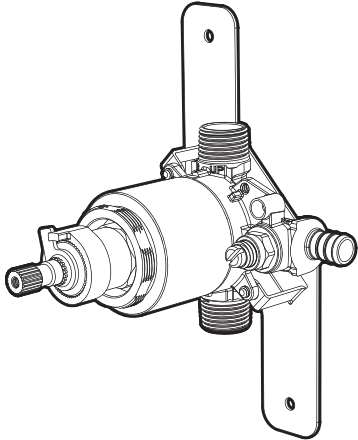
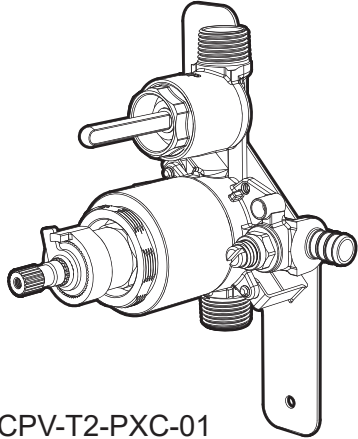


INSTALLATION INSTRUCTIONS

CPV-T2-PXC  
Thermostatic Shower Valve

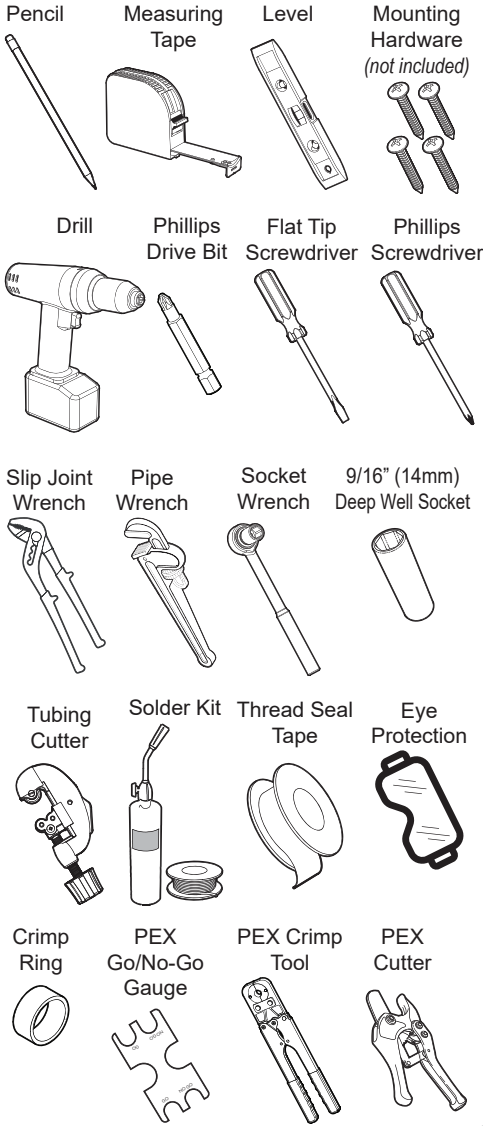


CPV-T2-DV-PXC  
Thermostatic Shower Valve  
with Integral Diverter



92-CPV-T2-PXC-01

TOOLS & SUPPLIES NEEDED



IMPORTANT

**SAFETY TIPS:**  
Be sure to read and understand all instructions before beginning installation.  
Inspect all connections after installation.  
Cover the drain to avoid loss of parts.  
Be sure to wear proper eye protection.  
Do NOT over tighten any connections or damage may occur.  
Shut OFF water supplies before beginning installation.  
Observe all local plumbing and building codes.

**VALVE SPECIFICATIONS:**  
This Valve has an operating range of 20-80 psi.  
This Valve is engineered to be used in conjunction with a Shower Head rated at 1.35 gpm (5.1 L/min) or higher flow rate.  
Maximum water pressure: 125 psi static.  
Minimum water pressure: 20 psi flowing.  
Minimum Cold Supply Temperature: 40°F.  
Maximum Hot Supply Temperature: 160°F.  
Minimum Hot Supply Temperature: 5°F above set point.

CAUTION

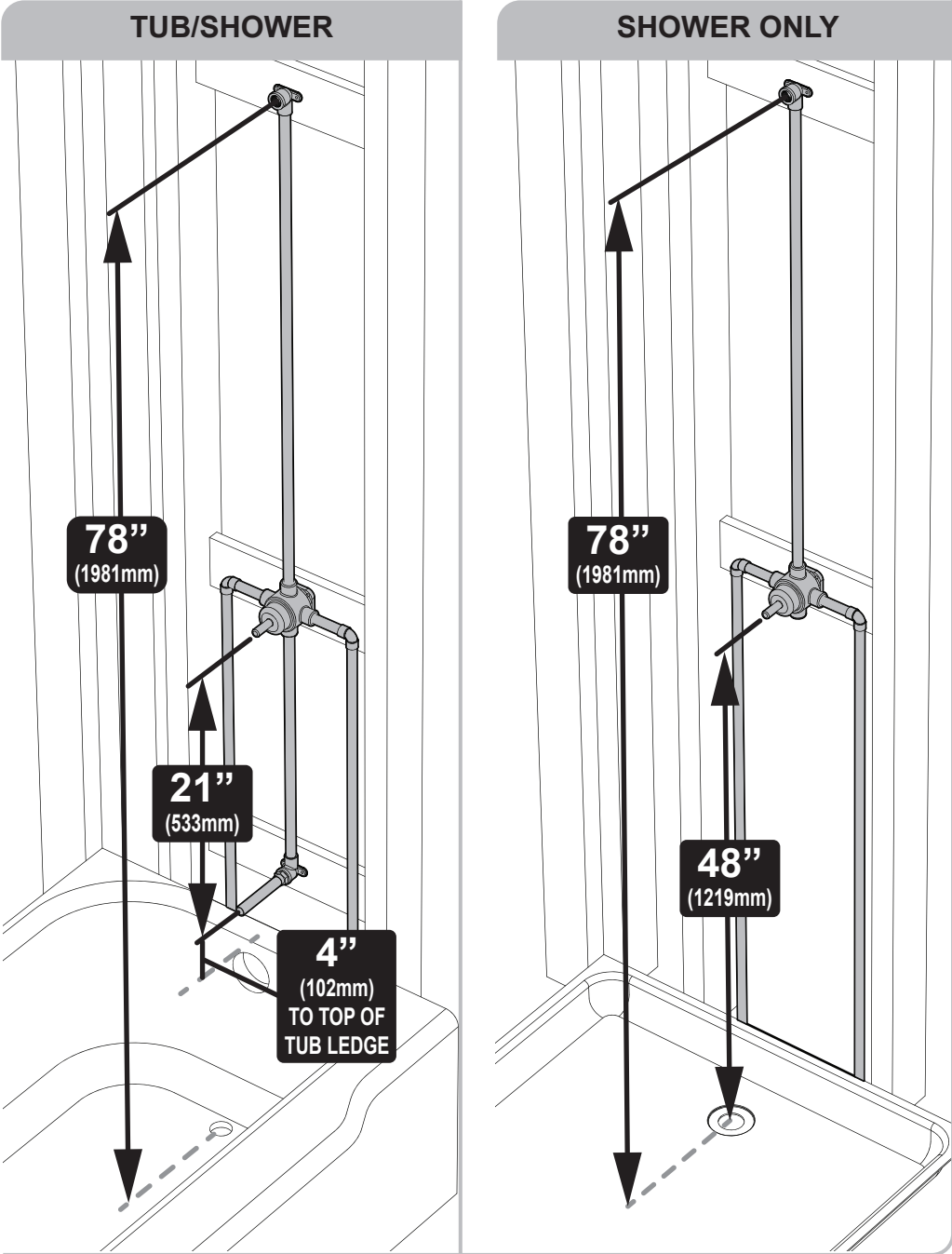
Risk of personal injury. Do NOT use the Valve without properly adjusting the Temperature Limit Stop (TLS) as outlined in this installation manual.  
Ensure proper structure is in place to support the Valve and plumbing during use.

MAINTENANCE

Your new product is designed for years of trouble-free performance.  
This type of valve must be cleaned and maintained on a regular basis. Periodic maintenance should be performed at least every 12 months or after any changes have been made to the building's plumbing system. Valves that are installed outdoors should be winterized by removing all of the internal parts and removing any standing water from the valve. Quarterly the maximum hot temperature setting (TLS) should be checked and adjusted accordingly.  
**FINISH MAINTENANCE:**  
Keep the surface finish looking new by cleaning it periodically with a soft cloth. Avoid abrasive cleaners, steel wool, and harsh chemicals as these will dull the finish and void your warranty.

