

MUELLER® Insulated Water Service Line Products

MUELLER Insulated Products are the simple, cost effective and reliable way to help address the problems associated with stray electrical currents on metallic water piping - either in new installations, or to retrofit existing lines.

Insulated products are available for use in many different locations along the service line allowing a style to be selected which can help to control stray currents, yet minimizes the need for changes to system specifications, installation procedures, or training programs.

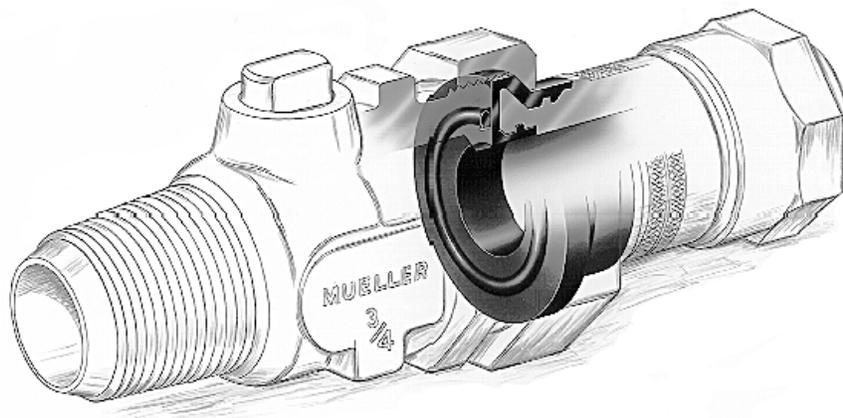
Mueller incorporates a nylon insulator that is structurally supported by specially shaped brass parts. This results in a strong union that will withstand the mechanical forces and stresses encountered in water distribution systems,

and that effectively stops the flow of electrical current at the point of installation.

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

All wrapping should be in accordance with 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.

All service brass will comply with AWWA C-800. Components in contact with potable water will also comply with latest requirements of the Federal Safe Drinking Water Act.



- **NYLON INSULATOR** - has high dielectric, compressive and impact strength. It is inert, and recommended for water service applications. Design capitalizes on nylon’s superior strength under compression.
- **BRASS PARTS** - designed to absorb tensile and bending forces from piping.
- **INSULATOR SKIRT**-is extra long to resist electrical bridging or shorting.
- **BEVELED FLANGE** increases compressive bearing area for added strength. Design assures reliable seal between nylon and brass tailpiece.
- **O-RING SEAL** - is retained in groove if tailpiece is removed to prevent O-ring loss; assures positive seal in union.
- **CONVENIENCE AND RELIABILITY** - the convenience of a union and an insulator in one product. Reliability proven by more than 30-years use of similar Mueller design in natural gas distribution industry.

Rev. 11-14 Shaded area indicates changes



Insulated MUELLER® 300™ Corporation Ball Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER 110® Compression Connection for CTS O.D. tubing*

Sizes Available: 3/4", 1", 2"

N-35008N



Insulated MUELLER® 300™ Corporation Ball Valve
Inlet: AWWA M.I.P. thread
Outlet: MUELLER 110® Compression Connection for CTS O.D. tubing*

Sizes Available: 3/4", 1", 2"

N-35028N



Insulated MUELLER 300 Corporation Ball Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER® Pack Joint Connection for CTS O.D. tubing*

Sizes Available: 3/4", 1"

P-35008N



Insulated MUELLER 300 Corporation Ball Valve
Inlet: AWWA M.I.P. thread
Outlet: MUELLER® Pack Joint Connection for CTS O.D. tubing*

Sizes Available: 3/4", 1"

P-35028N



Insulated MUELLER 300 Corporation Ball Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: Copper flare nut*

Sizes Available: 3/4", 1"

N-35000N



Insulated MUELLER 300 Corporation Ball Valve
Inlet: AWWA M.I.P. thread
Outlet: Copper flare nut*

Sizes Available: 3/4", 1"

N-35025N



Insulated MUELLER 300 Corporation Ball Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: F.I.P.

Sizes Available: 3/4", 1", 2"

N-30045N



Insulated MUELLER 300 Corporation Ball Valve
Inlet: AWWA M.I.P. thread
Outlet: F.I.P.

Sizes Available: 3/4", 1", 2"

N-30046N

NOTE: See page 6A.6 for inserting tools and adapter nipples for these corporation valves.

* See charts on page 6A.7 for tubing and pipe that may be used with MUELLER 110, Pack Joint connections and for flare connection accessories.

