

# Diaphragm Seals

with Thread Connection, Flush Diaphragm

MDM 7400

## Standard Versions

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.

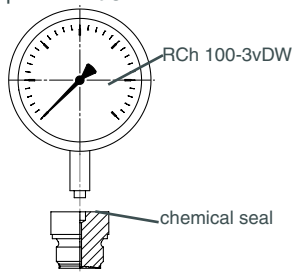
### Construction

**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.

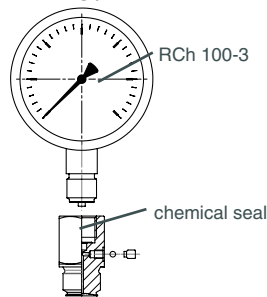
With the welded connection of pressure gauge / chemical seal and a filling port which is not accessible externally no leakage can occur. The parts are easy to clean externally.

**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: **74..vd8**



Example: **74..G½**



### Chemical Seal and Process Connection

1.4435 (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<sup>-9</sup> 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

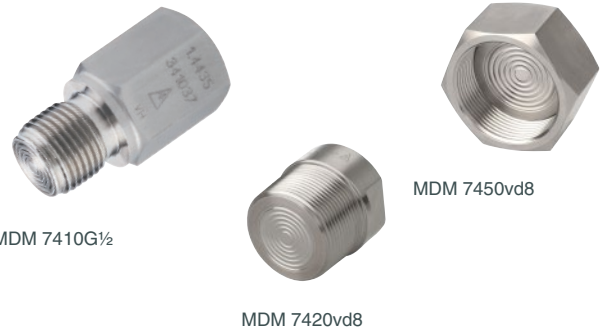
MDM 7450: Hexagon union nut, G 1 (1" BSP) to G 2 (2" BSP) for flat gasket (flush mounted)

### Reference Temperature

+20 °C (68 °F)

## Minimum Span Pressure Gauges

See tables on page 2



## t<sub>k</sub>-value (mbar /10K) (temperature coefficient of the chemical seal)

See tables on page 2 (for white oil FN2)

## Options

- MDM 7450: Union nut PN 600, G 1½ (1½" BSP) or G 2 (2" BSP)
- 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



Instruments To  
Industry Ltd

## INSTRUMENTS TO INDUSTRY LTD

Euro Works - Hawksley Industrial Estate - Hawksley Street  
Oldham - OL8 4PQ - United Kingdom

T: +44 (0)161 652 7741

F: +44 (0)161 621 0389

E: sales@itiuk.com

W: www.itiuk.com

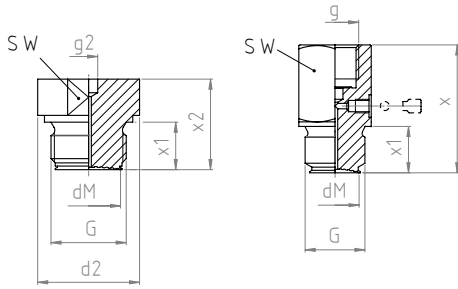
7400

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

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

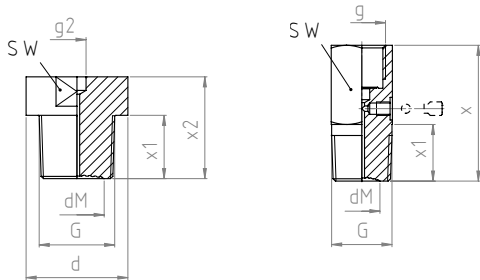
Sealing through gasket according to DIN 3852 form A (not within the scope of delivery)



