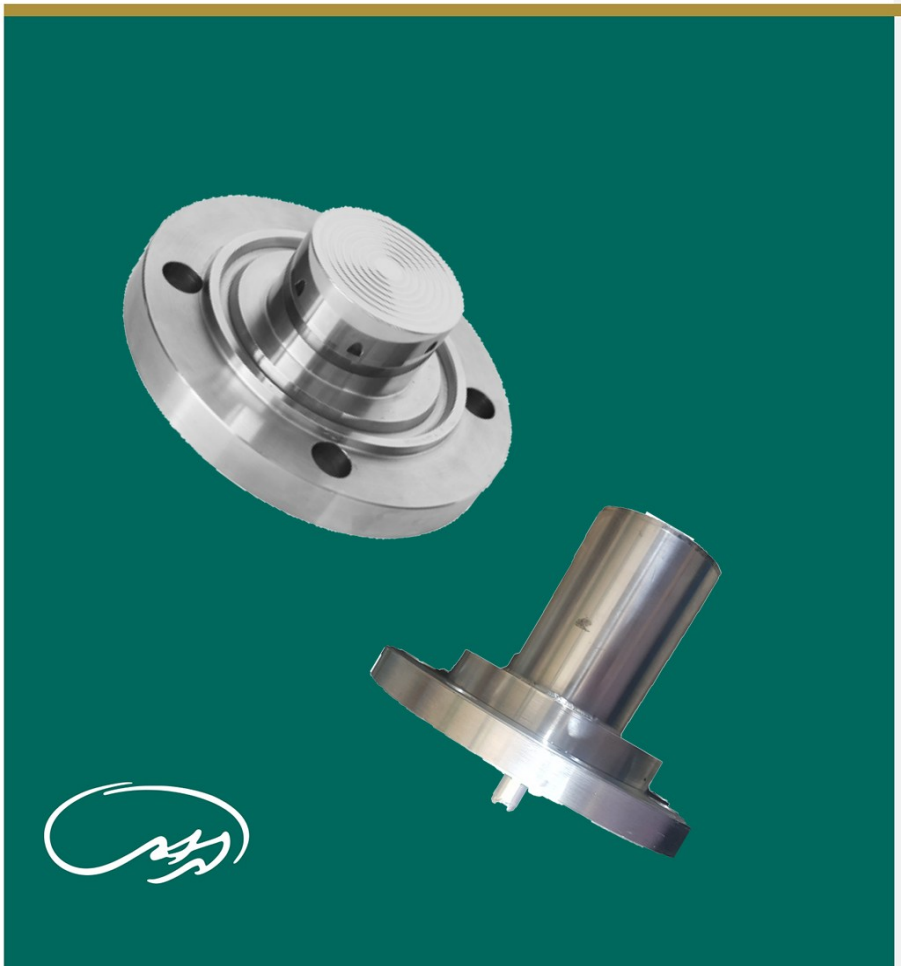
PRESSURE MEASURING

WITH EXT DIAPHRAGM



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Introduction



The EXT diaphragm seal is typically used in combination with (differential) pressure transmitters for level, flow and pressure measurement, in those applications where the diaphragm needs to be flush with the vessel wall or where insulation layers need to be passed. The EXT is recommended when extended seals are required fully in exotic materials and/or when special grade cover flanges are required for pressure and temperature ratings. The seal body is made of Bar stock or forged material. Its pressure rating is defined by the back-up flange and as such it can be used for pressure ratings determined by the licensor. This design is often used in UREA and fertilizer industry.

Size, rating and Facing

Flange & Extension materials

The threaded flange can be supplied in several materials. Some of the standard materials are:

Flanged Material	Extension Material	Diaphragm Material
AISI 316(L)	AISI 316(L)	AISI 316L Alloy C276 Tantalum Monel 400 Inconel 625
AISI 304L or AISI 316(L)	AISI 304L	AISI 316L
AISI 310 or AISI 316(L)	AISI 310	AISI 316L
AISI 321 or AISI 316(L)	AISI 321	AISI 316L
Alloy 625 or AISI 316(L)	Alloy 625	Alloy 625
AISI 316(L)	Alloy 825	Alloy 625
Alloy C-276 or AISI 316(L)	Alloy C-276	Alloy C-276
Duplex F51/F60 or AISI 316(L)	Duplex F51/F60	AISI 316L
Duplex F53 or AISI 316(L)	Duplex F53	AISI 316L
AISI 316(L)	AISI 316(L) Monel Alloy 625	Nickel 200 Monel 400 Inconel 625
Titanium Gr. 2	Titanium Gr. 2	Titanium Gr. 2

