

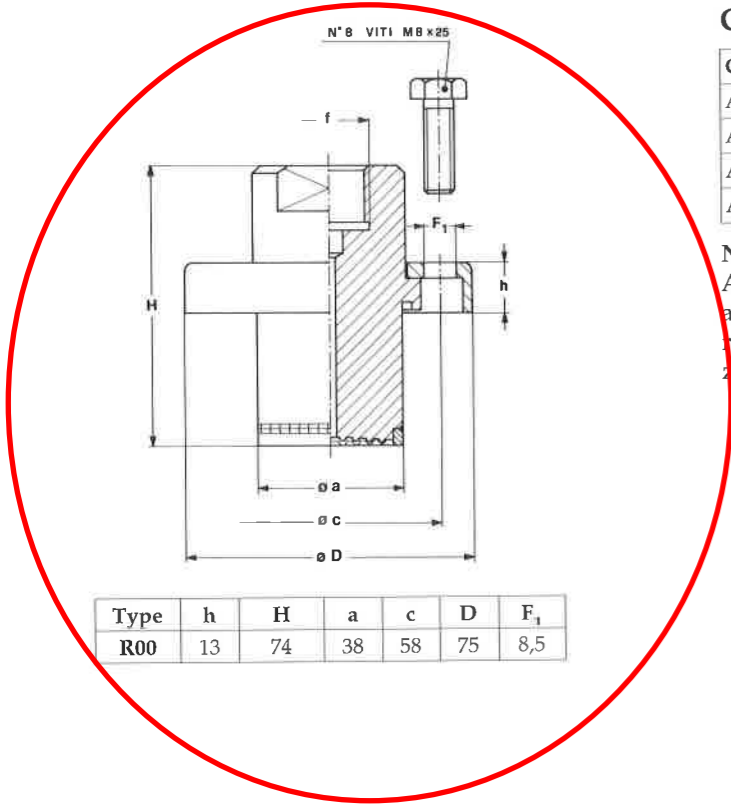
DIAPHRAGM SEAL "IN LINE" TYPE R00

REMOTE MOUNTING

CAPILLARY TYPE - max. length 6 mt.

CAPILLARY TYPE	CODE
AISI 304 st. st.	1
AISI 316 st.st. covered with AISI 304 st. st. armour	4
AISI 304 st.st. covered with AISI 304 st. st. armour, PVC coated	5
AISI 304 st.st. covered with AISI 304 st. st. armour	9

N.B.
All diaphragm seals are coupled to the instruments and fixed by a welding point. For applications with capillary: should diaphragm seal and instrument not be at a same level, instrument zeroing on installation is required.



Type	h	H	a	c	D	F ₁
R00	13	74	38	58	75	8,5

HOW TO ORDER

DESCRIPTION & CODE	
04	04 - section
R00	R00 - "In line" diaphragm seal
4	Process connection material 4 - AISI 316
4	Diaphragm material 4 - AISI 316 L
000	
41F	Instrument connection 41F - 1/2" BSP F
9	Capillary type 0 - without capillary See capillary type table
1000	capillary length (mm.)
R15	See options table

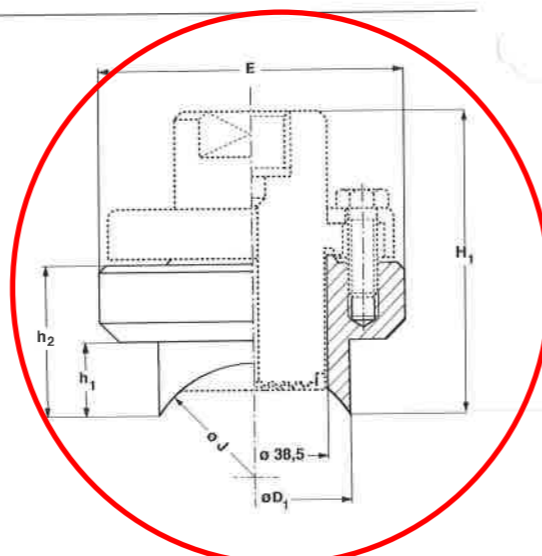
OPTIONS

Description	Code
Helium Test	C05
Dye penetration test	P04
"Fluorolube" filling	R15
AISI adaptor 1/2" BSPM x 1/4" NPTM	R21
Without instrument, seal only	S20

SADDLE WELDED: TYPES AND DIMENSIONS

7RC - saddle welded for pipes DN 2" ÷ 4".

Working pressure: max. permitted 250 bar, and in accordance with used pipe schedule.
Process connection: shaped, suitable for outside pipe welding, DN 2" - 3" - 4".
Body: AISI 316 st.st.



