

TCM 1550 Series

Coriolis Mass Flow Meter and Density Meter for Marine Fuel Consumption Management

- > All in one mass flow and density meter
- > Customized installation length
- > Direct mass flow measurement
- > Real time density measurement for fuel quality control
- > Maintenance free
- > No moving parts
- > Replaces all kind of volume based flow meters
- > Excellent repeatability in order to determine actions for process/engine optimization
- > Recommended 5 year meter recalibration

Accuracy¹⁾:

Basic Accuracy [Mass Flow]: ± 0.1 % of flow rate
Mass Flow Repeatability: ± 0.05 % of flow rate
Basic Accuracy [Volume Flow]: ± 0.15 % of flow rate
Volume Flow Repeatability: ± 0.05 % of flow rate
Zero Stability: ± 0.01 % of full scale

Density:

Density Range: up to 2500 kg/m³, 2.5 g/cm³
Density Accuracy: Liquids ± 1.0 kg/m³, ± 0.001 g/cm³
Density Repeatability: ± 0.5 kg/m³, ± 0.0005 g/cm³

Temperature:

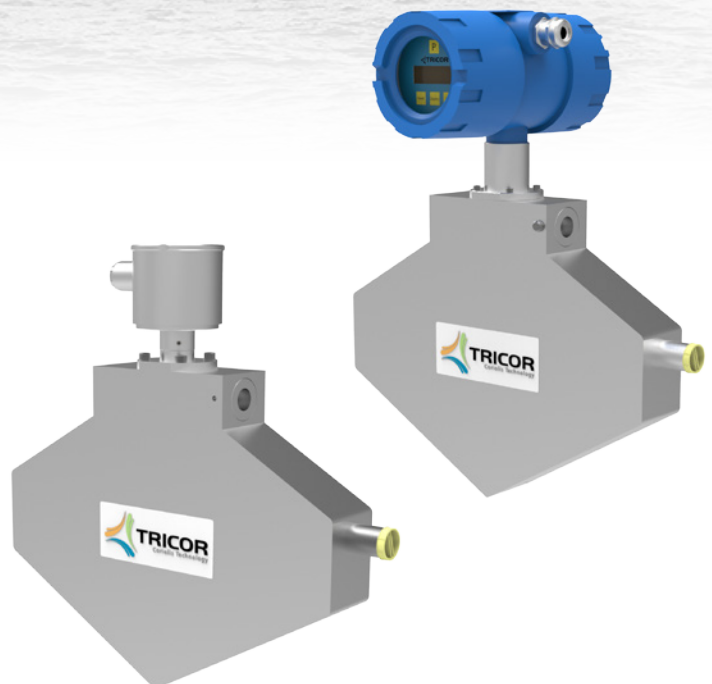
Process Temperature Range: Standard: -40 °F ... +212 °F (-40 °C ... +100 °C)
Optional²⁾: -76 °F ... +302 °F (-60 °C ... +150 °C)
-76 °F ... +392 °F (-60 °C ... +200 °C)
Temperature Accuracy: ± 1.8 °F ± 0.5 % of reading
(± 1 °C ± 0.5 % of reading)
Temperature Repeatability: ± 0.36 °F (± 0.2 °C)

Materials of Construction [wetted parts]:

Tubes: 1.4404/AISI 316L
Case: 1.4404/AISI 316L

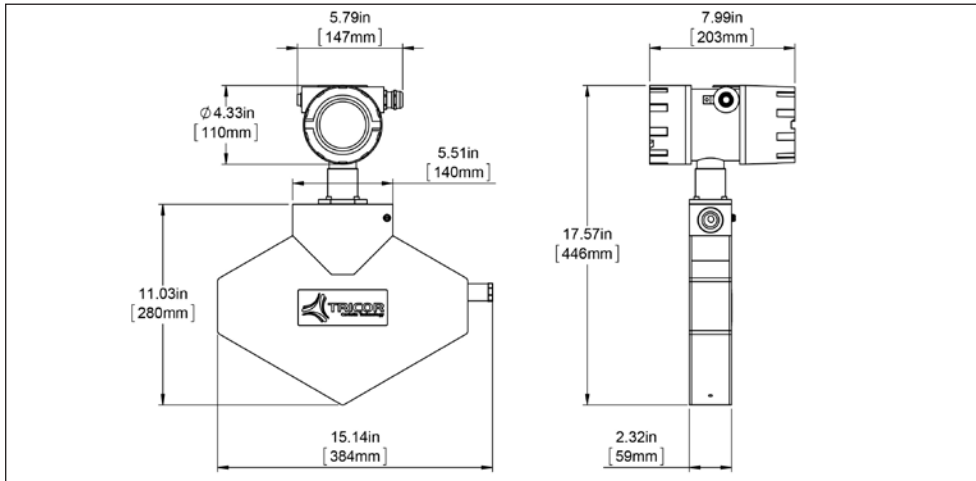
Typical Specification:

Nominal Meter Size G1/2" thread



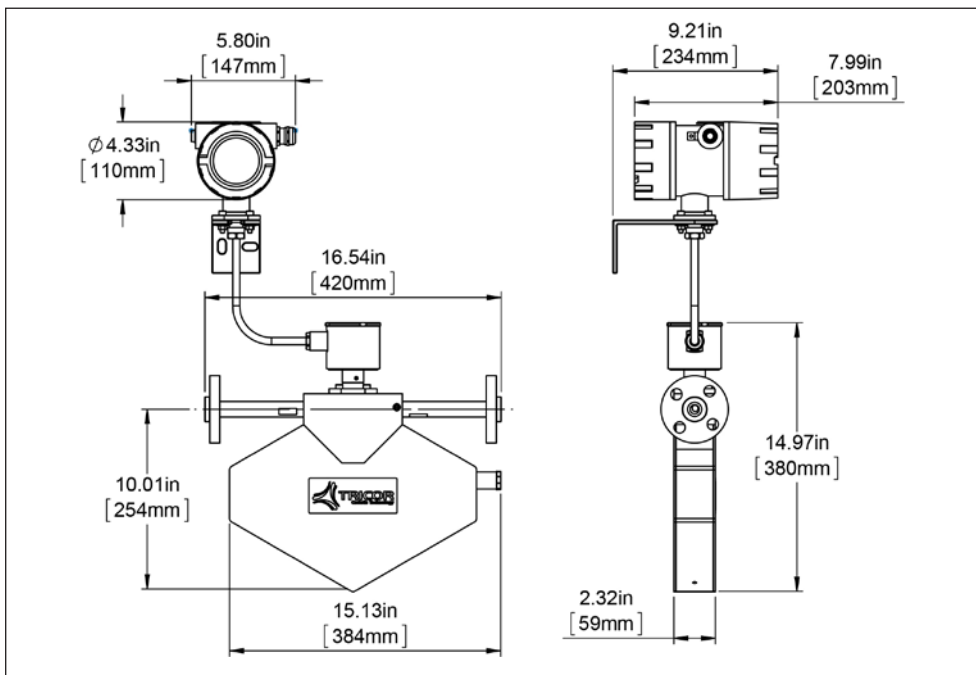
¹⁾ Stated flow accuracy combines the effects of repeatability, linearity and hysteresis.
²⁾ Ex-Version compact: -40 °C ... +70 °C, -40 °F ... +158 °F.

Meter Dimensions³⁾:



Compact Version

weight: 11.6 kg/25.7 lb
with meter mount ex-electronics
meter connection: G1/2" thread



