

# COPPER TUBE & FITTINGS

---

FOR REFRIGERATION & AIR CONDITIONING





In 1930 Mueller Brass Company invented and pioneered the now famous Streamline solder type copper fitting. This development led to making all copper plumbing the standard of the industry.

Today, Mueller manufactures and markets one of the industry's most complete line of copper products from one source. Included are wrought and cast solder-type pressure and DWV fittings. The many years of engineering know how and experience is reflected in the fine quality and workmanship of Streamline® products listed on the following pages.

<b>CONTENTS</b>			
<b>Topic</b>	<b>Page</b>	<b>Topic</b>	<b>Page</b>
<b>Accessories</b>	<b>18</b>	<b>Index</b>	<b>2</b>
<b>Connection Descriptions</b>	<b>3</b>	<b>Installation Information</b>	<b>24</b>
<b>Copper Fittings – Pressure</b>	<b>4-17</b>	<b>Pressure Data – Fittings</b>	<b>22</b>
<b>Copper Tube</b>	<b>20-21</b>	<b>Sizing Table</b>	<b>3</b>
<b>Cross Reference</b>	<b>19</b>	<b>Specifications &amp; Standards</b>	<b>23</b>
<b>Degree Table</b>	<b>3</b>	<b>Terms of Sale</b>	<b>26</b>
<b>FAQ's</b>	<b>25</b>	<b>Warranty</b>	<b>27</b>

\*All sizes shown in this catalog are OD.

**Mueller Industries is also your source for these other great products:**

- Copper Tube
- Linesets
- PVC DWV Fittings
- ABS DWV Fittings
- PVC Sch. 40 Fittings
- PVC & CPVC Sch. 80 Fittings
- CPVC CTS Fittings
- Insert Fittings
- Sewer & Drain Fittings
- Brass Fittings & Nipples
- Steel Fittings & Nipples
- Plumbing Valves
- Faucets
- Refrigeration Valves
- Refrigeration Driers

**Print Date 08/03**

Copyright Mueller Industries, INC.  
 Standard Products Division  
 8285 Tournament Drive, Suite 150  
 Memphis, TN 38125  
 Telephone: 1-800-FITTING

Description		Page
<b>ACCESSORIES</b>		
Abrasive Cleaning Pad		18
Abrasive Mesh Cloth		18
Copper Fitting Brush – Carbon Steel		18
Copper Fitting Brush – H.D. Stainless Steel		18
Copper Fitting Brush – Solid Handle		18
Copper Tube Brush		18
Insulating Tape – Non-Asbestos Cork		18
Insulation Foam Tape		18
Plumbers Sandcloth		18
Wet Proof Sandcloth		18
<b>Copper Fittings</b>		
Adapter – Female	C x F	4
Adapter – Male	C x M	4
Adapter – Fitting	FTG x F	4
Adapter – Fitting	FTG x M	5
Bushing – Flush	FTG x C	5
Bushing – Flush	FTG x F	6
Cap	C	6
Coupling – No Stop	C x C	6
Coupling – Reducing	C x C	7
Coupling – Rolled Stop	C x C	7
Coupling – Staked Stop	C x C	7
Cross – Forged Brass	C x C x C x C	8
Elbow 45°	C x C	8
Elbow 45° – Street	FTG x C	9
Elbow 45°	FTG x FTG	9
Elbow 90°	C x C	9
Elbow 90° – Street	FTG x C	10
Elbow 90°	FTG x FTG	11
Elbow 90° – Forged Brass	C x F	11
Elbow 90° – Forged Brass	C x M	11
Elbow 90° – Long Radius	C x C	10
Elbow 90° – Long Radius – Street	FTG x C	10
Elbow 90° – Long Radius	FTG x FTG	11
Fitting Reducer	FTG x C	12
Hanger – Hi-Ear	C	17
P-Trap – Suction Line	C x C	12
Plug – Fitting	FTG	13
Return Bend	C x C	13
Tee	C x C x C	14
Tee – Fitting	C x FTG x C	16
Tee – Forged Brass	C x C x F	16
Tube Strap – 2-Hole		17
Tube Strap – Perforated		17
Union	C x C	17

Description	Page
<b>COPPER TUBE</b>	
Nitrogenized® Copper Tube	20
Refrigeration Service Tube	21
Technical Data	21

CONNECTION DESCRIPTIONS		
Symbol	Name	Description
C	Copper	Female Solder. Receives copper tube diameter
FTG	Fitting	Male Solder. Fitting end is made to copper tube diameter
F	Female	ANSI Standard internal taper pipe thread (NPTI)
M	Male	ANSI Standard external taper pipe thread (NPTE)

DIMENSIONS OF WROT AND CAST FITTING ENDS								
SOLDER CUP DIMENSIONS				FITTING END DIMENSIONS				
C				FTG				
SIZE	A		B	SIZE	A		B	
	MAX	MIN	MIN		MAX	MIN	MIN	
1/8	.131	.127	.25	1/8	.126	.123	.31	
3/16	.194	.190	.31	3/16	.189	.186	.38	
1/4	.256	.252	.31	1/4	.251	.248	.38	
5/16	.319	.315	.31	5/16	.314	.311	.38	
3/8	.381	.377	.31	3/8	.376	.373	.38	
1/2	.506	.502	.38	1/2	.501	.497	.44	
5/8	.631	.627	.50	5/8	.626	.622	.56	
3/4	.756	.752	.62	3/4	.751	.747	.69	
7/8	.881	.877	.75	7/8	.876	.872	.81	
1 1/8	1.132	1.128	.91	1 1/8	1.127	1.122	.97	
1 3/8	1.382	1.378	.97	1 3/8	1.377	1.372	1.03	
1 5/8	1.633	1.628	1.09	1 5/8	1.627	1.621	1.16	
2 1/8	2.133	2.128	1.34	2 1/8	2.127	2.121	1.41	
2 5/8	2.633	2.628	1.47	2 5/8	2.627	2.621	1.53	
3 1/8	3.133	3.128	1.66	3 1/8	3.127	3.121	1.72	
3 5/8	3.633	3.628	1.91	3 5/8	3.627	3.621	1.67	
4 1/8	4.133	4.128	2.16	4 1/8	4.127	4.121	2.22	
5 1/8	5.133	5.128	2.66	5 1/8	5.127	5.121	2.72	
6 1/8	6.133	6.128	3.09	6 1/8	6.127	6.121	3.22	
8 1/8	8.133	8.128	3.97	8 1/8	8.127	8.121	4.09	

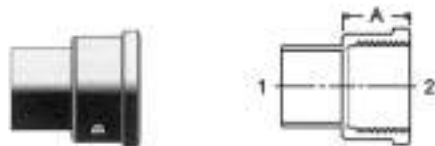
SIZING CONVERSION TABLE																		DEGREE TABLE		
Nominal Fraction	1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	7"	8"	Degree	Bend	
Nominal Decimal	.125	.25	.375	.50	.625	.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0	90°	1/4	
OD Fraction	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1 1/8"	1 3/8"	1 5/8"	2 1/8"	2 5/8"	3 1/8"	4 1/8"	5 1/8"	6 1/8"	7 1/8"	8 1/8"	60°	1/6	
OD Decimal	.25	.375	.50	.625	.75	.875	1.125	1.375	1.625	2.125	2.625	3.125	4.125	5.125	6.125	7.125	8.125	45°	1/8	
																		22-1/2°	1/16	
																			11-1/4°	1/32

\* OD = Outside Diameter / Nominal = Inside Diameter (ID)

# SOLDER JOINT PRESSURE FITTINGS ADAPTERS

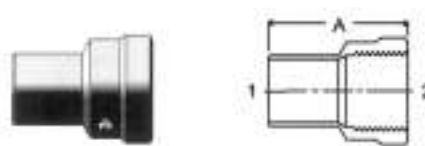


## ADAPTER – FEMALE



MUELLER STYLE <b>WC-402</b>					CONNECTION <b>C x F</b>				
ELKHART STYLE <b>103</b>					NIBCO STYLE <b>9603</b>				
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions A B C		
1/4	x 1/2		W 01204	100	300	.11	15/64		
	x 3/8		W 01205	100	700	.06	5/8		
	x 1/4		W 01206	100	900	.04	21/32		
	x 1/8		W 01207	100	1,500	.03	9/16		
3/8	x 3/8		W 01214	50	1,000	.05	21/32		
	x 1/4		W 01215	50	750	.04	5/8		
	x 1/8		W 01216	100	1,500	.03	17/32		
1/2	x 3/4		W 01223	50	300	.13	13/16		
	x 1/2		W 01224	50	500	.10	1		
	x 3/8		W 01225	50	750	.06	53/64		
	x 1/4		W 01226	50	750	.05	19/32		
5/8	x 3/4		W 01230	25	250	.15	1 3/64		
	x 1/2		W 01231	50	500	.10	27/32		
	x 3/8		W 01232	50	500	.07	49/64		
	x 1/4		W 01233	50	500	.05	1/2		
3/4	x 3/4		W 01238	50	500	.14	57/64		
	x 1/2		W 01239	50	500	.09	29/32		
7/8	x 1		W 01245	25	250	.24	1 5/32		
	x 3/4		W 01246	25	250	.14	27/32		
	x 1/2		W 01247	25	250	.11	1		
1 1/8	x 1 1/4		W 01261	10	100	.28	1 7/32		
	x 1		W 01263	25	250	.24	31/32		
	x 3/4		W 01264	25	250	.22	13/16		
	x 1/2		W 01265	20	200	.29	23/32		
1 3/8	x 1 1/2		W 01270	10	100	.52	1 13/32		
	x 1 1/4		W 01271	10	100	.43	1 7/32		
	x 1		W 01272	10	100	.33	1		
1 5/8	x 2		W 01278	-	60	.72	1 7/32		
	x 1 1/2		W 01279	10	100	.58	1 1/4		
	x 1 1/4		W 01280	5	50	.42	29/32		
2 1/8	x 2		W 01287	-	50	.74	15/16		
	x 1 1/2		W 01288	5	50	.74	1 3/16		
2 5/8	x 2 1/2		W 01296	-	25	1.19	1 3/16		
3 1/8	x 3		W 01297	-	15	1.83	1 5/16		

## ADAPTER – FITTING



MUELLER STYLE <b>WC-405</b>					CONNECTION <b>FTG x F</b>				
ELKHART STYLE <b>103-2</b>					NIBCO STYLE <b>9603-2</b>				
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions A B C		
3/8	x 3/8		W 01514	50	750	.06	1 9/32		
1/2	x 1/2		W 01524	50	350	.11	1 15/32		
	x 3/8		W 01525	50	750	.05	1 19/64		
	x 1/4		W 01526	50	750	.06	1 1/8		
5/8	x 1/2		W 01531	50	450	.11	1 1/2		
	x 3/8		W 01532	50	750	.07	1 19/64		
7/8	x 3/4		W 01546	25	250	.19	1 45/64		
	x 1/2		W 01547	50	500	.11	1 11/16		
1 1/8	x 1		W 01563	25	250	.25	2 5/64		
	x 3/4		W 01564	25	250	.17	1 49/64		
1 3/8	x 1 1/4		W 01571	10	100	.43	2 7/32		
1 5/8	x 1 1/2		W 01579	10	100	.55	2 15/32		
2 1/8	x 2		W 01587	-	50	.68	2 13/32		
2 5/8	x 2 1/2		W 01596	-	25	1.21	2 53/64		

## ADAPTER – MALE



MUELLER STYLE <b>WC-401</b>					CONNECTION <b>C x M</b>				
ELKHART STYLE <b>104</b>					NIBCO STYLE <b>9604</b>				
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions A B C		
1/4	x 3/8		W 01105	50	1000	.04	3/4		
	x 1/4		W 01106	50	1,200	.03	49/64		
	x 1/8		W 01107	100	2,400	.02	27/64		
5/16	x 1/8		W 01109*	50	800	.07	27/32		
	x 1/4		W 01110*	50	1,200	.03	5/8		
3/8	x 1/2		W 01113	50	500	.09	1		
	x 3/8		W 01114	50	1,000	.06	63/64		
	x 1/4		W 01115	50	1,200	.03	21/32		
	x 1/8		W 01116	50	1,000	.01	17/32		
1/2	x 3/4		W 01123	25	250	.17	1 7/64		
	x 1/2		W 01124	50	500	.09	13/16		
	x 3/8		W 01125	50	500	.06	21/32		
	x 1/4		W 01126	50	750	.06	7/8		
5/8	x 1		W 01129	15	150	.28	1 29/64		
	x 3/4		W 01130	25	250	.16	15/16		
	x 1/2		W 01131	50	500	.08	13/16		

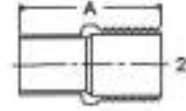
Continued on next page.

