



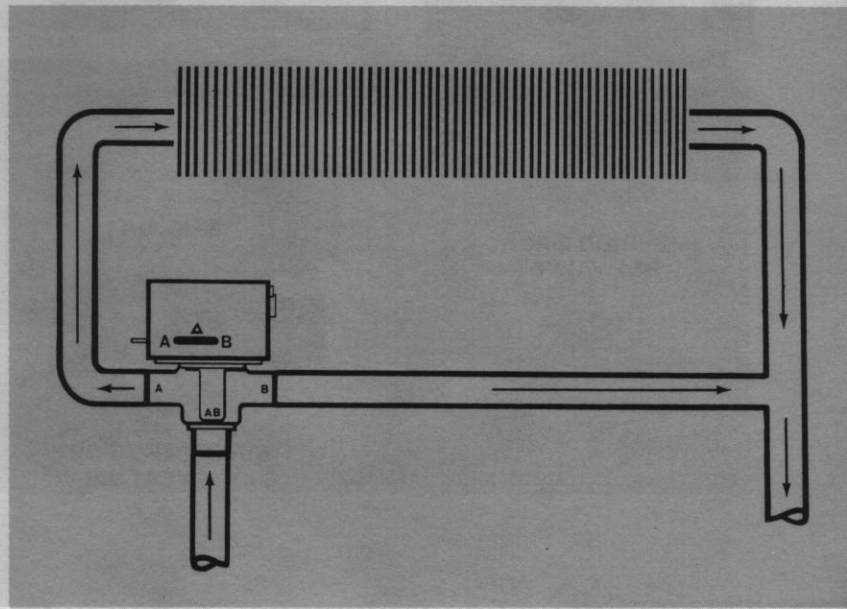
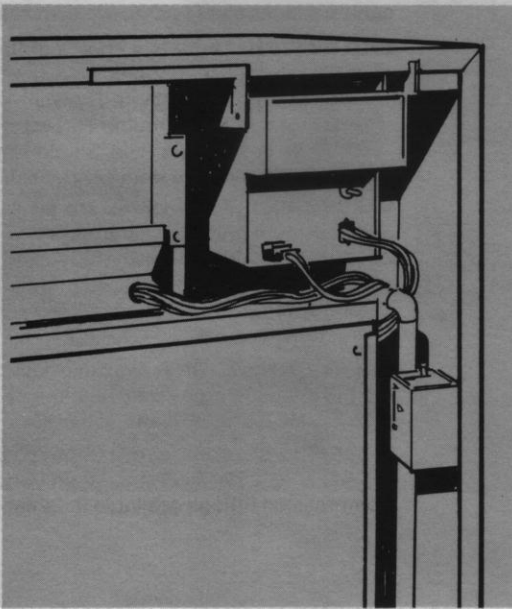
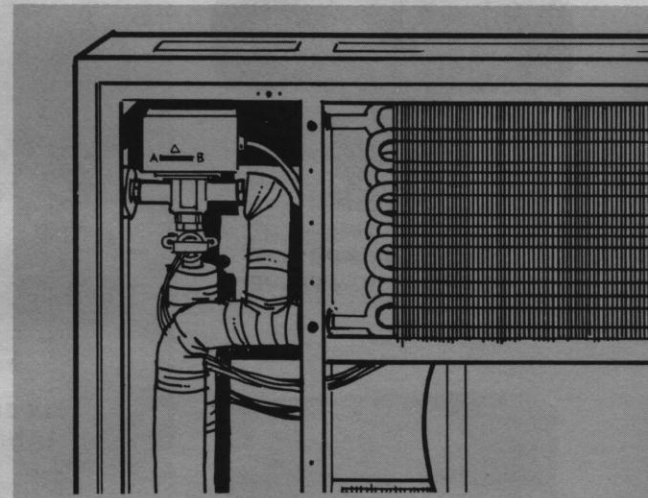
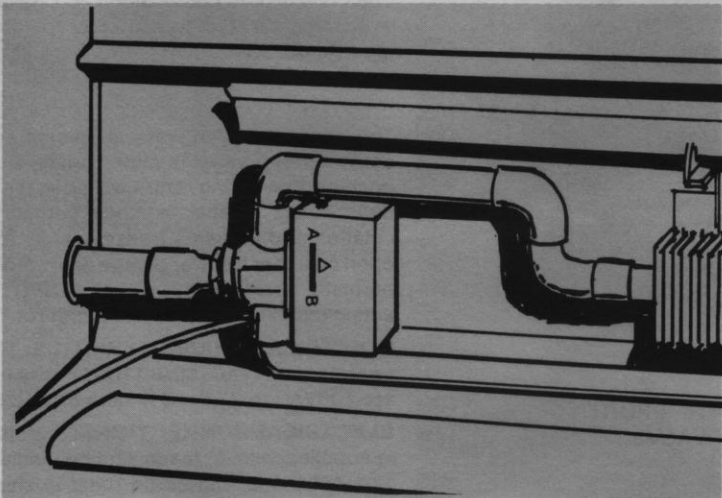
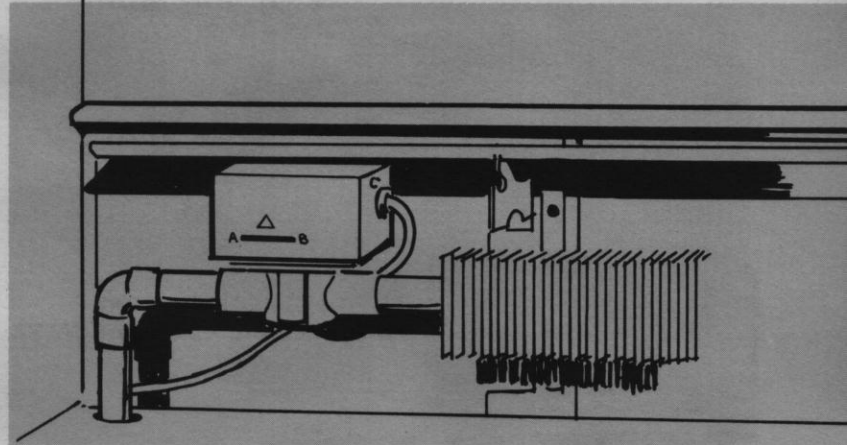
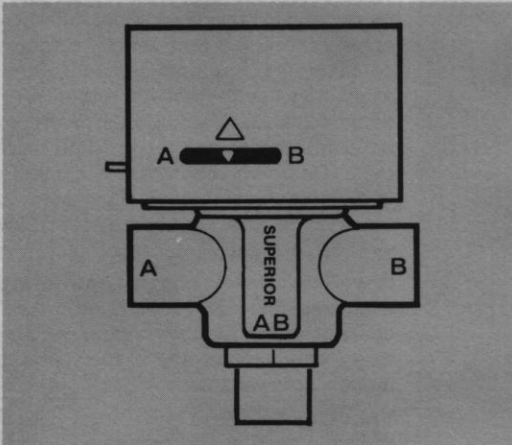
FLAIR

