



# Insulated Water Service Line Products

Low lead solutions to problems caused by stray electrical currents

**Mueller Co.**

# Mueller® Insulated Products

Configurations and styles (in 3/4", 1" and 2")

## Mueller® Insulated Products allow cost effective control of stray currents

In recent years, stray electrical currents—particularly their causes and effects—have caused increasing concern. The American Water Works Association, among other organizations, has sponsored a number of case studies on the stray current issue which point to certain problems that may result from the presence of stray currents in metallic piping systems, including:

- Accelerated corrosion of water distribution system components.
- Shock hazards for field personnel.

Some of the more common situations that can create stray electrical currents and, in their wake, significant problems in water distribution systems are:

- Use of the domestic plumbing as a ground for the electrical system.
- The proliferation of electronic and speed control appliances.
- Operation of an electrical mass transit system on rails.
- Proximity of cathodic-protected systems to water distribution mains.

## AWWA policy

Current AWWA policy\* on the grounding of electrical circuits on water pipe states that:

*“AWWA opposes the grounding of electric systems to pipe systems conveying drinking water to a customer’s premises...a water utility should reserve the right to use nonmetallic pipe or pipe-jointing materials for mains or services, to use electrically insulating fittings or coatings on mains or services, and to disconnect any grounding connection that has been installed on its mains or services without its consent.”*

\*As reaffirmed January 25, 1987.

## An effective way to fight stray currents

Mueller insulated products are a simple, cost effective way to fight stray currents and the problems associated with them in metallic service lines and mains—either in new installations, or to retrofit existing lines. They help utilities to insulate their systems with a minimum of change to existing service line materials, specifications and installation procedures, saving both time and money.



More than 30 years ago, Mueller invented this approach to insulated products to isolate natural gas mains for corrosion protection. The technology is proven effective in controlling stray currents and in resisting pipe stresses.

Mueller incorporates nylon with specially shaped low lead brass parts in a union that effectively stops the flow of electrical current without compromising the strength of the service line. The nylon insulating material is inert, stable and recommended for water service. The strong, beveled-flange design takes advantage of the nylon material's strength in compression and allows tensile and bending forces to be absorbed by the metallic parts of the union.

Note that the Mueller design uses an O-ring seal and does not depend upon threaded plastic components, which are notoriously weak and difficult to seal against leakage.

## Wide range of Mueller products with insulating feature

Mueller Insulated Products provide the quality, dependability and extended service life you have come to expect from all Mueller products. The insulating feature is offered in Mueller® 300™ Corporation, Curb and Meter Ball Valves in various inlet and outlet configurations. These valves offer a 300 psig working pressure rating.

The nylon insulator is also available in straight service fittings in a number of inlet and outlet configurations. Insulated water meter couplings are also available.

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## Mueller® 300™ Corporation Ball Valves

- CC thread x Mueller 110° Compression Connection (CTS)
- IP thread x Mueller 110° Compression Connection (CTS)
- CC thread x Mueller Pack Joint Connection (CTS)
- IP thread x Mueller Pack Joint Connection (CTS)
- CC thread x Copper Flare Connection
- IP thread x Copper Flare Connection
- CC thread x FIP
- IP thread x FIP



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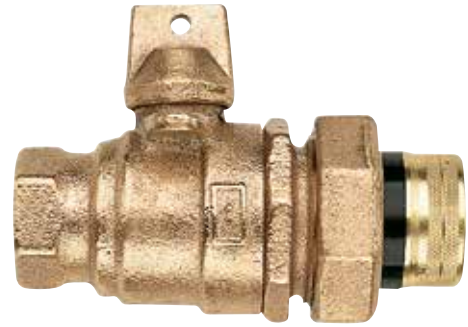
## Straight Service Fittings

- Mueller 110° Compression Connection (CTS) both ends
- Mueller Pack Joint Connection (CTS) both ends
- FIP both ends
- FIP x Mueller 110° Compression Connection (CTS)\*\*
- MIP x Mueller 110° Compression Connection (CTS)\*\*
- Iron Meter Bar Lock Nut x Mueller 110° Compression Connection (CTS)\*\*
- FIP x Mueller Pack Joint Connection (CTS)\*\*
- MIP x Mueller Pack Joint Connection (CTS)\*\*
- Iron Meter Bar Lock Nut x Mueller Pack Joint Connection (CTS)\*\*
- Female Copper Flare thread x Mueller 110° Compression Connection (CTS)\*\*
- Female Copper Flare thread x Copper Flare Connection\*\*



