

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

- Labom REconnect quick coupling device for easy and safe separation and connection of diaphragm seal systems. Available with a wide range of pressure gauges and pressure transmitters; Type series MK1000, see data sheet D6-022
- 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 tem- perature influence and reinforced dia- phragm in LTC technology. (LTC=Low Temperature Coefficient) Further details see General technical in- formation TA_031.
Material wet- ted 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 pres- sure:	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 gen-
eral technical information TA_038.

Hygienic design

The surface roughness of the wetted parts made of stain-
less 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:	$Ra \leq 0.38 \mu m$
Laser welds:	$Ra \leq 0.76 \mu m$
Turned parts:	$Ra \leq 0.76 \mu m$

Further versions of hygienic design upon request.

Temperature error

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

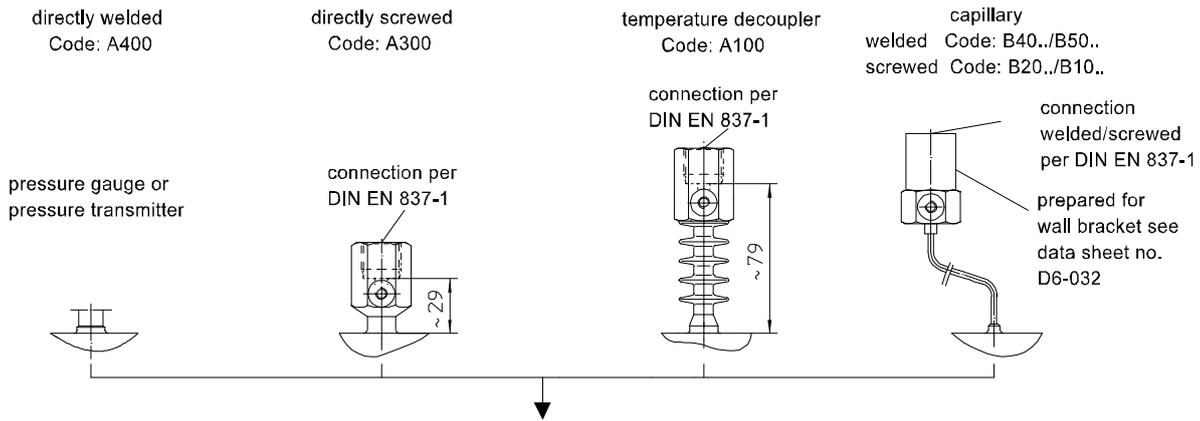
Weight

With measuring device connection G1/2 approx. 1.5 kg

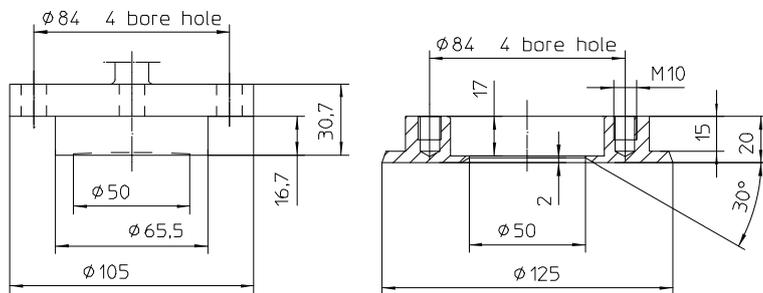
**Further information about diaphragm seals see general
technical information TA_031.**

**Flame arrester MF21xx for connection of measuring de-
vices to zone 0 see data sheet D6-025.**

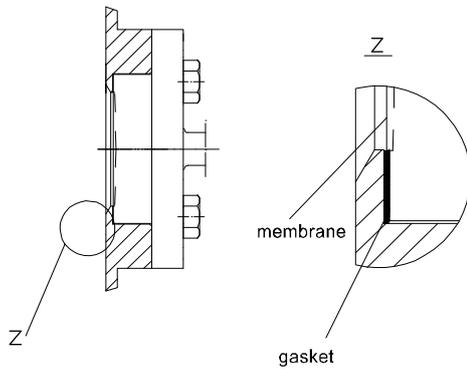
Measuring device connection



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	<u>pressure transmission fluid</u>	<u>temperature range</u> 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.