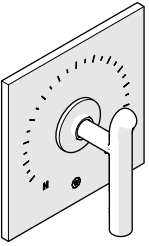
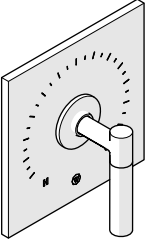
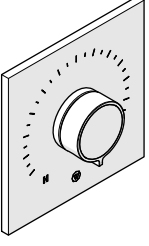
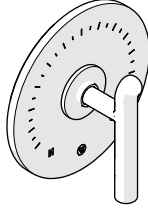
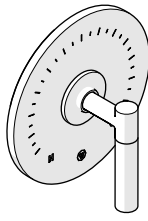
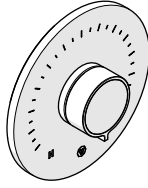


INSTALLATION GUIDELINES

BOND THERMOSTATIC CONTROL VALVE TRIMS

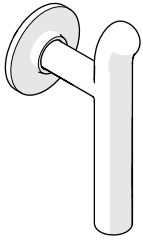
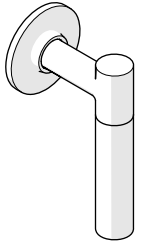
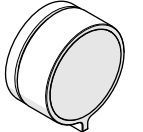
	STYLE	DESCRIPTION
	BTH110	Bond Solo Series Square Thermostatic Control Valve Trim with Lever Handle
	BTH12A	Bond Tandem Series Square Thermostatic Control Valve Trim with Guilloche Lines Lever Handle
	BTH12B [SHOWN]	Bond Tandem Series Square Thermostatic Control Valve Trim with Two-Tone Lever Handle
	BTH12C	Bond Union Series Square Thermostatic Control Valve Trim with Guilloche Link Lever Handle
	BTH12D	Bond Union Series Square Thermostatic Control Valve Trim with Enamel Guilloche Lines Lever Handle
	BTH130 [SHOWN]	Bond Solo Series Square Thermostatic Control Valve Trim with Knob Handle
	BTH14A	Bond Tandem Series Square Thermostatic Control Valve Trim with Guilloche Lines Knob Handle
	BTH14B	Bond Tandem Series Square Thermostatic Control Valve Trim with Two-Tone Guilloche Lines Knob Handle
	BTH14D	Bond Union Series Square Thermostatic Control Valve Trim with Enamel Guilloche Lines Knob Handle
	BTH15C	Bond Union Series Square Thermostatic Control Valve Trim with Guilloche Link Knob Handle

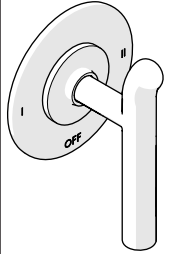
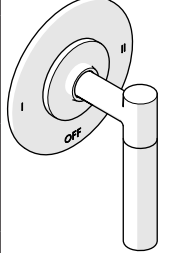
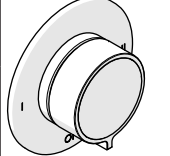
	STYLE	DESCRIPTION
	BTH210	Bond Solo Series Round Thermostatic Control Valve Trim with Lever Handle
	BTH22A	Bond Tandem Series Round Thermostatic Control Valve Trim with Guilloche Lines Lever Handle
	BTH22B [SHOWN]	Bond Tandem Series Round Thermostatic Control Valve Trim with Two-Tone Lever Handle
	BTH22C	Bond Union Series Round Thermostatic Control Valve Trim with Guilloche Link Lever Handle
	BTH22D	Bond Union Series Round Thermostatic Control Valve Trim with Enamel Guilloche Lines Lever Handle
	BTH230 [SHOWN]	Bond Solo Series Round Thermostatic Control Valve Trim with Knob Handle
	BTH24A	Bond Tandem Series Round Thermostatic Control Valve Trim with Guilloche Lines Knob Handle
	BTH24B	Bond Tandem Series Round Thermostatic Control Valve Trim with Two-Tone Guilloche Lines Knob Handle
	BTH24D	Bond Union Series Round Thermostatic Control Valve Trim with Enamel Guilloche Lines Knob Handle
	BTH25C	Bond Union Series Round Thermostatic Control Valve Trim with Guilloche Link Knob Handle

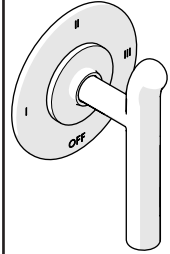
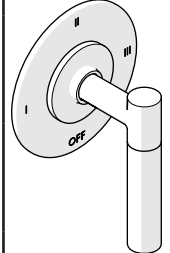
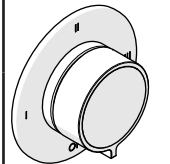
INSTALLATION GUIDELINES

BOND VOLUME CONTROL AND DIVERTER TRIMS

WATERWORKS

	STYLE	DESCRIPTION
	BVC110	Bond Solo Series Volume Control with Lever Handle
	BVC12A	Bond Tandem Series Volume Control with Guilloche Lines Lever Handle
	BVC12B [SHOWN]	Bond Tandem Series Volume Control with Two-Tone Lever Handle
	BVC12C	Bond Union Series Volume Control with Guilloche Link Lever Handle
	BVC12D	Bond Union Series Volume Control with Enamel Guilloche Lines Lever Handle
	BVC130 [SHOWN]	Bond Solo Series Volume Control with Knob Handle
	BVC14A	Bond Tandem Series Volume Control with Guilloche Lines Knob Handle
	BVC14B	Bond Tandem Series Volume Control with Two-Tone Guilloche Lines Knob Handle
	BVC14D	Bond Union Series Volume Control with Enamel Guilloche Lines Knob Handle
	BVC15C	Bond Union Series Volume Control with Guilloche Link Knob Handle

	STYLE	DESCRIPTION
	B2T110	Bond Solo Series Two Way Diverter Trim with Lever Handle
	B2T12A	Bond Tandem Series Two Way Diverter Trim with Guilloche Lines Lever Handle
	B2T12B [SHOWN]	Bond Tandem Series Two Way Diverter Trim with Two-Tone Lever Handle
	B2T12C	Bond Union Series Two Way Diverter Trim with Guilloche Link Lever Handle
	B2T12D	Bond Union Series Two Way Diverter Trim with Enamel Guilloche Lines Lever Handle
	B2T130 [SHOWN]	Bond Solo Series Two Way Diverter Trim with Knob Handle
	B2T14A	Bond Tandem Series Two Way Diverter Trim with Guilloche Lines Knob Handle
	B2T14B	Bond Tandem Series Two Way Diverter Trim with Two-Tone Guilloche Lines Knob Handle
	B2T14D	Bond Union Series Two Way Diverter Trim with Enamel Guilloche Lines Knob Handle
	B2T15C	Bond Union Series Two Way Diverter Trim with Guilloche Link Knob Handle

	STYLE	DESCRIPTION
	B3T110	Bond Solo Series Three Way Diverter Trim with Lever Handle
	B3T12A	Bond Tandem Series Three Way Diverter Trim with Guilloche Lines Lever Handle
	B3T12B [SHOWN]	Bond Tandem Series Three Way Diverter Trim with Two-Tone Lever Handle
	B3T12C	Bond Union Series Three Way Diverter Trim with Guilloche Link Lever Handle
	B3T12D	Bond Union Series Three Way Diverter Trim with Enamel Guilloche Lines Lever Handle
	B3T130 [SHOWN]	Bond Solo Series Three Way Diverter Trim with Knob Handle
	B3T14A	Bond Tandem Series Three Way Diverter Trim with Guilloche Lines Knob Handle
	B3T14B	Bond Tandem Series Three Way Diverter Trim with Two-Tone Guilloche Lines Knob Handle
	B3T14D	Bond Union Series Three Way Diverter Trim with Enamel Guilloche Lines Knob Handle
	B3T15C	Bond Union Series Three Way Diverter Trim with Guilloche Link Knob Handle

INSTALLATION GUIDELINES

BOND THERMOSTATIC SHOWER SYSTEM

IMPORTANT:

- To ensure these product are installed properly, you must read and follow these guidelines.
- The owner/user of these products must keep this information for future reference.
- These products must be installed by a professional licensed contractor and must be on-site prior to rough-in. This allows the installer to visualize the installation.
- **ALL VALVES AND TRIMS SOLD SEPARATELY.**
- Refer to the Installation Guidelines provided with each VALVE for complete rough-in installation details and related information.
- Be sure your installation conforms to all federal, state, and local codes. In the State of Massachusetts, all installations must comply with the rules and regulations set forth within 248 CMR.
- **WARNING:** The **THERMOSTATIC VALVES** (GUTH56/GUTH38) features anti-scald protection. The risk of scalding exists until the installer has properly calibrated/adjusted the temperature setting during final TRIM installation.
- These products are sold partially assembled but shown fully disassembled for illustrative and service purposes only. Inspect these products to ensure you have all the parts required for proper installation.
- Use only a strap wrench or protected/smooth-jaw wrench on any finished surface.
- The use of certain plumber's putty may stain stone or tile surfaces.
- If further assistance is required, please contact Product Support at 1-800-927-2120 Monday through Friday, 8am - 6pm EST.
- Refer to the separate Service Parts Documents for available replacement parts.

