

LIGATURE RESISTANT SHOWER VALVE, HANDLE AND ESCUTCHEON PLATE

#SV230i

Installation, Maintenance & Operation Instructions

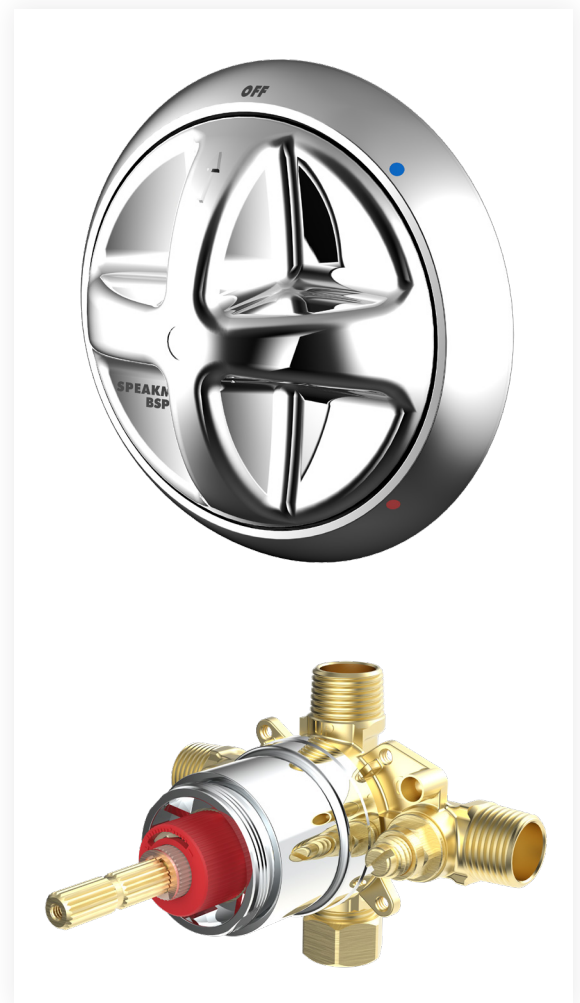
Features easy grip, ligature resistant handle that meets ADA pull force requirements, and does not require pinch and grasp to turn, anti-friction ring maintains tight fit with smooth handle operation, redundant sealing to prevent moisture migration, escutcheon plate and handle with variable rough-in, anti-scald mechanism, ASSE 1016 & UPC approved shower valve and ADA compliant. Heavy, all metal construction designed for maximum strength and protection from abuse. Polished chrome finish.

Specifications

- Easy grip, ligature resistant handle.
- Anti-friction ring maintains tight fit with smooth handle operation.
- Redundant sealing to prevent moisture migration.
- Escutcheon plate & handle with variable rough-in.
- Valve body with integral stops.
- Anti-scald mechanism.
- Adjustable temperature limit stop.
- Brass Valve body, Zinc Handle and Escutcheon Plate, with polished chrome finish.
- Piston type pressure balancing/ceramic, regulating cartridge assembly with built-in check valves.
- Can be installed back to back.
- Four port valve with ½" NPT/female copper sweat inlets and outlets.
- Maximum operating water pressure: 80 PSI static.
- Minimum operating water pressure: 20 PSI flowing.
- Maximum operating water temp: 140° F.
- Minimum operating water temp: 40° F.

Certifications

- ADA Compliant
- Approved in the NYS Office of Mental Health Patient Safety Standards, Materials and Systems Guidelines.
- This product is certified by IAPMO to meet
 - UPC
 - ASME A112.18.1-2012 /CSA B125.1-12
 - ASSE 1016



Care & Cleaning

Your new Product is designed for years of trouble-free performance. Keep it looking new by cleaning it periodically with a soft cloth. The use of harsh chemicals and abrasives on any of the custom finish products may damage the finish and void the product warranty. Please be sure to only use approved cleaners.

Waiver & Disclaimer

This waiver-disclaimer is attached to and made a part of the written contract to purchase these products for use in psychiatric and correctional facilities. Such fixtures and products are purchased to reduce the risk of self-imposed death or injury to patients or clients in such facilities, but are NOT represented as able to prevent such death or injury.

Behavioral Safety Products, LLC (“BSP”) as the seller and Speakman Company as the manufacturer of these products have not, and will not represent or warrant to the purchaser shown in this contract (“Purchaser”) that its fixtures and products will prevent death or injury in any case whatsoever.

BSP and Speakman Company make no express or implied warranty with respect to the preventative quality of its products, but merely represents that the use of such products tends to reduce deaths and injuries by patients or clients who are subject to meticulous screening processes and diligent supervision on the part of the facility housing them.

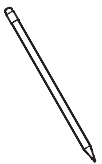
Purchaser acknowledges the foregoing disclaimer and waives any and all claims against BSP and Speakman Company as to express or implied warranties of fitness for any purpose whatsoever.

IMPORTANT

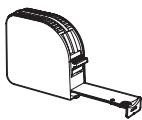
- Be sure to read instructions thoroughly before beginning installation.
- Be sure to have properly adjusted the Temperature Limiting Stop (TLS) as outlined in this Instruction Manual.
- Inspect all connections after installation of valve.
- This valve has an operating range of 20-80 psi.
- This valve is designed to be used in conjunction with a shower-head rated at 1.75 gpm (6.6 L/min) or higher flow rate
- Ensure the Valve has been installed Plumb and Level to the wall. Alignment issues may interfere with Handle operation.

Tools and Supplies

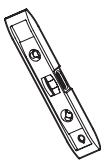
Pencil



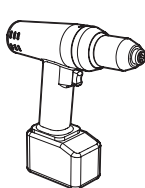
Measuring Tape



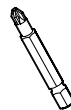
Level



Drill



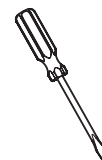
Phillips Drive Bit



Mounting Hardware
(not included)



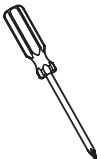
Flat Tip Screwdriver



Pin-In Torx Key Wrench
(included)



