



**-SINCE 1930-**  
**HOLBY**  
**TEMPERING VALVE**

AN AUTOMATIC

**ALL BRONZE**

**THERMOSTATICALLY OPERATED**  
**WATER BLENDING DEVICE**

APPROVED

by the

ANSI / AMERICAN SOCIETY  
OF SANITARY ENGINEERING  
STANDARD No. 1017

APPROVED

by the

BOARD OF STANDARDS AND APPEALS  
CITY OF NEW YORK  
CAL. #578 - 48 - SM

DISTRIBUTED BY

PLUMBING and HEATING SUPPLIERS

**HOLBY VALVE INC.**

24 FERDON STREET, NEWARK, NJ 07105  
U.S.A.

PHONE (973) 465-7400

FAX (973) 465-7475

[www.holby.com](http://www.holby.com)

# **HOLBY TEMPERING VALVE**

## **APPLICATION**

The HOLBY TEMPERING VALVE is a temperature regulating valve, designed to be used as a master, zone, fixture or individual appliance regulator to control the predetermined temperature of hot water. Water delivered from hot water generating equipment such as boilers, heat exchangers, submerged coils, or any other source is frequently too hot or scalding. This condition can be corrected by the installation of a HOLBY TEMPERING VALVE.

The HOLBY TEMPERING VALVE is also used in regulating temperatures of engines, heating systems, compressors, cooling towers, processing machinery and many other applications. The HOLBY TEMPERING VALVE IS NOT AN ANTI-SCALD VALVE.

## **DESCRIPTION**

The HOLBY TEMPERING VALVE is rugged, constructed entirely of bronze and copper and hydrostatically tested to a pressure of 300 psig. It has the following features:

1. A long mixing chamber with vanes at an angle to the longitudinal axis of the valve which provides thorough mixing of the hot and cold water.
2. The thermostatic element is placed inside the body of the valve where the hot and cold water mix. It is immediately sensitive to any change in water temperature and makes proper corrections by opening or closing the hot and cold water inlets in the valve.
3. A long thermostatic element provides fifteen to twenty times the number of corrugations found in the usual short thermostat. Thus, the total expansion is divided over these numerous corrugations, so that the flexing of each is reduced to mere thousandths of an inch resulting in long life of the instrument.
4. The action of the thermostatic element moves a piston over the hot and cold water openings, opening the cold as it reduces the opening of the hot, thus uniformly blending the hot and cold water, producing an even temperature of the delivered water without any change in volume. This action eliminates the building up of temperature in circulating systems at times when little or no hot water is being used.
5. Large hot and cold water passages result in very low pressure drop through the valve.
6. Complies with ASSE Standard #1017-2009.

## **INSTALLATION**

The HOLBY TEMPERING VALVE will operate satisfactorily when installed in any position. Valve installation must follow the HOLBY basic piping diagrams. The adjusting screw end of the valve should not be placed against, nor in-line with any other fixed object for a (minimum) space of twenty-four inches. This clearance is required for service access to the internal valve parts. Warranty is only valid for proper installations.

## **SERVICE and MAINTENANCE**

The HOLBY TEMPERING VALVE should be opened, inspected and cleaned within one year of initial installation. A routine inspection and service schedule should be implemented depending on the system water quality.

## **TEMPERATURE RANGE**

The HOLBY TEMPERING VALVE can be adjusted to deliver water within close tolerances of any temperature from 120° to 200° Fahrenheit provided that the hot water supplied to the valve is of a higher temperature than that for which the valve is set. Higher or lower temperature ranges are available on special order. For outlet temperatures below 120° Fahrenheit, please specify for low temperature operation.

## **REGULATION**

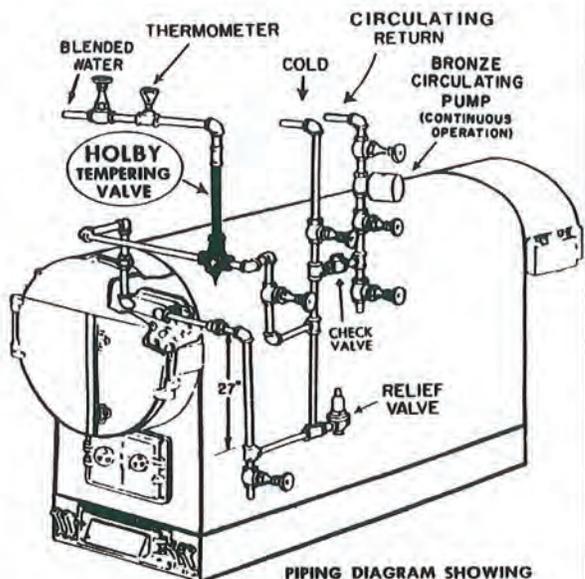
The temperature of the water delivered by the HOLBY TEMPERING VALVE can be changed by turning the adjusting screw clockwise for lower temperatures and counter-clockwise for higher temperatures. To facilitate adjustment a thermometer should be placed in the outlet line as shown in the diagram and water should be flowing through the HOLBY TEMPERING VALVE while adjustments are being made.