Flange size, rating

ASME B16.5 Size	Rating	Facing
1" to 4" (DN20 to DN100)	cl. 150 - cl. 2500 (PN10-400)	RF, LMF, FF, SGF RJF, SFF SMF, LTF, STF, LGF, LFF

Specification

Gold coating

Several types of gold coating can be applied on the seals. The selection choices are:

- 25 µm chemical resistance
- 40 µm chemical resistance

Polymer coating

Polymer coatings come in several types. The technical data on thickness and temperature limitation can be found in datasheet “polymer solutions” The applicable selection on BF seals are:

- PTFE coating
- Ceramic coating

Capillary tube and armor (protection)

The standard capillary tube mounting position is top side (axial) of the seal. Alternatively, the capillary can be placed at the side of the seal (radial). The standard tube material is TP316 (316SS). There are three options in ID of the capillary tube 1mm. Aramak capillaries are always protected against mechanical forces by armor. This double shielded armor is consistent witn standard AISI 304, and optionally AISI 316. Additionally, the armor could be protected with a PVC sleeve in white, black, preferably with yellow to protect against dust and water ingress and possible corrosive ambient atmosphere.



Cover Flange

The DFW will be clamped to the process. This can be done with a standard blind flange. However, positioning the seal in line with the flange and gasket will be challenging. Therefore, Aramak offers the option for a cover flange. This flange has a groove to fit the seal part, and fixing holes to fix the seal into the flange. Details can be found in the dimensions section.

Material Certification

Material traceability and related certification are applicable for all process wetted parts. Material certification possibilities depend on the type of seal, the assembly construction and the materials used. Material certification is in accordance with EN10204 3.1. Additional material certification and testing can be provided on request, such as Positive Material Identification (PMI), NACE conformity for ISO-15156 (MR-0175) and/or ISO-17945 (MR-0103), and many more.

Material limitations

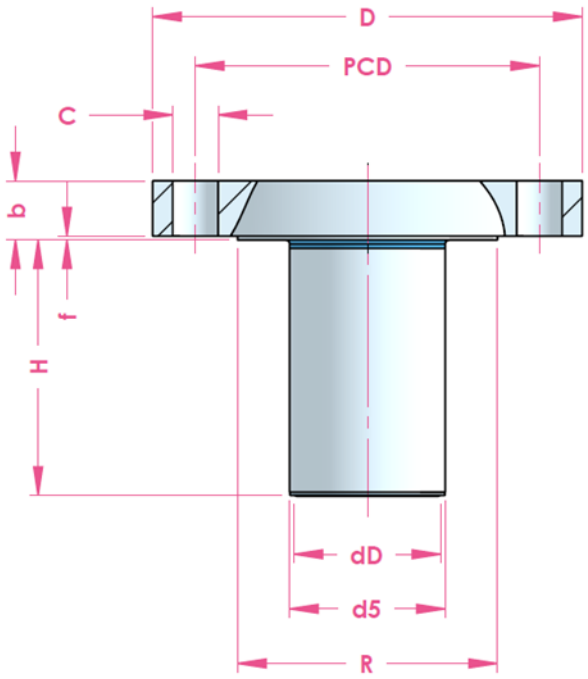
Zirconium and Titanium versions of the EXD cannot be welded with stainless steel. This results in a screwed connection. For this occasion we developed a special connection based on the high pressure connection.

Lifting handles

Larger sizes and ratings of diaphragm seals can weigh up to 50 kg. Handling and installation can become a challenge. As from 15kg it is recommended to apply a set of lifting handles, welded on the sides of the flange of the seal. This can be used to handle it easier and install it in a safer way or attach lifting tools to it.