Phillips Screwdriver



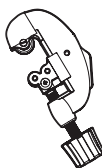
Adjustable Wrench



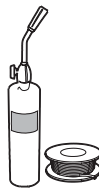
Pipe Wrench



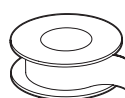
Tubing Cutter



Solder Kit



Thread Seal Tape

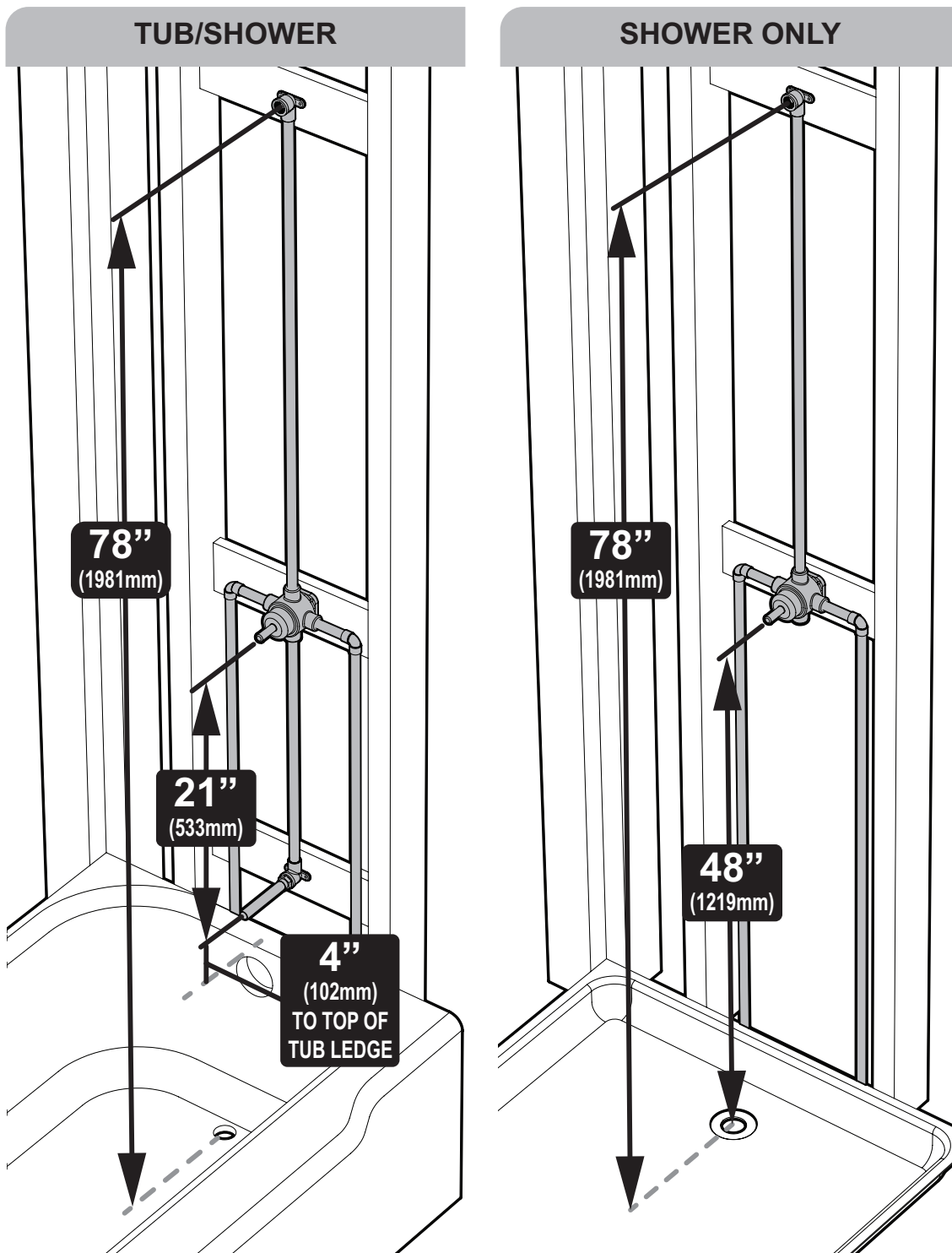


Eye Protection



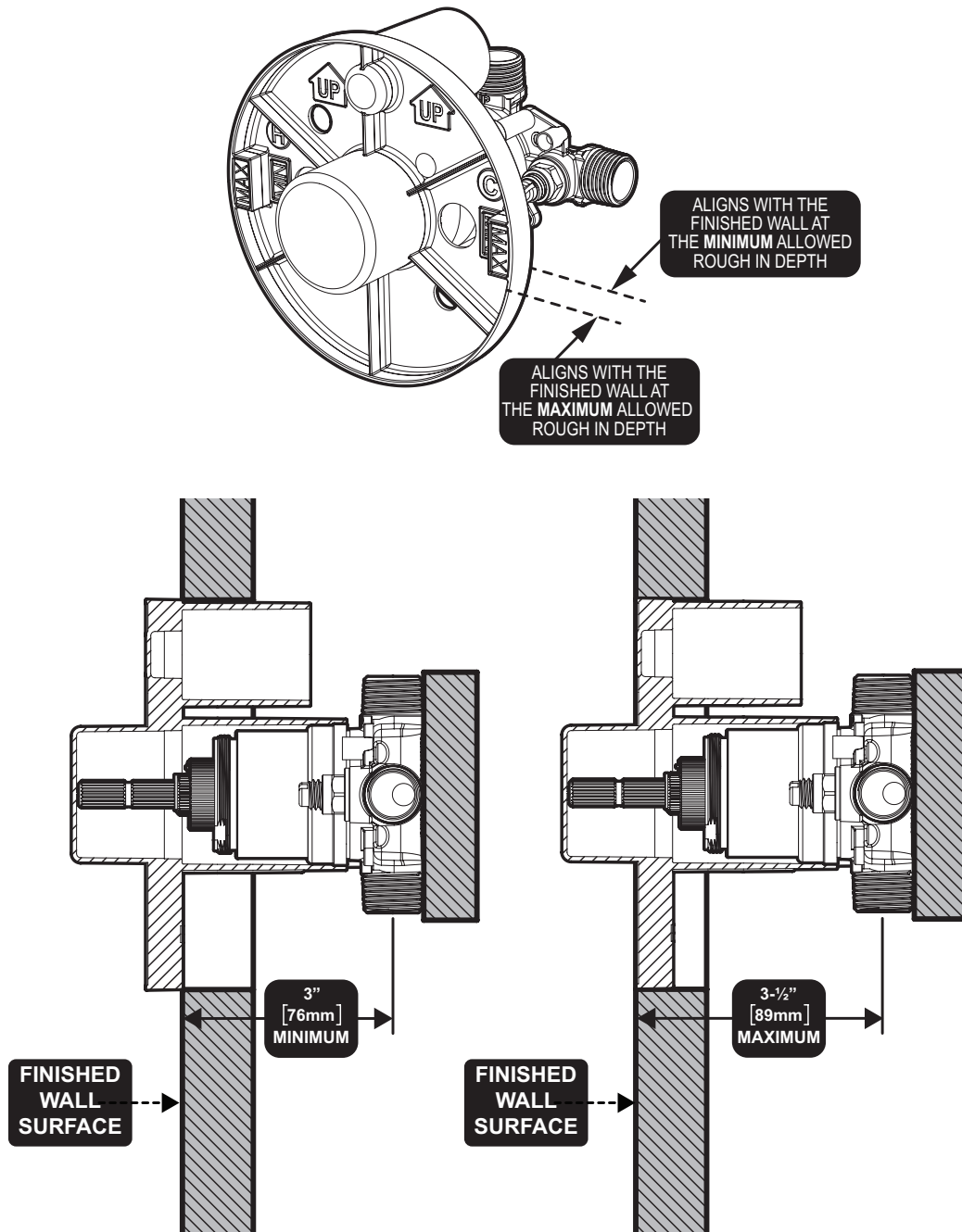


Rough In Vertical Reference



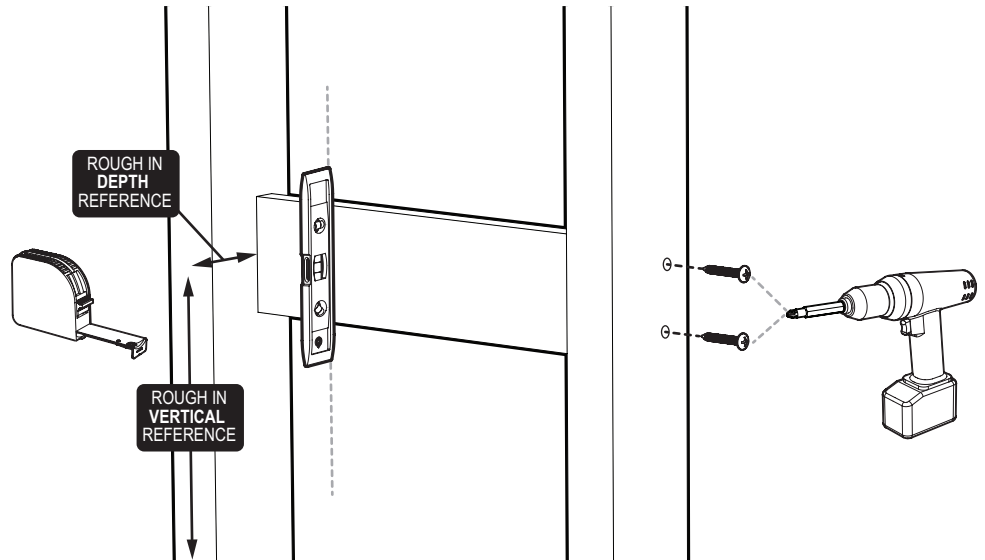
Rough In Depth Reference

Determine the mounting depth of the Valve referencing the diagrams below. The Protective Cover on the Valve has reference markings showing where the Valve should align with the Finished Wall Surface. The distance from the Finished Wall Surface to the centerline of the Valve Inlets/Outlets **MUST** fall between **3" Minimum and 3-1/2" Maximum**.

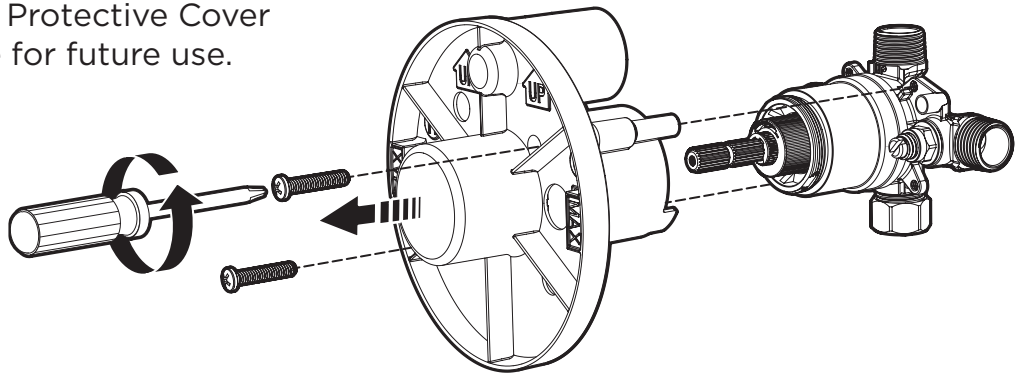


Installation Instructions

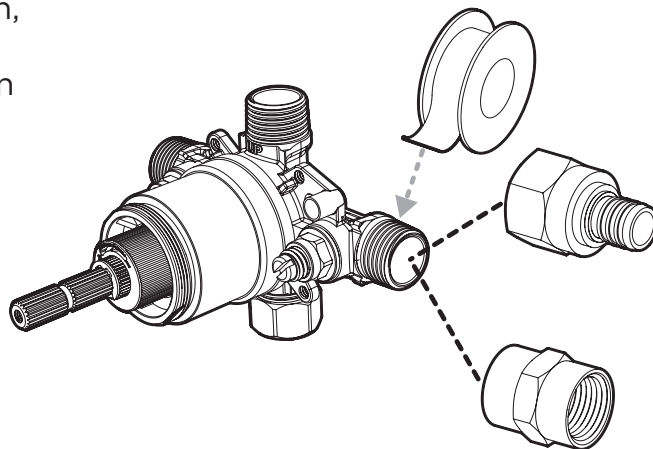
1. Referencing the rough in guides, install a 1" x 4" Cross Brace between the Vertical Studs at the proper height and depth outlined. Use a Level to ensure the front surface of the Cross Brace is perfectly vertical.



