### SERVICE FITTINGS

<u>Mueller Co.</u>

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MUELLER CO. offers a variety of proven service connections to fit most pipe and tubing used in today's service lines. These connections include the MUELLER 110<sup>®</sup> Compression Connection,

MUELLER Pack Joint Connection, MUELLER INSTA-TITE<sup>®</sup> Connection, MUELLER GRIP Connection, copper flare connection and several types of threaded connections.

The MUELLER 110 Compression Connection offers high resistance to pull-out, fast installation, and a visual means to check for proper tightness. This connection is available on most MUELLER valves and stops in sizes from 3/4" to 2", and for CTS tubing or IPS pipe.

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.

#### **MUELLER 110<sup>®</sup> Compression Connection Features**



- NUT corrosion resistant cast bronze ASTM B62 (85- 5-5-5).
- NUT bottoms out on shoulder of coupling to give quick visual indication of proper tightening.
- TWO DESIGNS conductive compression connection fits type "K" copper tubing and CTS O.D. PE plastic tubing. A separate design fits IPS PE plastic pipe. Recommended stainless steel liners for plastic tubing and pipe available.
- CONDUCTOR SPRING provides metal-to-metal contact between copper tubing and fitting for electrical conductivity.
- GASKET compresses concave gripper band and seals against fitting body, pipe and nut. Uniform pressure is applied around the concave gripper, forcing each outer edge to grip the pipe for pull-out resistance.

- ENTIRE GASKET is enclosed to resist cold flow and creep.
- NUT bottoms out on shoulder of coupling to give quick visual indication of proper tightening.
- FLUOROCARBON COATING on inside surface of nut reduces tightening effort and avoids gasket
- PRESSURE RATING 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).
- □ GRIPPER BAND is stainless steel and overlaps itself so no gasket material can get underneath.



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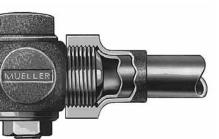
Rev. 3-15 Shaded area indicates changes

#### MUELLER<sup>®</sup> INSTA-TITE<sup>®</sup> Connection



- BODY is cast from corrosion resistant Low Lead bronze in compliance with AWWA C-800.
- □ LARGE WRENCH FLATS provide generous gripping area for tightening connections to valve bodies.
- TWO DESIGNS are available to fit either CTS O.D. PE plastic tubing or IPS PE plastic pipe.
- SIMPLE DESIGN eliminates flaring, heating ,threading, cementing, and nut tightening. Liners (inserts) are not required.

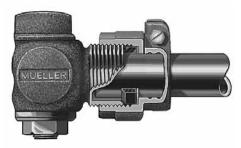
- PRESSURE RATING The pressure holding capability of the MUELLER INSTA-TITE Connection is designed to be greater than that of the valve or fitting on which it is used (only in potable water distribution applications complying with AWWA standards).
- O-RING between the connection housing and the tubing or pipe creates a positive seal. Any increase in pressure, up to the maximum rating of the PE tubing or pipe, increases the sealing force.
- MUELLER INSTA-TITE CONNECTION is used on polyethylene (PE) pipe or tubing only.
- GRIP RING is made from a high strength plastic and is designed to allow easy installation of the pipe or tubing while providing high resistance to pullout.
- COLOR CODED grip ring, RED for CTS O.D. and WHITE for IPS, aids in proper selection and use.



- CONNECTION MEETS all applicable parts of AWWA C800 standard.
- MUELLER CO. was instrumental in introducing the copper flare connection to the water industry as an alternative to the old lead connections.

#### **Copper Flare Connection**

- PRESSURE RATING The pressure holding capability of the MUELLER Copper Flare 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).
- MUELLER<sup>®</sup> COPPER FLARE CONNECTION is for use on type "K" copper tubing.
- CONVEX SURFACE in nut opposes convex surface on body to provide a line contact, assuring greater pullout resistance and a dependable seal.
- EXTRA LONG SKIRT on copper flare nut provides added support to tubing and reduces possibility of leaks.



- NUT corrosion resistant cast bronze ASTM B62 (85-5-5-5).
- GASKET compressed against the fitting and pipe outer surface by tightening of nut. Not interchangeable with the Mueller 110 Compression Connection gasket.

#### **Pack Joint Connection**

- MUELLER PACK JOINT CONNECTION available in three styles: for type "K" copper and PE tubing (CTS), for IPS PE (PEP) and PVC pipe.
- 3/4" & 1" CTS NUT/GASKET ASSEMBLY ARE INTERCHANGEABLE - with comparable size of Mueller 110<sup>®</sup> Compression Connections nut/gasket assembly CTS only. (Note that 1-1/2" and 2" CTS components and all sizes of IPS components are NOT interchangeable.)
- PRESSURE RATING The pressure holding capability of the MUELLER Pack Joint 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).

### SERVICE FITTINGS

#### **MUELLER<sup>®</sup> Grip Compression Connection**

The MUELLER<sup>®</sup> Grip Compression Connection is a stab connection with large wrench flats. It is available in CTS and can be ordered by adding a "G" in front of an existing compression connection Part Number (EX: B25008N to G25008N).



- PRESSURE RATING -The pressure holding capability of the MUELLER Grip 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).
- □ GASKET compressed against the fitting and pipe outer surface by tightening of nut.



- MUELLER GRIP COMPRESSION CONNECTION - available for type "K" copper and PE tubing (CTS).
- INTERCHANGEABLE with 110<sup>®</sup> CTS Compression Connection in 3/4" - 1" or CTS Pack Joint in 3/4" - 2".
- □ NUT corrosion resistant cast bronze.

Grip Joint kits										
Size Kit Grip ring Washer Gasket Connection nut										
3/4" CTS         682861         312919         311692         537881         537838										
1" CTS         682862         312920         311695         537882         537839										
682863	312921	538107	537883	537840						
2" CTS 682864 312922 538108 538109 537841										
Grip ring										
Gasket Washer										
	Kit 682861 682862 682863 682864	Kit         Grip ring           682861         312919           682862         312920           682863         312921           682864         312922	Kit         Grip ring         Washer           682861         312919         311692           682862         312920         311695           682863         312921         538107           682864         312922         538108	Kit         Grip ring         Washer         Gasket           682861         312919         311692         537881           682862         312920         311695         537882           682863         312921         538107         537883           682864         312922         538108         538109						

# 6.4

### Mueller Co.

### SERVICE FITTINGS WITH COPPER FLARE CONNECTION

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H-15405N

#### Two Part Union Copper flare nut x female copper flare thread



#### **Eighth bend coupling** Copper flare nut x F.I.P.

Quarter bend coupling

Copper flare nut x F.I.P.

1-1/2"±

2"

3/4" x 1/2"

2"

1" ±

1-1/4"±

Straight coupling

3/4"

1-1/4"

Copper flare nut x M.I.P.

5/8" x 1/2"

1-1/2"‡

2"

1-1/2"

H-15455N

H-15460N

1" x 3/4"

1"

3/4"

3/4"

1" 3/4"

2"



Straight three part union Copper flare nut-both ends

### H-15400N

1/2"	5/8"	5/8" x 1/2"	5/8" x 3/4"	3/4"	3/4" x 1/2"
3/4" x 1"	1"	1-1/4"	1-1/4' x 1"	1-1/2"	2"

1-1/2"

Eighth bend three part union Copper flare nut-both ends

### H-15522N

3/4" 1"	

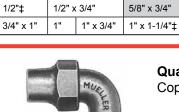


H-15525N

3/4"

3/4" x 1"

Quarter bend three part union Copper flare nut-both ends



H-15425N

## Quarter bend coupling

Copper flare nut x M.I.P.

1" 1-1/2" 2" Straight coupling

Copper flare nut x F.I.P.

