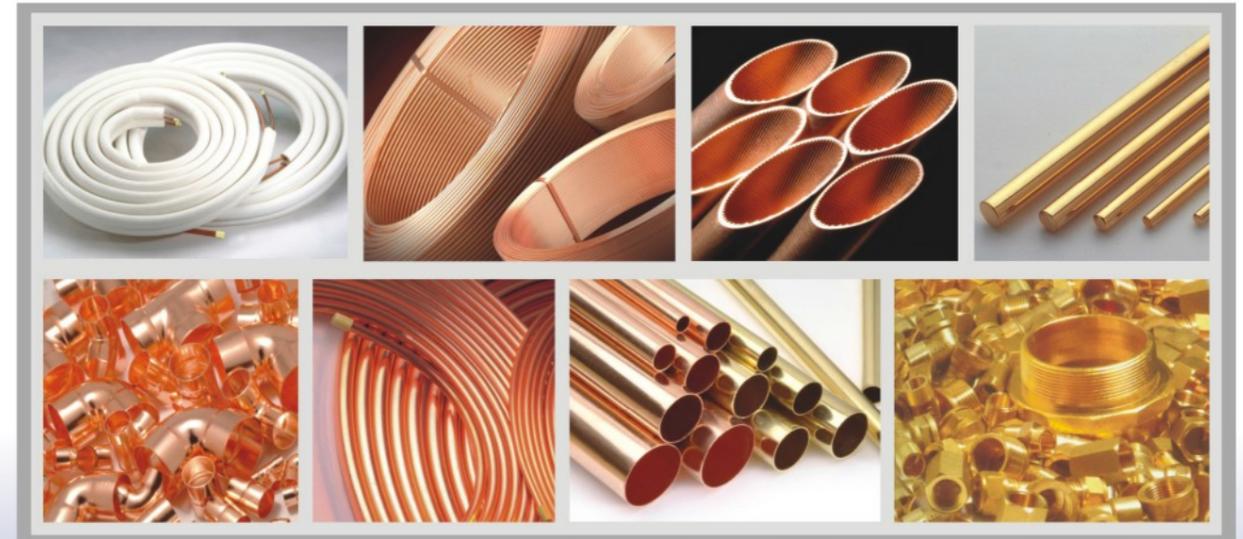




## INTERNATIONAL MATERIAL SOLUTIONS LTD.



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## INTERNATIONAL MATERIAL SOLUTIONS LTD.



### COMPANY PROFILE

**INTERNATION MATERIAL SOLUTION LTD.** a private-held company for copper ,copper alloy plastic products including tubing, rods, fittings etc .continued to focus on copper processing and integrated global resources to build itself into one of the most competitive multinationals in the worlds copper processing industry. Two main product groups for **INTERNATION MATERIAL SOLUTION LTD.** are copper tube and bar. Copper tubes include refrigeration tube, construction tube, copper alloy tube, copper & copper alloy fittings and tube for other applications. These tubes are generally used in field of air-conditioning refrigeration, construction piping, equip manufacturing, auto industry, electronic and communication, traffic and transportation, hardware and mechanism, electric power, seawater desalting etc.

With the capacity of over 150000 tons per year so far, and the operation of Quality control system ISO 9001 and also the certifications approved for different products in different markets such as NSF,UPC,WHI and Kitemark, Sai, SGS, SABS, C-TPAT etc.,

**INTERNATION MATERIAL SOLUTION LTD.** has great confidence to satisfy various customers with different requirements.

**INTERNATION MATERIAL SOLUTION LTD.** will follow its direction of making strong, making large endeavoring to be the most competitive copper-processing multi-international enterprises in the world.

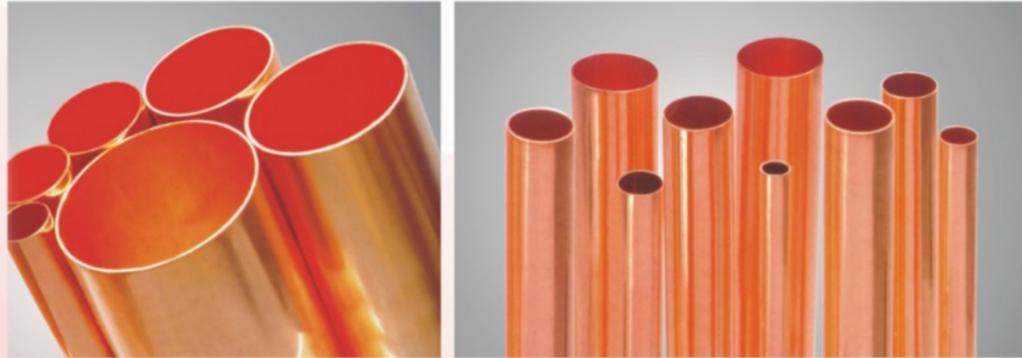
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# COPPER TUBE SERIES

## - COPPER TUBES

The main purposes :  
Water, Gas, Sanitation, Air Conditioning, Refrigeration,  
Fire Protection And General Purposes.

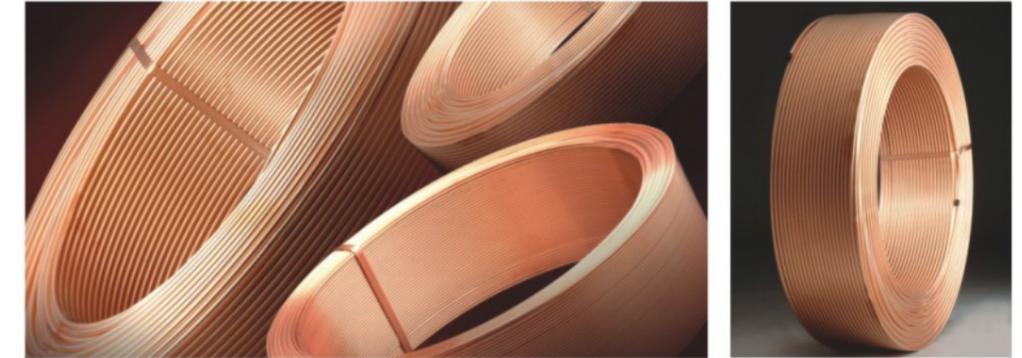


### ◆ standard and copper Alloy No.

Standard	Alloy No.	Temper				Chemical composition Cu%
JIS H3300	C1220	H	1/2H	OL	O	Minimum 99.90
JIS H3300						
BS2871	C106	H	1/2H	/	O	
EN12735-2	CU-DHP	Y0 80	/	Y0 40	Y0 35	
EN12735-1	or CW024A	R360 R290	R250	/	R220	
EN1057		R360 R290	R250	/	R220	
EN12449	CU-DHP	R360 R290	R250	/	R220/R200	
	or CW024A	H110 H095	H070	/	H040	
DIN	SF-Cu	F36	F25	F22	O	
ASTM	B68	/	/	O 50	O 60	
	B88	H58				
	B75	H80和H58	H55	O 50	O 60	
	B280	H58	/		O 60	
	B743-92a	H58	/	O 50	O 60	

# COPPER TUBE SERIES

## - LWC FOR ACR SERIES (PLAIN)



### ◆ Specifications (FOR REFERENCE ONLY)

OD		WALL THICKNESS		COIL WEIGHT	
mm	inch	mm	inch	kg	lbs
3.8	5/32	0.28-0.60	0.011-0.024	90-130 130-180 >180(as per customer's requirements)	200-300 300-400 >400(as per customer's requirements)
4.76	3/16	0.28-0.81	0.011-0.032		
6.35	1/4	0.28-1.07	0.011-0.042		
7.94	5/16	0.28-1.5	0.011-0.059		
9.52	3/8	0.28-1.5	0.011-0.059		
12.7	1/2	0.35-2.00	0.014-0.079		
15.88	5/8	0.46-2.00	0.018-0.079		
19.05	3/4	0.71-2.00	0.028-0.079		
22.22	7/8	0.89-2.00	0.035-0.079		

## - PANCAKE COILS SERIES

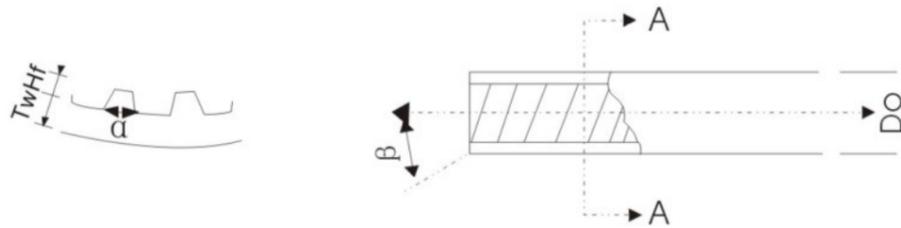
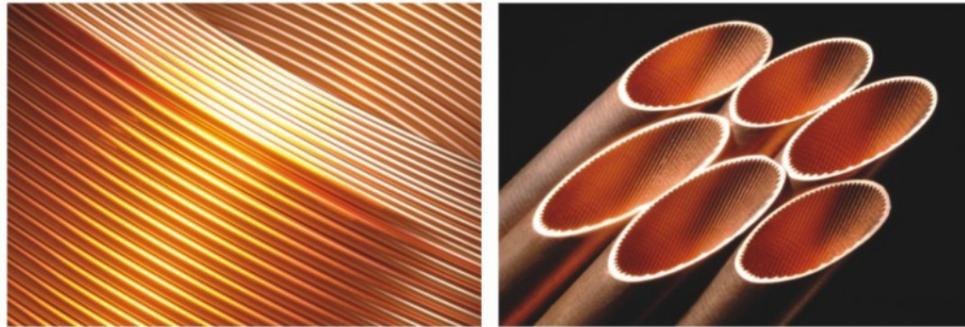


