Diaphragm seal

screw-in thread

Type series DE1…

Application area

- Machinery construction
- Chemical and petrochemical industry
- General process technology

Features

- Flush-mounted separating diaphragm of stainless steel or special material
- Nominal pressure PN 400
- Volume optimised diaphragm base
- Connection to Zone 0
- 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

Application

Suitable for mounting to bourdon tube pressure gauges and pressure transmitters. The screw-type diaphragm seal is suited for measuring aggressive, highly viscous media and for high process temperatures.

Technical data

Constructional design

Basic body:	Volume reduced diaphragm base Material: stainless steel mat.-no. 1.4404/1.4435 (316L)
Diaphragm:	Flat diaphragm
Material wetted parts:	Diaphragm: See order details Basic body: Stainless steel mat.-no. 1.4404/1.4435 (316L)

Process connection

Design:
- Screw-in thread per DIN 3852, model A, G1/2 A, G3/4 A, G1 A, G1 1/2 A, G 2 A
- NPT connections per ASME B1.20.1 3/4", 1", 1 1/2", 2"

Further connections upon request.

Nominal pressure: PN 400

Nominal width: See table

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.

Temperature error

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

Tests and certificates

Connection to Zone 0: with flame arrester,

Ⓔx IIG IIC according to PTB 03 ATEX 4032 X

Weight

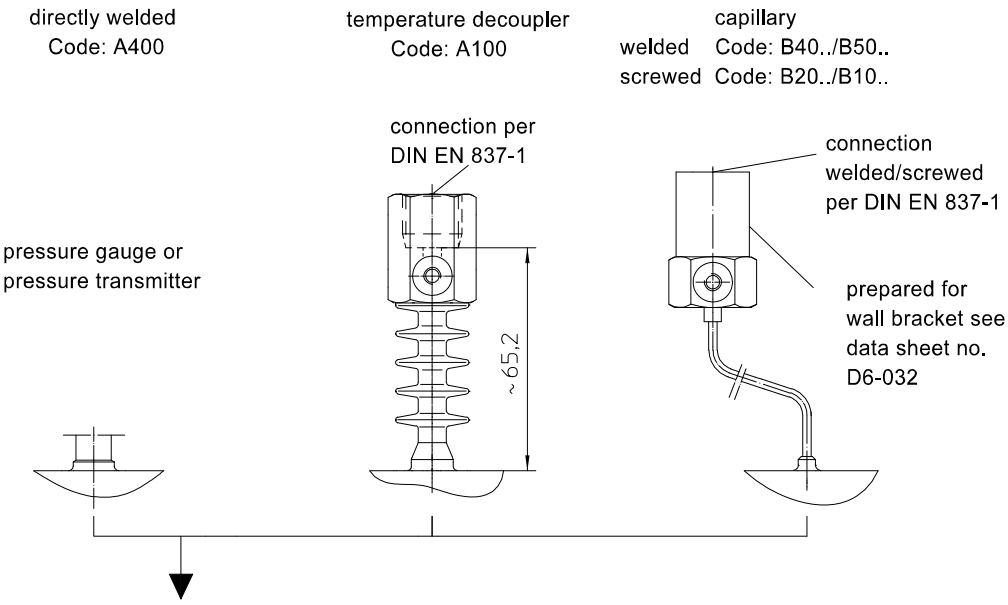
With measuring connection G1/2:

G1/2 A:	approx. 0.2 kg
G3/4 A:	approx. 0.3 kg
G1 A:	approx. 0.5 kg
G1 1/2 A:	approx. 1.0 kg
G2 A:	approx. 1.6 kg

Further information about diaphragm seals see general technical information TA_031.

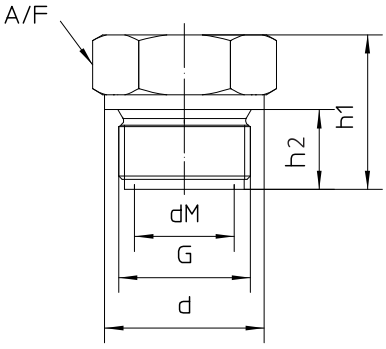
Measuring device connection

For screw-in thread per DIN 3852, model A



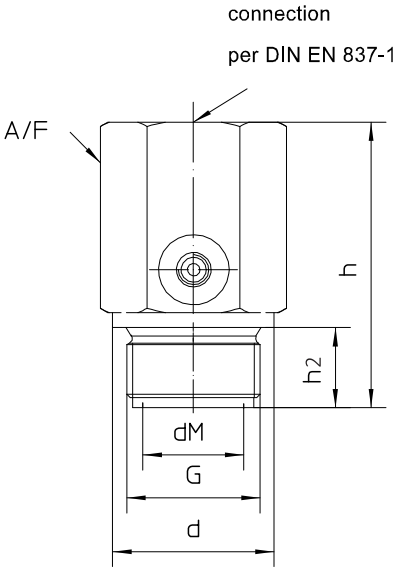
Dimensions

For screw-in thread per DIN 3852, model A



Dimensions (mm)						
G	**d**	**dM**	**h**	**h1**	**h2**	**A/F**
G1/2 A	26	17.5	55	27	14	27
G3/4 A	32	22.6	57	31	16	32
G1 A	39	27	59	33	18	41
G1 1/2 A	55	40	61	40	22	55
G2 A	68	51	64	42	24	70

