### MUELLER<sup>®</sup> CORPORATION VALVES

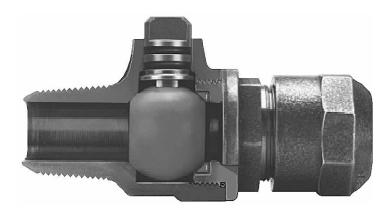


Machine inserted corporation stops were developed by Hieronymus Mueller in conjunction with his development of the drilling and tapping machine used to make pressure taps in water mains. During the development of the machine inserted corporation stop, Mr. Mueller designed an inlet thread which became known as the Mueller or "CC" thread. This thread form was eventually adopted by the American Water Works Association and is listed in ANSI/AWWA Standard C800 as the AWWA Taper thread.

Mueller Co. pioneered other design concepts in the waterworks industry such as the copper flare connection, Mueller 110<sup>®</sup> Compression Connection and the Mueller ORISEAL<sup>®</sup> Valves, which use O-ring seals to assure leak-tight performance. Mueller Co. offers corporation stops in three designs: machined key (commonly referred to as ground key), ORISEAL type (1-1/2" and 2" sizes only) and ball type.

All three designs are available with a wide range of inlet/outlet combinations including the Mueller 110 Compression Connection, Mueller Grip Compression Connection and Pack Joint Connection. These three designs are all compatible with the Mueller line of drilling and tapping machines, and small drilling machines.

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 300™ Ball Type Corporation Valves

- □ **Blow-Out Proof Stem Design** -prevents separation and assures dependable, safe operation.
- Straight Design allows maximum flow with minimum pressure loss.
- Manufactured and Tested to ANSI/AWWA C800 standard.
- Double O-ring Stem Seals are supported in precision machined grooves and provide secure, leak tight sealing.
- □ **Inlet Threads** are either AWWA taper (Mueller "CC") or AWWA iron pipe.
- □ Stainless Steel Reinforced Seat Seal assures reliable seal under full flow and pressure.

- □ End Piece O-ring provides secondary seal to prevent leakage.
- **300psig** -maximum working pressure.
- Extra Strong key to ball connection provides strong, reliable performance and resists breakage.
- Outlets include copper flare connection, Mueller 110 Compression Connection, Mueller Grip Compression Connection, Mueller INSTA-TITE, Pack Joint Connection and iron pipe thread connection.
- Stem Rotation full 360 degree.
- □ **Fluorocarbon Coated Ball** ensures smooth , easy turning operation.



Rev. 4-14 Shaded area indicates changes

The Mueller ORI-CORP<sup>®</sup> Corporation Valve is an easy turning, O-ring sealed, balanced pressure, plug type valve having a round, full open unobstructed flow way. These valves also feature a heavy one-piece bronze body with integral wrench flats.

The integral plug and key head construction provides maximum strength and positive operation. The large operating head provides more than adequate wrench gripping area for easy operation.



### Mueller ORI-CORP Corporation Valve

- Top Sealing O-ring seals valve from exterior leakage and adds to easy turning qualities.
- Integral Wrench Flats on inlet and outlet of body provide generous wrench gripping area.
- □ **Inlet** is available with either AWWA taper (Mueller "CC") thread or AWWA iron pipe thread.
- Strong, One-Piece Body has no cavities that could allow debris to collect and cause damage to the plug.
- Bronze Retaining Ring secures plug in body and also functions as a dirt seal to protect bottom O-ring. Since this valve is a balanced pressure type, there is no force tending to eject the plug or load the retaining mechanism.
- Bottom Sealing O-ring seals valve from leakage and adds to easy turning qualities.
- □ **Large Operating Head** provides more than adequate wrench gripping area.

- Outlet Port Sealing O-ring is totally confined in a machined groove to provide positive leak- tight shutoff.
- Integral One-Piece Plug and Operating Head provides strength and assures positive operation. Quarter turn in either direction activates valve. An integrally cast flange at the top of the plug functions as a dirt seal to protect the top O-ring.
- □ **Full Flow** round way plug opening provides straight through passage with no obstruction.
- Integral Outlet is available with either Mueller 110<sup>®</sup> Conductive Compression Connection, Mueller Grip Compression Connection, outside iron pipe thread or inside iron pipe thread.
- □ **175psig** maximum working pressure.

### MUELLER<sup>®</sup> CORPORATION VALVES



Mueller Co. has been manufacturing ground key corporation stops since 1870 and many features of the modern day stops were developed by Mueller Co.

These features include a brass alloy, and inlet thread and outlet connections that were eventually adopted as American Water Works Association Standards.

### Mueller<sup>®</sup> Ground Key Design Corporation Valves

**Integral Outlet** - available with a wide variety of outlet end connections including the Mueller 110® Compression Connection, Mueller Grip Compression Connection, Mueller Pack Joint Connection, Mueller INSTA-TITE<sup>®</sup> Connection, copper flare, inside iron pipe, outside iron pipe, increasing iron pipe, Mueller Coupling Thread and other popular connections.

Inlet Threads - are either AWWA taper thread (Mueller "CC") or AWWA iron pipe thread.

Manufactured and Tested - to ANSI/AWWA C800 Standard.

- Straight Through Design allows maximum flow with minimum pressure loss.
- Key and Body are precision machined to assure sealing surfaces match.
- **100psig** maximum working pressure for 1/2," 3/4" and 1" sizes. 80 PSIG - maximum working pressure for 1-1/4", 1-1/2" and 2"
- "D" Shaped Washer turns with key to prevent loosening of key nut.
- Key Nut is designed so overtightening will strip stem threads instead of breaking stem.

