



Features

- Circular diaphragm of stainless steel, slightly grooved, welded by laser
- Volume optimized diaphragm base
- Dead-zone free design
- Connection of measuring instrument:
 - directly welded
 - directly screwed
 - with temperature decoupler
 - with capillary

Options

- Material certificate acc. to DIN EN 10204-3.1
- Hygienic design with advanced surface quality
- Special materials upon request

Application area

- Food industry
- Pharmaceuticals
- Biotechnology

Application

Suitable for mounting to bourdon tube pressure gauges and pressure transmitters. The inline diaphragm seal is used mainly for dead-zone free measuring.

Technical Data

Process connections for pipes per DIN and Inch

sanitary connection per DIN 11851
 clamp connection per ISO 2852 and DIN 32676
 IDF connection per ISO 2853

Diaphragm seal material

basic body:
 st. steel mat. no. 1.4404 (316L)
 coupling nut:
 st. steel mat. no. 1.4301 (304)

Nominal pressure/nominal widths
 see table

Separating diaphragm

standard material stainless steel , further materials upon request

Measuring instrument connection

· directly welded/screwed
 · with temperature decoupler
 · with capillary
 see order code
 material stainless steel

Process temperature

dependent on measuring system, diaphragm seal filling liquid and installation.

Diaphragm seal filling liquid

see data sheet D5-003.
 Standard according to order code

Hygienic design

surface formation of wetted parts as per EHEDG guidelines
 ($R_a \leq 0.8 \mu\text{m}$)

