



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 H ₂ , 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) ²⁾ :	690 bar [10,000 psi]
TCMH 0450-HC-SSPS (-SSMS) ¹⁾ :	414 bar [6,000 psi]

ACCURACY

Flow:	±0.5 % of flow rate
Mass Repeatability:	±0.1 % 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 - PROCESS²⁾

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)

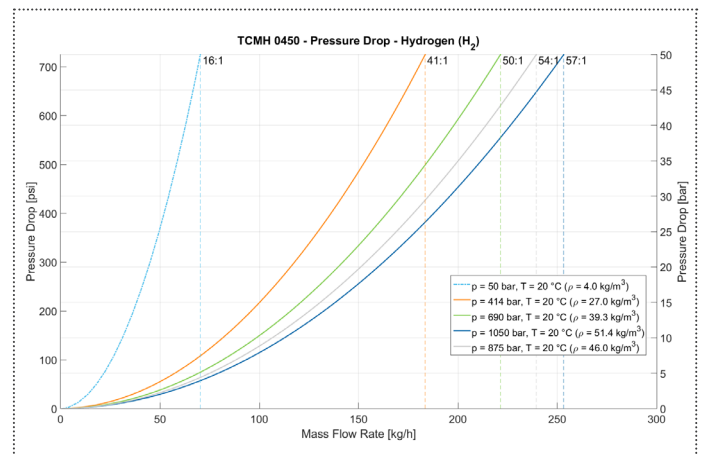
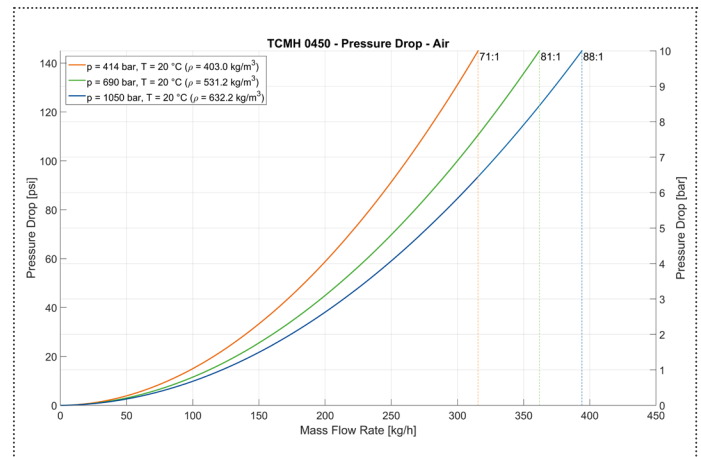
Tubes ¹⁾ :	1.4404 [AISI 316L] or Sandvik Alloy HP160
Case:	1.4404 [AISI 316L]
Flow Splitter:	1.4404 [AISI 316L]

BURST PROTECTION

Rupture Disc:	G½"
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CONNECTIVITY

Flow Meter:	¾" Autoclave (MP) (others on request)
Signal Cable Connection:	Push-Pull connector
For triple Ex approval (Ex3) ³⁾	



