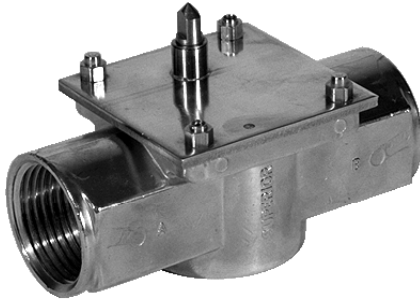# ☆STAR VALVE BODIES

2 PORT - HIGH PRESSURE
Forged Brass Body For Use With all Star Actuators

**☆Star™ 2 port
High Pressure Body**

BENEFITS & SPECIAL FEATURES

- Corrosion resistant 1-piece composite stem
- Conical seats provide proportional flow when used with the Corvus, Pulsar and Regulus actuators.
- INSERT-A-SEAT™ allows field adjustable flow and pressure differential
- Brass bearing plate
- Heavy brass high quality forging
- Also available in a 3-port version
- Available in C X C, NPT, BSP, JIS, Compression, and Inverted flare
- Triple ZOLAST™ "O" ring seal on stem
- Compatible with chilled or hot water, and steam limit
- 600 PSI (40.8 bar) static operating pressure
- UL certification: 300 PSI (20.4 bar) continuous duty
- 1500 PSI (103 bar) burst pressure

Operation

The ☆Star bodies utilize a ball that swings between two orifices, or seats. The seats are conically shaped to provide proportional flow, ever decreasing as the ball approaches until 100% of the flow ceases. While the largest seat is machined directly out of the forged brass body, the smaller INSERT-A-SEATS™ are factory or field inserted to change the flow and pressure differential characteristics of the valve. The ball, stem and bearing plate are removable for cleaning or replacement. Since the plate forms a water-tight seal with the forging, the actuator may be removed without draining the system.

Application

The ☆Star body is compatible with all ☆Star actuators. Depending on the actuator chosen, the valve is suitable for systems requiring on-off, modulating or fully proportional control. Applications include, but are not limited to, zone control on hydronic systems, fan coils, control of domestic heating loops and storage tanks, humidity control and industrial process control.

Description

Every ☆Star body is compatible with all ☆Star actuators. ☆Star valves are designed primarily for use on chilled or hot water. The valves are compatible with hundreds of other fluids in many environments.The low pressure bodies are incompatible with steam systems; high pressure body and plate are required.
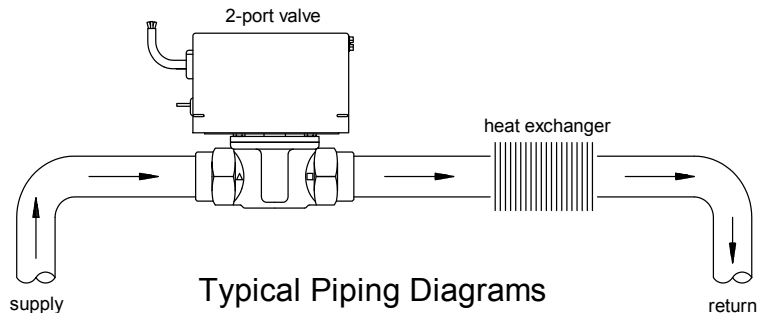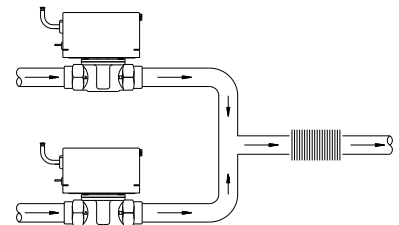
Typical Piping Diagrams

SPECIFICATIONS

PRESSURE
   Static Pressure - water ..... 600 PSIG / 40.8 bars

MAXIMUM TEMPERATURE LIMITS
   Valve with actuator
      Fluid
         Standard .... 195°F / 91°C
         High temp. option .... 250°F / 121°C
      Ambient .... 110°F / 43°C
   Body only (fluid)
      Standard .... 375°F / 191°C

