

Diaphragm Seal

990.19 union nut per SMS 3352

with stainless steel pressure gauge

E 06.04.11

Ed.17.01

Design	Diaphragm Seal with sterile process connection with union nut per SMS 3352 DN 1 1/2" or DN 2" Pressure gauge in stainless steel
Type	990.19
Pressure rate	PN 40 for pressure range from 0-1 bar to 0-40 bar
Material standard	Upper part of stainless steel 1.4404 (316L) Lower part and connection stainless steel 1.4435 (316L) Diaphragm of stainless steel 1.4435 (316L)
Level of cleanliness	Oil and grease free per ASTM G93-03 level E (< 550 mg/m ²)
Connection DN 1 1/2"	Union nut DN 1 1/2" per SMS SS3352 For pipe dimension 38 x 1,2 mm Pipe standard ISO 1127 row 2 or ISO 2037/1992 Connection thread RD 60 x 1/6
Connection DN 2"	Union nut DN 2" per SMS SS3352 For pipe dimension 51 x 1,2 mm Pipe standard ISO 1127 row 2 or ISO 2037/1992 Connection thread RD 70 x 1/6
Surface roughness	Diaphragm Ra ≤ 0.76 µm per ASME BPE SF3
Process temperature	Max +80°C, in sterilisation (SIP) max +130°C
Ambient temperature	Ambient temperature standard +10+40°C Option lowest temperature to max -40°C Option highest temperature to max +60°C
Working Pressure	90% of full scale range by fluctuating pressure full scale value by short time pressure
Filling media	KN 59 Neobee M-20 (FDA 21 CFR 172.856) KN 92 white minerale oil (FDA 21 CFR 172.878) KN 7 glycerine (FDA 21 CFR 182.1320)
Certificate (option)	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
More options	Electropolished diaphragm surface roughness Ra ≤ 0,38 µm Origen of wetted parts from EU, Schweiz or USA



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Pressure gauges for mounting with diaphragm seal 990.19



Stainless steel version

Case of stainless steel dim 100 mm, wetted parts of stainless steel
Accuracy Cl.1,0%, pressure range max 250 bar
Ingress protection IP 65 EN 60529/IEC 529
Pressure limitation 90% of full scale value by fluctuating pressure

2840 = lower mount - standard without case filling

2841 = back mount - standard without case filling

2940 = lower mount - with liquid filled case (glycerine)

2941 = back mount - with liquid filled case (glycerine)

2880 = with vibration damped movement



Stainless steel safety version

Case of stainless steel dim 100 mm, wetted parts of stainless steel
Safety version EN 837-1 (S3) with safety wall behind the scale
Accuracy Cl.1,0%, pressure range max 250 bar
Ingress protection IP 65 EN 60529/IEC 529
Pressure limitation 90% of full scale value by fluctuating pressure

232.30 = standard without case filling

233.30 = with liquid filled case (glycerine)



With electrical switch

Case of stainless steel dim 100 mm, wetted parts of stainless steel
Safety version EN 837-1 (S3) with safety wall behind the scale
Accuracy Cl.1,0%, pressure range max 250 bar
Ingress protection IP 65 EN 60529/IEC 529
Pressure limitation 90% of full scale value by fluctuating pressure

Magnet spring switch 821 or inductive switch 831
Single switch with function max or min

Double switch with function max-min, min-max, 2x max or 2x min

PGS23.100 = case with or without liquid filled case

Options for pressure gauges

- Dial with unit bar/Pa, bar/psi, kPa, MPa, psi
- ATEX protection c with device cat 2G/2D
- Design acc.to NACE Sour Gas Service
- Design Oxygen Oil- and Grease free
- Silicone free version
- Dial with colored fields or customer logo
- Ingress protection IP 66 or IP 67
- Case in stainless steel 316 Ti
- Case polished
- Case epoxy-coated
- Case PTFE-coated
- Liquid filled case silicone M50 for low ambient temperatures

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Standard versions 990.19 union nut

