

## back side diaphragm seals, with flanged connection



Diaphragm seals are designed to isolate the sensing element of pressure gauges and pressure switches from process fluids which may be corrosive, viscous, sedimentous and/or with a high temperature and pressure. An elastic diaphragm, mechanically clamped, fitted to a leak proof check, guarantees the separation of the process fluid from the transmission fill fluid.

### 4.3B0 - MGS9/3B

Instrument type	Minimum range	Maximum range	Notes
Bourdon tube, DS 4", 6" (100...150 mm)	0...10 psi (0...0,6 bar)	0...580 psi (0...40 bar)	Vacuum and compound gauges included
Diaphragm differential pressure gauges	0...100 InH <sub>2</sub> O (0...250 mbar)	0...360 psi (0...25 bar)	Max static pressure 60 bar
Diaphragm pressure switches	0...15 psi (0...15 bar)	0...580 psi (0...40 bar)	Vacuum and compound gauges included
Pressure transmitters	0...40 InH <sub>2</sub> O (0...100 mbar)	0...580 psi (0...40 bar)	Max static pressure 60 bar

**Working temperature:** -49...+302°F (-45°C...+150°C.)

**Accuracy\*:** (add to instrument accuracy) ±0,5% for direct mounting; ± 1% for capillary mounting.

**Instrument connection:** AISI 304 st.st.

**Diaphragm:** AISI 316L st.st. (cod. **4**), Monel 400 (cod. **6**), Hastelloy C276 (cod. **9**), Tantalum (cod. **B**), Titanium (cod. **2**) and AISI 316L st.st. PTFE coated (cod. **8**)\*\*.

**Gaskets:** PTFE (max. 250°C).

**Threaded process connection:** in AISI 316 st.st. (cod. **4**), AISI 316L st.st. (cod. **5**), AISI 316L st.st. PTFE coated (cod. **N**)\*\*.

**Dimensions :** DN 15...50 and PN 6...40 EN 1092 step seal; 1/2"...2" class 150...600 RF as per ASME B16.5.

\* at +68°F (20 °C) process temperature (or state when ordering)

**EN 1092 flanges finishing:** type B1 (PN 2,5...40) = Ra 3,2...12,5 µm (cod. **RF7**); type B2 (PN 63...100) = Ra 0,8...3,2 µm (cod. **RF8**).

**ASME flanges finishing:** type RF = Ra 125...250 AARH (cod. **RF3**).  
**EN 1092 flanges finishing:** type B1 (PN 2,5...40) = Ra 3,2...12,5 µm (cod. **RF7**); type B2 (PN 63...100) = Ra 0,8...3,2 µm (cod. **RF8**).

**ASME flanges finishing:** type RF = Ra 125...250 AARH (cod. **RF3**).

**Filling liquid:** silicon oil.

**Fixing bolts:** AISI 304 st.st.

\*\* max temperature +328°F (+150°C), with PTFE coating

### ASSEMBLING

All diaphragm seals are mounted on the instruments and fixed by an aluminium protection label. For applications with capillary: should diaphragm seal and instrument not be at the same level, instrument adjustment is required). (For use and installation, see data sheet "4")

<b>D</b> - Direct	<b>9</b> - Capillary AISI304 st.st., AISI304 st.st. armoured, 36.37" max (6 mt max)
<b>I</b> - Nude capillary AISI304, 36.37" max (6 mt max)	<b>6</b> - Capillary AISI316 st.st., AISI316 st.st. armoured, 36.37" max (6 mt max)

### FILLING FLUIDS and process fluid temperature

Fluid	Vacuum	Pressure	Fluid	Vacuum	Pressure
Standard silicon oil	-40...+122°F (-40...+100°C)	-40...+302°F (-40...+150°C)	<b>E</b> - Fluorinated liquid "E"	-40...+212°F (-40...+100°C)	-40...+302°F (-40...+150°C)
<b>B</b> - Silicon oil "B"	-40...+302°F (-40...+150°C)	-40...+482°F (-40...+250°C)	<b>F</b> - Silicon oil "C"	-130...+176°F (-90...+80°C)	-130...+302°F (-90...+150°C)
<b>C</b> - Silicon oil "C"	-14...+392°F (-10...+200°C)	-14...+662°F (-10...+350°C)	<b>G</b> - Mineral food oil "G"	-14...+302°F (-10...+150°C)	-14...+392°F (-10...+200°C)
<b>D</b> - Silicon oil "D"	-14...+392°F (-10...+200°C)	-14...+752°F (-10...+400°C)			

