

ALL YOUR COPPER
NEEDS COVERED

American Plumbing Fitting Range



IMAGINATION



KNOWLEDGE



DELIVERY

K

COPPER FITTING

Specifications

All of the advantages found in copper as a metal have been capitalized to the utmost in the manufacture of **K** Fittings. Because of the accuracy of construction and design, copper plumbing is more efficient and less expensive.

K manufactures nine general types of fittings: Wrot Pressure; Cast Pressure; Wrot Drainage; Cast Drainage; Flanges; Flared Tube; Threaded Bronze; Each has its particular place and use and each offers its own advantages when used for the proper service requirement.

ALLOY AND FINISH – **K** Fittings are made from highest quality raw materials available – Cast Fittings are made from Copper Alloy C84400 which consists of 81% Copper, 7% Lead, 3% Tin, and 9% Zinc per ASTM Specification B584. Wrot Copper Fittings are made from commercially pure copper mill products per ASTM Specifications B75 Alloy C12200.

K fittings are produced to meet requirements of applicable standards wherever practicable.

K brand wrot and cast fittings are manufactured registered to ISO 9002 quality standards.

Following is suggested phrasing to be incorporated in your specifications or bills of material for Copper Tube Fittings.

WROT SOLDER JOINT FITTINGS – “Wrot Solder Joint Fittings shall be produced to one of the following specifications:

1. Material and workmanship shall be in accordance with ASME/ANSI B16.22; Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.”
2. The dimensional, material and workmanship shall meet the requirements of MSS SP-104; Wrought Copper Solder Joint Pressure Fittings.”
3. The dimensional, material and workmanship of 5”-12” copper fittings shall meet the requirements of MSS SP-109 “Welded Fabricated Copper Solder Joint Pressure Fittings.”
4. Certified to ANSI/NSF 61.

CAST COPPER ALLOY SOLDER JOINT FITTINGS – “Cast Copper Alloy Solder Joint Fittings shall be in accordance with ANSI Std. B16.18.”

WROT DRAINAGE FITTINGS – “Wrot Drainage Fittings shall be in accordance with ASME/ANSI Std. B16.29.”

CAST COPPER ALLOY SOLDER JOINT DRAINAGE FITTINGS – “Cast Copper Alloy Solder Joint Drainage Fittings shall be in accordance with ASME Std. B16.23.”

CAST COPPER ALLOY FLARED TUBE FITTINGS – “Cast Copper Alloy Flared Tube Fittings shall be in accordance with ASME/ANSI Std. B16.26.

CAST COPPER ALLOY FLANGES AND FLANGED FITTINGS –

CLASS 150 – Cast Copper Alloy Flanges and Flanged Fittings shall meet the requirements of MSS SP-106 and/or the workmanship and dimensions of Federal Specifications WW-F-406 or ASME Std. B16.24.

CLASS 125 – Material, workmanship and dimensions of flanges shall be in accordance with MSS SP-106

CAST BRONZE THREADED FITTINGS – “Cast Bronze Threaded Fittings shall be in accordance with ANSI/ASME B16.15.”

POLYBUTYLENE COPPER INSERT TYPE VALVES AND FITTINGS – “Wrot Copper Insert Fittings shall be manufactured per the following specifications: MSS SP-103 or ASTM F1380.”

For technical information and dimensions refer to the engineering section contained in this catalog.



PORN PROM METAL PUBLIC COMPANY LIMITED

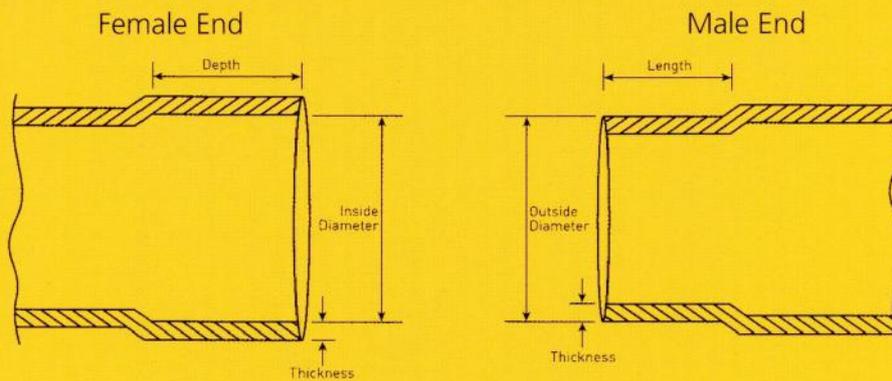
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ISO 9001:2000

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SPECIFIED DIMENSIONS OF SOLDER JOINT COPPER FITTING



American Plumbing Fittings are suitable for use with the American Standard Specifications for Copper tubes to ASTM B88. All dimensions are imperial (inches).

