

## Inline diaphragm seal

NEUMO BioConnect

Type series DF6...



### Application area

- Food industry
- Pharmaceutical industry
- Biotechnology

### Features

- Circular diaphragm of stainless steel, slightly grooved, laser welded
- Volume optimised diaphragm base
- Self-draining
- EHEDG-certified
- 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 inline diaphragm seal with aseptic design 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:	Inline diaphragm
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:	Patented aseptic connection NEUMO BioConnect for all pipes per EN and ISO See tables and order details.
Nominal pressure/nominal width:	See tables

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:	$Ra \leq 0.38 \mu\text{m}$
Laser welds:	$Ra \leq 0.76 \mu\text{m}$
Turned parts:	$Ra \leq 0.76 \mu\text{m}$

Further versions of hygienic design upon request.

### Temperature error

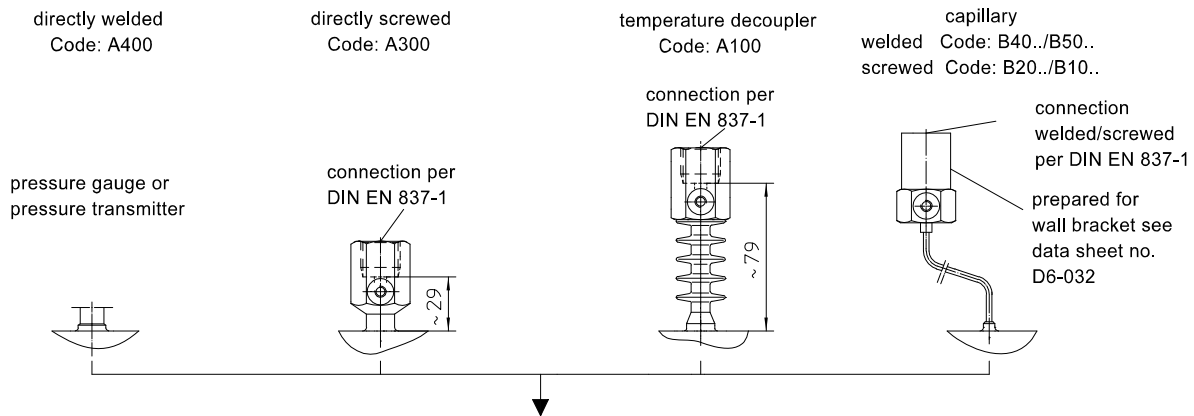
In order to optimise the system we provide a detailed error calculation upon request.

### Weight

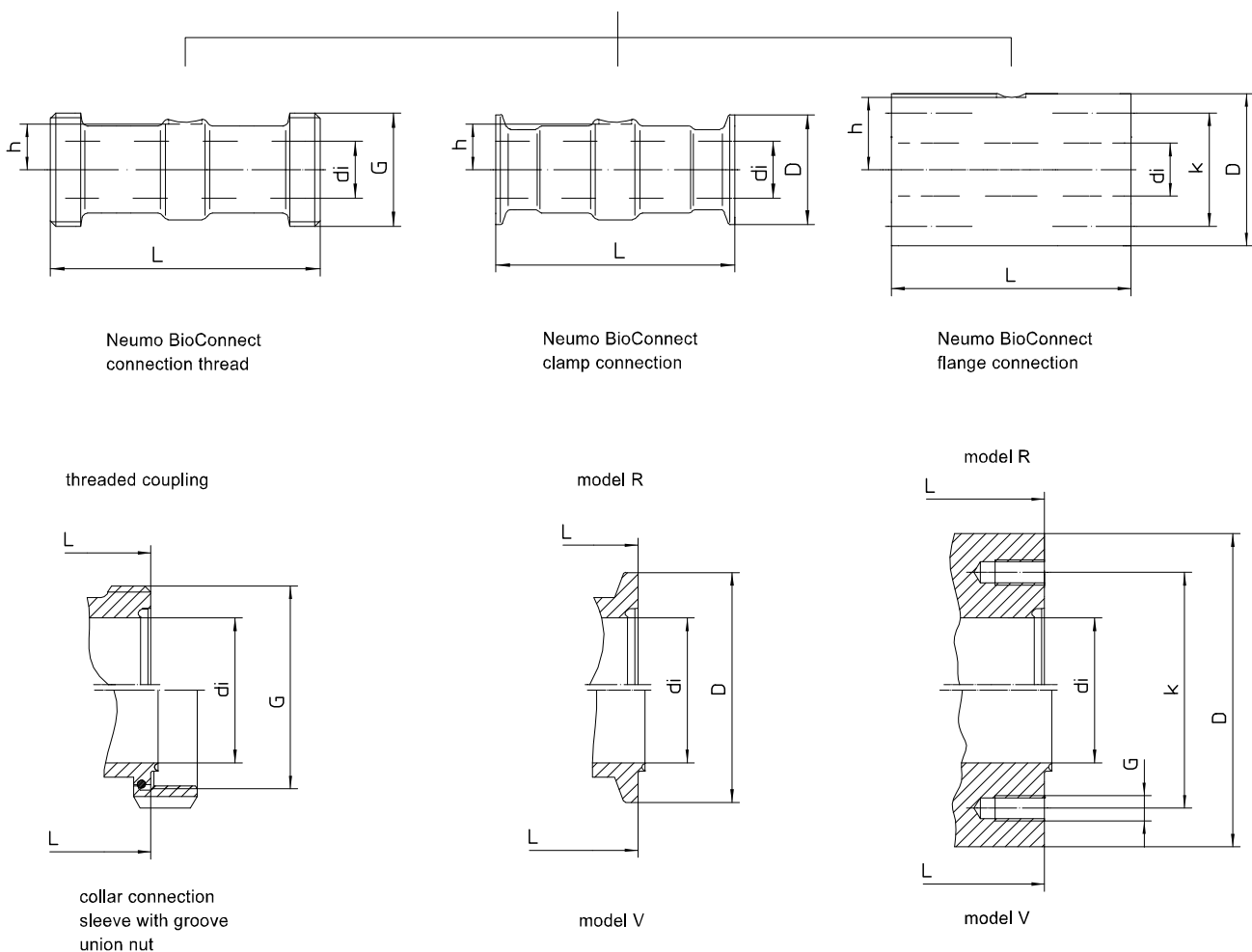
See table.

