

How can I use the CONVERT function in Excel to convert measurements from one unit to another?

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The CONVERT function in Excel allows users to easily convert measurements from one unit to another. This function can be used to convert various types of units, such as length, weight, time, and temperature. By specifying the original measurement, the desired unit, and the conversion factor, the CONVERT function will automatically calculate and display the converted measurement. This feature is particularly useful for individuals who frequently work with different units of measurement and need to quickly convert them for various purposes. Overall, the CONVERT function in Excel provides a convenient and efficient way to convert measurements and improve accuracy in data analysis.

Converts a number from one measurement system to another. For example, CONVERT can translate a table of distances in miles to a table of distances in kilometers.

Syntax

CONVERT(number,from_unit,to_unit)

Number is the value in from_units to convert.

From_unit is the units for number.

To_unit is the units for the result. CONVERT accepts the following text values (in quotation marks) for from_unit and to_unit.

Weight and Mass

| Weight and mass | From_unit or to_unit |
|----------------------------|--------------------------------|
| Gram | "g" |
| Slug | "sg" |
| Pound mass (avoirdupois) | "lbm" |
| U (atomic mass unit) | "u" |
| Ounce mass (avoirdupois) | "ozm" |
| Grain | "grain" |
| U.S. (short) hundredweight | "cwt" or "shweight" |
| Imperial hundredweight | "uk_cwt" or "lcwt" ("hweight") |
| Stone | "stone" |
| Ton | "ton" |

| Weight and mass | From_unit or to_unit |
|-----------------|------------------------------|
| Imperial ton | "uk_ton" or "LTON" ("brton") |

Distance

| Distance | From_unit or to_unit |
|--------------------------------|----------------------|
| Meter | "m" |
| Statute mile | "mi" |
| Nautical mile | "Nmi" |
| Inch | "in" |
| Foot | "ft" |
| Yard | "yd" |
| Angstrom | "ang" |
| Ell | "ell" |
| Light-year | "ly" |
| Parsec | "parsec" or "pc" |
| Pica (1/72 inch) | "Picapt" or "Pica" |
| Pica (1/6 inch) | "pica" |
| U.S survey mile (statute mile) | "survey_mi" |

Time

| Time | From_unit or to_unit |
|--------|----------------------|
| Year | "yr" |
| Day | "day" or "d" |
| Hour | "hr" |
| Minute | "mn" or "min" |
| Second | "sec" or "s" |

Pressure

| Pressure | From_unit or to_unit |
|----------|----------------------|
| Pascal | "Pa" (or "p") |

| Pressure | From_unit or to_unit |
|---------------|----------------------|
| Atmosphere | "atm" (or "at") |
| mm of Mercury | "mmHg" |
| PSI | "psi" |
| Torr | "Torr" |

Force

| Force | From_unit or to_unit |
|-------------|----------------------|
| Newton | "N" |
| Dyne | "dyn" (or "dy") |
| Pound force | "lbf" |
| Pond | "pond" |

Energy

| Energy | From_unit or to_unit |
|-----------------------|----------------------|
| Joule | "J" |
| Erg | "e" |
| Thermodynamic calorie | "c" |
| IT calorie | "cal" |
| Electron volt | "eV" (or "ev") |
| Horsepower-hour | "HPH" (or "hh") |
| Watt-hour | "Wh" (or "wh") |
| Foot-pound | "flb" |
| BTU | "BTU" (or "btu") |

Power

| Power | From_unit or to_unit |
|--------------|----------------------|
| Horsepower | "HP" (or "h") |
| Pferdestärke | "PS" |
| Watt | "W" (or "w") |

Magnetism

| Magnetism | From_unit or to_unit |
|-----------|----------------------|
| Tesla | "T" |
| Gauss | "ga" |

Temperature

| Temperature | From_unit or to_unit |
|-------------------|----------------------|
| Degree Celsius | "C" (or "cel") |
| Degree Fahrenheit | "F" (or "fah") |
| Kelvin | "K" (or "kel") |
| Degrees Rankine | "Rank" |
| Degrees Réaumur | "Reau" |