### ◆ Specifications

O.D(inch)	Thickness (inch)	Length(ft)
1/8" to 1 1/8"	0.014" to 0.059"	≤100

# COPPER TUBE SERIES

## - LWC FOR ACR SERIES (INNER GROOVED)

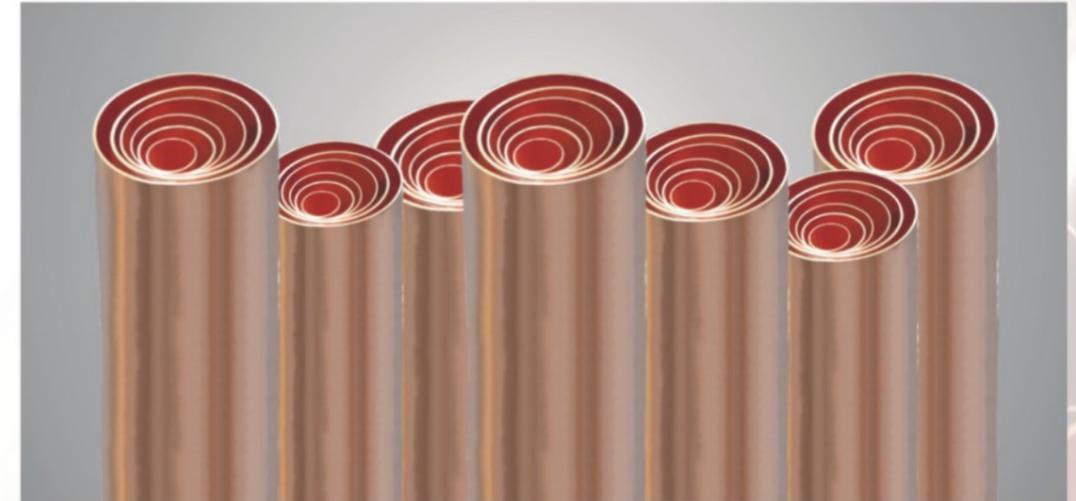


### ◆ Specifications (FOR REFERENCE ONLY)

Specifications	Unit weight	O.D.	I.D.	Bottom Wall Thickness Tw	Fin Groove Depth Hf	Total Wall Thickness	Apex Angle	Helix Angle	Number of Tooth
φ5.00×0.20+0.15-18°	33	5.00	4.30	0.20	0.15	0.35	40	18	40
φ7.00×0.25+0.10-15°	52	7.00	6.30	0.25	0.10	0.35	40	15	65
φ7.00×0.25+0.18-18°	57	7.00	6.14	0.25	0.18	0.43	40	18	50
φ7.00×0.25+0.22-16°	58	7.00	6.06	0.25	0.22	0.47	22	16	54
φ7.00×0.27+0.15-18°	60	7.00	6.16	0.27	0.15	0.42	53	18	60
φ7.94×0.25+0.18-18°	65	7.94	7.08	0.25	0.18	0.43	40	18	50
φ7.94×0.25+0.20-18°	66	7.94	7.04	0.25	0.20	0.45	40	18	50
φ7.94×0.26+0.17-18°	66	7.94	7.08	0.26	0.17	0.43	40	18	50
φ7.94×0.28+0.20-18°	72	7.94	6.98	0.28	0.20	0.48	40	18	50
φ7.94×0.30+0.20-18°	76	7.94	6.94	0.30	0.20	0.50	40	18	50
φ9.52×0.27+0.16-18°	82	9.52	8.66	0.27	0.16	0.43	30	18	70
φ9.52×0.28+0.12-15°	80	9.52	8.72	0.28	0.12	0.40	53	15	65
φ9.52×0.28+0.15-18°	83	9.52	8.66	0.28	0.15	0.43	53	18	60
φ9.52×0.28+0.15-25°	88	9.52	8.66	0.28	0.15	0.43	90	25	65
φ9.52×0.28+0.20-18°	85	9.52	8.56	0.28	0.20	0.48	25	18	55
φ9.52×0.28+0.20-18°	88	9.52	8.56	0.28	0.20	0.48	40	18	60
φ9.52×0.30+0.20-18°	90	9.52	8.52	0.30	0.20	0.50	30	18	60
φ9.52×0.30+0.20-18°	94	9.52	8.52	0.30	0.20	0.50	53	18	60
φ9.52×0.34+0.15-25°	104	9.52	8.54	0.34	0.15	0.49	90	25	65
φ9.52×0.40+0.25-18°	123	9.52	8.22	0.40	0.25	0.65	40	18	60
φ12.00×0.36+0.25-18°	140	12.00	10.78	0.36	0.25	0.61	40	18	70
φ12.70×0.35+0.25-18°	155	12.70	11.50	0.35	0.25	0.60	53	18	70
φ12.70×0.40+0.25-18°	170	12.70	11.40	0.40	0.25	0.65	53	18	70
φ12.70×0.50+0.25-18°	201	12.70	11.20	0.50	0.25	0.75	53	18	75
φ12.75×0.36+0.21/0.25-20°	150	12.75	11.53	0.36	0.25	0.61	48	20	70

# COPPER TUBE SERIES

## - STRAIGHT TUBES SERIES



### ◆ Specifications

Thickness O.D.	0.013" to 0.023"	0.023" to 0.031"	0.031" to 0.039"	0.039" to 0.047"	0.047" to 0.059"	0.059" to 0.078"	0.078" to 0.12"	0.12" to 0.16"	0.16" to 0.22"	0.22" to 0.27"	0.27" to 0.37"
1/4" to 1/2"	○	○	○	○	○						
1/2" to 3/4"	○	○	○	○	○	○					
3/4" to 1"	○	○	○	○	○	○	○	○			
1" to 1-3/8"		○	○	○	○	○	○	○	○		
1-3/8" to 1-1/2"			○	○	○	○	○	○	○		
1-1/2" to 1-19/20"			○	○	○	○	○	○	○	○	
1-19/20" to 2-1/2"			○	○	○	○	○	○	○	○	
2-1/2" to 2-3/4"				○	○	○	○	○	○	○	○
2-3/4" to 3-3/8"				○	○	○	○	○	○	○	○
3-3/8" to 4"					○	○	○	○	○	○	○
4" to 5-3/8"						○	○	○	○	○	○
5-3/8" to 6-1/4"							○	○	○	○	○
6-1/4" to 8-5/8"								○	○		

# COPPER TUBE SERIES

## - PACKING WAYS (LWC)

	Packing ways	Wooden pallets	Plates		Way of placing strings		Winding way		Hailiang	Neutral
			Cardboard Reels	Reels (I.D.Payout)	Draw from I.D.	Draw from O.D.	Clockwise	Anti-Clockwise		
Hailiang	General packing	☐	☐	☐		☐	☐	☐		
	Simple Packing	☐					☐	☐		
	Draw from I.D.Packing	☐		☐	☐		☐	☐	☐	
	General double pallets packing	☐	☐	☐			☐	☐	☐	
Neutral	General packing	☐	☐	☐		☐	☐			☐
	Simple Packing	☐		☐			☐	☐		☐
	Draw from I.D.Packing	☐			☐			☐		☐
	General double pallets packing	☐	☐	☐			☐	☐		☐



General Packing



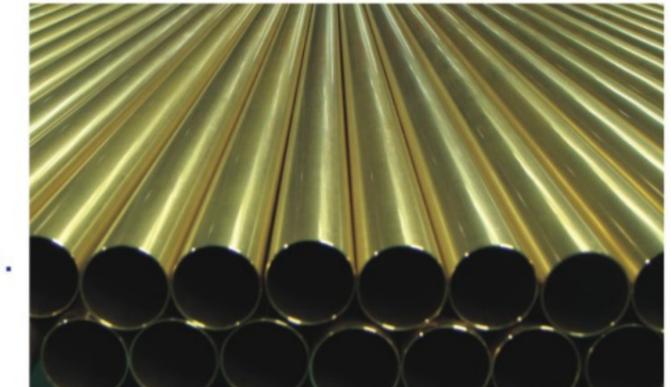
General Doubled Pallets Packing(X+X)

# COPPER ALLOY SERIES

## - BRASS STRAIGHT TUBE

The main purposes :

Buildings, Sanitation,  
Marine, Desalt Sea Water Etc.

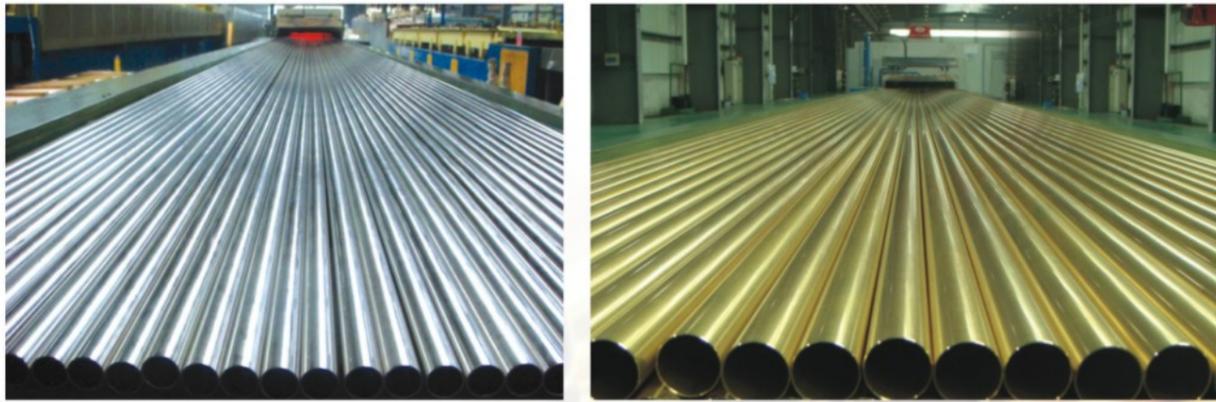


◆ The main standard and copper Alloy No.

Standard	Copper Alloy No.	Temper
ASTMB111	C44300	O 61
	C68700	O 61
	C70600	O 61/H55
	C71500	O 61
	C71640	O 61/Hr50
JISH3300	C4430	O
	C6870	O
	C7060	O
	C7150	O
	C7164	O
BS EN12451 (BS2871)	CuZn28Sn1As(CZ111)	R320/H060/R360/H080
	CuZn20A12As(CZ110)	R340/H070/R390/H085
	CuNi10Fe1Mn(CN102)	R290/H075/R310/H105/R480/H150
	CuNi30Fe1Mn(CN107)	R370/H090/R480/H120
	CuNi30Fe2Mn2(CN102)	R420/H090
ASTMB135	C33000	O 1/2H H
	C28000	
	C27000/C27200/C27400	
	C26000/C26200/C26800	
	C23000	

# COPPER ALLOY SERIES

## • HIGH ACCURACY COPPER ALLOY TUBE



### Main Products:

- Admiralty Brass Tube C44300
- Al-Brass Tube C68700
- CuNi Tube C70600
- CuNi Tube C71500/C71640

**Total Capacity: 50000 tons/year**

### Specification scope of high accuracy copper alloy tube

O.D.(mm)	Thickness (Unit:mm)										Length(mm)	
	0.4	0.4-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0	6.0-7.0	7.0-8.0	8.0-10.0		10.0-12.0
4.74-10	○	○										≤25000
>10-20	○	○	○	○	○							≤25000
>20-50		○	○	○	○	○	○	○				≤25000
>50-100			○	○	○	○	○	○	○	○		≤15000
>100-200				○	○	○	○	○	○	○		≤12000
>200-300					○	○	○	○	○	○		≤6000
>300-419					○	○	○	○	○	○		≤6000