SUPERIOR VALVES

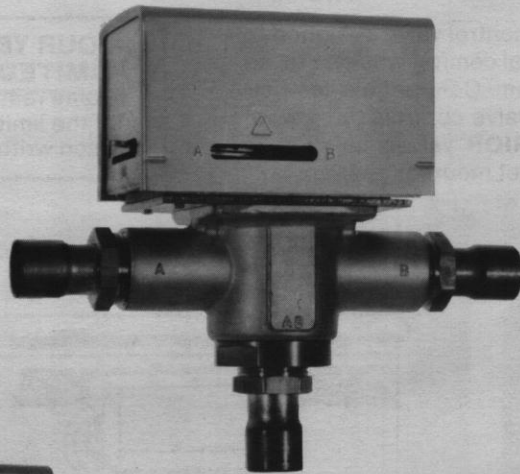
The **SUPERIOR** valve is a motorized zone control valve designed to provide maximum fuel economy and personal comfort when installed in a hydronic heating and/or cooling system. Comfortable temperatures are maintained as the **SUPERIOR** valve controls the flow of water through a heat exchanger. **SUPERIOR** valves function in response to the demand of a room or cabinet mounted thermostat.

FOUR YEAR LIMITED WARRANTY

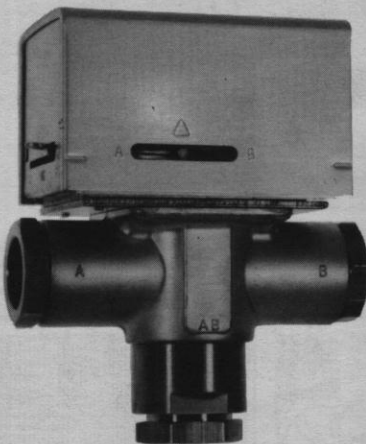
Some restrictions apply. Details of the limited warranty available upon written request.



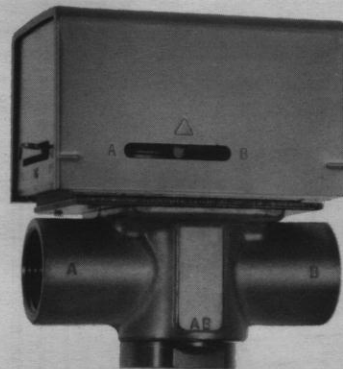
SUPERIOR motorized zone control valves



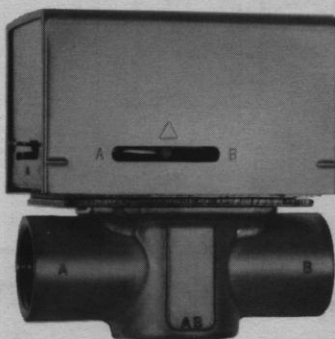
**SUPERIOR 3-PORT
UNION FLARE x C SWEAT VALVE**



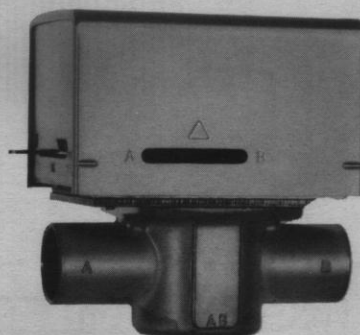
**SUPERIOR 3-PORT
COMPRESSION VALVE**



**SUPERIOR 3-PORT
NPT VALVE**



**SUPERIOR 2-PORT
BSP VALVE**



**SUPERIOR 2-PORT
C x C SWEAT VALVE**

The **SUPERIOR** valve is a motorized zone valve, designed to control hot water, chilled water or low pressure steam systems. The valve is available with a wide range of operating options and accessories. Sizes from 1/2" to 1 1/4" make it universal and suitable for residential, commercial and industrial heating and cooling systems.

The **SUPERIOR** valve is controlled by a wall or room thermostat to provide accurate room or area temperature control. A 3-port bypass model will maintain constant flow and head pressure. Other valves are available for high humidity and ocean front conditions, fail-safe solar applications and commercial and industrial processing. **SUPERIOR** valves are compatible with most thermostats including the electronic digital setback models. Low power draw allows these valves to be used with existing power supplies.

