



PRESSURE MEASURING WITH DWF DIAPHRAGM



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Introductions

The DFW construction has a seal body that is made of bar stock or forged material. The weld of the diaphragm to the seal body is a wetted part and therefore diaphragm materials are mostly chosen the same as the flange material. Its pressure rating is defined by the cover flange and as such it can be used for all pressure ratings in all facings.



Applications

The diaphragm is Laser-welded to the body and is designed to have the best performance for the specific size. This means that the flexibility and shape is carefully tested and measured. The standard thickness of diaphragm foil is 0.1mm

Body Material	General name
AISI 316(L)	AISI 316L Alloy C276 Tantalum Monel 400 Inconel 625
AISI 304L	AISI 316L
AISI 310	AISI 316L
AISI 321	AISI 316L
Alloy 625	Alloy 625
Alloy 825	Alloy 625
Alloy C-276	Alloy C-276
Duplex F51/F60	AISI 316L
Duplex F53	AISI 316L
Nickel 201	Nickel 201 Monel 400 Inconel 625
Titanium Gr. 2	Titanium Gr. 2



Specification

Gold coatings

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

- 25 μm chemical resistance
- 40 μm chemical resistance

Polymer coatings

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 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 1mm. Aramak capillaries are always protected against mechanical forces by armor. This doubled shielded armor consist is standard AISI 304, and optionally AISI 316. Additionally, the armor could be protected with a PVC sleeve in white, black, optionally with Yellow to protect against dust and water ingress and possibly corrosive ambient atmosphere.



Flush rings and flush flanges

Aramak offers matching flush rings or flush flanges to their diaphragm seal. On request equipped with blind plugs, vent plug and or flushing / draining needle valves, which can be fitted or welded to the complete construction.

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 dimension's section.

Material Certification

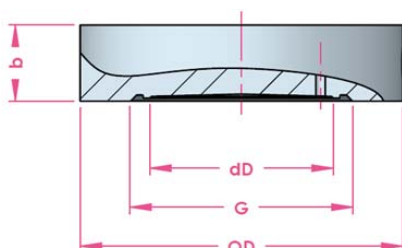
Material traceability and related certification are applicable for all process wetted parts. Material certification possibilities depend on the type of seal, the assembly construction and the materials used. Material certification is in accordance with EN10204 3.1 Additional material certification and 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.





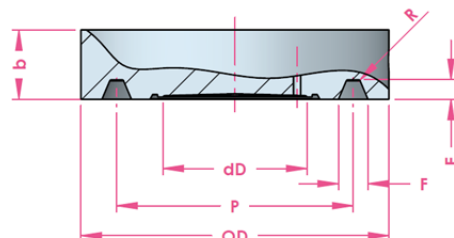
Dimensions table

ASME 16.5 RF facing



size	rating	OD	dD	b
1"	cl. 150-2500	51	35.0	24.0±1
1.5"	cl. 150-600	73.0	46.0	
	cl. 900-2500		54.0	
2"	cl. 150-600	92	54.0	
	cl. 900-2500		75.0	
3"	cl. 150-2500	127.0	89.0	
4"	cl. 150-2500	158		

ASME 16.5 RTJ

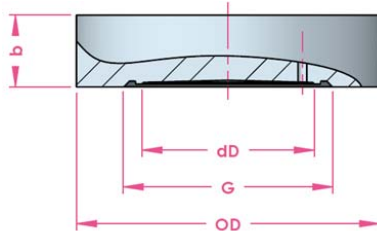


size	rating	OD	dD	b	E	F	P	
1"	cl. 150	63.5	35.0				47.63	
	cl. 300	70.0					50.80	
	cl. 400-600	71.5						
	cl. 900-1500	82.5					60.33	
1.25"	cl. 150	73.0			6.35	8.74	57.15	
	cl. 300	79.5					60.33	
	cl. 400-600	81.0						
	cl. 900-1500	102.0					7.92	11.91
1.5"	cl. 150	82.5	46.0		7.92	11.91	65.07	
	cl. 300	90.5					68.27	
	cl. 400-600	92.0						
	cl. 900-1500	114.0					6.35	8.74
2"	cl. 150	102.0	28.0±1		7.92	11.91	82.55	
	cl. 300	108.0						
	cl. 400-600	124.0					6.35	8.74
	cl. 900-1500	133.0					7.92	11.91
3"	cl. 150	146.0			6.35	8.74	101.60	
	cl. 300	156.0					114.30	
	cl. 400-600	168.0						
	cl. 900	171.0					7.92	11.91
4"	cl. 1500	175.0	75.0		9.53	13.49	136.53	
	cl. 2500	181.0					127.00	
	cl. 150	194.0						
	cl. 300	203.0					6.35	8.74
4"	cl. 400	175.0	89.0		7.92	11.91	149.23	
	cl. 600	181.0						
	cl. 900	194.0						
	cl. 1500	203.0					11.13	16.66
							157.18	



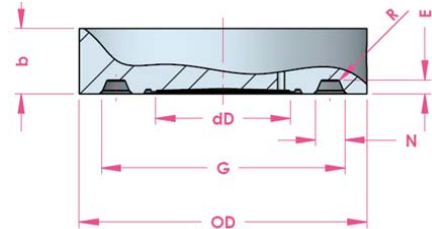
Dimensions table

EN 1092-1 B1 type



size	rating	OD	dD	b
1"	cl. 150-2500	51	35.0	24.0±1
1.5"	cl. 150-600	73.0	46.0	
	cl. 900-2500		54.0	
2"	cl. 150-600	92	54.0	
	cl. 900-2500		75.0	
3"	cl. 150-2500	127.0	89.0	
4"	cl. 150-2500	158		

ISO 10423 6BX Type



size	rating	OD	dD	b	E	N	G
1-13/16"	69MPa	105.0	32.0	28.0	5.6	11.8	77.7
	103,5MPa	106.0					
	138MPa	117.0					
2-1/16"	69MPa	111.0	44.0	28.0	5.9	12.7	86.2
	103,5MPa	114.0					
	138MPa	132.0					
2-9/16"	69MPa	132.0	57.0	28.0	6.8	14.1	102.7
	103,5MPa	133.0					
	138MPa	151.0					
3-1/16"	69MPa	152.0	72.0	28.0	7.5	15.4	119.0
	103,5MPa	154.0					
	138MPa	171.0					



Ordering Information

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



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