### Chemical composition of high accuracy copper alloy tube

Standard	Name	Copper Alloy No	Chemical Composition (%)													
			Cu	Sn	Pb	Fe	Al	Zn	Mn	Ni	As	C	Co	P	S	Others
ASTM B111	Admiralty Brass Tube	C44300	70.0-73.0	0.9-1.2	≤0.07	≤0.06	-	Remainder	-	-	0.02-0.06					
	Al-Brass Tube	C68700	76.0-79.0	-	≤0.07	≤0.06	1.8-2.5	Remainder	-	-	0.02-0.06					
	90-10 CuNi Tube	C70600	Remainder	-	≤0.05	1.0-1.8	-	≤1.0	≤1.0	9.0-11.0						
	70-30 CuNi Tube	C71500	Remainder	-	≤0.05	0.04-1.0	-	≤1.0	≤1.0	29.0-33.0						
	6630/22 CuNi Tube	C71640	Remainder	-	≤0.05	1.7-2.3	-	≤1.0	1.5-2.5	29.0-32.0	≤0.06	-	-	≤0.03	-	
JIS H3300	Condenser Brass Tube	C4430	70.0-73.0	0.9-1.2	≤0.05	≤0.05	-	Remainder	-	-	0.02-0.06					
		C6870	76.0-79.0	-	≤0.05	≤0.05	1.8-2.5	Remainder	-	-	0.02-0.06					
	Condenser CuNi Tube	C7060	Remainder	-	≤0.05	1.0-1.8	-	≤0.50	0.20-1.0	9.0-11.0	-	-	-			Cu-Fe-Mn-Ni ≥99.5
		C7150	Remainder	-	≤0.05	0.04-1.0	-	≤0.50	0.20-1.0	29.0-33.0	-	-	-			Cu-Fe-Mn-Ni ≥99.5
		C7164	Remainder	-	≤0.05	1.7-2.3	-	≤0.50	1.5-2.5	29.0-32.0	-	-	-			Cu-Fe-Mn-Ni ≥99.5
BS EN12451 (BS2871)	Condenser Brass Tube	CuZn28Sn1As (CZ111)	70.0-72.5	0.9-1.3	≤0.05	≤0.07	-	Remainder	≤0.1	≤0.1	0.02-0.06		≤0.01		≤0.3	
		CuZn20Al2As (CZ110)	76.0-79.0	-	≤0.05	≤0.07	1.8-2.3	Remainder	≤0.1	≤0.1	0.02-0.06		≤0.01		≤0.3	
	Condenser CuNi Tube	CuNi10Fe1Mn (CN102)	Remainder	≤0.03	≤0.02	1.0-2.0	-	≤0.50	0.50-1.0	9.0-11.0	-	≤0.05	≤0.1	≤0.02	≤0.05	≤0.2
		CuNi30Fe1Mn (CN107)	Remainder	≤0.05	≤0.02	0.40-1.0	-	≤0.50	0.50-1.5	30.0-32.0	-	≤0.05	≤0.1	≤0.02	≤0.05	≤0.2
		CuNi30Fe1Mn (CN108)	Remainder	≤0.05	≤0.02	1.5-2.5	-	≤0.50	1.5-2.5	29.0-32.0	-	≤0.05	≤0.1	≤0.02	≤0.05	≤0.2

# COPPER ALLOY SERIES

## - BRASS STRAIGHT TUBE



Thickness O.D.	0.019" to 0.023"	0.023" to 0.031"	0.031" to 0.039"	0.039" to 0.047"	0.047" to 0.059"	0.059" to 0.078"	0.078" to 0.12"	0.12" to 0.16"
1/4" to 1/2"	○	○	○	○	○			
1/2" to 3/4"	○	○	○	○	○	○		
3/4" to 1"		○	○	○	○	○	○	
1" to 1-3/8"			○	○	○	○	○	○
1-3/8" to 2"				○	○	○	○	○
2" to 2-3/4"				○	○	○	○	

## - PACKING WAYS



# FITTING SERIES

## - COPPER FITTING

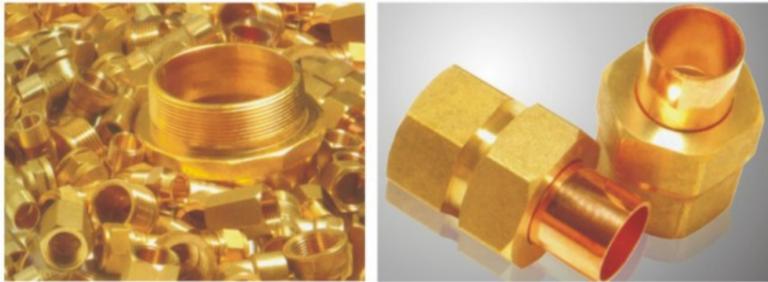
The main purposes:  
Air Conditioning,  
Water, Gas Etc.



SPECIFICATION	NOMAL SIZE (inch)	STANDARD
45° Elbow CXC	1/8 to 6	ASME B 16.22
90° Elbow CXC	1/8 to 2×1 1/2	
90° Long Elbow CXC	1/8 to 4	
Coupling w/Stop CXC Dimple	1/8 to 8	
Coupling Less /Stop CXC Dimple	1/8 to 5	
Flush Bushings FTGXC	1/4×1/8 to 2×1 1/2	
Coupling w/Stop rolled	1/8 to 8	
Reducing coupling w/stop CXC	5/8×1/4 to 6×3	
Fitting Reducer FTGXC	5/8×1/4 to 4×1 1/4	
TUBE STRAP	1/8 to 2	
Fitting End Plugs	3/8 to 1 1/4	
45° Street Elbow FTGXC	1/8 to 4	
90° Street Elbow FTGXC	1/4 to 4	
90° Street Long Elbow FTGXC	1/8 to 3	
TEE CXCXC	1/8 to 8	
P-TRAP	1/2 to 2	
U-BEND	1 to 2	
CAP	1/8 to 6	
MALE ADAPTER CXM	1/4×1/8 to 2×2	
REDUCING TEE	1/4×1/8 to 8×8×4	
FEMALE ADAPTER CXF	3/8×3/8 to 2×2	
UNION BTASS	3/8 to 1	
FEMALE ADAPTER FTGXF	1/4×1/4 to 2-1/2×2-3/8	
MALE ADAPTER FTGXM	1/4×1/4 to 2-1/2×2-3/8	
45° Equal Elbow CXC E10ECC	8 to 308	EN1254-1
90° Equal Elbow CXC HLE11ECC	6 to 308	
45° Street Elbow FTGXC E13EFC	8 to 159	
90° Street Elbow FTGXC E14EFC	6 to 219	
90° Long Radius Street Elbow CXC FTG E15ELFC	12 to 108	
90° Long Radius Elbow CXC E12ELLC	12 to 108	
Cross CXCXCXC E60CCCC	15 22 28 35	
Equal Tee CXCXC E30TCC	6 to 308	
Reducing Tee CXCXC E31TRC	42×42×42 to 219×219×159	
Stop End E40CAP	8 to 159	
Reducing Coupler CXC E21RRC	15×10 to 219×108	
Fitting Reducer CXC FTG E22RCF	16×12 to 219×159	
Equal Coupler CXC E20CC	C6 to 308	

# FITTING SERIES

## BRASS FITTING



### ◆ Fitting series

Brass capillary fitting			
Male Coupling		Female Coupling	
15mm×1/2" M	22mm×3/4" M	15mm×1/2" F	22mm×3/4" F
28mm×1" M	15mm×3/4" M	28mm×1" F	15mm×3/4" F
22mm×1" M			
Male Elbow		Female Elbow	
15mm×1/2" M	22mm×3/4" M	15mm×1/2" F	22mm×3/4" F
28mm×1" M	15mm×3/4" M	28mm×1" F	15mm×3/4" F
Female Tee		Wall Plated Elbow	
15mm×15×1/2" F	22mm×22×3/4" F	15mm×1/2" F	
28mm×28×1" F		22mm×3/4" F	

### ◆ Brass compression fitting

Male Coupling and Female Coupling			
15mm×1/2" M/F		22mm×3/4" M/F	
28mm×1" M/F		15mm×3/4" M/F	
Coupling		Male Elbow	
15mm×15mm	22mm×22mm	15mm×1/2" M	22mm×3/4" M
28mm×28mm	22mm×15mm	28mm×1" M	15mm×3/4" M
28mm×22mm			
Female Elbow		Elbow	
15mm×1/2" F	22mm×3/4" F	15mm×15mm	22mm×22mm
28mm×1" F	15mm×3/4" F	28mm×28mm	22mm×15mm
28mm×22mm			
Tee		Wall Plated Elbow	
15mm×15mm×1/2" F	15mm×1/2" F 22mm×3/4" F		
22mm×22mm×3/4" F			
22mm×22mm×1/2" F			
28mm×28mm×1" F			
15mm×15mm×15mm			
22mm×22mm×22mm			
28mm×28mm×28mm			
22mm×22mm×15mm			
22mm×15mm×22mm			

### ◆ Threaded fitting

Nipple F×M	Cap	Coupling M×M
3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"
Coupling F×F	Coupling M×F	Elbow F×F
3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"
Elbow M×F	Elbow M×M	Tee F×F×F
3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"
Reducing Bush F×F		Reducing Adapter M×M
1/2" ×3/8" 3/4" ×1/2"		1/2" ×3/8" 3/4" ×1/2"
1" ×1/2" 1" ×3/4"		1" ×1/2"
1 1/4" ×3/4" 1 1/4" ×1/2"		1 1/4" ×3/4" 1 1/4" ×1/2"
3 Piece Adapter M×F	3 Piece Adapter F×F	3 Piece Adapter M×M
3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"	3/8" 1/2" 3/4" 1"
3 Piece Elbow M×M		NUT
3/8" 1/2" 3/4" 1"		16×1/2" 20×3/4"
Female Adapter		
1/2" F×1/2" /16	1/2" F×3/4" /20	3/4" F×3/4" /20
Male Elbow		Female Elbow
1/2" /16×1/2" /16		1/2" F×1/2" /16 3/4" F×1/2" /16
3/4" /20×3/4" /20		1/2" F×3/4" /20 3/4" F×3/4" /20
Female Tee		
1/2" /16×1/2" F×1/2" /16 3/4" /20×1/2" F×3/4" /20		
3/4" /20×3/4" F×3/4" /20		
Male Tee		
1/2" /16×1/2" ×1/2" /16		
3/4" /20×1/2" ×3/4" /20		

# INSULATED COPPER TUBES PLASTIC-COATED COPPER TUBES

The main purposes :  
Air Conditioning,  
Water, Gas Etc.