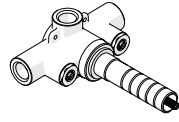
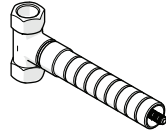
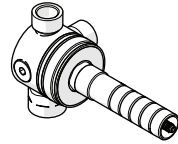
VALVE FUNCTION:

- **THERMOSTATIC VALVES** only mix hot and cold water and do not have volume or shut-off capabilities.
- **VOLUME CONTROL VALVES** controls on/off/volume and must be installed for each fitting that will have water flowing to it or a **DIVERTER VALVE** for multiple fittings.

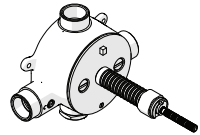
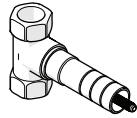
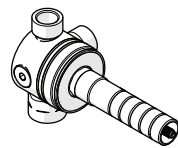
REQUIRED PLUMBING DETAILS:

- Depending on the number of end fittings in the shower system and how many are able to operate **SIMULTANEOUSLY**, the system will require either:

A. **GUTH56** system for a **MAXIMUM** of 2 fittings flowing simultaneously or,

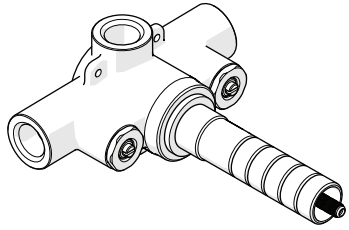
		STYLE	NUMBER OF OUTLETS	INLET/OUTLET CONNECTIONS
THERMOSTATIC VALVE		GUTH56	2	1/2" FEMALE NPT
VOLUME CONTROL VALVE		GUV18	1	1/2" FEMALE NPT
		GUV19		
DIVERTER VALVE		GUDV14 [SHOWN]	2	3/4" NPT INLET/ 1/2" NPT OUTLETS
		GUDV66	3	

B. **GUTH38** system for 3+ fittings flowing simultaneously.

		STYLE	NUMBER OF OUTLETS	INLET/OUTLET CONNECTIONS
THERMOSTATIC VALVE		GUTH38	2	3/4" FEMALE NPT
VOLUME CONTROL VALVE		GUV16	1	3/4" FEMALE NPT
		GUV17		
DIVERTER VALVE		GUDV14 [SHOWN]	2	3/4" NPT INLET/ 1/2" NPT OUTLETS
		GUDV66	3	

INSTALLATION GUIDELINES

BOND THERMOSTATIC SHOWER SYSTEM WITH GUTH56

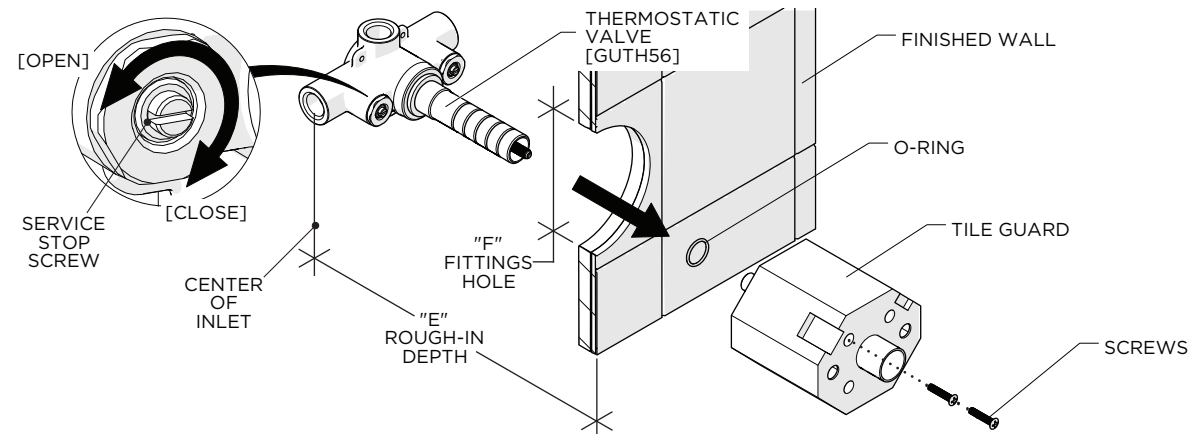
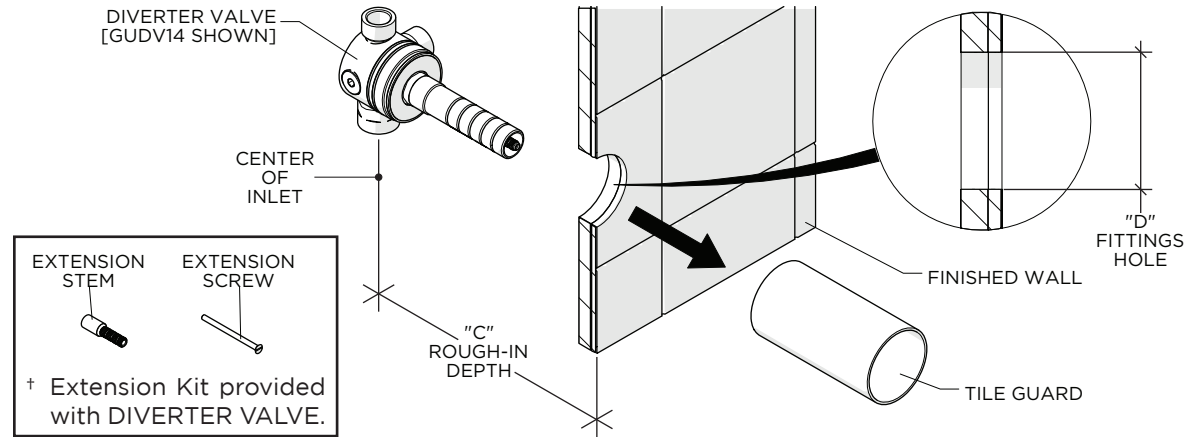
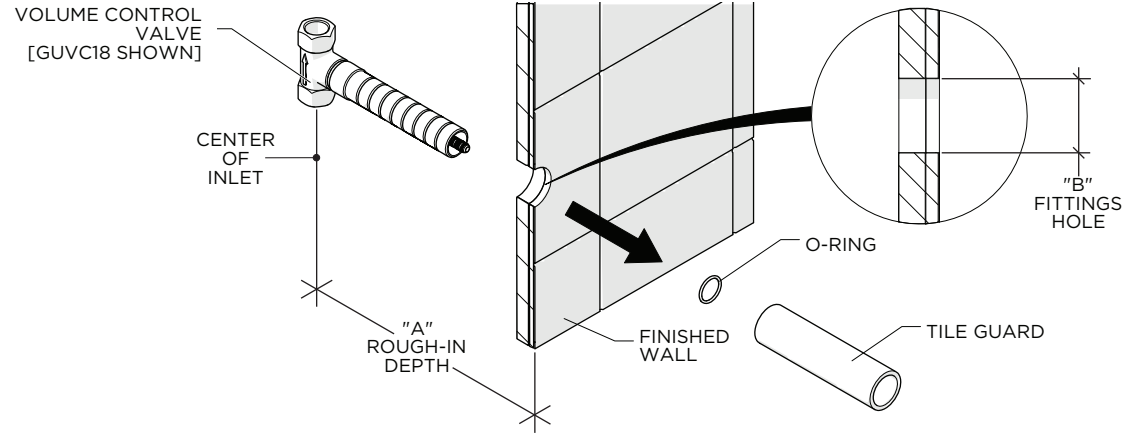


ROUGH-IN AND VALVE PREPARATION:

- **IMPORTANT:** It is RECOMMENDED to flush out the supply lines prior to installing this THERMOSTATIC VALVE. Refer to the Installation Guidelines provided with the VALVE for further information on how to properly flush the supply lines.
- **CAUTION:** The rough-in depth is measured from the centerline of the inlets to the surface of the finished wall. If the VALVES are roughed-in too shallow, the associated TRIMS cannot be installed correctly.
- Remove and discard the TILE GUARDS only when the finished wall surface (TILE or SLAB) is completed and TRIMS are ready for installation.