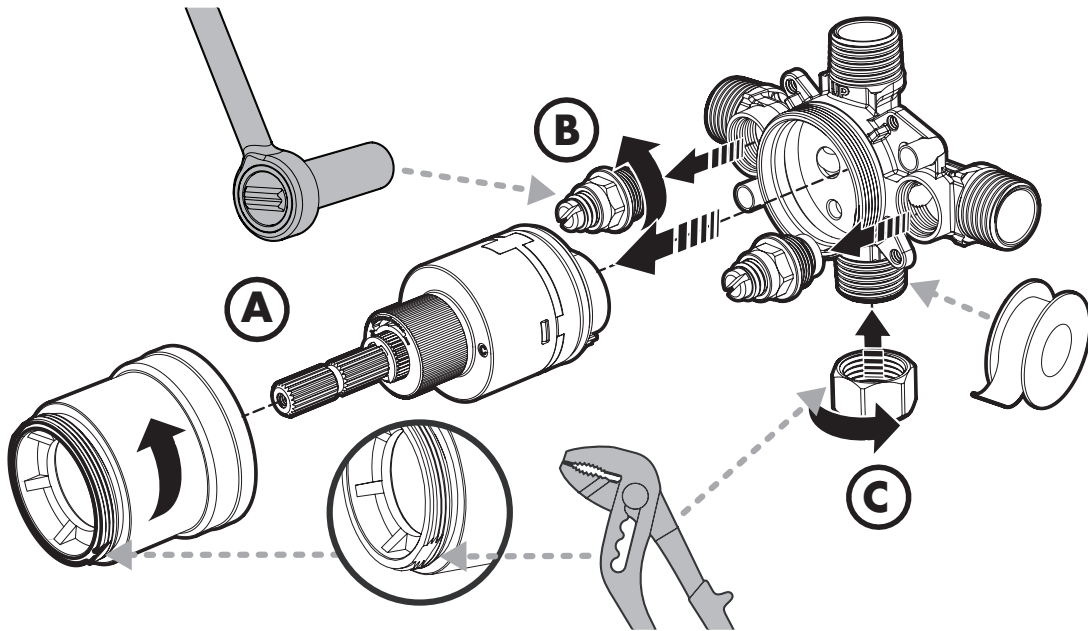
2. Remove Screws, and Protective Cover from Valve. Set aside for future use.



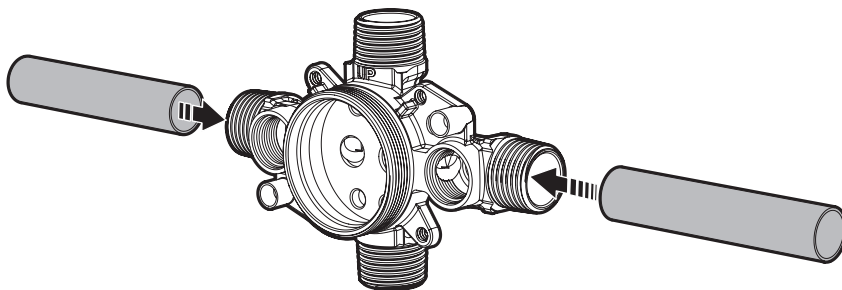
3. If performing a non-sweat installation, attach necessary adapters to Valve. Thread Seal Tape is recommended on all threaded connections.



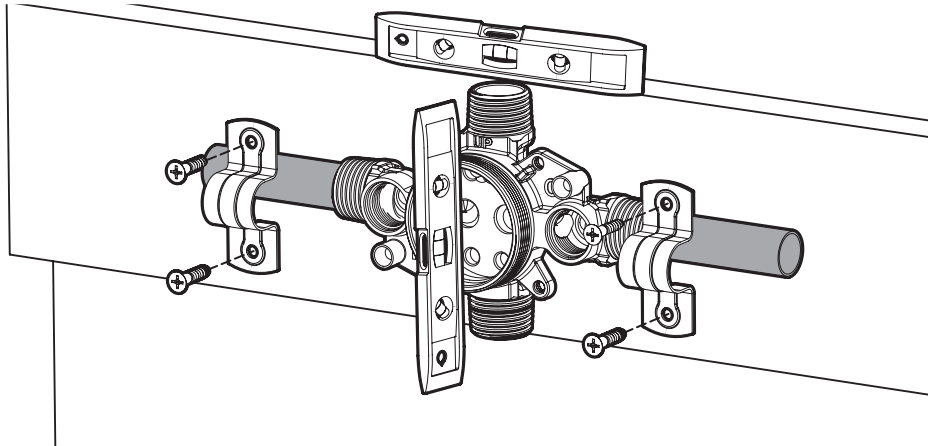
4. **If you are planning for a Copper Sweat installation**, remove the Retaining Nut and Valve Cartridge (A) using a Slip Joint Wrench on the small flats of the Retaining Nut, as well as the Integral Stops (B) using a Socket Wrench equipped with a 9/16" (14mm) Deep Well Socket to prevent damage during soldering. **If you are performing a Pipe and Fitting installation, removal of the internal components is not necessary.** If performing a shower only installation, ensure the Cap is properly installed to the lower port of the Valve after applying Thread Seal Tape (C).



5. Plumb horizontal inlets to Valve.

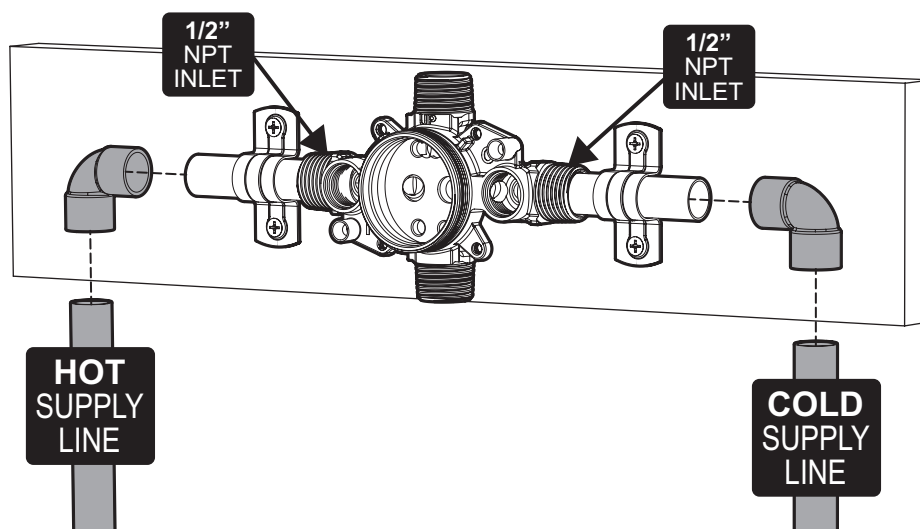


6. Using a Level, align Valve into position and secure to Cross Beam using Pipe Straps or similar method.

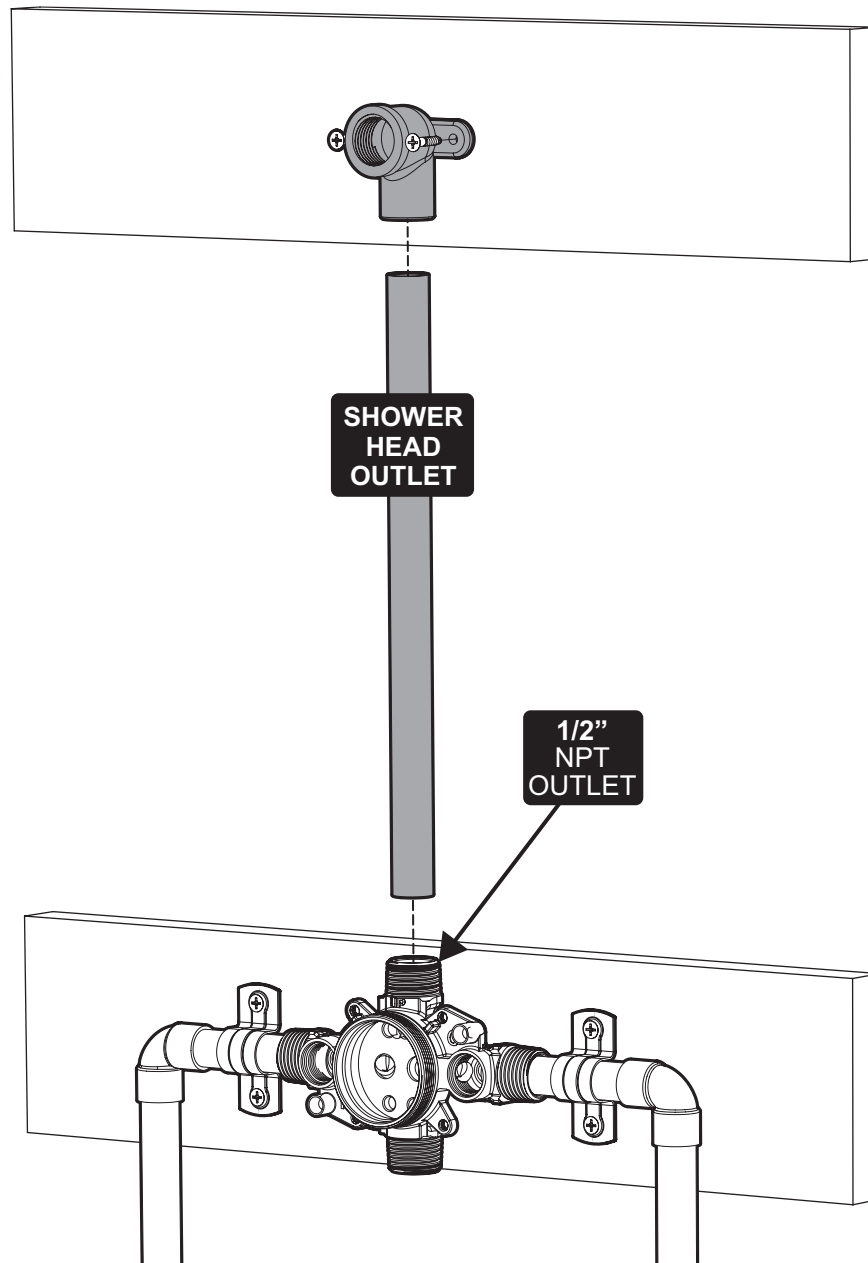


IMPORTANT! Before mounting, ensure valve is perfectly level and plumb. Valves that are not level and plumb will affect Trim Handle operation.

