Type 700
Precision Air Pressure Regulator
For applications that require accurate pressure control

The Type 700 is designed to provide high flow capacity and accurate process control. A poppet valve balanced by a rolling diaphragm insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.

Features
- **1/4”, 3/8”, 1/2” NPT/BSP Porting**
- **High Flow Capacity**
  Allows flows up to 80 scfm (2,264 Nl/min)
- **Sensitive**
  Senses output pressure deviations to within 1/8 inch water column pressure
- **Stable Output**
  Dampening action of aspirator tube makes this regulator insensitive to changes in flow
- **On-line Maintenance**
  Can be serviced without removal from air line

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow Capacity</strong></td>
<td>See performance curves</td>
</tr>
<tr>
<td><strong>Exhaust Capacity</strong></td>
<td>4 scfm (120 Nl/min)</td>
</tr>
<tr>
<td></td>
<td>[downstream pressure 5 psi (35 BAR) above set pressure]</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>1/8” (3.2 mm) water</td>
</tr>
<tr>
<td><strong>Effect of Supply Pressure Variation on Output</strong></td>
<td>Less than 0.1 psi (.007 BAR) for 100 psi (6.7 BAR) change</td>
</tr>
<tr>
<td><strong>Air Consumption, Maximum</strong></td>
<td>Steady State: From 1.0 to 12.5 scfh (30 to 375 Nl/hr), depending on output pressure range</td>
</tr>
<tr>
<td><strong>Supply Pressure</strong></td>
<td>250 psig (17.5 BAR) Maximum</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40°F to 160°F (-40°C to 71°C)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1 lb, 10 oz (.74 kg)</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Pipe, panel, or bracket</td>
</tr>
<tr>
<td><strong>Port Sizes</strong></td>
<td>1/4&quot;, 3/8” or 1/2” NPT/BSP</td>
</tr>
<tr>
<td><strong>Output Pressure Ranges</strong></td>
<td>0-2 psi (0-0.15 BAR), 0-15 psi (0-1.0 BAR)</td>
</tr>
<tr>
<td></td>
<td>0-30 psi (0-2.0 BAR), 0-60 psi (0-4.0 BAR)</td>
</tr>
<tr>
<td></td>
<td>0-150 psi (0-10 BAR)</td>
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</tbody>
</table>

Materials of Construction

- **Body**
  Diecast aluminum alloy
- **Internal Components**
  Stainless steel, brass, plated steel, acetal
- **Diaphragm**
  Buna-N elastomer, polyester fabric
- **Knob**
  Phenolic plastic
Type 700 Precision Air Pressure Regulator

**Warranty** ControlAir, Inc. products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir, Inc. recommended usages. ControlAir, Inc.’s liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir, Inc.’s sole option, of any products proved defective. ControlAir, Inc. reserves the right to discontinue manufacture of any products or change products materials, designs or specifications without notice. Note: ControlAir does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for the proper selection, use, and maintenance of any ControlAir product remains solely with the purchaser and end user. Drawing downloads available at www.controlair.com

**Ordering** Use this coding system to order

**Model**

700

**Port Size (NPT)**

A 1/4"

B 3/8"

C 1/2"

**Range**

A 0-2 psi (0-0.15 BAR)

B 0-15 psi (0-1.0 BAR)

C 0-30 psi (0-2.0 BAR)

D 0-60 psi (0-4.0 BAR)

E 0-150 psi (0-10 BAR)

**Options**

C Check Valve: integral safety device which quickly dumps output pressure when there is a loss of supply air

E Tapped Exhaust: allows captured exhaust. 1/4" NPT port

H High Bleed: provides more dynamic performance at lower pressure and flow rates

K Stainless Steel Knob Stem, knob itself is phenolic plastic

L Low Bleed: reduces steady state air consumption by 50%

N Non-Relieving: for constant flow or downstream pressure relief applications

S Stainless Steel Adjust Screw: hex head stainless steel adjust screw for maximum corrosion resistance

T Tamper-proof Cover: prevents casual adjustment of output pressure

U BSP Porting

X ATEX 94/9/EC Approval II 2 GD

**Accessories**

Mounting Bracket (zinc plated steel): P/N 446-707-025

Gauges: 1/4" NPT back mount, 2" face, dual scale

<table>
<thead>
<tr>
<th>Range PSI (BAR)</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15 (0-1.0)</td>
<td>446-725-003</td>
</tr>
<tr>
<td>0-30 (0-2.0)</td>
<td>446-725-004</td>
</tr>
<tr>
<td>0-60 (0-4.0)</td>
<td>446-725-001</td>
</tr>
<tr>
<td>0-160 (0-11)</td>
<td>446-725-002</td>
</tr>
</tbody>
</table>

**Flow Characteristics**

**Atmosphere**

Supply

Output

Flow, scfm (Nl/min)