CONVERSIONCALC PLUS™

ULTIMATE PROFESSIONAL CONVERSION CALCULATOR

CALCULATED INDUSTRIES

PSI

38.5

CONVERSIONCALC PLUS™

Off · RESET On/C

gpm	dl	oz/cm²	cl	liters/sec	mL/sec	nl	x²	wt/vol
gal		fl oz		liters		mL		%
Bars	grains	psi	sc	psf	mg	kPa	mcg	MPa	ng
tons		lbs		dry oz		kg		grams
m/min	quart	m/sec	pint	mm²/sec	cup	km/h	tbsp	mph	tsp
m		cm		mm		km		miles
Yds	gtts	ft/sec	min	in/sec	dr	X(10⁻¹)	Prefix		
Yds		Feet		Inch		/		←

	in-lbs	hp	ft-lbs	btu/hr	N-m	kW	1/x
2nd	7		8		9		÷
	Hectare	J	Acre	BTU	Acre-Ft	kcal	Clear All
3rd	4		5		6		×
Store	med tabs	°K	°C	°F	Conv
Rcl	1		2		3		-
	Bd-Ft		Cost		Tape	π
M+	0		.		=		+

CALCULATED INDUSTRIES®

FAST. ACCURATE. RELIABLE.

Model 8030

CONVERSIONCALC PLUS™

The *ConversionCalc Plus*™ is an easy-to-use and powerful handheld calculator that provides more than 500 conversion combinations using 70 built-in Standard, Metric and other units of measure. Work in and convert between linear, area and volume units, plus weights, temperatures, velocity and more.

With the *ConversionCalc Plus* you can enter and convert everything from very large units to micro- and nano-units -- kilograms and tons, drams, scruples, grains, microliters, even tablespoons and cups. Don't waste time looking up tables and conversions in books and online. Virtually any conversion is at your fingertips with the *ConversionCalc Plus*.

The *ConversionCalc Plus™* is the professional choice for:

- Health Care Professionals
- Scientists
- Pharmacists
- Nutritionists
- Lab Technicians
- Specifiers
- Importers/Exporters

With the *ConversionCalc Plus™* you can convert:

- Flow Rate
- Weight
- Linear, Area and Volume Dimensions
- Temperature
- Weight per Volume
- Pressure
- Torque
- Energy
- Power
- Velocity

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GETTING STARTED

You may want to practice getting a feel for your calculator keys by reading through the key definitions and learning how to enter data, how to store values, etc., before proceeding to the examples.

KEY DEFINITIONS

Basic Function Keys

`On/C`	***On/Clear Key —*** Turns on power. Pressing once clears the last entry and the display. Pressing twice clears all non-permanent values.
`Off`	***Off —*** Turns all power off. Clears all non-permanent values.
`➕➖➗✖️`	Arithmetic operation keys.
`0`-`9` and `•`	Keys used for entering numbers.
`%`	***Percentage —*** Used to define a given percentage of a number.

/ *Fraction Bar* — Used to enter fractions. Fractions can be entered as proper (1/2, 1/8, 1/16) or improper (3/2, 9/8). If the denominator (bottom) is not entered, the calculator's fractional accuracy setting is automatically used.

2nd and **3rd** Used with the dimensional keys to convert between units or with other keys to access special functions.

Rcl *Recall* — Used with other keys to recall stored values and settings.

2nd Rcl *Store* — Used for storing values.

M+ *Accumulative Memory* — Adds displayed value to Accumulative Memory.

2nd M+ *M-* — Subtracts displayed value from Accumulative Memory.

Miscellaneous Function Keys

⬅ *Backspace Key* — Used to delete entries one at a time (unlike the **On/C** key which deletes the entire entry).

(cont'd)

2nd **◄** *Square Root (√x̄) —* Calculates the Square Root of the number in the display.

2nd **=** *Paperless Tape (Tape) —* Accesses the Paperless Tape Mode, which keeps track of your past 20 entries. Useful for checking strings of numbers.

3rd **/** *Preference Settings (Prefs) —* Accesses various customizable settings, such as dimensional answer formats (see Preference Settings section).

2nd **♦** *Reciprocal (1/x) —* Calculates the reciprocal of the number in the display. (e.g., **8** **2nd** **♦** **=** 0.125).

2nd **X** *Clear All —* Returns all stored values to the default settings. Does not affect Preference Settings.