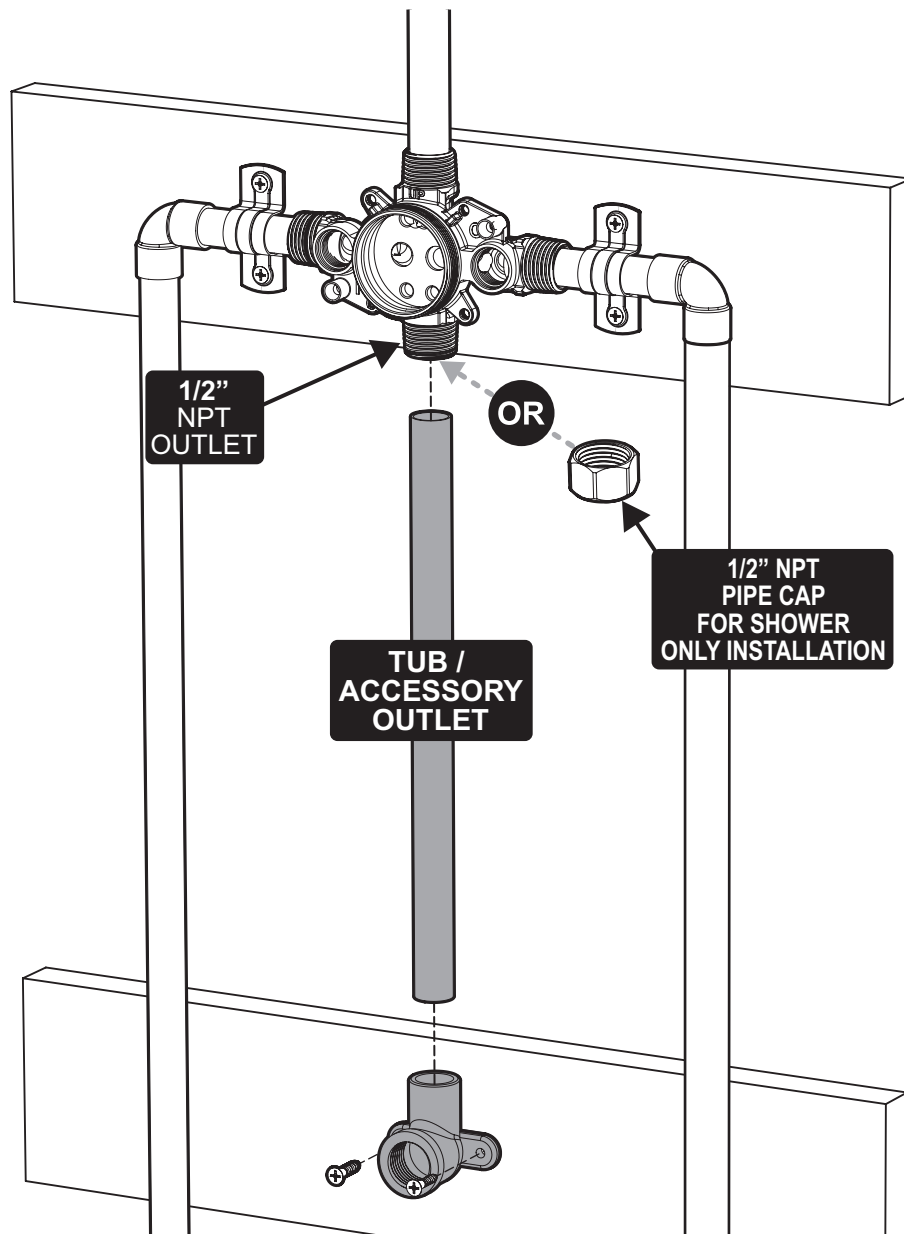
7. Make plumbing connections to the Valve Inlets. Valve Inlet Connections are 1/2" NPT Male. Cold Supply to be connected to the Right Inlet, Hot Supply to be connected to the Left Inlet. Thread Sealant Tape is recommended on all threaded connections.



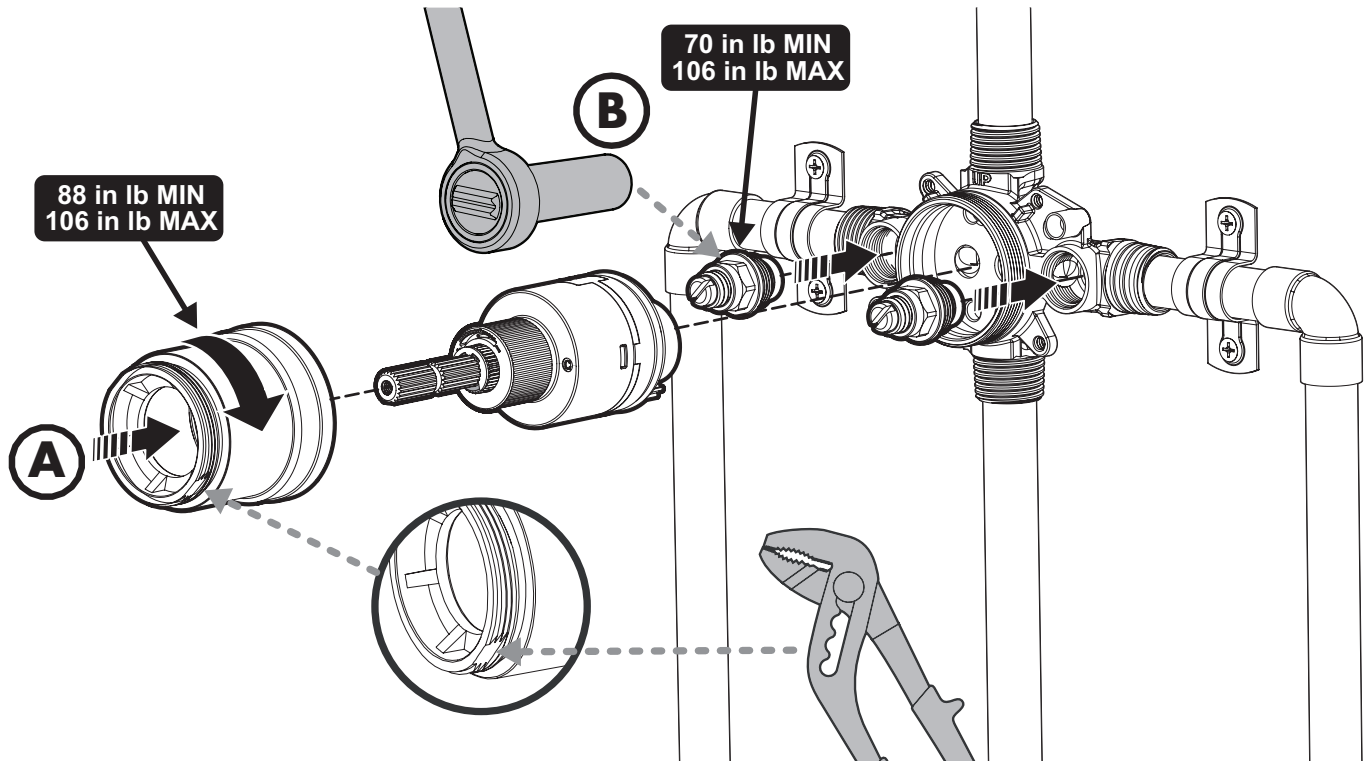
8. Make plumbing connections to the Shower Head Outlet of the Valve. Shower Head Outlet Connection is 1/2" NPT Male. See "Rough In Vertical Reference" for the proper mounting height of the Shower Head. Ensure proper bracing is in place to support the plumbing and Shower Arm Connection. Thread Sealant Tape is recommended on all threaded connections.



9. Make plumbing connections to the Tub/Accessory Outlet of the Valve. Tub/Accessory Outlet Connection is 1/2" NPT Male. See "Rough In Vertical Reference" for the proper mounting height of the Tub Spout (if used). Ensure proper bracing is in place to support the plumbing and Tub Spout or Accessory connections. If your installation does not include a Tub/Accessory, install the included 1/2" NPT Cap to the Tub/Accessory Outlet. Thread Sealant Tape is recommended on all threaded connections.