# SOLDER JOINT PRESSURE FITTINGS ADAPTERS / BUSHINGS

## ADAPTER – MALE (cont.)

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
5/8	x 3/8		W 01132	50	500	.06	41/64		
	x 1/4		W 01133	25	600	.06	3/4		
3/4	x 3/4		W 01138	25	250	.14	1 1/64		
	x 1/2		W 01139	25	500	.08	3/4		
7/8	x 1		W 01145	10	100	.29	1 5/32		
	x 3/4		W 01146	25	250	.14	1 15/32		
	x 1/2		W 01147	25	250	.13	7/8		
1 1/8	x 1 1/2		W 01161	10	100	.50	1 45/64		
	x 1 1/4		W 01162	10	100	.40	1 9/16		
	x 1		W 01163	10	100	.24	1 9/64		
	x 3/4		W 01164	10	100	.18	59/64		
	x 1/2		W 01165	25	250	.18	31/32		
1 3/8	x 1 1/2		W 01170	10	100	.51	1 21/32		
	x 1 1/4		W 01171	10	100	.41	1 9/32		
	x 1		W 01172	10	100	.35	2 1/4		
	x 3/4		W 01173	10	100	.29	31/32		
1 5/8	x 2		W 01178	–	50	.79	1 7/32		
	x 1 1/2		W 01179	10	100	.50	1 1/4		
	x 1 1/4		W 01180	10	100	.48	1 1/8		
	x 1		W 01181	10	100	.37	1 3/32		
2 1/8	x 2		W 01187	5	50	.87	1 19/64		
	x 1 1/2		W 01188	–	50	.60	1 3/32		
	x 1 1/4		W 01189	–	50	.64	1 5/32		
2 5/8	x 2 1/2		W 01196	–	20	1.22	1 21/32		
	x 2		W 01197	–	20	.98	1 1/8		
	x 1 1/2		W 01198	–	22	.97	1 7/32		
3 1/8	x 3		W 01199	–	20	1.72	1 27/64		
4 1/8	x 4		W 01150	–	16	3.50	1 29/32		

## ADAPTER – FITTING



MUELLER STYLE  
**WC-404**

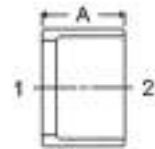
CONNECTION  
**FTG x M**

ELKHART STYLE  
**104-2**

NIBCO STYLE  
**9604-2**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
3/8	x 3/8		W 01414	50	750	.06	1 1/4		
1/2	x 3/8		W 01425	50	1000	.04	1 1/4		
5/8	x 1/2		W 01431	50	500	.09	1 3/8		
	x 3/8		W 01432	50	1000	.05	1 11/32		
7/8	x 3/4		W 01446	50	500	.15	1 59/64		
	x 1/2		W 01447	25	250	.09	1 23/32		
1 1/8	x 1		W 01463	25	250	.24	2 1/4		
	x 3/4		W 01464	25	250	.19	2 3/64		
1 3/8	x 1 1/4		W 01471	10	100	.41	2 15/32		
1 5/8	x 1 1/2		W 01479	10	100	.52	2 19/32		
2 1/8	x 2		W 01487	–	50	.86	2 49/64		
2 5/8	x 2 1/2		W 01496	–	25	1.54	3 3/8		

## BUSHING – FLUSH



MUELLER STYLE  
**WC-106**

CONNECTION  
**FTG x C**

ELKHART STYLE  
**119**

NIBCO STYLE  
**9618**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
3/8	x 1/4		W 01706	100	4,000	.01	3/8		
1/2	x 3/8		W 01712	100	4,000	.01	7/16		
	x 1/4		W 01714	100	2,400	.02	7/16		
5/8	x 1/2		W 01715	100	1,500	.02	9/16		
	x 3/8		W 01717	100	1,500	.04	9/16		
3/4	x 5/8		W 01720	50	750	.03	1 1/16		
	x 1/2		W 01721	50	750	.06	1 1/16		
	x 3/8		W 01722	50	750	.08	1 1/16		
7/8	x 3/4		W 01725	50	500	.04	1 3/16		
	x 5/8		W 01726	50	500	.08	1 3/16		
	x 1/2		W 01727	50	500	.11	1 3/16		
1 1/8	x 7/8		W 01737	25	250	.13	3 1/32		
	x 3/4		W 01738	50	500	.18	3 1/32		
	x 5/8		W 01739	25	250	.22	3 1/32		
1 3/8	x 1 1/8		W 01743	10	200	.16	1 1/32		
	x 7/8		W 01745	10	200	.30	1 1/32		

Continued on next page.

# SOLDER JOINT PRESSURE FITTINGS

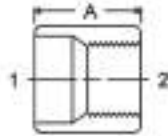
## BUSHINGS / CAPS / COUPLINGS



### BUSHING – FLUSH (cont.)

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
1 5/8	x 1 3/8		W 01750	10	100	.22	1	5/32	
	x 1 1/8		W 01751	10	100	.41	1	5/32	
2 1/8	x 1 5/8		W 01758	10	100	.68	1 13/32		
	x 1 3/8		W 01759	5	50	.95	1 13/32		
2 5/8	x 2 1/8		W 01767	–	50	.92	1 17/32		

### BUSHING – FLUSH



MUELLER STYLE  
**WC-417**

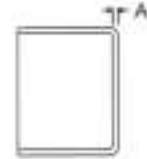
CONNECTION  
**FTG x F**

ELKHART STYLE  
**119-3**

NIBCO STYLE  
**9618-3**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
5/8	x 1/8		A 07812*	100	1,600	.04	17/32		
	x 1/4		A 07813*	50	1,200	.02	9/16		
7/8	x 3/8		A 07814*	50	450	.08	13/16		
1 1/8	x 1/2		A 07815*	50	300	.17	31/32		
1 3/8	x 3/4		A 07816*	10	160	.25	1 3/64		
1 5/8	x 1		A 07817*	10	90	.34	1 5/64		
2 1/8	x 1 1/2		A 07819*	10	90	.48	1 13/32		

### CAP



MUELLER STYLE  
**WC-415**

CONNECTION  
**C**

ELKHART STYLE  
**117**

NIBCO STYLE  
**9617**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
1/4			W 07002	50	2,000	.00	1/32		
3/8			W 07004	50	2,000	.00	3/32		
1/2			W 07006	50	1,000	.01	3/32		
5/8			W 07007	50	1,000	.02	1/32		
3/4			W 07008	50	2,000	.03	1/8		
7/8			W 07009	25	1,000	.04	3/64		
1 1/8			W 07011	10	500	.07	3/64		
1 3/8			W 07012	25	250	.11	3/64		
1 5/8			W 07013	25	250	.16	1/16		
2 1/8			W 07014	–	100	.30	1/16		
2 5/8			W 07015	–	50	.48	5/64		
3 1/8			W 07016	–	50	.73	5/64		
3 5/8			W 07017	–	25	1.15	3/32		
4 1/8			W 07018	–	20	1.52	7/64		

### COUPLING – NO STOP



MUELLER STYLE  
**WC-400NS**

CONNECTION  
**C x C**

ELKHART STYLE  
**101**

NIBCO STYLE  
**9601**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
1/4			W 01900	100	4,000	.01			
3/8			W 01901	50	2,000	.01			
1/2			W 01902	50	1,700	.02			
5/8			W 01903	100	1,000	.03			
3/4			W 01904	25	375	.04			
7/8			W 01905	50	500	.06			
1 1/8			W 01906	25	250	.11			
1 3/8			W 01907	25	250	.15			
1 5/8			W 01908	10	100	.21			
2 1/8			W 01909	–	75	.38			
2 5/8			W 01910	–	50	.68			
3 1/8			W 01911	–	25	1.06			
4 1/8			W 01913	–	15	2.05			

## COUPLING – ROLLED STOP



MUELLER STYLE  
**WC-400**

CONNECTION  
**C x C**

ELKHART STYLE  
**100-RS**

NIBCO STYLE  
**9600-RS**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/8		W 01000	100	4,000		3/64		
	3/16		W 01001	100	4,000		1/16		
	1/4		W 01003	100	4,000		1/16		
	3/8		W 01009	50	2,000	.01	1/16		
	1/2		W 01017	50	1,700	.02	1/16		
	5/8		W 01022	50	1,000	.02	1/16		
	3/4		W 01028	25	500	.04	1/16		
	7/8		W 01034	25	500	.06	1/16		
	1		W 01040	25	250	.10	1/16		
	1 1/8		W 01047	10	250	.10	1/16		
	1 3/8		W 01055	25	250	.15	1/16		
	1 1/2		W 01062	-	150	.22	1/16		
	1 5/8		W 01063	10	100	.22	1/16		
	2 1/8		W 01072	-	75	1.40	1/16		
	2 5/8		W 01082	-	50	.67	3/16		
	3 1/8		W 01092	-	25	1.05	3/16		
	3 5/8		W 10100	-	20	1.40	3/16		
	4 1/8		W 10107	-	15	2.13	3/16		

## COUPLING – STAKED STOP



MUELLER STYLE  
**WC-400S**

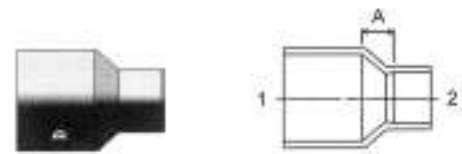
CONNECTION  
**C x C**

ELKHART STYLE  
**100**

NIBCO STYLE  
**9600-DS**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4		W 10141	100	4,000	.01	1/16		
	5/16		W 10142	100	5,600	.01	1/16		
	3/8		W 10143	50	2,000	.01	1/16		
	1/2		W 10144	50	1,700	.02	1/16		
	5/8		W 10145	100	1,000	.03	1/16		
	3/4		W 10157	25	500	.04	1/16		
	7/8		W 10146	50	500	.06	1/16		
	1 1/8		W 10147	25	250	.11	1/16		
	1 3/8		W 10148	25	250	.15	1/16		
	1 5/8		W 10149	10	100	.21	1/16		
	2 1/8		W 10150	-	75	.38	1/16		
	2 5/8		W 10151	-	50	.68	3/16		
	3 1/8		W 10152	-	25	1.02	3/16		
	3 5/8		W 10153	-	20	1.48	3/16		
	4 1/8		W 10154	-	15	2.03	3/16		
	5 1/8		W 10155	-	8	3.24	3/16		
	6 1/8		W 10156	-	3	5.58	3/16		
	8 1/8		W 10130	-	1	14.13	7/16		

## COUPLING – REDUCING



MUELLER STYLE  
**WC-400R**

CONNECTION  
**C x C**

ELKHART STYLE  
**101-R**

NIBCO STYLE  
**9600**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4 x	3/16	W 01004	50	2,000	.01	5/32		
	x	1/8	W 01005	50	2,000	.00	3/16		
	3/8 x	5/16	W 01010	50	2,000	.01	3/32		
	x	1/4	W 01011	50	2,000	.01	3/16		
	1/2 x	3/8	W 01019	50	1,700	.02	7/32		
	x	1/4	W 01021	50	1,200	.02	3/8		
	5/8 x	1/2	W 01023	50	1,000	.03	1/8		
	x	3/8	W 01025	100	1,000	.03	19/64		
	x	1/4	W 01027	100	1,000	.03	23/64		
	3/4 x	5/8	W 01029	100	600	.05	1/4		
	x	1/2	W 01030	100	600	.03	3/16		

Continued on next page.



