

CTS FITTINGS



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Gruvlok Full-Flow Grooved Fittings for Copper Piping Systems provide an economical and efficient method of changing direction. These copper fittings are available in sizes 2" to 8" (50 - 200mm).

Cast fittings in 90° and 45° elbows, tees, caps, concentric reducers, and reducing tees are cast with a copper alloy conforming to CDA C89833. Cast fittings are stronger and more durable than wrought copper fittings and are less susceptible to damage in transit or during installation. Reducing fittings are available with Groove x Groove or Groove x Cup End configurations.

Fittings are standard radius, full flow, designed for installation with Gruvlok Copper System products:

- Figure 640 Pivot-Bolt Rigid Couplings
- Figure 672 Rigid Couplings
- Figure 616 Reducing Coupling
- Figure 617 Transition Coupling
- Figure 61H or 61 Flange Adapters

MATERIAL SPECIFICATIONS

CAST COPPER ALLOY FITTINGS:

Copper Alloy conforming to CDA C89833 or C83470; UL Classified in accordance with ANSI / NSF-61 and bears the UL Water Quality Mark.

WROUGHT COPPER FITTINGS:

(For Figure 652 Groove by Copper Fittings Only)
ASTM B 75 C12200; wall thickness per ASTM B 88 Type L.

MAXIMUM WORKING PRESSURE

Fittings are rated at the pressure rating of the Gruvlok Coupling or Adapter in use: Figure 672 Couplings, Figure 640 Pivot-Bolt Couplings, Figure 616 Reducing Couplings, Figure 617 Transition Couplings, Figure 61H Hinged Flange Adapters and Figure 61 Flange Adapters.

PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			

FIG. 610

90° CTS Elbow

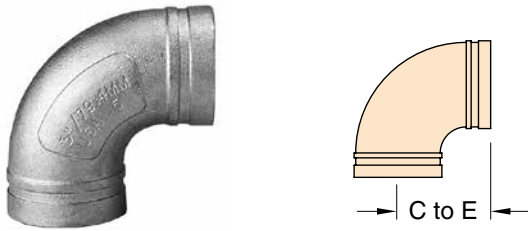


FIGURE 610 90° CTS ELBOW			
Nominal Size	Copper Tubing O.D.	Center to End	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2	2.125	2.91	1.9
50	54.0	73.9	0.9
2½	2.625	3.31	2.7
65	66.7	84.1	1.2
3	3.125	3.81	3.6
80	79.4	96.8	1.6
4	4.125	4.75	7.1
100	104.8	120.7	3.2
5	5.125	5.94	11.9
125	130.2	150.9	5.4
6	6.125	6.94	16.7
150	155.6	176.7	7.6
8	8.125	7.75	25.3
200	206.4	196.9	11.5

FIG. 601

45° CTS Elbow

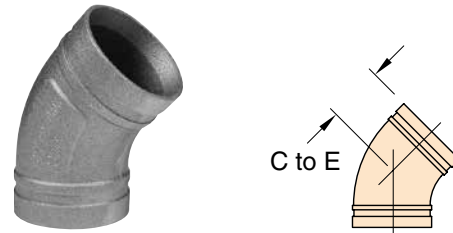


FIGURE 601 45° CTS ELBOW			
Nominal Size	Copper Tubing O.D.	Center to End	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2	2.125	2.19	1.6
50	54.0	55.6	0.7
2½	2.625	2.31	2.1
65	66.7	58.7	1.0
3	3.125	2.59	2.7
80	79.4	65.8	1.2
4	4.125	3.19	5.5
100	104.8	81.0	2.5
5	5.125	3.25	7.7
125	130.2	82.6	3.5
6	6.125	3.5	10.1
150	155.6	88.9	4.6
8	8.125	4.25	16.6
200	206.4	108.0	7.5