Dimensions

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

How to order

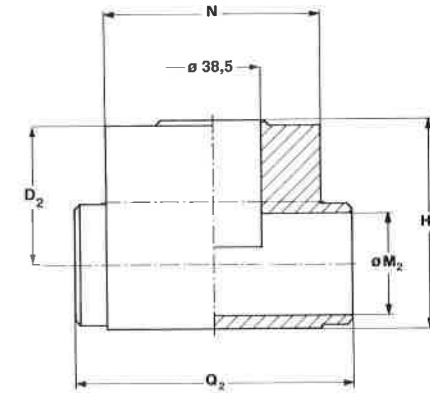
Section	Type	Material	Process connection (1)
5	7RC	4	H00

(1) see dimensions table above, to code.

"IN-LINE" WELDED: TYPES AND DIMENSIONS

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.



Dimensions

DN	Code	H ₂	Q ₂	N	D ₂	M ₂ *
1/2" (15)	400	83	110	85	43	15,8
3/4" (20)	500	83	110	85	45,5	20,9
1" (25)	600	83	110	85	48,5	26,6

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

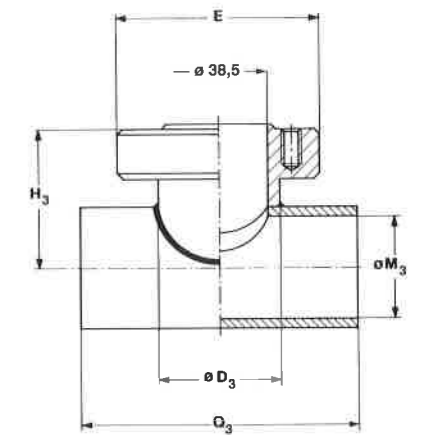
How to order

Section	Type	Material	Process connection (1)
5	7MS	4	400

(1) see dimensions table above, to code.

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.



Dimensions

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

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

How to order

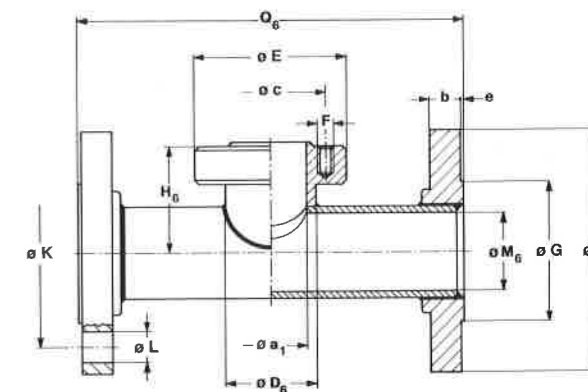
Section	Type	Material	Process connection (1)
5	7MT	4	A00

(1) see dimensions table above, to code.

"IN-LINE" FLANGED

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.



Dimensions *

E	c	a ₁	F (n° 8 holes)
80	58	38,5	M8

*see flange dimensions table on pag. 4.

How to order

Section	Type	Material	Process connection (1)	Flange shape and finishing (1)
5	7FL	4	AAA	RF3

(1) see dimensions and flange shape and finishing tables on page 4, to code.

**pipng welded connections,
for "in-line" diaphragm seal, type R00**

05.7FL

FLANGED CONNECTION AS PER UNI - DIN : DIMENSIONS

(dimensions as per DIN, in bracket)

DN	PN-bar (1)	Code	T	G	M ₆	K	L	b	e	H ₆	D ₆	N (2)	Q ₆
40	10+16	SQG	150	88	40,9	110	18	13	3	55,5	48	4	220
40	25+40	SSG	150	88	40,9	110	18	15	3	55,5	48	4	230
40	64+100	SUG	170	85 (88)	40,9	125	22	23	3	55,5	48	4	270
50	10+16	TQA	165	102	52,5	125	18	15	3	61	55	4	255
50	25+40	TSG	165	102	52,5	125	18	17	3	61	55	4	260
50	64	TTG	180	95 (102)	52,5	135	22	23	3	61	55	4	290
50	100	TUG	195	95 (102)	52,5	145	26	25	3	61	55	4	300

1) suitable for 150% of flange rating at 20÷30 °C and 100% of flange rating at 340 °C.

2) N° threaded holes.

3) tube SCH 40S dimensions, as per ANSI B31.1.

