

# TCM 0100 Coriolis Mass Flow Meter

## Benefits:

- > Ultra low flow rate down to 5cc/min (300 grams/hr, .001 gallons/min)
- > Rated at 5,000 psi
- > No filter requirement
- > Fast response time
- > Simple to clean / flushable
- > Multiple connections available (NPT, AutoClave, tubing)
- > No moving parts – less wear, easier maintenance

**Pressure Rating:** 345 bar, 5000 psi

## Specifications:

Mass Flow Rate (max.): 50 kg/hr, 1.84 lbs/min  
Volumetric Flow Rate (max.): 50 l/hr, 0.22 gpm, 7.55 bbl/d (US)  
Tube Inner Diameter: 0.06 in, 1.52 mm  
Weight (w/o flanges): 2 lbs, 0.9 kg

## Accuracy: <sup>1)</sup>

Basic Accuracy (Mass Flow):  $\pm 0.2\%$  of flow rate  
Basic Accuracy (Volume Flow):  $\pm 0.25\%$  of flow rate  
Repeatability:  $\pm 0.1\%$  of flow rate  
Zero Stability:  $\pm 0.02\%$  of full scale

## Density:

Density Range: Up to 4,500 kg/m<sup>3</sup>, 4.5 g/cm<sup>3</sup>  
Density Accuracy: Liquids:  $\pm 1.0$  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:

Temperature Range (Fluid): -40°C to 100°C, -40°F to 212°F  
Temperature Accuracy:  $\pm 1.0$ °C  $\pm 0.5\%$  of reading  
Temperature Repeatability:  $\pm 0.2$  C,  $\pm 0.36$ °F

## Process Pressure Effect: <sup>2)</sup>

Mass Flow Accuracy:  $\pm 0.001\%$  of rate per psi <sup>3)</sup>  
Density Accuracy:  $\pm 0.00003$  g/cm<sup>3</sup> per psi <sup>3)</sup>

## Materials of Construction:

Wetted Parts: 316L Stainless Steel  
All-Welded Design

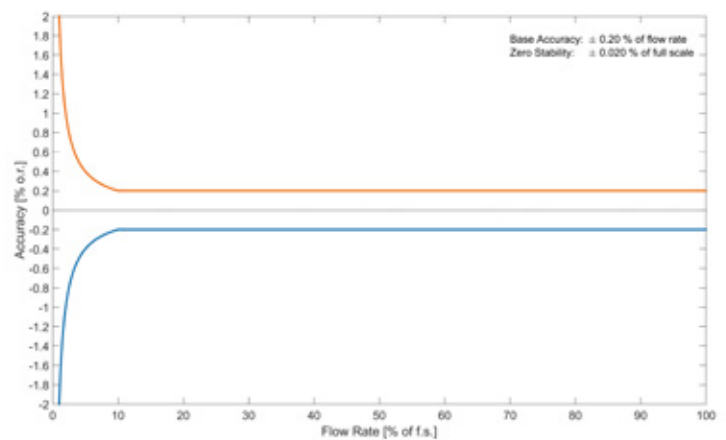
<sup>1)</sup> Stated flow accuracy combines the effects of repeatability, linearity and hysteresis

<sup>2)</sup> TCE-8000 electronics offers pressure input to eliminate process pressure effect

