Copper pipe size *chart* (Type K, L, M)

Copper tube size is nominal. The outside diameter is always **1/8 in larger** than the nominal size, so **1/2 in copper has a 0.625 in OD**. **Type K** has the thickest wall, **Type L** is medium and **Type M** is the thinnest. All three have the same OD, so they use the same fittings.

NOMINAL SIZE	OD, IN (MM)	K WALL, IN (MM)	K ID, IN (MM)	L WALL, IN (MM)	L ID, IN (MM)	M WALL, IN (MM)	M ID, IN (MM)
1/4 in	0.375 (9.5)	0.035 (0.89)	0.305 (7.75)	0.030 (0.76)	0.315 (8.00)	—	—
3/8 in	0.500 (12.7)	0.049 (1.24)	0.402 (10.21)	0.035 (0.89)	0.430 (10.92)	0.025 (0.64)	0.450 (11.43)
1/2 in	0.625 (15.9)	0.049 (1.24)	0.527 (13.39)	0.040 (1.02)	0.545 (13.84)	0.028 (0.71)	0.569 (14.45)
5/8 in	0.750 (19.0)	0.049 (1.24)	0.652 (16.56)	0.042 (1.07)	0.666 (16.92)	—	—
3/4 in	0.875 (22.2)	0.065 (1.65)	0.745 (18.92)	0.045 (1.14)	0.785 (19.94)	0.032 (0.81)	0.811 (20.60)
1 in	1.125 (28.6)	0.065 (1.65)	0.995 (25.27)	0.050 (1.27)	1.025 (26.03)	0.035 (0.89)	1.055 (26.80)
1-1/4 in	1.375 (34.9)	0.065 (1.65)	1.245 (31.62)	0.055 (1.40)	1.265 (32.13)	0.042 (1.07)	1.291 (32.79)
1-1/2 in	1.625 (41.3)	0.072 (1.83)	1.481 (37.62)	0.060 (1.52)	1.505 (38.23)	0.049 (1.24)	1.527 (38.79)
2 in	2.125 (54.0)	0.083 (2.11)	1.959 (49.76)	0.070 (1.78)	1.985 (50.42)	0.058 (1.47)	2.009 (51.03)
2-1/2 in	2.625 (66.7)	0.095 (2.41)	2.435 (61.85)	0.080 (2.03)	2.465 (62.61)	0.065 (1.65)	2.495 (63.37)
3 in	3.125 (79.4)	0.109 (2.77)	2.907 (73.84)	0.090 (2.29)	2.945 (74.80)	0.072 (1.83)	2.981 (75.72)
3-1/2 in	3.625 (92.1)	0.120 (3.05)	3.385 (85.98)	0.100 (2.54)	3.425 (86.99)	0.083 (2.11)	3.459 (87.86)
4 in	4.125 (104.8)	0.134 (3.40)	3.857 (97.97)	0.110 (2.79)	3.905 (99.19)	0.095 (2.41)	3.935 (99.95)
5 in	5.125 (130.2)	0.160 (4.06)	4.805 (122.05)	0.125 (3.17)	4.875 (123.82)	0.109 (2.77)	4.907 (124.64)
6 in	6.125 (155.6)	0.192 (4.88)	5.741 (145.82)	0.140 (3.56)	5.845 (148.46)	0.122 (3.10)	5.881 (149.38)
8 in	8.125 (206.4)	0.271 (6.88)	7.583 (192.61)	0.200 (5.08)	7.725 (196.21)	0.170 (4.32)	7.785 (197.74)
10 in	10.125 (257.2)	0.338 (8.59)	9.449 (240.00)	0.250 (6.35)	9.625 (244.47)	0.212 (5.38)	9.701 (246.41)
12 in	12.125 (308.0)	0.405 (10.29)	11.315 (287.40)	0.280 (7.11)	11.565 (293.75)	0.254 (6.45)	11.617 (295.07)

Sources: Copper Development Association, The Copper Tube Handbook · 14.2b (Type L) · 14.2c (Type M) · Copper Tube Handbook, Table 14.1 · Standards

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Copper pipe size *chart* (Type K, L, M) Notes and pitfalls

TYPE K, L, M AND DWV COMPARED

TYPE	COLOR CODE	WALL	STANDARD	USES LISTED BY THE CDA
K	Green	Thickest	ASTM B88	Water service and distribution, fire protection, solar, fuel oil, HVAC, snow melting, compressed air, natural gas, LP gas, vacuum
L	Blue	Medium	ASTM B88	Water service and distribution, fire protection, solar, fuel oil, natural gas, LP gas, HVAC, snow melting, compressed air, vacuum
M	Red	Thinnest	ASTM B88	Water service and distribution, fire protection, solar, fuel oil, HVAC, snow melting, vacuum
DWV	Yellow	Thin	ASTM B306	Drain, waste and vent; HVAC; solar (not a pressure tube)

Sources: Copper Development Association, The Copper Tube Handbook · 14.2b (Type L) · 14.2c (Type M) · Copper Tube Handbook, Table 14.1 · Standards

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Copper pipe size *chart* (Type K, L, M) Notes and pitfalls, continued

WEIGHT AND WATER VOLUME PER LENGTH

SIZE	K LB/FT	L LB/FT	M LB/FT	K GAL/100 FT	L GAL/100 FT	M GAL/100 FT
1/4 in	0.145	0.126	—	0.38	0.40	—
3/8 in	0.269	0.198	0.145	0.66	0.75	0.83
1/2 in	0.344	0.285	0.204	1.13	1.21	1.32
5/8 in	0.418	0.362	—	1.73	1.81	—
3/4 in	0.641	0.455	0.328	2.26	2.51	2.68
1 in	0.839	0.655	0.465	4.04	4.29	4.54
1-1/4 in	1.04	0.884	0.682	6.32	6.53	6.80
1-1/2 in	1.36	1.14	0.94	8.95	9.24	9.51
2 in	2.06	1.75	1.46	15.66	16.08	16.47
2-1/2 in	2.93	2.48	2.03	24.19	24.79	25.40
3 in	4	3.33	2.68	34.48	35.39	36.26
3-1/2 in	5.12	4.29	3.58	46.75	47.86	48.82
4 in	6.51	5.38	4.66	60.70	62.22	63.18
5 in	9.67	7.61	6.66	94.20	96.96	98.24
6 in	13.9	10.2	8.92	134.47	139.39	141.11
8 in	25.9	19.3	16.5	234.61	243.48	247.27
10 in	40.3	30.1	25.6	364.28	377.97	383.97
12 in	57.8	40.4	36.7	522.36	545.70	550.61

Sources: Copper Development Association, The Copper Tube Handbook · 14.2b (Type L) · 14.2c (Type M) · Copper Tube Handbook, Table 14.1 · Standards

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