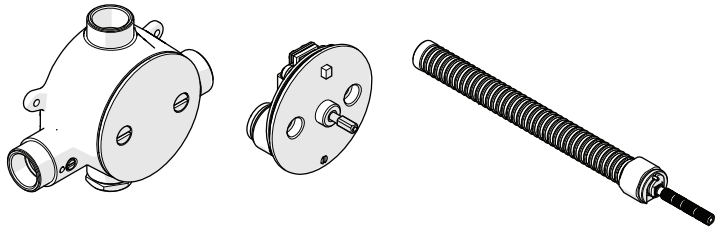
VALVE	DIMENSION	VALUE
GUVC18, GUVC19	A	6-1/4" [159mm] MAX 2-3/4" [70mm] MIN
	B	Ø1-3/8" [35mm]
GUDV14, GUDV66	C	5-1/2" [140mm] MAX 3-1/4" [83mm] MIN
	D	Ø2-1/2" [64mm]
GUTH56	E	6" [152mm] MAX 3-1/2" [89mm] MIN
	F	Ø4-1/2" [114mm]

WATERWORKS



INSTALLATION GUIDELINES

BOND THERMOSTATIC SHOWER SYSTEM WITH GUTH38

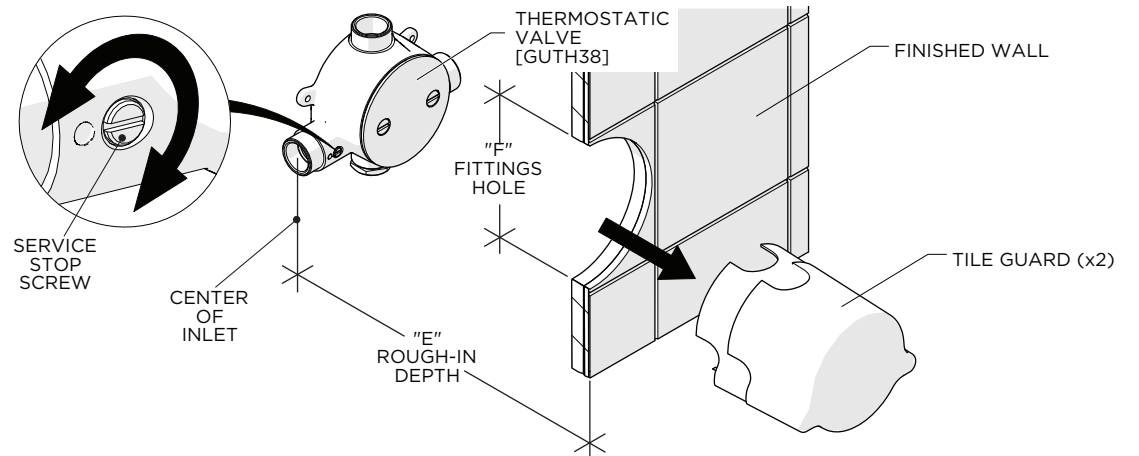
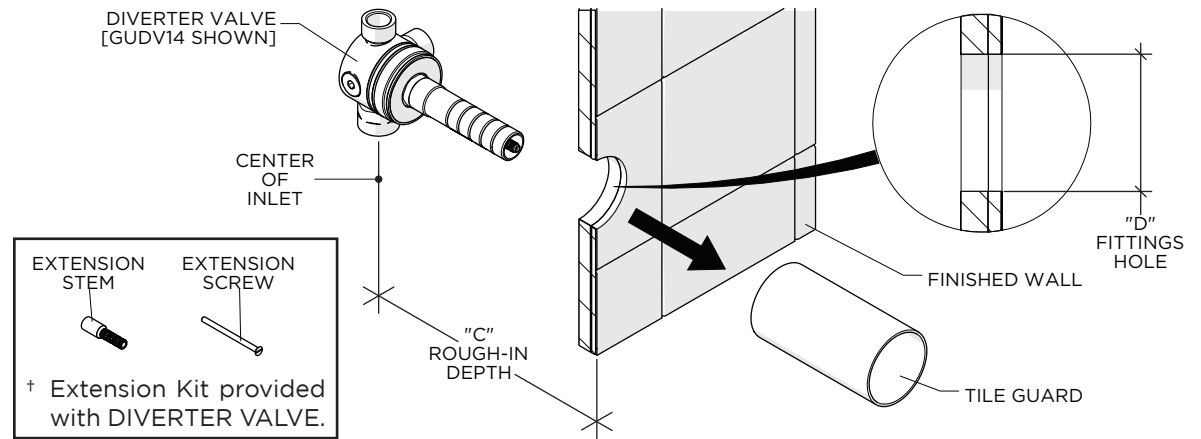
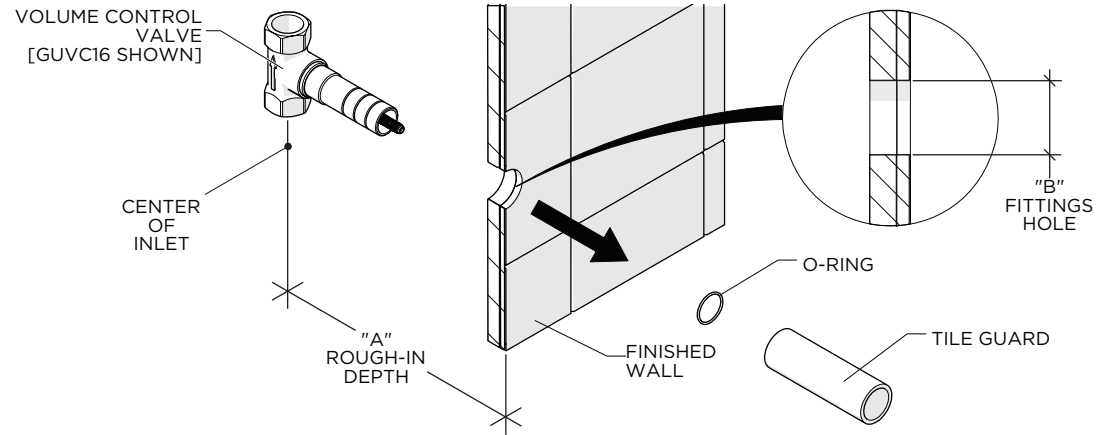


ROUGH-IN AND VALVE PREPARATION:

- This THERMOSTATIC VALVE is provided with a pre-installed FLUSH PLATE. The THERMOSTATIC CARTRIDGE and TRIM ADAPTER are packaged separately and provided with the VALVE.
- **IMPORTANT:** Make sure the supply lines are flushed prior to final TRIM installation using the FLUSH PLATE provided. Refer to the Installation Guidelines provided with the VALVE for further information.
- **CAUTION:** The rough-in depth is measured from the centerline of the inlets to the surface of the finished wall. If the VALVES are roughed-in too shallow, the associated TRIMS cannot be installed correctly.
- Remove and discard the TILE GUARDS only when the finished wall surface (TILE or SLAB) is completed and TRIMS are ready for installation.

VALVE	DIMENSION	VALUE
GUV16, GUV17	A	4-3/4" [121mm] MAX 3" [76mm] MIN
	B	Ø1-3/8" [35mm]
GUDV14, GUDV66	C	5-1/2" [140mm] MAX 3-1/4" [83mm] MIN
	D	Ø2-1/2" [64mm]
GUTH38	E	3-5/8" [92mm] MIN
	F	Ø5-1/4" [133mm]

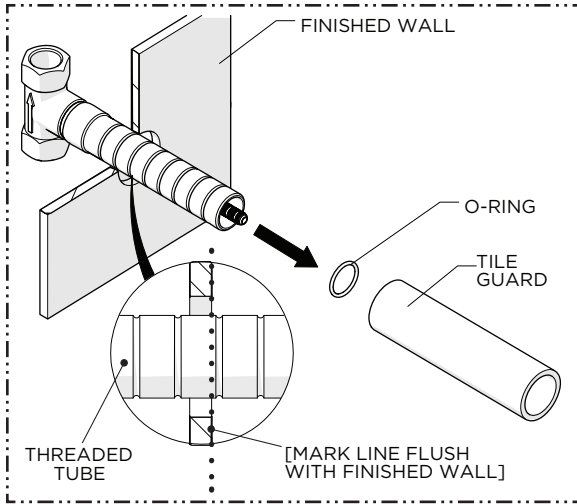
WATERWORKS



INSTALLATION GUIDELINES

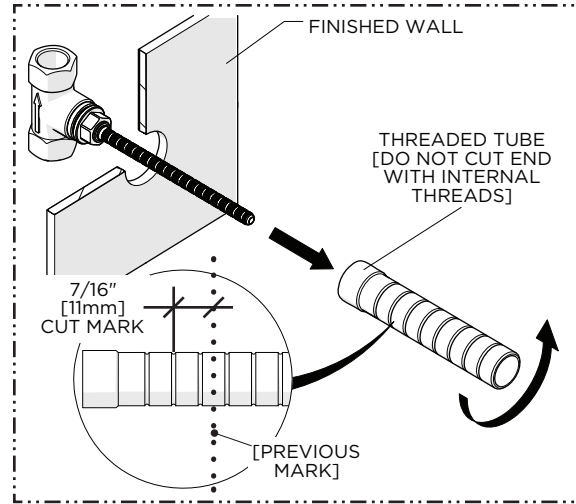
VOLUME CONTROL VALVE PREPARATION

WATERWORKS

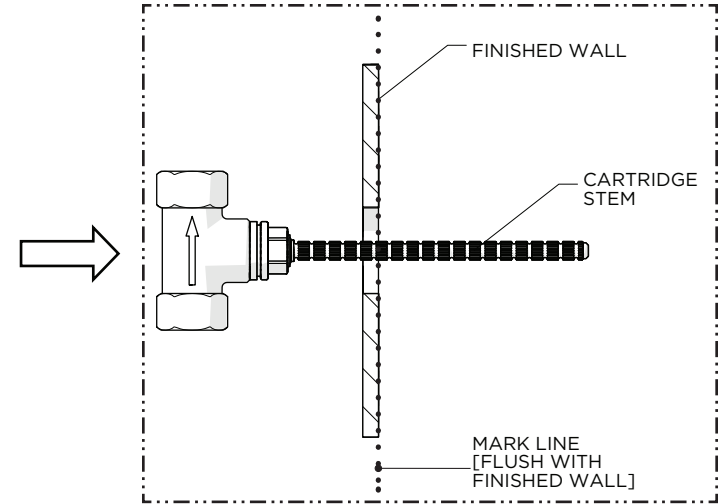


1. Remove the TILE GUARD when ready to install the TRIM then mark the THREADED TUBE where it protrudes past the finished wall.