### OPTIONS

<b>C05</b> - Helium Test (1)	<b>TS4</b> - Washing plug (1)
<b>E30</b> - Nace version bMR0103 (2) - MR0175 (ISO 15156) (3)	

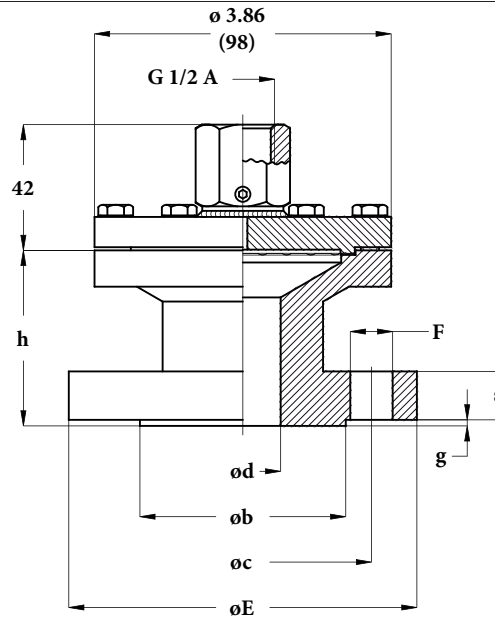
(1) available only on some executions: contact our Technical Department.

(2) Monel 400 or Hastelloy C diaphragm.

(3) Hastelloy C process connection and diaphragm.

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# MGS9/3B



## EN 1092 STANDARD

dimensions : mm

DN (1)	PN-bar	Code	h	E	b	d	g	c	s	F	N (2)
15	6	OO0	48	80	40	15	2	55	12	11	4
15	10÷16	OQ0	52	95	45	15	2	65	14	14	4
15	25÷40	OS0	52	95	45	15	2	65	14	14	4
25	6	QO0	50	100	60	25	2	75	14	11	4
25	10÷16	QQ0	54	115	68	25	2	85	16	14	4
25	25÷40	QS0	54	115	68	25	2	85	16	14	4
50	6	TO0	54	140	90	50	2	110	16	14	4
50	10÷16	TQ0	61	165	102	50	2	125	19	18	4
50	25÷40	TS0	62	165	102	50	2	125	20	18	4

1) DN 20, 40 and over are available

2) N°holes.

## ASME STANDARDS

dimensions : inches

DN (1)	Classe	Code	h	E	b	d	g	c	s	F	N (2)
1/2"	150	4AA	1.89"	3.54"	1.37"	0.59"	0.08"	2.37"	0.38"	0.63"	4
1/2"	300	4BA	2.11"	3.74"	1.37"	0.59"	0.08"	2.62"	0.50"	0.63"	4
1/2"	600	4DA	2.37"	3.74"	1.37"	0.59"	0.27"	2.62"	0.56"	0.63"	4
1"	150	6AA	2.01"	4.33"	2"	0.98"	0.08"	3.12"	0.50"	0.63"	4
1"	300	6BA	2.38"	4.88"	2"	0.98"	0.08"	3.5"	0.62"	0.75"	4
1"	600	6DA	2.64"	4.88"	2"	0.98"	0.27"	3.5"	0.69"	0.75"	4
2"	150	BAA	2.20"	6"	3.62"	1.96"	0.08"	4.75"	0.69"	0.75"	4
2"	300	BBA	2.37"	6.49"	3.62"	1.96"	0.08"	5"	0.81"	0.75"	8
2"	600	BDA	2.75"	6.49"	3.62"	1.96"	0.27"	5"	1"	0.75"	8

1) 3/4", 1"1/2 and over are available

2) N°holes.

## "HOW TO ORDER" SEQUENCE

Section	Model / material	Connection / material	Diaphragm	Process / connection	Flange / finishing	Instrument / connection	Assembling	Options
4	3B0	4, 5, N	4, 6, 9 B, 2, 8	OO0...TS0 4AA...BDA	RF3...RF8	41F - G 1/2 F	D 1, 9, 6	B...G C05...E30

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