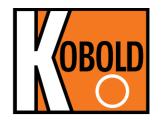
Pressure gauge with diaphragm seal for the paper industry

Nominal dia. 100



measuring

monitoring

analysing



Features

- Compact design
- · Easily cleaned and sterilized
- Indirect pressure measurement
- Small reduction of inner pipe size

Description

Diaphragm seals are mounted direct to the pressure gauge or connected to the measuring unit by using capillary tube. The connection has to be hermetically sealed to ensure proper transmission of pressure by the filling media thus guaranteeing the correct measurement.

The pressure in the process medium in front of the diaphragm is transmitted via the filling to the movement where it causes a deflection of the measuring element which inturn indicates the current pressure.

Ranges

0...25 bar to 0...40 bar

Applications

Paper industry

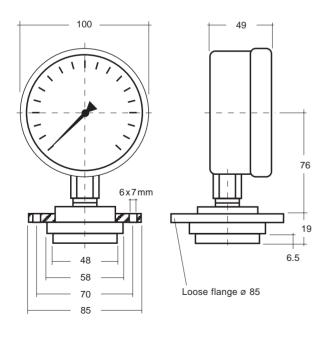
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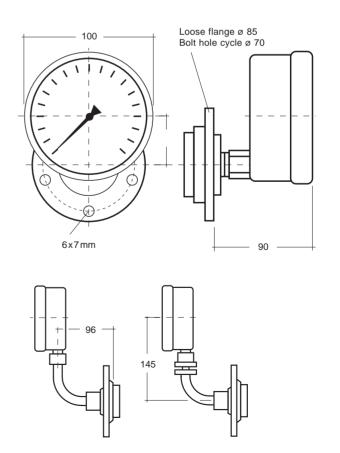
ARGENTINA, AUSTRIA, BELGIUM, BRAZIL, CANADA, CHINA, FRANCE, GREAT BRITAIN, ITALY, NETHERLANDS, POLAND, SWITZERLAND, USA, VENEZUELA

KOBOLD Messring GmbH Nordring 22-24 D-65719 Hofheim/Ts. (206192) 299-0 Fax (06192) 23398 E-mail: info.de@kobold.com Internet: www.kobold.com

Model MAN	RF2CD	RF2DD	RF2ED	RF2FD	Options
Nominal size	100 mm				
Symbol				with vibration damping	
Accuracy class	1.6				
Indicating range	025 to 040				
Max. pressure	static load: up to full s alternating load: 0.9 til	cale value mes full scale value			
Overrange protection	short-term: 1.3 times t				
Housing	1.4301				
Ring	1.4301				
Window	glass				
Dial	aluminum, white				
Pointer	aluminum, black				
Movement	Brass				
Measuring element	Brass				
Connection flange	ø 85 mm steel				stainless steel
- position	bottom	back	back		
- diaphragm	ø 48 mm, 1.4571				
Fluid filling					glycerine
Protection	IP 54				IP 65
Temperatures					
mediumambient	Tmax. +100°C Tmax. +40°C				

Dimensional drawings





Diaphragm seals for pressure gauges



measuring

monitoring

analysing



Features

- Protection of the measuring device against aggressive, highly viscous, solidifying or crystallizing media
- Protection against high process temperatures or change of temperatures
- Protection of the measuring device against vibrations by use of capillary tube
- Damping of pressure changes and pressure peaks
- Compact design following special hygienic requirements

Description

Diaphragm seals transmit the process pressure to the measuring instrument, with the diaphragm forming a hermetical seal between the medium and measuring instrument.

By selecting the correct diaphragm seal, application problems can be solved, which would not be possible without them.

Ranges

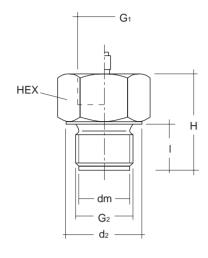
depending on model of diaphragm seal 0...1 bar to 0...60 bar

Applications

Chemical industry, engineering, machine construction, food industries

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Diaphragm seal GF

with fixed male thread G 1/2 male to G 11/4 male

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube.