## **FUNCTIONS**

1. To mix hot and cold water and control the mixed water temperature within close tolerances between 120° and 200° Fahrenheit. Other temperature ranges are available upon request.
2. To prevent elevated hot water temperatures during off-peak periods. As hot water enters the HOLBY TEMPERING VALVE the thermostat closes the hot water inlet and opens the cold water inlet allowing hot water re-circulation flow through the HOLBY TEMPERING VALVE thus controlling the rate of re-circulation to the hot water supply line.
3. To increase the capacity of water heating systems by automatically introducing cold water to the hot water lines and delivering a blended mixture at the desired temperature.
4. To deliver water at different temperatures to various locations from one hot water source.

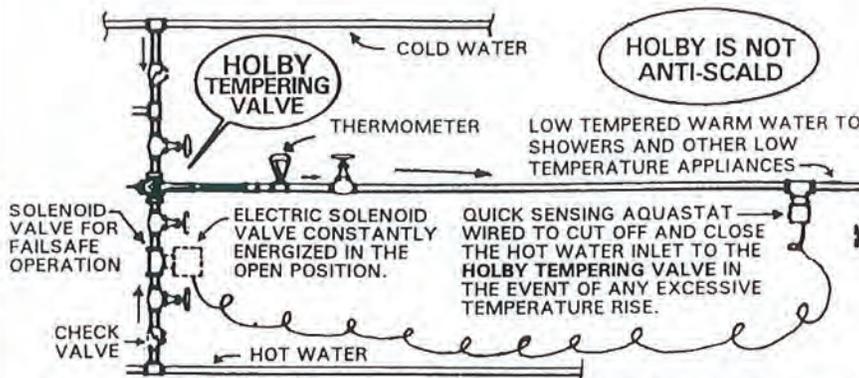
# HOLBY TEMPERATURE REGULATING VALVE-TYPICAL INSTALLATIONS

Constantly Updated & Improved Since 1930



PIPING DIAGRAM SHOWING  
HOLBY TEMPERING VALVE  
IN A VERTICAL POSITION CONTROLLING  
THE TEMPERATURE OF HOT WATER  
DELIVERED BY A SUBMERGED TANKLESS  
WATER HEATER

\* CAN BE INSTALLED  
IN ANY POSITION



PIPING DIAGRAM SHOWING THE USE AND APPLICATION OF A CONSTANTLY  
ENERGIZED ELECTRIC SOLENOID VALVE, WIRED TOGETHER WITH A QUICK  
ACTING AND SENSING IMMERSION AQUASTAT (MERCURY TYPE PREFERRED  
FOR VISUAL INSPECTION.)

