

# Diaphragm Seal

990.18 threaded connection per DIN 11851  
with pressure transmitter S-20

E 06.04.17

Ed.17.01

<b>Design</b>	Diaphragm Seal with sterile process connection with threaded connection per DIN 11851 DN 25, 32, 40 or 50. Pressure transmitter S-20 in stainless steel
<b>Type</b>	<b>990.18</b>
<b>Pressure rate</b>	PN 40 for pressure range from 0-1 bar to 0-40 bar
<b>Material standard</b>	Upper part of stainless steel 1.4404 (316L) Lower part and connection stainless steel 1.4435 (316L) Diaphragm of stainless steel 1.4435 (316L)
<b>Level of cleanliness</b>	Oil and grease free per ASTM G93-03 level E (< 550 mg/m <sup>2</sup> )
<b>Connection DN 25</b>	Threaded connection DN 25 per DIN 11851 For pipe dimension 29 x 1,5 mm Pipe standard DIN 11850 row 2 Connection thread RD 52 x 1/6
<b>Connection DN 32</b>	Threaded connection DN 32 per DIN 11851 For pipe dimension 35 x 1,5 mm Pipe standard DIN 11850 row 2 Connection thread RD 58 x 1/6
<b>Connection DN 40</b>	Threaded connection DN 40 per DIN 11851 For pipe dimension 41 x 1,5 mm Pipe standard DIN 11850 row 2 Connection thread RD 65 x 1/6
<b>Connection DN 50</b>	Threaded connection DN 50 per DIN 11851 For pipe dimension 53 x 1,5 mm Pipe standard DIN 11850 row 2 Connection thread RD 78 x 1/6
<b>Surface roughness</b>	Diaphragm Ra ≤ 0.76 µm per ASME BPE SF3
<b>Process temperature</b>	Max +80°C, in sterilisation (SIP) max +130°C
<b>Ambient temperature</b>	Ambient temperature standard +10+40°C
<b>Working Pressure</b>	90% of full scale range by fluctuating pressure full scale value by short time pressure
<b>Filling media</b>	KN 92 white minerale oil (FDA 21 CFR 172.878) KN 59 Neobee M-20 (FDA 21 CFR 172.856) KN 7 glycerine (FDA 21 CFR 182.1320)
<b>Certificate (option)</b>	EN 10204-2.2 FDA-approval filling media EN 10204-2.2 Surface roughness of wetted parts EN 10204-2.2 Test report State-of-the-art EN 10204-3.1 Certificate wetted parts incl. chemical analysis EN 10204-3.1 Certification of class and accuracy EN 10204-3.1 Accuracy calibration values listed EN 10204-3.1 Pressure and stability test EN 10204-3.1 Helium leak test
<b>More options</b>	Electropolished diaphragm surface roughness Ra ≤ 0,38 µm Origen of wetted parts from EU, Schweiz or USA



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## Pressure transmitter S-20 for diaphragm seal 990.18

<b>Design</b>	Stainless steel pressure transmitter for universal use
<b>Type</b>	<b>S-20</b>
<b>Accuracy</b>	0,25% (BFSL) 0,5% including non-linearity, hysteresis, zero offset and end value deviation
<b>Wetted parts</b>	Wetted parts in stainless steel 316 L
<b>Output signal</b>	4-20 mA (2-wire) or 0-10 V (3-wire) Option: 0-5 V, 1-5 V, 0-5-4,5 V (RAT) or 20-4 mA
<b>Power supply</b>	8-36 VDC (12-36 VDC in 0-10 V)
<b>Temperature range</b>	Process temperature -30+100°C Ambient temperature -30+100°C Compensated range 0+80°C
<b>Temperature influence</b>	≤ 0,2%/10K for zeropoint, ≤ 0,2%/10K for span Pressure range < 0,4 = ≤ 0,4%/10K for zeropoint
<b>Permissible load</b>	4-20 mA $RA[\text{Ohm}] = (UB[V]-7,5 \text{ V})/0,023 \text{ A}$ 0-10 V $RA \geq \max 10 \text{ V}/1 \text{ mA}$
<b>Setting time (10-90%)</b>	≤ 3 ms with 4-20 mA, ≤ 2 ms with 0-10 V (1 ms as option)
<b>Long-term drift</b>	≤ 0,1% of end value each year
<b>Service life</b>	100 million load cycles
<b>Overpressure limits</b>	3 times overpressure safe in pressure range max 6 bar 2 times overpressure safe in pressure range max 6 bar
<b>Elanslutning</b>	Angular connector DIN EN 175301-803 A (IP 65) Circular connector M12x1 (IP 67) Cable entry IP 67 or IP 68
<b>Electrical protective</b>	Short-circuit resistance, reverse polarity protection, resistance to overvoltage and insulation voltage
<b>Transmission fluid</b>	Synthetic oil Option food-compatible transmission fluid Option oxygen, oil and grease free Option silicone free filling
<b>Shock resistance</b>	Mechanical shock 500 g
<b>Vibration resistance</b>	Vibration safe 20 g
<b>CE-mark</b>	PED 97/23/EG EMC 2004/108/EEC, EN 61326, EM 30 V/m
<b>RoHs</b>	RoHs-conformity 2011/65/EU