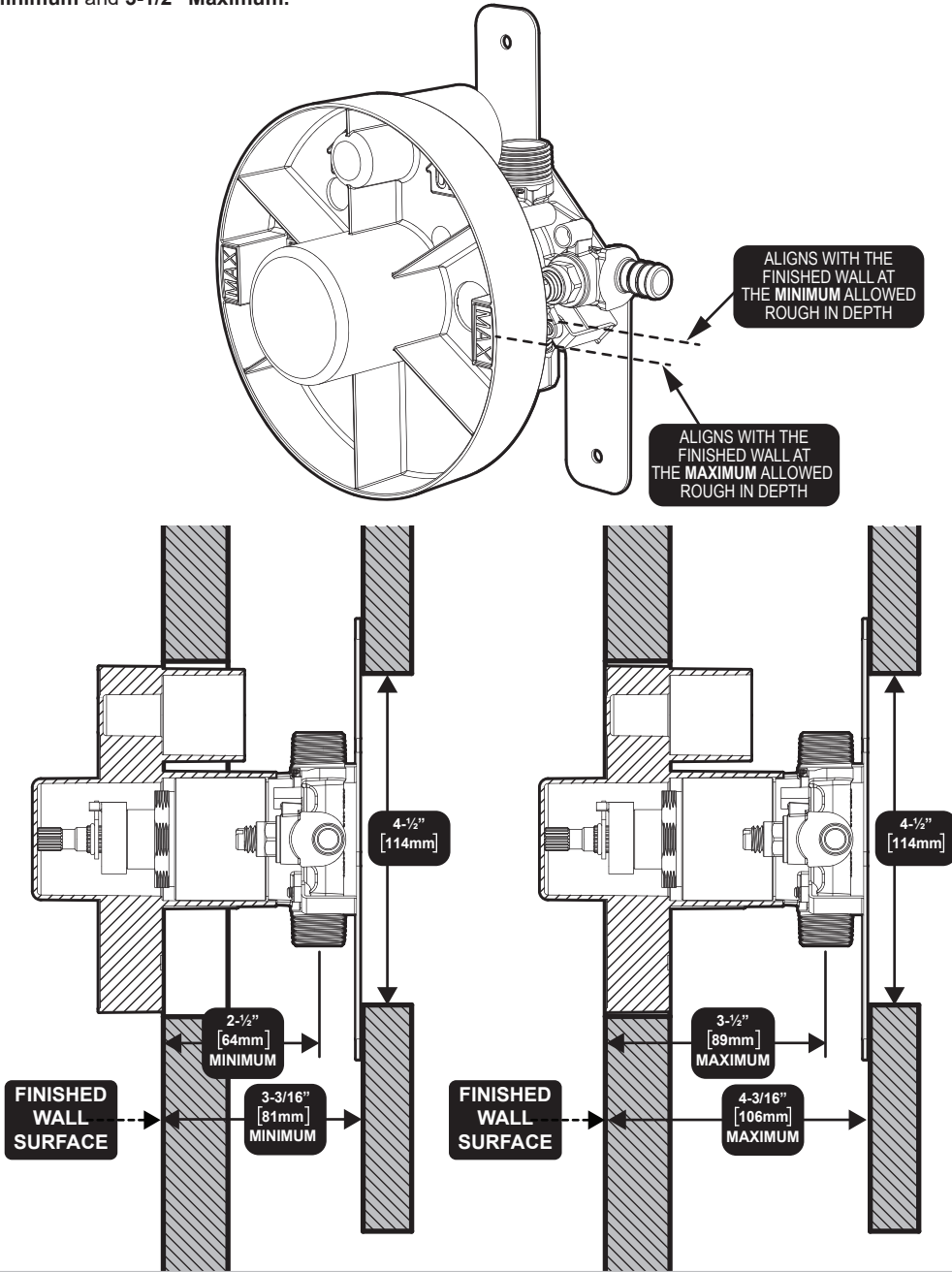
**NEED HELP?**  
For additional assistance or service please contact: 800-537-2107 [www.speakman.com](http://www.speakman.com)

ROUGH IN VERTICAL REFERENCE



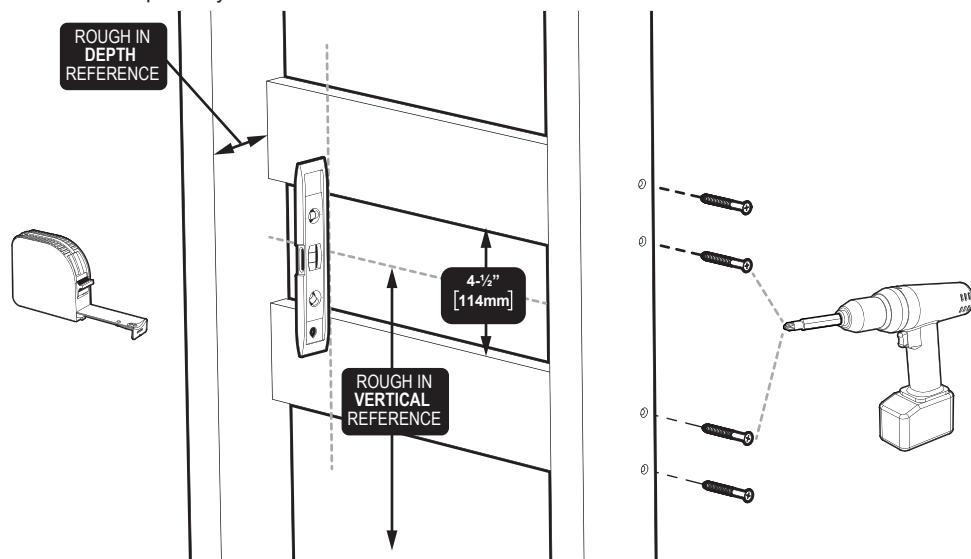
ROUGH IN DEPTH REFERENCE

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 Outlets **MUST** fall between 2-1/2" Minimum and 3-1/2" Maximum.



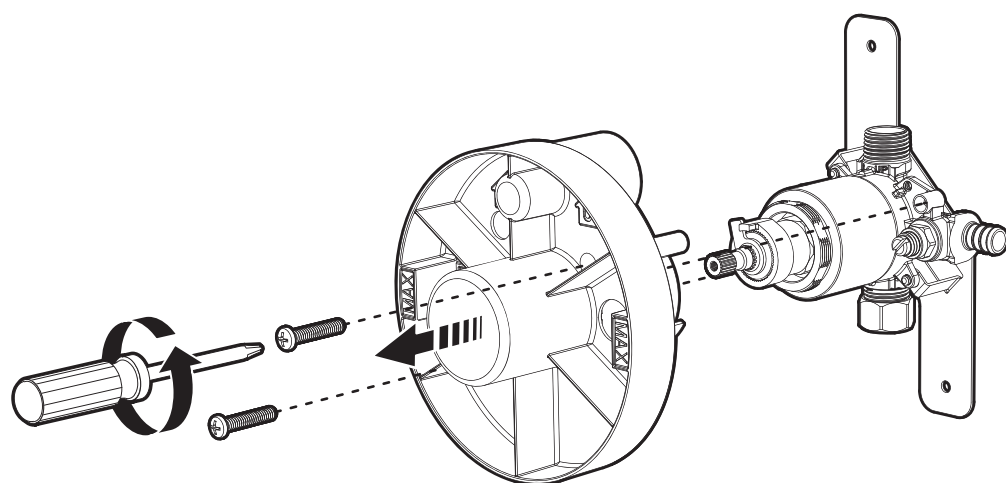
## SITE PREPARATION

- ① Referencing the rough in guides, install two (2) 1" x 4" Cross Braces between the Vertical Studs at the proper height and depth outlined. Use a Level to ensure the front surface of the Cross Braces are perfectly vertical and flush to each other.



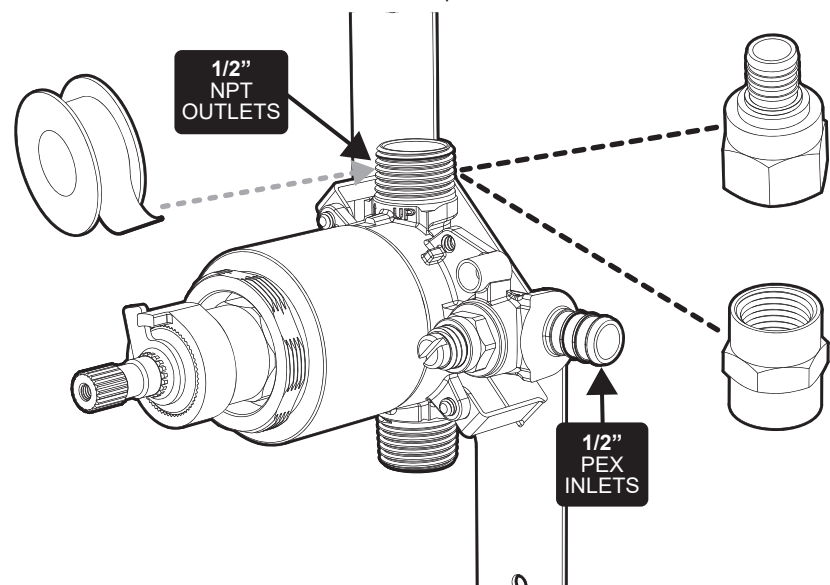
## PREPARE VALVE FOR MOUNTING

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



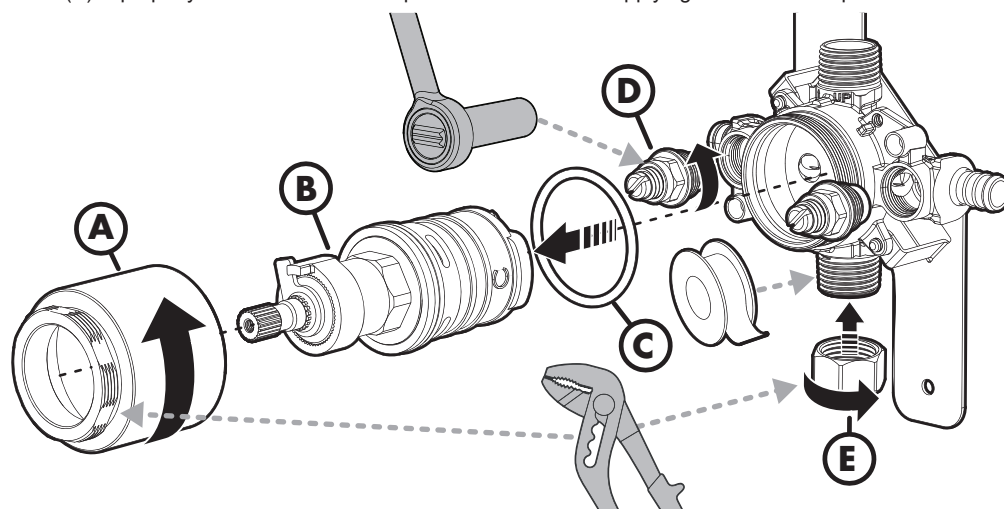
## PREPARE VALVE FOR MOUNTING

- ③ If performing a non-sweat installation, attach necessary adapters to Valve. Thread Seal Tape is recommended on all threaded connections. Skip forward to STEP 6.