FIG. 619

CTS Tee

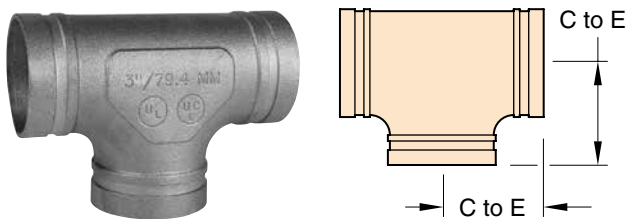


FIGURE 619 CTS TEE			
Nominal Size	Copper Tubing O.D.	Center to End	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2	2.125	2.69	2.5
50	54.0	68.3	1.1
2½	2.625	3.20	3.8
65	66.7	81.3	1.7
3	3.125	3.52	4.7
80	79.4	89.4	2.1
4	4.125	4.25	9.0
100	104.8	108.0	4.1
5	5.125	5.94	17.7
125	130.2	150.9	8.0
6	6.125	6.94	24.8
150	155.6	176.3	11.3
8	8.125	7.75	46.2
200	206.4	196.9	21.0

FIG. 660

CTS Cap

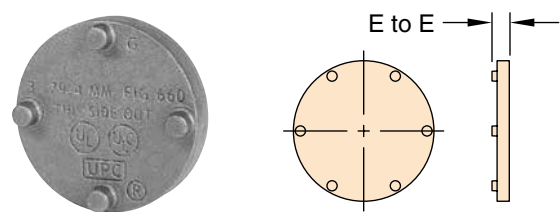


FIGURE 660 CTS CAP			
Nominal Size	Copper Tubing O.D.	End to End	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2	2.125	0.92	0.6
50	54.0	23.4	0.3
2½	2.625	0.92	1.0
65	66.7	23.4	0.4
3	3.125	0.92	1.3
80	79.4	23.4	0.6
4	4.125	0.92	2.2
100	104.8	23.4	1.0
5	5.125	0.92	5.8
125	130.2	23.4	2.6
6	6.125	0.92	8.1
150	155.6	23.4	3.7
8	8.125	1.03	14.1
200	206.4	26.2	6.4

Notes:

For information on larger sizes, contact an Anvil Sales Representative.
See page 1 for CTS Fitting Specifications.

FIG. 621

CTS Reducing Tee

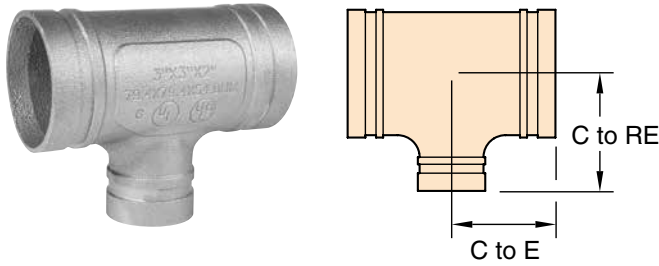


FIGURE 621 CTS REDUCING TEE

Nominal Size	Copper Tubing O.D.	C to E	C to RE	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2½ x 2 x 2	2.625 x 2.625 x 2.125	3.28	3.38	3.5
65 x 65 x 50	66.7 x 66.7 x 54.0	83.3	85.9	1.6
3 x 3 x 2	3.125 x 3.125 x 2.125	3.00	3.38	3.8
80 x 80 x 50	79.4 x 79.4 x 54.0	76.2	85.9	1.7
3 x 3 x 2½	3.125 x 3.125 x 2.625	3.25	3.5	4.3
80 x 80 x 65	79.4 x 79.4 x 66.7	82.6	88.9	2.0
4 x 4 x 2	4.125 x 4.125 x 2.125	3.66	4.13	6.9
100 x 100 x 50	104.8 x 104.8 x 54.0	93.0	104.9	3.2
4 x 4 x 2½	4.125 x 4.125 x 2.625	3.94	4.06	7.5
100 x 100 x 65	104.8 x 104.8 x 66.7	100.1	103.1	3.4
4 x 4 x 3	4.125 x 4.125 x 3.125	4.19	4.16	8.7
100 x 100 x 80	104.8 x 104.8 x 79.4	106.4	105.7	4.0
5 x 5 x 3	5.125 x 5.125 x 3.125	3.75	4.63	10.0
125 x 125 x 80	130.2 x 130.2 x 79.4	95.3	117.6	4.5
5 x 5 x 4	5.125 x 5.125 x 4.125	4.25	4.56	11.4
125 x 125 x 100	130.2 x 130.2 x 104.8	108.0	115.8	5.2
6 x 6 x 2½	6.125 x 6.125 x 2.625	3.63	5.13	11.5
150 x 150 x 65	155.6 x 155.6 x 66.7	92.2	130.3	5.2
6 x 6 x 3	6.125 x 6.125 x 3.125	3.69	5.19	11.9
150 x 150 x 80	155.6 x 155.6 x 79.4	93.7	131.8	5.4
6 x 6 x 4	6.125 x 6.125 x 4.125	4.19	5.13	13.7
150 x 150 x 100	155.6 x 155.6 x 104.8	106.4	130.3	6.2
6 x 6 x 5	6.125 x 6.125 x 5.125	4.69	5.19	15.9
150 x 150 x 125	155.6 x 155.6 x 130.2	119.1	131.8	7.2

Dimensional information in this chart is for cast fittings.

