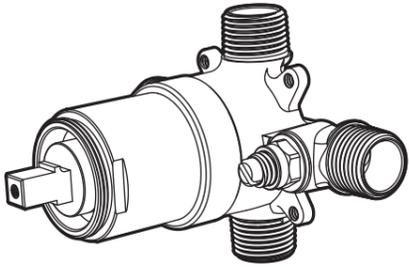


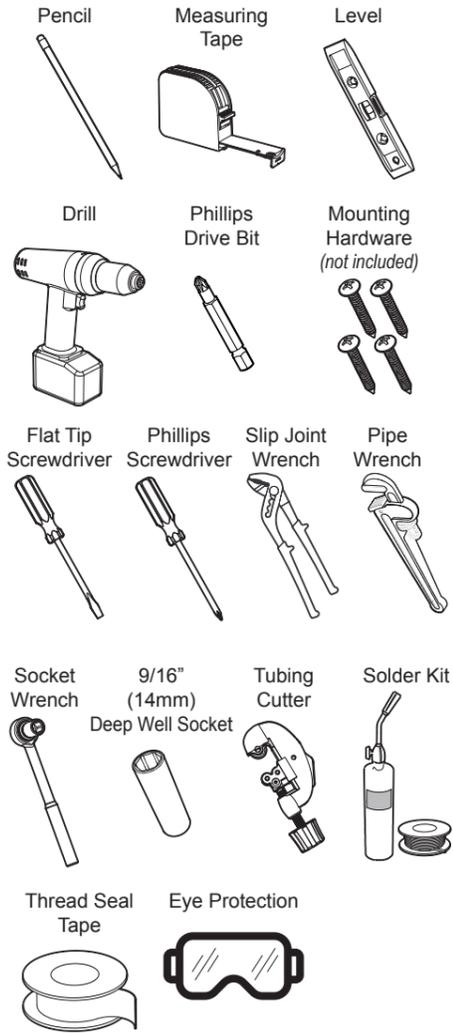
**INSTALLATION INSTRUCTIONS**

**85666V**  
Balance Pressure Shower Valve  
with Sweat / Thread Connections



92-85666V-03

**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 1.75 gpm (6.6 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:



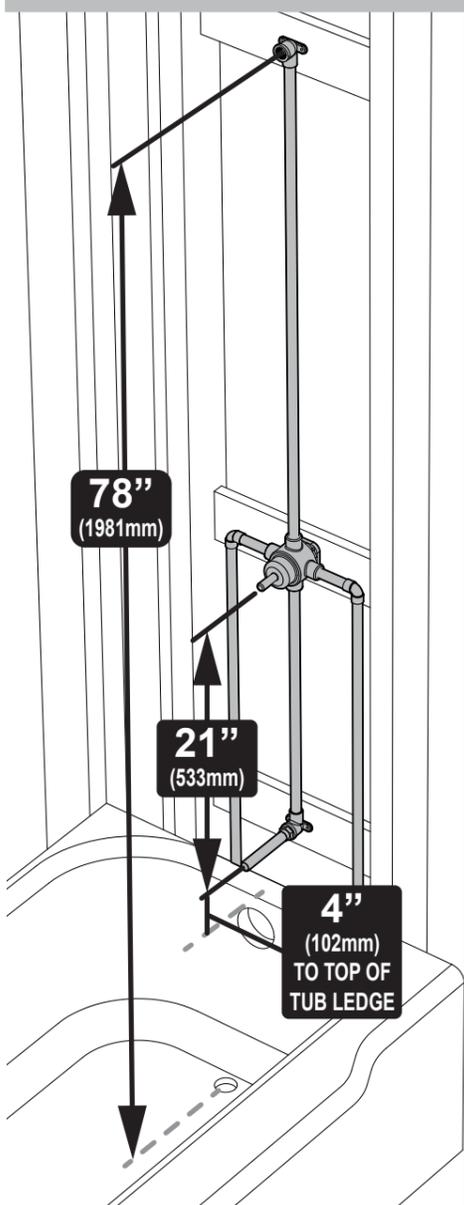
800-944-9292



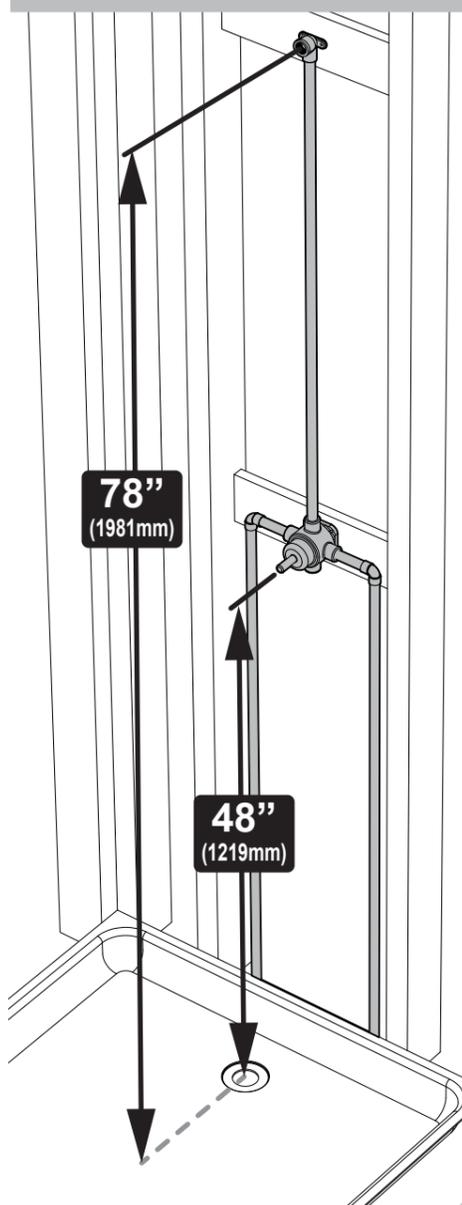
www.wolverinebrass.com

**ROUGH IN VERTICAL REFERENCE**

**TUB/SHOWER**

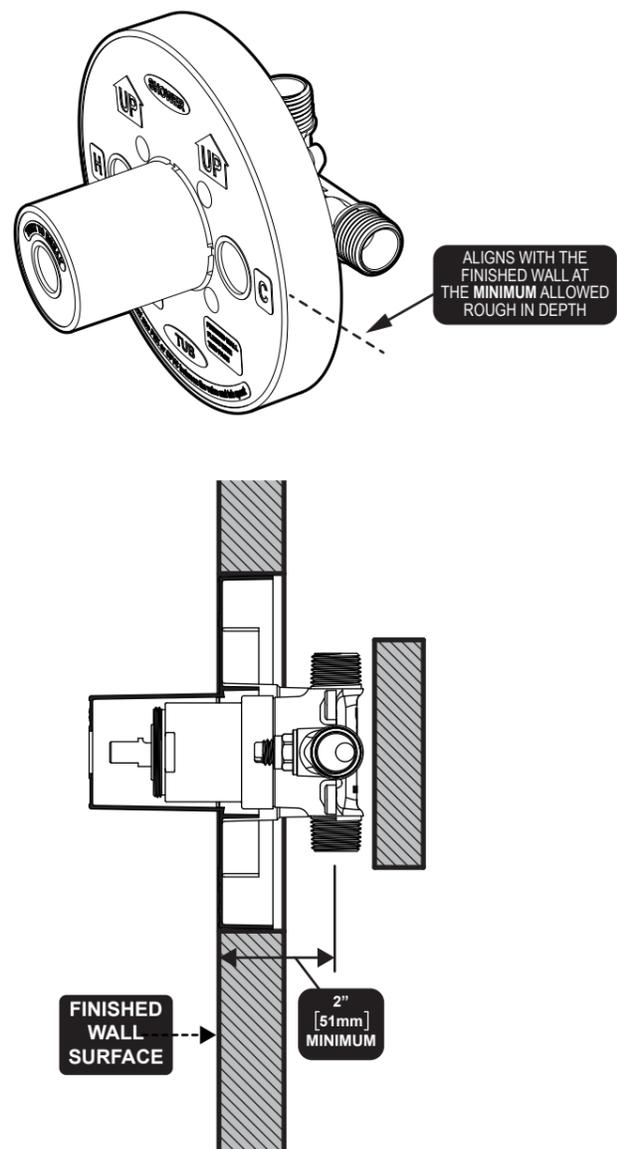


**SHOWER ONLY**



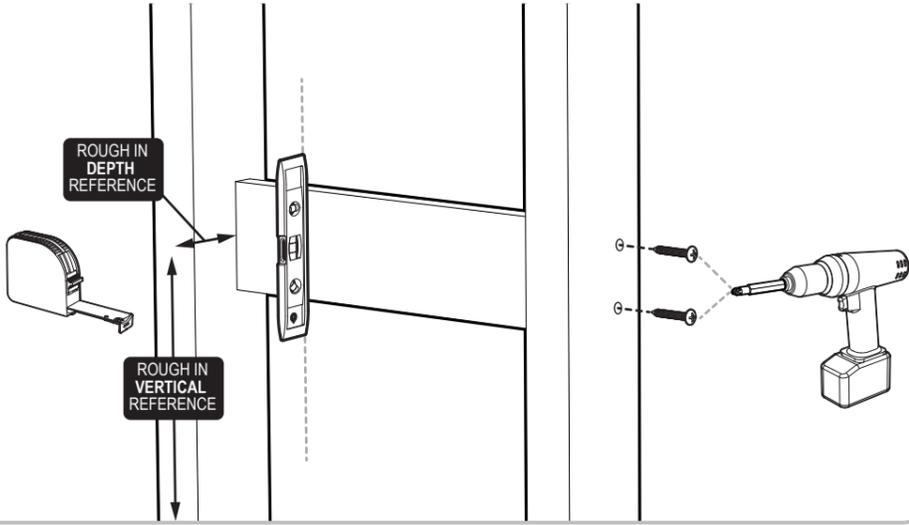
**ROUGH IN DEPTH REFERENCE**

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 at the Minimum Mounting Depth.



