# Diaphragm - Type Diaphragm Seal
# Type L990.41 - Large Volume Flanged Diaphragm Seal



## Applications

Process industry diaphragm seal to combine bourdon tube pressure gauges. Intended for corrosive, contaminated, hot or viscous pressure media.

**Diaphragm Seal Model L990.41**

## Standard Features

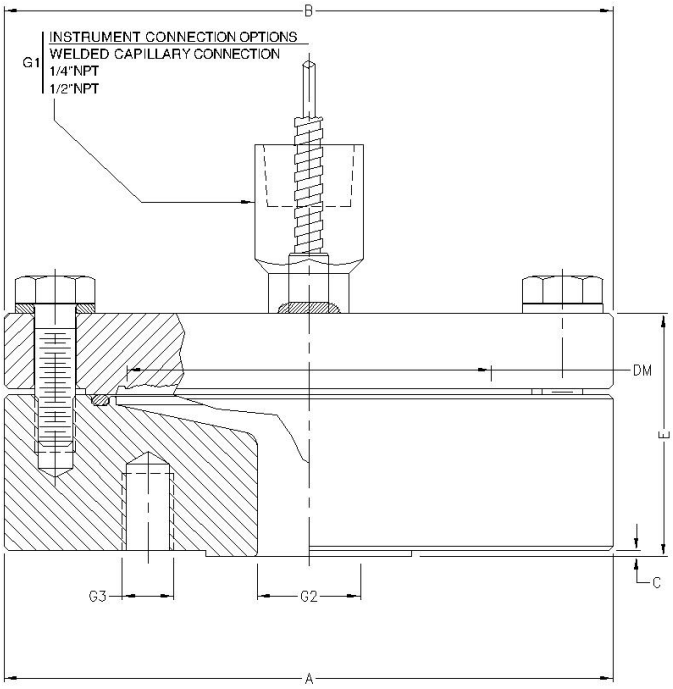
**Design**
Internal 3.5” diaphragm with larger displacement and improved sensitivity to lower pressure ranges; requires hydraulic fluid to transmit pressure to instrument

**Process Connection**
½” to 2” per ASME B16.5; other see options

**Instrument Connection**
Capillary, ¼” or ½” NPT-female

**Suitable Pressure Ranges** (MWP 1500 psi @250°F)
From 10” $H_2O$ to class 900

**Available Options** (connections, materials, flushing ports, etc.) See Selection Guide (over)




DM=EFFECTIVE DIAPHRAGM DIAMETER
G1=INSTRUMENT CONNECTION
G2=PROCESS CONNECTION
G3=THREADED BOLT HOLE
X=NUMBER OF BOLT HOLES
CLASS=FLANGE RATING PER ASME B16.5
SIZE=NOMINAL PIPE SIZE
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

| G2 SIZE / CLASS | G3 | X | A | B | C | DM | E |
|---|---|---|---|---|---|---|---|
| 1/2” 150# | 1/2”–13UNC | 4 | 5.91 | | 0.06 | | 2.36 |
| 1/2” 300# | 1/2”–13UNC | 4 | 5.91 | | 0.06 | | 2.36 |
| 1/2” 600# | 1/2”–13UNC | 4 | 5.91 | | 0.25 | | 2.55 |
| 3/4” 150# | 1/2”–13UNC | 4 | 5.91 | | 0.06 | | 2.36 |
| 3/4” 300# | 5/8”–11UNC | 4 | 5.91 | | 0.06 | | 2.36 |
| 3/4” 600# | 5/8”–11UNC | 4 | 5.91 | | 0.25 | | 2.55 |
| 1” 150# | 1/2”–13UNC | 4 | 5.91 | | 0.06 | | 2.36 |
| 1” 300# | 5/8”–11UNC | 4 | 5.91 | 5.91 | 0.06 | 3.5 | 2.36 |
| 1” 600# | 5/8”–11UNC | 4 | 5.91 | | 0.25 | | 2.55 |
| 1–1/2” 150# | 1/2”–13UNC | 4 | 5.91 | | 0.06 | | 2.36 |
| 1–1/2” 300# | 3/4”–10UNC | 4 | 6.12 | | 0.06 | | 2.46 |
| 1–1/2” 600# | 3/4”–10UNC | 4 | 6.12 | | 0.25 | | 2.65 |
| 2” 150# | 5/8”–11UNC | 4 | 6.00 | | 0.06 | | 2.36 |
| 2” 300# | 5/8”–11UNC | 8 | 6.50 | | 0.06 | | 2.36 |
| 2” 600# | 5/8”–11UNC | 8 | 6.50 | | 0.25 | | 2.55 |

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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.

