

Measurement Conversions

Multiply This Unit	By This Column	To Obtain This Unit
acre	43,560	ft ²
	1.562 x 10 ⁻³	sq mi
	160	sq rod
	0.4047	hectare
Angstrom unit (Å)	3.937 x 10 ⁻⁹	in
	1 x 10 ⁻⁴	m
	0.1	mm
	1 x 10 ⁻⁸	cm
	1 x 10 ⁻¹⁰	m
are	3.954	sq rod
	100	m ²
	119.6	yd ²
	0.02471	acre
atmosphere	760	torr
	760	mm Hg at 0° C
	29.92	in Hg at 0° C
	406.79	in H ₂ O at 4° C
	33.899	ft H ₂ O at 4° C
	407.16	in H ₂ O at 15° C
	33.93	ft H ₂ O at 15° C
	1.0333	kg/cm ²
	10.333	kg/m ²
	1.01325 x 10 ⁶	dyne/cm ²
	14.696	lb/in ²
	2116.32	lb/ft ²
	1.0133	bar
bar	0.9869	atm
	750	mm Hg (0° C)
	10,197	kg/m ²
	1 x 10 ⁶	dyne/cm ²
	14.5	lb/in ²

barrel	42	gal
Btu	777.98	ft-lb
	3.930×10^{-4}	hp-hr
	2.931×10^{-4}	kwh
	2.520×10^{-1}	cal (kg)
	107.6	kg-m
	1055	joule
Btu/sec	1055	watt
Btu/min	0.0236	hp
	17.58	watt
Btu/lb	0.55556	cal/gm
bushel	35.238	1
	0.3524	hectoliter
	4	peck
	1.2444	cu ft
calorie (gram)	3.968×10^{-3}	Btu
calorie/gm	1.8	Btu/lb
carat	0.2	g
cental	100	lb
centimeter	0.032808	ft
	0.393700	in
	10,000	m
	1×10^8	Å
	0.01	m
	10	mm
centimeter of Hg (0° C)	0.01316	atm

	0.1934	lb/in ²
	27.845	lb/ft ²
	0.44604	ft H ₂ O at 4° C
	135.95	kg/m ²
	13332	dyne/cm ²
centimeter ²	100	mm ²
	1 x 10 ⁻⁴	m ²
	0.1550	in ²
	0.00108	ft ²
	1.196 x 10 ⁻⁴	yd ²
centimeter ³	0.061	in ³
	3.531 x 10 ⁻⁵	ft ³
	1.3079 x 10 ⁻⁶	yd ³
	1 x 10 ⁻⁶	m ³
	0.99997	ml
	0.0338	oz (US fl)
	0.0351	oz (Brit. fl)
	10.567 x 10 ⁻⁴	qt (US fl)
	8.7988 x 10 ⁻⁴	qt (Brit. fl)
	2.6417 x 10 ⁻⁴	gal (US fl)
	2.1997 x 10 ⁻⁴	gal (Brit. fl)
centimeter/second	0.0328	ft/sec
	1.9685	ft/min
	0.06	m/min
	3.728 x 10 ⁻⁴	mi/min
	0.02237	mi/hr
	0.03600	km/hr
centipoise	6.72 x 10 ⁻⁴	lb/sec-ft
	3.60	kg/hr-m
chain (surveyors)	100	link
	66	ft
	20.117	m

cheval-vapeur	735.499	watt
	0.9863	hp
cord	128	ft ³
	3.625	stere
day	86,400	sec
	1440	min
	0.143	wk
	0.0028	yr
decimeter	3.937	in
	0.328	ft
dram (dry)	0.0625	oz (wt)
	1.7718	g
dram (fluid)	3.6967	cc
	0.125	oz (fl)
dyne	1.020 x 10 ⁻³	g
	2.248 x 10 ⁻⁴	lb
dyne/centimeter ²	1 x 10 ⁻⁶	bar
	10.197 x 10 ⁻⁴	g/cm ²
	1.4504 x 10 ⁻⁵	lb/in ²
ell	45	in
erg	9.4805 x 10 ¹⁰	Btu
	1	dyne-cm
	7.376 x 10 ⁻⁸	ft-lb
	2.388 x 10 ⁻¹¹	cal (kg)
fathom	6	ft
firkin	9	gal
foot	30.48	cm

