### WASTEWATER DIVISION

# NYLON AND PVC VALVES

### HIGH FLOW, LOW FRICTION LOSS AND MINIMUM SERVICING FOR A BROAD RANGE OF APPLICATIONS





MANUAL NYLON THREADED VALVE

PRESSURE REDUCING ELECTRIC NYLON THREADED VALVE



MANUAL PVC SLIP VALVE

#### PRESSURE REDUCING PVC THREADED VALVE

### **APPLICATIONS**

- Headworks assemblies for use in advanced treatment wastewater drip dispersal systems
- Ideal for water control in all piping networks
- Above or below grade installations
- Remote control irrigation for master valves and automated or manual operations
- Nylon valves are ideal for mild corrosive and acidity levels in the water
- PVC Valves are ideal for higher corrosive and acidity levels in the water

### **SPECIFICATIONS**

- Recommended Operating Pressure (psi): Nylon - 12 minimum to 145 maximum PVC - 12 minimum to 115 maximum (based on valve size - see chart)
- Maximum Water Temperature: 140° F
- Optional Functions: Manual, Electric, Pressure Reducing, Pressure Sustaining

### MATERIALS

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

### **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.

### **AVAILABLE MODELS & SIZES**

MATERIAL		NYLON	PVC	
CO	NNECTION	THREADED	THREADED	SLIP
	1″	Х	-	-
SIZES	1 ½″	X	-	-
	2″	X	-	-
	323	Х	-	-
	3″	-	X	Х
	4″	-	-	Х
	6″	-	-	Х



### **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 A, 0 or C, depending on the direction the selector is pointed.

### **3-WAY CONTROL VALVES**

The 3-Way control valve only ports water (or air) into the control chamber to close the valve or releases it from the control chamber to open the valve. This non-continuous porting technique allows for full opening of the main valve when operating conditions require the valve to be fully open.



SPECIFICATIONS				
SIZE	MAX. FLOW (GPM)	Cv	OPERATING PRESSURE (psi) *	
1″	44	18	12 - 115	
1 ½″	110	66	12 - 145	
2"	176	83	12 - 145	
323	176	103	12 - 145	
3″	396	175	12 - 115	
4"	440	250	12 - 115	
6″	1,540	554	12 - 145	

\* Low Pressure Diaphragms also available



\* Weight for Basic Valve

\*\* Refers to a 2" Valve body with a 3" inlet and outlet

### **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.

## NYLON VALVE SHOWN



COMMON POR



SHORT BOLT

BONNET

SPRING

SPRING SEAT

DIAPHRAGM

BODY

NUT

PLUG

LONG BOLT

# **2-WAY ELECTRIC VALVES**

### **PRODUCT ADVANTAGES**

- Durable, glass reinforced nylon construction provides superb hydraulic performance.
- Large internal water passage with no moving parts in the flow path prevents clogging.
- Built-in 2-Way Solenoid with low power requirement for ease of operation and reliability.
- Simple installation either vertically or horizontally.
- High resistance to corrosive water containing fertilizer and chemicals.
- Standard with a flow control (throttling) handle.

#### **APPLICATIONS**

 Ideal for mild corrosive and mild acidity levels in the water

#### **SPECIFICATIONS**

- Available Sizes: 1", 1 1/2", 2" and 323
- Maximum Working Pressure:
  1" 115 psi and 2" to 323 150 psi
- Maximum Water Temperature: 140° F
- Connections: Female Threaded NPT
- Electrical Specifications: Voltage - Standard 24 VAC, 60 Hz Inrush Current - 29mA Holding Current - 14mA Allowable Voltage Variation: 10%

#### **MATERIALS**

- Body and Bonnet: Glass Reinforced Nylon
- Spring: Stainless Steel (AISI 302)
- Nuts, Bolts, Washers: Stainless Steel (304)
- Diaphragm: Natural Rubber



LIGHT PURPLE AREA INDICATES RECOMMENDED OPERATING RANGE

### 2-WAY CONTROL VALVES

The 2-Way control valve continuously ports water into and from the control chamber, making it an excellent choice when a very accurate and sensitive regulation performance is required. The 2-Way valves may be used with clean water when a minimal pressure difference is allowed and a fast, accurate response is required.

