

## diaphragm seals, welded



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. The diaphragm is welded to the upper body, to ensure separation of filling fluid from process medium. Diaphragm faced position permit an accurate and deeper cleaning. Process sizes are ASME/EN 1092 flanged to suit application in chemical, petrochemical, water treatment, paper industries.

### 4,500 - MGS9/5

**Nominal pressure:** up to 0...6000 psi (up to 0...400 bar) depending on flange rating.

**Measuring ranges:** from -30...0 IN Hg to 0...6000 psi (from -1...0 to 0...400 bar); see also table at page 2.

**Working temperature:** -130...+752°F (-90°C...+400°C.); depending on filling fluid.

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

#### Diaphragm, welded to process connection:

AISI 316 L st.st (cod. **4**); Monel 400 (cod. **6**); Hastelloy C 276 (cod. **9**).

**Flanged process connection:** AISI 316 st.s. (cod. **4**); AISI 316L st.s. (cod. **5**).

\* at +68°F (20 °C) working temperature

**Full-cover version:** wetted parts covered with

Monel 400 (cod. **6FC**); Hastelloy C 276 (cod. **9FC**); Tantalum (cod. **BFC**).

**Dimensions :** DN 25...100 and PN 2,5...400 EN 1092-1; 1"...4" class 150...2500 as per ASME B16.5.

**Finishing:** EN 1092-1 type B: Ra 3,2...12,5 µm (cod. **RF7**); ASME B16.5 type RF = Ra 125...250 AARH (cod. **RF3**); (all other finishing type are available).

## 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 "F"	-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>P04</b> - Dye penetrant test (1)
<b>E30</b> - NACE MR0103/MR0175 (ISO 15156) (2)	

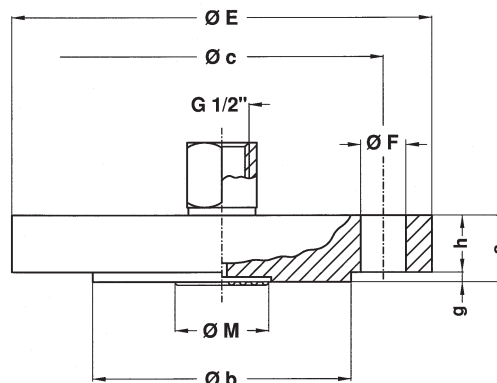
(1) Available for some excutions pls. consult our technical dep. to check their feasibility.

(2) With Monel 400 or Hastelloy C diaphragm only.

MINIMUM MEASURING RANGES (bar)

dimensions : mm

φ M	30	40	50	65
pressure	6	2,5	1	0,6
vacuum			-1	-1
vacuum...pressure	-1...+5	-1...+1,5	-1...+0,6	-1...+0,6



EN 1092 STANDARD, type B

dimensions : mm

DN (1)	PN-bar (1) (3)	Code	E	c	b	g	h	s	N (2)	F	M
25	10...16/25...40	QQ0/QS0	115	85	68	2	16	18	4	14	30
25	63/100	QT0/QU0	140	100	68	2	22	24	4	18	30
40	10...16/25...40	SQ0/SS0	150	110	88	3	15	18	4	18	40
40	63/100	ST0/SU0	170	125	88	3	23	26	4	22	40
50	10...16	TQ0	165	125	102	3	15	18	4	18	50
50	25...40	TS0	165	125	102	3	17	20	4	18	50
50	63	TT0	180	135	102	3	23	26	4	22	50
50	100	TU0	195	145	102	3	25	28	4	26	50
80	10/16	VP0/VQ0	200	160	138	3	17	20	8	18	65
80	25...40	VS0	200	160	138	3	21	24	8	18	65
80	100	VU0	230	180	138	3	29	32	8	26	65

(1) Flanges DN 25...100 and PN 2.5...400 are all available

(3) Maximum nominal pressure of connected instrument

(2) N° holes.

ASME B16.5 STANDARD, type RF

dimensions : inches

DN (1)	Class (1)	bar (3)	Code	E	c	b	g	h	s	N (2)	F	M
1"	150	20	6AA	4,33"	3,13"	2"	0,08"	0,50"	0,58"	4	0,63"	1,18"
1"	300	50	6BA	4,92"	3,5"	2"	0,08"	0,63"	0,7"	4	0,75"	1,18"
1"	600	110	6DA	4,92"	3,5"	2"	0,28"	0,69"	0,96"	4	0,75"	1,18"
1"	900...1500	150...260	6FA	5,91"	4"	2"	0,28"	1,13"	1,4"	4	1"	1,18"
1" 1/2	150	20	AAA	4,92"	3,87"	2,87"	0,08"	0,63"	0,7"	4	0,63"	1,57"
1" 1/2	300	50	ABA	6,1"	4,5"	2,87"	0,08"	0,75"	0,83"	4	0,87"	1,57"
1" 1/2	600	110	ADA	6,1"	4,5"	2,87"	0,28"	0,88"	1,15"	4	0,87"	1,57"
1" 1/2	900...1500	150...260	AFA	7,09"	4,87"	2,87"	0,28"	1,25"	1,53"	4	1,12"	1,57"
1" 1/2	2500	420	AGA	8,07"	5,75"	2,87"	0,28"	1,75"	2,03"	4	1,26"	1,57"
2"	150	20	BAA	5,91"	4,75"	3,63"	0,08"	0,69"	0,77"	4	0,75"	1,97"
2"	300	50	BBA	6,5"	5"	3,63"	0,08"	0,81"	0,89"	8	0,75"	1,97"
2"	600	110	BDA	6,5"	5"	3,63"	0,28"	1"	1,28"	8	0,75"	1,97"
2"	900...1500	150...260	BFA	8,46"	6,5"	3,63"	0,28"	1,5"	1,78"	8	1"	1,97"
2"	2500	420	BGA	9,25"	6,75"	3,63"	0,28"	2"	2,28"	8	1,12"	1,97"
3"	150	20	EAA	7,48"	6"	5"	0,08"	0,88"	0,96"	4	0,75"	2,56"
3"	300	50	EBA	8,27"	6,63"	5"	0,08"	1,06"	1,14"	8	0,87"	2,56"
3"	600	110	EDA	8,27"	6,63"	5"	0,28"	1,25"	1,53"	8	0,87"	2,56"
3"	900	150	EFA	9,45"	7,5"	5"	0,28"	1,5"	1,78"	8	1"	2,56"
3"	1500	260	EFA	10,43"	8"	5"	0,28"	1,88"	2,15"	8	1,26"	2,56"

(1) Flanges 1"...4" and classes 150...2500 are all available.

(3) Maximum nominal pressure of connected instrument

(2) N° holes.

"HOW TO ORDER" SEQUENCE

Section	Model	Connection material	Diaphragm material	Process connection	Flange finishing	Instrument connection	Assembling	Options
4	500	4, 5	4, 5, 9 6FC...BFC	QQ0...VU0 6AA...EFA	RF3...RF7	41F - G 1/2 F	D, 1 9, 6	B...G C05...P04