**Further information about diaphragm seals see general technical information TA\_031.**

## Measuring device connection



## Dimensions



**Inline diaphragm seal with BioConnect screwing for pipes per EN 10357 (DIN 11850)**

pipe dimensions per DIN 11866 table 1 model A

DN	PN	di	thread	h	L	weight appr.
		[mm]	G	[mm]	[mm]	[kg]
15	16	16	M30x1.5	12.0	150	1.1
20	16	20	M36x2	16.0	150	-
25	16	26	M42x2	21.0	110	0.9
32	16	32	M52x2	26.0	110	1.3
40	16	38	M56x2	28.5	110	1.4
50	16	50	M68x2	34.0	110	1.7
65	16	66	M90x3	42.0	110	2.1
80	16	81	M100x3	47.5	60	1.2
100	16	100	M130x4	60.0	60	1.3

**Inline diaphragm seal with BioConnect screwing for pipes per ISO 1127 -**

pipe dimensions per DIN 11866 table 1 model B

DN/ OD	PN	di	thread	h	L	weight appr. [kg]
		[mm]	G	[mm]	[mm]	
21.3	16	18.1	M30x1,5	16.0	150	-
33.7	16	29.7	M42x2	21.0	110	0.9
42.4	16	38.4	M52x2	26.0	110	1.3
48.3	16	44.3	M56x2	28.5	110	1.4
60.3	16	56.3	M68x2	35.0	110	1.7

**Inline diaphragm seal with BioConnect clamp connection for pipes per EN 10357 (DIN 11850)**

pipe dimensions per DIN 11866 table 1 model A

DN	PN	di	D	h	L	weight appr. [kg]
		[mm]		[mm]	[mm]	
15	16	16	25.0	12.0	150	1.1
20	16	20	50.4	16.0	150	-
25	16	26	50.4	21.0	110	0.9
32	16	32	50.4	26.0	110	1.3
40	16	38	64.0	28.5	110	1.4
50	16	50	77.4	34.0	110	1.7
65	16	66	90.9	42.0	110	2.1
80	16	81	106.0	47.5	60	1.2
100	16	100	119.0	60.0	60	1.3

**Inline diaphragm seal with BioConnect clamp connection for pipes per EN ISO 1127 -**

pipe dimensions per DIN 11866 table 1 model B

DN/ OD	PN	di	D	h	L	weight appr. [kg]
		[mm]		[mm]	[mm]	
21.3	16	18.1	50.4	16.0	150	-
33.7	16	29.7	50.4	21.0	110	0.9
42.4	16	38.4	50.4	26.0	110	1.3
48.3	16	44.3	64.0	28.5	110	1.4
60.3	16	56.3	77.4	35.0	110	1.7

**Inline diaphragm seal with BioConnect flange connection for pipes per EN 10357 (DIN 11850)**

pipe dimensions per DIN 11866 table 1 model A

DN	PN	h	D	L	k	G	no. of borings	weight appr. [kg]
		[mm]		[mm]				
15	16	35.5	75	150	55	M8	4	2.5
25	16	40.5	85	110	65	M8	4	4.6
32	16	45.5	95	110	75	M8	4	5.5
40	16	48.0	100	110	80	M8	4	6
50	16	53.0	110	110	90	M8	4	6.6
65	16	68.0	140	110	115	M10	4	7.5
80	16	73.0	150	60	125	M10	4	8.5
100	16	85.5	175	60	150	M10	4	10

**Inline diaphragm seal with BioConnect flange connection for pipes per EN ISO 1127 -**

pipe dimensions per DIN 11866 table 1 model B

DN/ OD	PN	h	D	L	k	G	no. of borings	weight appr. [kg]
		[mm]		[mm]				
21.3	16	35.5	75	150	55	M8	4	2.5
33.7	16	40.5	85	110	65	M8	4	3
42.4	16	45.5	95	110	75	M8	4	4.5
48.3	16	48.0	100	110	80	M8	4	5
60.3	16	53.0	110	110	90	M8	4	6

Designation of internal pipe diameter in accordance with tolerances of respective standard.