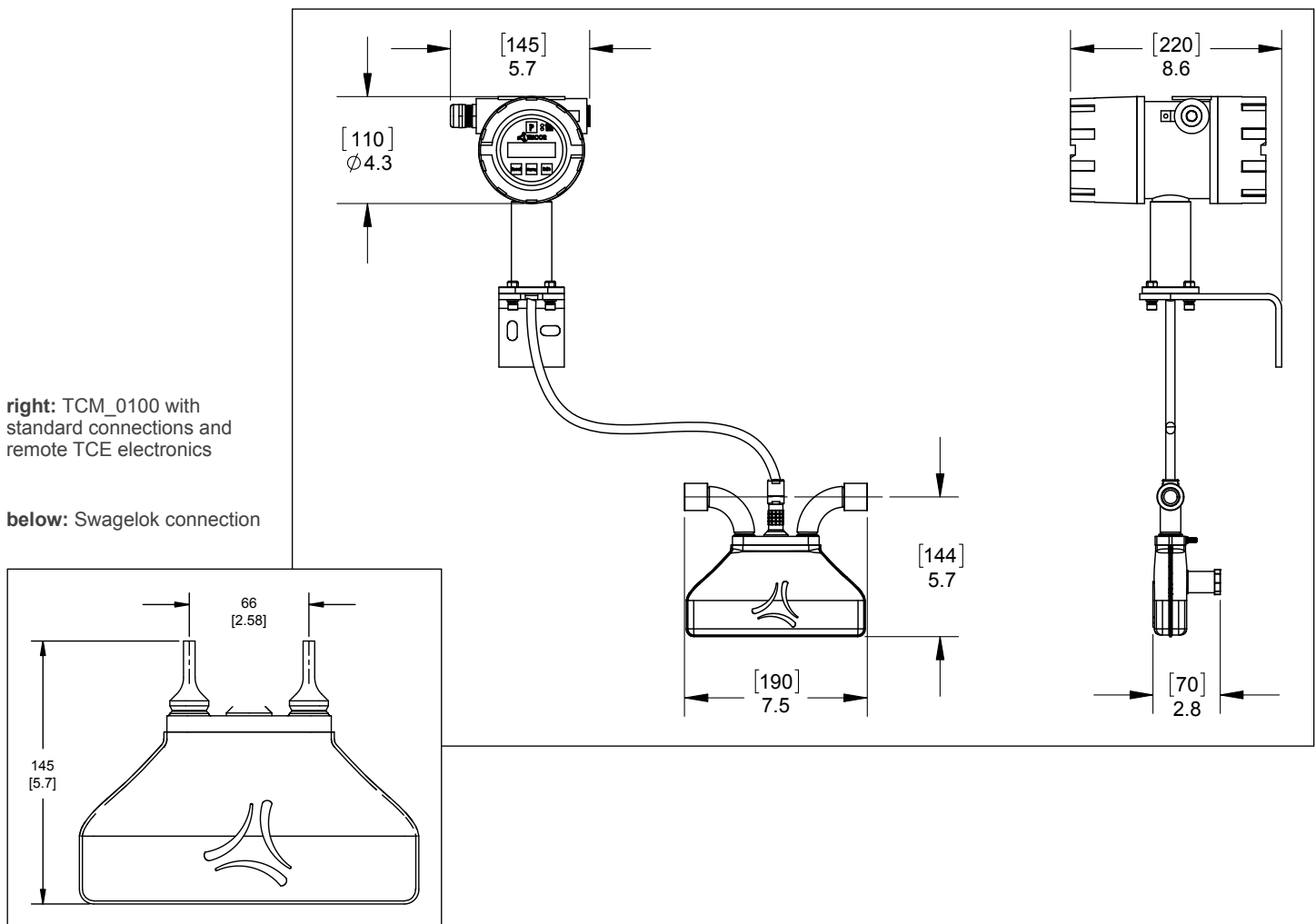
<sup>3)</sup> 1 psi = 0.06894 bar



## Accuracy Curves:



## Meter Dimensions: <sup>2)</sup>



**right:** TCM\_0100 with standard connections and remote TCE electronics

**below:** Swagelok connection

## Electronics:

The TCE-8000 transmitter offered with the TRICOR Coriolis Mass Flow Meter is also available with other mounting options.

## Ex Certifications:

ATEX (Ex)	Zone 1: Group IIC or IIB, T2...T4
ATEX (Exn)	Zone 2: II 3G Ex nA IIC T2...T4 Gc
IECEX (Ex)	Zone 1: Group IIC or IIB, T2...T4
EAC (TR-CU) <sup>5)</sup>	Group IIC or IIB, T2 ... T4

## Panel Mount<sup>3)</sup>



Power Supply:

Outputs:

Interface:

More options on request

## Remote Field Mount<sup>4)</sup>



24 V DC  $\pm 20\%$  or 90 ... 264 V AC

Analog, Frequency, Pulse, Status

RS485 RTU (Modbus), HART®

<sup>2)</sup> Drawing of the Meter Dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).

<sup>3)</sup> Weight: 0.4 kg/0.88 lb.

<sup>4)</sup> Weight with aluminum diecast housing: 3.8 kg/8.3 lb with 3 m cable, Weight with 1.4404/AISI 316L housing: 6.15 kg/13.56 lb.

<sup>5)</sup> For EAC (TR-CU) the electronic is only available in aluminum housing.



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