NOTE: A straight edge (not supplied) can be used to mark the TUBE.

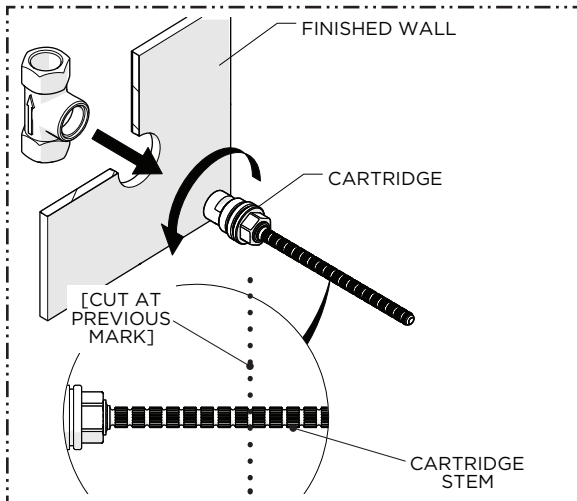


2. Remove the THREADED TUBE then cut it 7/16" [11mm] behind the previous mark so the TUBE will be 7/16" [11mm] below or recessed into the finished wall surface.

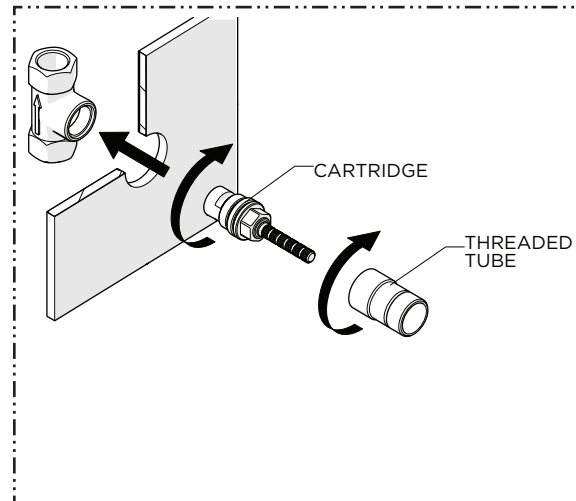


3. Mark the CARTRIDGE STEM where it protrudes past the finished wall.

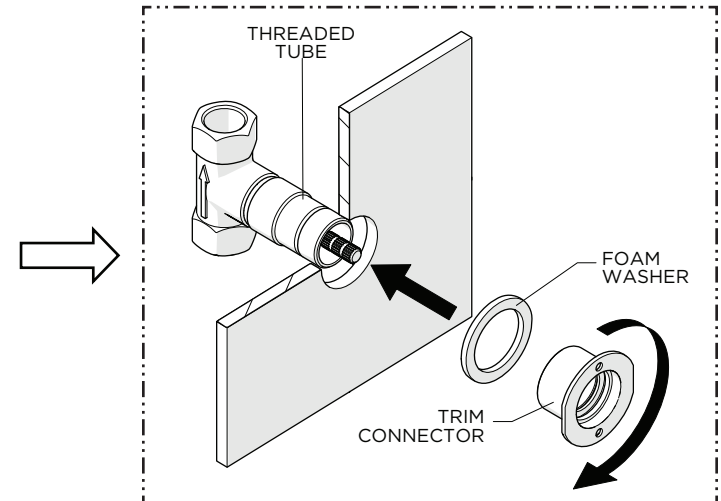
NOTE: A straight edge (not supplied) can be used to mark the CARTRIDGE STEM.



4. Remove the CARTRIDGE using a 21/32" [17mm] shower valve socket wrench (not supplied) then cut the CARTRIDGE STEM at the previous mark.



5. Thread and securely tighten the CARTRIDGE back into the VALVE then thread the THREADED TUBE back onto the CARTRIDGE until it stops

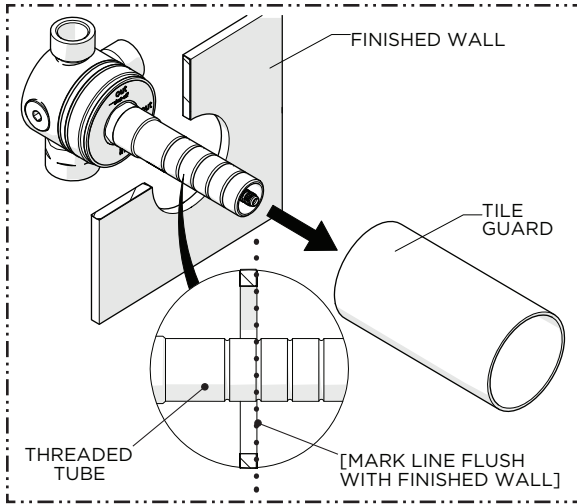


6. Using the FOAM WASHER provided, thread and securely tighten the TRIM CONNECTOR onto the THREADED TUBE.

➤ SEE PAGE 13 FOR KNOB AND LEVER HANDLE INSTALLATION STEPS.

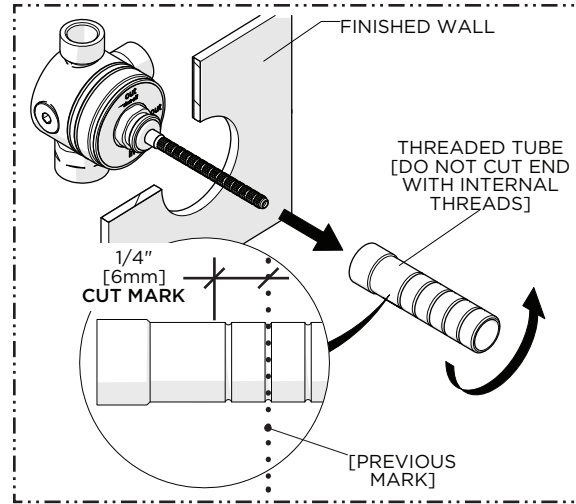
INSTALLATION GUIDELINES

DIVERTER VALVE PREPARATION

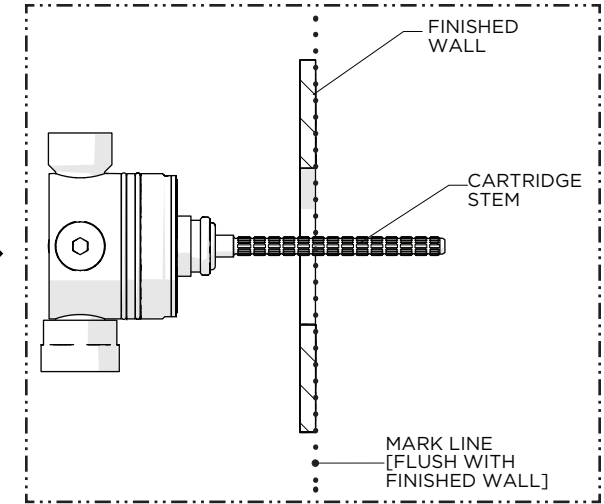


1. Remove the TILE GUARD when ready to install the TRIM then mark the THREADED TUBE where it protrudes past the finished wall.

NOTE: A straight edge (not supplied) can be used to mark the TUBE.

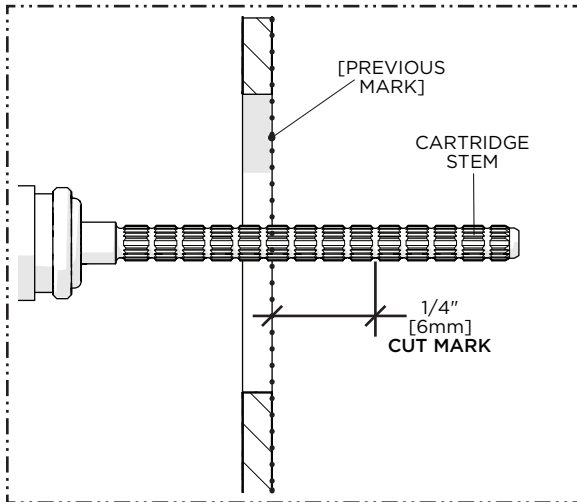


2. Remove the THREADED TUBE then cut it 1/4" [6mm] behind the previous mark so the TUBE will be 1/4" [6mm] below or recessed into the finished wall surface.

