

Engineering General Tools:-

Engineer General Tools contains equation calculations, unit conversions and chemistry information for over 4000 chemical compounds. Suitable for students and professionals in the chemical, science, engineering, maths fields. A very handy tool for calculations, conversions and reference.

Solve standard equations in the following categories of Physics, Electrical Engineering, Maths - Geometry, Maths - Statics, Dimensionless Numbers, CSTR and more.

A unit conversion tool of over 200 predefined values and the ability to add your own.

The app Interface is swipe screen, easy to use and convenient to have around. Divided into four main screens Equation Calculations, Chemical Data, Units Calculations, Add user units. Instructions are included in the app for each screen, e.g. Equations Instructions are below

Main Equation Groups are :-

Physics
Electrical
Dimensionless Numbers
CSTR
Maths Information
Chemical Information
Chemical Data
Maths - Geometry
Maths - Statics
Maths - Series
Maths - Proportional Lengths
Maths - Interest
Maths - Areas, Volumes
Decanters
Pipes
Distillation
Hydrostatics
Heat Transfer, Exchangers
Vessel Design subjected to combine loading

Unit Groups :

ACCELERATION UNITS
AREA UNITS
CALORIFIC VALUE (VOL BASIS) UNITS
DENSITY UNITS
ENERGY UNITS
ENTHALPY UNITS
FORCE UNITS
FREQUENCY UNITS
HEAT FLUX UNITS
HEAT FLUX UNITS
HEAT TRANSFER COEFFICIENT UNITS
HENRYS LAW CONSTANT UNITS
LENGTH UNITS

MASS UNITS
MASS FLUX UNITS
POWER UNITS
PRESSURE UNITS
SPECIFIC HEAT UNITS
SPECIFIC VOLUME UNITS
MASS FLOW UNITS
USER DEFINED UNITS
TIME UNITS
PLANE ANGLE UNITS
TEMPERATURE UNITS
VOLUME UNITS
VELOCITY UNITS

The main Chemical Groups are :-

Thermodynamic Data
Solids Data
Physical Data
Organic Data
Acid and Base Dissociation Constants
Acid and Base Dissociation Constants in Water
Acid Base Indicators
Liquids Data
Anion_Contributions_Entropies
Cation Contributions
General Chemical Data
Gas Data
Steam Tables Pressure
Periodic Table
Standard Electrode Potentials Acidic
Standard Electrode Potentials Basic
Standard Heats Free Energies Formation
Standard Heats Free Energies Formation Absolute Entropies
Thermodynamic Data1
Saturated Steam - Pressure
Saturated Steam - Temperature
SuperHeated Steam - Pressure - PSI
Steam Table
SuperHeated Steam Pressure - Bar
Steam Table SI - Bar

Settings Instructions : \n

1. Select the number of decimal values after the decimal . to appear in the result.i.e 2 means 1.XX from listbox.\n
2. Check if it is required to express the result in engineering form(scintific form) i.e. $2e+4$ \n

Units Instructions : \n

1. Select Units group from listbox.\n
2. Select unit conversion from conversion listbox.\n

3. After selecting unit conversion result will be calculated. Use number keypad, enter value to be converted. \n

Results calculated on clicking number or by clicking Calculate button on keypad. \n

Backkey and clear options remove entries. \n

Use top Textbox for unit conversion and below textbox for Calculator. Calculator functions not used directly for conversions, use keypad copy buttons to copy conversion values to calculator textbox.

Use calculator functions cursor must be in below textbox. Standard calculator usage. Use equals button to calculate. Result is displayed below entry text.

Use $\times 10^x$ key raises number by a factor of 10 i.e. 10000 enter 1×10^5 . \n

The displayed reverse result is the unit conversion value calculated in the reverse direction. Click the viewer button to display common symbols used in the units display. \n

UNIT SYMBOLS \n

π - Pi value (3.142...), mm - millimeter, km - kilometer \n

yd - yard, cm - centimeter \n

in - inch, ft - foot \n

m - metro, ha - hectare \n

kcal - kilocalorie \n

Btu - British thermal unit \n

Cal - calorie \n

MJ - mega joule (1,000,000 joules) \n

g - gram, mg - milligram \n

kg - kilogram, gal - gallon \n

KJ - kilojoule \n

kWh - kilo watt hour (1000 joules)

hp - horse power, lbf - pound force \n

W - watt, J - joule \n

h - hour, s - second \n

mN - milli newton \n

kgf - kilogram force \n

tonf - ton force, kN - kilo newton \n

N - newton, min - minute \n

psi - pounds per square inch \n

atm - atmosphere, dyn - dyne, l - liter \n

mmHg - millimeters of mercury \n

cu - cubic, mi - mile, oz - ounce, US - United States \n

Imp - Imperial, Lux - Illuminance, Pb - Pebibyte \n