

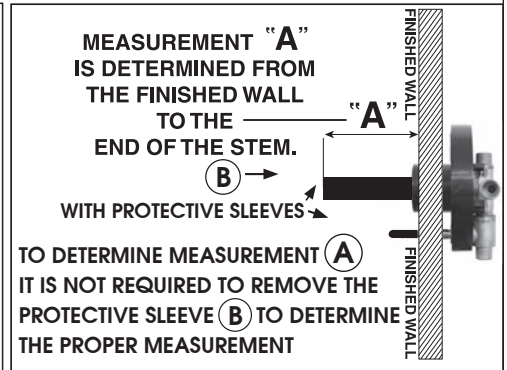
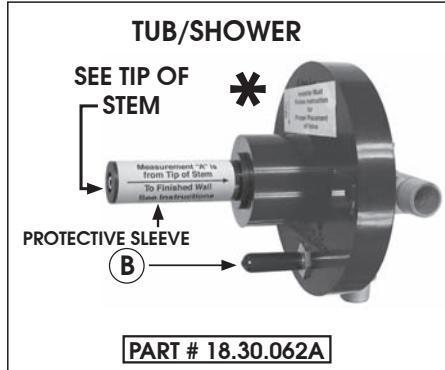
bluewater®

manufacturing corporation

NEW 7-1-07 Pressure Balancing Valve Shower or Tub/Shower Installation Instructions

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

STEP #1: READ YELLOW CAUTION LABELS



*PLEASE NOTE SPLINES ARE 16pt OR 20pt

THE ROUGH VALVES COME PRE-ASSEMBLED AND ARE FACTORY READY TO INSTALL

STEP #2: (MEASUREMENT "A" IS FROM TIP OF STEM TO FINISHED WALL) SEE PAGE # 3 FOR MEASUREMENT DETAILS.

1. The black plaster 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. The placement of the FINISHED WALL (Measurement "A") is CRITICAL. Measuring from the end of stem, see the chart. Access to in-wall valves must be provided. CUTOUT TEMPLATE IS INCLUDED.
2. Rough valve body into wall, connecting piping to 1/2" Female copper sockets or 1/2" Male I.P. nipples. (SEE FIGURE 2 ON PAGE 3) IMPORTANT: NOTE "UP AND DOWN" MARKINGS ON BACK OF VALVE.
3. 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 EVEN DURING TESTING OR FLUSHING.
4. When soldering the valve body, it is NOT necessary to remove the cartridge assembly.

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Use two or three digit number below as center number in product code (example 21.701.10)

Handle Group	Measurement A
Design Group I 507, 701, 702, 703	1-1/2"
Design Group II 04, 06, 07, 10, 500, 501*, 503*, 506, 509*, 512, 800, 801, 803, 809	1-3/4"
Design Group III 05, 08, 09, 16, 20, 30, 40, 50, 505, 508, 510*, 511, 513, 808, 810, 811, 813	2"
Design Group IV 515, 516, 816	2-1/4"
Design Group V 301, 302, 02, 03, 12, 13, 14, 502, 504, 804	2-1/2"
Design Group VI 303	2-3/4"
Design Group VII 601, 602, 603, 604	3-1/4"



