

SITRANS P measuring instruments for pressure

Diaphragm seals of flange design

For differential pressure,
fixed connection and with capillary

Overview



Diaphragm seals of flange design for pressure transmitters for differential pressure, fixed connection and with flexible capillary

Technical specifications

Diaphragm seals of flange design for pressure transmitters for differential pressure, fixed connection and with flexible capillary

Nominal diameter	Nominal pressure
• DN 80	PN 40
• DN 100	PN 16, PN 40
• 3 inch	Class 150, class 300
• 4 inch	Class 150, class 300
Sealing face	
• For stainless steel, mat. No. 1.4404/316L	To EN 1092-1, form B1 or ASME B16.5 RF 125 ... 250 AA
• For the other materials	To EN 1092-1, form B2 or ASME B16.5 RFSF
Materials	
• Main body	Stainless steel mat. no. 1.4404/316L
• Wetted parts	Stainless steel mat. no. 1.4404/316L
	<ul style="list-style-type: none"> • Without coating • PTFE coating (for vacuum on request) • ECTFE coating (for vacuum on request) • PFA coating (for vacuum on request)
	Monel 400, mat. No. 2.4360
	Hastelloy C276, mat. No. 2.4819
	Hastelloy C4, mat. No. 2.4610
	Tantalum
• Capillary	Stainless steel, mat. No. 1.4571/316Ti
• Sheath	Spiral hose made of stainless steel, mat. No. 1.4301/316
Sealing material in the process flanges	
• For pressure transmitters, absolute pressure transmitters and low-pressure applications	Copper
• For other applications	Viton
Maximum pressure	See above and the technical data of the pressure transmitter

Tube length	Without tube
	50 mm (1.97 inch)
	100 mm (3.94 inch)
	150 mm (5.91 inch)
	200 mm (7.87 inch)
Capillary	
• Length	Max. 10 m (32.8 ft), longer lengths on request
• Internal diameter	2 mm (0.079 inch)
• Minimum bending radius	150 mm (5.9 inch)
Filling liquid	Silicone oil M5
	Silicone oil M50
	High-temperature oil
	Halocarbon oil (for measuring O ₂)
	Food oil (FDA listed)
	Glycerine/water (not suitable for use in low-pressure range)
	170 °C (338 °F)
Max. recommended process temperature	
Permissible ambient temperature	Dependent on the pressure transmitter and the filling liquid of the remote seal
	More information can be found in the technical data of the pressure transmitters and in the section "Technical data of filling liquid" in the Technical description to the remote seals
Weight	Approx. 4 kg (8.82 lb)
Certificate and approvals	
Classification according to pressure equipment directive (DRGL 97/23/EC)	For gases of fluid group 1 and liquids of fluid group 1; complies with requirements of article 3, paragraph 3 (sound engineering practice)

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Selection and Ordering data		Order No. Ord. code	
Diaphragm seal		D) 7MF4913 -	
Mounting flange (with tube as option) for direct mounting to high-pressure side and flanged remote seal without tube , fitted by means of capillary to low-pressure side of SITRANS P for differential pressure, DS III series (7MF443-...)		1 ■ ■ ■ ■ - B ■ ■ ■ ■	
Flange, connection to EN 1092-1			
Nom. diam.	Nom. press.		
• DN 80	PN 40	D	
• DN 100	PN 16	G	
	PN 40	H	
Flange, connection to ASME B16.5			
Nom. diam.	Nom. press.		
• 3 inch	Class 150	Q	
	Class 300	R	
• 4 inch	Class 150	T	
	Class 300	U	
Other version Add Order code and plain text: Flange: ..., Nominal diameter: ...; Nominal pressure: ...		Z J 1 Y	
Wetted parts materials			
Smooth sealing face to EN 1092-1, form B1 or B2, or to ASME B16.5 RF 125 ... 250 AA or RFSF			
• Stainless steel 316L			
- without coating		A	
- with PTFE coating		E 0	
- with ECTFE coating ¹⁾		F	
- with PFA coating		D	
• Monel 400, mat. No. 2.4360		G	
• Hastelloy C276, mat. No. 2.4819		J	
• Hastelloy C4, mat. No. 2.4610		U	
• Tantalum		K	
Other version Add Order code and plain text: Wetted parts materials: ...		Z K 1 Y	
Tube length			
(for mounting flange on high-pressure side)			
• Without tube		0	
• 50 mm (1.97 inch)		1	
• 100 mm (3.94 inch)		2	
• 150 mm (5.90 inch)		3	
• 200 mm (7.87 inch)		4	
Other version: Add Order code and plain text: Tube length: ...		9 L 1 Y	
Filling liquid			
• Silicone oil M5		1	
• Silicone oil M50		2	
• High-temperature oil		3	
• Halocarbon oil (for measuring O ₂)		4	
• Glycerin/water ²⁾		6	
• Food oil (FDA listed)		7	
Other version Add Order code and plain text: Filling liquid: ...		9 M 1 Y	

