

back side diaphragm seals, with flanged connection Type 04.600

04.600



Diaphragm seals are designed to isolate the sensing element of pressure gauges, pressure switches and electronic pressure transmitter from process fluids which may be corrosive, viscous, sedimentous and/or with a high temperature. The diaphragm is mechanically clamped between upper housing and intermediate ring. It is leak proof tested to guarantee fill fluid separation from process fluid. Process side are ANSI/UNI/DIN flanged to suit application in pharmaceutical, chemical, petrochemical, water treatment, paper and food process industries.

Functional and constructive characteristics.

Ranges: -1...0/0...40 bar.

Process temperature: -45°C...+150°C.

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

Instrument connection: AISI 316 st. st. 1/2" BSPF.

Diaphragm: AISI 316 L st.st.

Gasket: PTFE (max. 250°C).

Process connection: AISI 316 st.st. DN 15...50, PN 6...40 UNI-DIN step seal; 1/2" ...2", 150...600 RF ANSI B16.5.

Filling liquid: silicone oil type "A".

Bolts and nuts: AISI 304 st. st.

Capillary (remote mounting): AISI 304 st.st. $\varnothing 3 \times 1$ or AISI 304 st.st. covered with AISI 304 st. st. armour $\varnothing 6$ (max. length 6 mt.).

FILLING LIQUIDS

Liquid type	Limit of process temperature
Silicon oil type "A"	-45 ... +150 °C
Silicon oil type "B"	-20 ... +250 °C
Silicon oil type "C"	+20 ... +340 °C
"Fluorolube"	-60 ... +150 °C

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

Special versions

High temperature version (option E10) : 340 °C (644°F) with BUNA S gasket and silicone oil type "C".

Diaphragm: Tantalum, Hastelloy B2, Hastelloy C276, Titanium, Monel 400, Nickel, AISI 316L st.st. PTFE coated (1).

Process connection: AISI 316L st.st., AISI 304 st.st., Hastelloy B2, Hastelloy C276, Monel 400, AISI 316 st.st. PTFE coated (1), Carbon steel, Carbon steel PTFE coated, with special flange finishing (see table FLANGE SHAPE AND FINISHING).

Filling liquids: special filling liquids are available for special process conditions (see table FILLING LIQUIDS).

Intermediate ring: AISI 316 st.st.; AISI 316 st.st. PTFE coated.

Flushing connection: AISI 316 st. st. 1/4" NPTM .

Not available for these flanged connection:

2", 300-600 ANSI B16.5.; PTFE coated process connection.

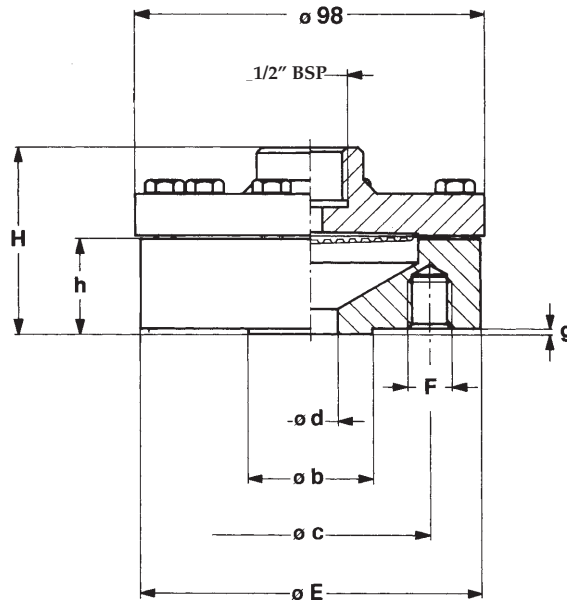
Capillary (remote mounting): AISI 316 st.st. covered with AISI 304 st. st. armour $\varnothing 6$; AISI 304 st.st. covered with AISI 304 st. st. armour $\varnothing 6$, PVC coated.

Studs, nuts: ASTM A 193 - B7 studs and ASTM A 194 - 2H nuts (option P15).

(1) max. temperature 150 °C/328 °F, with PTFE coating.