Handles with *Requires special bushing. Part # 77.03.435B

NEW ROUGH-IN SPECIFICATIONS 7-1-07

Pressure Balancing Valve for Shower or Tub/Shower Combination Valve

VALVE KIT

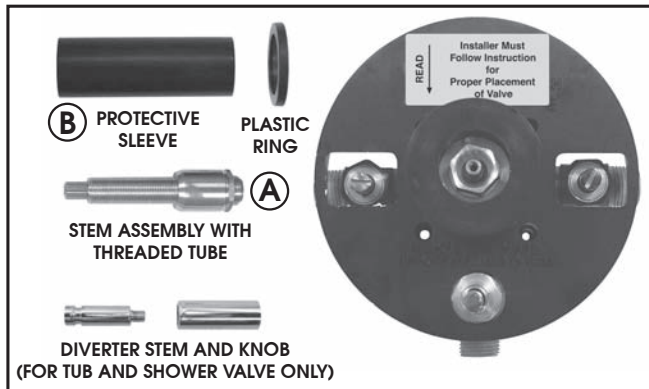


FIGURE # 1

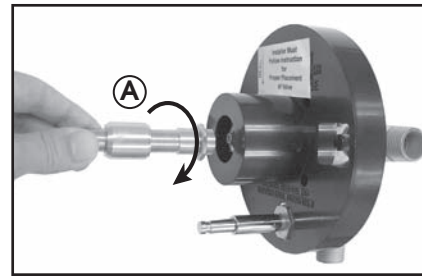


FIGURE # 2

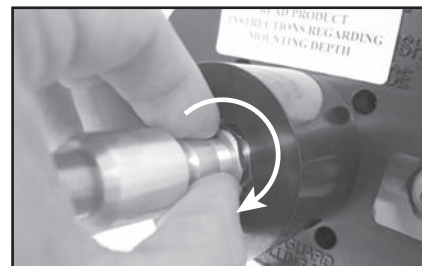
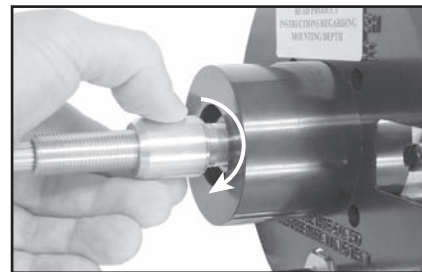


FIGURE # 3



INSTALLER NOTE:

If you decide to remove Center Plastic Sleeve (B) prior to installing valve... Be sure to follow these instructions to make sure you install all parts correctly

PREPARATION OF VALVE ASSEMBLY:

STEP #1. Install the stem and threaded tube assembly by rotating clockwise and hand tightening only into the valve center as shown in **Figure #1**.

STEP #2. Tighten thin locking nut (clockwise) into base of valve stem assembly to secure stem into position as shown in **Figure #2**.
(SEE TORQUE TIGHTENING INSTRUCTIONS ON PAGE #5)

STEP #3 The tall holding/centering nut should be threaded down into the base assembly as shown in **Figure #3**.

STEP #4. Slide plastic ring and sleeve onto the Stem assembly as shown in **Figure #4 and #4A**. (The centering/holding nut must be at the base to allow the plastic sleeve and ring to slide on.)

STEP #5. The valve and mud guard assembly is now ready for final installation into finished wall.

SEE PAGE #1 FOR EXACT MOUNTING DEPTH

FIGURE # 4

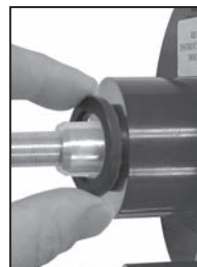


FIGURE #4A

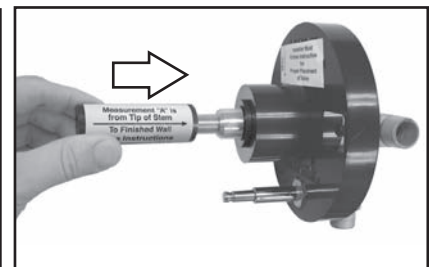
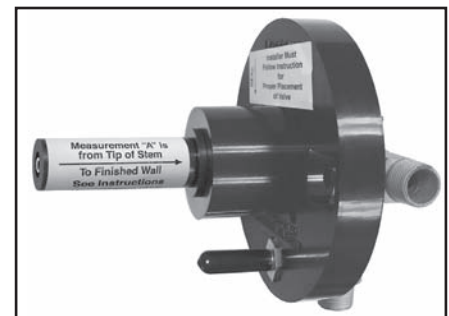


FIGURE # 5



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. (FIG. 2) **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 measure from tip of stem to finished wall using chart on Page 1.

3. For TUB & SHOWER installations, 36" MUST be allowed between valve and shower head to prevent stacking. SEE FIG. 3

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. Plastic guard should be left attached to the valve until the finished wall material is installed.

⚠ 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 hex cap from the valve body. FIG. 4

4. Remove the Grey Adjustment Ring by placing the blade of a thin screwdriver into the groove and prying it off. FIG. 5

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 hex cap using a wrench. Open both service stops and confirm the maximum hot water temperature.