FIG. 618

CTS Reducing Tee (Groove x Groove x Cup)

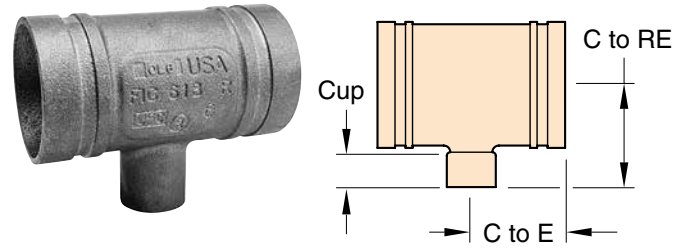


FIGURE 618 CTS REDUCING TEE

Nominal Size	Copper Tubing O.D.	C to E	C to RE	Cup	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2 x 2 x ¾	2.125 x 2.125 x 0.825	2.20	2.04	0.75	1.6
50 x 50 x 20	54.0 x 54.0 x 21.0	55.9	51.8	19.0	0.7
2 x 2 x 1	2.125 x 2.125 x 1.125	2.33	2.26	0.91	1.8
50 x 50 x 25	54.0 x 54.0 x 25.4	59.1	57.4	23.1	0.8
2 x 2 x 1¼	2.125 x 2.125 x 1.375	2.48	2.41	0.97	2.0
50 x 50 x 32	54.0 x 54.0 x 34.9	63.0	61.2	24.6	0.9
2 x 2 x 1½	2.125 x 2.125 x 1.625	2.55	2.34	1.09	2.0
50 x 50 x 40	54.0 x 54.0 x 38.1	64.7	59.4	27.7	0.9
2½ x 2½ x ¾	2.625 x 2.625 x 0.875	2.27	2.24	0.75	2.2
65 x 65 x 20	66.7 x 66.7 x 21.0	57.7	57.0	19.0	1.0
2½ x 2½ x 1	2.625 x 2.625 x 1.125	2.40	2.46	0.91	2.3
65 x 65 x 25	66.7 x 66.7 x 25.4	61.0	62.5	23.1	1.0
2½ x 2½ x 1¼	2.625 x 2.625 x 1.375	2.52	2.63	0.97	2.5
65 x 65 x 32	66.7 x 66.7 x 34.9	64.0	66.8	24.6	1.1
2½ x 2½ x 1½	2.625 x 2.625 x 1.625	2.70	2.74	1.09	2.7
65 x 65 x 40	66.7 x 66.7 x 38.1	68.6	69.6	27.7	1.2
3 x 3 x ¾	3.125 x 3.125 x 0.875	2.45	2.64	0.75	2.9
80 x 80 x 20	79.4 x 79.4 x 21.0	62.2	67.1	19.0	1.3
3 x 3 x 1	3.125 x 3.125 x 1.125	2.54	2.85	0.91	3.0
80 x 80 x 25	79.4 x 79.4 x 25.4	64.5	72.4	23.1	1.4
3 x 3 x 1¼	3.125 x 3.125 x 1.375	2.63	2.95	0.97	3.1
80 x 80 x 32	79.4 x 79.4 x 34.9	66.8	74.9	24.6	1.4
3 x 3 x 1½	3.125 x 3.125 x 1.625	2.85	3.06	1.09	3.4
80 x 80 x 40	79.4 x 79.4 x 38.1	72.4	77.7	27.7	1.5
4 x 4 x ¾	4.125 x 4.125 x 0.875	2.95	3.06	0.75	5.2
100 x 100 x 20	104.8 x 104.8 x 21.0	74.9	77.7	19.0	2.4
4 x 4 x 1	4.125 x 4.125 x 1.125	3.10	3.28	0.91	5.5
100 x 100 x 25	104.8 x 104.8 x 25.4	78.7	83.3	23.1	2.6
4 x 4 x 1¼	4.125 x 4.125 x 1.375	3.25	3.53	0.97	5.7
100 x 100 x 32	104.8 x 104.8 x 34.9	82.5	89.7	24.6	2.6
4 x 4 x 1½	4.125 x 4.125 x 1.625	3.35	3.71	1.09	6.1
100 x 100 x 40	104.8 x 104.8 x 38.1	85.1	94.2	27.7	2.8

Notes:

For information on larger sizes, contact an Anvil Sales Representative.
See page 1 for CTS Fitting Specifications.

FIG. 650

CTS Concentric Reducer

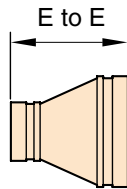


FIGURE 650 CTS CONCENTRIC REDUCER			
Nominal Size	Copper Tubing O.D.	End to End	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>	<i>Lbs./Kg</i>
2½ x 2 65 x 50	2.625 x 2.125 66.7 x 54.0	3.29 83.6	1.4 0.6
3 x 2 80 x 50	3.125 x 2.125 79.4 x 54.0	2.50 63.5	1.4 0.6
3 x 2½ 80 x 65	3.125 x 2.625 79.4 x 66.7	2.50 63.5	1.4 0.6
4 x 2 100 x 50	4.125 x 2.125 104.8 x 54.0	4.75 120.7	3.0 1.4
4 x 2½ 100 x 65	4.125 x 2.625 104.8 x 66.7	3.00 76.2	2.3 1.1
4 x 3 100 x 80	4.125 x 3.125 104.8 x 79.4	3.00 76.2	2.3 1.1
5 x 3 125 x 80	5.125 x 3.125 130.2 x 79.4	3.88 98.6	3.7 1.7
5 x 4 125 x 100	5.125 x 4.125 130.2 x 104.8	3.38 85.9	3.7 1.7
6 x 3 150 x 80	6.125 x 3.125 155.6 x 79.4	4.38 111.3	5.1 2.3
6 x 4 150 x 100	6.125 x 4.125 155.6 x 104.8	3.88 98.6	5.2 2.4
6 x 5 150 x 125	6.125 x 5.125 155.6 x 130.2	3.38 85.9	4.8 2.2
8 x 6 200 x 150	8.125 x 6.125 206.4 x 155.6	5.00 127.0	9.7 4.4

FIG. 652

CTS Concentric Reducer (Groove x Cup)

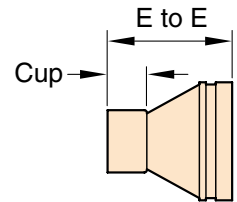


FIGURE 652 CTS CONCENTRIC REDUCER				
Nominal Size	Copper Tubing O.D.	End to End	Cup	Approx. Wt. Ea.
<i>In./DN(mm)</i>	<i>In./mm</i>	<i>In./mm</i>		<i>Lbs./Kg</i>
2 x 1 50 x 25	2.125 x 1.125 54.0 x 25.4	2.70 68.6	0.91 23.1	0.5 0.2
2 x 1¼ 50 x 32	2.125 x 1.375 54.0 x 34.9	3.00 76.2	0.97 24.6	0.4 0.2
2 x 1½ 50 x 40	2.125 x 1.625 54.0 x 38.1	2.94 74.7	1.09 27.7	0.4 0.2
2½ x 1 65 x 25	2.625 x 1.125 66.7 x 25.4	3.25 82.6	0.91 23.1	0.5 0.2
2½ x 1¼ 65 x 32	2.625 x 1.375 66.7 x 34.9	3.52 89.4	0.97 24.6	0.6 0.3
2½ x 1½ 65 x 40	2.625 x 1.625 66.7 x 38.1	3.45 87.6	1.09 27.7	0.6 0.3
2½ x 2 65 x 50	2.625 x 2.125 66.7 x 54.0	3.38 85.9	1.34 34.0	0.6 0.3
3 x 1½ 80 x 40	3.125 x 1.625 79.4 x 38.1	3.68 93.5	1.09 27.7	0.7 0.3
3 x 2 80 x 50	3.125 x 2.125 79.4 x 54.0	4.10 104.1	1.34 34.0	1.0 0.5
4 x 2 100 x 50	4.125 x 2.125 104.8 x 54.0	4.75 120.7	1.34 34.0	1.4 0.6

Notes:

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