SERIES 350 BACKFLUSH VALVES

PRODUCT ADVANTAGES
- 3-Way hydraulically operated diaphragm valves with low pressure loss.
- Double chambered design requires low actuation pressure for a wide application range.
- Dynamic sealing diaphragm seals at very low pressure and prevents seal friction and erosion.
- Highly durable reinforced plastic valve is chemical and cavitation resistant.
- T-configuration valve has a common outlet connected to the filter inlet and two other outlets - one to the water inlet manifold and the other to the drain manifold.
- Used with disc and sand media filters.

SPECIFICATIONS
- Operating Pressure: 10 -145 psi
- Maximum Temperature: 150° F
- External Operating Pressure: 85%-100% of operating pressure
- Control Chamber Displacement Volume:
  - 2": 0.03 gallons
  - 3": 0.09 gallons
  - 4": 0.15 gallons
- 2" Series 350 Connections:
  - Inlet - 2" Grooved (Victaulic)
  - Outlet - 2" Threaded
  - Flush - 2" Threaded
- 3" Series 350 Connections:
  - Inlet - 3" Grooved (Victaulic)
  - Outlet - 3" Grooved (Victaulic)
  - Flush - 2" Threaded
- 4" Series 350 Connections:
  - Inlet - 4" Grooved (Victaulic)
  - Outlet - 4" Threaded
  - Flush - 4" Grooved (Victaulic) or 3" Threaded

MATERIALS
- Valve Body, Separating Partition and Lower Adapter: Polyamide 6 - 30GF Black color
- Cover: Polyamide 6 - 30GF Grey color
- Diaphragm: NR-AL52 Nylon Fabric Reinforced
- Seats, Diaphragm Washers: Stainless Steel 304
- Plug, Plug Washer: Acetal Copolymer Black
- Stopper Disc: PVC-U
- Seal, O-Rings: NBR
- Spring: Stainless Steel AISI 302
- Shaft: Stainless Steel AISI 303
- External Bolts, Studs, Nuts and Discs: Stainless Steel
**OPERATION**

A hydraulic command from the solenoid [1], which pressurizes the Lower Control Chamber [2], forces the Diaphragm [3] actuated Plug Assembly [4] to move towards the Supply Port Seal [5], eventually sealing the valve drip tight. This allows water flow from the filter through the Drain Port Seal [6]. Venting the upper control chamber causes the line pressure, together with the Spring [7] force, to move the valve back to filtration mode.

**HYDRAULIC DATA 2” VALVE**

<table>
<thead>
<tr>
<th>FILTRATION 2 → C</th>
<th>BACKFLUSH C → 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$K_v = 46$ $C_v = 53$</td>
<td>$K_v = 60$ $C_v = 70$</td>
</tr>
</tbody>
</table>

$$\Delta P = \left( \frac{Q}{C_v} \right)^2$$ \hspace{1cm} $C_v = \text{GPM} @ \Delta P \text{ of 1 psi}$

**HYDRAULIC DATA 3” VALVE**

<table>
<thead>
<tr>
<th>FILTRATION 2 → C</th>
<th>BACKFLUSH C → 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$K_v = 93$ $C_v = 107$</td>
<td>$K_v = 122$ $C_v = 141$</td>
</tr>
</tbody>
</table>

$$\Delta P = \left( \frac{Q}{C_v} \right)^2$$ \hspace{1cm} $C_v = \text{GPM} @ \Delta P \text{ of 1 psi}$

**HYDRAULIC DATA 4” VALVE**

<table>
<thead>
<tr>
<th>FILTRATION 2 → C</th>
<th>BACKFLUSH C → 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$K_v = 190$ $C_v = 220$</td>
<td>$K_v = 250$ $C_v = 290$</td>
</tr>
</tbody>
</table>

$$\Delta P = \left( \frac{Q}{C_v} \right)^2$$ \hspace{1cm} $C_v = \text{GPM} @ \Delta P \text{ of 1 psi}$

**DIMENSIONS & WEIGHT**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2”</td>
<td>4.96”</td>
<td>10.78”</td>
<td>4.99”</td>
<td>3.15”</td>
<td>3.54”</td>
<td>-</td>
<td>1.02”</td>
<td>6.2 LBS.</td>
</tr>
<tr>
<td>3”</td>
<td>6.32”</td>
<td>14.88”</td>
<td>4.72”</td>
<td>3.77”</td>
<td>5.64”</td>
<td>-</td>
<td>-</td>
<td>6.2 LBS.</td>
</tr>
<tr>
<td>4”</td>
<td>8.26”</td>
<td>18.26”</td>
<td>8.85”</td>
<td>5.11”</td>
<td>5.45”</td>
<td>7.02”</td>
<td>-</td>
<td>21.8 LBS.</td>
</tr>
</tbody>
</table>

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>MODEL NUMBER</th>
<th>SIZE</th>
<th>VALVE APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>71000-012780</td>
<td>61BFG2TP</td>
<td>2”</td>
<td>2” LP &amp; 2” COMPACT LP DISC-KLEEN</td>
</tr>
<tr>
<td>71000-013360</td>
<td>61BFG3PB</td>
<td>3”</td>
<td>3” LP DISC-KLEEN &amp; APOLLO ANGLE</td>
</tr>
<tr>
<td>71000-013430</td>
<td>61BFG4GPB</td>
<td>4”</td>
<td>48” AGF SAND MEDIA</td>
</tr>
<tr>
<td>71000-013440</td>
<td>61BFG4GPGB-DM</td>
<td>4”</td>
<td>APOLLO DISC-KLEEN</td>
</tr>
</tbody>
</table>