



**BOURDON**  
The Original by Baumer



### Main Features

- Pressure range from 1.6 bar to 40 bar
- Enlarged diaphragm
- Temperature -40 °C ... 400 °C
- Class 150 and 300
- NPS 1/2" to 1"
- PN10 to PN40
- DN15 to DN25

### Applications

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

### Technical Data

This diaphragm seals with flanged process connection and enlarged diaphragm are used to protect pressure gauges from high temperatures, aggressive or corrosive fluids.

The design allows direct mounting on standardized flange connections of pipes or tanks. Due to the enlarged diaphragm this seals can be used for low pressure ranges, despite the small size of the flange.

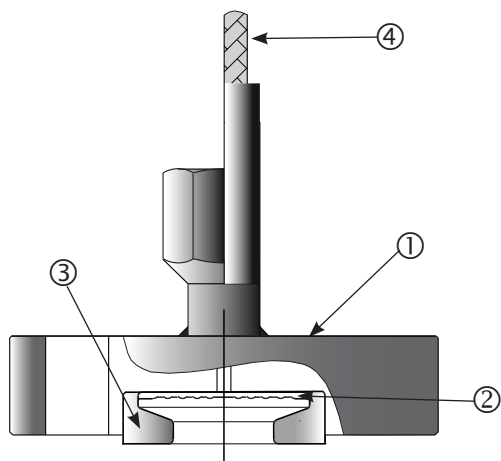
Different diaphragm materials can be selected to adapt the seal to various applications and process fluids.

The diaphragm seals can be mounted to pressure gauges or pressure switches directly or with a flexible capillary. For use with electronic transmitters for pressure and differential pressure the product series D9xx is recommended.

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

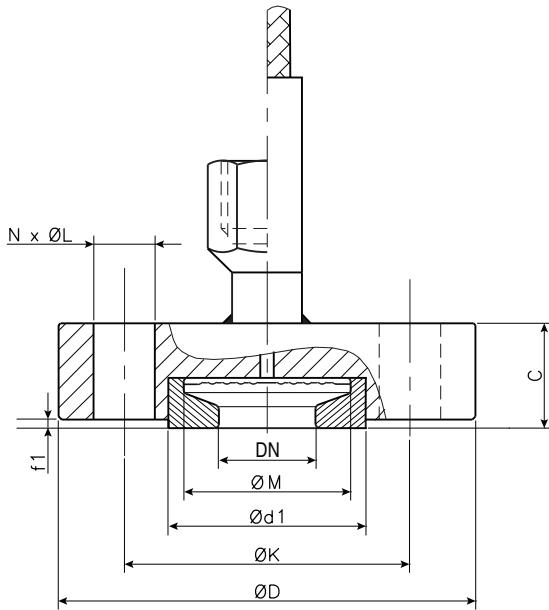
Min.pressure ranges	See table on page 2
Temperature	-40 °C ... +400 °C
Filling liquids	LRS1: -15 °C ... +150 °C LRS9: -40 °C ... +400 °C high temperature oil Other liquids on request
Mounting	Direct or remote from 1.5 to 12 meters
Flange material	Stainless steel 1.4404 (AISI 316L)
Flange types	<b>ASME B16.5 / EN1759-1:</b> class 150 and 300, NPS 1/2" to 1". <b>EN1092-1:</b> PN 10 to 40, DN 15 to 25. Available flange faces see table on page 2. Other flange types on request.
Diaphragm	Stainless steel 1.4435 (AISI 316L) Option: Hastelloy (see ordering details on page 3)
Maximum pressure	According to the PN or the class of the flange and its standardized pressure temperature relation

### Materials



	N°	D821
Flange	①	• Stainless steel 1.4404
Diaphragm	②	• Stainless steel 1.4435 • Hastelloy C276 (2.4819)
Wetted part	③	• Stainless steel 1.4435 • Hastelloy C276 (2.4819)
Capillary (option)	④	• Stainless steel

