

Diaphragm Seals for food / bio / pharmaceutical industries

SÜDMO (W 500 D), Ingoldstutzen, APV In-Line, NEUMO BioControl®, Varivent® (for Varinline® case), Clamp DIN 32676 Series C

MDM 73..
MDM 73..v

Information on applications, features, metrological influences such as temperature, level difference, floating time, etc., can be found in model overview 7000. Furthermore, you will find information on other chemical seal versions.

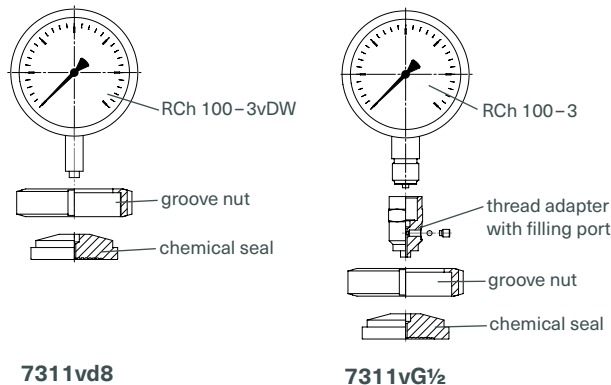
Construction

Model 73..vd8 has an orifice d8 as instrument connection for welding to a pressure gauge with process connection d8x5, e.g. RCh 100–3vDW.

Leakage cannot occur at the welded connection of pressure gauge / chemical seal and the filling port that is not accessible externally. The parts can be easily cleaned externally.

Model 73..vG½ has a gauge adapter with female thread for direct mounting to measuring instruments with male thread.

The screwed connections pressure gauge / chemical seal and the filling port must not be loosened or opened, as otherwise filling fluid leaks and the pressure measuring unit loses its functional capability.



Minimum Span Pressure Gauges

See tables on page 2 and 3

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

See tables on page 2 and 3 (for vegetable oil FN 1)

Options

- Wetted parts R_a < 0.4 µm
- Wetted parts electropolished
- Reinforced groove nut
- Calculation of the temperature-related additional error for the entire pressure measuring system

Standard Versions

Chemical Seal and Process Connection

Stainless steel 316L (1.4435)

Instrument Connection

73..vd8 orifice d8
73..vG½ G ½ female

Diaphragm

Stainless steel 316L (1.4435) flush welded with chemical seal
Helium leak detection up to 10⁹ mbar l/s
Effective diaphragm diameter dM, see tables on page 2 and 3

Surface Roughness of the Wetted Parts

R_a < 0.8 µm

Union Nut (if applicable)

Stainless steel

Nominal Pressure

See tables on page 2 and 3

Special Versions Upon Request

- Other instrument connections, whereas we do not recommend NPT female threads
- Other material combinations
- Versions according to other standards and nominal widths

Accessory

Capillary line, cooling elements see data sheets 7.7002 and 7.7003
Other accessory available upon request

Mounting / Filling / Certificates

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

Ordering Information Chemical Seals

See page 4

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7301

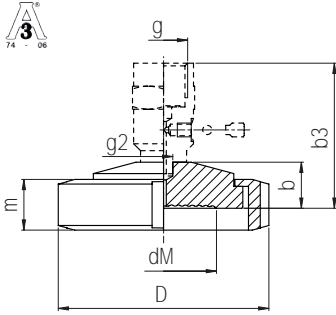
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Dimensional Data (mm), Weight (kg), Minimum Span (bar) and t_k -value (mbar /10K)

Groove Union Nut

MDM 7311v... Südmo W500

form A for tubes according to DIN 11866 – series A (DIN 11850)

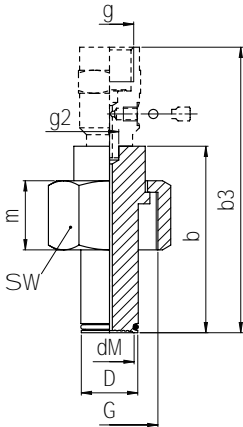


DN	PN	for outer tube Ø x wall thickness	inner tube Ø	b	b3	D	dM	d ¹⁾	g	g2	m	minimum span	t_k -value	approx. weight	
														vd8	vG $\frac{1}{2}$
25		29 x 1.5	26			63	21	23				0 - 4 ²⁾	5.50	0.32	0.45
32	25	35 x 1.5	32			70	28	30			21	0 - 2.5 ²⁾	2.30	0.37	0.50
40		41 x 1.5	38			78	34	36				0 - 1 ²⁾	1.20	0.50	0.63
50		53 x 1.5	50	20	63	92	46	48	G $\frac{1}{2}$	Ø 8	22	0 - 1 ³⁾	0.45	0.85	0.98
65	20	70 x 2	66			112	60	62			25	0 - 0.6 ³⁾	0.82	1.28	1.41
80		85 x 2	81			127	72	75			29	0 - 0.6 ³⁾	0.64	1.39	1.52

Hexagon Union Nut

MDM 7319.10v... Ingoldstutzen

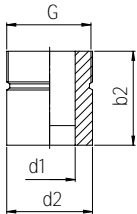
suitable for welding connection pieces



DN	PN	for outer tube Ø x wall thickness	inner tube Ø	b	b3	D	dM	d ¹⁾	g	g2	G	m	SW
25	60	29 x 1.5	26	71	114	25	21	23	G $\frac{1}{2}$	Ø 8	1 $\frac{1}{4}$	30	46
50		53 x 1.5	50	85	128	50	46	48			2	35	70

DN	PN	minimum span	t_k -value	approx. weight	
				vd8	vG $\frac{1}{2}$
25	60	0 - 4 ²⁾	5.50	0.33	0.46
50		0 - 1 ³⁾	0.45	0.50	0.63

FDA compliant EPDM seal is within the scope of delivery.



