

Lumber Sizes & Metric Converter

US nominal to actual, to what you can actually buy in the UK, EU, and Australia.

ROGUEENGINEER

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01 Nominal vs. actual (US)

NOMINAL	ACTUAL (IN)	MM
1x2	3/4 x 1-1/2	19 x 38
1x3	3/4 x 2-1/2	19 x 64
1x4	3/4 x 3-1/2	19 x 89
1x6	3/4 x 5-1/2	19 x 140
1x8	3/4 x 7-1/4	19 x 184
1x10	3/4 x 9-1/4	19 x 235
1x12	3/4 x 11-1/4	19 x 286
2x2	1-1/2 x 1-1/2	38 x 38
2x3	1-1/2 x 2-1/2	38 x 64
2x4	1-1/2 x 3-1/2	38 x 89
2x6	1-1/2 x 5-1/2	38 x 140
2x8	1-1/2 x 7-1/4	38 x 184
2x10	1-1/2 x 9-1/4	38 x 235
2x12	1-1/2 x 11-1/4	38 x 286
4x4	3-1/2 x 3-1/2	89 x 89
4x6	3-1/2 x 5-1/2	89 x 140
6x6	5-1/2 x 5-1/2	140 x 140
5/4x6 deck board	1 x 5-1/2	25 x 140

Dry dressed sizes per PS 20. Plans call out nominal; cut lists use actual. Measure the board.

03 Plywood + sheet goods

ITEM	LABEL	ACTUALLY	MM
Sanded plywood	1/4 in	0.225 (about 7/32)	5.7
Sanded plywood	1/2 in	0.451 (about 15/32)	11.5
Sanded plywood	3/4 in	0.703 (about 23/32)	17.9
Tempered hardboard	1/8 in	0.115 to 0.125	2.9 to 3.2
MDF	3/4 in	0.750 (true)	19.05
US sheet	4 x 8 ft	48 x 96 in	1219 x 2438
UK sheet	1220 x 2440	48.0 x 96.1 in	1220 x 2440
EU sheet	1250 x 2500	49.2 x 98.4 in	1250 x 2500
AU sheet	1200 x 2400	47.2 x 94.5 in	1200 x 2400

Measure before cutting dados; sheets vary by mill. Metric 18 mm ply is a hair thicker than US 3/4; AU 17 mm a hair thinner.

02 What to buy instead

US (ACTUAL MM)	UK	EU / NORDIC	AUSTRALIA
1x4 (19 x 89)	PSE 18 x 94 (ex 22 x 100)	21 x 95 planed	90 x 19 DAR pine
1x6 (19 x 140)	PSE 18 x 144 (ex 22 x 150)	21 x 145 planed (verify)	140 x 19 DAR pine
2x4 (38 x 89)	CLS 38 x 89	45 x 95 regel C24	90 x 45 MGP10
2x6 (38 x 140)	CLS 38 x 140, or C24 47 x 150	45 x 145 regel	140 x 45 MGP10
2x8 (38 x 184)	C16/C24 47 x 200 regularised	45 x 195 regel	190 x 45 MGP10
2x10 (38 x 235)	C24 47 x 225 regularised	45 x 220 regel (verify)	240 x 45 MGP10
4x4 (89 x 89)	100 x 100 treated post (UC4)	95 x 95 treated post	90 x 90 H4 treated post
6x6 (140 x 140)	150 x 150 treated post (UC4)	145 x 145 (special order)	150 x 150 F7 cypress post
3/4 in ply (18 mm)	18 mm, 1220 x 2440	18 mm, 1250 x 2500	17 mm, 1200 x 2400

UK CLS matches US 2x almost exactly. C16/C24 carcassing is 47 mm thick and sawn or regularised, so joints sized for 38 mm need adjusting. AU structural ply is 17 mm. "verify" = not confirmed at a big-box store.

04 Lengths

US LENGTH	EXACT MM	METRIC STOCK	DIFFERENCE
6 ft (72 in)	1829	1.8 m	29 mm short
8 ft (96 in)	2438	2.4 m	38 mm short
10 ft (120 in)	3048	3.0 m	48 mm short
12 ft (144 in)	3658	3.6 m	58 mm short
14 ft (168 in)	4267	4.2 m	67 mm short
16 ft (192 in)	4877	4.8 m	77 mm short

Metric stock is always a bit shorter than the imperial length it replaces. Check your longest cut against 2.4 / 3.0 / 3.6 / 4.2 / 4.8 m before you buy. Also 2.7 m (UK/AU) and 5.4 / 6.0 m.

05 Fractions to mm

FRACTION	DECIMAL	MM
1/16	0.0625	1.59
1/8	0.1250	3.18
3/16	0.1875	4.76
1/4	0.2500	6.35
5/16	0.3125	7.94
3/8	0.3750	9.53
7/16	0.4375	11.11
1/2	0.5000	12.70

06 Fractions to mm

FRACTION	DECIMAL	MM
9/16	0.5625	14.29
5/8	0.6250	15.88
11/16	0.6875	17.46
3/4	0.7500	19.05
13/16	0.8125	20.64
7/8	0.8750	22.23
15/16	0.9375	23.81
1	1.0000	25.40

1 in = 25.4 mm exactly. mm = in x 25.4.

07 Rules + board feet

- Metric editions are not a straight conversion: dimensions round to the nearest 5 mm and to sizes you can buy.
- Board feet = T x W x L (inches) / 144, nominal thickness and width. 2x4 x 8 ft = 5.33 bf; 1x6 x 10 ft = 5 bf.
- Hardwood by the quarter: 4/4 = 1 in, 5/4 = 1-1/4, 6/4 = 1-1/2, 8/4 = 2 (rough).
- 1 m3 of lumber is about 424 board feet.
- Nearest bolts: 1/4 = M6, 5/16 = M8, 3/8 = M10, 1/2 = M12. Diameter only; threads do not interchange.
- A "3-1/2 in" 2x4 measures 3-3/8 to 3-5/8 with moisture. Cut to fit, not to the drawing.