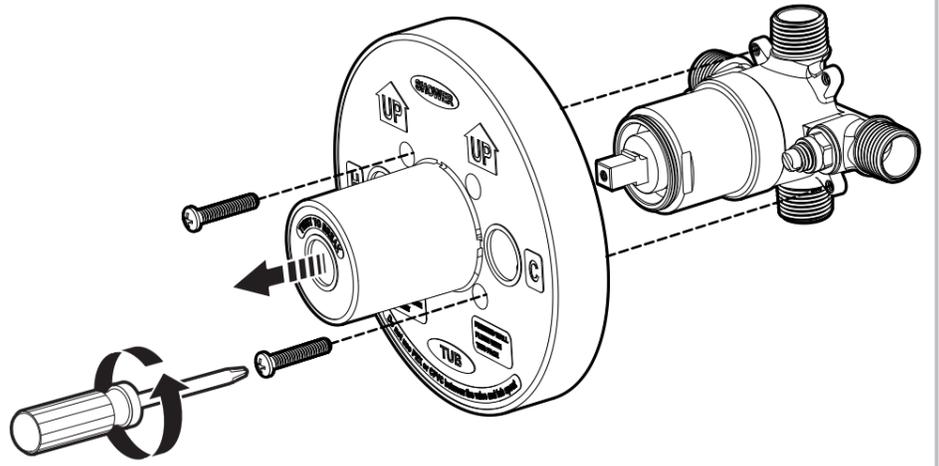
## SITE PREPARATION

- 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.



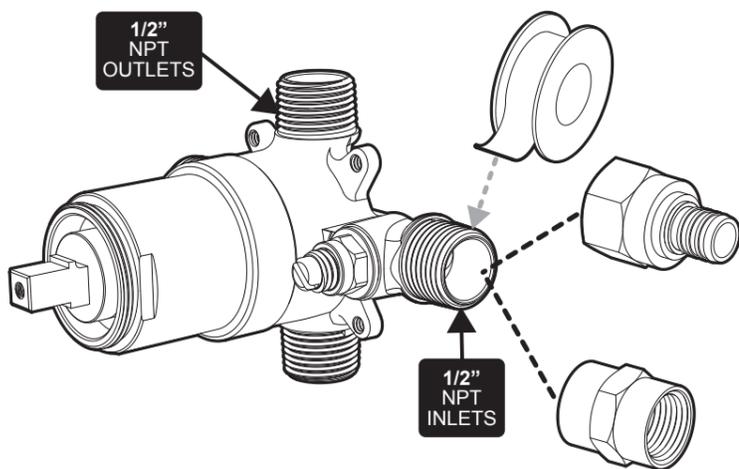
## PREPARE VALVE FOR MOUNTING

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



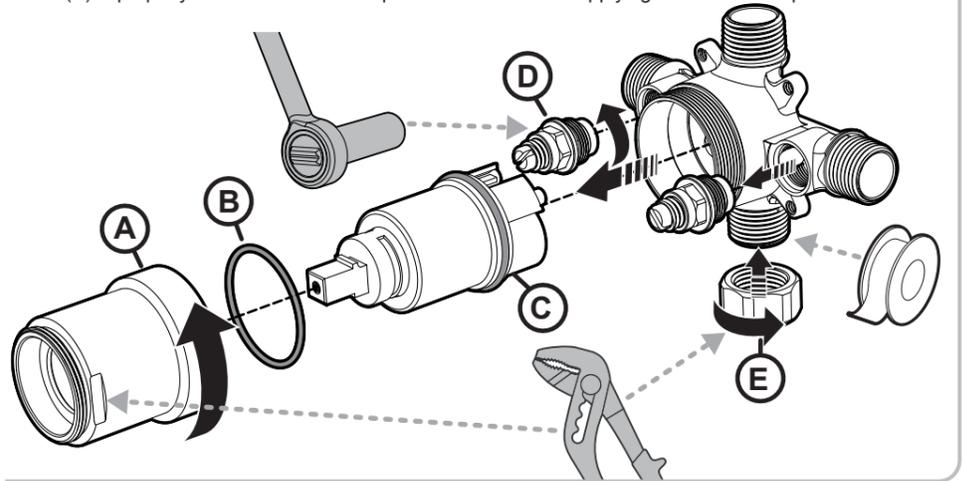
## PREPARE VALVE FOR MOUNTING

- 3 If performing a non-sweat installation, attach necessary adapters to Valve. Thread Sealant is recommended on all threaded connections. Skip forward to STEP 5.



