

# Diaphragm Seals for food- / bio- / pharmaceutical industry

SÜDMO (W 500 D), 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.

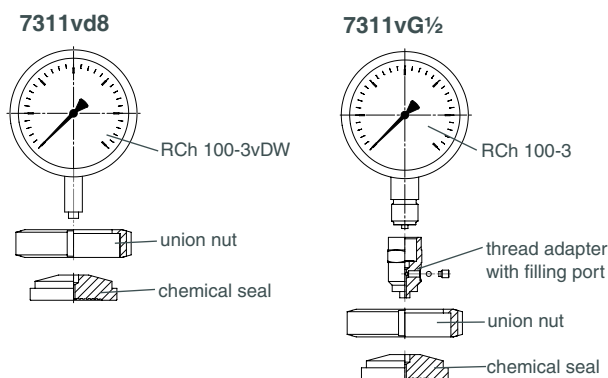
### Construction

**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

$R_a < 0.8 \mu\text{m}$

### 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<sub>k</sub>-Value (mbar/10K) (Temperature Coefficient of the Chemical Seal)

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



## Options

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

The reference temperature is  $+20 \text{ }^\circ\text{C}$ .  
Please specify if a  $+20 \text{ }^\circ\text{C}$  deviating working temperature (tA) is required (dial inscription tA...) or the cleaning temperature (tR max) is  $+150 \text{ }^\circ\text{C}$  and above (dial inscription tR max).

Example: pressure gauge...,  
chemical seal: MDM 7311vd8, DN 25, PN 25, tA  $+80 \text{ }^\circ\text{C}$ ,  
wetted parts electropolished



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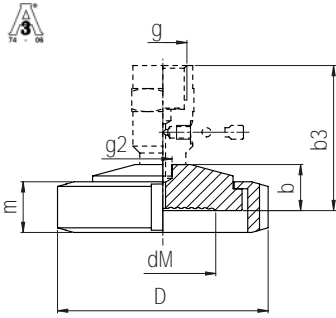
**7301**  
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# Dimensional Data (mm), Weights (kg), Minimum Span (bar) and $t_k$ -value (mbar /10K)

## Groove Union Nut

MDM 7311v... Südmo W500

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

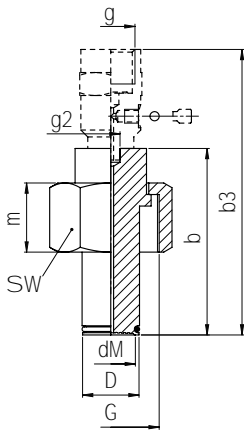


DN	PN	For tube male-Ø x wall thickness	Tube female-Ø	b	b3	D	dM	d*	g	g2	m	Minimum measuring span	tk-value	Weight (approx.)	
														vd8	vG 1/2
25	25	29 x 1.5	26	20	63	63	21	23	G1/2	Ø 8	21	0 - 4 <sup>2)</sup>	5.50	0.32	0.45
32		35 x 1.5	32			70	28	30				0 - 2.5 <sup>2)</sup>	2.30	0.37	0.50
40		41 x 1.5	38			78	34	36				0 - 1 <sup>2)</sup>	1.20	0.50	0.63
50	20	53 x 1.5	50	20	63	92	46	48	G1/2	Ø 8	22	0 - 1 <sup>1)</sup>	0.45	0.85	0.98
65		70 x 2	66			112	60	62				0 - 0.6 <sup>1)</sup>	0.82	1.28	1.41
80		85 x 2	81			127	72	75				0 - 0.6 <sup>1)</sup>	0.64	1.39	1.52

## Hexagon Union Nut

MDM 7319.10v... Ingoldstutzen

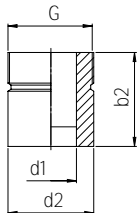
for Welding Connection Pieces



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	G1/2	Ø 8	1 1/4	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 1/2
25	60	0 - 4 <sup>2)</sup>	5.50	0.33	0.46
50		0 - 1 <sup>1)</sup>	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	Weight (approx.)
25	60	46	25	42	1 1/4	0.32
50		60	50	68	2	0.48

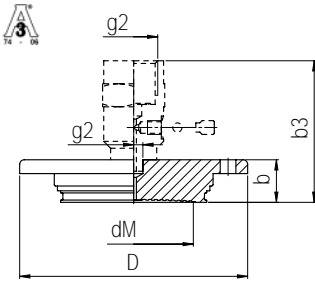
\* = external diameter diaphragm <sup>1)</sup> for bourdon tube pressure gauge NG 100 <sup>2)</sup> for bourdon tube pressure gauge RCh / RChG 100-3 without limit switch contact assembly

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

## Flange Connection

### MDM 7319v... APV In-Line

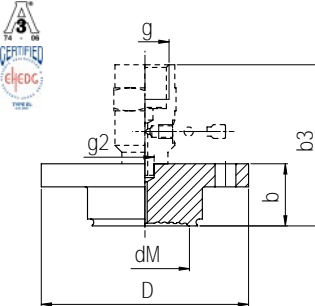
### for APV IN-Line cases



DN	PN	Tube female-Ø	b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
												vd8	vG ½
50	40	66.2	18.5	61.5	99	52	54	G½	Ø 8	0 - 1 <sup>1)</sup>	0.95	0.67	0.80

### MDM 7391v... NEUMO BioControl®

### for NEUMO BioControl® Case Connection Flange

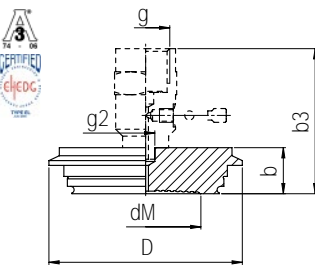


DN	PN	NEUMO BioControl® Case Connection	Tube female-Ø	b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
													vd8	vG ½
25	16	30.5	30.5	20	63	64	21	23	G½	Ø 8	0 - 4 <sup>2)</sup>	5.50	0.30	0.43
50		50	50	27	70	90	46	48			0 - 1 <sup>1)</sup>	0.45	0.57	0.70
65		68	68			120	60	62			0 - 0.6 <sup>1)</sup>	0.82	0.70	0.83
80		87.5	87.5	37	80	140	72	74			0 - 0.6 <sup>1)</sup>	0.64	1.17	1.30

## Clamp Connection

### MDM 7313v...Varivent®

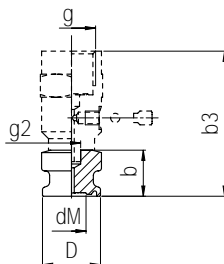
### Clamp Connection Varivent® for Varinline® cases



Typ	PN	process opening	Tubes according to DIN 11866** series			b	b3	D	dM	d*	g	g2	Minimum measuring span	tk-value	Weight (approx.)	
			A	B	C										vd8	vG ½
F	25	50	25	25	1"	19	62	66	32	34	G½	Ø 8	0 - 1 <sup>2)</sup>	1.40	0.57	0.70
N		68	40...125	32...100	1½...4"			84	48	50			0 - 1 <sup>1)</sup>	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	Ø 8	0 - 4 <sup>3)</sup>	9	0.06	0.19

\* = external diameter diaphragm  
\*\* = other tube series upon request

<sup>1)</sup> for bourdon tube pressure gauge NG 100

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

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