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DIMENSIONS (mm.)



FLANGED CONNECTION AS PER UNI - DIN

DN	PN-bar (1)	Code	h	H	E	b	d	g	c	F	N (2)	L (3)
15	6	OOG	34	59	80	40	15	2	55	M10	4	70
15	10...16	OQG	27	52	95	45	15	2	65	M12	4	70
15	25...40	OSG	27	52	95	45	15	2	65	M12	4	70
20	6	POG	34	59	90	50	20	2	65	M10	4	70
20	10...16	PQG	27	52	105	58	20	2	75	M12	4	70
20	25...40	PSG	27	52	105	58	20	2	75	M12	4	70
25	6	QOG	27	52	100	60	25	2	75	M10	4	70
25	10...16	QQG	27	52	115	68	25	2	85	M12	4	70
25	25...40	QSG	27	52	115	68	25	2	85	M12	4	70
40	6	SOG	27	52	130	80	40	3	100	M12	4	70
40	10...16	SQG	27	52	150	88	40	3	110	M16	4	70
40	25...40	SSG	27	52	150	88	40	3	110	M16	4	70
50	6	TOG	27	52	140	90	50	3	110	M12	4	70
50	10...16	TQG	27	52	165	102	50	3	125	M16	4	70
50	25...40	TSG	27	52	165	102	50	3	125	M16	4	70

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

2) N° threaded holes;

3) studs length (option P15).

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FLANGED CONNECTION AS PER ANSI

DN	PN-psi (1)	Code	h	H	E	b	d	g	c	F	N (2)	L (3)
1/2"	150	4AA	34	59	89	34,9	15	1,6	60,3	1/2" 13UNC	4	85
1/2"	300	4BA	27	52	95	34,9	15	1,6	66,7	1/2" 13UNC	4	85
1/2"	600	4DA	48,5	73,5	95	34,9	15	6,3	66,7	1/2" 13UNC	4	85
3/4"	150	5AA	27	52	98,5	42,9	20	1,6	69,8	1/2" 13UNC	4	85
3/4"	300	5BA	38	63	117,5	42,9	20	1,6	82,5	5/8" 11UNC	4	115
3/4"	600	5DA	48,5	73,5	117,5	42,9	20	6,3	82,5	5/8" 11UNC	4	115
1"	150	6AA	27	52	108	50,8	25	1,6	79,4	1/2" 13UNC	4	85
1"	300	6BA	38	63	124	50,8	25	1,6	88,9	5/8" 11UNC	4	115
1"	600	6DA	48,5	73,5	124	50,8	25	6,3	88,9	5/8" 11UNC	4	115
1" 1/2	150	AAA	27	52	127	73	40	1,6	98,4	1/2" 13UNC	4	85
1" 1/2	300	ABA	27	52	155,5	73	40	1,6	114,3	3/4" 10UNC	4	125
1" 1/2	600	ADA	48,5	73,5	155,5	73	40	6,3	114,3	3/4" 10UNC	4	125
2"	150	BAA	27	52	152,5	92,1	50	1,6	120,6	5/8" 11UNC	4	115
2" (4)	300	BBA	27	52	165	92,1	50	1,6	127	5/8" 11UNC	8	115
2" (4)	600	BDA	48,5	73,5	165	92,1	50	6,3	127	5/8" 11UNC	8	115

- 1) suitable for 150% of flange rating at 20...30 °C and 100% of flange rating at 340 °C.
- 2) N° threaded holes;
- 3) studs length (option P15).
- 4) flushing connection not available.

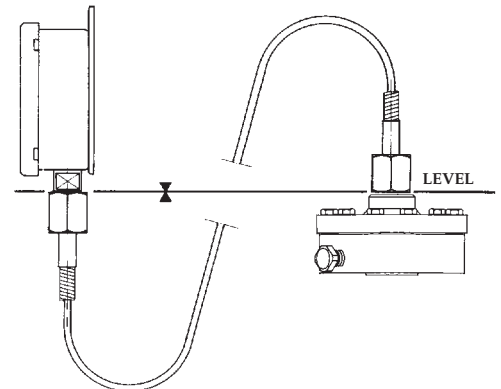
REMOTE MOUNTING

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 316 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 mounted on the instruments and fixed by an aluminium protection label. For applications with capillary: should diaphragm seal and instrument not be at a same level, instrument on installation is required. (For use and installation, see data sheet "04").



