

Materials for the transmitter terminal box

Integral mount design	
Material	Cast aluminum or stainless steel 1.4409 (ASTM CF3M)
Paint	Paint coat $\geq 80 \mu\text{m}$ thick, RAL 9002 (gray white)
Cable gland ²⁾	Polyamide or stainless steel ¹⁾
Remote mount design	
Material	Cast aluminum
Paint	Mid-section: Paint coat $\geq 80 \mu\text{m}$ thick, RAL 7012 (basalt gray) Front cover / rear cover: RAL 9002 (gray white)
Cable gland ²⁾	Polyamide

- 1) On explosion-proof design for ambient temperature of $-40 \text{ }^\circ\text{C}$ ($-40 \text{ }^\circ\text{F}$)
- 2) Cable gland with M20 x 1.5 or NPT thread, to be selected via the order number

Materials for the sensor

Wetted components	
FCB400	FCH400
Stainless steel 1.4435 or 1.4404 (AISI 316L)	Stainless steel 1.4435 or 1.4404 (AISI 316L)
C4 ¹⁾ (2.4610) nickel alloy or C22 ¹⁾ (2.4602) nickel alloy	—
Optional: Manufacture in accordance with NACE MR0175 and MR0103 (ISO 15156)	

Housing²⁾

Stainless steel 1.4404 (AISI 316L), 1.4301 (AISI 304), 1.4308 (ASTM CF8)

- 1) Hastelloy C is a registered trademark of Haynes International. C4 and C22 nickel alloys are equivalent to Hastelloy C4 and Hastelloy C22.
- 2) If wetted parts of the sensor are made from nickel alloy, the sensor housing is made from the same material.

Material load for process connections

The temperature class of the analyzer is T4.	Nominal diameter	PS _{max}	TS _{max}	TS _{min}
Pipe fitting (DIN 11851)	DN 15 ... 40 (1/2 ... 1 1/2")	40 bar (580 psi)	140 °C (284 °F)	-40 °C (-40 °F)
	DN 50 ... 100 (2 ... 4")	25 bar (363 psi)	140 °C (284 °F)	-40 °C (-40 °F)
Pipe fitting (SMS 1145)	DN 25 ... 80 (1 ... 3")	6 bar (87 psi)	140 °C (284 °F)	-40 °C (-40 °F)
Tri-Clamp (DIN 32676)	DN 15 ... 50 (1/2 ... 2")	16 bar (232 psi)	120 °C (248 °F)	-40 °C (-40 °F)
	DN 65 ... 100 (2 1/2 ... 4")	10 bar (145 psi)	120 °C (248 °F)	-40 °C (-40 °F)

Material load curves for flange devices

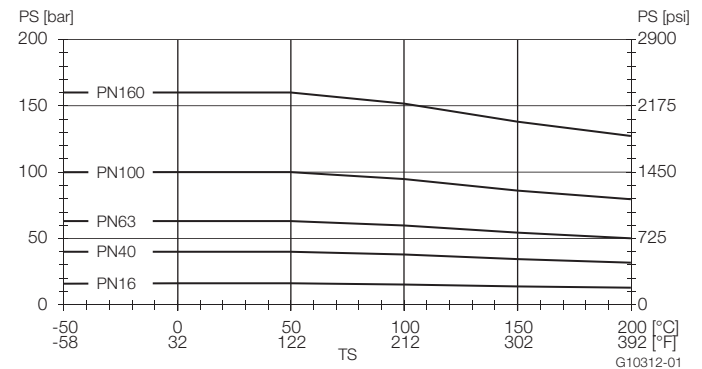


Fig. 12: Stainless steel DIN flange 1.4571 / 1.4404 (AISI 316Ti / 316L) up to DN 200 (8")

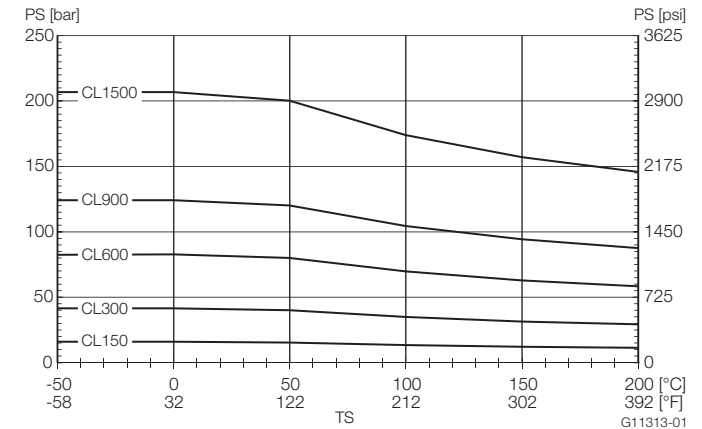


Fig. 13: Stainless steel ASME flange 1.4571 / 1.4404 (AISI 316Ti / 316L) up to DN 200 (8")