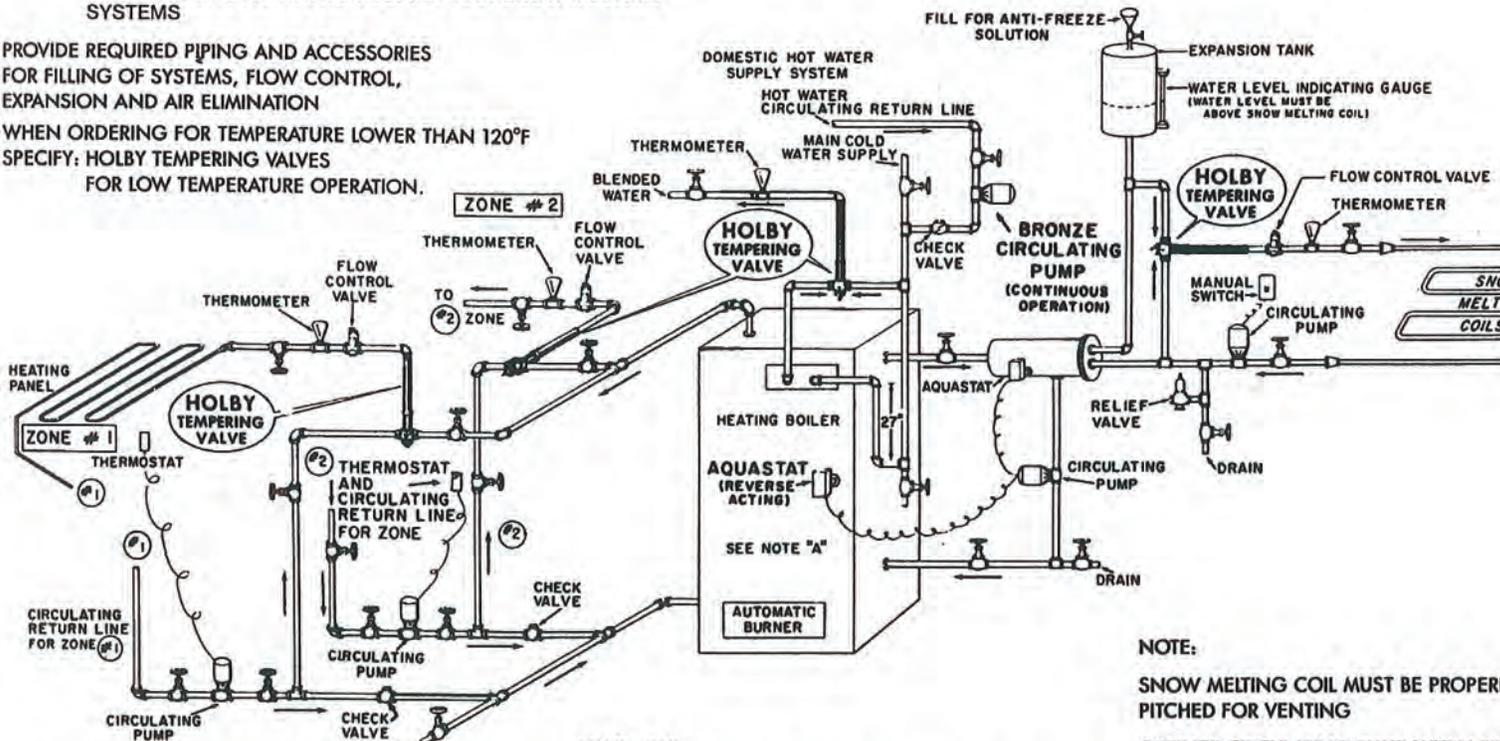
THE ABOVE MENTIONED FAILSAFE AND SAFETY APPLICATION HAS BEEN  
PUBLISHED, PRINTED AND RECOMMENDED FOR MANY YEARS WITH OUR  
GROUP SHOWER SCHEMATIC DRAWINGS, FORMS: NO. 10 W/SH PAGE 24 &  
FORM: NO. 11 W/O SH PAGE 25 OF OUR CATALOGUE.

## PIPING DIAGRAM SHOWING HOLBY TEMPERING VALVES

AS USED TO CONTROL THE REQUIRED TEMPERATURES TO SUPPLY  
THE DIFFERENT TYPES OF HEATING UNITS\* TO THE VARIOUS  
ZONES IN A HYDRONIC HEATING SYSTEM, ALSO AS USED FOR  
THE DOMESTIC HOT WATER SUPPLY AND SNOW MELTING  
SYSTEMS

PROVIDE REQUIRED PIPING AND ACCESSORIES  
FOR FILLING OF SYSTEMS, FLOW CONTROL,  
EXPANSION AND AIR ELIMINATION

WHEN ORDERING FOR TEMPERATURE LOWER THAN 120°F  
SPECIFY: HOLBY TEMPERING VALVES  
FOR LOW TEMPERATURE OPERATION.



ADIATORS, COILS, BASEBOARD RADIATION,  
LOW TEMPERATURE FLOOR AND CEILING  
PANEL GRIDS, ETC.

ADDITIONAL ZONES CAN BE ADDED

NOTE: "A"  
REVERSE ACTING AQUASTAT TO STOP  
CIRCULATING PUMPS WHEN TEMPERATURE IN  
BOILER DROPS BELOW TEMPERATURE REQUIRED  
FOR DOMESTIC HOT WATER SUPPLY SYSTEM  
(CONNECTED TO BREAK LIVE WIRE TO PUMPS)