Copper Fittings
to suit
ASME B16-22

Tube Outside Diameter	Minimum Wall Thickness
Inches	Min
1/4	0.019
3/8	0.023
1/2	0.026
5/8	0.029
3/4	0.031
7/8	0.033
1 1/8	0.040
1 3/8	0.044
1 5/8	0.051
2 1/8	0.059
2 5/8	0.067
3 1/8	0.075

Female End		
Inside Diameter		Depth
Max	Min	Min
0.256	0.252	0.250
0.381	0.377	0.310
0.506	0.502	0.380
0.631	0.627	0.500
0.756	0.752	0.620
0.881	0.877	0.750
1.132	1.128	0.910
1.382	1.378	0.970
1.633	1.628	1.090
2.133	2.128	1.340
2.633	2.628	1.470
3.133	3.128	1.660

Male End		
Outside Diameter		Length
Max	Min	Min
0.251	0.248	0.310
0.376	0.373	0.380
0.501	0.497	0.440
0.626	0.622	0.560
0.751	0.747	0.690
0.876	0.872	0.810
1.127	1.122	0.970
1.377	1.372	1.030
1.627	1.621	1.160
2.127	2.121	1.410
2.627	2.621	1.530
3.127	3.121	1.720

Copper Fittings
to suit
AS/NZ 1571
Copper Tube

5/16	0.019
1	0.036
1 1/4	0.043
1 1/2	0.048
2	0.057
2 1/2	0.066
3	0.064
4	0.071

0.319	0.315	0.295
1.006	1.001	0.820
1.256	1.251	0.940
1.509	1.501	1.030
2.009	2.001	1.260
2.518	2.502	1.450
3.018	3.012	1.575
4.018	4.001	1.420

N/A	N/A	N/A
1.000	0.996	0.890
1.250	1.246	1.000
1.500	1.496	1.100
2.000	1.995	1.350
2.500	2.494	1.500
N/A	N/A	N/A
N/A	N/A	N/A

Glossary of Terms

Male End - is made to the same outside diameter as the tube and fits into the female end of a fitting.

Female End - is designed to accept a male end. The inside diameter accepts the outside diameter of a tube or male end.

Thickness - the thickness of the wall of the tube or fitting.

Connector - female/female - connecting copper tube and/or male end fittings.

Reducer - female/female reduced connector - used to connect tubes of different diameters.

Bushing - male/female reducer - used to connect a fitting and a tube of reduced diameter.

Elbow - female/female bend - expanded both ends.

Bend - female/male end - expanded one end.

Return Bend - 180° bend, male/male.

Common Equivalent Terms

Female End - cup, pocket, expanded or 'copper'.

Male End - fitting or unexpanded.

Connector - coupling, socket, straight coupling.

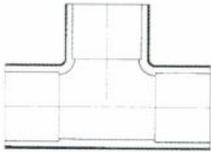
Reducer - reducing coupling.

Bends - street elbows.

Bushings - fittings reducer.

**Tees – Equal
Female/Female/
Female**

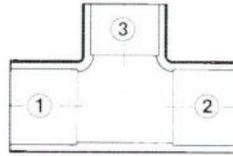
(copper to copper
to copper)



Code KTE		
Tube Outside Diameter	Order Code	Std pack
1/4	KTE006	10
5/16	KTE008	10
3/8	KTE010	10
1/2	KTE013	10
5/8	KTE016	10
3/4	KTE019	10
7/8	KTE022	10
1	KTE025	10
1 1/8	KTE029	10
1 1/4	KTE032	10
1 3/8	KTE035	10
1 1/2	KTE038	10
1 5/8	KTE041	5
2	KTE050	4
2 1/8	KTE054	3
2 3/8	KTE067	2
3	KTE076	2
3 1/8	KTE079	

**Tees –
Reducing
Female/Female/
Female**

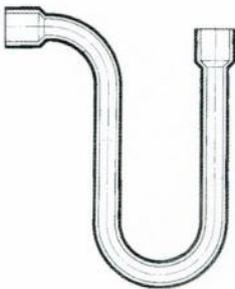
(copper to copper
to copper)