CoriolisMaster FCB430, FCB450, FCH430, FCH450

Coriolis mass flowmeter

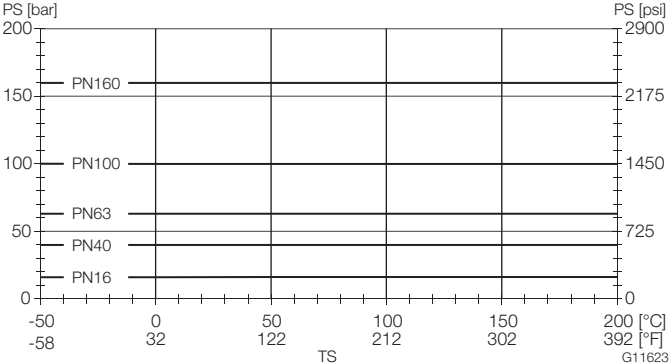


Fig. 14: Nickel alloy DIN flange C4 (2.4610) or nickel alloy C22 (2.4602) up to DN 200 (8")

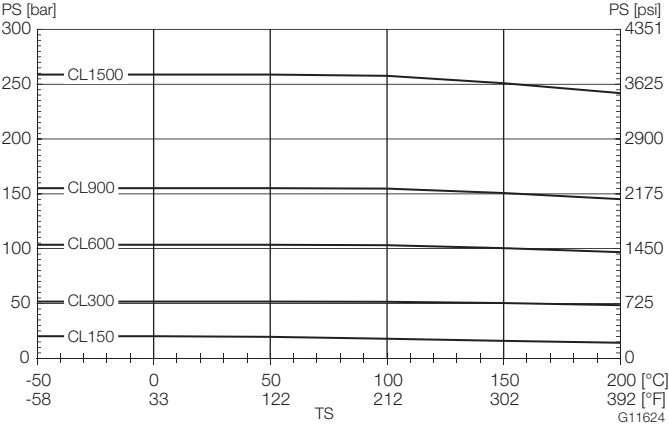


Fig. 15: Nickel alloy ASME flange C4 (2.4610) or nickel alloy C22 (2.4602) up to DN 200 (8")

Dimensions for devices with integral mount design

Devices with meter tube nominal diameter DN 15 ... 50 and flange DN 10 ... 65

Sensor with wetted parts made from stainless steel. All specified dimensions and weights are in mm (inch) or kg (lb).