Diaphragm Seal 990.19 Union nut SMS 3352 DN 1 1/2" for pipe dim 38 x 1,2 mm DN 2" for pipe dim 51 x 1,2 mm Surface roughness Ra ≤ 0.76 µm Temp +80°C (SIP) max +130°C Filling KN 59 FDA Stainless steel pressure gauge liquid filled case dim 100 mm				
	2940 dim 100 lower mount with 990.19 union nut		2941 dim 100 back mount with 990.19 union nut	
	DN 1 1/2"	DN 2"	DN 1 1/2"	DN 2"
Pressure range	Code	Code	Code	Code
0-2,5 bar	40266034	40265734	40266834	40268034
0-4 bar	40266036	40265736	40266836	40268036
0-6 bar	40266037	40265737	40266837	40268037
0-10 bar	40266038	40265738	40266838	40268038
0-16 bar	40266041	40265741	40266841	40268041
0-25 bar	40266043	40265743	40266843	40268043
0-40 bar	40266045	40265745	40266845	40268045
-1/+1,5 bar	40266086	40265786	40266886	40268086
-1/+3 bar	40266087	40265787	40266887	40268087
-1/+5 bar	40266088	40265788	40266888	40268088
-1/+9 bar	40266089	40265789	40266889	40268089

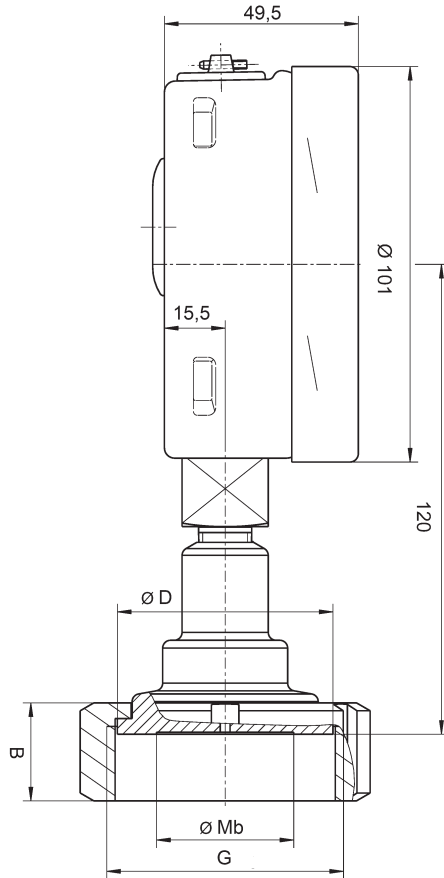
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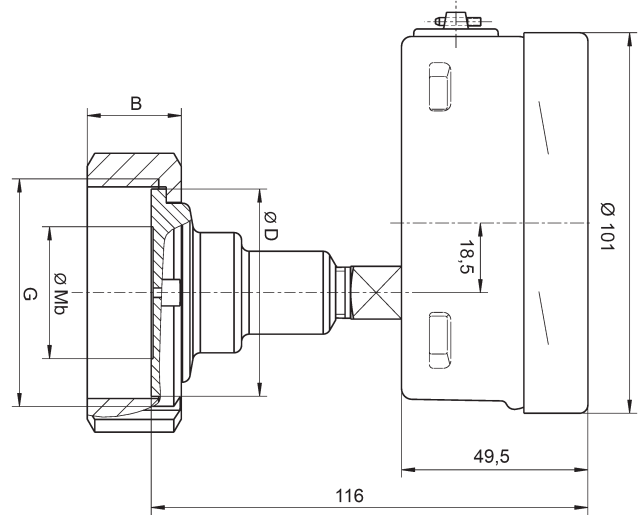
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Diaphragm seal 990.19 with union nut
with pressure gauge 2940 lower mount



Diaphragm seal 990.19 with union nut
with pressure gauge 2941 back mount



Type	Design	DN	PN	Pipe	Mb	D	B	G
990.19	SMS 3352	DN 1 1/2"	40	38 x 1,2	35	55	25	Rd 60 x 1/6
990.19	SMS 3352	DN 2"	40	51 x 1,2	45	65	26	Rd 70 x 1/6

DN = diameter of lower part

PN = max pressure rate

Mb = diameter of diaphragm