Range: 0 - 6 bar to 0 - 1000 bar

Temperature range: -40 °C to +200 °C

Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 15 m, if required with protection hose

Filling fluid: depending on operating conditions

Model for	Model for								Range (bar)
direct mounting	capillary tube	G ₂	G ₁	dm	HEX	d ₂	1	H _{max}	min.	max.
DRM-600R15	DRM-601R15	G 1/2 A	G 1/2	18	27	27	20	42	0-100	0-1000
DRM-600R20	DRM-601R20	G3/4A	G 1/2	23.8	36	36	20	46	0-40	0-1000
DRM-600R25	DRM-601R25	G1A	G 1/2	29.5	41	40.5	20	46	0-10	0-600
DRM-600R32	DRM-601R32	G 11/4 A	G 1/2	38	50	49.5	20	46	0-6	0-600
100°C	200°C	max. medium temperature								



with running nut for connection of capillary tube to pressure gauges dia. 63, 100 and 160.

Range: 0 - 100 bar to 0 - 600 bar

Temperature range: 0°C to +350°C

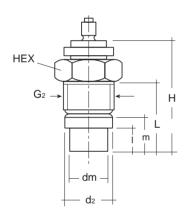
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: MF 7 recommended

Model for								
capillary tube	G ₂	dm	d ₂	HEX	I	m	L	Н
DRM-620R20	G3/4A	18	23.8	32	11	17	35	60
350°C	max. medium temperature							



Diaphragm seal ø 18, rotatable, long

with running nut for connection of capillary tube to pressure gauges dia. 63, 100 and 160.

Range: 0 - 100 bar to 0 - 600 bar

Temperature range: 0 °C to +350 °C

Material: st. st. 1.4301, st. st. 1.4571, others on request

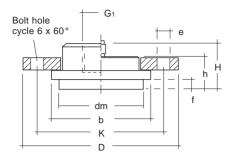
Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: MF 7 recommended

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Model for									
capillary tube	G ₂	dm	d ₂	HEX	1	m	L	h	Н
DRM-620/1R20	G3/4A	18	23.8	32	11	17	45	76	107
350°C	max. medium temperature								



Diaphragm seal ø 48

with rectangle flange for connection of capillary tube to pressure gauges dia. 63, 100 and 160

Range: 0 - 4 bar to 0 - 100 bar Temperature range: -20 °C to +200 °C

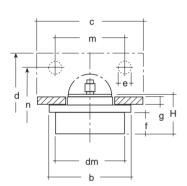
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Flange: ø 85, passivated steel, 1.4571, aluminium Max. length of capillary tube: up to 15 m, if required with protection hose

Filling fluid: depending on operating conditions

Model for	Model for									
direct mounting	capillary tube	dm	b	D	K	е	f	h	Н	G ₁
DRM-622F48	DRM-622/1F48	48	58	85	70	7	6.5	18	25	G 1/2
100°C	200°C	max. medium temperature								



Membrane pressure adaptor ø 38

with rectangle flange for connection of capillary tube to pressure gauges NG 63, NG 100 and NG 160

Measuring range: 0 - 4 bar to 0 - 100 bar Temperature range: -20 °C to +250 °C

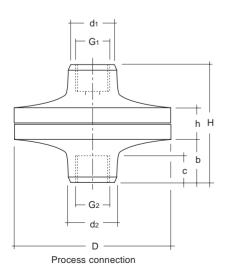
Material: W.1.4301, W.1.4571, others on request Diaphragm: front flush, material st. st. 1.4571

Rectangle flange: passivated steel

Max. length of capillary tube: up to 12 metres, if required with protective tube

Filling fluid: depending on operating conditions

Model	dm	b	С	d	е	f	g	Н	m	n
DRM-621F38	38	45	58	50	6.5	12	6	25	45	35
250°C	max. medium temperature									