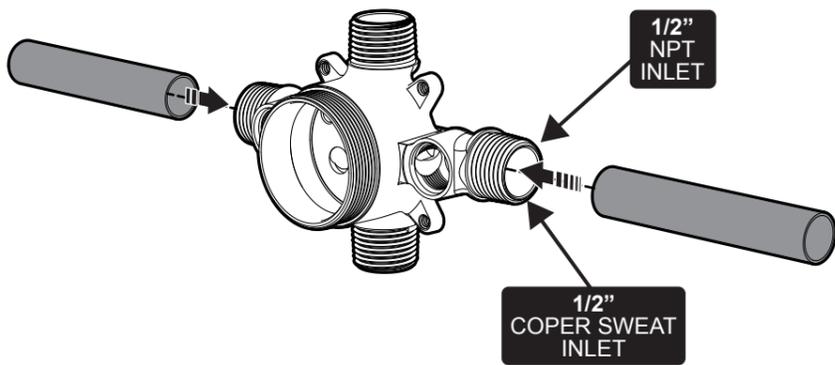
## PREPARE FOR SOLDERED CONNECTIONS

- 4 If planning for a Copper Sweat installation, it is recommended that you remove the Bonnet (A), Valve Body O-Ring (B) and Valve Cartridge (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.



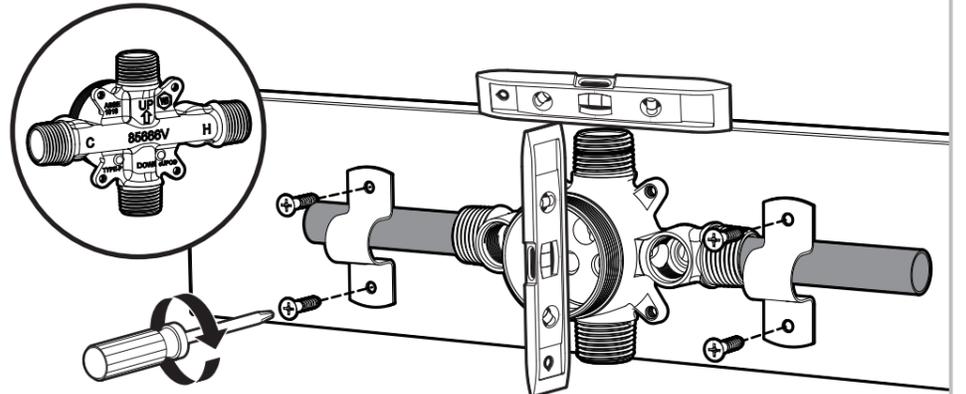
## PLUMB INLET PIPING

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



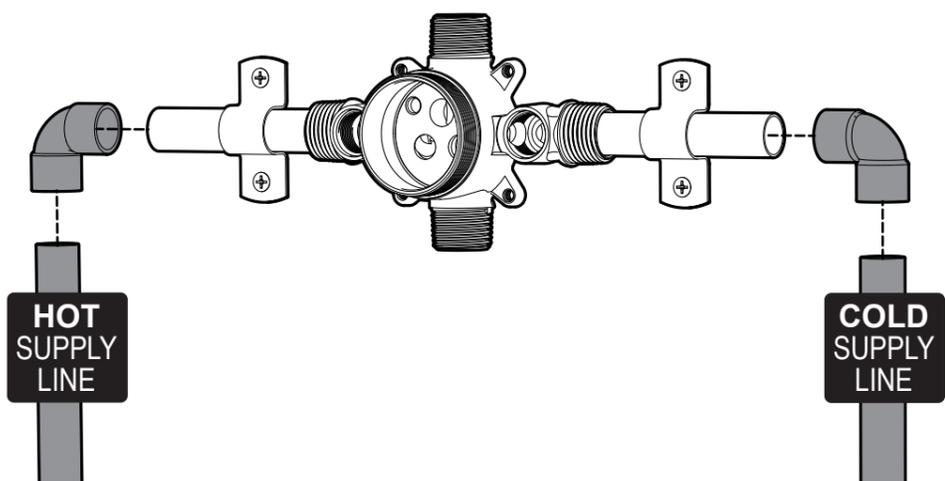
## SECURE VALVE TO STRUCTURE

- 6 Verify proper orientation of Valve so the Shower Outlet is pointing upwards (see back of Valve for reference). Using a Level, align Valve into position and secure to Cross Beam using Pipe Straps or similar method. Mounting hardware is not included.