### ◆ Standard size (inch)

Type	Size d2xt2/d1xt1	O.D. of the tube d1d2d3	Thickness of Insulator t1t2t3t4	Length	Material	Weight Pounds/feet
-P2320	1/4" x0.032	1.02" 0.87" 1.89"	0.35" 0.2"	30ft to 100ft	0	0.233
-P2330	3/8" x0.032	1.02" 0.87" 1.89"	0.35" 0.2"	30ft to 100ft	0	0.233
-P2420	1/4" x0.032	1.30" 0.87" 2.17"	0.394" 0.2"	30ft to 100ft	0	0.286
-P2430	1/2" x0.032	1.30" 0.87" 2.17"	0.394" 0.2"	30ft to 100ft	0	0.286
-P2520	1/4" x0.032	1.42" 0.87" 2.29"	0.394" 0.2"	30ft to 100ft	0	0.390
-P2530	5/8" x0.039	1.42" 0.87" 2.29"	0.394" 0.2"	30ft to 100ft	0	0.390
-P3520	3/8" x0.032	1.42" 1.02" 2.44"	0.394" 0.2"	30ft to 100ft	0	0.440
-P3530	5/8" x0.039	1.42" 1.02" 2.44"	0.394" 0.2"	30ft to 100ft	0	0.440
-P3620	3/8" x0.032	1.54" 1.02" 2.56"	0.394" 0.2"	30ft to 100ft	0	0.569
-P3630	3/4" x0.039	1.54" 1.02" 2.56"	0.394" 0.2"	30ft to 100ft	0	0.569
-P4620	1/2" x0.032	1.54" 1.30" 2.84"	0.394" 0.2"	30ft to 100ft	0	0.629
-P4630	3/4" x0.039	1.54" 1.30" 2.84"	0.394" 0.2"	30ft to 100ft	0	0.629

### PLASTIC-COATED COPPER TUBES ARE MADE ACCORDING TO EN1057 OR ASTM B88

DN (mm)	OD (mm)	Thickness (mm)	Gear-shaped loop (mm)	Parallel loop (mm)	Foam (mm)	Maximum deviation (mm)	Length	Maximum deviation (mm)
15	15	0.7	18.6	17	21.5	±0.20	2.9 to 5.8	0 to +10
20	22	0.9	25.6	24	28.5			
25	28		31.6	30				
32	35	1.2		37.6		±0.30	2.9 to 5.8	0 to +10
40	42			44.6				
50	54			56.8				
65	67	1.5		69.8		±0.40	2.9 to 5.8	0 to +10
80	76			78.8				
						±0.50		

# SMALL FURBISHED BRASS ROD SERIES

## • SMALL FURBISHED BRASS RODS

The main purposes :

Air Conditioning, Electricity, Machinery Etc.



Designation, Chemical Composition Of Small Furbished Brass Rods

Copper Alloy No.		Designation	Width or Diameter (mm)
JIS	UNS		
C2700	C27000	-	Round Rod 5 to 80
C2800	C28000	-	
-	C34000 C34500 C35000 C35300	ASTM B453	
-	C36000	ASTM B16	
C3601	C36000	-	
C3602	C36000	-	
C3603	-	-	
C3604	-	-	
C3605	-	-	
C3712 C3771	C37100 C37700	-	
C4622	C46200	-	
C4641	C46400	-	
-	C48500	ASTM B21	
-	C67300 C67600	ASTM B138	
C6782	-	-	
C6783	-	-	

## Copper fittings

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### Our Mainly Products

- Copper Tube
- Brass Fitting
- Brass Tube
- Brass Compression Fitting
- Brass Pex Fitting
- Stub Out Elbow
- Copper Manifold
- Refrigeration Accessories
- PVC Coated Copper Tube

# Copper fittings

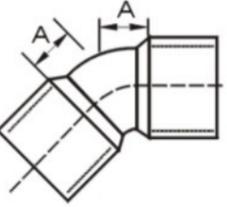
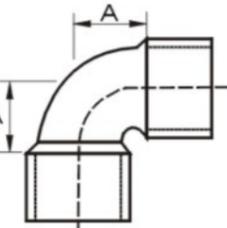
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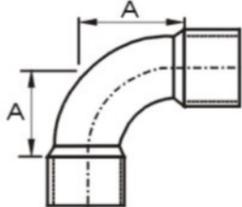
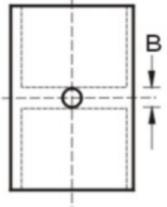
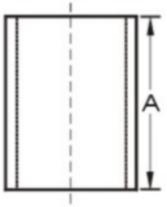
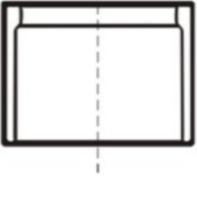


# Copper fittings

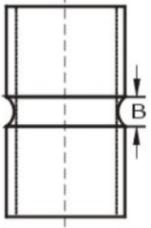
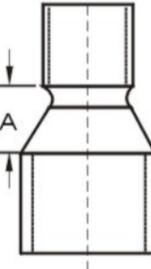
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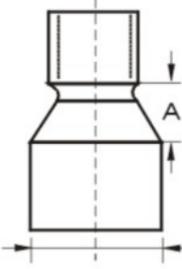


Drawing	Part No.	Actual Size(inch)	Nominal Size(inch)
<b>45° Elbow C × C</b>  MUELLER STYLE: WE-504 CONNECTION:CXC ELKHART STYLE:106 NIBCO STYLE:9606	10ECC01	Q5/16	
	10ECC02	Q1/4	1/8
	10ECC03	Q3/8	1/4
	10ECC04	Q1/2	3/8
	10ECC05	Q5/8	1/2
	10ECC06	Q3/4	5/8
	10ECC07	Q7/8	3/4
	10ECC08	Q 1	7/8
	10ECC09	Q1 1/8	1
	10ECC10	Q1 3/8	1 1/4
	10ECC11	Q1 5/8	1 1/2
	10ECC12	Q2 1/8	2
	10ECC13	Q2 5/8	2 1/2
	10ECC14	Q3 1/8	3
	10ECC15	Q3 5/8	3 1/2
	10ECC16	Q4 1/8	4
	10ECC17	Q5 1/8	5
	10ECC18	Q6 1/8	6
<b>90° Elbow C × C</b>  MUELLER STYLE: WE-500 CONNECTION:CXC ELKHART STYLE:107-C NIBCO STYLE:9607-1	11ECC01	Q5/16	
	11ECC02	Q1/4	1/8
	11ECC03	Q3/8	1/4
	11ECC04	Q1/2	3/8
	11ECC05	Q5/8	1/2
	11ECC06	Q3/4	5/8
	11ECC07	Q7/8	3/4
	11ECC08	Q 1	7/8
	11ECC09	Q1 1/8	1
	11ECC10	Q1 3/8	1 1/4
	11ECC11	Q1 5/8	1 1/2
	11ECC12	Q2 1/8	2
	11ECC13	Q2 5/8	2 1/2
	11ECC14	Q3 1/8	3
	11ECC15	Q3 5/8	3 1/2
	11ECC16	Q4 1/8	4
	11ECC17	Q6 1/8	6
	11ECC18	Q8 1/8	8
11ECC19	Q1/2 × 3/8	3/8 × 1/4	
11ECC20	Q5/8 × 1/2	1/2 × 3/8	
11ECC21	Q5/8 × 3/8	1/2 × 1/4	
11ECC22	Q7/8 × 5/8	3/4 × 1/2	
11ECC23	Q1 1/8 × 5/8	1 × 1/2	
11ECC24	Q1 1/8 × 7/8	1 × 3/4	
11ECC25	Q1 3/8 × 1 1/8	1-1/4 × 1	
11ECC26	Q1 3/8 × 7/8	1-1/4 × 3/4	
11ECC27	Q1 5/8 × 1 3/8	1 1/2 × 1 1/4	
11ECC28	Q2 1/8 × 1 5/8	2 × 1 1/2	

Drawing	Part No.	Actual Size(inch)	Nominal Size(inch)
<b>90° Long Elbow C × C</b>  MUELLER STYLE:WE-500L CONNECTION:CXC ELKHART STYLE:107-L NIBCO STYLE: 9607-LT	12ELCC01	Q5/16	
	12ELCC02	Q1/4	1/8
	12ELCC03	Q3/8	1/4
	12ELCC04	Q1/2	3/8
	12ELCC05	Q5/8	1/2
	12ELCC06	Q3/4	5/8
	12ELCC07	Q7/8	3/4
	12ELCC08	Q 1	7/8
	12ELCC09	Q1 1/8	1
	12ELCC10	Q1 3/8	1 1/4
	12ELCC11	Q1 5/8	1 1/2
	12ELCC12	Q2 1/8	2
	12ELCC13	Q2 5/8	2 1/2
	12ELCC14	Q3 1/8	3
	12ELCC15	Q3 5/8	3 1/2
	12ELCC16	Q4 1/8	4
<b>Couplings w/Stop C × C Dimple</b>  MUELLER STYLE:WC-400C CONNECTION:CXC ELKHART STYLE:100 NIBCO STYLE: 9600-DS	23CCC01	Q1/4	1/8
	23CCC02	Q3/8	1/4
	23CCC03	Q1/2	3/8
	23CCC04	Q5/8	
	23CCC05	Q3/4	5/8
	23CCC06	Q7/8	
	23CCC07	Q1 1/8	
	23CCC08	Q1 3/8	1 1/4
	23CCC09	Q1 5/8	1 1/2
	23CCC10	Q2 1/8	2
	23CCC11	Q2 5/8	2 1/2
	23CCC12	Q3 1/8	3
	23CCC13	Q4 1/8	4
	23CCC14	Q5 1/8	5
	23CCC15	Q6 1/8	6
23CCC16	Q8 1/8	8	
<b>Couplings Less/Stop C × C</b>  MUELLER STYLE: WC-400NS CONNECTION:CXC ELKHART STYLE: 101 NIBCO STYLE: 9601	24CCC01	Q1/4	1/8
	24CCC02	Q3/8	1/4
	24CCC03	Q1/2	3/8
	24CCC04	Q5/8	
	24CCC05	Q3/4	5/8
	24CCC06	Q7/8	
	24CCC07	Q1 1/8	1
	24CCC08	Q1 3/8	1 1/4
	24CCC09	Q1 5/8	1 1/2
	24CCC10	Q2 1/8	2
	24CCC11	Q2 5/8	2 1/2
	24CCC12	Q3 1/8	3
	24CCC13	Q4 1/8	4
	24CCC14	Q5 1/8	5
	<b>Flush Bushings FTG × C</b>  CONNECTION:FTGX ELKHART STYLE: 119 NIBCO STYLE: 9618	25CFC01	Q3/8 × 1/4
25CFC02		Q3/4 × 3/8	3/8 × 1/4
25CFC03		Q5/8 × 1/2	1/2 × 3/8
25CFC04		Q5/8 × 3/8	1/2 × 1/4
25CFC05		Q7/8 × 3/4	3/4 × 5/8
25CFC06		Q7/8 × 5/8	3/4 × 1/2
25CFC07		Q7/8 × 1/2	3/4 × 3/8
25CFC08		Q7/8 × 3/8	3/4 × 1/4
25CFC09		Q1 1/8 × 7/8	1 × 3/4
25CFC10		Q1 1/8 × 3/4	1 × 5/8
25CFC11		Q1 1/8 × 5/8	1 × 1/2
25CFC12		Q1 1/8 × 1 1/8	1 1/4 × 1
25CFC13		Q1 1/8 × 7/8	1 1/4 × 3/4
25CFC14		Q1 5/8 × 7/8	1 1/2 × 1 1/4
25CFC15		Q2 1/8 × 1 5/8	2 × 1 1/2



