

Diaphragm Seals for food- / biotechnics- pharmaceutical industry

SÜDMO (W 500 D), NAUE, Ingoldstutzen, APV-In-Line, NEUMO BioControl®,
Varivent® (for Varinline® cases), Clamp DIN 32 676 Series C

MDM 73..
MDM 73..v

Standard Version

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

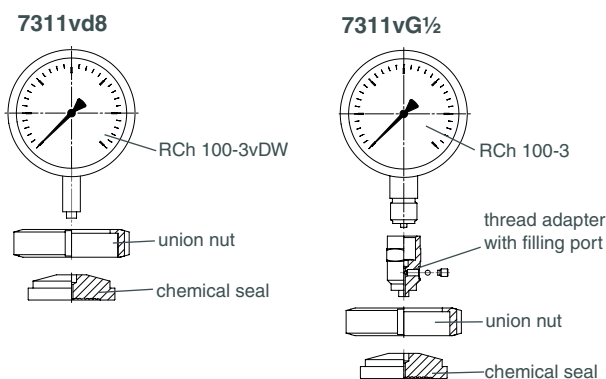
Construction

Model 73..vG½ has a gauge adapter with a female thread for direct mounting to pressure measuring instruments with male thread. The screwed connections pressure gauge / chemical seal and the filling port may not be loosened, as otherwise the filling fluid leaks and the pressure measuring system loses its functional capability.

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.

With the welded connection of pressure gauge / chemical seal and a filling port which is not accessible externally no leakage can occur. The parts are easy to clean externally.

Example:



Chemical Seal and Process Connection

1.4435 (316 L stainless steel)

Instrument Connection

73..vd8: orifice d8
73..vG½: G ½ female

Diaphragm

1.4435 (316L stainless steel) flush welded, welded to chemical seal,
helium leak detection up to 10⁻⁹ mbar l/s
Effective diaphragm diameter dM, see tables on page 2 ff.

Surface Roughness of the Wetted Parts

Ra < 0.8 µm

Union Nut (if applicable)
Stainless steel

Nominal Pressure

See tables on page 2 ff.

Minimum Span Pressure Gauges

See tables on page 2 ff.

t_K-value (mbar/10K) (temperature coefficient of the chemical seal)

See tables on page 2 ff. (for vegetable oil FN 1)



Options

- Wetted parts Ra < 0.4 mm
- Wetted parts electropolished
- Reinforced union nut
- Calculation of the temperature-related additional error for the whole pressure measuring system

Special Options among others

- Other instrument connections upon request, but NPT-female thread is not recommendable
- Other material combinations upon request
- Versions according to other norms and nominal sizes upon request

Accessories

Capillary line, cooling elements: see data sheet 7002
Sealings do not belong to the standard product range, but are available upon request.

Construction / Filling / Certificates

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

Ordering Information Chemical Seals

Please regard 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 instruments and add the information for the particular chemical seal:

- Model : e.g. MDM 7311 vd8, MDM 7313 vG½
- Nominal size: e.g. DN 25
- Nominal pressure: e.g. PN 25
if applicable options: see page 1, e.g. Ra < 0.4 µm

The reference temperature is +20 °C.
Please specify if a +20 °C deviating working temperature (tA) is required (dial inscription tA...) or the cleaning temperature (tR max) is +150 °C and above (dial inscription tR max).

Example: pressure gauge...,
chemical seal: MDM 7311vd8, DN 25, PN 25, tA +80°C,
wetted parts electropolished



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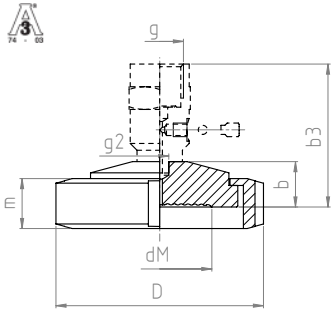
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Dimensional Data (mm), Weights (kg), Minimum Span (bar) and t_k -value (mbar /10K)

Groove Union Nut

MDM 7311v... Südmo W500

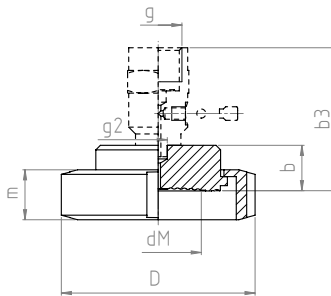
form A for tubes according to DIN 11866, series A (DIN 11850)



DN	PN	For tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	m	Minimum measuring span	tk-value	Weight (approx.)	
														vd8	vG ½
25	25	29 x 1.5	26	20	63	63	21	23	G½	Ø 8	21	0 - 4 ²⁾	5.50	0.32	0.45
32		35 x 1.5	32			70	28	30				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	20	53 x 1.5	50	20	63	92	46	48	G½	Ø 8	22	0 - 1 ¹⁾	0.45	0.85	0.98
65		70 x 2	66			112	60	62				0 - 0.6 ¹⁾	0.82	1.28	1.41
80		85 x 2	81			127	72	75				0 - 0.6 ¹⁾	0.64	1.39	1.52

