

Quick Reference Sheet

Category:

Water service products

Item Class: 420: Water Service Fittings

Models:

T-5300, T-5400, T-5200, T-5500, T-4300, T-4320, T-4305, T-4326, T-4301, T-4321, T-4325, T-4410, T-4412, T-4411, T-4413, T-4440, T-4441, T-4442, T-4350, T-4370, T-4355, T-4365, T-4351, T-4371, T-4432, T-4433, T-4450, T-4451, T-4100, T-4105, T-4201, T-4200, T-4211, T-4400, T-4401, T-4430, T-4431, T-4110, T-4111, T-4112, T-4215, T-4216, T-4217, T-4500 and T-4501

Technical features and facts:

- All models are constructed of **ASTM B62** specified (85-5-5-5) bronze, except for the Models T-4500 and T-4217.
- All models comply with **A.W.W.A. C800-01**.
- There are three pressure ratings for the fittings and curb stops: The curb stops are rated at **300 WOG** and all ½", ¾" and 1" fittings, **100 psi**. 1-1/4, 1-1/2" and 2" fittings, **80 psi**.
- All models are designed for installation onto underground water service lines, connecting the water main to the house or building.
- The meter couplings and flanges are the only fittings not suitable for underground installation.
- Each model has at least one of the following types of end connections, some have them in combination: **Threaded**, **Flared**, **Ring Compression**, **Pack-joint** and **Flanged**.
- Each fitting component is marked with the Legend name, nominal size and either CTS or IPS where applicable. This discourages interchangeability with competitors.
- All models are designed for residential, commercial and industrial applications.
- Unlike typical fitting **configuration descriptions**, water service fittings' configuration descriptions are unique: A **coupling** describes a connection of two *different* types (verses "adapter" or "bushing"). A **union** describes two *like* connections. The description "**quarter-bend**" describes a 90-degree elbow. The **flange** connection is not a common class 125/150 round, but unique in shape and dimension to meter flanges. The **tee** is the remaining configuration.
- Whenever a ring compression or pack-joint end is connected to plastic (polyethylene) tubing or pipe, the insert stiffeners are installed inside the open end of the tubing or pipe to help prevent collapse from the compression forces.

Pack-joint models:

- Offer greater mechanical pull-out resistance over ring-compression connections
- The pack-joint nut's clamp has a special thread called a "butfress-type," which is designed and shaped to bite into the softer plastic pipe or tubing.
- The NBR (Buna-N) gasket and anti-friction ring assure a positive compression-type seal and act independently of the clamp.
- ¾", 1" and 1-1/4" pack-joint nuts are equipped with a 3/8" slotted, 304 SS clamp bolt. 1-1/2" and 2" nuts are equipped with a ½" slotted 304 SS clamp bolt.

Ring-compression models:

- Have a stainless steel "gripper ring" on the inside diameter of the NBR gasket, which concentrically pinches against the tubing or pipe.

- Offer convenient “one-tool-tightening” as compared to the pack-joint or flared connections, which requires two tools.

Flared models:

- Are typically installed onto Type K soft copper tubing
- Cannot be installed onto plastic polyethylene tubing (unless transitional).
- All models are a full-pattern design.

Other related products: Insert fittings and tank tees are indirectly related.
T-441 and T-442 Bronze angle meter valves.

F.A.Q.:

Q. Is it O.K. to use these as compression repair couplings in installations other than an underground water service line?

A. No. All of these fittings are designed for use as underground fittings only. They should not be installed on aboveground lines carrying water, gas or other media.

Q. Do you have to install insert stiffeners every time you install a pack-joint or ring-compression fitting onto polyethylene plastic tubing or piping?

A. Yes. The compression forces exerted by both types of fittings are enough to collapse the tubing or pipe. Stiffeners prevent this collapse by providing a rigid backing inside of the tubing or pipe end.

Q. What is the difference between a Minneapolis pattern curb stop and traditional curb stop?

A. The relation to its curb box. The purpose of all curb stops is to permit shutoff of the water supply from the water main to the building. Because the water line is buried, access to the stop’s operating head is attained by placing a cast iron curb box over the stop. The curb box acts as a rigid conduit from the operating head (underground) to the ground’s surface. When a traditional curb stop is installed, an “arch pattern” curb box is placed over the stop. When a Minneapolis pattern stop is used, a special curb box is threaded onto the threads of the Minneapolis pattern stop. This creates a positive connection between the box and the stop, verses the arch pattern simply being placed over the stop. The advantages are less contamination or dirt-clogging of the curb box and a reduced possibility of the box moving off of the stop’s operating head during frost heave or backfilling. Visually, a Minneapolis pattern curb stop has threads cut around the stem area, directly below the operating head. The same area in a traditional curb stop is plain.

Q. Do we have corporation stops? What is the difference between a corporation stop and a curb stop?

A. No. A corporation stop is a special stop valve that is installed under pressure, directly into the water main pipeline. Their unique body shape, operating head and special driving threads are all designed specifically for use with a water main drilling and tapping machine. The sole purpose of a corporation stop is to allow for the installation of a new water service line without interrupting water main pressure. One end of the corporation stop is typically threaded into the water main then immediately shut off. The other end is now ready to accept the copper tubing, polyethylene tubing or pipe, beginning the run to the building. After all components have been installed, before complete backfilling, the corporation stop is then opened, allowing water main pressure into the new service line. The corporation stop is left open and buried during backfilling, without access to ground surface. A curb stop is typically the first (and only) valve installed downstream from the corporation stop, and the only valve designed to control the flow of water to the building. The top of the previously mentioned curb box is capped, to prevent debris from falling into the box.