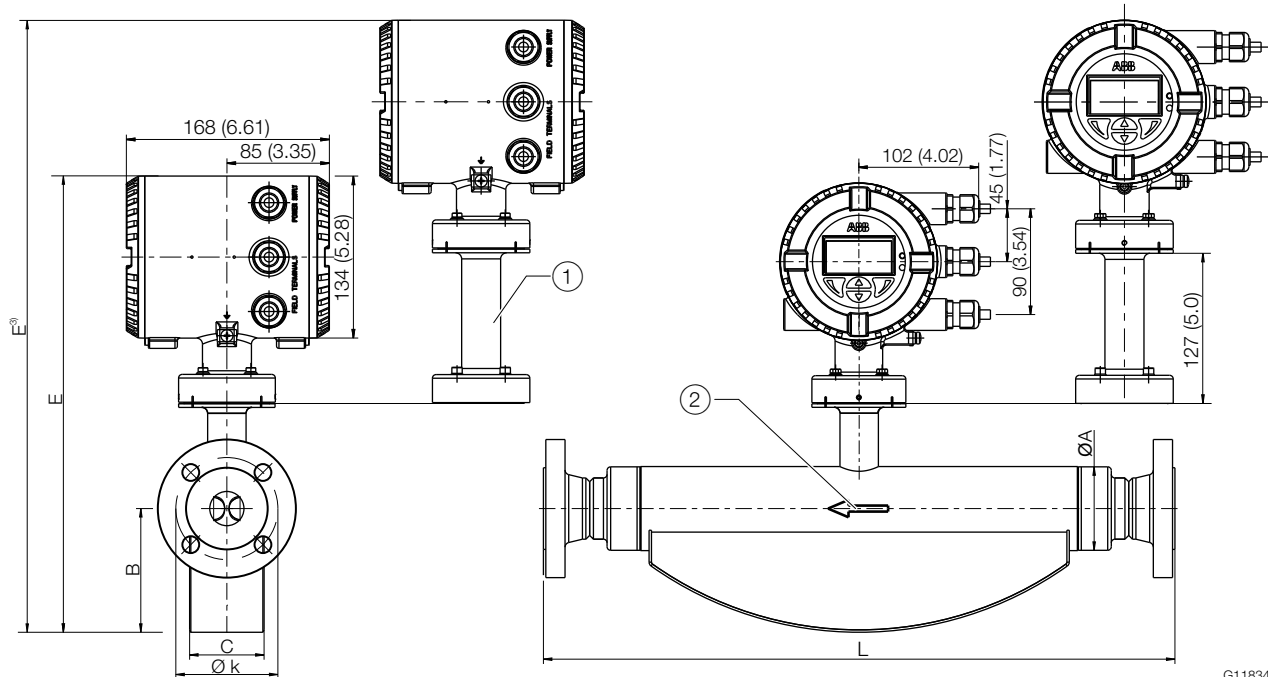


Fig. 16: Integral mount design with dual-compartment transmitter housing

① Option TE1 "Extended tower length" or option PR4 / PR5 / PR6 / PR7 "Pressure-resistant sensor housing" ② Flow direction

Meter tube nominal diameter DN 15 (1/2")							Approx. weight		
DN / process connection	L	Ø k	Ø A	B	C	E	Aluminum ¹⁾	Stainless steel ²⁾	
10 (3/8)	PN 40 (EN 1092-1 B1)	385 (15.2)	60 (2.4)	44.5 (1.8)	77 (3.0)	46 (1.8)	340 / 467 ³⁾ (13.39 / 18.39 ³⁾)	9 / 10 ³⁾ (19.8 / 22 ³⁾)	12 / 13 ³⁾ (26.5 / 28.7 ³⁾)
	JIS 10K	385 (15.2)	65 (2.6)						
15 (1/2)	PN 40 (EN 1092-1 B1)	385 (15.2)	65 (2.6)	44.5 (1.8)	77 (3.0)	46 (1.8)	340 / 467 ³⁾ (13.39 / 18.39 ³⁾)	9 / 10 ³⁾ (19.8 / 22 ³⁾)	12 / 13 ³⁾ (26.5 / 28.7 ³⁾)
	PN 63 (EN 1092-1 B2)	403 (15.9)	75 (3.0)						
	PN 100 (EN 1092-1 B2)	403 (15.9)	75 (3.0)						
	CL150 (ASME B16.5)	435 (17.1)	60.5 (2.4)						
	CL300 (ASME B16.5)	421 (16.6)	66.7 (2.6)						
	CL600 (ASME B16.5)	421 (16.6)	66.7 (2.6)						
	CL900 (ASME B16.5)	421 (16.6)	82.6 (3.3)						
JIS 10K	385 (15.2)	70 (2.8)							
20 (3/4)	PN 40 (EN 1092-1 B1)	421 (16.6)	75 (3.0)	44.5 (1.8)	77 (3.0)	46 (1.8)	340 / 467 ³⁾ (13.39 / 18.39 ³⁾)	9 / 10 ³⁾ (19.8 / 22 ³⁾)	12 / 13 ³⁾ (26.5 / 28.7 ³⁾)
	CL150 (ASME B16.5)	421 (16.6)	69.9 (2.8)						
	JIS 10K	421 (16.6)	75 (3.0)						

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Coriolis mass flowmeter

Meter tube nominal diameter DN 25 (1")								Approx. weight	
DN / process connection		L	Ø k	Ø A	B	C	E	Aluminum ¹⁾	Stainless steel ²⁾
20 (3/4)	PN 40 (EN 1092-1 B1)	576 (22.7)	75 (3.0)	69.5 (2.74)	103 (4.06)	62 (2.44)	379 / 506 ³⁾ (14.92 / 19.92 ³⁾)	11 / 12 ³⁾ (24,3 / 26.5 ³⁾)	14 / 15 ³⁾ (30.9 / 33.1 ³⁾)
	CL150 (ASME B16.5)	575 (22.6)	69.9 (2.8)						
	JIS 10K	576 (22.7)	75 (3.0)						
25 (1)	PN 40 (EN 1092-1 B1)	525 (20.7)	85 (3.3)						
	PN 63 (EN 1092-1 B2)	564 (22.2)	100 (3.9)						
	PN 100 (EN 1092-1 B2)								
	CL150 (ASME B16.5)	575 (22.6)	79.2 (3.1)						
	CL300 (ASME B16.5)	576 (22.7)	88.9 (3.5)						
	CL600 (ASME B16.5)								
	CL900 (ASME B16.5)	576 (22.7)	82.6 (3.25)						
	CL1500 (ASME B16.5)								
JIS 10K	525 (20.7)	90 (3.54)							
40 (1 1/2)	PN 40 (EN 1092-1 B1)	576 (22.7)	110 (4.33)						
	PN 63 (EN 1092-1 B2)	572 (22.5)	125 (4.92)						
	PN 100 (EN 1092-1 B2)								
	CL150 (ASME B16.5)	576 (22.7)	98.6 (3.88)						
	CL300 (ASME B16.5)	576 (22.7)	114.3 (45.0)						
	CL600 (ASME B16.5)								
JIS 10K	576 (22.7)	105 (4.13)							

