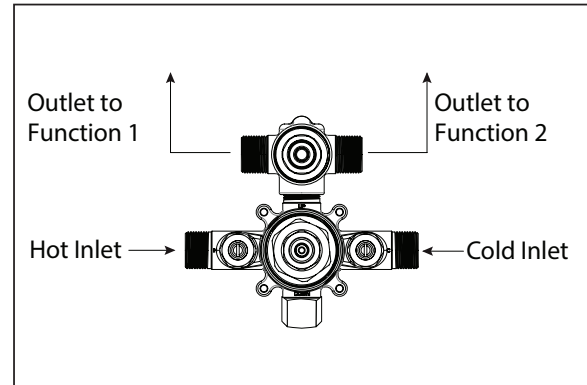


# Pressure Balance Valve Shower x Shower Installation Instructions

**SIGMA**  
PRECISION CRAFTED



PART# 18.30.063



This valve is precision-engineered to provide satisfactory performance, provided it is installed and operated in accordance with the 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 strongly recommend all plumbing fixtures be installed by a professional.

## SPECIFICATIONS

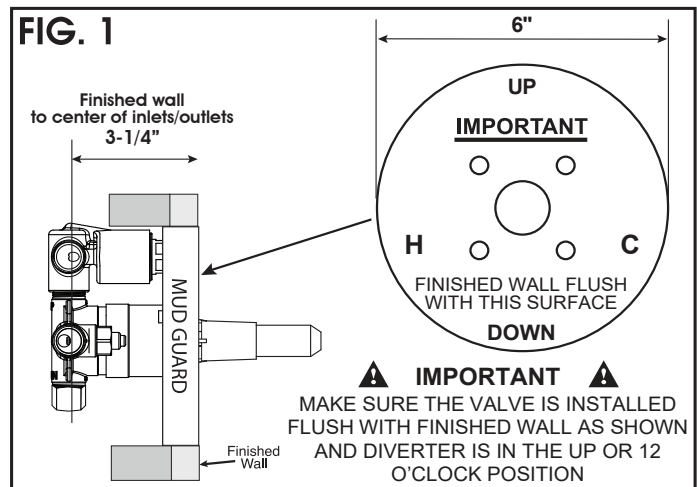
Minimum operating pressure	20 psi
Maximum operating pressure	125 psi
Max hot water inlet temp.	190°F
Hot and cold water inlets	1/2" NPT male
Shower and tub outlet	1/2" NPT male
Flow capacity w/Diverter	4.5 GPM / 60 psi

## 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 cartridges. The rough valve comes PRE-ASSEMBLED and FACTORY READY TO INSTALL.
3. The valve body will not function when installed upside down. See markings on front and back of valve and on mud guard.
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 FLUSHING.**
5. When soldering the valve body, it is NOT necessary to remove the cartridges.
6. 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" MARKING ON FRONT AND BACK OF VALVE AND "UP" AND "DOWN" MARKINGS ON MUD GUARD.
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.
3. 1 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.



## ⚠ 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-clock wise 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. **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.

