

Diaphragm Seals

Compact Type - Male Thread

PN 60, optional PN 100 (7910v...) or PN 600 (7980v...)

7910v...

7980v...

Standard Version

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 also find advice on other chemical seal versions.

Application:

Diaphragm seal models MDM 7910v.../MDM 7980v... were especially designed for application under extreme process conditions. Diaphragm, upper and lower part are welded.

With the use of filling fluids which are suitable for the specific temperature range, the diaphragm seal models MDM 7910v... / MDM 7980v... can be used for:

- ambient temperatures up to min. - 40 °C (- 40 °F) and/or
- medium temperatures up to max. +150 °C (+302 °F)

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

Construction

Model 7910vG½ or 7980vG½ has a gauge adapter with a female thread for direct mounting to pressure measuring instruments with male thread.

The screwed connection pressure gauge / adapter and the filling port may not be loosened, as otherwise the filling fluid leaks and the pressure measuring instrument loses its functional capability.

Model 7910vd8 or 7980vd8 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.

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



Pressure Ranges

7910v... 0-1 bar to 0-60 bar (0-15 psi up to 0-800 psi), optional 0-100 bar (0-1,000 psi)

7980v... 0-100 bar to 0-600 bar (0-1,500 up to 10,000 psi) for bourdon tube pressure gauges NCS 63,100 and 160 for other pressure gauges: upon request

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

for silicone oil FA1 7910v... 0.40 mbar / 10 K
7980v... 2.80 mbar / 10 K

Options

- Other process connections like M 20x1.5 or ½"NPT
- 7910 PN 100 with reinforced weld seam

Special Options among others

- Other instrument connections upon request, but NPT-female thread is not recommendable
- Other material combinations (process connections, diaphragm) e.g. titanium, monel, hastelloy alloy upon request
- Calculation of the temperature-related additional error for the whole measuring system

Accessories

Capillary line, cooling elements: see data sheet 7002
Other accessories: 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 sheet of the requested pressure measuring instruments and add the information for the particular chemical seal:
 - Model : e.g. MDM 7910vd8, MDM 7980vG½
 - Process connection: G ½ B (½" BSP), M 20x1.5
 - Nominal pressure: e.g. PN 60
- if applicable options: tA +80 °C (+176 °F)

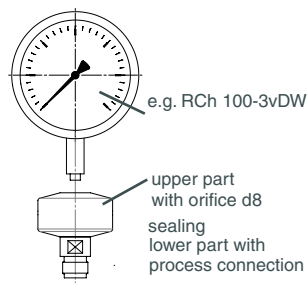
The reference temperature is +20 °C (+68 °F)

Please specify if a +20 °C (+68 °F) deviating temperature (tA) is required (dial inscription tA...).

Example: pressure gauge...,

chemical seal: MDM 7910vd8, G ½ B (½" BSP), PN 60, tA +80 °C (+176 °F)

7910 / 7980vd8



Upper Part

1.4435 (316 L stainless steel)

Process Connection

7910/7980vG½: G ½ female

7910/7980vd8: orifice d8

Diaphragm

1.4435 (316 L stainless steel) welded with upper and lower part, He-leak detection up to 10⁻⁹ mbar l/s

Effective diaphragm diameter dM= 48 mm (1.89") 7910v...
30 mm (1.18") 7980v...

Lower Part with Process Connection

316 L (stainless steel), Connection male thread G ½ B (½" BSP)

Orifice d= 10 mm (0.4"), e.g. for medium crude oil,

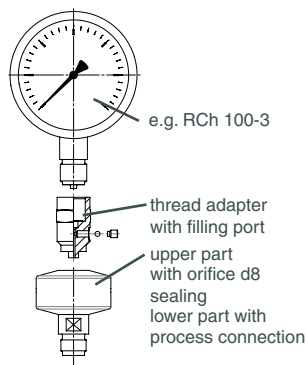
Connection options, see page 2

Nominal Pressure

7910v... PN 60 (optional PN 100)