Diaphragm seal of plastic

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube

Range: 0 - 4 bar to 0 - 16 bar

Temperature range: 0 °C to +80 °C

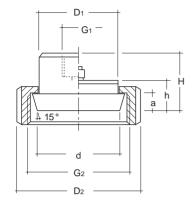
Material: PVC (poly vinyl chloride), PP (polypropylene)

PVDF (poly vinyl fluoride) hypalone with PTFE coating

Diaphragm: hypalone with PTFE coating
Max. length of capillary tube: up to 1 m, if required with protection hose

Filling fluid: depending on operating conditions

Model	D	G ₁	G ₂	d ₁	d ₂	b	С	h	Н
DRM-630R15	90	G 1/2	G1/2	32	32	25	18	34	75
DRM-630R08	90	G 1/4	G1/4	32	32	25	18	24	75
630 = PVC / 631 = PP / 632 = PVDF									



Diaphragm seal with union nut to DIN 11851

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube. Also available for electronic pressure sensors or in combination with digital pressure gauges.

0 - 1 bar to 0 - 40 bar Range:

-10°C to +200°C (not with electr. transm.) Temperature range: Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: compatible with foodstuffs

Model for	Model for									
direct mounting	capillary tube	G ₂	D ₁	D ₂	G ₁	DΝ	d	а	h	Н
DRM-602R25	DRM-603R25	Rd52x1/6"	35	63	G 1/2	25	40	8	16	31
DRM-602R32	DRM-603R32	Rd58x1/6"	41	70	G 1/2	32	46	11	16	32
DRM-602R40	DRM-603R40	Rd65x1/6"	48	78	G 1/2	40	52	11	16	32
DRM-602R50	DRM-603R50	Rd78x1/6"	61	92	G 1/2	50	64	11	16	32
100°C	200°C	max. medium temperature								



for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube. Also available for electronic pressure sensors or in combination with digital pressure gauges.

Range: 0 - 1 bar to 0 - 100 bar

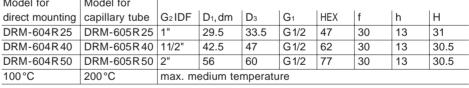
Temperature range: -10°C to +200°C (not with electr. transm.) Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: compatible with foodstuffs

Model for	Model for								
direct mounting	capillary tube	G ₂ IDF	D₁, dm	Dз	G ₁	HEX	f	h	Н
DRM-604R25	DRM-605R25	1"	29.5	33.5	G 1/2	47	30	13	31
DRM-604R40	DRM-605R40	11/2"	42.5	47	G1/2	62	30	13	30.5
DRM-604R50	DRM-605R50	2"	56	60	G 1/2	77	30	13	30.5
100°C	200°C	max. medium temperature							



Diaphragm seal with union nut to APV-RJT standard

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube. Also available for electronic pressure sensors or in combination with digital pressure gauges.

0 - 1 bar to 0 - 100 bar Range:

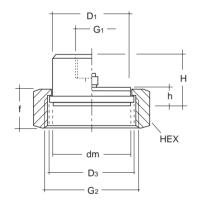
-10°C to +200°C (not with electr. transm.) Temperature range: Material: st. st. 1.4301, st. st. 1.4571, others on request

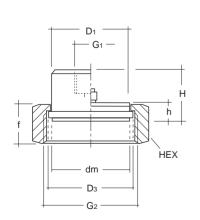
front flush, material st. st. 1.4571 Diaphragm:

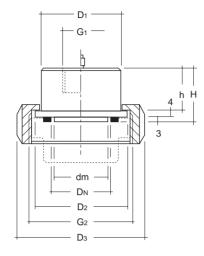
Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: compatible with foodstuffs

Model for	Model for	G ₂							
direct mounting	capillary tube	APV-RJT	D ₁ , dm	Dз	G ₁	HEX	f	h	Н
DRM-614R25	DRM-615R25	1"	29.5	33.5	G 1/2	47	30	13	31
DRM-614R40	DRM-615R40	11/2"	42.5	47	G 1/2	62	30	13	30.5
DRM-614R50	DRM-615R50	2"	56	60	G 1/2	77	30	13	30.5
100°C	200°C	max. medium temperature							







Diaphragm seal with union nut to SMS standard

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube. Also available for electronic pressure sensors or in combination with digital pressure gauges.

