

Diaphragm Seal

Special chemical seal

For pulp and paper industries, DN 48, PN 40

MDM 7590

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

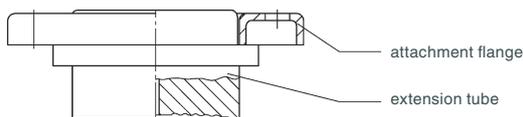
Diaphragm seal models MDM 7590 are mainly used in the pulp and paper industry.

Bourdon tube pressure gauges, pressure switches, pressure transmitters and other pressure measuring instruments up to PN 40 can be equipped with this chemical seal.

Construction

Model 7590vdb 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.



Standard Versions

Process Connection

DN 48, extension tube length TuL 15 mm

Body (including extension tube)

Stainless steel 316L

Diaphragm

Stainless steel 316L, flush welded to the body, effective diaphragm \varnothing dM = 38 mm

Attachment Flange

Stainless steel moulding, 6 holes \varnothing 7 mm, hole circle \varnothing 70 mm

Nominal Pressure

PN 40

Instrument Connection

d8

Filling Liquid

Silicone oil (FA1)

Pressure Ranges Measuring Instrument

Pressure gauge NCS 100: 0–1.6 bar to 0–40 bar, also corresponding compound ranges; pressure ranges for other pressure measuring instruments upon request

Reference Temperature

+20 °C, dial inscription pressure gauge: $t_A + 20$ °C



Options

- Instrument connection female thread G 1/2, G 1/4, 1/4" NPT, 1/2" NPT
- Extension tube length 6.5 mm
- Quadrant pipe 90° or quadrant pipe 90° with vibration damper, only for pressure gauges NCS \leq 100, cf. drawings on page 2
- Counter flange for welding, massive version or with pipe welding socket (cf. page 2)
- Other filling fluid, according to the medium requirement
- Working temperature deviating from +20 °C (please specify precise operating conditions!)
- Capillary line (max. length upon request) or cooling element between chemical seal and measuring instrument, see data sheet 7.7002 and 7.7003, strongly recommended for medium temperatures $> +100$ °C

Special Versions

- Other instrument connections upon request
- Other counter flanges upon request
- Version in special sizes upon request
- Special materials upon request

Ordering Information Chemical Seal

Please note the detailed ordering information

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

Model	MDM 7590
Process connection	DN 48
Nominal pressure	PN 40
Extension tube length TuL	15 mm or 6.5 mm
Material chemical seal	stainless steel 316L
Instrument connection¹⁾	d8
Specifics	see above

Please indicate in particular if the medium or ambient temperature deviates from +20 °C as well as any special process or cleaning conditions.

Example:

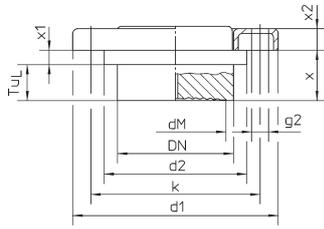
**MDM 7590, DN 48, PN 40,
TuL 15 mm, stainless steel 316L,
instrument connection d8**

¹⁾ information only required for lose chemical seals

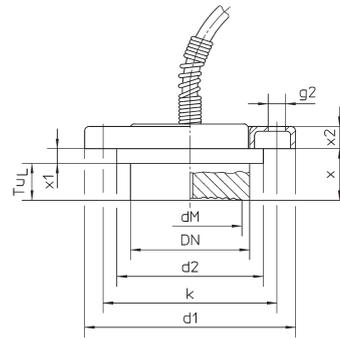
Dimensional Drawing, Dimensional Data and Weight

Connections

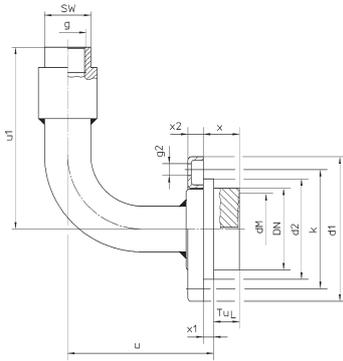
Direct mounting d8



Mounting with capillary line (optional)

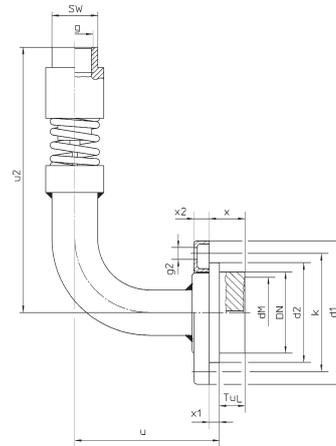


90° quadrant pipe (optional)



90° quadrant pipe with vibration damper (optional)

(only for pressure measuring instruments ≤ NCS 100)

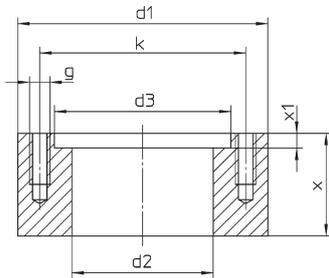


Dimensional Data (mm/inch) and Weights (kg/lb)

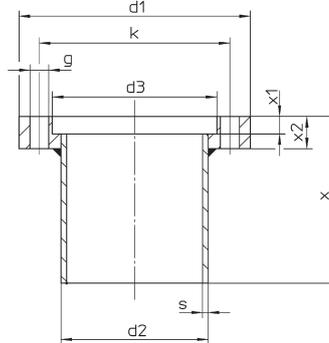
extension tube length TuL	DN	b±2	d1	d2	dM	g	g2	k±2	u±1	u1±1	u2±1	x	x1	x2	SW	(approx.) weight ¹⁾								
15 mm 0.59"	48	66 2.6	85	59	38	G 1/2	6 x Ø 7 6 x Ø 0.28	70	81	107	157	21 0.83	6	9	27	0.72								
6.5 mm 0.26"	1.89	57.5 2.26	3.35	2.32	1.5											2.76	3.19	4.21	6.18	12.5 0.49	0.24	0.35	1.06	0.40

Counter Flanges for Welding

Massive version



Version with pipe welding socket



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

version	d1	d2	d3	g	g2	k	s	x	x1	x2	(approx.) weight
massive	85	48.5 1.91	59.5 2.34	6 x M6	—	70	—	35 1.38	5 0.2	—	1.00 2.20
with pipe welding socket	3.35	54 2.13	60.4 2.38	—	6 x Ø 7 6 x Ø 0.28	2.76	2 0.08	55 2.17	7 0.28	12 0.47	0.40 0.88

¹⁾ standard version, direct mounting