

Diaphragm Seals Flange type with extension tube

Flange connection according to DIN EN, ASME or JIS

Membrane flush welded

MDM 7515v

MDM 7525v

Standard Version

Information on applications, properties, metrological influences such as temperature, level difference, floating time and others, can be found in model overview 7000. Furthermore, you will also find indications on other chemical seal versions.

Application

Diaphragm seals of the type series 75.. are suitable for aggressive, contaminated and hot media.

Numerous common pressure gauges of our supply programme can be equipped with these chemical seals, but also pressure switches, pressure transmitters and pressure transducers, depending on the nominal size of the chemical seal up to PN 40 resp. Class 300.

Construction

The diaphragm is welded free of dead space to the process side of the chemical seal.

Model 75..vd8 has an orifice d8 as instrument connection for welding to a pressure gauge with process connection d8x5, e.g. RCh 100 – 3vDW, cooling element or capillary line.

Leakage cannot occur at the welded connection of pressure gauge / upper part and the filling port, which is not accessible from the outside.

The parts can be easily cleaned externally.

Model 75..vG½ has a measuring instrument adapter with female thread for direct mounting to measuring instruments with male thread. The screwed connections pressure gauge / adapter and the filling port must not be loosened or opened at any time, or else filling fluid will leak and the measuring unit loses its efficiency.

NACE resp. Sour Gas Application

The material we use complies with the NACE MR 0175 standards (NACE 0103 upon request). Only material with test certification is used.



Sealing Face

DIN EN 1092-1 Form B, sealing face B1, flange stamped B, Raised Face (RF) for ASME B 16.5

Nominal Pressure

See tables on page 3

Minimum Span Pressure Gauges

See tables on page 3

t_κ-Value (mbar/10K) (Temperature Coefficient of the Chemical Seal)

See tables on page 3 (for silicone oil FA 1)

Accessories

Capillary line, cooling elements: see data sheet 7002
Process connection pieces and sealings do not belong to the standard supply programme, but are available upon request.

Construction / Filling / Certificates

Information on mounting, filling and certificates are available upon request.

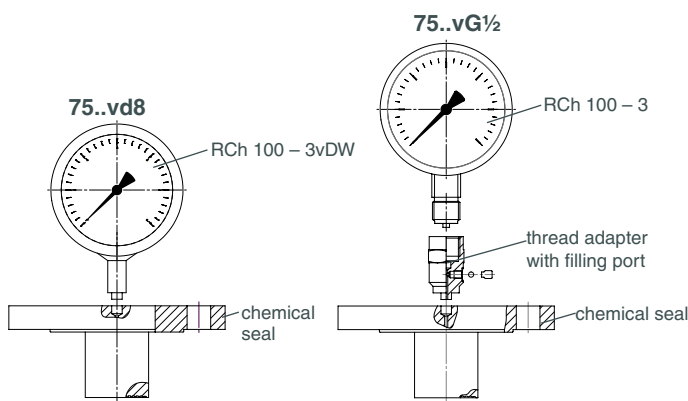
Ordering Information Chemical Seals

Please note our detailed ordering information

- in model overview 7000
- in the check lists for pressure measuring instruments with chemical seals and
- in the data sheets of the requested pressure measuring instrument and add the information for the respective chemical seal:
 - Model: e.g. MDM 7515vd8, MDM 7525vG½
 - Nominal case size: e.g. NPS 2", DN 25
 - Nominal pressure: e.g. Class 300, PN 40
 - Extension tube length (TuL), extension tube diameter (TuD) see tables on page 3

The reference temperature is +20 °C (+68 °F). Please indicate, if a working temperature (tA) deviating from +20 °C (+68 °F) max. is required (dial inscription tA...).

