



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. The "in-line" diaphragm position enables deep cleaning of their surfaces. Flange clamping with metallic sealing guarantees the system against leakage at high process fluid temperatures and pressures.

## 4.R00 - MGS9/R

**Working pressure:** from 0...100 to 0...3000 psi (from 0...6 to 0...250 bar).

**Process 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.

**Bolts and lock ring:** AISI 304 st.st.

**Diaphragm:** welded to process connection,

**4** - AISI 316 L st.st,

**9** - Hastelloy C276.

**Process connection:**

**4** - AISI 316 st.st.,

**5** - AISI 316L st.st.

**Process connection, welded type:**

**7RC** - saddle, for pipe size DN 2"...4";

**7MS** - "in line", for pipe size 1/2"...1";

**7MT** - "in line", for pipe size 1" 1/2"...4".

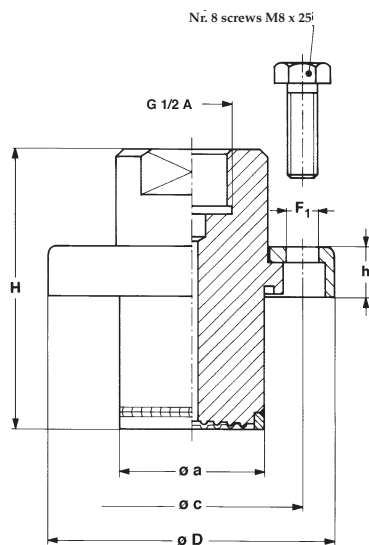
**Process connection, flanged type: (Mod. 7FL)**

- "in line", for flange size 1"1/2 - 2" ; 150...900 RF;

- "in line", for flange size DN 40...50, PN 10...100 step seal.

**Filling liquid:** silicon oil.

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



h	H	a	c	D	F <sub>1</sub>
0.51"	2.91"	1.49"	2.28"	2.95"	0.33"
(13)	(74)	(38)	(58)	(75)	(8,5)

dimensions : inches (mm)

### 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.

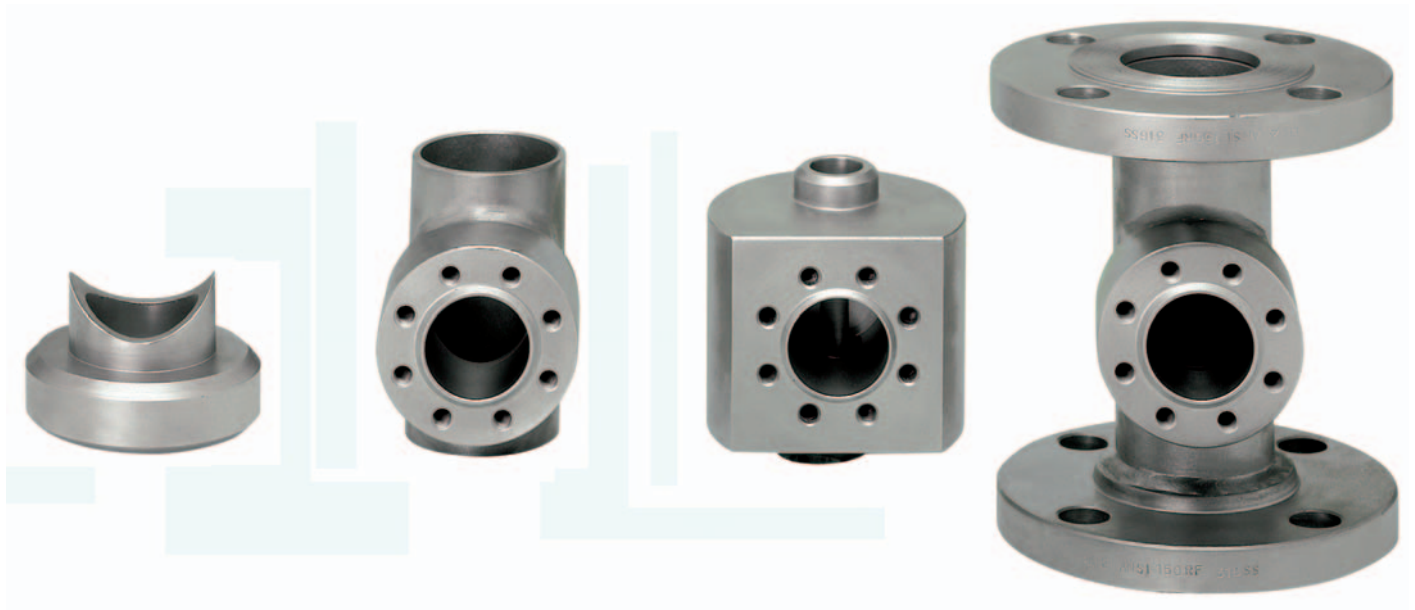
<b>D</b> - Direct
<b>T</b> - Cooling extension
<b>1</b> - Nude capillary AISI304, 236" max (6 mt max)
<b>9</b> - Capillary AISI304 st.st., covered with AISI304 armour, 236" max (6 mt max)
<b>6</b> - Capillary AISI316 st.st., covered with AISI316 st.st. armour, 236" max (6 mt max)

