

Multiply by	To Get				
inch	2.54	cm	hp	2544.5	Btu / hr
This can also be written as: 1 inch = 2.54 cm			hp	745.70	W (watt)
A acre	43,560	ft ²	hp	0.74570	kW
ampere-hr (A-h)	3,600	coulomb (C)	hp	33,000	ft-lbf / min
ångström (Å)	1x10 ⁻¹⁰	m	hp	550	ft-lbf / sec
atm (atmosphere)	1.01325	bar	hp-hr	2544	Btu
atm, std	76.0	cm of Hg	hp-hr	1.98x10 ⁶	ft-lbf
atm, std	760	mm of Hg at 0°C	hp-hr	2.68x10 ⁶	J
atm, std	33.90	ft of water	in	2.54*	cm
atm, std	29.92	in of Hg at 30°F	in of Hg	0.0334	atm
atm, std	14.696	lbf/in ² abs (psia)	in of Hg	13.60	in of water
atm, std	101.325	kPa	in of Hg	3.387	kPa
atm, std	1.013x10 ⁵	Pa	in of water	0.0736	in of Hg
atm, std	1.03323	kgf / cm ²	in of water	0.0361	lbf / in ² (psi)
atm, std	14.696	psia	in of water	0.002458	atm
B bar	0.9869	atm, std	J J (joule)	9.4782x10 ⁻⁴	Btu
bar	1x10 ⁵	Pa	J	6.2415x10 ¹⁸	eV
Btu	778.169	ft-lbf	J	0.73756	ft-lbf
Btu	1055.056	J	J	1	N-m
Btu	5.40395	psia-ft ³	J	1x10 ⁷	ergs
Btu	2.928x10 ⁻⁴	kWh	J / s	1	W
Btu	1x10 ⁻⁵	therm	K kg (kilogram)	2.2046226	lbfm (pound mass)
Btu / hr	1.055056	kJ / hr	kg	0.068522	slug
Btu / hr	0.216	ft-lbf / sec	kg	1x10 ⁻³	metric ton
Btu / hr	3.929x10 ⁻⁴	hp	kg / m ³	0.062428	lbfm / ft ³
Btu / hr	0.2931	W	kgf	9.80665	newton (N)
Btu / lbfm	2.326*	kJ / kg	kip	1000	lbf
Btu / lbfm	25.037	ft ² / s ²	kip	4448	N
Btu / lbfm-R	4.1868	kJ / kg-K	kJ	1	1 kPa-m ³
Btu / lbfm-°F	4.1868	kJ / kg-°C	kJ	1000	N-m
Btu / lbfm-R	4.1868	kJ / kmol-K	kJ	0.94782	Btu
C cal (g-calorie)	3.968x10 ⁻³	Btu	kJ / kg	1000	ft-lbf
cal	1.560x10 ⁻⁶	hp-hr	kJ / kg	0.42992	m ² / s ²
cal (IT calorie)	4.1868	J	kJ / kg-K	0.23885	Btu / lbfm
Calorie (Cal)	4.1868	kJ	kJ / kg-°C	1	Btu / lbfm-°R
cal / sec	4.1868	W (watt)	kJ / kg-°C	1	kJ / kg-K
cm (centimeter)	0.03281	ft	kJ / kg-°C	0.23885	J / g-°C
cm	0.3937	in	kJ / kg-°C	0.23885	Btu / lbfm-°F
cP (centipoise)	0.001	Pa-sec	km	3280.8	Btu / lbfm-R
cSt (centistokes)	1x10 ⁻⁶	m ² / sec	km/hr	0.6214	ft
D degree	π/180	radian	km/hr	0.6214	mi / hr (mph)
dyne	10	μN (micronewton)	km/hr	0.2778	m/s
E eV (electronvolt)	1.602x10 ⁻¹⁹	J	km/hr	0.9113	ft/s
erg	1x10 ⁻⁷	J	kPa (kilopascal)	9.8693x10 ⁻³	atm
F ft (feet)	0.3048*	m	kPa	0.14504	lbf / in ² (psi)
ft	30.48	cm	kW	3412.14	Btu / hr
ft ²	2.2957x10 ⁻⁵	acre	kW	0.9478	Btu / sec
ft ²	144	in ²	kW	737.56	lbf-ft / sec
ft ²	0.09290304*	m ²	kWh	1.341	hp
ft ³	7.481	gal (U.S.)	kWh	3412.14	Btu
ft ³	0.02832	m ³	kWh	1.341	hp-hr
ft ³	28.317	L	kWh	3600	kJ
ft ³ / lbfm	0.062428	m ³ / kg	L L (liter)	0.03531	ft ³
ft-lbf	1.285x10 ⁻³	Btu	L	61.02	in ³
ft-lbf	1.35582	J	L	0.2642	gal (U.S.)
ft-lbf	3.766x10 ⁻⁷	kWh	L	0.001	m ³
ft-lbf	1.35582	N-m	L / s	2.119	ft ³ / min (cfm)
ft-lbf	0.324	calorie (g-cal)	L / s	15.85	gal / min (gpm)
ft-lbf / sec	1.818x10 ⁻³	hp	lbf (pound force)	32.174	lbfm-ft / s ²
ft / s ²	0.3048*	m / s ²	lbf	4.44822	N
G U.S. gallon (gal)	0.13368	ft ³	lbf	32.17	poundals
gal	3.7854	L	lbf / in ² (psi)	0.06805	atm
gal	3.7854x10 ⁻³	m ³	lbf / in ²	2.307	ft water
gal	231	in ³	lbf / in ²	2.036	in Hg
gal (U.K.)	1.201	gal (U.S.)	lbf / in ²	6894.757	Pa
gal (U.K.)	277.4	in ³	lbf / in ²	0.45359237*	kg
gal / min (gpm)	0.002228	ft ³ / sec	lbfm	0.031081	slug
gamma (γ,Γ)	1x10 ⁻⁹	tesla (T)	lbfm / in ³	1728	lbfm / ft ³
gauss	1x10 ⁻⁴	T	lbfm / ft ³	0.016018	g / cm ³
gram (g)	2.205x10 ⁻³	lbfm	lbfm / ft ³	16.018	kg / m ³
g / cm ³	1	1 kg / L	M m (meter)	3.28083	ft
g / cm ³	1000	kg / m ³	m	1.0926	yard
g / cm ³	62.428	lbfm / ft ³	m	39.370	in
g / cm ³	1.940	slug / ft ³	m ²	1550	in ²
g / cm ³	0.036127	lbfm / in ³	m ²	10.764	ft ²
H hectare	1x10 ⁴	m ²	m ³	1x10 ⁶	cm ³ (cc)
hectare	2.47104	acres	m ³	35.315	ft ³
hp (horsepower)	42.41	Btu / min	m ³	264.17	gal (U.S.)
hp	0.7068	Btu / sec	m ³	1000	L
			m ³ / kg	16.02	ft ³ / lbfm
			m / s	196.8	ft / min

