Diaphragm seal

DRD-connection

Type series DD4100

Application area

- Food industry
- Pharmaceutical industry
- Biotechnology

Features

- Flush-mounted separating diaphragm of stainless steel, laser welded
- Alternative with reinforced diaphragm in LTC technology (reduced temperature influence)
- Volume optimised diaphragm base
- 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
- Electropolishing (wetted parts)
- Hygienic design with advanced surface quality
- Special materials upon request

Application

Suitable for mounting to bourdon tube pressure gauges and pressure transmitters. The diaphragm seal with DRD connection is used mainly for dead-zone free pressure measurement.

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

Process connection

Design:	DRD-connection
Nominal width:	DN 50
Nominal pressure:	PN 40

Sealing are not included in the scope of delivery.

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.

Hygienic design

The surface roughness of the wetted parts made of stainless steel are executed according to EHEDG Doc.8 and ASME BPE SF3.
In case of choosing the additional feature HY, we guarantee the following surface roughness values:

Diaphragm foil:	Ra ≤ 0.38 µm
Laser welds:	Ra ≤ 0.76 µm
Turned parts:	Ra ≤ 0.76 µm

Further versions of hygienic design upon request.

Temperature error

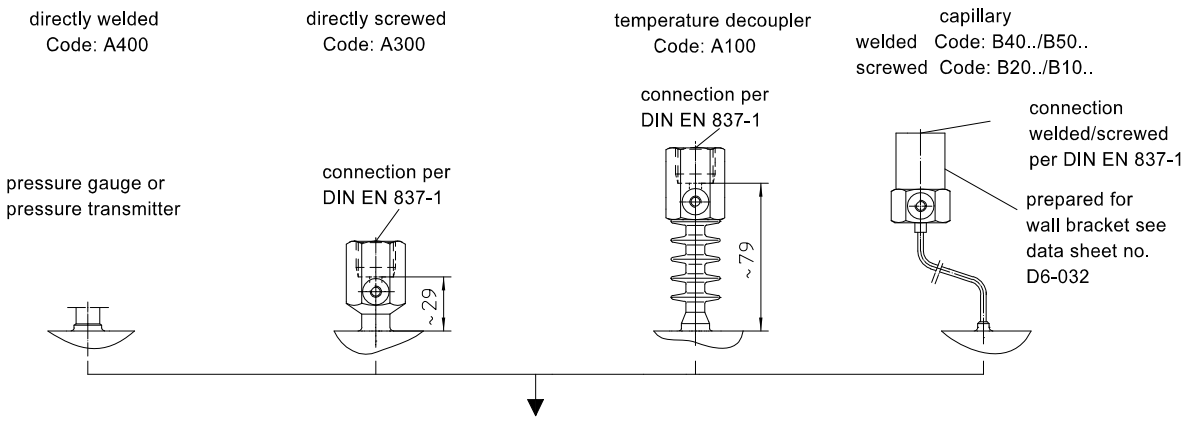
In order to optimise the system we provide a detailed error calculation upon request.

Weight

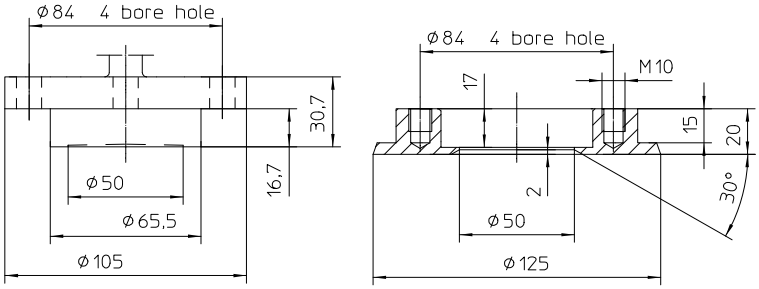
With measuring device connection G1/2 approx. 1.5 kg

Further information about diaphragm seals see general technical information TA_031.

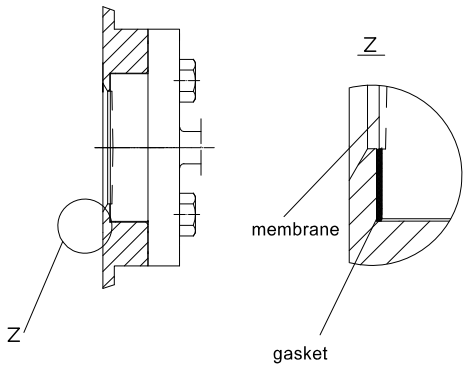
Measuring device connection



Dimensions



Mounting example



Order details

Diaphragm seal DRD-connection
Type series DD4100

Order details DD4100			
DD4100	nominal width DN 50 / nominal pressure PN 40		
	surface roughness	standard	
HY		Hygienic version as per EHEDG Doc.8 and ASME BPE SF3	
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
7	material	wetted parts stainless steel mat.-no. 1.4435 (316L)	
7L		wetted parts stainless steel mat.-no. 1.4435 (316L), diaphragm in LTC technology	
	system filling [1]	pressure transmission fluid	temperature range[2]
L22		synthetic oil, free of silicone FD1, standard	-10…140 °C
L23		synthetic oil, free of silicone FD1, please specify max. temperature	-40…230 °C
L15		glycerine/water FGW	-30…110 °C

Additional features (to be indicated in case of need, only)	
W1020	material certificate acc. to EN 10204-3.1, wetted parts
W4035	electropolishing of wetted parts

Accessories	
MZ2010	weld-in flange, for DRD-connection, stainless steel mt.-no. W.-Nr. 1.4404 (316L)
MZ2010-HY	weld-in flange, for DRD-connection, stainless steel mt.-no. W.-Nr. 1.4404 (316L), HYGIENIC design
MS2010-A10	flat gasket for diaphragm seal DRD-connection, material: PTFE gasket fiber-glass reinforced 65x50x1
MZ8100-A10	hexagon screw 25 DIN 933, material stainless steel mat.-no. 1.4571 (316Ti)

Order code (example): DD4100 - A4007 - L22 - W1020 - ...

[1] further and detailed Informations to pressure transmission fluids see TA_038
To achieve an optimised system design it is necessary to get information about the exact operating temperature.

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