Example: Pressure gauge...,
Chemical seal: MDM 7515vd8, DN 50,
PN 40, TuL 100, TuD 76, tA +80 °C



Chemical Seal and Process Connection

Stainless steel 1.4404 (316 L)

Instrument Connection

75..vd8 : for welding to measuring instrument, capillary line or cooling element with welding connection (recommended for media temperatures higher than 100 °C (212 °F))

75..vG ½ : G ½ female

Diaphragm

Stainless steel 1.4435 (316 L) flush welded with chemical seal, He-leak detection up to 10⁻⁹ mbar l/s

Effective diaphragm diameter dM, see tables on page 3



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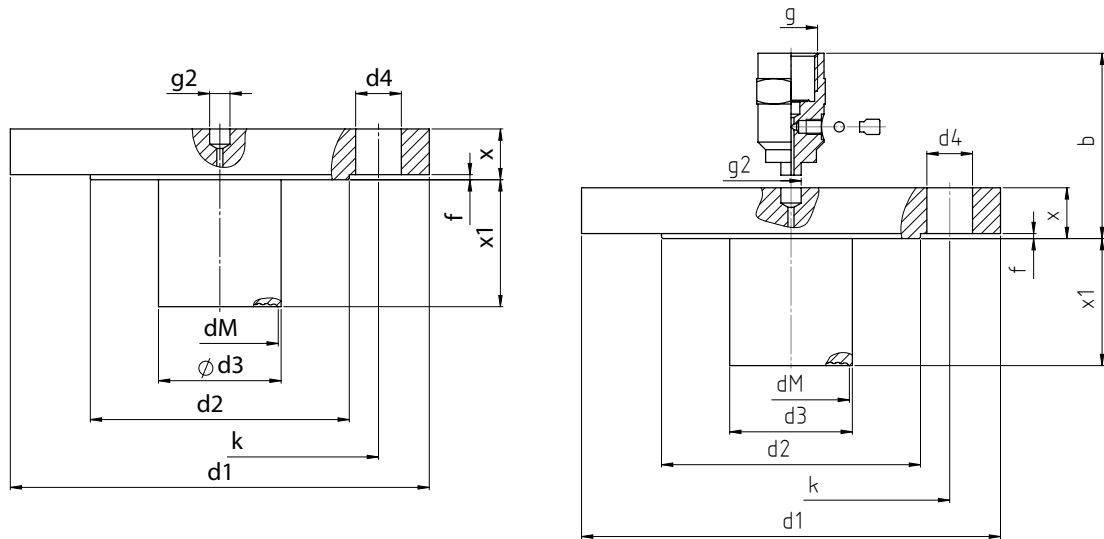
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Ordering Information, Further Options

Basic Models:		Diaphragm Seals				MDM 75..v
Instrument connection: orifice d8 for direct welding to measuring instrument, with cooling element or with capillary line					75..vd8	
G ½ female (½" BSP) option: G ¼ female (¼" BSP)					75..vG ½	
Chemical seal: Flange: stainless steel 1.4404 (316 L)		Flange	Extension tube	Sealing Face	Diaphragm	
	Standard					
	Stainless steel 316 L	stainless steel 316 L	stainless steel 316 L	stainless steel 316 L	stainless steel 316 L	Stainless steel 316 L
	Option wetted parts special material (lining)					
	Tantalum	stainless steel 316 L	Tantalum	Tantalum	Tantalum	Stainless steel 316 L / Tantalum
	Options flange stainless steel, wetted parts special material					
	Hastelloy C276	stainless steel 316 L	Hastelloy C276	Hastelloy C276	Hastelloy C276	Stainless steel 316 L / Hastelloy C276
	Monel 400	stainless steel 316 L	Monel 400	Monel 400	Monel 400	Stainless steel 316 L / Monel 400
	Options solid made of special material					
	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium
	Options wetted parts stainless steel, diaphragm special material					
	Tantalum	stainless steel 316 L	stainless steel 316 L	stainless steel 316 L	Tantalum	Stainless steel 316 L / Diaphragm Tantalum
	Hastelloy C276	stainless steel 316 L	stainless steel 316 L	stainless steel 316 L	Hastelloy C276	Stainless steel 316 L / Diaphragm Hastelloy C276
Monel 400	stainless steel 316 L	stainless steel 316 L	stainless steel 316 L	Monel 400	Stainless steel 316 L / Diaphragm Monel 400	
Process connection: according to DIN EN 1092-1 or ASME						
Further options:	Form of sealing face sealing face according to DIN EN 1092-1 Form B2, stamped B2, A, C, D, E, F, G, ASME RJF-circular groove					
	Other special materials upon request, e.g.					
		2.4617		Hastelloy B2		
		2.4610		Hastelloy C4		
		1.4462		Duplex		
		in the case configurations:				
		solid made of special material				
		flange stainless steel 316 L /				
		wetted parts made of special material				
		wetted parts stainless steel 316 L / diaphragm made of special material				
Coating on extension tube, diaphragm and sealing face						
	PFA					
	ECTFE					
	gold/rhodium (protection against hydrogen diffusion)					
	PTC					
Special versions:	other instrument connections upon request, whereas we do not recommend NPT female threads					
	other material combinations upon request					
	versions according to other standards (such as JIS), other sealing faces, shapes and nominal case sizes upon request					
	special extension tube length or extension tube diameter upon request					
	calculation of the temperature related additional error for the whole pressure measuring unit					