# SOLDER JOINT PRESSURE FITTINGS


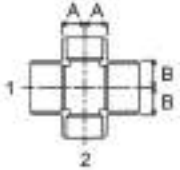
## COUPLINGS / CROSS / 45° ELBOWS





### COUPLING – REDUCING (cont.)

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
3/4	x	3/8	W 01031	100	600	.04	5/16		
7/8	x	3/4	W 01035	100	1,000	.06	13/64		
	x	5/8	W 01036	50	500	.08	19/64		
	x	1/2	W 01037	50	500	.06	13/32		
	x	3/8	W 01038	50	500	.06	3/8		
1 1/8	x	7/8	W 01049	25	250	.13	11/32		
	x	3/4	W 01050	25	250	.10	23/64		
	x	5/8	W 01051	25	250	.11	13/32		
	x	1/2	W 01052	25	250	.10	15/32		
1 3/8	x	1 1/8	W 01056	10	100	.18	9/32		
	x	7/8	W 01058	10	100	.17	13/32		
	x	5/8	W 01060	10	100	.15	17/32		
1 5/8	x	1 3/8	W 01064	10	100	.24	5/16		
	x	1 1/8	W 01065	10	100	.24	15/32		
	x	7/8	W 01067	10	100	.22	19/32		
	x	5/8	W 01069	10	100	.23	25/32		
2 1/8	x	1 5/8	W 01073	–	100	.39	15/32		
	x	1 3/8	W 01074	–	100	.41	35/64		
	x	1 1/8	W 01075	–	100	.38	13/16		
	x	7/8	W 01077	–	100	.39	29/32		
	x	5/8	W 01079	–	75	.40	1 3/32		
2 5/8	x	2 1/8	W 01083	–	50	.68	19/32		
	x	1 5/8	W 01084	–	50	.72	7/8		
	x	1 3/8	W 01085	–	50	.77	1		
	x	1 1/8	W 01086	–	50	.78	1 3/16		
3 1/8	x	2 5/8	W 01093	–	25	1.00	1/2		
	x	2 1/8	W 01094	–	25	1.02	15/16		
	x	1 5/8	W 01095	–	25	1.12	1 1/4		
3 5/8	x	3 1/8	W 10101	–	25	1.49	29/64		
4 1/8	x	3 5/8	W 10108	–	20	1.94	5/8		
	x	3 1/8	W 10109	–	20	1.91	29/32		
	x	2 5/8	W 10110	–	15	1.99	1 7/16		
	x	2 1/8	W 10111	–	20	2.00	1 5/8		

### CROSS – FORGED BRASS

									
MUELLER STYLE <b>WT-603</b>				CONNECTION <b>C x C x C x C</b>					
ELKHART STYLE <b>N/A</b>				NIBCO STYLE <b>N/A</b>					
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4		A 01409*	25	1,000	.05	1/4	1/4	

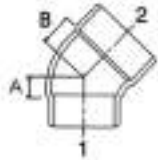
### ELBOW 45°

									
MUELLER STYLE <b>WE-504</b>				CONNECTION <b>C x C</b>					
ELKHART STYLE <b>106</b>				NIBCO STYLE <b>9606</b>					
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4		W 03005	50	2,000	.01	3/16		
	3/8		W 03012	50	2,800	.01	3/16		
	1/2		W 03021	50	850	.02	13/64		
	5/8		W 03026	50	500	.04	17/64		
	3/4		W 03030	50	500	.06	5/16		
	7/8		W 03034	25	250	.10	23/64		
	1 1/8		W 03044	10	200	.18	15/32		
	1 3/8		W 03050	10	100	.21	7/16		
	1 5/8		W 03055	10	100	.30	1/2		
	2 1/8		W 03059	10	50	.55	5/8		
	2 5/8		W 03063	5	25	1.41	29/32		
	3 1/8		W 03067	2	20	1.87	29/32		
	3 5/8		W 03070	2	10	3.35	1 9/64		
	4 1/8		W 03073	–	5	4.68	1 3/16		

# SOLDER JOINT PRESSURE FITTINGS

## 45° ELBOWS / 90° ELBOWS

### ELBOW 45° – STREET



MUELLER STYLE  
**WE-505**

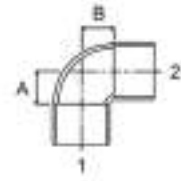
CONNECTION  
**FTG x C**

ELKHART STYLE  
**106-2**

NIBCO STYLE  
**9606-2**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	3/8		W 03312	100	3,400	.01	9/16	3/16	
	1/2		W 03321	100	1,500	.02	21/32	13/64	
	5/8		W 03326	50	500	.04	13/16	17/64	
	3/4		W 03330	50	500	.06	1	5/16	
	7/8		W 03334	25	250	.10	1 1/16	23/64	
	1 1/8		W 03344	25	250	.17	1 7/16	15/32	
	1 3/8		W 03350	10	100	.31	1 13/16	25/32	
	1 5/8		W 03355	10	100	.43	2 5/64	15/16	
	2 1/8		W 03359	5	50	.86	2 3/32	5/8	
	2 5/8		W 03363	2	20	1.43	3 2/16	29/32	
	3 1/8		W 03368	2	10	1.92	2 17/32	29/32	
	4 1/8		W 03373	-	5	4.62	4 5/32	1 15/16	

### ELBOW 90° – SHORT RADIUS



MUELLER STYLE  
**WE-500**

CONNECTION  
**C x C**

ELKHART STYLE  
**107-C**

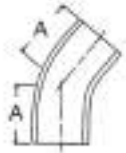
NIBCO STYLE  
**9607-1**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4		W 02003	50	2,000	.01	3/8	3/8	
	3/8		W 02009	50	1,700	.02	3/8	3/8	
	1/2		W 02017	50	1,000	.03	1/2	1/2	
	5/8		W 02022	100	1,000	.05	19/32	19/32	
	3/4		W 02028	50	500	.10	7/8	7/8	
	7/8		W 02034	50	500	.11	53/64	53/64	
	1		W 02040	20	200	.22	1 1/8	1 1/8	
	1 1/8		W 02047	25	250	.20	1 5/64	1 5/64	
	1 3/8		W 02084	10	100	.31	1 3/32	1 3/32	
	1 5/8		W 02085	10	100	.43	1 7/32	1 7/32	
	2 1/8		W 02086	10	50	.86	1 9/16	1 9/16	
	2 5/8		W 02087	5	25	1.40	1 13/16	1 13/16	
	3 1/8		W 02088	5	25	1.99	2 1/16	2 1/16	
	3 5/8		W 02089	2	10	2.74	2 13/32	2 13/32	
	4 1/8		W 02090	2	10	3.80	2 23/32	2 23/32	
	6 1/8		W 02097	-	1	11.73	4 13/64	4 13/64	

#### REDUCING

3/8 x 1/4	W 02011	50	750	.02	7/16	11/32
1/2 x 3/8	W 02019	50	750	.03	9/16	7/16
5/8 x 1/2	W 02023	50	500	.04	5/8	1/2
x 3/8	W 02025	50	500	.05	21/32	7/16
3/4 x 5/8	W 02029	50	500	.08	11/16	19/32
x 1/2	W 02030	50	500	.07	13/16	1/2
7/8 x 3/4	W 02035	50	500	.11	29/32	7/8
x 5/8	W 02036	50	500	.10	59/64	21/32
x 1/2	W 02037	50	500	.10	15/16	5/8
1 1/8 x 7/8	W 02049	25	250	.17	1	7/8
x 3/4	W 02050	25	250	.16	1	7/8
x 5/8	W 02051	25	250	.18	1 3/16	3/4
x 1/2	W 02052	25	150	.20	1 11/32	21/32
1 3/8 x 1 1/8	W 02056	20	200	.31	1 7/16	1 1/8
1 5/8 x 1 3/8	W 02077	5	100	.33	1 9/64	55/64
2 1/8 x 1 5/8	W 02078	5	50	.60	1 9/16	1 13/64

### ELBOW 45°



MUELLER STYLE  
**WE-507**

CONNECTION  
**FTG x FTG**

ELKHART STYLE  
**106-2-2**

NIBCO STYLE  
**9606-2-2**

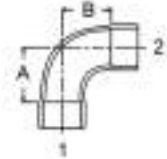
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/2		W 03621	50	1,700	.02	21/32		
	5/8		W 03626	50	750	.04	13/16		
	7/8		W 03634	25	250	.10	1 11/64		
	1 1/8		W 03644	10	100	.17	1 7/16		

# SOLDER JOINT PRESSURE FITTINGS

## 90° ELBOWS



### ELBOW 90° – LONG RADIUS

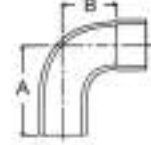


MUELLER STYLE <b>WE-500L</b>					CONNECTION <b>C x C</b>				
ELKHART STYLE <b>107-L</b>					NIBCO STYLE <b>9607-LT</b>				
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions A B C		
	3/16		W 02701	50	1,000	.01	5/16	5/16	
	1/4		W 02715	50	2,000	.01	1/2	1/2	
	5/16		W 02710	50	1,700	.01	9/16	9/16	
	3/8		W 02716	50	1,700	.02	3/4	3/4	
	1/2		W 02717	50	500	.04	3/4	3/4	
	5/8		W 02722	50	500	.06	7/8	7/8	
	3/4		W 02728	50	500	.11	1 1/8	1 1/8	
	7/8		W 02734	25	250	.15	1 3/16	1 3/16	
	1 1/8		W 02747	10	100	.26	1 1/2	1 1/2	
	1 1/4		W 02054	50	50	.33	1 7/8	1 7/8	
	1 3/8		W 02055	10	100	.44	1 7/8	1 7/8	
	1 5/8		W 02063	5	50	.61	2 1/4	2 1/4	
	2 1/8		W 02072	5	25	1.19	2 7/8	2 7/8	
	2 5/8		W 02082	5	25	2.06	3 21/32	3 21/32	
	3 1/8		W 02092	2	10	3.05	4 5/8	4 5/8	
	3 5/8		W 02093	1	5	4.95	4 29/32	4 29/32	
	4 1/8		W 02095	-	1	7.75	5 7/8	5 7/8	

#### REDUCING

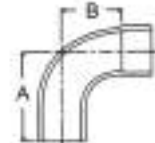
3/8 x 1/4	W 02711	50	2,000	.01	19/32	15/32	
1/2 x 3/8	W 02719	50	1,000	.03	41/64	39/64	
5/8 x 1/2	W 02723	50	1,000	.06	3/4	11/16	
x 3/8	W 02725	50	1,000	.03	11/16	5/8	
7/8 x 3/8	W 02735	25	250	.13	1 5/32	1 1/16	
x 5/8	W 02736	50	500	.10	1 7/8	1 7/8	
1 1/8 x 7/8	W 02749	10	200	.20	1 1/4	1 9/64	
x 5/8	W 02751	25	250	.12	1 1/8	7/8	
1 3/8 x 1 1/8	W 02756	10	100	.33	1 5/8	1 15/32	
x 7/8	W 02758	10	100	.35	1 63/64	1 3/8	
x 5/8	W 02760	10	100	.40	2 5/32	1 3/8	
1 5/8 x 1 3/8	W 02064	5	50	.44	1 59/64	1 7/8	
x 1 1/8	W 02065	5	50	.52	2 1/8	1 5/8	
x 7/8	W 02067	5	50	.51	2 3/64	1 3/8	
2 1/8 x 1 5/8	W 02073	2	20	.89	2 7/16	2 11/64	
x 1 3/8	W 02074	2	20	.95	2 1/2	2 1/8	
x 1 1/8	W 02075	2	20	.97	2 1/2	2 3/32	
2 5/8 x 2 1/8	W 02083	2	20	1.15	2 31/32	2 31/32	