2nd **=** *Change Sign (+/–) —* Toggles displayed value between negative and positive value.

2nd **♦** *Pi —* Displays value of **π** (3.141593).

2nd **●**	***Total Cost (Cost) —*** Calculates total cost based on entry of per unit cost.
2nd **%**	***x^2 —*** Squares the value on the display.
2nd **/**	***Exponential Notation*** ***$x(10^y)$ —*** Enters exponential notation values. Also used to toggle between exponential and non-exponential modes.
3rd **%**	***Weight per Volume*** ***(wt/vol) —*** Stores a new Weight per Volume value. Default value is 62.42796 pounds per cubic foot (1,000 kilograms per cubic meter).

CONVERSION FUNCTION KEYS

With the *ConversionCalc Plus* you can easily and quickly enter or convert any of the following units.

Linear, Area and Volume Keys

UNIT	KEY
Feet	**Feet**
Inch	**Inch**
Yards	**Yds**
Meter	**m**
	(cont'd)

UNIT		KEY
Centimeter		`cm`
Millimeter		`mm`
Kilometer		`km`
Miles		`miles`
Acre		`2nd` `5`
Hectare		`2nd` `4`
Board Feet	*(Bd-Ft)*	`2nd` `0`
Acre Feet	*(Acre-Ft)*	`2nd` `6`
Gallon		`gal`
Fluid Ounce		`fl oz`
Quart		`3rd` `m`
Pint		`3rd` `cm`
Cup		`3rd` `mm`
Tablespoon	*(tbsp)*	`3rd` `km`
Teaspoon	*(tsp)*	`3rd` `miles`
Dram	*(dr)*	`3rd` `Inch`
Minim	*(min)*	`3rd` `Feet`
Liters		`liters`
Milliliter		`mL`
Deciliter	*(dl)*	`3rd` `gal`
Centiliter	*(cl)*	`3rd` `fl oz`
Microliter	*(µl)*	`3rd` `liters`
Nanoliter	*(nl)*	`3rd` `mL`
Drops	*(gtts)*	`3rd` `Yds`

Weight Keys

UNIT		KEY
Tons		`tons`
Pounds		`lbs`
Dry Ounce		`dry oz`
Kilogram		`kg`
Grams		`grams`
Milligram	*(mg)*	`3rd` `dry oz`
Microgram	*(mcg)*	`3rd` `kg`
Nanogram	*(ng)*	`3rd` `grams`
Metric Tons	*(met tons)*	`2nd` `1`
Grains		`3rd` `tons`
Scruples	*(sc)*	`3rd` `lbs`

Velocity Keys

UNIT		KEY
Feet per Minute	*(ft/min)*	`2nd` `Yds`
Inches per Second	*(in/sec)*	`2nd` `Inch`
Feet per Second	*(ft/sec)*	`2nd` `Feet`
Miles per Hour	*(mph)*	`2nd` `miles`
Meters per Minute	*(m/min)*	`2nd` `m`

(cont'd)

UNIT		KEY
Meters per Second	*(m/sec)*	2nd cm
Millimeters per Second	*(mm/sec)*	2nd mm
Kilometers per Hour	*(km/h)*	2nd km

Flow Rate Keys

UNIT		KEY
Gallons per Minute	*(gpm)*	2nd gal
Ounces per Second	*(oz/sec)*	2nd fl oz
Liters per Second	*(liters/sec)*	2nd liters
Milliliters per Second	*(mL/sec)*	2nd mL

Pressure Keys

UNIT		KEY
Pounds per Square Inch	*(psi)*	2nd lbs
Pounds per Square Foot	*(psf)*	2nd dry oz
Kilopascals	*(kPa)*	2nd kg
Megapascals	*(MPa)*	2nd grams
Bars		2nd tons

Torque Keys

UNIT		KEY
Inch-Pounds	*(in-lbs)*	2nd 7
Foot-Pounds	*(ft-lbs)*	2nd 8
Newton-Meters	*(N-m)*	2nd 9

Temperature Keys

UNIT		KEY
Celsius	*(°C)*	2nd 2
Fahrenheit	*(°F)*	2nd 3
Kelvin	*(K)*	3rd 1
Rankine	*(°R)*	3rd 2
Réaumur	*(°r)*	3rd 3