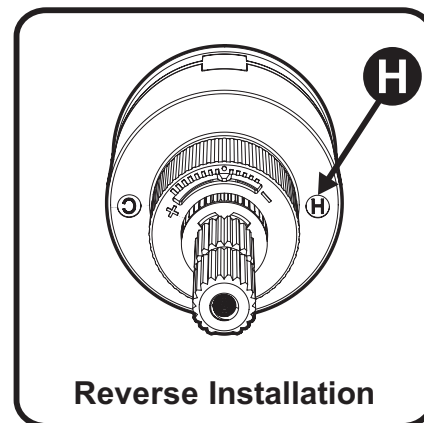
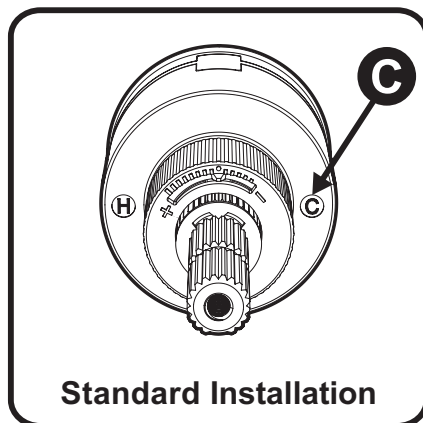
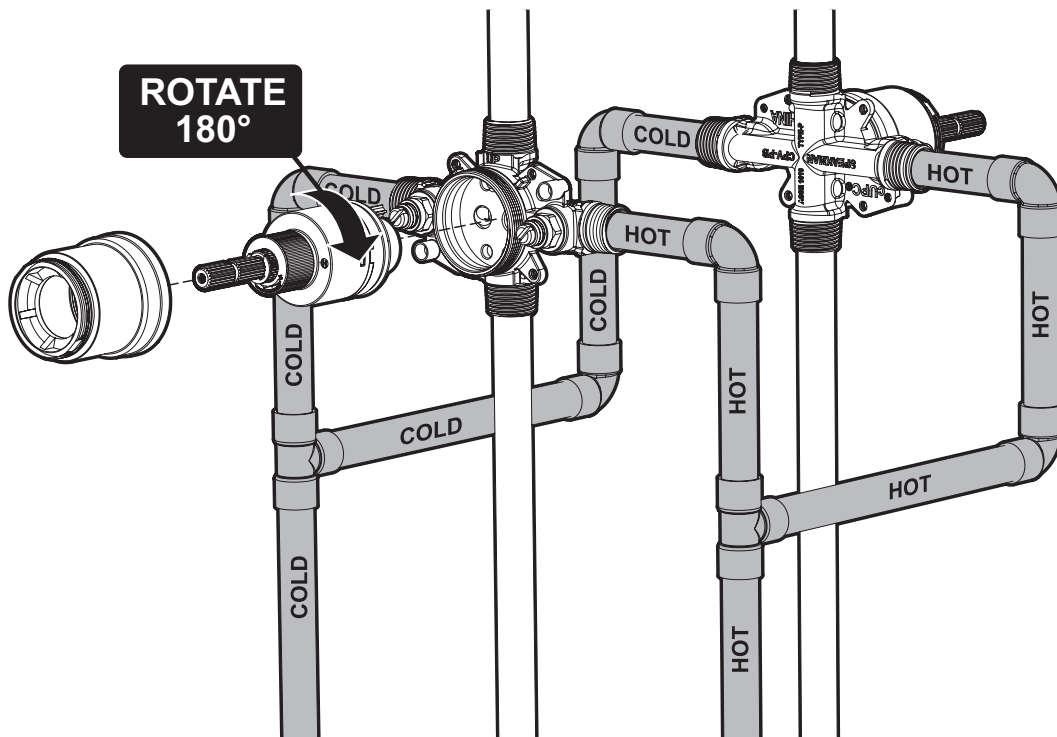


10. If you removed the Retaining Nut and Valve Cartridge (A) as well as the Integral Stops (B) to perform a Copper Sweat installation, reinstall the components at this time. If you performed a Pipe and Fitting installation and did not remove the components earlier, skip this step.



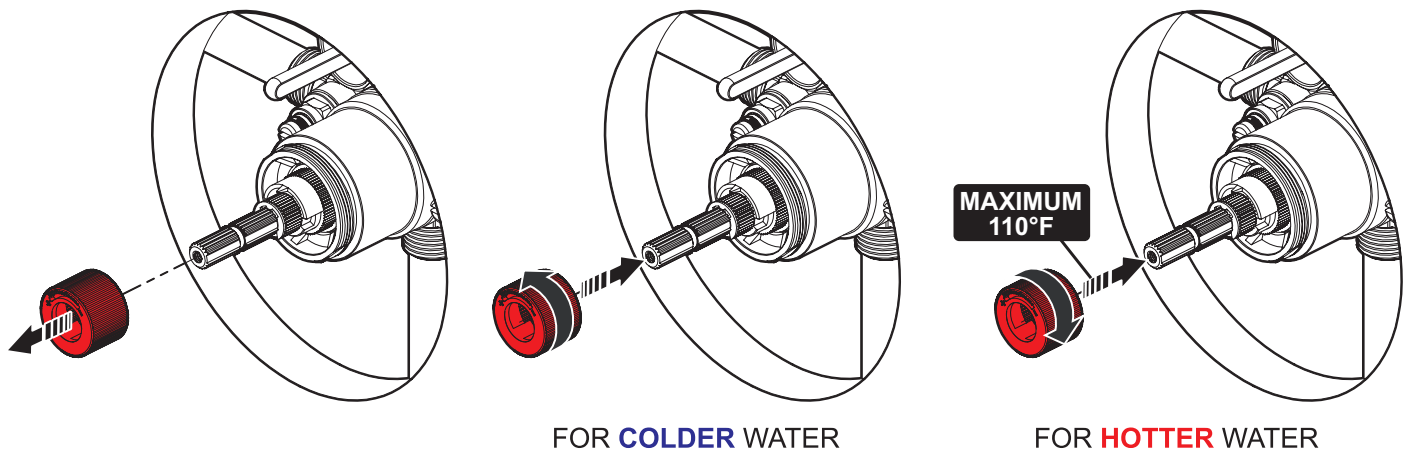
11. Your Shower Valve has the ability to be mounted back-to-back with another Valve in a shared space. This means the HOT and COLD inlets may be reversed. Please see the following steps to adapt your valve for back-to-back mounting or reversed inlet supplies.

If you are not making a reverse or back-to-back installation, skip this step. If the HOT and COLD water supplies are reversed (HOT on right and COLD on left), disassemble Valve Cartridge as outlined in STEP 4. Rotate Valve Cartridge 180° so “H” appears on the right. Reinstall the Valve Cartridge making sure that the mounting posts are aligned and engaged to the corresponding holes in the Valve Body. Reinstall Retaining Nut as outlined in STEP 10.



12. The maximum outlet temperature setting adjustment (TLS) of the Valve has been factory set at 110 °F. To adjust the limit of the maximum outlet temperature the Valve delivers, adjust the Valve's temperature limit stop (TLS) collar by following the steps below.

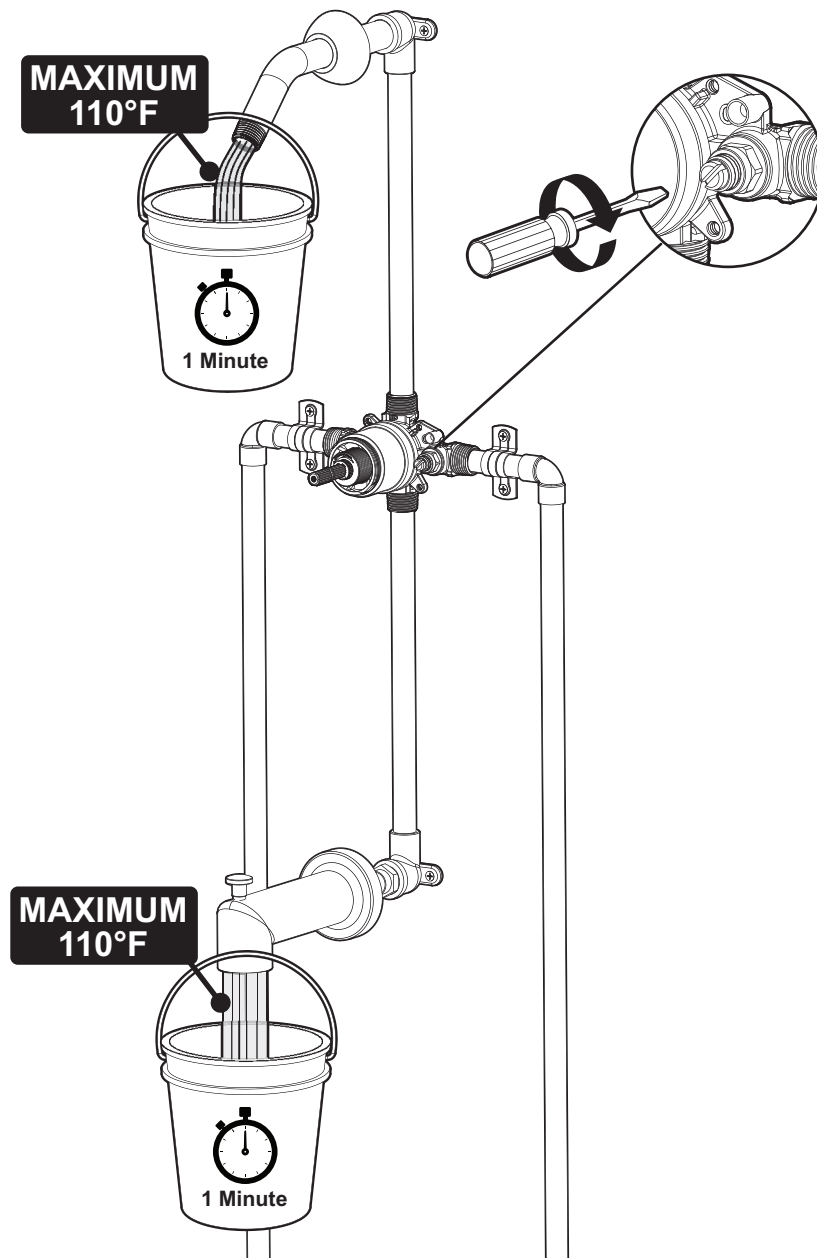
With the water supplies "On" and the Valve in the "Off" position, remove the (RED) TLS adjustment collar from the Cartridge.