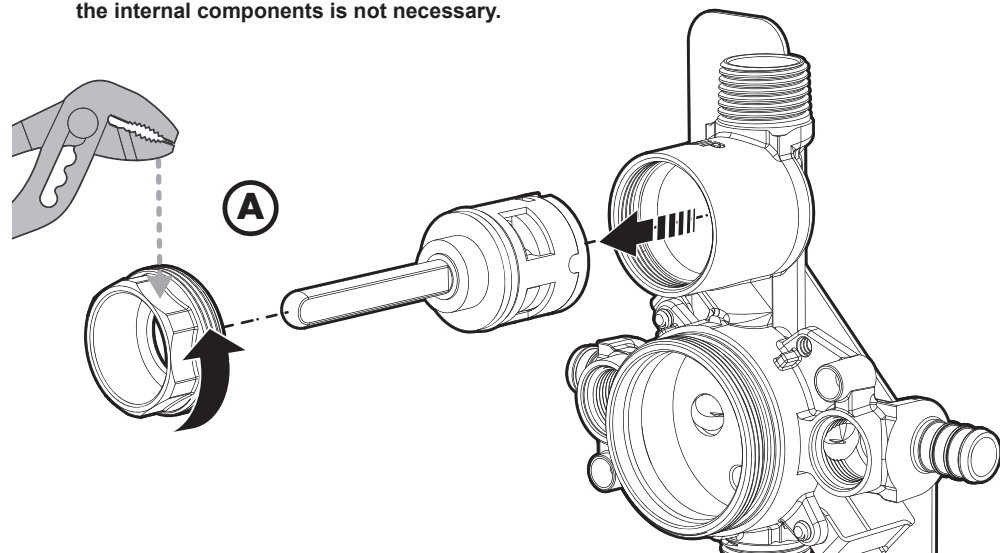
## PREPARE FOR SOLDERED CONNECTIONS

- ④ If planning for a Copper Sweat installation, it is recommended that you remove the Bonnet (A), Valve Cartridge (B) and Valve Body O-Ring (C) as well as the Integral Stops (D) to prevent damage during soldering. If you are performing a non-sweat installation, removal of the internal components is not necessary. If performing a shower only installation, ensure the Cap (E) is properly installed to the lower port of the Valve after applying Thread Seal Tape.



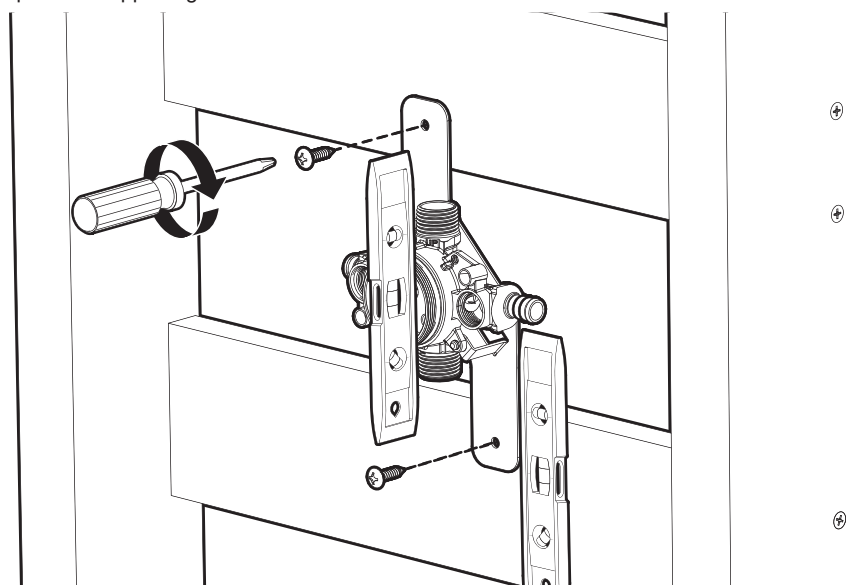
## PREPARE FOR SOLDERED CONNECTIONS

- ⑤ If you are planning for a Copper Sweat installation with an Integral Diverter (-DV), it is recommended that you remove the Diverter Retaining Nut and Diverter Valve Cartridge (A) to prevent damage during soldering. If you are performing a non-sweat installation, removal of the internal components is not necessary.



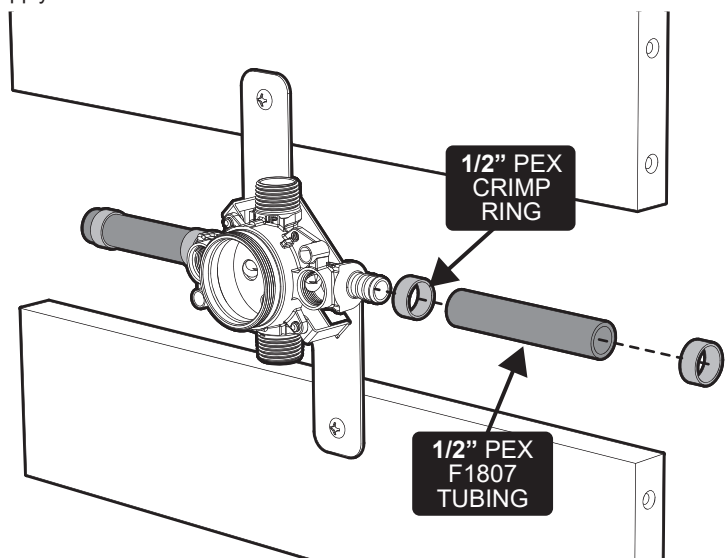
## SECURE VALVE TO STRUCTURE

- ⑥ Using a Level, align Valve into position and secure to Cross Beam using Mounting Screws capable of supporting the Valve in use.



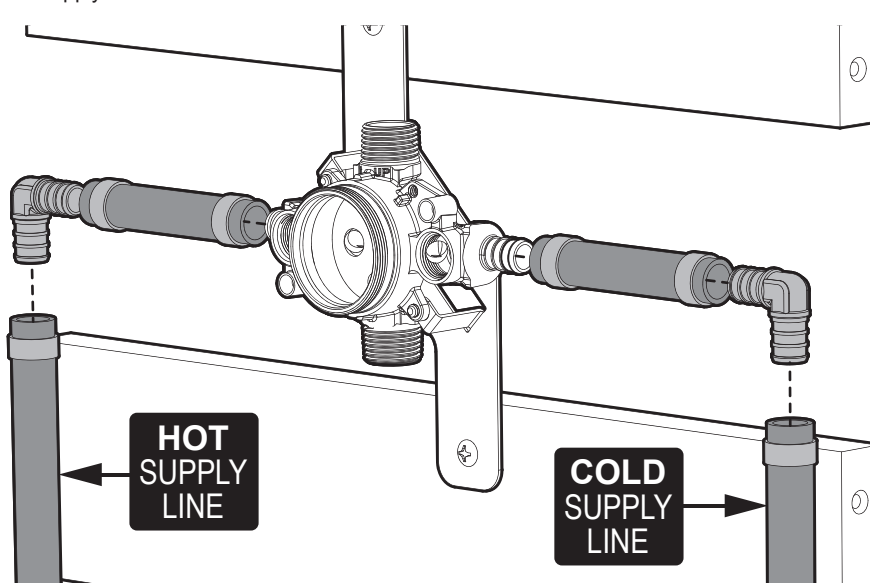
## PLUMB INLET PIPING

- ⑦ Make plumbing connections to the Valve Inlets. Valve Inlet Connections are 1/2" PEX Compression and should be used with F1807 Tubing. Cold Supply to be connected to the Right Inlet, Hot Supply to be connected to the Left Inlet.



## PLUMB SUPPLY LINES TO VALVE

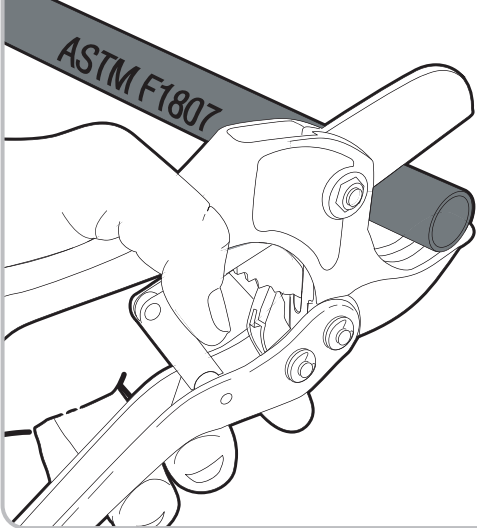
- ⑧ Continue plumbing connections to the Valve Inlets. Cold Supply to be connected to the Right Inlet, Hot Supply to be connected to the Left Inlet.



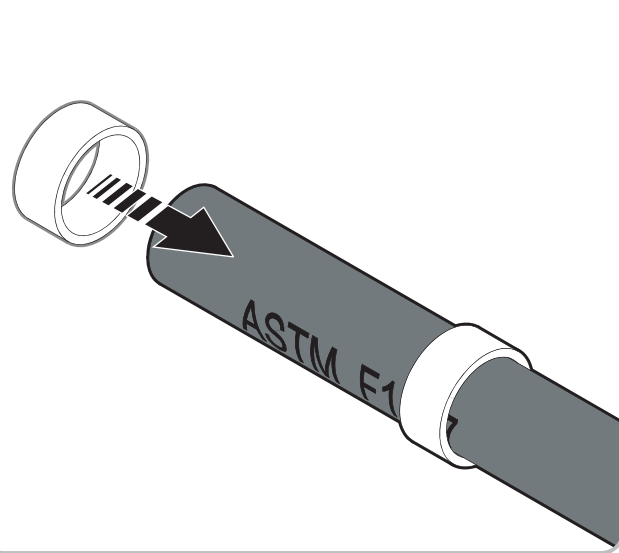


PEX (CRIMP) INSTALLATION INSTRUCTIONS

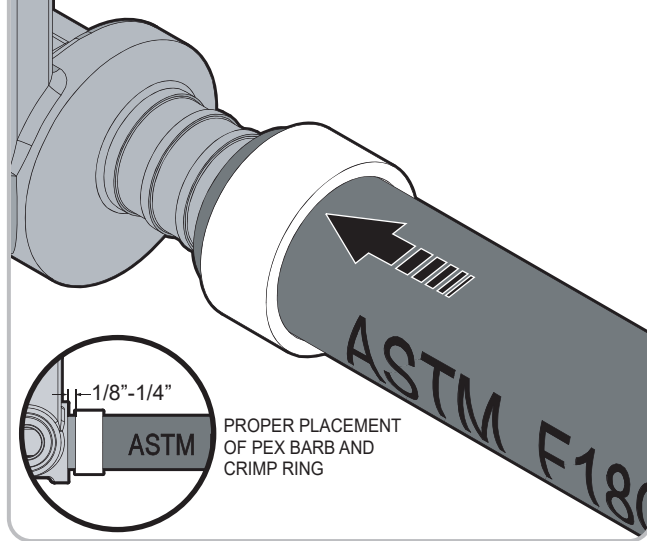
- A** Use Plastic Tubing Cutters (not included), to cut the PEX Tubing to length. Ensure that a good square (90°) cut is obtained. A rough or uneven cut will result in a weakened joint.