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## Standard versions 990.18 threaded connection

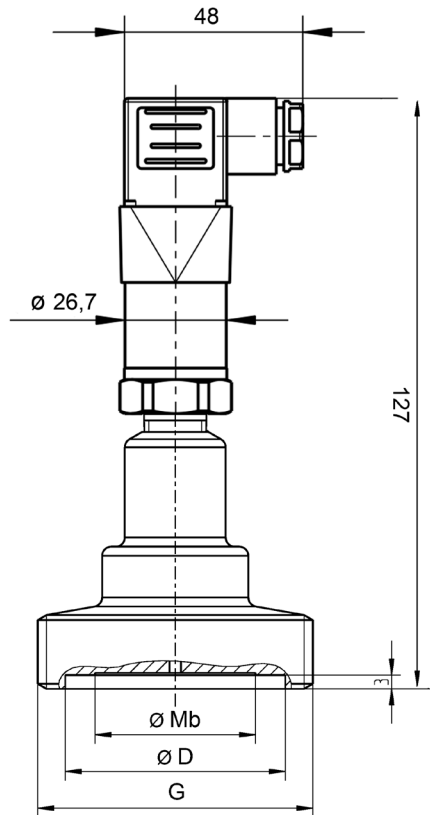
<b>Diaphragm Seal 990.18</b>  Threaded connection DIN 11851 DN 25 for pipe 29 x 1,5 DN 40 for pipe 41 x 1,5 mm DN 50 for pipe 53 x 1,5 mm Surface roughness Ra ≤ 0.76 µm Temp +80°C (SIP) max +130°C Filling KN 92 FDA  Pressure transmitter S-20 Output signal 4-20 mA (2-wire) Connector DIN 175301-803 A			
	<b>DN 25</b>	<b>DN 40</b>	<b>DN 50</b>
<b>Tryckområde</b>	<b>Artikelnr</b>	<b>Artikelnr</b>	<b>Artikelnr</b>
0-1 bar	40307002	40308002	40309003
0-1,6 bar	40307003	40308003	40309003
0-2,5 bar	40307004	40308004	40309004
0-4 bar	40307006	40308006	40309006
0-6 bar	40307007	40308007	40309007
0-10 bar	40307008	40308008	40309008
0-16 bar	40307011	40308011	40309011
0-25 bar	40307013	40308013	40309013
0-40 bar	40307015	40308015	40309015
-1/0 bar	40307040	40308040	40309040
-1/+1,5 bar	40307066	40308066	40309066
-1/+3 bar	40307067	40308067	40309067
-1/+5 bar	40307068	40308068	40309068
-1/+9 bar	40307069	40308069	40309069

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## Diaphragm Seal 990.18 threaded connection with pressure transmitter S-20



Type	Design	DN	PN	Pipe	Mb	D	G
990.18	DIN 11851	DN 25	40	29 x 1,5	25	44	Rd 52 x 1/6
990.18	DIN 11851	DN 32	40	35 x 1,5	32	50	Rd 58 x 1,6
990.18	DIN 11851	DN 40	40	41 x 1,5	35	56	Rd 65 x 1/6
990.18	DIN 11851	DN 50	25	53 x 1,5	52	68,5	Rd 78 x 1,6

DN = diameter of lower part

PN = max pressure rate

Mb = diameter of diaphragm