

## Pressure Balancing Valve Shower Installation Instructions



This valve is precision engineered to provide satisfactory performance provided it is installed and operated in accordance with recommendations contained in these instructions. Please be sure to familiarize yourself with these instructions.

**NOTICE:** These instructions do not represent step-by-step directions. They are a product supplement only to be used by a qualified and licensed plumber. We recommend all plumbing fixtures be installed by a professional.

### SPECIFICATIONS

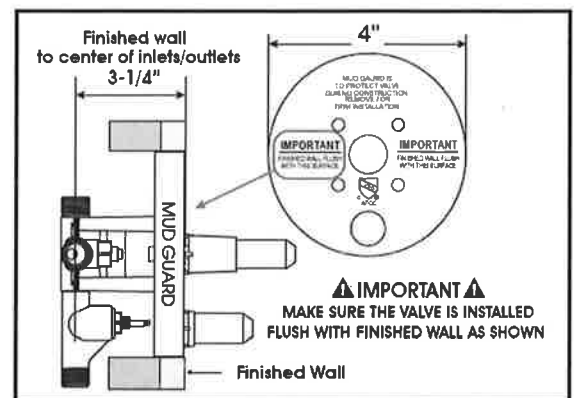
Minimum operating pressure	20 psi
Maximum operating pressure	125 psi
Max hot water inlet temp.	190°F
Hot and cold water inlets	1/2" NPT male
Shower and tub outlet	1/2" NPT male
Flow capacity	5 GPM / 60 psi

### PRIOR TO STARTING:

1. FLUSH lines of debris prior to starting. Debris may clog cartridge.
2. The mud guard represents a typical hole size required to access the integral service stops and the removable cartridge. The rough valve comes PRE-ASSEMBLED and FACTORY READY TO INSTALL.
3. Be alert that the valve body is not installed upside down. See markings on BACK of valve.
4. The screwdriver service stops should always be in the full-open position with the valve in use. They are not to be used to restrict flow of either hot or cold inlets. THE HOT AND COLD WATER MUST BE FULLY OPERATIONAL AT THE VALVE INLETS OR THE UNIT WILL NOT FUNCTION PROPERLY DURING TESTING OR EVEN FLUSHING.
5. When soldering the valve body, it is NOT necessary to remove the cartridge assembly.
6. Shower valve (Part # G00-320SA-A00) may be used for shower only. The unused port must be capped by plumber during installation.
7. Make sure to flush or raise grouting on a tiled wall surface to prevent seepage behind plate.

### ROUGH-IN OF VALVE

1. Rough valve body into wall, connecting piping to 1/2" Female copper sockets or 1/2" Male I.P. nipples. **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, combining thickness of wall board and finished wall materials. It is **CRITICAL TO PLACE MUD GUARD FLUSH WITH FINISHED WALL. FIG. 1**
3. Anchor installation to bracing between studs. (Ears on the valve body can be used by removing the plastic guard OR by anchoring the connection piping.)
4. Valve should be pressurized and tested for leaks at the connections. DO NOT close wall until valve is tested.
5. Mud guard should be left attached to the valve until the finished wall material is installed.
6. Use only propane or butane gas when soldering. Do not use oxygen / acetylene as extreme heat may damage internal components. Do not solder within 4 inches of valve port. Open stop valves when soldering inlets.
7. **FOR TUB/SHOWER INSTALLATIONS:** 36" must be allowed between valve and showerhead to prevent stacking. If PEX is utilized, the supply line must be oversized to 3/4" for full flow capacity.



**FIG. 1**

## ⚠ SETTING HOT LIMIT STOP ⚠

IT IS THE RESPONSIBILITY OF THE INSTALLER TO SET THE MAXIMUM OUTPUT TEMPERATURE OF THE VALVE AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION IN ACCORDANCE WITH ASSE/ANSI 1016-2005 4.2.2 REQUIREMENTS.

1. To properly set the limit ring in accordance with local code requirements, you must use a thermometer or calibrated sensing device to accurately measure the outlet water temperature.
2. Turn off the water using both screw driver service stops.
3. Expose the top of the cartridge by removing the top hex cap from the valve body. FIG. 2
4. Remove the temperature ring by placing the blade of a knife into the groove and prying it off. FIG. 3. It is not necessary to remove the inner hex nut.
5. Locate the stop tab on the bottom of the ring. The further it is re-oriented in a counter-clockwise direction, the shorter the travel allowed (and thus, the lower the temperature output possible). It is suggested to allow approximately 8 splines of movement. However, local codes vary and water supply temperatures vary as well.
6. **IMPORTANT!! BEFORE RE-ORIENTING THE RING, BE SURE THE STEM IS IN THE FULL OFF POSITION.**
7. Re-Install top hex cap using a wrench. Open both service stops and confirm the maximum hot water temperature.