# Description Ordering Code - L990.41

**L990.41,1/4X1.0-150R,SS,SS-0,SS,SS,VI,3.5**

**Diaphragm Size**
**3.5 = 3.5" effective diaphragm diameter**
4.9 = 4.9" effective diaphragm diameter (See note 12)

**Gasket Material** (See notes 6 & 11)
**VI = Viton®**
TF = Teflon®, white
AS = Alloy 718, silver-plated (See note 10)

**Bolts**
**CS = Carbon Steel, zinc-plated**
**SS = Stainless steel**
**HS = High temperature stainless steel**

**Diaphragm Material**
**SS = 316 stainless steel**
**MO = Monel® 400 (See note 8)**
**HB = Hastelloy® B-2 (See note 8)**
**HC = Hastelloy® C-276 (See note 8)**
**PF = 316 stainless steel, Teflon® coated**
**TF = 316 stainless steel, white Teflon® lined**
**TA = Tantalum (See note 8)**
**TI = Titanium, grade 2 (See note 9)**
**NI = Nickel 200 (See note 8)**
**IN = Inconel® 600 (See note 8)**
**IC = Incoloy® 825 (See note 8)**
**IN = Carpenter® 20 (See note 8)**
**SA = 316 stainless steel, gold plated**

**Flushing Connection** (See note 7)
**0 = None**
1 = 1/8" NPT female
2 = 1/4" NPT female
3 = 2x1/8" NPT female
4 = 2x1/4" NPT female

**Lower Housing Material** (See note 6)
CS = Carbon steel, nickel-plated
**SS = 316 stainless steel**
MO = Monel® 400
HB = Hastelloy® B-2
HC = Hastelloy® C-276
CC = Carbon steel, Teflon® lined, carbon (See note 5)
CW = Carbon steel, Teflon® lined, virgin white (See note 5)
SC = 316 stainless steel, Teflon® lined, carbon (See note 5)
SW = 316 stainless steel, Teflon® lined, virgin white (See note 5)
TC = Carbon steel, Teflon® coated
TS = 316 stainless steel, Teflon® coated
TA = Tantalum (See note 4)
TI = Titanium, grade 2
NI = Nickel 200
IN = Inconel® 600
IC = Incoloy® 825

**Upper Housing Material** (See note 3)
CS = Carbon steel, powder coated
**SS = 316 stainless steel**
TI = Titanium, grade 2

**Flange Rating (Other facings available)**
**150R = 150#RF**
**300R = 300#RF**
600R = 600#RF
XXXX = Other ( Define flange connection on purchase order)

**Process Connection (per ASME B16.5)**
**1.0 = 1" Pipe**
1/2 = 1/2" Pipe
3/4 = 3/4" Pipe
1.5 = 1.5" Pipe
**2.0 = 2" Pipe**

**Instrument Connection**
**1/4 = 1/4" NPT female**
**1/2 = 1/2" NPT female**
**CPL = Capillary connection** (To weld capillary directly to seal, see note 2)

**Diaphragm Seal Design (See note 1)**
**L990.41 = Flanged Process Connection, Large Diaphragm**

**Notes**
1. Maximum working pressure is based on flange rating per ASME B16.5.
2. Capillary connection is available with a stainless steel upper housing only.
3. Bolting material supplied will match upper housing material, except stainless steel bolts with titanium upper housing.
4. Special material metal bonded to a 316 stainless steel flange.
5. Supplied with a smooth raised face finish.
6. Lower housing and gasket are a process wetted part.
7. Available with solid lower housing material only. Customer to supply flushing plug.
8. Special material metal bonded to stainless steel upper housing.
9. Upper housing must be titanium.
10. Supplied with high temperature stainless steel bolts.
11. Standard material for stainless steel and carbon steel wetted parts is Viton® (400°F max.). Teflon® is standard for all other wetted parts (500°F max.). Silver-plated Alloy 718 gasket is used for high temperature applications (752°F max.).
12. Maximum working pressure 200 psi.

*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 Fluid & Mounting options: Please reference datasheet ACS 99.MO.



**Ordering information**
Pressure gauge model / Nominal size / Scale range / Size of connection / Optional extras required
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.

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