7980v... PN 600

7910 / 7980vG½



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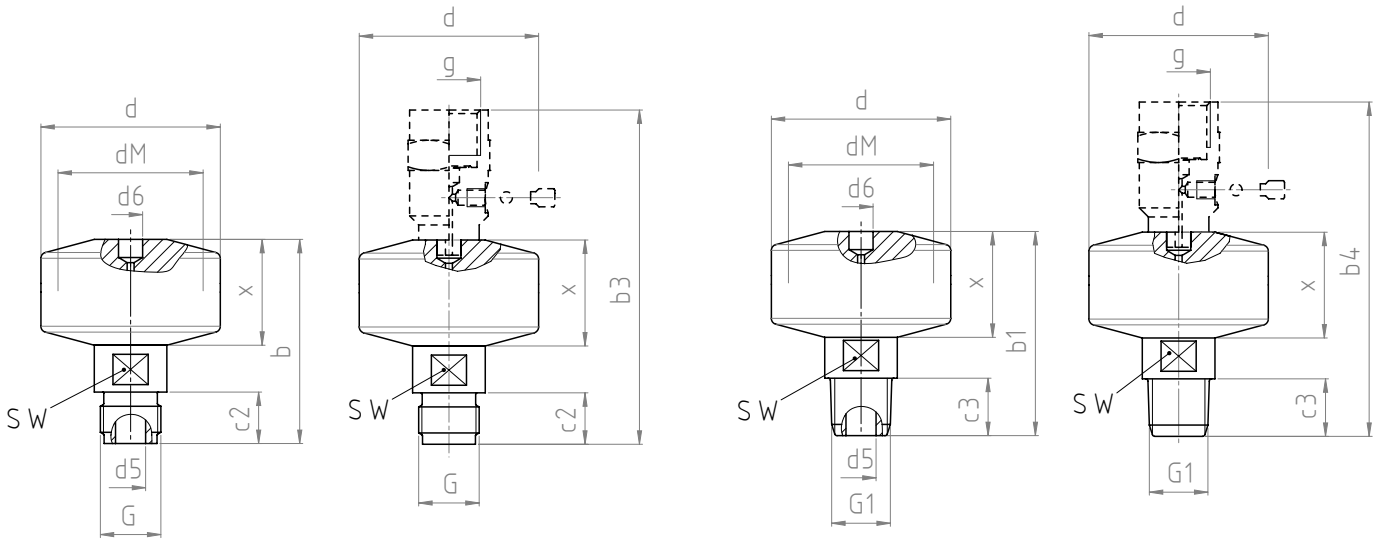
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Dimensional Data and Weights

MDM 7910v...

G 1/2 B (1/2" BSP)

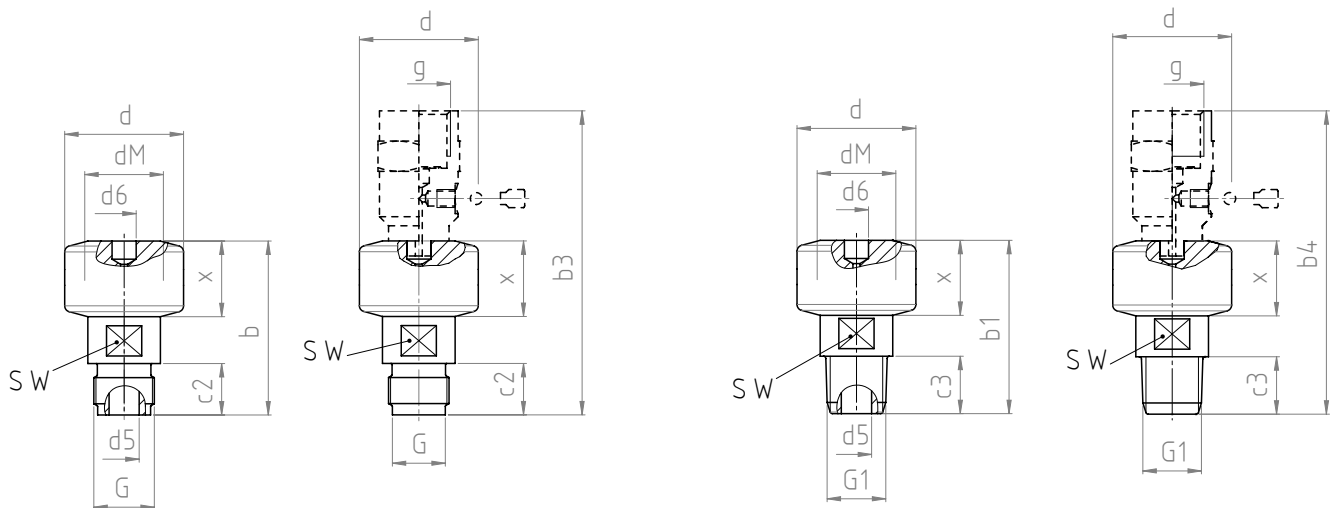
1/2 NPT



MDM 7980v...

G 1/2 B (1/2" BSP)

1/2 NPT



Dimensional Data (mm / inches) and Weights (kg / lb)

Model	b	b1	b3	b4	c2	c3	d	d5	d6	dM	G	G1	SW	x	Weight (approx.)	
															vd8	vG1/2
MDM 7910	67.5	70	110.5	113	17	19	59*	10	8	48	G 1/2 B	1/2" NPT	21	35	0.62	0.75
	2.66	2.76	4.35	4.45	.67	.75	2.32	.4	.31	1.89	1/2" BSP				.83	1.38
MDM 7980	60	60	103	103	17	19	45	10	8	30	G 1/2 B	1/2" NPT	21	27	0.33	0.46
	2.36	2.36	4.06	4.06	.67	.75	1.77	.4	.31	1.18	1/2" BSP				.93	1.06

* deviates when weld seam is reinforced