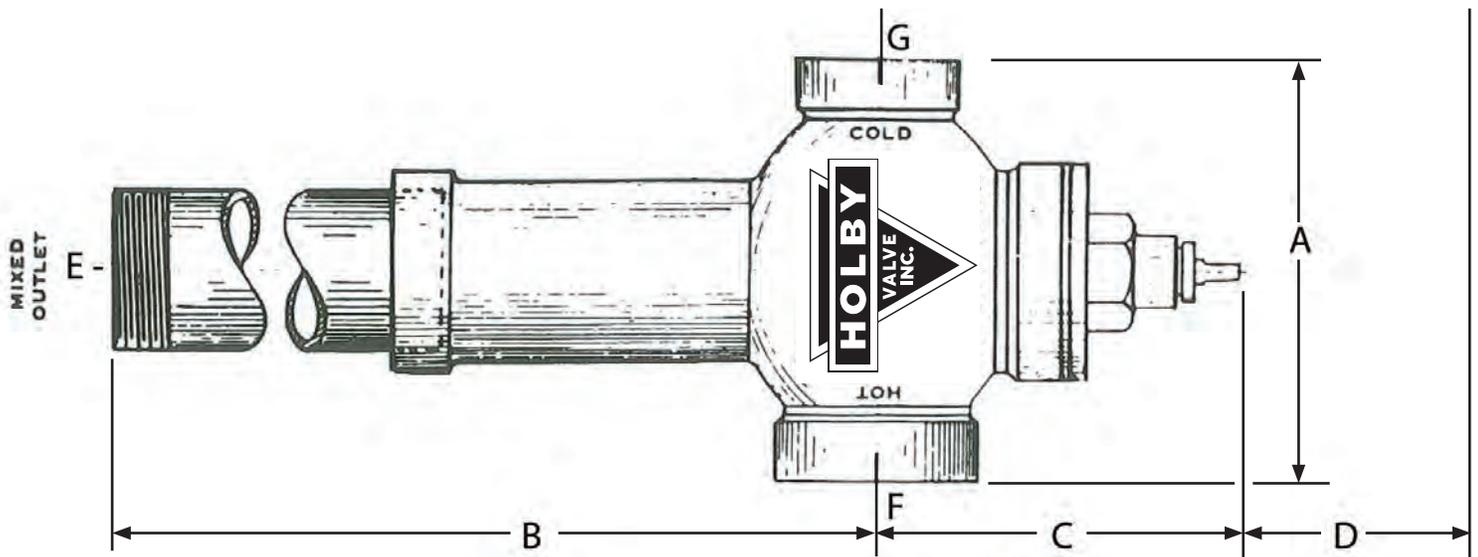
NOTE:

SNOW MELTING COIL MUST BE PROPERLY  
PITCHED FOR VENTING

OPERATE CIRCULATING PUMP WHEN FILL  
SNOW MELTING SYSTEM WITH ANTI-FRE  
SOLUTION

NOT TO SCALE

PIPING DIAGRAMS FOR OTHER USES AND APPLICATIONS AVAILABLE ON REQUEST



SIZE	A	B	C	D *	STANDARD PIPE TAP			SHIPPING WEIGHTS
					E MIXED OUTLET	F HOT INLET	G COLD INLET	
1/2"	4-1/4"	8"	3-1/4"	6"	1/2"	1/2"	1/2"	7 lbs.
3/4"	4-1/4"	8"	3-1/4"	6"	3/4"	3/4"	3/4"	7 lbs.
1"	4-1/4"	11-1/4"	4-1/4"	12"	1"	1"	1"	8 lbs.
1-1/4"	4-3/4"	19"	4-1/2"	15"	1-1/4"	1-1/4"	1"	14 lbs.
1-1/2"	5-1/2"	23"	5"	20"	1-1/2"	1-1/2"	1-1/4"	18 lbs.
2"	6-3/8"	25"	6"	20"	2"	2"	1-1/2"	27 lbs.
2-1/2"	7-1/2"	27-3/4"	6-1/2"	24"	2-1/2"	2-1/2"	2"	42 lbs.
3"	9"	29-1/8"	7"	24"	3"	3"	2-1/2"	63 lbs.
4"	10-1/4"	31"	8"	24"	4"	4"	4"	97 lbs.

\* Note: "D" is clearance required for adjusting and servicing

### GUARANTY

We guarantee each new HOLBY TEMPERING VALVE to be free from defects in material and workmanship for a period of one year from date of installation. Any HOLBY TEMPERING VALVE or part, returned to us carriage prepaid, will be repaired or replaced without charge if found defective upon our examinations. All carriage charges to be paid by the customer.

For this guarantee to be effective, installation must be properly made according to our piping recommendations. We will not be responsible for any incidental damage or labor caused by defective material.

For proper installation of the HOLBY TEMPERING VALVE used in special applications, please obtain our piping diagrams.