

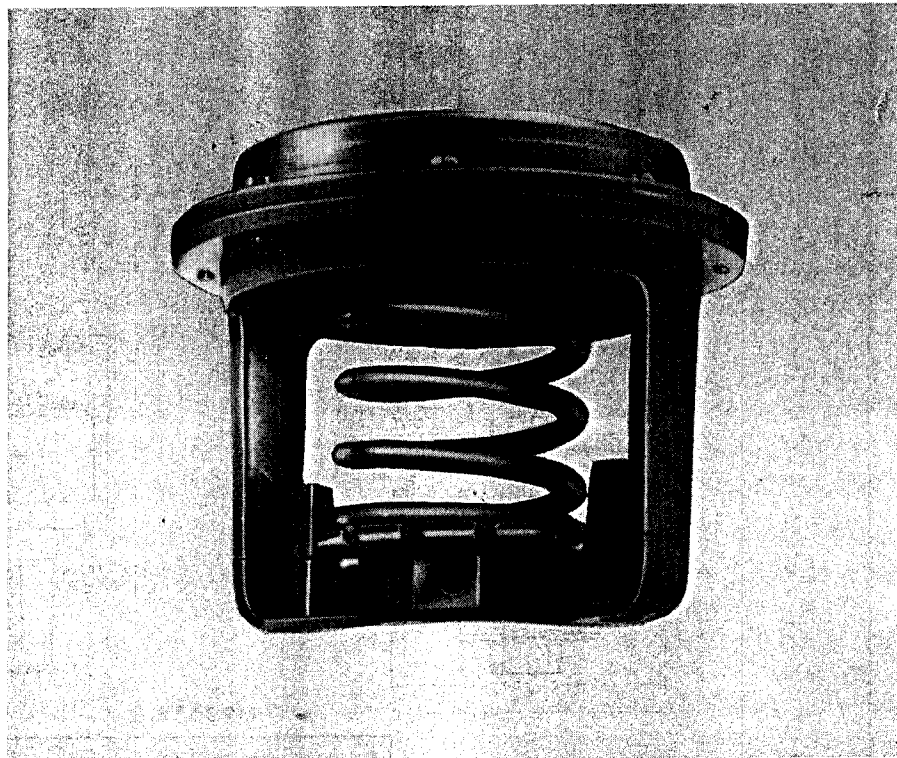
## General

These pneumatically powered actuators are used to operate the V5011 and V5013 valve assemblies. They provide proportional control of steam or hot and cold liquids of HVAC systems.

They are available to provide direct or reverse action, with or without an integral positioning relay.

## Features

- Rolling diaphragm for long-life and low hysteresis.
- Easily attached to valve assembly.
- May be installed after valve piping.
- Slide lock feature permits simple engagement to valve stem.
- Direct- or reverse-action control.
- Models with positioning relay available.