Drawing	Part No.	Actual Size(inch)	Nomial Size(inch)
<p>Coupling w/stop rolled</p> 	MUELLER STYLE: WC-400 CONNECTION: CXC ELKHART STYLE: 100 NIBCO STYLE: 9600-RS	20CCC01 Q5/16	
		20CCC02 Q1/4	1/8
		20CCC03 Q3/8	1/4
		20CCC04 Q1/2	3/8
		20CCC05 Q5/8	1/2
		20CCC06 Q3/4	5/8
		20CCC07 Q7/8	3/4
		20CCC08 Q1	7/8
		20CCC09 Q1 1/8	1
		20CCC10 Q1 3/8	1 1/4
		20CCC11 Q1 5/8	1 1/2
		20CCC12 Q2 1/8	2
		20CCC13 Q2 5/8	2 1/2
		20CCC14 Q3 1/8	3
		20CCC15 Q3 5/8	3 1/2
		20CCC16 Q4 1/8	4
		20CCC17 Q5 1/8	5
		20CCC18 Q6 1/8	6
		20CCC19 Q8 1/8	8
<p>Reducing coupling w/stop C x C</p> 	MUELLER STYLE: WC-400 R CONNECTION: CXC ELKHART STYLE: 101-R NIBCO STYLE: 9600	21RCC01 Q1/4 x 3/16	
		21RCC02 Q3/4 x 3/8	5/8 x 1/4
		21RCC03 Q1/2 x 3/8	3/8 x 1/4
		21RCC04 Q1/2 x 1/4	3/8 x 1/8
		21RCC05 Q5/8 x 3/8	1/2 x 1/4
		21RCC06 Q3/8 x 1/4	1/4 x 1/8
		21RCC07 Q3/4 x 1/2	5/8 x 3/8
		21RCC08 Q5/8 x 1/2	1/2 x 3/8
		21RCC09 Q5/8 x 1/4	1/2 x 1/8
		21RCC10 Q7/8 x 1/2	3/4 x 3/8
		21RCC11 Q3/4 x 5/8	5/8 x 1/2
		21RCC12 Q7/8 x 3/8	3/4 x 1/4
		21RCC13 Q7/8 x 5/8	3/4 x 1/2
		21RCC14 Q1 1/8 x 5/8	1 x 1/2
		21RCC15 Q1 3/8 x 5/8	1 1/4 x 1/2
		21RCC16 Q7/8 x 3/4	3/4 x 5/8
		21RCC17 Q1 1/8 x 3/4	1 x 5/8
		21RCC18 Q1 1/8 x 7/8	1 x 3/4
		21RCC19 Q1 3/8 x 7/8	1 1/4 x 3/4
		21RCC20 Q1 3/8 x 3/4	1 1/4 x 5/8
		21RCC21 Q1 3/8 x 1 1/8	1 1/4 x 1
		21RCC22 Q1 5/8 x 7/8	1 1/2 x 3/4
		21RCC23 Q1 5/8 x 5/8	1 1/2 x 1/2
		21RCC24 Q1 5/8 x 3/4	1 1/2 x 5/8
		21RCC25 Q1 5/8 x 1 1/8	1 1/2 x 1
		21RCC26 Q1 5/8 x 1 3/8	1 1/2 x 1 1/4
		21RCC27 Q2 1/8 x 7/8	2 x 3/4
		21RCC28 Q2 1/8 x 5/8	2 x 1/2
		21RCC29 Q2 1/8 x 1 1/8	2 x 1
		21RCC30 Q2 1/8 x 1 3/8	2 x 1 1/4
		21RCC31 Q2 1/8 x 1 5/8	2 x 1 1/2
		21RCC32 Q2 5/8 x 1 3/8	2 1/2 x 1 1/4
		21RCC33 Q2 5/8 x 1 1/8	2 1/2 x 1
		21RCC34 Q2 5/8 x 2 1/8	2 1/2 x 2
		21RCC35 Q2 5/8 x 1 5/8	2 1/2 x 1 1/2
		21RCC36 Q3 1/8 x 2 5/8	3 x 2 1/2
		21RCC37 Q3 1/8 x 1 3/8	3 x 1 1/4
		21RCC38 Q3 1/8 x 1 5/8	3 x 1 1/2
		21RCC39 Q3 1/8 x 2 1/8	3 x 2
		21RCC40 Q3 1/8 x 2 5/8	3 x 2 1/2
		21RCC41 Q3 5/8 x 3 1/8	3 1/2 x 3
		21RCC42 Q4 1/8 x 2 1/8	4 x 2
		21RCC43 Q4 1/8 x 3 1/8	4 x 3
		21RCC44 Q4 1/8 x 3 5/8	4 x 3 1/2
		21RCC45 Q4 1/8 x 2 5/8	4 x 2 1/2
		21RCC46 Q4 1/8 x 2 1/8	4 x 2
		21RCC47 Q6 1/8 x 4 1/8	6 x 4
		21RCC48 Q6 1/8 x 3 1/8	6 x 3

Drawing	Part No.	Actual Size(inch)	Nomial Size(inch)
<p>Fitting Reducer FTG x C</p> 	CONNECTION: FTGXC ELKHART STYLE: 118 NIBCO STYLE: 9600-2	22RFC01 Q3/4 x 3/8	5/8 x 1/4
		22RFC02 Q1/2 x 3/8	3/8 x 1/4
		22RFC03 Q1/2 x 1/4	3/8 x 1/8
		22RFC04 Q5/8 x 3/8	1/2 x 1/4
		22RFC05 Q3/8 x 1/4	1/4 x 1/8
		22RFC06 Q3/4 x 1/2	5/8 x 3/8
		22RFC07 Q5/8 x 1/2	1/2 x 3/8
		22RFC08 Q7/8 x 3/8	3/4 x 1/4
		22RFC09 Q7/8 x 1/2	3/4 x 3/8
		22RFC10 Q3/4 x 5/8	5/8 x 1/2
		22RFC11 Q7/8 x 5/8	3/4 x 1/2
		22RFC12 Q7/8 x 3/4	3/4 x 5/8
		22RFC13 Q1 1/8 x 1/2	1 x 3/8
		22RFC14 Q1 1/8 x 5/8	1 x 1/2
		22RFC15 Q1 1/8 x 3/4	1 x 5/8
		22RFC16 Q1 1/8 x 7/8	1 x 3/4
		22RFC17 Q1 3/8 x 7/8	1 1/4 x 3/4
		22RFC18 Q1 3/8 x 3/4	1 1/4 x 5/8
		22RFC19 Q1 3/8 x 1 1/8	1 1/4 x 1
		22RFC20 Q1 3/8 x 5/8	1 1/4 x 1/2
		22RFC21 Q1 5/8 x 7/8	1 1/2 x 1/2
		22RFC22 Q1 5/8 x 7/8	1 1/2 x 3/4
		22RFC23 Q1 5/8 x 1 1/8	1 1/2 x 1
		22RFC24 Q1 5/8 x 1 3/8	1 1/2 x 1 1/4
		22RFC25 Q2 1/8 x 7/8	2 x 3/4
		22RFC26 Q2 1/8 x 5/8	2 x 1/2
		22RFC27 Q2 1/8 x 1 1/8	2 x 1
		22RFC28 Q2 1/8 x 1 3/8	2 x 1 1/4
		22RFC29 Q2 1/8 x 1 5/8	2 x 1 1/2
		22RFC30 Q2 5/8 x 2 1/8	2 1/2 x 2
		22RFC31 Q2 5/8 x 1 3/8	2 1/2 x 1 1/4
		22RFC32 Q2 5/8 x 1 5/8	2 1/2 x 1 1/2
		22RFC33 Q2 5/8 x 1 1/8	2 1/2 x 1
		22RFC34 Q3 1/8 x 2 3/8	3 x 2 1/4
		22RFC35 Q3 1/8 x 1 3/8	3 x 1 1/4
		22RFC36 Q3 1/8 x 1 5/8	3 x 1 1/2
		22RFC37 Q3 1/8 x 2 1/8	3 x 2
		22RFC38 Q3 1/8 x 2 5/8	3 x 2 1/2
		22RFC39 Q3 5/8 x 3 1/8	3 1/2 x 3
		22RFC40 Q4 1/8 x 2 1/8	4 x 2
		22RFC41 Q4 1/8 x 3 5/8	4 x 3 1/2
		22RFC42 Q4 1/8 x 3 1/8	4 x 3
		22RFC43 Q4 1/8 x 2 3/8	4 x 2 1/2
		22RFC44 Q4 1/8 x 1 3/8	4 x 1 1/4

# Copper fittings

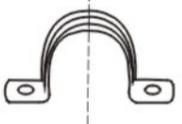
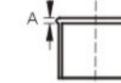
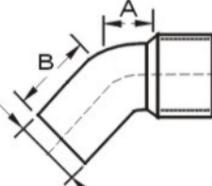
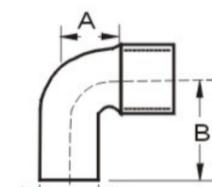
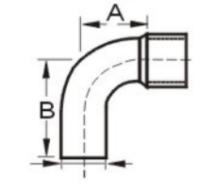
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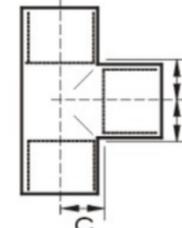
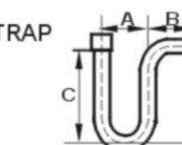
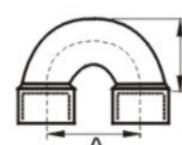
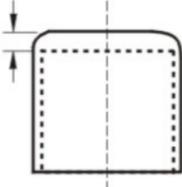
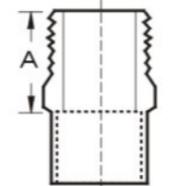


# Copper fittings

ASME B 16.22



Drawing	Part No.	Actual Size(inch)	Nominal Size(inch)
<b>TUBE STRAP</b> 	MUELLER STYLE: WS-1100 CONNECTION: CXCXC ELKHART STYLE: 120 NIBCO STYLE: 9624	53TSP001 Q1/4	1/8
	53TSP002 Q3/8	1/4	
	53TSP003 Q1/2	3/8	
	53TSP004 Q5/8	1/2	
	53TSP005 Q3/4	5/8	
	53TSP006 Q7/8	3/4	
	53TSP007 Q1 1/8	1	
	53TSP008 Q1 3/8	1 1/4	
	53TSP009 Q1 5/8	1 1/2	
	53TSP010 Q2 1/8	2	
<b>Fitting End Plugs</b> 	CONNECTION: FTG MUELLER STYLE: WC-416 ELKHART STYLE: 116 NIBCO STYLE: 9616	54IN010 Q1/2	3/8
	54IN011 Q3/4	5/8	
	54IN012 Q5/8	1/2	
	54IN013 Q7/8	3/4	
	54IN014 Q1 1/8	1	
	54IN015 Q1 3/8	1 1/4	
<b>45° Street Elbow FTG×C</b> 	MUELLER STYLE: WE-505 CONNECTION: FTGX C ELKHART STYLE: 106-2 NIBCO STYLE: 9606-2	13EFC01 Q5/16	
	13EFC02 Q1/4	1/8	
	13EFC03 Q3/8	1/4	
	13EFC04 Q1/2	3/8	
	13EFC05 Q5/8	1/2	
	13EFC06 Q3/4	5/8	
	13EFC07 Q7/8	3/4	
	13EFC08 Q1	7/8	
	13EFC09 Q1 1/8	1	
	13EFC10 Q1 3/8	1 1/4	
	13EFC11 Q1 5/8	1 1/2	
	13EFC12 Q2 1/8	2	
	13EFC13 Q2 5/8	2 1/2	
	13EFC14 Q3 1/8	3	
	13EFC15 Q3 5/8	3 1/2	
	13EFC16 Q4 1/8	4	
<b>90° Street Elbow FTG×C</b> 	MUELLER STYLE: WE-503 CONNECTION: FTGX C ELKHART STYLE: 107-C-2 NIBCO STYLE: 9607-2	14EFC01 Q3/8	1/4
	14EFC02 Q1/2	3/8	
	14EFC03 Q5/8	1/2	
	14EFC04 Q3/4	5/8	
	14EFC05 Q7/8	3/4	
	14EFC06 Q1	7/8	
	14EFC07 Q1 1/8	1	
	14EFC08 Q1 3/8	1 1/4	
	14EFC09 Q1 5/8	1 1/2	
	14EFC10 Q2 1/8	2	
	14EFC11 Q2 5/8	2 1/2	
	14EFC12 Q3 1/8	3	
	14EFC13 Q3 5/8	3 1/2	
	14EFC14 Q4 1/8	4	
<b>90° Street Long Elbow FTG×C</b> 	MUELLER STYLE: WE-503L CONNECTION: FTGX C ELKHART STYLE: 107-L-2 NIBCO STYLE: 9607-2-LT	15ELFC02 Q1/4	1/8
	15ELFC03 Q3/8	1/4	
	15ELFC04 Q1/2	3/8	
	15ELFC05 Q5/8	1/2	
	15ELFC06 Q3/4	5/8	
	15ELFC07 Q7/8	3/4	
	15ELFC08 Q1 1/8	1	
	15ELFC09 Q1 3/8	1 1/4	
	15ELFC10 Q1 5/8	1 1/2	
	15ELFC11 Q2 1/8	2	
	15ELFC12 Q2 5/8	2 1/2	
	15ELFC13 Q3 1/8	3	