### ELBOW 90° – SHORT RADIUS STREET



MUELLER STYLE <b>WE-503</b>					CONNECTION <b>FTG x C</b>				
ELKHART STYLE <b>107-C-2</b>					NIBCO STYLE <b>9607-2</b>				
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions A B C		
	1/4		W 02305	50	2,000	.01	3/4	3/8	
	3/8		W 02312	50	1,700	.02	3/4	3/8	
	1/2		W 02321	50	750	.03	15/16	1/2	
	5/8		W 02326	50	500	.05	1 5/32	19/32	
	3/4		W 02330	25	250	.10	1 7/16	7/8	
	7/8		W 02334	25	250	.11	1 5/8	13/16	
	1 1/8		W 02344	25	250	.21	2 1/32	1 1/16	
	1 3/8		W 02384	25	125	.31	2 5/64	1 1/16	
	1 5/8		W 02385	10	100	.43	2 3/8	1 7/32	
	2 1/8		W 02386	10	50	.86	2 25/32	1 3/8	
	2 5/8		W 02387	5	25	1.36	3 11/32	1 13/16	
	3 1/8		W 02388	2	20	1.99	3 25/32	2 1/16	
	3 5/8		W 02389	1	10	2.83	4 3/8	2 23/64	
	4 1/8		W 02390	2	10	3.89	4 15/16	2 23/64	

### ELBOW 90° – LONG RADIUS STREET

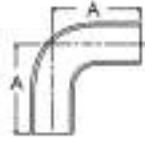


MUELLER STYLE <b>WE-503L</b>					CONNECTION <b>FTG x C</b>				
ELKHART STYLE <b>107-L-2</b>					NIBCO STYLE <b>9607-2-LT</b>				
1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions A B C		
	3/8		W 02809	50	1,700	.03	1 1/8	3/4	
	1/2		W 02817	50	500	.04	1 3/16	3/4	
	5/8		W 02822	50	500	.07	1 3/8	7/8	
	3/4		W 02828	25	250	.11	1 11/16	1 1/8	
	7/8		W 02834	25	250	.15	2	1 3/16	
	1 1/8		W 02847	10	100	.27	2 15/32	1 1/2	
	1 3/8		W 02350	10	100	.42	2 29/32	1 7/8	
	1 5/8		W 02355	5	50	.60	3 7/16	2 1/4	
	2 1/8		W 02359	5	25	1.21	4 9/32	2 7/8	
	2 5/8		W 02363	5	25	2.08	5 5/32	3 21/32	
	3 1/8		W 02368	2	10	3.10	6 9/32	4 5/8	
	3 5/8		W 02393	1	5	5.52	7 7/32	5 1/4	
	4 1/8		W 02395	-	1	7.50	8 3/32	5 7/8	

# SOLDER JOINT PRESSURE FITTINGS

## 90° ELBOWS

### ELBOW 90° – SHORT RADIUS



MUELLER STYLE  
**WE-506**

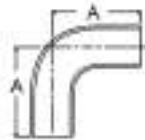
CONNECTION  
**FTG x FTG**

ELKHART STYLE  
**105-C**

NIBCO STYLE  
**9607-2-2**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	3/8		W 02612	50	2,800	.02	3/4		
	1/2		W 02621	50	750	.04	15/16		
	5/8		W 02626	50	500	.05	1 5/32		
	7/8		W 02634	25	250	.11	1 5/8		
	1 1/8		W 02644	10	100	.21	2 1/32		
	1 3/8		W 02684	10	100	.29	2 5/64		
	1 5/8		W 02685	5	50	.44	2 3/8		
	2 1/8		W 02686	1	10	.86	2 31/32		
	2 5/8		W 02687	1	10	1.38	3 21/64		
	3 1/8		W 02688	1	10	2.07	3 25/32		
	3 5/8		W 02689	1	10	2.63	4 11/32		
	4 1/8		W 02690	1	5	3.88	4 7/8		

### ELBOW 90° – LONG RADIUS



MUELLER STYLE  
**WE-506L**

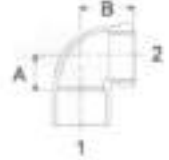
CONNECTION  
**FTG x FTG**

ELKHART STYLE  
**105-L**

NIBCO STYLE  
**607-2-2-LT**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1 3/8		W 02650	5	50	.41	2 29/32		
	1 5/8		W 02655	5	50	.62	3 7/16		
	2 1/8		W 02659	1	10	1.19	4 23/64		

### ELBOW 90° – FORGED BRASS



MUELLER STYLE  
**WE-502**

CONNECTION  
**C x F**

ELKHART STYLE  
**N/A**

NIBCO STYLE  
**N/A**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4	x 1/4	W 02206*	50	450	.10	1/2	3/4	
		x 1/8	W 02207*	50	800	.07	7/16	25/32	
	3/8	x 3/8	W 02214*	50	600	.10	9/16	45/64	
		x 1/4	W 02215*	50	600	.09	1/2	3/4	
		x 1/8	W 02216*	50	700	.08	1/4	29/32	
	1/2	x 1/2	W 02224*	–	225	.24	21/32	59/64	
		x 3/8	W 02225*	25	300	.11	1/2	45/64	
		x 1/4	W 02226*	25	350	.10	7/16	3/4	
	5/8	x 3/4	W 02230*	10	150	.29	21/32	1	
		x 1/2	W 02231*	10	240	.25	1/2	15/16	
		x 3/8	W 02232*	10	240	.17	37/64	25/32	
	3/4	x 3/4	W 02238*	10	150	.28	21/32	1 3/64	
		x 1/2	W 02239*	10	140	.26	21/32	1 1/32	
	7/8	x 3/4	W 02246*	10	150	.28	21/32	1 3/64	
		x 1/2	W 02247*	10	150	.23	33/64	1 3/32	
	1 1/8	x 3/4	W 02264*	10	90	.44	23/32	1 7/32	

### ELBOW 90° – FORGED BRASS



MUELLER STYLE  
**WE-501**

CONNECTION  
**C x M**

ELKHART STYLE  
**N/A**

NIBCO STYLE  
**N/A**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4	x 3/8	W 02105*	50	450	.11	1	29/64	
		x 1/4	W 02106*	50	700	.07	7/8	3/8	
		x 1/8	W 02107*	50	1,200	.04	3/4	1/8	
	3/8	x 1/2	W 02113*	25	350	.16	1 1/4	15/32	
		x 3/8	W 02114*	50	450	.10	1	29/64	
		x 1/4	W 02115*	50	800	.06	7/8	1/4	
		x 1/8	W 02116*	50	800	.06	3/4	19/64	
	1/2	x 3/4	W 02123*	10	140	.22	1 1/2	9/16	
		x 1/2	W 02124*	25	300	.13	1 1/4	5/16	
		x 3/8	W 02125*	25	400	.10	1	5/16	
		x 1/4	W 02126*	25	400	.09	1	1/4	
	5/8	x 3/4	W 02130*	10	160	.22	1 1/2	9/16	
		x 1/2	W 02131*	10	240	.17	1 1/4	17/32	

Continued on next page.

# SOLDER JOINT PRESSURE FITTINGS

## 90° ELBOWS / FITTING REDUCERS / HANGERS / P-TRAPS



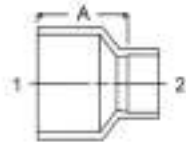
### ELBOW 90° – FORGED BRASS (cont.)

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	5/8 x	3/8	W 02132*	10	240	.16	1 1/8	7/16	
	3/4 x	1	W 02137*	10	140	.90	1 11/16	15/32	
	x	3/4	W 02138*	10	210	.22	1 1/2	15/32	
	7/8 x	3/4	W 02146*	10	150	.31	1 1/2	9/16	
	x	1/2	W 02147*	15	180	.24	1 13/32	33/64	
	x	3/8	W 02148*	10	120	.24	1 13/64	33/64	
	1 1/8 x	1	W 02163*	10	90	.45	2 13/32	23/32	
	x	3/4	W 02164*	10	120	.44	1 17/32	23/32	

### FITTING REDUCER (cont.)

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	3 1/8 x	1 5/8	W 01378	–	50	1.03	2 21/32		
	x	1 3/8	W 01379	–	50	1.12	3		
	3 5/8 x	3 1/8	W 01381	–	20	1.32	2 11/32		
	x	2 5/8	W 01382	–	20	1.37	1 39/64		
	x	2 1/8	W 01383	–	20	1.49	3 3/32		
	4 1/8 x	3 5/8	W 01386	–	20	1.76	2 1/2		
	x	3 1/8	W 01387	–	15	1.84	2 31/32		
	x	2 5/8	W 01388	–	15	2.03	3 35/64		
	x	2 1/8	W 01389	–	15	2.09	3 21/32		

### FITTING REDUCER



MUELLER STYLE  
**WC-403**

CONNECTION  
**FTG x C**

ELKHART STYLE  
**118**

NIBCO STYLE  
**9600-2**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4 x	1/8	W 01302	50	2,000	.01	1 7/32		
	3/8 x	1/4	W 01306	50	2,000	.02	3/8		
	1/2 x	3/8	W 01312	50	2,000	.02	5/8		
	x	1/4	W 01314	50	2,800	.01	1 19/32		
	5/8 x	1/2	W 01315	50	750	.03	3/4		
	x	3/8	W 01317	50	1,700	.03	2 25/32		
	3/4 x	5/8	W 01320	100	1,000	.03	7/8		
	x	1/2	W 01321	100	900	.04	2 29/32		
	x	3/8	W 01322	100	900	.03	7/8		
	7/8 x	3/4	W 01325	50	500	.08	3 31/32		
	x	5/8	W 01326	25	500	.06	6 1/64		
	x	1/2	W 01327	50	500	.05	1 1/8		
	1 1/8 x	7/8	W 01337	25	250	.11	1 7/64		
	x	3/4	W 01338	25	250	.09	1 1/4		
	x	5/8	W 01339	25	250	.10	1 11/32		
	x	1/2	W 01340	20	200	.08	1 3/8		
	1 3/8 x	1 1/8	W 01343	10	100	.17	1 7/32		
	x	7/8	W 01345	10	100	.15	1 11/32		
	x	5/8	W 01347	10	100	.14	1 1/2		
	1 5/8 x	1 3/8	W 01350	10	100	.21	1 13/32		
	x	1 1/8	W 01351	10	100	.22	1 17/32		
	x	7/8	W 01353	10	100	.21	1 11/16		
	x	5/8	W 01355	10	100	.21	1 3/4		
	2 1/8 x	1 5/8	W 01358	–	100	.39	2 127/32		
	x	1 3/8	W 01359	–	100	.38	2 1/32		
	x	1 1/8	W 01360	–	100	.40	2 1/8		
	x	7/8	W 01362	–	100	.39	2 3/16		
	x	5/8	W 01364	–	100	.44	2 5/8		
	2 5/8 x	2 1/8	W 01367	–	50	.63	2 1/32		
	x	1 5/8	W 01368	–	50	.58	2 7/32		
	x	1 3/8	W 01369	–	50	.65	2 15/32		
	x	1 1/8	W 01370	–	50	.73	2 7/8		
	3 1/8 x	2 5/8	W 01376	–	25	.93	2 1/32		
	x	2 1/8	W 01377	–	25	.96	2 1/2		