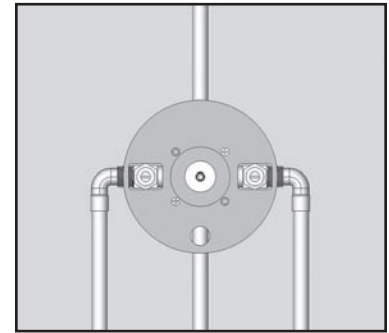


FIG. 2

TO PREVENT DRIPPING IN THE TUB-FILL MODE, SHOWER ARM MUST BE LOCATED A MINIMUM OF 36" ABOVE VALVE OUTLET.

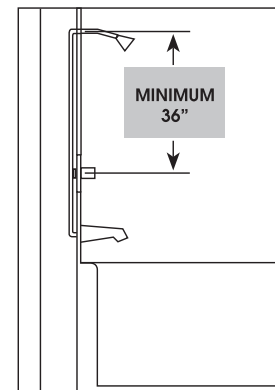


FIG. 3

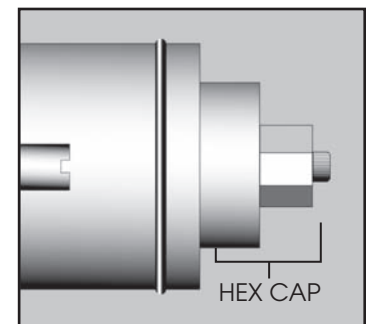


FIG. 4

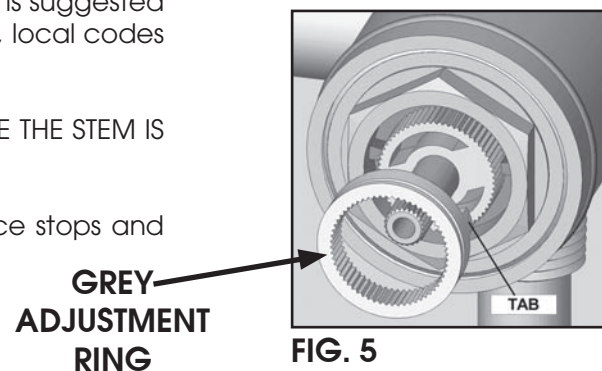


FIG. 5

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 in Figure 7. Part C is a loose brass O-ring that is compressed inside Part D by tightening or loosening Part E.

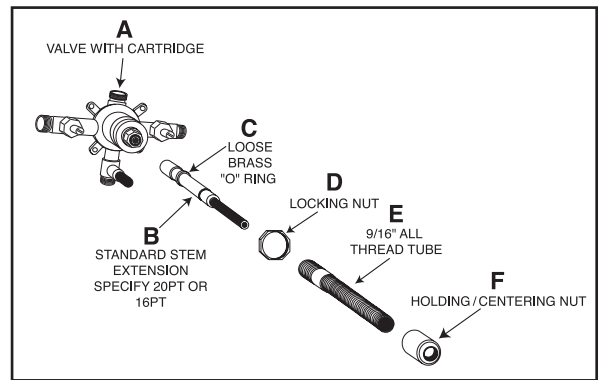


FIG. 6

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. 7**

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 hex cap using wrench.
8. Re-assemble trim.