## PLUMB SUPPLY LINES TO VALVE

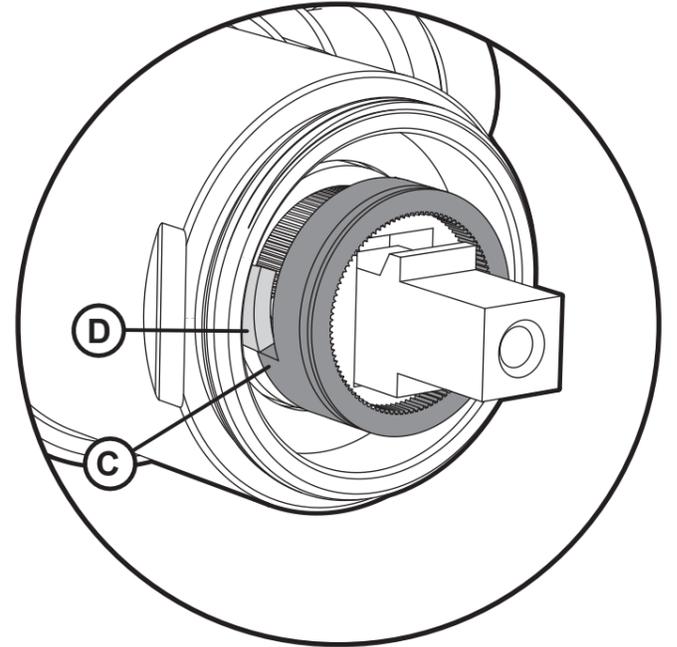
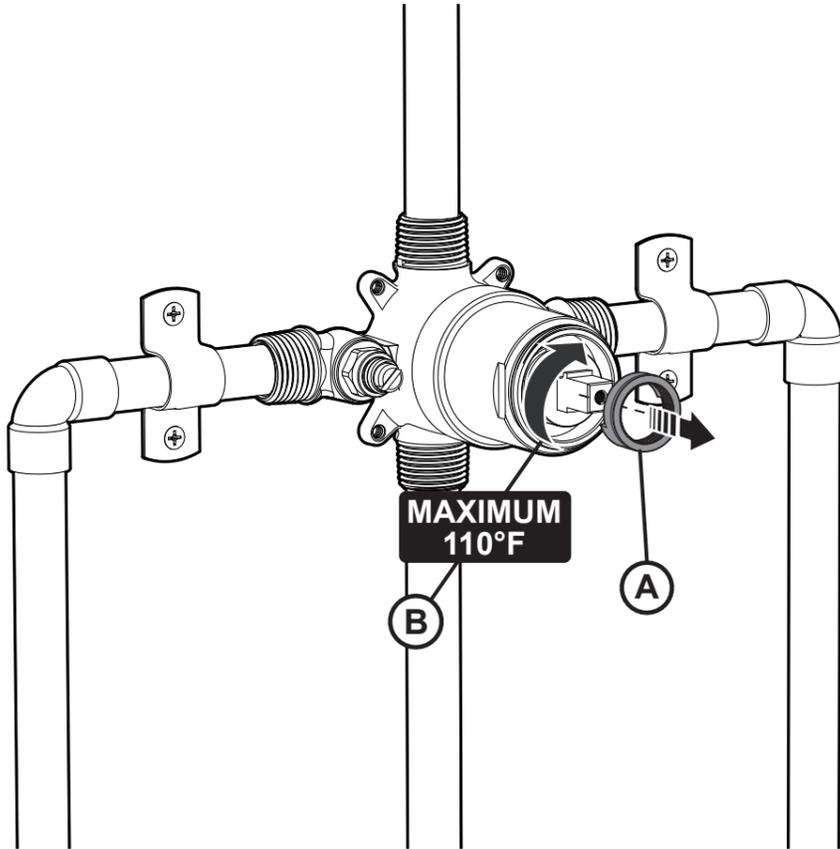
- 7 Continue plumbing connections to the Valve Inlets. Cold Supply to be connected to the Right Inlet, Hot Supply to be connected to the Left Inlet. Thread Sealant is recommended on all threaded connections.





## TEMPERATURE LIMIT STOP (TLS) ADJUSTMENT

- 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) Plate by following the steps below.