### H-15450N



H-15530N

3/4"

3/4" x 1"

1"

**Eighth bend coupling** M.I.P x copper flare nut

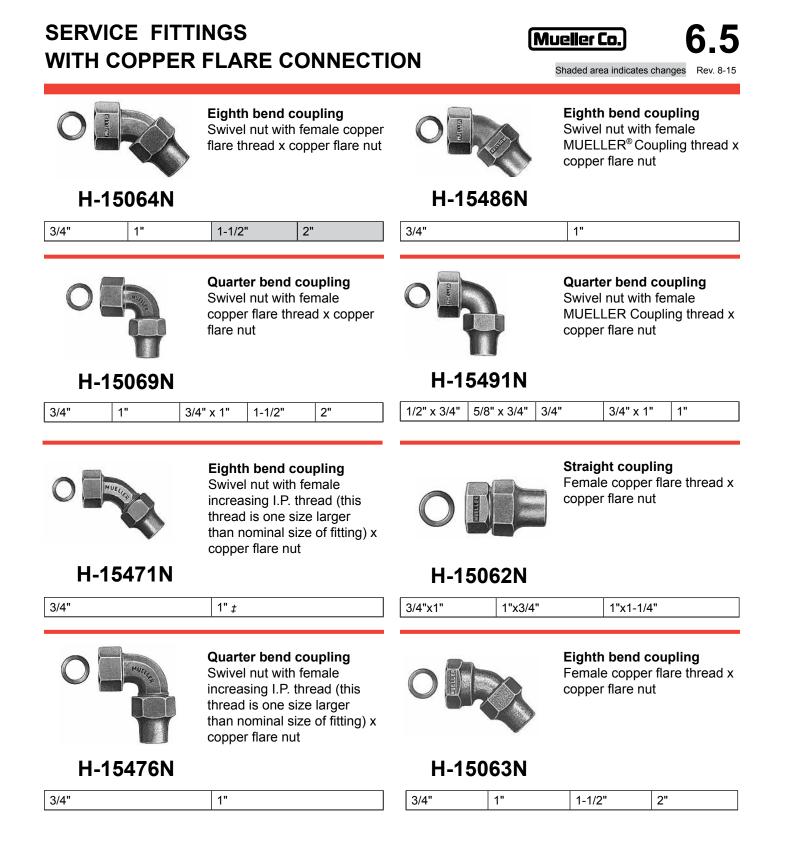
1" x 3/4"

H-15539N

1/2"	1/2" x 3/4"‡	5/8" x 3/4"	3/4"	3/4" x 1/2"	1"	]	3/4"	1"
1" x 3/4"	1-1/4"	1-1/2"	2"			]		

1/2"‡

NOTE: Sizes shown above represent normal size of fitting. When two sizes are given, the first is size of copper flare nut and second is size of threaded end. ‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.



Note: Sizes shown above represent nominal size of fitting. When two sizes are listed, the first is the size of threaded end and the second is size of copper flare nut. ‡Requires minimum ordering quantity. Contact MUELLER Customer Center for minimum order requirements and availability.

|--|

3/4"

3/4"

3/4"



1"x3/4"

### SERVICE FITTINGS WITH COPPER FLARE CONNECTION

Rev. 4-14 Shaded area indicates changes



1"

Quarter bend coupling Female copper flare thread x copper flare nut

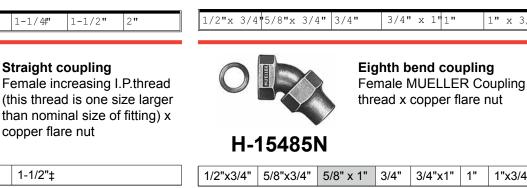


Straight coupling Female MUELLER<sup>®</sup> Coupling thread x copper flare nut

1" x 3/4

1"x3/4"

### H-15480N



H-15470N

1"

H-15465N

#### **Eighth bend coupling** Female increasing I.P. thread (this thread is one size larger

than nominal size of fitting) x copper flare nut

2"



#### Quarter bend coupling Female MUELLER Coupling thread x copper flare nut

Quarter bend coupling

Internal swivel connection

for 110 compression or pack

joint CTS x copper flare nut

1"

H-15490N

1/2"x3/4" 5/8"x3/4" 3/4" 1"	1"x3/4"
-----------------------------	---------



#### Quarter bend coupling Female increasing I.P. thread (this thread is one size larger than nominal size of fitting) x

1-1/2"

copper flare nut

H-15475N

	3/4"	1"	1-1/2"	2"
--	------	----	--------	----

1-1/4"



#### Straight coupling Female copper flare thread x M.I.P. thread



H-15551N

#### Straight coupling Female copper flare thread x

F.I.P. thread

1"

H-15082N

7		1				
3/4"	1"		3/4"	1"	1-1/2"	2"
						· · · · · · · · · · · · · · · · · · ·

3/4"

NOTE: Sizes shown above represent nominal size of fitting. When two sizes are listed, the first is the size of the threaded end and the second is size of copper flare nut. ‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum order requirements and availability.

Straight union Extra strong (XS) lead flange coupling x copper flare nut			O		Swivel nut	nd coupling with female extra ) lead flange thread are nut
H-15506N			H-155	16N		
1/2" 1/2" x 3/4" 5/	/8" x 3/4" 3/4" (	3/4" x 5/8"	5/8"x3/4"	3/4"		1"
	<b>Straight coupling</b> Female extra strong lead flange thread x flare nut		O			uble extra strong flange thread x
H-15505N			H-155	10N		
1/2" 1/2" x 3/4"	5/8" 5/8" x 3/4"	3/4"	5/8" x 3/4"	3/4"		2"
3/4" x 1" 1" 1" x 3/4"	1-1/4" x 1" 1-1/2"	2"				
	<b>Eighth bend coupl</b> Female extra strong flange thread x copp	(XS) lead	O		Female ext	end coupling ra strong (XS) thread x copper
H-15515N			H-155	13N		
5/8" x 3/4" 3/4"	1"		1/2"x3/4" 5/8'	'x3/4" 3/4	" 1"‡	1"x3/4"
O	Quarter bend coup Female extra strong lead flange thread x flare nut (pre-1920)	(XS)				

(Mueller Co.)

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1"x3/4"

SERVICE FITTINGS

WITH COPPER FLARE CONNECTION

NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of lead flange end and second is size of copper flare nut. ‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.



#### Rev. 4-14 Shaded area indicates changes

### COPPER FLARE TOOLS AND MISCELLANEOUS EQUIPMENT

Copper flare connection optional equipment

Copper flare nut	Solid copper disc Used with regular copper flare nut to shut off line.	Brass cap Used with re copper flare shut off line. copper flare cap off line.	nut to Fits on		
CATALOG NUMBER: H-15430	CATALOG NUMBER: <b>H-15535</b>	CATALOG N	NUMBER: <b>H-15540N</b>		
1/2" 3/4" 1" 1-1/4¶1-1/2¶2"	1/2" 3/4" 1" 1-1/4"1-1/2"2"	3/4"	1" 1-1/2" 2"		
Flaring tool Used to make 45° flare on type "K" copper tubing.	Reamer Used to ream the inside of type "K" copper tubing to remove burrs prior to flaring.				
CATALOG NUMBER: H-18000	CATALOG NUMBER: H-18005	CATALOG	NUMBER: N/A		
1/2" 5/8" 3/4" 1" 1-1/4 <b>1</b> -1/2 <b>2</b> "	3/4" 1"	1/2"	3/4" 1"		
Brass Hammer Solid brass head with 10" wooden handle. Weight 2-3/4 lb. CATALOG NUMBER: H-18025	Copper Gasket				
	Replacement gasket to be used inside Female Copper Service Thread when assembling Fitting onto a Corporation Valve/Stop. Gasket is intended for single use only and must be replaced if Fitting is disassembled or reused.				
Pulling coupling - 3/4" & 1"					
For replacing iron pipe with copper se pipe. Copper and iron pipes are joined		Size	Part Number		
iron is pulled through, leaving copper i	n place. Coupling is steel.	3/4"	053271 052914		
One end has Inside I.P. Thread, other Connection. Spud and nut have flat su		1-1/4"	036262		
wrench.	Connection. Spud and nut have flat surfaces to provide firm grip for wrench				
	1-1/2"	053323			
CATALOG NUMBER: H-18030		2"	053323		

## SERVICE FITTINGS WITH MUELLER 110<sup>®</sup> COMPRESSION CONNECTION

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Shaded area indicates changes Rev. 10-14



H-15403N

Straight three part union MUELLER 110<sup>®</sup> Conductive Compression Connection for CTS O.D.\* tubing-both ends

1/2"	1/2"x3/4"	5/8"x3/4"	5/8"x3/4" 5/		3/4"	1"	
1"x3/4"	1-1/4"	1-1/4"x1"		1-1	1/2"	1-1/2"x1"	2"



H-15404N

E-15409N

H-15413N

3/4"x1"

1"

3/4"

3/4"\*\*

1"

Straight coupling MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing x M.I.P. thread

Straight three part union

Connection for IPS PE\*

pipe-both ends

Straight coupling

MUELLER 110<sup>®</sup> Compression

1"x3/4"

**MUELLER 110 Conductive** 

Compression Connection for CTS O.D. tubing x Pack Joint

Connection for IPS PE pipe \*\*Note: 3/4" size only may also be used

Straight Female coupling

**MUELLER** Coupling Thread

Swivel x 110 CTS Conductive

**Compression Connection for** 

1"x3/4"

1/2"‡	1/2" x 3/4"	5/8" x 3/4"	3/4" 3/4" x 1/2"		3/4" x 1"
1"	1" x 3/4"	1-1/4"	1-1/4" x	1-1/2"	
1-1/2" x 1"		1-1/2" x 2"	1" x 2" 2"		2" x 1-1/2"



H-15451N

**Straight coupling** MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing x F.I.P. thread

1/2"	1/2" x 3/4"	5/8" x 3/4"	3/4"	3/4" x 1/2"	3/4" x 1"
1"	1" x 3/4"	1" x 1-1/4"	1-1/4"	1-1/4" x 1"	1-1/2"
1-1/2" x 1"		2"	2" x 1-1/2"		

Mueller Co.



Straight coupling MUELLER 110 Compression Connection for IPS PE\* pipe

x M.I.P. thread



H-15409N

3/4"

Straight coupling three part union MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing x 110 Compression Connection for IPS PE\* pipe

1"x3/4"



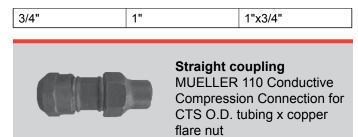
3/4"x1"

#### Straight coupling

1"

MUELLER 110 Compression Connection for IPS PE\* pipe x F.I.P. thread

### H-15454N



1"

### H-15079N

3/4"

\*See chart on page 6.11 for tubing and pipe that may be used with these connections.

on PVC

1"

CTS O.D.

‡Requires minimum ordering quantity. Contact MUÉLLER Customer Service Center for minimum ordering requirements and availability.

NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of MUELLER 110 Compression Connection and second is size of threaded end.

# 6.10 Mueller Co.

Rev. 1-16 Shaded area indicates changes

## SERVICE FITTINGS WITH MUELLER 110<sup>®</sup> COMPRESSION CONNECTION

	Quarter bend coupling           MUELLER 110 Conductive           Compression Connection for           CTS O.D.* tubing x F.I.P. thread						ML Co CT	a <b>rter bend u</b> JELLER 110 ( mpression Co S O.D.* tubin	Conductive	
н	-15533N				н	-155	526N			
3/4"	3/4" x 1" 1"	1" x 3/4'	' 1-1/2"	2"	3/4"	1"		1" x 3/4"	1-1/2"	2"
	Eight bend coupling MUELLER 110 <sup>®</sup> Conductive Compression Connection for CTS O.D.* tubing - both ends					$\diamond$	MU Co	<b>yht bend unio</b> JELLER 110 ( mpression Co S O.D.* tubin	Conductive	
H	-15528N				Н	-155	534N			
3/4"		1"			3/4"				1"	
H	Quarter bend coupling MUELLER 110 Conductive Compression Connection for CTS O.D.* tubing x M.I.P. threadH-15431N			н	-155	29N	MU Co CT thr	<b>ght bend co</b> JELLER 110 mpression C S O.D. * tub ead	Conductive Connection for	
3/4"	3/4" x 1" 1		1-1/2"	2"	3/4"				1"	
0/1	0,1 X 1 1		1 1/2		0,1				•	
Quarter bend union Internal swivel connection for 110 compression or pack joint CTS x MUELLER 110 Conductive Compression Connection for CTS O.D.* tubing			С	-154	) 	Fe thr Co Co	raight coupl male MUELL ead x MUEL nductive Con nnection for C ing	ER Coupling ER 110 pression		
3/4"		1"			1/2"x3/4	"	5/8"x3/4	1"	3/4"	1"

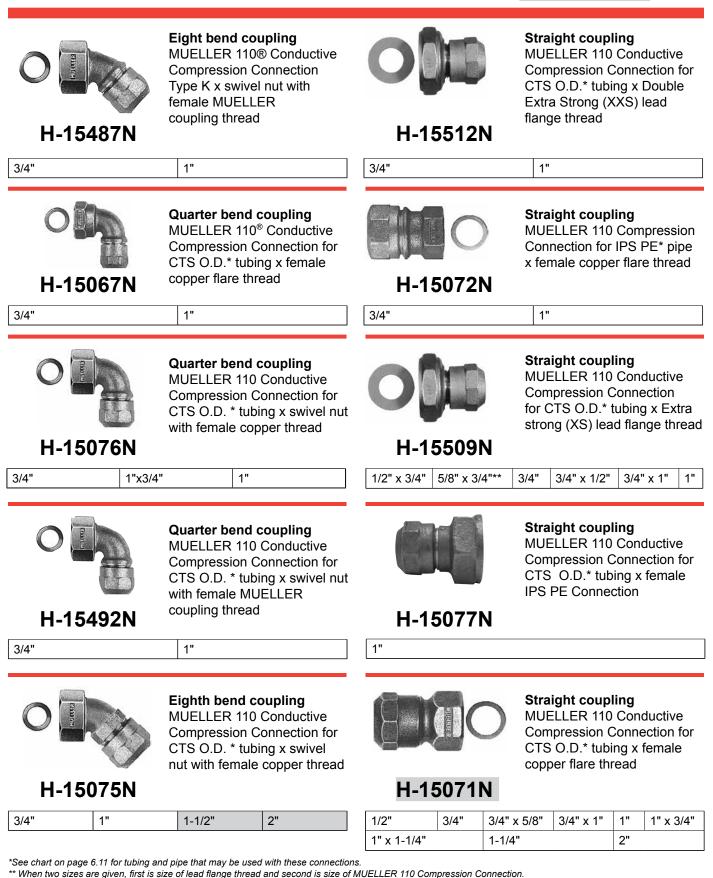
\*See chart on page 6.11 for tubing and pipe that may be used with these connections.

MUELLER Service Tees are manufactured and tested in accordance with ANSI/AWWA C800. Components in contact with potable water will also comply with latest requirements of the Federal Safe Drinking Water Act.

## SERVICE FITTINGS WITH MUELLER 110<sup>®</sup> COMPRESSION CONNECTION

Shaded area indicates changes Rev. 8-15

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NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of MUELLER 110 Compression Connection and second is size of threaded end.

#### 6.12 Mueller Co.

#### Rev. 4-14 Shaded area indicates changes

## **MUELLER 110<sup>®</sup> COMPRESSION CONNECTION INFORMATION**

#### 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
1/2" CTS	Type "K" copper	0.622 - 0.628	0.045 - 0.053	-	-
3/4" CTS	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
3/4 015	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	-	-
1 015	Polyethylene	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880	504385
4 4/4" ОТО	Type "K" copper	1.371 - 1.379	0.060 - 0.070	-	-
1-1/4" CTS	Polyethylene	1.370 - 1.380	0.153 - 0.168	1.034 - 1.074	505142
1-1/2" CTS	Type "K" copper	1.621 - 1.630	0.067 - 0.077	-	-
1-1/2 010	Polyethylene	1.619 - 1.631	0.181 - 0.199	1.221 - 1.269	506139
	Type "K" copper	2.120 - 2.130	0.076 - 0.090	-	-
2" CTS	Polyethylene	2.119 - 2.131	0.236 - 0.260	1.599 - 1.659	506141
3/4" IPS	Polyethylene	1.045 - 1.110	0.118 - 0.138	0.809 - 0.834	505141
1" IPS	Polyethylene	1.329 - 1.399	0.150 - 0.170	1.029 - 1.059	505142

\*Type "K" soft copper tubing per ASTM B88; CTS polyethylene (PE) per ASTM D-2737 - SDR-9; IPS polyethylene (PE) per ASTM D-2239 - PE SIDR-7; IPS polyvinylchloride (PVC) per ASTM D1785



#### **Mueller 110 Compression Connection Replacement Parts**

Size	Gakset part number†	Connection nut
1/2" CTS	681516	147542
3/4" CTS	581949	507831
1" CTS	581951	507835
1-1/4" CTS	581953	507843
1-1/2" CTS	581955	507847
2" CTS	581957	507851
3/4" IPS	89599	508826
1" IPS PE	89788	508827



Gasket assembly



Nut

†Gasket and gripper band assembly

#### Adapter Nut for pre-1976 style Mueller 110 Compression Connection for CTS tubing

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	A States
1" CTS	682551	



#### **Copper Gasket**

Replacement gasket to be used inside Female Copper Service Thread when assembling Fitting onto a Corporation Valve/Stop. Gasket is intended for single use only and must be replaced if Fitting is disassembled or reused.



Size	Part Number
3/4"	053271
1"	052914
1-1/4"	036262
1-1/2"	053323
2"	053322

SERVICE FITTI MUELLER® PAG	NGS WITH CK JOINT CONNEC		J	(	<b>Mueller (</b> Shaded are	<b>Co.</b> ) ea indicates chan	6.13 Iges Rev. 3-15
	Straight three part union MUELLER Pack Joint Connection for CTS O.D.* tubing- both ends				MUEL Conne	er bend cou LER Pack J ction for CT x F.I.P. three	oint S O.D.*
P-15403N			P-15	533N			
3/4" 1" 1" x 3/4" 1-1/	/4" 1-1/2" 1-1/2 x 1" 2"	3/4"	1"	1" x 3/4'	' 1" x 1-1.	/4" 1-1/2"	2"
	<b>Eighth bend union</b> MUELLER Pack Joint Connection for CTS O.D.* tubing - <b>both ends</b>				MUEL Conne	<b>ht coupling</b> LER Pack J ction for CT x M.I.P. thre	oint S O.D.*
P-15528N			P-15	428N			
3/4"	1"	1/2"		3/4"	3/4" x 1/2"	5/8" x 3/4"	3/4" x 1"
		1"		1-1/4"	1" x 3/4"	1-1/4" x 1"	1-1/2"
		1-1/2	" x 1" (	1-1/2" x 2"	2"	2" x 1-1/2"	
	Quarter bend union MUELLER Pack Joint Connection for CTS O.D.* tubing - both ends				MUEL Conne	er bend cou LER Pack J ection for CT x M.I.P. thre	oint S O.D.*
P-15526N				531N			
3/4" 1" 1"	x 3/4"   1-1/2"   2"	3/4"	3/4" x	1" 1"	1" x 3/4"	1-1/2"	2"
EM	<b>Straight coupling</b> MUELLER Pack Joint Connection for CTS O.D.* tubing x F.I.P. thread	(	0		Femal	e <b>r bend cou</b> e MUELLEF x PJ for CT	RCoupling
P-15451N			P-15	490N			
3/4" 3/4" x 1" 1" 1" x 3	3/4" 1-1/2" 2" 2" x 1-1/2"	1"					
	<b>Eighth bend coupling</b> MUELLER Pack Joint Connection for CTS O.D. * tubing x F.I.P. thread	(			Femal	n <b>bend couj</b> e MUELLEF x PJ for CT	R Coupling
P-15534N		_	P-15	485N			
3/4" 1"	1" x 1-1/4"	1"					

\*See chart on page 6.15 for tubing and pipe that may be used with these connections. NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of MUELLER Pack Joint Connection and second is size of threaded end.

## 6.14 Mueller Co.)

### SERVICE FITTINGS WITH MUELLER<sup>®</sup> PACK JOINT CONNECTION

Rev. 1-16 Shaded area indicates changes

Rev. 1-16 S	naded area indicates	s changes						
-		Straight coup Female MUEL thread x PJ for tubing	LER Coupling		A Briant		x MUELLE Compressi	
P-1	5481N				V-15	5445N	Assembled	wrench tite.
1/2"x3/4"	5/8"x3/4"	3/4"	1"	2"				
8		Straight coup MUELLER Pac Connection for both ends **Note: 3/4" size only on PVC	ck Joint r IPS PE pipe	-	9		Connectior - <b>both end</b>	Pack Joint for IPS PVC pipe
E-1	5404N				V-15	5401N		
3/4"**	l" 1"x3/4	1" 1-1/4" 1-1	1/2" 2"	1"		1" x 3/4"*	* 1-1/2"	2"
E-1	5443N	Straight coup MUELLER Pac Connection for x Pack Joint C CTS O.D. tubin **Note: 3/4" size only PVC	ck Joint r IPS PE pipe Connection for ng	on	V-18	5441N	Connectior	oupling Pack Joint ofor IPS PVC pipe of Connection for
3/4"**	3/4"**	x1" ´	1"	1"		1"x3/4"	1-1/2" 1-1	/2"x3/4" 2"
		Straight coup MUELLER Pac Connection for F.I.P. thread **Note: 3/4" size only on PVC	ck Joint r IPS PE* x		B	Winter	-	Pack Joint for IPS PVC* pipe
<b>E-1</b> 3/4"** 1'	5454N ' 1"x3/4'		1/2" 2"	1"	<b>V-15</b>	5442N /4" 1-1/2"	1-1/2"x3/4"	1-1/2"x1" 2"
6 F-1	5429N	Straight coup MUELLER Pac Connection for M.I.P. thread **Note: 3/4" size only on PVC	ck Joint r IPS PE* x	_	0 V-1	6440N		Pack Joint for IPS PVC* pipe
			4 4 /0"	] [			<b>1 1 1 1 1 1 1 1 1 1</b>	
.3/4"^^   :3/4	"**x1"   1"   1"	x3/4" 1-1/4"	1-1/2" 2"	1"	1"x3	/4" 1-1/2"	1-1/2"x3/4"	1-1/2"x1" 2"

\*See chart on page 6.15 for tubing and pipe that may be used with these connections. \*\*Note: 3/4" size only may also be used on PVC

NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of MUELLER Pack Joint Connection and second is size of threaded end.

	Straight coupling MUELLER Pack Joint Connection for CTS O.D.* tubing x female copper flare thread		Quarter bend coupling MUELLER Pack Joint Connection for CTS O.D.* tubing x swifel nut with female copper thread
P-15071N		P-15076N	
3/4"         1"         1" x 3/4"	3/4" x 1" 1-1/2" 2"	3/4" 1"	1" x 3/4"
O P-15075N	<b>Eighth bend coupling</b> MUELLER Pack Joint Connection for CTS O.D.* tubing x swivel nut with female copper thread	P-15409N	Straight three part union MUELLER Pack Joint Connection for CTS O.D.* tubing x 110 Compression Connection for IPS PE* pipe
3/4"	1"	3/4"	1"
	Quarter bend coupling MUELLER Pack Joint Connection for CTS O.D.* tubing x female copper flare thread		Straight coupling MUELLER Pack Joint Connection for CTS O.D.* tubing x steel pipe Pack Joint
P-15067N		P-15421N	
3/4"	1" x 3/4"**	3/4"	1"
	Quarter bend coupling MUELLER Pack Joint Connection IPS PE pipe - both ends **Note: 3/4" size only may also be used with PVC		Quarter bend coupling MUELLER Pack Joint Connection IPS PVC pipe - both ends
E-15547N		V-15111N	
3/4"		1" 1-	1/2" 2"

**MUELLER® PACK JOINT CONNECTION** 

SERVICE FITTINGS WITH

Shaded area indicates changes Rev. 1-16

(Mueller Co.)

6.15

\*See chart on page 6.15 for tubing and pipe that may be used with these connections. \*\*Note: 3/4" size only may also be used on PVC NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of MUELLER Pack Joint Connection and second is size of threaded end.

# 6.16 Mueller Co.

#### Rev. 2-15 Shaded area indicates changes

## MUELLER® PACK JOINT CONNECTION INFORMATION

#### 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	-	-
3/4 015	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	-	-
1 015	Polyethylene	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880	528705
1-1/2" CTS	Type "K" copper	1.621 - 1.630	0.067 - 0.077	-	-
1-1/2 C15	Polyethylene	1.619 - 1.631	0.181 - 0.199	1.221 - 1.269	528706
2" CTS	Type "K" copper	2.120 - 2.130	0.076 - 0.090	-	-
2 015	Polyethylene	2.119 - 2.131	0.236 - 0.260	1.599 - 1.659	528707
	Polyethylene	1.045 - 1.110	0.118 - 0.138	0.809 - 0.834	505141
3/4" IPS	3/4" Sch. 40 PVC	1.046 - 1.054	0.113 - 0.133	0.780 - 0.828	509759
	3/4" Sch. 80 PVC	1.046 - 1.054	0.154 - 0.174	0.698 - 0.746	509760
	Polyethylene	1.329 - 1.399	0.150 - 0.170	1.029 - 1.059	505142
1" IPS	1" Sch. 40 PVC	1.310 - 1.320	0.133 - 0.153	-	-
	1" Sch. 80 PVC	1.310 - 1.320	0.179 - 0.200	-	-
1-1/4" IPS	Polyethylene	1.754 - 1.832	0.197 - 0.221	1.360 - 1.390	312787
	Polyethylene	2.05 - 2.141	0.230 - 0.258	1.590 - 1.625	529116
1-1/2" IPS	1-1/2" Sch. 40 PVC	1.894 - 1.906	0.145 - 0.165	-	-
	1-1/2" Sch. 80 PVC	1.894 - 1.906	0.200 - 0.224	-	-
	Polyethylene	2.637 - 2.742	0.295 - 0.330	2.047 - 2.082	529117
2" IPS	2" Sch. 40 PVC	2.369 - 2.381	0.154 - 0.174	-	-
	2" Sch. 80 PVC	2.369 - 2.381	0.218 - 0.244	-	-

\*Type "K" soft copper tubing per ASTM B88; CTS polyethylene (PE) per ASTM D-2737 - SDR-9; IPS polyethylene (PE) per ASTM D-2239 - PE SIDR-7; IPS polyvinylchloride (PVC) per ASTM D1785

Liner

#### Liners used with MUELLER PVC Pack Joint Connection for OD Controlled PE Pipe

Nominal size of connection	Material	Tubing or pipe O.D. range - inches	Tubing or pipe I.D. range - inches	Length - inches	Liner part number
3/4" IPS	IPS PE OD controlled DR-9	1.046 - 1.054	0.772 - 0.820	2.00	313073
3/4 123	IPS PE OD controlled DR-11	1.046 - 1.054	0.816 - 0.864	2.00	313074
4" 100	IPS PE OD controlled DR-9	1.310 - 1.320	.0978 - 1.028	2.125	313084
1" IPS -	IPS PE OD controlled DR-11	1.310 - 1.320	1.030 - 1.080	1.84	505142
1-1/2" IPS	IPS PE OD controlled DR-9	1.894 - 1.906	1.412 - 1.484	3.00	538266
1-1/2° IPS	IPS PE OD controlled DR-11	2.369 - 2.381	2.082 - 2.047	3.20	538267
2" IPS	IPS PE OD controlled DR-9	1.894 - 1.906	1.496 - 1.560	3.00	538269
2 153	IPS PE OD controlled DR-11	2.369 - 2.381	1.885 - 1.949	3.20	538270

#### **MUELLER Pack Joint Connection Kit**

Size	Connection Kit
3/4" CTS	681921
1" CTS	681922
1-1/2" CTS	681923
2" CTS	681924
3/4" IPS PE	682377
1" IPS PE	682556
1-1/4" CTS	682556
1-1/2 IPS PE	682557
2" IPS PE	682558
3/4" IPS PVC	682377
1" IPS PVC	682553
1-1/2" IPS PVC	682554
2" IPS PVC	682555



Connection Kit (includes Pack Joint, Gasket and washer)

#### **Copper Gasket**

Replacement gasket to be used inside Female Copper Service Thread when assembling Fitting onto a Corporation Valve/Stop. Gasket is intended for single use only and must be replaced if Fitting is disassembled or reused.