MDM 7312v... Naue

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

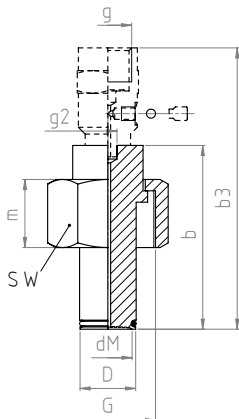


DN	PN	For tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	m	Minimum measuring span	tk-value	Weight (approx.)	
														vd8	vG ½
25	10	29 x 1.5	26	20	63	63	21	23	G½	Ø 8	21	0 - 4 ²⁾	5.50	0.29	0.42
32		35 x 1.5	32			70	28	30				0 - 2.5 ²⁾	2.30	0.36	0.49
40		41 x 1.5	38			78	34	36				0 - 1 ²⁾	1.20	0.48	0.61
50	20	53 x 1.5	50	20	63	92	46	48	G½	Ø 8	22	0 - 1 ¹⁾	0.45	0.73	0.86
65		70 x 2	66			112	60	62				0 - 0.6 ¹⁾	0.82	1.29	1.41
80		85 x 2	81			127	72	75				0 - 0.6 ¹⁾	0.64	1.39	1.52

Hexagon Union Nut

MDM 7319.10v... Ingoldstutzen

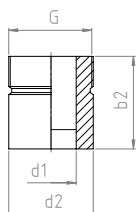
for Welding Connection Pieces



DN	PN	For tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	G	m	SW
25	60	29 x 1.5	26	71	114	25	21	23	G½	Ø 8	1¼	30	46
50		53 x 1.5	50	85	128	50	46	48			2	35	70

DN	PN	Minimum measuring span	tk-value	Weight (approx.)	
				vd8	vG ½
25	60	0 - 4 ²⁾	5.50	0.33	0.46
50		0 - 1 ¹⁾	0.45	0.50	0.63

EPDM FDA conform seal is within the scope of delivery.



Welding Connection piece

DN	PN	b2	d1	d2	G	Weight (approx.)
25	60	46	25	42	1¼	0.32
50		60	50	68	2	0.48

¹⁾ for bourdon tube pressure gauge NG 100

²⁾ for bourdon tube pressure gauge RCh / RChG 100-3 without limit switch contact assembly

* = external diameter diaphragm

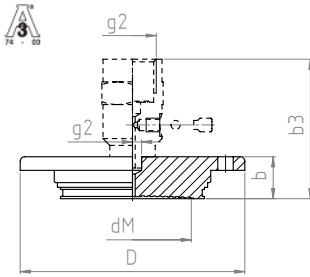
³⁾ for bourdon tube pressure gauge RCh / RChG 63-3 without limit switch contact assembly

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

Flange Connection

MDM 7319v... APV In-Line

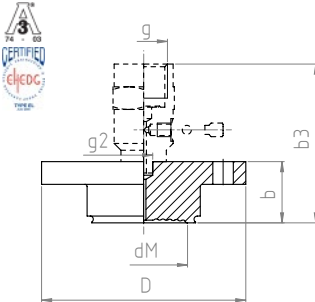
for APV IN-Line cases



DN	PN	For tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
													vd8	vG ½
50	40	69.2 x 1.5	66.2	18,5	61,5	99	52	54	G½	Ø8	0 - 1 ¹⁾	0.95	0.67	0.80

MDM 7391v... NEUMO BioControl®

for NEUMO BioControl® Case Connection Flange

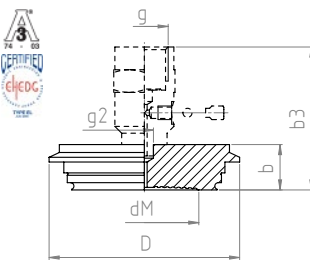


DN	PN	NEUMO BioControl® Case Connection	Tube female-Ø	b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
													vd8	vG ½
25	16	30.5	30.5	20	63	64	21	23	G½	Ø8	0 - 4 ²⁾	5.50	0.30	0.43
50		50	50	27	70	90	46	48			0 - 1 ¹⁾	0.45	0.57	0.70
65		68	68			120	60	62			0 - 0.6 ¹⁾	0.82	0.70	0.83
80		87.5	87.5	37	80	140	72	74			0 - 0.6 ¹⁾	0.64	1.17	1.30

Clamp Connection

MDM 7313v... Varivent®

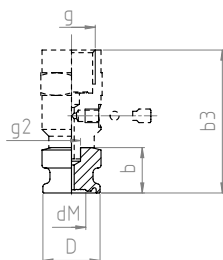
Clamp Connection Varivent® for Varinline® cases



DN	PN	For tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
													vd8	vG ½
31	25	23 x 1.5	20	30	73	52.7	17	19	G½	Ø8	0 - 4 ³⁾	7.80	0.24	0.37
50		53 x 1.5	50	19	62	66	32	34			0 - 1 ²⁾	1.40	0.57	0.70
68	70 x 2	66	84			48	50	0 - 1 ¹⁾			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 tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
													vd8	vG ½
¾"	40	19.05 x 1.65	15.75	20	63	25	16	18	G½	Ø8	0 - 4 ³⁾	9	0.06	0.19

Changes, replacement of materials and printing errors excepted.

¹⁾ for bourdon tube pressure gauge NG 100

²⁾ for bourdon tube pressure gauge RCh / RChG 100-3 without limit switch contact assembly

³⁾ for bourdon tube pressure gauge RCh / RChG 63-3 without limit switch contact assembly

* = external diameter diaphragm

Changes, replacement of materials and printing errors excepted.