

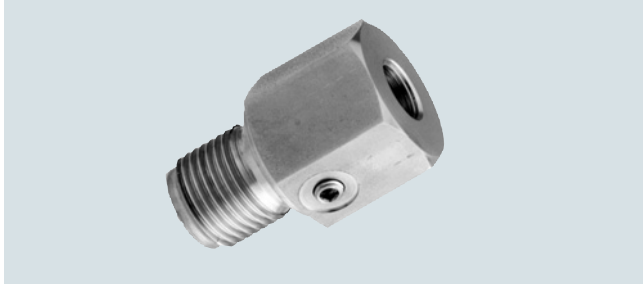
Pressure Measurement

Remote seals for pressure transmitters
SITRANS P320/P420

Miniature diaphragm seals

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Overview



Miniature diaphragm seals

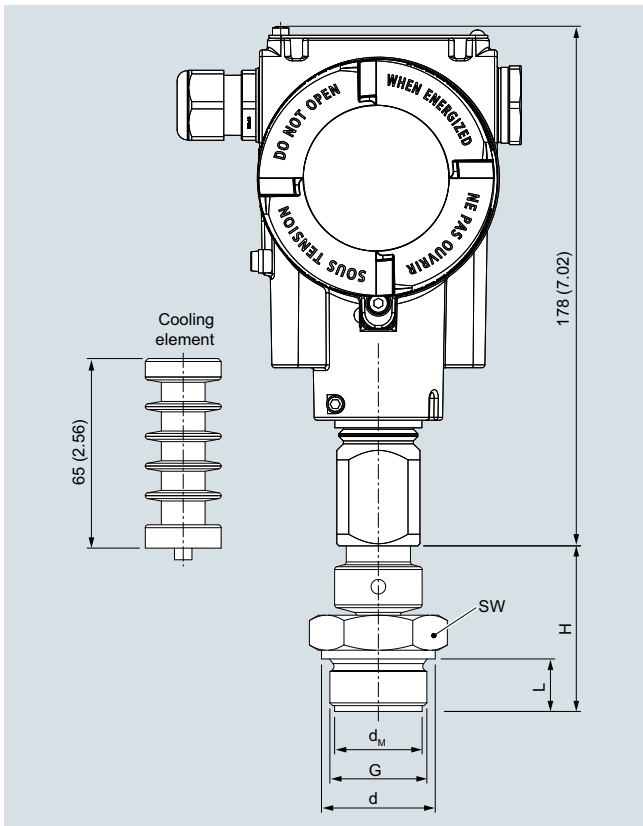
The miniature diaphragm seals are available for the SITRANS P320/420 pressure transmitter series.

Suitable for high pressures, contaminated, fibrous and viscous media in the chemical, paper, food and drink industries.

Design

- Flush-mounted diaphragm
- No dead spaces
- Fixed threaded stems

Dimensional drawings



Miniature diaphragm seal, dimensions in mm (inch)

G	Ø d _M		SW		Ø d		L		H	
	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)
G1B	25	(0.98)	41	(1.61)	39	(1.53)	28	(1.1)	56	(2.21)
G1½B	40	(1.57)	55	(2.17)	60	(2.36)	30	(1.18)	50	(1.97)
G2B	50	(1.97)	60	(2.36)	70	(2.76)	30	(1.18)	63	(2.48)

G	Ø d _M		SW		L		H	
	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)
1"-NPT	27	(1.06)	41	(1.61)	25	(0.98)	40	(1.57)
1½"-NPT	34	(1.34)	55	(2.17)	26	(1.02)	45	(1.77)
2"-NPT	46	(1.81)	65	(2.56)	26	(1.02)	45	(1.77)

d_M: Effective diaphragm diameter

Technical specifications

Miniature diaphragm seals

Span with

- G1B and 1"-NPT > 6 bar (> 87 psi)
- G1½B and 1½"-NPT > 2 bar (> 29 psi)
- G2B and 2"-NPT > 600 mbar (> 8.7 psi)

Filling liquid

Silicone oil M5 or food oil (FDA listed)

Material

- Main body

Stainl. steel mat No. 1.4404/ 316L or Hastelloy C276, mat No. 2.4819

- Diaphragm

Stainl. steel mat No. 1.4404 / 316L or Hastelloy C276, mat. No. 2.4819

Maximum pressure

100% of nominal pressure of pressure transmitter, up to maximum of PN 400 (5802 psi) (depending on the seal used)

Temperature of use

Same as pressure transmitter

Temperature range of medium

Same as pressure transmitter

Max. recommended process temperature

150 °C (302 °F)