Energy Keys

UNIT		KEY
Joules	*(J)*	3rd 4
British Thermal Units	*(BTU)*	3rd 5
Kilocalories	*(kcal)*	3rd 6

Power Keys

UNIT		KEY
Horsepower	*(hp)*	3rd 7
BTU per Hour	*(btu/hr)*	3rd 8
Kilowatts	*(kW)*	3rd 9

PREFERENCE SETTINGS

Press **3rd**, then **/** to access the Preferences menu. Continue pressing **/** to toggle through different Preferences. Press **+** or **−** keys to toggle between options of the different Preferences. Press **On/C** to exit Preferences. Your calculator will keep your Preference Settings until a Full Reset alters your settings to the default values *(see **Appendix** for more information)*.

KEYSTROKE	DISPLAY
3rd **/** *(Fractional Resolution)*	**FRAC 0-1/64 INCH**
+	**FRAC 0-1/2 INCH**
+	**FRAC 0-1/4 INCH**
+	**FRAC 0-1/8 INCH**
+	**FRAC 0-1/16 INCH**
+	**FRAC 0-1/32 INCH**
+ *(repeats options)*	**FRAC 0-1/64 INCH**
Second press of **/**: *(Area Answer Format)*	**AREA Std.**
+	**AREA 0. SQ FEET**
+	**AREA 0. SQ YD**
+	**AREA 0. SQ M**
+ *(repeats options)*	**AREA Std.**

Third press of **/**:
(Volume Answer Format) **VOL Std.**
+ **VOL 0. CU YD**
+ **VOL 0. CU FEET**
+ **VOL 0. CU M**
+ *(repeats options)* **VOL Std.**

Fourth press of **/**:
(Exponential Mode) **EXP On**
+ **EXP OFF**
+ *(repeats options)* **EXP On**

Fifth press of **/**:
(Metric Rounding) **METR 0.000 M**
+ **METR FLOAt M**
+ *(repeats options)* **METR 0.000 M**

Sixth press of **/**:
*(Mathematical
Operation)* **MATH OrdEr**
+ **MATH CHAIn**
+ *(repeats options)* **MATH OrdEr**

Seventh press of **/**:
(Fractional Mode) **FRAC Std.**
+ **FRAC COnSt.**
+ *(repeats options)* **FRAC Std.**

CALCULATING PERCENTAGES

The **%** key can be used for finding a given percent of a number or for working add-on, discount or division percentage calculations. It can be used with any type of number, in any dimension (feet, inch, millimeter, etc.) and any type of convention (non-dimensioned, linear, square or cubic).

Find 18% of 50 feet:

KEYSTROKE	DISPLAY
On/C On/C	**0.**
5 0 Feet X 1 8 %	**9 FEET 0 INCH**

Find 17.5% of 75 nanograms:

KEYSTROKE	DISPLAY
7 5 3rd grams X	
1 7 • 5 %	**13.125 nG**

Subtract 37.5% from 130 foot-pounds:

KEYSTROKE	DISPLAY
1 3 0 2nd 8 –	
3 7 • 5 %	**81.25 LB FEET**

USING EXPONENTIAL NOTATION

Your calculator is defaulted to have exponential notation set to "on." Therefore, any integer value exceeding seven digits will display in exponential format. When exponential notation is off, the calculator adjusts dimensioned values to a higher unit when the display limit is exceeded (known as Auto-Ranging); e.g., "20,000,000 mm" exceeds the seven-digit display, so "20,000 m" is displayed. This auto-ranging also applies to other dimensional units, such as Inches to Feet, Feet to Yards, etc.

To enter an exponential value, enter the main value, press 2nd /, then enter the exponential power.

Enter 2.34 x 10⁸ into the calculator.

KEYSTROKE	DISPLAY
2 • 3 4	2.34
2nd / 8	2.34^8
=	2.34000^{08}

You can also toggle a displayed value to exponential notation by simply pressing the / key.

