The Model 115-4 has an extremely wide range of applications: anywhere it is necessary to open and close a valve electrically. Typical examples include:

- Process control
- Storage tank level control
- Automated fountains
- Emergency shut-off valve in fuel systems

**SERIES FEATURES**

- Electrically operated solenoid allows valve to open or close
- High capacity pilot system provides positive response in larger valves
- Can be maintained without removal from the line
- Adjustable response speed
- Exhaust-to-atmosphere operation (optional) allows minimum pressure loss
- Factory tested

**OPERATION**

A three-way solenoid operates a high-capacity three-way auxiliary pilot. In one position, the pilot connects supply pressure to the main valve diaphragm chamber, causing the main valve to close. In the other position, the pilot connects the diaphragm chamber downstream (or to atmosphere), allowing the valve to open. The pilot system is equipped with a needle valve that allows the opening and closing speed of the valve to be adjusted.

The solenoid can be supplied for either energize-to-open or energize-to-close operation.

**COMPONENTS**

The Model 115-4 consists of the following components, arranged as shown on the schematic diagram:

1. Model 65 Basic Control Valve
2. Model 452 Three-Way Solenoid Pilot
3. Model 3600 Three-Way Auxiliary Pilot
4. Model 141-2 Needle Valve
5. Model 159 Y-Strainer
6. Model 141-4 Isolation Ball Valves
7. Model 155 Visual Indicator (Optional)

**SIZING**

Definitive sizing information can be found in the OCV Catalog, Series 115 section and Engineering section Performance Charts. Consult the factory for assistance and a copy of the OCV ValveMaster Sizing program.

**MAX. PRESSURE**

The pressures listed below are maximum pressures at 100°F.

<table>
<thead>
<tr>
<th>END CONNECTIONS</th>
<th>DUCTILE IRON</th>
<th>STEEL/STN STL</th>
<th>LOW-LEAD BRONZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threaded</td>
<td>400 psi</td>
<td>400 psi</td>
<td>400 psi</td>
</tr>
<tr>
<td>Grooved</td>
<td>300 psi</td>
<td>300 psi</td>
<td>300 psi</td>
</tr>
<tr>
<td>150# Flanged</td>
<td>250 psi</td>
<td>285 psi</td>
<td>225 psi</td>
</tr>
<tr>
<td>300# Flanged</td>
<td>400 psi</td>
<td>400 psi</td>
<td>400 psi</td>
</tr>
</tbody>
</table>

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email: sales@controlvalves.com • website: www.controlvalves.com

Global performance. Personal touch.
SIZES GLOBE/ANGLE
Flanged Ends: 8" - 24" (globe); 8" - 16" (angle)

FLUID OPERATING TEMPERATURE RANGE
(Valve Elastomers)
EPDM 32°F - 230°F*

MATERIALS - Consult factory for others.

Body/Bonnet: Ductile Iron (epoxy coated), Carbon Steel (epoxy coated), Stainless Steel, low-lead Bronze

Others available (consult factory)

Seal Ring: low-lead Bronze, Stainless Steel

Stem: Stainless Steel, Monel

Spring: Stainless Steel

Diaphragm: EPDM*

Seat Disc: EPDM*

Pilot: low-lead Bronze, Stainless Steel

Other pilot system components: low-lead Bronze/Brass, All Stainless Steel

Tubing & Fittings: Copper/Brass, Stainless Steel

Solenoid: Enclosure: Weatherproof NEMA 4X / Explosion Proof NEMA 4X, 6P, 7, 9

Body: Brass, Stainless Steel

Voltages: 24, 120, 240, 480 VAC / 12, 24 VDC

Note: Working pressures of solenoids vary greatly, consult factory on application of OCV Model 115-4 valves.

*Others available upon request.

**Valves 1-1/4" through 24" are certified to NSF/ANSI 372. Valves 4" through 24" are also certified to NSF/ANSI 61-G.

SPECIFICATIONS (Typical Water Application)

The solenoid shut-off valve shall open and close via discrete electrical signals. The valve shall be equipped with a three-way solenoid valve that operates a three-way auxiliary pilot, allowing the valve to open when <energized>, deenergized >.

DESIGN
The solenoid valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall the pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include a needle valve, Y-strainer, solenoid valve, auxiliary pilot and isolation ball valves. The solenoid shut-off valve shall be operationally and hydrostatically tested prior to shipment.

MATERIALS OF CONSTRUCTION
The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be low-lead Bronze. Elastomers (diaphragms, resilient seats and O-rings) shall be EPDM. The auxiliary pilot shall be low-lead Bronze. The needle valve and isolation ball valves shall be brass and control line tubing shall be copper. The solenoid shall have a brass body, weatherproof enclosure and be suitable for operation on <voltage>.

OPERATING CONDITIONS
The solenoid shut-off valve shall be suitable for pressures of <X to X> psi at flow rates up to <X> gpm.

ACCEPTABLE PRODUCTS
The solenoid shut-off valve shall be a <size> Model 115-4, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

U.S. DIMENSIONS - INCHES

<table>
<thead>
<tr>
<th>DIM</th>
<th>END Conn.</th>
<th>1 1/4-1 1/2</th>
<th>2</th>
<th>2 1/2</th>
<th>3</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
<th>24</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>SCREWED</td>
<td>8 3/4</td>
<td>9 7/8</td>
<td>10 1/2</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*GROOVED END NOT AVAILABLE IN 1 1/4*