

Diaphragm Seal

990.18 union nut per DIN 11851

with stainless steel pressure gauge

E 06.04.16

Ed.17.01

Design	Diaphragm Seal with sterile process connection with union nut per DIN 11851 DN 25, 32, 40 or 50. Pressure gauge in stainless steel
Type	990.18
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 25	Union nut 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
Connection DN 32	Union nut 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
Connection DN 40	Union nut 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
Connection DN 50	Union nut 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
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 990.18



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 990.18 union nut

Diaphragm Seal 990.18 Union nut 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 59 FDA Stainless steel pressure gauge liquid filled case dim 100 mm						
	2940 dim 100 lower mount with 990.18 union nut			2941 dim 100 back mount with 990.18 union nut		
	DN 25	DN 40	DN 50	DN 25	DN 40	DN 50
Pressure range	Code	Code	Code	Code	Code	Code
0-2,5 bar	40267804	40267904	40267404	40267704	40267604	40267504
0-4 bar	40267806	40267906	40267406	40267706	40267606	40267506
0-6 bar	40267807	40267907	40267407	40267707	40267607	40267506
0-10 bar	40267808	40267908	40267408	40267708	40267608	40267508
0-16 bar	40267811	40267911	40267411	40267711	40267611	40267511
0-25 bar	40267813	40267913	40267413	40267713	40267613	40267513
0-40 bar	40267815	40267915	40267415	40267715	40267615	40267515
-1/0 bar	40267840	40267940	40267440	40267740	40267640	40267540
-1/+1,5 bar	40267866	40267966	40267466	40267766	40267666	40267566
-1/+5 bar	40267868	40267968	40267468	40267768	40267668	40267568
-1/+9 bar	40267869	40267969	40267469	40267769	40267669	40267569

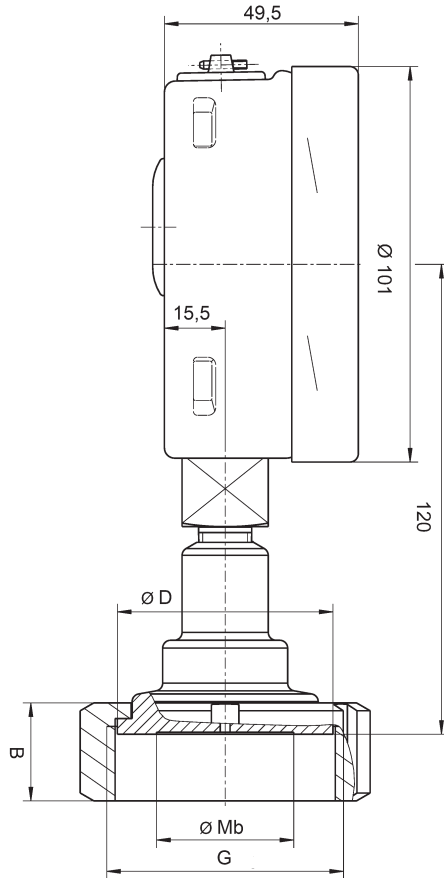
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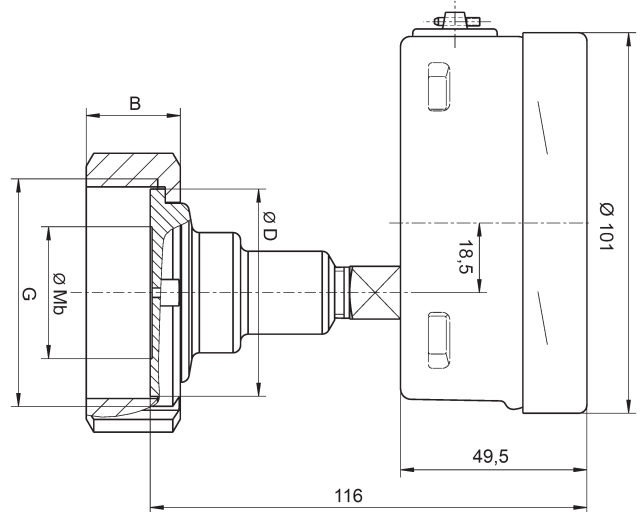
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Diaphragm seal 990.18 with union nut
with pressure gauge 2940 lower mount



Diaphragm seal 990.18 with union nut
with pressure gauge 2941 back mount



Type	Design	DN	PN	Pipe	Mb	D	B	G
990.18	DIN 11851	DN 25	40	29 x 1,5	25	44	21	Rd 52 x 1/6
990.18	DIN 11851	DN 32	40	35 x 1,5	32	50	21	Rd 58 x 1,6
990.18	DIN 11851	DN 40	40	41 x 1,5	35	56	21	Rd 65 x 1/6
990.18	DIN 11851	DN 50	25	53 x 1,5	52	68,5	22	Rd 78 x 1,6

DN = diameter of lower part

PN = max pressure rate

Mb = diameter of diaphragm