(cont'd)

*Enter 2,356 and change to
exponential notation:*

KEYSTROKE	DISPLAY
②③⑤⑥❏	**2356.**
╱	**2.35600 ⁰³**

*Enter 0.00056 and change to
exponential notation:*

●⓪⓪⓪⑤⑥❏	**0.00056**
╱	**5.60000 ⁻⁰⁴**

MEMORY OPERATION

Whenever the **M+** key is pressed,
the displayed value will be added
to the Memory. Other Memory
functions:

FUNCTION	KEYSTROKE
Add to Memory	**M+**
Subtract from Memory	**2nd M+**
Recall total in Memory	**Rcl M+**
Display/Clear Memory	**Rcl Rcl**

Memory is semi-permanent,
clearing only when you do one of
the following:

— turn off the calculator
— press **Rcl Rcl**
— press **2nd X** *(Clear All)*

When Memory is recalled (Rcl M+), consecutive presses of M+ will display the calculated Average and total Count of the accumulated values.

Using M+

KEYSTROKE	DISPLAY
4 5 M+	M+ 45. ₘ
2 5 M+	M+ 25. ₘ
1 5 2nd M+	M- 15. ₘ
Rcl M+	TTL STORED 55. ₘ
M+	AVG 18.33333 ₘ
M+	CNT 3. ₘ
Rcl Rcl	M+ 55.

Using Memory Storage Keys (M0 - M9)

In addition to the standard cumulative Memory (as previously described), your calculator has ten independent Storage Registers – M0 through M9 – that can be used to permanently store single, noncumulative values.

The following example shows the use of M0 (2nd Rcl 0). To use M1 through M9, replace the presses of the 0 key with presses of the corresponding number key (1 through 9).

You can replace a value in one of these Memory registers by storing a new value in place of the stored value.

— Store single value in M0
— Clear M0
— Recall M0

Store 212.5 into M0, recall the value and then clear the value.

KEYSTROKE	DISPLAY
(2)(1)(2)(•)(5)	
2nd Rcl (0)	**M-0 STORED 212.5**
Off On/C	**0.**
Rcl (0)	**M-0 STORED 212.5**
(0) 2nd Rcl (0)	**M-0 STORED 0.**

PAPERLESS TAPE FUNCTION

The Paperless Tape function is useful for checking figures. You can review your entries by scrolling through your past 20 entries or calculations. Press 2nd ▤ to access Paperless Tape mode. Press ➕ or ➖ to scroll forward or backward. Press ▤ to exit mode and continue with a new entry or calculation.

Add 15 mL, then 25 mL, then 45 mL. Access Paperless Tape mode and scroll back through your entries.

KEYSTROKE	DISPLAY
On/C On/C	0.
1 5 mL +	15. mL
2 5 mL +	40. mL
4 5 mL =	85. mL
Rcl =	85. mL
+	15. mL
+	25. mL
+	45. mL
=	85. mL

USING THE
CONVERSIONCALC PLUS

USING THE 2ND AND 3RD FUNCTION KEYS

The primary keys are used to access miscellaneous calculator functions and to enter numeric values and units.

Use the 2nd and 3rd function keys to enter or convert to the units above the primary keys. The abbreviations for the secondary functions are printed in blue (like the 2nd key) and the abbreviations for the third functions are printed in red (like the 3rd key).

ENTERING DIMENSIONS AND UNITS

When entering feet-inch dimensional values, you must enter the largest dimension first — feet before inches, inches before fractions. To enter fractions of an inch, enter the numerator (value above the line), press 🔲 (Fraction Bar key) and then enter the denominator (value below the line).

numerator	**3**
fraction bar	**—**
denominator	**16**

For all other units of measurement, you can only enter whole numbers or decimal numbers. You cannot enter combinations of units (for example, you cannot enter 12 meters 6 centimeters 4 millimeters).

Linear Dimensions

The following examples show how linear dimensions are entered.

Note: The On/C key should be pressed after each of the entries to clear the display.

DIMENSION	KEYSTROKE
5 feet	**5** Feet
1/2 inch	**1 / 2**

5 feet 1-1/2 inch	5 Feet 1 Inch 1 $/$ 2
10 yards	1 0 Yds
17.5 meters	1 7 $\bullet$ 5 m

Square and Cubic Dimensions

For square dimensions, enter the value and press the unit key twice. For cubic dimensions, press the unit key three times.

DIMENSION	KEYSTROKE
33 square meters	3 3 m m
5.5 cubic meters	5 $\bullet$ 5 m m m
130 square feet	1 3 0 Feet Feet

CONVERTING UNITS

With the *ConversionCalc Plus* you can easily convert an entered or calculated unit to other units by simply pressing the key(s) for the units you want to convert to.

Add a series of values and then calculate the sum and convert to other units.

