

DIAPHRAGM SEALS FOR PTX19, PTX130, DM650PM, DM670PM

- APPLICATIONS IN FOOD, PHARMA AND CHEMICAL INDUSTRIES
- EXOTIC METAL DIAPHRAGM AT REQUEST
- LOW VOLUME CAPACITY
- BACKUP DIAPHRAGM CONVOLUTION
- HELIUM LEAK TESTED



➤ INTRODUCTION

A range of hygienic diaphragm seal systems manufactured to the highest possible standard for use in all food, process, pharmaceutical and chemical applications. Modern chemical processing and process manufacturing procedures demand ever greater accuracy and reliability from their pressure measuring instruments. In order to minimise costs, both reject levels and production downtime must be kept to an absolute minimum. In some applications where there are chemical or hygiene considerations, it is necessary to isolate the pressure measuring instrument, usually a gauge or a transmitter, from the process medium.

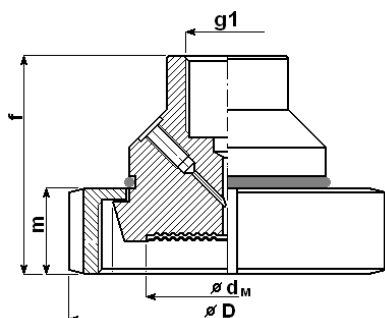
This isolation is achieved by using a pressure-sensitive diaphragm made from a material resistant to the process medium, enclosed in a system fitted to the base of the instrument. The space between the diaphragm and the measuring element in the instrument must be evacuated under a vacuum and filled with a suitable fill-fluid and sealed. The process pressure exerts a force on the outside face of the diaphragm. As the diaphragm flexes under this force, it pushes inwards and attempts to compress the fill-fluid within the instrument. This fill-fluid is designed to withstand compression so that the movement is channelled directly into the measuring element, producing a resultant reading on the gauge.

The entire operation of the diaphragm seal system is based on Pascal's Principle which states that a pressure exerted on a fluid is transmitted undiminished through that fluid and in every direction. For this process to work, the displacement force of the diaphragm must exceed the force required to move the measuring element in the instrument itself. In practice, this means that the smaller the force required to move the measuring element, the easier it is to construct an accurate seal system.

SPECIFICATIONS

Process connection	AISI316 stainless steel with following fitting: DN 25, 32, 40, 50, 65, 80
Diaphragm:	Electro polished AISI316L stainless steel. Laser welded
Seal fill	Non-toxic oil for food service FDA approved

CONNECTION TYPES



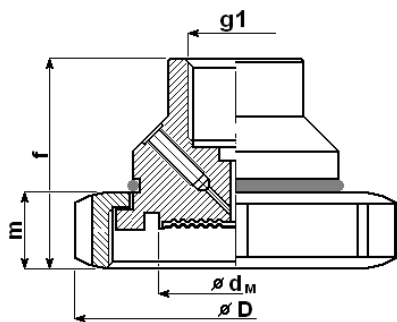
DIN – Standard 11851

DN 25-40 Max Working Pressure 40 bar

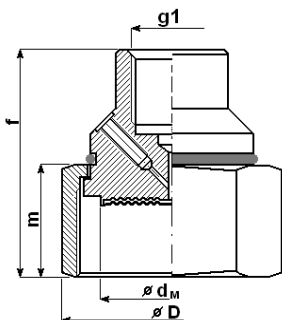
DN 50-80 Max Working Pressure 25 bar

DN	D	dM	f	m	g1	Weight / kg
25	63	28	54	21	1/2" BSP	1.2
32	70	34	54	21	1/2" BSP	1.3
40	78	38	53	21	1/2" BSP	1.3
50	92	46	48	22	1/2" BSP	1.7
65	112	52	54	25	1/2" BSP	2.1
80	127	72	59	29	1/2" BSP	2.6

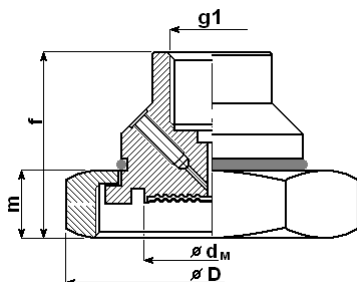
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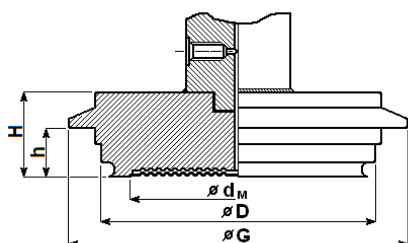
SMS – Standard 681 Max Working Pressure 25 bar						
DN	D	dM	f	m	g1	Weight / kg
1"	51	24	55.5	20	½" BSP	0.2
1 ½"	74	34	57	25	½" BSP	0.6
2"	84	46	62	26	½" BSP	1.0
2 ½"	100	52	62	30	½" BSP	1.3
3"	114	72	66	32	½" BSP	2



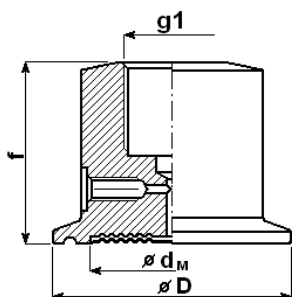
IDF/ISS – Standard BS 4825 Max Working Pressure 40 bar						
DN	D	dM	f	m	g1	Weight / kg
1"	52	24	66.5	30	½" BSP	0.7
1 ½"	64	34	66.5	30	½" BSP	1.5
2"	79	45	61.5	30	½" BSP	2.5



RJT/APV – Standard BS 4825 Max Working Pressure 40 bar						
DN	D	dM	f	m	g1	Weight / kg
1"	57	20	58.6	20	½" BSP	0.4
1 ½"	72	28	59.6	21	½" BSP	0.75
2"	86	38	60.6	22	½" BSP	1



VARIVENT® COMPATIBLE CONNECTION (Model TU) (registered trademark of Tuchenhausen GmbH) Max Working Pressure 25 bar						
	G	D	H	h	dM	Weight / kg
form F	66	50	19	12.3	40	0.9
form N	84	68	19	12.3	60	1.3



TRI-CLAMP – Standard ISO 2852 Max pressure dependant on size and clamp type used.					
Type / DN	D	dM	f	g1	Weight / kg
1"	50.5	23	37	½" BSP	0.9
1 ½"	50.5	34	37	½" BSP	0.9
2"	64	46	45	½" BSP	1.0
2 ½"	77.5	58	45	½" BSP	1.1
3"	91	69	45	½" BSP	1.3
4"	119	93	45	½" BSP	1.5

ORDER CODE	Model	Size
Example	Tri-Clamp	2"