## Specifications

<p><b>MODELS</b></p> <p>MP953A Direct-acting, with positioner</p> <p>MP953B Reverse-acting, with positioner</p> <p>MP953C Direct-acting, without positioner</p> <p>MP953D Reverse-acting, without positioner</p> <p><b>SIZE (Nominal Diameter)</b></p> <p>MP953A &amp; C: 5 (127), 8 (203), or 13-inch (330 mm)</p> <p>MP953B &amp; D: 7-inch (178 mm)</p> <p><b>STROKE</b></p> <p>5 (127) or 7-inch (178 mm) dia: 1/2 (12) and 3/4-inch (19 mm)</p> <p>8-inch (203 mm) dia: 3/4 (19) and 1-1/2-inch (38 mm)</p> <p>13-inch (330 mm) dia: 1-1/2-inch (38 mm)</p>	<p><b>OPERATING RANGE</b></p> <p>With positioner:</p> <p>3 (21) to 10 psi (69 kPa) start</p> <p>3 (21), 5 (35) or 10 psi (69 kPa) range</p> <p>Without positioner:</p> <p>5-inch (127 mm) dia: 4 (28) to 11 psi (76 kPa), 2 (14) to 7 psi (48 kPa), 8 (55) to 12 psi (83 kPa).</p> <p>7-inch (178 mm) dia: 4 (28) to 11 psi (76 kPa), 3 (21) to 7 psi (48 kPa), 8 (55) to 13 psi (90 kPa).</p> <p>8-inch (203 mm) dia: 4 (28) to 11 psi (76 kPa), 2 (14) to 7 psi (48 kPa), 8 (55) to 12 psi (83 kPa), 3 (21) to 15 psi (104 kPa).</p> <p>13-inch (330 mm) dia: 2 (14) to 7 psi (48 kPa), 4 (28) to 11 psi (76 kPa).</p> <p><b>MAXIMUM SAFE PRESSURE</b></p> <p>25 psi (173 kPa)</p>	<p><b>MAXIMUM DIAPHRAGM TEMPERATURE</b></p> <p>160 F (71 C) standard</p> <p>250 F (121 C) high temperature models</p> <p><b>DIMENSIONS</b></p> <p>See Figure 1</p> <p><b>ACCESSORIES</b></p> <p>Position Indicator for:</p> <p>5-inch (127 mm) dia - 316028A</p> <p>7-inch (178 mm) dia - 316035A</p> <p>8-inch (203 mm) dia - 316037A</p> <p>13-inch (330 mm) dia - 316036A</p> <p>Valve Bonnet Extension Kit: 14000501-001 (separates actuator from valve 2-1/2 inches [64 mm] for high temperature applications)</p> <p>Corrosion Resistant Spray: C &amp; S Part No. 3858</p> <p><b>WHEN SPECIFYING, INDICATE</b></p> <p>Model Number</p> <p>Accessories</p>
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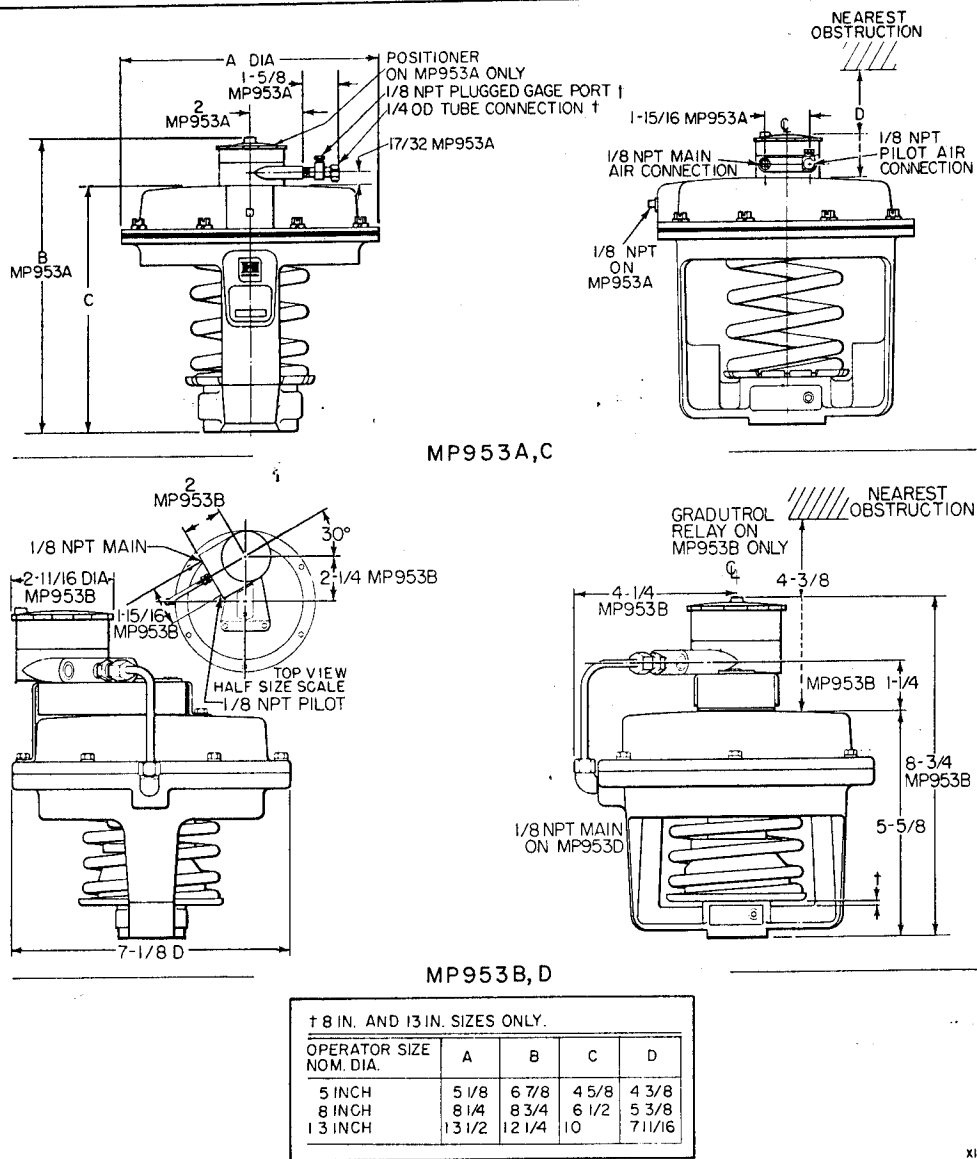


FIG. 1. APPROXIMATE DIMENSIONS OF VALVE OPERATORS

## Typical Operation

In a direct-acting (N.O. valve) system, an increase in control air pressure will force the actuator diaphragm and cup downward, forcing the valve stem down to proportionately close-off the flow through the valve.

In a reverse-acting (N.C. valve) model, the increase in control air pressure will force the diaphragm and cup upwards, forcing the valve stem up to proportionately increase the flow through the valve.

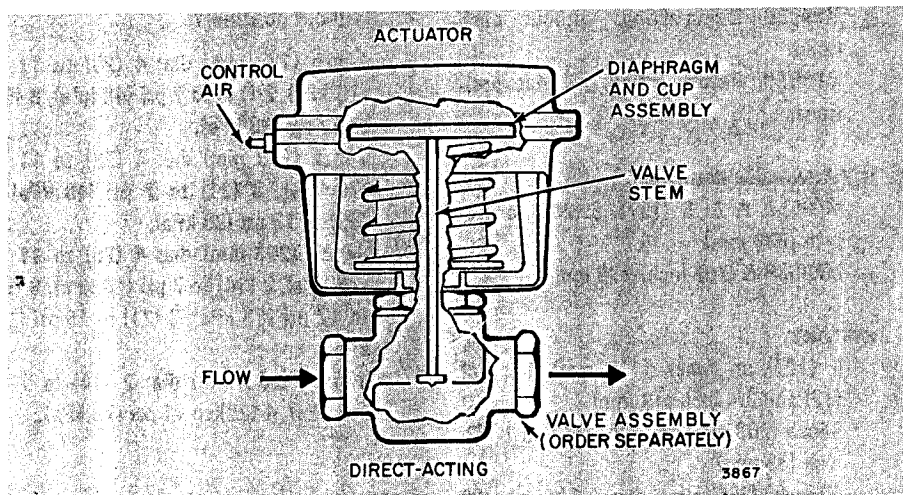


FIG. 2