

Chemical seal type Q - flange with semi-closed diaphragm according to EN 1092-1/B and according to ANSI B16.5

Semi-closed flanges **type Q** offer the possibility of using larger diameter diaphragms on a chemical seal with a relatively small connection dimension.

The requirement for the size of the diaphragm results from the characteristics of the pressure gauge the diaphragm is used to protect. Larger diaphragms are needed, for example, for pressure gauges DN100 and larger, for capillary connected pressure gauges, for high temperature measurements or where higher measurement sensitivity is required.

The idea is that a liner is placed in the face of the flange, in which there is a conical cavity that creates an enlarged space at the diaphragm.

The composition of the chemical seal from several parts allows to select the individual materials so that the parts in contact with the measured medium have the necessary chemical resistance.

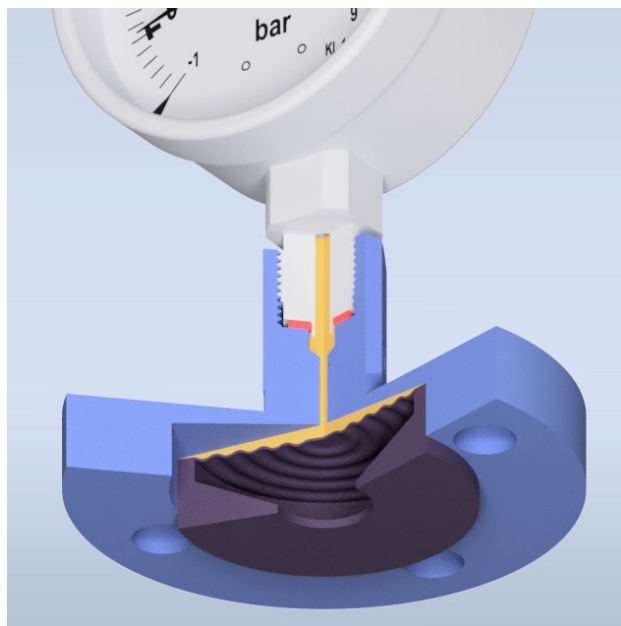
Also at the same time the whole has the necessary mechanical properties. Another feature is the possibility to minimize the need for materials with special resistance and thus the cost.

Depending on the materials of the individual parts of the chemical seal, two designs are used: **A** and **B**.

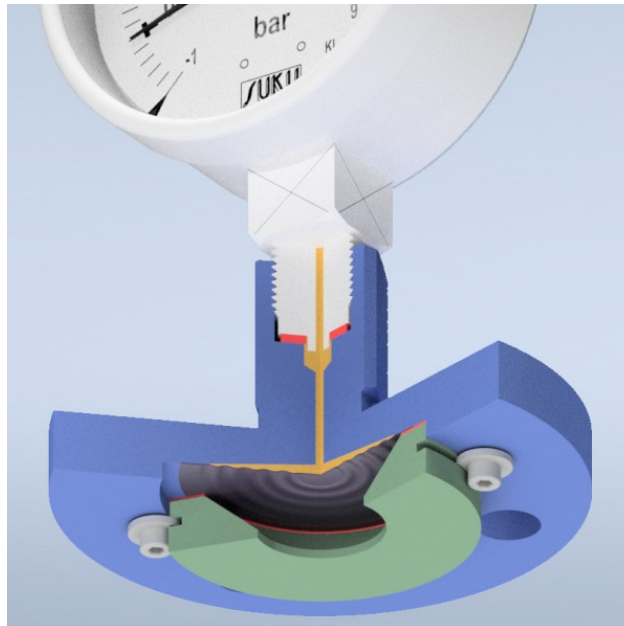
Connection method of pressure transmitter or pressure gauge

- direct connection (G1/2 "B internal acc. to EN837-1)
- direct connection with another thread
- capillary lines connected axially
- capillary line connected at an angle to the flange axis
- direct connection by welding
- connection with an intercooler up to 200°C
- connection by a cooler up to 400°C

Design A

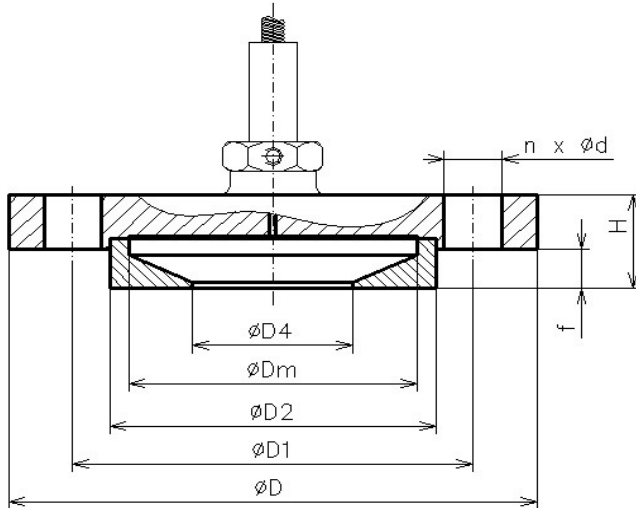


Design B

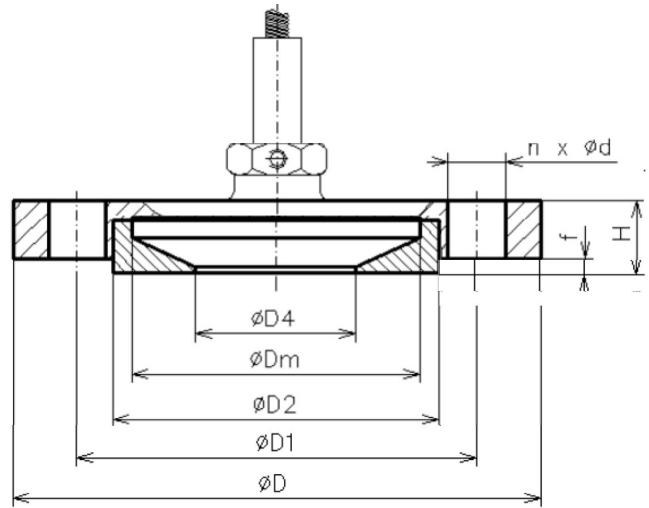


Design	Diaphragm	Lower part - spacer in contact with the medium
A	1.4435, Hastelloy C-276,	Stainless steel 1.4404, Hastelloy C-276
B	tantalum, nickel, titanium, Hastelloy C-276 Stainless steel 1.4435 (1.4571) stainless steel with PTFE foil stainless steel with PTFE coating (Xylan black, thickness 0.05 to 0.10 mm)	PVDF stainless steel with various types of protective coatings

Type Q Design A



Type Q Design B



EN 1092-1

Size		Dimensions (mm)						Design A		Design B	
DN	PN	Dm	D	n	d	D1	D2	H	f	H	f
15	10/40	42	95	4	14	65	45	22	3	23	11
20	10/40	52	105	4	14	75	58	22	3	25	11
25	10/40	60	115	4	14	85	68	22	3	25	11
40	10/40	60	150	4	18	110	88	24	3	27	11

Details for ordering

Type (or DN/PN) - design - diaphragm material - connection method of transmitter/pressure gauge - special requirements

Example (see photo on the right)

Type Q25 - B - Tantalum diaphragm - Thread G1/2" - PVDF spacer

Further details for ordering the assembly of the chemical seal with pressure transmitter or pressure gauge:

Type of pressure transmitter / pressure gauge - Measured pressure range (static pressure, difference) - Operating temperature of medium and environment (min, max) - Required measurement accuracy - Working fluid requirements - Special requirements