#### Dimensional data (mm/inches) and weights (kg/lb)

G	PN	d2	dM	g	g2	x	x1	x2	SW	Minimum measuring span <sup>4)</sup>	$t_k$ -value	Weight (approx.)	
												vd8	G½
G ½ B ½" BSP	600	30 1.18	16 .63	G ½ ½" BSP	Ø 8 Ø .31	59 2.32	20 .79	32 1.26	27 1.06	0 - 4 <sup>3)</sup> 0 - 60	9.00	0.12 0.26	0.23 0.51
G ¾ B ¾" BSP		35 1.38	21 .83					35 1.38	32 1.26	0 - 4 <sup>3)</sup> 0 - 60		0.19 0.42	0.31 0.68
G 1 B 1" BSP		39 1.54	28 1.1			55 2.17	21 .83	39 1.54	41 1.61	0 - 2.5 <sup>2)</sup> 0 - 40	2.30	0.35 0.77	0.44 0.97
G 1½ B 1½" BSP		58 2.28	38 1.5			67 2.63	30 1.18	60 2.36	50 1.97	0 - 1 <sup>2)</sup> 0 - 15	0.80	0.98 2.16	1.24 2.73
G 2 B 2" BSP		78 3.07	46 1.81			70 2.76			65 2.56	0 - 1 <sup>1)</sup> 0 - 15	0.45	1.64 3.62	1.98 4.37

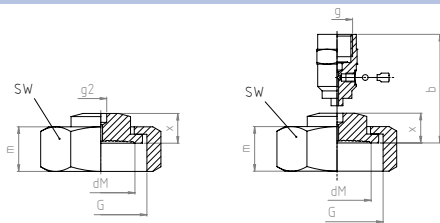
### MDM 7420v... / MDM 7420...



#### Dimensional data (mm/inches) and weights (kg/lb)

G	PN	d	dM	g	g2	x	x1	x2	SW	Minimum measuring span <sup>4)</sup>	$t_k$ -value	Weight (approx.)	
												vd8	G½
½" NPT	600	32 1.26	16 .63	G ½ ½" BSP	Ø 8 Ø .31	54 2.13	19 .75	45 1.77	27 1.06	0 - 4 <sup>3)</sup> 0 - 60	9.00	0.21 0.46	0.22 0.49
¾" NPT			19 .75							60 2.36		25 .98	41 1.61
1" NPT		45 1.77	24 .94			55 2.17	28 1.1	41 1.61	0 - 2.5 <sup>2)</sup> 0 - 40	3.60	0.39 0.86	0.52 1.15	
1½" NPT		52 2.05	32 1.26			65 2.56	30 1.18	50 1.97	46 1.81	0 - 1 <sup>2)</sup> 0 - 15	1.40	0.74 1.63	0.87 1.92
2" NPT		78 3.07	38 1.5					55 2.17	65 2.56	0 - 1 <sup>2)</sup> 0 - 15	0.80	1.71 3.77	1.84 4.06

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



#### Dimensional data (mm/inches) and weights (kg/lb)

G	PN	dM	g	g2	x	b	m	SW	Minimum measuring span <sup>4)</sup>	$t_k$ -value	Weight (approx.)	
											vd8	vG½
G 1 1" BSP	600	24 .94	G ½ ½" BSP	Ø 8 Ø .31	20 .79	63 2.48	28.5 1.12	41 1.61	0 - 2.5 <sup>2)</sup> 0 - 40	3.60	0.29 0.64	0.42 0.93
G 1¼ 1¼" BSP		28 1.1							30.5 1.2		50 1.97	0 - 2.5 <sup>2)</sup> 0 - 40
G 1½ 1½" BSP	40	34 1.34					31 1.22	55 2.17	0 - 1 <sup>2)</sup> 0 - 15	1.20	0.50 1.10	0.63 1.39
G 2 2" BSP		46 1.81					35 1.38	70 2.76	0 - 1 <sup>1)</sup> 0 - 15	0.45	0.65 1.43	0.78 1.72

<sup>1)</sup> for bourdon tube pressure gauges NCS 100 (4")

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

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

<sup>4)</sup> Pressure ranges for other pressure measuring instruments, e.g. pressure transmitters, upon request