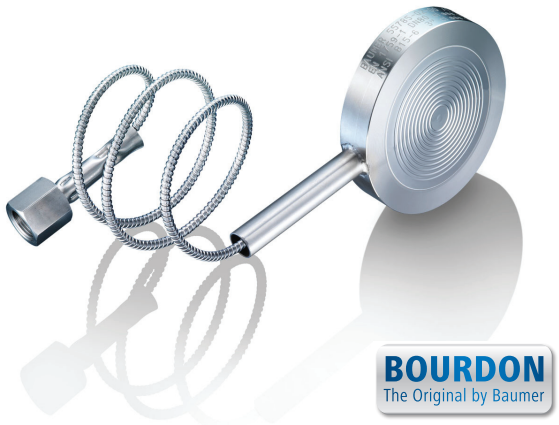
D803

Flanged diaphragm seal (cell type)



Main Features

- Pressure range from 160 mbar to 400 bar
- Temperature -40°C … 400°C
- Class 150 to 2500
- NPS 2" to 4"
- PN10 to PN100
- DN50 to DN100

Applications

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

Technical Data

This cell type diaphragm seals with flush diaphragm are used to protect pressure gauges from high temperatures, aggressive or corrosive fluids.

The flush diaphragm allows direct mounting on standardized flange connections of pipes or tanks. An additional blind flange is necessary to mount this seal (not included in the delivery).

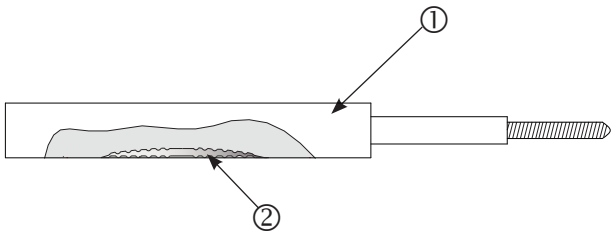
Different diaphragm materials can be selected to adapt the seal to various applications and process fluids.

The diaphragm seals can be mounted to pressure gauges or pressure switches with a flexible capillary.

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

Min.pressure ranges	See table on page 2
Temperature	-40 °C ... +400 °C
Filling liquids	LRS1: -15°C ... +150°C LRS9: -40°C ... +400°C (high temperature oil) Other liquids on request
Mounting	Remote from 1.5 to 12 meters
Flange material	Stainless steel 1.4404 (AISI 316L)
Flange types	**ASME B16.5 / EN1759-1:** class 150 to 2500, NPS 2" to 4". **EN1092-1:** PN 10 to 100, DN 50 to 100. Available flange faces see table on page 3. Other flange types on request.
Diaphragm	Stainless steel 1.4435 (AISI 316L) Option: Hastelloy, Uranus (see ordering details on page 4)
Maximum pressure	According to the PN or the class of the flange and its standardized pressure temperature relation

Materials



	N°	D803
Upper part	①	• Stainless steel 1.4404
Diaphragm	②	• Stainless steel 1.4435 • Hastelloy B2 (2.4617) • Hastelloy C276 (2.4819) • Tantalum • Uranus B6 (1.4539)

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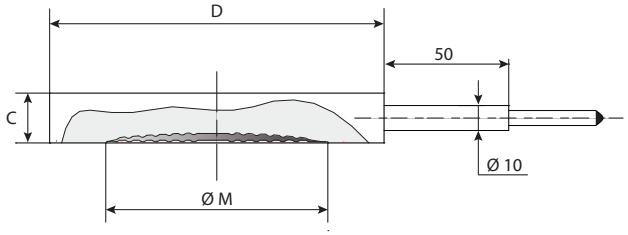
Flanged diaphragm seal (cell type)

Dimensions (mm)

Flat Face

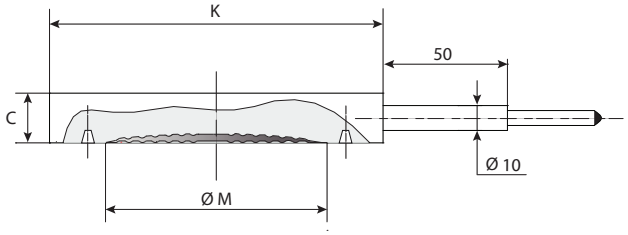


Minimum pressure ranges depending on diaphragm diameter Ø M[1)]

Ø M [2)] (mm)	DN63		DN100/150/160	
	Gauge	Compound	Gauge	Compound
54	0 ... 1 bar	-1 ... 3 bar	0 ... 1 bar	-1 ... 3 bar
89	0 ... 1 bar	-1 ... 0 bar	0 ... 0.16 bar	-1 ... 0 bar