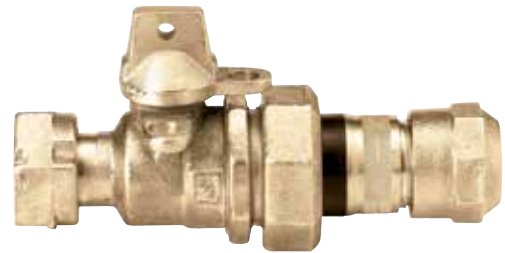
## Mueller® 300™ Curb Ball Valves

- Mueller 110° Compression Connection (CTS) both ends
- Mueller Pack Joint Connection (CTS) both ends
- Copper Flare Connection both ends
- FIP both ends
- FIP x Mueller 110° Compression Connection (CTS)\*
- FIP x Mueller Pack Joint Connection (CTS)\*
- FIP x Copper Flare Connection\*



## Mueller® 300™ Meter Ball Valves

- Mueller 110° Compression Connection (CTS) x Meter Swivel Nut (with lockwing)
- Mueller 110° Compression Connection (CTS) x Meter Flange (with lockwing)
- FIP x Meter Swivel Nut (with lockwing)\*
- FIP x Meter Flange (with lockwing)\*



## Water Meter Couplings\*\*\*

- MIP x Meter Swivel Nut (various lengths available)



\* FIP is on insulator end

\*\* FIP, MIP, iron meter bar lock nut, or copper flare thread is on end opposite of insulator

\*\*\* Design of this product differs from that of other products featured in this brochure

## Wrapping: a key to dependable performance

For buried installations, the insulator and the adjacent piping must be wrapped at least 3 feet in both directions from the insulator to avoid the possibility of stray currents traveling through the soil around the insulator.

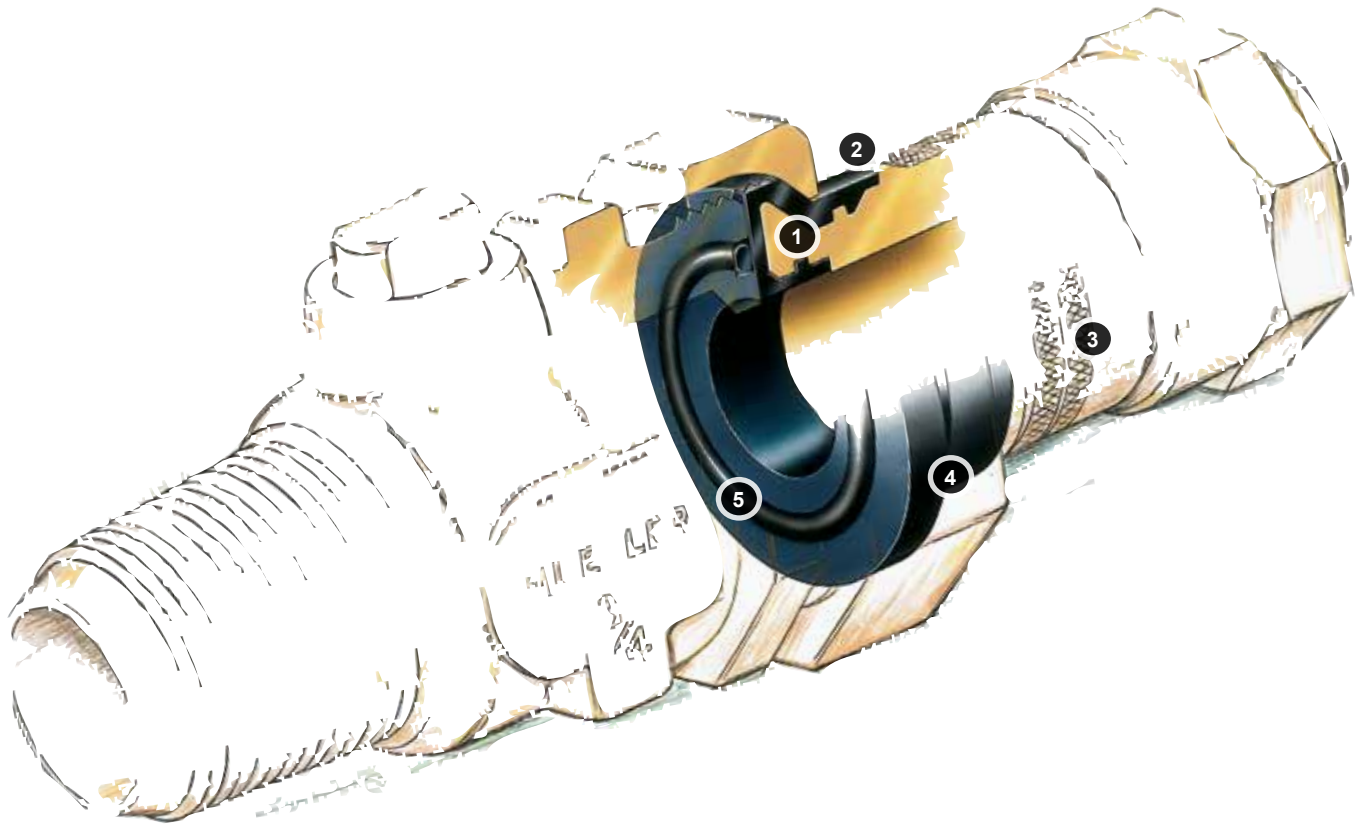
Polyken primer and #932 Hi-Tack Joint Wrap Tape or equal are recommended for wrapping the insulator and service line pipe. The main pipe must be tape-wrapped or encased with 8 mil polyethylene.

