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# Inches to Millimetres Conversion Chart

Fractional and whole-inch conversion chart

For: Machinists, makers, woodworkers and engineers

**allunitconversions.com/in-to-mm-conversion-chart**
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| EXACT DEFINITION | FORMULA | REVERSE | WORKED EXAMPLE |
|---|---|---|---|
| 1 inch = 25.4 mm exactly | mm = in × 25.4 | in = mm ÷ 25.4 | 3/8 in = 0.375 × 25.4 = 9.525 mm |

Millimetres are rounded to 3 decimal places (fractions) or 1 decimal place (whole inches).

## Fractional inches (1/64 in steps)

| Fraction (in) | Inches (in) | Millimetres (mm) | Fraction (in) | Inches (in) | Millimetres (mm) |
|---|---|---|---|---|---|
| 1/64 | 0.0156 | 0.397 | 33/64 | 0.5156 | 13.097 |
| 1/32 | 0.0313 | 0.794 | 17/32 | 0.5313 | 13.494 |
| 3/64 | 0.0469 | 1.191 | 35/64 | 0.5469 | 13.891 |
| 1/16 | 0.0625 | 1.588 | 9/16 | 0.5625 | 14.288 |
| 5/64 | 0.0781 | 1.984 | 37/64 | 0.5781 | 14.684 |
| 3/32 | 0.0938 | 2.381 | 19/32 | 0.5938 | 15.081 |
| 7/64 | 0.1094 | 2.778 | 39/64 | 0.6094 | 15.478 |
| 1/8 | 0.1250 | 3.175 | 5/8 | 0.6250 | 15.875 |
| 9/64 | 0.1406 | 3.572 | 41/64 | 0.6406 | 16.272 |
| 5/32 | 0.1563 | 3.969 | 21/32 | 0.6563 | 16.669 |
| 11/64 | 0.1719 | 4.366 | 43/64 | 0.6719 | 17.066 |
| 3/16 | 0.1875 | 4.762 | 11/16 | 0.6875 | 17.463 |
| 13/64 | 0.2031 | 5.159 | 45/64 | 0.7031 | 17.859 |
| 7/32 | 0.2188 | 5.556 | 23/32 | 0.7188 | 18.256 |
| 15/64 | 0.2344 | 5.953 | 47/64 | 0.7344 | 18.653 |
| 1/4 | 0.2500 | 6.350 | 3/4 | 0.7500 | 19.050 |
| 17/64 | 0.2656 | 6.747 | 49/64 | 0.7656 | 19.447 |
| 9/32 | 0.2813 | 7.144 | 25/32 | 0.7813 | 19.844 |
| 19/64 | 0.2969 | 7.541 | 51/64 | 0.7969 | 20.241 |
| 5/16 | 0.3125 | 7.938 | 13/16 | 0.8125 | 20.638 |
| 21/64 | 0.3281 | 8.334 | 53/64 | 0.8281 | 21.034 |
| 11/32 | 0.3438 | 8.731 | 27/32 | 0.8438 | 21.431 |
| 23/64 | 0.3594 | 9.128 | 55/64 | 0.8594 | 21.828 |
| 3/8 | 0.3750 | 9.525 | 7/8 | 0.8750 | 22.225 |
| 25/64 | 0.3906 | 9.922 | 57/64 | 0.8906 | 22.622 |
| 13/32 | 0.4063 | 10.319 | 29/32 | 0.9063 | 23.019 |
| 27/64 | 0.4219 | 10.716 | 59/64 | 0.9219 | 23.416 |
| 7/16 | 0.4375 | 11.112 | 15/16 | 0.9375 | 23.813 |
| 29/64 | 0.4531 | 11.509 | 61/64 | 0.9531 | 24.209 |
| 15/32 | 0.4688 | 11.906 | 31/32 | 0.9688 | 24.606 |
| 31/64 | 0.4844 | 12.303 | 63/64 | 0.9844 | 25.003 |
| 1/2 | 0.5000 | 12.700 | 1 | 1.0000 | 25.400 |

## Whole inches

| Inches (in) | Millimetres (mm) | Inches (in) | Millimetres (mm) | Inches (in) | Millimetres (mm) | Inches (in) | Millimetres (mm) |
|---|---|---|---|---|---|---|---|
| **1** | 25.4 | **18** | 457.2 | **35** | 889.0 | **52** | 1,320.8 |
| **2** | 50.8 | **19** | 482.6 | **36** | 914.4 | **53** | 1,346.2 |
| **3** | 76.2 | **20** | 508.0 | **37** | 939.8 | **54** | 1,371.6 |
| **4** | 101.6 | **21** | 533.4 | **38** | 965.2 | **55** | 1,397.0 |
| **5** | 127.0 | **22** | 558.8 | **39** | 990.6 | **56** | 1,422.4 |
| **6** | 152.4 | **23** | 584.2 | **40** | 1,016.0 | **57** | 1,447.8 |
| **7** | 177.8 | **24** | 609.6 | **41** | 1,041.4 | **58** | 1,473.2 |
| **8** | 203.2 | **25** | 635.0 | **42** | 1,066.8 | **59** | 1,498.6 |
| **9** | 228.6 | **26** | 660.4 | **43** | 1,092.2 | **60** | 1,524.0 |
| **10** | 254.0 | **27** | 685.8 | **44** | 1,117.6 | **72** | 1,828.8 |
| **11** | 279.4 | **28** | 711.2 | **45** | 1,143.0 | **84** | 2,133.6 |
| **12** | 304.8 | **29** | 736.6 | **46** | 1,168.4 | **96** | 2,438.4 |
| **13** | 330.2 | **30** | 762.0 | **47** | 1,193.8 | **100** | 2,540.0 |
| **14** | 355.6 | **31** | 787.4 | **48** | 1,219.2 | **120** | 3,048.0 |
| **15** | 381.0 | **32** | 812.8 | **49** | 1,244.6 | **144** | 3,657.6 |
| **16** | 406.4 | **33** | 838.2 | **50** | 1,270.0 | | |
| **17** | 431.8 | **34** | 863.6 | **51** | 1,295.4 | | |

## Sources and method

- **International Yard and Pound Agreement (1959)** — 1 in = 25.4 mm, 1 ft = 0.3048 m, 1 lb = 0.453 592 37 kg exactly
- **NIST Special Publication 811** — Guide for the Use of the International System of Units (www.nist.gov/pml/special-publication-811)

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