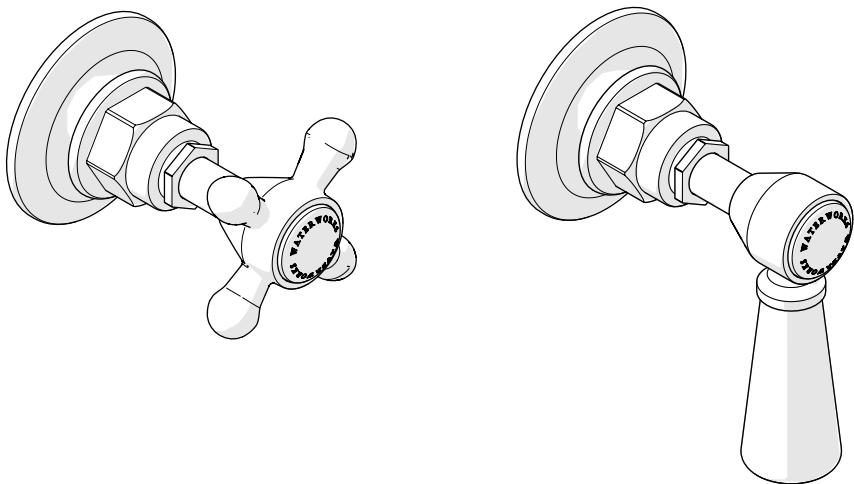


INSTALLATION GUIDELINES

VOLUME CONTROL AND DIVERTER TRIMS

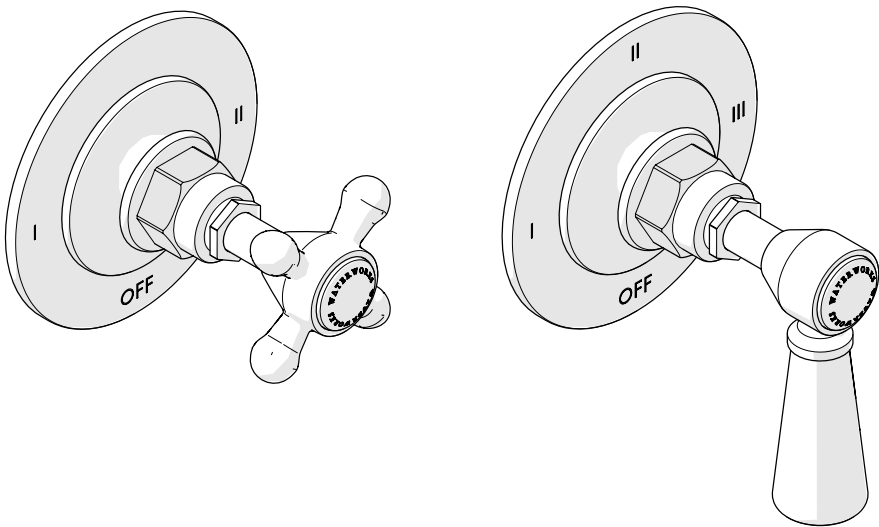
WATERWORKS

HIGHGATE VOLUME CONTROL TRIM



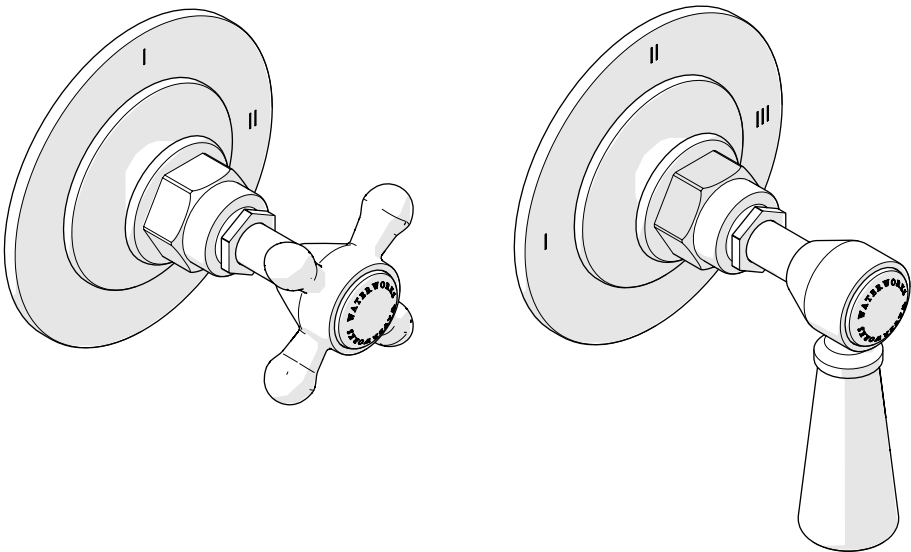
STYLES		
HGVC40 [SHOWN]	HGVC50 [SHOWN]	HGVCAE