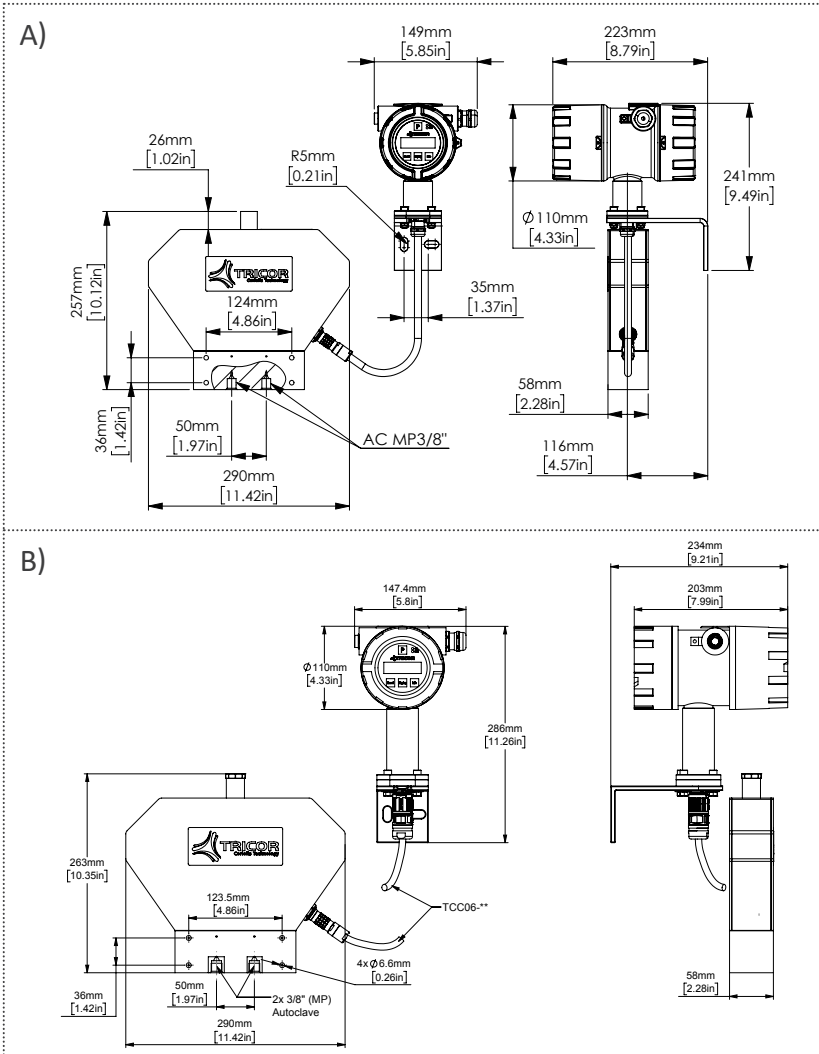
¹⁾ P respectively 1.4404/AISI 316L = NACE compliant, M respectively HP160 = not NACE compliant.

²⁾ Customer specific pressure compensation curves on request.

³⁾ With connector M23 (TCE) and with connector Lemo (TCM), x m cable length (TCC-06-xx).



HIGH PRESSURE | TCMH 0450 Coriolis Mass Flow Meter – Gas



METER DIMENSIONS AND WEIGHTS

A) Ex/Ex1

Weight: 7.5 kg [16.5 lb]

B) Ex3

Weight: 7.5 kg [16.5 lb]

APPROVALS & CERTIFICATIONS

ATEX Zone 1 IECEx	Sensor: II 1G Ex ia IIC T4...T2 Ga Transm.: II 2(1)G Ex db [ia Ga] IIC T4 Gb
Atex Zone 2	II 3G Ex nA IIC T4
cCSAus	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)	Sensor: 0Ex ia IIC T4...T2 Ga X Transm.: 1Ex d [ia Ga] IIC T4 Gb X
KGS (Korea)	Sensor: Ex ia IIC T4 Transm.: Ex d [ia] IIC T4

ELECTRONICS

Power Supply:	24 V DC or 100 ... 240 V AC (version dependent)
Housing Material:	Aluminum 1.4404 [AISI 316L]
Display:	LCD Display

OUTPUT SIGNALS

Analogue:	2 x 4 ... 20 mA passive two-wire, galvanically free accuracy $\pm 0.05\%$ 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
Status:	push pull programmable

INPUT SIGNALS

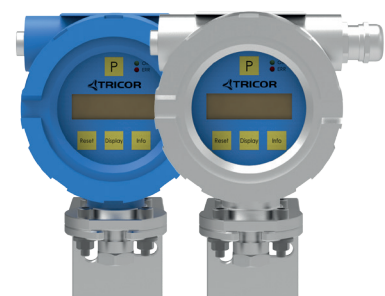
Control Input:	0/24 V DC
Analogue (optional):	4 ... 20 mA active for passive 2-wire-pressure sensor supply >20 V (sensor current 20 mA)
Interfaces:	RS485 RTU (Modbus), optional HART®

PROTECTION CLASS

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

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REMOTE MOUNT⁵⁾



⁴⁾ For cCSAus the electronic is only available in aluminum housing.
⁵⁾ 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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