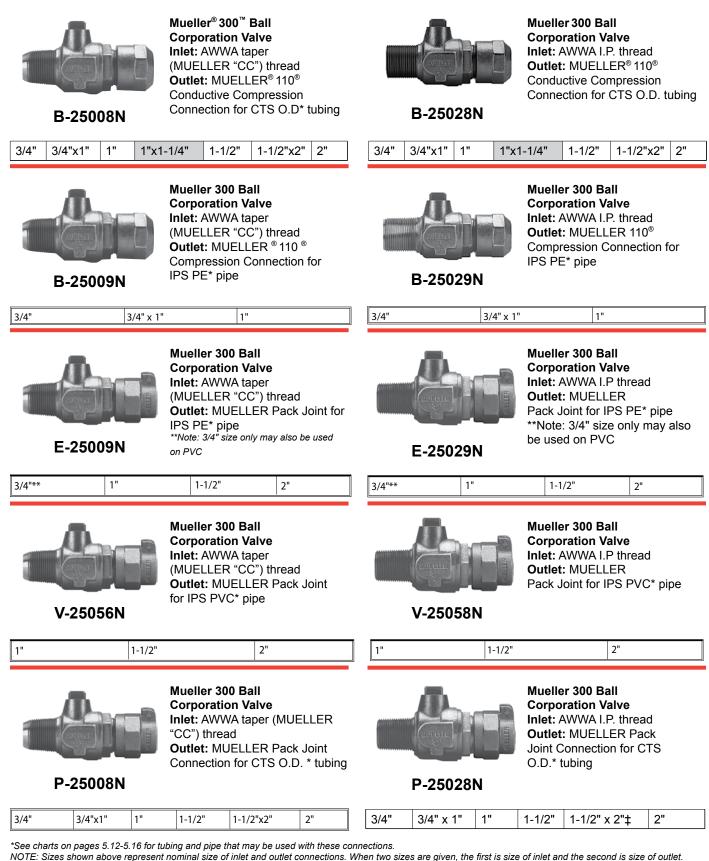


#### **Corporation valve inlet threads**



### 3/4" - 2" MUELLER<sup>®</sup> 300<sup>™</sup> BALL CORPORATION VALVES

Rev. 3-17 Shaded area indicates changes



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

Mueller Corporation Valves 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.

### 3/4" - 2" MUELLER<sup>®</sup> 300<sup>™</sup> BALL CORPORATION VALVES



Shaded area indicates change Rev. 4-14



**B-25006N** 

3/4"

3/4"

MUELLER<sup>®</sup> 300<sup>™</sup> Ball Corporation Valve AWWA taper (MUELLER "CC") thread MUELLER<sup>®</sup> INSTA-TITE<sup>®</sup> Connection for CTS PE\* pipe

MUELLER 300 Ball

**Corporation Valve** 

(MUELLER "CC") thread

INSTA-TITE® Connection for IPS

AWWA taper

**MUELLER<sup>®</sup>** 

PE\* pipe

1"

1"



MUELLER<sup>®</sup> 300<sup>™</sup> Ball Corporation Valve

AWWA I.P. thread MUELLER<sup>®</sup> INSTA-TITE<sup>®</sup> Connection for CTS PE\* pipe

B-25024N



3/4"

3/4"

### MUELLER 300 Ball

1"

1"

Corporation Valve AWWA I.P. thread MUELLER<sup>®</sup> INSTA-TITE<sup>®</sup> Connection for IPS PE\* pipe

B-25026N

B-25005N



**B-25000N** 

MUELLER 300 Ball Corporation Valve Inlet: AWWA taper (MUELLER "CC") thread Outlet: Copper flare straight connection



MUELLER 300 Ball Corporation Valve Inlet: AWWA I.P. thread Outlet: Copper flare straight connection

B-25025N

3/4"	3/4" x 1" 1	" 1-1/2" MUELLER 30 Corporation V Inlet: AWWA (MUELLER "C Outlet: Coppe Bend CS	<b>/alve</b> taper C") thread	3/4"	3/4" x 1"	Cor Inle (MU	1-1/2" ELLER 300 E poration Val t: AWWA tap ELLER "CC" let: Copper fl	ve ber ) thread
3/4"	1"	1-1/2"	2"	1-1/2"		2	"	
		MUELLER 30 Corporation V Inlet: AWWA t (MUELLER "C Outlet: F.I.P. t	<b>/alve</b> aper :C") thread			Cor Inle	ELLER 300 E poration Val t: AWWA I.P. let: F.I.P. thre	<b>ve</b> thread
В	-20045N			E	3-20046N			

\*See charts on pages 5.12-5.16 for tubing and pipe that may be used with these connections.

NOTE: Sizes shown above represent nominal size of inlet and outlet connections. When two sizes are given, the first is size of inlet and the second is size of outlet. For identification purposes MUELLER INSTA-TITE Connections for CTS O.D. PE tubing have red gripper rings, and the connections for IPS PE pipe have white gripper rings.





### 3/4" - 2" MUELLER<sup>®</sup> 300<sup>™</sup> BALL CORPORATION VALVES

Rev. 10-14 Shaded area indicates changes

В	<b>2996N</b>	MUELLER 300 Corporation V Inlet: AWWA ta (MUELLER "Co Outlet: M.I.P. t	<b>aper</b> C") thread	B-200	MUELLER 300 Ball Corporation Valve Inlet: AWWA I.P. thread Outlet: M.I.P. thread (Full siz diameter inlet to outlet)	ze
3/4"	1"	1-1/2"	2"	3/4"	1"	
B	-20003N	Corporation V Inlet: AWWA ta (MUELLER "CO	MUELLER 300 Ball Corporation Valve Inlet: AWWA taper (MUELLER "CC") thread Outlet: Increasing M.I.P. thread		MUELLER 300 Ball Corporation Valve Inlet: AWWA I.P. thread Outlet: M.I.P. thread (Full size diameter inlet to outlet).	
3/4"	1"	1-1/2"	2"	1-1/2"	2"	

#### **OPTIONAL T-HEAD:**

All ball corporation valves are available with a 360° turn T-head cap by adding "-10" to catalog number: Example: B-25008N-10 For a 3/4" or 1" detachable T-head caps for corporation valves

add "-00" to catalog number.Example: B-25008N-00

#### **RECLAIMED WATER STYLE:**

All ball corporation valves area available marked for "reclaimed water" by adding "-20" to the catalog number. Example: B-25008N-20.

NOTE: Sizes shown above represent nominal size of inlet and outlet connections. When two sizes are given, the first is size of inlet and the second is size of outlet.

