NOMINAL FLOW RATE (* reference gases)

@ 20°C air, pressure drop 10 bar: 394 kg/h @ 1,050 bar
[14.5 lb/min @ 15,200 psi]
362 kg/h @ 690 bar
[13.3 lb/min @ 10,000 psi]
316 kg/h @ 414 bar
[11.6 lb/min @ 6,000 psi]

@ 20°C H₂, pressure drop 50 bar:
254 kg/h @ 1,050 bar
[9.30 lb/min @ 15,200 psi]
240 kg/h @ 875 bar
[8.80 lb/min @ 12,690 psi]
222 kg/h @ 690 bar
[8.15 lb/min @ 10,000 psi]
184 kg/h @ 414 bar
[6.75 lb/min @ 6,000 psi]

PRESSURE RATING
TCMH 0450-HC-SPPS (-SPMS) 1) : 1,050 bar [15,200 psi]
TCMH 0450-HC-SRPS (-SRMS) 1) : 690 bar [10,000 psi]
TCMH 0450-HC-SSPS (-SSMS) 1) : 414 bar [6,000 psi]

ACCURACY
Flow: ±1 % of flow rate
Mass Repeatability: ±0.5 % of flow rate
Zero Stability: 0.45 kg/h [0.0165 lb/min]
Temperature: ±1 °C ±0.5 % of flow rate
[±1.8 °F ±0.5 % of flow rate]

OPERATING CONDITIONS - PROCESS 2)
Process Temperature Range: -40 °C ... +100 °C [-40 °F ... +212 °F]
Medium: Gas
Pressure Effect on Sensitivity: 0.0002 % / bar [0.000014 % / psi]

OPERATION CONDITIONS - ENVIRONMENT
Ambient Temperature: -40 °C ... +70 °C [-40 °F ... +158 °F]
Relative Humidity: max. 95 %

MATERIALS (WETTED PARTS)
Tubes: 1.4404 [AISI 316L] or Sandvik Alloy HP160
Case: 1.4404 [AISI 316L]
Flow Splitter: 1.4404 [AISI 316L]

BURST PROTECTION
Rupture Disc: G½"

CONNECTIVITY
Flow Meter: ¾” Autoclave (MP)
[other on request]
Signal Cable Connection: Push-Pull connector
For triple Ex approval (Ex3) 3)

1) P respectively 1.4404/AISI 316L = NACE compliant, M respectively HP160 = not NACE compliant.
2) Customer specific pressure compensation curves on request.
3) With connector M33 (TCE) and with connector Lemo (TCM), x m cable length (TCC-06-xx).
**HIGH PRESSURE | TCMH 0450**

**Coriolis Mass Flow Meter – Gas**

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**METER DIMENSIONS AND WEIGHTS**

**A)**
- **Ex/Ex1**
  - Weight: 7.5 kg [16.5 lb]

**B)**
- **Ex3**
  - Weight: 7.5 kg [16.5 lb]

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**EX-CERTIFICATIONS**

**ATEX**
- Zone 1: Group IIC, T2...T4
- Zone 2: II 3G Ex nA IIC T2...T4 Gc

**IECEx**
- Zone 1: Group IIC, T2...T4

**cCSAus**
- Class 1, Division 1: Group A, B, C, D, T2...T4

**ATEX + IECEx + cCSAus triple approval**
- Zone 1: Group IIC, T2...T4

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**ELECTRONICS**

**Power Supply:**
- 24 V DC ±20 % or 90 ... 264 V AC

**Housing Material:**
- Aluminum 1.4404 [AISI 316L]

**Display:**
- LCD Display

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**REMOTE MOUNT**

**OUTPUT SIGNALS**

**Analog:**
- 2 x 4 ... 20 mA passive two-wire, galvanically free
- accuracy ±0.05 % of f.s.
- temperature drift 0.05 % per 10 K
- load <620 Ω (with 24 V supply)
- output value programmable

**Frequency/Pulse:**
- 5 - 10,000 Hz active, push pull for flowrate
- push pull programmable

**INPUT SIGNALS**

**Control Input:**
- 0/24 V DC

**Analog (optional):**
- 4 ... 20 mA active for passive 2-wire-pressure sensor
- supply >20 V (sensor current 20 mA)

**Interfaces:**
- RS485 RTU (Modbus), optional HART®

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**PROTECTION CLASS**

IP65 (NEMA 4)
IP66 (NEMA 4X) optional

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For cCSAus the electronic is only available in aluminum housing.

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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