	0.3048	m
foot H ₂ O (4° C)	0.0295	atm
	0.883	in Hg (0° C)
	2.419	cm Hg (0° C)
	0.4335	lb/in ²
	62.427	lb/ft ²
	304.79	kg/m ²
foot ²	0.111	yd ²
	3.587 x 10	mi ²
	2.296 x 10 ⁻⁵	acre
	0.0929	m ²
	929	cm ²
foot ³	1728	in ³
	0.037	yd ³
	28,316	cc
	0.02832	m ³
	28.316	l
	7.4805	gal (US)
	6.2288	gal (Brit.)
foot ³ H ₂ O	62.42	lb (4° C)
	62.36	lb (15° C)
foot ³ /min	0.4720	l/sec
	472	cc/sec
	448.831	gal/min
foot-pound	0.1383	kg-m
foot-pound/min	3.030 x 10 ⁻⁵	hp
foot/min	0.01667	ft/sec
	0.0114	mph
	0.508	cm/sec

	0.005	m/sec
	0.3048	m/min
	0.0183	km/hr
foot/second	0.01136	mi/min
	0.6818	mph
	30.48	cm/sec
	18.288	m/min
	1.097	km/hr
furlong	660	ft
	220	yd
	40	rod
gallon (US)	0.8327	gal (Brit.)
	128	oz
	8	pt
	3785.4	cc
	3.785	l
	0.00379	m ³
	231	in ³
	0.1337	ft ³
	0.00495	yd ³
	8.3378	lb H ₂ O (60° F)
gallon (British)	1.2009	gal (US)
	4546	cc
	4.546	l
	277.419	in ³
	0.16054	ft ³
	10	lb H ₂ O (60° F)
	160	oz (Brit. fl)
gallon/minute (US)	8.0208	ft ³ /hr
	0.06308	l/sec
gill (US)	4	oz

grain	0.00229	oz (avoir.)
	0.0648	g
gram	0.0353	oz (avoir.)
	0.0022	lb
	15.432	grain
gram/centimeter ²	9.6784 x 10 ⁻⁴	atm
	0.7356	mm Hg (0° C)
	0.0289	in Hg (0° C)
	0.3284	ft H ₂ O (60° F)
	0.0142	lb/in ²
gram/centimeter ²	2.0482	lb/ft ²
	980.665	dyne/cm ²
	10	kg/m ²
gram/centimeter ³	62.428	lb/ft ³
	8.345	lb/gal (US)
	0.0361	lb/in ³
	1	g/ml
gram/liter	1000	ppm
	0.0624	lb/ft ³
gravity	32.174	ft/sec ²
	980.665	cm/sec ²
hand	4	in
hectare	2.471	acre
	100	are
	107.640	ft ²
	10,000	m ²
hogshead	63	gal
horsepower	42.418	Btu/min

	33,000	ft-lb/min
	550	ft-lb/sec
	0.7457	kw
	10.688	cal (kg)/min
	1.014	cheval-vapeur
hour	3600	sec
	0.04167	day
	0.0059	wk
hundredweight (cwt)	100	lb (short)
	112	lb (long)
inch	1000	mil
	0.083	ft
	0.02778	yd
	2.54	cm
	0.0254	m
	2.54 x 10 ⁸	Å
inch Hg (0° C)	13.595	in H ₂ O
	1.133	ft H ₂ O
	0.0334	atm
	25.4	mm Hg
	34.5	g/cm ²
	345.3	kg/m ²
	33,864	dyne/cm ²
	0.4912	lb/in ²
	70.73	lb/ft ²
inch H ₂ O (4° C)	0.00245	atm
	0.07355	in Hg
	25.399	kg/m ²
	5.2022	lb/ft ²
	0.0361	lb/in ²
inch ²	6.4516	cm ²
	6.4516 x 10 ⁻⁴	m ²

	0.0069	ft ²
	0.00077	yd ²
inch ³	16.387	cc
	5.7870×10^{-4}	ft ³
	1.6387×10^{-5}	m ³
	2.14335×10^5	yd ³
	0.003606	gal (Brit.)
	0.004329	gal (US)
	0.01639	l
	0.5541	oz (US fl)
	0.01488	qt (dry)
	0.01732	qt (US fl)
joule	1.3556	ft-lb
	0.1875	kg-m
kilogram	35.274	oz (avoir.)
	2.2046	lb
	9.842×10^{-4}	ton (long)
	0.0011	ton (short)
kilogram-meter	7.2330	ft-lb
kilogram/meter	0.67197	lb/ft
kilogram/meter ²	0.07356	mm Hg (0° C)
	0.00142	lb/in ²
	9.6777×10^{-5}	atm
	0.20482	lb/ft ²
kilogram/meter ³	0.06243	lb/ft ³
	0.001	g/cc
kiloliter	35.317	ft ³
kilometer	3280.8	ft
	0.53959	mi (naut)
	0.62137	mi