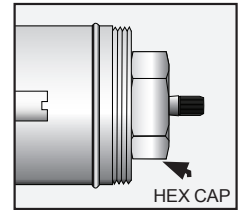


FIG. 2

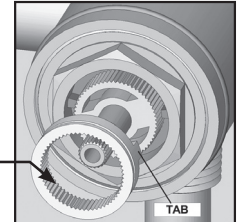


FIG. 3

## INSTALLING TRIM

**\*\*SEE PAGE 3 FOR INSTALLING TRIM FOR ONE-PIECE HANDLES**

1. Install extended stem and all-thread onto cartridge stems. Fully seat stem onto cartridges by tightly securing the all-threaded tubes and locking nuts onto valves. Install plate and centering nut onto center all-thread. FIG 4a.
2. **For the diverter**, mark the all-thread flush with the trim plate. FIG 4b Remove the all-thread and cut 3/16" behind the mark so that the all-thread will be 3/16" behind the trim plate when reinstalled. FIG 4c Mark the stem flush with the trim plate, remove the stem, and cut at the mark. FIG 4d Reassemble the stem and the all-thread (making sure the locking nut is tightly securing all-thread), then the plate. Position the lever of the diverter handle at a 12 o'clock, while using the knurled nut to fully thread the diverter handle onto the all-thread. FIG 4e
3. **For the center handle**, screw on the escutcheon to the all-thread and mark the all-thread flush with the top of the escutcheon. Cut the all-thread at the mark. FIG 4b Place the handle onto the stem and measure the gap between the bottom of the handle and the top of the escutcheon, then cut the gap distance from the stem so the handle sits just above the escutcheon (the stem should protrude out from the all-thread around 1/4"). FIG 4d Reassemble the stem, all-thread, escutcheon, and handle. FIG 4e See page 3 for heavy handle tension adjustment if necessary