### Dimensions (mm)



### Minimum pressure ranges depending on diaphragm diameter Ø M <sup>(1)</sup>

Ø M <sup>(2)</sup> (mm)	DN63		DN100/150/160	
	Gauge	Compound	Gauge	Compound
32	0 ... 4 bar	-1 ... 9 bar	0 ... 10 bar	-1 ... 9 bar
38	0 ... 4 bar	-1 ... 9 bar	0 ... 6 bar	-1 ... 9 bar
45	0 ... 1 bar	-1 ... 5 bar	0 ... 4 bar	-1 ... 5 bar
50	0 ... 1 bar	-1 ... 3 bar	0 ... 1.6 bar	-1 ... 3 bar
54	0 ... 1 bar	-1 ... 3 bar	0 ... 1 bar	-1 ... 3 bar

<sup>(1)</sup> Fluid temperature -20 ... 100 °C, ambient temperature -10 ... 50 °C, others on request

<sup>(2)</sup> Ø M according to dimension tables below

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

DN	Class	Ø D	Ø K	Ø L	N	EN1759-1		ANSI B16-5		Ø d1	Ø M in mm <sup>(1)</sup>	Weight in kg
						C	f1	C	f1			
1/2"	150	89	60.3	15.9	4	23.6	1.6	24	2	35.1	32	1
	300	95	66.7	15.9	4	23.6	1.6	24	2	35.1	32	1.1
3/4"	150	99	69.8	15.9	4	25.6	1.6	26	2	42.9	45	1.3
	300	117	82.6	19	4	25.6	1.6	26	2	42.9	45	1.9
1"	150	108	79.4	15.9	4	25.6	1.6	26	2	50.8	50	1.6
	300	124	88.9	19	4	25.6	1.6	26	2	50.8	50	2.2

### Flange dimensions (mm) EN 1092-1

DN	PN	Ø D	C	Ø K	Ø L	N	f1	Ø d1	Ø M in mm <sup>(1)</sup>	Weight in kg
15	10/40	95	24	65	14	4	2	45	38	1.3
20	10/40	105	26	75	14	4	2	58	45	1.5
25	10/40	115	26	85	14	4	2	68	54	1.8

<sup>(1)</sup> Active diameter.

### Ordering codes for flange faces

Face Type	Drawing	ANSI B16-5		EN 1759-1		EN 1092-1	
			Codes		Codes		Codes
Raised face		Raised face (2) Ra = 3.2...6.3 µm	G	Type B (1.6) Ra = 3.2...6.3 µm	G	Type B1 Ra = 3.2...12.5 µm	B

### Ordering details D821

Model		D821	-				.	2		.				
Flanged diaphragm seals with enlarged diaphragm		D821	-											
<b>Mounting</b>														
Direct mounting		1												
St. steel capillary with St. steel protection		A												
St. steel capillary with St. steel protection and PVC sheath		B												
St. steel capillary with reinforced St. steel protection		C												
<b>For special capillary Ø 2.5 mm (seals mounted on MX, MZ, RP, RD)</b>														
St. steel capillary Ø 2.5 with St. steel protection		G												
St. steel capillary Ø 2.5 with St. steel protection and PVC sheath		H												
St. steel capillary Ø 2.5 with reinforced St. steel protection		J												
<b>Capillary length</b>														
Without (direct mounting)		0												
1.5 m		E												
3 m		3												
4.5 m		F												
6 m		6												
9 m		9												
12 m		D												
<b>Instrument connection</b>														
G1/2 female		L												
G1/4 female		H												
1/2 NPT female		N												
1/4 NPT female		8												
1/4 NPT male (only with capillary)		5												
1/2 NPT male (only with capillary)		6												
<b>Flange standard</b>														
ANSI B16-5		2												
EN 1092-1		4												
EN 1759-1		6												
<b>Flange material</b>														
St. steel 316L (1.4404)		2												
<b>PN</b>														
<b>ANSI B16-5 / EN 1759-1</b>														
Class 150		1												
Class 300		2												
<b>EN 1092-1</b>														
PN10		C												
PN16		D												
PN25		F												
PN40		G												
<b>Diaphragm coating</b>														
Without		0												
<b>Diaphragm material</b>														
2		St. steel 316L (1.4435)												
6		Hastelloy C276 (2.4819)												
<b>Flange face type</b>														
x		See table page 2 (codes)												
<b>DN</b>														
<b>ANSI B16-5 / EN 1759-1</b>														
2		1/2"												
3		3/4"												
4		1"												
<b>EN 1092-1</b>														
C		15												
D		20												
E		25												