### P-TRAPS – SUCTION LINE



MUELLER STYLE  
**WE-554P**

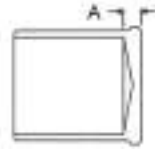
CONNECTION  
**C x C**

ELKHART STYLE  
**123**

NIBCO STYLE  
**9698**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	5/8		W 60999	10	50	.39	6.00	5.55	1.50
	3/4		W 61008	10	50	.52	6.00	6.13	1.50
	7/8		W 61000	5	25	.60	6.00	6.13	1.50
	1 1/8		W 61001	3	15	.86	5.73	6.13	1.50
	1 3/8		W 61002	4	20	1.19	6.56	5.28	1.88
	1 5/8		W 61003	4	4	2.27	8.66	7.90	2.50
	2 1/8		W 61009	1	3	3.80	9.90	8.66	3.00

### PLUG – FITTING



MUELLER STYLE  
**WC-416**

CONNECTION  
**FTG**

ELKHART STYLE  
**116**

NIBCO STYLE  
**9616**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4		A 01402*	50	500	.01	1/8		
	3/8		A 01422*	100	4,000	.01	1/8		
	1/2		A 01392*	50	2,000	.02	1/8		
	5/8		A 01504*	50	1,200	.03	1/8		
	3/4		A 02273*	10	560	.05	1/8		
	7/8		A 01529*	50	600	.07	1/8		
	1 1/8		A 01556*	25	375	.12	1/8		
	1 3/8		A 01590*	15	180	.20	1/8		
	1 5/8		A 01628*	10	120	.28	1/8		

### RETURN BEND



MUELLER STYLE  
**WE-512**

CONNECTION  
**C x C**

ELKHART STYLE  
**138**

NIBCO STYLE  
**9638**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions			
							A	B	C	
	3/8	x 4	1/2	W 06025	25	150	.09	4	1/2	2 7/16
		x 1	1/2	W 06020	25	850	.03	1	1/2	15 1/16
	1/2	x 6		W 06048	–	100	.19	6		3 1/4
		x 4		W 06045	–	200	.13	4		2 5/16
		x 3		W 06041	25	225	.10	3		1 3/4
		x 2		W 06036	50	300	.07	2		1 1/4
		x 1	29/32	W 06035	50	300	.07	29/32		113/64
		x 1	1/2	W 06032	50	500	.06	1		1
	5/8	x 6		W 06069	5	30	.30	6		3 5/16
		x 3	3/8	W 06062	10	120	.18	3	3/8	2
		x 3		W 06060	25	150	.16	3		113/16
		x 2	1/2	W 06058	25	250	.13	2	1/2	1 9/16
		x 2	1/4	W 06056	25	250	.13	2	1/4	1 1/2
		x 1	7/8	W 06053	25	250	.11	1	7/8	1 1/4
		x 1	9/16	W 06051	25	250	.10	1	9/16	1 3/32
	3/4	x 4		W 06084	–	120	.23	4		1 7/8
		x 3	3/8	W 06081	10	90	.23	3	3/8	2 1/16
		x 2	1/2	W 06077	10	100	.18	2	1/2	1 5/8
		x 2	1/8	W 06074	10	100	.16	2	1/8	1 7/16
		x 2		W 06073	10	100	.16	2		1 3/8
	7/8	x 12		W 06099	15	15	.88	12		6 7/16
		x 3	3/8	W 06095	10	100	.30	3	3/8	2 1/8
		x 2	1/2	W 06092	10	100	.23	2	1/2	1 11/16
	1 1/8	x 3	1/4	W 60111	5	50	.52	3	1/4	2 3/16
		x 3		W 60110	5	50	.48	3		2 1/16
	1 3/8	x 3	3/4	W 60121	5	50	.68	3	3/4	2 9/16
	1 5/8	x 4	1/2	W 60131	–	25	.96	4	1/2	3 1/6
	2 1/8	x 5	1/2	W 60140	–	15	1.92	5	1/2	3 13/16







# SOLDER JOINT PRESSURE FITTINGS

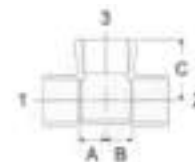
## TEES



### TEE (cont.)

1	Size		3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions				
	2							A	B	C		
4 1/8	x	2 1/8	x	4 1/8	W 40216	1	5	8.75	2 1/8	2 11/64	2 13/64	
		x	1 5/8	x	4 1/8	W 40215	1	5	8.51	2 1/8	4 27/64	2 13/64
		x	1 3/8	x	4 1/8	W 40214	1	5	8.57	2 1/8	4 35/64	2 3/16
		x	1 1/8	x	4 1/8	W 40213	1	5	9.33	2 1/8	4 43/64	2 13/64
6 1/8	x	6 1/8	x	3 1/8	W 40503	-	1	10.61	1 3/4	1 3/4	3 47/64	
		x	2 5/8	W 40504	-	1	10.67	1 3/4	1 3/4	4 51/64		
		x	2 1/8	W 40505	-	1	10.87	1 3/4	1 3/4	4 59/64		

### TEE – FORGED BRASS



MUELLER STYLE  
**WT-602**

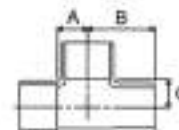
CONNECTION  
**C x C x F**

ELKHART STYLE  
**N/A**

NIBCO STYLE  
**N/A**

1	Size		3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions			
	2							A	B	C	
1/4	x	1/4	x	1/4	W 04208*	50	450	.09	7/16	9/16	
			x	1/8	W 04209*	50	1,200	.04	1/4	27/64	
3/8	x	3/8	x	3/8	W 04228*	25	350	.15	9/16	2 1/32	
			x	1/4	W 04229*	25	400	.10	7/16	5/8	
			x	1/8	W 04230*	10	400	.11	7/16	9/16	
1/2	x	1/2	x	3/8	W 04259*	10	240	.15	1 1/16	23/32	
5/8	x	5/8	x	1/2	W 04283*	10	150	.33	47/16	1 3/32	

### TEE – FITTING



MUELLER STYLE  
**WT-600F**

CONNECTION  
**C x FTG x C**

ELKHART STYLE  
**111-2**

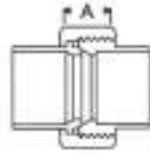
NIBCO STYLE  
**9611-2**

1	Size		3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
	2							A	B	C
5/8				W 04106	50	300	.11	2 1/64	1 19/64	2 1/64
7/8				W 04131	25	150	.23	1 5/32	1 25/32	2 9/64

# SOLDER JOINT PRESSURE FITTINGS

## UNIONS / COPPER TUBE STRAPS

### UNION



MUELLER STYLE  
**WC-407**

CONNECTION  
**C x C**

ELKHART STYLE  
**4733**

NIBCO STYLE  
**9633**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	3/8		W 08001	25	250	.12	19/32		
	1/2		W 08002	25	250	.11	7/16		
	5/8		W 08003	25	250	.17	15/32		
	7/8		W 08004	25	150	.37	5/8		
	1 1/8		W 08005	10	100	.51	29/64		
	1 3/8		A 11205*	-	25	.76	1/2		
	1 5/8		A 11206*	-	25	1.04	23/32		
	2 1/8		A 11207*	-	25	1.77	1/2		
	2 5/8		A 11216*	-	20	3.25	1		
	3 1/8		A 11217*	-	15	4.75	1 5/32		

### COPPER TUBE STRAP – 2-HOLE



MUELLER STYLE  
**WS-1100**

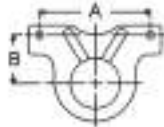
CONNECTION

ELKHART STYLE  
**120**

NIBCO STYLE  
**9624**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	1/4		A 01203	100	4,000	.01			
	3/8		A 01278	100	5,600	.01			
	1/2		A 01366	100	3,400	.01			
	5/8		A 02529	100	1,500	.01			
	3/4		A 01467	100	2,000	.01			
	7/8		A 02574	50	750	.01			
	1 1/8		A 02614	50	750	.02			
	1 3/8		A 02650	50	500	.04			
	1 5/8		A 02675	50	500	.05			
	2 1/8		A 02708	50	500	.06			

### HANGER – HI-EAR



MUELLER STYLE  
**W-124**

CONNECTION  
**C**

ELKHART STYLE  
**124**

NIBCO STYLE  
**N/A**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	5/8		A 03167	100	1,000	.03	1 5/8	47/64	
	7/8		A 03168	25	500	.04	1 5/8	7/8	
	1 1/8		A 03171	25	250	.04	1 1/8	1	

### COPPER TUBE STRAP – PERFORATED



MUELLER STYLE  
**WS-1101**

CONNECTION

ELKHART STYLE  
**125**

NIBCO STYLE  
**9623**

1	Size 2	3	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.	Dimensions		
							A	B	C
	25 Ft. Roll		A 01211	1	10	1.63	.75		

## ABRASIVE CLEANING PAD

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
4 x 6	A 01210	1	14	.32

## ABRASIVE MESH CLOTH

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
5 Yd. Roll	A 01215	1	50	.04
10 Yd. Roll	P 35187	1	50	.15
25 Yd. Roll	P 35188	1	20	.37

## COPPER FITTING BRUSH—CARBON STEEL



SOLID HANDLE

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
1/4	P 35166	1	100	.04
3/8	P 35167	1	100	.08
1/2	P 35168	1	100	.08
5/8	P 35169	1	100	.10
7/8	P 35170	1	100	.10
1 1/8	P 35171	1	100	.10
1 3/8	P 35172	1	50	.10
1 5/8	P 35173	1	50	.12
2 1/8	P 35174	1	50	.12

## COPPER FITTING BRUSH—HEAVY DUTY STAINLESS STEEL



SOLID HANDLE

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
5/8	P 35175	1	100	.12
7/8	P 35176	1	100	.14

## COPPER FITTING BRUSH—STAINLESS STEEL



SOLID HANDLE

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.
1/4	P 35249	12		.04
3/8	P 35250	12		.08
1/2	P 35251	12		.08
5/8	P 35252	12		.08
3/4	P 35253	12		.08
7/8	P 35254	12		.08
1	P 35255	12		.10
1 1/8	P 35256	12		.10
1 3/8	P 35257	6		.12
1 1/2	P 35258	6		.12
1 5/8	P 35259	6		.12
2 1/8	P 35260	6		.12
2 3/8	P 35261	6		.12
2 5/8	P 35262	6		.12

## COPPER TUBE BRUSH



Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
1/4	P 35199	6	120	.04
3/8	P 35200	6	120	.04
5/8	P 35201	6	120	.04
7/8	P 35202	6	120	.08

## INSULATING TAPE—NON-ASBESTOS CORK

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.
1/8 x 2 x 30 Ft. Roll	A 01208	1	12	2.75

## INSULATION FOAM TAPE

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt.
1/8 x 2 x 30 Ft. Roll	A 01209	1	12	.75

## PLUMBERS SANDCLOTH

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
2 Yd. Roll	P 35189			.02
5 Yd. Roll	P 35190	1	50	.06
10 Yd. Roll	A 03382	1	24	.45
25 Yd. Roll	A 03343	1	12	.94

## WET PROOF SANDCLOTH

Size	Part Number	Box Qty.	Master Qty.	Approx. Net. Wt
5 Yd. Roll	P 35191	1	50	.06
10 Yd. Roll	P 35192	1	50	.15
25 Yd. Roll	P 35193	1	20	.37