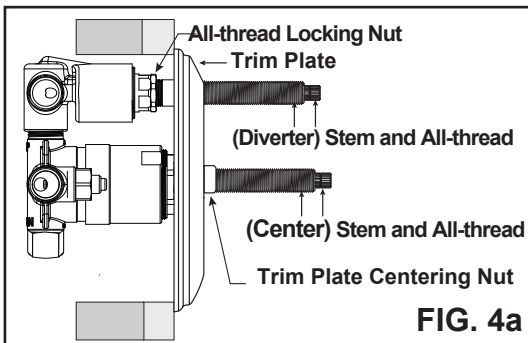


FIG. 4a

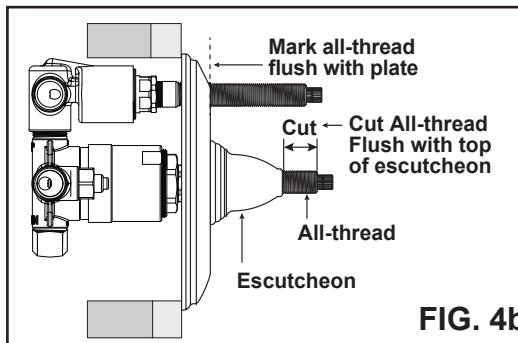


FIG. 4b

### REPLACEMENT PARTS:

**18.30.893**  
Valve Cartridge

**18.30.898**  
Trickle Flow Diverter  
Cartridge

**00.41.014**  
Extension Kit

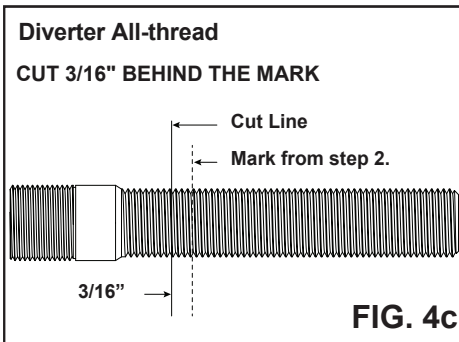


FIG. 4c

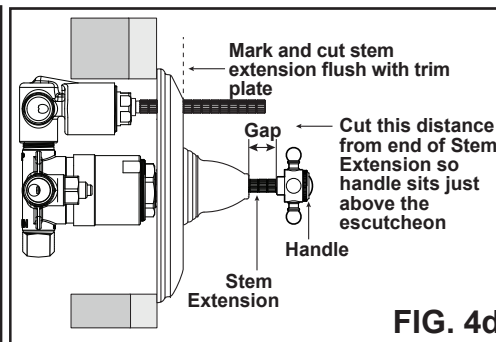


FIG. 4d

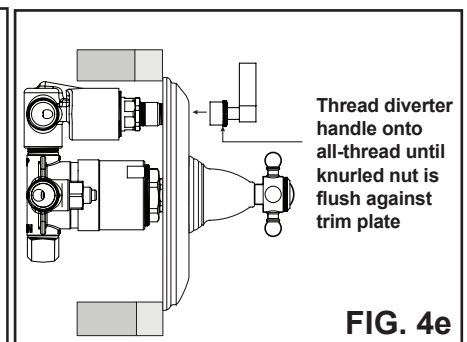


FIG. 4e

# INSTALLING TRIM FOR ONE-PIECE HANDLES

1. Install extended stem and all-thread onto cartridge stems. Fully seat stem onto cartridges by tightly securing the all-threaded tubes and locking nuts onto valves. Install plate and centering nut onto center all-thread. Handle Stixx uses the universal collar in lieu of the centering nut- this threads over the all-thread until the top of the collar is flush with the plate. FIG 4a.
2. **For the diverter**, mark the all-thread flush with the trim plate. FIG 4b Remove the all-thread and cut 3/16" behind the mark so that the all-thread will be 3/16" behind the trim plate when reinstalled. FIG 4c Mark the stem flush with the trim plate, remove the stem, and cut at the mark. FIG 4d Reassemble the stem and the all-thread (making sure the locking nut is tightly securing all-thread), then the plate. Position the lever of the diverter handle at a 12 o'clock, while using the knurled nut to fully thread the diverter handle onto the all-thread. FIG 4e
3. **For the center handle**, place the handle assembly over the all-thread and measure the gap between the bottom of the handle and the trim plate. This represents the amount that should be cut from the all-thread. Make the cut conservatively and re-install to verify, then cut further if necessary. FIG 4b Stem extension should at all times be visible for proper installation. Therefore, STEM SHOULD ALWAYS BE 1/4" LONGER THAN ALL-THREAD.

