

# POWERS

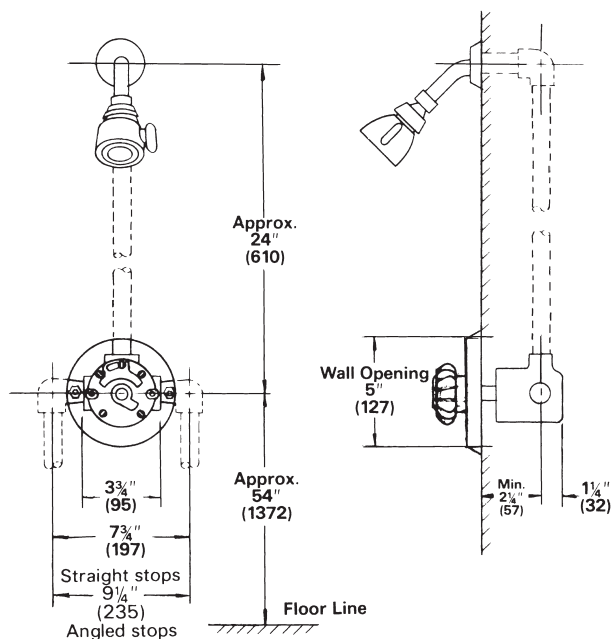
A WATTS INDUSTRIES CO.

## INSTALLATION INSTRUCTIONS

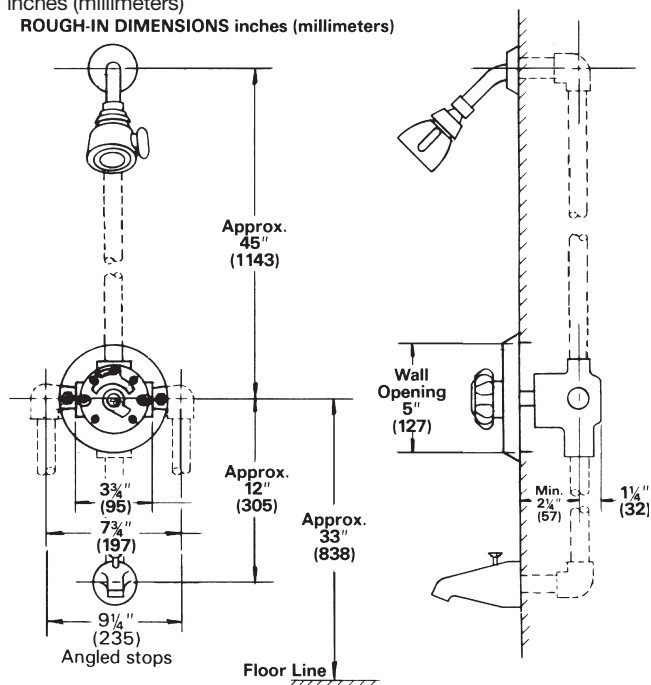
### Hydroguard Pressure Balancing Valves

### Series 410

**Figure 1.**  
Rough-in dimensions  
inches (millimeters)



**Figure 2.**  
Rough-in dimensions  
inches (millimeters)  
ROUGH-IN DIMENSIONS inches (millimeters)



## INSTALLATION

Installation should be in accordance with accepted plumbing practices. Flush all piping thoroughly before installation.

1. Position mixer  $2\frac{1}{2}$ " (64mm) from inlet center to finished wall surface. Facing front of mixer, connect hot water to left side (labeled "HOT") and connect cold water to right side (labeled "COLD").
2. When copper tubing is used, flare fittings are recommended. If flared fitting cannot be used, then the balancing chamber cartridge must be removed before soldering near the Hydroguard body. Inlet checkstops with direct sweat straight or  $90^\circ$  angle or straight with  $\frac{1}{2}$ " NPT connections are available. To remove the balancing chamber cartridge, remove the four bonnet screws and lift off the bonnet. Pull cartridge out with either pliers or cartridge puller #401-202. Before replacing the cartridge, lubricate the side O-rings with a small amount of grease or soap.
3. Three port bodies can be *top* or *bottom* outlet. Unit is factory-assembled for top outlet installation. See Figure 1. For shower unit, pipe top outlet directly to showerhead.

If bottom outlet (or reversed outlets) is required, place mixer stem in closed position (full clockwise) and remove O-ring and Stop C (Figure 5). Rotate stem  $180^\circ$  and replace stop in its initial position.

With mixer in closed position, the notch in *top* spline on the stem (Figure 3) must face the outlet for *standard*

inlets (cold water to cold port). For reversed inlets (cold water to hot port), the notch must face way from the outlet port.

Hot and cold inlets should also be identified to avoid confusion during fixture maintenance.

