

# IRON AND BRONZE VALVES

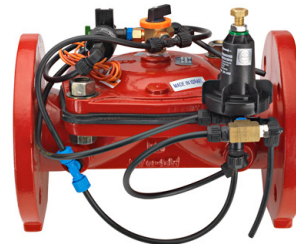
**SUPREME DURABILITY AND SUPERIOR HYDRAULIC PERFORMANCE**



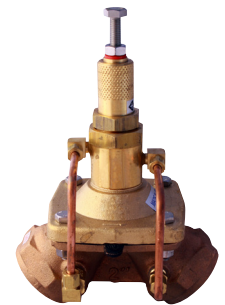
**MANUAL IRON THREADED VALVE**



**BASIC IRON GROOVED VALVE**



**PRESSURE REDUCING ELECTRIC IRON FLANGED VALVE**



**QUICK RELIEF ANGLE BRONZE THREADED VALVE**

## PRODUCT ADVANTAGES

- Unique design allows a straight flow pattern with lowest friction loss in the industry.
- Superb hydraulic performance with low operating pressure.
- Direct sealing diaphragm for positive opening and closing.
- Simple inline installation with minimal parts provides low maintenance requirements.
- Iron valves have protective polyester coating for resistance to corrosive elements and UV protection.
- Bronze valves are designed to resist cavitation where extreme flow velocities exist.

**LONGEST WARRANTY IN THE INDUSTRY**

## APPLICATIONS

- High pressure applications
- Drip and sprinkler irrigation systems
- Center pivot control
- Permanent systems

## SPECIFICATIONS

- Optional Functions: Manual, Electric, Pressure Reducing, Pressure Sustaining, Hydraulic Remote Control, Quick Relief, Flow Control, Surge Anticipating, Float Control and more
- Connections:  
Threaded ANSI NPT Female  
Grooved ANSI/AWWA C-606  
Flanged ANSI CL-125

## MATERIALS

- Body and Bonnet:  
Cast Bronze (ASTM B-62)  
Cast Iron (ASTM A 125 CLB)
- Spring: Stainless Steel (AISI 302)
- Nuts, Bolts, Washers:  
Stainless Steel (BS 5216)
- Diaphragm: Natural Rubber

## AVAILABLE MODELS & SIZES

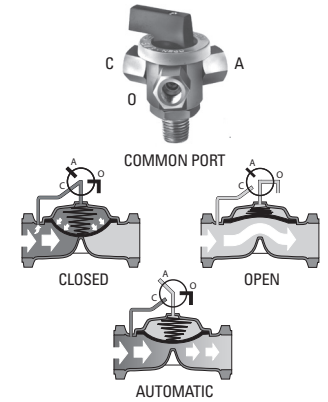
| MATERIAL/CONNECTION | 1" | 1 1/2" | 2" | 2" AN | 323 | 323 AN | 3" | 3" AN | 4" | 4" AN | 6" | 6" AN | 868 | 8" | 10" | 12" |
|---------------------|----|--------|----|-------|-----|--------|----|-------|----|-------|----|-------|-----|----|-----|-----|
| IRON FLANGED        | -  | -      | -  | -     | -   | -      | X  | -     | X  | X     | X  | X     | X   | X  | X   | X   |
| IRON THREADED       | X  | X      | X  | X     | X   | -      | X  | X     | -  | -     | -  | -     | -   | -  | -   | -   |
| IRON GROOVED        | -  | -      | X  | -     | X   | -      | X  | X     | X  | -     | X  | -     | -   | -  | -   | -   |
| BRONZE THREADED     | X  | X      | X  | X     | X   | X      | -  | -     | -  | -     | -  | -     | -   | -  | -   | -   |

AN = ANGLE VALVE

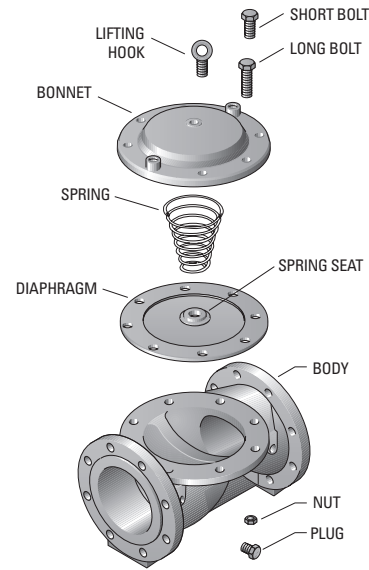
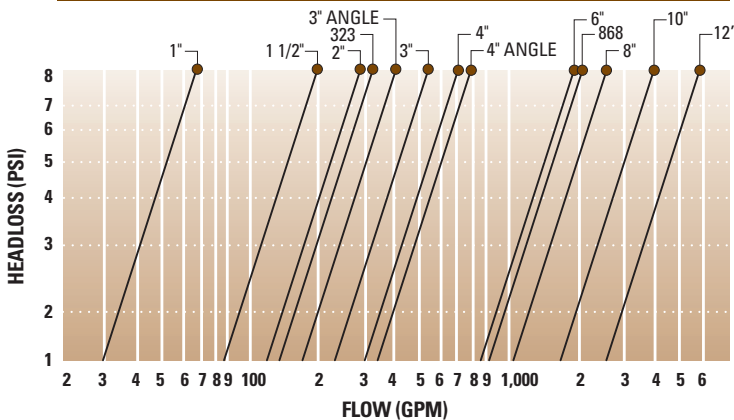
## IRON AND BRONZE VALVES