### 1-1/2" & 2" MUELLER® ORI-CORP® CORPORATION VALVES



Shaded area indicates change Rev. 4-14



MUELLER ORI-CORP Corporation Valve Inlet: AWWA taper (MUELLER "CC") thread Outlet: MUELLER® 110® Conductive Compression Connection for CTS O.D.\* tubing

H-15013N



H-15023N

MUELLER ORI-CORP Corporation Valve Inlet: AWWA I.P. thread Outlet: MUELLER 110 Conductive Compression Connection for CTS O.D.\* tubing

# 1-1/2" 2" \*\*



#### MUELLER ORI-CORP Corporation Valve Inlet: AWWA taper (MUELLER "CC") thread Outlet: MUELLER Pack Joint Connection for CTS O.D.\* tubing



P-15023N

MUELLER ORI-CORP Corporation Valve Inlet: AWWA I.P. thread Outlet: MUELLER Pack Joint Connection for CTS O.D.\* tubing

P-15013N

1-1/2"	2"	1-1/2"	2" **



H-15014N

#### MUELLER ORI-CORP Corporation Valve Inlet: AWWA taper (MUELLER "CC") thread Outlet: F.I.P. thread



#### MUELLER ORI-CORP Corporation Valve Inlet: AWWA I.P. thread Outlet: F.I.P. thread

H-15015N

1-1/2#	2" ‡	1-1/2#"	2" ‡
	MUELLER ORI-CORP Corporation Valve Inlet: AWWA taper (MUELLER "CC") thread Outlet: M.I.P. thread		MUELLER ORI-CORP Corporation Valve Inlet: AWWA I.P. thread Outlet: M.I.P. thread
H-9968N		H-9969N	

\*See charts on pages 5.12-5.16 for tubing and pipe that may be used on these connections.

\*\* For use with Service Saddle only—-cannot be machine inserted.

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

NOTE: Sizes shown above represent nominal size of inlet and outlet connections.





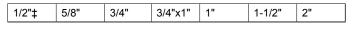
Reliable Connections

#### Rev. 5-17 Shaded area indicates changes



**Ground Key Corporation Valve** Inlet: AWWA taper (Mueller "CC") thread Outlet: Mueller<sup>®</sup> 110<sup>®</sup> Conductive Compression Connection for CTS O.D.\* tubing

H-15008N





H-15031N

**Ground Key Corporation Valve** Inlet: AWWA taper (Mueller "CC") thread Outlet: Mueller 110 **Conductive Compression** Connection for CTS O.D. tubing eighth bend connection



Inlet: AWWA I.P. thread Outlet: Mueller 110 Conductive Compression Connection for CTS O.D.\* tubing

**Ground Key Corporation Valve** 

H-15028N

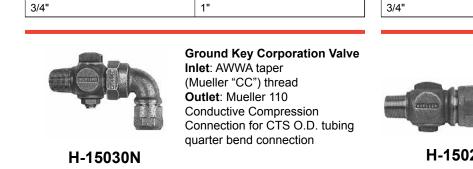


1"



**Ground Key Corporation Valve** Inlet: AWWA taper (Mueller "CC") thread Outlet: Mueller 110 Compression Connection for IPS PE\* pipe

H-15009N



Ground Key Corporation Valve Inlet: AWWA I.P. thread Outlet: MUELLER 110 Compression Connection for IPS PE\* pipe

H-15029N

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



**Ground Key Corporation Valve** Inlet: AWWA taper (Mueller "CC") thread Outlet: Mueller® Pack Joint

P-15008N

E-15009N

3/4"

Connection for CTS O.D.\* tubing



**Ground Key Corporation Valve** Inlet: AWWA I.P. thread Outlet: Mueller Pack Joint Connection for CTS O.D.\*

P-15028N

3/4"	3/4"x1"	1"	3/4"	1"
MUELLER	Inlet: A	ad Key Corporation Valve AWWA taper er "CC") thread		Ground Key Corporation Valve Inlet: AWWA I.P. thread Outlet: Mueller <sup>®</sup> Pack Joint

E-15029N

Outlet: Mueller<sup>®</sup> Pack Joint Compression Connection for IPS PE\* pipe

1"

1"

Outlet: Mueller<sup>®</sup> Pack Joint

Compression Connection for IPS

\*See charts on pages 5.12-5.16 for tubing and pipe that may be used on these connections.

PE\* pipe

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

NOTE: Sizes shown above represent nominal size of inlet and outlet connections. When two sizes are given, the first is size of inlet and the second is size of outlet.

3/4"

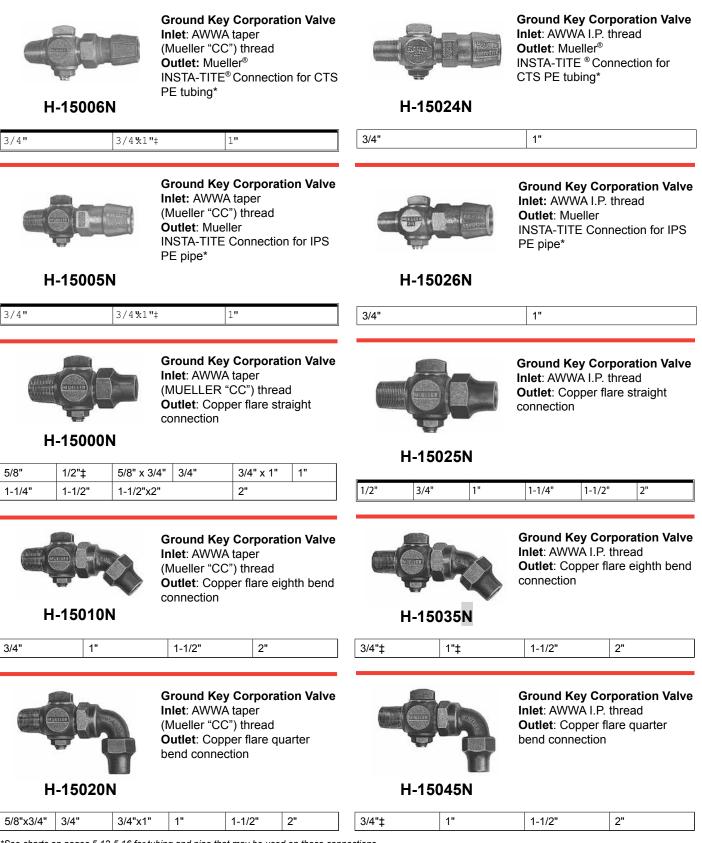
Mueller Corporation Valves are manufactured and tested in accordance with ANSI/AWWA C800. Components in contact with potable water will also comply with latest requirements of the Federal Safe Drinking Water Act.

### 1/2" - 2" GROUND KEY DESIGN CORPORATION VALVES

### 1/2" - 2" GROUND KEY DESIGN CORPORATION VALVES



Shaded area indicates change Rev. 4-14



\*See charts on pages 5.12-5.16 for tubing and pipe that may be used on these connections.

