The Model 120 has a wide range of applications: anywhere the flow rate must be controlled or limited. Typical examples include:
- Pump systems
- Zone flow control in municipal and industrial water
- Filter backwash control
- Fuel metering systems

**SERIES FEATURES**
- Controls or limits flow to a predetermined rate
- Built-in orifice plate for sensing flow rate
- Extra-sensitive differential pilot
- Flow rate is adjustable with single screw
- Adjustable response speed
- 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 the differential across the integral orifice plate, located in the valve inlet flange, responds to changes in differential and causes the main valve to do the same. Increased differential (flow rate) works to close the pilot and main valve, whereas decreased differential works to open them. The net result is a constant modulating action of the pilot and main valve to hold the differential, hence the flow rate, constant. The pilot system is equipped with a needle valve that fine tunes the valve response to the system variables.

**COMPONENTS**
The Model 120 consists of the following components, arranged as shown on the schematic diagram:
1.) Model 65 Basic Control Valve
2.) Orifice Plate
3.) Model 2450 Rate of Flow Control Pilot
4.) Model 126 Ejector - Fixed orifice pilot system supply restrictor
5.) Model 141-2 Needle Valve - Adjustable response speed
6.) Model 159 Y-strainer - Protects pilot system from dirt/debris
7.) Model 141-4 Isolation Ball Valves
8.) Model 155 Visual Indicator (Optional)

**MAX. PRESSURE**
The pressures listed below are maximum pressures at 100°F.

**SIZING**
The following chart states the minimum and maximum flow rate with standard bore orifice plate. This means the valve can be adjusted to control within the ranges shown. Lower flow ranges are possible through the use of smaller orifice plate bores. All ranges are adjustable within a 4:1 ratio (high to low flow). Consult the factory for assistance and a copy of the OCV ValveMaster Sizing program.

**END CONNECTIONS**

<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>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>

**TOLL FREE 1.888.628.8258**
- phone: (918)627.1942
- fax: (918)622.8916
- 7400 East 42nd Place, Tulsa, Ok 74145
- email: sales@controlvalves.com
- website: www.controlvalves.com
**SIZES**

GLOBE/ANGLE

Flanged Ends - 1 1/4" - 24" (globe); 1 1/4" - 16" (angle)

**FLUID OPERATING TEMPERATURE RANGE**

(Valve Elastomers)

EPDM 32°F - 230°F*

**MATERIALS**

**Body/Bonnet:** Ductile Iron (epoxy coated), Carbon Steel (epoxy coated), Stainless Steel, low-lead Bronze, Others available (consult factory)

**Seat Ring:** low-lead Bronze, Stainless Steel

**Stem:** Stainless Steel, Monel

**Spring:** Stainless Steel

**Diaphragm:** EPDM*

**Seal 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

*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 rate of flow control valve shall function to control or limit the flow rate, regardless of fluctuations in upstream or downstream pressure.

**OPERATING CONDITIONS**

The rate of flow control valve shall be suitable for controlling the flow rate over a range of <X to X> gpm at pressures ranging from <X to X> psi.

**ACCEPTABLE PRODUCTS**

The rate of flow control valve shall be a <size> Model 120, <globe pattern, angle pattern>, with <150# flanged, 300# flanged> end connections, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

**U.S. DIMENSIONS - INCHES**

| DIM | END CONN | 1 1/4-1/2 | 2 | 2 1/2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 24 |
|-----|----------|------------|---|-------|---|---|---|---|----|----|----|----|----|----|
| C   | FLG      | 8 1/2      | 9 7/8 | 10 1/2 | 12 3/4 | 15 5/8 | 18 5/8 | 26 3/8 | 31 1/8 | 35 1/2 | 40 1/2 | 42 | 63 3/4 |
| E   | ALL      | 6 6 7 6 1/2 8 10 11 7/8 15 3/8 17 18 19 27 |
| F   | ALL      | 6 6 7 6 1/2 8 10 11 7/8 15 3/8 17 18 19 27 |
| H   | ALL      | 10 11 11 11 12 13 14 17 18 20 20 20 28 1/2 |

*GROOVED END NOT AVAILABLE IN 1 1/4*

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 120 valve

When Ordering please provide:

Fluid to be controlled - Model Number - Size
Globe or Angle - End Connection - Body
Material - Trim Material - Pilot Options - Flow Rate Setting or Range - Special Requirements / Installation requirements.

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Represented by: