

COUPLINGS

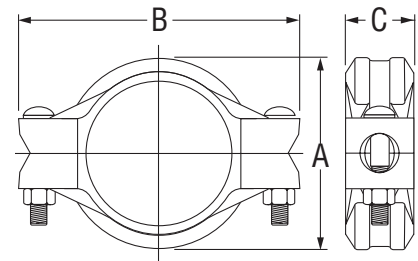
Figure 672 Rigid Coupling – Patented

The Figure 672 Rigid Coupling, size range 2" to 8" (DN 50 to DN 200) is capable of pressures up to 300 PSI (2,065 kPa) depending on copper tubing size and type. It provides a rigid joint by firmly gripping along the circumference of the copper tube grooves. The Figure 672 Coupling is supplied with a NSF61 approved grade EPDM EN tri-seal gasket.

Figure 672 Rigid Couplings are a proven dependable method of joining copper tubing and are an economical alternative to soldering (sweating) joints and can be used on type K, L, M, DWV copper tube.



Tech Data: G510



Nominal Size Inches mm	Copper Tubing O.D. Inches mm	Max.* Gap Inches mm	Nominal Dimensions			Coupling Bolts		Approx. Weight lbs kg
			A Inches mm	B Inches mm	C Inches mm	Qty.	Size Inches	
2 50	2.125 54,0	0.06 1,5	3.09 78,6	4.65 118,1	1.72 43,7	2	¾ x 2¼	2.1 0,9
2½ 65	2.625 66,7	0.06 1,5	3.59 91,3	5.38 136,7	1.72 43,7	2	¾ x 2¼	2.3 1,1
3 80	3.125 79,4	0.06 1,5	4.12 104,7	6.25 158,8	1.72 43,7	2	½ x 3	2.9 1,3
4 100	4.125 104,8	0.09 2,3	5.33 135,3	7.75 196,9	1.86 47,2	2	½ x 3	3.9 1,8
5 125	5.125 130,7	0.09 2,3	6.48 164,6	9.25 235,0	1.86 47,2	2	¾ x 3¼	6.0 2,7
6 150	6.125 155,6	0.09 2,3	7.25 184,1	10.25 260,4	1.86 47,2	2	¾ x 3¼	6.7 3,0
8 200	8.125 206,4	0.09 2,3	9.64 244,8	12.75 323,9	1.86 47,2	2	¾ x 4¾	10.5 4,8

* Maximum available gap between pipe ends, minimum gap = 0.



See Tyco Fire & Building Products
Publication TFP1800

PERFORMANCE PRESSURE RATINGS FIGURE 672 COUPLING

Nominal Size Inches mm	Type "K" ASTM B-88			Type "L" ASTM B-88			Type "M" ASTM B-88			DWV ASTM B-306		
	Wall Thick Inches mm	Max. Working Pressure psi/kPa	Max. End Load lbs/kN	Wall Thick Inches mm	Max. Working Pressure psi/kPa	Max. End Load lbs/kN	Wall Thick Inches mm	Max. Working Pressure psi/kPa	Max. End Load lbs/kN	Wall Thick Inches mm	Max. Working Pressure psi/kPa	Max. End Load lbs/kN
2 50	0.083 2,1	300 2065	1.065 4,74	0.070 1,8	300 2065	1.065 4,74	0.058 1,5	250 1725	890 3,96	0.042 1,1	– –	– –
2½ 65	0.095 2,4	300 2065	1.625 7,23	0.080 2,0	300 2065	1.625 7,23	0.065 1,7	250 1725	1.350 6,01	– –	– –	– –
3 80	0.109 2,8	300 2065	2.300 10,23	0.090 2,3	300 2065	2.300 10,23	0.072 1,8	250 1725	1.415 6,30	0.045 1,1	100 690	765 3,40
4 100	0.134 3,4	300 2065	4.005 17,82	0.110 2,8	300 2065	4.005 17,82	0.095 2,4	250 1725	3.340 14,86	0.058 1,5	100 690	1.335 5,94
5 125	0.160 4,1	300 2065	6.190 27,55	0.125 3,2	300 2065	6.19 27,55	0.109 2,8	200 1375	4.125 18,36	0.072 1,8	100 690	2.060 9,17
6 150	0.192 4,9	300 2065	8.840 39,34	0.140 3,6	300 2065	8.840 39,34	0.122 3,1	200 1375	5.890 26,21	0.083 2,1	100 690	2.945 13,10
8 200	0.271 6,9	300 2065	15.550 69,2	0.200 5,1	300 2065	15.550 69,20	0.170 4,3	200 1375	10.370 46,10	0.109 2,8	100 690	5.180 23,0

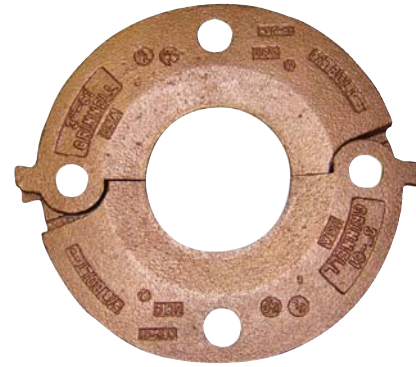
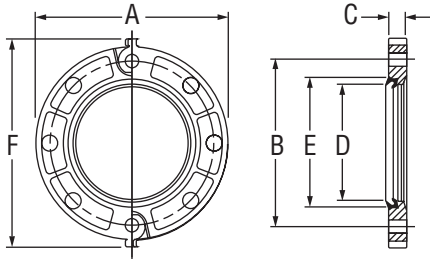
Please refer to General Notes on page 17.

COPPER
GROOVED
SYSTEM

FLANGES

Figure 61 Flange Adapter (ANSI Class 125/150)

The Figure 61 Flange Adapter is capable of pressures up to 300 PSI (20,7 bar) depending on copper tubing size and type. It provides a direct transition from flanged components to a grooved copper tube system. I.P.S. size flange bolt patterns conform to ANSI Class 125 and 150. The Figure 61 Flange Adapter is supplied with NSF 61 approved grade EPDM EN Gasket.



Tech Data: G515

**COPPER
GROOVED
SYSTEM**

Nominal Size Inches mm	Copper Tubing O.D. Inches mm	Nominal Dimensions						Bolts**		Approx. Weight lbs kg
		A Inches mm	B Inches mm	C Inches mm	D* Inches mm	E* Inches mm	F Inches mm	Qty.	Size Inches	
2	2.125	6.38	4.75	0.75	2.13	3.41	7.25	4	5/8 x 3	4.1
50	54,0	162,1	120,7	19,1	54,0	86,6	184,2			1,9
2½	2.625	7.00	5.50	0.88	2.63	3.91	7.88	4	5/8 x 3	5.7
65	66,7	178,0	140,0	22,0	67,0	99,0	200,0			2,6
3	3.125	7.50	6.00	0.94	3.13	4.53	9.88	4	5/8 x 3	6.7
80	79,4	190,5	152,4	23,9	80,0	115,1	251,0			3,0
4	4.125	9.00	7.50	0.94	4.13	5.53	9.90	8	5/8 x 3	8.5
100	104,8	228,6	190,5	23,9	105,0	140,5	251,5			3,9
5	5.125	10.00	8.50	1.00	5.13	6.72	11.38	8	¾ x 3½	10.3
125	130,2	254,0	215,9	25,4	130,0	170,7	289,1			4,7
6	6.125	11.00	9.50	1.00	6.13	7.78	11.88	8	¾ x 3½	11.5
150	155,6	279,4	241,3	25,4	156,0	197,6	301,8			5,2

* Dimensions D and E represent minimum and maximum sealing surfaces.

** Bolts are not supplied. Bolt lengths shown are standard; it is the responsibility of the purchaser to verify correct length for the intended application.

Note: Phenolic Type "F" flange washer adapters are required when the Figure 61 Flange Adapter is used against surfaces such as:

- Rubber surfaces
- Adapting to AWWA cast flanges
- Rubber faced wafer valves
- Serrated flange surfaces

Figure 61 Flange Adapters are not recommended for applications that incorporate tie rods for anchoring or on a standard fitting within 90° of each other.

Please refer to General Notes on page 17.

FITTINGS – COPPER SYSTEM

COPPER GROOVED SYSTEM

Cast fittings in 90°, 45° elbow, 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 Grinnell® Copper System Figure 672 Couplings or Figure 61 Flange Adapters.

Fittings are rated at the pressure rating of the Figure 672 Coupling or Figure 61 Flange being used.



Tech Data: G520

MATERIAL SPECIFICATIONS

Cast Copper Alloy Fittings

- Copper Alloy Conforming to CDA C89833
- UL Classified in Accordance with ANSI/NSF61 and Bears the UL Water Quality Mark

Wrot Copper Fittings

- ASTM B-75 C12200; Wall Thickness Per ASTM B-88 Type L



For Fire Protection Pressure Rating and Listing / Approval information contact Tyco Fire & Suppression Building Products.



FITTINGS

Figures 610, 601, 619 & 660



FIGURE 610
90° ELBOW CAST

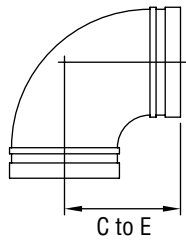


FIGURE 601
45° ELBOW CAST

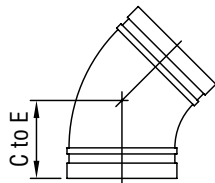


FIGURE 619
TEE CAST

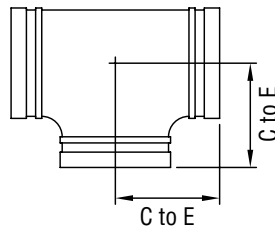
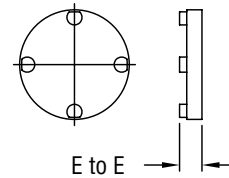


FIGURE 660
CAP CAST



**COPPER
GROOVED
SYSTEM**

Nominal Size Inches mm	Copper Tube O.D. Inches mm	Figure 610		Figure 601		Figure 619		Figure 660	
		Nominal C to E Inches mm	Approx. Weight lbs kg	Nominal C to E Inches mm	Approx. Weight lbs kg	Nominal C to E Inches mm	Approx. Weight lbs kg	Nominal E to E Inches mm	Approx. Weight lbs kg
2	2.125	2.91	1.95	2.19	1.6	2.69	2.5	.92	.7
50	54,0	73,9	0,9	55,6	0,7	68,3	1,13	23,4	,3
2½	2.625	3.31	2.65	2.31	2.1	3.20	3.0	.92	1.0
65	66,7	84,1	1,2	58,7	1,0	81,3	1,36	23,4	,5
3	3.125	3.81	3.65	2.59	2.8	3.52	4.05	.92	1.4
80	79,4	96,8	1,66	65,8	1,3	89,4	2,2	23,4	,6
4	4.125	4.75	7.0	3.19	5.7	4.25	9.15	.92	2.4
100	104,8	120,7	3,18	81,0	2,6	108,0	4,15	23,4	1,1
5	5.125	5.94	11.6	3.25	8.0	5.94	17.75	.92	4.2
125	130,2	150,9	5,26	82,6	3,6	150,9	8,05	23,4	1,9
6	6.125	6.94	16.62	3.5	10.5	6.94	24.4	.92	5.9
150	155,6	176,7	7,54	88,9	4,8	176,3	11,07	23,4	2,7
8	8.125	7.75	23.6	4.25	16.9	7.75	36.25	.92	10.2
200	206,4	196,9	10,7	108,0	7,7	196,9	16,44	23,4	4,6

Please refer to General Notes on page 17.

FITTINGS

Figure 621 Reducing Tee

COPPER GROOVED SYSTEM

Nominal Size Inches mm	Copper Tube O.D. Inches mm	Nominal C to E Inches mm	Nominal C to RE Inches mm	Approx. Weight lbs kg
2½ x 2½ x 2 65 x 65 x 50	2.625 x 2.625 x 2.125 66.7 x 66.7 x 54.0	3.28 83.3	3.38 85.9	3.47 1.57
3 x 3 x 2 80 x 80 x 50	3.125 x 3.125 x 2.125 79.4 x 79.4 x 54.0	3.00 76.2	3.38 85.9	3.69 1.67
3 x 3 x 2½ 80 x 80 x 65	3.125 x 3.125 x 2.625 79.4 x 79.4 x 66.7	3.25 82.6	3.5 88.9	4.13 1.87
4 x 4 x 2 100 x 100 x 50	4.125 x 4.125 x 2.125 104.8 x 104.8 x 54.0	3.66 93.0	4.13 104.9	6.75 3.06
4 x 4 x 2½ 100 x 100 x 65	4.125 x 4.125 x 2.625 104.8 x 104.8 x 66.7	3.94 100.1	4.06 103.1	7.31 3.32
4 x 4 x 3 100 x 100 x 80	4.125 x 4.125 x 3.125 104.8 x 104.8 x 79.4	4.19 106.4	4.16 105.7	7.84 3.56
5 x 5 x 3 125 x 125 x 80	5.125 x 5.125 x 3.125 130.2 x 130.2 x 79.4	3.75 95.3	4.63 117.6	9.35 4.24
5 x 5 x 4 125 x 125 x 100	5.125 x 5.125 x 4.125 130.2 x 130.2 x 104.8	4.25 108.0	4.56 115.8	10.95 4.97
6 x 6 x 2½ 150 x 150 x 65	6.125 x 6.125 x 2.625 155.6 x 155.6 x 66.7	3.63 92.2	5.13 130.3	10.78 4.89
6 x 6 x 3 150 x 150 x 80	6.125 x 6.125 x 3.125 155.6 x 155.6 x 79.4	3.69 93.7	5.19 131.8	11.05 5.01
6 x 6 x 4 150 x 150 x 100	6.125 x 6.125 x 4.125 155.6 x 155.6 x 104.8	4.19 106.4	5.13 130.3	12.86 5.83
6 x 6 x 5 150 x 150 x 125	6.125 x 6.125 x 5.125 155.6 x 155.6 x 130.2	4.69 119.1	5.196 131.8	14.75 6.69

Dimensional information in this chart is for cast fittings.



FIGURE 621 REDUCING TEE
GROOVE X GROOVE X GROOVE
CAST

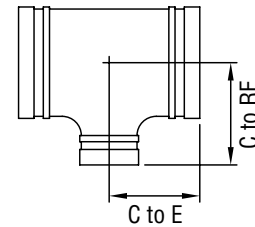


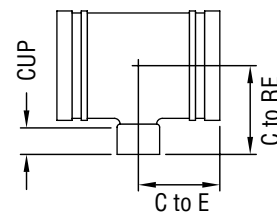
Figure 618 Reducing Tee

Nominal Size Inches mm	618 Groove x Groove x Cup Cast			Approx. Weight lbs kg
	C to E Inches mm	C to RE Inches mm	Cup Inches mm	
2 x 2 x ¾ 50 x 50 x 20	2.20 55.9	2.04 51.8	0.81 20.6	1.5 0.6
2 x 2 x 1 50 x 50 x 25	2.33 59.1	2.26 57.4	0.94 23.9	1.5 0.6
2 x 2 x 1¼ 50 x 50 x 32	2.48 63.0	2.41 61.2	0.99 25.1	1.5 0.6
2 x 2 x 1½ 50 x 50 x 40	2.55 64.7	2.34 59.4	1.13 28.7	2.0 0.8
2½ x 2½ x ¾ 65 x 65 x 20	2.27 57.7	2.24 57.0	0.81 20.6	2.0 1.0
2½ x 2½ x 1 65 x 65 x 25	2.40 61.0	2.46 62.5	0.94 23.9	2.0 1.0
2½ x 2½ x 1¼ 65 x 65 x 32	2.52 64.0	2.63 66.8	0.99 25.1	2.0 1.0
2½ x 2½ x 1½ 65 x 65 x 40	2.70 68.6	2.74 69.6	1.13 28.7	2.5 1.2
3 x 3 x ¾ 80 x 80 x 20	2.45 62.2	2.64 67.1	0.81 20.6	3.0 1.4
3 x 3 x 1 80 x 80 x 25	2.54 64.5	2.85 72.4	0.94 23.9	3.0 1.4
3 x 3 x 1¼ 80 x 80 x 32	2.63 66.8	2.95 74.9	0.99 25.1	3.0 1.4
3 x 3 x 1½ 80 x 80 x 40	2.85 72.4	3.06 77.7	1.13 28.7	3.5 1.6
4 x 4 x ¾ 100 x 100 x 20	2.95 74.7	3.06 77.7	0.81 20.6	5.0 2.2
4 x 4 x 1 100 x 100 x 25	3.10 78.7	3.28 83.3	0.96 24.4	5.5 2.6
4 x 4 x 1¼ 100 x 100 x 32	3.25 82.5	3.53 89.7	0.99 25.1	6.0 2.7
4 x 4 x 1½ 100 x 100 x 40	3.35 85.1	3.71 94.2	1.13 28.7	6.0 2.7

Please refer to General Notes on page 17.



FIGURE 618
REDUCING TEE
GROOVE X GROOVE X CUP
CAST



COUPLINGS

Figures 650 & 652 Concentric Reducer



FIGURE 650 CONCENTRIC REDUCER
GROOVE X GROOVE
CAST

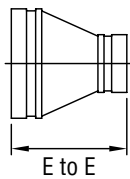
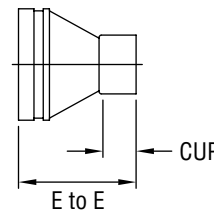


FIGURE 652 CONCENTRIC REDUCER
GROOVE X CUP
WROT COPPER



**COPPER
GROOVED
SYSTEM**

Nominal Size Inches mm	650 Groove x Groove	
	E to E Inches mm	Approx. Weight lbs kg
2½ x 2 65 x 50	3.29 83,6	1.4 0,6
3 x 2 80 x 50	2.50 63,5	1.4 0,6
3 x 2½ 80 x 65	2.50 63,5	1.4 0,6
4 x 2 100 x 50	4.75 120,7	3.2 1,5
4 x 2½ 100 x 65	3.00 76,2	2.3 1,1
4 x 3 100 x 80	3.00 76,2	2.4 1,1
5 x 3 125 x 80	3.88 98,6	3.8 1,7
5 x 4 125 x 100	3.38 85,9	3.8 1,7
6 x 3 150 x 80	4.38 111,3	5.0 2,3
6 x 4 150 x 100	3.88 98,6	5.1 2,3
6 x 5 150 x 125	3.38 85,9	4.9 2,2
8 x 6 200 x 150	5.00 127,0	9.5 4,3

Nominal Size Inches mm	652 Groove x Groove x Cup		
	E to E Inches mm	Cup Inches mm	Approx. Weight lbs kg
2 x 1 50 x 25	2.70 68,6	0.91 23,1	0.5 0,2
2 x 1¼ 50 x 32	3.00 76,2	0.97 24,6	0.4 0,2
2 x 1½ 50 x 40	2.94 74,7	1.09 27,7	0.4 0,2
2½ x 1 65 x 25	2.28 57,9	0.91 23,1	0.5 0,2
2½ x 1¼ 65 x 32	3.52 89,4	0.97 24,6	0.6 0,3
2½ x 1½ 65 x 40	3.45 87,6	1.09 27,7	0.6 0,3
2½ x 2 65 x 50	3.30 83,8	1.34 34,0	0.6 0,3
3 x 1½ 80 x 40	2.59 65,8	1.09 27,7	0.7 0,3
3 x 2 80 x 50	4.10 104,1	1.34 34,0	1.0 0,5
4 x 2 100 x 50	3.41 86,6	1.34 34,0	1.4 0,6

Please refer to General Notes on page 17.