Size	Part Number
3/4"	053271
1"	052914
1-1/4"	036262
1-1/2"	053323
2"	053322

SERVICE FITTI MUELLER <sup>®</sup> INS	NGS WITH TA-TITE <sup>®</sup> CONNEC <sup>®</sup>		Aueller Co. 6.17 Shaded area indicates changes Rev. 4-14
MUELLER INSTA-TITE	Straight union MUELLER INSTA-TITE Connection for CTS O.D.* PE tubing-both ends	NUCLUER INSTATUTE	Straight union MUELLER INSTA-TITE Connection for IPS* PE pipe- both ends
H-15406N		H-15408N	
3/4"	1"	3/4"	1"
MUBLIER INSTATUTE	<b>Straight coupling</b> MUELLER INSTA-TITE Connection for CTS O.D.* PE tubing x M.I.P. thread	HIELLER INSTA-TITE	<b>Straight coupling</b> MUELLER INSTA-TITE Connection for IPS* PE pipe x M.I.P. thread
H-15424N		H-15426N	
3/4"	1"	3/4" 3/4"	x1" 1"
MUELLER NUELLER NISTATILE	<b>Straight coupling</b> MUELLER INSTA-TITE Connection for CTS O.D.* PE tubing x F.I.P. thread	MUELLER INSTATITE	<b>Straight coupling</b> MUELLER INSTA-TITE Connection for IPS* PE pipe x F.I.P. thread
H-15457N		H-15456N	
3/4"	1"	3/4" 3/4"	x1" 1"
	Staight coupling MUELLER INSTA-TITE Connection for CTS O.D.* PE tubing x female copper flare thread		Straight coupling MUELLER INSTA-TITE Connection for IPS* PE pipe x female copper flare thread
H-15074N		H-15073N	
3/4"	1"	3/4" 3/4"	x1" 1"
	Quarter bend coupling MUELLER INSTA-TITE Connection for IPS* PE pipe- both ends		
H-15464N			
3/4"	1"		

\* See chart on page 6.17 for tubing and pipe that can be used with these connections. NOTE: Sizes shown above represent nominal size of fitting. When two sizes are given, first is size of threaded end and second is size of MUELLER INSTA-TITE Connection.

## MUELLER<sup>®</sup> INSTA-TITE<sup>®</sup> **CONNECTION INFORMATION**

Rev. 4-14 Shaded area indicates changes

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#### Polyethylene PE Tubing and pipe used with Mueller INSTA-TITE Connections

Nominal size of connec- tion	Material	Tubing or pipe O.D. range (in.)	Tubing or pipe wall thick- ness range (in.)	Tubing or pipe I.D. range (in.)
3/4" CTS PE	Polyethylene PE	0.871-0.879	0.097-0.107	0.657-0.685
1" CTS PE	Polyethylene PE	1.120-1.130	0.125-0.137	0.846-0.880
3/4" IPS PE	Polyethylene PE	1.045-1.110	0.118-0.138	0.809-0.834
1" IPS PE	Polyethylene PE	1.329-1.399	0.150-0.170	1.029-1.059

CTS polyethylene (PE) per ASTM D-2737 - SDR-9 IPS polyethylene (PE) per ASTM D-2239 - SIDR-7

#### Mueller INSTA-TITE Connection replacement parts

Size	Gripper ring part number	O-ring part number
3/4" CTS PE (red gripper)	506325	606324
1" CTS PE (red gripper)	506327	506326
3/4" IPS PE (white gripper)	505885	505883
1" IPS PE (white gripper	505886	505884



#### O-ring

#### **Optional tools for use with MUELLER INSTA-TITE Connections**

#### Pipe beveling tool

To assure proper installation, the end of the pipe or tubing must be properly beveled before it is inserted into the MUELLER INSTA-TITE Connection. MUELLER CO. offers a special beveling tool for both CTS PE tubing and IPS PE pipe.



PART NUMBER: H-18015 for 3/4" and 1" CTS PE tubing PART NUMBER: H-18017 for 3/4" and 1" IPS PE pipe

#### Pipe removal tool

Pipe or tubing may be removed from the MUELLER INSTA-TITE Connection using special removal tools. Use one tool for 3/4" size connection and two tools for 1" size.

PART NUMBER: 506336



#### **Copper Gasket**

Replacement gasket to be used inside Female Copper Service Thread when assembling Fitting onto a Corporation Valve/Stop. Gasket is intended for single use only and must be replaced if Fitting is disassembled or reused.



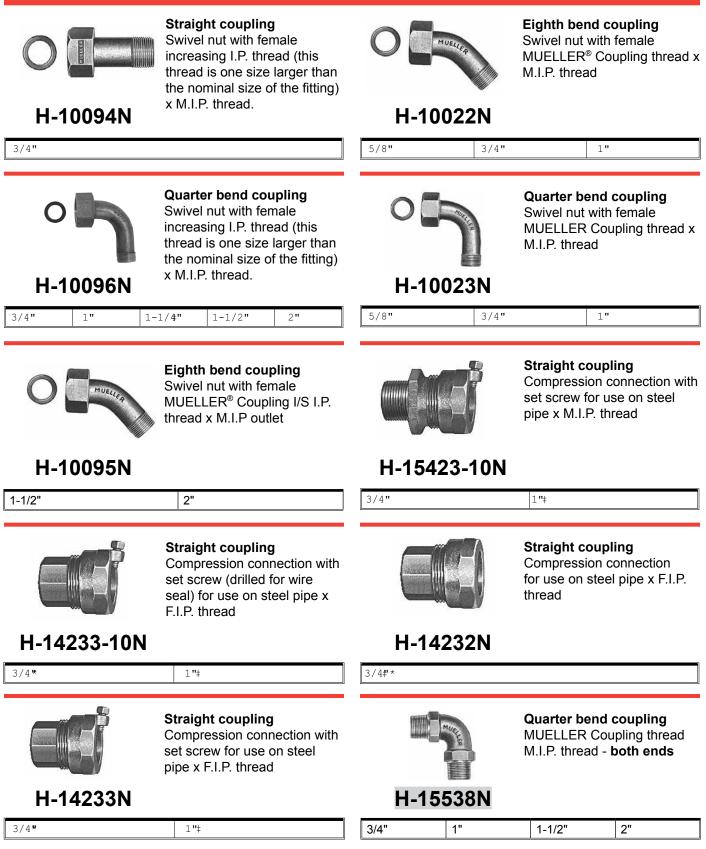
Size	Part Number
3/4"	053271
1"	052914
1-1/4"	036262
1-1/2"	053323
2"	053322

### SERVICE FITTINGS WITH THREADED CONNECTIONS

Shaded area indicates changes Rev. 9-15

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Mueller Co.)



\* Both ends of coupling are 3/4" size.

‡ Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum order requirements and availability. NOTE: Sizes shown above represent nominal size of fitting.

# 6.20 Mueller Co.)

Rev. 4-14 Shaded area indicates changes

## SERVICE FITTINGS WITH THREADED CONNECTIONS



**Eighth bend coupling** F.I.P. thread x **both ends** 

### H-10076N

3/4"	1"
0,1	•

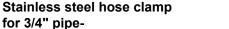
\* Both ends of coupling are 3/4" size.

‡ Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum order requirements and availability. NOTE: Sizes shown above represent nominal size of fitting.