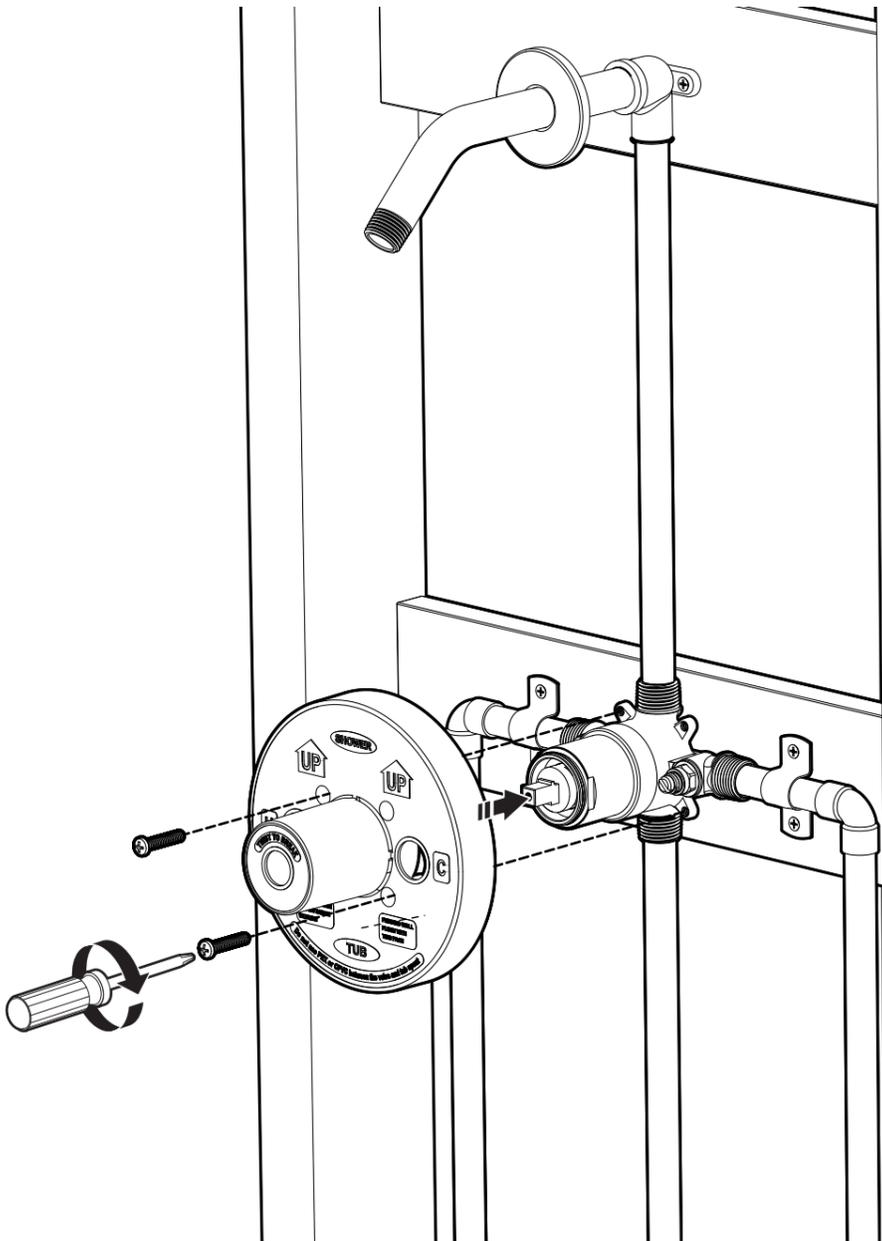


### ADJUSTING THE TEMPERATURE LIMIT

- With the water supplies "On" and the Valve in the "Off" position, remove the Hot Limit Adjustment Ring (A).
- Rotate the Valve Spindle clockwise to the maximum desired temperature (B).
- Reinstall the Black Hot Limit Adjustment Ring so that the Ring Stop (C) touches the Cartridge Stop (D)
- Return the Valve to the "OFF" position by rotating the Valve Spindle counter-clockwise.