Drawing	Part No.	Actual Size(inch)	Nominal Size(inch)
<b>TEE C×C×C</b> 	MUELLER STYLE: WT-600 CONNECTION: CXCXC ELKHART STYLE: 111 NIBCO STYLE: 9611	30TCC01 Q1/4	1/8
	30TCC02 Q3/8	1/4	
	30TCC03 Q1/2	3/8	
	30TCC04 Q5/8	1/2	
	30TCC05 Q3/4	5/8	
	30TCC06 Q7/8	3/4	
	30TCC07 Q1	7/8	
	30TCC08 Q1 1/8	1	
	30TCC09 Q1 3/8	1 1/4	
	30TCC10 Q1 5/8	1 1/2	
	30TCC11 Q2 1/8	2	
	30TCC12 Q2 5/8	2 1/2	
	30TCC13 Q3 1/8	3	
	30TCC14 Q3 5/8	3 1/2	
	30TCC15 Q4 1/8	4	
	30TCC16 Q5 1/8	5	
	30TCC17 Q6 1/8	6	
	30TCC18 Q8 1/8	8	
<b>P-TRAP</b> 	MUELLER STYLE: WE-554P CONNECTION: CXC ELKHART STYLE: N/A NIBCO STYLE: 9698	41PTP01 Q5/8	1/2
	41PTP02 Q3/4	5/8	
	41PTP03 Q7/8	3/4	
	41PTP04 Q1 1/8	1	
	41PTP05 Q1 3/8	1 1/4	
	41PTP06 Q1 5/8	1 1/2	
	41PTP07 Q2 1/8	2	
<b>U-BEND</b> 	MUELLER STYLE: WE-512 CONNECTION: CXC ELKHART STYLE: 138 NIBCO STYLE: 9638	42UBD01 Q1 1/8×3	1
	42UBD02 Q1 3/8×3 3/4	1 1/4	
	42UBD03 Q1 5/8×4 1/2	1 1/2	
	42UBD04 Q5/8×1 7/8	1/2	
	42UBD05 Q3/4×2 1/2	5/8	
	42UBD06 Q3/8×1 1/2	1/4	
	42UBD07 Q7/8×2 1/2	3/4	
	42UBD08 Q1 1/2×1 1/2	3/8	
	42UBD09 Q2 1/8×5 1/2	2	
<b>CAP</b> 	MUELLER STYLE: WC-415 CONNECTION: C ELKHART STYLE: 117 NIBCO STYLE: 9617	40CAP01 Q1/4	1/8
	40CAP02 Q3/8	1/4	
	40CAP03 Q1/2	3/8	
	40CAP04 Q5/8	1/2	
	40CAP05 Q3/4	5/8	
	40CAP06 Q7/8	3/4	
	40CAP07 Q1 1/8	1	
	40CAP08 Q1 3/8	1 1/4	
	40CAP09 Q1 5/8	1 1/2	
	40CAP10 Q2 1/8	2	
	40CAP11 Q2 5/8	2 1/2	
	40CAP12 Q3 1/8	3	
	40CAP13 Q4 1/8	4	
	40CAP14 Q6 1/8	6	
<b>MALE ADAPTER C×M</b> 	MUELLER STYLE: WC-401 CONNECTION: CXM ELKHART STYLE: 104 NIBCO STYLE: 9604	60CM01 Q3/8×1/8	1/4×1/8
	60CM02 Q1/2×3/8	3/8×3/8	
	60CM03 Q5/8×1/2	1/2×1/2	
	60CM04 Q5/8×3/4	1/2×3/4	
	60CM05 Q5/8×3/8	1/2×3/8	
	60CM06 Q7/8×3/4	3/4×3/4	
	60CM07 Q1-1/8×1	1×1	
	60CM08 Q1-1/8×3/4	1×3/4	
	60CM09 Q1-3/8×1-1/4	1-1/4×1-1/4	
	60CM10 Q1-3/8×1	1-1/4×1	
	60CM11 Q1-5/8×1-1/2	1-1/2×1-1/2	
	60CM12 Q2-1/8×2	2×2	

# Copper fittings

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# Copper fittings

ASME B 16.22

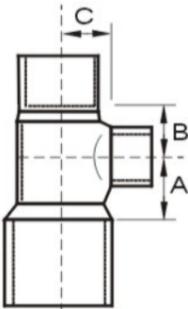


Drawing Part No. Actual Size(inch) Nomial Size(inch)

Part No.	Actual Size(inch)	Nomial Size(inch)
31TR.C01	Q3/8 × 1/4	1/4 × 1/8
31TR.C02	Q3/8 × 1/2	1/4 × 3/8
31TR.C03	Q3/8 × 1/4 × 1/4	1/4 × 1/8 × 1/8
31TR.C04	Q1/2 × 5/8	3/8 × 1/2
31TR.C05	Q1/2 × 3/8	3/8 × 3/8 × 1/4
31TR.C06	Q5/8 × 1/2	1/2 × 1/2 × 3/8
31TR.C07	Q5/8 × 11/8	1/2 × 1/2 × 1
31TR.C08	Q5/8 × 3/8	1/2 × 1/2 × 1/4
31TR.C09	Q5/8 × 1/4	1/2 × 1/2 × 1/8
31TR.C10	Q5/8 × 1/2 × 5/8	1/2 × 3/8 × 1/2
31TR.C11	Q5/8 × 1/2 × 1/2	1/2 × 3/8 × 3/8
31TR.C12	Q5/8 × 3/8 × 1/2	1/2 × 1/4 × 1/2
31TR.C13	Q5/8 × 7/8	1/2 × 3/4
31TR.C14	Q3/4 × 3/8	5/8 × 5/8 × 1/4
31TR.C15	Q3/4 × 5/8 × 5/8	5/8 × 1/2 × 1/2
31TR.C16	Q3/4 × 1/2	5/8 × 3/8
31TR.C17	Q7/8 × 1/2	3/4 × 3/8
31TR.C18	Q7/8 × 3/8	3/4 × 3/4 × 1/4
31TR.C19	Q7/8 × 3/4	3/4 × 5/8
31TR.C20	Q7/8 × 5/8	3/4 × 1/2
31TR.C21	Q7/8 × 1 1/8	3/4 × 1
31TR.C22	Q7/8 × 5/8 × 5/8	3/4 × 1/2 × 1/2
31TR.C23	Q7/8 × 5/8 × 7/8	3/4 × 1/2 × 3/4
31TR.C24	Q1 1/8 × 1/2	1 × 3/8
31TR.C25	Q1 1/8 × 3/4	1 × 5/8
31TR.C26	Q1 1/8 × 5/8	1 × 1/2
31TR.C27	Q1 1/8 × 7/8 × 1 1/8	1 × 3/4 × 1
31TR.C28	Q1 1/8 × 7/8	1 × 3/4
31TR.C29	Q1 1/8 × 7/8 × 7/8	1 × 3/4 × 3/4
31TR.C30	Q1 1/8 × 7/8 × 5/8	1 × 3/4 × 1/2
31TR.C31	Q1 1/8 × 5/8 × 5/8	1 × 1/2 × 1/2
31TR.C32	Q1 1/8 × 5/8 × 7/8	1 × 1/2 × 3/4
31TR.C33	Q1 1/8 × 1 1/8 × 7/8	1 × 1 × 3/4
31TR.C34	Q1 1/8 × 5/8 × 1 1/8	1 × 1/2 × 1
31TR.C35	Q1 1/8 × 1 1/8 × 1 5/8	1 × 1 × 1 1/2
31TR.C36	Q1 1/8 × 1 1/8 × 1 3/8	1 × 1 × 1 1/4
31TR.C37	Q1 3/8 × 1/2	1 1/4 × 3/8
31TR.C38	Q1 3/8 × 5/8	1 1/4 × 1/2
31TR.C39	Q1 3/8 × 7/8	1 1/4 × 3/4
31TR.C40	Q1 3/8 × 1 3/8 × 2 1/8	1 1/4 × 1 1/4 × 2

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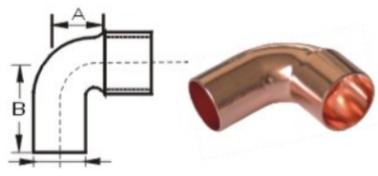
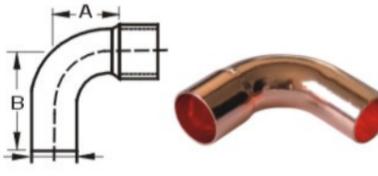
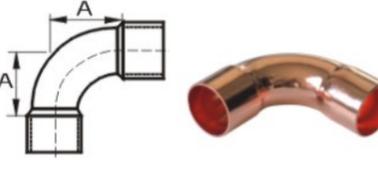
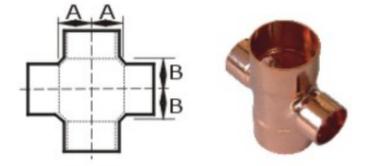
MUELLER STYLE: WT-600  
CONNECTION: CXCXC  
ELKHART STYLE: 111  
NIBCO STYLE: 9611