1) Devices with terminal boxes made from aluminum.

2) Devices with terminal boxes made from stainless steel.

3) Devices with option TE1 "extended tower length" or option PR4 / PR5 / PR6 / PR7 "pressure-resistant sensor housing".

Tolerance for dimension L: +0 / -3 mm (+0 / -0.018 inch)

Meter tube nominal diameter DN 50 (2")								Approx. weight	
DN / process connection		L	Ø k	Ø A	B	C	E	Aluminum ¹⁾	Stainless steel ²⁾
40 (1 1/2)	PN 40 (EN 1092-1 B1)	763 (30)	110 (4.33)	99 (3.9)	125 (4.92)	80 (3.15)	416 / 543 ³⁾ (16.38 / 21.38 ³⁾)	27 / 28 ³⁾ (59,5 / 61,7 ³⁾)	30 / 31 ³⁾ (66,1 / 68,3 ³⁾)
	PN 63 (EN 1092-1 B2)	745 (29.33)	125 (4.92)						
	PN 100 (EN 1092-1 B2)								
	CL150 (ASME B16.5)	763 (30)	98.6 (3.88)						
	CL300 (ASME B16.5)	756 (29.76)	114.3 (4.5)						
	CL600 (ASME B16.5)								
	CL900 (ASME B16.5)	780 (30.71)	124 (4.88)						
	CL1500 (ASME B16.5)								
JIS 10K	763 (30)	105 (4.13)							
50 (2)	PN 40 (EN 1092-1 B1)	715 (28.15)	125 (4.92)						
	PN 63 (EN 1092-1 B2)	745 (29.33)	135 (5.31)						
	PN 100 (EN 1092-1 B2)	745 (29.33)	145 (5.71)						
	CL150 (ASME B16.5)	715 (28.15)	120.7 (4.75)						
	CL300 (ASME B16.5)	763 (30)	127 (5.0)						
	CL600 (ASME B16.5)	773 (30.43)	127 (5.0)						
	CL900 (ASME B16.5)	790 (31.1)	165.1 (6.5)						
	CL1500 (ASME B16.5)								
JIS 10K	715 (28.15)	120 (4.72)							
65 (2 1/2)	PN 40 (EN 1092-1 B1)	763 (30)	145 (5.71)						
	CL150 (ASME B16.5)	756 (29.76)	139.7 (5.5)						
	CL900 (ASME B16.5)	800 (31.5)	190.5 (7.5)						
	CL1500 (ASME B16.5)								
	JIS 10K	763 (30)	140 (5.51)						

1) Devices with terminal boxes made from aluminum.

2) Devices with terminal boxes made from stainless steel.

3) Devices with option TE1 "extended tower length" or option PR4 / PR5 / PR6 / PR7 "pressure-resistant sensor housing".

Tolerance for dimension L: +0 / -3 mm (+0 / -0.018 inch)

CoriolisMaster FCB430, FCB450, FCH430, FCH450

Coriolis mass flowmeter

Devices with meter tube nominal diameter DN 80 and flange DN 65 ... 100

Sensor with wetted parts made from stainless steel. All specified dimensions and weights are in mm (inch) or kg (lb).