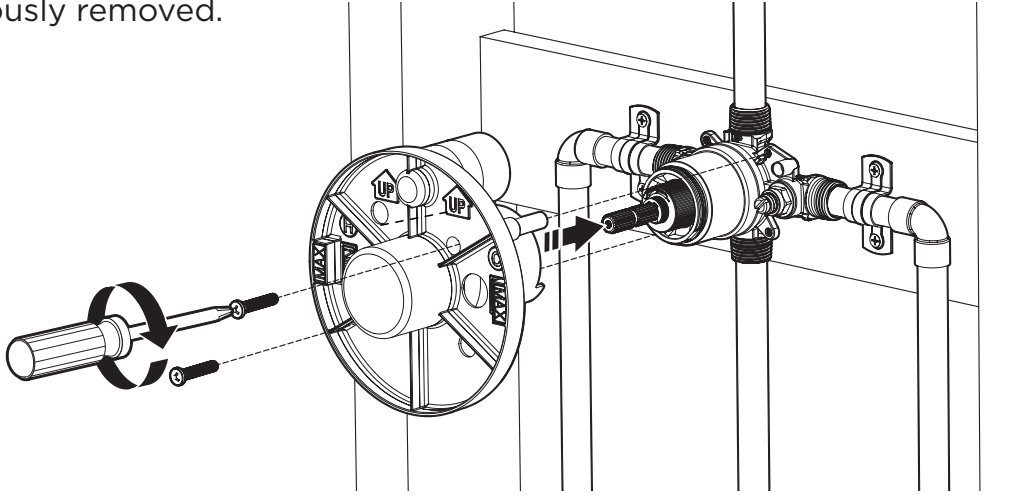
ADJUSTING THE TEMPERATURE LIMIT

- For **Colder** setting, adjust the Temperature Limiting Collar in a counter-clockwise direction and slide it back to the splined section of the Cartridge until fully seated. Rotate the Valve Spindle clockwise to check if desired outlet temperature is achieved. If not, repeat the procedure.
- For **Hotter** setting, adjust the Temperature Limiting Collar in a clockwise direction and slide it back to the splined section of the Cartridge until fully seated. Rotate the Valve Spindle clockwise to check if desired outlet temperature is achieved. If not, repeat the procedure.
- Once desired outlet temperature is achieved, rotate the spindle counter-clockwise to the "Off" position.

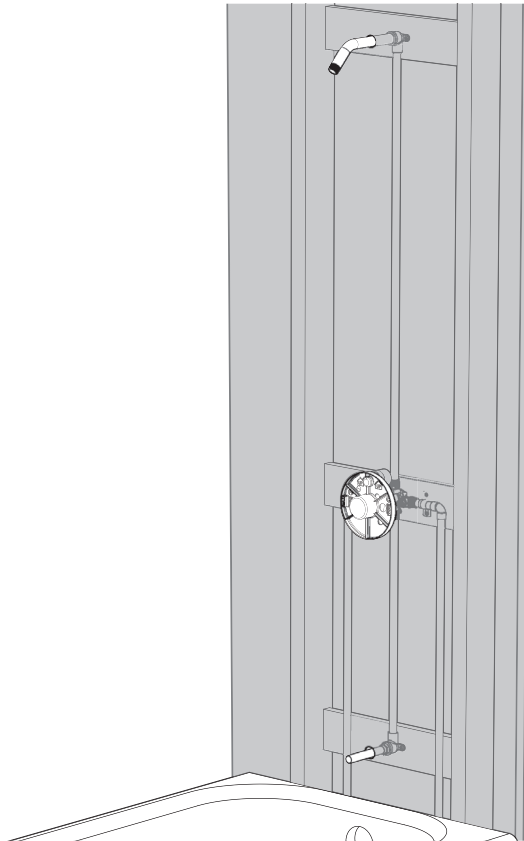
13. **Temporarily** place the Valve Handle on to the Valve Spindle. Rotate the Valve Handle counter-clockwise to ensure the Valve is in the “OFF” position. With the Valve in the “OFF” position, turn “ON” water supplies and **inspect for leaks**. Place a bucket at the Shower/Tub outlets. Turn the Valve Handle clockwise to the full “ON” position. Flush each outlet for 1 minute. Verify the outlet temperature using a thermometer. Return the Valve Handle to the “OFF” position by rotating counter-clockwise until it stops. Turn “OFF” water supplies. If you desire to turn “OFF” the water supplies at the Valve, you can do so by turning the Stop Screws clockwise.



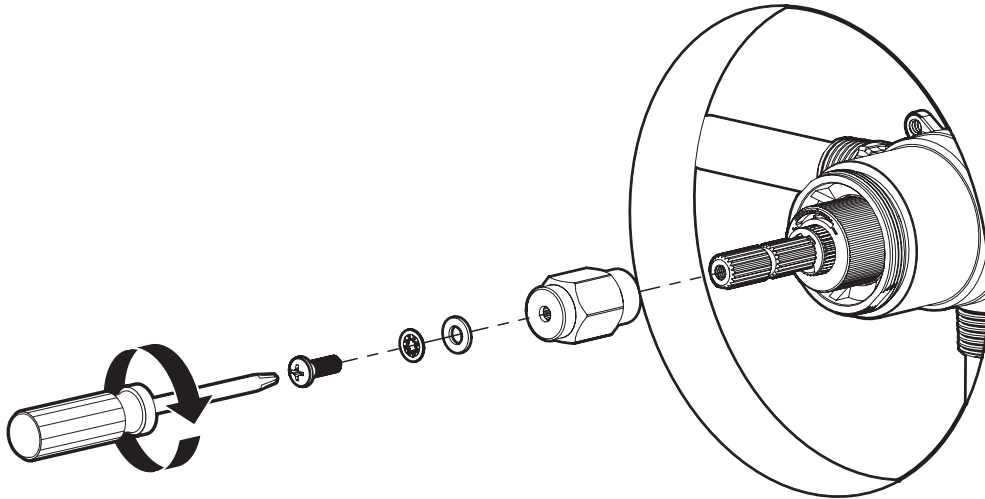
14. Remove Valve Handle from Spindle and Reinstall Protective Cover, and Screws previously removed.



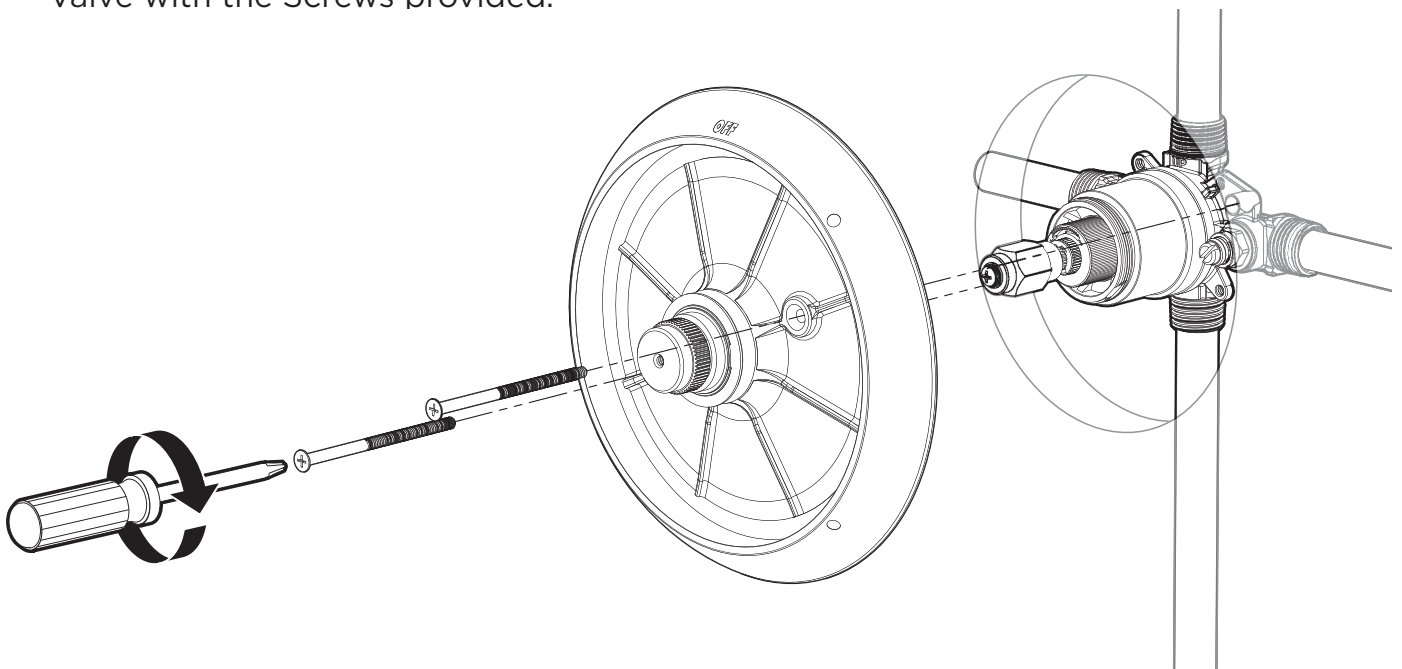
15. **Important:** Verify valve has been properly mounted according to the rough in dimensions on page 4 before completing finished wall construction. Complete installation of both the Shower Head outlet and Tub/Accessory outlet. Cut Valve access opening using the Protective Cover as a guide.



