

# MUELLER® 110® COMPRESSION CONNECTIONS FOR WATER USE (CONDUCTIVE TYPE)

## PRODUCT SPECIFICATIONS

### 1. MATERIAL SPECIFICATIONS

- 1.1 Nut – Cast Bronze – ASTM B62.
- 1.2 Nut Interior Coating – Fluorocarbon.
- 1.3 Gasket – Molded Synthetic Rubber – ASTM D2000 4AA815.
- 1.4 Gripper Band – Hardened Stainless Steel – Type 410.
- 1.5 Body – Cast Bronze – ASTM B62.
- 1.6 Gasket Conductor Spring (CTS only) – Bronze Wire – ASTM B134 Alloy C26000.
- 1.7 Rigid Metal Liner (for use with plastic pipe or tubing) - Stainless Steel - ANSI Type 304.

### 2. SIZES, OPERATING PRESSURE AND TEMPERATURE

- 2.1 Two basic styles of connections are available.
  - 2.1.1 Connections are available for 1/2", 3/4", 1-1/4", 1-1/2" and 2" Copper Tube Size (CTS O.D.) Tubing. See chart below.
  - 2.1.2 Connections are available for 3/4" and 1" Iron Pipe Size (IPS I.D.) - PE Plastic Pipe. See chart below.
- 2.2 Operating Pressure – The pressure holding capability of the MUELLER 110 Compression Connection is designed to be greater than that of the valve or fitting on which it is used (only in potable water distribution applications complying with AWWA standards).
- 2.3 Operating temperature range is +32 F to + 150 F.

### TUBING AND PIPE DIMENSIONS USED WITH THE MUELLER 110 COMPRESSION CONNECTION

Nominal Size	Material	Tubing or Pipe O.D. Range		Wall Thickness Range		Tubing or Pipe I.D. Range	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
1/2" CST	CU (1)	0.622	0.628	0.045	0.053	—	—
3/4" CTS	CU (1)	0.872	0.878	0.061	0.069	—	—
	PE (2)	0.871	0.879	0.097	0.107	0.657	0.685
1" CTS	CU (1)	1.121	1.129	0.061	0.069	—	—
	PE (2)	1.120	1.130	0.125	0.137	0.846	0.880
1-1/4" CTS	CU (1)	1.371	1.379	0.060	0.070	—	—
	PE (2)	1.370	1.380	0.153	0.168	1.034	1.074
1-1/2" CTS	CU (1)	1.621	1.630	0.067	0.077	—	—
	PE (2)	1.619	1.631	0.181	0.199	1.221	1.269
2" CTS	CU (1)	2.120	2.130	0.076	0.090	—	—
	PE (2)	2.119	2.131	0.236	0.260	1.599	1.659
3/4" IPS	PE (3)	1.045	1.110	0.118	0.138	0.809	.0834
1" IPS	PE (3)	1.329	1.399	0.150	0.170	1.029	1.059

(1) Type K copper tubing per ASTM B88

(2) CTS polyethylene (PE) per ASTM D-2737 SDR-9

(3) IPS polyethylene (PE) per ASTM D-2239 SDR-7

NOTE: Due to the characteristics of plastic pipe, it is necessary to use a rigid liner inside the end of the tubing or pipe.

### 3. DESIGN FEATURES

- 3.1 Connection parts are pre-assembled permitting piping to be stabbed into connection for fast, easy assembly, except for corporation valve use. For this use only it is necessary to remove the connection while corporation valve is inserted into the main or drilled through.
- 3.2 Nut bottoms on a shoulder eliminating need for torque wrench in assembly. This also provides visual final check to assure connection is properly tightened.

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## 3. DESIGN FEATURES (cont.)

- 3.3 Sealing gasket has molded-in-place bronze spring (CTS only) to assure electrical contact for connection when used on metal tubing.
- 3.4 Sealing gasket is totally confined to prevent cold flow or creep either of which could cause future leakage.
- 3.5 Hardened Stainless Steel gripper band securely grips the pipe as its concave shape is compressed by the sealing gasket. This part provides the connection with high resistance to pull out, which could result from line pressure, back filling, ground settlement or accidental disturbance from ditching equipment.
- 3.6 Gripper band overlaps itself to prevent cold flow of the gasket into the cavity under the gripper band.
- 3.7 When this connection is used for plastic tubing or pipe, stainless steel continuous tube liners are used, which are flared at one end to prevent overinsertion into end of pipe.
- 3.8 The interior surface of the nut, including threads, is given a baked-on Fluorocarbon finish to reduce assembly friction and prevent gasket twisting or snaking while being compressed.
- 3.9 MUELLER 110® Compression Connections are supplied as integral parts of a variety of waterworks products such as corporation valves, curb valves, meter valves, and meter setting materials, and as separate couplings and fittings.



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