

Main Features

- Low pressure version
- Pressure range from 160 mbar to 100 bar
- Temperature -60 °C ... 400 °C
- Class 150 to 600
- NPS 1/2" to 2"
- DN15 to DN50

Applications

- Oil & Gas / Chemical
- Water / Waste water
- Energy
- Process technic

Technical Data

The diaphragm seals are used to protect the measuring instrument from high temperature, aggressive, crystalizing or corrosive media.

The design of the process flange allows direct mounting on standardized flange connections of pipes or tanks.

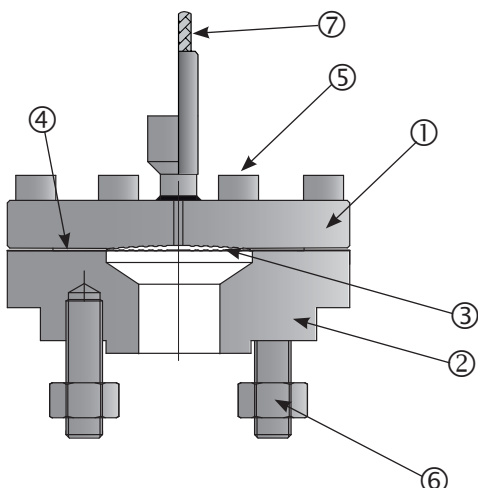
The D438 should be used especially for the measurement of low pressure on process flanges with small diameters and high pressure ratings. These products can also be used in processes with fluid temperatures > 200 °C. For applications with lower temperatures and pressure ratings, it is recommended to check, if the series D425 and D435 can be used.

For pressure ranges above 0...10 bar it is recommended to use the series D418.

The filling fluid of the measuring system has to be chosen compatible to the application.

Pressure ranges	0 ... 160 mbar to 0 ... 100 bar
Temperature	-60 °C ... +400 °C
Filling liquids	LRS1: -15 °C ... +150 °C LRS9: -40 °C ... +400 °C high temperature oil Other liquids on request
Mounting	Direct or remote from 1.5 to 12 meters
Flange types	Hot rolled or forged 1.4404 stainless steel according EN 10088-3, compliant with NACE MR 0103 or MR 0175. ASME B16.5 / EN1759-1: class 150 to 600, NPS 1/2" to 2" (DN15 to DN50) Available flange faces see table on page 2. Other flange types on request.
Diaphragm	Stainless steel 1.4435 (AISI 316L) Active diameter 95 mm Option: Hastelloy
Maximum pressure	According to the class of the flange and its standardized pressure temperature relation

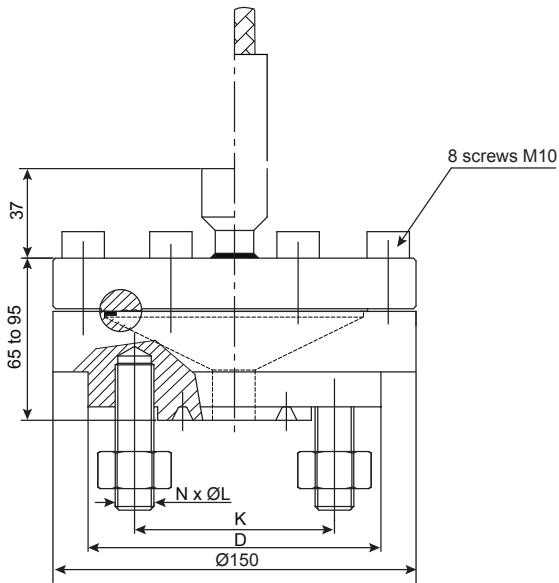
Materials



	N°	D438
Upper part	①	Stainless steel 1.4404
Process flange	②	Stainless steel 1.4404 ¹⁾
Diaphragm	③	Stainless steel 1.4435 ¹⁾
Gasket	④	Graphite
Screws	⑤	Stainless steel A4-80
Screws / nuts	⑥	ASTM A 193 B7M / A 194 2HM
Capillary (option)	⑦	Stainless steel

¹⁾ Others materials see ordering details on page 3.

