The Model 8101 is applicable anywhere it is necessary to automatically maintain an essentially constant level in storage tanks or reservoirs. Such applications occur in:

- Municipal water
- Water treatment facilities
- Fire protection systems
- Rural water
- Fuel storage tanks

If the valve is to be primarily used for high level shut-off, consult factory.

**OPERATION**

The Model 8101 is designed for tank fill only. A rotary, float-activated pilot controls the position of the main valve. With the float in the full down position, the pilot is wide open, as is the main valve. As the float begins to rise, the pilot begins to restrict flow, causing the main valve to throttle further closed. When fluid level raises the float to the full up position, flow is blocked and the main valve is closed.

**COMPONENTS**

The Model 8101 consists of the following components, arranged as shown on the schematic diagram:

1. Model 65 Basic Control Valve
2. Model 812 Float Pilot
3. Model 126 Ejector
   - Fixed orifice pilot system supply restrictor
4. Model 141-2 Needle Valve
   - Adjustable response speed
5. Model 159 Y-strainer
   - Protects pilot system from dirt/debris
6. Model 141-4 Isolation Ball Valves
7. Model 155 Visual Indicator (Optional)

**SIZING**

While most Model 8100 Float Valves are line size, there are two factors to check. To keep from using too small a valve, flow rate should be limited to a maximum of 25 ft/sec velocity. Too large a valve can result in loss of inlet pressure, which is needed to close the valve on high level. Definitive sizing information can be found in the OCV Catalog, Series 8100 section and Engineering section Performance Charts. Consult the factory for assistance and a copy of the OCV ValveMaster Sizing program.

<table>
<thead>
<tr>
<th>SIZE</th>
<th>1 1/4&quot;-1 1/2&quot;</th>
<th>2&quot;</th>
<th>2 1/2&quot;</th>
<th>3&quot;</th>
<th>4&quot;</th>
<th>6&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN. FLOW GPM</td>
<td>14 - 23</td>
<td>50</td>
<td>75</td>
<td>115</td>
<td>200</td>
<td>450</td>
</tr>
<tr>
<td>MAX. FLOW GPM</td>
<td>115 - 160</td>
<td>260</td>
<td>370</td>
<td>570</td>
<td>1000</td>
<td>2250</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
Screwed Ends -1 1/4" - 3"
Grooved Ends - 1 1/2" - 4" (globe);
1 1/2" - 4" (angle)
Flanged Ends - 1 1/4" - 6" (globe);
1 1/4" - 6" (angle)

MAX. PRESSURE
Limited by float pilot to 250 psig maximum, all
materials and end connections (maximum pres-
sures at 100°F).

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)

Seat Ring: low-lead Bronze, Stainless Steel

Stem: Stainless Steel, Monel

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

*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 modulating float valve shall be installed on the inlet line to the tank and shall modulate to hold a
constant level in the tank, thus balancing inflow and outflow levels. The modulating float valve shall
include a simple, two-way, non-adjustable float pilot to be installed in the tank at the desired tank level
and be connected to the main valve by a single, customer-installed sense line.

MATERIALS OF CONSTRUCTION
The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. All ferrous sur-
faces 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 float pilot shall be low-lead
Bronze, with stainless steel internals. The 5" spherical float shall be stainless steel, as shall the float
rod. The isolation ball valves shall be brass and control line tubing shall be copper.

OPERATING CONDITIONS
The modulating float valve shall be suitable for a maximum flow rate of <X> gpm at inlet pressures
ranging from <X> to <X> psi.

ACCEPTABLE PRODUCTS
The modulating float valve shall be a <size> Model 8101, <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 END CONN</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>8</th>
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<tbody>
<tr>
<td>A SCREWED</td>
<td>8 3/4</td>
<td>9 7/8</td>
<td>10 1/2</td>
<td>13</td>
<td>15 1/4</td>
<td>17 3/4</td>
<td>25 3/8</td>
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<tr>
<td>A GROOVED</td>
<td>8 3/4</td>
<td>9 7/8</td>
<td>10 1/2</td>
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<tr>
<td>C 150# FLGD</td>
<td>8 1/2</td>
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<td>17 3/4</td>
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<tr>
<td>D SCREWED</td>
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<td>D GROOVED</td>
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<tr>
<td>D 300# FLGD</td>
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<td>4 3/8</td>
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<td>11 7/8</td>
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*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 8101 valve
When Ordering please provide:
Fluid to be controlled - Model Number - Size
Globe or Angle - End Connection
Body Material Trim Material - Pilot Options
Special Requirements / Installation
requirements.

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

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