Diaphragm seal for general application

flange-type for low pressure application

Type series DA810.

Application area

- Machinery construction
- Chemical and petrochemical industry
- General process technology

Features

- Flush-mounted separating diaphragm of stainless steel or special material
- Reduced torque error
- Volume optimised diaphragm base
- Alternative with reinforced diaphragm in LTC technology (reduced temperature influence)
- Connection to Zone 0
- System fillings for different applications
- Measuring device connection:
  - directly welded
  - directly screwed
  - with temperature decoupler
  - with capillary

Options

- Certificates
  - Material certificate acc. to EN 10204-3.1

Application

Suitable for mounting to pressure transmitters, especially for low-pressure applications. Due to the loose clamping flange there are no mounting torque errors. The flange-type diaphragm seal is suited for measuring aggressive, highly viscous media and for high process temperatures.

Technical data

Constructional design

Basic body: Volume reduced diaphragm base
Material:
stainless steel mat.-no. 1.4404/1.4435 (316L)

Diaphragm: Flush-mounted diaphragm, laser welded; alternative with reduced temperature influence and reinforced diaphragm in LTC technology.
(LTC=Low Temperature Coefficient)
Further details see General technical information TA_031.

Material wetted parts: Diaphragm:
See order details

Basic body:
Stainless steel mat.-no. 1.4404/1.4435 (316L)

Process connection

Design: Flange connection per EN 1092-1 and ASME B16.5
Further designs upon request.

Nominal pressure/Nominal width: See table

Sealing are not included in the scope of delivery.

Sealing surfaces

per:

- EN 1092-1, model B1, B2, C, D
- ASME B 16.5, RFSF, RF 125-250AA, RJF

With special material surface upon request.

Measuring device connection

See order details.
Material stainless steel mat.-no. 1.4301 (304)

System filling

See order details; further upon request.
Further details about pressure transmission fluids see general technical information TA_038.

Temperature error

In order to optimise the system we provide a detailed error calculation upon request.

Tests and certificates

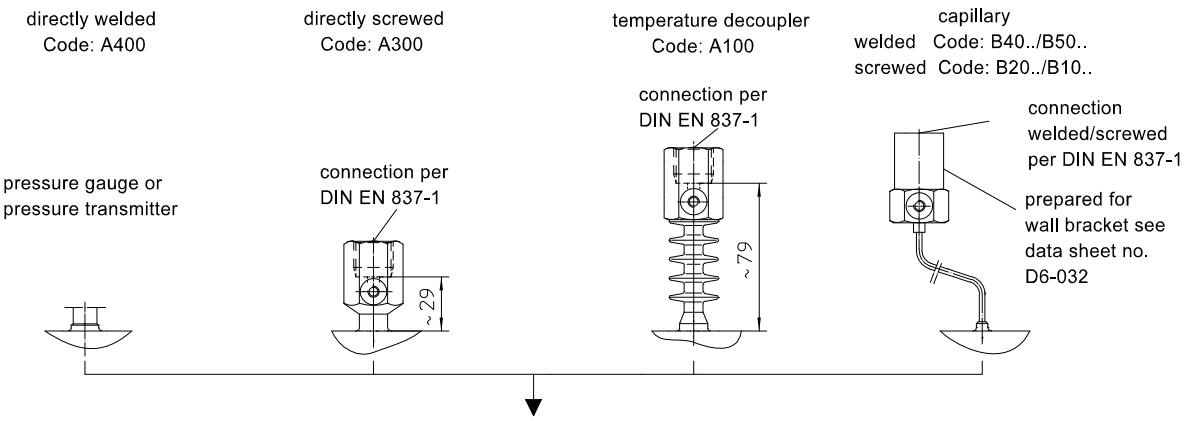
Connection to Zone 0: with flame arrester,
Ⓔx IIG IIC according to PTB 03 ATEX 4032 X

Weight

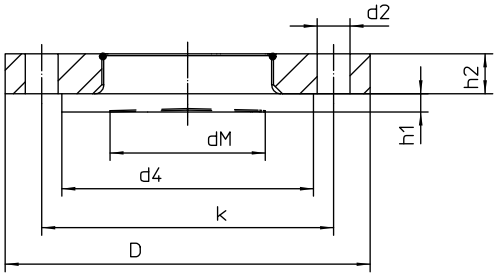
See table.

Further information about diaphragm seals see general technical information TA_031.

Measuring device connection



Dimensions



Dimensions (mm) EN 1092-1										
DN	**PN**	**D**	**k**	**d2**	**dM**	**d4**	**h1**	**h2**	**no. bore holes**	**Weight approx.**
50	10/40	165	125	18	51	102	8	15	4	3.2 kg
80	10/40	200	160	18	86	138	10	22	8	5 kg
100	10/16	220	180	18	86	158	10	22	8	6 kg
100	25/40	235	190	22	86	162	10	22	8	10 kg
125	10/16	250	210	18	86	188	10	22	8	11 kg
125	25/40	270	220	26	86	188	10	22	8	12 kg

Dimensions (mm) ASME B16.5										
DN	**Class**	**D**	**k**	**d2**	**dM**	**d4**	**h1**	**h2**	**no. bore holes**	**Weight approx.**
3“	150	190	152.4	19	86	127	10	22	4	5.2 kg
3“	300	210	168.3	22	86	127	10	22	8	6 kg
4“	150	230	190.5	19	86	158	10	22	8	10 kg
4“	300	255	200	22	86	158	10	20	8	11 kg

Order details

Diaphragm seal, flange-type per EN 1092-1 and ASME B16.5, for low pressure applications, Type series DA810 .

order details diaphragm seal DA810 .			
DA810 .	diaphragm seal, flange-type per EN and ASME, for low pressure applications		
0	design	standard	
2		zone 0	
D11 . .	design per EN 1092-1	sealing surface	model B1
D12 . .			model B2 [1]
D14 . .			model C
D13 . .			model D
41		nominal width	DN 50, PN 10-40
62			DN 50, PN 63
71			DN 100, PN 10-16
72			DN 100, PN 25-40
81			DN 125, PN 10-16
82			DN 125, PN 25-40
D50 . .	design per ASME B16.5	sealing surface	RFSF [1]
D51 . .			RF125-250 AA
D52 . .			RJF
51		nominal width	DN 3" Class 150
52			DN 3" Class 300
61			DN 4" Class 150
62			DN 4" Class 300

A400	measuring device connection	directly	welded
A300			screwed G1/2
A100		with temperature decoupler	screwed G1/2
B40 . .		with capillary	welded
B20 . .			screwed G1/2
B50 . .		with capillary and stainless steel protective tube	welded
B10 . .			screwed G1/2
11		capillary length	1 m
12			1.6 m
13			2.5 m
14			4 m
21			5 m
15			6 m
23			7 m
16			8 m
17			10 m
9			others
1	material wetted parts	stainless steel mat.-no. 1.4404/1.4435 (316 L), standard	
1L		stainless steel mat.-no. 1.4404/1.4435 (316 L), diaphragm in LTC technology [2]	
2		Tantal	
3		Hastelloy C276	
8		Hastelloy C4	

	system filling [3]	pressure transmission fluid	temperature range[4]
L22		synthetic oil, free of silicone FD1, standard	-10…140 °C
L23		synthetic oil, free of silicone FD1, pls. specify max. temperature	-40…230 °C
L31		high temperature oil FV3H	-10…400 °C

Additional features (to be indicated in case of need, only)	
W1020	material certificate per EN 10204-3.1, wetted parts

Order code (example): DA8100 - D1162 - A4001 - L22 - ...

[1] necessary in case of special materials. Diaphragms made of special materials cover the complete sealing surface area. The use of metallic seals is not permissible in this case. The maximum pressure level then depends on the design and properties of the sealing material.

[2] for DN 50 and DN 80

[3] for more detailed information about pressure transmission fluids see TA_038. Please state temperature range to allow an accurate calculation of the system.

[4] max. media temperature for pressures > 0 bar rel.