Volume

| Volume (or liquid measure) | From_unit or to_unit |
|----------------------------|----------------------|
| Teaspoon | "tsp" |
| Modern teaspoon | "tspm" |
| Tablespoon | "tbs" |
| Fluid ounce | "oz" |
| Cup | "cup" |
| U.S. pint | "pt" (or "us_pt") |
| U.K. pint | "uk_pt" |
| Quart | "qt" |
| Imperial quart (U.K.) | "uk_qt" |
| Gallon | "gal" |
| Imperial gallon (U.K.) | "uk_gal" |
| Liter | "l" or "L" ("lt") |
| Cubic angstrom | "ang3" or "ang^3" |
| U.S. oil barrel | "barrel" |

| Volume (or liquid measure) | From_unit or to_unit |
|-------------------------------|--|
| U.S. bushel | "bushel" |
| Cubic feet | "ft3" or "ft^3" |
| Cubic inch | "in3" or "in^3" |
| Cubic light-year | "ly3" or "ly^3" |
| Cubic meter | "m3" or "m^3" |
| Cubic Mile | "mi3" or "mi^3" |
| Cubic yard | "yd3" or "yd^3" |
| Cubic nautical mile | "Nmi3" or "Nmi^3" |
| Cubic Pica | "Picapt3", "Picapt^3", "Pica3" or "Pica^3" |
| Gross Registered Ton | "GRT" ("regton") |
| Measurement ton (freight ton) | "MTON" |

Area

| Area | From_unit or to_unit |
|--------------------------|--|
| International acre | "uk_acre" |
| U.S. survey/statute acre | "us_acre" |
| Square angstrom | "ang2" or "ang^2" |
| Are | "ar" |
| Square feet | "ft2" or "ft^2" |
| Hectare | "ha" |
| Square inches | "in2" or "in^2" |
| Square light-year | "ly2" or "ly^2" |
| Square meters | "m2" or "m^2" |
| Morgen | "Morgen" |
| Square miles | "mi2" or "mi^2" |
| Square nautical miles | "Nmi2" or "Nmi^2" |
| Square Pica | "Picapt2", "Pica2", "Pica^2" or "Picapt^2" |
| Square yards | "yd2" or "yd^2" |

Information

| Information | From_unit or to_unit |
|-------------|----------------------|
| Bit | "bit" |
| Byte | "byte" |

Speed

| Speed | From_unit or to_unit |
|-------------------|----------------------|
| Admiralty knot | "admkn" |
| Knot | "kn" |
| Meters per hour | "m/h" or "m/hr" |
| Meters per second | "m/s" or "m/sec" |
| Miles per hour | "mph" |

The following abbreviated unit prefixes can be prepended to any metric from_unit or to_unit.

| Prefix | Multiplier | Abbreviation |
|--------|------------|--------------|
| yotta | 1E+24 | "Y" |
| zetta | 1E+21 | "Z" |
| exa | 1E+18 | "E" |
| peta | 1E+15 | "P" |
| tera | 1E+12 | "T" |
| giga | 1E+09 | "G" |
| mega | 1E+06 | "M" |
| kilo | 1E+03 | "k" |
| hecto | 1E+02 | "h" |
| dekao | 1E+01 | "da" or "e" |
| deci | 1E-01 | "d" |
| centi | 1E-02 | "c" |
| milli | 1E-03 | "m" |
| micro | 1E-06 | "u" |

| Prefix | Multiplier | Abbreviation |
|--------|------------|--------------|
| nano | 1E-09 | "n" |
| pico | 1E-12 | "p" |
| femto | 1E-15 | "f" |
| atto | 1E-18 | "a" |
| zepto | 1E-21 | "z" |
| yocto | 1E-24 | "y" |

| Binary Prefix | Prefix Value | Abbreviation | Derived from |
|---------------|--|--------------|--------------|
| yobi | $2^{80} = 1\,208\,925\,819\,614\,629\,174\,706\,176$ | "Yi" | yotta |
| zebi | $2^{70} = 1\,180\,591\,620\,717\,411\,303\,424$ | "Zi" | zetta |
| exbi | $2^{60} = 1\,152\,921\,504\,606\,846\,976$ | "Ei" | exa |
| pebi | $2^{50} = 1\,125\,899\,906\,842\,624$ | "Pi" | peta |
| tebi | $2^{40} = 1\,099\,511\,627\,776$ | "Ti" | tera |
| gibi | $2^{30} = 1\,073\,741\,824$ | "Gi" | giga |
| mebi | $2^{20} = 1\,048\,576$ | "Mi" | mega |
| kibi | $2^{10} = 1024$ | "ki" | kilo |

If the input data types are incorrect, CONVERT returns the #VALUE! error value.

If the unit does not exist, CONVERT returns the #N/A error value.

If the unit does not support a binary prefix, CONVERT returns the #N/A error value.

If the units are in different groups, CONVERT returns the #N/A error value.

Unit names and prefixes are case-sensitive.