The **SUPERIOR** valve is designed with the time proven motor drive, spring return system that includes a fail-safe mode. **SUPERIOR** valves are universal in concept, giving the user a large variety of features, sizes, connections and applications. U. L. Listed models are available.

VALVE BODY AND TYPE: 2-port, normally closed or normally open, 3-port, normally closed or normally open and 3-port, mid-position. Valves are available which operate at up to 300 PSIG static pressure. All models of **SUPERIOR** valves are available with condensate protection for installation on chilled water systems.

The **normally open** valve is reverse acting. When activated, the valve is motor driven to the closed position. The spring return will open the valve when deactivated. A fail-safe mode permits gravity circulation and prevents freeze-ups, as the valve will open on either a power outage or a motor failure. The normally open valve requires a SPDT or reverse acting (cooling) thermostat for control.

ELECTRICAL CHARACTERISTICS: The standard operator is 24VAC, 50/60 HZ. Other motor options are 100VAC to 277VAC in both 50 and 60 HZ.

ELECTRICAL CONNECTIONS: The standard valve is supplied with 4" leads. Options include 18", 24" and 72" leads with strain relief bushings, ground wires and 1/2" box connectors. 24" or 72" jacketed cables and terminal boards are also available.

END SWITCH: There is a choice of three isolated end switches. All are optional.

SPST (Single Pole, Single Throw.)

SPDT (Single Pole, Double Throw.)

SPST Sealed (Single Pole, Single Throw
for protection from condensation.)

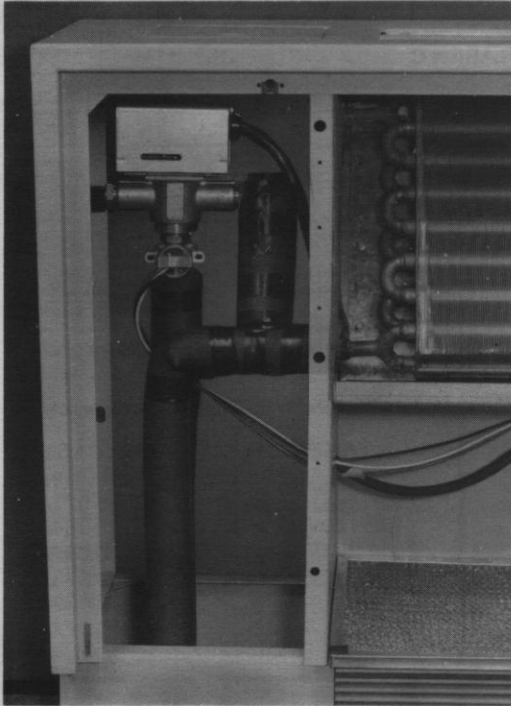
VALVE ORIFICE: All valves are available with an option of high pressure differential, low flow or low ΔP , high Cv. Unless otherwise specified, the valve is supplied with a medium ΔP , and medium Cv rating. Valves in larger sizes are available with high-flow characteristics up to 7.1 Cv.

BODY CONNECTIONS: Available body connections are the standard c x c sweat, and the optional union flare x c, NPT, JIS, BSP and compression.

SIZES: The range of sizes of the body connections are 1/2", 3/4", 1" and 1 1/4" in sweat, union sweat or thread. Compression fittings available in 22mm and 28mm.

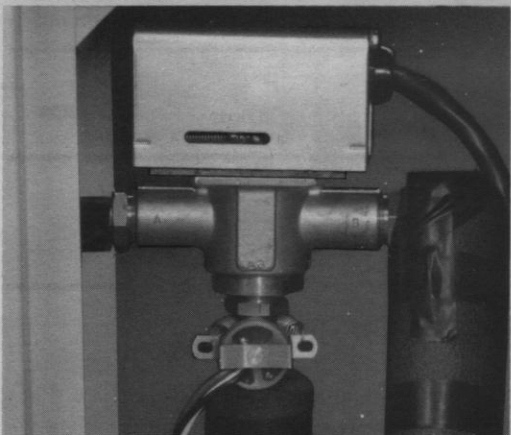
for fuel economy and personal comfort.

Because all the major component assemblies of the **SUPERIOR** valve are available as replacement parts, the need to replace the complete valve has virtually been eliminated. Both the motor and the end switch can be replaced without draining the system.

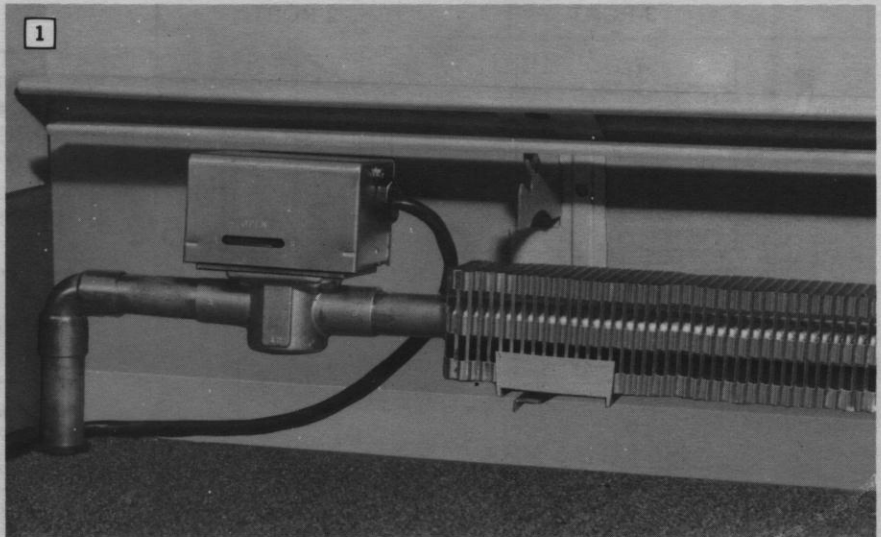


A 3-port **SUPERIOR** valve is used to maintain a constant flow and head pressure when installed in the supply and bypass piping of a fan coil system. Shown with automatic changeover switch.