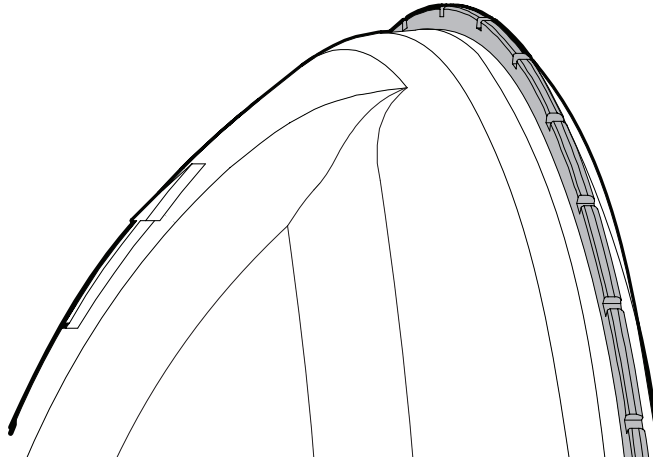
16. Once ready to install the Valve Trim, remove the Protective Cover from Valve. Ensure the Valve is in the “OFF” position. Slide Splined Hex Shaft over the Valve Spindle, followed by Flat Washer, Lock Washer, and secure with Screw.



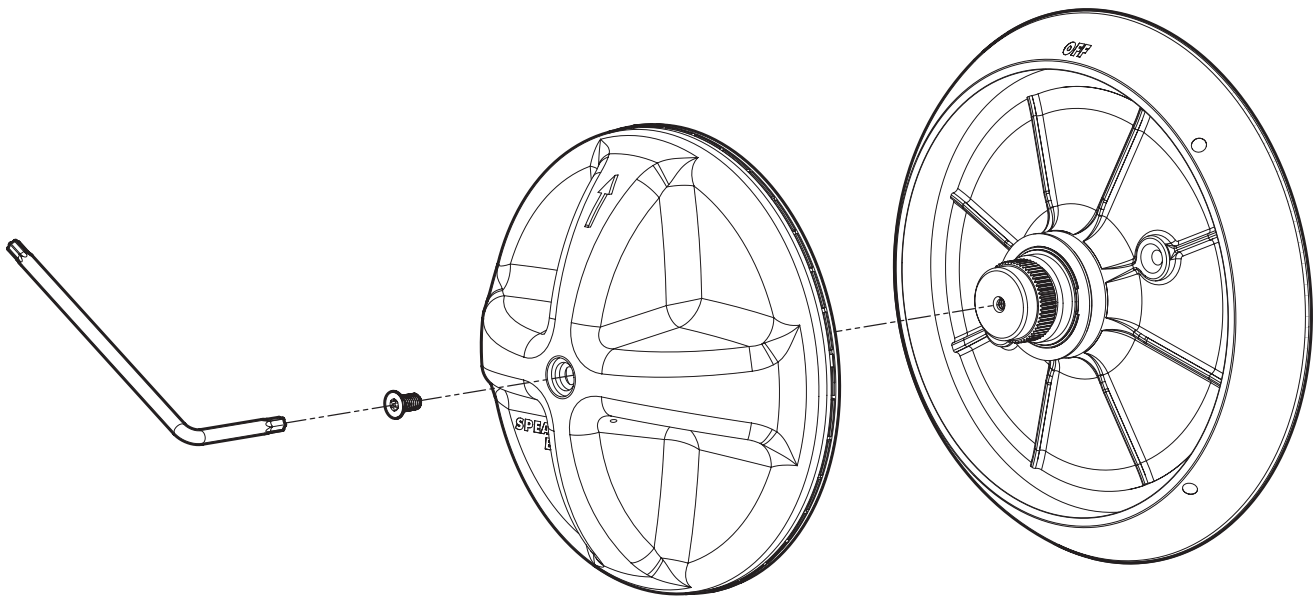
17. Place the Wall Plate over the Splined Hex Shaft. Orient the Wall Plate so the “OFF” marking is at the top position as shown below. Secure Wall Plate to the Shower Valve with the Screws provided.



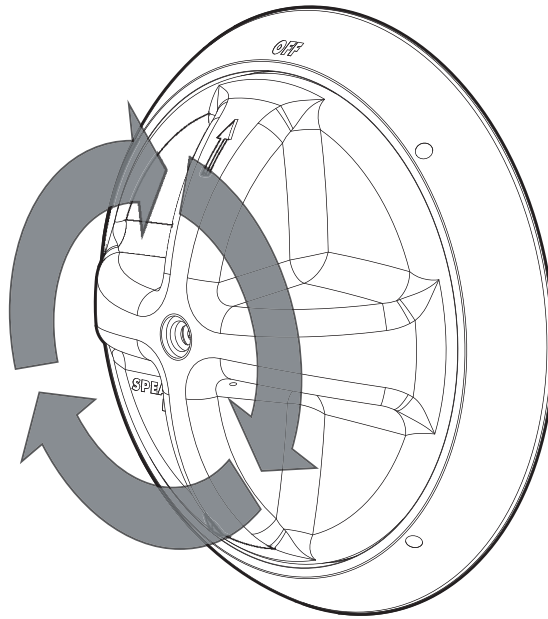
18. Verify that the Friction Ring is properly seated into the Friction Ring Groove of the Wall Plate.



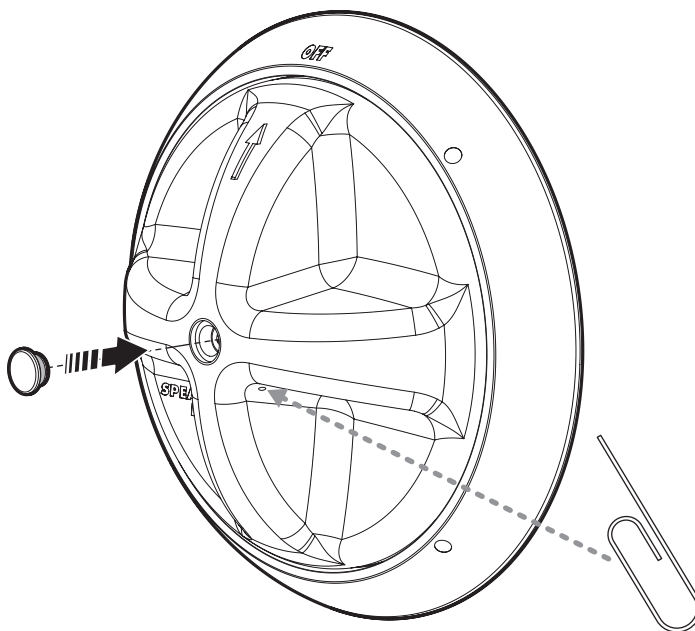
19. Orient the Handle Assembly as shown below with the arrow facing upwards. Install the Handle Assembly over the Wall Plate Splined Shaft. Secure with the Pin-In Torx Screw using the supplied Key Wrench.



20. Verify that the Handle rotates smoothly.



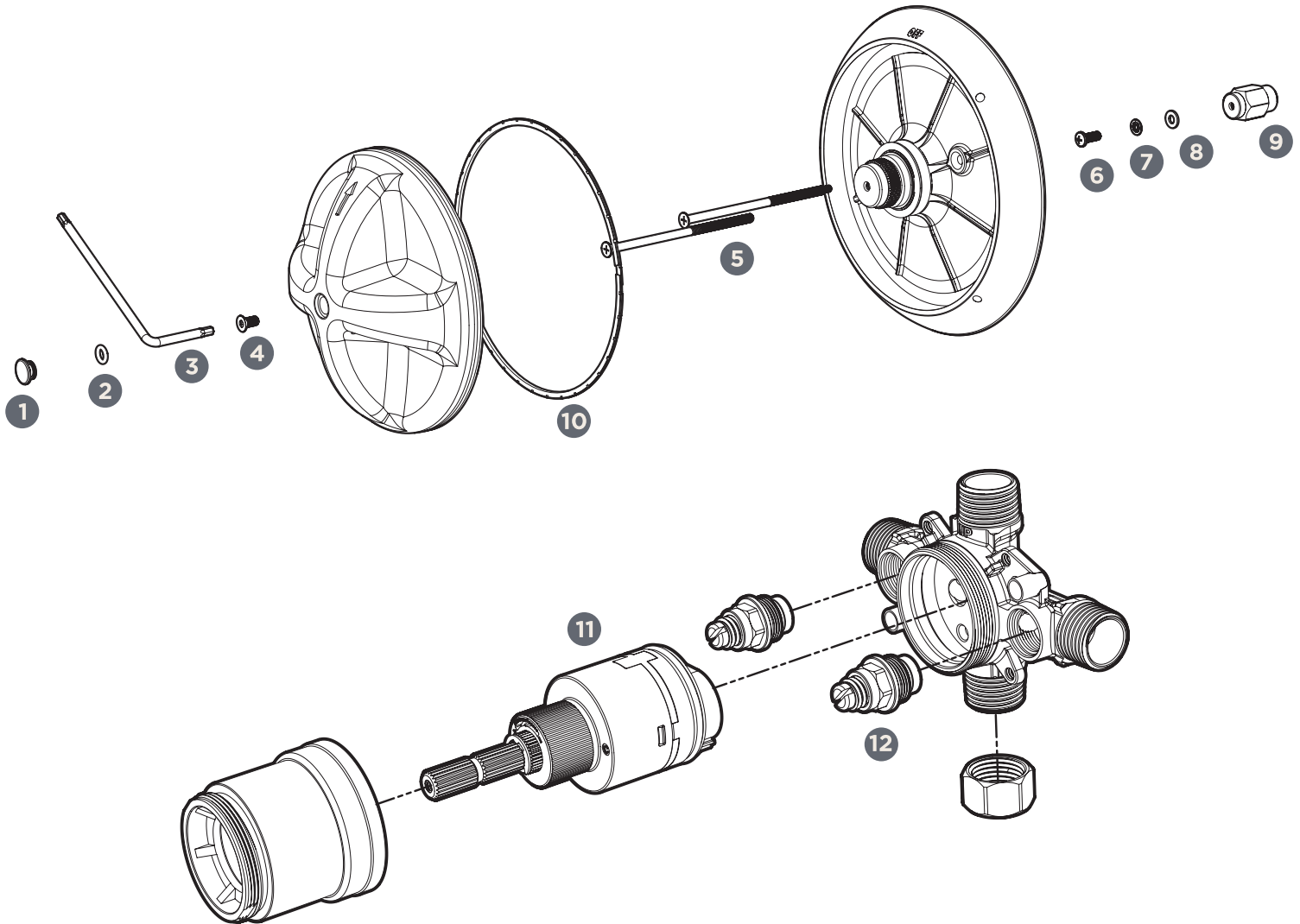
21. Insert Screw Cover with O-Ring installed, into recess of Handle.