Code KTR		
Tube Outside Diameter	Order Code	Std pack
1 x 2 x 3		
5/16 x 5/16 x 1/4	KTR0080806	10
3/8 x 3/8 x 1/4	KTR0101006	10
1/2 x 1/2 x 1/4	KTR0131306	10
1/2 x 1/2 x 3/8	KTR0131310	10
5/8 x 5/8 x 3/8	KTR0161610	10
5/8 x 5/8 x 1/2	KTR0161613	10
3/4 x 3/4 x 3/8	KTR0191910	10
3/4 x 3/4 x 1/2	KTR0191913	10
3/4 x 3/4 x 5/8	KTR0191916	10
7/8 x 7/8 x 1/2	KTR0222213	10
7/8 x 7/8 x 5/8	KTR0222216	10
1 x 1 x 1/2	KTR0252513	10
1 x 1 x 3/4	KTR0252519	10
1 1/8 x 1 1/8 x 5/8	KTR0292916	10
1 1/8 x 1 1/8 x 7/8	KTR0292922	10
1 3/8 x 1 3/8 x 5/8	KTR0353516	10
1 3/8 x 1 3/8 x 7/8	KTR0353522	10
1 5/8 x 1 5/8 x 1 1/8	KTR0353529	10
1 5/8 x 1 5/8 x 5/8	KTR0414116	10
1 5/8 x 1 5/8 x 7/8	KTR0414122	10
1 5/8 x 1 5/8 x 1 1/8	KTR0414129	10
1 5/8 x 1 5/8 x 1 3/8	KTR0414135	10
2 1/8 x 2 1/8 x 5/8	KTR0545416	5
2 1/8 x 2 1/8 x 7/8	KTR0545422	5
2 1/8 x 2 1/8 x 1 1/8	KTR0545429	5
2 1/8 x 2 1/8 x 1 3/8	KTR0545435	5
2 1/8 x 2 1/8 x 1 5/8	KTR0545441	5
2 5/8 x 2 5/8 x 1 1/8	KTR0676729	3
2 5/8 x 2 5/8 x 1 3/8	KTR0676735	3
2 5/8 x 2 5/8 x 1 5/8	KTR0676741	3
3 1/8 x 3 1/8 x 1 5/8	KTR0797941	3

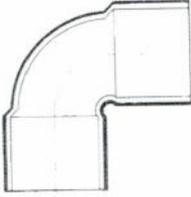
**P Traps
Female/Female**

(copper to copper)



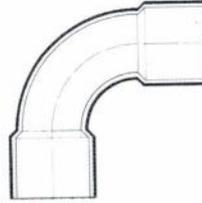
Code KPT					
Nominal Size	Order Code	Centre-line Radius	Width	Height	Std pack
5/8	KPT016	7/8	3 3/8	6	5
3/4	KPT019	1 1/8	4 3/8	6	5
7/8	KPT022	1 1/4	5	6	5
1 1/8	KPT029	1 1/2	5 3/4	6 1/2	4
1 3/8	KPT035	1 1/2	6	7 1/2	2
1 5/8	KPT041	1 3/4	6 3/4	10 1/4	
2 1/8	KPT054	2 1/4	8 1/4	12 1/16	

90° Elbows - Short Radius Female/Female
(copper to copper)



Code KEN		
Tube Outside Diameter	Order Code	Std pack
1/2	KEN013S	10
5/8	KEN016S	10
3/4	KEN019S	10
7/8	KEN022S	10
1	KEN025S	10
1 1/8	KEN029S	10
1 1/4	KEN032S	10
1 3/8	KEN035S	10
1 1/2	KEN038S	10
1 5/8	KEN041S	10
2 1/8	KEN054S	4
2 5/8	KEN067S	2
3	KEN076S	2
3 1/8	KEN079S	2

90° Elbows - Long Radius Female/Female
(copper to copper)