## One-Piece Handles:

07 Stella  
08 Stella X  
20 Toronto  
83 Lisse  
95 Stixx  
97 Capella  
98 Capella X

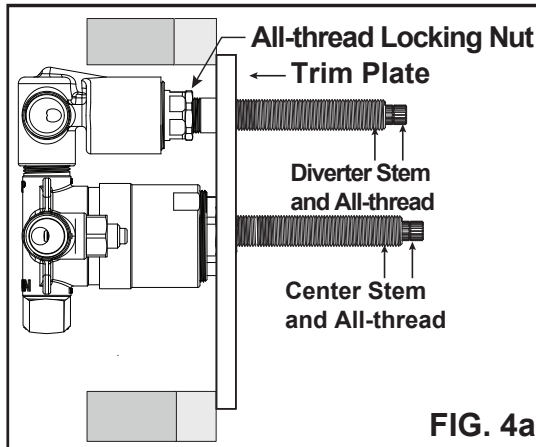


FIG. 4a

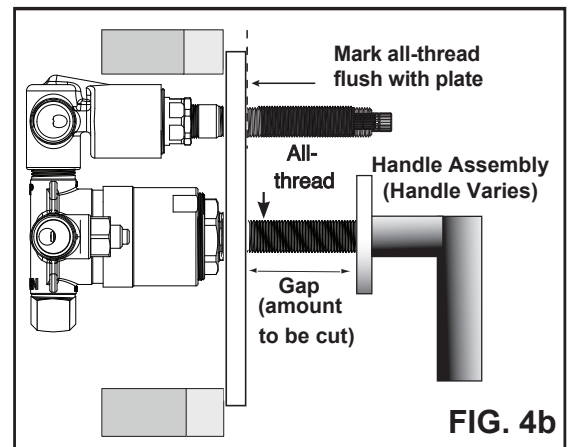


FIG. 4b

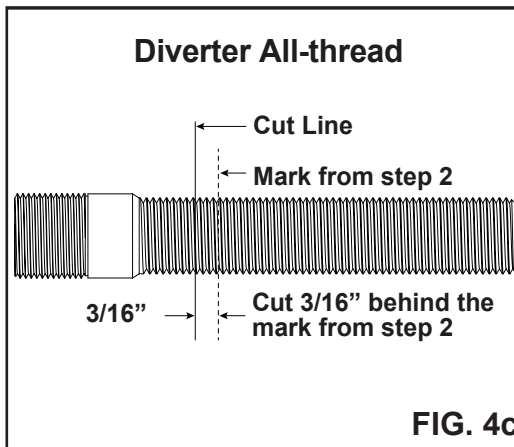


FIG. 4c

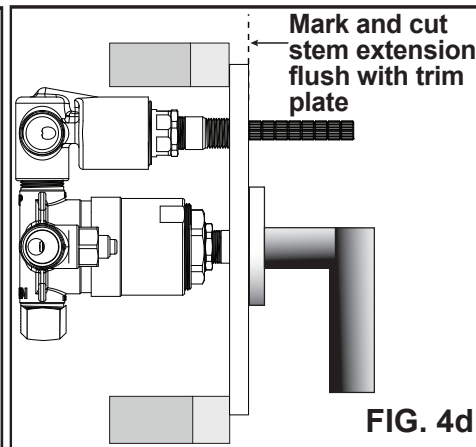


FIG. 4d

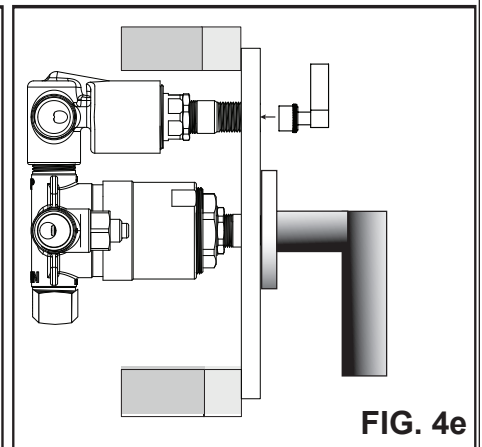
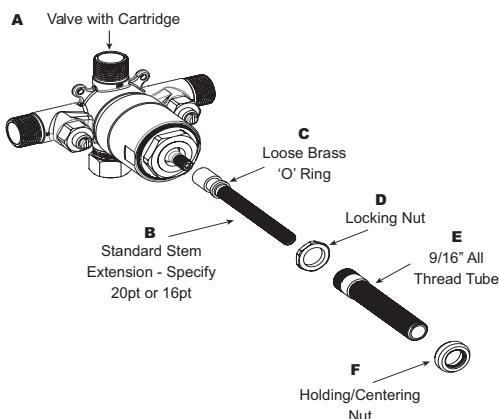


FIG. 4e



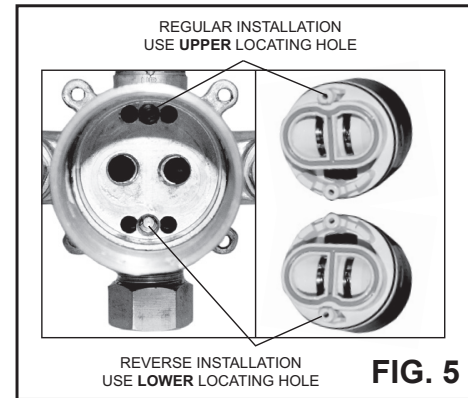
## HEAVY HANDLE TENSION ADJUSTMENT

SIGMA 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 E 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. Test for leaks.
9. Re-assemble trim.



## **Trouble-Shooting the Pressure Balance Valve**

<b><u>Malfunction</u></b>	<b><u>Cause</u></b>	<b><u>Remedy</u></b>
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 incor-rectly 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: Never 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, 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.

**Product/Finish Warranty:** American Faucet & Coatings Corporation warrants that products are free from defects in materials and workmanship for five (5) years from date of invoice. In addition, our Finish Warranty provides limited LIFETIME coverage for Chrome & PVD finishes, five (5) years for Omega powder coated finishes. Living finishes are war-ranted for workmanship only. If any material proves to be defective after inspection by our company, it will be repaired or replaced at our discretion at no charge. However, no claims for labor, shipping costs, or consequential damages will be accepted.