MAINTENANCE NOTE

To remove the Screw Cover for maintenance, insert a Paper Clip or similar item into the .04" access hole within the Handle Assembly as shown below.

Repair / Replacement Parts



Item	Part No.	Description
1-9	RPG48-0046	Valve Trim Mounting Hardware
10	RPG22-0049	Valve Trim Handle Friction Ring
11	RPG05-1124	Pressure Balance Valve Cartridge
12	RPG50-21029	Valve Check Stop Repair Kit

Service Instructions

Caution- Any repair or servicing of the Valve may effect the maximum outlet temperature setting of the Valve. After working on the Valve, make sure the maximum outlet temperature is set to the recommended setting of 110 °F.

Pressure Balance Cartridge Removal

1. Remove Trim from Valve. Close the Integral Stops of the Valve by turning the Stop Spindles clockwise.
2. With the Valve in the “OFF” position, remove the Bonnet by unthreading with a Slip Joint Wrench.
3. If necessary, remove the Cartridge from the Valve Body by pulling on the Valve spindle of the Cartridge. Verify that the Lower Cartridge Seal is in place within the Valve Cartridge, and not within the Valve Body.
4. Replace the Pressure Balance Cartridge if necessary. When replacing the Pressure Balance Cartridge, verify that the Lower Cartridge Seal is properly installed in the recess on the bottom of the Cartridge. This Lower Cartridge Seal is positioned over the HOT & COLD inlet waterways of the Valve Body.
5. Reassemble the Bonnet by threading it into the Valve Body with a Slip Joint Wrench. Final torque should be 88-106 in*lb. Important- Adjust the Valve’s maximum outlet temperature to the recommended setting of 110 °F. See Temperature Limit Stop adjustment steps within this document.
6. Open the Integral Stops of the Valve by turning the Stop Spindles counter-clockwise. Check Valve for leaks.
7. Reassemble the Trim parts.

Spring Check Stop Parts Removal

1. Remove Trim from Valve. Shut off HOT and COLD water supply lines to the inlets of the Valve.
2. Unscrew the Stop’s Retaining Nut using a Socket Wrench equipped with a 9/16” (14mm) Deep Well Socket. Carefully remove the Retaining Nut w/Spindle, Spring, and Poppet assembly. Clean and/or replace the necessary parts. Reassemble the parts, reversing the above procedure. Final torque should be 70-106 in*lb. Repeat procedure on the other Stop.
3. Turn on the HOT and COLD water supply lines. Check for leaks.
4. Reassemble the Trim Parts.

Rough-In Diagrams

NOTES:

COMPLIANCE:

ASME A112.18.1/CSA B125.1

ASSE1016/ASME A112.1016/CSA B125.1

CONNECTIONS:

Hot/Cold Inlets: ½" Female Copper Sweat
½" NPT Male

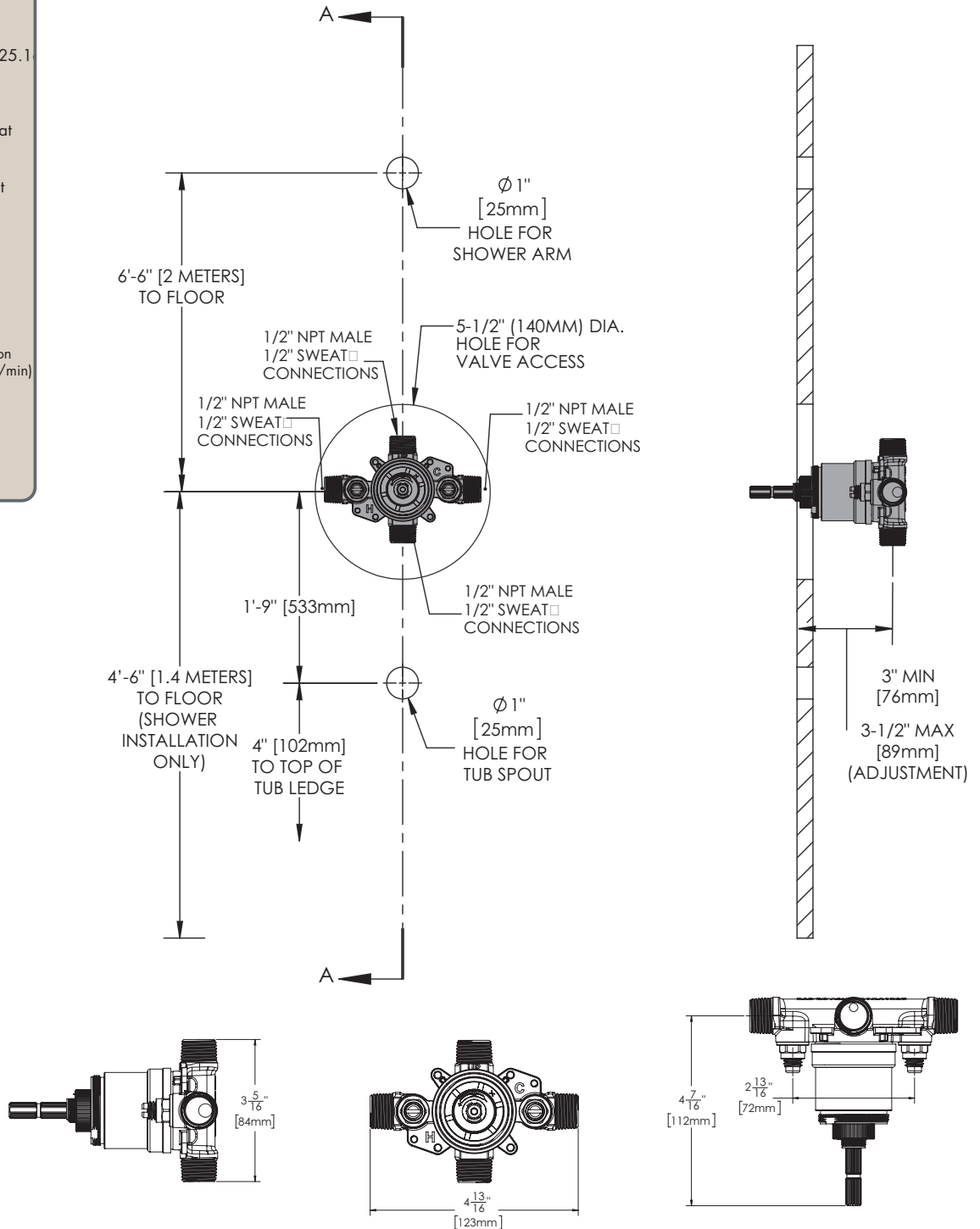
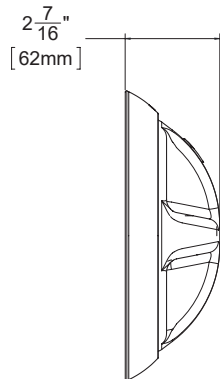
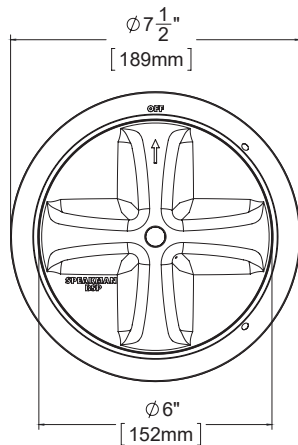
Shower Outlet: ½" Female Copper Sweat
½" NPT Male

Tub Outlet: ½" Female Copper Sweat
½" NPT Male
(Cap included for Shower Only Connections)

NOTES:

This valve is designed to be used in conjunction with a shower-head rated at 1.75 gpm (6.6 L/min) or higher flow rate

Contractor to supply necessary inlet connections.



DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.
FOR ADA MOUNTING LOCATIONS, CONSULT ADAAG, ANSI A117.1, AND STATE REGULATIONS.