Selection and Ordering data		Order No. Ord. code	
Diaphragm seal		D) 7MF4913 -	
Mounting flange (with tube as option) for direct mounting to high-pressure side and flanged remote seal without tube, fitted by means of capillary to low-pressure side of SITRANS P for differential pressure, DS III series (7MF443-...)		1 ■ ■ ■ ■ - B ■ ■ ■ ■	
Length of capillary ³⁾			
• 1.0 m (3.28 ft)		2	
• 1.6 m (5.25 ft)		3	
• 2.5 m (8.20 ft)		4	
• 4.0 m (13.1 ft)		5	
• 6.0 m (19.7 ft)		6	
• 8.0 m (26.25 ft)		7	
• 10.0 m (32.8 ft)		8	
Other version		9 N 1 Y	
Add Order code and plain text:			
Length of capillary: ...			
1) For vacuum on request.			
2) Not suitable for use in low-pressure range.			
3) Max. capillary length, see section "Technical description".			
D) Subject to export regulations AL: N, ECCN: EAR99H.			

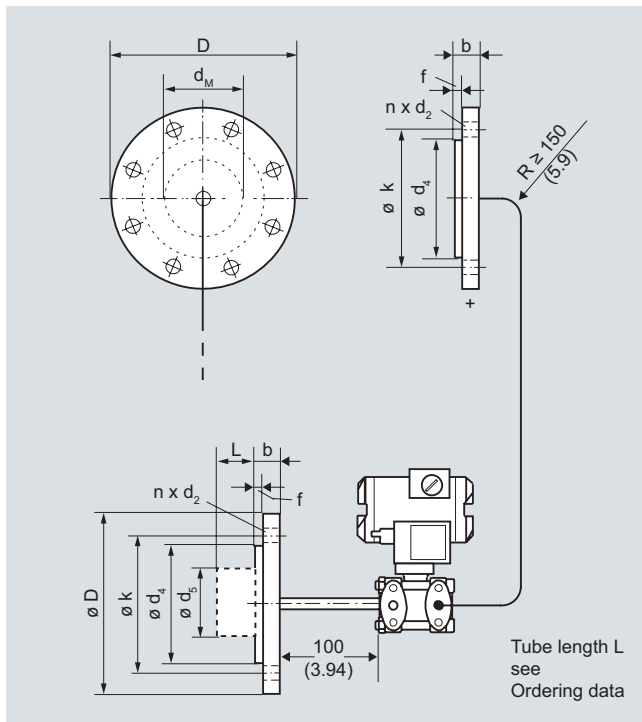
Selection and Ordering data	Order code
Further designs	
Please add "-Z" to Order No. and specify Order code.	
Spark arrestor With spark arrestor for mounting on zone 0 (including documentation)	A02
Quality inspection certificate (Factory calibration) to IEC 60770-2	C11
Acceptance test certificate to EN 10204, section 3.1	C12
Vacuum-proof design for use in low-pressure range	V03

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Dimensional drawings



Diaphragm seals of flange design with flexible capillary, fixed connection, for connection to a SITRANS P pressure transmitter for differential pressure, dimensions in mm (inch)

Connection to EN 1092-1

Nom. diam.	Nom. press.	b	D	d ₂	d ₄	d ₅	d _M	f	k	n
		mm	mm	mm	mm	mm	mm	mm	mm	
DN 80	PN 40	24	200	18	138	76	89	2	160	8
DN 100	PN 16	20	200	18	158	94	89	2	180	8
	PN 40	24	235	22	162	94	89	2	190	8

Connection to ASME B16.5

Nom. diam.	Nom. press.	b	D	d ₂	d ₄	d ₅	d _M	f	k	n
	lb/sq.in.	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	
3 inch	150	24 (0.96)	190 (7.48)	20 (0.79)	127 (5)	76 (3)	89 (3.50)	1,6 (0.06)	152,5 (6)	4
	300	29 (1.14)	210 (8.27)	22 (0.87)	127 (5)	76 (3)	89 (3.50)	1,6 (0.06)	168,5 (6.63)	8
4 inch	150	24 (0.95)	230 (9.06)	20 (0.79)	158 (6.22)	94 (3.69)	89 (3.50)	1,6 (0.06)	190,5 (7)	4
	300	32 (1.26)	255 (10.04)	22 (0.87)	158 (6.22)	94 (3.69)	89 (3.50)	1,6 (0.06)	200 (7.87)	8

d: Inside diameter of gasket according to EN 1092-1 / ASME B16.5

d_M: Effective diaphragm diameter