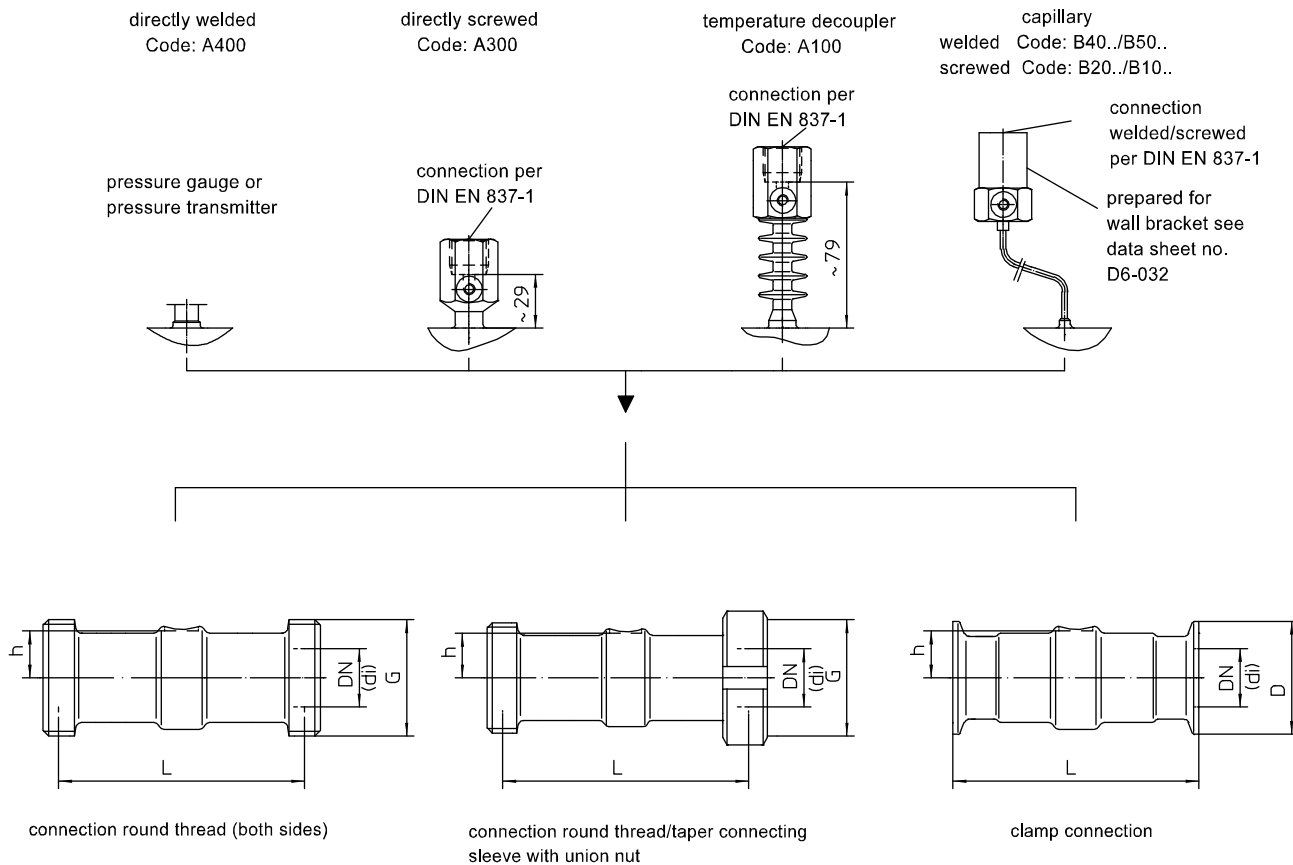
Installation instructions

see operating instructions BTA-062

Weights

with measuring instrument connection G 1/2 see table

Dimensions



Designs

sanitary connection for pipes per DIN 11850

- round thread on both sides per DIN 11851
- round thread/taper connecting sleeve with groove union nut per DIN 11851

clamp connection for pipes per DIN 11850

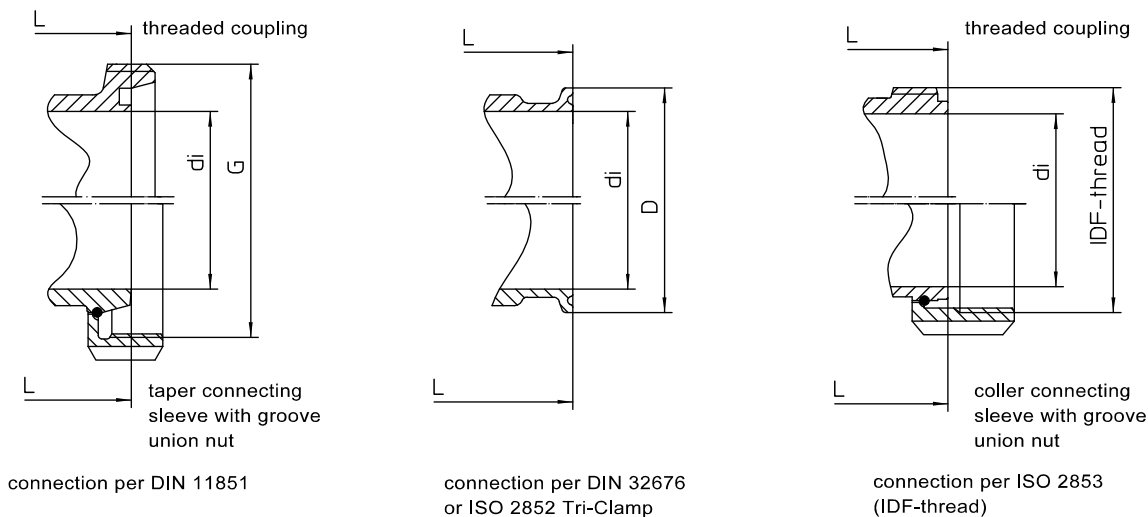
- connections per DIN 32676

IDF connection for pipes per BS 4825 Part 3 and O.D. Tube

- IDF-thread on both sides per ISO 2853

clamp connection for pipes per BS 4825 Part 3 and O.D. Tube

- per ISO 2852 Tri-Clamp



Inline diaphragm seals for pipes per DIN 11850

Dimensions

nominal diameter	length	inside diameter	standard connection	pressure gauge BH../BR..	temperature decoupler	sanitary connections				
						DIN 11851		DIN 32676		weight approx.
						nom. pres.	connection round thread per DIN 11851	Nenn-druck	clamp connection per DIN 32676	
DN	L	di	h	h1	h2	PN	thread	PN	D	[kg]
	[mm]	[mm]	[mm]	[mm]	[mm]		G [Rd]		[mm]	
15	240	16.0	44.0	100.0	92.0	40	34x1/8"	16	34.0	0.9
25	110	26.0	48.0	106.0	102.0	40	52x1/6"	16	50.5	0.9
32	110	32.0	53.0	111.0	107.0	40	58x1/6"	16	50.5	1.3
40	110	38.0	55.5	113.5	109.5	40	65x1/6"	16	50.5	1.4
50	110	50.0	61.0	119.0	115.0	25	78x1/6"	16	64.0	1.7
65	110	66.0	69.0	127.0	123.0	25	95x1/6"	10	91.0	2.1
80	110	81.0	75.5	133.5	129.5	25	110x1/4"	10	106.0	1.2
100	110	100.0	88.0	146.0	142.0	25	130x1/4"	10	119.0	1.3