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

NOTE: Sizes shown above represent nominal size of inlet and outlet connections. When two sizes are given, the first is size of inlet and the second is size of outlet.

Mueller Corporation Valves 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.





Reliable Connections

#### Rev. 10-14 Shaded area indicates changes

### 1/2" - 2" GROUND KEY DESIGN **CORPORATION VALVES**

		Ground Key Co Inlet: AWWA tap (MUELLER "CC" Outlet: F.I.P three	er ') thread		NUELLER E		Ground Ke Inlet: AWW Outlet: F.I.F	A I.P. threa	
H-1	0045N			l	H-1004	6N			
1/2" 3	/4" 1"	1-1/4" 1-1	/2" 2"	1/2"	3/4"	1"	1-1/4"‡	1-1/2"	2"
H-1	5027N	Ground Key Co Inlet: AWWA I.P. Outlet: I.P. threa connection - this thread is one siz copper tubing to	thread d copper flare connection e larger than the		<b>()</b> H-1500	2N	Ground Ke Inlet: AWW (MUELLER Outlet: I.P. connection thread is on copper tubin	A taper "CC") thre thread cop - this conn e size larg	ad oper flare ection ler than the
			]		11-1500	211	1		]
3/4"				3/4"			1"		
		Ground Key Co Inlet: AWWA tap (MUELLER "CC' Outlet: M.I.P. thr	er ') thread		Pueller		Ground Ke Inlet: AWW Outlet: M.I.	A I.P. threa	
	9996N	1 1 (01)			H-1001			4.4.0	
3/4"	1"	1-1/2"‡	2"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
H-1	0003N	Ground Key Co Inlet: AWWA tap (MUELLER"CC) Outlet: Increasir (outlet is one siz inlet)	er thread ng I.P. thread		н-9979	)	Ground Ke Inlet: AWW, Outlet: Incr (outlet is on inlet)	A I.P. threa easing I.P.	ad thread
		11 1 1 / 41	1 1 / 2" 2"	1/2" (2/4)		5/8" (3/4" ou	tlet) 3/4"	1" 1-1	/2" 2"
1/2" 5/8" (3	3/4" outlet) 3/4"	1" 1-1/4"	1-1/2" 2"	1/2" (3/4'		טיס נטי4 UU	uet) 3/4	ı [1-1	12 2
H-6	971N	Ground Key Co Inlet: AWWA tap (MUELLER "CC" Outlet: MUELLE thread	er ') thread		Н-9976	<b>SN</b>	Ground Ke Inlet: AWW Outlet: MU thread	A I.P. threa	ad
5/8"	3/4"	1"		2/4"			1.1		
			Dueteman Demise Cont	3/4"			1"		

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

Mueller Corporation Valves 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.

### 1/2" - 2" GROUND KEY DESIGN **CORPORATION VALVES**



Shaded area indicates change Rev. 8-14



3/4"

**Ground Key Corporation Valve** Inlet: AWWA taper (MUELLER "CC") thread **Outlet:** MUELLER Coupling thread 1-1/64" I.D. thru valve for use with pito tube



Ground Key Corporation Valve Inlet: AWWA I.P. thread Outlet: MUELLER Coupling thread (with coupling nut and leather washer) 1-1/64" I.D. thru valve - for use with pito tube

### H-9995N

1" 1" See page 5.14 for installation tools See page 5.14 for installation tools



H-9992N

**Ground Key Corporation Valve** Inlet: AWWA taper (MEULLER "CC") thread Outlet: Inceasing I.P. thread (outlet is one size larger than inlet) 1-1/32" I.D. thru valve for use with pito tube



**Ground Key Corporation Valve** Inlet: Standard I.P. thread\*\* Outlet: M.I.P. thread

H-10012N



See page 5.14 for installation tools



#### **Ground Key Corporation Valve** Inlet: AWWA taper (MEULLER "CC") thread

Outlet: Mueller coupling thread

H-10001N

1"

1"

See page 5.14 for installation tools

\*\* For use with Service Saddle only-cannot be machine inserted.

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

NOTE: Sizes shown above represent nominal size of inlet and outlet connections.



Rev. 10-15 Shaded area indicates changes

# Mueller Drilling and Tapping Machine equipment required to install corporation valves having Mueller 110<sup>®</sup> Compression Connection outlet

Valve size (nominal) (If two numbers: Inl	et x Outlet)	1/2"	3/	'4"	3/4	"x1"	1	"	1-1/2"	2"
Combined drill and tap size - see section	n 1 for part numbers	CTS	CTS	IPS PE	CTS	IPS PE	CTS	IPS PE	CTS	CTS
B-101/B-100 inserting tool		1/2"		3/	4"		1	"	1-1/2"	2"
A-3 inserting tool		680598	680600	680688	680601	680689	680601	680689	-	-
Maximum allowable size drill or shell	AWWA I.P.	7/16"	11/16"	11/16"	11/16"	11/16"	7/8"	7/8"	1-7/16"*	1-3/4"*
cutter - see section 2 for part numbers	CC (AWWA taper)	7/16"	11/16"	11/16"	11/16"	11/16"	15/16"	15/16"	1-7/16"*	1-15/16"*
Mega-Cut™/E-5 machine adapter nipple		63796	52019	508919	36750	508920	36750	508920	501949	508199
D-5 machine adapter nipple		37900	37902	508917	37903	508918	37903	508918	597644	507645
Tru-Cut/PL-2 machine adapter nipple for use on 1.125" max. wall PVC		-	507632	509050	507633	509051	507633	509051	-	-

\*Ball and ORI-CORP® Corporation valves IP and CC inlet: 1-7/8" maximum.

#### 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	-	-
2/41 070	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	504281
4. 070	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" CTS	Type "K" copper	1.371 - 1.379	0.060 - 0.070	-	-
1-1/4 015	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	-	-
1-1/2 013	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	Kit	Gasket part number†	Connection nut
1/2" CTS		681516	147542
3/4" CTS	682600	581949	507831
1" CTS	682601	581951	507835
1-1/2" CTS	682602	581955	507847
2" CTS	682603	581957	507851
3/4" IPS PE	-	89599	508826
1" IPS PE	-	89788	508827

*†Gasket and gripper band assembly* 

Gasket





Nut

### **Corporation Valve Wrench**



For operating up to and including 1" corporation valves.