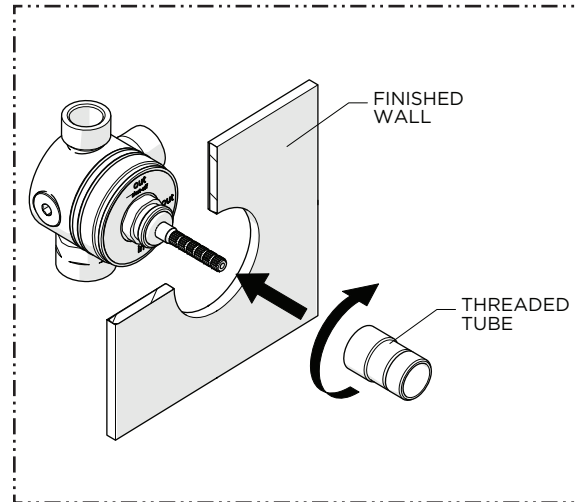


3. Mark the CARTRIDGE STEM where it protrudes past the finished wall.

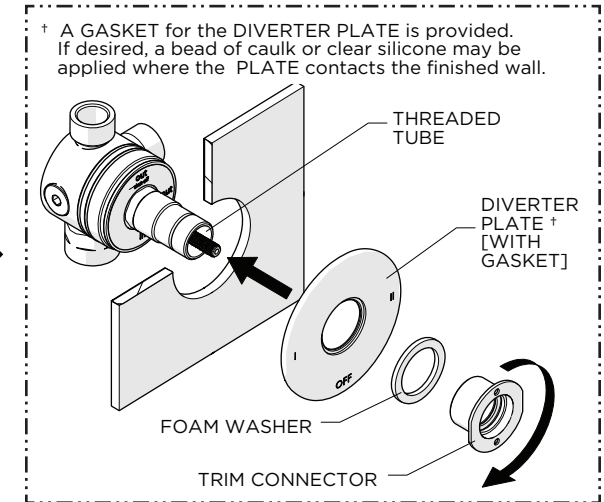
NOTE: A straight edge (not supplied) can be used to mark the CARTRIDGE STEM.



4. Carefully cut the CARTRIDGE STEM 1/4" [6mm] in front of the previous mark so the STEM will protrude 1/4" [6mm] from the finished wall surface.



5. Thread the THREADED TUBE back onto the CARTRIDGE until it stops



† A GASKET for the DIVERTER PLATE is provided. If desired, a bead of caulk or clear silicone may be applied where the PLATE contacts the finished wall.

6. Firmly hold the DIVERTER PLATE against the finished wall then thread and securely tighten the TRIM CONNECTOR onto the THREADED TUBE making sure to use the FOAM WASHER provided.

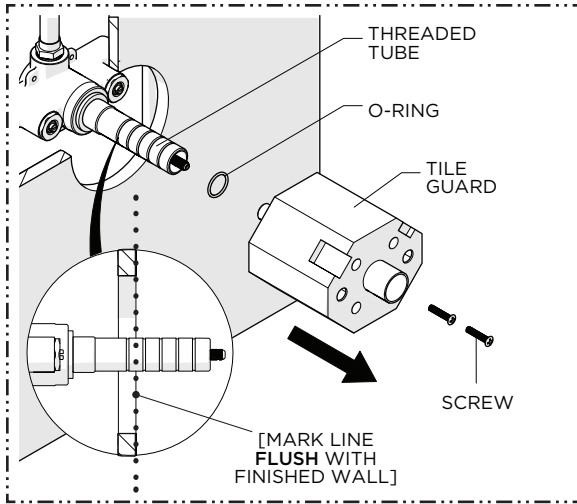
NOTE: The PLASTIC INSERT provided with the DIVERTER PLATE can be discarded.

➤ **SEE PAGE 13 FOR KNOB AND LEVER HANDLE INSTALLATION STEPS.**

INSTALLATION GUIDELINES

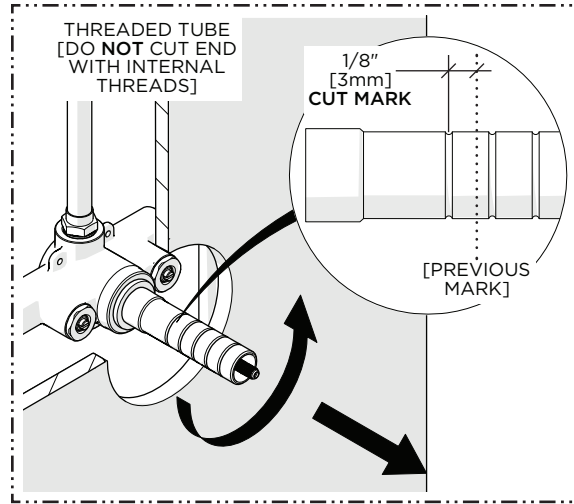
THERMOSTATIC VALVE PREPARATION - GUTH56

WATERWORKS



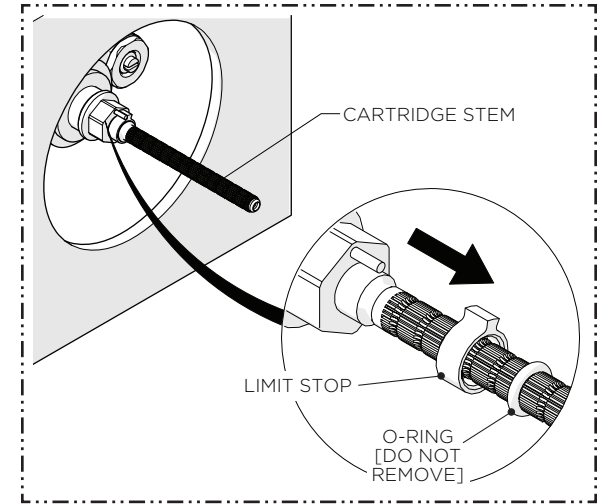
1. Remove the TILE GUARD when ready to install the TRIM then mark the THREADED TUBE where it protrudes past the finished wall.

NOTE: A straight edge (not supplied) can be used to mark the TUBE.



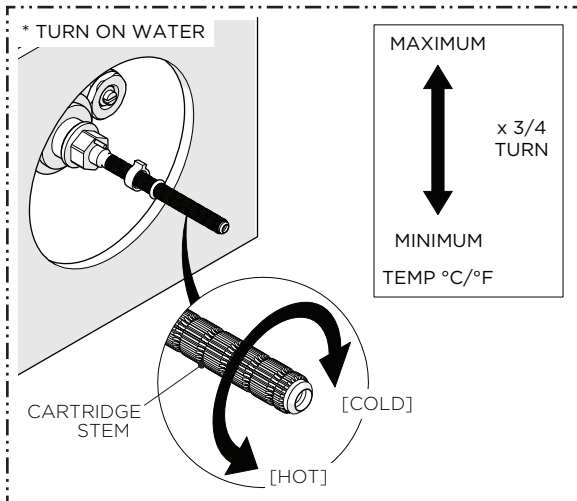
2. Remove the THREADED TUBE then cut it 1/8" [3mm] behind the previous mark.

CAUTION: Do NOT cut the end with the internal threads.



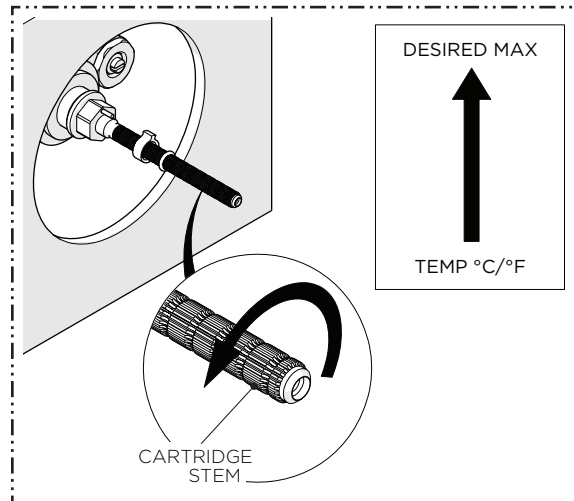
3. Slide the O-RING and LIMIT STOP up the CARTRIDGE STEM.

CAUTION: Do NOT remove or damage the O-RING.