* The exact conversion between metric and English.

TEMPERATURE

T(K) = T(°C) + 273.15
 T(R) = T(°F) + 459.67
 T(°F) = 1.8 T(°C) + 32

SOME IMPORTANT CONSTANTS

Atomic Mass Unit (u)	=	1.66054x10 ⁻²⁷ kg
Avogadro's number (N _A)	=	6.02213x10 ²³ particles/mol
Boltzmann's constant (k _B)	=	1.38065x10 ⁻²³ J / K
electron charge (e)	=	-1.6022x10 ⁻¹⁹ C
electron mass (m _e)	=	9.10939x10 ⁻³¹ kg
proton mass (m _p)	=	1.6726x10 ⁻²⁷ kg
Gas Constant (R)	=	8314 J / kmol-K
Gravitational Constant (G)	=	6.672x10 ⁻¹¹ N-m ² / kg ²
Gravity (mean)	=	9.8067 (9.81) m / s ²
Planck's constant (h)	=	6.6260x10 ⁻³⁴ J-s
Speed of Light (c)	=	2.99792458x10 ⁸ m/s (exact)

SI PREFIXES

yocto (10⁻²⁴), zepto (10⁻²¹), atto (10⁻¹⁸), femto (10⁻¹⁵), pico (10⁻¹²), nano (10⁻⁹), micro (10⁻⁶), milli (10⁻³), centi (10⁻²), deci (10⁻¹), deka (10¹), hecto (10²), kilo (10³), mega (10⁶), giga (10⁹), tera (10¹²), peta (10¹⁵), exa (10¹⁸), zetta (10²¹), yotta (10²⁴)