Diaphragm Seals

with Thread Connection, Flush Diaphragm

MDM 7400

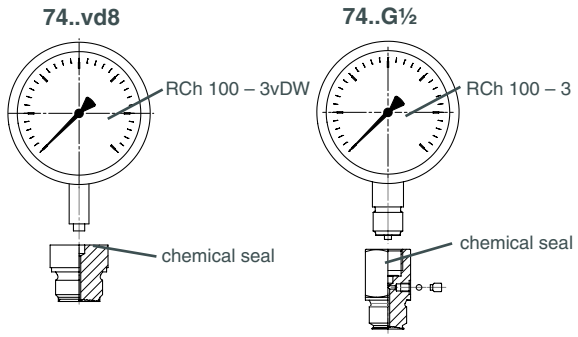
Standard Version

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 74..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.

Model 74..G½ 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 liquid leaks and the pressure measuring system loses its functional capability.

Example:



Chemical Seal and Process Connection
1.4404 (316 L stainless steel)

Instrument Connection
74..vd8: orifice d8
74..G½: G ½ female (½" BSP)

Diaphragm
1.4435 (316 L 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

Union Nut (if applicable)
Stainless steel (1.4301)

Nominal Pressure
See tables on page 2

Process Connection
MDM 7410: male thread, G ½ B (½" BSP) to G 2 B (2" BSP) for sealing DIN 3852 form A
MDM 7420: male thread , ½" NPT to 2" NPT
MDM 7450: Hexagon union nut, G 1 (1" BSP) to G 2 (2" BSP) for flat gasket (flush mounted)

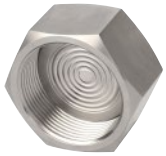
Reference Temperature
+20 °C (68 °F)

Minimum Span Pressure Gauges

See tables on page 2


MDM 7410vd8


MDM 7420vd8


MDM 7450vd8

t_k-Value (mbar /10K) (Temperature Coefficient of the Chemical Seal)

See tables on page 2 (for white oil FN2)

Options

- Calculation of the temperature-related additional error for the whole pressure measuring system

Special Versions Among Others

- Other instrument connections upon request, whereas we do not recommend NPT-female thread
- Other process connections upon request
- Diaphragm hastelloy C 276 and others upon request
- Other material combinations (process connection, diaphragm), e.g. process connection hastelloy C 276 with diaphragm hastelloy C 276

Accessories

Capillary line, cooling elements: see data sheet 7002

Process connection pieces and 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 instrument and add the following information for the particular chemical seal:
  - Model: e.g. MDM 7410vd8
  - Nominal size: e.g. G 1 B
  - Nominal pressure: e.g. PN 600

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

Example: pressure gauge....,
chemical seal: MDM 7410vd8, G 1 B, PN 600, tA +80°C

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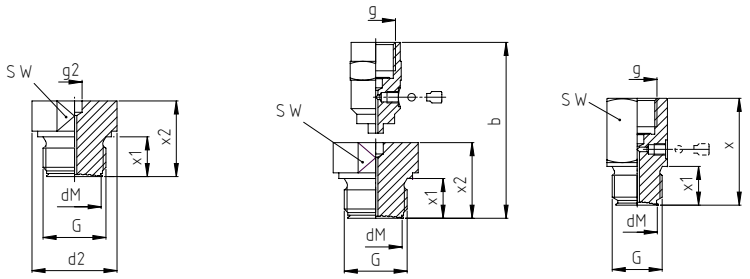
Dimensional Data (mm), Weights (kg), Minimum Span (bar) and t_k-value (mbar/10K)

MDM 7410v... / MDM 7410...

Sealing through gasket according to DIN 3852 form A (not within the scope of delivery)

vd8 vG ½ B G ½ B

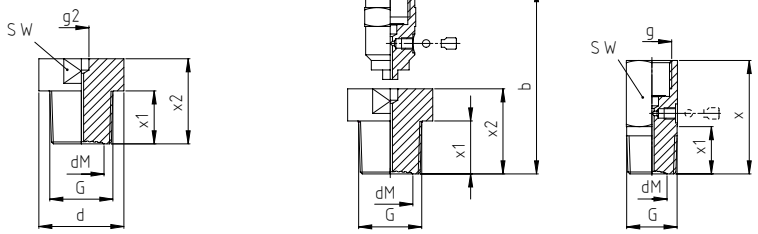


Dimensional Data (mm) and Weights (kg)

G	PN	Instrument connection	d2	dM	g	g2	x	x1	x2	b	SW	Minimum measuring span[4]	t_k-value	Weight (approx.) vd8	Weight (approx.) G½
G ½ B	600	vd8 / G ½ B	30	16	G ½	Ø8	59	20	32	–	27	0 - 4[3]	9.00	0.12	0.23
G ¾ B			35	21			59		35		32	0 - 4[2]	5.50	0.19	0.31
G 1 B		vd8 / vG ½ B	45	28			–	21	39	82	41	0 - 2.5[2]	2.30	0.35	0.44
G 1½ B			58	38				30	57	100	50	0 - 1[2]	0.80	0.98	1.24
G 2 B			78	46					60	103	65	0 - 1[1]	0.45	1.64	1.98

MDM 7420v... / MDM 7420...

vd8 vG ½ B G ½ B

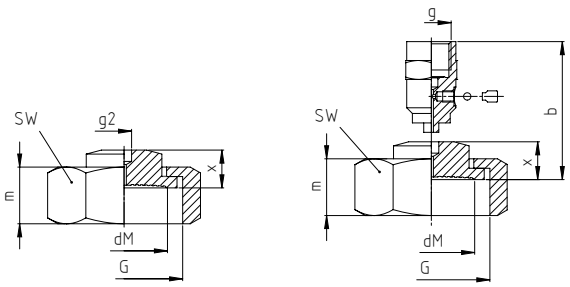


Dimensional Data (mm) and Weights (kg)

G	PN	Instrument connection	d	dM	g	g2	x	x1	x2	b	SW	Minimum measuring span[4]	t_k-value	Weight (approx.) vd8	Weight (approx.) G½
½" NPT	600	vd8 / G ½ B	32	16	G ½	Ø 8	54	19	45	–	27	0 - 4[3]	9.00	0.21	0.22
¾" NPT				19			60	25				0 - 2.5[3]	6.50	0.22	0.23
1" NPT		vd8 / vG ½ B	45	24			–	28		88	41	0 - 2.5[2]	3.60	0.39	0.52
1½" NPT			52	32				30	50	93	46	0 - 1[2]	1.40	0.74	0.87
2" NPT			78	38					55	98	65	0 - 1[2]	0.80	1.71	1.84

MDM 7450v... / MDM 7450...

vd8 vG ½ B



Dimensional Data (mm) and Weights (kg)

G	PN	dM	g	g2	x	b	m	SW	Minimum measuring span[4]	t_k-value	Weight (approx.) vd8	Weight (approx.) vG½
G 1	600	24	G ½	Ø 8	20	63	28.5	41	0 - 2.5[2]	3.60	0.29	0.42
G 1¼		28					30.5	50	0 - 2.5[2]	2.30	0.41	0.54
G 1½	40	34					31	55	0 - 1[2]	1.20	0.50	0.63
G 2		46					35	70	0 - 1[1]	0.45	0.65	0.78

[1] for bourdon tube pressure gauges NCS 100 (4")
[2] for bourdon tube pressure gauges RCh/RChG 100-3 without limit switch contact assembly
[3] for bourdon tube pressure gauges RCh/RChG 63-3 without limit switch contact assembly
[4] pressure ranges for other measuring instruments, e.g. pressure transmitters, upon request