0.001$  g/cm<sup>3</sup>]  
 Density Repeatability:  $\pm 0.5$  kg/m<sup>3</sup> [ $\pm 0.0005$  g/cm<sup>3</sup>]

## 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> The 200 bar standard pressure rating is per ASME. The 345 bar option is non-ASME rated.

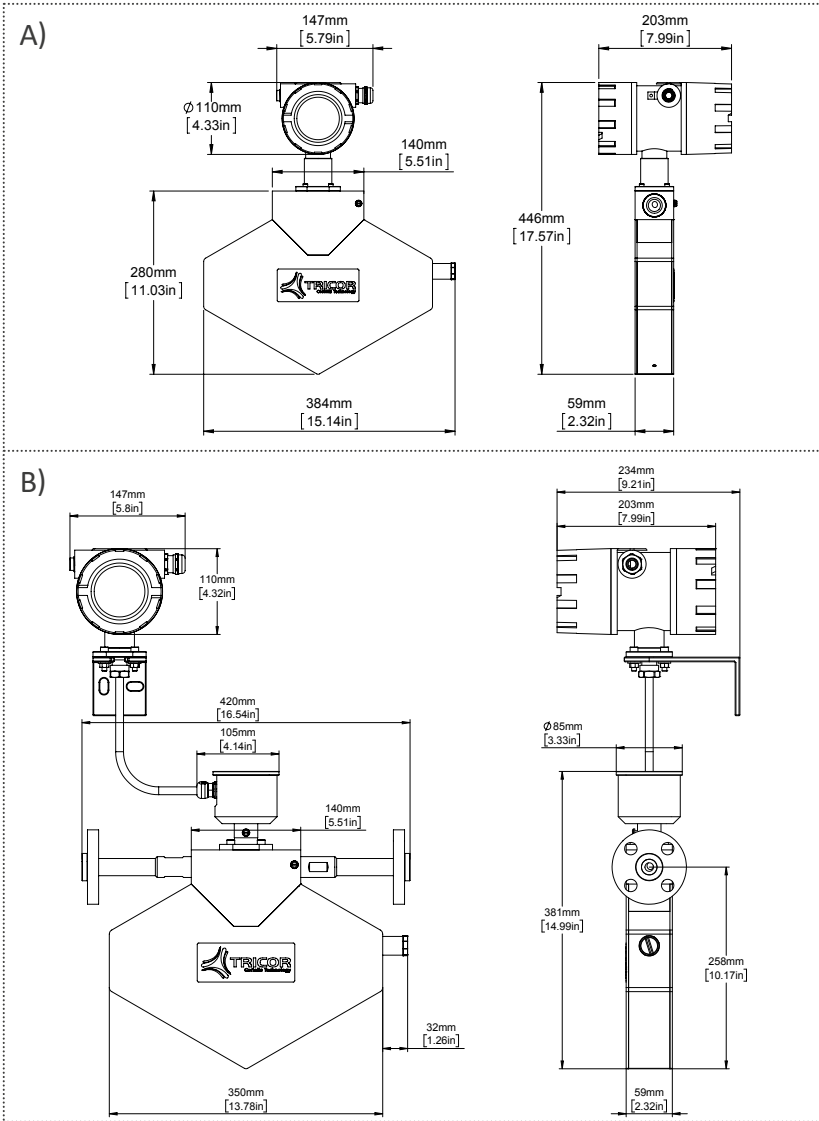
<sup>2)</sup> Stated flow accuracy combines the effects of repeatability, linearity and hysteresis.

<sup>3)</sup> The specifications refer to standard conditions (for further information see TCM CLASSIC series manual).





# CLASSIC Series | TCM 3100 Coriolis Mass Flow Meter



## METER DIMENSIONS<sup>4)</sup> AND WEIGHTS

### A) Compact Version

Weight: 11.6 kg [25.6 lb]

With meter mount in aluminum diecast housing

### B) Remote Version

Weight: 12.9 kg [28.4 lb]

With junction box and remote field mount

### Standard Process Connection

G $\frac{1}{2}$ " thread (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>7)</sup>



## REMOTE MOUNT<sup>8)</sup>



## ELECTRONICS

Power Supply: 24 V DC or 100 ... 240 V AC (version dependent)

Outputs: Analog, Frequency, Pulse, Status

Interfaces: RS485 RTU (Modbus), HART<sup>®</sup>

Cable Gland: M20 |  $\frac{1}{2}$ " NPT

<sup>4)</sup> Drawing of the Meter Dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).

<sup>5)</sup> For cCSAus the electronic is only available in aluminum housing.

<sup>6)</sup> Only wall mounting, not panel mounting.

<sup>7)</sup> Weight: 0.4 kg [0.88 lb].

<sup>8)</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].

[www.tricorflow.com](http://www.tricorflow.com)



### NORTH & SOUTH AMERICA

AW-Lake Company  
2440 W. Corporate Preserve Dr. #600  
Oak Creek WI 53154 | USA  
+1 414 574 4300

### ASIA PACIFIC & MIDDLE EAST

KEM Küppers Elektromechanik GmbH  
Liebigstraße 5  
85757 Karlsfeld | Germany  
+49 8131 59391-0

### CHINA

KEM flow technology (Beijing) Co., Ltd.  
Rm. 906, Block C, Ruiipu Office Bldg, No. 15  
HongJunYingNan Road  
Chaoyang District, Beijing 100012 | China  
+86 10 84929567

### EUROPE (ROW)

KEM Küppers Elektromechanik GmbH  
Liebigstraße 5  
85757 Karlsfeld | Germany  
+49 8131 59391-100