

Technical Information Section

Kembla Copper Tube Type A					
Nom Size (DN)	Actual Tube Size (Metric)	Actual Tube Size (Imperial)	kg per 6m length	Pack Qty	*Safe Working Pressure (kPa)
6	6.35 x 0.91	¼" x 20g	0.83	200	11,320
8	7.94 x 0.91	5/16" x 20g	1.08	200	8,810
10	9.52 x 1.02	3/8" x 19g	1.46	200	8,350
15	•12.70 x 1.02	½" x 19g	2.01	100	6,100
18	•15.88 x 1.22	5/8" x 18g	3.00	100	5,750
20	•19.05 x 1.42	¾" x 17g	4.22	100	5,560
25	25.40 x 1.63	1" x 16g	6.53	100	4,750
32	31.75 x 1.63	1¼" x 16g	8.28	50	3,750
40	38.10 x 1.63	1½" x 16g	10.03	50	3,100
50	50.80 x 1.63	2" x 16g	13.52	30	2,310
65	63.50 x 1.63	2½" x 16g	17.01	30	1,840
80	76.20 x 2.03	3" x 14g	25.39	25	1,900
90	88.90 x 2.03	3½" x 14g	29.73	15	1,630
100	101.60 x 2.03	4" x 14g	34.09	10	1,500
125	127.00 x 2.03	5" x 14g	42.79	8	1,200
150	152.40 x 2.64	6" x 12g	66.68	7	1,300
200	203.20 x 2.64	8" x 12g	random	1	910

Kembla Copper Tube Type C					
Nom Size (DN)	Actual Tube Size (Metric)	Actual Tube Size (Imperial)	kg per 6m length	Pack Qty	*Safe Working Pressure (kPa)
10	9.52 x 0.71	3/8" x 22g	1.06	200	5,520
15	•12.70 x 0.71	½" x 22g	1.43	100	4,070
18	•15.88 x 0.91	5/8" x 20g	2.30	100	4,180
20	•19.05 x 0.91	¾" x 20g	2.78	100	3,450
25	25.40 x 0.91	1" x 20g	3.76	100	2,560

* Safe working pressures applicable up to 50°C.

- Generally supplied as 'BQ' - bendable quality.

Type 'A', 'B', 'C', and 'D' copper are to Australian Standards. Similar Standards are available in each country.

Kembla Copper Tube Type B					
Nom Size (DN)	Actual Tube Size (Metric)	Actual Tube Size (Imperial)	kg per 6m length	Pack Qty	*Safe Working Pressure (kPa)
6	6.35 x 0.71	¼" x 22g	0.54	200	8,560
8	7.94 x 0.71	⅝" x 22g	0.86	200	6,700
10	9.52 x 0.91	⅜" x 20g	1.32	200	7,220
15	•12.70 x 0.91	½" x 20g	1.81	100	5,290
18	•15.88 x 1.02	⅝" x 19g	2.56	100	4,810
20	•19.05 x 1.02	¾" x 19g	3.10	100	3,970
25	25.40 x 1.22	1" x 18g	4.97	100	3,500
32	31.75 x 1.22	1¼" x 18g	6.28	50	2,780
40	38.10 x 1.22	1½" x 18g	7.59	50	2,300
50	50.80 x 1.22	2" x 18g	10.20	30	1,710
65	63.50 x 1.22	2½" x 18g	12.82	30	1,370
80	76.20 x 1.63	3" x 16g	20.50	25	1,520
90	88.90 x 1.63	3½" x 16g	23.98	15	1,300
100	101.60 x 1.63	4" x 16g	27.49	10	1,200
125	127.00 x 1.63	5" x 16g	34.46	8	960
150	152.40 x 2.03	6" x 14g	51.49	7	1,000
200	203.20 x 2.03	8" x 14g	random	1	720