4. A 4-port valve has a double outlet body. See Figure 2. The top outlet "S" is piped to the showerhead. The bottom outlet "Tub" is piped directly to a diverter type spout. There is a built-in diverter fitting in the Hydroguard so it is not necessary to use a twin ell. Be sure that "Tub" is piped to the tub. If the outlet connections are crossed, the Hydroguard will not function properly.
5. Slide roughing-in guide onto mixer stem until it contacts temperature stop on stem. Facing front of mixer, the words, "Front Finished Wall Guide" can be read. Position mixer so finished wall surface will be within  $\frac{3}{8}$ " (19mm) rim on the guide. This ensures the center line of the mixer connections will be  $2\frac{1}{2}$ " (64mm) from the finished wall surface. After wall is finished, remove rough-in guide. Before assembling dial to mixer body, attach gasket to inside dial and sides. Allow approximately  $\frac{1}{8}$ " (3.2mm) of gasket to protrude past dial edge. Attach dial to mixer body with two screws furnished. Place dial insert inside dial. Secure with retainer (rubber). Cover stem with sleeve, fasten lever handle to stem with screw provided. For lucite handle, use plug button provided. Figure 4 shows typical relationship of parts.

**MAXIMUM TEMPERATURE SETTING**

6. (Refer to Figure 5.) This must be set on the job. Mixer will pass full HOT water. Loosen screw B (do not remove). Rotate stem to get desired maximum temperature. Move stop A until it touches stop C. Tighten screw B.

**Note:** With high (over 140°F [60°C]) hot water, remove screw B, turn stop A over as shown by dashed lines (the word "HOT" will face in), replace screw B. Reset stop A per above.

**CAUTION.** Adjustable stop A must be present for proper installation. *For further information on repair and maintenance, see Technical Instruction.*

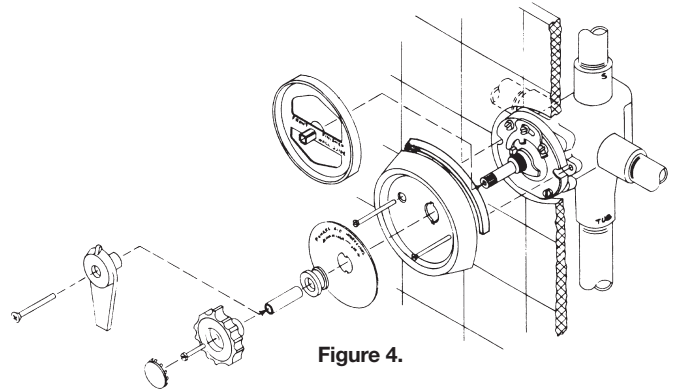


Figure 4.

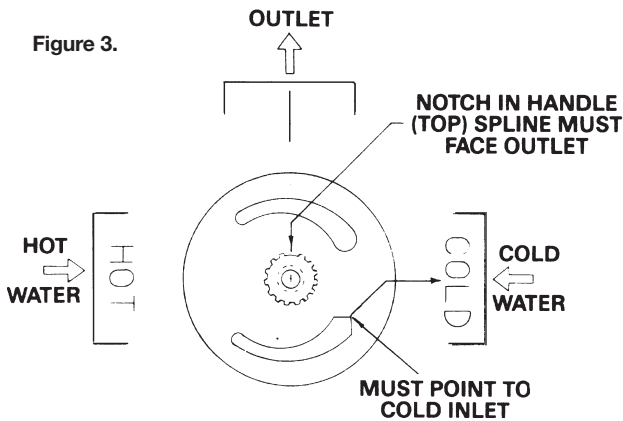


Figure 3.

**ORIENTATION OF PLATE & STEM ASSEMBLY FOR STANDARD INLETS (COLD WATER INTO COLD PORT)**

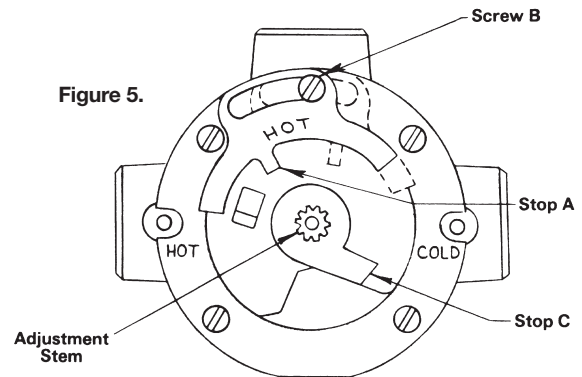


Figure 5.

**CALIFORNIA PROPOSITION 65 WARNING**  
**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (Installer: California law requires that this warning be given to the consumer.)  
 For more information: [www.wattsind.com/prop65](http://www.wattsind.com/prop65)

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