

Diaphragm-Type Diaphragm Seal Flange-Type Diaphragm Seal Type 990.FR

WIKA Datasheet 990.FR

Applications

- Process industry diaphragm seal to combine with pressure transmitters and Bourdon tube pressure gauges.
- Intended for corrosive, contaminated, hot or viscous pressure media.

Special Features

- Flush Flanged Diaphragm Seal
- Rotatable Flange
- Large Material Selection
- Diaphragm welded
- Max. temperature limits: -40/752 °F for all metal versions
- Max. temperature limits: Consult factory for all plastic versions



Flange-Type Diaphragm Seal Type 990.FR

Standard Features

Process Connection

1.5" to 4" per ASME/ANSI B16.5

Instrument Connection

Capillary, 1/4" or 1/2" NPT-female

Applicable Pressure Instruments

Switches: all sensor & bourdon tube types,

for micro switch & diaphragm model consult factory

Transmitters: all standard units

WIKA Gauges: Size 4.5": all gauge pressure ranges ≥ 15 psi

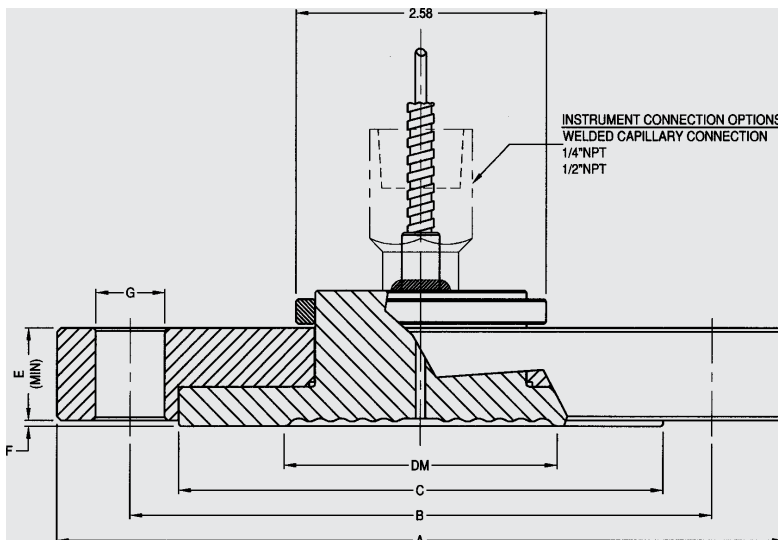
Size 4.0": all gauge pressure ranges ≥ 15 psi

Vacuum & Compound ranges consult factory

Size 2.5": all gauge pressure ranges

Available Options (connections, materials, etc.)

See Selection Guide (over)



X=NUMBER OF BOLT HOLES
DN=NOMINAL PIPE SIZE
DM=EFFECTIVE DIAPHRAGM DIAMETER* See Page 2
CLASS=FLANGE RATING PER ASME B16.5
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

SIZE DN	CLASS	A	B	C	DM	E	F	G	x	WEIGHT lbs
1.5"	150	5.00	3.55	2.88	1.9	0.69	0.06	0.62	4	3.5
	300	6.12	4.50	2.88	1.9	0.81	0.06	0.88	4	5.5
	600	6.12	4.50	2.88	1.9	1.13	0.25	0.88	4	7.3
	1500	7.00	4.88	2.88	1.9	1.50	0.25	1.12	4	13.0
	2500	8.00	5.75	2.88	1.9	2.00	0.25	1.25	4	22.9
2"	150	6.00	4.75	3.62	2.4	0.75	0.06	0.75	4	5.9
	300	6.50	5.00	3.62	2.4	0.88	0.06	0.75	8	8.1
	600	6.50	5.00	3.62	2.4	1.25	0.25	0.75	8	12.5
	1500	8.50	6.50	3.62	2.4	1.75	0.25	1.00	8	29.0
	2500	9.25	6.75	3.62	2.4	2.25	0.25	1.12	8	43.6
3"	150	7.50	6.00	5.00	3.5	0.94	0.06	0.75	4	11.7
	300	8.25	6.62	5.00	3.5	1.12	0.06	0.88	8	17.2
	600	8.25	6.62	5.00	3.5	1.50	0.25	0.88	8	24.2
	900	9.50	7.50	5.00	3.5	1.75	0.25	1.00	8	36.7
	1500	10.53	8.00	5.00	3.5	2.13	0.25	1.25	8	53.9
4"	150	9.00	7.50	6.19	3.5	0.94	0.06	0.75	8	16.9
	300	10.04	7.88	6.19	3.5	1.25	0.06	0.88	8	27.9

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To determine the effects of temperature and response time in a specific application, contact the factory for an *Application Questionnaire*. The information provided will allow WIKA Technical Support to accurately model your application parameters using state-of-the-art computer simulation techniques.

Technical Data:

Max. displacement volume

- *DM: 1.9" = 0.07 in³ (1.140cc)
- 2.4" = 0.096 in³ (1.580cc)
- 3.5" = 0.335 in³ (5.500cc)

Sealing Face

Serrated finish per ASME B16.5

Special Requirements:

- NACE: per MR0175/ISO 15156-2:2009
- MTR: Material Certification per EN10204 3.1
- Oxygen & Chlorine Service:
Cleaned per ASME B40.100 Level IV

990.FR Smart Code Configuration	
Field No.	Code
1	Process Connection Type
	A ASME B16.5
	? Other - please specify
2	Process Connection
	SM15 1.5"
	SM20 2"
	SM30 3"
	SM40 4"
	???? Other - please specify

Nominal Pressure Rating	
3	1 Class 150
	2 Class 300
	4 Class 600
	5 Class 900
	6 Class 1500
	? Other - please specify
4	Sealing Face Style
	1B Raised Face (RF) 125...250 RMS
	1F Ring [Type] Joint (RTJ/RJF)
	SF Raised Face Smooth Finish (RFSF)
?? Other - please specify	
5	Flange Body Material
	C2 316L SS (1.4435)
	Sealing Face and Diaphragm Material
	C2-C2 316L SS (1.4435)
	H3-H3 Hastelloy® B2 (2.4617)
	H4-H4 Hastelloy® B3 (2.4600)
	H2-H2 Hastelloy® C276 (2.4819)
	M1-M1 Monel® 400 (2.4360)
	I1-I1 Inconel® 600 (2.4816)
	I2-I2 Incoloy 825 (2.4858)
	NL-NL Nickel
T1-T1 Titanium grade 2 (3.7035)	
CF-CF 316L SS w/ PFA coating ¹	
CG-CG 316L SS w/ gold plating ^{1, 2}	
??-?? Other - please specify	

¹ RFSF sealing face required for lined/coated lower housings
² Gold plating is 50 micro-inch thick

How to Order			
	Add information	Sample:	Reference page*
Instrument:		232.34 4.5 200 psi 1/2L	57-67
D/S:		990.FR-A-SM20-1-1B-C2-C2-C2-Z-Z-Z	
Mounting:		DZZZZ-N2-ZZZZ-ZZZ	229
System fill:		Silicon oil KN2	228
Additional:		N/A	

*2013 Price List

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TO SPECIFY ADDITIONAL SEAL REQUIREMENTS (INSTRUMENT CONNECTION, MOUNTING, QUALITY CERTIFICATION, ETC) PLEASE REFER TO PAGE *** FOR OPTION CODES TO ADD TO THE END OF THE MODEL CODE ABOVE.



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