HIGHGATE TWO & THREE WAY DIVERTER VALVE TRIMS FOR THERMOSTATIC



STYLES			
HG2T01 [SHOWN]	HG2T10	HG3T01	HG3T10 [SHOWN]

HIGHGATE TWO & THREE WAY DIVERTER VALVE TRIM FOR PRESSURE BALANCE



STYLES			
HG2P01 [SHOWN]	HG2P10	HG3P01	HG3P10 [SHOWN]

INSTALLATION GUIDELINES

VOLUME CONTROL AND DIVERTER TRIMS

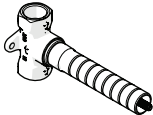
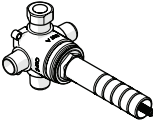
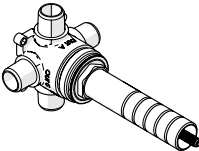
IMPORTANT:

- ALL VALVES AND TRIMS SOLD SEPARATELY.
- 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.
- 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:** Anti-scald protection is the responsibility of the installer and according to applicable codes.
- 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:

- Refer to the Installation Guidelines provided with each VALVE for complete rough-in installation details and related information.
- **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.
- **DIVERTER VALVES** can direct mixed water at a fixed volume to multiple devices. Water cannot flow out of the devices simultaneously (i.e. out of the shower head and handshower together).

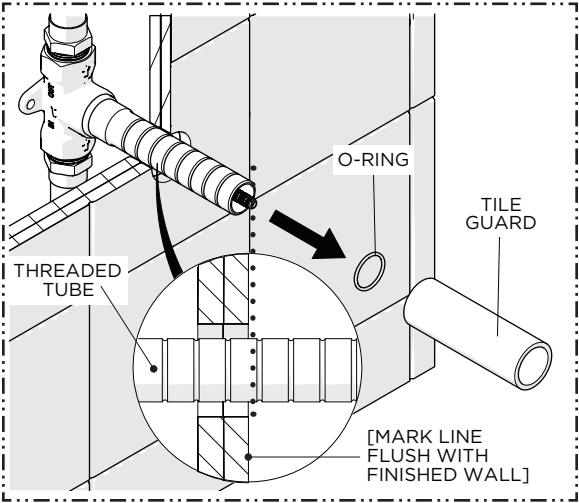
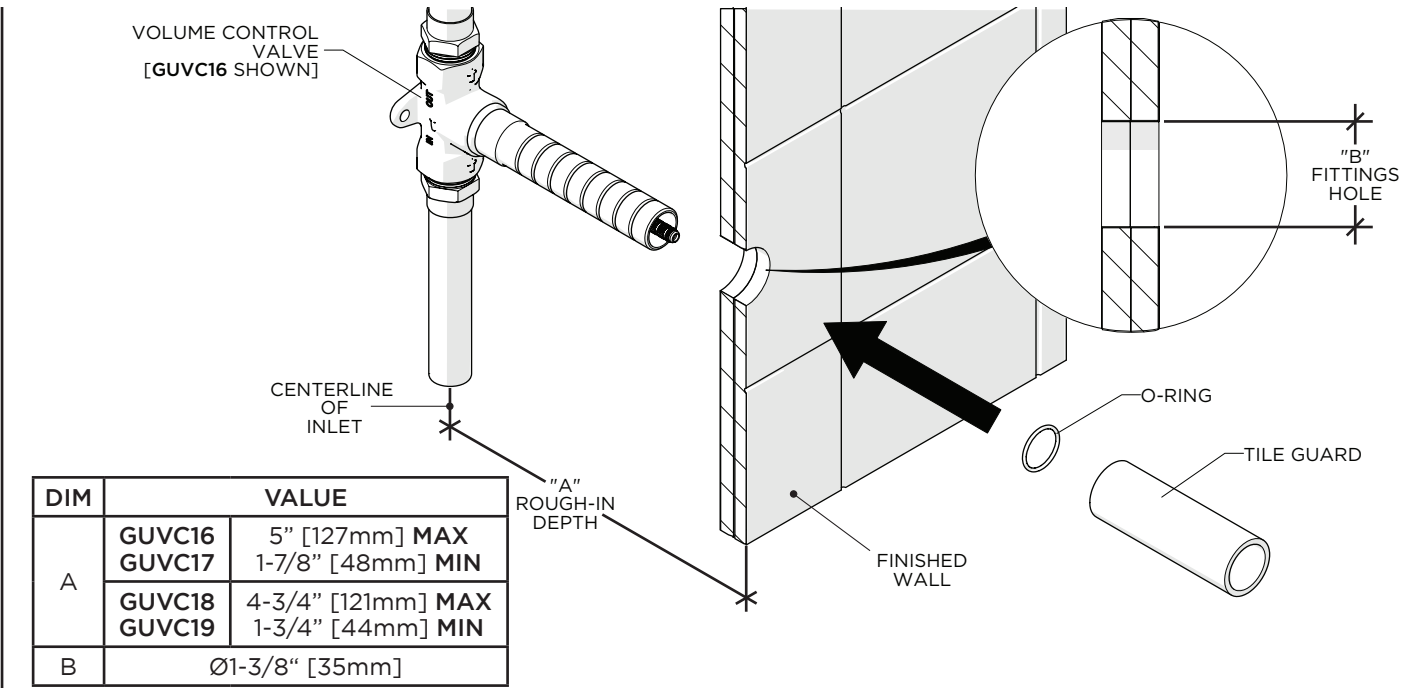
REQUIRED PLUMBING DETAILS:

		STYLE	NUMBER OF OUTLETS	INLET/OUTLET CONNECTIONS
VOLUME CONTROL VALVE		GUVC16	1	3/4" FEMALE NPT
		GUVC17		
		GUVC18		1/2" FEMALE NPT
		GUVC19		
DIVERTER VALVE [WITH SHUTOFF]		GUDV2T [SHOWN]	2	1/2" MALE NPT
		GUDV3T	3	1/2" MALE NPT
		GUDV66	3	3/4" (IN) x 1/2" (OUT) FEMALE NPT
DIVERTER VALVE [WITHOUT SHUTOFF]		GUDV2P	2	1/2" MALE NPT
		GUDV3P [SHOWN]	3	1/2" MALE NPT
		GUDV65	3	1/2" FEMALE NPT

INSTALLATION GUIDELINES

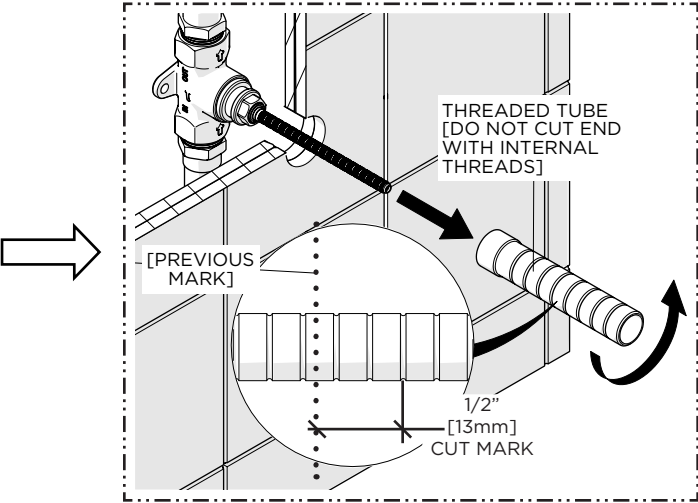
HIGHGATE VOLUME CONTROL TRIM WITH GUVVC16/17/18/19

- **CAUTION:** The rough-in depth is measured from the centerline of the inlets to the surface of the finished wall. If the VALVE is roughed-in too shallow, the TRIM cannot be installed correctly.
- Remove and discard the TILE GUARD only when the finished wall surface (TILE or SLAB) is completed and the TRIM is ready for installation.

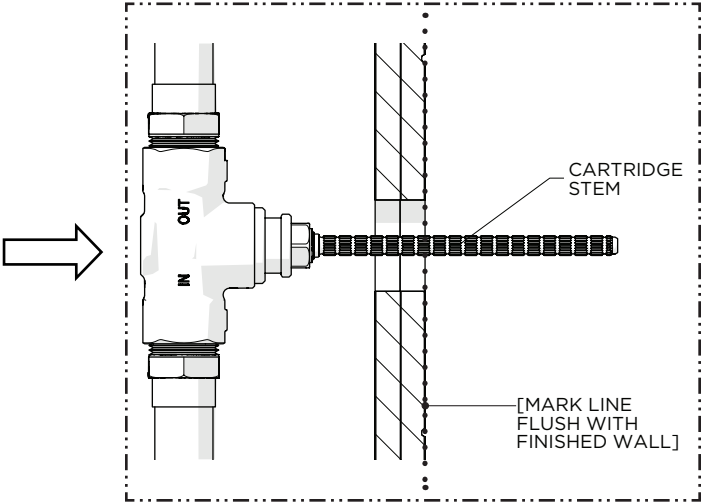


1. Remove the TILE GUARD when ready to install the TRIM then mark the THREADED TUBE where it protrudes past the finished wall.

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



2. Remove the THREADED TUBE then cut it 1/2" [13mm] in front of the previous mark so the TUBE will protrude 1/2" [13mm] from the finished wall surface.



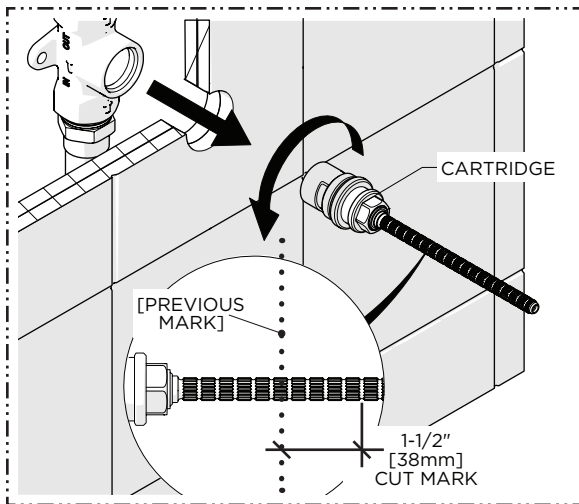
3. Mark the CARTRIDGE STEM where it protrudes past the finished wall.

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

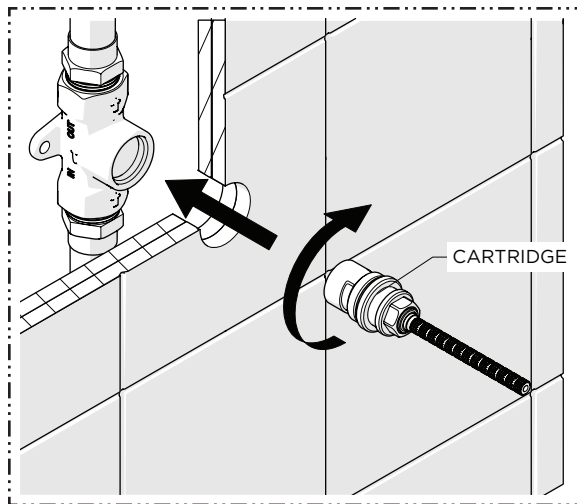
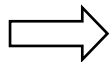
INSTALLATION GUIDELINES

HIGHGATE VOLUME CONTROL TRIM WITH GUVVC16/17/18/19

WATERWORKS

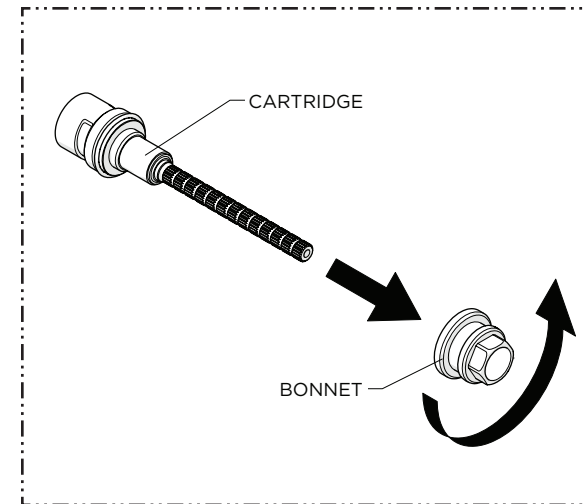
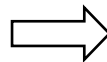


4. Remove the CARTRIDGE using a 21/32" [17mm] shower valve socket wrench (not supplied) then cut the CARTRIDGE STEM 1-1/2" [38mm] in front of the previous mark so the STEM will protrude 1-1/2" [38mm] from the finished wall surface.



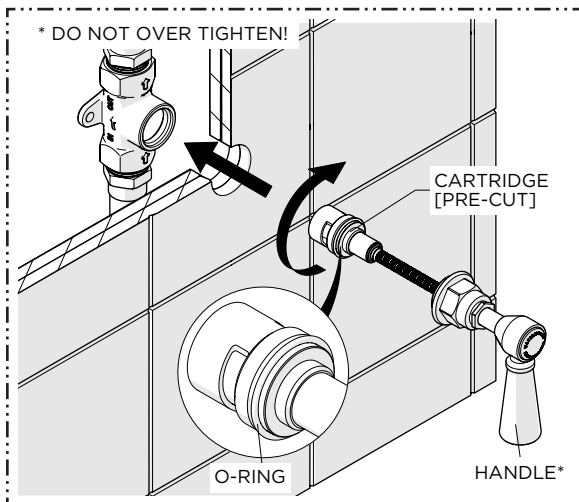
GUVVC18 & GUVVC19 ONLY:

5. Thread and securely tighten the CARTRIDGE back into the VALVE.



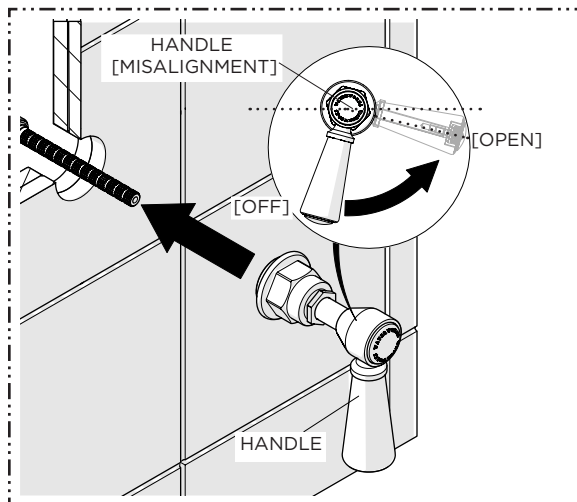
STEPS 6 - 10 GUVVC16 & GUVVC17 ONLY: HANDLE ALIGNMENT.

6. After cutting the CARTRIDGE STEM, unthread the BONNET from the CARTRIDGE if not already disassembled when removing from the VALVE.

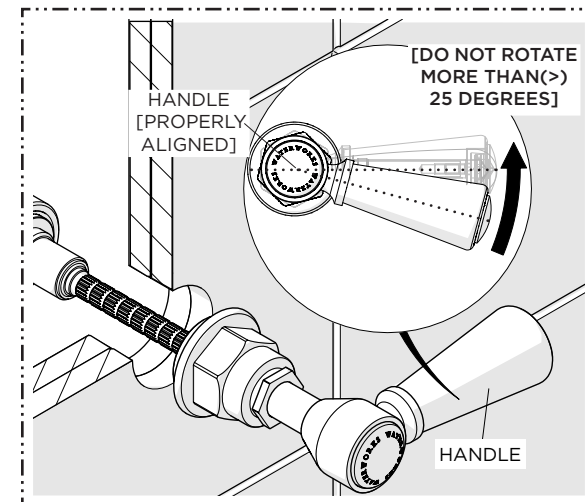
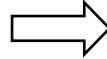


7. Using the HANDLE, thread the CARTRIDGE back into the VALVE until there is **NOTICEABLE** resistance.

NOTE: Ensure the O-RING on the CARTRIDGE has not been damaged and is properly seated.



8. Remove and replace the HANDLE to position it as close as possible to the "OFF" position then turn the HANDLE a 1/4 turn to the "OPEN" position making sure NOT to unthread the CARTRIDGE.



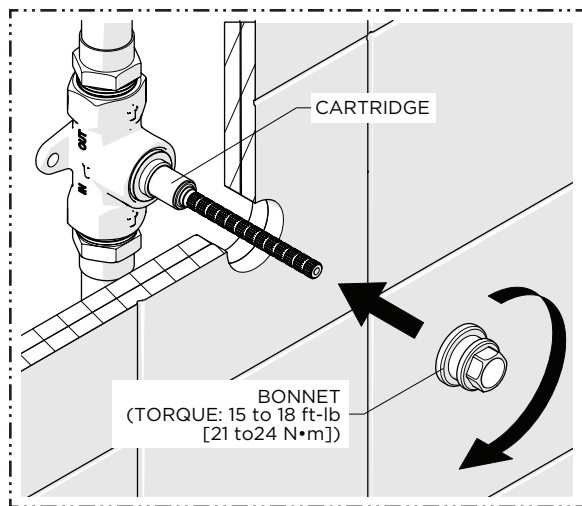
9. **If needed**, carefully continue to rotate the HANDLE counter-clockwise to obtain the proper alignment. Do **NOT** rotate/unthread the CARTRIDGE more than 25 degrees.

NOTE: Repeat Steps 7 & 8 if the CARTRIDGE is unthreaded too far.

INSTALLATION GUIDELINES

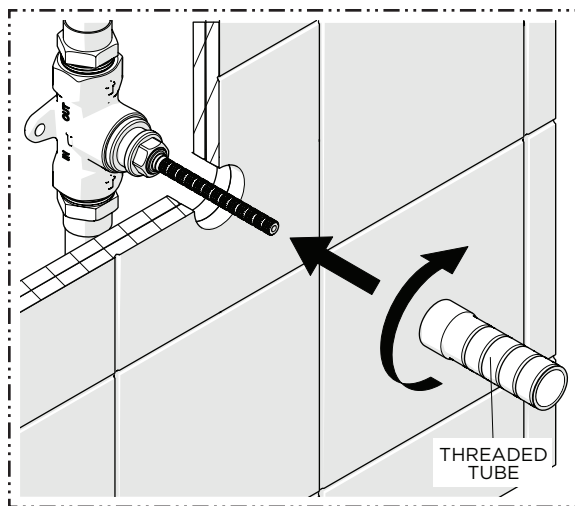
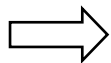
HIGHGATE VOLUME CONTROL TRIM WITH GUVVC16/17/18/19

WATERWORKS

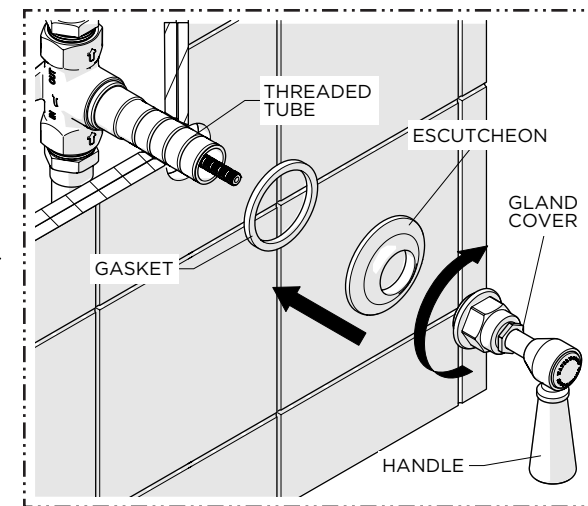
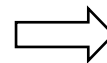


10. Remove the HANDLE then thread and securely tighten the BONNET back onto the CARTRIDGE.

NOTE: The BONNET requires a torque between 15 and 18 ft-lb [21-24 N•m].



11. Thread and securely tighten the THREADED TUBE back onto the CARTRIDGE until snug.

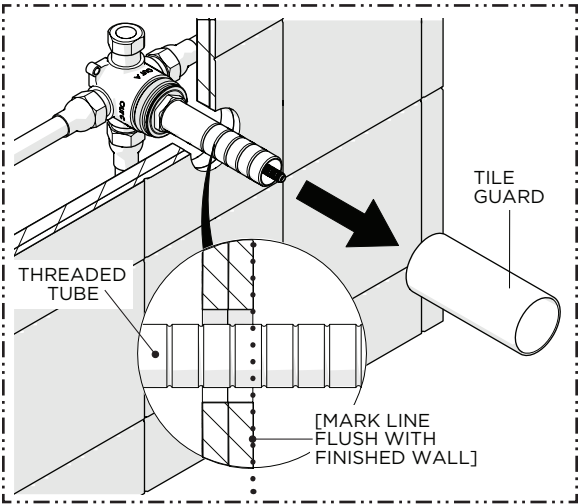
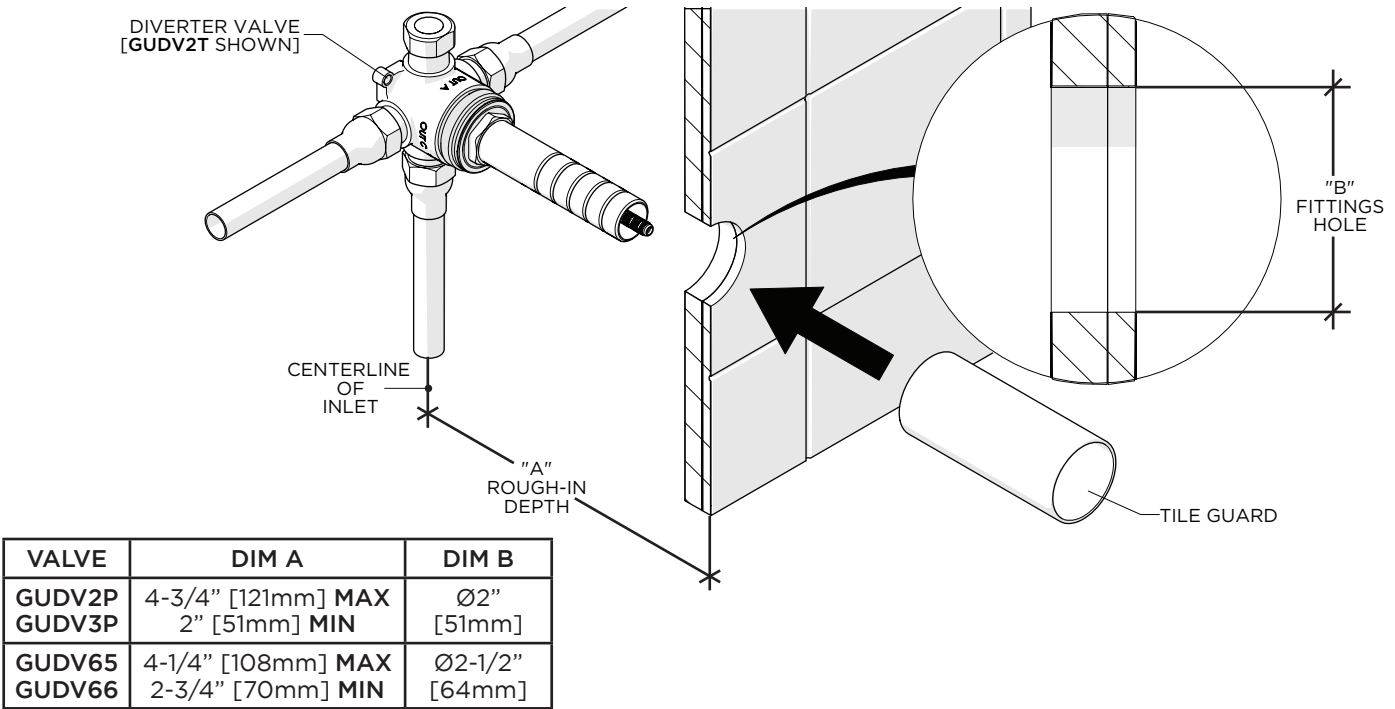


12. Slide the ESCUTCHEON and GASKET over the THREADED TUBE, then thread and securely tighten the GLAND COVER onto the THREADED TUBE.

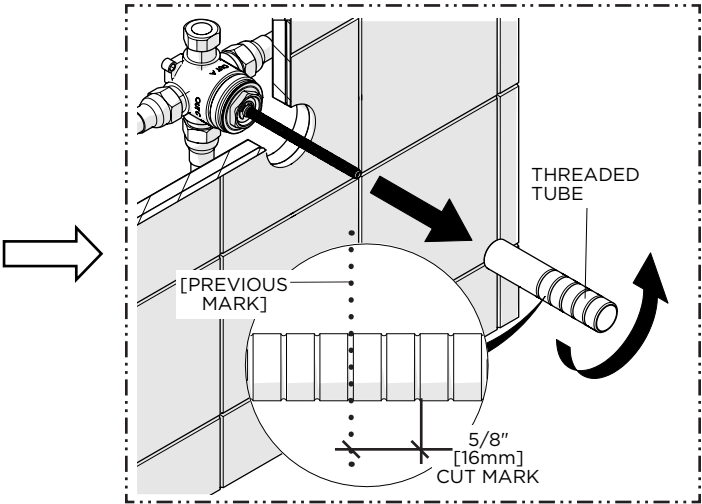
INSTALLATION GUIDELINES

HIGHGATE DIVERTER TRIM WITH GUDV2T/3T/66/2P/3P/65

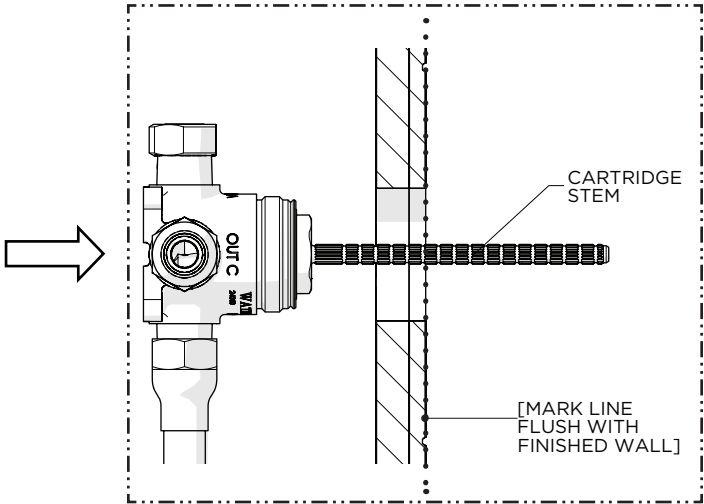
- **CAUTION:** The rough-in depth is measured from the centerline of the inlets to the surface of the finished wall. If the VALVE is roughed-in too shallow, the TRIM cannot be installed correctly.
- The DIVERTER VALVE TRIM components (i.e. HANDLE and TRIM PLATE) are packaged separately from each other.
- Remove and discard the TILE GUARD only when the finished wall surface (TILE or SLAB) is completed and the TRIM is ready for installation.



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 5/8" [16mm] in front of the previous mark so the TUBE will protrude 5/8" [16mm] from the finished wall surface.

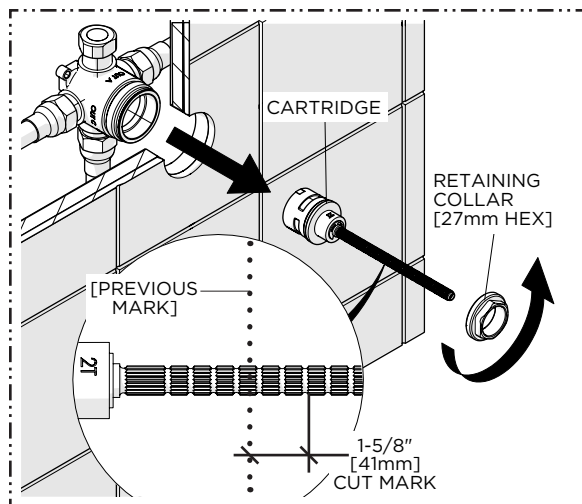


3. Mark the CARTRIDGE STEM where it protrudes past the finished wall.
NOTE: A straight edge (not supplied) can be used to mark the CARTRIDGE STEM.

INSTALLATION GUIDELINES

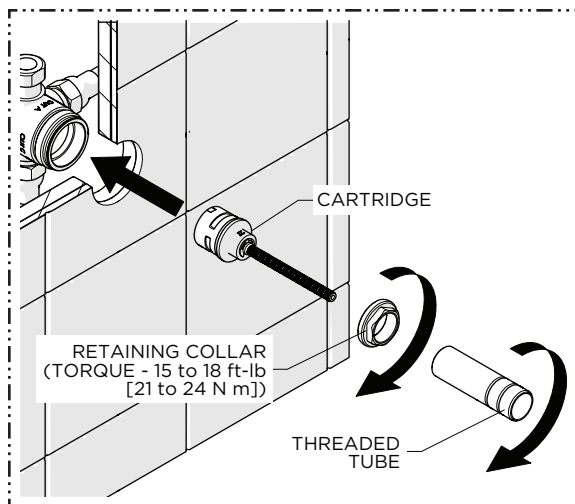
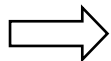
HIGHGATE DIVERTER TRIM WITH GUDV2T/3T/66/2P/3P/65

WATERWORKS



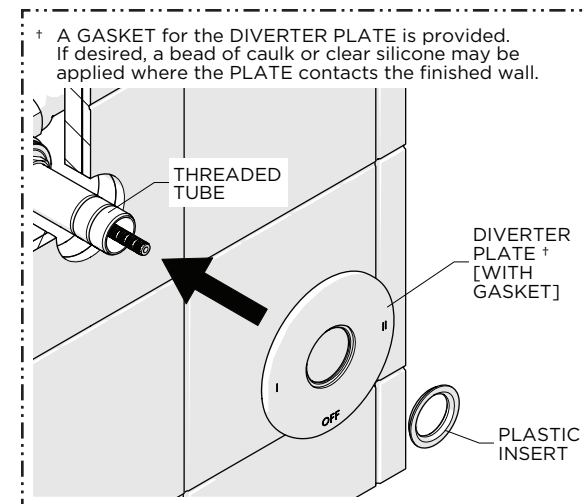
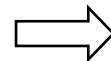
4. Unthread the RETAINING COLLAR and remove the CARTRIDGE then cut the CARTRIDGE STEM 1-5/8" [41mm] in front of the previous mark so the STEM will protrude 1-5/8" [41mm] from the finished wall surface.

NOTE (GUDV66/65 ONLY): Do NOT remove the CARTRIDGE, carefully cut the STEM.

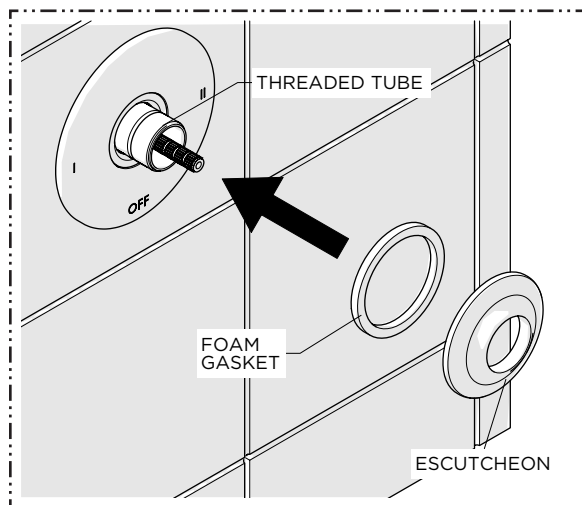


5. Re-insert the CARTRIDGE then thread and securely tighten the RETAINING COLLAR to the specified torque setting shown. Thread the THREADED TUBE back into the RETAINING COLLAR until snug.

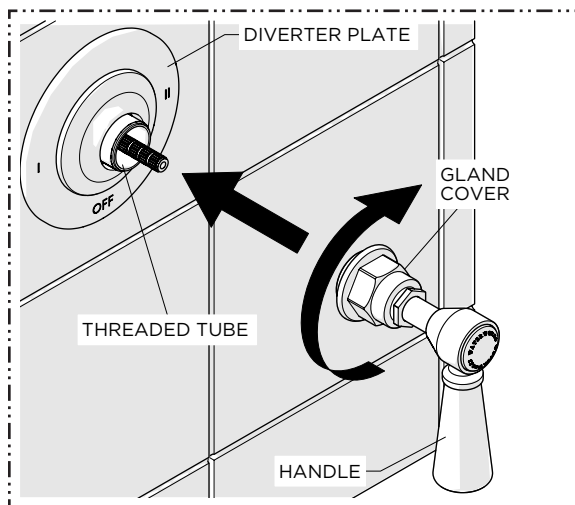
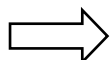
NOTE (GUDV66/65 ONLY): Thread the TUBE back onto the CARTRIDGE until snug.



6. Using the PLASTIC INSERT provided, slide the DIVERTER PLATE † [WITH GASKET] over the THREADED TUBE.



7. Slide the ESCUTCHEON and GASKET over the THREADED TUBE.



8. Holding the DIVERTER PLATE and ESCUTCHEON, thread the GLAND COVER onto the THREADED TUBE.