OTHER OPTIONS: □ Special seals and motors for high temperature water and low pressure steam systems (250°F/121°C). □ 300 PSI pressure. □ Automatic changeover switch to change the thermostat to or from heating to cooling. □ Normally open valves for solar freeze protection and modulating water systems. □ **WATERGATE**, 3-port valves for combination heating and domestic hot water storage systems. □ **DOUBLE ZONE**, the **SUPERIOR** way to low cost zoning.



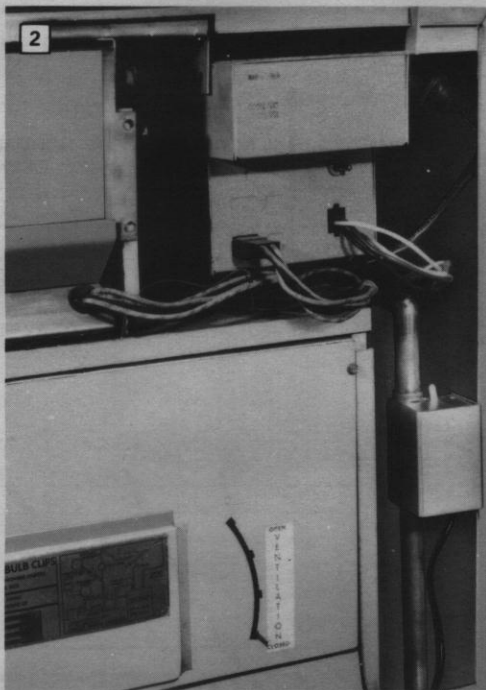
Automatic changeover switch.



1

1

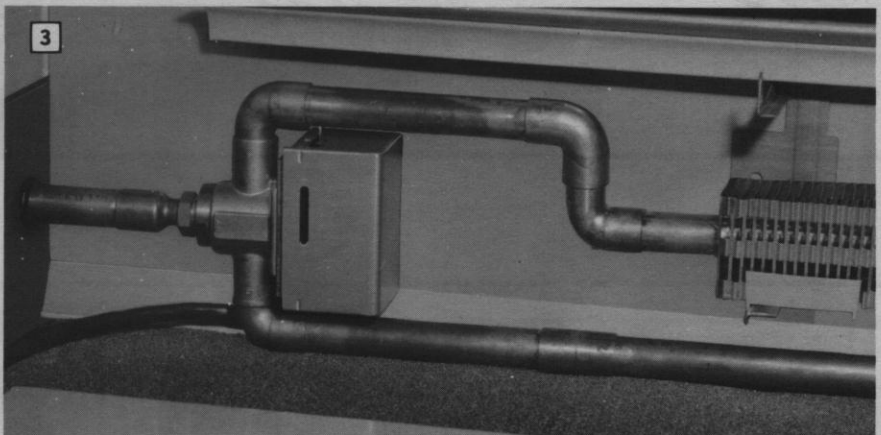
The 2-port **SUPERIOR** valve can be installed under the cover of most commercial and residential baseboards.



2

2

A 2-port **SUPERIOR** valve will provide positive control of water flow through the coil of a hydronic heating and electric air conditioning unit.

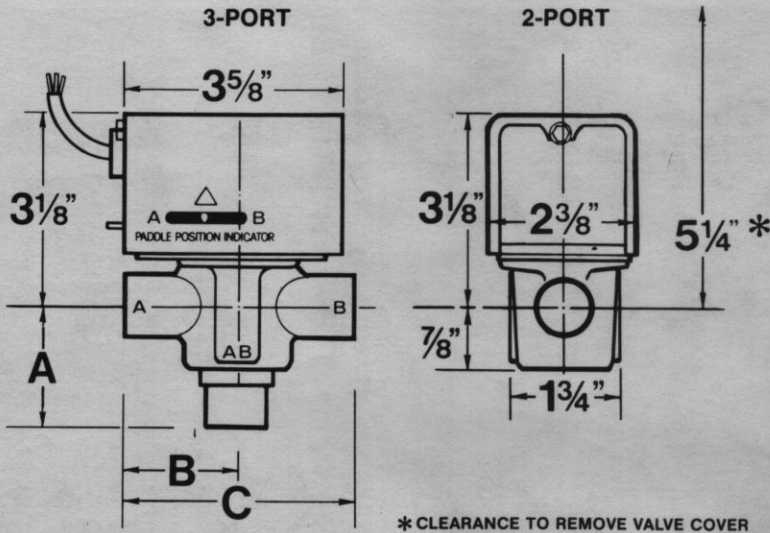


3

3

The 3-port **SUPERIOR** valve is ideal for bypass zoning in a series loop installation of commercial baseboard.