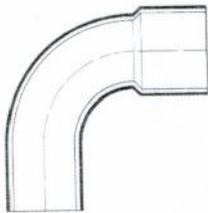


Code KEN - Equal Elbows		
Tube Outside Diameter	Order Code	Std pack
1/4	KEN006	10
3/8	KEN010	10
1/2	KEN013	10
5/8	KEN016	10
3/4	KEN019	10
7/8	KEN022	10
1	KEN025	10
1 1/8	KEN029	10
1 1/4	KEN032	10
1 3/8	KEN035	10
1 1/2	KEN038	10
1 5/8	KEN041	10
2	KEN050	4
2 1/8	KEN054	4
2 1/2	KEN065	4
2 5/8	KEN067	2
3	KEN076	2
3 1/8	KEN079	2
4	KEN100	

Code KEN - Reducing Elbows

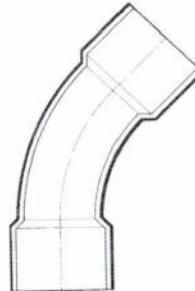
Tube Outside Diameter	Order Code	Std pack
3/4 X 1/2	KEN01913	10
1 X 3/4	KEN02519	10

90° Bends - Long Radius Female/Male
(fittings to copper)



Code KBN		
Tube Outside Diameter	Order Code	Std pack
3/8	KBN010	10
1/2	KBN013	10
5/8	KBN016	10
3/4	KBN019	10
7/8	KBN022	10
1	KBN025	10
1 1/8	KBN029	10
1 1/4	KBN032	10
1 3/8	KBN035	10
1 1/2	KBN038	10
1 5/8	KBN041	10
2 1/8	KBN054	4
2 5/8	KBN067	2

45° Elbows - Long Radius Female/Female
(copper to copper)



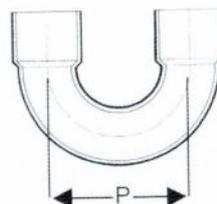
Code KEF		
Tube Outside Diameter	Order Code	Std pack
3/8	KEF010	10
1/2	KEF013	10
5/8	KEF016	10
3/4	KEF019	10
7/8	KEF022	10
1	KEF025	10
1 1/8	KEF029	10
1 1/4	KEF032	10
1 3/8	KEF035	10
1 1/2	KEF038	10
1 5/8	KEF041	10
2 1/8	KEF054	5
2 5/8	KEF067	3
3 1/8	KEF079	2

180° Return Bends - Male/Male
(fitting/fitting)



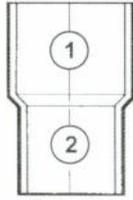
These fittings are custom-made to specific requirements. We can supply a wide range of different sizes and configurations, made to meet customers' individual specifications. If you require 180° Return Bends, please contact us to discuss your needs.

180° Elbows - Long Radius Female/Female
(copper to copper)



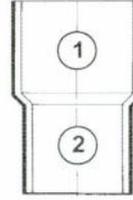
Code KEU			
Tube Outside Diameter	Order Code	Pitch (Centres)	Std Pack
3/8	KEU010	1 1/2	10
1/2	KEU013	1 1/2	10
5/8	KEU016	2	10
3/4	KEU019	2 1/4	10
7/8	KEU022	2 1/2	10
1	KEU025	3	10
1 1/8	KEU029	3	10
1 3/8	KEU035	3	5
1 5/8	KEU041	3 1/2	4
2 1/8	KEU054	4 1/2	2

**Reducers
Female/Female**
(copper to copper)



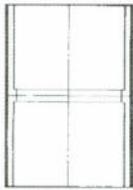
Code KRR		
Tube Outside Diameter	Order Code	Std Pack
$3/8 \times 1/4$	KRR01006	10
$1/2 \times 1/4$	KRR01306	10
$1/2 \times 3/8$	KRR01310	10
$5/8 \times 3/8$	KRR01610	10
$5/8 \times 1/2$	KRR01613	10
$3/4 \times 3/8$	KRR01910	10
$3/4 \times 1/2$	KRR01913	10
$3/4 \times 5/8$	KRR01916	10
$7/8 \times 3/8$	KRR02210	10
$7/8 \times 1/2$	KRR02213	10
$7/8 \times 5/8$	KRR02216	10
$7/8 \times 3/4$	KRR02219	10
$1 \times 3/4$	KRR02519	10
$1 1/8 \times 1/2$	KRR02913	10
$1 1/8 \times 5/8$	KRR02916	10
$1 1/8 \times 3/4$	KRR02919	10
$1 1/8 \times 7/8$	KRR02922	10
$1 1/8 \times 1$	KRR02925	10
$1 3/8 \times 5/8$	KRR03516	10
$1 3/8 \times 3/4$	KRR03519	10
$1 3/8 \times 7/8$	KRR03522	10
$1 3/8 \times 1 1/8$	KRR03529	10
$1 5/8 \times 7/8$	KRR04122	10
$1 5/8 \times 1 1/8$	KRR04129	10
$1 5/8 \times 1 3/8$	KRR04135	10
$2 1/8 \times 7/8$	KRR05422	10
$2 1/8 \times 1 1/8$	KRR05429	10
$2 1/8 \times 1 3/8$	KRR05435	10
$2 1/8 \times 1 5/8$	KRR05441	10
$2 5/8 \times 1 1/8$	KRR06729	5
$2 5/8 \times 1 3/8$	KRR06735	5
$2 5/8 \times 1 5/8$	KRR06741	5
$2 5/8 \times 2 1/8$	KRR06754	5
$3 1/8 \times 2 5/8$	KRR07967	3