### OPTIONS

Descriptions
<b>B</b> - Silicon liquid "B" for process fluid temperature from -4°F to +482°F (from -20°C to +250°C)
<b>C</b> - Silicon liquid "C" for process fluid temperature from +68°F to +644°F (from +20°C to +340°C)
<b>E</b> - Fluorinated liquid "E" for process fluid temperature from -76°F to +302°F (from -60°C to +150°C)
<b>C05</b> - Helium Test
<b>P04</b> - Dye penetrant test

### "HOW TO ORDER" SEQUENCE

Section/Model/Connection material/Diaphragm material/Process Connection/Instrument connection/Assembling/Options  
 4 R00 4,5 4,9 --- 41F - G 1/2 F 1, 9, 6 D, T B, C, E C05, P04



**5.7RC** - saddle welded for pipes DN 2"...4".

**Working pressure:** max permitted 250 bar, in accordance with used pipe schedule.

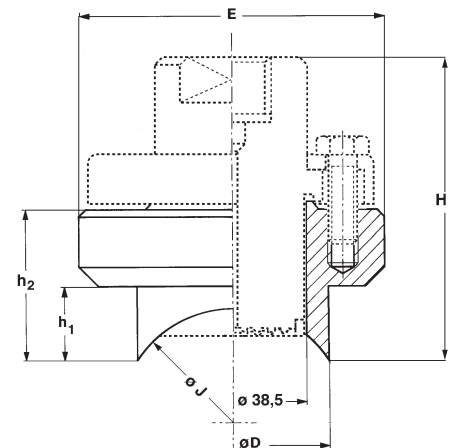
**Process connection:** shaped, suitable for outside pipe welding, DN 2" - 3" - 4".

**Body:** AISI 316 st.st. (code 4)

**Dimensions (mm)**

DN	Code	h <sub>1</sub>	h <sub>2</sub>	H	D	E	J*
2" (50)	<b>L00</b>	28,5	48,5	87,5	55	80	60,3
3" (80)	<b>I00</b>	23,5	43,5	82,5	65	80	88,9
4" (100)	<b>H00</b>	23	43	82	75	80	114,3

\*tube SCH 40S dimensions, as per ASME B31.1



**5.7MS** - "in-line" welded for pipes DN 1/2"...1".

**Working pressure:** max. permitted 250 bar, and in accordance with used pipe schedule.

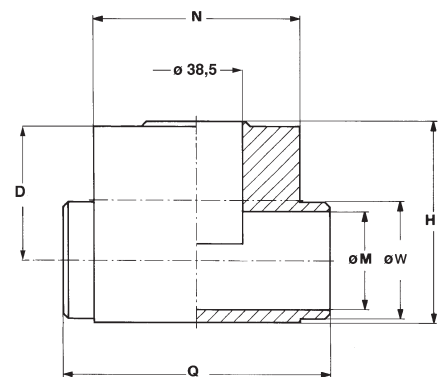
**Process connection:** "head" welded, for pipes DN 1/2" - 3/4" - 1".

**Body:** AISI 316 st.st. (code 4)

**Dimensions (mm)**

DS	Code	H	Q	N	D	M*	W*
1/2" (15)	<b>400</b>	83	110	85	43	15,8	21,4
3/4" (20)	<b>500</b>	83	110	85	45,5	20,9	26,7
1" (25)	<b>700</b>	83	110	85	48,5	26,6	33,4

\*tube SCH 40S dimensions, as per ASME B31.1



# piping welded connections, for "in-line" diaphragm seal MGS9/R

# 7MT - 7FL

882-06/08

**5.7MT** - "in-line" welded for pipes DN 1" 1/2...4".

**Working pressure:** max. permitted 250 bar, and in accordance with used pipe schedule.

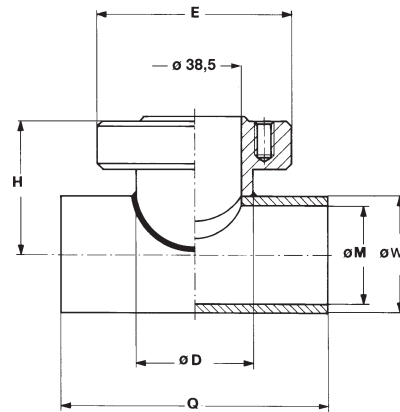
**Process connection:** "head" welded, for pipes DN 1" 1/2 - 2" -3" -4".

