Type-41

Type 41-1
Type 41-2
Precision Air Regulators

ISO 9002 certified

Precision Control Devices
TYPE 41-1 AND TYPE 41-2 PRECISION AIR REGULATORS

FEATURES
• Superior regulation characteristics
• Rugged, corrosion-resistant construction
• Excellent stability and repeatability
• Self-relieving of excess downstream pressure
• Low droop at high flow
• Mounting options available

DESCRIPTION
The Type 41 regulators are designed for applications requiring high flow capacity, low droop, high accuracy, and fine adjustment sensitivity. The use of Bellofram’s rolling diaphragm provides greater sensitivity and improved accuracy. In addition, Type 41 regulators offer reduced overall size and several mounting options, providing direct interchangeability with more expensive competitors’ units.

Ruggedly designed and constructed, the Type 41 regulators have housings made of precision-cast aluminum. They are pressure tested and chromate treated for internal corrosion resistance. Every regulator is finished with vinyl paint which resists scratching, weathering and other physical abuse.

Careful design and quality materials throughout assure long, trouble-free operation in the most difficult industrial environments. A rubberized, soft-seat valve stem provides stability and “forbives” dirt and other foreign matter. An aspirator maintains downstream pressure and compensates for droop when high flow occurs. The gauge port is convenient for gauge installation and can also be used as an additional full flow outlet.

The design of these regulators is especially well suited for panel applications due to ease of mounting (only one panel hole required), small size, adjustment sensitivity (32 threads per inch on the adjusting screw), and knob.

MODELS
The Type 41 comes in two versions, Type 41-1 and Type 41-2. These two regulators offer the same performance in two slightly different packages.

TYPE 41-1: This unit comes standard with 1/4” NPT ports and a knob, and can be panel mounted using either the center nut or the threaded shoulder holes, spaced 1.5 in. (38.1 mm) center-to-center.

TYPE 41-2: This unit comes standard with 1/2” NPT ports, a knob and a bonnet vent port which can be tapped for a 1/4” NPT fitting if desired. It can be panel mounted using either the center nut or the threaded shoulder holes, spaced 1.25 in. (32.7 mm) center-to-center.

<table>
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<tr>
<th>psig (BAR)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
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<tr>
<td>25</td>
<td>1.7</td>
<td>1.4</td>
<td>1.0</td>
<td>0.7</td>
<td>0.3</td>
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TYPE 41: REGULATED PRESSURE VS. FLOW

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<th>SCFM (LPM)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
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<tbody>
<tr>
<td>0</td>
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<td>142</td>
<td>283</td>
<td>425</td>
<td>566</td>
<td>708</td>
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1/4” NPT
### TYPE 41 Regulator

**Sensitivity**
1" Water Column (2.5 cm)

**Effect of Supply Pressure variation (25 psig) on Outlet Pressure**
\( \pm 0.35 \text{ psig} \) (24 mBAr)

**Exhaust Capacity (5 psig above 20 psig set point)**
0.1–0.45 SCFM Typical

**Max Supply Pressure**
250 psig (17.2 BAR)

**Flow Capacity at 100 psig (6.9 BAR) supply and 20 psig (1.4 BAR) outlet**
25 SCFM (700 LPM)

**Effect of Changes in Flow on Regulated Pressure (100 psig / 6.9 BAR Supply)**
1 psig (0.07 BAR) over flow of 10 SCFM (0-30 psig / 0-2.1 BAR range, 1/4" NPT, 20 psig / 1.4 BAR set point)

**Output Pressure Ranges**
- 0-2 psig (0-0.14 BAR)
- 0-10 psig (0-0.69 BAR)
- 0-30 psig (0-2.1 BAR)
- 0-60 psig (0-4.1 BAR)
- 0-100 psig (0-6.9 BAR)

**Total Air Consumption @ Maximum Output**
6 SCFH (2.8 LPM)

**Port Size**
1/4" NPT, BSPT

**Materials of Construction**
- Body: Diecast aluminum with vinyl paint
- Adjusting Screw: Plated steel
- Trim: Plated steel, brass, acetal resin
- Diaphragm: Buna-N with polyester fabric
- Knob: Phenolic plastic
- Spring: Music wire

**Mounting Options**
Pipe, panel, or bracket

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### Dimensions for Type 41-1

#### Dimensions for Type 41-2
(same as 41-1 except where indicated)

### Mounting Bracket
FLUOROCARBON PINTLE
A special elastomeric pintle used where elements in the supply air, such as flame retardant synthetic lubricants, are particularly destructive to ordinary pintle material.

NON-RELIEVING
Used in applications where it is desirable to relieve pressure downstream of the regulator, for some constant flow applications, and where the gas flowing through the regulator must not escape at the regulator. Non-relieving regulators should not be used for low or no flow applications.

CORROSIVE RESISTANT EPOXY FINISH
An epoxy paint applied to the outside surface of the regulator to provide increased resistance to corrosive environments.

TAPPED VENT (41-2 only)
Allows installation of plumbing to capture exhaust air.

MOUNTING BRACKET
Steel (dichromate finish) bracket for side mounting.

PRESSURE GAUGE
Dual scale 2 in. (50.8 mm) gauges. Ranges include 0-30 psig (0-200 kPa), 0-60 psig (0-400 kPa), 0-100 psig (0-700 kPa) and 0-160 psig (0-1100 kPa). When specified with regulator, the correct range will be supplied.