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FLANGE SHAPE AND FINISHING

Code	Form UNI	Finishing (turning made)	Code	Form DIN	Finishing (turning made)	Code	Form ANSI B16.5	Finishing
LM1	2225 SM	Ra 3,2 µm max	LM2	2513 V13	Rz 63 µm max	LM3	LM	AARH 125÷250 µin (grooves)
LF1	2225 SF	Ra 3,2 µm max	LF2	2513 R13	Rz 63 µm max	LF3	LF	AARH 125÷250 µin (grooves)
LT1	2226 DM	Ra 3,2 µm max	LT2	2512 F	Rz 40 µm max	LT3	LT	AARH 125 µin max (turning made)
LG1	2226 DF	Ra 3,2 µm max	LG2	2512 N	Rz 40 µm max	LG3	LG	AARH 125 µin max (turning made)
CM1	2227 CM	Ra 12,5 µm max	CM2	2514 V	Rz 160 µm max	ST3	ST	AARH 125 µin max (turning made)
CF1	2227 CF	Ra 12,5 µm max	CF2	2514 R	Rz 160 µm max	SG3	SG	AARH 125 µin max (turning made)
LN1	6078	Ra 0,8 µm max	LN2	2696 L	Rz 4 µm max	RJ3	RJ	AARH 63 µin max (turning made)
FF1	2229 	Ra 12,5 µm max	FF2	2526 A/B	Rz 40÷160 µm	FF3	FF	AARH 125÷250 µin (grooves)
RF1	2229 	Ra 12,5 µm max	RF2	2526 C	Rz 40÷160 µm	RF3	RF	AARH 125÷250 µin (grooves)
			RF4	2526 D	Rz 40 µm max	SM3	SM	AARH 125 µin max (turning made)
			RF5	2526 E	Rz 16 µm max	SF3	SF	AARH 125 µin max (turning made)
						RFS	RF (smooth)	AARH 125 µin max (turning made)
						RF6	Stock	AARH 500 µin max (grooves)

HOW TO ORDER

CODE & DESCRIPTION

04	04 - diaphragm seals
600	600 - flanged connection diaphragm seal
	Process connection material 4 - AISI 316 st.st. H - AISI 304 st.st. 5 - AISI 316 L st.st. N - AISI 316 st.st. + PTFE 3 - Carbon steel 8 - Carbon steel + PTFE 6 - MONEL 400 9 - HASTELLOY C 276 1 - HASTELLOY B 2
N	
	Diaphragm material 4 - AISI 316 L st.st. 8 - AISI 316 L st.st. + PTFE 6 - MONEL 400 9 - HASTELLOY C 276 1 - HASTELLOY B 2 B - TANTALIO 2 - TITANIO 7 - NICKEL
9	
OOG	Process connection see flanged connection table to code
41F	Instrument connection 41F - 1/2" BSP F
	Capillary type 0 - without capillary see capillary type table
9	
1000	capillary length (mm.)
RF1	Flange shape and finishing (see table)
AIN	see options table

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Ra (µm)	0,8	1,6	3,2	6,3	12,5	25	50
Rz (µm)	3,2	6,3	12,5	25	50	100	200
AARH (µin)	32	63	125	250	500	1000	2000

OPTIONS

DESCRIPTIONS	CODE
AISI 316 st.st. intermediate ring	AI4
AISI 316 + PTFE st.st. intermediate ring	AIN
Helium Test	C05
AISI 316 st.st top housing	CS4
High temperature version (340° C - 644°F)	E10
NACE MR 01.75 version	E30
Studs, nuts and washers	P15
"Fluorolube" filling	R15
AISI adaptor 1/2" BSP M x 1/2" BSP F	R20
AISI adaptor 1/2" BSP M x 1/4" NPT M	R21
Without instrument, alone	S20
AISI 316 st.st. flushing connection	TS4



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