### North American Pressure Gauges and Thermometers

#### 8735 Pressure Gauges with English and Metric Scales

<table>
<thead>
<tr>
<th>Gauge Designation</th>
<th>Range (from zero unless otherwise indicated)</th>
<th>Male Pipe Connection Location</th>
<th>Type</th>
<th>Wetted Material</th>
<th>Fluid Medium</th>
<th>Accuracy</th>
<th>Case Material</th>
<th>Glass Material</th>
<th>Working Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>8735-1SI</td>
<td>15&quot; wc 400 mm wc</td>
<td>Lower</td>
<td>Dry</td>
<td>Copper Alloy</td>
<td>Gaseous (air, natural gas)</td>
<td>+/-1.5% of span</td>
<td>Steel Case NEMA 2</td>
<td>Acrylic</td>
<td>Steady = Full Scale</td>
</tr>
<tr>
<td>8735-30I</td>
<td>30&quot; wc 760 mm wc</td>
<td>Lower</td>
<td>Dry</td>
<td>Copper Alloy</td>
<td>Liquid and Gaseous (air, natural gas, oil)</td>
<td>+/-2.5% of span</td>
<td>304 Stainless Steel with vent plug and NEMA 4X</td>
<td>Polycarbonate with Buna N gasket</td>
<td>Steady = 0.75 x Full Scale</td>
</tr>
<tr>
<td>8735-5P</td>
<td>5 psi 35 kPa</td>
<td>Lower</td>
<td>Dry</td>
<td>316 Stainless Steel</td>
<td>Liquid and Gaseous (air, natural gas, oil)</td>
<td>+/-2.5% of span</td>
<td>Liquid Filled</td>
<td>*** Suitable for liquid filling</td>
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</tr>
<tr>
<td>8735-15I</td>
<td>15 psi 100 kpa</td>
<td>Lower</td>
<td>Dry</td>
<td>Copper Alloy</td>
<td>Liquid and Gaseous (air, natural gas, oil)</td>
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<td>30 psi 200 kpa</td>
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<tr>
<td>8735-15PB</td>
<td>15 psi 100 kpa</td>
<td>Lower</td>
<td>Dry</td>
<td>316 Stainless Steel</td>
<td>Liquid and Gaseous (air, natural gas, oil)</td>
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<td>30 psi 200 kpa</td>
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<td>8735-15PLF</td>
<td>15 psi 100 kpa</td>
<td>Lower</td>
<td>Dry</td>
<td>Copper Alloy</td>
<td>Liquid and Gaseous (air, natural gas, oil)</td>
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<td>8735-15PBLF</td>
<td>15 psi 100 kpa</td>
<td>Lower</td>
<td>Dry</td>
<td>316 Stainless Steel</td>
<td>Liquid and Gaseous (air, natural gas, oil)</td>
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<td>316 Stainless Steel</td>
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* See maximum temperature listed under standard features

*** Suitable for liquid filling

Note: Wetted materials in the selection chart include connection and capsule or bourdon tube element

### STANDARD FEATURES

- **Dial Size:** 2 1/2 inch
- **Pipe Connection:** 1/4" NPT or 1/4 BSPT (see ordering instructions)
- **Dial:** Aluminum
- **Pointer:** Aluminum
- **Weight:** Approximately 0.5 lb (0.23 kg)
- **Maximum Temperature:** 140°F (60°C) except* models from the selection chart are 212°F (100°C)
- **Minimum Temperature:** -4°F (-20°C)
- **Temperature Error (from reference):** +/-0.4% span for every 18°F (10°C), rising or falling
- **Zero Feature:** Both liquid filled gauges and dry gauges which are suitable for liquid filling (noted Dry*** in the selection charts) do not have a zero adjustment on the dial
- **Liquid Filled Gauge Fluid:** Glycerine

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* See maximum temperature listed under standard features

*** Suitable for liquid filling

Note: Wetted materials in the selection chart include connection and capsule or bourdon tube element
SIZING and INSTALLATION

— Select gauge for double the range of anticipated pressures. Note: Maximum accuracy is obtained in the middle third of the gauge range.