Description	Connection	Mueller	Elkhart	Nibco	Page
Adapter – Female	C x F	WC-402	103	9603	4
Adapter – Male	C x M	WC-401	104	9604	4
Adapter – Fitting	FTG x F	WC-405	103-2	9603-2	4
Adapter – Fitting	FTG x M	WC-404	104-2	9604-2	5
Bushing – Flush	FTG x C	WC-106	119	9618	5
Bushing – Flush	FTG x F	WC-417	119-3	9618-3	6
Cap	C	WC-415	117	9617	6
Coupling – No Stop	C x C	WC-400NS	101	9601	6
Coupling – Reducing	C x C	WC-400R	101-R	9600	7
Coupling – Rolled Stop	C x C	WC-400	100-RS	9600-RS	7
Coupling – Staked Stop	C x C	WC-400S	100	9600-DS	7
Cross – Forged Brass	C x C x C x C	WT-603	N/A	N/A	8
Elbow 45°	C x C	WE-504	106	9606	8
Elbow 45° – Street	FTG x C	WE-505	106-2	9606-2	9
Elbow 45°	FTG x FTG	WE-507	106-2-2	9606-2-2	9
Elbow 90°	C x C	WE-500	107-C	9607-1	9
Elbow 90° – Street	FTG x C	WE-503	107-C-2	9607-2	10
Elbow 90°	FTG x FTG	WE-506	105-C	9607-2-2	11
Elbow 90° – Forged Brass	C x F	WE-502	N/A	N/A	11
Elbow 90° – Forged Brass	C x M	WE-501	N/A	N/A	11
Elbow 90° – Long Radius	C x C	WE-500L	107-L	9607-LT	10
Elbow 90° – Long Radius – Street	FTG x C	WE-503L	107-L-2	9607-2-LT	10
Elbow 90° – Long Radius	FTG x FTG	WE-506L	105-L	9607-2-2-LT	11
Fitting Reducer	FTG x C	WC-403	118	9600-2	12
Hanger – Hi-Ear	C	W-124	124	N/A	17
P-Trap – Suction Line	C x C	WE-554P	123	9698	12
Plug – Fitting	FTG	WC-416	116	9616	13
Return Bend	C x C	WE-512	138	9638	13
Tee	C x C x C	WT-600	111	9611	14
Tee – Fitting	C x FTG x C	WT-600F	111-2	9611-2	16
Tee – Forged Brass	C x C x F	WT-602	N/A	N/A	16
Tube Strap – 2-Hole	–	WS-1100	120	9624	17
Tube Strap – Perforated	–	WS-1101	125	9623	17
Union	C x C	WC-407	4733	9633	17

## NITROGENIZED® COPPER TUBE

Mueller Industries' cleaning, purging and pressurizing process assures the high level of tube cleanliness in conformance to ASTM B280, the refrigeration industry standard. The tube is sealed with plugs which maintain the standard of cleanliness from the factory to the job site.

**STREAMLINE®** COPPER TUBE PRESSURIZED WITH NITROGEN provides maximum protection against the formation of harmful oxides normally formed during brazing operations. Reduction of these oxides greatly reduces system contamination. Plugs are reusable. When less than a 20' length of tube is required for an installation the unused length of tube may be replugged to prevent atmospheric contamination during storage.

**STREAMLINE®** Nitrogenized® seamless copper tube is available in sizes 3/8" OD thru 3-1/8" OD. Larger sizes from 3-5/8" OD thru 8-1/8" are cleaned and capped. Manufactured and cleaned in accordance with ASTM B280. 20-ft. Lengths Hard Drawn - Cleaned and Capped - Color Coded - Marked "ACR/MED".

## TYPE K NITROGENIZED® OXY/MED

SIZE	WT/FT	FT/BNDL	WALL	RATED WORKING PRESSURE (PSIG)			
				150 F	200 F	300 F	400 F
3/8	.145	500	.035	913	860	842	537
1/2	.269	500	.049	960	904	885	565
5/8	.344	500	.049	758	713	698	446
3/4	.418	200	.049	626	589	577	368
7/8	.641	200	.065	724	682	668	426
1 1/8	.839	100	.065	557	524	513	327
1 3/8	1.04	100	.065	452	425	416	266
1 5/8	1.36	100	.072	420	396	387	247
2 1/8	2.06		.083	370	348	341	217
2 5/8	2.93		.095	338	319	312	199
3 1/8	4.00		.109	328	308	302	193
3 5/8	5.12		.120	311	293	286	183
4 1/8	6.51		.134	306	288	282	180
5 1/8	9.67		.160	293	276	270	172
6 1/8	13.90		.192	295	277	271	173
8 1/8	25.90		.271	314	295	289	184

## TYPE L NITROGENIZED® ACR/MED

SIZE	WT/FT	FT/BNDL	WALL	RATED WORKING PRESSURE (PSIG)			
				150 F	200 F	300 F	400 F
3/8	.126	500	.030	775	729	714	456
1/2	.198	500	.035	662	623	610	389
5/8	.285	500	.040	613	577	565	361
3/4	.362	200	.042	537	505	495	316
7/8	.455	200	.045	495	466	456	291
1 1/8	.655	100	.050	420	395	387	247
1 3/8	.884	100	.055	373	351	344	219
1 5/8	1.14	100	.060	347	327	320	204
2 1/8	1.75		.070	309	291	285	182
2 5/8	2.48		.080	285	269	263	168
3 1/8	3.33		.090	270	254	248	159
3 5/8	4.29		.100	258	243	238	152
4 1/8	5.38		.110	249	235	230	147
5 1/8	7.61		.125	229	215	211	135
6 1/8	10.20		.140	213	201	196	125
8 1/8	19.30		.200	230	216	212	135

Tables give computed allowable stress for annealed copper tube at indicated temperature.

## REFRIGERATION SERVICE TUBE

**STREAMLINE**® dehydrated and nitrogen purged and sealed copper tube is of a consistent fully annealed temper, bright and thoroughly dried and packaged in individual cartons. Each carton is clearly labeled showing size and length.

Tube is manufactured in accordance with ASTM B 280 and ANSI B9.1, refrigeration industry standards. For special lengths and sizes not listed please consult your local Mueller Industries representative.

## COILS

SIZE		RATED INTERNAL WORKING PRESSURE (PSIG)				50 FT. SHIPPING INFORMATION 100 FT.				
O.D.	WALL	150°F	250°F	350°F	400°F	COIL DIA	WT/COIL	COIL/MSTR	COL DIA	WT/COIL
1/8	.030	2613	2459	2049	1537	10 <sup>3/4</sup>	1.74	10	17	3.48
3/16	.030	1645	1548	1290	968	11 <sup>3/4</sup>	2.88	10	18 <sup>5/8</sup>	5.76
1/4	.030	1195	1125	938	703	13 <sup>1/2</sup>	4.02	10	18 <sup>5/8</sup>	8.04
5/16	.032	1017	957	798	598	15 <sup>1/2</sup>	5.45	10	19 <sup>7/8</sup>	10.90
3/8	.032	836	787	656	492	17	6.70	10	21 <sup>7/8</sup>	13.40
1/2	.032	618	581	485	363	19 <sup>7/8</sup>	9.10	5	25	18.20
5/8	.035	525	494	412	309	21 <sup>1/4</sup>	12.55	5	25 <sup>1/4</sup>	25.10
3/4	.035	435	409	341	256	23 <sup>1/4</sup>	15.25	3	29	30.50
7/8	.045	495	466	388	291	27 <sup>1/4</sup>	22.75	3	32 <sup>1/4</sup>	45.50
1 1/8	.050	420	395	330	247	34 <sup>1/2</sup>	32.75	—	38 <sup>1/2</sup>	65.50
1 3/8	.055	373	351	293	219	45	44.20	—	45	88.40
1 5/8	.060	347	327	272	204	45	57.00	—	49	114.00

## TECHNICAL DATA

Values of allowable internal working pressure for copper tube in service are based on the formula from ANSI B31, Standard Code for Pressure Piping:

$$P = \frac{2 S t m}{D_{\max} - 0.8 t m}$$

P= Allowable pressure	@ 150°F S =	5100 PSIG annealed
S= Allowable stress	@ 200°F S =	4800 PSIG annealed
T= Wall thickness	@ 300°F S =	4700 PSIG annealed
D max= Outside Diameter	@ 400°F S =	3000 PSIG annealed

All ratings listed for types K, L, M, DWV and refrigeration service tube in the preceding charts are calculated for tube in the annealed condition. These values should be used when soldering, brazing or welding is employed for joining components in a system. While the ratings for hard drawn tube are substantially higher, they should only be used for systems using properly designed flare or compression mechanical joints, since joining by any heating process might anneal (soften) the tube.

In designing a system, careful consideration should also be given to joint ratings as well as those of the components.

## TEMPERATURE-PRESSURE RATINGS OF SOLDER JOINTS

ALLOYS USED FOR JOINTS	SERVICE TEMPERATURE °F	STANDARD TUBE SIZE, TYPES K, L, AND M			
		WATER AND NON-CORROSIVE LIQUIDS AND GASES			
		1/4 to 1	1 1/4 to 2	2 1/2 to 4	5 to 8
50-50 Tin Lead Solder Not to be used in potable water systems	100	200	175	150	135
	150	150	125	100	90
	200	100	90	75	70
	250	85	75	50	45
95-5 Tin-Antimony Solder	100	1090	850	705	660
	150	625	485	405	375
	200	505	395	325	305
	250	270	210	175	165
Alloy E Solder	100	710	555	460	430
	150	475	370	305	285
	200	375	290	240	225
	250	320	250	205	195
Alloy HB Solder	100	1035	805	670	625
	150	710	555	460	430
	200	440	345	285	265
	250	430	335	275	260
Brazing Alloys (Melting at or above 1000°F)	Pressure-temperature ratings is that of the tube being used.				

Note: Ratings are those given in ASME B16.22 "Wrought Copper and Copper Alloy Solder Joint Pressure Fittings". (a) Solder alloys are covered by ASTM Standard Specification B32.

Note: Safe Drinking Water Act Amendment of 1986 prohibits the use of any solder having a lead content in excess of 02% for potable water systems.

## PRESSURE LOSS IN FITTINGS EXPRESSED AS EQUIVALENT LENGTH OF TUBE, FEET

Nominal or Standard in Inches	Wrot Copper Fittings					
	90 Degree Ell	45 Degree Ell	Tee Straight Run	Tee Side Branch	Coupling	180 Degree Bend
3/8	0.5	0.5	0.5	1	—	0.5
1/2	0.5	0.5	0.5	1	—	1
5/8	0.5	0.5	0.5	2	—	1
3/4	1	0.5	0.5	2	—	2
1	1	1	0.5	3	—	2
1-1/4	2	1	0.5	4	0.5	3
1-1/2	2	2	1	5	0.5	4
2	2	2	1	7	0.5	8
2-1/2	2	3	2	9	0.5	16
3	3	4	—	—	1	20



# SPECIFICATIONS & STANDARDS

## COPPER FITTINGS

Mueller Industries manufactures or supplies product which meet the latest revisions of the following recognized industry standards:

**ASME/B16.22**

Wrought Copper and Copper Alloy Solder Joint Pressure Fittings

**MSS SP-104**

Wrought Copper Solder Joint Pressure Fittings

**MSS SP-109**

The dimensional, material and workmanship of Welded Fabricated Copper Solder Joint Pressure Fittings

**ANSI B16.18**

Cast Copper Alloy Solder Joint Pressure Fittings

**ANSI/ASME B16.15**

Cast Bronze Threaded Fittings

**ANSI/ASME B16.26**

Cast Copper Alloy Flared for Copper Tubes

**ASME B16.23**

Cast Copper Alloy Solder Joint Drainage Fittings – DWV

**ASME B16.24 or MSS SP-106**

Class 150 – Cast Copper Alloy Flanges and Flanged Fittings

**MSS SP-106**

Class 125 – Cast Copper Alloy Flanges and Flanged Fittings

**ASME/ANSI B16.29**

Wrought Copper Wrought Copper Alloy Solder Joint Drainage Fittings – DWV

The materials used to manufacture these fittings are also in compliance with the following specifications:

**Wrought Copper Fittings**

ASTM B75 Alloy C12200

**Cast Fittings**

ASTM B584 Alloy C84400

## COPPER TUBE

Tube Type	Color Code	ASTM Standard	Application	Commercially Available Lengths		
				Nominal or Standard Size	Drawn	Annealed
TYPE K	Green	B 88 <sup>3</sup>	Domestic Water Service and Distribution, Fire Protection, Solar, Fuel/Fuel Oil, HVAC, Snow Melt	<b>STRAIGHT LENGTHS:</b>		
				1/4" to 8"	20 ft.	20 ft.
				10"	18 ft.	18 ft.
				12"	12 ft.	12 ft.
				<b>Coils:</b>		
				1 1/4", 1	–	60 ft.
					–	100 ft.
				1 1/4", 1 1/2"	–	60 ft.
				2"	–	40 ft.
					–	45 ft.
TYPE L	Blue	B 88 <sup>3</sup>	Domestic Water Service and Distribution, Fire Protection, Solar, Fuel/Fuel Oil, Natural Gas, LP Gas, Snow Melt, HVAC	<b>STRAIGHT LENGTHS:</b>		
				1/4" to 10"	20 ft.	20 ft.
				12"	18 ft.	18 ft.
				<b>Coils:</b>		
				1/4" to 1"	–	60 ft.
					–	100 ft.
				1 1/4" to 1 1/2"	–	60 ft.
				2"	–	40 ft.
					–	45 ft.
				TYPE M	Red	B 88 <sup>3</sup>
1/4" to 12"	20 ft.	NA				
DWV	Yellow	B 306	DWV, HVAC Solar	<b>STRAIGHT LENGTHS:</b>		
				1/4" to 8"	20 ft.	NA
ACR	Blue	B 280	Air Conditioning Refrigeration, Natural Gas, LP Gas	<b>STRAIGHT LENGTHS:</b>		
				3/8" to 4 1/8"	20 ft.	
				<b>Coils:</b>		
				1/8" to 1 5/8"	–	50 ft.
OXY MED OXY/MED OXY/ACR ACR/MED	K-Green L-Blue	B 819	Medical Gas	<b>STRAIGHT LENGTHS:</b>		
				1/4" to 8"	20 ft.	NA
TYPE GAS	Yellow	B 837	Natural Gas, LP Gas	<b>STRAIGHT LENGTHS:</b>		
				3/8" to 1 1/8"	12 ft.	12 ft.
				12"	20 ft.	20 ft.
				<b>Coils:</b>		
				3/8" to 7/8"	–	60 ft.
					–	100 ft.

1. There are many other copper and copper alloy tubes and pipes available for specialized applications.  
 2. For information on these products, contact the Copper Development Association Inc. Individual manufacturers may have commercially available lengths in addition to those shown in this table.

3. Tube made to other ASTM standards is also intended for plumbing applications, but ASTM B 88 is the most widely used. ASTM Standard Classification B 698 lists six plumbing tube standards including B88.  
 4. Available as special order only.



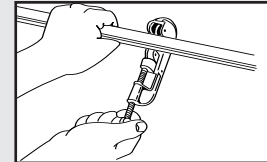
## COPPER TUBE AND SOLDER TYPE FITTINGS

### HOW TO MAKE PERFECT SOLDER JOINTS

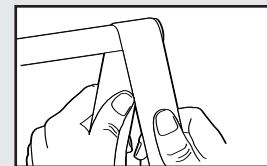
1. Cut tube square with the cutter or fine hack saw (32 tooth blade is recommended). Remove Burr.
2. Clean outside end of copper tube thoroughly with sandcloth or sandpaper equal to cup depth of fitting. Leave no dark spots.
3. Clean inside of fitting carefully to tube stop with wire brush. Note: Sandcloth or sandpaper may also be used.
4. Using a brush, apply light uniform coat of soldering flux to the outside of the tube and inside of the fitting.
5. Slip tube into fitting to tube stop. Turn tube back and forth once or twice to distribute flux evenly.
6. Apply heat uniformly around the fitting with torch. When solder melts upon contact with heated fitting, the proper soldering temperature has been reached. Remove flame and feed solder slightly off center at the bottom of the joint. Proceed across the bottom of the fitting and up to the top center position. Return to the starting point, and then proceed up the incompleated side to the top, again, overlapping the solder metal. Wipe off surplus solder with a piece of cloth.

**CAUTION: Do not overheat the joint or direct the flame into the face of the fitting cup. Overheating could burn the flux, which will destroy its effectiveness and the solder will not enter the joint properly.**

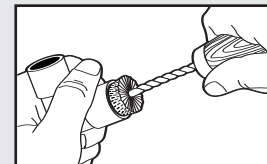
1. Cut tube to length and remove burr with file or scraper.



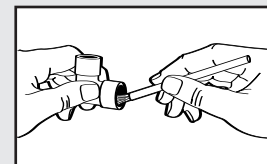
2. Clean outside of tube with sandpaper or sandcloth.



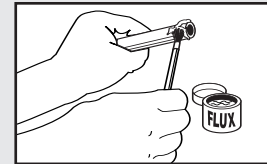
3. Clean inside of fitting with wire brush, sandcloth or sandpaper.



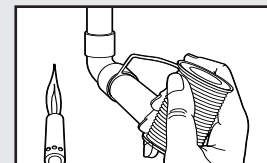
4. Apply flux thoroughly to inside of fitting.



5. Apply flux thoroughly to outside of tube—assemble tube and fitting.



6. Apply heat with torch. When solder melts upon contact with heated fitting, the proper temperature for soldering has been reached. Remove flame and feed solder to the joint at one or two points until a ring of solder appears at the end of the fitting.



The following information may be helpful when a system is being designed. Mueller wrought copper solder joint pressure fittings can be used in some of the following applications:

1. *What are some of the common system designs or applications where solder joint pressure fittings may be used?*

**Answer:**

- Plumbing of homes, high rise apartments, industrial, commercial and office buildings.
- Underground water services.
- Chilled water mains (Solder joint pressure fittings only).
- Heating – For radiant panel and hydronic heating for snow melting systems.
- Fuel Oil, L.P. and Natural Gas Services in accordance with local codes.
- Nonflammable Medical Gas Systems per NFPA 99. (Health Care Facilities)
- Air Conditioning and Refrigeration Systems.
- Ground Source Heat Pump Systems.
- Fire Sprinkler Systems.

2. *Can you buy type K fittings?*

**Answer:** No, the minimum wall for copper fittings are governed by ASME B16.22 and MSS SP-104 standards.

3. *What can be done when a union leaks?*

**Answer:** Assuming both male and female ends are not damaged or obstructed by a foreign material, it can be sealed by applying a light coat of bees wax.

4. *Are Wrot copper fittings lead free?*

**Answer:** Yes

5. *Are Cast copper alloy solder joint pressure fittings lead free?*

**Answer:** No, Cast fittings contain 7% lead.

# TERMS AND CONDITIONS OF SALE



THE FOLLOWING CONSTITUTE THE TERMS AND CONDITIONS OF SALE FOR ALL PRODUCTS MANUFACTURED, DISTRIBUTED AND/OR SOLD BY MUELLER INDUSTRIES, INC. OR ITS SUBSIDIARIES OR AFFILIATES (SELLER).

ACCEPTANCE OF SELLER'S OFFER TO SELL OR BUYER'S ORDER IS EXPRESSLY MADE CONDITIONAL ON BUYER'S ACCEPTANCE OF THE PROVISIONS STATED HEREIN. BUYER'S ACCEPTANCE OF EACH SHIPMENT OF GOODS SHALL BE DEEMED TO BE AN ACCEPTANCE OF THE PROVISIONS HEREOF NOTWITHSTANDING ANY ACT OF SELLER, INCLUDING SHIPMENT, ACCEPTANCE OF PAYMENTS, AND NOTWITHSTANDING ANY TERM OR CONDITION CONTAINED IN ANY FORM OF BUYER, AND ANY PROPOSAL FOR ADDITIONAL OR DIFFERENT TERMS OR ANY ATTEMPT BY BUYER TO VARY ANY OF THE PROVISIONS HEREIN IS HEREBY DEEMED A MATERIAL ALTERATION AND REJECTED. THE PROVISIONS HEREIN MAY NOT BE ADDED TO, MODIFIED, SUPERSEDED, OR ALTERED EXCEPT BY WRITTEN AGREEMENT OR MODIFICATION SIGNED BY AN OFFICER OF SELLER, NOTWITHSTANDING ANY TERMS WHICH MAY NOW OR IN THE FUTURE APPEAR ON BUYER'S FORMS OR COMMUNICATIONS, ALL OF WHICH ARE REJECTED WITHOUT FURTHER ACTION OF SELLER.

NO PERSON (EXCEPT AN OFFICER OF SELLER) IS AUTHORIZED TO BIND SELLER TO ANY ORDER FOR ANY GOODS EXCEPT ACCORDING TO THE PROVISIONS HEREIN.

1. **PRICES.** All prices for SELLER's products are subject to change or withdrawal without notice. Unless otherwise stated by SELLER, prices, terms of payment and pricing policies will be those of the SELLER in effect at the time of shipment. SELLER reserves the right to make price changes within the periods of contracts, including installment contracts or blanket orders. The cost of packing and crating other than in accordance with the standards of SELLER may constitute an additional charge and may at SELLER's discretion be added to the sales price(s). SELLER also reserves the right to divide Buyer's order into separate shipments and to invoice and otherwise treat each shipment as a separate contract subject to these Terms and Conditions. All sales and shipments are subject at all times to credit approval by SELLER.

2. **TRANSPORTATION AND RISK OF LOSS.** Unless otherwise agreed in advance in writing by SELLER, delivery of products hereunder shall be F.O.B. shipping point, with transportation expenses paid by Buyer unless standard SELLER freight prepayment qualifications are met and the risk of loss or damage to products in transit shall fall upon Buyer (whose responsibility it shall be to file claims with carrier at delivery to Buyer at Buyer's premises) upon delivery (a) to Buyer's designated representative, or (b) to a common carrier or other designated shipper (not including SELLER), whichever of the foregoing occurs earlier. SELLER in its discretion shall select the appropriate transportation method and routing. All orders, unless otherwise agreed in writing, are for shipment at SELLER's earliest convenience. Stated delivery dates are approximate and will be calculated from the date that SELLER has received all information necessary to permit SELLER to proceed with work immediately and without interruption. If any or all products are not delivered when ready due to the request of Buyer, SELLER reserves the right to invoice Buyer at any time thereafter and to place such products in storage with all risk of loss or damage borne by Buyer and with all expenses and costs attributable thereto for the account of Buyer, which shall be payable by Buyer upon submission of SELLER's invoices to Buyer.

3. **DELAYS.** SELLER shall not be liable for any delays in delivery due or resulting in whole or in part from or made impossible or impractical by any cause beyond the control of SELLER including but not limited to fire, explosion, epidemics, accident, material and significant breakdown, strike or labor disputes, adverse weather conditions, loss or damage in shipment, shortage or lack of materials, fuel or power, sale or transfer of manufacturing facilities, embargo, acts of God, acts (including delay or failure to act) of any governmental authority (de jure or de facto) or any other contingency or delay or failure or cause beyond SELLER's control. If, due to any such occurrence, SELLER is unable to supply total demands for any goods specified, SELLER may, but shall not be obligated to, allocate production, inventory and deliveries (in any manner fair and reasonable to the extent that goods are not special or unique) and will notify Buyer reasonably that there will be delay or nondelivery.

4. **TAXES.** All prices are exclusive of any applicable foreign or U.S.A. federal, state or local sales, use, excise or other taxes, which SELLER may be required to pay or collect, under any existing or future law, upon or with respect to the sale, delivery, storage, processing, use or consumption of any of the products covered hereby, which shall be for the account of Buyer, who shall promptly pay the amount thereof to SELLER upon demand.

5. **PAYMENT TERMS AND SECURITY INTEREST.** Unless otherwise agreed in advance in writing by SELLER, payment terms are 2% 30 days, net 45 days. All payments not made within such time may be subject to a carrying charge of one percent per month on the unpaid balance or the highest rate permitted by applicable law, whichever is the lesser. Until the entire amount due hereunder is paid, SELLER reserves a security interest in all products sold, with all rights, privileges and remedies of a selling secured party in the jurisdiction to which the goods may be shipped or within which they may be kept at any time. In pursuance thereof, Buyer agrees to timely execute any documents which SELLER may request from time to time in order to give notice of, perfect or otherwise give effect to the existence of said security interest.

