

Weights & Measures

Multiply	by	to obtain
LENGTH		
centimeter	0.03281	foot (ft)
centimeter	0.39370	inch
foot	0.3048	metre (m)
foot	304.8	millimetre (mm)
inch	25.4	millimetre
microinch	0.0254	micron ($\mu\text{A m}$)
micron (micronetre)	39.37008	microinch
millimetre	0.039370	inch

Multiply	by	to obtain
AREA		
centimetre ²	0.15500	inch ²
centimetre ²	0.00108	foot ²
foot ²	0.09290	metre ² (m ²)
foot ²	929.0304	centimetre ² (mm ²)
inch ²	645.16	millimetre ² (mm ²)
metre ²	1550.003	inch ²
metre ²	10.76391	foot ²
millimetre ²	0.00155	inch ²

Multiply	by	to obtain
VOLUME		
centimeter ³	0.06102	inch
foot ³	0.02832	metre ³ (m ³)
foot ³	28.31685	litre
gallon(U.K. liquid)	4.54609	litre
gallon(U.S. liquid)	3.78541	litre
inch ³	16.38706	centimetre ³ (cm ³)
litre	0.021997	gallon(U.K. liquid)
litre	0.26417	gallon(U.S. liquid)

Multiply	by	to obtain
VELOCITY and FLOW		
centimeter/minute	0.39307	inch/minute
foot/minute	18.288	metre/hour
foot/minute	0.3048	metre/minute
foot ³ /minute	28.31685	litre/minute
gallon(U.S. liquid)	3.78541	litre/minute
litre/minute	0.035315	foot ³ /minute
litre/minute	0.26417	gallon(U.S.)/minute

Multiply	by	to obtain
MASS and DENSITY		
gram(=0.001kg)	0.0352274	ounce(avoirdupois)
kilogram	2.20462	pound
kilogram/metre ³	0.06243	pound/foot ³
kilogram/metre ³	0.00835	pound/gallon(U.S.)
ounce (avoirdupois)	28.34952	gram
pound (avoirdupois)	0.45359	kilogram(kg)
ton(long=2240lb)	1016.047	kilogram
ton(short=2000lb)	907.1847	kilogram

Multiply	by	to obtain
FORCE and FORCE/LENGTH		
dyne	0.00001	newton(N)
kilogram-force	9.80665	newton
newton	0.10197	kilogram-force
newton	0.22481	pound-force
newton-metre	0.00571	pound - inch
pound - force	4.44822	newton
pound - inch	175.1268	newton-metre (N/m)
pound - foot	14.59390	newton-metre

Multiply	by	to obtain
BENDING MOMENT or TORQUE		
kilogram-metre	9.80665	newton-metre(M-m)
kilogram-metre	7.23299	pound-foot
newton-metre	0.73756	pound-foot
newton-metre	0.10197	kilogram-metre
pound-foot	1.35582	newton-metre

Multiply	by	to obtain
PRESSURE and STRESS		
atmosphere(atm)	101325	pascal(Pa)
atmosphere	1.101325	bar
atmosphere	1.0333	kilogram/centimetre ²
bar	0.98692	atmosphere
bar	1.02668	kilogram/centimetre ²
bar	100000	Pascal(or N/m ²)
bar	14.50377	pound/inch ²
kilogram/centimetre ²	0.968	atmosphere
kilogram/centimetre ²	0.98066	bar
kilogram/centimetre ²	98066	Pascal(and N/m ²)
kilogram/centimetre ²	14.22334	Pound/inch ²
kilogram/metre ²	9.80665	Pascal
newton/metre ² (N/m ²)	0.000145	Pound/inch ²
newton/metre ² (or Pa)	0.10197	kilogram/metre ²
newton/metre	0.000010197	kilogram/centimetre ²
Pascal (N/M)	0.0000987	atmosphere
Pascal	0.00001	bar
kPa	0.01	bar
Mpa	10	bar
pound/inch ²	0.06895	bar
pound/inch ²	6895	Pa
pound/inch ²	0.07031	kilogram/centimetre ²
pound/inch ²	0.06805	atmosphere

Multiply	by	to obtain
ENERGY, WORK and POWER		
Btu(internat.)	1055.056	joule(J)
calorie	4.19002	joule
foot-pound	1.35582	joule
kilogram-metre	9.80665	joule
joule	0.73756	foot-pound
joule	0.101972	kilogram-metre
foot-pound/hour	0.0003766	watt(W)
horsepower(550ft-lb/s)	0.7457	kilowatt(KW)
horsepower(electric)	746	watt
kilowatt	1.34102	horsepower(550ft-lb/s)

Multiply	by	to obtain
MISCELLANEOUS		
atmosphere(atm)	760	mm Hg at 32°F
atmosphere	129.92	inch Hg at 32°F
atmosphere	10330	mm H2O at 60°F
bar	14070	pound/inch ²
bar	750	torr
bar	29.53	inch Hg at 32°F
feet or water(at 60°F)	0.8843	inch Hg at 60°F
feet or water	0.4331	pound/inch ²
inch of Hg(at 60°F)	0.03342	atmosphere
inch of Hg	1.131	feet of water
inch of Hg	0.4898	pound/inch ²
torr(and mm Hg)	0.0013116	atmosphere
torr	0.001333	bar(or 133.6Pa)
torr	0.00136	Kilogram/centimetre ²
torr	0.03937	inch of Hg(at 32°F)
torr	13.59	mm H2O
torr	0.01934	pound/inch ²
torr.l/sec	1.316	atm.cc/sec(or Std.cc/s)
atm.cc/sec	0.76	torr.l/sec
torr.l/sec	1000	Lusec
Lusec	0.0001	torr.l/sec
dro of water or bubble	16	centimetre ²