

# Diaphragm Seal MDM 7910.Hv...

Special version

Compact type, male thread, PN 400

ARMANO

T07-000-028

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.

## Application

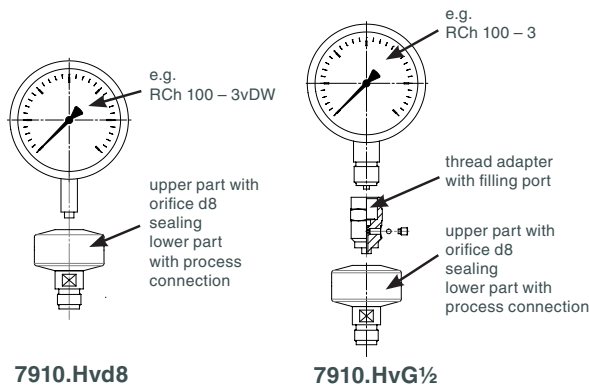
The chemical seal model MDM 7910.Hv... was especially designed for application under extreme process conditions. Diaphragm, upper part and lower part are welded. With the use of a filling fluid, which is suitable for the specific temperature ranges, it is applicable for ambient temperatures to min.  $-20\text{ }^{\circ}\text{C}$  ( $-4\text{ }^{\circ}\text{F}$ ) and/or medium temperatures up to max.  $+200\text{ }^{\circ}\text{C}$  ( $+392\text{ }^{\circ}\text{F}$ ).

Bourdon tube pressure gauges, pressure switches, pressure transmitters, pressure transducers and other pressure measuring instruments can be equipped with diaphragm seals of this type series.

## Construction

**Model 7910.Hvd8** 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 that is not accessible externally. The parts can be easily cleaned externally.

**Model 7910.HvG $\frac{1}{2}$**  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.



7910.Hvd8

7910.HvG $\frac{1}{2}$

## Standard Versions

### Upper Part

Stainless steel 316L (1.4404)

### Instrument Connection

7910.Hvd8: orifice d8  
7910.HvG $\frac{1}{2}$ : G  $\frac{1}{2}$  female

### Diaphragm

Membrane stainless steel 316L (1.4435) welded with upper and lower part, helium leak detection up to  $10^{-9}$  mbar l/s  
Effective diaphragm diameter dM = 48 mm (1.89")

### Lower Part with Process Connection

Stainless steel 316L (1.4404), connection male thread G  $\frac{1}{2}$ B  
Orifice d = 10 mm (0.4"), e.g. for medium crude oil



**Nominal Pressure**  
PN 400

**Pressure Ranges**  
-1 / +1 bar to 0 – 400 bar

for Bourdon tube pressure gauges NCS 63, 100 and 160  
for other pressure measuring instruments: upon request

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

0.40 mbar/10 K (for silicone oil FA1)

## Options

- Other process connections M20x1.5 or  $\frac{1}{2}$ " NPT
- Calculation of the temperature-related additional error for the entire pressure measuring system

## Special Versions Upon Request

- Other instrument connections, whereas we do not recommend NPT female threads
- Other material combinations (process connection, membrane), e.g. Monel, Hastelloy

## Accessory

Capillary line, cooling elements: see data sheet 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

Please regard our detailed ordering information

- in model overview 7000
- in the check lists for pressure measuring instruments with chemical seal
- in the respective data sheets of the required pressure measuring instrument

and add the information for the respective chemical seal:

**Model** MDM 7910.Hvd8, MDM 7910.HvG $\frac{1}{2}$   
**Process connection** G  $\frac{1}{2}$ B, M20x1.5  
**Nominal pressure** PN 400  
**Options, if necessary** t<sub>A</sub> +80 °C

The reference temperature is  $+20\text{ }^{\circ}\text{C}$  ( $+68\text{ }^{\circ}\text{F}$ ). Please specify if an operating temperature (t<sub>A</sub>) deviating from  $+20\text{ }^{\circ}\text{C}$  ( $+68\text{ }^{\circ}\text{F}$ ) is required (dial inscription t<sub>A</sub>...).

Example: pressure gauge ...  
chemical seal **MDM 7910.Hvd8, G  $\frac{1}{2}$ B, PN 400, t<sub>A</sub> +80 °C**

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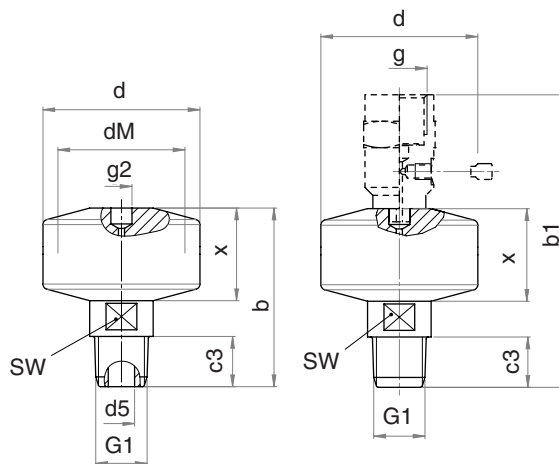
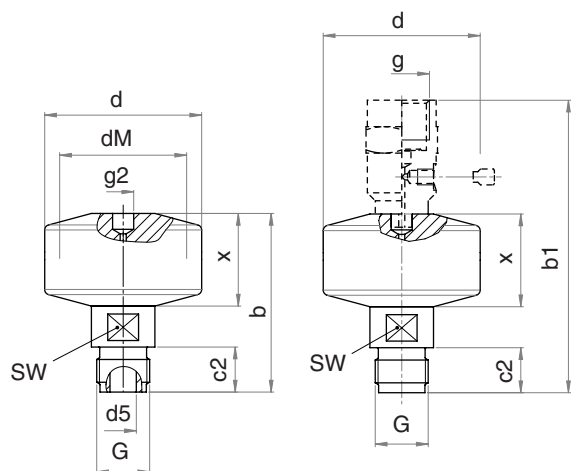
## Connections, Dimensional Data and Weight

### Male Thread Connections

#### MDM 7910.Hv...

G 1/2 B

1/2" NPT



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

Type	b	b1	c2	c3	d	d5	dM	g	g2	G	G1	SW	x	(approx.) weight	
														vd8	vG1/2
MDM 7910.Hv	70 2.76	113 4.45	17 0.67	19 0.75	59 2.32	10 0.39	48 1.89	G 1/2	d8	G 1/2 B M20x1.5	1/2" NPT	21 0.83	35 1.38	0.62 1.37	0.75 1.65