Dial Indicating Pressure Gauges

Process

600/700 SERIES

• 600 (Brass) and 700 (316 Stainless steel) Gauges are specifically designed for demanding applications in the chemical and petroleum processing industries
• Extreme high pressure ranges available from vacuum through 60,000 psi
• Low pressure ranges from -30 inH2O vac through 10 psi
• 4-1/2 inch size – bottom connected
• Turret style cases are constructed of a rugged, corrosion-resistant phenolic material
• Solid front, safety case with a blow-out black isolates the gauge face from the pressure
• Adjustable pointer
• Standard lenses are shatter resistant acrylic; safety glass lenses available
• Stock availability

OPERATING SPECIFICATIONS

1. Working Pressure Limitations
   a. Dynamic Pressure
      The working pressure should be limited to 60% of the dial range.
   b. Static Pressure
      The working pressure, when no sharp fluctuations occur, should be limited to 90% of the dial range.

2. Ambient Temperature
   a. 640/740 Series
      -40°F to 150°F (-40°C to 65°C)
   b. 660/760 Series
      -4°F to 150°F (-20°C to 65°C) Glycerine Fill
      -40°F to 150°F (-40°C to 65°C) Special Fill

3. Media Temperature
   a. 640 Series
      -4°F to 150°F (-20°C to 65°C)
   b. 660 Series
      -4°F to 150°F (-20°C to 65°C) Glycerine Fill
      -40°F to 150°F (-40°C to 65°C) Special Fill
   c. 740 Series
      -40°F to 212°F (-40°C to 100°C)
      Maximum for short term/intermittent
   d. 760 Series
      -4°F to 212°F (-20°C to 100°C) Glycerine Filled
      -40°F to 212°F (-40°C to 100°C) Special Fill
      250°F (130°C) Maximum for short term/intermittent

APPLICATIONS

- Chemical petroleum and petrochemical refineries
- Utilities
- Food processing plants
- Paper mills
- Power generating stations
- Water treatment plants
- Wherever accuracy, safety, readability and reliability are crucial

ACCURACY

- 4-1/2 inch 600 Series Gauges: ±0.5%
- 4-1/2 inch 700 Series Gauges: ±0.5%
- 4-1/2 inch 700 Series Gauges (LP): ±1.5%

MODELS SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODELS</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td>45-640, 45-660, 45-740, 45-760 Turret style black phenolic. Solid front, safety case with blow-out back</td>
</tr>
<tr>
<td>Bayonet Ring</td>
<td>45-640, 45-660, 45-740, 45-760 Thread black phenolic</td>
</tr>
<tr>
<td>Lens</td>
<td>45-640, 45-660, 45-740, 45-760 Acrylic. Laminated safety glass is available as a stock option</td>
</tr>
<tr>
<td>Bourdon Tube</td>
<td>45-640, 45-660 (up to 600 psi) Beryllium copper “C” tube</td>
</tr>
<tr>
<td></td>
<td>45-740, 45-760 (up to 600 psi) 316 Stainless steel “C” tube</td>
</tr>
<tr>
<td></td>
<td>45-640, 45-660, 45-740, 45-760 (greater than 600 psi) 316 Stainless steel coiled safety tube</td>
</tr>
<tr>
<td>Connection</td>
<td>45-640, 45-660 1/4” NPT brass</td>
</tr>
<tr>
<td></td>
<td>45-740, 45-760 1/4” NPT or 1/2” NPT 316 Stainless steel</td>
</tr>
<tr>
<td>Movement</td>
<td>45-640, 45-660 Brass and Nickel-Silver with highly polished bearing surfaces. An internal zero stop is standard.</td>
</tr>
<tr>
<td></td>
<td>45-740, 45-760 Stainless steel with highly polished bearing surfaces. An internal zero stop is standard.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>45-640, 45-660 ± 1/2% Full Scale ASME grade 2A</td>
</tr>
<tr>
<td></td>
<td>45-740, 45-760 ± 1/2% Full Scale ASME grade 2A, ± 1.5% Full Scale ASME grade A for inH2O, 5 psi and 10 psi ranges</td>
</tr>
<tr>
<td>Pointer</td>
<td>45-640, 45-660, 45-740, 45-760 Balanced micro-adjustable aluminum, black finish</td>
</tr>
<tr>
<td>Dial</td>
<td>45-640, 45-660, 45-740, 45-760 Aluminum, white background with black markings. Single scale psi is standard. psi/bar, psi/kPa, or psi/Kg/cm² dual scale are available as stock options. On dual scale dials, the outer scale is psi in black and the Inner metric scale is red. UV resistant.</td>
</tr>
<tr>
<td>Fill Liquid</td>
<td>45-660, 45-760 Glycerine and water. Silicone and halocarbon are available as options.</td>
</tr>
</tbody>
</table>