### 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.



### FLOW RATE VS. PRESSURE LOSS



IRON FLANGED VALVE SHOWN

### IRON VALVES DIMENSIONS & WEIGHT

| SIZE/CONNECTION | LENGTH   | HEIGHT   | WEIGHT *  |
|-----------------|----------|----------|-----------|
| 1" THREADED     | 4 3/4"   | 2"       | 2.2 LBS.  |
| 1 1/2" THREADED | 6 11/16" | 3 11/16" | 4.9 LBS.  |
| 2" THREADED     | 7 7/16"  | 4 9/16"  | 7.0 LBS.  |
| 323 THREADED    | 8 7/8"   | 5"       | 9.9 LBS.  |
| 3" THREADED     | 8 7/8"   | 5"       | 24.0 LBS. |
| 2" GROOVED      | 7 1/2"   | 4"       | 5.7 LBS.  |
| 323 GROOVED     | 7 15/16" | 4 3/4"   | 6.6 LBS.  |
| 3" GROOVED      | 11 1/4"  | 4 7/8"   | 24.3 LBS. |
| 4" GROOVED      | 12 1/2"  | 5 1/4"   | 26.4 LBS. |
| 6" GROOVED      | 15 7/16" | 9 7/8"   | 68.3 LBS. |
| 3" FLANGED      | 11 1/4"  | 7 3/4"   | 37.5 LBS. |
| 4" FLANGED      | 12"      | 9 1/16"  | 48.5 LBS. |
| 6" FLANGED      | 15 3/8"  | 12 3/8"  | 101 LBS.  |
| 868 FLANGED     | 15 3/16" | 13 3/4"  | 110 LBS.  |
| 8" FLANGED      | 18 1/8"  | 15 3/4"  | 176 LBS.  |
| 10" FLANGED     | 21 1/16" | 17 1/2"  | 258 LBS.  |
| 12" FLANGED     | 22 7/8"  | 19 1/2"  | 344 LBS.  |

\* WEIGHT FOR BASIC VALVE

### HYDRAULIC SPECIFICATIONS

| SIZE   | MAX. RECOMMENDED FLOW RATE (GPM) | FLOW FACTOR (Cv) | OPERATING PRESSURE RANGE (psi) * |
|--------|----------------------------------|------------------|----------------------------------|
| 1"     | 44                               | 20               | 17 - 230                         |
| 1 1/2" | 110                              | 75               | 17 - 230                         |
| 2"     | 176                              | 110              | 21 - 230                         |
| 323    | 176                              | 110              | 21 - 230                         |
| 3"     | 396                              | 200              | 17 - 230                         |
| 4"     | 440                              | 260              | 17 - 230                         |
| 6"     | 1,540                            | 700              | 21 - 230                         |
| 868    | 1,540                            | 780              | 21 - 230                         |
| 8"     | 2,112                            | 930              | 10 - 230                         |
| 10"    | 4,268                            | 1,460            | 10 - 230                         |
| 12"    | 6,160                            | 2,220            | 10 - 230                         |

\* HIGH PRESSURE DIAPHRAGM - LOW PRESSURE DIAPHRAGMS AVAILABLE FOR ALL SIZES  
MINIMUM FLOW RATE FOR ALL SIZES: <1

### BRONZE VALVES DIMENSIONS & WEIGHT

| SIZE/CONNECTION | LENGTH   | HEIGHT  | WEIGHT * |
|-----------------|----------|---------|----------|
| 1" THREADED     | 4 11/16" | 2"      | 2.2 LBS. |
| 1 1/2" THREADED | 5 7/8"   | 3 3/8"  | 4.0 LBS. |
| 2" THREADED     | 7 1/4"   | 4"      | 5.7 LBS. |
| 323 THREADED    | 8 3/4"   | 4 9/16" | 8.5 LBS. |

\* WEIGHT FOR BASIC VALVE



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