## SERVICE FITTINGS WITH HOSE CLAMP RIBBED INSERT TYPE CONNECTION

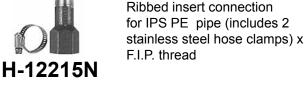
1"

1"



PART NUMBER : 504030

Stainless steel hose clamp for 1" pipe-PART NUMBER: 504031



Straight coupling

Ribbed insert connection for

IPS PE pipe (hose clamps NOT included) x F.I.P. thread

1"

1"

Straight coupling

H-12200N

#### **Straight coupling** Ribbed insert connection for IPS PE pipe (includes 2

stainless steel hose clamps) x female copper flare thread

3/4"

3/4"

3/4"



**Straight coupling** Ribbed insert connection for IPS PE pipe (hose clamps NOT included) x female copper flare thread

H-12203N

H-12210N

3/4" x 1"

**Straight coupling** Ribbed insert connection for IPS PE pipe (includes 2 stainless steel hose clamps) x M.I.P. thread

1"

**Straight coupling** Ribbed insert connection for IPS PE pipe (hose clamps NOT included) x M.I.P. thread



H-12218N

3/4"

3/4"

504030 - 3/4" 504031 - 1"

# and the second sec

H-12213N

3/4"

#### **Copper Gasket**

Replacement gasket to be used inside Female Copper Service Thread when assembling Fitting onto a Corporation Valve/Stop. Gasket is intended for single use only and must be replaced if Fitting is disassembled or reused.

1"



Size	Part Number
3/4"	053271
1"	052914
1-1/4"	036262
1-1/2"	053323
2"	053322

NOTE: Sizes shown above represent nominal size of fitting.

Mveller Co.) 6

Shaded area indicates changes Rev. 4-14

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## 6.22 Mueller Co.

#### Rev. 4-14 Shaded area indicates changes

**Straight three part union** I.P. threaded copper flare nut -both ends

### H-15402N

3/4"

3/4"



**Straight coupling** I.P. threaded copper flare nut x M.I.P. thread

H-15427N



H-15452N

SERVICE FITTINGS WITH I.P. THREADED

**COPPER FLARE CONNECTION** 

#### Straight coupling

Straight coupling

x F.I.P. thread

1" ‡

I.P. threaded copper flare nut

I.P. threaded copper flare nut x female increasing I.P. thread (this thread is one size larger than nominal size of fitting)

H-15467N

3/4"

3/4" ‡

Copper flare nut I.P. threaded

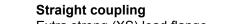
### H-15432N

3/4"	1"

#### FOR OTHER FLARE CONNECTION OPTIONAL EQUIPMENT, SEE PAGE 6.7

‡ Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability. NOTE: Sizes shown above represent nominal size of fitting.

# SERVICE FITTINGS WITH LEAD FLANGE CONNECTION



Shaded area indicates changes Rev. 4-14

Mueller Co.)

Extra strong (XS) lead flange coupling x F.I.P. thread



**Straight coupling** Extra strong (XS) lead flange coupling x M.I.P. thread



### H-10051N

5/8"x3/4"

1/2"‡	1/2"x3/4"‡	5/8"x3/4"	5/8" x 1/2"	3/4"	1"	1-1/2"
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H-10050N

**Straight coupling** Extra strong (XS) lead flange coupling -**both ends** 



H-10052N

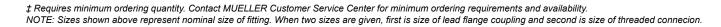
Straight coupling

3/4"

Double extra strong (XXS) lead flange coupling x F.I.P. thread

### H-10054N

3/4" *±* 5/8" 3/4"



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### SERVICE TEES

#### 6.24 Mueller Co.

Rev. 1-15 Shaded area indicates changes



3/4" x 3/4" x 1"

1-1/2" x 1-1/2" x 3/4"

2" x 2" x 3/4"

1"

1" x 3/4" x 3/4"

1-1/2" x 1-1/2" x 1"

2" x 2" x 1"

Service tee

**MUELLER 110 Conductive Compression Connection for** CTS O.D.\* tubing-all ends



Service tee **MUELLER Pack Joint Compression Connection for** CTS O.D.\* tubing-all ends

1" x 1" x 3/4"	3/4"	3/4" x 3/4" x 1"	1"	1" x 1" x	1-1/2"	2"
1-1/2" x 1-1/2" x 1-1/2"				3/4"		
2" x 2" x 2"	1-1/2"	x 1-1/2" x 1"	2" x 2	" x 3/4"	2" x 2" x ′	1"



Service tee **MUELLER 110 Conductive Compression Connection for** IPS\* PE tubing-all ends

### H-15444N

H-15385N

3/4"

3/4"



M.I.P. thread x M.I.P. thread x **MUELLER 110 Conductive** Compression Connection for CTS O.D.\* tubing



P-15385N

3/4"

E-15444N

Service tee

Service tee

tubing-all ends

**MUELLER Pack Joint** 

Connection for IPS PE\*

M.I.P. thread x M.I.P. thread x MUELLER Pack Joint Connection for CTS O.D.\* tub

3/4"	1"	1"x1"x3/4"	3/4"	3/4"x3/4"x1"	1"
		r <b>vice tee</b> P. thread x F.I.P. thread x IELLER 110 Conductive		MUELLE	ead x F.I.P. thread x ER Pack Joint tion for CTS
H-15392	2N		P-1	5393N	-
3/4"		["	3/4"	1" <i>‡</i>	



Service tee sizing - sizes of ends are listed in the order shown above - when all three end sizes are the same, only one size is listed.

‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability. \* See page 6.29 for tubing that can be used with this connection.

### SERVICE TEES

Mueller Co. 6.25

Shaded area indicates changes Rev. 4-14

H-15391N	Service tee MUELLER 110 Conductive Compression Connection for CTS O.D.* tubing x 110 Conductive Compression Connection for CTS O.D.* tubing x F.I.P. thread	<b>H-1</b>	5393N	Compres for CTS Conduct Connect	tee R 110 Conductive soion Connection O.D.* tubing x 110 ive Compression ion for CTS O.D.* Inside CC thread	
3/4" 1"	2"x2"x1"	2"x2"x3/4"		2"x2"x1"		
Service tee Copper flare nut x M.I.P. thread x copper flare nut		Service tee M.I.P. thread x M.I.F copper flare		read x M.I.P. thread x		
H-15382N		H-1	5384N			
3/4" ‡		3/4" <i>‡</i>				
Service tee Copper flare nut - all ends					<b>tee</b> lare nut x copper x M.I.P. thread	
H-15380N	"   1" x 3/4" x 3/4"   1" x 1" x 3/4"   1-1/4" <b>‡</b>	<b>H-1</b>	5386N 3/4"x3	/4"x1"	1"	
1-1/4" x 1-1/4" x 3/4"‡         1-1           1-1/2" x 1-1/2" x 1"         2"	1/4" x 1-1/4" x 1"‡ 1-1/2" 1-1/2" x 1-1/2" x 3/4"‡ 2"x 2" x 3/4"‡ 2" x 2" x 1"	<u></u>				
H-10097N	<b>Service tee</b> F.I.P. thread - <b>all ends</b>		<b>5</b> 387N	Compres for CTS Conduct Connect	tee R 110 Conductive soion Connection O.D.* tubing x 110 ive Compression ion for CTS O.D.* MI.P. thread	
1"		3/4"	3/4"x3	3/4"x1"	1"	
			1			



Service tee sizing - sizes of ends are listed in the order shown above - when all three end sizes are the same, only one size is listed.

‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability. \* See page 6.29 for tubing that can be used with this connection.

### **"U" BRANCH CONNECTIONS**



Rev. 4-14 Shaded area indicates changes



H-15373N

3/4"x3/4"x7-1/2"

1-1/2"x3/4"x7-1/2"±

Inlet: MUELLER<sup>®</sup> 110<sup>®</sup> Conductive Compression Connection for CTS O.D.\* tubing **Outlets:** MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing straight line



Inlet: MUELLER Pack Joint Connection for CTS O.D.\* tubing Outlets: MUELLER Pack Joint Connection for CTS O.D.\* tubing straight line

### P-15373N

1"x3/4"x7-1/2"

1-1/2"x3/4"x7-1/2" #



Inlet: MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing

1"x3/4"x5-1/4"

**Outlets:** M.I.P. thread straight line

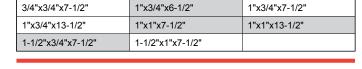


Inlet: MUELLER<sup>®</sup> Pack Joint Connection for CTS O.D.\* tubing **Outlets:** M.I.P. thread straight line

P-15363N

3/4"x3/4"x7-1/2"	1"x3/4"x6-1/2"	1"x3/4"x7-1/2"
1"x3/4"x13-1/2"	1"x1"x7-1/2"	1-1/2"x3/4"x7-1/2"
1-1/2"x1"x7-1/2"		

1"x3/4"x7-1/2"





Inlet: MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing Outlets: M.I.P. threads right angle



Inlet: Copper flare nut Outlets: Copper flare nut straight line

H-15360N

	3/4"x3/4"x5-1/2"	3/4"x3/4"x10"	1"x3/4"x5-1/4"
1"X3/4"X10"	1"x3/4"x10"		



1"x3/4"x7"±

**Inlet:** Copper flare nut **Outlets:** M.I.P. thread straight line

### H-15362N

3/4"x3/4"x7"	3/4"x3/4"x7-1/2"	3/4"x3/4"x13-1/2"
1"x3/4"x6-1/2"	1"x3/4"x7"	1"x3/4"x7-1/2"
1"x3/4"x13-1/2"		

Inlet: Copper flare nut Outlets: M.I.P. thread right angle

H-15368N

1"x3/4"x7" ‡

NOTE: Inline or Angle valves with fip threads can be added to any U Branch with MIP Ends

#Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.