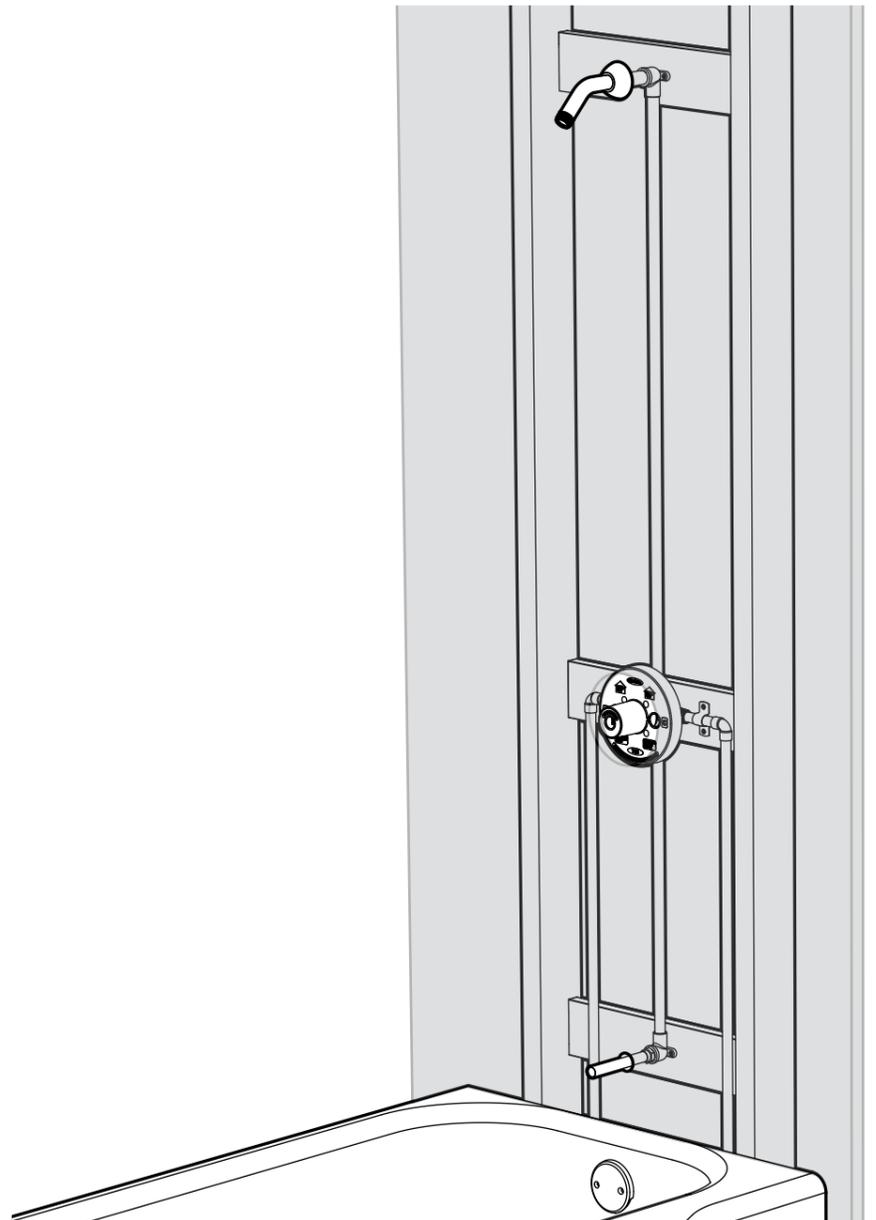
## REINSTALL PROTECTIVE COVER

- 13 Reinstall Protective Cover, and Screws previously removed.



## FINISHED WALL CONSTRUCTION

- 14 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 they 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.*

- 6) Open the Integral Stops of the Valve by turning the Stop Screws counterclockwise. 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.

#### 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

**With exception of items listed below, this product has a limited warranty against defects in materials or workmanship for a period of one year from the date of purchase.**

Exceptions:

- 1.) Faucet valve cartridges have a limited warranty for a period of 100 years from the date of manufacture. This date is stamped on the valve cartridge.
- 2.) Product finish have a limited warranty for a period of 100 year from the date of installation. Failure to follow the cleaning instructions voids all finish warranty. Damage due to accidents or installation is not warranted. (*Oil Rub Bronze and Matte Black have a 1 year finish warranty.*)

Warranty is limited to replacement of defective components or units. Associated replacement or repair labor costs are NOT included. This warranty only pertains to single dwelling residential use. Valves used for other than single dwelling residential use are covered by a 1 year limited warranty from the date of purchase.

