## SERIES 75 NYLON CONTROL VALVES



MANUAL NYLON THREADED VALVE


## APPLICATIONS

Series 75 Control Valves - designed to operate and protect irrigation networks in field crops, vineyards, orchards, and greenhouses.

## MATERIALS

- Body and Bonnet: Reinforced Nylon (*Optional: Polypropylene)
- **Diaphragm: Natural Rubber (*Optional: ALD, EPDM)
- Spring: SST 302, (*Optional: SST 316)
*Optional parts for special chemical resistance
** Wide selection of pressure ranges
- Extremely Versatile

Gal plastic valves are available with full selection of control functions and various end connections.

## PRODUCT ADVANTAGES

- Simple and Reliable Design

Highly resistant to fertilizers and chemicals.

- Outstanding Performances

High flow capacity and very low head losses achieved by a flexible diaphragm that provides a wide water passage throughout the valve's hydrodynamic body.

- Ultimate Durability Long life and easy inline maintenance accomplished by structural simplicity and high-quality corrosion-free materials.

SPECIFICATIONS

|  |  | PERFORMANCE |  | PRESSURE RANGE (psi) |  | MAX TEMP | DIMENSIONS |  | PALLET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SIZE | *CONNECTIONS | Cv | MAX. FLOW (GPM) | LOW PRESSURE DIAPHRAM | HIGH PRESSURE DIAPHRAM | ${ }^{\circ} \mathrm{F}$ | LENGTH | WEIGHT <br> (Ibs) | QUANTITY |
| 3/4" | TH | 9 | 26 | 9-114 | 13-114 | 140 | 4-1/2' | 0.4 |  |
| $1 "$ | TH | 18 | 44 | 9-114 | 13-114 | 140 | 4-7/8" | 0.4 |  |
| $11 / 2^{\prime \prime}$ | TH | 70 | 110 | 5-145 | 10-145 | 140 | 7-3/8" | 2.0 |  |
| 2" | TH | 82 | 176 | 5-145 | 10-145 | 140 | 7-7/8" | 2.2 |  |
| 323 | TH | 93 | 396 | 5-145 | 10-145 | 140 | 9-3/8" | 3.1 |  |
| 3" SuperGal | TH | 140 | 440 | 6-145 | 6-145 | 140 | 10-1/8" | 6.8 |  |
| - 343 | TH, F | 290 | 812 | 4-175 | 4-175 | 140 | 18-5/8" | 12.8 | 22 |
| 4" | F, G | 410 | 900 | 4-175 | 4-175 | 140 | 14-5/8" | 13.1 | 24 |
| 646 | F | 430 | 960 | 4-175 | 4-175 | 140 | 16-1/2" | 17.5 | 20 |

*TH $=$ Threaded, F = Flanged, G = Grooved

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## 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 ( 0 ): 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 $\mathrm{A}, \mathrm{O}$ or C , depending on the direction the selector is pointed.

FLOW RATE vs. FRICTION LOSS

| SIZE | Cv | FLOW RATE (GPM) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 10 | 20 | 30 | 40 | 50 | 60 |
|  |  | FRICTION LOSS, Hf (psi) |  |  |  |  |  |
| 3/4" | 9 | 1.2 | 4.9 | 11.1 |  |  |  |
| $1 "$ | 18 | 0.3 | 1.2 | 2.8 | 4.9 | 7.7 | 11.1 |


| SIZE | Cv | FLOW RATE (GPM) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 60 | 100 | 140 | 180 | 220 | 260 | 300 | 340 | 380 | 420 | 460 |
|  |  | FRICTION LOSS, Hf |  |  |  |  |  |  |  |  |  |  |
| $11 / 2^{\prime \prime}$ | 70 | 0.7 | 2.0 | 4.0 | 6.6 | 9.9 |  |  |  |  |  |  |
| 2 " | 85 | 0.5 | 1.5 | 2.9 | 4.8 | 7.2 | 10.1 |  |  |  |  |  |
| 323 " | 93 | 0.4 | 1.2 | 2.3 | 3.7 | 5.6 | 7.8 | 10.4 |  |  |  |  |
| 3" SG | 140 | 0.2 | 0.5 | 1.0 | 1.7 | 2.5 | 3.4 | 4.6 | 5.9 | 7.4 | 9.0 | 10.8 |


| SIZE | Cv | FLOW RATE (GPM) |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 250 | 320 | 390 | 460 | 530 | 600 | 670 | 740 | 810 | 880 | 950 | 1020 | 1090 |
|  |  | FRICTION LOSS, Hf |  |  |  |  |  |  |  |  |  |  |  |  |
| 343 | 290 | 0.7 | 1.2 | 1.8 | 2.5 | 3.3 | 4.3 | 5.3 | 6.5 | 7.8 | 9.2 | 10.7 |  |  |
| NEN 4" | 410 | 0.4 | 0.6 | 0.9 | 1.3 | 1.7 | 2.1 | 2.7 | 3.3 | 3.9 | 4.6 | 5.4 | 6.2 |  |
| 646 | 430 | 0.3 | 0.6 | 0.8 | 1.1 | 1.5 | 1.9 | 2.4 | 3.0 | 3.5 | 4.2 | 4.9 | 5.6 | 6.4 |

## 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.
- FOR FLANGED VALVES: Tighten bolts using the 'star' method so there is even distribution of torque on the bolted connections.