All wrapping should be in accordance with the wrapping manufacturer's instructions; ANSI/AWWA C209 Standard for Cold-Applied Coatings for the exterior of special sections, connections and fittings for steel water pipelines; and ANSI/AWWA C105/A21.5 Standard for Polyethylene Encasement for Ductile Iron Pipe Systems.

There must be no breaks in the wrapping. Care should be taken to assure that the wrapping is not damaged during backfill.



# Designed and manufactured to meet your needs



**1 Beveled flange**

Increases bearing surface for added strength. Configuration reduces creep and assures seal between nylon and brass tailpiece.

**2 Extra long insulator skirt**

Resists bridging or shorting.

**3 Low lead brass parts**

Designed to absorb tensile and bending forces from piping.

**4 Nylon insulator**

Has high bearing and impact strength. Design capitalizes on nylon's strength under compression.

**5 Self-activating O-ring**

Ensures a positive seal. Retained in groove if tailpiece is removed.



## Our Products

Mueller has built its reputation on producing innovative water distribution products of superior quality – a reputation that is literally “on the line” every day throughout the world. Mueller products and those of its affiliates are used throughout the water system...from the source to the consumer. And we are committed to continuing research and development of new products and services to meet the growing needs of the water infrastructure industry. Mueller is the largest and only full-line supplier of potable water distribution products in North America and its markets continue to expand globally.

## Our People

The capacity to deliver the widest array of products and stand behind those products to ensure your satisfaction is our strength. The success of Mueller is dependent upon the success of those who are involved, both inside and outside our company. Therefore, we feel our future is wholly dependent on long-term relationships with our employees, customers and suppliers. This is why we strive to be proactive and responsive to their needs, always looking for a “better way”. It’s an approach that has set us apart since 1857 and will assure our mutual achievement and prosperity in the future.

*For more information about Mueller or to view Mueller’s full line of water products, please visit [www.muellercompany.com](http://www.muellercompany.com) or call Mueller Customer Service at 1.800.423.1323.*

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# Other Innovative Mueller Products



## Pipe Repair Products

Pipe repair products from Mueller Co. are the right choice for emergency repair of water main or service line breaks and leaks. Service saddles form a tight connection between the main and service line and feature an O-ring fit into a dimensionally controlled groove, which eliminates creep and seal blowout. Our complete line of pipe repair products works for all types of pipe materials, is available in bronze, stainless steel, and ductile iron and sizes ranging from 2" to 36".



**Smart Move™**

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