## CALIFORNIA PROPOSITION 65

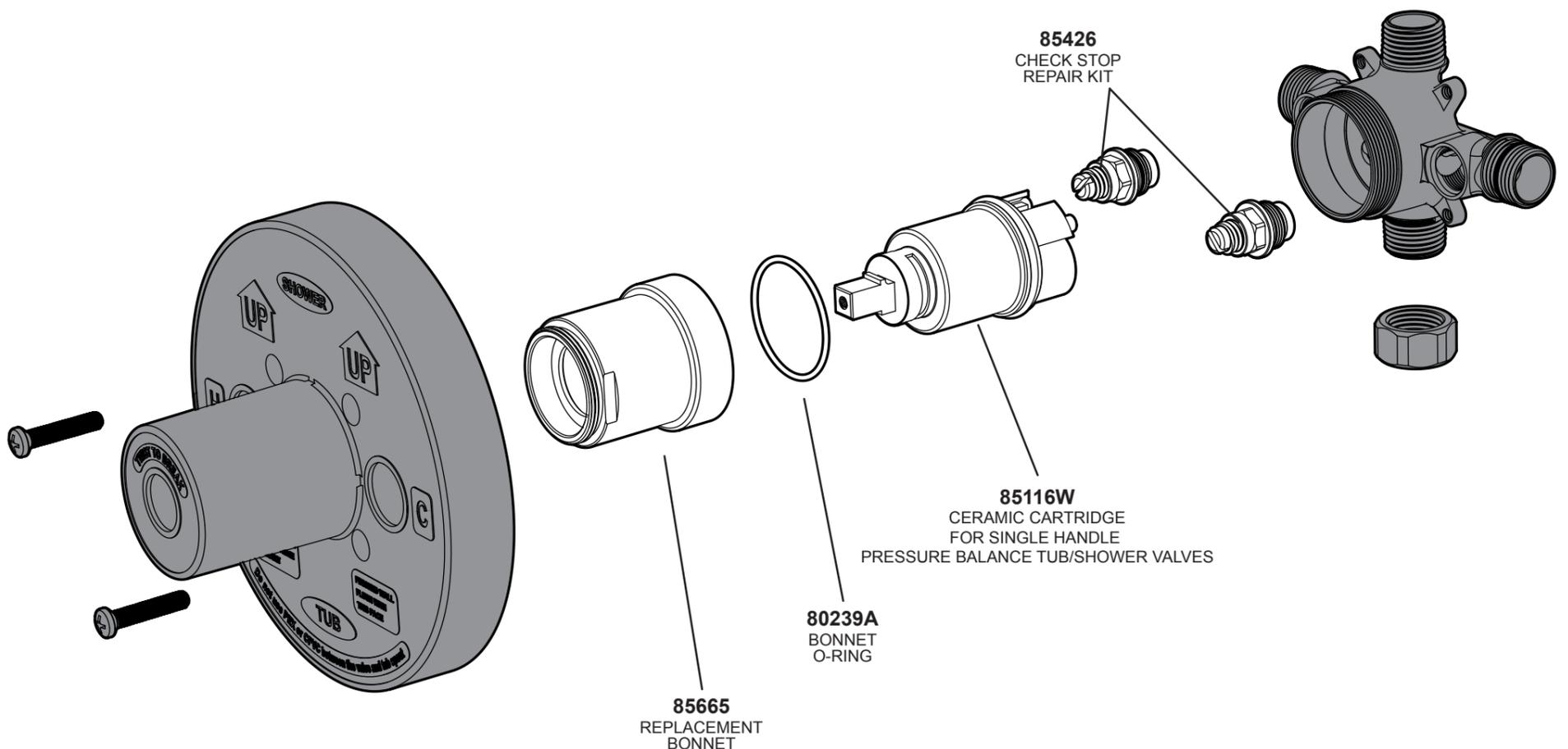


### CALIFORNIA PROPOSITION 65:

**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



# 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" NPT Male  
 1/2" Female Copper Sweat

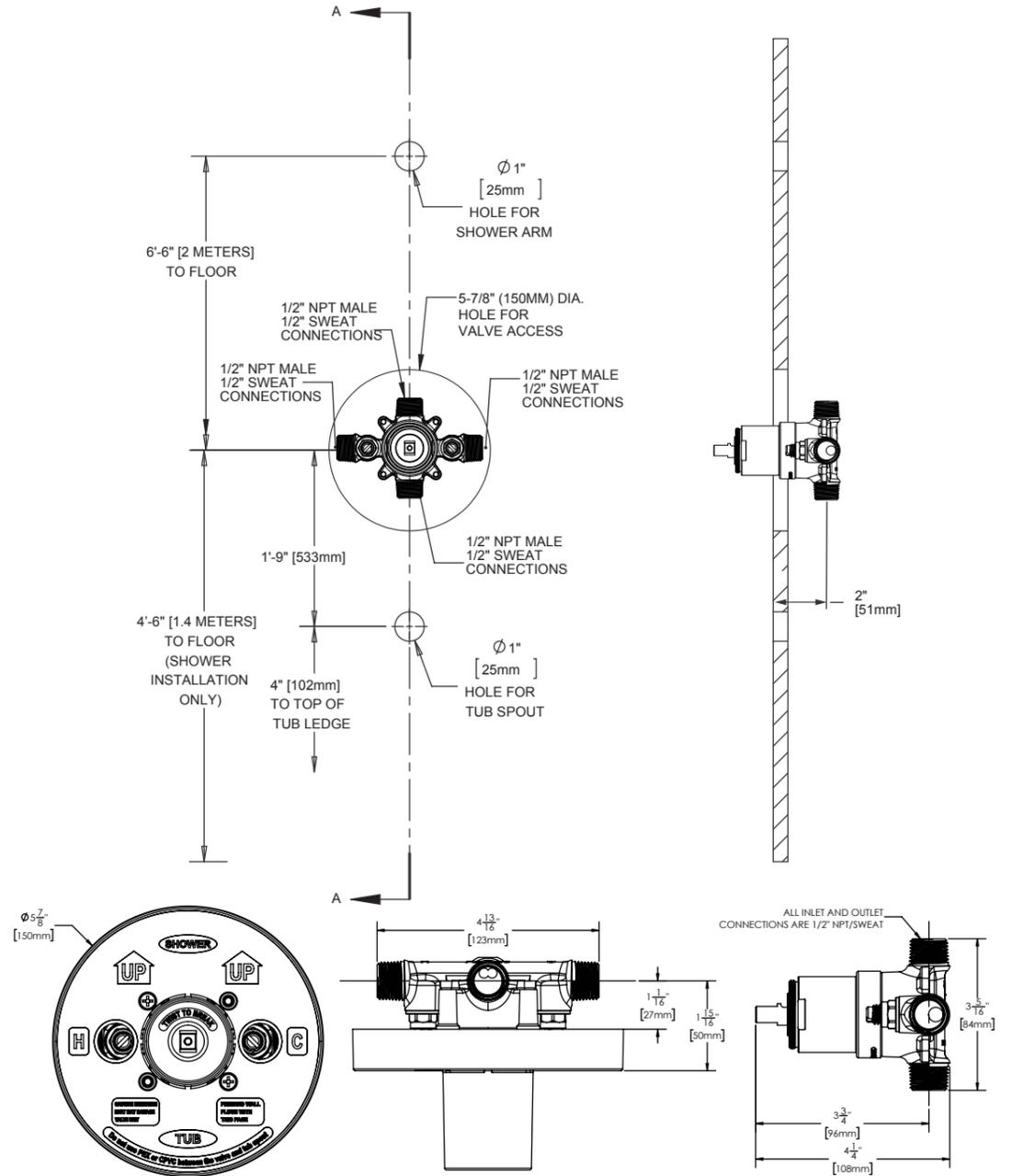
Shower Outlet: 1/2" NPT Male  
 1/2" Female Copper Sweat

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 1.75 gpm (6.6 L/min) or higher flow rate.

Installer to supply necessary inlet connections.



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