## Order details

### Inline diaphragm seal NEUMO BioConnect

#### Type series DF6 . . .

#### Order details inline diaphragm seal DF6 . . .

DF61 . .	design	for pipes per EN 10357 (DIN 11850), pipe dimensions per DIN 11866 table 1 model A		
		<u>process connection</u>	<u>insertion length L</u>	<u>pipe inside-Ø di</u>
<b>00-F5</b>	nominal width DN	DN 15	150 mm	16 mm
<b>10-F2</b>		DN 25	110 mm	26 mm
<b>20-F2</b>		DN 32	110 mm	32 mm
<b>30-F2</b>		DN 40	110 mm	38 mm
<b>40-F2</b>		DN 50	110 mm	50 mm
<b>50-F2</b>		DN 65	110 mm	66 mm
<b>60-F1</b>		DN 80	60 mm	81 mm
<b>70-F1</b>		DN 100	60 mm	100 mm
<b>S4001</b>	process connection	NEUMO BioConnect <sup>1,2</sup>	threaded coupling on both sides	
<b>S4002</b>			clamp connection on both sides (model R)	
<b>S4003</b>			clamp connection on both sides (model V)	
<b>S4009</b>			flange connection (model R)	
<b>S4010</b>			flange connection (model V)	
<b>S . . . .</b>			further aseptic connections upon request	
DF62 . .	design	for pipes per EN ISO 1127, pipe dimensions per DIN 11866 table 1 model B		
		<u>process connection</u>	<u>insertion length L</u>	<u>pipe inside-Ø di</u>
<b>00-F5</b>	nominal width DN / OD	DN 21.3 (pipe 21.3 x 1.6)	150 mm	18.1 mm
<b>10-F2</b>		DN 33.7 (pipe 33.7 x 2.0)	110 mm	29.7 mm
<b>20-F2</b>		DN 42.4 (pipe 42.4 x 2.0)	110 mm	38.4 mm
<b>30-F2</b>		DN 48.3 (pipe 48.3 x 2.0)	110 mm	44.3 mm
<b>40-F2</b>		DN 60.3 (pipe 60.3 x 2.0)	110 mm	56.3 mm
<b>S4001</b>	process connection	NEUMO BioConnect <sup>1,2</sup>	threaded coupling on both sides	
<b>S4002</b>			clamp connection on both sides (model R)	
<b>S4003</b>			clamp connection on both sides (model V)	
<b>S4009</b>			flange connection (model R)	
<b>S4010</b>			flange connection (model V)	
<b>S . . . .</b>	further aseptic connections upon request			
	surface roughness	standard		
<b>HY</b>		Hygienic version as per EHEDG Doc.8 and ASME BPE SF3		
<b>A400</b>	measuring device connection	directly	welded	
<b>A300</b>			screwed G1/2	
<b>A100</b>		with temperature decoupler	screwed G1/2	
<b>B40 . .</b>		with capillary	welded	
<b>B20 . .</b>			screwed G1/2	
<b>B50 . .</b>		with capillary and stainless steel protective tube	welded	
<b>B10 . .</b>			screwed G1/2	
<b>11</b>		capillary length	1 m	
<b>12</b>			1.6 m	
<b>13</b>			2.5 m	
<b>14</b>			4 m	
<b>21</b>			5 m	
<b>15</b>			6 m	
<b>23</b>			7 m	
<b>16</b>			8 m	
<b>17</b>			10 m	
<b>9</b>			others	
<b>7</b>	material	wetted parts stainless steel mat.-no. 1.4435 (316L)		
		<u>pressure transmission fluid</u>	<u>temperature range</u> <sup>4</sup>	
<b>L22</b>	system filling <sup>3</sup>	synthetic oil, free of silicone FD1, standard	-10...140 °C	
<b>L23</b>		synthetic oil, free of silicone FD1, pls. specify max. temperature	-40...230 °C	
<b>L15</b>		glycerine/water FGW	-30...110 °C	

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

order code (example): DF6140 - S4001 - A4007 - L22 - ...

<sup>1</sup> EHEDG certified only in connection with hygienic design (order ccode option HY)

<sup>2</sup> EHEDG certificate valid only if gaskets are used that are listed in the "EHEDG position paper"

<sup>3</sup> for more detailed information about pressure transmission fluids see TA\_038.

Please state temperature range to allow an accurate calculation of the system.

<sup>4</sup> max. media temperature for pressures > 0 bar rel.