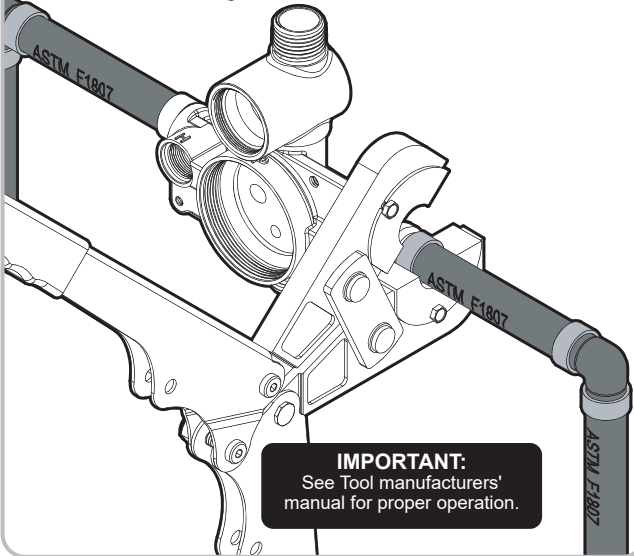
- B** Slide the correct size Crimp Ring (not included) over the PEX Tubing (not included) approximately 2" past the end of the tubing.



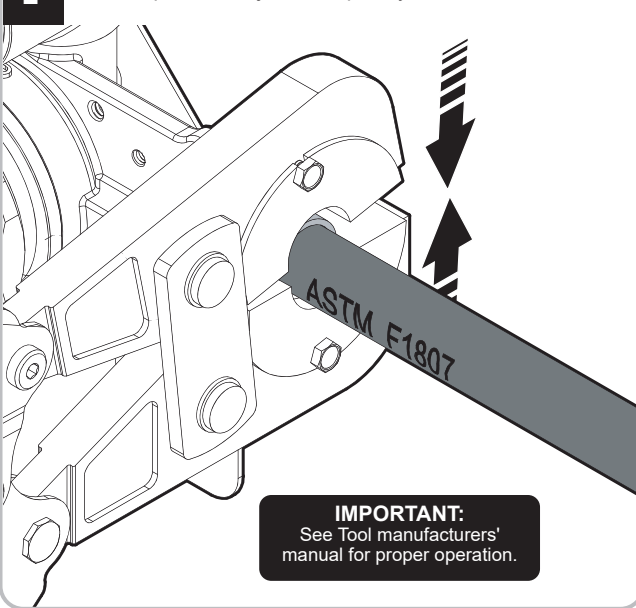
- C** Push the tubing onto the PEX Barb of the Valve until it touches the shoulder. Position the Crimp Ring 1/8" - 1/4" from the end of the tube. This distance ensures that the Crimp Ring is positioned directly over the PEX Barb.



- D** Position the open jaws of the correct size Crimp Tool (not included) over the Crimp Ring ensuring that the tool is held straight.



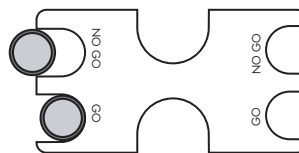
- E** Close/squeeze the jaws completely.



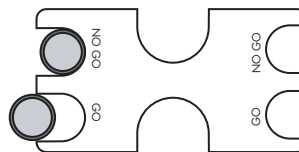
- F** Verify that the connection is secure by using a Go/No-Go Gauge (not included). The Gauge Slot that corresponds to the Crimp Ring size should easily slide onto the compressed Crimp Ring.

**Note:** Do not try to save time by recrimping a crimp that does not gauge properly. The fitting must be cut out and replaced.

**PASS**

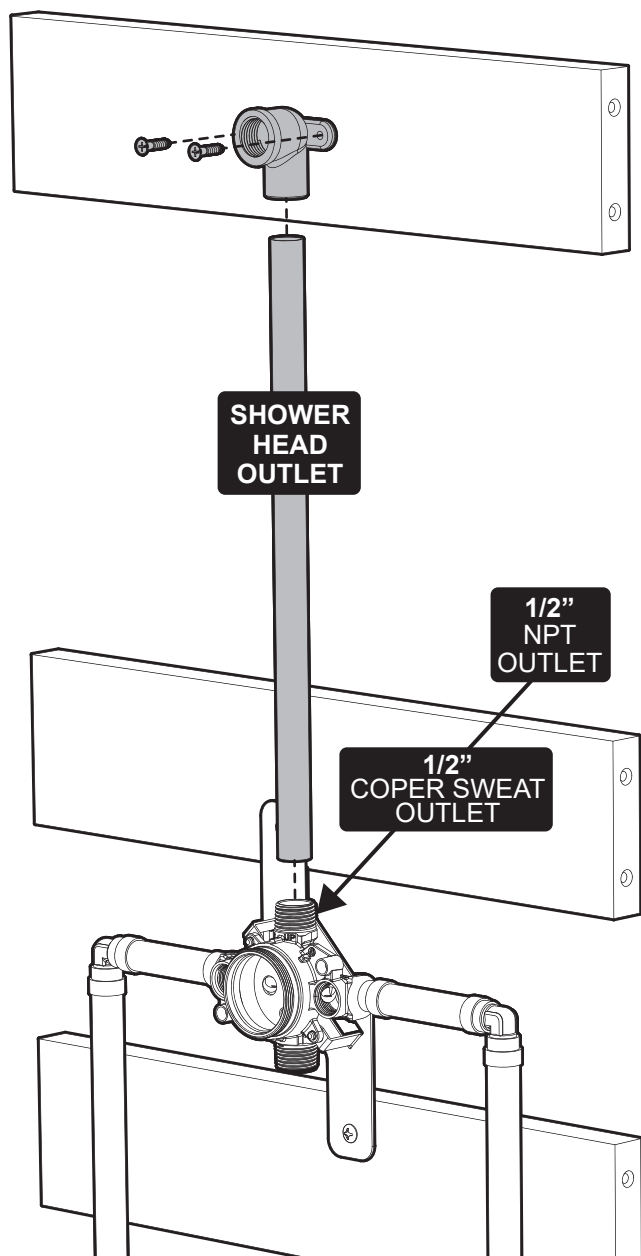


**FAIL**



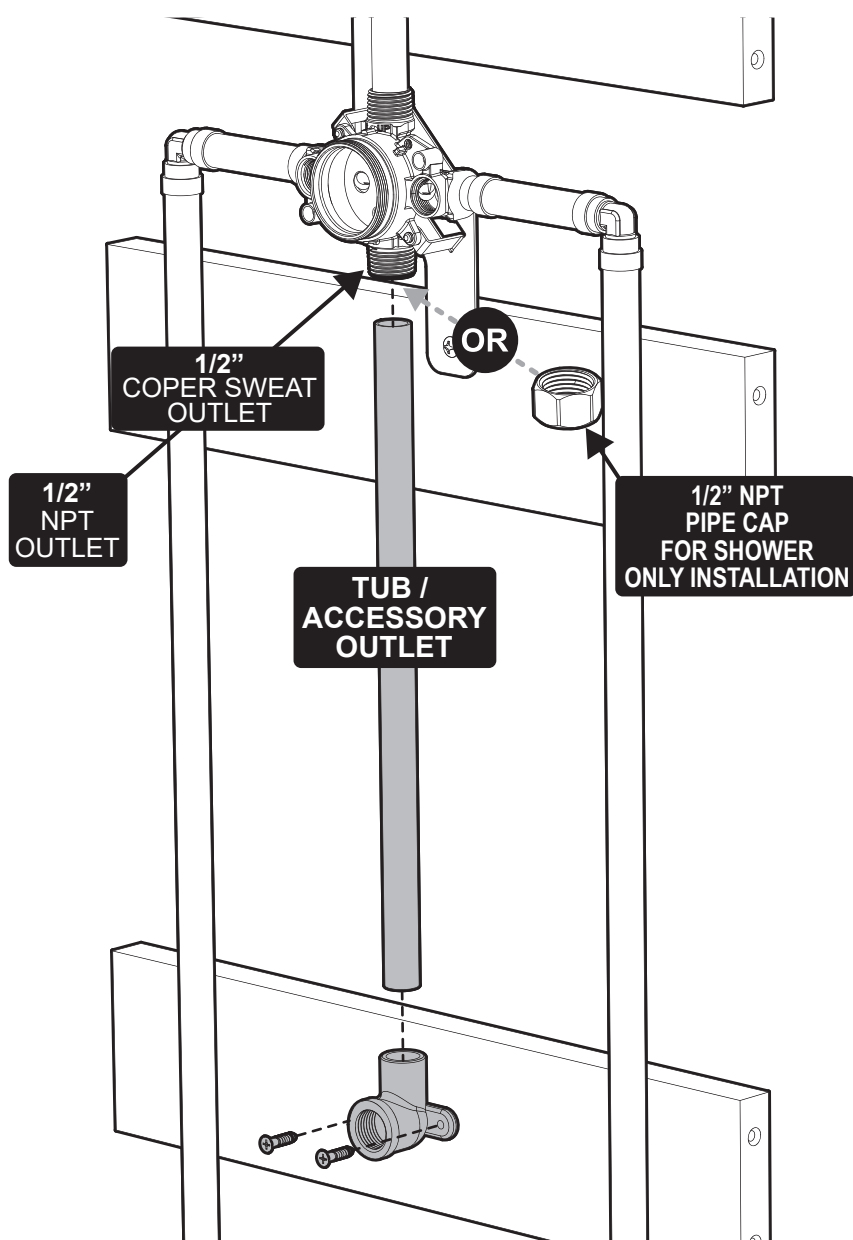
PLUMB SHOWER HEAD OUTLET

- 9** Make plumbing connections to the Shower Head Outlet of the Valve. Shower Head Outlet Connection is 1/2" NPT Male (1/2" Copper Sweat). 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 is recommended on all threaded connections.