6. **FINANCIAL RESPONSIBILITY.** If Seller has any reasonable doubt at any time as to Buyer's financial condition and ability to perform, Seller, at its option, may (a) decline to make further shipments other than on a cash in advance basis or upon Buyer providing other security satisfactory to Seller, or (b) terminate this agreement.

7. **RECEIVING AND INSPECTION.** Any claim by Buyer based upon or relating to any claimed defect in the products ascertainable upon visual inspection thereof, including without limitation any claim relating to size, type, quantity or shipping damage and the like, must be presented to SELLER or its representative within fifteen (15) days following the date of receipt of the product by Buyer. Buyer's receipt of any product delivered hereunder shall be an unqualified acceptance, and a waiver by Buyer of any and all such claims with respect to such product unless Buyer gives SELLER notice of claim within fifteen (15) days after such receipt. Unless otherwise agreed in advance in writing by SELLER, variations in the products as to composition, dimensions, quantity and the like shall be permissible and not cause for Buyer's rejection or revocation if within prevailing industry (United States of America) standards. Buyer assumes all risk and liability for results.

8. **TOOLING.** Buyer will indemnify, defend and hold SELLER harmless from and against any liability, damage, loss or expense arising from the use or handling of any tooling supplied or designed by Buyer from which products are to be cast or manufactured by SELLER.

9. **PATENT INDEMNITY.** SELLER agrees to protect, indemnify and hold harmless the Buyer, its successors, assigns, customers and users of its products against any liability, loss, damage or expense whatsoever resulting from any infringement of any United States Letters Patent by any thing, number, material, design, composition, or processing of SELLER's origin or practice

supplied by SELLER. With respect to any thing, number, material or design, composition, or processing, specified by Buyer and not of SELLER's origin or practice, BUYER agrees to save SELLER harmless from any liability, loss damage or expense whatsoever resulting from any infringement of any United States Letters Patent arising out of SELLER's making, using or selling the same for or to BUYER in fulfillment of its orders or contracts. SELLER and BUYER severally agree to notify the other in writing promptly of any charge of infringement made and of any suit brought in respect to such device or composition and to assume or tender to the other the full control of the defense or settlement of such suit in accordance herewith.

10. **WARRANTY.** Seller warrants only to Buyer that products furnished of Seller's own manufacture will conform to prevailing (United States of America) industry standards as to quality, inspections, composition, quantity and type, and will be free from defects in workmanship and materials for a period of one year from the date of receipt by Buyer of the products. This warranty will not apply to damage resulting from normal wear, improper installation, misuse or neglect. Weight figures shown in Seller's catalogue and price sheets, and documents of sale are approximate only. Product is sold on a per unit basis not on a weight basis. Seller does not warrant any aspect of product representation, installation, modifications or manufacturing carried out by parties other than Seller and Buyer hereby indemnifies Seller for any loss, cost or expense to which Seller may be exposed as a result of any such activities by Buyer or Buyer's customers. Seller's sole obligation for failure to comply with this warranty will be, at its election, to repair or replace the defective product where Buyer notifies Seller and such product is made available to Seller for inspection F.O.B. Seller's facility or point of manufacture within the one year warranty period. Except to the extent that (1) descriptions of size, quality and type, which may appear on Seller invoices and other documents, and (2) statements of conformity of products with specification of certain industry, government, or professional organizations standards, which may appear as product information disclosures in Seller's literature and documents, may from time to time be construed to be express warranties, THIS WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

11. **LIMITATION OF LIABILITY.** Under no circumstances will Seller's liability in the aggregate to Buyer under any legal theory, including without limitation, breach of contract or warranty, or commission of any tort, including negligence and strict liability, or claims for indemnification, exceed the invoice price for the affected product. Buyer must commence any action at law or in equity against Seller within one year after the product is delivered to Buyer. Buyer will not have any recourse against Seller for any loss which reasonably could be prevented by cover or otherwise. Exceptions to Seller's warranty and limitation of liability provisions or waivers of the same granted by Seller will not constitute a precedent, default or waiver of Seller's rights to enforce such provisions in whole or in part in the future. SELLER WILL NOT BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY KIND WHATSOEVER, WHETHER ANY CLAIM OR POTENTIAL CLAIM IS BASED UPON THEORIES OF CONTRACT, NEGLIGENCE, OR TORT AND INCLUDING WITHOUT LIMITATION, SELLER WILL HAVE NO LIABILITY FOR SHIPPING CHARGES, LABOR, INSTALLATION, COSTS OR ANY OTHER LOSSES OR EXPENSES RELATED TO OR ASSOCIATED WITH THE INSPECTION, REPAIR OR REPLACEMENT OF THE WARRANTED PRODUCTS.

12. **DEFAULT.** Buyer will be in default if (a) Buyer fails to pay Seller any amount when due under this agreement, (b) Buyer otherwise fails for a period of five days after receiving written notice from Seller to fulfill or perform any provisions of this agreement, (c) Buyer becomes insolvent or bankrupt, or a petition is filed voluntarily or involuntarily and not dismissed within 30 days of filing, or (d) Buyer makes a general assignment for the benefit of its creditors, or a receiver is appointed, or a substantial part of Buyer's assets are attached or seized under legal process and not released within 30 days thereafter.

Upon buyer's default, Seller may, at its option, without prejudice to any of its other rights and remedies, and without demand for payments past due, (a) make shipments subject to receipt of cash in advance, (b) terminate this agreement and declare immediately due and payable the obligations of Buyer for goods previously shipped, notwithstanding any other provision in these terms and conditions, (c) demand reclamation, or (d) suspend any further deliveries until the default is corrected, without releasing Buyer from its obligations under this agreement. In any event, Buyer will remain liable for all loss and damage sustained by Seller because of Buyer's default.

13. **OTHER.** (a) SELLER accepts no responsibility to BUYER or to any person claiming by or through BUYER, for compliance with any statute, governmental rule or regulation made applicable to this contract by reason of BUYER's intended use of the products unless SELLER has received from BUYER prior timely written notification of such statute, rule or regulation and has accepted the same by a separate writing signed by an officer of SELLER.

(b) SELLER's forbearance or failure to enforce any of these conditions as set forth herein or to exercise any right accruing from any default of BUYER shall not affect, impair or waive SELLER's right if such default continues or if any subsequent default of BUYER occurs.

(c) The provisions herein constitute the entire agreement between BUYER and SELLER and no terms or conditions other than those stated herein and no agreement or understanding oral or written in any way purporting to modify these conditions shall be binding on SELLER unless hereafter made in writing and signed by an officer of SELLER. All orders are subject to acceptance at SELLER's offices. This agreement shall be construed in accordance with the laws of Tennessee and any disputes arising under these terms and conditions, and the orders to which they pertain, shall be brought exclusively in Shelby County, Tennessee.

(d) The provisions of this agreement shall be considered severable. In the event that any of the provisions, or portions or applications thereof, of this agreement are held to be unenforceable or invalid by any court of competent jurisdiction, all remaining portions shall remain in full force and effect in accordance with the spirit of this agreement.

(e) The rights and obligations of BUYER and SELLER hereunder shall not be assigned to any third party without the prior written consent of the other party.

(f) ACCEPTANCE OF THE PRODUCTS SOLD HEREUNDER SHALL CONSTITUTE ASSENT TO THESE CONDITIONS AND SELLER HEREBY OBJECTS TO AND REJECTS ANY AND ALL ADDITIONAL OR DIFFERENT TERMS PROPOSED BY BUYER, WHETHER CONTAINED IN BUYER'S PURCHASING OR SHIPPING RELEASE FORMS OR ELSEWHERE. ALL PROPOSALS, NEGOTIATIONS, AND REPRESENTATIONS, IF ANY, MADE PRIOR AND WITH REFERENCE HERETO ARE MERGED HEREIN, AND ANY PROPOSED ADDITIONS, MODIFICATIONS, DELETIONS OR CHANGES NOT IN SEPARATE WRITINGS SIGNED BY AN OFFICER OF SELLER ARE REJECTED WITHOUT FURTHER ACTION BY SELLER.

Customers acknowledge that the above terms and conditions of sale shall pertain to each and every order placed with Mueller Industries, Inc.



# HOMEOWNER LIMITED WARRANTY

## RESIDENTIAL COPPER PLUMBING PRODUCTS

### WHAT THE WARRANTY TERMS MEAN

In this warranty, "Manufacturer" refers to Mueller Industries, Inc. or its subsidiaries, which manufactures the Product, and any person or company that assumes its obligation under this warranty. "Homeowner" means the owner of the residential building in the United States in which the Product has been installed and also means any succeeding owner during the original warranty term. "Product" means the copper water tube and/or copper or brass fittings manufactured by the Manufacturer for the residential building market in the United States. Manufacturer warrants only Products it has manufactured and does not warrant Products of any other company.

### DATE THE WARRANTY BEGINS

The warranty begins on the date of the new home purchase, or in the case of home additions or renovations, on the date the installation is completed. The warranty is transferable to succeeding Homeowners for the remainder of the original warranty term, in which case the date the warranty begins shall continue without change.

### WHAT IS COVERED

The Manufacturer warrants to the Homeowner for a period of 50 years from the date the warranty begins that its properly installed Product will be free of failure as a result of defects in material or workmanship in manufacturing the Product.

### WHAT THE MANUFACTURER WILL DO FOR YOU

As long as (1) such a failure occurs within 50 years from the date the warranty begins and (2) the Homeowner promptly notifies the Manufacturer of the Product of that failure by contacting it through its 800 phone number listed below, the Manufacturer will correct that failure by repairing or replacing the Product within a reasonable time, without charge. This warranty is limited to the cost of repairing or replacing the Product, including installation.

### WHAT IS NOT COVERED: DISCLAIMER OF LIABILITY FOR CONSEQUENTIAL AND OTHER DAMAGES

The Manufacturer does NOT warrant against failure:

1. of any product, parts or systems that it has not manufactured;
2. if the Product is used for purposes other than residential plumbing applications;
3. caused by, contributed in whole or in part by or resulting from any of the following;
  - (a) improper installation;
  - (b) abuse, such as, without limitation, vandalism;
  - (c) natural disasters, such as, without limitation, flooding, windstorm and lightning;
  - (c) attachments or modifications to the Product that the Manufacturer did not authorize;
  - (e) external causes, where external, physical or chemical qualities produce damage to the Product, such as without limitation, aggressive water or an unsuitable or hostile environment; or
  - (f) any other cause beyond the Manufacturer's control.

The Manufacturer shall NOT be liable under any circumstances for any other direct or any indirect, incidental or consequential damages of any kind.

### THIS IS THE ONLY WARRANTY

THIS WARRANTY IS THE ONLY WARRANTY FOR THE PRODUCT PROVIDED BY THE MANUFACTURER, AND IS AND SHALL BE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO AN IMPLIED WARRANTY OF MERCHANTABILITY, AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF THE MANUFACTURER. NONE OF THE MANUFACTURER'S EMPLOYEES, AND NO OTHER PERSON OR BUSINESS, IS AUTHORIZED TO MAKE ANY OTHER WARRANTY ON THE MANUFACTURER'S BEHALF COVERING THE PRODUCT.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Mueller Industries, Inc.  
800-348-8464  
Memphis, TN



# If You Only Think Copper When You Think Mueller, Think Again.



- ▼ ABS & PVC Fittings ▼ Copper Tube
- ▼ Copper Pressure / DWV Fittings ▼ PVC & Styrene Sewer & Drain Fittings
- ▼ Refrigeration Valves & Accessories ▼ Line Sets ▼ Brass / Bronze Valves



OUR VISION IS CUSTOMER FOCUSED™