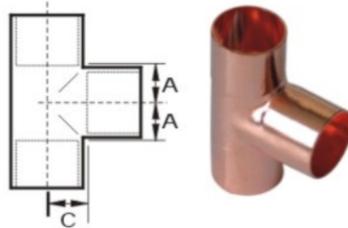


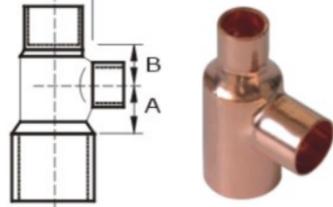
Part No.	Actual Size(inch)	Nomial Size(inch)	Part No.	Actual Size(inch)	Nomial Size(inch)
31TR.C41	Q1 3/8 × 1 5/8	1 1/4 × 1 1/2	31TR.C96	Q2 1/8 × 1 3/8 × 1 3/8	2 × 1 1/4 × 1 1/4
31TR.C42	Q1 3/8 × 1 1/8	1 1/4 × 1	31TR.C97	Q2 1/8 × 1 5/8 × 7/8	2 × 1 1/2 × 3/4
31TR.C43	Q1 3/8 × 1 1/8 × 13/8	1 1/4 × 1 × 1 1/4	31TR.C98	Q2 1/8 × 1 5/8 × 1 5/8	2 × 1 1/2 × 1 1/2
31TR.C44	Q1 3/8 × 3/4	1 1/4 × 5/8	31TR.C99	Q2 5/8 × 5/8	2 1/2 × 1/2
31TR.C45	Q1 3/8 × 1 1/8 × 1 1/8	1 1/4 × 1 × 1	31TR.C100	Q2 5/8 × 7/8	2 1/2 × 3/4
31TR.C46	Q1 3/8 × 1 1/8 × 5/8	1 1/4 × 1 × 1/2	31TR.C101	Q2 5/8 × 1 1/8	2 1/2 × 1
31TR.C47	Q1 3/8 × 7/8 × 1 1/8	1 1/4 × 3/4 × 1	31TR.C102	Q2 5/8 × 1 3/8	2 1/2 × 1 1/4
31TR.C48	Q1 3/8 × 7/8 × 7/8	1 1/4 × 3/4 × 3/4	31TR.C103	Q2 5/8 × 1 5/8	2 1/2 × 1 1/2
31TR.C49	Q1 3/8 × 1 1/8 × 7/8	1 1/4 × 1 × 3/4	31TR.C104	Q2 5/8 × 2 1/8 × 15/8	2 1/2 × 2 × 2 1/2
31TR.C50	Q1 3/8 × 5/8 × 5/8	1 1/4 × 1/2 × 1/2	31TR.C105	Q2 5/8 × 2 1/8 × 13/8	2 1/2 × 2 × 1 1/4
31TR.C51	Q1 3/8 × 7/8 × 1 3/8	1 1/4 × 3/4 × 1 1/4	31TR.C106	Q2 5/8 × 2 1/8 × 11/8	2 1/2 × 2 × 1
31TR.C52	Q1 3/8 × 5/8 × 1 3/8	1 1/4 × 1/2 × 1 1/4	31TR.C107	Q2 5/8 × 2 1/8 × 7/8	2 1/2 × 2 × 3/4
31TR.C53	Q1 3/8 × 7/8 × 5/8	1 1/4 × 3/4 × 1/2	31TR.C108	Q2 5/8 × 2 1/8 × 5/8	2 1/2 × 2 × 1/2
31TR.C54	Q1 5/8 × 1/2	1 1/2 × 3/8	31TR.C109	Q2 5/8 × 15/8 × 25/8	2 1/2 × 1 1/2 × 2 1/2
31TR.C55	Q1 5/8 × 5/8	1 1/2 × 1/2	31TR.C110	Q2 5/8 × 13/8 × 25/8	2 1/2 × 1 1/4 × 2 1/2
31TR.C56	Q1 5/8 × 7/8	1 1/2 × 3/4	31TR.C111	Q2 5/8 × 13/8 × 23/8	2 1/2 × 1 1/4 × 1 1/4
31TR.C57	Q1 5/8 × 2 1/8	1 1/2 × 1 1/2 × 2	31TR.C112	Q2 5/8 × 11/8 × 25/8	2 1/2 × 1 × 2 1/2
31TR.C58	Q1 5/8 × 1 1/8 × 5/8	1 1/2 × 1 × 1/2	31TR.C113	Q2 5/8 × 2 1/8	2 1/2 × 2
31TR.C59	Q1 5/8 × 7/8 × 5/8	1 1/2 × 3/4 × 1/2	31TR.C114	Q2 5/8 × 7/8 × 2 5/8	2 1/2 × 3/4 × 2 1/2
31TR.C60	Q1 5/8 × 7/8 × 15/8	1 1/2 × 3/4 × 1 1/2	31TR.C115	Q2 5/8 × 2 1/8 × 1 5/8	2 1/2 × 2 × 1 1/2
31TR.C61	Q1 5/8 × 7/8 × 13/8	1 1/2 × 3/4 × 1 1/4	31TR.C116	Q2 5/8 × 2 1/8 × 2 1/8	2 1/2 × 2 × 2
31TR.C62	Q1 5/8 × 7/8 × 11/8	1 1/2 × 3/4 × 1	31TR.C117	Q3 1/8 × 3 1/8 × 5/8	3 × 3 × 1/2
31TR.C63	Q1 5/8 × 7/8 × 7/8	1 1/2 × 3/4 × 3/4	31TR.C118	Q3 1/8 × 7/8	3 × 3/4
31TR.C64	Q1 5/8 × 1 1/8 × 1 1/8	1 1/2 × 1 × 1	31TR.C119	Q3 1/8 × 1 1/8	3 × 1
31TR.C65	Q1 5/8 × 1 1/8 × 1 3/8	1 1/2 × 1 × 1 1/4	31TR.C120	Q3 1/8 × 1 3/8	3 × 1 1/4
31TR.C66	Q1 5/8 × 1 3/8 × 7/8	1 1/2 × 1 1/4 × 3/4	31TR.C121	Q3 1/8 × 1 5/8	3 × 1 1/2
31TR.C67	Q1 5/8 × 1 3/8 × 5/8	1 1/2 × 1 1/4 × 1/2	31TR.C122	Q3 1/8 × 2 1/8	3 × 2
31TR.C68	Q1 5/8 × 1 3/8 × 15/8	1 1/2 × 1 1/4 × 1 1/2	31TR.C123	Q3 1/8 × 2 5/8	3 × 2 1/2
31TR.C69	Q1 5/8 × 1 3/8 × 13/8	1 1/2 × 1 1/4 × 1 1/4	31TR.C124	Q3 1/8 × 2 5/8 × 3 1/8	3 × 2 1/2 × 3
31TR.C70	Q1 5/8 × 1 3/8 × 11/8	1 1/2 × 1 1/4 × 1	31TR.C125	Q3 1/8 × 2 5/8 × 25/8	3 × 2 1/2 × 2 1/2
31TR.C71	Q1 5/8 × 1 3/8 × 15/8	1 1/2 × 1 1/2 × 1 1/2	31TR.C126	Q3 1/8 × 2 5/8 × 2 1/8	3 × 2 1/2 × 2
31TR.C72	Q1 5/8 × 1 3/8	1 1/2 × 1 1/4	31TR.C127	Q3 1/8 × 2 5/8 × 15/8	3 × 2 1/2 × 1 1/2
31TR.C73	Q1 5/8 × 1 1/8 × 1 5/8	1 1/2 × 1 × 1 1/2	31TR.C128	Q3 1/8 × 2 5/8 × 11/8	3 × 2 1/2 × 1
31TR.C74	Q1 5/8 × 1 1/8 × 7/8	1 1/2 × 1 × 3/4	31TR.C129	Q3 1/8 × 2 5/8 × 7/8	3 × 2 1/2 × 3/4
31TR.C75	Q1 5/8 × 1 1/8	1 1/2 × 1	31TR.C130	Q3 1/8 × 2 1/8 × 3 1/8	3 × 2 × 3
31TR.C76	Q2 1/8 × 5/8	2 × 1/2	31TR.C131	Q3 1/8 × 2 1/8 × 25/8	3 × 2 × 2 1/2
31TR.C77	Q2 1/8 × 7/8	2 × 3/4	31TR.C132	Q3 1/8 × 2 1/8 × 2 1/8	3 × 2 × 2
31TR.C78	Q2 1/8 × 1 3/8	2 × 1 1/4	31TR.C133	Q3 1/8 × 2 1/8 × 15/8	3 × 2 × 1 1/2
31TR.C79	Q2 1/8 × 1 1/8	2 × 2 × 1	31TR.C134	Q3 1/8 × 15/8 × 3 1/8	3 × 1 1/2 × 3
31TR.C80	Q2 1/8 × 1 5/8 × 2 1/8	2 × 1 1/2 × 2	31TR.C135	Q4 1/8 × 3 1/8	4 × 3
31TR.C81	Q2 1/8 × 1 5/8 × 1 1/8	2 × 1 1/2 × 1	31TR.C136	Q4 1/8 × 2 1/8	4 × 2
31TR.C82	Q2 1/8 × 1 5/8 × 5/8	2 × 1 1/2 × 1/2	31TR.C137	Q4 1/8 × 1 5/8	4 × 1 1/2
31TR.C83	Q2 1/8 × 1 3/8 × 2 1/8	2 × 1 1/4 × 2	31TR.C138	Q4 1/8 × 2 5/8	4 × 4 × 2 1/2
31TR.C84	Q2 1/8 × 1 3/8 × 15/8	2 × 1 1/4 × 1 1/2	31TR.C139	Q4 1/8 × 1 3/8	4 × 4 × 1 1/4
31TR.C85	Q2 1/8 × 1 3/8 × 1 1/8	2 × 1 1/4 × 1	31TR.C140	Q4 1/8 × 1 1/8	4 × 4 × 1
31TR.C86	Q2 1/8 × 1 3/8 × 7/8	2 × 1 1/4 × 3/4	31TR.C141	Q4 1/8 × 7/8	4 × 4 × 3/4
31TR.C87	Q2 1/8 × 1 1/8 × 2 1/8	2 × 1 × 2	31TR.C142	Q4 1/8 × 5/8	4 × 4 × 1/2
31TR.C88	Q2 1/8 × 1 1/8 × 15/8	2 × 1 × 1 1/2	31TR.C143	Q4 1/8 × 3 1/8 × 4 1/8	4 × 3 × 4
31TR.C89	Q2 1/8 × 1 1/8 × 1 1/8	2 × 1 × 1	31TR.C144	Q4 1/8 × 3 1/8 × 3 1/8	4 × 3 × 3
31TR.C90	Q2 1/8 × 7/8 × 15/8	2 × 3/4 × 1 1/2	31TR.C145	Q4 1/8 × 3 1/8 × 2 1/8	4 × 3 × 2
31TR.C91	Q2 1/8 × 7/8 × 2 1/8	2 × 3/4 × 2	31TR.C146	Q4 1/8 × 2 1/8 × 4 1/8	4 × 2 × 4
31TR.C92	Q2 1/8 × 5/8 × 2 1/8	2 × 1/2 × 2	31TR.C147	Q6 1/8 × 6 1/8 × 4 1/8	6 × 6 × 4
31TR.C93	Q2 1/8 × 2 1/8 × 25/8	2 × 2 × 2 1/2	31TR.C148	Q6 1/8 × 6 1/8 × 3 1/8	6 × 6 × 3
31TR.C94	Q2 1/8 × 1 5/8	2 × 1 1/2	31TR.C149	Q6 1/8 × 6 1/8 × 2 1/8	6 × 6 × 2
31TR.C95	Q2 1/8 × 1 5/8 × 1 3/8	2 × 1 1/2 × 1 1/4	31TR.C150	Q8 1/8 × 8 1/8 × 4 1/8	8 × 8 × 4