Range: 0 - 1 bar to 0 - 10 bar

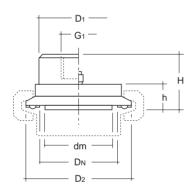
Temperature range: -10°C to +200°C (not with electr. transm.)
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: compatible with foodstuffs

Model for	Model for	G ₂ SMS-								
direct mounting	capillary tube	standard	D ₁	D ₂	dm	G ₁	DΝ	Dз	h	Н
DRM-610R40	DRM-611R40	11/2"	47.5	55	34.5	G 1/2	11/2"	74	20	27
DRM-610R50	DRM-611R50	2"	60	65	45.5	G 1/2	2"	84	20	27
100°C	200°C	max. medium temperature								



Diaphragm seal with clamp connection

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube. Also available for electronic pressure sensors or in combination with digital pressure gauges.

Range: 0 - 2.5 bar to 0 - 10 bar

Temperature range: -10 °C to +200 °C (not with electr. transm.)

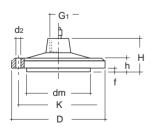
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: compatible with foodstuffs

Model for	Model for							
direct mounting	capillary tube	DN	D ₁	D ₂	dm	G ₁	h	Н
DRM-612F40	DRM-613F40	11/2"	42.5	50.4	34.5	G 1/2	10.5	25
DRM-612F50	DRM-613F50	2" 51 64 45.5 G1/2 10.5 29						
100°C	200°C	max. medium temperature						



Diaphragm seal with flange connection, diameter 100 mm

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube.

Range: 0 - 1 bar to 0 - 40 bar Temperature range: -40 °C to +250 °C

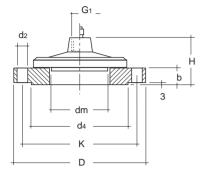
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 15 m, if required with protection hose

Filling fluid: depending on operating conditions

Model for	Model for								
direct mounting	capillary tube	G ₁	dm	K	d ₂	D	f	b	Н
DRM-624F100	DRM-624/1F100	G 1/2	63.5	82	7	100	2	8	34.5
100°C	250°C	max. medium temperature							



Diaphragm seal with open mounting flange, diameter 100 mm to DIN 2527 type C, DN 50, PN 40 for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube.

Range: 0 - 1 bar to 0 - 40 bar Temperature range: -40 °C to +250 °C

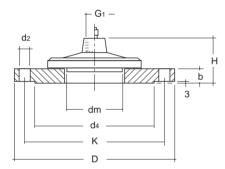
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 15 m, if required with protection hose

Filling fluid: depending on operating conditions

Model for	Model for	Flange								
direct mounting	capillary tube	D _N /P _N	G ₁	dm	d ₄	K	D	d ₂	b	Н
DRM-633F50	DRM-633/1F50	50/40	50/40 G1/2 64 102 125 165 18 2						20	54.5
100°C	250°C	max. medium temperature								



Diaphragm seal with open mounting flange, diameter 100 to DIN 2527 form C, DN 100, PN 6

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube.

Range: 0 - 1 bar to 0 - 6 bar Temperature range: -40 °C to +250 °C

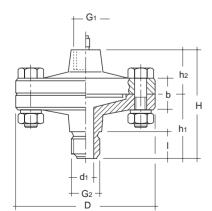
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 15 m, if required with protection hose

Filling fluid: depending on operating conditions

Model for	Model for	Flange										
direct mounting	capillary tube	D _N /P _N	G ₁	dm	d ₄	K	D	d ₂	b	Н		
DRM-633F100	DRM-633/1F100	100/6	G 1/2	64	148	170	210	18	16	50.5		
100°C	250°C	max. medium temperature										



Diaphragm seal with connection G 1/2 male and enlarged bore ø 10 mm for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube.