DIMENSIONS & WEIGHT			
SIZE	LENGTH	HEIGHT	WEIGHT
1″	4 7/8″	4 7/8"	.5 LBS.
1 1/2"	7 3/8"	6"	2.0 LBS.
2″	7 7/8″	6″	2.2 LBS.
323	9 1/4"	6 5/8"	3.1 LBS.

FLOW RANGE		
SIZE	GPM	
1″	1 - 50	
1 1/2"	1 - 125	
2″	1 - 175	
323	1 - 225	

ORDERING INFORMATION			
SIZE	ITEM NUMBER	MODEL NUMBER	
1″	71610-014015	61ET1PBI-BC	
1 1/2"	71610-014040	61ET1.5PBI2-BC	
2″	71610-014507	61ET2PBI2-BC	
323	71610-015202	61ET323PBI2-BC	

SOLD IN CASE QUANTITIES AND 24VAC ONLY 1" CASE QUANTITY = 20 1 1/2" AND 2" CASE QUANTITY = 8 323 CASE QUANTITY = 4



1" ELECTRIC PBI THROTTLING NYLON VALVE



323 ELECTRIC PBI THROTTLING NYLON VALVE

# **SERIES 80 2-WAY ELECTRIC VALVES**

### **PRODUCT ADVANTAGES**

- Suitable for high pressure applications with quick reaction to opening and closing.
- Exceptionally low inrush and holding current allows the longest wire run from valve to controller.
- Quick reaction to opening and closing and a drip-tight seal for accurate irrigation.
- Stable solenoid to voltage fluctuations with low sensitivity to dirt no diode solenoid.
- Integrated check valve ensures valve remains closed until the controller designates opening.
- Flow control stem allows manual control from full closure up to maximum capacity.







1 ½" & 2" GLOBE SERIES 80 2-WAY

1½"Angle & 2" Globe

2" Angle

1½" Globe

120 140 160 180

FLOW RATE (GPM)

80 100

60

1 ½" & 2" ANGLE SERIES 80 2-WAY

16

14

12

10

8

2

PRESSURE LOSS (psi)

11/2" & 2" FLOW RATE VS. PRESSURE LOSS

### **APPLICATIONS**

 Ideal for mild corrosive and mild acidity levels in the water

### **SPECIFICATIONS**

- Recommended Flow Ranges: ¾" valve - .01 to 26 GPM 1" valve - .01 to 44 GPM 1 ½" valve - .25 to 110 GPM 2" valve - .25 to 176 GPM
- Valve Configurations:
  ¾" & 1" valves Globe
  1½" & 2" valves Globe or Angle
- Minimum Operating Pressure: 7 psi
- Maximum Operating Pressure: 150 psi
- Maximum Water Temperature: 140° F
- Standard Solenoid Voltage: 24VAC <u>+</u> 10% voltage
- Solenoid Inrush Current: .22A
- Solenoid Holding Current: .095A

### **MATERIALS**

- Body, Bonnet, Diaphragm Seat: Glass Reinforced Polyamide (GRP)
- Nuts, Bolts, Washers: Stainless Steel 304
- Spring: Stainless Steel AISI 302

¾" & 1" FLOW RATE VS. PRESSURE LOSS





ORDERING INFORMATION STANDARD 24VAC VALVES			
VALVE SIZE	ITEM NUMBER	MODEL NUMBER	
¾" GLOBE	00135-000995	LVET.75GH2	
1" GLOBE	00135-001005	LVET1GH2	
1 1⁄2" GLOBE	00135-001015	LVET1.5GH2	
1 1/2" ANGLE	00135-001016	LVET1.5GH2-AN	
2" GLOBE	00135-001025	LVET2GH2	
2" ANGLE	00135-001026	LVET2GH2-AN	