[1)] Fluid temperature -20 ... 100°C, ambiant temperature -10 ... 50°C, others on request
[2)] Ø M according to dimension tables on page 2 and 3

Ring Joint Face



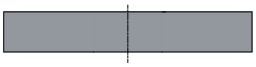
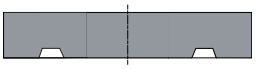
Flange dimensions (mm) ANSI B16-5 / EN 1759-1

DN	Class	Flat Face				Ring Joint Face			
		Ø M	D	C	Weight in kg	Ø M	K	C	Weight in kg
2" (DN50)	150	54	102	20	1.3	54	102	24	1.6
	300	54	102	20	1.3	54	108	24	1.8
	600	54	102	20	1.3	54	108	24	1.8
	900/1500	54	102	20	1.3	89	124	24	2.3
	2500	54	102	20	1.3	89	133	24	2.6
3" (DN80)	150	89	134	20	2.2	89	133	24	2.6
	300	89	134	20	2.2	89	146	24	3.2
	600	89	134	20	2.2	89	146	24	3.2
	900	89	134	20	2.2	89	156	24	3.6
	1500	89	134	20	2.2	89	168	24	4.2
	2500	89	134	20	2.2	89	168	26	4.5
4" (DN100)	150	89	158	20	3.4	89	172	24	4.4
	300	89	158	20	3.4	89	175	24	4.5
	600	89	158	20	3.4	89	175	24	4.5
	900	89	158	20	3.4	89	181	24	4.8
	1500	89	158	20	3.4	89	194	24	5.6
	2500	89	158	20	3.4	89	203	30	7.6

Flange dimensions (mm) EN 1092-1

DN	PN	Flat Face			
		Ø M	D	C	Weight in kg
50	10/16	54	102	20	1.3
	25/40	54	102	20	1.3
	63	54	102	20	1.3
	100	54	102	20	1.3
80	10/16	89	138	20	2.4
	25/40	89	138	20	2.4
	63	89	138	20	2.4
	100	89	138	20	2.4
100	10/16	89	159	20	3.1
	25/40	89	159	20	3.1
	63	89	159	20	3.1
	100	89	159	20	3.1

Ordering codes for flange faces

Face Type	Drawing	ANSI B16-5	Codes	EN 1759-1	Codes	EN 1092-1	Codes
Flat face [1]		Flat face Ra = 3.2...6.3 µm	A	Type A Ra = 3.2...6.3 µm	A	Type A Ra = 3.2...6.3 µm	A
Ring joint face		Ring joint face Ra = 0.4...1.6 µm	Q	Type J Ra = 0.4...1.6 µm	Q	N/A	

1) Suitable for Raised face (RF) flanges

D803

Flanged diaphragm seal (cell type)

Ordering details D803

D803	–				.		2			.			

Model

Flanged diaphragm seal (cell type)	D803
	–

Capillary type

St. steel tube and protection	A
St. steel tube and protection and white plastic ATEX sheath	D
St. steel tube and reinforced protection	F
For special capillary Ø 2.5 mm (seals mounted on MX, MZ, RP, RD)	
St. steel capillary Ø 2.5 with St. steel protection	G
St. steel capillary Ø 2.5 with reinforced St. steel protection and PVC sheath	H
St. steel capillary Ø 2.5 with reinforced St. steel protection	J

Capillary length

1.5 m	E
3 m	3
4.5 m	F
6 m	6
9 m	9
12 m	D

Instrument connection

G1/2 female	L
G1/4 female	H
1/2 NPT female	N
1/4 female	8

.

Flange standard

ANSI B16-5	2
EN 1092-1	4
EN 1759-1	6

Flange material

St. steel 316L (1.4404)	2

PN

ANSI B16-5 / EN 1759-1	
Class 150	1
Class 300	2
Class 600	3
Class 900	4
Class 1500	5
Class 2500	6
EN 1092-1	
PN10	C
PN16	D
PN25	F
PN40	G
PN63	N
PN100	J

Diaphragm coating (1)

0	Without
1	PTFE 0.02 mm
4	HALAR 0.2 mm

Diaphragm material

2	St. steel 316L (1.4435)
3	Uranus B6 (1.4539)
5	Hastelloy B2 (2.4617)
6	Hastelloy C276 (2.4819)
7	Tantalum

Flange face type

A	Flat face
Q	Ring joint face

.

DN

ANSI B16-5 / EN 1759-1	
7	2" (DN50)
9	3" (DN80)
V	4" (DN100)
EN 1092-1	
H	50
K	80
L	100

(1) No coating for flange facing types with groove, code Q