Range: 0 - 1 bar to 0 - 40 bar Temperature range: -40 °C to +250 °C

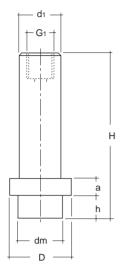
Material: st. st. 1.4301, st. st. 1.4571, others on request

Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose

Filling fluid: depending on operating conditions

Model for	Model for									
direct mounting	capillary tube	D	G ₁	G ₁	d ₁	b	1	h ₁	h ₂	Н
DRM-625R15	DRM-625/1R15	100	100 G1/2 G1/2A 10				20	46	34.5	80.5
100°C	250°C	max. medium temperature								



Diaphragm seal for homogenizing machines without mounting flange

for direct mounting to pressure gauges dia. 63, 100 and 160.

Range: 0 - 100 bar to 0 - 1000 bar

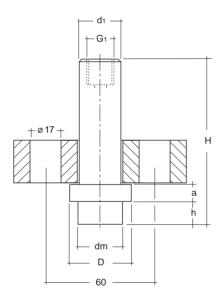
Temperature range: 0°C to +120°C (calibration temperature +85°C)

Material: st. st. 1.4301, st. st. 1.4571
Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: not available

Filling fluid: MF8 (foodstuff-compatible) recommended

Model	D	dm	d ₁	а	h	Н	G ₁
DRM-189F23	34.5	23.8	22	10	12.5	90.5	G3/8



Diaphragm seal for homogenizing machines with rectangle flange

for direct mounting to pressure gauges dia. 63, 100 and 160.

Range: 0 - 100 bar to 0 - 1000 bar

Temperature range: 0°C to +120°C (calibration temperature +85°C)

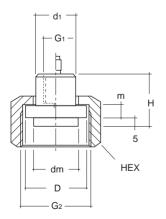
Material: st. st. 1.4301, st. st. 1.4571
Diaphragm: front flush, material st. st. 1.4571

Rectangle flange: 1.4301
Max. length of capillary tube: not available

Filling fluid: MF8 (foodstuff-compatible) recommended

Model	D	dm	d ₁	а	h	Н	G ₁
DRM-189/1F23	33.3	23.8	22	10	12.5	86.5	G 3/8

Rectangle flange: 95x43x25 mm



Diaphragm seal with union nut

for direct mounting to pressure gauges dia. 63, 100 and 160 or capillary tube.

Range: 0 - 100 bar to 0 - 1600 bar

Temperature range: 0°C to +120°C

Material: st. st. 1.4301, st. st. 1.4571
Diaphragm: front flush, material st. st. 1.4571

Max. length of capillary tube: up to 10 m, if required with protection hose Filling fluid: MF8 (foodstuff-compatible) recommended

Model for	Model for								
direct mounting	capillary tube	G ₂	G ₁	HEX	dm	D	d ₁	m	Н
DRM-616R45	DRM-617R45	M45x2	G 3/8	55	23.8	33.3	22	6	27
100°C	120°C	max. medium temperature							

We can manufacture gauges to your specification, too!



Simply call us!

Inline diaphragm seal for Bourdon tube pressure gauges and pressure sensors



measuring
•
monitoring
•
analysing



Features

- Design following special hygienic requirements
- For highly viscous applications
- · Easily cleaning without removal
- Temperature medium up to 80°C (1/2 h up to 140°C)
- Apllication in food industry

Description

The housing of the seal is manufactured in one piece.

The diaphragm, which moves in the same direction as the flow, is welded at both sides to the seal body. The pressure in the process medium in front of the diaphragm is transmitted via the filling to the pressure indicator.

The transition to the connections,

following special hygienic requirements, and a flow-friendly design must avoid the bedding of the medium.

The cleaning of the seal is possible without removal from the pipe system.

Applications

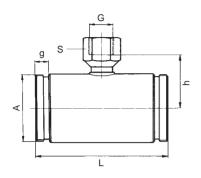
Food industry, beverage industry, pharmaceitical industry

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Dimensional drawings



Inline diaphragm seal sterile connection ISO for direct mounting and with capillary tube

Range: 1.6...40 bar to 2.5...40 bar (dependant on the pipe dia.)

