

## continuous duty Diaphragm Seal, welded, with threaded connection



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. In case of accidental removal of the instrument or of liquid filling leak the diaphragm will place on the upper cup preventing any damage and any process liquid leak. Thanks to an exclusive calibration system the pressure gauge should stand an overpressure of 210bar without the help of any pressure control switch .

### Diaphragm seal model 04.2B0

**Design:** ASME B40.2

**Working pressure:** *from -30...0 INHG to 0...2320 psi (from -1...0 to 0...160 bar).*

**“Continuous duty”:** *3000 psi (210 bar) as per ASME B40.2.*

**Process temperature:** *-49...+302°F (-45°C...+150°C.)*

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

**Instrument connection:** AISI 304 st.st.

**Diaphragm material:**

**4** - AISI 316L st.st.,

**6** - Monel 400,

**9** - Hastelloy C 276,

**B** - Tantalum,

**J** - Alloy 600;

**I** - Alloy 825;

**U** - 25.22.2.

**Gaskets:** PTFE up to  $+482^{\circ}\text{F}$  ( $+250^{\circ}\text{C}$ ).

**Process connection:**

**5** - AISI 316L st.st.

**6** - Monel 400

**9** - Hastelloy C 276.

**Clamp nuts and bolts:** high resistance steel.

**Filling liquids:** Silicon oil.

**Special overpressure:** *3000 psi for 1 hour (210 bar) (2) (3).*

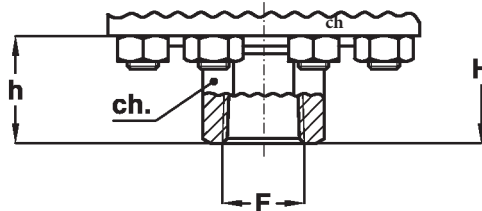
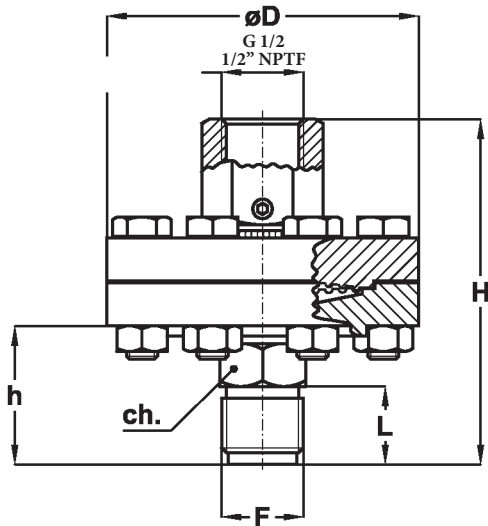
(1) at  $68^{\circ}\text{F}$  ( $20^{\circ}\text{C}$ ) process temperature (or state temperature when ordering)

(2) on request only, pressure gauge/pressure switch assembling only

(3) Vacuum and compound gauges excluded

**continuous duty Diaphragm Seal  
welded, with threaded connection**

**04.2B0**



| F                    | D     | ch    | H     | h      | L     | Weight     |
|----------------------|-------|-------|-------|--------|-------|------------|
| <b>41M</b> - G 1/2 B | 3.15" | 0.87" | 3.54" | 2.79"  | 0.79" | 2.36 lbs   |
| <b>43M</b> - 1/2 NPT | (80)  | (22)  | (90)  | (35,5) | (20)  | (1,070 kg) |

dimensions : inches (mm)

| F                       | D     | ch    | H     | h      | Weight     |
|-------------------------|-------|-------|-------|--------|------------|
| <b>43F</b><br>1/2 NPT F | 3.15" | 1.06" | 3.23" | 1.08"  | 2.34 lbs   |
|                         | (80)  | (27)  | (82)  | (27,5) | (1,060 kg) |

dimensions : inches (mm)

**ASSEMBLING**

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 the same level, instrument adjustment is required). (For use and installation, see data sheet "04 - Introduction diaphragm seals")

|  |   |
|--|---|
| <b>D</b> - Direct  | <b>9</b> - Capillary AISI304 st.st., AISI304 st.st. armoured, 36.37" max (6 mt max) |
| <b>I</b> - Nude capillary AISI304, 36.37" max (6 mt max) | <b>6</b> - Capillary AISI316 st.st., AISI316 st.st. armoured, 36.37" max (6 mt max) |

**FILLING FLUIDS and process fluid temperature**

| Fluid                      | Vacuum                      | Pressure                    | Fluid                             | Vacuum                      | Pressure                     |
|----------------------------|-----------------------------|-----------------------------|-----------------------------------|-----------------------------|------------------------------|
| Standard silicon oil       | -40...+122°F (-40...+100°C) | -40...+302°F (-40...+150°C) | <b>E</b> - Fluorinated liquid "E" | -40...+212°F (-40...+100°C) | -40...+302°F (-40...+150°C)  |
| <b>B</b> - Silicon oil "B" | -40...+302°F (-40...+150°C) | -40...+482°F (-40...+250°C) | <b>F</b> - Silicon oil "C"        | -130...+176°F (-90...+80°C) | -130...+302°F (-90...+150°C) |
| <b>C</b> - Silicon oil "C" | -14...+392°F (-10...+200°C) | -14...+662°F (-10...+350°C) | <b>G</b> - Mineral food oil "G"   | -14...+302°F (-10...+150°C) | -14...+392°F (-10...+200°C)  |
| <b>D</b> - Silicon oil "D" | -14...+392°F (-10...+200°C) | -14...+752°F (-10...+400°C) |                                   |                             |                              |

**OPTIONS**

|   |
|---|
| <b>C05</b> - Helium Test (1)  |
| <b>E30</b> - Nace version MR0103/MR0175 (ISO 15156) (2)                           |
| <b>TS5</b> - AISI316L stainless steel washing plug, 1/4" NPT                      |
| <b>P04</b> - Dye penetrant test   |
| <b>BAI</b> - Stainless steel fixing bolts (5)                                     |
| <b>S40</b> - Max overpressure 3000 psi (210 bar) (3) (4)                          |
| <b>MPP</b> - PTFE diaphragm protection, for temperature up to 302 °F (150 °C) (3) |
| Special process connections (1) : 1/4" NPTF; 3/4" NPTF; 3/4 NPTM                  |

(1) on models with AISI316L process connection only  
 (2) Stainless steel process connection and Monel 400 or Hastelloy C276 diaphragm

(3) Except for vacuum and compound gauges  
 (4) for pressure gauge/pressure switch assembling only  
 (5) max 100 bar

**"HOW TO ORDER" SEQUENCE**

Section/Model/Connection material/Diaphragm material/Process Connection/Instrument connection/Assembling/Options

**04 2B0**      **5**                      **4, 6, 9**                      **41M**                      **41F - G 1/2 F**                      **D**      **B...G**  
    **6**    **B, J, I**                      **43M**                      **43F - 1/2NPT F**                      **1, 9, 6** **C05...MPP**  
    **9**    **U**    **43F**



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