1. Add 375 milliliters plus 385 milliliters plus 65 milliliters:

KEYSTROKE	DISPLAY
On/C On/C	**0.**
	(cont'd)

KEYSTROKE	DISPLAY
3 7 5 mL ➕	**375. mL**
3 8 5 mL ➕	**760. mL**
6 5 mL ➖	**825. mL**

2. Convert to other units:

3rd *liters* *(microliters)*	**825000. mcL**
Feet *(cubic feet)*	**0.029135 CU FEET**
Inch *(cubic inches)*	**50.34459 CU INCH**
fl oz *(fluid ounces)*	**27.89657 F-OZ**
gal *(gallons)*	**0.217942 GAL**

Note: Continued presses of other units of volume will convert the values to those units.

CONVERSION EXAMPLES

Linear Conversion

1. Enter 185 feet, 6-1/2 inches and convert to other linear values:

KEYSTROKE	DISPLAY
On/C *On/C*	**0.**
1 8 5 *Feet*	
6 *Inch* 1 / 2	**185 FEET 6-1/2 INCH**

2. Convert to other linear values:

KEYSTROKE	DISPLAY
Inch	**2226 1/2 INCH**
Yds	**61.84722 YD**
m	**56.553 M**

`cm`	**5655.31 CM**
`mm`	**56553.1 MM**
`km`	**0.056553 KM**
`miles`	**0.03514 MILE**

Area Conversion

Enter 125 square meters and convert to other units of area:

KEYSTROKE	DISPLAY
`On/C` `On/C`	**0.**
`1` `2` `5` `m` `m`	**125 SQ M**
`Yds`	**149.4988 SQ YD**
`Feet`	**1345.489 SQ FEET**
`Inch`	**193750.^{39} SQ INCH**
`miles`	**0.000048 SQ MILE**
`cm`	**1250000. SQ CM**
`m`	**125. SQ M**
`2nd` `5` *(acres)*	**0.030888 ACRE**
`2nd` `4` *(hectares)*	**0.0125 HECT**

Volume Conversion

Enter 75 cubic feet and convert to other units of volume:

KEYSTROKE	DISPLAY
`On/C` `On/C`	**0.**
`7` `5` `Feet` `Feet` `Feet`	**75 CU FEET**
`Yds`	**2.777778 CU YD**

(cont'd)

KEYSTROKE	DISPLAY
`m`	**2.123763 CU M**
`2nd` `0` *(Board Feet)*	**900. BDFT**
`2nd` `6` *(Acre Feet)*	**0.001722 ACFT**

Enter 15 liters and convert to other units of volume:

KEYSTROKE	DISPLAY
`On/C` `On/C`	**0.**
`1` `5` `liters`	**15 L**
`fl oz` *(fluid ounces)*	**507.2103 F-OZ**
`3rd` `m` *(quart)*	**15.85032 QT**
`mL` *(milliliters)*	**15000. mL**

Enter 3.5 cups and convert to other units of volume:

KEYSTROKE	DISPLAY
`On/C` `On/C`	**0.**
`3` `•` `5` `3rd` `mm` *(cups)*	**3.5 CUP**
`3rd` `km` *(tablespoons)*	**56. TBSP**
`3rd` `miles` *(teaspoons)*	**168. TSP**
`3rd` `inch` *(drams)*	**224. DRAM**
`3rd` `Feet` *(minims)*	**13440. MIN**
`liters`	**0.828059 L**

Enter 25 drams and convert to other units of volume:

KEYSTROKE	DISPLAY
`On/C` `On/C`	**0.**

$\boxed{2}\boxed{5}$ **3rd** *Inch* (drams)	**25 DRAM**
mL (milliliters)	**92.41728 mL**
3rd *liters* (microliters)	**92417.28 mcL**
3rd *mL* (nanoliters)	**9.24173 ^{07} nL**
3rd *Yds* (drops or gtts)	**1386.259 GTTS**

Adjust the default to 20 drops per cubic centimeter. Enter 25 drams and convert to other units of volume.

KEYSTROKE	DISPLAY
On/C *On/C*	**0.**
$\boxed{2}\boxed{0}$ **2nd**	
Rcl *Yds*	**STORED 20. GTTS Per CU CM**
$\boxed{2}\boxed{5}$ **3rd** *Inch*	**25 DRAM**
mL (milliliters)	**92.41728 mL**
3rd *liters* (µL-microliters)	**92417.28 mcL**
3rd *Yds* (drops or gtts)	**1848.346 GTTS**

If a low viscosity liquid contains 20 drops per cubic centimeter, how many drops are contained in 2-1/2 teaspoons?