SPECIFICATIONS:



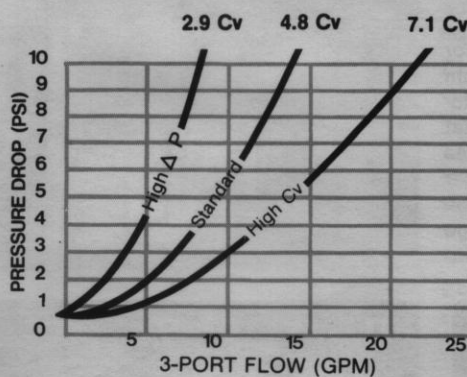
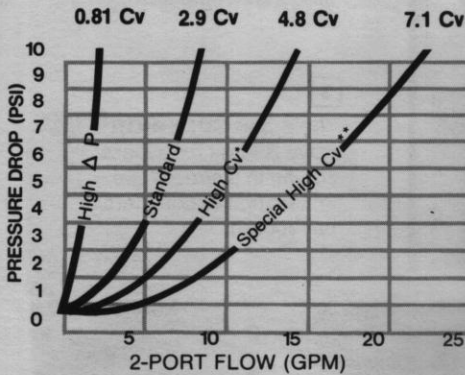
BODY	SIZE	A	B	C
C x C SWEAT	1/2"	1 1/2"	1 7/8"	3 3/4"
	3/4"	1 1/2"	1 7/8"	3 3/4"
	1"	1 7/8"	1 7/8"	3 3/4"
UNION FLARE x C	1/2"	2 9/16"	3 1/4"	6 1/2"
	3/4"	3 3/8"	1 13/16"	1 5/8"
	1"	3 1/2"	4 3/16"	8 3/8"
NPT OR BSP	1/2"	1 1/4"	1 7/8"	3 3/4"
	3/4"	1 3/4"	1 7/8"	3 3/4"
	1"	1 1/2"	1 7/8"	3 3/4"
COMPRESSION	22mm	2 1/8"	2 1/4"	4 1/2"
	28mm	2 1/4"	2 3/8"	4 3/4"
COMPRESSION x C	1 1/4"	3 3/4"	4"	8"

DIMENSIONS INCLUDE ALL FITTINGS AND ADAPTERS

FLOW CHARACTERISTICS (Cv) AND PRESSURE DIFFERENTIAL (ΔP)

	2-PORT				3-PORT			
	NORMALLY CLOSED		NORMALLY OPEN		NORMALLY CLOSED		NORMALLY OPEN	
	Cv	ΔP	Cv	ΔP	Cv	ΔP	Cv	ΔP
STANDARD	2.9	25 PSI	2.9	50 PSI	4.8	10 PSI	4.8	5 PSI
HIGH ΔP, LOW Cv	0.8	50 PSI	0.8	100 PSI	2.9	25 PSI	2.9	12.5 PSI
HIGH Cv, LOW ΔP	4.8	10 PSI	4.8	20 PSI	7.1	6 PSI	7.1	3 PSI
SPECIAL HIGH Cv**	7.1	6 PSI	7.1	12 PSI	NOT AVAILABLE		NOT AVAILABLE	

*Larger valves only.



VOLTAGE AC	AMPERAGE
24V	0.32A
100V	0.077A
110V-120V	0.064A
200V-208V	0.037A
220V-230V	0.033A
240V	0.032A
277V	0.027A

U.L. Listed models available.

PRESSURE

Static pressure/water	
Standard	300PSIG
UL Certified To	125PSIG
High Pressure	600PSIG
HL Certified To	300PSIG

MAXIMUM TEMPERATURE LIMITS

Standard	195°F/91°C (water)
Optional	250°F/121°C (water)
	15 lbs. (steam)
Ambient	110°F/43°C (air)

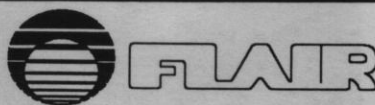
U.L. Listed models available.

TIMING

Full open to closed	5 seconds
Full closed to open	12 seconds

END SWITCH

Rating	5 Amps
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FLAIR INTERNATIONAL CORPORATION

600 Old Willets Path · Hauppauge, New York 11788
 TEL.: (516) 234-3600 FAX: (516) 234-3610

SUPERIOR VALVES

UF and UG series
condensate protected

The SUPERIOR valve is a motorized zone control valve designed to provide maximum fuel economy and personal comfort when installed in a hydronic heating and/or cooling system.

The SUPERIOR valve is a motorized zone valve, designed to control hot water, chilled water or low pressure steam systems. The valve is available with a wide range of operating options and accessories. Sizes from 1/2" to 1" make it universal and suitable for residential, commercial and industrial heating and cooling systems.

The SUPERIOR valve is actuated by a temperature-sensing control to provide comfortable room or area temperature. A 3-port bypass model will maintain constant flow and head pressure. The UF and UG series condensate protected valves are available for high humidity conditions, and for use on chilled water systems. Superior valves are compatible with most thermostats including the electronic digital setback models. Low power draw allows these valves to be used with existing power supplies.

VALVE BODY AND TYPE: 2-port, or 3-port, normally closed or normally open. UF and UG series valves contain stainless steel springs and fasteners. All ferrous metals are coated. The cover is anodized aluminum. The motor is protected by a special grease coating.

ELECTRICAL CONNECTIONS: The standard valve is supplied with 4" leads. Options include: longer leads as specified, insulated cables, Bx cables, grommets, strain relief bushings and ground wires.

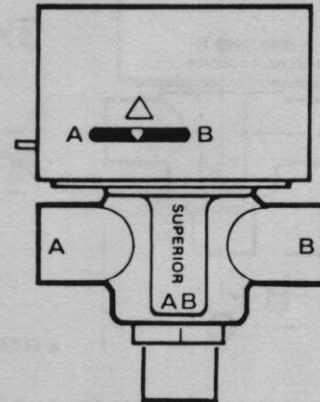
END SWITCH, optional.
SPST (Single Pole, Single Throw)

VALVE ORIFICE: Standard is 5/16" on 2-port valves, 7/16" x 5/16" on 3-port. All valves are available with options of high pressure differential (3/16" orifice) or high Cv (7/16" orifice). Valves in larger sizes are available with high-flow characteristics up to 7.1 Cv (1/2" orifice).