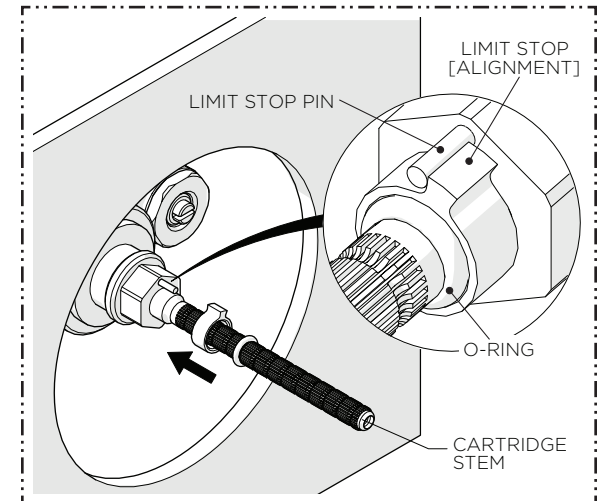


4. Turn on the water supply and open a **DIVERTER** or **VOLUME CONTROL VALVE** then slowly rotate the CARTRIDGE STEM clockwise to attain full cold then rotate it counterclockwise to attain full hot. Verify that a full range of temperatures exists.

NOTE: It's approximately 3/4 of a turn.



5. With water running, rotate the CARTRIDGE STEM to adjust the temperature to the **maximum** desired bathing temperature, verified with a thermometer, then turn the water off and make sure **NOT** to change this setting.

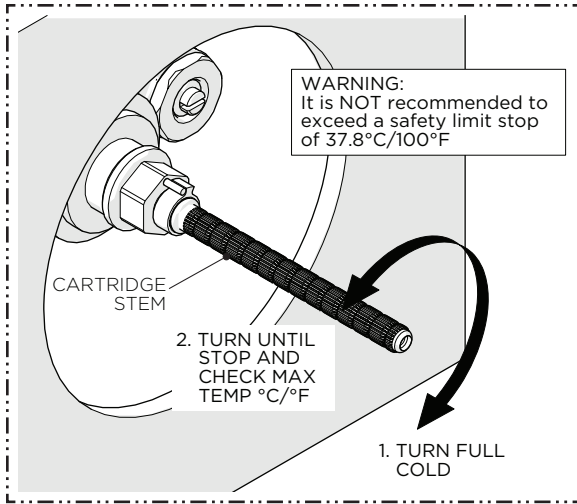


6. Slide the LIMIT STOP and O-RING back down the CARTRIDGE STEM making sure to properly align the LIMIT STOP with the LIMIT STOP PIN.

NOTE: The O-RING will prevent the LIMIT STOP from sliding off the STEM.

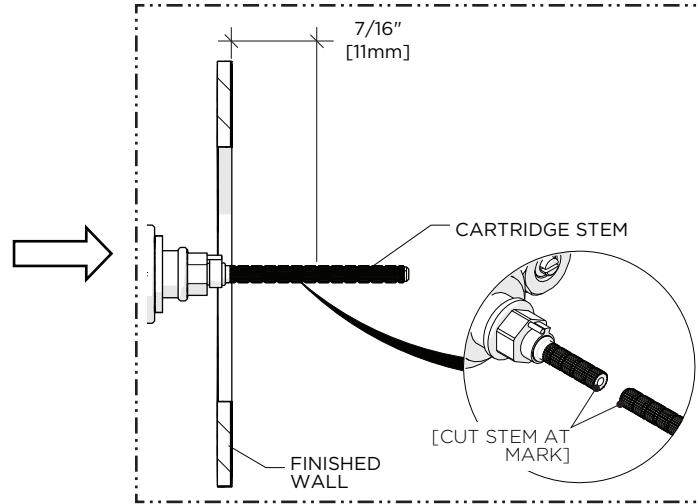
INSTALLATION GUIDELINES

THERMOSTATIC VALVE PREPARATION - GUTH56

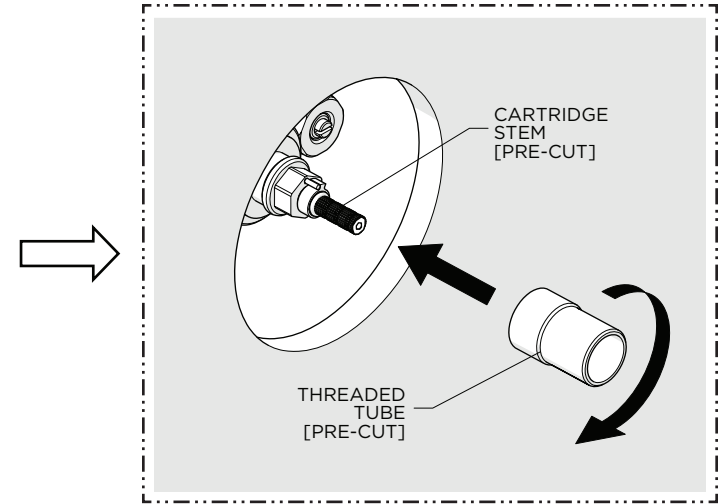


7. Verify the **maximum** desired bathing temperature set in the previous step. If it is not the correct temperature, repeat the calibration procedures.

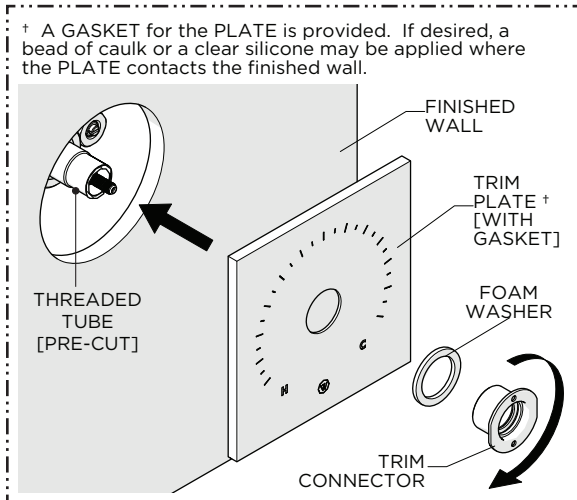
WARNING: It is NOT recommended to exceed a safety limit stop of 37.8°C/100°F.



8. Mark the CARTRIDGE STEM 7/16" [11mm] in front of the finished wall then cut the STEM at the marked location.



9. Thread the THREADED TUBE back onto the CARTRIDGE until it stops.



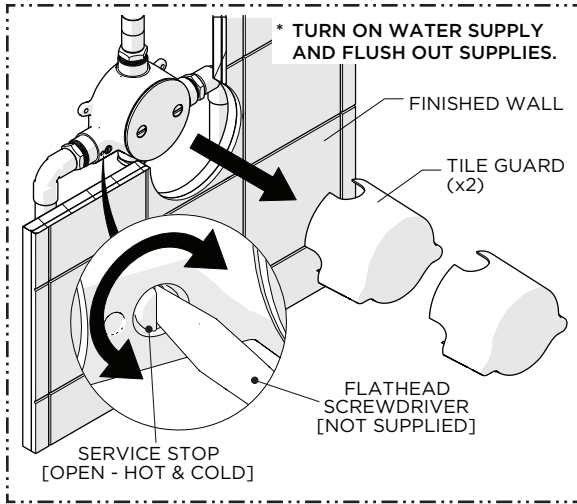
10. Firmly hold the TRIM PLATE against the finished wall then thread and securely tighten the TRIM CONNECTOR onto the THREADED TUBE making sure to use the FOAM WASHER provided.

PROCEED TO
HANDLE INSTALLATION
ON PAGE 13

INSTALLATION GUIDELINES

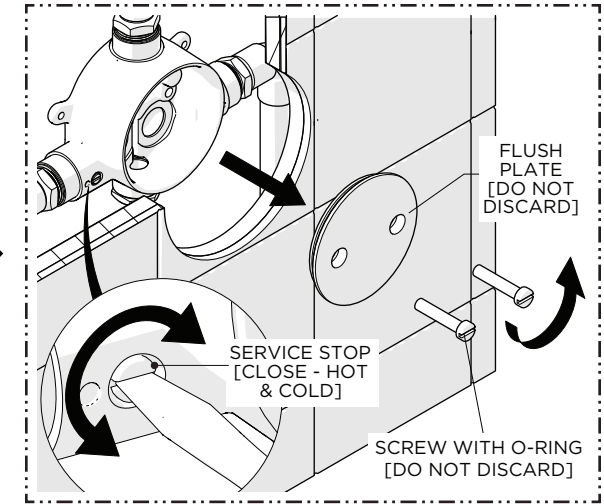
THERMOSTATIC VALVE PREPARATION - GUTH38

WATERWORKS

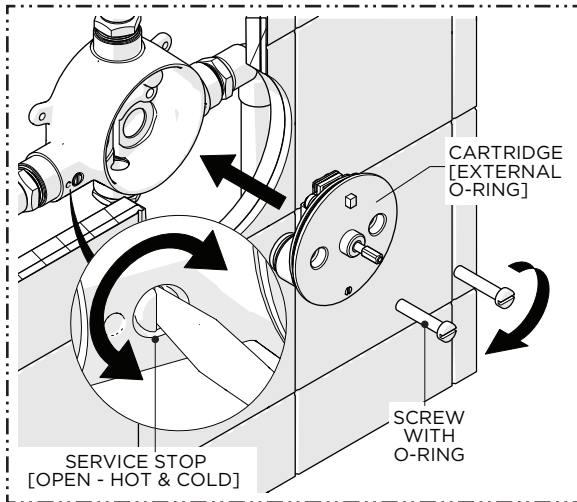


1. Remove the TILE GUARDS from the VALVE and OPEN the hot and cold SERVICE STOPS then turn on the water supplies to flush out the lines to prevent clogging of the FILTER SCREENS.