INSULATED CURB AND METER BALL VALVES

Shaded area indicates change Rev. 4-14



N-35209N

Insulated MUELLER® 300™ Ball Valve

MUELLER 110 Compression Connection for CTS O.D. tubing* - **both ends**
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (N-35209N-3)

Sizes Available: 3/4", 1", 2"



P-35209N

Insulated MUELLER 300 Ball Valve

MUELLER® Pack Joint Connection for CTS O.D. tubing* - **both ends**
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (P-35209N-3)

Sizes Available: 3/4", 1"



N-35172N

Insulated MUELLER 300 Ball Valve

Inlet: MUELLER 110 Compression Connection for CTS O.D. tubing *
Outlet: F.I.P. thread
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (N-35172N-3)

Sizes Available: 3/4", 1"



P-35172N

Insulated MUELLER 300 Ball Valve

Inlet: MUELLER Pack Joint Connection for CTS O.D. tubing *
Outlet: F.I.P. thread
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (P-35172N-3)

Sizes Available: 3/4", 1"



N-35166N

Insulated MUELLER 300 Ball Valve

Inlet: Copper Flare Nut *
Outlet: F.I.P.
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (N-35166N-3)

Sizes Available: 3/4", 1"



N-30283N

Insulated MUELLER 300 Ball Valve

F.I.P. thread - **both ends**
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (N-30283N-3)

Sizes Available: 3/4", 1"



N-35351N

Insulated MUELLER Ball Meter Valve

Inlet: Swivel Meter Nut
Outlet: F.I.P.
Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (N-34351N-3)

Sizes Available: 3/4", 1"



N-35163N

Insulated MUELLER 300 Ball Valve

MUELLER 110 Compression Connection for CTS O.D. tubing* - **both ends**
Quarter turn check and Minneapolis top thread - this valve may be ordered with 360° turn option by adding -3 to end of catalog number (N-35163N-3)

Sizes Available: 3/4", 1"

* See charts on page 6A.7 for tubing and pipe that may be used with MUELLER 110, Pack Joint connections and for flare connection accessories.

Rev. 4-14 Shaded area indicates changes



N-35204N

Insulated MUELLER[®] 300[™] Ball Valve

Copper Flare* - **both ends**

Quarter turn check - this valve may be ordered with 360 turn option by adding -3 to end of catalog number (N-35209N-3)

Sizes Available: 3/4", 1"

INSULATED STRAIGHT COUPLINGS



6A.5

Shaded area indicates change Rev. 4-14



N-35403N

Insulated straight service fitting
MUELLER 110® Compression
Connection CTS O.D. tubing*
- **both ends**
Sizes Available: 3/4", 1"



P-35403N

Insulated straight service fitting
MUELLER® Pack Joint
Connection CTS O.D. tubing*
- **both ends**
Sizes Available: 3/4", 1"



N-35451N

Insulated straight service fitting
Inlet: F.I.P. thread
Outlet: MUELLER 110
Compression Connection
CTS O.D. tubing *
Sizes Available: 3/4", 1"



P-35451N

Insulated straight service fitting
Inlet: F.I.P. thread
Outlet: MUELLER Pack Joint
Connection CTS O.D. tubing*
Sizes Available: 3/4", 1"



N-35428N

Insulated straight service fitting
Inlet: M.I.P. thread
Outlet: MUELLER 110
Compression Connection
CTS O.D. tubing *
Sizes Available: 3/4", 1"



P-35428N

Insulated straight service fitting
Inlet: M.I.P. thread
Outlet: MUELLER Pack Joint
Compression Connection
CTS O.D. tubing *
Sizes Available: 3/4", 1"



N-35071N

Insulated straight service fitting
Inlet: Female copper flare
thread (adapts to flare
connection end)
Outlet: MUELLER 110
Compression Connection
CTS O.D. tubing *
Sizes Available: 3/4", 1", 1"x3/4"



P-35071N

Insulated straight service fitting
Inlet: Female copper flare
thread (adapts to flare
connection end)
Outlet: MUELLER Pack Joint
Compression Connection
CTS O.D. tubing *
Sizes Available: 3/4", 1", 1" x 3/4"



N-35062N

Insulated straight service fitting
Inlet: Female copper flare
thread (adapts to flare
connection end)
Outlet: Copper flare nut *
Sizes Available: 3/4", 1"x3/4", 1"



N-30077N

Insulated straight service fitting
F.I.P. thread **both ends**
Sizes Available: 3/4", 1"

* See charts on page 6A.7 for tubing and pipe that may be used with MUELLER 110, Pack Joint connections and for flare connection accessories.
† First size is female copper flare thread, second size is outlet.

6A.6



MUELLER® INSULATED METER COUPLINGS & EQUIPMENT INFORMATION

Rev. 4-14 Shaded area indicates changes



Insulated straight coupling
Lock nut* x MUELLER 110®
Compression Connection for
CTS O.D. tubing **

N-34218N

Catalog size	5/8" x 3/4"	5/8" x 3/4" x 3/4"	1"
Meter size	5/8"	5/8" x 3/4", 3/4"	1"
Thread size	3/4"	3/4"	1"



Insulated straight coupling
Lock nut* x MUELLER® Pack
Joint Connection for CTS
O.D. tubing **

P-34218N

Catalog size	5/8" x 3/4"	5/8" x 3/4" x 3/4"	1"
Meter size	5/8"	5/8" x 3/4", 3/4"	1"
Thread size	3/4"	3/4"	1"

* For use with Mueller Iron Meter Yokes (Page 8B.1).

