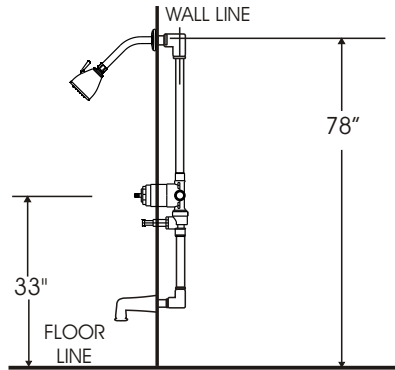
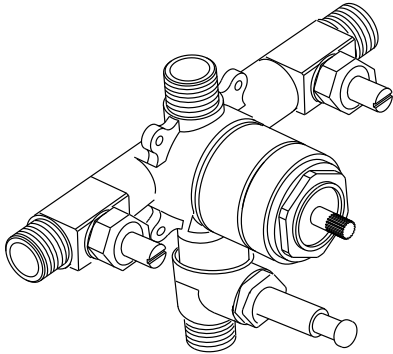


## ESTATE SERIES PRESSURE BALANCED TUB/SHOWER VALVE

### DESCRIPTION

This product is precision engineered to provide satisfactory performance provided it is installed and operated in accordance with our recommendations contained in this manual. In order to fully enjoy the comfort, safety and the reliability of your pressure balancing valve, be certain to familiarize yourself with the contents of this manual.



### SPECIFICATIONS AND DIMENSIONS

Minimum operating pressure	20 psi
Maximum operating pressure	145 psi
Maximum test pressure	500 psi
Hot and cold water inlets	1/2" IPS
Shower outlet	1/2" IPS
Flow capacity	5 USGPM@ 50 psi
Finished wall adjustment	: see Illustration

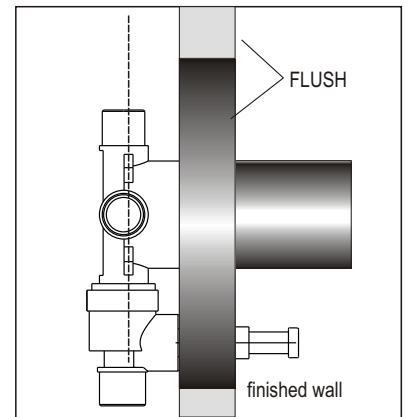
### INSTALLATION

NOTE: Failure to follow these instructions may cause damage or improper operations and nullify the warranty.

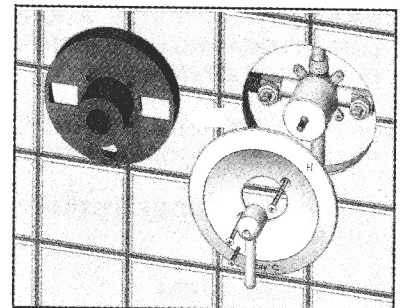
#### ROUGH IN AND VALVE

- Make sure the water supplies are off
- 1. Rough valve body into wall, connecting piping to 1/2" female copper  
Important: note "up" and "down" markings on back of valve.
- 2. The depth of rough-in should account for thickness of wall materials to be used (combined thickness of wall board and finished wall material) .  
Face of guard should be flushed with finished wall surface (see figure 1).
- 3. Anchor installation to bracing between studs (ears on the valve body can be used for this by removing the plastic guard) - otherwise, anchor the connection piping.
- 4. Valve should be pressurized and tested for leaks at the connections. Secure the valve firmly against the stud. Make sure the 1/2" shower outlet is in the up position.
- 5. Plastic guard should be left attached to the valve until finished the wall material is installed.
- 6. After wall is finished, remove plastic guard and replace with trim sleeve and escutcheon plate (figure 2).

Orient handle so that lever is pointed to off as marked on plate.



**figure 1**



**figure 2**

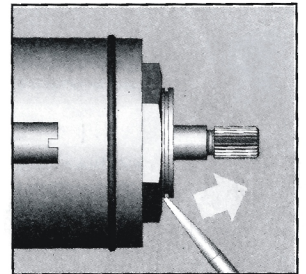
KEEP THIS INSTRUCTION BOOKLET FOR FUTURE REFERENCE

## IMPORTANT!!!! SETTING HOT LIMIT STOP

The removal of the warning label barrier on the face of this mixing valve constitutes the transfer of liability from the manufacturer to the installer under the laws of the United States. It is the installer's responsibility to set the maximum output temperature of the valve to no more than 120°F, in accordance with ASSE/ANSI standard 1016 -1996 dealing with individual thermostatic, pressure balancing and combination pressure balancing and thermostatic control valves for individual fixtures section 4.2.2., temperature limit setting.

TO PROPERLY SET THE LIMIT RING, YOU MUST USE A THERMOMETER OR CALIBRATED SENSING DEVICE TO ACCURATELY MEASURE THE OUTLET WATER TEMPERATURE. THE ADJUSTMENT RING IS POSITIONED AS FOLLOWS:

1. Expose the top of the cartridge by removing the trim sleeve from the valve body.  
Do not remove the hex nut holding it in place. (See Figure 3)
2. Remove the grey adjustment ring by placing the blade of a knife into the groove and prying it off (see **figure 3**).
3. Note the stop tab on the bottom of the ring (see **figure 4**). The further it is reoriented in a counter-clockwise direction, the shorter the travel allowed (and thus, the lower the temperature output possible).



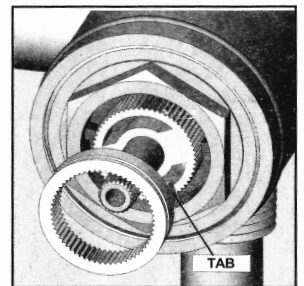
**figure 3**

**Important: before re-orienting the ring, be sure the stem is in the full off position.**

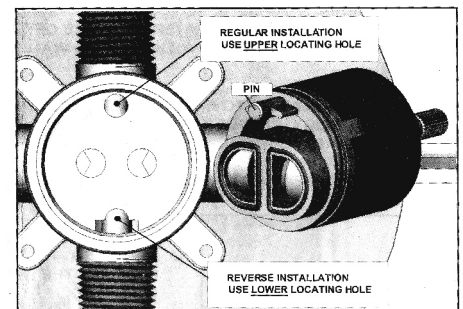
## REVERSING CARTRIDGE FOR BACK-TO-BACK INSTALLATIONS ONLY

When a valve is installed with reversed supply connections (typically in a back-to-back situation), the cartridge can be reversed to allow normal operation (see **figure 5**).

1. Remove trim sleeve to expose top of valve.
2. Loosen and remove hex nut above cartridge.
3. Remove cartridge from valve cavity.. Look into cavity to see upper and lower locating holes for cartridge pin.
4. Re-insert cartridge, aligning the pin with lower locating hole (partially cut away by discharge opening). Press cartridge in firmly to assure that pin is properly inserted.
5. Secure cartridge by tightly reassembling The hex nut. Reassemble trim.



**figure 4**



**figure 5**

## REPLACING CARTRIDGE

SAME BASIC PROCEDURE AS ABOVE (REVERSE IF NECESSARY).

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