\* See page 6.29 for tubing that can be used with this connection.

NOTE: Sizes shown above represent nominal size of end connections. First is size of inlet, second is size of outlets, and third is center-to-center dimension between outlets.

### **"U" BRANCH CONNECTIONS**



Shaded area indicates changes Rev. 4-14

Outlets: M.I.P. thread straight

Inlet: F.I.P. thread



Inlet: M.I.P. thread Outlets: M.I.P. thread straight line

### H-15364N

3/4"x3/4"x13-1/2"‡	3/4"x1"x5-1/4"	1"x3/4"x5-1/4"
1"x3/4"x6-1/2" ‡	1"x3/4"x7-1/2"	1"x3/4"x8"
1"x3/4"x13-1/2"	1"x1"x7-1/2"	1"x1"x13-1/2"

Contrast of	CITICITY CO.

H-15365N

3/4"x13-1/2"‡	3/4"x1"x5-1/4"	1"x3/4"x5-1/4"	3/4"x3/4'
4"x6-1/2" ‡	1"x3/4"x7-1/2"	1"x3/4"x8"	1"x3/4"x <sup>-</sup>
4"x13-1/2"	1"x1"x7-1/2"	1"x1"x13-1/2"	1"x1"x7-1

3/4"x3/4"x7-1/2"	1"x3/4"x6-1/2"	1"x3/4"x7-1/2"	
1"x3/4"x13-1/2"	1"x3/4"x13-1/2"	1"x3/4"x14"	
1"x1"x7-1/2"	1-1/4"x3/4"x13-1/2"	1 X3/4 X14	

line



Inlet: F.I.P. thread Outlets: F.I.P. thread straight line

H-15367N

1"x3/4"x7-1/2"



Inlet: Pack Joint Connection for PVC tubing Outlet: M.I.P. thread straight line with 7-1/2" Center Two piece factory assembled

1"x3/4"x7-1/2"

1-1/2"x3/4"x7-1/2"

NOTE: Inline or Angle valves with fip threads can be added to any U Branch with MIP Ends

‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.
\* See page 6.29 for tubing that can be used with this connection.

NOTE: Sizes shown above represent nominal size of end connections. First is size of inlet, second is size of outlets, and third is center-to-center dimension between outlets



### SPECIAL "U" BRANCH CONNECTIONS ASSEMBLY WORKSHEET

Rev. 4-14 Shaded area indicates changes

Mueller Co. has the capability to supply "U" Branches with virtually any combination of end connections, including styles with any standard Mueller valve or fitting attached to one or more of the connections. Use the illustrations below to sketch what is needed. Label each of the three positions with the type/size of connection (eg: MUELLER 110 Connection, M.I.P., etc.), and type/size valve/fitting to be attached if applicable. Best availability will result by selecting a standard "U" Branch from the preceding page, however special configurations may be available.

\_\_\_\_\_ Enter catalog number of standard "U" branch, otherwise mark the appropriate illustration below to show important dimensions of the special "U" branch you require, such as distance between outlets. Position #1 Type/size connection:

Check this box if nothing is to be attached at position #1, otherwise provide the following information.
 Valve/fitting catalog number:
 Valve options (eg: handles):

Position #2 Type/size connection:

Check this box if nothing is to be attached at position #2, otherwise provide the following information.
 Valve/fitting catalog number:
 Valve options (eg: handles):

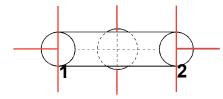
Position #3 Type/size connection: \_\_\_\_\_

Check this box if nothing is to be attached at position #3, otherwise provide the following information.
 Valve/fitting catalog number:
 Valve options (eg: handles):

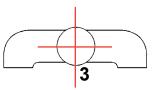
If angle valves are needed: Draw an arrow head on the end of the red line at each of the appropriate positions to show the direction the angle valve outlet should point. If ordering inline valves: Draw an arrow head to show the direction the valve head (cap) or access cover should point.

Note: Although the arrow lines are shown in the 12, 3, 6 and 9 o'clock positions, which are most common and preferred, other angles can be ordered. If some other angle is required, draw in your own arrow line and mark the angle in degrees referenced to the centerline of the "U" branch body.

#### Straight line "U" branch viewed from outlet end



Right angle "U" branch - top right illustration: viewed from inlet end; bottom right illustration: viewed from outlet end



be attached: at

There are three possible locations where a special fitting can be attached: at outlets 1 and 2, or inlet 3.

FAX this page to Mueller Customer Service (217) 425-7537. A representative will contact you to discuss availability submitting this page does not constitute placing an order.

### **"Y" BRANCH CONNECTIONS**

Mueller Co. 6.29

Shaded area indicates changes Rev. 4-14

H-15343N	Two branch-short body *Inlets: MUELLER 110 <sup>®</sup> Conductive Compression Connection for CTS O.D.** tubing *Outlet: MUELLER 110 Conductive Compression Connection for CTS O.D.** tubing	P-153	<b>343N</b>	Two branch-s *Inlets: MUEI Joint Connect O.D.** tubing *Outlet: MUE Connection for tubing	LER <sup>®</sup> Pack ion for CTS LLER Pack Joint
3/4"x1" 1"	1"x1-1/2" 1"x2"	3/4"x1"	1"	1"x1-1/2"	1"x2"
H-15347N	Two branch-short body *Inlets: MUELLER 110 <sup>®</sup> Conductive Compression Connection for CTS O.D.** tubing *Outlet: M.I.P. thread	P-153	647N	Two branch-s *Inlets: MUEI Joint Connect O.D.** tubing *Outlet: M.I.F	LER <sup>®</sup> Pack ion for CTS
3/4"x1" 1"	1"x1-1/2" 1"x2"	3/4"x1"	1"	1"x1-1/2"	1"x2"
H-15341N	Two branch *Inlets: Copper flare nut *Outlet: M.I.P. thread	H-153	40N	<b>Two branch</b> * <b>Inlets:</b> Copp * <b>Outlet:</b> Copp	
3/4"x1-1/2"‡ 3/4"x1-1/4"‡	1"x1-1/4"‡ 1"x1-1/2" 1"x2"	3/4"	3/4"x1"	1"x1-1/4"	1"x1-1/2"
H-15346N	Three branch *Inlets: Copper flare nut *Outlet: M.I.P. thread	H-153	6 350N	Four branch *Inlets: Copp *Outlet: Copp	
3/4"x1-1/2 ± 1"x1	I-1/2" 1"x2"	3/4"x2" ‡		1"x2"	
	Four branch *Inlets: Copper flare *Outlet: M.I.P. thread			* <b>Inlets:</b> Copp * <b>Outlet:</b> Copp	
H-15351N		H-153			
3/4"x2" ‡	1"x2"	3/4"x1-1/2 ‡	1"x1-	-1/2" 1	"x2"

NOTE: Minimum length of copper tubing "gooseneck" is: 3/4" size-30", 1" size-40".

‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.

\*Inlets and outlet can be reversed.

\*\*See page 6.29-6.30 for tubing that can be used with this connection.

### **"Y" BRANCH CONNECTIONS**

Two branch

## 6.30 Mueller Co.

#### Rev. 2-15 Shaded area indicates changes



H-15342N

Two branch \*Inlets: Copper flare nut \*Outlet: F.I.P. thread



Two branch-short body \*Inlets: M.I.P. thread \*Outlet: M.I.P. thread

\*Inlets: MUELLER INSTA-TITE

**\*Outlet:** MUELLER INSTA-TITE

Connection for IPS\* PE pipe

Connection for IPS\* PE pipe

#### H-10070N

H-15353N

3/4"x1"



Two branch - Short body \*Inlets: Solder joint \*Outlet: MUELLER 110<sup>®</sup> Conductive Compression Connection for CTS O.D.\*\* tubing

### H-15344N

1"x1-1/2"

1"x2"

1"x2"

3/4"x1"



Two branch \*Inlets: MUELLER 110<sup>®</sup> Conductive Compression Connection for IPS PE pipe \*Outlet: MUELLER 110 Conductive Compression Connection for IPS PE pipe

### H-15354N

3/4"x1"

NOTE: Minimum length of copper tubing "gooseneck" is: 3/4" size-30", 1" size-40".

‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.

\*Inlets and outlet can be reversed.

\*\*See page 6.29 for tubing that can be used with this connection.