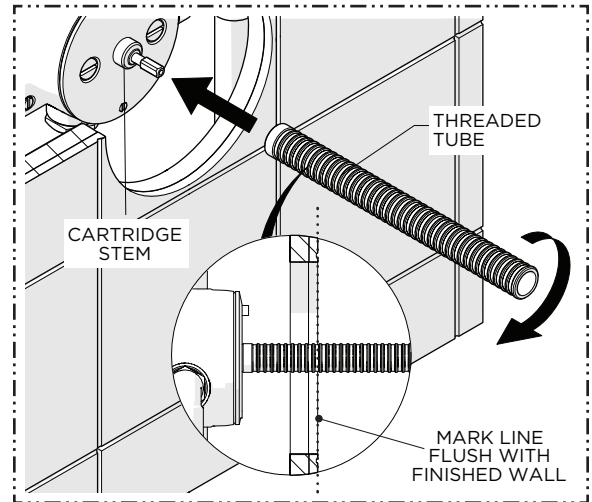
CAUTION: FAILURE TO FLUSH THE SUPPLY LINES WILL PERMANENTLY DAMAGE THE CARTRIDGE AND VOID THE WARRANTY! REPEAT THE FLUSHING PROCESS AS NEEDED BEFORE FINAL TRIM INSTALLATION.



2. After the lines have been fully flushed, CLOSE the hot and cold SERVICE STOPS then unthread the SCREWS and remove the FLUSH PLATE.

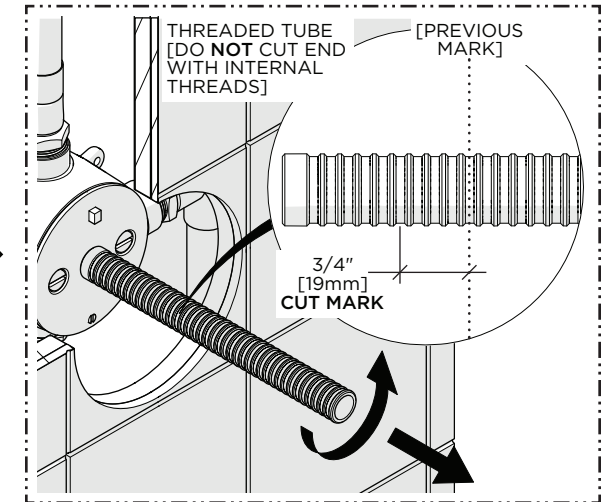


3. Insert the CARTRIDGE into the VALVE BODY then thread and securely tighten the SCREWS, re-open the SERVICE STOPS, and check for leaks.



4. Fully thread the THREADED TUBE onto the CARTRIDGE STEM and mark the TUBE where it protrudes past the finished wall.

NOTE: A straight edge (not supplied) can be used to mark the TUBE.

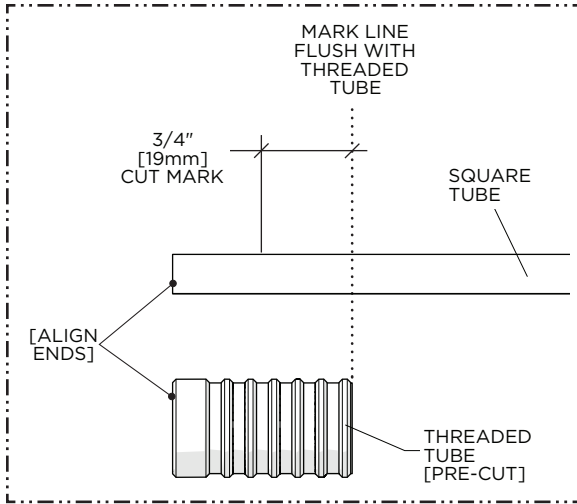


5. Remove the THREADED TUBE then cut it 3/4" [19mm] behind the previous mark.

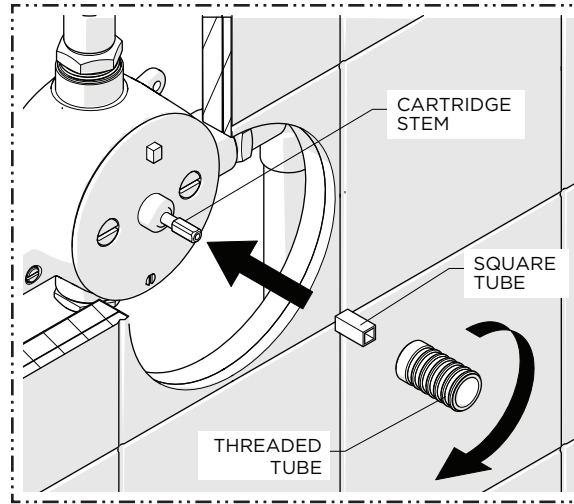
CAUTION: Do NOT cut the end with the internal threads.

INSTALLATION GUIDELINES

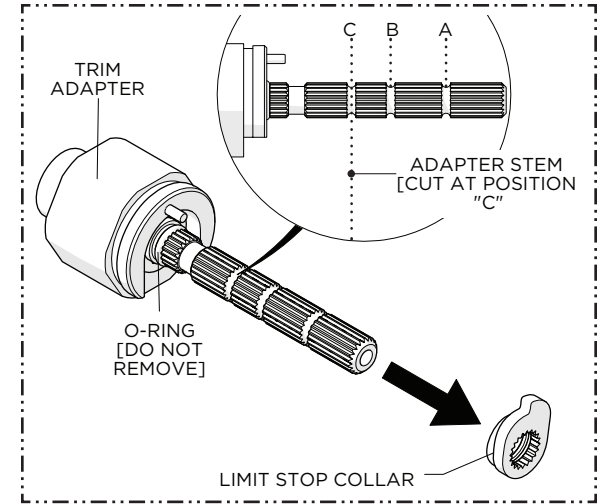
THERMOSTATIC VALVE PREPARATION - GUTH38



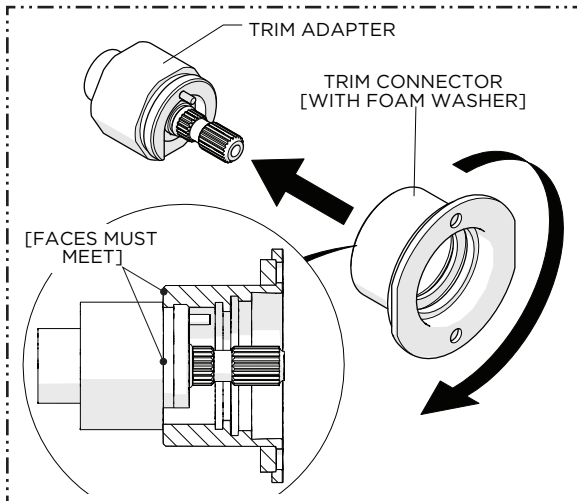
6. Align the pre-cut **THREADED TUBE** with the **SQUARE TUBE** then mark and cut the **SQUARE TUBE** 3/4" [19mm] **shorter** than the **THREADED TUBE**.



7. Slide the **SQUARE TUBE** onto the **CARTRIDGE STEM** then thread the **THREADED TUBE** onto the **STEM** until it stops.

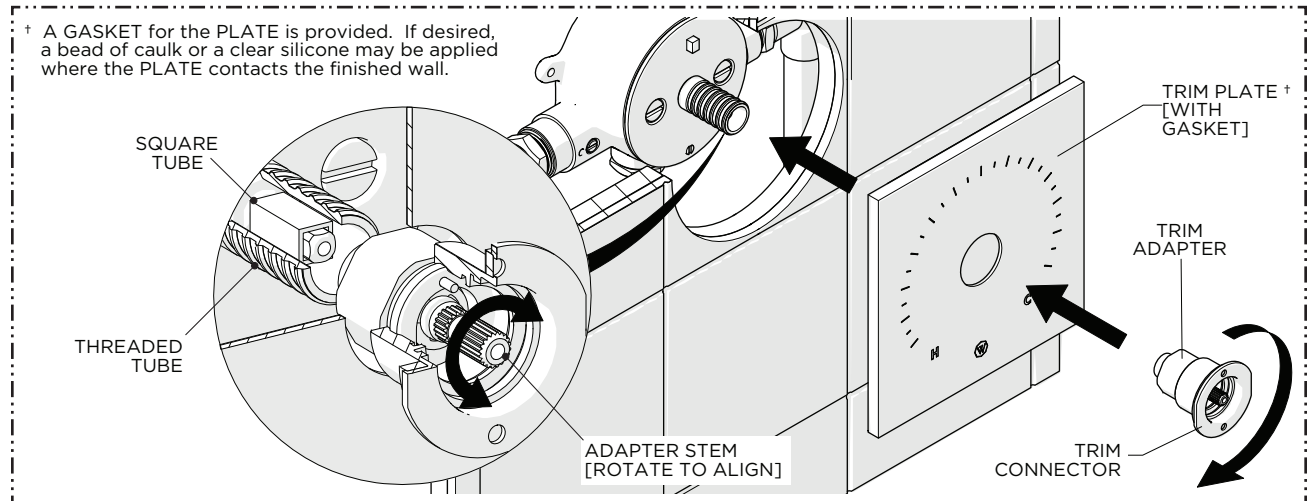


8. Remove the **LIMIT STOP COLLAR** from the **TRIM ADAPTER** then cut the **ADAPTER STEM** at position "C" as shown.



9. Thread the **TRIM CONNECTOR** onto the **TRIM ADAPTER** until the bottom face of the **CONNECTOR** touches the **ADAPTER**.

NOTE: Do **NOT** remove the **FOAM WASHER** from the **TRIM CONNECTOR**.

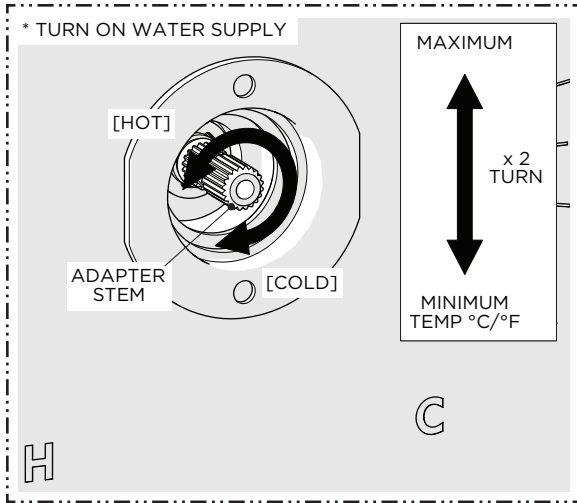


10. Firmly holding the **TRIM PLATE** against the finished wall, thread and securely tighten the **TRIM ADAPTER & CONNECTOR ASSEMBLY** onto the **THREADED TUBE**.

NOTE: **ROTATING THE ADAPTER STEM WILL HELP PROPERLY ALIGN IT WITH THE SQUARE TUBE.**

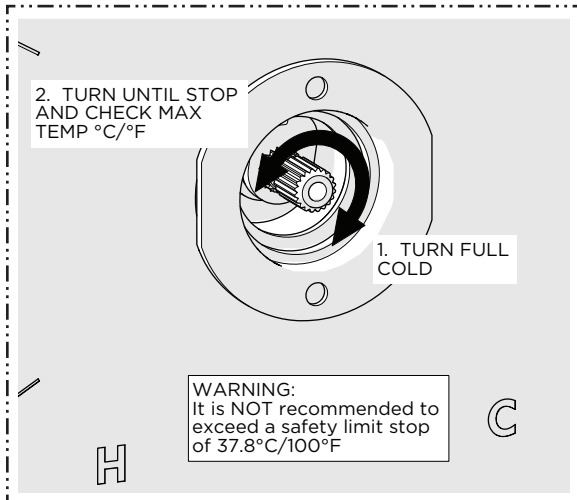
INSTALLATION GUIDELINES

THERMOSTATIC VALVE PREPARATION - GUTH38



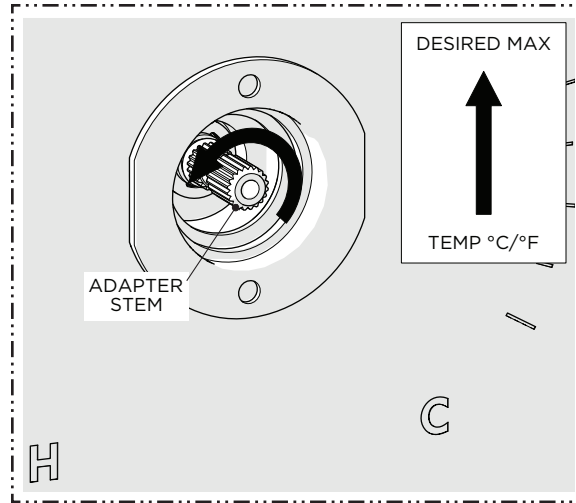
11. Open a diverter/wall valve then slowly rotate the ADAPTER STEM clockwise to attain full hot then rotate it counterclockwise to attain full cold. Verify that a full range of temperatures exists.

NOTE: It's approximately 2 complete rotations.

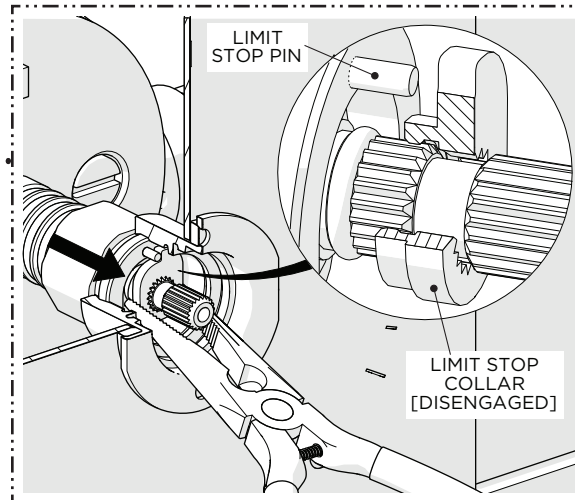


14. Turn the ADAPTER STEM clockwise to full cold then counterclockwise until it stops and verify the **maximum** desired bathing temperature set in the previous step.

WARNING: It is NOT recommended to exceed a safety limit stop of 37.8°C/100°F.

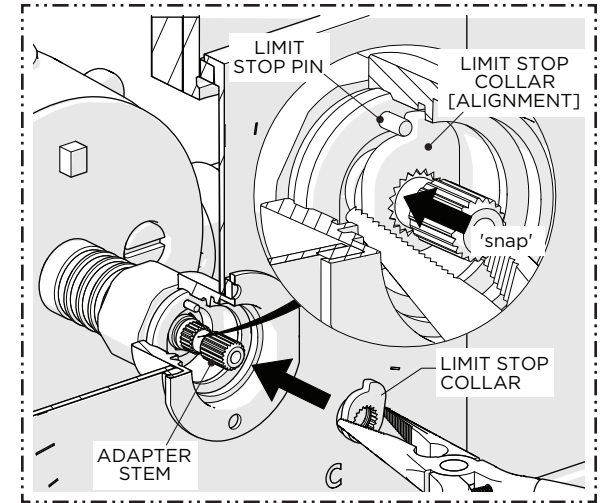


12. With water running, rotate the ADAPTER STEM to adjust the temperature to the **maximum** desired bathing temperature, verified with a thermometer, then turn the water off and make sure **NOT** to change this setting.



IF THE MAXIMUM BATHING TEMPERATURE IS NOT CORRECT OR NEEDS TO BE ADJUSTED:

15. Slightly pull the LIMIT STOP COLLAR forward so it does not hit the PIN and **REPEAT** steps 11 through 14 to re-calibrate the temperature setting.



13. Slide the LIMIT STOP COLLAR back onto the ADAPTER STEM making sure to properly align it with the LIMIT STOP PIN and pressing down firmly.

NOTE: Pressing down firmly on the COLLAR will engage the O-RING and prevent it from sliding off the STEM.

**PROCEED TO
HANDLE INSTALLATION
ON PAGE 13**

INSTALLATION GUIDELINES

BOND KNOB AND LEVER HANDLE INSTALLATION

STEPS 1 - 2 KNOB HANDLE INSTALLATION ONLY

1. Remove the INDICE, center SCREW and KNOB HANDLE from the ESCUTCHEON. Do **NOT** remove the internal SPRING.

NOTE: To remove the INDICE push down on and rotate it 45° then release.

2. Fully thread the ESCUTCHEON into the TRIM CONNECTOR, place the KNOB HANDLE onto the ESCUTCHEON, thread and securely tighten the SCREW, and re-attach the INDICE.

STEPS 3 - 4 LEVER HANDLE INSTALLATION ONLY

3. **CAREFULLY** slide the ESCUTCHEON up the LEVER HANDLE to expose the UNION NUT then thread the NUT into the TRIM CONNECTOR until it stops.

4. **CAREFULLY** slide the ESCUTCHEON down the LEVER HANDLE to conceal the TRIM CONNECTOR.