

# back side diaphragm seals, with flanged connection

# MGS9/3A



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. The mechanical sealing of the diaphragm guarantees the application of the system at high process fluid temperature avoiding the problems caused by gaskets.

## 4.3A0 - MGS9/3A

**Working pressure:** from 0...1000 to 3000 psi (from 0...60 bar to 0...250 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 316 st.st.

**Diaphragm:** welded, AISI 316L st.st. (cod. **4**), Monel 400 (cod. **6**), Hastelloy C276 (cod. **9**), Hastelloy B2 (cod. **1**), Tantalum (cod. **B**), Titanium (cod. **2**).

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

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

**Dimensions :** DN 15...25 and PN 25...100 EN 1092 step seal; 1/2"...1 1/2 class 600...2500 RF as per ASME B16.5.

**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.

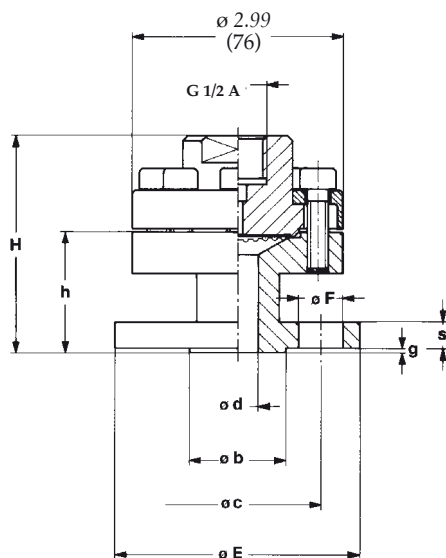
## ASSEMBLING

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. (6 mt). (For use and installation, see data sheet "4")

<b>D</b> - Direct	<b>9</b> - Capillary AISI304 st.st., AISI304 st.st. armoured, 236" max (6 mt max)
<b>T</b> - Cooling extension	<b>6</b> - Capillary AISI316 st.st., AISI316 st.st. armoured, 236" max (6 mt max)
<b>1</b> - Capillary AISI304 st.st. 236" max (6 mt max)	

## OPTIONS

<b>B</b> - Silicon liquid "B" for process fluid temperature from -40°F to +482°F (from -40°C to +250°C)
<b>C</b> - Silicon liquid "C" for process fluid temperature from -14°F to +662°F (from +10°C to +350°C)
<b>E</b> - Fluorinated liquid "E" for process fluid temperature from -60°F to +302°F (from -40°C to +150°C)
<b>R20</b> - Adaptor G 1/2 A M/F with filling screw
<b>R21</b> - Adaptor G 1/2 A M x 1/4 - 18 NPT F with filling screw
<b>E30</b> - Nace MR0103 version, with Monel 400 or Hastelloy C diaphragm.



## EN 1092 STANDARD

dimensions : mm

DN	PN-bar	Code	h	H	E	b	d	g	c	s	F	N (1)
15	25...40	<b>OS0</b>	47	82,5	95	45	15	2	65	14	14	4
15	63...100	<b>OU0</b>	51	86,5	105	45	15	2	75	18	14	4
20	25...40	<b>PS0</b>	49	84,5	105	58	20	2	75	16	14	4
20	63...100	<b>PU0</b>	57	92,5	130	58	20	2	90	20	18	4
25	25...40	<b>QS0</b>	49	84,5	115	68	25	2	85	16	14	4
25	63...100	<b>QU0</b>	59	94,5	140	68	25	2	100	22	18	4

1) N°holes.

## ASME STANDARDS

dimensions : inches

DN	Classe	Code	h	H	E	b	d	g	c	s	F	N (1)
1/2"	600	<b>4DA</b>	2,11"	3,51"	3,74"	1,37"	0,59"	0,24"	2,62"	0,57"	0,62"	4
1/2"	900...1500	<b>4FA</b>	2,70"	4,10"	4,74"	1,37"	0,59"	0,24"	3,24"	0,88"	0,86"	4
3/4"	600	<b>5DA</b>	2,33"	3,73"	4,62"	1,68"	0,78"	0,24"	3,24"	0,62"	0,74"	4
3/4"	900...1500	<b>5FA</b>	2,82"	4,22"	5,11"	1,68"	0,78"	0,24"	3,5"	1,04"	0,86"	4
3/4"	2500	<b>5GA</b>	3,08"	4,48"	5,49"	1,68"	0,78"	0,24"	3,74"	1,25"	0,86"	4
1"	600	<b>6DA</b>	2,39"	3,79"	4,88"	2"	0,98"	0,24"	3,5"	0,68"	0,74"	4
1"	900...1500	<b>6FA</b>	3,10"	4,5"	5,86"	2"	0,98"	0,24"	4"	1,12"	1,02"	4
1"	2500	<b>6GA</b>	3,35"	4,75"	6,24"	2"	0,98"	0,24"	4,24"	1,37"	1,02"	4
1" 1/2	600	<b>ADA</b>	1,72"	3,12"	6,12"	2,87"	1,57"	0,24"	4,5"	0,88"	0,86"	4
1" 1/2	900...1500	<b>AFA</b>	2,09"	3,49"	7"	2,87"	1,57"	0,24"	4,87"	1,25"	1,14"	4
1" 1/2	2500	<b>AGA</b>	2,59"	3,98"	7,99"	2,87"	1,57"	0,24"	5,74"	1,75"	1,25"	4

1) N°holes.

## "HOW TO ORDER" SEQUENCE

Section	Model material	Connection material	Diaphragm connection	Process	Flange finishing	Instrument connection	Assembling	Options
4	3A0	4, 5	4, 6, 9 2, B, 1	OS0...QU0 4DA...AGA	RF3...RF8	41F - G 1/2 F	D, T 1, 9, 6	B, C, E R20...E30