FLANGED CONNECTION AS PER ANSI : DIMENSIONS

DN	PN-psi (1)	Code	T	G	M ₆	K	L	b	e	H ₆	D ₆	N (2)	Q ₆
1" 1/2	150	AAA	127	73	40,9	98,4	16	15,9	1,6	55,5	48	4	205
1" 1/2	300	ABA	155,5	73	40,9	114,3	22	19	1,6	55,5	48	4	220
1" 1/2	600	ADA	155,5	73	40,9	114,3	22	22,5	6,3	55,5	48	4	230
1" 1/2	900	AEA	178	73	40,9	123,8	29	32	6,3	55,5	48	4	300
2"	150	BAA	152,5	92,1	52,5	120,6	19	17,5	1,6	61	55	4	230
2"	300	BBA	165	92,1	52,5	127	19	20,9	1,6	61	55	8	250
2"	600	BDA	165	92,1	52,5	127	19	25,5	6,3	61	55	8	260
2"	900	BEA	216	92,1	52,5	165,1	26	38,2	6,3	61	55	8	320

1) suitable for 150% of flange rating at 20÷30 °C and 100% of flange rating at 340 °C.

2) N° threaded holes.

3) tube SCH 40S dimensions, as per ANSI B31.1.

FLANGE SHAPE AND FINISHING

Code	Shape UNI	Finishing	Code	Shape DIN	Finishing	Code	Shape ANSI B16.5	Finishing
LM1	2225 SM	Ra 3,2 µm	LM2	2513 V13	Rz 40 µm	LM3	LM	AARH 125+500 µin (grooves)
LF1	2225 SF	Ra 3,2 µm	LF2	2513 R13	Rz 40 µm	LF3	LF	AARH 125+500 µin (grooves)
LT1	2226 DM	Ra 3,2 µm	LT2	2512 F	Rz 40 µm	LT3	LT	AARH 125 µin max
LG1	2226 DF	Ra 3,2 µm	LG2	2512 N	Rz 40 µm	LG3	LG	AARH 125 µin max
CM1	2227 CM	Ra 12,5 µm	CM2	2514 V	Rz 160 µm	ST3	ST	AARH 125 µin max
CF1	2227 CF	Ra 12,5 µm	CF2	2514 R	Rz 160 µm	SG3	SG	AARH 125 µin max
LN1	6078	Ra 0,8 µm	LN2	2696 L	Rz 4 µm	RJ3	RJ	AARH 63 µin max
FF1	2229 flat	Ra 12,5 µm	FF2	2526 A/B	Rz 160 µm	FF3	FF	AARH 125+500 µin (grooves)
RF1	2229 step	Ra 12,5 µm	RF2	2526 C	Rz 40+160 µm	RF3	RF	AARH 125+500 µin (grooves)
			RF4	2526 D	Rz 40 µm	SM3	SM	AARH 125 µin max
			RF5	2526 E	Rz 16 µm	SF3	SF	AARH 125 µin max
						RFS	RF (smooth)	AARH 125 µin max

	▽▽▽		▽▽		▽	
Ra (µm)	0,8	1,6	3,2	6,3	12,5	25
Rz (µm)	3,2	6,3	12,5	25	50	100
AARH (µin)	32	63	125	250	500	1000

REV. 02 E 04/97 IN ORDER TO IMPROVE THEIR PRODUCTION, MESSRS. NUOVA FIMA RESERVE THE RIGHT TO THEMSELVES TO MAKE ALL THE MODIFICATIONS THAT THEY DEEM INDISPENSABLE AT ANY TIME

"in line" diaphragm seal

04.R00



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.

Functional and constructive characteristics

Ranges: 0/6 ÷ 0/250 bar.

Process temperature: -45°C÷+150°C.

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

Instrument connection: AISI 316 st.st. 1/2" BSP F.

Diaphragm: AISI 316 L st.st., welded.

Process connection: saddle welded type, AISI 316 for pipe size DN 2"÷4"; "in line" welded type, AISI 316 for pipe size 1/2"÷4"; "in line" flanged for pipe size 1" 1/2÷3".

Filling liquid: silicone oil type "A".

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

Capillary (remote mounting): AISI 304 st.st. Ø3x1 or AISI 304 st.st. covered with AISI 304 st. st. armour Ø6 (max. length 6 mt.).

Special Version

Filling fluids: special filling fluids are available for special process conditions (see table FILLING FLUIDS).

Capillary (remote mounting): AISI 316 st.st. covered with AISI 304 st. st. armour Ø6; AISI 304 st.st. covered with AISI 304 st. st. armour Ø6, PVC coated.

FILLING LIQUIDS

Liquid type	Limit of process temperature
Silicone oil type "A"	-45 + +150 °C (-49 + +302 °F)
Silicone oil type "B"	-20 + +250 °C (-4 + +482 °F)
Silicone oil type "C"	+20 + +340 °C (+68 + +644 °F)
"Fluorolube"	-60 + +150 °C (-76 + +302°F)

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

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