

Diaphragm seal

NEUMO BioControl

Type series DL8110



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 DB_D6-022
- Certificates
 - Material certificate per 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 for BioControl 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) Basic body: Stainless steel mat.-no. 1.4404/1.4435 (316L)

Process connection

Design:	NEUMO BioControl connection flange ■ size 25 ■ size 50 ■ size 65 ■ size 80
Nominal pressure:	PN 16
Gasket:	Material EPDM, peroxide cross-linked, FDA compliant, 80 Shore A, black Temperature range: -10...150 °C

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 per 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.

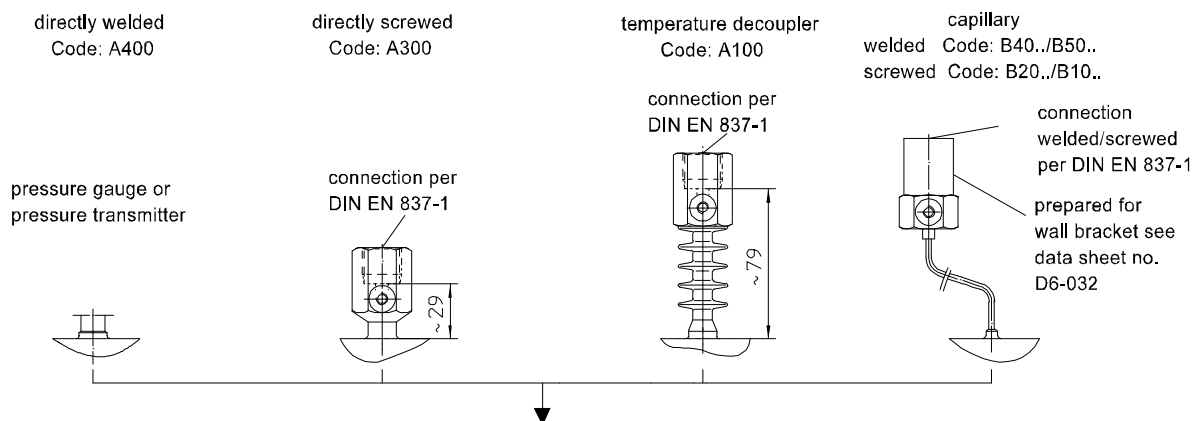
Weight

See table.

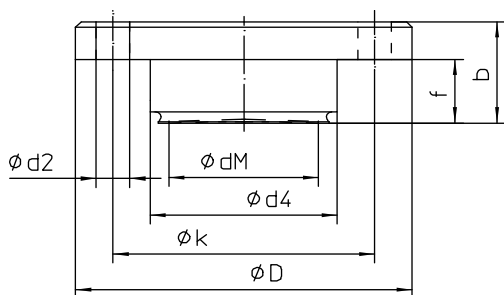
Further information about diaphragm seals see general technical information TA_031.

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

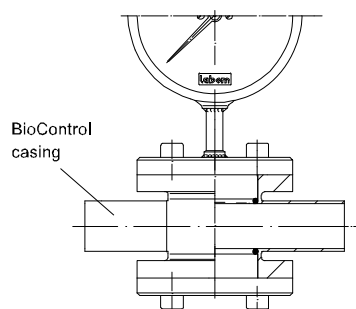
Measuring device connection



Dimensions



Mounting example



Process connection	dM	D2	no. bore holes	d4	D	f	b	k	Weight approx.
size 25	24	7	4	30.4	64	11	20	50	0.3 kg
size 50	40	9	4	50	90	17	27	70	0.7 kg
size 65	54	11	4	68	120	17	27	95	1.4 kg
size 80	70	11	4	87.5	140	25	37	115	2.6 kg

Order details

Diaphragm seal Neumo Biocontrol			
DL8110	design	Neumo Biocontrol connection flange	
	surface roughness	standard	
HY		Hygienic version as per EHEDG Doc.8 and ASME BPE SF3	
D10.	process connection	size 25	
D11.		size 50	
D12.		size 65	
D13.		size 80	
2	sealing	EPDM, temperature range -10...150 °C, FDA compliant	
7	diaphragm material	stainless steel mat.-no. 1.4435 (316L)	
7L		stainless steel mat.-no. 1.4435 (316L), diaphragm in LTC technology ²	
9		variant	
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
	system filling ²	<u>pressure transmission fluid</u>	<u>temperature range</u> ³
L22		synthetic oil, free of silicone FD1, standard	-10...140 °C
L23		synthetic oil, free of silicone FD1, please specify max. temperature	-10...150 °C (restricted by the sealing)
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

Order code (example): DL8110 - HY - D122 - A4007 - L22 - ...

¹ For sizes 65 and 80.

² Further and detailed information to pressure transmission fluids see TA_038.

³ Max. media temperature for pressures > 0 bar rel.