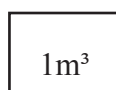
Kembla Copper Tube Type D					
Nom Size (DN)	Actual Tube Size (Metric)	Actual Tube Size (Imperial)	kg per 6m length	Pack Qty	*Safe Working Pressure (kPa)
32	31.75 x 0.91	1¼" x 20g	4.73	50	2,040
40	38.10 x 0.91	1½" x 20g	5.71	50	1,690
50	50.80 x 0.91	2" x 20g	7.66	30	1,260
65	63.50 x 0.91	2½" x 20g	9.61	30	1,010
80	76.20 x 1.22	3" x 18g	15.43	25	1,130
90	88.90 x 1.22	3½" x 18g	20.65	15	970
100	101.60 x 1.22	4" x 18g	20.65	10	890
125	127.00 x 1.42	5" x 17g	30.07	8	830
150	152.40 x 1.63	6" x 16g	41.45	7	800

Conversion Chart for m/h - kPa - bar								
m/h	kPa	bar	m/h	kPa	bar	m/h	kPa	bar
1.00	9.81	0.098	18.50	181.49	1.815	36.00	353.16	3.532
1.50	14.72	0.147	19.00	186.39	1.864	36.50	358.07	3.581
2.00	19.62	0.196	19.50	191.30	1.913	37.00	362.97	3.630
2.50	24.53	0.245	20.00	196.20	1.962	37.50	367.88	3.679
3.00	29.43	0.294	20.50	201.11	2.011	38.00	372.78	3.728
3.50	34.34	0.343	21.00	206.01	2.060	38.50	377.69	3.777
4.00	39.24	0.392	21.50	210.92	2.109	39.00	382.59	3.826
4.50	44.15	0.441	22.00	215.82	2.158	39.50	387.50	3.875
5.00	49.05	0.491	22.50	220.73	2.207	40.00	392.40	3.924
5.50	53.96	0.540	23.00	225.63	2.256	40.50	397.31	3.973
6.00	58.86	0.589	23.50	230.54	2.305	41.00	402.21	4.022
6.50	63.77	0.638	24.00	235.44	2.354	41.50	407.12	4.071
7.00	68.67	0.687	24.50	240.35	2.403	42.00	412.02	4.120
7.50	73.58	0.736	25.00	245.25	2.453	42.50	416.93	4.169
8.00	78.48	0.785	25.50	250.16	2.502	43.00	421.83	4.218
8.50	83.39	0.834	26.00	255.06	2.551	43.50	426.74	4.267
9.00	88.29	0.883	26.50	259.97	2.600	44.00	431.64	4.316
9.50	93.20	0.932	27.00	264.87	2.649	44.50	436.55	4.365
10.00	98.10	0.981	27.50	269.78	2.698	45.00	441.45	4.415
10.50	103.01	1.030	28.00	274.68	2.747	45.50	446.36	4.464
11.00	107.91	1.079	28.50	279.59	2.796	46.00	451.26	4.513
11.50	112.82	1.128	29.00	284.49	2.845	46.50	456.17	4.562
12.00	117.72	1.177	29.50	289.40	2.894	47.00	461.07	4.611
12.50	122.63	1.226	30.00	294.30	2.943	47.50	465.98	4.660
13.00	127.53	1.275	30.50	299.21	2.992	48.00	470.88	4.709
13.50	132.44	1.324	31.00	304.11	3.041	48.50	475.79	4.758
14.00	137.34	1.373	31.50	309.02	3.090	49.00	480.69	4.807
14.50	142.25	1.422	32.00	313.92	3.139	49.50	485.60	4.856
15.00	147.15	1.472	32.50	318.83	3.188	50.00	490.50	4.905
15.50	152.06	1.521	33.00	323.73	3.237	50.50	495.41	4.954
16.00	156.96	1.570	33.50	328.64	3.286	51.00	500.31	5.003
16.50	161.87	1.619	34.00	333.54	3.335	51.50	505.22	5.052
17.00	166.77	1.668	34.50	338.45	3.384	52.00	510.12	5.101
17.50	171.68	1.717	35.00	343.35	3.434	52.50	515.03	5.150
18.00	176.58	1.766	35.50	348.26	3.483	53.00	519.93	5.199