### CORPORATION VALVE MUELLER® INSTA-TITE® TOOLS & MISCELLANEOUS



### Mueller<sup>®</sup> Drilling and Tapping Machine equipment required to install corporation valves having Mueller INSTA-TITE Connection outlets

Valve size (nominal) (If two numbers: Inlet	Valve size (nominal) (If two numbers: Inlet x Outlet)			1" CTS PE or IPS PE
Combined drill and tap size - see section 1 for partnumbers			3/4"	1"
B-101/B-100 inserting tool		680600	68060	1
A-3 inserting tool		-	-	680601
Maximum allowable size drill or shell	AWWA I.P.	11/16"		7/8"
cutter - see section 2 for part numbers	CC (AWWA taper)			15/16"
Mega-Cut™/E-5 machine adapter nipple	·	52019	36750	
D-5 machine adapter nipple		37902	37903	
Tru-Cut/PL-2 machine adapter nipple for us	Tru-Cut/PL-2 machine adapter nipple for use on 1.125" max. wall PVC		507633	

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

Nominal size of connection	Material	Tubing or pipe O.D. range (in.)	Tubing or pipe wall thickness range (in.)	Tubing or pipe I.D. range (in.)
3/4" CTS PE		0.0871-0.879	0.097-0.107	0.0657-0.685
1" CTS PE	Delvothylone DE	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		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 - PE SIDR-7

#### **Mueller INSTA-TITE Connection replacement parts**

Size	Gripper ring part number	O-ring part number
3/4" CTS PE	506325	506324
1" CTS PE	506327	506326
3/4" IPS PE	505885	505883
1" IPS PE	505886	505884

O-rings

**Corporation Valve Wrench** For operating up to and including 1" corporation stops and valves.



Gripper rings

# Mueller INSTA-TITE Connection optional equipment 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 special beveling tool for CTS PE tubing and IPS PE pipe.

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



### CORPORATION VALVE PACK JOINT TOOLS AND MISCELLANEOUS

Rev. 2-15 Shaded area indicates changes

# Mueller<sup>®</sup> Drilling and Tapping Machine equipment required to install corporation having Mueller Pack Joint Connection outlets

et x Outlet)	3/4" CTS	IPS, PE, & PVC	3/4"x1" CTS	IPS, PE, & PVC	1" CTS	IPS, PE, & PVC	1-1/2" CTS	IPS & PE	IPS & PVC	2" CTS	IPS & PE	IPS & PVC
on 1	3/4"		1"		1-1/2"			2"				
	680600	-	680601	680601	-	-	-	-	-	-	-	-
	-	-	-	-	680601	-	680421	-	-	680422	-	-
AWWA I.P.	11/16"	-	11/16"	-	7/8"	-	1-7/16"	1-7/16"	-	1-3/4"	1-3/4"	-
CC (AWWA taper)	11/16"	-	11/16"	-	15'16"	-	1-7/16"	1-7/16"	-	1-15/16"	1-15/16"	-
	52019	508919	36750	682256	36750	682256	501949	508199**	682257	508199	682258	682258
	37902	508917	37903	682259	37903	682259	507644	507645**	682033	507645	682034	682034
Tru-Cut/PL-2 machine adapter nipple for use on 1.125" max. wall PVC		509050	507633	-	507633	-	-	-	-	-	-	-
	AWWA I.P. CC (AWWA taper)	CTS           n1         680600           -         -           AWWA I.P.         11/16"           CC (AWWA taper)         11/16"           52019         37902	CTS         & PVC           n1         3/2           680600         -           -         -           AWWA I.P.         11/16"           CC (AWWA taper)         11/16"           52019         508919           37902         508917	CTS         & PVC         CTS           n1         3/4"           680600         -         680601           -         -         -           AWWA I.P.         11/16"         -         11/16"           CC (AWWA taper)         11/16"         -         11/16"           52019         508919         36750           37902         508917         37903	CTS         & PVC         CTS         & PVC           n1         3/4"           680600         -         680601         680601           -         -         -         -           AWWA I.P.         11/16"         -         11/16"         -           CC (AWWA taper)         11/16"         -         11/16"         -           52019         508919         36750         682256           37902         508917         37903         682259	CTS         & PVC         CTS         & PVC         TCTS           n1         3/4"         680600         -         680601         680601           -         -         680600         -         680601         680601           -         -         -         -         680601         -           AWWA I.P.         11/16"         -         11/16"         -         7/8"           CC (AWWA taper)         11/16"         -         11/16"         -         15'16"           52019         508919         36750         682256         36750           37902         508917         37903         682259         37903	PCC Outlet)         CTS         & PVC         CTS         & PVC         T*CTS         & PVC           n1         3/4"         1"           680600         -         680601         680601         -           -         -         -         680601         -         -           AWWA I.P.         11/16"         -         11/16"         -         7/8"         -           CC (AWWA taper)         11/16"         -         11/16"         -         15'16"         -           52019         508919         36750         682256         36750         682259           37902         508917         37903         682259         37903         682259	CTS         & PVC         CTS         & PVC         T"CIS         & PVC         CTS           n1         3/4"         1"         -         -         -         -         -         -         -         -         -         -         -         -         -         680601         -         -         -         -         -         680601         -         -         -         -         680421           AWWA I.P.         11/16"         -         11/16"         -         7/8"         -         1-7/16"           CC (AWWA taper)         11/16"         -         11/16"         -         15"16"         -         1-7/16"           52019         508919         36750         682256         36750         682256         501949           37902         508917         37903         682259         37903         682259         507644	PCC Outlet)         CTS         & PVC         CTS         & PVC         T"CIS         & PVC         CTS         IPS & PE           n1         3/4"         1"         1-1/2"           680600         -         680601         680601         -         -         -           -         -         -         -         680601         -         680421         -           AWWA I.P.         11/16"         -         11/16"         -         7/8"         -         1-7/16"         1-7/16"           CC (AWWA taper)         11/16"         -         11/16"         -         15'16"         -         1-7/16"         1-7/16"           52019         508919         36750         682256         36750         682256         501949         508199**           37902         508917         37903         682259         37903         507644         507645**	PVC         CTS         & PVC         CTS         & PVC         TCIS         & PVC         CTS         IPS & PE         PVC           n1         3/4"         1"         1"         1-1/2"	CTS         & PVC         CTS         & PVC         T"         IPS & PE         PVC         2*CTS           n1         3/4"         1"         1-1/2"         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         680601         -         680601         -         -         -         -         -         -         -         680421         -         -         680422           AWWA I.P.         11/16"         -         11/16"         -         7/8"         -         1-7/16"         1-7/16"         -         1-3/4"           CC (AWWA taper)         11/16"         -         11/16"         -         15'16"         -         1-7/16"         1-7/16"         -         1-15/16"           52019         508919         36750         682256         36750         682256         501949         508199**         682257         508199           37902         508917         37903         682259         507644         507645***         682033         507645	PCX Outlet)         CTS         & PVC         CTS         & PVC         CTS         & PVC         CTS         PPC         2"CIS         PE           n1         3/4"         1"         1-1/2"         2"

