

Diaphragm Seal

990.22 clamp connection
and process transmitter UPT-20

E 06.05.07

Ed.17.01

Design	Diaphragm Seal for hygienic and sterile industry with clamp connection SMS, ASME or DIN Process transmitter UPT-20 in stainless steel
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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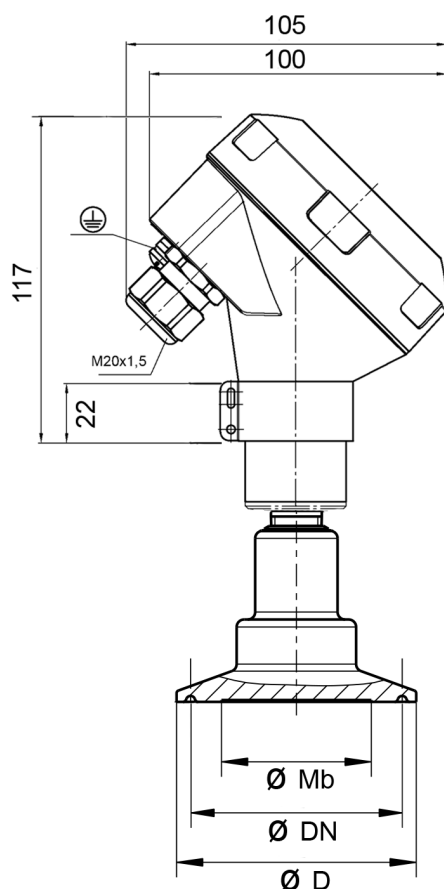
Design	Process transmitter for: Chemical and petrochemical industry, Control and process technology, machine building and plant construction. Pharmaceutical, hygienic industries and food industry. Standard design or with HART-protocol Mounted with diaphragm seal
Type	UPT-20
Accuracy	0,15% including non-linearity, hysteresis, zero offset and end value deviation
Wetted parts	Wetted parts in stainless steel 1.4404 (316L)
Case	The case is rotatable by 330° Material Plastic (PBT) or stainless steel or stainless steel case with electropolished surface
Display (option)	4 1/2-digit LC-display shows actual pressure, maximum pressure, pressure unit, bargraph and information
Pressure range	Adjustable turndown 20:1 for pressure range
Power supply	12-36 VDC
Output signal	4-20 mA 2-wire or 4-20 mA 2-wire with HART-protocol $4-20\text{ mA } R_A[\text{Ohm}] = (U_B[\text{V}] - 12\text{ V}) / 0,023\text{ A}$
Zero point adjustment	-5+95%
Settling time (10-90%)	≤ 250 ms
Electrical connection	Cable gland M20x1,5 in plastic or stainless steel Angular connector DIN 175301-803A Circular connector M12 x 1 (4-pin)
Electrical safety	Reverse polarity protection
Ingress protection	IP 66/67
Chock/vibration	Mechanical chock 150 g, vibration safe 4 g (5-100Hz)
CE-marking	EMC 2004/108/EC enlgt EN 61326, PED 97/23/EG
RoHs	RoHs-conformity 2011/65/EU
Ex-design (option)	Ex-design ATEX II 1/2G Ex ia IIC T4/T5/T6 Gc/Gb Process temperature T5/T6 -40+60°C, T4 -40+80°C
Pressure range	0-0,4 bar, 0-1,6 bar, 0-6 bar, 0-16 bar, 0-40 bar, -1/0 bar, -1/+0,6 bar, -1/+5 bar eller -1/+15 bar



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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 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

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

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