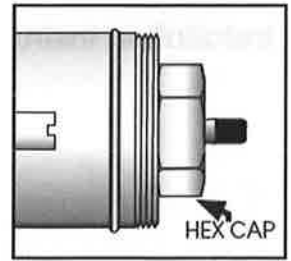


FIG. 2

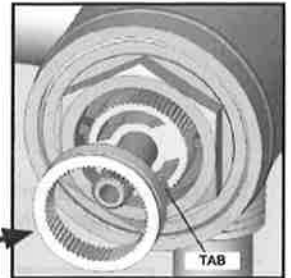
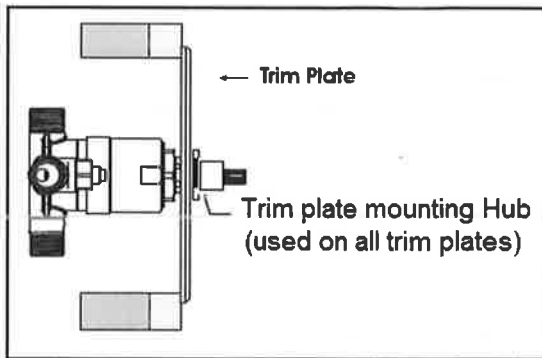


FIG. 3

### INSTALLING TRIM



#### REPLACEMENT PARTS:

- |                |                       |
|----------------|-----------------------|
| G00-C320SA-A00 | Cartridge             |
| G00-E320SA-A00 | 20 pt. stem extension |



FIG. 4A

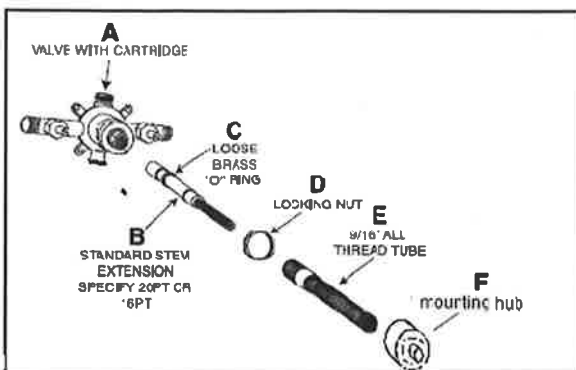


FIG. 4B



FIG. 4C

1. Thread trim mounting hub on threaded mounting tube measure excess between trim back plate and base of mounting hub flange. Remove mounting hub and cut excess of mounting tube. FIG. 4A
2. Install extended stem onto cartridge stem. Fully seat onto cartridge by tightly securing all thread nipple and locking nut onto valve. then cut stem to proper height to engage stem in the mounting hub. FIG. 4B
3. Once trim hub and trim plate has been installed. The handle can then be threaded onto to the trim hub. FIG. 4C



### HANDLE TENSION ADJUSTMENT

THG offers many handles of varying sizes and weights. Each design allows the installer to set the torque (tension) on each valve that uses the standard assembly B through F as shown. Part C is a loose brass O-ring that is compressed inside Part F by tightening or loosening Part D.

## 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. FIG. 5

1. Expose top of valve.
2. Loosen and remove hex cap above cartridge with wrench.
3. Remove cartridge from valve cavity.
4. Look into cavity to see upper and lower locating holes for cartridge pin on the floor of the cavity.
5. Re-insert cartridge, aligning the pin with lower locating hole (Partially cutaway by discharge opening).
6. Press cartridge in firmly to assure that pin has been properly inserted.
7. Secure cartridge by tightly re-assembling the cap using wrench.
8. Re-assemble trim.

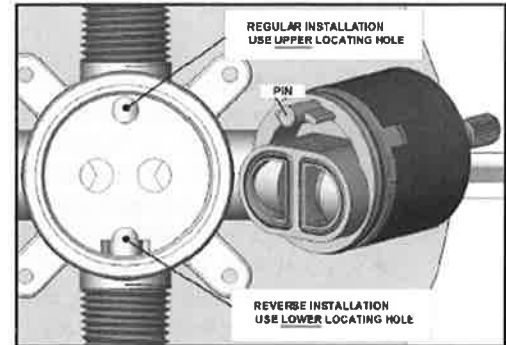


FIG. 5

## Trouble Shooting - Pressure Balancing Valve

Malfunction	Cause	Remedy
Shower control opening through hot.	Hot and cold water supplies have been connected in reverse.	Rotate cartridge as described in "Back to Back Installation"
Tub filler or shower head drips after shutting off valve.	Water remains in the piping column to the shower head (this is normal) Failure to close cartridge before setting temperature ring causing a partially opened cartridge. Seal on the inlet of the cartridge is faulty.	Allow approx. 3-5 min. to drain column.* Reset the temperature ring as described on Figure 3. Check the seal for cuts or damage and replace if necessary.
Shower insufficiently hot.	Adjustable handle position stop incorrectly set.	- Reset handle position. - Check hot water source temperature setting.
No flow of hot or cold water.	Either the hot or the cold side is not fully pressurized. Debris caught inside the inlets of the cartridge. Valve could be too deep in the wall.	Be sure service stops are both wide open and system is fully pressurized. Reset cartridge and flush out any debris from the inlets. Install stem extension kit.
Trim parts do not operate valve correctly.	Stem and all thread not installed to proper lengths.	Remove excess length from stem and all thread, or call customer service.
Trim plate will not install flush to wall.	Valve body was installed beyond finish wall.	Re-install valve to proper depth or call dealer for custom trim plate.