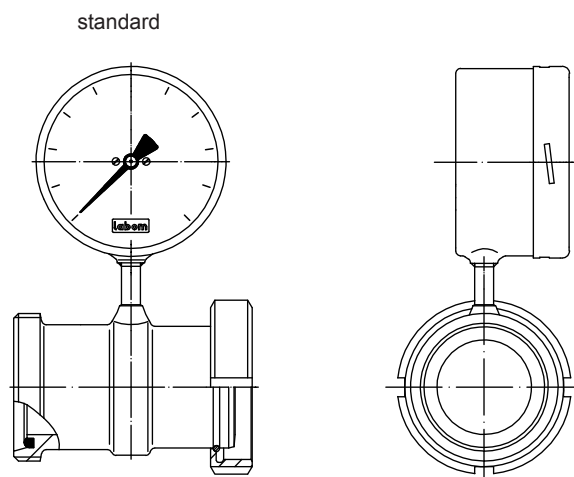
Inline diaphragm seals for pipes per BS 4825 Part 3 and O.D. Tube (suitable for pipes per ASME-BPE 1997)

Dimensions

nominal diameter	length	inside diameter	standard connection	pressure gauge BH../BR..	temperature decoupler	sanitary connections				
						IDF per ISO 2853		clamp connection per ISO 2852		weight approx.
						nom. pres.	IDF thread per ISO 2853	nom. pres.	clamp connection per ISO 2852	
DN	L	di	h	h1	h2	PN	IDF-thread	PN	D	[kg]
[inch]	[mm]	[mm]	[mm]	[mm]	[mm]		[Tr]		[mm]	
1"	25.4	110	22.2	48.0	106.0	40	37x3.175	16	50.5	0.9
1 1/2"	38.0	110	34.8	55.5	113.5	40	50.5x3.175	16	50.5	1.3
2"	51.0	110	47.8	61.0	119.0	25	64x3.175	16	64.0	1.7
2 1/2"	63.5	110	60.3	69.0	127.0	25	77.5x3.175	16	77.5	2.1
3"	76.1	60	72.9	75.5	133.5	25	91x3.175	10	91.0	1.2
4"	101.6	60	97.6	88.0	146.0	25	118x3.175	10	119.0	1.3

pipe dimensions within pipe tolerance

Fitting position



Order Details

- please give additional specifications for models not listed -

Inline diaphragm seal for food/pharmaceutical/biotechnology

design	for pipes per DIN 11850								
	· round thread on both sides per DIN 11851							DF11 ..	
	· round thread/taper connecting sleeve with groove union nut per DIN 11851							DF12 ..	
	· clamp connection per DIN 32676							DF31 ..	
nominal width	process connection insertion length L pipe inside-Ø di								
	· DN 15	240 mm	16 mm					00	
	· DN 25	110 mm	26 mm					10	
	· DN 32	110 mm	32 mm					20	
	· DN 40	110 mm	38 mm					30	
	· DN 50	110 mm	50 mm					40	
	· DN 65	110 mm	66 mm					50	
	· DN 80	60 mm	81 mm					60	
design	for pipes per BS 4825 Part 3 and O.D. Tube (suitable for pipes per ASME-BPE 1997)								
	· IDF thread on both sides per ISO 2853							DF41 ..	
nominal width DN	process connection insertion length L pipe inside-Ø di								
	· 1"	110 mm	22.2 mm					10	
	· 1 1/2"	110 mm	34.8 mm					30	
	· 2"	110 mm	47.8 mm					40	
	· 2 1/2"	110 mm	60.3 mm					50	
	· 3"	60 mm	72.9 mm					60	
	· 4"	60 mm	97.6 mm					70	
	surface roughness	· standard							
· hygienic version as per EHEDG guidelines							HY		
connection of measuring instrument	· directly	· welded						A400 ..	
		· screwed G 1/2						A300 ..	
	· with temperature decoupler A100	· screwed G 1/2						A100 ..	
	· with capillary	· welded							B40 .. ←
		· screwed G 1/2							B20 .. ←
	· with capillary and protective tube	· welded							B50 .. ←
· screwed G 1/2								B10 .. ←	
wetted parts	· material diaphragm st. steel mat.-no. 1.4435 (316L), basic body st. steel mat.-no. 1.4404 (316L)							7	
system filling ¹	filling liquid		temperature range ²						
	· foodstuff oil FD1 (standard)		+10...+140 °C					L22	
	· foodstuff oil FD1, pls specify temperature, max.		-40...+200 °C					L23	
	· glycerine/water FGW		-20...+120 °C					L15	
additional features (to be indicated in case of need, only)									
material certificate acc. to DIN EN 10204-3.1, wetted parts								W1020	
Order code (example):								DF1140 A4007 L22	

capillary length	
length m	order-code
1	11
1.6	12
2.5	13
4	14
5	21
6	15
7	23
8	16
10	17
others	9

¹ Please check data sheet D5-003 for further information.

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

² max. temperature of liquid filling for abs. pressure > 1 bar