

Conversion Factors

CONVERSION FACTORS					
Multiply	By	To Obtain	Multiply	By	To Obtain
acre	43,560	square feet (ft ²)	joule (J)	9.478×10 ⁻⁴	Btu
ampere-hr (A-hr)	3,600	coulomb (C)	J	0.7376	ft-lbf
ångström (Å)	1×10 ⁻¹⁰	meter (m)	J	1	newton-m (N-m)
atmosphere (atm)	76.0	cm, mercury (Hg)	J/s	1	watt (W)
atm, std	29.92	in, mercury (Hg)			
atm, std	14.70	lb/in ² abs (psia)	kilogram (kg)	2.205	pound (lbm)
atm, std	33.90	ft, water	kgf	9.8066	newton (N)
atm, std	1.013×10 ⁵	pascal (Pa)	kilometer (km)	3,281	feet (ft)
			km/hr	0.621	mph
bar	1×10 ⁵	Pa	kilopascal (kPa)	0.145	lb/in ² (psi)
barrels-oil	42	gallons-oil	kilowatt (kW)	1.341	horsepower (hp)
Btu	1,055	joule (J)	kW	3,413	Btu/hr
Btu	2.928×10 ⁻⁴	kilowatt-hr (kWh)	kW	737.6	(ft-lbf)/sec
Btu	778	ft-lbf	kW-hour (kWh)	3,413	Btu
Btu/hr	3.930×10 ⁻⁴	horsepower (hp)	kWh	1.341	hp-hr
Btu/hr	0.293	watt (W)	kWh	3.6×10 ⁶	joule (J)
Btu/hr	0.216	ft-lbf/sec	kip (K)	1,000	lbf
			K	4,448	newton (N)
calorie (g-cal)	3.968×10 ⁻³	Btu			
cal	1.560×10 ⁻⁶	hp-hr	liter (L)	61.02	in ³
cal	4.186	joule (J)	L	0.264	gal (US Liq)
cal/sec	4.186	watt (W)	L	10 ⁻³	m ³
centimeter (cm)	3.281×10 ⁻²	foot (ft)	L/second (L/s)	2.119	ft ³ /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)	1×10 ⁻⁶	m ² /sec (m ² /s)	meter (m)	3.281	feet (ft)
cubic feet/second (cfs)	0.646317	million gallons/day (mgd)	m	1.094	yard
		gallon	m/second (m/s)	196.8	feet/min (ft/min)
cubic foot (ft ³)	7.481	Liters	mile (statute)	5,280	feet (ft)
cubic meters (m ³)	1,000	joule (J)	mile (statute)	1,609	kilometer (km)
electronvolt (eV)	1.602×10 ⁻¹⁹		mile/hour (mph)	88.0	ft/min (fpm)
			mph	1.609	km/h
foot (ft)	30.48	cm	mm of Hg	1.316×10 ⁻³	atm
ft	0.3048	meter (m)	mm of H ₂ O	9.678×10 ⁻⁵	atm
ft-pound (ft-lbf)	1.285×10 ⁻³	Btu			
ft-lbf	3.766×10 ⁻⁷	kilowatt-hr (kWh)			
ft-lbf	0.324	calorie (g-cal)	newton (N)	0.225	lbf
ft-lbf	1.356	joule (J)	N-m	0.7376	ft-lbf
ft-lbf/sec	1.818×10 ⁻³	horsepower (hp)	N-m	1	joule (J)
gallon (US Liq)	3.785	liter (L)	pascal (Pa)	9.869×10 ⁻⁶	atmosphere (atm)
gallon (US Liq)	0.134	ft ³	Pa	1	newton/m ² (N/m ²)
gallons of water	8.3453	pounds of water	Pa-sec (Pa-s)	10	poise (P)
gamma (γ, Γ)	1×10 ⁻⁹	tesla (T)	pound (lbm,avdp)	0.454	kilogram (kg)
gauss	1×10 ⁻⁴	T	lbf	4.448	N
gram (g)	2.205×10 ⁻³	pound (lbm)	lbf-ft	1.356	N-m
			lbf/in ² (psi)	0.068	atm
hectare	1×10 ⁴	square meters (m ²)	psi	2.307	ft of H ₂ O
hectare	2.47104	acres	psi	2.036	in of Hg
horsepower (hp)	42.4	Btu/min	psi	6,895	Pa
hp	745.7	watt (W)			
hp	33,000	(ft-lbf)/min	radian	180/π	degree
hp	550	(ft-lbf)/sec			
hp-hr	2,544	Btu	stokes	1×10 ⁻⁴	m ² /s
hp-hr	1.98×10 ⁶	ft-lbf			
hp-hr	2.68×10 ⁶	joule (J)	therm	1×10 ⁵	Btu
hp-hr	0.746	kWh			
			watt (W)	3.413	Btu/hr
inch (in)	2.540	centimeter (cm)	W	1.341×10 ⁻³	horsepower (hp)
in of Hg	0.0334	atm	W	1	joule/sec (J/s)
in of Hg	13.60	in of H ₂ O	weber/m ² (Wb/m ²)	10,000	gauss
in of H ₂ O	0.0361	lb/in ² (psi)			
in of H ₂ O	0.002458	atm			



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