Drawing	Part No.	Actual Size(inch)	Nomial Size(inch)
<b>FEMALE ADAPTER C×F</b>  MUELLER STYLE: WC-402 CONNECTION: CXF ELKHART STYLE: 103 NIBCO STYLE: 9603 	61CF01	Q1/2×3/8	3/8×3/8
	61CF02	Q5/8×1/2	1/2×1/2
	61CF03	Q5/8×3/4	1/2×3/4
	61CF04	Q5/8×3/8	1/2×3/8
	61CF05	Q5/8×1/4	1/2×1/4
	61CF06	Q7/8×3/4	3/4×3/4
	61CF07	Q7/8×1/2	3/4×1/2
	61CF08	Q1-1/8×1	1×1
	61CF09	Q1-1/8×3/4	1×3/4
	61CF10	Q1-3/8×1-1/4	1-1/4×1-1/4
	61CF11	Q1-5/8×1-1/2	1-1/2×1-1/2
	61CF12	Q2-1/8×2	2×2
	<b>UNION BRASS</b>  MUELLER STYLE: WC-407 CONNECTION: CXC ELKHART STYLE: 4733 NIBCO STYLE: 9633 	62UN01	Q1/2
62UN02		Q5/8	1/2
62UN03		Q7/8	3/4
62UN04		Q1-1/8	1
<b>FEMALE ADAPTER FTG×F</b>  MUELLER STYLE: WC-405 CONNECTION: FTGXF ELKHART STYLE: 103-2 NIBCO STYLE: 9603-2 	62FF01	Q3/8×3/8	1/4×1/4
	62FF02	Q1/2×1/2	3/8×3/8
	62FF03	Q1/2×3/8	3/8×1/4
	62FF04	Q1/2×1/4	3/8×1/8
	62FF05	Q5/8×1/2	1/2×3/8
	62FF06	Q5/8×3/8	1/2×1/4
	62FF07	Q7/8×3/4	3/4×5/8
	62FF08	Q7/8×1/2	3/4×3/8
	62FF09	Q1-1/8×1	1×7/8
	62FF10	Q1-1/8×3/4	1×5/8
	62FF11	Q1-3/8×1-1/4	1-1/4×1-1/8
	62FF12	Q1-5/8×1-1/2	1-1/2×1-3/8
	62FF13	Q2-1/8×2	2×1-7/8
	62FF14	Q2-5/8×2-1/2	2-1/2×2-3/8
<b>MALE ADAPTER FTG×M</b>  MUELLER STYLE: WC-404 CONNECTION: FTGXM ELKHART STYLE: 104-2 NIBCO STYLE: 9604-2 	63FM01	Q3/8×3/8	1/4×1/4
	63FM02	Q1/2×3/8	3/8×1/4
	63FM03	Q5/8×1/2	1/2×3/8
	63FM04	Q5/8×3/8	1/2×1/4
	63FM05	Q7/8×3/4	3/4×5/8
	63FM06	Q7/8×1/2	3/4×3/8
	63FM07	Q1-1/8×1	1×7/8
	63FM08	Q1-1/8×3/4	1×5/8
	63FM09	Q1-3/8×1-1/4	1-1/4×1-1/8
	63FM10	Q1-5/8×1-1/2	1-1/2×1-3/8
	63FM11	Q2-1/8×2	2×1-7/8
	63FM12	Q2-5/8×2-1/2	2-1/2×2-3/8

Drawing	Part No.	Size(mm)
<b>45° Equal Elbow C×C E10ECC</b>  	10ECC01	8
	10ECC02	10
	10ECC03	12
	10ECC04	15
	10ECC05	22
	10ECC06	28
	10ECC07	35
	10ECC08	42
	10ECC09	54
	10ECC10	67
	10ECC11	76
	10ECC12	108
	10ECC13	133
	10ECC14	159
	10ECC15	219
	10ECC16	276
	10ECC17	308
<b>90° Equal Elbow C×C HLE11ECC</b>  	11ECC01	6
	11ECC02	8
	11ECC03	10
	11ECC04	12
	11ECC05	15
	11ECC06	18
	11ECC07	22
	11ECC08	22×15
	11ECC09	28
	11ECC10	35
	11ECC11	42
	11ECC12	54
	11ECC13	67
	11ECC14	76
	11ECC15	89
	11ECC16	108
	11ECC17	133
	11ECC18	159
	11ECC19	219
	11ECC20	276
	11ECC21	308
<b>45° Street Elbow FTG×C E13EFC</b>  	13EFC01	8
	13EFC02	10
	13EFC03	12
	13EFC04	15
	13EFC05	22
	13EFC06	28
	13EFC07	35
	13EFC08	42
	13EFC09	54
	13EFC10	67
	13EFC11	76
	13EFC12	89
	13EFC13	108
	13EFC14	159

Drawing	Part No.	Size(mm)
<b>90° Street Elbow FTG×C E14EFC</b> 	14EFC01	6
	14EFC02	8
	14EFC03	10
	14EFC04	12
	14EFC05	15
	14EFC06	22
	14EFC07	28
	14EFC08	35
	14EFC09	42
	14EFC10	54
	14EFC11	67
	14EFC12	76
	14EFC13	108
	14EFC14	133
	14EFC15	159
	14EFC16	219
<b>90° Long Radius Street Elbow C×FTG E15ELFC</b> 	15ELFC01	12
	15ELFC02	15
	15ELFC03	22
	15ELFC04	28
	15ELFC05	35
	15ELFC06	42
	15ELFC07	54
	15ELFC08	64
	15ELFC09	76
	15ELFC10	89
	15ELFC11	108
<b>90° Long Radius Elbow C×C E12ELCC</b> 	12ELCC01	12
	12ELCC02	15
	12ELCC03	22
	12ELCC04	28
	12ELCC05	35
	12ELCC06	42
	12ELCC07	54
	12ELCC08	64
	12ELCC09	76
	12ELCC10	89
	12ELCC11	108
<b>Cross C×C×C×C E60CCCC</b> 	60CCCC01	15
	60CCCC02	22
	60CCCC03	28
	60CCCC04	35

Drawing	Part No.	Size(mm)
<b>Equal Tee C×C×C E30TCC</b> 	30TCC01	6
	30TCC02	8
	30TCC03	10
	30TCC04	12
	30TCC05	15
	30TCC06	18
	30TCC07	22
	30TCC08	28
	30TCC09	35
	30TCC10	42
	30TCC11	54
	30TCC12	67
	30TCC13	76
	30TCC14	89
	30TCC15	108
	30TCC16	133
	30TCC17	159
	30TCC18	219
	30TCC19	276
	30TCC20	308

Drawing	Part No.	Size(mm)
<b>Reducing Tee C×C×C E31TRC</b> 	31TRC17	42×42×22
	31TRC18	42×42×28
	31TRC19	42×42×35
	31TRC20	42×42×54
	31TRC21	54×54×15
	31TRC22	54×54×22
	31TRC23	54×54×28
	31TRC24	54×54×35
	31TRC25	54×54×42
	31TRC26	54×42×42
	31TRC27	67×67×22
	31TRC28	67×67×28
	31TRC01	12×12×10
	31TRC02	12×12×16
	31TRC03	15×15×22
	31TRC04	22×15×15
	31TRC05	18×15×18
	31TRC06	22×15×22
	31TRC07	22×22×14
	31TRC08	22×22×15
	31TRC09	22×22×16
	31TRC10	28×28×22
	31TRC11	28×28×15
	31TRC12	28×22×15
	31TRC13	35×35×15
	31TRC14	35×35×22
	31TRC15	35×35×28
	31TRC16	42×42×15
31TRC29	67×67×35	
31TRC30	67×67×42	
31TRC31	67×67×54	
31TRC32	76×76×28	
31TRC33	76×76×35	
31TRC34	76×76×42	
31TRC35	76×76×54	
31TRC36	76×76×67	
31TRC37	108×108×42	
31TRC38	108×108×54	
31TRC39	108×108×67	
31TRC40	108×108×76	
31TRC41	133×133×108	
31TRC42	159×159×133	
31TRC43	159×159×108	
31TRC44	219×219×159	

Drawing	Part No.	Size(mm)
<p>Stop End E40CAP</p>	40CAP01	8
	40CAP02	10
	40CAP03	15
	40CAP04	22
	40CAP05	28
	40CAP06	35
	40CAP07	42
	40CAP08	54
	40CAP09	67
	40CAP10	76
	40CAP11	108
	40CAP12	159
	<p>Reducing Coupler C×C E21RCC</p>	21RCC01
21RCC02		18×12
21RCC03		18×15
21RCC04		22×15
21RCC05		28×15
21RCC06		28×18
21RCC07		28×22
21RCC08		35×15
21RCC09		35×22
21RCC10		35×28
21RCC11		42×15
21RCC12		42×22
21RCC13		42×28
21RCC14		42×35
21RCC15		54×22
21RCC16		54×28
21RCC17		54×35
21RCC18		54×42
21RCC19		67×35
21RCC20	67×42	
21RCC21	67×54	
21RCC22	76×35	
21RCC23	76×42	
21RCC24	76×54	
21RCC25	76×64	
21RCC26	108×54	
21RCC27	108×67	
21RCC28	108×76	
21RCC29	133×108	
21RCC30	159×108	
21RCC31	219×108	

Drawing	Part No.	Size(mm)
<p>Fitting Reducer C×FTG E22RCF</p>	22RCF01	16×12
	22RCF02	22×15
	22RCF03	22×18
	22RCF04	28×15
	22RCF05	28×16
	22RCF06	28×22
	22RCF07	35×15
	22RCF08	35×22
	22RCF09	35×28
	22RCF10	42×15
	22RCF11	42×18
	22RCF12	42×22
	22RCF13	42×28
	22RCF14	42×35
	22RCF15	54×22
	22RCF16	54×28
	22RCF17	54×35
	22RCF18	54×42
	22RCF19	67×28
	22RCF20	67×35
	22RCF21	67×54
	22RCF22	76×35
	22RCF23	76×54
	22RCF24	108×54
	22RCF25	133×108
	22RCF26	159×108
	22RCF27	219×159
<p>Equal Coupler C×C E20CC</p>	20CC01	6
	20CC02	8
	20CC03	10
	20CC04	12
	20CC05	15
	20CC06	18
	20CC07	22
	20CC08	28
	20CC09	35
	20CC10	42
	20CC11	54
	20CC12	64
	20CC13	67
	20CC14	76
	20CC15	89
	20CC16	108
	20CC17	133
	20CC18	159
	20CC19	219
	20CC20	276
	20CC21	308