

# **SUPERIOR VALVE BODIES**

#### 3 PORT - HIGH PRESSURE

Forged Brass Body For Use With Astral & Corvus Actuators



Superior™ 3-port High Pressure Body







### Description

Every Superior body is compatible with all Superior actuators and the \$\frac{1}{2}\text{Star}\$ Astral and Corvus actuators. \$\frac{1}{2}\text{Star}\$ valves are designed primarily for use on chilled or hot water and low-pressure steam. 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.

### Operation

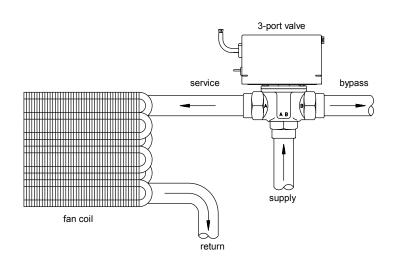
The Superior bodies utilize a paddle that swings between two orifices, or seats. The paddle, stem and bearing plate are removable for cleaning or replacement. Since the plate forms a water-tight seal with the forging, the actuator may be removed without draining the system.

#### Application

Depending on the actuator chosen, the valve is suitable for systems requiring on-off, diverting (with or without priority), and mid-position 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.

# **BENEFITS & SPECIAL FEATURES**

- Corrosion resistant 1-piece stainless steel stem
- Brass high pressure bearing plate
- Heavy brass high quality forging
- Also available in a 2-port version
- Available in C X C, NPT, BSP, JIS, and Compression
- Double ZOLAST™ rubber "O" ring seal on stem
- Compatible with chilled or hot water
- 600 PSI (41.3 bar) static operating pressure limit
- UL Certification: 300 PSI (20.7 bar) continuous duty, 1500 PSI (103.4 bar) burst pressure



Typical Piping Diagram

#### **SPECIFICATIONS**

**PRESSURE** 

Static Pressure - water ............ 600 PSIG / 41.3 bar

MAXIMUM TEMPERATURE LIMITS

Valve w/ Actuator

Fluid:

Ambient:

Standard ......110°F / 43°C

High temp. option ...... 165°F / 74°C

Body only Fluid:

Standard and

High temp. option .......375°F / 191°C

## **RATINGS**

Orifice	Diameter		Standard	Flow		Pressure	
	in.	cm	or Option	C <sub>v</sub>	Kv	PSI	BAR
Low	3/16	.476	Option	8.0	11.4	50	3.4
Med	5/16	.794	Standard	2.9	41.4	25	1.7
High	7/16	1.11	Option	4.8	68.5	10	.68
Special High	8/16	1.27	Option	7.1	101.3	6	.40

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

14.504 PSI = 1 BAR

#### **MATERIALS**

1.	STEM	STAINLESS STEEL
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2. SEAT ..... BRASS

3. STEM O-RINGS ......ZOLAST™ RUBBER

4. THREADED POST .... BRASS

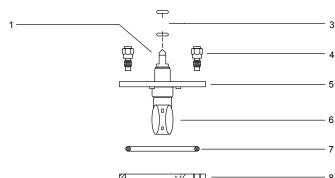
5. PRESSURE PLATE ... BRASS

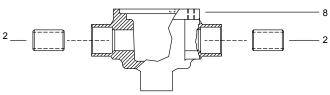
6. PADDLE .....ZOLAST™ RUBBER

7. BODY O-RING .....ZOLAST™ RUBBER

8. BODY......BRASS

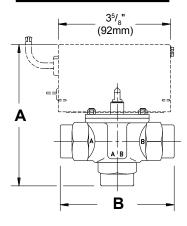
#### **EXPLODED VIEW**

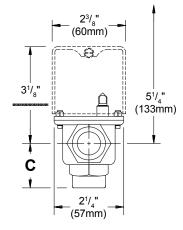




Body	Size	Α	В	С	
	1/2"	4 5/16"	3 1/8"	1 1/4"	
	1/2	110mm	79mm	32mm	
CXC	3/4"	4 9/16"	3 3/4"	1 1/2"	
Sweat	5/4	116mm	95mm	38mm	
	1"	4 7/8"	3 7/8"	1 7/8"	
		124mm	98mm	48mm	
	1/2"	4 7/8"	3 5/8"	1 3/4	
NPT BSP JIS	1/2	124mm	92mm	45mm	
	3/4"	4 3/4"	3 5/8"	1 3/4	
	5/4	121mm	92mm	45mm	
	1"	4 7/8"	4"	1 7/8"	
		124mm	102mm	48mm	
Comp- ression	1/2",	4 1/2"	3 1/4"	1 7/16"	
	15mm	114mm	825mm	37mm	
	3/4",	4 13/16"	3 11/16"	1 3/4"	
	22mm	122mm	84mm	45mm	
	1",	4 3/4"	3 7/8"	1 7/8"	
	28mm	121mm	98mm	48mm	

#### **DIMENSIONS**





#### **INSTALLATION**

Valves are labelled with "A" & "B" symbols for port identification. With 3-port valves flow is from "AB" to either "A" or "B" port. 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, however, care should be taken to protect actuator from open flame.

Flair pursues a policy of constant improvement. For this reason, all specifications are subject to change without notice.