BODY CONNECTIONS: Available body connections are C x C (sweat); NPT, JIS, and BSP threads on pipe sizes, union flare and compression fittings.

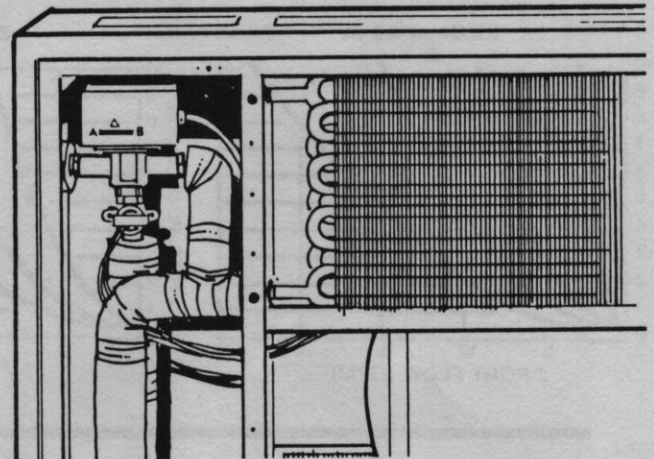
SIZES: The range of sizes of the body connections are 1/2, 3/4 and 1 inch in sweat, or thread. Compression fittings are also available in 15, 22 and 28mm; 1/2, 3/4 and 1 inch.

**FOUR YEAR
LIMITED WARRANTY**
Some restrictions apply. Details of limited warranty available upon written request.



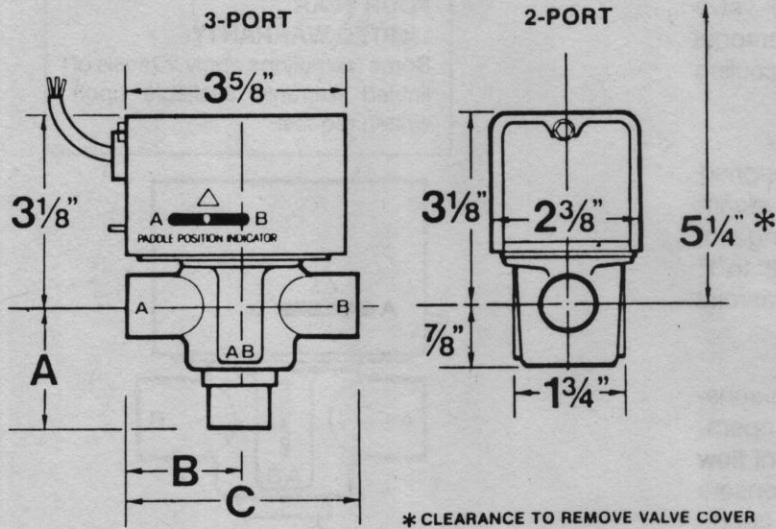
The UF series valves are 2-port. The UG series valves are 3-port. These valves have stainless steel and coated parts where needed to protect against condensation.

Because all the major component assemblies of the SUPERIOR valve are available as replacement parts, the need to replace the complete valve has virtually been eliminated. Both the motor and the end switch can be replaced without draining the system.



A 3-port SUPERIOR valve is used to maintain a constant flow and head pressure when installed in the supply and bypass piping of a fan coil system. Shown with automatic changeover switch.

SPECIFICATIONS: UF = Condensate Protected UG = Condensate Protected



BODY	SIZE	A	B	C
CxC SWEAT	1/2"	1 1/2"	1 7/8"	3 3/4"
	3/4"	1 13/16"	1 7/8"	3 3/4"
	1"	1 7/8"	1 7/8"	3 3/4"
NPT OR BSP	1/2"	1/4"	1 7/8"	3 3/4"
	3/4"	1 1/4"	1 7/8"	3 3/4"
	1"	1 1/2"	1 7/8"	3 3/4"
COMPRESSION	3/4", 22mm	2 1/8"	2 1/4"	4 1/2"
	1", 28mm	2 1/4"	2 3/8"	4 3/4"

DIMENSIONS INCLUDE ALL FITTINGS AND ADAPTERS.

* CLEARANCE TO REMOVE VALVE COVER

FLOW CHARACTERISTICS (Cv) AND PRESSURE DIFFERENTIAL (ΔP)

	2-PORT		3-PORT	
	NORMALLY CLOSED	NORMALLY OPEN	NORMALLY OPEN	NORMALLY CLOSED
	Cv	ΔP	Cv	ΔP
STANDARD	2.9	25 PSI	2.9	50 PSI
HIGH ΔP, LOW Cv	0.8	50 PSI	0.8	100 PSI
HIGH Cv, LOW ΔP	4.8	10 PSI	4.8	20 PSI
SPECIAL HIGH Cv**	7.1	6 PSI	7.1	12 PSI
				NOT AVAILABLE

*Larger valves only.