**Body:** AISI 316 st.st. (code **4**)

## Dimensions (mm)

DN	Code	H	Q	E	D	M*	W*
1" 1/2 (40)	<b>A00</b>	55,5	110	80	48	40,9	48,3
2" (50)	<b>B00</b>	61	110	80	55	52,5	60,3
3" (80)	<b>E00</b>	74	110	80	65	77,9	88,9
4" (100)	<b>F00</b>	86	110	80	75	102,3	114,3

\*tube SCH 40S dimensions, as per ANSI B31.1



**5.7FL** - flanged side to be in line mounted.

**Working pressure:** max. permitted 100 bar, and in accordance with used pipe schedule.

**Flanged process connection:**

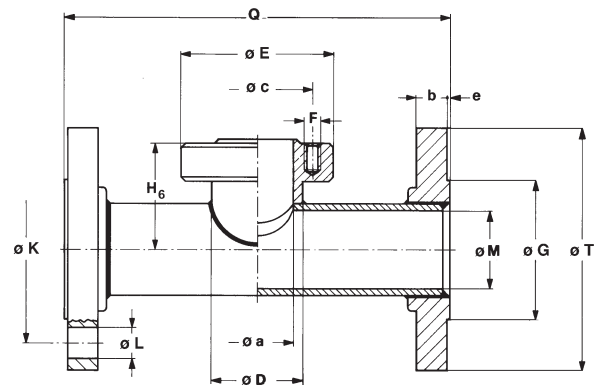
- DN 40...50, PN 10...100 UNI-DIN step seal;

- 1" 1/2...2", 150...900 RF ANSI B16.5.

**Body, tube and flanges:** AISI 316 st.st. (code **4**)

## Dimensions (mm)\*

E	c	a	F (n° 8 holes)
80	58	38,5	M8



## FLANGED CONNECTION AS PER EN : DIMENSIONS (mm)

DN	PN-bar (1)	Code	T	G	M(2)	K	L	b	e	H	D	N (1)	Q
40	10...16/25...40	<b>SS0</b>	150	88	40,9	110	18	16	2	55,5	48	4	230
40	63...100	<b>SU0</b>	170	88	38,1	125	22	24	2	55,5	48	4	260
50	10...16	<b>TQ0</b>	165	102	52,5	125	18	16	2	61	55	4	230
50	25...40	<b>TS0</b>	165	102	52,5	125	18	18	2	61	55	4	230
50	63	<b>TT0</b>	180	102	49,3	135	22	24	2	61	55	4	260
50	100	<b>TU0</b>	195	102	49,3	145	26	26	2	61	55	4	260

## FLANGED CONNECTION AS PER ASME : DIMENSIONS (mm)

DN	PN-psi (1)	Code	T	G	M(2)	K	L	b	e	H	D	N (1)	Q
1" 1/2	150	<b>AAA</b>	125	73	40,9	98,4	16	16	2	55,5	48	4	230
1" 1/2	300	<b>ABA</b>	155	73	40,9	114,3	22	19	2	55,5	48	4	230
1" 1/2	600	<b>ADA</b>	155	73	40,9	114,3	22	22,5	7	55,5	48	4	260
2"	150	<b>BAA</b>	150	92,1	52,5	120,6	19	17,5	2	61	55	4	230
2"	300	<b>BBA</b>	165	92,1	52,5	127	19	21	2	61	55	8	230
2"	600	<b>BDA</b>	165	92,1	52,5	127	19	25,5	7	61	55	8	260

1) N° threaded holes.

2) tube SCH 40S dimensions, as per ASME B31.1.

## "HOW TO ORDER" SEQUENCE

Section/Model/Connection material/Process Connection

5    **7RC**                    4                    **L00...H00**  
       **7MS**    **400...700**  
       **7MT**    **A00...F00**  
       **7FL**    **SS0...BDA**