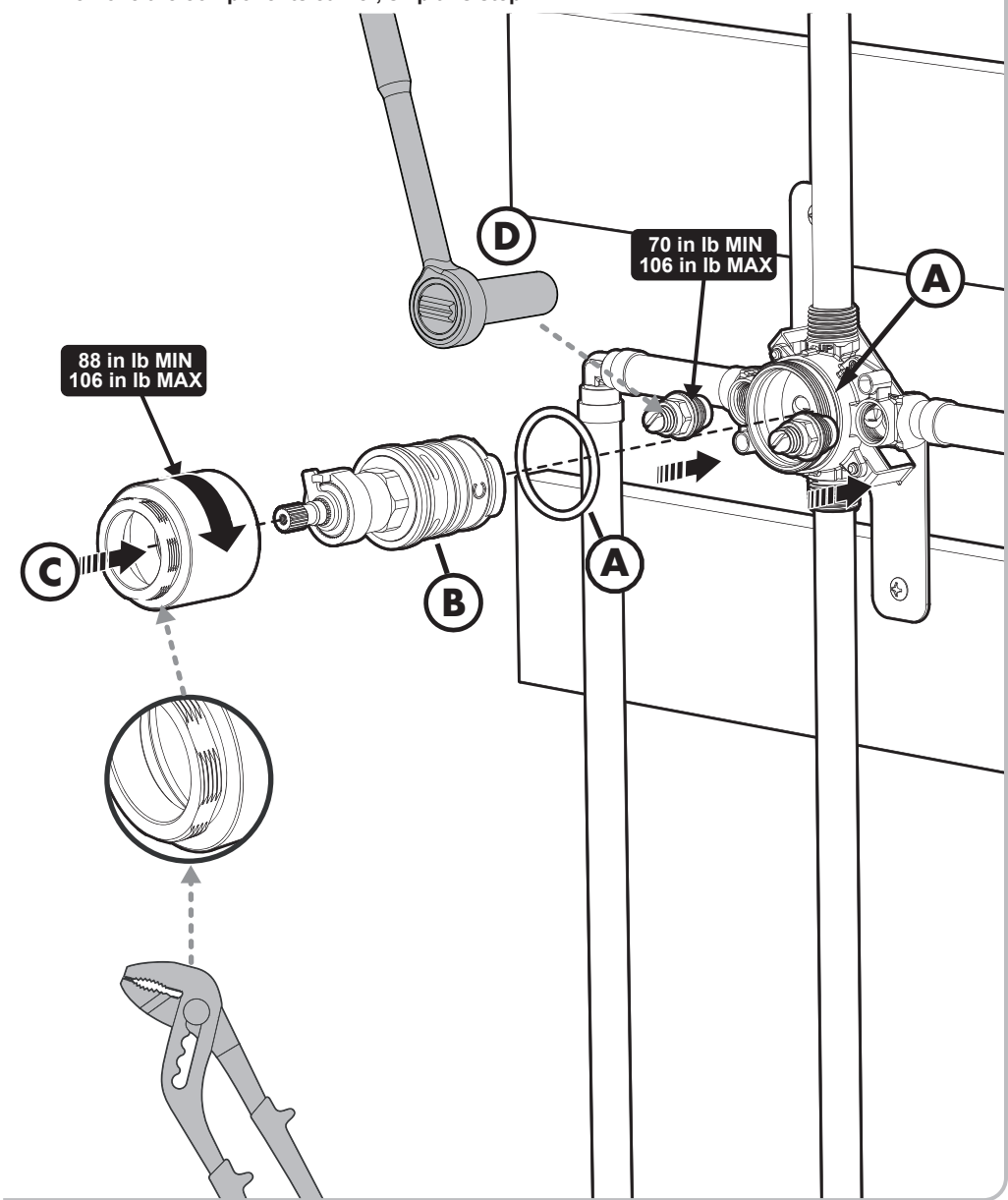
PLUMB TUB/ACCESSORY OUTLET

- 10** Make plumbing connections to the Tub/Accessory Outlet of the Valve. Tub/Accessory Outlet Connection is 1/2" NPT Male (1/2" Copper Sweat). 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 is recommended on all threaded connections.



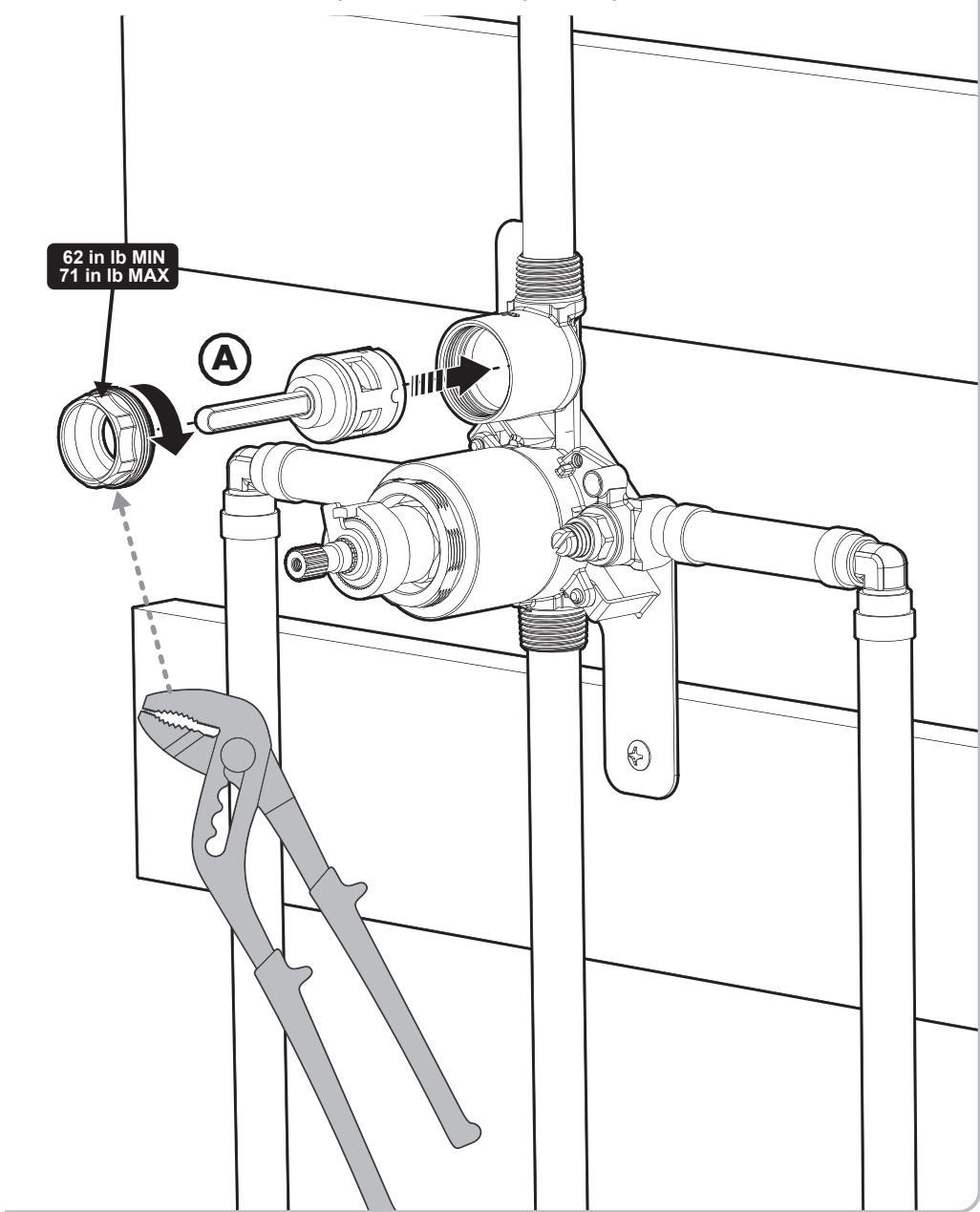
## REINSTALL VALVE COMPONENTS

- 11** If you performed a Copper Sweat installation and removed the internal components of the Valve, reinstall the components at this time. Slip the Valve Body O-Ring (A) onto the groove of the



