VALVES

NYLON AND PVC VALVES

PRODUCT ADVANTAGES

- Superb hydraulic performance.
- Simple design with only one moving component, the diaphragm, means parts are not located in the water passage way.
- Low operating pressure.
- Simple inline installation with minimal maintenance requirements for maximum dependability.
- Durable, corrosion-resistant materials provide high resistance to corrosive water containing fertilizers and chemicals.
- Nylon valves have threaded connections.
- PVC valves have threaded or socket (slip) connections allowing pipes to be cemented into the valves.

APPLICATIONS

- Ideal for water control in PVC networks
- Agriculture or Greenhouse and Nursery
- Surface or subsurface installations
- Portable systems

SPECIFICATIONS

- Recommended Operating Pressure (psi):
  - 15 min. to 145 max. - Nylon 1”, 1 1/2”, 2”, 323
  - 6 min. to 145 max. - Nylon 3”
  - 7 min. to 145 max. - PVC all sizes
- Maximum Water Temperature: 140° F
- Optional Functions: Manual, Electric, Pressure Reducing, Pressure Sustaining or Remote Control and more functions

MATERIALS

- Nylon Valve Body, Bonnet, Seat: Glass Reinforced Polyamide (GRP)
- PVC Valve Body: uPVC
- Spring: Stainless Steel (AISI 302)
- Nuts, Bolts, Washers (except 3” Nylon): Zinc Coated Steel (BS 5216)
- Nuts, Bolts, Washers (3” Nylon): Stainless Steel 304
- Diaphragm: Natural Rubber
- Connections: Threaded - ANSI (NPT Female) Socket - IPS, PVC Standard

AVAILABLE MODELS & SIZES

<table>
<thead>
<tr>
<th>SIZES</th>
<th>MATERIAL</th>
<th>NYLON</th>
<th>PVC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CONNECTION</td>
<td>THREADED</td>
<td>THREADED</td>
</tr>
<tr>
<td>1”</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1 1/2”</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2”</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>323</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3”</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3”</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4”</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6”</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>
NYLON AND PVC VALVES

MANUAL VALVE OPERATION WITH A 3-WAY SELECTOR

- **CLOSED (C):** Upstream pressure or pressure from an external source is applied to the control chamber. Initiated by the spring, the diaphragm is pressed down to close the valve drip-tight.
- **OPEN (O):** Relieving the water or air pressure to the atmosphere from the control chamber causes the valve to open.
- **AUTOMATIC (A):** The automatic port of the 3-Way selector is connected to a solenoid, hydraulic relay or pilot which controls the valve. The common port of the 3-Way selector connects the control chamber to either A, O or C, depending on the direction the selector is pointed.

### VALVE INSTALLATION TIPS

- **THREADED VALVES:** Use a few layers of Teflon sealer compound on the adapter and tighten by hand. Use a wrench to tighten the adapter another half revolution.
- **SOCKET OR ‘SLIP’ VALVE WITH PVC PIPE:** Use the same procedure as when cementing PVC pipes. Mark the pipe first, then apply glue to the socket of the valve and the PVC pipe. Insert the pipe until reaching the mark and rotate a quarter turn. Hold the joint in place until the cement hardens.
- **INSTALLATION ABOVE GROUND:** When installing a manifold above ground, the length of the manifold should be kept as short as possible (this eliminates the need for additional support). For longer lengths, a firm support under the horizontal pipes is recommended. Always install the valve with the bonnet exposed to the sun.

### FLOW RATE VS. PRESSURE LOSS

Light brown area indicates recommended operating range.

### DIMENSIONS & WEIGHT

<table>
<thead>
<tr>
<th>SIZE/CONNECTION</th>
<th>LENGTH</th>
<th>HEIGHT</th>
<th>WEIGHT *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1” NYLON THREADED</td>
<td>4 7/8”</td>
<td>2 7/8”</td>
<td>0.4 LBS.</td>
</tr>
<tr>
<td>1 1/2” NYLON THREADED</td>
<td>7 3/8”</td>
<td>4 3/8”</td>
<td>2.0 LBS.</td>
</tr>
<tr>
<td>2” NYLON THREADED</td>
<td>7 7/8”</td>
<td>4 3/8”</td>
<td>2.2 LBS.</td>
</tr>
<tr>
<td>323 NYLON THREADED</td>
<td>9 1/4”</td>
<td>4 3/4”</td>
<td>3.1 LBS.</td>
</tr>
<tr>
<td>3” NYLON THREADED</td>
<td>10 1/4”</td>
<td>4 1/2”</td>
<td>3.1 LBS.</td>
</tr>
<tr>
<td>3” PVC THREADED</td>
<td>10 1/8”</td>
<td>7 5/8”</td>
<td>9.3 LBS.</td>
</tr>
<tr>
<td>3” PVC SLIP</td>
<td>10 1/8”</td>
<td>7 5/8”</td>
<td>9.3 LBS.</td>
</tr>
<tr>
<td>4” PVC SLIP</td>
<td>11”</td>
<td>8”</td>
<td>9.5 LBS.</td>
</tr>
<tr>
<td>6” PVC SLIP</td>
<td>14”</td>
<td>15”</td>
<td>20 LBS.</td>
</tr>
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</table>

* Weight for Basic Valve

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>SIZE</th>
<th>MAX. FLOW (GPM)</th>
<th>Cv</th>
<th>OPERATING PRESSURE (psi) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
<td>44</td>
<td>18</td>
<td>15 - 115</td>
</tr>
<tr>
<td>1 1/2”</td>
<td>110</td>
<td>66</td>
<td>22 - 145</td>
</tr>
<tr>
<td>2”</td>
<td>176</td>
<td>83</td>
<td>22 - 145</td>
</tr>
<tr>
<td>323</td>
<td>264</td>
<td>93</td>
<td>22 - 145</td>
</tr>
<tr>
<td>3”</td>
<td>400</td>
<td>120</td>
<td>6 - 145</td>
</tr>
<tr>
<td>3” PVC</td>
<td>400</td>
<td>175</td>
<td>9 - 115</td>
</tr>
<tr>
<td>4” PVC</td>
<td>700</td>
<td>250</td>
<td>9 - 115</td>
</tr>
<tr>
<td>6” PVC</td>
<td>1,540</td>
<td>554</td>
<td>7 - 145</td>
</tr>
</tbody>
</table>

* Low Pressure Diaphragms also available

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**FLOW (GPM)** | **HEADLOSS (PSI)**
---|---
20 | 1
30 | 1.5
40 | 2
50 | 2.5
60 | 3
70 | 3.5
80 | 4
90 | 4.5
100 | 5
150 | 6
200 | 7
300 | 8
400 | 9
500 | 10
600 | 11
700 | 12
800 | 13
900 | 14
1,000 | 15
1,100 | 16
1,200 | 17
1,300 | 18
1,400 | 19
1,500 | 20
1,600 | 21
1,700 | 22

\[ H (psi) = \sqrt{Q (GPM)^{2} \times \frac{1}{Cv}} \]

**MAX. FLOW (GPM) VS. HEADLOSS (PSI)**

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**GROW MORE WITH LESS**

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