Conversion Chart for m/h - kPa - bar								
m/h	kPa	bar	m/h	kPa	bar	m/h	kPa	bar
53.50	524.84	5.248	71.00	696.51	6.965	88.50	868.19	8.682
54.00	529.74	5.297	71.50	701.42	7.014	89.00	873.09	8.731
54.50	534.65	5.346	72.00	706.32	7.063	89.50	878.00	8.780
55.00	539.55	5.396	72.50	711.23	7.112	90.00	882.90	8.829
55.50	544.46	5.445	73.00	716.13	7.161	90.50	887.81	8.878
56.00	549.36	5.494	73.50	721.04	7.210	91.00	892.71	8.927
56.50	554.27	5.543	74.00	725.94	7.259	91.50	897.62	8.976
57.00	559.17	5.592	74.50	730.85	7.308	92.00	902.52	9.025
57.50	564.08	5.641	75.00	735.75	7.358	92.50	907.43	9.074
58.00	568.98	5.690	75.50	740.66	7.407	93.00	912.33	9.123
58.50	573.89	5.739	76.00	745.56	7.456	93.50	917.24	9.172
59.00	578.79	5.788	76.50	750.47	7.505	94.00	922.14	9.221
59.50	583.70	5.837	77.00	755.37	7.554	94.50	927.05	9.270
60.00	588.60	5.886	77.50	760.28	7.603	95.00	931.95	9.320
60.50	593.51	5.935	78.00	765.18	7.652	95.50	936.86	9.369
61.00	598.41	5.984	78.50	770.09	7.701	96.00	941.76	9.418
61.50	603.32	6.033	79.00	774.99	7.750	96.50	946.67	9.467
62.00	608.22	6.082	79.50	779.90	7.799	97.00	951.57	9.516
62.50	613.13	6.131	80.00	784.80	7.848	97.50	956.48	9.565
63.00	618.03	6.180	80.50	789.71	7.897	98.00	961.38	9.614
63.50	622.94	6.229	81.00	794.61	7.946	98.50	966.29	9.663
64.00	627.84	6.278	81.50	799.52	7.995	99.00	971.19	9.712
64.50	632.75	6.327	82.00	804.42	8.044	99.50	976.10	9.761
65.00	637.65	6.377	82.50	809.33	8.093	100.00	981.00	9.810
65.50	642.56	6.426	83.00	814.23	8.142	110.00	1079.10	10.791
66.00	647.46	6.475	83.50	819.14	8.191	120.00	1177.20	11.772
66.50	652.37	6.524	84.00	824.04	8.240	130.00	1275.30	12.753
67.00	657.27	6.573	84.50	828.95	8.289	140.00	1373.40	13.734
67.50	662.18	6.622	85.00	833.85	8.339	150.00	1471.50	14.715
68.00	667.08	6.671	85.50	838.76	8.388	160.00	1569.60	15.696
68.50	671.99	6.720	86.00	843.66	8.437	170.00	1667.70	16.677
69.00	676.89	6.769	86.50	848.57	8.486	180.00	1765.80	17.658
69.50	681.80	6.818	87.00	853.47	8.535	190.00	1863.90	18.639
70.00	686.70	6.867	87.50	858.38	8.584	200.00	1962.00	19.620
70.50	691.61	6.916	88.00	863.28	8.633	210.00	2060.10	20.601

Discharge from Copper Pipe with Velocity and Head Loss								
Dia DN	Velocity m/s	Friction Loss/100m			Discharge			
		m/h	kPa	bar	L/s	L/m	L/h	kL/h
15	2.15	56.4	553.7	5.5	0.2	12	720	0.7
20	2.20	33.7	330.9	3.3	0.5	30	1,800	1.8
25	2.42	27.5	270.1	2.7	1.0	60	3,600	3.6
32	2.20	17.6	172.8	1.7	1.5	90	5,400	5.4
40	2.25	14.5	142.2	1.4	2.3	135	8,100	8.1
50	2.45	11.4	111.8	1.1	4.5	270	16,200	16.2
65	2.56	9.3	91.4	0.9	7.5	450	27,000	27.0
80	2.39	6.7	65.3	0.7	10.0	600	36,000	36.0
100	2.63	5.5	54.2	0.5	20.0	1,200	72,000	72.0
125	2.49	3.8	37.4	0.4	30.0	1,800	108,000	108.0
150	2.31	2.7	26.3	0.3	40.0	2,400	144,000	144.0
200	2.50	2.3	22.4	0.2	80.0	4,800	288,000	288.0