Dimensions (mm)



Flange dimensions (mm) ANSI B16-5 / EN 1759-1

DN	Class	Ø D	Ø K	N	Ø L		N	Weight (kg)
					ISO ¹⁾	ASME ¹⁾		
1/2" (DN15)	150	89	60.3	4	M14	1/2 UNC	4	7.8
	300	95	66.7	4	M14	1/2 UNC	4	8.2
	600	95	66.7	4	M14	1/2 UNC	4	8.2
3/4" (DN20)	150	99	69.8	4	M14	1/2 UNC	4	8
	300	117	82.6	4	M16	5/8 UNC	4	9.4
	600	117	82.6	4	M16	5/8 UNC	4	9.4
1" (DN25)	150	108	79.4	4	M14	1/2 UNC	4	8.5
	300	124	88.9	4	M16	5/8 UNC	4	9
	600	124	88.9	4	M16	5/8 UNC	4	9
2" (DN50)	150	150	120.6	4	M16	5/8 UNC	4	9.5
	300	165	127	8	M16	5/8 UNC	4	10.2
	600	165	127	8	M16	5/8 UNC	4	10.2

⁽¹⁾ see codification on page 3.

Ordering codes for flange faces

Face Type	Drawing	ANSI B16-5	EN 1759-1		
		Codes	Codes	Codes	
Raised face		Raised face (2) ⁽¹⁾	G	Type B (1.6) ⁽¹⁾	G
		Raised face (7) ⁽²⁾	R	Type B (6.4) ⁽²⁾	R
		Ra = 3.2...6.3 µm		Ra = 3.2...6.3 µm	
Ring joint face		Ring joint face	Q	Type J	Q
		Ra = 0.4...1.6 µm		Ra = 0.4...1.6 µm	

⁽¹⁾ Class 150 and 300

⁽²⁾ Class 600

Ordering details D438

D438											
Model											
Flange diaphragm seal	D438										
Upper part material											
Hot rolled NACE compliant 1.4404 st. steel EN10083-3	L										
Forged NACE compliant 1.4404 st. steel	M										
Type of capillary											
Direct (no capillary)	1										
St. steel capillary with st. steel protection	A										
St. steel capillary with st. steel protection and white plastic Atex sheath	D										
St. steel capillary with reinforced st. steel protection	F										
Outlet position											
Axial outlet	0										
Capillary length											
Without capillary	0										
Length 1.5 meter	E										
Length 3 meters	3										
Length 4.5 meters	F										
Length 6 meters	6										
Length 9 meters	9										
Length 12 meters	D										
Instrument connection											
G1/2 female	L										
1/2NPT female	N										
Diaphragm material											
Stainless steel 316L (1.4435)	2										
Hastelloy C276 (2.4819)	6										
Diaphragm coating											
No coating	0										
Gold coating 15 µm	7										
Flange standard											
ANSI B16-5	2										
EN 1759-1	6										
PN/Class											
ANSI B16-5 / EN 1759-1											
Class 150	1										
Class 300	2										
Class 600	3										
DN/NPS											
ANSI B16-5 / EN 1759-1											
NPS 1/2" (DN15)	2										
NPS 3/4" (DN20)	3										
NPS 1" (DN25)	4										
NPS 2" (DN50)	7										
Flange face type											
See table page 2 (codes)	x										
Flange face finish											
Standard finish	0										
Vent valve											
0	Without										
1	SW 1/4 OD 10 valve										
9	SW 1/4 OD 3/8 valve										
Drain valve (bottom hole)											
0	Without										
1	SW 1/4 OD 10 valve										
9	SW 1/4 OD 3/8 valve										
Heat tracing circuit											
0	Without										
1	With										
Bolts											
M	ISO (metric) ¹⁾										
A	ASME (UNC)										
Process flange coating											
0	Without										
Flange material											
L	Hot rolled NACE compliant 1.4404 EN 10083-3										
M	Forged NACE compliant 1.4404										

¹⁾ Except flange ANSI B16-5