— For shutoff when gauge is not being read, install a valve ahead of each gauge.

LIQUID FILLED GAUGES

Advantages

— The liquid absorbs vibration as well as pulsation and spikes in pressure.

— The dampening action of the liquid enables the operator to take readings during conditions of rapid dynamic loading and vibration.

— The liquid lubricates all moving elements, dramatically reducing wear in the movement.

— Because most liquid-filled gauges are filled with non-aqueous liquid and hermetically sealed, they perform in corrosive environments and are immune to moisture penetration and icing. Also, shock effects are lessened.

Commissioning into Service

For liquid filled pressure gauges, case venting (after the gauge is installed) is necessary to preserve the accuracy. Temperature fluctuations during shipment and in the process application cause the liquid filling to expand and contract which in turn increases and decreases case pressure. As a result, accuracy can be decreased and the pointer may not return to zero properly until the gauge is vented to atmosphere.

To vent liquid filled gauges, move the lever to the open position which will release any pressure or vacuum build up in the case. The gauge should always be installed in an upright position. The lever can be left in the open position.

Ordering Instructions

Use gauge designation in the selection chart for ordering ¼” NPT pipe connection versions. For ¼ BSPT pipe connection versions, simply add an “M” to the front of the part number in the selection chart. For example, to order the ¼ BSPT version of 8735-15I, simply order M8735-15I. Metric versions will not be stocked, therefore will have longer delivery times. For gauges with special ranges, scales, dial sizes and materials contact the engineering department.

North American Differential Pressure Gauges

Used to measure low air or gas pressures—positive, negative (vacuum), or differential.

They are accurate within ±2% of full scale throughout range (at 70 F). Their design has high resistance to shock, vibration, and over-pressures.

Gauges can be flush- or surface-mounted with standard hardware supplied. A 4 ½” hole is required for flush panel mounting. Although calibrated for vertical position, ranges above 1"wc can be used at any angle by simply re-zeroing.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters’ recommendations and care in operation.
SPECIFICATIONS

Ambient Temperature Limits: 20 to 140 F
Maximum Pressure: 15 psig
Connections: 1/8" npt high and low pressure taps, duplicated—one pair on side and one pair on back.
Housing: Die cast aluminum, baked dark gray hammerloid finish.
Weight: 1 lb 2 oz.

North American 8737 Thermometers

8737-A: 40 F to 260 F
For hot water, gas, or oil. Magnifying glass tube with red liquid. White enameled pressed steel case with black graduations and numbers. Overall length 10¼". Has ½" mpt bottom connection with ¼" stem extension. Wt. ½ lb.

8737-B: 200 F to 1000 F
Gases or liquids. Laboratory dial type with 9" stainless steel stem and ½" mpt center back connection. 3" silver dial in chrome case with black graduations and numbers. Insert stem a minimum of 4" into hot gases or 3" into liquids. Wt. ¾ lb.

8737-C: 50 F to 300 F, 10 C to 150 C
Hot oil thermometer. Dial type with 2 ½" stem and ½" mpt center back connection. 1¼" white dial in 2" silver case with black (Fahrenheit) and red (Celsius) graduations and numbers. Wt. ¼ lb.

8737-D: 200 F to 1000 F, 100 C to 550 C
Back-connected thermometer for gases or liquids. Dial type with 2" diameter dial, 2 ½" stem length, ¼" npt connection. Suitable for measuring radiant tube TwinBed® II plenum temperatures. Wt. 2 oz.

8737-E: 50 F to 500 F, 10 C to 260 C
Back-connected thermometer with a dial size of 2". A 6" stem and ¼" npt connection. 300 SS case with external reset. Wt. 0.4 lbs.

8737-F: 50 F to 500 F, 10 C to 260 C
Back-connected thermometer for gases or liquids. Dial type, 2" diameter dial, 6" stem length, ¼" npt connection. Suitable for measuring direct fired TwinBed® II plenum temperatures. Wt. 2 oz.

DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC. IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.