#### Tubing, pipe and liners used with MUELLER Pack Joint Connection

e "K" copper blyethylene e "K" copper blyethylene e "K" copper blyethylene e "K" copper blyethylene blyethylene blyethylene Sch. 40 PVC	0.872 - 0.878 0.871 - 0.879 1.121 - 1.129 1.120 - 1.130 1.621 - 1.630 1.619 - 1.631 2.120 - 2.130 2.119 - 2.131 1.045 - 1.110 1.046 - 1.054	0.061 - 0.069 0.097 - 0.107 0.061 - 0.069 0.125 - 0.137 0.067 - 0.077 0.181 - 0.199 0.076 - 0.090 0.236 - 0.260 0.118 - 0.138	- 0.657 - 0.685 - 0.846 - 0.880 - 1.221 - 1.269 - 1.599 - 1.659 0.809 - 0.834	- 528704 - 528705 - 528706 - 528707 505141
e "K" copper lyethylene e "K" copper lyethylene e "K" copper lyethylene lyethylene	1.121 - 1.129         1.120 - 1.130         1.621 - 1.630         1.619 - 1.631         2.120 - 2.130         2.119 - 2.131         1.045 - 1.110	0.061 - 0.069 0.125 - 0.137 0.067 - 0.077 0.181 - 0.199 0.076 - 0.090 0.236 - 0.260	- 0.846 - 0.880 	528705 - 528706 - 528707
blyethylene e "K" copper blyethylene e "K" copper blyethylene blyethylene	1.120 - 1.130 1.621 - 1.630 1.619 - 1.631 2.120 - 2.130 2.119 - 2.131 1.045 - 1.110	0.125 - 0.137 0.067 - 0.077 0.181 - 0.199 0.076 - 0.090 0.236 - 0.260	- 1.221 - 1.269 - 1.599 - 1.659	528706 - 528707
e "K" copper lyethylene e "K" copper lyethylene lyethylene	1.621 - 1.630 1.619 - 1.631 2.120 - 2.130 2.119 - 2.131 1.045 - 1.110	0.067 - 0.077 0.181 - 0.199 0.076 - 0.090 0.236 - 0.260	- 1.221 - 1.269 - 1.599 - 1.659	528706 - 528707
lyethylene e "K" copper blyethylene	1.619 - 1.631 2.120 - 2.130 2.119 - 2.131 1.045 - 1.110	0.181 - 0.199 0.076 - 0.090 0.236 - 0.260	- 1.599 - 1.659	528706 - 528707
e "K" copper blyethylene blyethylene	2.120 - 2.130 2.119 - 2.131 1.045 - 1.110	0.076 - 0.090 0.236 - 0.260	- 1.599 - 1.659	- 528707
lyethylene	2.119 - 2.131 1.045 - 1.110	0.236 - 0.260		528707
lyethylene	1.045 - 1.110			
· ·		0.118 - 0.138	0.809 - 0.834	505141
Sch. 40 PVC	1 046 1 054			505141
	1.040 - 1.034	0.113 - 0.133	0.780 - 0.828	509759
Sch. 80 PVC	1.046 - 1.054	0.154 - 0.174	0.698 - 0.746	509760
lyethylene	1.329 - 1.399	0.150 - 0.170	1.029 - 1.059	505142
Sch. 40 PVC	1.310 - 1.320	0.133 - 0.153	-	-
Sch. 80 PVC	1.310 - 1.320	0.179 - 0.200	-	-
lyethylene	1.754 - 1.832	0.197 - 0.221	1.360 - 1.390	312787
lyethylene	2.05 - 2.141	0.230 - 0.258	1.590 - 1.625	529116
Sch. 40 PVC	1.894 - 1.906	0.145 - 0.165	-	-
Sch. 80 PVC	1.894 - 1.906	0.200 - 0.224	-	-
lyethylene	2.637 - 2.742	0.295 - 0.330	2.047 - 2.082	529117
Sch. 40 PVC	2.369 - 2.381	0.154 - 0.174	-	-
Sch. 80 PVC	2.369 - 2.381	0.218 - 0.244	-	-
	lyethylene ich. 40 PVC ich. 80 PVC lyethylene iyethylene Sch. 40 PVC Sch. 80 PVC iyethylene ich. 40 PVC ich. 80 PVC 388; CTS polyeth	Iyethylene         1.329 - 1.399           ich. 40 PVC         1.310 - 1.320           ich. 80 PVC         1.310 - 1.320           ilyethylene         1.754 - 1.832           ilyethylene         2.05 - 2.141           Sch. 40 PVC         1.894 - 1.906           Sch. 80 PVC         1.894 - 1.906           Sch. 80 PVC         1.894 - 1.906           ilyethylene         2.637 - 2.742           ich. 40 PVC         2.369 - 2.381           ich. 80 PVC         2.369 - 2.381	Iyethylene         1.329 - 1.399         0.150 - 0.170           ich. 40 PVC         1.310 - 1.320         0.133 - 0.153           ich. 80 PVC         1.310 - 1.320         0.179 - 0.200           Iyethylene         1.754 - 1.832         0.197 - 0.221           Iyethylene         2.05 - 2.141         0.230 - 0.258           Sch. 40 PVC         1.894 - 1.906         0.145 - 0.165           Sch. 80 PVC         1.894 - 2.742         0.205 - 0.330           ich. 40 PVC         2.369 - 2.381         0.154 - 0.174           ich. 80 PVC         2.369 - 2.381         0.218 - 0.244           388; CTS polyethylene (PE) per ASTM D-2737 - SDR-9; IPS polyethylene         2.381         0.218 - 0.244	Iyethylene         1.329 - 1.399         0.150 - 0.170         1.029 - 1.059           ich. 40 PVC         1.310 - 1.320         0.133 - 0.153         -           ich. 80 PVC         1.310 - 1.320         0.179 - 0.200         -           lyethylene         1.754 - 1.832         0.197 - 0.221         1.360 - 1.390           lyethylene         2.05 - 2.141         0.230 - 0.258         1.590 - 1.625           Sch. 40 PVC         1.894 - 1.906         0.145 - 0.165         -           Sch. 80 PVC         1.894 - 1.906         0.200 - 0.224         -           idyethylene         2.637 - 2.742         0.295 - 0.330         2.047 - 2.082           ich. 40 PVC         2.369 - 2.381         0.154 - 0.174         -           ich. 80 PVC         2.369 - 2.381         0.218 - 0.244         -           388; CTS polyethylene (PE) per ASTM D-2737 - SDR-9; IPS polyethylene         -         -

#### 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
3/4 153	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
1 153	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
1-1/2 183	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



Connection Kit (includes Pack Joint, Gasket and Washer)



Corporation Valve Wrench For operating up to and including 1" corporation valves.