KEYSTROKE	DISPLAY
On/C *On/C*	**0.**
$\boxed{2}\boxed{0}$	
2nd *Rcl* *Yds*	**STORED 20. GTTS Per CU CM**
$\boxed{2}$ *•* $\boxed{5}$ **3rd** *miles*	**2.5 TSP**
3rd *Yds*	**246.4461 GTTS**

Weight Conversion

*Enter 1,200 pounds and convert to
other units of weight:*

KEYSTROKE	DISPLAY
On/C On/C	**0.**
1 2 0 0 lbs	**1200 LB**
tons	**0.6 Ton**
2nd 1 *(metric tons)*	**0.544311 MET Ton**
dry oz	**19200. D-OZ**
kg	**544.3108 kG**
grams	**544310.^{84} GRAM**

*Enter 750 milligrams and convert to
other units of weight:*

KEYSTROKE	DISPLAY
On/C On/C	**0.**
7 5 0	
3rd dry oz *(milligrams)*	**750 mG**
3rd kg *(micrograms)*	**750000. mcG**
3rd grams *(nanograms)*	**7.50000 ^{08} nG**
3rd tons *(grains)*	**11.57427 GRAN**
3rd lbs *(scruples)*	**0.578713 SC**

Weight/Volume Conversions

The *ConversionCalc Plus* can convert between Weight and Volume. To recall Weight per Volume factor press **3rd** **%**. Continue pressing **%** to display as pounds, grains, metric tons, kilograms, grams, milligrams or tons. The default weight per Volume factor is:

• 62.42796 pounds per cubic feet
• 0.036127 pounds per cubic inch
• 8.345404 pounds per gallon
• 252.891 grains per cubic inch
• 1 metric ton per cubic meter
• 1,000 kilograms per cubic meter
• 1 gram per cubic centimeter
• 1 kilogram per liter
• 1,000 grams per liter
• 1,000,000 milligrams per liter
• 0.842777 tons per cubic yard
• 1,685.555 pounds per cubic yard

To change the Weight per Volume factor, enter the value, then press **3rd** **%**. The first press will enter the Weight as the calculator's current setting. To change the Weight per Volume factor, continue to press the **%** key to cycle through the factors shown above. When you have selected the desired factor, press **On/C** to set and exit.

If crude oil has an approximate density of 850 kilograms per cubic meter, how much would 55 gallons weigh?

KEYSTROKE	DISPLAY
On/C **On/C**	**0.**
8 **5** **0** **3rd** **%** *	**850**

Continue pressing **% until **kG Per CU M** is shown.*

5 **5** **gal**	**55 GAL**
lbs	**390.1477 LB**

Butter has a density of 56.9 pounds per cubic foot. How much does 6 cups of butter weigh?

KEYSTROKE	DISPLAY
On/C **On/C**	**0.**
5 **6** **●** **9** **3rd** **%** *	**56.9**

*Continue pressing **%** *until* **LB Per CU FEET** *is shown.*

6 **3rd** **mm** *(Cup)*	**6 CUP**
lbs	**2.852409 LB**

Note: To return weight/volume factor to default setting of 62.42796 pounds per cubic foot, perform a Clear All by pressing **2nd** **X**.

Temperature Conversion

Enter 212° Fahrenheit and convert to other temperatures:

KEYSTROKE	DISPLAY
On/C **On/C**	**0.**
2 **1** **2** **2nd** **3**	**212 °F**
2nd **2** *(Celsius)*	**100 °C**
3rd **1** *(Kelvin)*	**373.15 K**
3rd **2** *(Rankine)*	**671.67 °R**
3rd **3** *(Réaumur)*	**80. °r**

Flow Rate Conversion

Enter 1.3 gallons per minute and convert to other flow rates:

KEYSTROKE	DISPLAY
On/C **On/C**	**0.**
1 **•** **3** **2nd** **gal** *(gallons per minute)*	**1.3 GPM**
2nd **fl oz** *(ounces per second)*	**2.773333 OPS** *(cont'd)*