## REINSTALL DIVERTER VALVE COMPONENTS

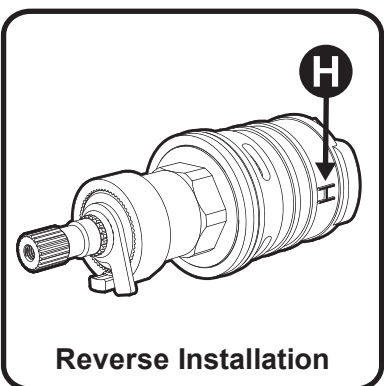
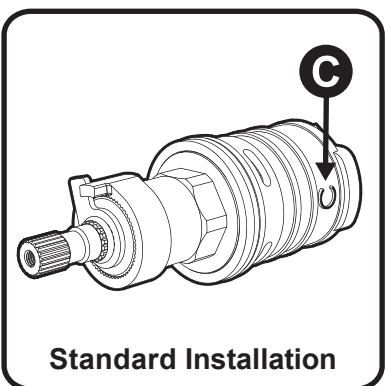
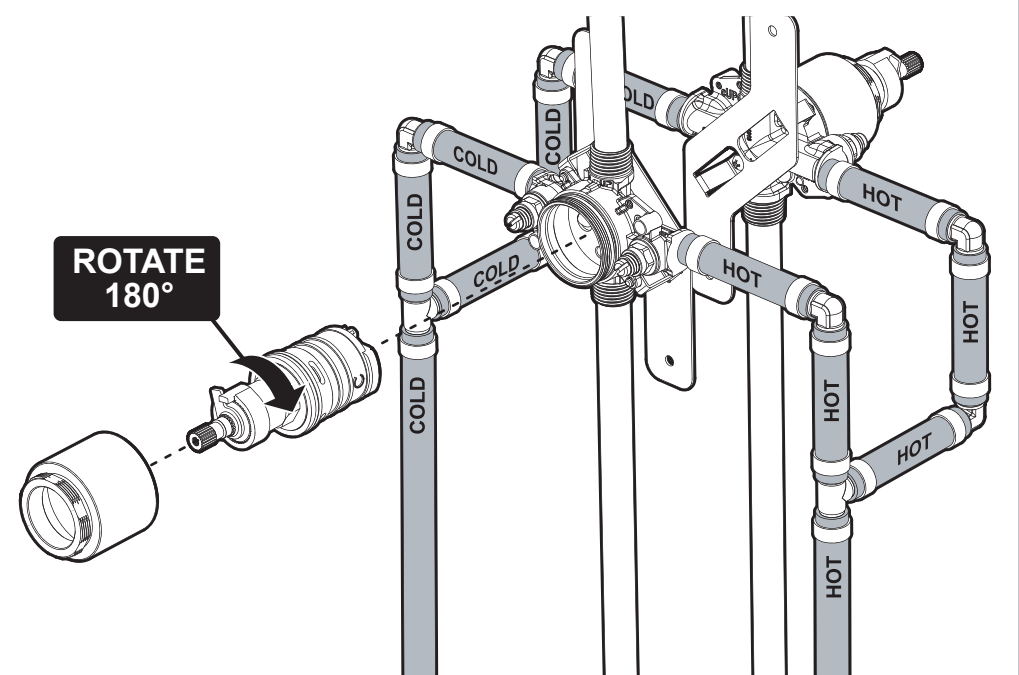
- 12** If you performed a Copper Sweat installation and removed the Diverter Retaining Nut and Diverter Valve Cartridge (A), reinstall the components at this time. Reinstall the Diverter Cartridge



## BACK TO BACK INSTALLATION

- 13** 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.

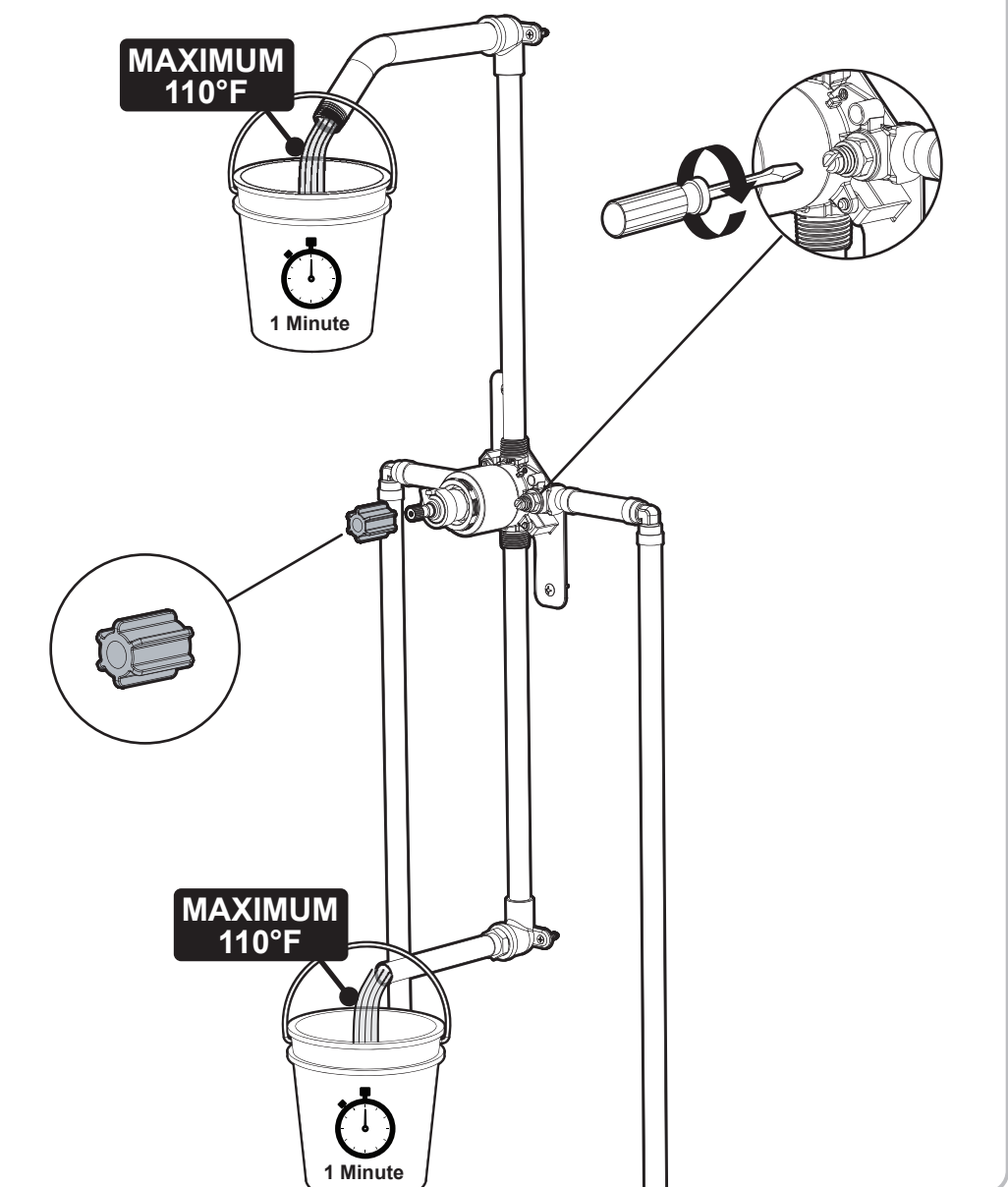
**If you are NOT making a reverse or back-to-back installation, skip this step.** If the HOT and COLD water supplies are reversed (HOT on right and COLD on left), disassemble Valve Cartridge as outlined in STEP 4. Rotate Valve Cartridge 180° so "H" appears on the right. Reinstall the Valve Cartridge making sure that the mounting posts are aligned and engaged to the corresponding holes in the Valve Body. Reinstall Bonnet as outlined in STEP 11.



## FLUSH SYSTEM / CHECK FOR LEAKS

- 14** Temporarily place the Spindle Adapter on to the Valve Spindle. Rotate the Spindle Adapter counter-clockwise to ensure the Valve is in the "OFF" position. With the Valve in the "OFF" position,

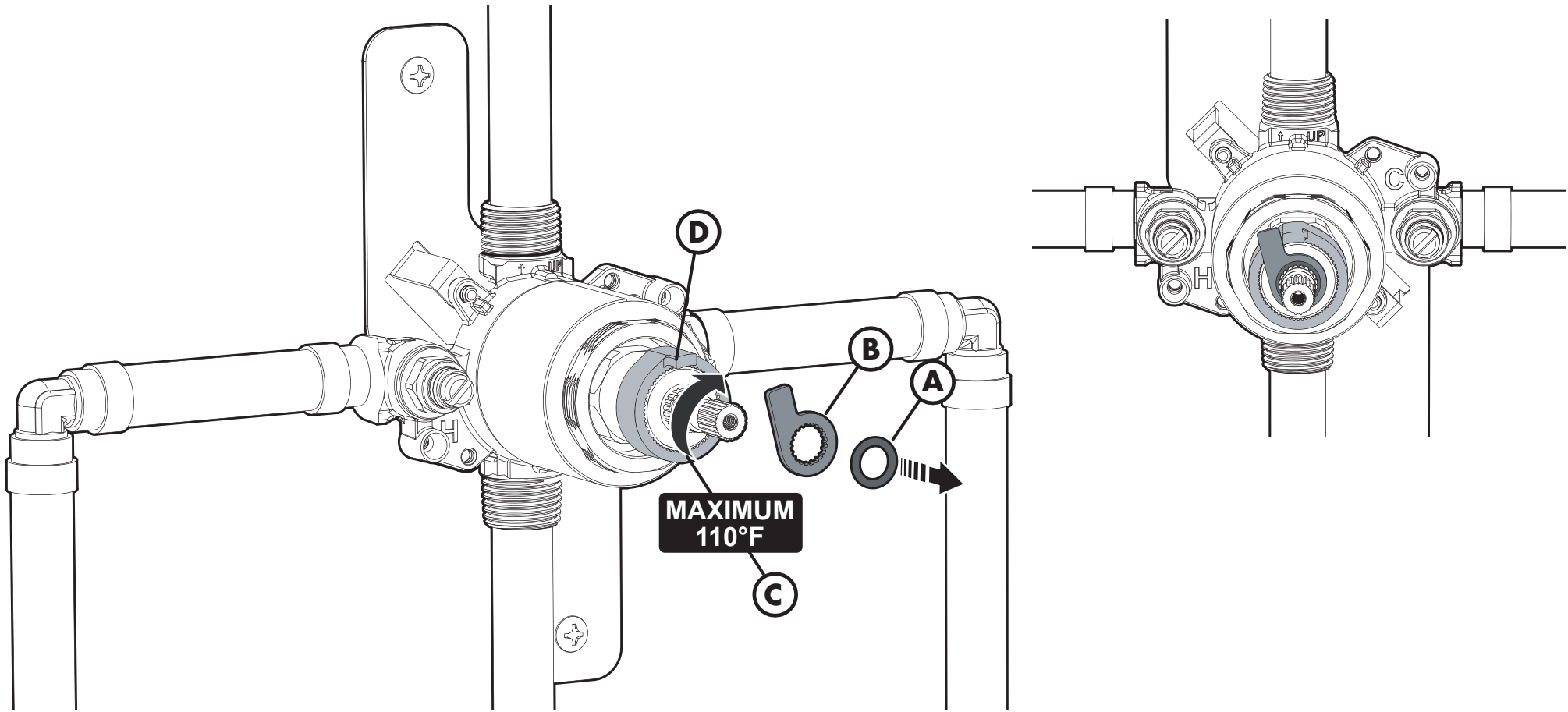
turn "ON" water supplies and inspect for leaks. Place a bucket at the Shower/Tub outlets. Turn the Spindle Adapter clockwise to the full "ON" position. Flush each outlet for 1 minute. Verify the outlet temperature using a thermometer. Return the Spindle Adapter to the "OFF" position by rotating counter-clockwise 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.