### CORPORATION VALVE COPPER FLARE TOOLS & MISCELLANEOUS



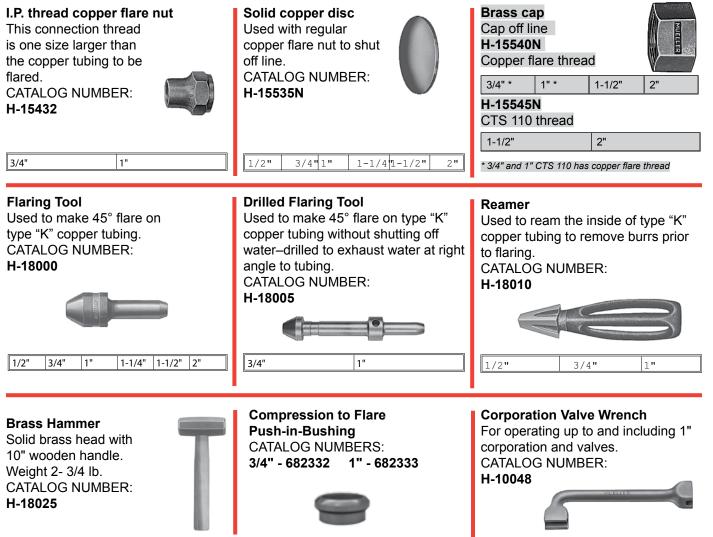
Shaded area indicates change Rev. 1-18

# Mueller<sup>®</sup> Drilling and Tapping Machine equipment required to install corporation valves having copper flare connection outlet

Valve size (nominal) (If two numbers: Inlet x Outlet)		1/2"	1/2"x3/4"	5/8"x3/4"	3/4"	3/4"x1"	1"	1-1/4"	1-1/2"	2"
Combined drill and tap size - see section 1 for part numbers		1/2"	1/2"	5/8"	3/4"	3/4"	1"	1-1/4"	1-1/2"	2"
B-101/B-100 inserting tool		680598	680600	680600	680600	680601	680601	-	-	-
A-3 inserting tool		-	-	-	-	-	680601	680602	88640	88641
Maximum allowable size drill or shell		7/16"	7/16"	9/16"	11/16"	11/16"	7/8"	1-1/8"	1-7/16"	1-3/4"*
cutter - see section 2 for part numbers	CC (AWWA taper)	7/16"	7/16"	9/16"	11/16"	11/16"	15/16"	1-3/16"	1-7/16"	1-15/16"*
Mega-Cut™/E-5 machine adapter nipple		63796	52019	52019	52019	36750	36750	682256	501947	508201
D-5 machine adapter nipple		37900	37902	37902	37902	37903	37903	682259	37905	37906
Tru-Cut/PL-2 machine adapter nipple for use on 1.125" max. wall PVC		-	-	-	507632	507633	507633	-	-	-

\* Ball and ORI-CORP® Corporation valves IP and CC inlet: 1-7/8" maximum.

### I.P. thread copper flare connection optional equipment



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 evident.



### CORPORATION VALVE MUELLER<sup>®</sup> GRIP TOOLS & MISCELLANEOUS EQUIPMENT

Rev. 5-16 Shaded area indicates changes

## MUELLER Drilling and Tapping Machine equipment required to install corporation valves having MUELLER Grip Compression Connection outlet

Valve size (nominal)		3/4"	3/4" x 1"	1"	1-1/2"	2"	3/4"	3/4"x1"	1"
(If two numbers: Inlet x Outlet)		CTS	CTS	CTS	CTS	CTS	IPS PE	IPS PE	IPS PE
Combined drill and tap size - see section 1 for part numbers		3/4"	3/4"	1"	1-1/2"	2"	3/	/4"	1"
B-101/B-100 inserting tool	680600	680601	680601	-	-	680688	680602	680602	
A-3 inserting tool	-	-	680601	680421	680422	-	-	680602	
Maximum allowable size drill or shell cutter - see section 2 for part numbers	AWWA I.P.	11/16"	11/16"	7/8"	1-7/16"	1-3/4"*	11/16"	11/16"	7/8"
	CC (AWWA taper)	11/16"	11/16"	15/16"	1-7/16"	1-15/16"*	11/16"	11/16"	15/16"
Mega-Cut™/E-5 machine adapter nipple		52019	36750	36750	501949	508199	508919	682256	682256
D-5 machine adapter nipple		37902	37903	37903	507644	507645	508917	682259	682259
Tru-Cut/PL-2 machine adapter nipple for use on 1.125	max. wall PVC	507632	507633	507633	-	-	509050	682290	682290

\*Ball and ORI-CORP<sup>®</sup> Corporation valves IP and CC inlet: 1-7/8" maximum.

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

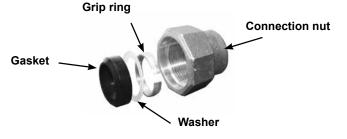
Nominal size of connection	Material*	Tubing or pipe O.D. range - inches	Tubing or pipe wall thickness range - inches	Tubing or pipe I.D. range - inches	Liner part number
2/41 070	Type "K" copper	0.872 - 0.878	0.061 - 0.069	-	-
3/4" CTS	Polyethylene	0.871 - 0.879	0.097 - 0.107	0.657 - 0.685	528704
4" 070	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	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
0" 070	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
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

Liner

### **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
1-1/2" CTS	682863	312921	538107	537883	537840
2" CTS	682864	312922	538108	538109	537841
3/4" IPS	683023	313094	313695	311869	538320
1" IPS	683024	313095	312122	313098	538321



### **Corporation Valve Wrench**

For operating up to and including 1" corporation valves.