Remote Version

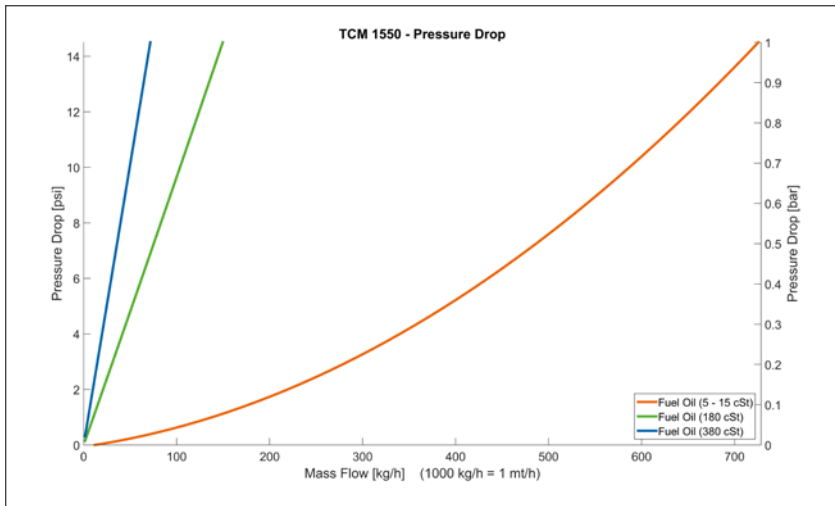
weight: 12.9 kg/28.5 lb
with junction box & remote field mount
meter connection:
standard meter connection according table

| Model Code | ANSI B16.5 or DIN EN 1092-1 Form B | Face-to-Face [mm] ⁴⁾ | Flange - Ø [mm] | Screws QTY | Hole - Ø (for screws) [mm] or screw dim. |
|------------|------------------------------------|---------------------------------|-----------------|------------|--|
| AA | 0.5" CL 150 ANSI | 420 | 90 | 4 | 16 |
| AB | 0.5" CL 300 ANSI | 420 | 95 | 4 | 16 |
| AC | 0.5" CL 600 ANSI | 420 | 95 | 4 | 16 |
| AD | 0.5" CL 900 ANSI | 420 | 120 | 4 | 22 |
| AE | 1.0" CL 150 ANSI | 420 | 110 | 4 | 16 |
| AF | 1.0" CL 300 ANSI | 420 | 95 | 4 | 19 |
| AG | 1.0" CL 600 ANSI | 420 | 125 | 4 | 19 |
| AH | 1.0" CL 900 ANSI | 420 | 150 | 4 | 25 |
| DA | DN15 PN40 EN 1092-1 Form B1 | 420 | 95 | 4 | M12 |
| DB | DN15 PN100 EN 1092-1 Form B1 | 420 | 105 | 4 | M12 |
| DC | DN25 PN40 EN 1092-1 Form B1 | 420 | 115 | 4 | M12 |
| DD | DN25 PN100 EN 1092-1 Form B1 | 420 | 140 | 4 | M16 |

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

⁴⁾ Customized face-to face length available.

Pressure Drop:



| Range | Fuel Oil | | |
|------------------------------|----------|------|-------|
| Viscosity [cSt] | 5-15 | 180 | 380 |
| Density [kg/m ³] | 900 | 900 | 900 |
| Flow Rate [mt/h] | 0.73 | 0.15 | 0.075 |
| Pressure Drop [bar/psi] | 1/14.5 | | |

Electronics:

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

Panel Mount



Weight: 0.4 kg/0.88 lb

Remote Field Mount



Weight: 3.8 kg/8.3 lb with 3 m cable

Power Supply: 24 V DC \pm 20 % or 90 ... 264 V AC
 Outputs: Analog, Frequency, Pulse, Status
 Interface: RS485 RTU (Modbus), HART[®]

More options on request

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 |
| cCSAus (Ex1) ⁵⁾ | Class 1, Division 1: Group A, B, C, D or C, D, T2...T4 |
| ATEX + IECEX + cCSAus triple approval (Ex3) ^{5) 6)} | Zone 1: Group IIC or IIB, T2...T4 and Class 1, Division 1: Group A, B, C, D or C, D, T2...T4 |
| EAC (TR-CU) ⁵⁾ | Group IIC or IIB, T2 ... T4 |

Product Type Approval:

| | |
|-----------------------------|---|
| American Bureau of Shipping | Certificate Number: 14-HS1223473-PDA-DUP |
| RMRS | Russian Maritime Register of Shipping |

Other Type Approvals in process.

⁵⁾ For Ex1, Ex3, EAC (TR-CU) the electronic is only available in aluminum housing.

⁶⁾ Only with remote electronics.