TEMPERATURE LIMIT STOP (TLS) ADJUSTMENT

**15** 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) Plate by following the steps below.

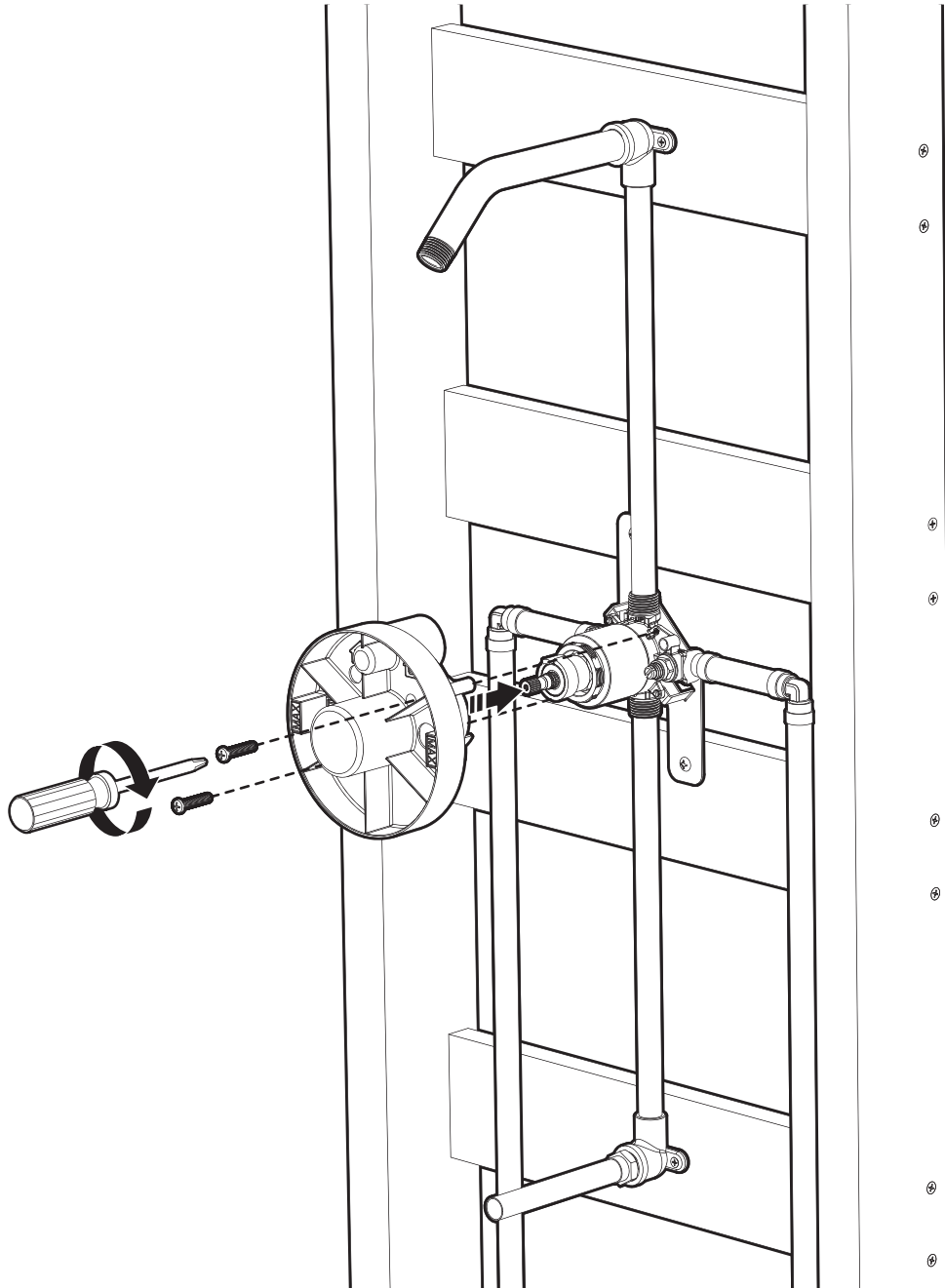


ADJUSTING THE TEMPERATURE LIMIT

- With the water supplies "On" and the Valve in the "Off" position, remove the retaining O-Ring (A) and TLS Plate (B).
- Rotate the Valve Spindle clockwise to the maximum desired temperature (C).
- Reinstall the TLS Plate (B) as shown so it contacts the left side of the Lug (D) and restricts further clockwise movement.
- Reinstall the O-Ring (A) to secure the TLS Plate (B) into position.
- Return the Valve to the "OFF" position by rotating the Valve Spindle counter-clockwise.

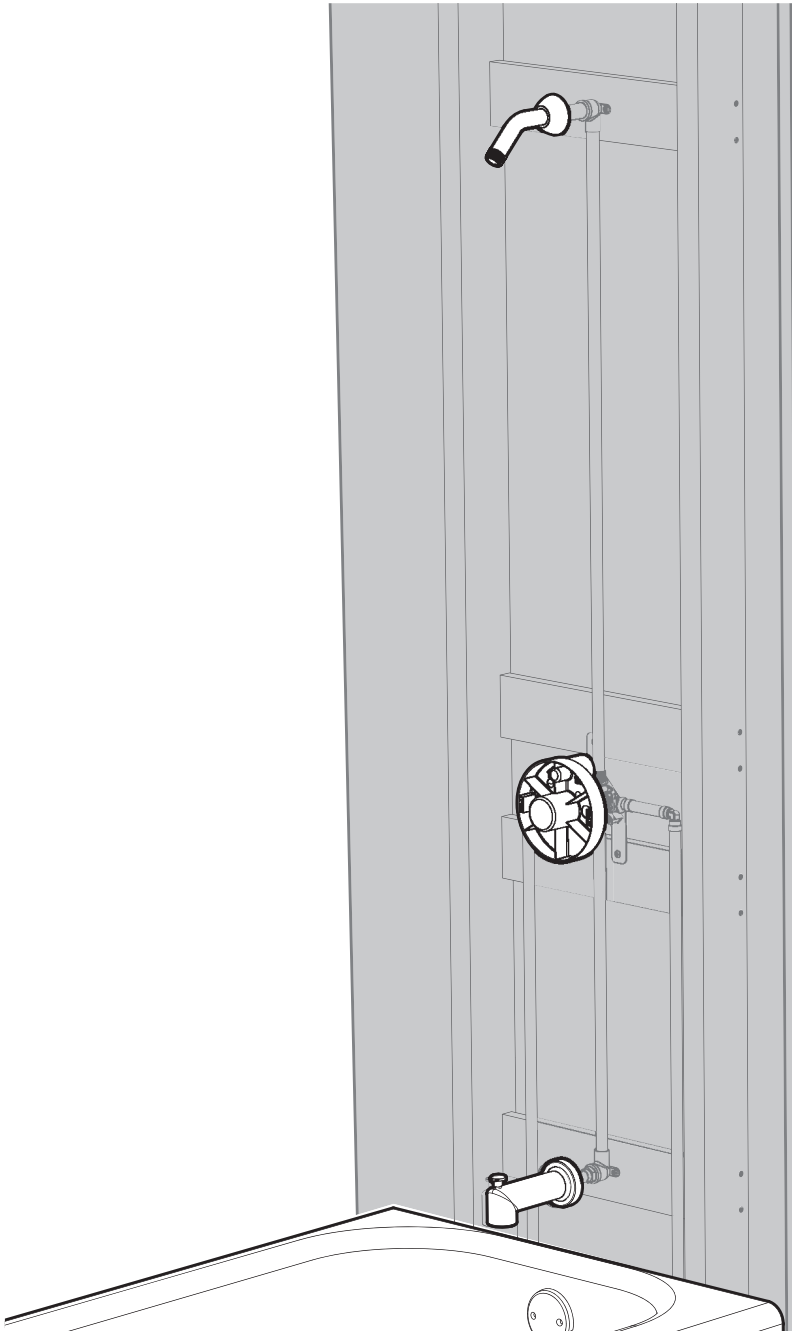
REINSTALL PROTECTIVE COVER

**16** Reinstall Protective Cover, and Screws previously removed.



FINISHED WALL CONSTRUCTION

**17** Complete finished wall construction and installation of both the Shower Head outlet and Tub/Accessory outlet. Cut Valve access opening using the Protective Cover as a guide.



## SERVICE INSTRUCTIONS

### Service Instructions

Caution- Any repair or servicing of the Valve may affect 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.

#### Valve Cartridge Removal

- 1) Remove Trim from Valve. Close the Integral Stops of the Valve by turning the Stop Screws clockwise.
- 2) With the Valve in the "OFF" position, remove the Bonnet by unthreading with a Slip Joint Wrench.
- 3) Remove the Valve Cartridge from the Valve Body by pulling on the Spindle of the Valve Cartridge. Verify that the Lower Cartridge Seal is in place within the Valve Cartridge, and not within the Valve Body.
- 4) Inspect the Integral Screens to verify the are debris free. If debris is present, clean the Screen material.
- 5) Replace the Valve Cartridge if necessary.
- 6) 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 section of this installation manual*.

- 7) Open the Integral Stops of the Valve by turning the Stop Screws counterclockwise. Check Valve for leaks.
- 8) 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.

#### Diverter Cartridge Removal

- 1) Remove Trim from Valve. Close the Integral Stops of the Valve by turning the Stop Screws clockwise.
- 2) Remove the Diverter Valve Retaining Nut using a Slip Joint Wrench.
- 3) Remove Diverter Cartridge from the Valve Body. Verify that the Lower Cartridge Seal is in place and not within the Valve Body.
- 4) Replace the Diverter Cartridge if necessary. When replacing the Diverter Cartridge, make sure that the mounting posts are aligned and engaged to the corresponding holes of the Cartridge Adapter.
- 5) Reassemble the Diverter Valve Retaining Nut using a Slip Joint Wrench. Final torque should be 62-71 in\*lb.
- 6) Open the Integral Stops of the Valve by turning the Stop Screws counterclockwise. Check for leaks.
- 7) Reassemble the Trim Parts.

