US / US-L

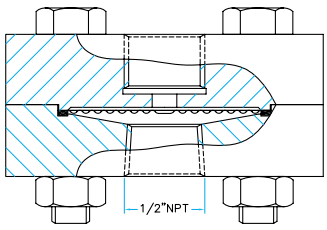
Diaphragm-type chemical seal

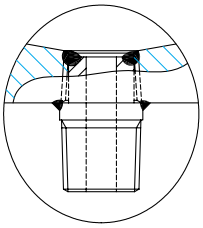
	US-L	US	US-L	US
process connection flanged	**ASME**	**½ ... 1 ½"**	**threaded**	
	DIN	**DN15 ... 40**	**NPT and BSP**	
diaphragm size	**89mm**	**51mm**	**89mm**	**51mm**
max. process pressure in bar at 20 °C				
(8 x 8.8 bolts)	100	300	100	300
min. pressure range for PI in bar	0,5	1,0	0,5	1,0
min. span for GP & AP in mbar	80	800	80	800
min. span for DP in mbar	10	200	10	200
max. capillary length in meter	15	15	15	15

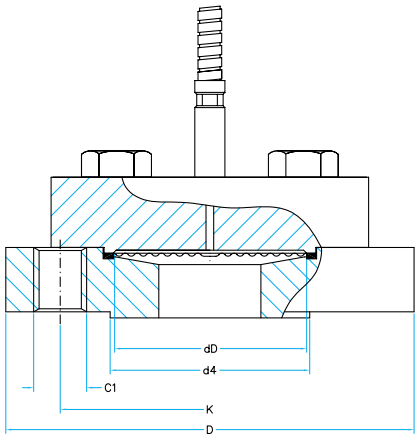
for correct use of limitations see introduction page 6

- upper part with integral diaphragm; specially designed for high safety
- standard upper part is interchangeable with full range of process connections
- process connection for stud end bolt mounting

description	standard model	options available
process connection		
flange; acc. ASME B16.5	size: ½ … 1½ " rating: 150 ... 600 # facing: raised face (RF) finish: Ra 3.2 ... 6.3 µm	2" and other sizes acc. ASME > 600 lbs flat face, groove, male, ring joint, tongue other finish
thread	NPT female ¼"; ½"; ¾"; 1" BSP / NPT male ½"	other thread sizes
flange; acc. DIN 2501	size: DN15, 25, 40 rating : PN 2,5 - 160 form: D, acc. DIN 2526	NW 50 and other sizes acc. DIN other pressure ratings other forms and finishes
wetted parts		
process connection	AISI-316 (L)	Hastelloy B2; Hastelloy C276; Inconel 600 Monel 400; Nickel 200: titanium lining: PTFE; PVDF; tantalum
diaphragm	AISI-316 L	Hastelloy B2; Hastelloy C276; Inconel 600 Monel 400; Nickel 200; tantalum; titanium coating foil: FEP; PFA; PTFE coating only: ETFE; PVDF; gold; silver
sealing ring embedded	PTFE (max 200 °C)	graphite (max 400 °C)
bolting		
US: ⅜" UNF	4 x A-270 max. 125 bar at 25 °C	4 x st. 8.8 max. 150 bar at 25 °C 8 x A-270 max. 250 bar at 25 °C 8 x st. 8.8 max. 300 bar at 25 °C
US-L: M10	10 x A-270 max. 100 bar at 25 °C	
upper part		
body	AISI-316	AISI-316 L; Hastelloy B2; Hastelloy C276 Inconel 600; Monel 400; Nickel 200; titanium
instrument connection	½" BSP female, capillary connection	¼" BSP
features		
capillary	AISI-316	
armour	stainless steel	protection sleeve of PVC
sealing oil	silicone type BSO 22	others see table 1 - page 55
flushing connection		1 or 2 port(s), ¼" NPT-female including plug(s)







minimum span in mbar for GP, AP & DP

transmitter type		
GP	AP	DP
800	800	200

process connection

flange thread	dD (mm)
various	51

minimum range in bar for pressure indicator

size of PI (mm)		
ø 63	ø 100	ø 160
1,0	1,0	1,0

temperature effect in mbar per +10 °C for GP, AP & DP

transmitter type			seal	capillary /mt
GP	AP	DP		
2,35	2,35		3,95	4,70
		0,175	0,96	0,77

measured from 20 °C

process connection

flange thread	dD (mm)
various	51

temperature effect in mbar per +10 °C for pressure indicator

pressure (bar)	size of PI (mm)			seal	capillary /mt
	ø 63	ø 100	ø 160		
≤ 60	4,5	18,0	30,0	4,2	6,0
≥ 60	2,7	10,0	12,0	4,2	6,0

measured from 20 °C

minimum span in mbar for GP, AP & DP

transmitter type		
GP	AP	DP
80	80	10

process connection

flange thread	dD (mm)
various	89

minimum range in bar for pressure indicator

size of PI (mm)		
ø 63	ø 100	ø 160
0,5	0,5	0,5

temperature effect in mbar per +10 °C for GP, AP & DP

transmitter type			seal	capillary /mt
GP	AP	DP		
0,19	0,19		0,39	0,40
		0,04	0,09	0,08

measured from 20 °C

process connection

flange thread	dD (mm)
various	89

temperature effect in mbar per +10 °C for pressure indicator

pressure (bar)	size of PI (mm)			seal	capillary /mt
	ø 63	ø 100	ø 160		
≤ 60	0,4	2,0	3,0	0,4	0,9
≥ 60	0,2	1,0	1,0	0,4	0,9

measured from 20 °C

	PI	GP AP	DP	standard included	PI	GP AP	DP	addidtional
tests		•	•	calibration test at 20 °C	•			dye penetrant test for pressurized welds
		•	•	helium test				
			•	static pressure test at 20 °C				
certificates					•			calibration test certificate
					•			conformity certificate on pressurized parts
					•			material certificate acc. EN 10204 3.1.B (3.1A/3.1C)
					•			NACE certificate acc. MR 01.75
documents	•			directions for use	•			technical information set