KEYSTROKE	DISPLAY
2nd *liters* *(liters per second)*	**0.082017** **L/S**
2nd *mL* *(milliliters per second)*	**82.01726** **mL/S**

Pressure Conversion

Enter 345 kilopascals and convert to other units of pressure:

KEYSTROKE	DISPLAY
On/C **On/C**	**0.**
3 **4** **5**	
2nd *kg* *(kilopascals)*	**345** **KPA**

Convert to other units of pressure:

2nd *grams* *(megapascals)*	**0.345** **MPA**
2nd *tons* *(bars)*	**3.45** **BAR**
2nd *lbs* *(pounds per square inch)*	**50.03802** **PSI**
2nd *dry oz* *(pounds per square foot)*	**7205.475** **PSF**

Velocity Conversion

Enter 150 kilometers per hour and convert to other units of velocity:

KEYSTROKE	DISPLAY
On/C **On/C**	**0.**

KEYSTROKE	DISPLAY
$\boxed{1}\boxed{5}\boxed{0}$ 2nd km *(kilometers per hour)*	**150 KM/H**
2nd $miles$ *(miles per hour)*	**93.20568 MPH**
2nd m *(meters per minute)*	**2500. M/M**
2nd cm *(meters per second)*	**41.66667 M/S**
2nd mm *(millimeters per second)*	**41666.67 MM/S**
2nd Yds *(feet per minute)*	**8202.1 FPM**
2nd $Feet$ *(feet per second)*	**136.7017 FPS**
2nd $Inch$ *(inches per second)*	**1640.42 IPS**

Torque Conversion

Enter 45 foot-pounds of torque and convert to inch-pounds and Newton-meters:

KEYSTROKE	DISPLAY
On/C On/C	**0.**
$\boxed{4}\boxed{5}$ 2nd $\boxed{8}$ *(foot-pounds)*	**45 LB FEET**
2nd $\boxed{7}$ *(inch-pounds)*	**540. LB INCH**
2nd $\boxed{9}$ *(Newton-meters)*	**61.01179 N-M**
	(cont'd)

Energy Conversion

Enter 225 kilocalories and convert to Joules and British thermal units:

KEYSTROKE	DISPLAY
On/C *On/C*	**0.**
2 2 5 **3rd** 6 *(kilocalories)*	**225 KCAL**

Convert to other units of energy:

3rd 4 *(Joules)*	**941400. JOUL**
3rd 5 *(British thermal units)*	**892.8721 BTU**

Power Conversion

Enter 175 kilowatts and convert to British thermal units per hour and horsepower:

KEYSTROKE	DISPLAY
On/C *On/C*	**0.**
1 7 5 **3rd** 9 *(kilowatts)*	**175 KW**
3rd 8 *(British thermal units per hour)*	**597124.⁷⁹ BTUH**
3rd 7 *(horsepower)*	**234.6789 HP**

APPENDIX

DEFAULT SETTINGS

After a Clear All (**2nd** **X**), your calculator will return to the following settings:

STORED VALUES	DEFAULT VALUE
Weight per Volume	**62.42796 LB/CU FT**
Drops (gtts) per cubic centimeter	**15. Per CU CM**

If you replace your battery or perform a Full Reset* (press **Off**, hold down **X** and press **On/C**), your calculator will return to the following settings (in addition to those above):

PREFERENCE SETTINGS	DEFAULT VALUE
Fractional Resolution	**1/64**
Area Display	**Standard**
Volume Display	**Standard**
Exponential Mode	**On**
Meter Linear Display	**0.000**
Mathematical Operation	**Order**
Fractional Mode	**Standard**

** Pressing Reset – a small hole located below the **Off** key – will also perform a Full Reset.*

AUTO SHUT-OFF

Your calculator will shut itself off after about 8-12 minutes of non-use.

ACCURACY/ERRORS

Accuracy/Display Capacity

Your calculator has a twelve digit display. This is made up of eight digits (normal display) and four fractional digits. You may enter or calculate values up to 19,999,999.99. Each calculation is carried out internally to twelve digits.

Errors

When an incorrect entry is made, or the answer is beyond the range of the calculator, an error message will display. To clear an error condition you must press the On/C button once.

At this point you must determine what caused the error and re-key the problem.