## PRODUCT WARRANTY

This product is warranted to be free of defects in material and workmanship for the period listed below from the date of installation.

**Consumer/Residential: Limited Lifetime Warranty**  
**Commercial Use: 5 Year Limited Warranty**

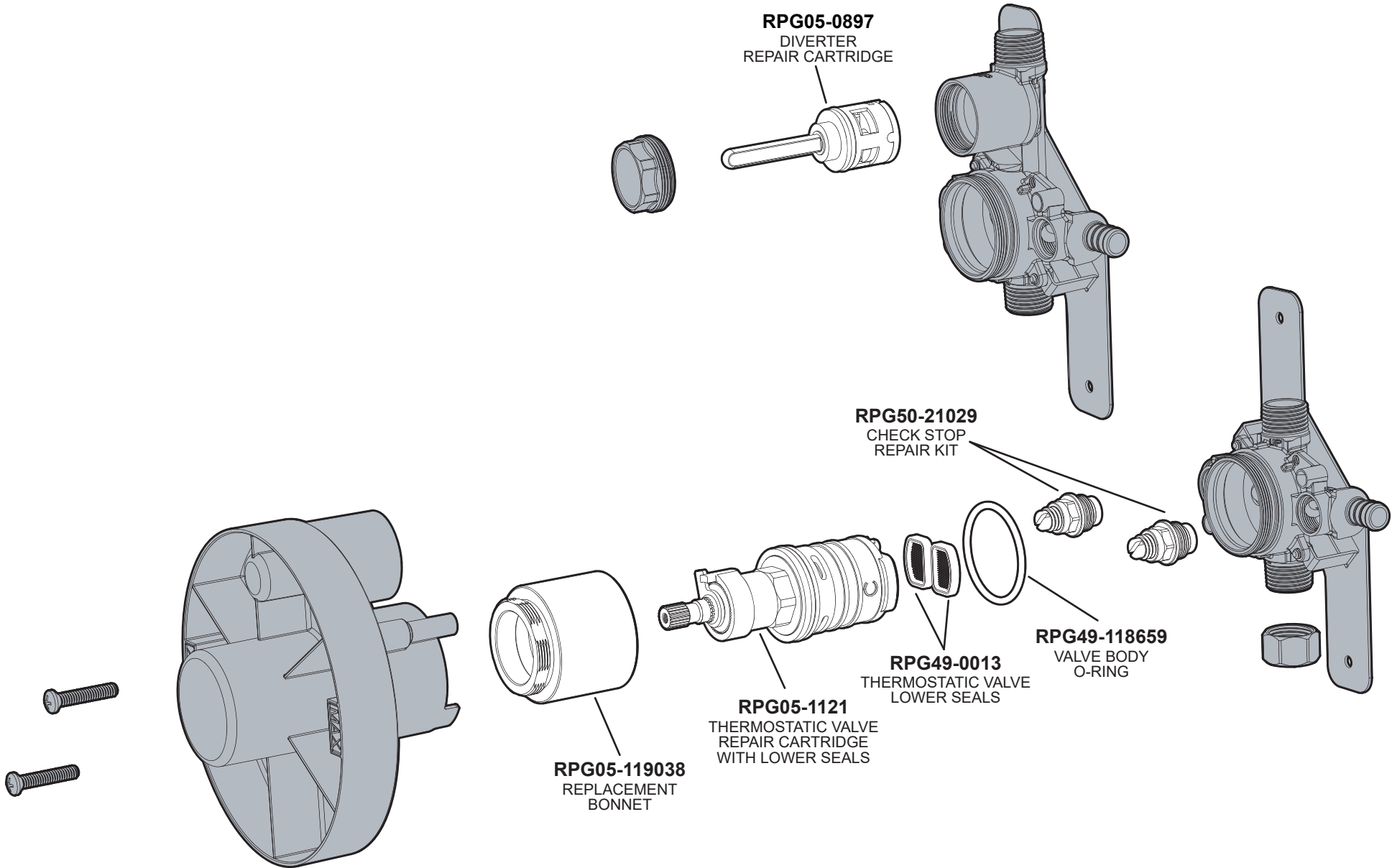
Speakman warrants to its purchasers only ("Buyer") that goods are sold free from defects in materials and workmanship and conform to Speakman's specifications at the time of manufacturing, provided the goods are properly installed and maintained. Buyer's sole and exclusive remedy for any goods that may prove to have had a non-conformance within the Warranty Period shall be, at Speakman's sole option, the repair or replacement of the non-conforming goods. For additional information please go to [www.speakman.com](http://www.speakman.com).

## CALIFORNIA PROPOSITION 65



**CALIFORNIA PROPOSITION 65:**  
**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). Wash hands after installation, repair, or removal of this product.

## REPAIR PARTS





## CPV-T2-PXC ROUGH-IN DIAGRAM

## COMPLIANCE

ASME A112.18.1 / CSA B125.1  
ASSE 1016 / ASME A112.1016 / CSA B125.16

## CONNECTIONS

HOT / COLD Inlets: 1/2" PEX ASTM F1807

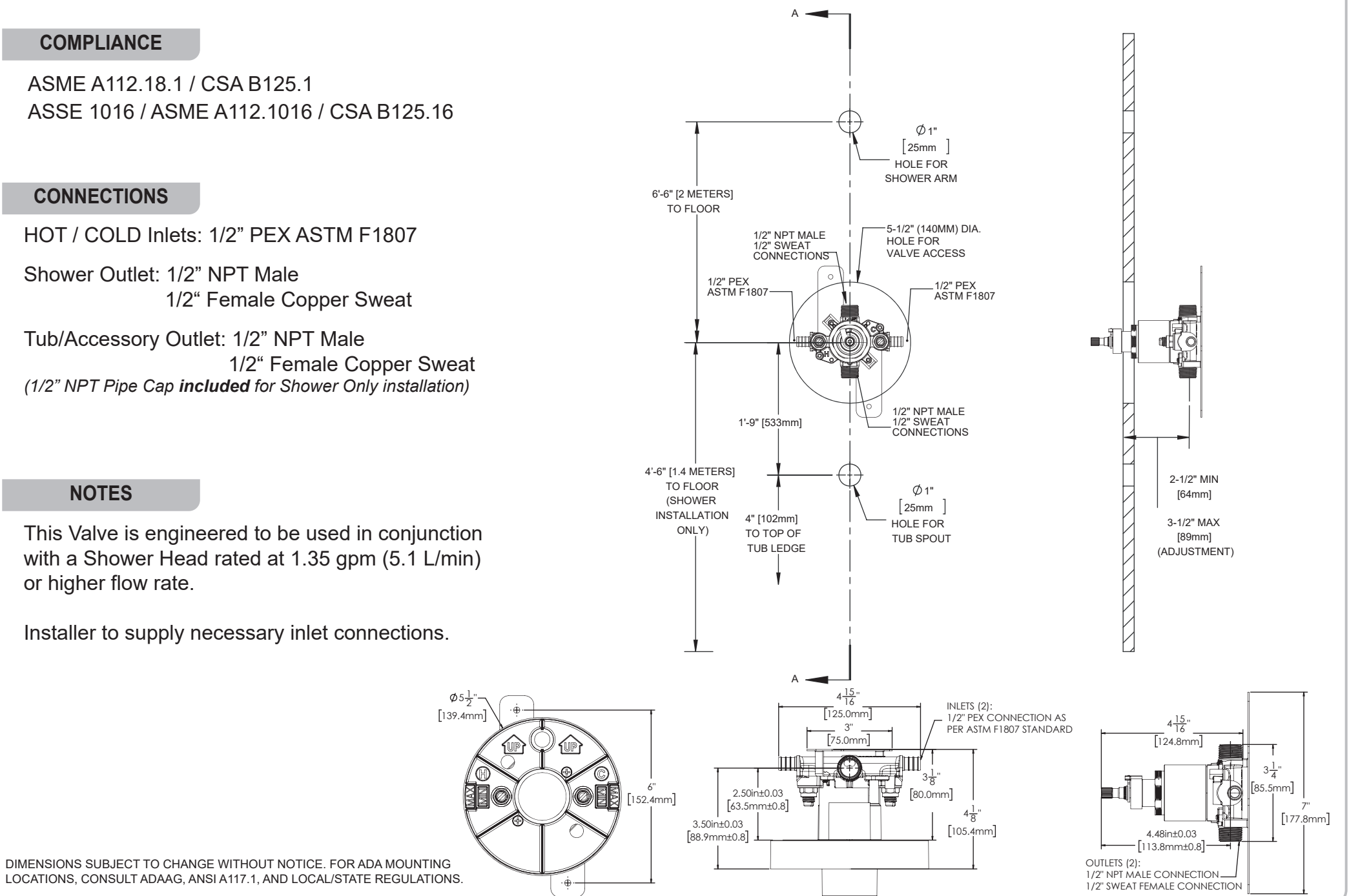
Shower Outlet: 1/2" NPT Male  
1/2" Female Copper Sweat

Tub/Accessory Outlet: 1/2" NPT Male  
1/2" Female Copper Sweat  
(1/2" NPT Pipe Cap **included** for Shower Only installation)

## NOTES

This Valve is engineered to be used in conjunction with a Shower Head rated at 1.35 gpm (5.1 L/min) or higher flow rate.

Installer to supply necessary inlet connections.



## CPV-T2-DV-PXC ROUGH-IN DIAGRAM

## COMPLIANCE

ASME A112.18.1 / CSA B125.1  
ASSE 1016 / ASME A112.1016 / CSA B125.16

## CONNECTIONS

HOT / COLD Inlets: 1/2" PEX F1807

Shower Outlet: 1/2" NPT Male  
1/2" Female Copper Sweat

Tub/Accessory Outlet: 1/2" NPT Male  
1/2" Female Copper Sweat  
(1/2" NPT Pipe Cap **included** for Shower Only installation)

## NOTES

This Valve is engineered to be used in conjunction with a Shower Head rated at 1.35 gpm (5.1 L/min) or higher flow rate.

Installer to supply necessary inlet connections.

