

# Installation Instructions

## Replacement Torque-able In-wall Cartridges

(Required for heavy handle sets)

### Model No. I-543 COLD and I-544 HOT

(supplied to replace existing cartridges)

#### Recommended Installation by a Professional Plumbing Contractor

1. Turn off water to valve.
2. Use 5/8" deep socket to remove existing cartridge.
3. Use 3/4" deep socket on cartridge bonnet only to install new torque-able cartridge.
4. The cartridge's bonnet must be tightened clockwise to a torque setting of 14-16 ft-lbs. If torque is applied to torque nut, stem will become too stiff to rotate. Removal of torque nut from cartridge's bonnet may cause damage to cartridge packing and ceramic disks.
5. Adjust stiffness of stem rotation by tightening or loosening torque nut.
6. Check stiffness by placing lever handle in horizontal position onto cartridge stem. Handle should not rotate under its own weight.  
(Note: Water supply to valve should still be off; water pressure may affect the stiffness of stem.)
7. Install escutcheon/bonnet trim and mark the all-thread nipple where excess needs to be trimmed
8. Remove escutcheon/bonnet trim and cut all-thread nipple 1/16" less than indicated mark to prevent exposure of nipple threads. NOTE: Do not cut stem and all-thread nipple until finished wall is complete and a dimension check of handle and escutcheons/bonnet trim is done.  
(Stem is grooved at 1/2" intervals.)
9. Cut the cartridge's stem at least 1/2" past the end of the cut all-thread nipple. Final stem length may be longer based on amount that is inserted into handle base.
10. Reinstall escutcheon trim and handle.
11. Secure handle into place by tightening handle set screw.  
**Note:** To achieve desired handle alignment, the cartridge MUST be tightened in clockwise rotation only. If the cartridge is loosened to align handle, cartridge may unscrew from valve body and cause extensive water damage.
12. Turn water supply on.