**\*NOTE: At no time try to stop dripping by applying extreme force when closing the valve!**

### Maintenance

The cartridge is designed for minimum maintenance in normal domestic use. If a malfunction occurs then this will probably necessitate a complete replacement. The cartridge contains no internally serviceable parts! Contact your installer or dealer.

To Clean trim, simply wipe gently with a damp cloth. Many household cleaners contain mild abrasives or chemicals and should never be used for cleaning decorative faucets.

Valve meets requirements of the following organizations: CSA B-125, ANSI A112.18.1M and ASSE 1016

THG warrants to the purchaser or homeowner all plumbing and accessory products sold by THG USA, to be free from manufacturing defects in materials and workmanship. THG limits this warranty for a period of five years from the date of delivery. THG warrants its products against mechanical failure for a period of five years. Finishes are warranted for a period of one year, with the exception of polished chrome, which is warranted for five years. Any defects in finish will usually appear within the first weeks of use. Proof of purchase (original sales receipt) from the original purchaser must accompany all warranty claims.

## REPAIR OR REPLACEMENT

If within the applicable warranty period the covered products shall be proved to the satisfaction of THG to be defective, THG will repair or replace such products, at its expense (provided that such repair or replacement shall not include installation costs). THG's obligation shall be limited to such repair and replacement and shall be conditioned upon THG's receiving notice of any alleged defect within the applicable warranty period. (Purchaser shall be responsible for all shipping charges for returned products.)

## LIMITATIONS ON WARRANTY COVERAGE

Warranties do not cover installation or any other labor charges, and do not apply to:

- Products that have not been installed by a licensed plumbing contractor;
- Products subject to normal wear and tear;
- Products which have been repaired, altered or modified in any way by purchaser or any person, or not using THG service parts;
- Products which have not been installed, used, maintained or stored in accordance with the instructions provided to purchaser by THG USA;
- Products which have been used for purposes other than or in a manner contrary to their intended and normal use; products that have been used outdoors;
- Products which have been damaged as a result of misuse, negligence, freezing, accident or faulty installation or maintenance;
- Products damaged by the effects of dirt, foreign bodies carried by water (sand and debris), salt water air, hard water, lime scale, or abrasive or aggressive cleaners;
- Products sold "as is" from dealer or showroom displays.
- Products purchased from any source other than a THG USA authorized dealer/showroom, or purchased via the internet.

## CARE AND CLEANING OF METAL FAUCETS AND FITTINGS

THG recommends following the care and cleaning guidelines as set forth by the DPHA (Decorative Plumbing & Hardware Association). Below is an overview of those guidelines; for complete instructions and product recommendations please refer to the DPHA Care and Maintenance brochure.

**For all finishes:** to prevent water spots, wipe off water with a clean, soft, damp cloth after each use. NEVER use an abrasive cleaning product, cleanser, ammonia-based cleaner, harsh chemicals or bleach. Use a mild ph-neutral soap mixed with water for regular cleaning.

**Uncoated polished finishes:** includes polished chrome (A02), polished nickel (B01), polished silver rhodium (F18), polished luxbrass (H44), gold polished (F01), nickel antique (H28), silver polished (D08), polished unlacquered brass (A01), polished black nickel (D24) a mild metal polish can be used to remove light oxidation. Faucet wax should be used after polishing to prevent oxidation.

**Uncoated matt finishes:** chrome matt (C02), luxbrass matt (H16), luxbrass satiney (H12), luxbrass graveled (H13), nickel matt (C01), nickel satiney (C05), nickel graveled (C44), gold matt uncoated (F07), silver matt rhodium (F19), etc. These finishes will oxidize and darken over time. To reduce oxidation, use a faucet wax on a regular basis.

**Coated (lacquered) finishes:** brass coated (C04), silver polished antique (H03), silver antique matt coated (H08), bronze clear uncoated (D01), bronze matt coated (D05), red copper polished coated (H01), red copper antique coated (H24), etc. wax monthly with a faucet wax designed for use with lacquered finishes.

**Living finishes:** bronze satiney (H27), oil rubbed bronze natural (D21), oil rubbed bronze US (D10), etc. finishes will vary in color and darkness, changing with time. "Renaissance Wax" can be applied to uncoated oil rubbed bronze finishes to darken the bronze and reduce wear on finish.

In addition, for a deep clean and to remove residual or corrosive markings we recommend a monthly application of the following THG cleaning products:

**Renov'rob:** for use on chrome and nickel finishes. This wax and organic soap based cleaner, applied and removed with a nonabrasive soft cloth, creates a protective wax-film which enables the fittings to be polished and produces a lasting brightness.

**Brillor:** for use on gold, luxbrass and satin finishes. This fatty-acid soap and micro-granules of organic content, applied and removed with a non-abrasive soft colth, creates a protective wax film which enables the fittings to be polished and produces a lasting brightness.