### MUELLER 110<sup>®</sup> COMPRESSION CONNECTION INFORMATION

Shaded area indicates changes Rev. 4-14

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
1/2" CTS	Type "K" copper	0.622 - 0.628	0.045 - 0.053	-	-
2/4" CTC	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
3/4" CTS	Polyethylene	0.871 - 0.879	0.097 - 0.107	0.657 - 0.685	504281
4" 0 7 9	Type "K" copper	1.121 - 1.129	0.061 - 0.069	-	-
1" CTS	Polyethylene	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880	504385
1 1/4" ОТО	Type "K" copper	1.371 - 1.379	0.060 - 0.070	-	-
1-1/4" CTS	Polyethylene	1.370 - 1.380	0.153 - 0.168	1.034 - 1.074	505142
1-1/2" CTS	Type "K" copper	1.621 - 1.630	0.067 - 0.077	-	-
1-1/2 015	Polyethylene	1.619 - 1.631	0.181 - 0.199	1.221 - 1.269	506139
	Type "K" copper	2.120 - 2.130	0.076 - 0.090	-	-
2" CTS	Polyethylene	2.119 - 2.131	0.236 - 0.260	1.599 - 1.659	506141
	Polyethylene	1.045 - 1.110	0.118 - 0.138	0.809 - 0.834	505141
3/4" IPS	3/4" Sch. 40 PVC	1.046 - 1.054	0.113 - 0.133	0.780 - 0.828	509759
	3/4" Sch. 80 PVC	1.046 - 1.054	0.154 - 0.174	0.698 - 0.746	509760
	Polyethylene	1.329 - 1.399	0.150 - 0.170	1.029 - 1.059	505142
1" IPS	1" Sch. 40 PVC	1.310-1.320	0.133-0.153	-	-
	1" Sch. 80 PVC	1.310-1.320	0179-0.200	-	-

#### Tubing, pipe and liners used with MUELLER 110 Compression Connection

\*Type "K" soft copper tubing per ASTM B88; CTS polyethylene (PE) per ASTM D-2737 - SDR-9; IPS polyethylene (PE) per ASTM D-2239 - PE SIDR-7; IPS polyvinylchloride (PVC) per ASTM D1785

#### **Mueller 110 Compression Connection replacement parts**

•	•	•
1/2" CTS	681516	147542
3/4" CTS	581949	507831
1" CTS	581951	507835
1-1/4" CTS	581953	507843
1-1/2" CTS	581955	507847
2" CTS	581957	507851
3/4" IPS	89599	508826
1" IPS	89788	508827



Gasket assembly



Liner

Nut

*†Gasket and gripper band assembly* 

#### Adapter Nut for pre-1976 style Mueller 110 Compression Connection for CTS tubing

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



### MUELLER<sup>®</sup> PACK JOINT CONNECTION INFORMATION

Rev. 2-15 Shaded area indicates changes

Mueller Co.

6.32

#### Tubing, pipe and liners used with MUELLER<sup>®</sup> Pack Joint Conections

Nominal size of	Material*	Tubing or pipe	Tubing or pipe wall	Tubing or pipe	Liner part
connection	inatorial	O.D. range - inches	thickness range - inches	I.D. range - inches	number
3/4" CTS	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
3/4 015	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	-	-
1 013	Polyethylene	1.120 - 1.130	0.125 - 0.137	0.846 - 0.880	528705
4.4/01.070	Type "K" copper	1.621 - 1.630	0.067 - 0.077	-	-
1-1/2" CTS	Polyethylene	1.619 - 1.631	0.181 - 0.199	1.221 - 1.269	528706
2" CTS	Type "K" copper	2.120 - 2.130	0.076 - 0.090	-	-
2" CTS	Polyethylene	2.119 - 2.131	0.236 - 0.260	1.599 - 1.659	528707
3/4" IPS	Polyethylene	1.045 - 1.110	0.118 - 0.138	0.809 - 0.834	505141
	3/4" Sch. 40 PVC	1.046 - 1.054	0.113 - 0.133	0.780 - 0.828	509759
	3/4" Sch. 80 PVC	1.046 - 1.054	0.154 - 0.174	0.698 - 0.746	509760
	Polyethylene	1.329 - 1.399	0.150 - 0.170	1.029 - 1.059	505142
1" IPS	1" Sch. 40 PVC	1.310 - 1.320	0.133 - 0.153	-	-
	1" Sch. 80 PVC	1.310 - 1.320	0.179 - 0.200	-	-
1-1/4" IPS	Polyethylene	1.754 - 1.832	0.197 - 0.221	1.360 - 1.390	312787
	Polyethylene	2.05 - 2.141	0.230 - 0.258	1.590 - 1.625	529116
1-1/2" IPS	1-1/2" Sch. 40 PVC	1.894 - 1.906	0.145 - 0.165	-	-
	1-1/2" Sch. 80 PVC	1.894 - 1.906	0.200 - 0.224	-	-
	Polyethylene	2.637 - 2.742	0.295 - 0.330	2.047 - 2.082	529117
2" IPS	2" Sch. 40 PVC	2.369 - 2.381	0.154 - 0.174	-	-
	2" Sch. 80 PVC	2.369 - 2.381	0.218 - 0.244	-	-

\*Type "K" soft copper tubing per ASTM B88; CTS polyethylene (PE) per ASTM D-2737 - SDR-9; IPS polyethylene (PE) per ASTM D-2239 - PE SIDR-7 ;IPS polyvinylchloride (PVC) per ASTM D1785



#### Liners used with MUELLER PVC Pack Joint Connection for OD Controlled PE Pipe

Nominal size of connection	Material	Tubing or pipe O.D. range - inches	Tubing or pipe I.D. range - inches	Length - inches	Liner part number
3/4" IPS	IPS PE OD controlled DR-9	1.046 - 1.054	0.772 - 0.820	2.00	313073
	IPS PE OD controlled DR-11	1.046 - 1.054	0.816 - 0.864	2.00	313074
1" IPS	IPS PE OD controlled DR-9	1.310 - 1.320	.0978 - 1.028	2.125	313084
	IPS PE OD controlled DR-11	1.310 - 1.320	1.030 - 1.080	1.84	505142
1-1/2" IPS	IPS PE OD controlled DR-9	1.894 - 1.906	1.412 - 1.484	3.00	538266
	IPS PE OD controlled DR-11	2.369 - 2.381	2.082 - 2.047	3.20	538267
2" IPS	IPS PE OD controlled DR-9	1.894 - 1.906	1.496 - 1.560	3.00	538269
	IPS PE OD controlled DR-11	2.369 - 2.381	1.885 - 1.949	3.20	538270

#### **MUELLER Pack Joint Connection Kit**

Size	Connection Kit		
3/4" CTS	681921		
1" CTS	681922		
1-1/2" CTS	681923		
2" CTS	681924		
3/4" IPS PE	682377		
1" IPS PE	682556		
1-1/2 IPS PE	682557		
2" IPS PE	682558		
3/4" IPS PVC	682377		
1" IPS PVC	682553		
1-1/2" IPS PVC	682554		
2" IPS PVC	682555		



## MUELLER<sup>®</sup> GRIP COMPRESSION CONNECTION INFORMATION

### 8-13

6.33

(Mueller Co.)

#### Tubing, pipe and liners used with MUELLER Grip 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
0/// 070	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
3/4" CTS	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
1-1/2" CTS	Type "K" copper	1.621 - 1.630	0.067 - 0.077	-	-
	Polyethylene	1.619 - 1.631	0.181 - 0.199	1.221 - 1.269	528706
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



Size	Kit	Grip ring	Washer	Gasket	Connection nut
3/4" CTS	682861	312919	311692	537881	537838
1" CTS	682862	312920	311695	537882	537839
1-1/2" CTS	682863	312921	538107	537883	537840
2" CTS	682864	312922	538108	538109	537841

**Grip ring Connection nut** Gasket . Washer

### PIPE PLUGS AND BUSHING



Rev. 4-14 Shaded area indicates changes



H-10034N

3/4"

1"

1-1/4"‡

Brass plug -

I.P. thead

1-1/2"‡

Machine inserted\*

5/8"

1/2"‡

3/4"‡

Brass plug -Machine inserted\* AWWA taper (MUELLER "CC") thread

1-1/4" = 1-1/2" 2"



Brass plug\*\* -Square head with AWWA taper (MUELLER "CC") thread

### H-10033N

1/2" 5/8" 3/4" 1" 1-1/4" 1-1/2" 2"



Brass plug -Square head with I.P. thread

### H-10035N

1/2"‡ 3/4" 1" 1-1/4"‡ 1-1/2"‡ 2"‡
-----------------------------------



1"‡

H-10037N

Brass bushing Male AWWA taper (MUELLER "CC") thread x female AWWA taper (MUELLER "CC") thread

2"‡

2-1/2"‡

### H-10036N

1"x3/4"	1-1/2"x1"	2"x3/4"	2"x1"	2"x1-1/2



1-1/4" MIP x 1" FIP
2" MIP x 3/4" FIP
2" MIP x 1" FIP
1" MIP x 3/4" FIP
1-1/2" MIP x 3/4" FIP
1-1/2" MIP x 1" FIP
2" MIP x 1-1/2" FIP

\*Nominal size.

‡Requires minimum ordering quantity. Contact MUELLER Customer Service Center for minimum ordering requirements and availability.