Weight

- G1B and 1"-NPT
- G1½B and 1½"-NPT
- G2B and 2"-NPT

Approx. 0.3 kg (approx. 0.66 lb)

Approx. 0.5 kg (approx. 1.10 lb)

Approx. 0.8 kg (approx. 1.76 lb)

Certificate and approvals

Classification according to pressure equipment directive (DGRL 2014/68/EU)

For gases of fluid group 1 and liquids of fluid group 1; complies with requirements of article 4, paragraph 3 (sound engineering practice)

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Selection and Ordering data	Article No.	Order code	Selection and Ordering data	Order code																														
<p>Miniature diaphragm seal</p> <p>directly connected to a</p> <ul style="list-style-type: none"> SITRANS P320/P420 transmitter for gauge pressure or absolute pressure (only together with negative pressure service), 7MF03../7MF04.. order separately Scope of delivery: 1 off <p>Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</p>	7MF0850 -		<p>Further designs</p> <p>Add "-Z" to Article No. and specify Order code.</p>																															
<p>Process connection</p> <p>Connection standard DIN 3852</p> <table border="0"> <tr><td>G 1/2"</td><td>PN 400</td><td>4ST</td></tr> <tr><td>G 3/4"</td><td>PN 400</td><td>4SU</td></tr> <tr><td>G 1"</td><td>PN 400</td><td>4SV</td></tr> <tr><td>G 1 1/2"</td><td>PN 400</td><td>4SW</td></tr> <tr><td>G 2"</td><td>PN 400</td><td>4SX</td></tr> </table> <p>Connection standard ASME B1.20.1</p> <table border="0"> <tr><td>1/2"-NPT-M</td><td>class 5800</td><td>5TS</td></tr> <tr><td>3/4"-NPT-M</td><td>class 5800</td><td>5TT</td></tr> <tr><td>1"-NPT-M</td><td>class 5800</td><td>5TU</td></tr> <tr><td>1 1/2"-NPT-M</td><td>class 5800</td><td>5TV</td></tr> <tr><td>2"-NPT-M</td><td>class 5800</td><td>5TW</td></tr> </table> <p>Other version Add Order code and plain text</p>	G 1/2"	PN 400	4ST	G 3/4"	PN 400	4SU	G 1"	PN 400	4SV	G 1 1/2"	PN 400	4SW	G 2"	PN 400	4SX	1/2"-NPT-M	class 5800	5TS	3/4"-NPT-M	class 5800	5TT	1"-NPT-M	class 5800	5TU	1 1/2"-NPT-M	class 5800	5TV	2"-NPT-M	class 5800	5TW	00-00		<p>Factory certificates</p> <p>Quality inspection certificate (Five-step factory calibration) to IEC 60770-2</p> <p>Inspection certificate to EN 10204-3.1 - material of body and wetted parts</p> <p>Manufacturer's declaration acc. to NACE (MR 0103-2012 and MR 0175-2009) (only together with seal diaphragm made of Hastelloy and stainless steel)</p> <p>Inspection certificate (EN 10204-3.1) - PMI test of pressure containing and wetted parts</p> <p>Certificate of FDA-approved fill oil (to EN10204-2.2)</p> <p>Functional safety (SIL2/3) Devices suitable for use according to IEC 61508 and IEC 61511 (Includes SIL conformity declaration)</p>	C11 C12 C13 C15 C17 C20
G 1/2"	PN 400	4ST																																
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<p>Filling liquid</p> <p>Silicone oil M5 Food-grade oil (FDA listed)</p> <p>Other version Add Order code and plain text</p>		A E Z	<p>Negative pressure services</p> <p>Negative pressure service</p> <p>Extended negative pressure service (for gauge and absolute pressure transmitters)</p>	D81 D85																														
<p>Wetted parts material</p> <p>Stainless steel 316L without coating Hastelloy C276, 2.4819</p>		A J	<p>Capillary connection</p> <p>Cooling element between transmitter and remote seal</p> <p>Customer-specific tube length</p> <p>Customer-specific tube length (specify in plain text)</p> <p>Specification of process conditions¹⁾</p> <p>Ambient temperature range</p> <ul style="list-style-type: none"> -10 ... +50 °C (14 ... +122 °F) preset -40 ... +50 °C (-40 ... +122 °F) -10 ... +85 °C (14 ... +185 °F) <p>Process temperature min. ... °C/(°F)/max. ... °C/(°F)</p>	S08 Y44 D66 D67 D68 Y50																														

¹⁾ See also "Specification of process conditions for selection and ordering data", page 1/338.