

Diaphragm Seal

990.22 clamp connection
and PGS23.100 with switch contacts

E 06.05.05

Ed.17.01

Design	Diaphragm Seal for hygienic and sterile industry with clamp connection SMS, ASME or DIN Pressure gauge PGS23.100 with switch contacts
Type	990.22
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) Option: Electropolished with surface roughness $Ra \leq 0,38 \mu m$
Level of cleanliness	Oil and grease free per ASTM G93-03 level E ($< 550 \text{ mg/m}^2$)
Clamp SMS	Clamp connection from DN 1" to DN 3" Pipe standard per BS4825 Part 3 DN 1 1/2" (TC 50,5) for pipe dim 38,1x1,6 DN 2" (TC 64) for pipe dim 50,8x1,6
Clamp ASME	Clamp connection DIN 32676 from DN 1" to DN 3" Pipe standard per ASME BPE or DIN 11866 row C DN 1 1/2" for pipe dim 38,1x1,65 DN 2" for pipe dim 50,8x1,65
Clamp DIN	Clamp connection DIN 32676 from DN 26,9 to DN 76,1 Pipe standard per DIN 11866 row B or ISO 1127 row 1 DN 33,7 for pipe dim 33,7x2 DN 42,4 for pipe dim 42,4x2
Surface roughness	$Ra \leq 0,76 \mu m$ per ASME BPE SF3 or $Ra \leq 0,38 \mu m$ per ASME BPE SF3 (electropolished)
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	Material syrafast stainless steel 1.4539 Material Hastelloy C276 (2.819) Material Hastelloy C22 (2.4602) Origen of wetted parts from EU, Schweiz or USA



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Pressure gauge PGS23.100 with switch contacts

Design	Stainless steel pressure gauge with switch contacts
Type	PGS23.100
Case diameter	Dim 100 mm
Accuracy	Class 1,0%
Wetted parts	Wetted parts in stainless steel 316 L
Case	Stainless steel safety version EN 837 (S3) With solid baffle wall and blow-out back. Hermetically sealed. Laminated safety glass. Ingress protection IP 65 or IP 66.
Liquid filling	Option with liquid filled case (silicone oil M50)
Pressure range	0-1 bar, 0-1,6 bar, 0-2,5 bar, 0-4 bar, 0-6 bar 0-10 bar, 0-16 bar, 0-25 bar or 0-40 bar -1/0 bar, -1/+1,5 bar, -1/+3 bar, -1/+5 bar, -1/+9 bar
Pressure unit	Bar, bar/Pa, bar/psi, kPa, MPa or psi
Contact switch	One or two contact switches mounted in the case. The switches can optionally be set all over the scale.
Electrical connection	Plug sidewise



Magnetic snap-action contact switch type 821

Rated voltage max 250 V, make current 1.0 A, breaking current 1.0, continuous current 0.6 A.
Contact rating max 30 W / 50 VA. Contact rating with liquid filled case 20 W / 20 VA

821.1	821.2	821.11	821.12	821.21	821.22
1 x max	1 x min	2 x max	min - max	max - min	2 x min
contact makes by rising pressure	contact breaks by rising pressure	contact makes by rising pressure	contact breaks by falling and rising	contact makes by falling and rising	contact breaks by rising pressure

Inductive contact switch type 831

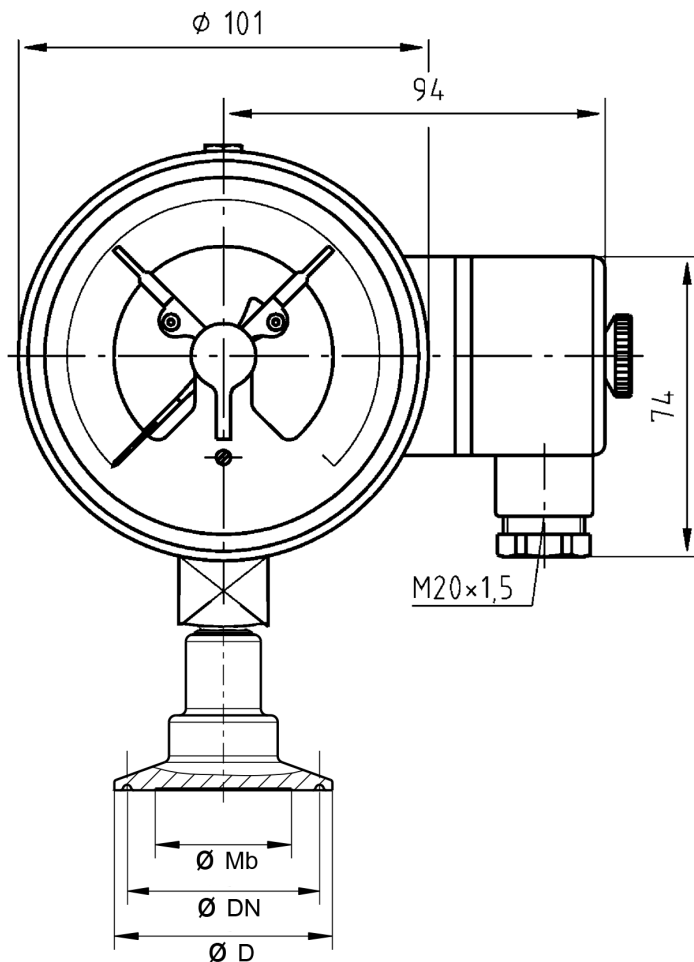
Long service life due to non-contact sensor. Additional control unit required (model 904.xx)
Suitable for use in zone 1 / 21 (2 GD) hazardous areas. ATEX CE EX II 2 GD c TX

831.1	831.2	831.11	831.12	831.21	831.22
1 x max	1 x min	2 x max	min - max	max - min	2 x min
contact makes by rising pressure	contact breaks by rising pressure	contact makes by rising pressure	contact breaks by falling and rising	contact makes by falling and rising	contact breaks by rising pressure

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Diaphragm Seal 990.22 with clamp
for pipe standard BS4825 part 3 or O.D.-Tube

DN	D	Mb	Pipe	PN
DN 1"	50,5	22	25,4 x 1,6	40
DN 1 1/2"	50,5	32	38,1 x 1,6	40
DN 2"	64	40	50,8 x 1,6	40
DN 2 1/2"	77,5	52	63,5 x 1,6	40
DN 3"	91	59	76,2 x 1,6	25

Diaphragm Seal 990.22 with clamp DIN 32676
for pipe standard DIN 11866 row C or ASME BPE

DN	D	Mb	Pipe	PN
DN 1"	50,5	22	25,4 x 1,65	40
DN 1 1/2"	50,5	32	38,1 x 1,65	40
DN 2"	64	40	50,8 x 1,65	40
DN 2 1/2"	77,5	52	63,5 x 1,65	40
DN 3"	91	59	76,2 x 1,65	25

Diaphragm Seal 990.22 with clamp DIN 32676
for pipe standard DIN 11866 row C or ISO 1127

DN	D	Mb	Pipe	PN
DN 26,9	50,5	22	26,9 x 1,6	40
DN 33,7	50,5	25	33,7 x 2	40
DN 42,4	64	32	42,4 x 2	40
DN 48,3	64	40	48,3 x 2	40
DN 60,3	77,5	52	60,3 x 2	40
DN 76,1	91	59	76,1 x 2	25

DN = diameter of lower part
PN = max pressure rate
Mb = diameter of diaphragm