**Bushings –
Male/Female**
(fittings to
copper)



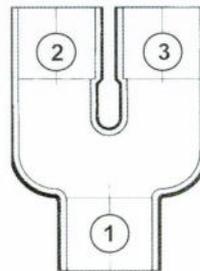
Code KNN		
Tube Outside Diameter	Order Code	Std Pack
$3/8 \times 1/4$	KNN01006	10
$1/2 \times 1/4$	KNN01306	10
$1/2 \times 3/8$	KNN01310	10
$5/8 \times 3/8$	KNN01610	10
$5/8 \times 1/2$	KNN01613	10
$3/4 \times 1/2$	KNN01913	10
$3/4 \times 5/8$	KNN01916	10
$7/8 \times 1/2$	KNN02213	10
$7/8 \times 5/8$	KNN02216	10
$7/8 \times 3/4$	KNN02219	10
$1 1/8 \times 1/2$	KNN02913	10
$1 1/8 \times 3/8$	KNN02916	10
$1 1/8 \times 3/4$	KNN02919	10
$1 1/8 \times 7/8$	KNN02922	10
$1 3/8 \times 5/8$	KNN03516	10
$1 3/8 \times 7/8$	KNN03522	10
$1 3/8 \times 1 1/8$	KNN03529	10
$1 5/8 \times 7/8$	KNN04122	10
$1 5/8 \times 1 1/8$	KNN04129	10
$1 5/8 \times 1 3/8$	KNN04135	10
$2 1/8 \times 7/8$	KNN05429	10
$2 1/8 \times 1 1/8$	KNN05435	10
$2 1/8 \times 1 3/8$	KNN05441	10
$2 5/8 \times 1 3/8$	KNN06735	5
$2 5/8 \times 1 5/8$	KNN06741	5
$2 5/8 \times 2 1/8$	KNN06754	5
$3 1/8 \times 2 1/8$	KNN07954	3
$3 1/8 \times 2 5/8$	KNN07967	3

**Connectors –
Female/Female**
(copper to copper)



Code KCC		
Tube Outside Diameter	Order Code	Std Pack
$1/4$	KCC006	10
$3/8$	KCC010	10
$1/2$	KCC013	10
$5/8$	KCC016	10
$3/4$	KCC019	10
$7/8$	KCC022	10
1	KCC025	10
$1 1/8$	KCC029	10
$1 1/4$	KCC032	10
$1 3/8$	KCC035	10
$1 1/2$	KCC038	10
$1 5/8$	KCC041	10
2	KCC050	10
$2 1/8$	KCC054	10
$2 5/8$	KCC067	5
$3 1/8$	KCC079	4

**Y Pieces – All
Branches Female**
(copper to copper)



Code KYP		
Tube Outside Diameter	Order Code	Std Pack
1 X 2 X 3		
$5/8 \times 1/2 \times 1/2$	KYP01613	10
$5/8 \times 5/8 \times 5/8$	KYP01616	10
$3/4 \times 5/8 \times 5/8$	KYP01916	10
$7/8 \times 5/8 \times 5/8$	KYPO2216	10
$7/8 \times 7/8 \times 7/8$	KYPO2222	10
$1 \times 3/4 \times 3/4$	KYPO2519	10
$1 1/8 \times 5/8 \times 5/8$	KYPO2916	10
$1 1/8 \times 3/4 \times 3/4$	KYPO2919	10
$1 1/8 \times 7/8 \times 7/8$	KYP02922	10