** See chart on page 6A.7 for tubing and pipe that may be used with these connections.



Insulated straight meter coupling
Integral insulator in tailpiece -
tailpiece machined inside and
outside M.I.P. x meter swivel nut

H-10871N***

Catalog size	5/8" x 3/4" x 3/4"	5/8"	1"	1"	1"
Meter size	5/8" x 3/4", 3/4"	5/8"	1"	1"	1"
Length	2"	2-1/2"	1-5/8"	2-1/8"	2-5/8"
Option	-00	-	-01	-02	-

*** This meter coupling uses nylon as an insulator but is not based on the same insulation design used on other items in this section.

MUELLER® Drilling and Tapping Machine equipment required to install Insulated corporation valves

Stop or Valve Size (Nominal)		3/4" CTS	1" CTS	2"
Combined Drill and Tap Size --See Section 1 For Part Numbers		3/4"	1"	2"
B-101/B-100 inserting tool†		681722	681724	-
Nut		501892	526587	-
A-3 inserting tool†		681722	681724	-
Nut		501892	526587	-
Maximum allowable size drill or shell cutter - see section 2 for part numbers	AWWA I.P.	11/16"	7/8"	-
	CC (AWWA taper)	11/16"	15/16"	-
E-5 machine adapter nipple - must be used with 502938		528723	528724	-
D-5 machine adapter nipple - must be used with 502938		528723	528724	-
E-5 machine adapter for insulated corp must be used with 502938		-	-	682649
D-5 machine adapter for insulated corp must be used with 502938		-	-	682649

†Includes nut and shank. Ordering one 3/4" 681722 inserting tool and one 1" 681725 extracting tool will enable user to insert and/or extract both sizes and styles of Insulated Ball Valves by switching the nuts and shanks.

Tubing, pipe and liners used with MUELLER 110 Compression Connection

Nominal size of connection	Material*	Tubing or pipe O.D. range - inches	Tubing or pipe wall thickness range - inches	Tubing or pipe I.D. range - inches	Liner part number
3/4" CTS	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
	Polyethylene	0.871 - 0.879	0.097 - 0.107	0.657 - 0.685	504281
1" CTS	Type "K" copper	1.121 - 1.129	0.061 - 0.069	-	-
	Polyethylene	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880	504385
2" CTS	Type "K" copper	2.120 - 2.130	0.076 - 0.090	-	-
	Polyethylene	2.119 - 2.131	0.236 - 0.260	1.599 - 1.659	506141

*Type "K" soft copper tubing per ASTM B88; CTS polyethylene (PE) per ASTM D-2737 - SDR-9

Mueller 100 Compression Connection replacement parts

Size	Gasket part number	Connection nut
3/4" CTS	581949	507831
1" CTS	581951	507835



†Gasket and gripper band assembly

Kit includes one standard Gasket (same used with current style 110 connections) and a special Nut that adapts to the older style connection threads on the fittings. It is installed in the same way as the current style connection (Gasket conductor spring should be toward fitting body).

Size	Connection kit
3/4" CTS	682552
1" CTS	682551



Tubing, pipe and liners used with MUELLER Pack Joint Connection

Nominal size of connection	Material*	Tubing or pipe O.D. range - inches	Tubing or pipe wall thickness range - inches	Tubing or pipe I.D. range - inches	Liner part number
3/4" CTS	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
	Polyethylene	0.871 - 0.879	0.097 - 0.107	0.657 - 0.685	528704
1" CTS	Type "K" copper	1.121 - 1.129	0.061 - 0.069	-	-
	Polyethylene	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880	528705
2" CTS	Type "K" copper	2.120 - 2.130	0.076 - 0.090	-	-
	Polyethylene	2.119 - 2.131	0.236 - 0.260	1.599 - 1.659	528707

*Type "K" soft copper tubing per ASTM B88; CTS polyethylene (PE) per ASTM D-2737 - SDR-9



Mueller Pack Joint Connection kit

Size	Connection kit
3/4" CTS	681921
1" CTS	681922
1-1/2" CTS	681923
2" CTS	681924



**Connection Kit
(includes Pack Joint, Gasket and Washer)**

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Copper flare nut



CATALOG NUMBER: **H-15430**

1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
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Solid Copper disc

Used with regular copper flare nut to shut off line.



CATALOG NUMBER: **H-15535**

1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
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Brass cap

Fits on copper flare spud to cap off line.



CATALOG NUMBER: **H-15540N**

1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
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Flaring Tool

Used to make 45° flare on type "K" copper tubing.



CATALOG NUMBER: **H-18000**

3/4"	1"
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Drilled flaring tool

Used to make 45° flare on type "K" copper tubing without shutting off water-drilled to exhaust water at right angle to tubing.



CATALOG NUMBER: **H-18005**

3/4"	1"
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Reamer

Used to ream the inside of type "K" copper tubing to remove burrs prior to flaring.



CATALOG NUMBER: **H-1801**

3/4"	1"
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Brass Hammer

Solid brass head with 10" wooden handle. Weight 2-3/4 lb.



CATALOG NUMBER: **H-18025**

Note: When using any striking tool, safety eye protection must be worn. Inspect hammer and tools for any damage after each use and repair or replace if mushrooming or chipping is evident.