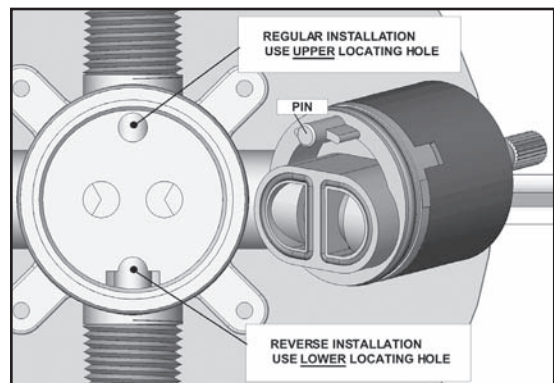


FIG. 7

**TO REPLACE CARTRIDGE
SAME PROCEDURE AS ABOVE,
REVERSE IF NECESSARY.**

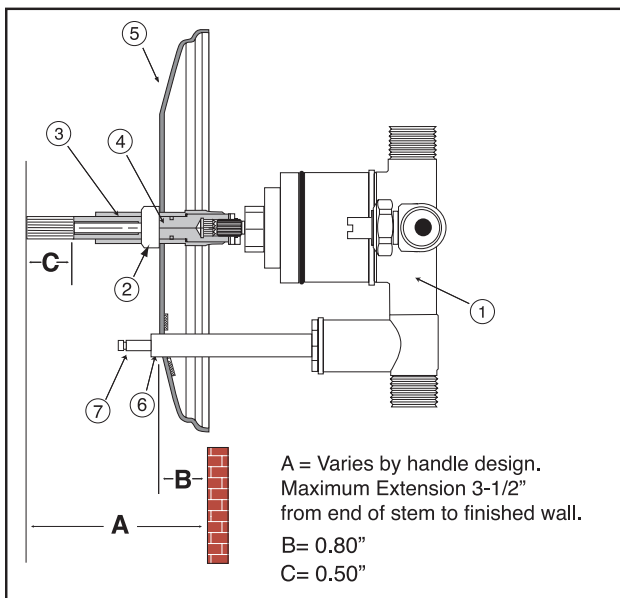


FIG. 8

1	Valve
2	Retaining Centering Nut
3	Thread All
4	16 Pt. In-Wall Stem
5	Plate
6	Long Diverter Sleeve
7	Short Diverter Sleeve

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 Gray 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 Gray Temperature Ring as described on Page 2-Figure 6. 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.	Valve body is not installed to proper depth	Install stem extension kit or remove excess length from stem of allthread.
Trim plate will not install flush to wall	Valve body is not installed to proper depth	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
ASSE 1016

-FULL SCALE (1:1) CUTOUT TEMPLATE-
PRESSURE BALANCE VALVE

"DO NOT FOLLOW INSTRUCTIONS ON BLACK PLASTIC GUARD"
GUARD IS FOR VALVE PROTECTION DURING CONSTRUCTION

TRIM PLATE OUTLINE
(SEE NOTE 2)

TYPICAL CUTOUT OUTLINE
(SEE NOTE 2)

**CUTOUT FITS BOTH
SHOWER AND TUB
AND SHOWER VALVES**

RETAIN PROTECTIVE SLEEVE
OVER DIVERTER ROD UNTIL
INSTALLATION OF BALANCE
OF TRIM

VALVE CARE

Your 1/4 turn ceramic valve will provide you a lifetime of service when cared for properly. The most common valve problem is a result of debris in the water line, such as sand, silt, solder, metal shavings, lime deposits or other foreign particles. Debris can become lodged between the ceramic discs and result in improper functioning of the open and close action of the valve. Particles can even cause cracks in the ceramic discs and render the cartridge useless. For further information, please contact Bluewater Manufacturing Corporation @ 877-890-8006 or fax your request to 877-373-0649

BLUE WATER MANUFACTURING CORPORATION LIMITED PRODUCT WARRANTY

Product/Finish Warranty: Bluewater Manufacturing Corporation warrants that products are free from manufacturing 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 powder coated finishes & Polished Gold. Living finishes are warranted 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, **Bluewater Manufacturing 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 and 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: Send your name, address, and telephone number along with a statement describing the nature of the problem and your paid sales slip or other proof of purchase to:

BLUE WATER MANUFACTURING CORPORATION
3231-C Business Park Drive #31
Vista, CA 92081

We will then contact you 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 **Bluewater Manufacturing Corporation's** printed instructions. Cartridge warranties vary. Please call factory for details. In the case of in-the-wall installations, **Bluewater Manufacturing Corporation** 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.** **Bluewater Manufacturing Corporation** reserves the right to change, modify or alter its products as deemed necessary. This warranty supersedes any other American Faucet & Coatings Corporation warranties, whether oral or written.

*Unless otherwise contrary to state law governing the purchase, **Bluewater Manufacturing Corporation's** liability will not exceed the wholesale price for the **Bluewater Manufacturing 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, **Bluewater Manufacturing Corporation** will replace the failed part free of charge to the original purchaser of the product. Your cost will be a \$7.95 handling and mailing charge. 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.)

NOTICE

Bluewater Manufacturing Corporation products are IAPMO listed and are tested to ASME A112.18.1M and ASSE 1016, and comply with Section 9 of NSF 61 for basin faucet, bar faucets, and kitchen faucets as required.

Bluewater Manufacturing Corporation