For details on accuracy/standard dial configuration and dial layouts, see pages 74-78
## ORDERING INFORMATION

### SERIES 600/700

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CASE TYPE</th>
<th>ORDERING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>640</td>
<td>Brass, Dry, Bottom Connection</td>
</tr>
<tr>
<td></td>
<td>740</td>
<td>SS, Dry, Bottom Connection</td>
</tr>
<tr>
<td></td>
<td>660</td>
<td>Brass, Liquid Filled, Bottom Connection</td>
</tr>
<tr>
<td></td>
<td>760</td>
<td>SS, Liquid Filled, Bottom Connection</td>
</tr>
</tbody>
</table>

### PRESSURE RANGES

- **30 inH₂O vac**: -30 inH₂O to 0 inH₂O
- **30 inH₂O**: -30 inH₂O to 0 inH₂O
- **60 inH₂O vac**: -60 inH₂O to 0 inH₂O
- **60 inH₂O**: -60 inH₂O to 0 inH₂O
- **60/60 inH₂O**: -60 inH₂O to 60 inH₂O
- **100 inH₂O**: -100 inH₂O to 0 inH₂O
- **160 inH₂O**: -160 inH₂O to 0 inH₂O
- **200 inH₂O**: -200 inH₂O to 0 inH₂O
- **300 inH₂O**: -300 inH₂O to 0 inH₂O

### PRESSURE RANGES

- **30 inH₂O vac**: 0 psi to 5 psi
- **30 inH₂O**: 0 psi to 30 psi
- **60 inH₂O vac**: 0 psi to 10 psi
- **60 inH₂O**: 0 psi to 60 psi
- **60/60 inH₂O**: 0 psi to 15 psi
- **100 inH₂O**: 0 psi to 60 psi
- **160 inH₂O**: 0 psi to 100 psi
- **200 inH₂O**: 0 psi to 160 psi
- **300 inH₂O**: 0 psi to 300 psi

### SCALE OPTION

- **inH₂O**: Single scale
- **psi**: Single scale
- **psi/kPa**: Dual scale
- **psi/kg/cm²**: Dual scale
- **psi/bar**: Dual scale

### CONNECTION SIZE

- **1/4” NPT**: 1/4” or 1/2” NPT
- **1/2” NPT**: 1/2” NPT
- **9/16-18 UNF**: 9/16-18 UNF 3B (above 3000 psi standard)

### OPTIONS

- **SGL**: Safety glass lens
- **GL**: Glass lens
- **MIP**: Maximum indicating pointer
- **BPMR**: Brass press fit orifice 0.3 mm
- **BPMR**: Brass threaded orifice 0.3 mm
- **BPMR**: Brass threaded orifice 0.8 mm
- **BP3**: Brass press fit orifice 0.3 mm
- **BT3**: Brass threaded orifice 0.3 mm
- **ST**: Stainless steel tagging
- **OS**: Overload stop
- **LM**: Laser marking

### EXAMPLE

1. Select model number (size & case type)
2. Select pressure range & scale option
3. Select connection size (if more than one is offered)
4. Select any required accessory or option

### OUTLINE DIMENSIONS

**45-640/660 & 45-740/760**

- **5.93” (148mm)**
- **5.59” (137mm)**
- **0.43” (11mm)**
- **0.23” (6mm)**
- **3.38” (86mm)**
- **5.50” (129mm)**
- **55” (14mm)**
- **1.69” (43mm)**
- **1.06” (27mm)**

**45-640/660 & 45-740/760 Panel Mount Ring**

- **3.46” (89mm)**
- **3.46” (89mm)**
- **5.53” (148mm)**
- **5.93” (137mm)**
- **1.4” (35mm)**
- **1.4” (35mm)**

***Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.***

**NOTE**: Refer to 600/700 Series Options & Accessories chart on page 66 for availability by model number.