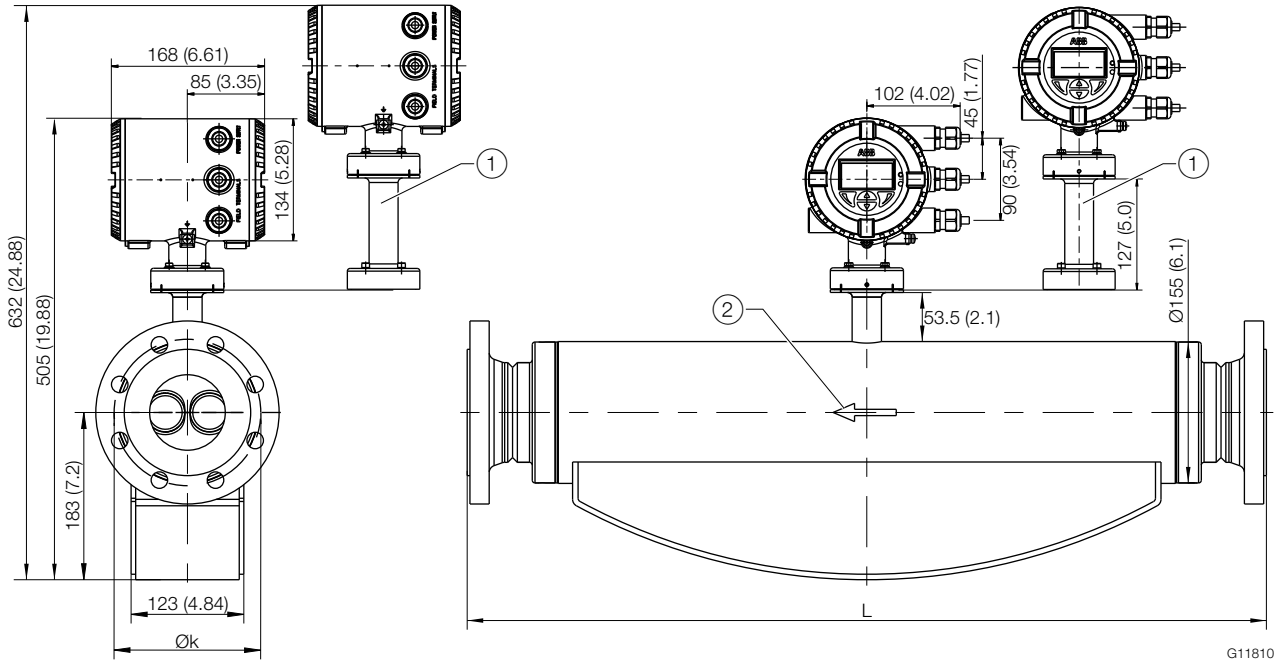


Fig. 17: Integral mount design with dual-compartment transmitter housing

① Option TE1 "Extended tower length" or option PR4 / PR5 / PR6 / PR7 "Pressure-resistant sensor housing" ② Flow direction

Meter tube nominal diameter DN 80 (3")			Approx. weight		
DN / process connection	L	Ø k	Aluminum ¹⁾	Stainless steel ²⁾	
65	PN 16 (EN 1092-1 B1)	— ⁴⁾	— ⁴⁾	— ⁴⁾	
(2 1/2")	PN 40 (EN 1092-1 B1)	910 (35.83)	145 (5.71)	70 / 71 ³⁾ (154.3 / 156.5 ³⁾	73 / 74 ³⁾ (160.9 / 163.1 ³⁾
	PN 63 (EN 1092-1 B2)		160 (6.30)	74 / 75 ³⁾ (163.1 / 165.4 ³⁾	77 / 78 ³⁾ (169.8 / 172.0 ³⁾
	PN 100 (EN 1092-1 B2)		170 (6.69)	78 / 79 ³⁾ (172 / 174.2 ³⁾	81 / 82 ³⁾ (178.6 / 180.8 ³⁾
	CL150 (ASME B16.5)	— ⁴⁾	— ⁴⁾	— ⁴⁾	— ⁴⁾
CL300 (ASME B16.5)	920 (36.22)	149.4 (5.88)	72 / 73 ³⁾ (158.7 / 160.9 ³⁾	75 / 76 ³⁾ (163.1 / 167.6 ³⁾	
CL600 (ASME B16.5)			73 / 74 ³⁾ (160.9 / 163.1 ³⁾	76 / 77 ³⁾ (167.6 / 169.8 ³⁾	
CL900 (ASME B16.5)	965 (37.99)	190.5 (7.50)	90 / 91 ³⁾ (198.4 / 200.6 ³⁾	93 / 94 ³⁾ (205.3 / 207.23 ³⁾	
CL1500 (ASME B16.5)					
JIS 10K	910 (35.83)	140 (5.5)	70 / 71 ³⁾ (154.3 / 156.5 ³⁾	73 / 74 ³⁾ (160.9 / 163.1 ³⁾	

1) Devices with terminal boxes made from aluminum.

2) Devices with terminal boxes made from stainless steel.

3) Devices with option TE1 "extended tower length" or option PR4 / PR5 / PR6 / PR7 "pressure-resistant sensor housing".

4) On request

Tolerance for dimension L: +0 / -3 mm (+0 / -0.018 inch)