# CORPORATION VALVES TOOLS & MISCELLANEOUS EQUIPMENT



Shaded area indicates change Rev. 4-01

#### Mueller® Drilling and Tapping Machine equipment required to install corporation valves having female I.P. thread outlet

Valve size (nominal)		1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Combined drill and tap size - see section 1 for part numbers		1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
B-101/B-100 inserting tool			680631	680632	-	-	-
A-3 inserting tool			-	680632	61212	61213	61214
Maximum allowable size drill or shell cutter - see section 2 for part numbers	AWWA I.P.	7/16"	11/16"	7/8"	1-1/8"	1-7/16"	1-3/4"*
	CC (AWWA taper)	7/16"	11/16"	15/16"	1-1/8"	1-7/16"	1-15/16"*
Mega-Cut / E-5 machine adapter nipple		36967	36920	36918	36733	503435	78907
D-5 machine adapter nipple			33556	36323	36195	36196	36188
Tru-Cut / PL-2 machine adapter nipple for use on 1.125" max wall PVC			-	-	-	-	-

### Mueller Drilling and Tapping Machine equipment required to install corporation valves having male I.P thread outlet

Valve size (nominal)		3/4"	1"	1-1/4"	1-1/2"	2"
Combined drill and tap size - see section 1 for part numbers		3/4"	1"	1-1/4"	1-1/2"	2"
B-101/B-100 inserting tool		680595	680596	-	-	-
A-3 inserting tool			680596	680597	83065	83066
Maximum allowable aize drill as shall auttor and contian 2 for part numbers	AWWA I.P.	11'16"	7/8"	1-1/8"	1-7/16"	1-3/4"*
Maximum allowable size drill or shell cutter - see section 2 for part numbers	CC (AWWA taper)	11'16"	15/16"	-	1-7/16"	1-15/16"*
Mega-Cut / E-5 machine adapter nipple		36919	36917	36928	501948	508200
D-5 machine adapter nipple			36911	36912	36913	36525
Tru-Cut / PL-2 machine adapter nipple for use on 1.125" max wall PVC			507631	-	-	-

### Mueller Drilling and Tapping Machine equipment required to install corporation valves having increase I.P. thread outlet

Valve size (nominal)		1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
Combined drill and tap size - see section 1 for part numbers		1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
B-101/B-100 inserting tool		680595	680595	680596	680597	-	-	-
A-3 inserting tool		-	-	-	680597	83065	83066	83157
Maximum allowable size drill or shell cutter - see section 2	AWWA I.P.	7/16"	9/16"	3/4"	15/16"	-	1-7/16"	1-3/4"
for part numbers	CC (AWWA taper)	7/16"	9/16"	11/16"	15/16"	1"	1-7/16"	1-15/16"
Mega-Cut / E-5 machine adapter nipple		36919	36919	36917	36928	501948	508200	-
D-5 machine adapter nipple		-	-	36911	36912	36913	36525	36526

### Mueller Drilling and Tapping Machine equipment required to install corporation valves having Mueller coupling thread outlet

Valve size (nominal)		1/2"	5/8"	3/4"	1"
Combined drill and tap size - see section 1 for part numbers		1/2"	5/8"	3/4"	1"
B-101/B-100 inserting tool		680609	680610	680611	680612
A-3 inserting tool	-	-	-	680612	
	AWWA I.P.	7/16"	9/16"	3/4"	15/16"
Maximum allowable size drill or shell cutter - see section 2 for part numbers	CC (AWWA taper)	-	-	11/16"	1"
Mega-Cut / E-5 machine adapter nipple		75493	75494	75495	75496
D-5 machine adapter nipple		-	-	61165	77375

#### Mueller Drilling and Tapping Machine equipment required to install corporation valves shown in chart heading

Valve size (nominal)		1" H-9991	1" H-9995	1" H-9992	3/4" H-15002	1" H-15002
Combined drill and tap size - see section 1 for part numbers		1"	1"	1"	3/4"	1"
B-101/B-100 inserting tool		680612	680612	680597	680603	680604
A-3 inserting tool		680612	680612	680597	-	680604
Maximum allowable size drill or shell cutter - see section 2 for part numbers	AWWA I.P.	-	-	-	11/16"	15/16"
	CC (AWWA taper)	-	-	-	11/16"	15/16"
Mega-Cut / E-5 machine adapter nipple		-	-	-	43900	43870
D-5 machine adapter nipple		-	-	-	45380	51104

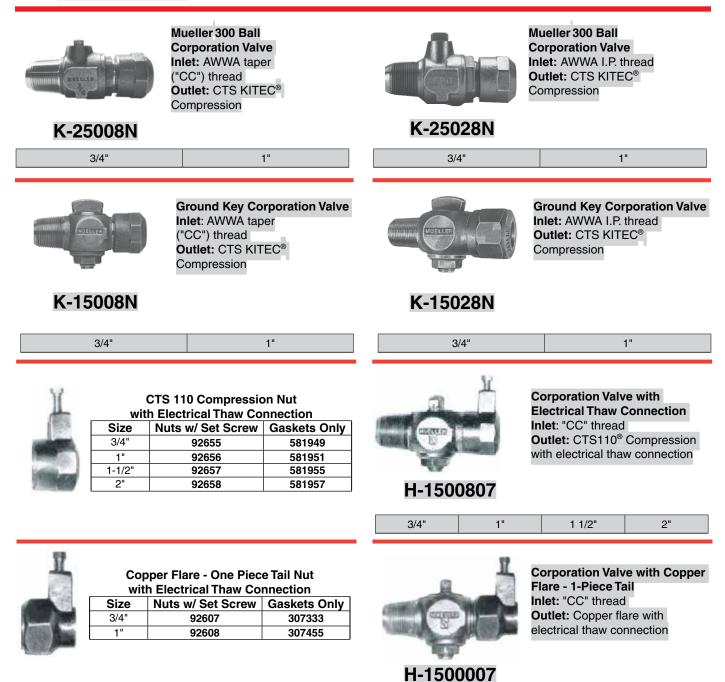
\* Ball and ORI-CORP<sup>®</sup> Corporation valves IP and CC inlet: 1-7/8" maximum.

5.18



Rev. 9-17 Shaded area indicates changes

### 3/4" TO 2" MUELLER 300<sup>™</sup> BALL CORPORATION VALVES



3/4"

1"