

Chemical seal type P (flange) / S (sandwich) with flushed diaphragm flange

Diaphragm made of special metal

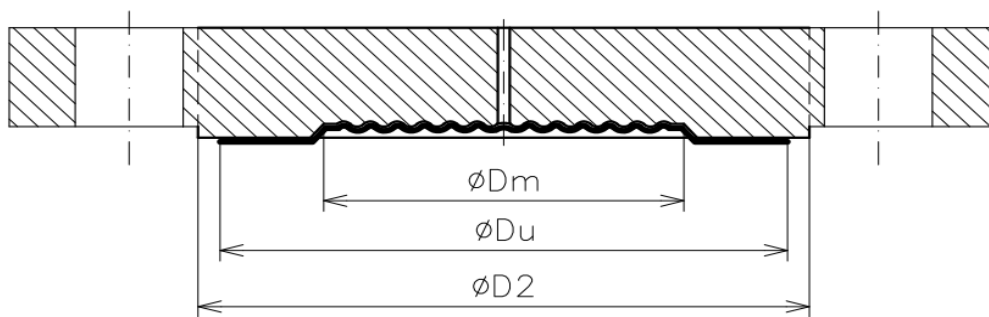
It is used in demanding applications where it is necessary to guarantee that the wetted part of the chemical seal is only made of chemically resistant material - i.e. pressure measurement of acids, alkalis, etc.

Diaphragm material

- Tantalum
- Hastelloy C276
- Titanium
- Nickel
- Stainless steel grades 316Ti/1.4571, 304/1.4301

Dimensional standard

- flange / sandwich with front face according to **EN 1092-1 / B** or **ANSI B 16.5 / RF**



Flange size	Dimensions [mm]		
	ØD2	ØDu	ØDm
DN 15 / PN 40	47	45	23
DN 25 / PN 40	68	60	34
DN 40 / PN 40	88	78	48
DN 50 / PN 40	102	89	60
DN 80 / PN 40	138	114	89
1" / 150-300	51	48	34
1 ½" / 150 – 2500	73	68	48
2" / 150 – 2500	92	78	60
3" / 150 – 2500	127	114	89

The weld is on the diameter of the ØDu and is located at the point where it is covered by the gasket after assembly. Between ØDu and ØDm diameters, the diaphragm is additionally nailed in several circles (to prevent filling fluid from getting underneath)

A diaphragm made of special material can also be welded to other types of separators - however, the weld must be covered with a gasket after installation (e.g. most often **the Clamp separator**).

Diaphragm with glued PTFE foil

It is used when it is necessary to guarantee that the wetted part of the chemical seal is only made of PTFE material. The advantage of the foil is the relatively thick PTFE layer, which resists well chemically and mechanically to the measured medium. The foil cannot be used for vacuum measurements (it would peel off).

- PTFE foil thickness: 0.25 mm, 0.5 mm
- the protective layer is always over the entire front surface, i.e. up to Ø D2

Diaphragm with vulcanised rubber

It is a special protection especially against abrasion, in combination with vacuum.
The diaphragm is stainless steel + protective layer: vulcanized rubber (NBR), layer 3 mm.

Diaphragm with coating

Suitable for applications where it is necessary to guarantee that the wetted part of the chemical seal is only non-metallic special material. The Diaphragm is stainless steel + protective layer. Advantageous for use also for vacuum measurement. However, the layer is susceptible to mechanical damage.

Coating:

- PTFE (Xylan 1088) layer thickness: 0.1 mm
- ECTFE (Halar) layer thickness: 0.3 mm
- The protective layer is always over the entire front surface, i.e. up to $\varnothing D2$.
- **coating can be done on any type of chemical seal**

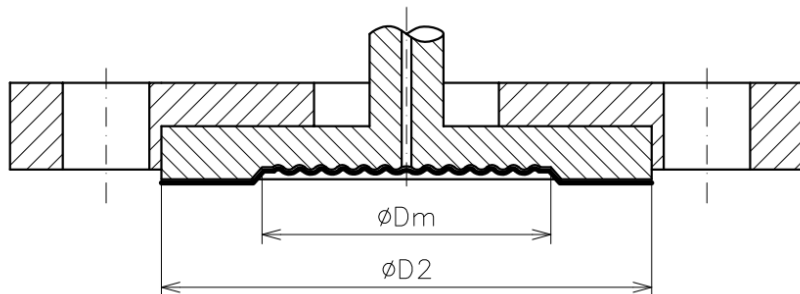
Diaphragm with electroplating, ceramic coating or tantalum plating

It is used where it is necessary to guarantee that the wetted part of the separator is only made of special material.

The diaphragm is made of stainless steel + protective layer:

- electroplating: 24 carat gold, layer approx. 3 μm
- ceramic layer, thickness 5 μm (material CrVTiAlN)
- tantalum plating: layer approx. 0.1 mm
- The protective layer is always over the entire front surface, i.e. up to $\varnothing D2$
- **both the plating and the ceramic layer can be applied to any type of chemical seal**

The flange is manufactured in a separable design - i.e. with a pressure flange:



The tube, if flanged, is produced in a split version - i.e. with a pressure flange.
The protective layer is all over the tube, including the sealing surfaces.