Welding Connection Piece

DN	PN	b2	d1	d2	G	approx. weight
25	60	46	25	42	1 $\frac{1}{4}$	0.32
50		60	50	68	2	0.48

¹⁾ external diameter diaphragm

²⁾ for Bourdon tube pressure gauges RCh / RChG 100 – 3 without limit switch contact assembly (GSG)

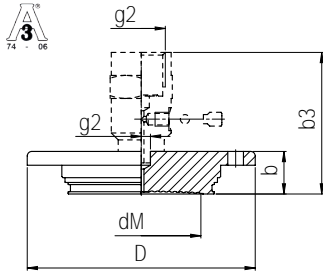
³⁾ for Bourdon tube pressure gauges NCS 100 (4")

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

Flange Connection

MDM 7319v... APV In-Line

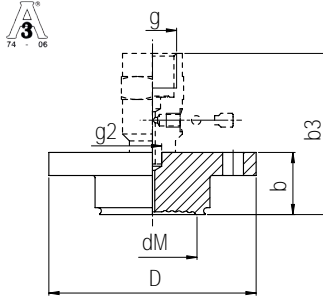
for APV In-Line case



DN	PN	inner tube Ø	b	b3	D	dM	d ¹⁾	g	g2	minimum span	t_k -value	approx. weight	
												vd8	vG½
50	40	66.2	18.5	61.5	99	52	54	G½	Ø 8	0 - 1 ²⁾	0.95	0.67	0.80

MDM 7391v... NEUMO BioControl®

for NEUMO BioControl® case connection flange

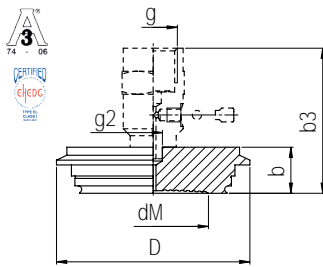


DN	PN	NEUMO BioControl® case connection	inner tube Ø	b	b3	D	dM	d ¹⁾	g	g2	minimum span	t_k -value	approx. weight	
													vd8	vG½
25	16	30.5	30.5	20	63	64	21	23	G½	Ø 8	0 - 4 ³⁾	5.50	0.30	0.43
50		50	50	27	70	90	46	48			0 - 1 ²⁾	0.45	0.57	0.70
65		68	68			120	60	62			0 - 0.6 ²⁾	0.82	0.70	0.83
80		87.5	87.5	37	80	140	72	74			0 - 0.6 ²⁾	0.64	1.17	1.30

Clamp Connection

MDM 7313v... Varivent®

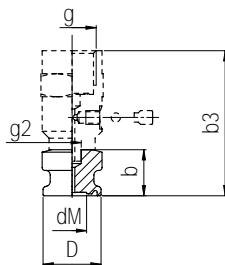
clamp connection Varivent® for Varinline® case



type	PN	process orifice	tubes according to DIN 11866 ⁴⁾ series			b	b3	D	dM	d ¹⁾	g	g2	minimum span	t_k -value	approx. weight	
			A	B	C										vd8	vG½
F	25	50	25	25	1"	19	62	66	32	34	G½	Ø 8	0 - 1 ³⁾	1.40	0.57	0.70
N		68	40...125	32...100	1½...4"			84	48	50			0 - 1 ²⁾	0.40	0.70	0.83

MDM 7340.13v... DIN 32676 Series C

form A for tubes according to DIN 11866 series C



NPS	PN	for outer tube Ø x wall thickness	inner tube Ø	b	b3	D	dM	d ¹⁾	g	g2	minimum span	t_k -value	approx. weight	
													vd8	vG½
¾"	40	19.05 x 1.65	15.75	20	63	25	16	18	G½	Ø 8	0 - 4 ⁵⁾	9	0.06	0.19

¹⁾ external diameter diaphragm

²⁾ for Bourdon tube pressure gauges NCS 100 (4")

³⁾ for Bourdon tube pressure gauges RCh / RChG 100 - 3 without limit switch contact assembly (GSG)

⁴⁾ other tube series upon request

⁵⁾ for Bourdon tube pressure gauges RCh / RChG 63 - 3 without limit switch contact assembly (GSG)

Ordering Information, Options

Basic Model	Diaphragm Seal	MDM 73..
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Please regard our detailed ordering information

- in model overview 7000
- in the checklists for pressure measuring instruments with chemical seal
- in the data sheet of the required pressure measuring instrument and add the information for the respective chemical seal, e.g. **MDM 7311**

The reference temperature is +20 °C (+68 °F). Please specify if an operating temperature (t_A) deviating from +20 °C (+68 °F) is required (dial inscription $t_{A...}$) or if the cleaning temperature (t_R max) exceeds +150 °C (+302 °F) (dial inscription t_R max...).

Instrument connection	orifice d8 for direct welding with measuring instrument (with cooling element or capillary line)	vd8
	G ½ female	vG½
Nominal width	DN, cf. tables page 2 and 3	e.g. DN 25
Nominal pressure	PN, cf. tables page 2 and 3	e.g. PN 25
Wetted material	stainless steel 316L (1.4435)	1.4435

These options are to be ordered in written form. Please contact us to ensure compatibility when combining options.

Wetted parts $R_a < 0.4 \mu\text{m}$

Wetted parts electropolished

Reinforced groove nut

Calculation of the temperature-related additional error for the entire pressure measuring system

Example MDM 7311vd8, DN 25, PN 25, 1.4435, $t_A +80 \text{ °C}$

Special Versions: Please describe your requirements in cleartext!