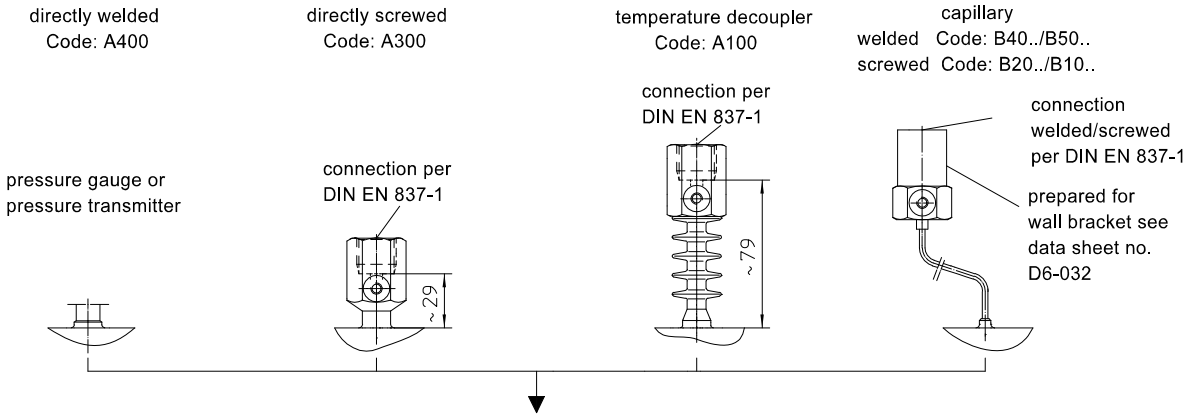
For screw-in thread per DIN 3852, model A, with measuring device connections directly screwed



Dimensions (mm)					
G	**d**	**dM**	**h**	**h2**	**A/F**
G1/2 A	26	17.5	55	14	27
G3/4 A	32	22.6	57	16	32
G1 A	39	27	59	18	41
G1 1/2 A	55	40	61	22	55
G2 A	68	51	64	24	70

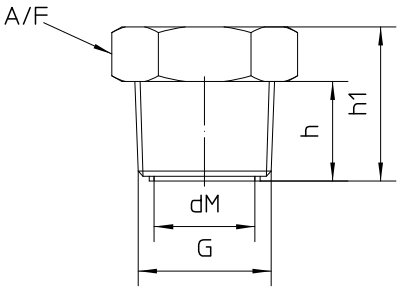
Measuring device connection

For NPT connections per ASME B1.20.1



Dimensions

For NPT connections per ASME B1.20.1



Dimensions NPT connections per ASME B1.20.1 (mm)				
G	**dM**	**h**	**h1**	**A/F**
3/4"	21	20	31	32
1"	27	25	40	41
1 1/2"	34	26	45	55
2"	46	26	45	65

Order details

Diaphragm seal screw-in thread
Type series DE1 . . .

Order details diaphragm seal DE1 . . .			
DE118 .	process connection PN 400 [1]	G1/2 A	
DE128 .		G3/4 A	
DE138 .		G1 A	
DE158 .		G1 1/2 A	
DE168 .		G2 A	
0	design	standard	
2		zone 0	
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
1	diaphragm material	stainless steel mat.-no. 1.4404/1.4435 (316 L)	
7		stainless steel mat.-no. 1.4435 (316L), basic body 1.4404 (316L)	
2		Tantal, basic body stainless steel mat.-no. 1.4404 (316L)	
3		Hastelloy C 276	
	system filling [2]	pressure transmission fluid	temperature range[3]
L22		synthetic oil, free of silicone FD1, standard	-10…140 °C
L23		synthetic oil, free of silicone FD1, pls. specify max. temperature	-40…230 °C
L31		high temperature oil FV3H	-10…400 °C

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

Order code (example): DE1380 - A4007 - L22 - ...

[1] further designs upon request
[2] for more detailed information about pressure transmission fluids see TA_038. Please state temperature range to allow an accurate calculation of the system.
[3] max. media temperature for pressure > 0 bar rel.