

## Style "WD" Valve Assembly

### FEATURES

- Balanced Sleeve Three-way Type
- Sizes 2" through 6"

### GENERAL DESCRIPTION

This three-way valve has a balanced sleeve type poppet and is suitable where it is desired to open one-line and close another by the operation of the regulator. This valve can be used for water, glycol, oil, calcium chloride brine or other liquid service.

When used on a regulator to control circulation of cooling water or lubricating oil for an internal combustion engine, this valve is employed to by-pass part of the cooling water or oil around the cooling system or heat exchanger.

### INSTALLATIONS

Mixing

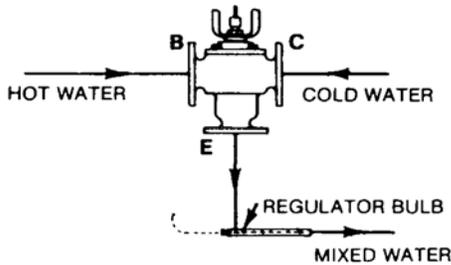


Figure 1: Illustrating a simple means for mixing hot and cold water where a rough mixing is suitable.

Diverting

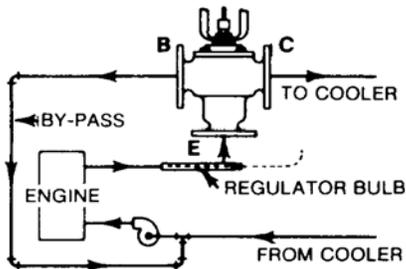


Figure 2: This drawing illustrates the most widely used method of cooling water control for internal combustion engines.

Diverting

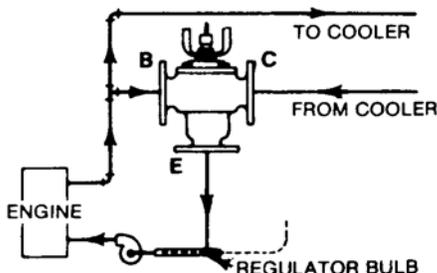
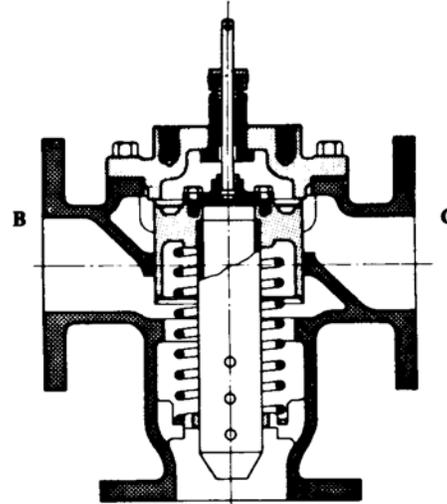


Figure 3: This drawing shows a method of controlling the cooling of engine lubricating oil.



E (Common Port)

With stem up, B port is open  
 With stem down, C port is open

### SPECIFICATIONS

- Type:** ..... Three-way. Balanced sleeve type poppet.  
**Sizes:** ..... 2" through 6"  
**Action:** ..... Modulating. Opens one line, closes another.  
**Connections:** ..... Flanged, Class 150 ANSI Bronze.  
**Materials:**  
*Valve Trim* ..... Bronze poppet and integral seats.  
 May be re-faced in field.  
*Valve Stem* ..... Type 316 St. St. Quick-detach type.  
*Stem Seal* ..... Rubber U-Cup Poppet  
*Seal* ..... Large O-ring  
*Body* ..... Bronze  
*Poppet Spring* ..... 18-8 stainless steel  
*Other Parts* ..... Non-ferrous metals

### Capacity Cv:

Valve Size In.	2	2½	3	4*	5	6
E to B	64.0	81.0	115.0	220.0	344.0	506.0
E to C	64.0	88.0	106.0	237.0	385.0	563.0

Type "WD" used with self-actuated temperature regulator series.

**Maximum Recommended Pressure Drops, PSI\***

Max. Pressure .....100 psi @ 100° F.

Max. Temp. ....200° F. @ 100 psi.

**Max. Pressure Drop**

2" - 3" sizes, 40 psi

4" - 6" sizes, 25 psi.

**Maximum Recommended Pressure Drops, PSI\***

Valve Size, in.	SATR SERIES							
	RT-1001	RT-1003	RT-1004	RT-1007	RT-1008	RT-1009	RT-1010	RT-1011
2	40	40	40	40	40	40	40	40
2 1/2	40	40	40	40	40	40	40	40
3			40				40	
4							25	
5							25	
6							25	

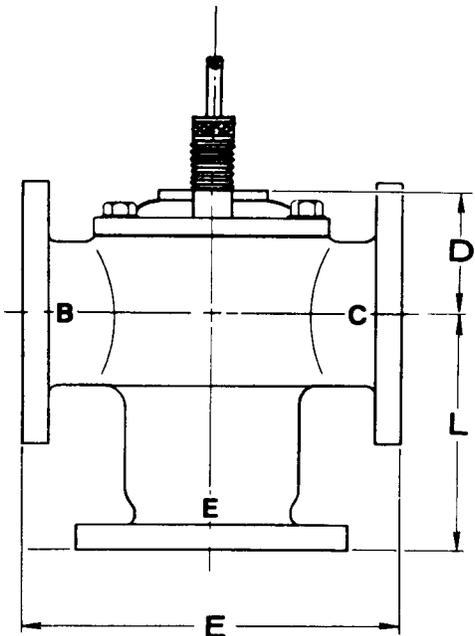
\* Supply pressure to the valve less any back pressure to the valve.

**DIMENSIONS**

Flanges have plain face. Drilling templates are in multiples of four so fittings may be made to face any quarter. Bolt holes straddle center lines.

All dimensions are in inches.

Valve Size, In.	Diameter of Flanges	Thickness of Flanges	Diameter of Bolt Circle	Number of Bolts	Size of Bolts	Diameter of Bolt Holes	Length of Bolts	Size of Ring Gaskets	D	E	L
2	6	1/2	4-3/4	4	5/8	3/4	2-1/4	2 x 4 1/8	4-3/16	8-5/8	5-3/16
2 1/2	7	9/16	5-1/2	4	5/8	3/4	2-1/2	2 1/2 x 4 7/8	4	10	6-1/2
3	7-1/2	5/8	6	4	5/8	3/4	2-1/2	3 x 5 3/8	4	10-1/2	6-3/4
4	9	11/16	7-1/2	8	5/8	3/4	3	4 x 6 7/8	3-9/16	15-7/8	8-9/16
5	10	3/4	8-1/2	8	3/4	7/8	3	5 x 7 3/4	6	19-1/4	11-5/8
6	11	15/16	9-1/2	8	3/4	7/8	3-1/4	6 x 8 3/4	6	23-1/2	13-7/16



**Robertshaw**

**U.S.A. and CANADA**

Robertshaw Industrial Products Division

1602 Mustang Drive

Maryville, Tennessee 37801

Phone: (865) 981-3100 Fax: (865) 981-3168

<http://www.robertshawindustrial.com>

**Exports**

Invensys Appliance Controls

1701 Byrd Avenue

P.O. Box 26544

Richmond, Virginia 23261-6544

Phone: (804) 756-6500 Fax: (804) 756-6561

Q-4054 (5/01)

Printed in U.S.A.