MATERIALS

1. STEM .... STAINLESS STEEL

2. SEAT .... BRASS

3. STEM O-RING .... ZOLAST™

4. THREADED POST .... BRASS

5. PRESSURE PLATE ..... BRASS

6. PADDLE .... ZOLAST™

7. BODY O-RING .... ZOLAST™

8. BODY .... BRASS

DIMENSIONS
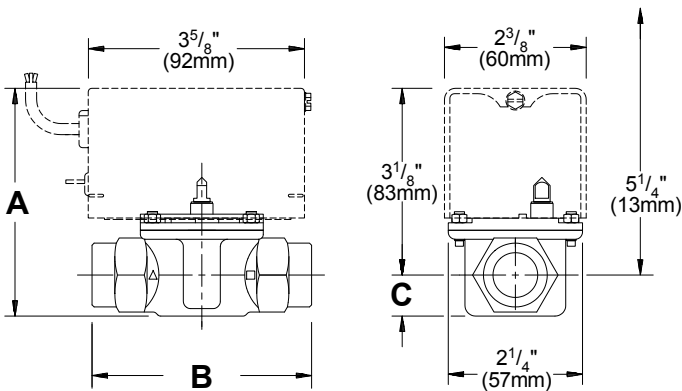
INSTALLATION

Valves are labelled with "W" and "☐" symbols for port identifi-cation. 2-port valves are unidirectional when equippped with a N/O or N/C valve (Astral or Corvus), and bidirectional when equipped with the Lumina, Pulsar or Regulus actuators. Care should be taken when soldering valve bodies so that the paddle is away from the seat. Actuators need not be removed prior to soldering or installed prior to filling system.
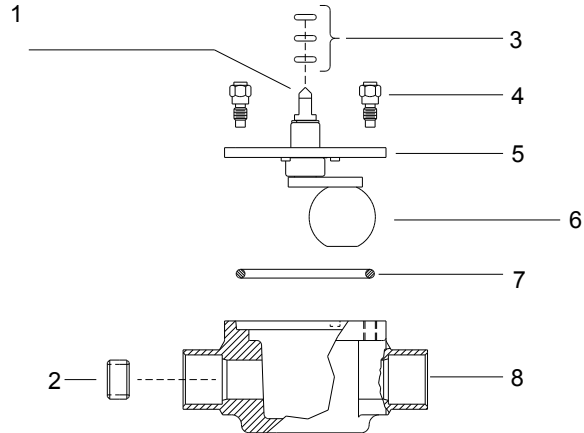
RATINGS

Orifice	Diameter		Standard or Option	Flow		Pressure Drop	
	in.	cm		Cv	Kv	PSI	BAR
Low	3/16	.476	Option	0.8	11.4	50	3.4
Med	6/16	.794	Option	2.9	41.4	25	1.7
High	9/16	1.11	Standard	4.8	68.5	10	.68

Kv based on Litres per minute flow, with pressure drop of 1kg/cm² at 20°C.
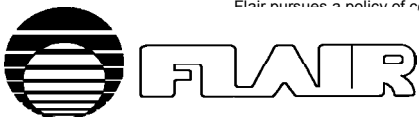
14.504 PSI = 1 BAR

For more detailed charts on flow and pressure consult the reference section.

EXPLODED VIEW

Body	Size	A	B	C
C X C Sweat	1/2"	3 3/4"	3 1/8"	11/16"
		95mm	79mm	17mm
	3/4"	3 3/4"	3 3/4"	11/16"
		95mm	95mm	17mm
	1"	3 7/8"	4 1/8"	13/16"
		98mm	105mm	21mm
NPT BSP JIS	1/2"	3 3/4"	3 5/8"	11/16"
		95mm	92mm	17mm
	3/4"	3 3/4"	3 5/8"	11/16"
		95mm	92mm	17mm
	1"	3 7/8"	4"	13/16"
		98mm	102mm	21mm
Union Flare	1/2", 3/4", 1"	3 3/4"	3 1/2"	11/16"
		95mm	89mm	17mm
Comp-ression	1/2", 15mm	3 3/4"	3 1/4"	11/16"
		95mm	83mm	17mm
	3/4", 22mm	3 3/4"	3 11/16"	11/16"
		95mm	84mm	17mm
	1", 28mm	3 13/16"	3 7/8"	3/4"
		97mm	98mm	19mm