**What we will do:** We will restore any product whose finish proves to be defective back to its original finish at no charge during the appropriate warranty period stated above. Proof of purchase must be provided. After the warranty period, American Faucet and Coatings Corporation will refinish any of its faucets at the prevailing appropriate charge.

**What you must do:** The faucets must be properly installed according to our instructions and specifications & are for residential use only. The faucets cannot be altered in any way. You must maintain and clean the faucets in accordance with the instructions provided with the product. You must use the faucet(s) for residential use only.

**How to obtain service:** Contact our customer service by calling 800.960.BATH or send an email to customerservice@sigmafaucet.com. Please have you model number and proof of purchase available so we can better assist you.

We will then respond and take appropriate action. Do not send us any part(s) of your faucet(s) or its various connecting hoses unless we have contacted you and have sent you an approved RGA form. All transportation charges for returned goods must be paid by the customer.

**What is not covered:** This warranty does not cover the crystal/glass, or porcelain products of any faucet or the drain assembly or aerator on other than the Chrome or PVD finishes. This warranty also does not cover damage caused by accident, alterations, misuse, abuse, normal wear and tear, lime deposits, direct exposure to salty air or corrosive materials, or the color change that takes place with the passage of time, or use in any manner contrary to American Faucet and Coatings Corporation's printed instructions. In the case of in-the-wall installations American Faucet and Coatings Corp. will assume no liability if there is no access. **In no event will we be liable for labor of any kind, incidental or consequential damages.** This warranty is extended in lieu of all other expressed or implied warranties, whether oral or written. **Many installation compounds are harmful to brass and metal finishes. The use of any lead-based or acidic curing adhesive, silicone, mastic, or plumber's putty on or near our finished products will void the finish warranty. Use only sealants which are neutral curing and are not reactive with metal and brass finishes.** American Faucet & Coatings Corporation reserves the right to change, modify or alter its products as deemed necessary. This warranty super-sedes any other American Faucet & Coatings Corporation warranties, whether oral or written.

*Unless otherwise contrary to state law governing the purchase, American Faucet and Coatings Corporation's liability will not exceed the wholesale price for the American Faucet and Coatings Corporation product considered defective. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion of incidental or consequential damages, so the above limitation may not apply to you.*

#### LIFETIME WARRANTY ON 1/4 TURN CERAMIC DISC CARTRIDGE

Should the ceramic disc cartridge in your faucet ever fail, American Faucet & Coatings Corporation will replace the failed part free of charge to the original purchaser of the product. Shipping and handling charges will apply. Labor not included. When ordering replacements, denote for widespread or centerset lavatory, Roman Tub, or other. Include age of faucet. (This does not include thermostatic, pressure balance, or diverter cartridges.)

#### CONSUMER WARNING CALIFORNIA PROPOSITION 65 WARNING

Among other chemicals known to cause harm, this faucet contains lead, a chemical known to the State of California to cause birth defects or other reproductive harm.

All faucets and products made of leaded brass alloys, even those that comply with U.S. Environmental Protection Agency regulations, contribute small amounts of lead to water that is allowed to stand in contact with the brass. This faucet complies with all E.P.A. regulations regarding the amount of lead used in plumbing brass and solder. The amount of lead contributed by any faucet is highest when the faucet is new. The following steps will reduce potential for exposure to lead from faucets and other parts of the plumbing system:

- Always run the water for a few seconds prior to use for drinking or cooking.
- Use only cold water for drinking or cooking.
- If you wish to flush the entire plumbing system of water that has been standing in the pipes or other fittings, run the cold water until the temperature of the water drops, indicating water coming from the outside main.
- If you are concerned about lead in your water, have your water tested.