Error Codes

OFLO	Overflow (too large)
MATH Error	Divide by 0
DIM Error	Dimension error
ENT Error	Invalid entry error

Auto-Range

If an "overflow" is created because of a calculation with small units that are out of the standard digit range of the display, the answer will be automatically expressed in the next larger units (instead of showing "**OFLO**") – e.g., 20,000,000 mm is shown as 20,000 m.

Note: If Exponential Notation is activated through the Preference Setting, the value will be shown in scientific notation (e.g., 20 million mm – 2.00000^{07} mm).

BATTERY

This model uses one (1) CR2016 battery (included). This should last approximately 800 hours of actual use. Should your calculator display become very dim or erratic, replace the battery.

 Note: Please use caution when disposing of your old batteries as they contain hazardous chemicals.

Replacement batteries are available at most discount or electronics stores. You may also call Calculated Industries at 1-775-885-4900.

RESET

If your calculator should ever "lock up," press Reset – a small hole located below the **Off** key – to perform a total reset.

REPAIR AND RETURN

RETURN GUIDELINES

1. Please read the *Warranty* in this User's Guide to determine if your Calculated Industries product remains under warranty *before* calling or returning any device for evaluation or repairs.

2. If your product won't turn on, check the battery as outlined in the User's Guide.

3. If you need more assistance, please go to the website listed below.

4. If you believe you need to return your product, please call a Calculated Industries representative between the hours of 8:00am and 4:00pm Pacific Time for additional information and a Return Merchandise Authorization (RMA).

Call Toll Free: 1-800-854-8075
Outside USA: 1-775-885-4900
www.calculated.com/warranty

WARRANTY

Calculated Industries ("CI") warrants this product against defects in materials and workmanship for a period of one (1) year from the date of original consumer purchase in the U.S. If a defect exists during the warranty period, CI, at its option, will either repair (using new or remanufactured parts) or replace (with a new or remanufactured calculator) the product at no charge.

THE WARRANTY WILL NOT APPLY TO THE PRODUCT IF IT HAS BEEN DAMAGED BY MISUSE, ALTERATION, ACCIDENT, IMPROPER HANDLING OR OPERATION, OR IF UNAUTHORIZED REPAIRS ARE ATTEMPTED OR MADE. SOME EXAMPLES OF DAMAGES NOT COVERED BY WARRANTY INCLUDE, BUT ARE NOT LIMITED TO, BATTERY LEAKAGE, BENDING, A "BLACK INK SPOT" OR VISIBLE CRACKING OF THE LCD, WHICH ARE PRESUMED TO BE DAMAGES RESULTING FROM MISUSE OR ABUSE.

To obtain warranty service in the U.S., please go to the website.

A repaired or replacement product assumes the remaining warranty of the original product or 90 days, whichever is longer.

Non-Warranty Repair Service — U.S.A.

Non-warranty repair covers service beyond the warranty period, or service requested due to damage resulting from misuse or abuse.

Contact Calculated Industries at 1-775-885-4900 to obtain current product repair information and charges. Repairs are guaranteed for 90 days.

Repair Service — Outside the U.S.A.

To obtain warranty or non-warranty repair service for goods purchased outside the U.S., contact the dealer through which you initially purchased the product. If you cannot reasonably have the product repaired in your area, you may contact CI to obtain current product repair information and charges, including freight and duties.

Disclaimer

CI MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCT'S QUALITY, PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS PRODUCT, INCLUDING BUT NOT LIMITED TO, KEYSTROKE PROCEDURES, MATHEMATICAL ACCURACY AND PREPROGRAMMED MATERIAL, IS SOLD "AS IS," AND YOU THE PURCHASER ASSUME THE ENTIRE RISK AS TO ITS QUALITY AND PERFORMANCE.

IN NO EVENT WILL CI BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE PRODUCT OR ITS DOCUMENTATION.

The warranty, disclaimer, and remedies set forth above are exclusive and replace all others, oral or written, expressed or implied. No CI dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary from state to state.

FCC CLASS B

This equipment has been certified to comply with the limits for a Class B calculating device, pursuant to Subpart J of Part 15 of FCC rules.

LOOKING FOR NEW IDEAS

Calculated Industries, a leading manufacturer of special-function calculators and digital measuring instruments, is always looking for new product ideas in these areas.

If you have a new product idea, please visit our "Bright Idea" page at www.calculated.com/brightidea.asp. For suggestions about improving this product or other products, please visit us at www.calculated.com under "Contact Us." Thank you.

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