

## Conversion Factors

From	Multiply By	To Obtain	From	Multiply By	To Obtain
acre	43560	square feet ( $\text{ft}^2$ )	joule (J)	$9.478 \times 10^{-4}$	Btu
ampere-hr (A-hr)	3600	coulomb (C)	J	0.7376	ft-lbf
ångström ( $\text{\AA}$ )	$1 \times 10^{-10}$	meter (m)	J	1	newton·m (N·m)
atmosphere (atm)	76	cm, mercury (Hg)	J/s	1	watt (W)
atm, std	29.92 in	mercury (Hg)			
atm, std	14.7	lbf/in <sup>2</sup> abs (psia)	kilogram (kg)	2.205	pound (lbm)
atm, std	33.9	ft, water	kgf	9.8066	newton (N)
atm, std	$1.013 \times 10^5$	pascal (Pa)	kilometer (km)	3281	feet (ft)
			km/hr	0.621	mph
bar	$1 \times 10^5$	Pa	kilopascal (kPa)	0.145	lbf/in <sup>3</sup> (psi)
barrels-oil	42	gallons-oil	kilowatt (kW)	1.341	horsepower (hp)
Btu	1055	joule(J)	kW	3413	Btu/hr
Btu	$2.928 \times 10^{-4}$	kilowatt-hr (kWh)	kW	737.6	(ft-lbf )/sec
Btu	778	ft-lbf	kW-hour (kWh)	3413	Btu
Btu/hr	$3.930 \times 10^{-4}$	horsepower (hp)	kWh	1.341	hp-hr
Btu/hr	0.293	watt (W)	kWh	$3.6 \times 10^6$	joule (J)
Btu/hr	0.216	ft-lbf/sec	kip (K)	1000	lbf
			K	4448	newton (N)
calorie (g-cal)	$3.968 \times 10^{-3}$	Btu			
cal	$1.560 \times 10^{-6}$	hp-hr	liter (L)	61.02	in <sup>3</sup>
cal	4.186	joule (J)	L	0.264	gal (US Liq)
cal/sec	4.186	watt (W)	L	$10 \times 10^{-3}$	m <sup>3</sup>
centimeter (cm)	$3.281 \times 10^{-2}$	foot (ft)	L/second (L/s)	2.119	ft <sup>3</sup> /min (cfm)
cm	0.394	inch (in)	L/s	15.85	gal (US)/min (gpm)
centipoise (cP)	0.001	pascal·sec (Pa·s)			
centistokes (cSt)	$1 \times 10^{-6}$	$\text{m}^2/\text{sec}$ ( $\text{m}^2/\text{s}$ )	meter (m)	3.281	feet (ft)
cubic feet/second (cfs)	0.646317	million gallons/day (mgd)	m	1.094	yard
cubic foot (ft <sup>3</sup> )	7.481	gallon	metric ton	1000	kilogram (kg)
cubic meters (m <sup>3</sup> )	1000	Liters	m/second (m/s)	196.8	feet/min (ft/min)
electronvolt (eV)	$1.602 \times 10^{-19}$	joule (J)	mile (statute)	5280	feet (ft)
			mile (statute)	1.609	kilometer (km)
foot (ft)	30.48	cm	mile/hour (mph)	88	ft/min (fpm)
ft	0.3048	meter (m)	mph	1.609	km/h
ft-pound (ft-lbf)	$1.285 \times 10^{-3}$	Btu	mm of Hg	$1.316 \times 10^{-3}$	atm
ft-lbf	$3.766 \times 10^{-7}$	kilowatt-hr (kWh)	mm of H <sub>2</sub> O	$9.678 \times 10^{-5}$	atm
ft-lbf	0.324	calorie (g-cal)			
ft-lbf	1.356	joule (J)	newton (N)	0.225	lbf
ft-lbf/sec	$1.818 \times 10^{-3}$	horsepower (hp)	N·m	0.7376	ft-lbf
			N·m	1	joule (J)
gallon (US Liq)	3.785	liter (L)			
gallon (US Liq)	0.134	ft <sup>3</sup>	pascal (Pa)	$9.869 \times 10^{-6}$	atmosphere (atm)
gallons of water	8.3453	pounds of water	Pa	1	newton/m <sup>2</sup> (N/m <sup>2</sup> )
gamma ( $\gamma, \Gamma$ )	$1 \times 10^{-9}$	tesla (T)	Pa·sec (Pa·s)	10	poise (P)
gauss	$1 \times 10^{-4}$	T	pound (lbm,avdp)	0.454	kilogram (kg)
gram (g)	$2.205 \times 10^{-3}$	pound (lbm)	lbf	4.448	N
			lbf-ft	1.356	N·m
hectare	$1 \times 10^4$	square meters (m <sup>2</sup> )	lbf/in <sup>2</sup> (psi)	0.068	atm
hectare	2.47104	acres	psi	2.307	ft of H <sub>2</sub> O
horsepower (hp)	42.4	Btu/min	psi	2.036	in of Hg
hp	745.7	watt(W)	psi	6895	Pa
hp	33000	(ft-lbf)/min	radian	$180/\pi$	degree
hp	550	(ft-lbf)/sec	stokes	$1 \times 10^{-4}$	m <sup>2</sup> /s
hp-hr	2544	Btu	therm	$1 \times 10^5$	Btu
hp-hr	$1.98 \times 10^6$	ft-lbf	watt (W)	3.413	Btu/hr
hp-hr	$2.68 \times 10^6$	joule (J)	W	$1.341 \times 10^{-3}$	horsepower (hp)
hp-hr	0.746	kWh	W	1	joule/sec (J/s)
			weber/m <sup>2</sup> (Wb/m <sup>2</sup> )	10000	gauss
inch (in)	2.54	centimeter (cm)			
in of Hg	0.0334	atm			
in of Hg	13.6	in of H <sub>2</sub> O			
in of H <sub>2</sub> O	0.0361	lbf/in <sup>2</sup> (psi)			
in of H <sub>2</sub> O	0.002458	atm			