VOLTAGE AC

AMPERAGE

24V	0.032A
100V	0.077A
110V-120V	0.064A
200V-208V	0.037A
220V-230V	0.033A
240V	0.032A
277V	0.032A

PRESSURE

STATIC PRESSURE/WATER

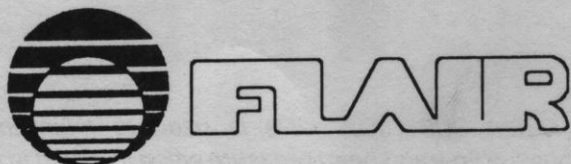
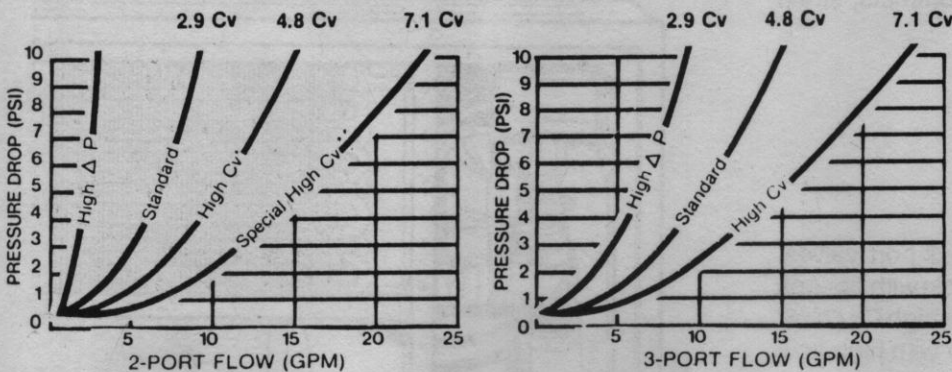
STANDARD	125 PSIG
HIGH PRESSURE OPTION	300 PSIG
TEST PRESSURE/WATER	300 PSIG

MAXIMUM TEMPERATURE LIMITS:

STANDARD	195°F/91°C (water)
OPTIONAL	250°F/121°C (water)
	15 lbs. (steam)
AMBIENT	110°F/43°C (air)

TIMING:

FULL OPEN TO CLOSED	5 seconds
FULL CLOSED TO OPEN	12 seconds



FLAIR INTERNATIONAL CORPORATION

600 OLD WILLETS PATH

HAUPPAUGE, NY 11788

TEL: (516) 234-3600 FAX: (516) 234-3610

SUPERIOR VALVES

UT and UU series
rated at 300 psi

The SUPERIOR valve is a motorized zone control valve designed to provide maximum fuel economy and personal comfort when installed in a hydronic heating and/or cooling system.

The SUPERIOR valve is a motorized zone valve, designed to control hot water, chilled water or low pressure steam systems. The valve is available with a wide range of operating options and accessories. Sizes from 1/2" to 1" make it universal and suitable for residential, commercial and industrial heating and cooling systems.

The SUPERIOR valve is controlled by a wall or room thermostat to provide accurate room or area temperature control. A 3-port bypass model will maintain constant flow and head pressure. Condensate protected valves are available for high humidity conditions, and for use on chilled water systems. Superior valves are compatible with most thermostats including the electronic digital setback models. Low power draw allows these valves to be used with existing power supplies.

VALVE BODY AND TYPE: 2-port, normally closed or normally open, 3-port, normally closed. UT and UU valves are rated to operate at up to 300 PSIG static pressure. These valves have a heavy brass flange on the forging. The actuator base plate is either reinforced brass or stainless steel.

ELECTRICAL CONNECTIONS: The standard valve is supplied with 4" leads. Options include: longer leads as specified, insulated cables, Bx cables, grommets, strain relief bushings and ground wires.

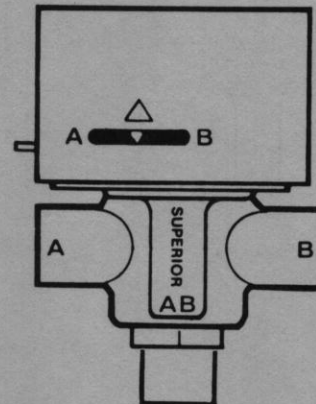
END SWITCH, optional.
SPST (Single Pole, Single Throw)

VALVE ORIFICE: Standard is 5/16" on 2-port valves, 7/16" x 5/16" on 3-port. All valves are available with options of high pressure differential (3/16" orifice) or high Cv (7/16" orifice). Valves in larger sizes are available with high-flow characteristics up to 7.1 Cv (1/2" orifice).

BODY CONNECTIONS: Available body connections are C x C sweat, NPT, JIS, and BSP threads on pipe sizes, union flare and compression.

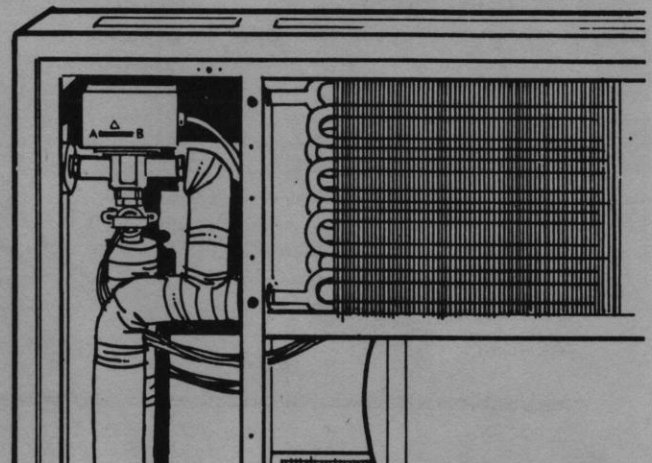
SIZES: The range of sizes of the body connections are 1/2", 3/4" and 1" in sweat, or thread. Compression fittings also available in 15, 22 and 28mm; 1/2", 3/4" and 1".

