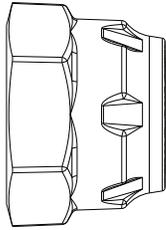




IMPORTANT NOTICE - READ CAREFULLY

Installation Instructions

"Ranger" Series Compression Connectors



The A.Y. McDonald "Ranger" Series compression system is a simple convenient method of connection.

The simple steps listed below will make your job easier and assure fast, safe, and watertight connections:

1. Service tubing should always be snaked in the ditch.
2. Use a tube or pipe cutter to assure a square end. Make sure pipe is round. On copper tubing, use a rounding tool, if necessary. Surface should be clean and free of nicks.

3. Insert stiffeners must be used on all plastic tube except rigid PVC.
4. Stab tube or pipe through the nut and into the socket of the valve or fitting until it bottoms out (Some fittings may or may not have a stop).

5. Tighten the "Ranger" Series nut to the following minimum torques. Over torquing by 5-10 ft.-lbs will not affect connection.

Size	Torque	Pipe O.D.
3/4"	75 ft.-lbs.	0.871" - 1.110"
1"	80 ft.-lbs.	1.120" - 1.384"
1 1/4"	100 ft.-lbs.	1.370" - 1.804"
1 1/2"	115 ft.-lbs.	1.619" - 2.109"
2"	125 ft.-lbs.	2.119" - 2.709"

6. PRESSURE TEST FOR LEAKS BEFORE BACKFILLING
7. Use only on cold water services.

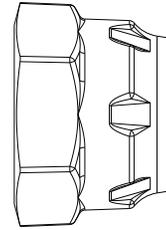
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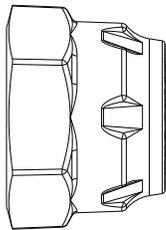
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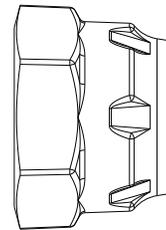
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Installation Instructions

"Ranger" Series Compression Connectors

A.Y. McDonald waterworks products are designed for reliable service.

Like all brass products, however, they can be damaged by improper handling and use.

CAUTIONS

1. Protect threads. Avoid loose fitting wrenches. Do not drop or impact.
2. Use extra care with high water pressures (over 100 PSIG) and pipe or tubing over 1". Consult factory if desired.
3. Inspect and test all joints, valves and fittings before backfilling.
4. Backfill carefully so as to avoid damage to the service line and connections. Looping of the service lines is recommended to minimize strain.
5. DO NOT use Vaseline®, plumber's grease, or any other petroleum based product on seals or o-rings.

Damage caused by improper use and/or handling will void our warranty



WARNING: It is unlawful in CALIFORNIA & VERMONT (effective 1/1/2010); MARYLAND (effective 1/1/2012); LOUISIANA (effective 1/1/2013) and the UNITED STATES OF AMERICA (effective 1/4/2014) to use any product in the installation or repair of any public water system or any plumbing in a facility or system that provides water for human consumption if the wetted surface area of the product has a weighted average lead content greater than 0.25%. This prohibition does not extend to service saddles used in California, Louisiana or under USA Public Law 111-380.

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