The Model 101-D is an automatic control valve that is designed to separate two systems from one another, remaining closed until needed. It has specific use where “System B” must, at times, be fed from “System A”. Typical examples would include:

- Domestic water systems
- Fire water systems
- Other emergency water systems

**SERIES FEATURES**

- Feeds “System B” from “System A”
- Opens fully when activated
- Field adjustable opening set point
- Field adjustable closing set point
- Separate opening and closing speed controls
- Manual override for opening and closing
- Can be maintained without removal from the line
- Factory tested and can be pre-set to your requirements

**OPERATION**

The normally open, spring-loaded pilot, sensing downstream pressure, responds to “System B” pressure decrease and causes the main valve to open at its field adjustable opening set point, when needed, as in the case of an emergency. The pilot system is equipped with an opening speed control that fine tunes the opening speed to the systems needs.

The normally closed, spring-loaded pilot, sensing downstream pressure, responds to “System B” pressure increase and causes the main valve to close at its field adjustable closing set point, when “System B” pressure returns to normal. The pilot system is equipped with a closing speed control that fine tunes the closing speed to the systems needs.

**COMPONENTS**

The Model 101-D consists of the following components, arranged as shown on the schematic diagram:

1. Model 65 Basic Control Valve
2. Model 1330 Closing Pilot
3. Model 1340 Opening Pilot
4. Four Model 141-4 Ball Valves (troubleshooting and manual override)
5. Model 159 Y-Strainer (dirt/debris protection)
6. Two Model 141-2 Needle Valves (opening/closing speed controls)
7. Model 155 Visual Indicator (Optional)

**SIZING**

Sizing for this model involves generally selecting line sized valves. Consult the factory for assistance if needed.

**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>640 psi</td>
<td>640 psi</td>
<td>500 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>640 psi</td>
<td>740 psi</td>
<td>500 psi</td>
</tr>
</tbody>
</table>

**RECOMMENDED INSTALLATION**

Differential On-Off Valve Model 101-D

System A

System B
SIZES GLOBE/ANGLE
Screwed Ends - 1 1/4" - 3"
Grooved Ends - 1 1/2" - 6" (globe)
1-1/2"-4" (angle)
Flanged Ends - 1 1/4" - 24" (globe);
1 1/4" - 16" (angle)

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

SPRING RANGE (opening/closing setting)
5-30 psi, 20-80 psi, 2-200 psi, 100-300 psi

MATERIALS
Consult factory for others.

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

Seat Ring: Stainless Steel, low-lead Bronze

Stem: Stainless Steel, Monel

Spring: Stainless Steel

Diaphragm: EPDM*

Seat Disc: EPDM*

Pilot: Stainless Steel, low-lead Bronze

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

Tubing & Fittings: Stainless Steel, Copper/Brass

*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.

DESIGN
The pressure differential on-off valve shall function to open, feeding “System B” from “System A” when the opening set point is reached. The valve shall also function to close again when the closing set point is reached.

OPERATING CONDITIONS
The pressure differential on-off valve shall be suitable for outlet opening pressures of X to X psi. The valve shall be suitable for outlet closing pressures of X to X psi.

ACCEPTABLE PRODUCTS
The pressure differential on-off valve shall be a <size> Model 101-D, <globe pattern, angle pattern>, with <150# flanged, 300# flanged, threaded, grooved> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

For maximum efficiency, the OCV control valve should be mounted in a piping system so that the valve bonnet (cover) is in the top position. Other positions are acceptable but may not allow the valve to function to its fullest and safest potential. In particular, please consult the factory before installing 8" and larger valves, or any valves with a limit switch, in positions other than described. Space should be taken into consideration when mounting valves and their pilot systems.

A routine inspection & maintenance program should be established and conducted yearly by a qualified technician. Consult our factory @ 1-888-628-8258 for parts and service.

How to order your Model 101-D valve
When ordering please provide:
Fluid to be controlled - Model Number - Size
Globe or Angle - End Connection - Body Material
Trim Material - Pilot Options - Opening / Closing - Outlet Pressure Setting or Spring Range - Inlet Pressure Setting or Spring Range - Special Requirements / Installation Requirements.

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