**FOUR YEAR
LIMITED WARRANTY**
Some restrictions apply. Details of limited warranty available upon written request.



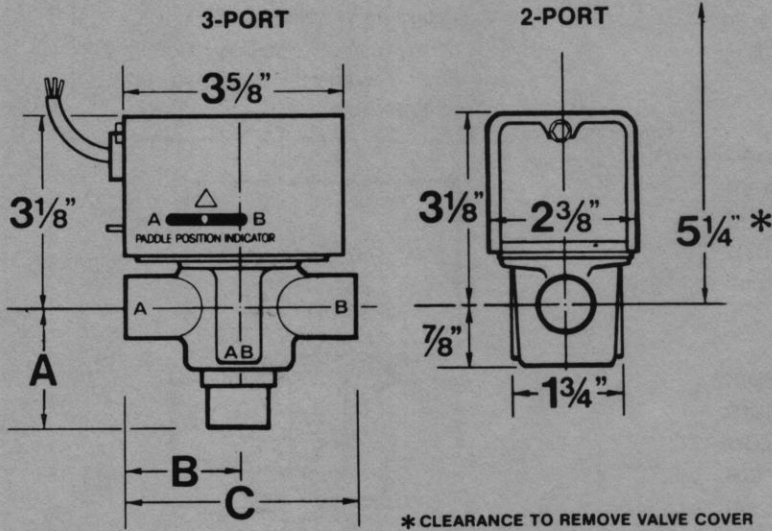
The UT series valves are 2-port. The UU series valves are 3-port. These valves have been tested at 1500 psi and are rated to operate at 300 psi.

Because all the major component assemblies of the SUPERIOR valve are available as replacement parts, the need to replace the complete valve has virtually been eliminated. Both the motor and the end switch can be replaced without draining the system.



A 3-port SUPERIOR valve is used to maintain a constant flow and head pressure when installed in the supply and bypass piping of a fan coil system. Shown with automatic changeover switch.

SPECIFICATIONS: UT = 2-Port, Normally Closed, 300 psi UU = 3-Port, Normally Closed, 300 psi



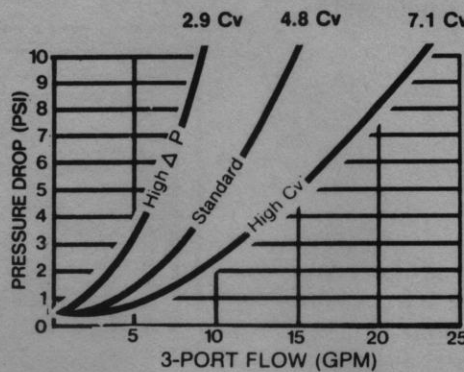
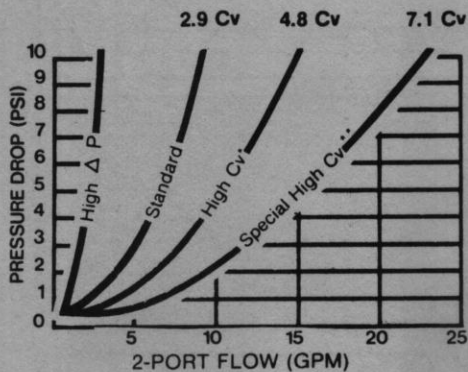
BODY	SIZE	A	B	C
CxS SWEAT	1/2"	1 1/2"	1 7/8"	3 3/4"
	3/4"	1 13/16"	1 7/8"	3 3/4"
	1"	1 7/8"	1 7/8"	3 3/4"
NPT OR BSP	1/2"	1 1/4"	1 7/8"	3 3/4"
	3/4"	1 1/4"	1 7/8"	3 3/4"
	1"	1 1/2"	1 7/8"	3 3/4"
COMPRESSION	3/4", 22mm	2 1/8"	2 1/4"	4 1/2"
	1", 28mm	2 1/4"	2 3/8"	4 3/4"

DIMENSIONS INCLUDE ALL FITTINGS AND ADAPTERS.

FLOW CHARACTERISTICS (Cv) AND PRESSURE DIFFERENTIAL (ΔP)

	2-PORT				3-PORT	
	NORMALLY CLOSED		NORMALLY OPEN		NORMALLY CLOSED	
	Cv	ΔP	Cv	ΔP	Cv	ΔP
STANDARD	2.9	25 PSI	2.9	50 PSI	4.8	10 PSI
HIGH ΔP, LOW Cv	0.8	50 PSI	0.8	100 PSI	2.9	25 PSI
HIGH Cv, LOW ΔP	4.8	10 PSI	4.8	20 PSI	7.1	6 PSI
SPECIAL HIGH Cv**	7.1	6 PSI	7.1	12 PSI	NOT AVAILABLE	

*Larger valves only.



VOLTAGE AC	AMPERAGE
24V	0.032A
100V	0.077A
110V-120V	0.064A
200V-208V	0.037A
220V-230V	0.033A
240V	0.032A
277V	0.032A

PRESSURE

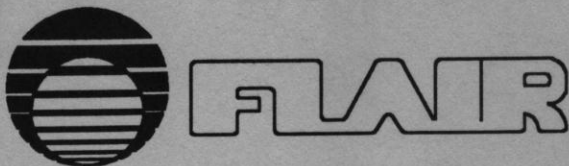
STATIC PRESSURE/WATER	
STANDARD	125 PSIG
HIGH PRESSURE OPTION	300 PSIG
TEST PRESSURE/WATER	300 PSIG

MAXIMUM TEMPERATURE LIMITS:

STANDARD	195°F/91°C (water)
OPTIONAL	250°F/121°C (water)
	15 lbs. (steam)
AMBIENT	110°F/43°C (air)

TIMING:

FULL OPEN TO CLOSED	5 seconds
FULL CLOSED TO OPEN	12 seconds



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