Temperature range: up to 80°C (1/2 h up to 140°C)

Housing: st. st. 1.4571

Diaphragm tube: st. st. 1.4571 (DN 15/20), st. st. 1.4571 (DN 25/40),

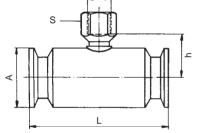
st. st. 1.4404 resp. 1.4435 (DN 50)

Socket connection: st. st. 1.4301 (DN 15/20), st. st. 1.4435 (DN 25, 40, 50)

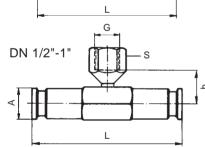
Filling liquid: following operating conditions

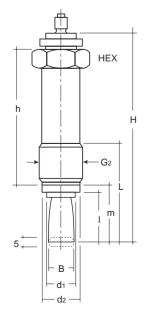
Model for direct	Model for							
mounting	capillary tube	DN	Α	L	h	G	g	S
DRM-500D15	DRM-501D15	15	M30 x 2	130	26	G 1/4	12	17
DRM-500D20	DRM-501D20	20	M36 x 2	120	30	G 1/4	12	17
DRM-500D25	DRM-501D25	25	M42 x 2	120	33	G 1/2	12	27
DRM-500D40	DRM-501D40	40	M56 x 2	110	39	G 1/2	14	27
DRM-500D50	DRM-501D50	50	M68 x 2	100	45	G 1/2	14	27

DN	for tube	O-ring	Weight kg	Innerform
15	26.9 x 2.0	18.5 x 3.0	0.6	Square
20	33.7 x 2.0	25.0 x 3.0	0.8	Square
25	48.3 x 2.0	30.0 x 3.0	0.9	Hexagonal
40	60.3 x 2.6	45.0 x 3.0	1.3	Hexagonal
50	88.9 x 2.6	55.0 x 3.0	1.6	Hexagonal



DN 1 1/2"-2"





Inline diaphragm seal with clamp connection ISO 2852 for direct mounting

Range: 1.6..40 bar to 2.5..40 bar (dependant on the pipe dia.)*

Temperature range: up to 80°C (1/2 h up to 140°C)

Housing: st. st. 1.4435

Diaphragm tube: st. st. 1.4435 (DN 15/20/25),

st. st. 1.4404 resp. 1.4435 (DN 40/50)

Socket connection: st. st. 1.4301 (DN 15/20/25), st. st. 1.4435 (DN 40/50)

Filling liquid: following operating conditions

*The range is dependant on the pipe diameter and the pressure sensor.

Model for direct								
mounting	DN	Α	L	h	G	S	Weight kg	Innerform
DRM-502D15	1/2"	25	140	24	G 1/2	17	0.5	Square
DRM-502D20	3/4"	25	120	27	G 1/2	27	0.5	Square
DRM-502D25	1"	50.5	120	36	G 1/2	27	1.6	Square
DRM-502D40	1 1/2"	50.5	120	36	G 1/2	27	1.2	Hexagonal
DRM-502D50	2"	64	100	45	G 1/2	27	1.3	Hexagonal

Capsule seal 33 mm standard with running nut G 3/4 A, M 28 x 1.5

for mounting to capillary tube of pressure gauge dia. 63, 100 and 160 mm

Range: 0 - 100 bar to 0 - 600 bar Temperature range: -40 °C up to +350 °C

Material: st. st. 1.4301, st. st. 1.4571, others upon request

Tongue sensor: st. st. 1.4571

Max. length of

capillary tube: up to 15 m, if required with protection hose

Filling liquid: MF 7 recommended

Model	HEX	G ₂	В	d ₁	d ₂	I	m	L	h	Н
DRM-606R20	32	G 3/4 A	16.5	18	24	33	39	67	76	130
DRM-606R28	32	M 28 x 1.5	16.5	18	24	33	39	67	76	130
350°C	max. n	max. medium temperature								