

# Diaphragm Seal 7310.18vd8

For food / bio / pharmaceutical industries

G 1" with sealing cone (metal sealing) and rotatable pressure screw

**ARMANO**

**T07-000-017**

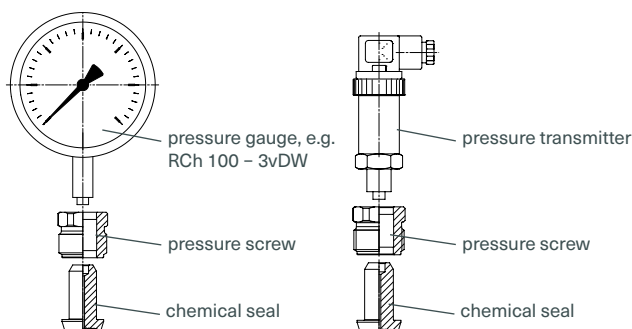
Information on applications, features, metrological influences such as temperature, level difference, floating time and others can be found in model overview 7000. Furthermore, you will find information on other chemical seal versions.

## Construction

**Model 7310.18vd8** has an orifice d8 as instrument connection for welding to a pressure transmitter or 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.



7310.18vd8

## Standard Versions

### Chemical Seal and Process Connection

Stainless steel 316L (1.4435)

### Instrument Connection

7310.18vd8 orifice d8

### Diaphragm

Stainless steel 316L (1.4435), flush welded with chemical seal, helium leak detection up to  $10^{-9}$  mbar l/s  
Effective diaphragm diameter dM = 21 mm (0.83")

### Surface Roughness of the Wetted Parts

Ra < 0.8  $\mu$ m

### Process Connection

Pressure screw G 1" with sealing cone Nitronic 60, rotatable

### Nominal Pressure

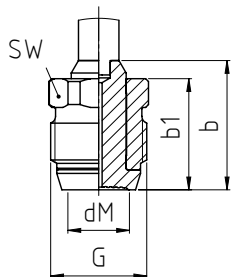
PN 600

## Minimum Span Pressure Gauge

0 – 4 bar (0 – 60 psi)

For Bourdon tube pressure gauge RCh / RChG 100 – 3 without limit switch contact assembly

For other pressure measuring instruments upon request



### Dimensional Data (mm / inch) and Weight (kg / lb)

G	dM	b	b1	SW	approx. weight
1"	21 0.83	45 1.77	39 1.54	32 1.26	0.24 0.53



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

5.50 mbar / 10 K (for vegetable oil FN 1)

## Advantages

- A crevice-free metal sealing is provided, which connects the chemical seal helium-tight with the connection shape, an O-ring is no longer required
- The pressure gauge can be easily aligned due to the cone-seat-principle
- Multiple system concept for all common process connections, see page 2

## Options

- Wetted parts Ra < 0.4  $\mu$ m
- Wetted parts electropolished
- Calculation of the temperature-related additional error for the entire pressure measuring system
- Reinforced diaphragm upon request e.g. for media containing particles
- Coatings, e.g. PTC

## Mounting / Filling / Certificates

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

## Ordering Information Chemical Seal

Please regard our detailed ordering information in model overview 7000 and in the checklists for pressure measuring instruments with chemical seal as well as the data sheets of the required pressure measuring instrument, and add the information for the respective chemical seal: **Model MDM 7310.18vd8**

The reference temperature is +20 °C (+68 °F). Please specify if an operating temperature (t<sub>A</sub>) deviating from +20 °C (+68 °F) is required (dial inscription t<sub>A</sub>...), or if the cleaning temperature (t<sub>r</sub> max) is higher than +150 °C (302 °F) (dial inscription t<sub>r</sub> max. ...).

Example pressure gauge ...  
chemical seal MDM 7310.18vd8, t<sub>A</sub> +80 °C,  
wetted parts electropolished

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G 1" with sealing cone (metal sealing) and rotatable pressure screw

## Dimensional Data (mm) and Weight (kg)

The chemical seal 7310.18 can be connected to a hygienic connection adapter by the use of this pressure screw.

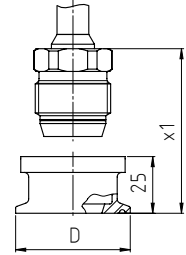
The following connection shapes are currently available (more upon request)

- clamp connection
- conical coupling with groove nut
- attachment flange

### Chemical Seal with Clamp Connection

ISO 2852 – for tubes according to ISO 2037 and BS 4825

DN	PN	for external tube Ø x wall thickness	internal tube Ø	D	x1	approx. weight
38	16/40	38 x 1.2	35.6	50.5	39	0.16
51	16/40	51 x 1.2	48.6	64	39	0.22
63.5	10/25	63.5 x 1.6	60.3	77.5	39	0.31
76.1	10/25	76.1 x 1.6	72.9	91	39	0.34



DIN 32676, series A – for tubes according to DIN 11850

DN	PN	for external tube Ø x wall thickness	internal tube Ø	D	x1	approx. weight
40	16/40	41 x 1.5	38	50.5	39	0.16
50	16/40	53 x 1.5	50	64	39	0.22
65	10/25	70 x 2	66	91	39	0.34
80	10/25	85 x 2	81	106	39	0.63

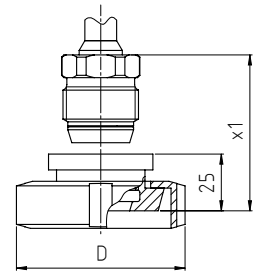
Tri-Clamp – for tubes according to BS4825 and O.D. tube; ASME BPE and ISO 1127

NPS	DN	PN	for external tube Ø x wall thickness		internal tube Ø		D	x1	approx. weight
			BS 4825 and O.D. tube / ASME BPE	ISO 1127	BS 4825 and O.D. tube / ASME BPE	ISO 1127			
1 ½"	38	16/40	38.1 x 1.6	42.4 x 2	34.8	38.4	50.5	39	0.16
2"	51	16/40	50.8 x 1.6	48.3 x 2	47.5	44.3	64	39	0.22
2 ½"	63.5	10/25	63.5 x 1.6	60.3 x 2	60.3	56.3	77.5	39	0.31
3"	76.1	10/25	76.2 x 1.6	76.1 x 2	73.0	72.1	91	39	0.34

### Conical Coupling with Groove Nut

DIN 11851 – conical coupling and groove nut

DN	PN	for external tube Ø x wall thickness	internal tube Ø	D	x1	approx. weight
40	40	41 x 1.5	38	79	39	0.45
50	25	53 x 1.5	50	92	39	0.51
65	25	70 x 2	66	112	39	0.58
80	25	85 x 2	81	127	39	0.65



### Chemical Seal with Attachment Flange

DRD

DN	PN	D	x1	approx. weight
50	40	105	39	0.32