Dimensions table

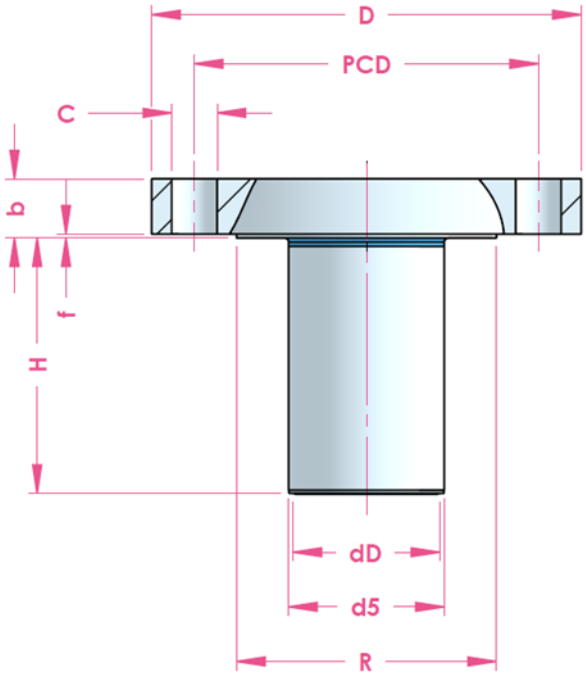
ASME 16.5 RF facing



size	rating	D	b	PCD	C / pcs	dD	d5	R	F
1.5"	cl. 150	127.0	18	98.6	16 / 4x	35.0	38.0	73.0	1.5
	cl. 300 cl. 400-600	155.0	21 29	114.3	22 / 4x				
	cl. 900-1500	178.0	39	124.0	29 / 4x				6.5
	cl. 2500	203.0	52	146.0	32 / 4x				
2"	cl. 150	152.0	19	120.6	19 / 4x	45.0	48.0	92	1
	cl. 300 cl. 400-600	165.0	23 33	127.0	19 / 8x				
	cl. 900-1500	216.0	45	165.1	25 / 8x				6.5
	cl. 2500	235.0	58	171.4	29 / 8x				
3"	cl. 150	190.0	25	152.4	19 / 4x	75.0	78.0	127.0	1.5
	cl. 300 cl. 400-600	210.0	29.0 39	168.1	22 / 8x				
	cl. 900	241.0	45	190.5	26 / 8x				6.5
	cl. 1500	267.0	55	203.2	32 / 8x				
	cl. 2500	305.0	74	228.6	35.0 / 8x				
4"	cl. 150	229.0	25	190.5	19 / 8x	89.0	93.0	157	1.5
	cl. 300 cl. 400	254.0	32 42.0	200.2	22 / 8x				
	cl. 600	273.0	45	215.9	22 / 8x				
	cl. 900	292.0	52	235.0	32 / 8x				6.5
	cl. 1500	311.0	61.0	241.3	35 / 8x				
	cl. 2500	356.0	83	273.0	41 / 8x				

Dimensions table

EN 1092-1 B1 type



size	rating	D	b	PCD	C / pcs	dD	d5	R	f
DN40	PN10-40	150.0	18.0	110.0	18.0 / 4x	35.0	38.0	88.0	3.0
	PN63-100	170.0	26.0	125.0	22.0 / 4x				
	PN160		28.0						
	PN250	185.0	34.0	135.0	26.0 / 4x				
	PN320	195.0	38.0	145.0					
	PN400	220.0	48.0	165.0	30.0 / 4x				
DN50	PN10-40	165.0	20.0	125.0	18.0 / 4x	45.0	48.0	102.0	3.0
	PN63	180.0	26.0	135.0	22.0 / 4x				
	PN100	195.0	28.0	145.0	26.0 / 4x				
	PN160		30.0						
	PN250	200.0	38.0	150.0	26.0 / 8x				
	PN320	210.0	42.0	160.0					
	PN400	235.0	52.0	180.0	30.0 / 8x				
DN80	PN10-40	215.0	24.0	160.0	18.0 / 8x	75.0	78.0	138.0	3.0
	PN63		28.0	170.0	22.0 / 8x				
	PN100	230.0	32.0	180.0	26.0 / 8x				
	PN160	230.0	36.0						
	PN250	255.0	46.0	200.0	30.0 / 8x				
	PN320	275.0	55.0	220.0					
	PN400	305.0	68.0	240.0	33.0 / 8x				
DN100	PN10-16	220.0	20.0	180.0	18.0 / 8x	89.0	93.0	158.0	3.0
	PN25-40	235.0	24.0	190.0	22.0 / 8x				
	PN63	250.0	30.0	200.0	26.0 / 8x				
	PN100	265.0	36.0	210.0	30.0 / 8x			162.0	
	PN160		40.0						
	PN250	300.0	54.0	235.0	33.0 / 8x				
	PN320	335.0	65.0	265.0	36.0 / 8x				
	PN400	370.0	80.0	295.0	39.0 / 8x				

Ordering Code Information

Please check the order code in our website. (Click here)

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