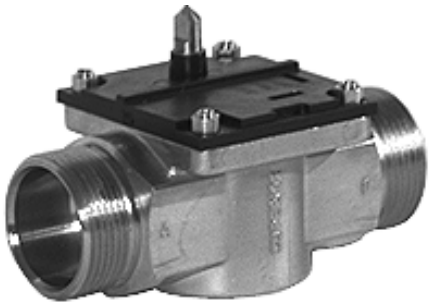
# ☆STAR VALVE BODIES

## 2 PORT - LOW PRESSURE

Forged Brass Body For Use With all Star Actuators



**☆Star™ 2 port Low Pressure Body**

## BENEFITS & SPECIAL FEATURES

- Corrosion resistant 1-piece stainless steel 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
- Insulated Isotherm II™ 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
- Double ZOLAST™ "O" ring seal on stem
- Compatible with chilled or hot water
- 100 PSI (6.8 bar) static operating pressure limit

### *Operation*

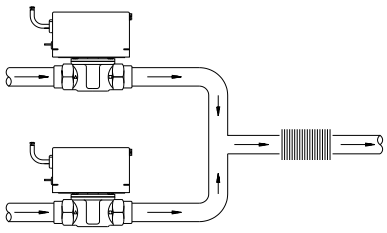
The ☆Star bodies utilize a ball that swings between two orifices, or seats. The seats are conically shaped to provide proportional flow, ever decreasing as the ball approaches until 100% of the flow ceases. While the largest seat is machined directly out of the forged brass body, the smaller INSERT-A-SEATS™ 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.

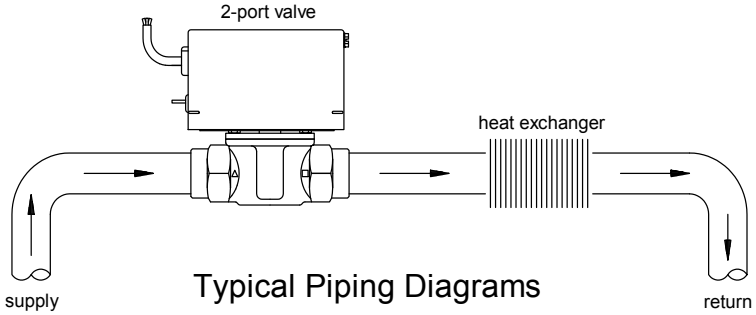
### *Application*

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

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Bulletin #SK220293

## SPECIFICATIONS

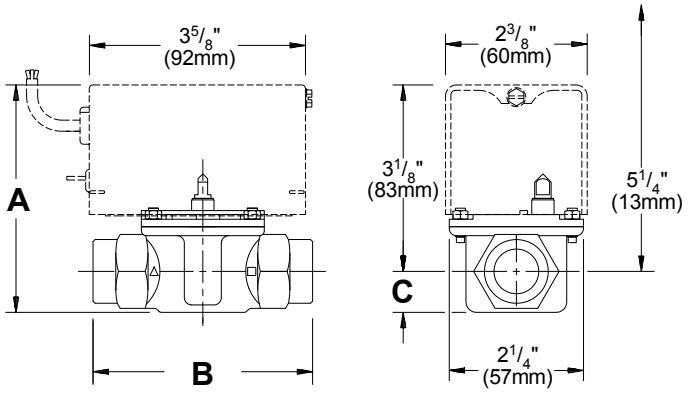
PRESSURE
- Static Pressure - water ..... 100 PSIG / 6.8 bars

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

## MATERIALS

1. STEM ..... COMPOSITE
2. SEAT ..... BRASS
3. STEM O-RINGS ..... ZOLAST™
4. THREADED POST ..... BRASS
5. PRESSURE PLATE ..... ISOTHERM II™
6. PADDLE ..... ZOLAST™
7. BODY O-RING ..... ZOLAST™
8. BODY ..... BRASS FORGING

## DIMENSIONS




## INSTALLATION

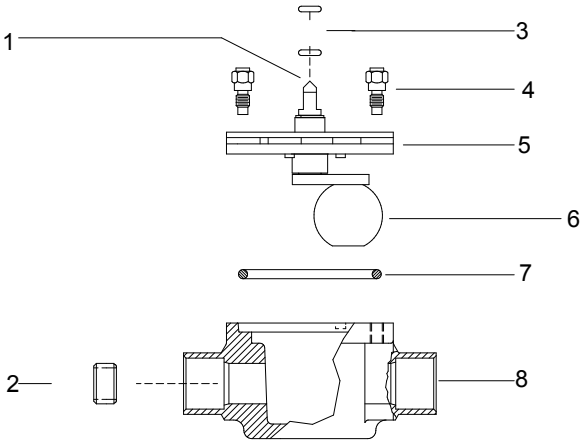
Valves are labelled with "W" and "□" symbols for port identification. 2-port valves are unidirectional when equippped with a N/O or N/C valve (Astral or Corvus), and bidirectional when equipped with the Lumina, Pulsar or Regulus actuators. Care should be taken when soldering valve bodies so that the paddle is away from the seat. Actuators need not be removed prior to soldering or installed prior to filling system. Special consideration only to valves used on steam systems. See instruction sheets.

## 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 |



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