Dimensional Data (mm), Weight (kg), Minimum Span (bar) and t_k -Value (mbar/10K)

Flange Connection Similar to DIN EN 1092-1 Form B1 / ASME B16.5



MDM 7515v DIN EN 1092-1

DN	PN	b	d1	d2	TuD d3	d4	dM	f	g2	g	k	x	TuL x1	Minimum span	t_k -value	Weight (approx.)		
																vd8	vG½	
50	25/40	63	165	102	48.3	4xØ18	46				125	20	50	0 - 1 ¹⁾	0.45	3.44	3.67	
																100	3.76	3.99
																150	4.07	4.30
																200	4.37	4.60
80	10/16	63	200	138	76	8xØ18	72	3	d8	G½	160	20	50	0 - 0.6 ¹⁾	0.64	5.25	5.48	
													100			5.81	6.04	
													150			6.37	6.60	
													200			6.92	7.15	
	25/40	67										24	50			6.15	6.38	
													100			6.71	6.94	
													150			7.27	7.50	
													200			7.82	8.05	
100	10/16	63	220	158	94	8xØ18	80				180	20	50	0 - 0.6 ¹⁾	0.54	6.25	6.48	
													100			7.50	7.73	
													150			8.75	8.98	
													200			10.00	10.23	
	25/40	67										190	50			8.15	8.38	
													100			9.40	9.63	
													150			10.70	10.93	
													200			12.00	12.23	

MDM 7525v ASME B16.5

NPS	Class	b	d1	d2	d3	d4	dM	f	g2	g	k	x	x1	Minimum span	t_k -value	Weight (approx.)		
																vd8	vG½	
2"	150	62.1	152.4	91.9	48.3	4xØ19.1	46				120.7	19.1	50	0 - 1 ¹⁾	0.45	3.84	4.07	
													100			4.16	4.39	
													150			4.47	4.70	
													200			4.77	5.00	
3"	150	66.9	190.5	127	76	4xØ19.1	72	1.6	d8	G½	152.4	23.9	50	0 - 0.6 ¹⁾	0.64	6.01	6.24	
													100			6.56	6.79	
													150			7.12	7.35	
													200			7.67	7.90	
	300	71.4	209.6				8xØ22.4					168.1	28.4	50			7.90	8.13
														100			8.46	8.69
														150			9.02	9.25
														200			9.57	9.80
4"	150	66.9	228.6	157.2	94	8xØ19.1	80				190.5	23.9	50	0 - 0.6 ¹⁾	0.54	8.63	8.86	
													100			9.90	10.13	
													150			11.15	11.38	
													200			12.40	12.63	
	300	74.8	254				8xØ22.4					200.2	31.8	50			13.13	13.36
														100			14.40	14.63
														150			15.65	15.88
														200			16.91	17.14

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¹⁾ for Bourdon tube pressure gauges NCS 100
²⁾ for Bourdon tube pressure gauges RCh / RChG 100 - 3 without limit switch contact assembly