1000 Litres



1000 Kilograms



Volume and Weight of Water in Copper Pipe Per Metre			
DN	ID	Volume Litres/Metre	Weight Kg/Metre
15	10.88	0.09	0.09
20	17.01	0.22	0.22
25	22.96	0.40	0.40
32	29.31	0.66	0.66
40	35.66	0.97	0.97
50	48.44	1.82	1.82
65	61.06	2.91	2.91
80	72.94	4.16	4.16
100	98.34	7.60	7.60
125	123.74	11.98	11.98
150	148.34	17.20	17.20
200	199.14	30.79	30.79

Conversion Chart L/s - kL/s - L/m - L/h							
L/s	kL/s	L/m	L/h	L/s	kL/s	L/m	L/h
1	0.001	60	3,600	90	0.09	5,400	324,000
2	0.002	120	7,200	100	0.10	6,000	360,000
3	0.003	180	10,800	110	0.11	6,600	396,000
4	0.004	240	14,400	120	0.12	7,200	432,000
5	0.005	300	18,000	130	0.13	7,800	468,000
6	0.006	360	21,600	140	0.14	8,400	504,000
7	0.007	420	25,200	150	0.15	9,000	540,000
8	0.008	480	28,800	200	0.20	12,000	720,000
9	0.009	540	32,400	250	0.25	15,000	900,000
10	0.010	600	36,000	300	0.30	18,000	1,080,000
11	0.011	660	39,600	350	0.35	21,000	1,260,000
12	0.012	720	43,200	400	0.40	24,000	1,440,000
13	0.013	780	46,800	450	0.45	27,000	1,620,000
14	0.014	840	50,400	500	0.50	30,000	1,800,000
15	0.015	900	54,000	550	0.55	33,000	1,980,000
16	0.016	960	57,600	600	0.60	36,000	2,160,000
17	0.017	1,020	61,200	650	0.65	39,000	2,340,000
18	0.018	1,080	64,800	700	0.70	42,000	2,520,000
19	0.019	1,140	68,400	750	0.75	45,000	2,700,000
20	0.020	1,200	72,000	800	0.80	48,000	2,880,000
21	0.021	1,260	75,600	850	0.85	51,000	3,060,000
22	0.022	1,320	79,200	900	0.90	54,000	3,240,000
23	0.023	1,380	82,800	950	0.95	57,000	3,420,000
24	0.024	1,440	86,400	1000	1.00	60,000	3,600,000
25	0.025	1,500	90,000	1100	1.10	66,000	3,960,000
30	0.030	1,800	108,000	1200	1.20	72,000	4,320,000
35	0.035	2,100	126,000	1300	1.30	78,000	4,680,000
40	0.040	2,400	144,000	1400	1.40	84,000	5,040,000
45	0.045	2,700	162,000	1500	1.50	90,000	5,400,000
50	0.050	3,000	180,000	1600	1.60	96,000	5,760,000
55	0.055	3,300	198,000	1700	1.70	102,000	6,120,000
60	0.060	3,600	216,000	1800	1.80	108,000	6,480,000
65	0.065	3,900	234,000	1900	1.90	114,000	6,840,000
70	0.070	4,200	252,000	2000	2.00	120,000	7,200,000
80	0.080	4,800	288,000	2100	2.10	126,000	7,560,000

WaterFlow

Pipe Sizing Software

*Engineers
Plumbing Designers
Local Authorities*

- * Save design time
- * Consistency with designs
- * Compare alternatives
- * Automatically sizes pipe
- * Removes the guesswork
- * Accurate pipe sizing
- * Savings on construction cost
- * Analysis and reports
- * Reduce design costs
- * Increase company profitability
- * Recall job details faster and efficiently
- * User friendly

‘It works the way you think’

www.bciot.org