



# Diaphragm-Type Chemical Seals

## Flange-Type Diaphragm Seal

Type L990.27

### Chemical Seals

#### Application

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

#### Design

Flange with integral diaphragm, which requires hydraulic fluid to transmit pressure to instrument.

#### Process Connection

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

½" to 1" per ASME/ANSI B16.5 (Diaphragm recessed)

#### Instrument Connection

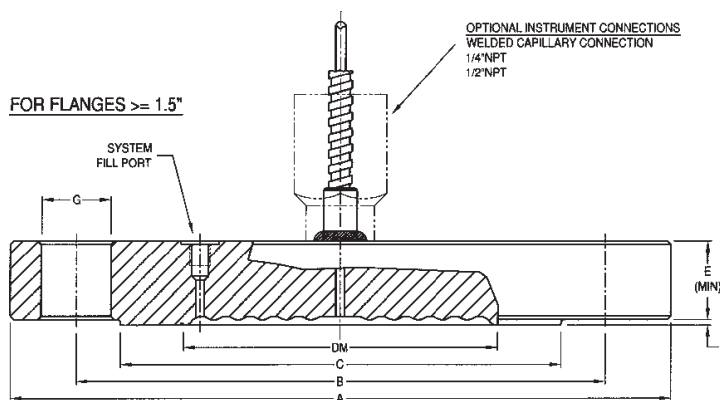
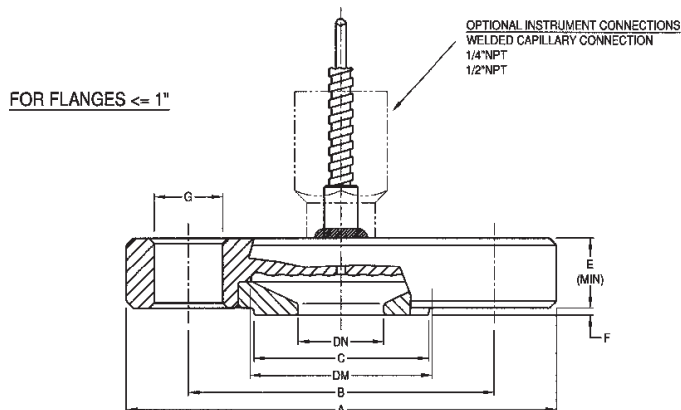
Capillary, ¼" or ½" NPT-female

#### Suitable Pressure Ranges

10 inH<sub>2</sub>O to class 2500, depending on flange and diaphragm size and process conditions

#### Available Options (connections, materials, etc.)

See Selection Guide (over)



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

| SIZE<br>DN | CLASS | A     | B     | C    | DM  | E    | F    | G    | X | WEIGHT<br>lbs |
|------------|-------|-------|-------|------|-----|------|------|------|---|---------------|
| 1/2"       | 150   | 3.50  | 2.38  | 1.38 | 1.3 | 0.85 | 0.06 | 0.62 | 4 | 2.2           |
|            | 300   | 3.75  | 2.62  | 1.38 | 1.6 | 0.85 | 0.06 | 0.62 | 4 | 2.2           |
| 3/4"       | 150   | 3.88  | 2.75  | 1.69 | 1.6 | 0.85 | 0.06 | 0.62 | 4 | 2.4           |
|            | 300   | 4.62  | 3.25  | 1.69 | 1.6 | 0.85 | 0.06 | 0.75 | 4 | 3.5           |
| 1"         | 150   | 4.25  | 3.12  | 2.00 | 2.1 | 0.85 | 0.06 | 0.62 | 4 | 3.1           |
|            | 300   | 4.88  | 3.50  | 2.00 | 2.1 | 0.85 | 0.06 | 0.75 | 4 | 3.7           |
| 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  | 4.68  | 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"         | 2500  | 12.01 | 9.00  | 5.00 | 3.5 | 2.67 | 0.25 | 1.38 | 8 | 93.9          |
|            | 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          |
|            | 400   | 10.94 | 7.88  | 6.19 | 3.5 | 1.63 | 0.25 | 1.00 | 8 | 38.3          |
|            | 600   | 10.83 | 8.50  | 6.19 | 3.5 | 1.75 | 0.25 | 1.00 | 8 | 47.3          |
|            | 900   | 11.51 | 9.25  | 6.19 | 3.5 | 2.00 | 0.25 | 1.25 | 8 | 60.9          |
|            | 1500  | 12.30 | 9.50  | 6.19 | 3.5 | 2.37 | 0.25 | 1.38 | 8 | 81.4          |
| 5"         | 2500  | 14.00 | 10.75 | 6.19 | 3.5 | 3.25 | 0.25 | 1.62 | 8 | 144.5         |

DWG.#2211823-5

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.

**ACS L990.27**  
(ACS 99.04)

# Selection Guide - Type L990.27

L990.27,1/4X3.0-150R,SS,SS,AXL

## Instrument Connection Location

AXL = Axial

RAD = Radial (See note 3)

## Wetted Material

SS = 316 stainless steel

MO = Monel<sup>®</sup> 400 (See note 1)

HB = Hastelloy<sup>®</sup> B-2 (See note 1)

HC = Hastelloy<sup>®</sup> C-276 (See note 1)

TF = 316 stainless steel, white Teflon<sup>®</sup> lined (See note 1)

PF = 316 stainless steel, Teflon<sup>®</sup> coated

IN = Inconel<sup>®</sup> 600 (See note 1)

IC = Incoloy<sup>®</sup> 825 (See note 1)

CA = Carpenter<sup>®</sup> 20 (See note 1)

TA = Tantalum (See note 1)

TI = Titanium, grade 2 (See note 2)

NI = Nickel 200 (See note 1)

SA = 316 stainless steel, gold-plated

## Flange Material

SS = 316 stainless steel

TI = Titanium, grade 2

## Flange Rating (Other facings available)

150R = 150#RF

300R = 300#RF

600R = 600#RF

900R = 900#RF

15XR = 1500#RF

25XR = 2500#RF

XXXX = Other (Define flange connection on purchase order)

## Process Connection

1/2 = 1/2" Pipe

3/4 = 3/4" Pipe

1.0 = 1" Pipe

1.5 = 1.5" Pipe

2.0 = 2" Pipe

3.0 = 3" Pipe

4.0 = 4" Pipe

5.0 = 5" Pipe

## Instrument Connection

1/4F = 1/4" NPT female

1/2F = 1/2" NPT female

CPL = Capillary connection (To weld capillary directly to seal)

## Diaphragm Seal Design

Type L990.27 = Flanged Type, Flush Diaphragm

## Notes

1. Supplied with a smooth raised face finish.
2. When used with a stainless steel flange, diaphragm is bonded to flange (max. 300°F media temperature).
3. Available with a 2" or larger process connection only.

*Items in **bold** are available from stock (subject to prior sales).  
For optional items, consult factory for current lead-time.*

Options not listed may be available, please consult factory.

Fill fluids & mounting options: please reference datasheet ACS 99.MO

THE MEASURE OF  
**Total Performance™**

## Ordering Information:

State computer part number (if available) / type number / size / range / connection size and location / options required.

Specifications given in this price list represent the state of engineering at the time of printing.  
Modifications may take place and the specified materials may change without prior notice

05/01



**WIKAI** Instrument Corporation

1000 Wiegand Boulevard

Lawrenceville, Georgia 30043-5868

Tel: 770-513-8200 Fax: 770-338-5118

<http://www.wika.com> e-mail: [chemseal@wika.com](mailto:chemseal@wika.com)