	1093.6	yd
kilometer/hour	27.7778	cm/sec
	54.68	ft/min
	0.9113	ft/sec
	0.5396	knot
	16.667	m/min
	0.27778	m/sec
kilometer ²	1.076 x 10 ⁷	ft ²
	1.196 x 10 ⁶	yd ²
	0.386	mi ²
	1 x 10 ⁶	m ²
	247.1	acre
kilowatt	56.884	Btu/min
	1.3410	hp
kilowatt-hour	3413	Btu
	1.3410	hp-hr
knot	51.479	cm/sec
	6080.2	ft/hr
	1.15155	mph
league	3	mi (naut)
light-year	9.4637 x 10 ¹²	km
	5.88 x 10 ¹²	mi
link	0.66	ft
liter	61.025	in ³
	0.035	ft ³
	0.2642	gal (US)
	33.814	oz (US fl)
	1.05668	qt (US fl)
	0.8799	qt (Brit. fl)

liter/second	15.8507	gal/min
meter	1 x 10 ¹⁰	Å
	3.2808	ft
	39.370	in
	5.359 x 10 ⁻⁴	mi (naut)
	6.2137 x 10 ⁻⁴	mi
	1.0936	yd
	1 x 10 ⁹	mm
meter/minute	0.05468	ft/sec
	0.06	km/hr
	0.03728	mph
meter ²	0.01	are
	2.471 x 10 ⁻⁴	acre
	10.7639	ft ²
	1550	in ²
	3.8610 x 10 ⁻⁷	mi ²
	1.19598	yd ²
meter ³	35.314	ft ³
	61,023	in ³
	1.3079	yd ³
	264.73	gal
	999.973	l
	1056.7	qt (US fl)
micron	1 x 10 ⁴	Å
	1 x 10 ⁻⁴	cm
	3.937 x 10 ⁻⁵	in
mile (statute)	8	furlong
	63360	in
	1.60935	km
	1609.35	m
	0.8684	mi (naut)

	320	rod
	1760	yd
mile (nautical)	6080.2	ft
	1.85325	km
	1.1516	mi (statute)
miles/hour	44.704	cm/sec
	88	ft/min
	0.8684	knot
	26.82	m/min
milligram	3.5274×10^{-5}	oz (avoir)
	5.6438×10^{-4}	dram
	2.2046×10^{-6}	lb
millimeter	0.03937	in
	1000	m
millimeter Hg (0° C)	1.316×10^{-3}	atm
	1333.22	dyne/cm ²
	1.3595	g/cm ²
	13.595	kg/m ²
	2.7845	lb/ft ²
millimicron (mm)	10	Å
	1×10^{-7}	cm
minute	6.94444×10^{-4}	day
	9.9206×10^{-5}	week
month (mean calendar)	30.4202	day
	730.085	hr
	43,805	min
	2.6283×10^6	sec
ounce (avoirdupois)	16	dram
	437.5	grain

	0.91146	oz (troy)
	3.125×10^{-5}	ton (short)
	28.35	g
ounce (fluid)	29.5737	cc
	1.8047	in ³
	8	dram
	0.25	gill
	0.029573	l
	0.03125	qt
ounce (British fl)	28.413	cc
pace	2.5	ft
parts per million	0.0584	grain/gl
peck	537.6	in ³
	8.8096	l
	16	pint
pint (dry)	550.61	cc
	33.6003	in ³
	0.5506	l
pint (fluid)	473.179	cc
	28.875	in ³
	128	dram
	4	gill
	0.473168	l
pound	256	dram
	7000	grain
	453.5924	g
	0.45359	kg
	1.2153	lb (troy)
pound/foot	1.48816	kg/m

pounds/foot ²	4.7252 x 10 ⁻⁴	atm
	4.7880 x 10 ⁻⁴	bar
	478.78	dyne/cm ²
	0.48824	g/cm ²
	0.35913	mm Hg (0° C)
	6.9445 x 10 ⁻³	lb/in ²
pound/in ²	0.068046	atm
	70.307	g/cm ²
	703.07	kg/m ²
	51.715	mm Hg (0° C)
pound/inch ³	27.68	g/cc
pound/foot ³	0.016018	g/cc
	16.018	kg/m ³
	5.787 x 10 ⁻⁴	lb/in ³
quart (dry)	0.03125	bushel
	1101.23	cc
	0.03889	ft ³
	1.1012	l
quart (liquid)	946.358	cc
	57.749	in ³
	0.03342	ft ³
	256	dram
	8	gill
	0.946333	l
quire	24	sheet
rod	0.25	chain
	16.5	feet
	0.025	furlong
	198	in
	25	link
	5.029216	m

	3.125 x 10 ⁻³	mi
rood	0.25	acre
second	0.01667	min
	2.7778 x 10 ⁻⁴	hr
	1.1574 x 10 ⁻⁵	day
slug	32.174	lb
	14.594	kg
span	9	in
stere	1	m ³
	999.973	l
stone	14	lb
	6.3503	kg
ton	20	cwt
	907.1846	kg
	0.89286	ton (long)
ton (long)	22.4	cwt
	1016.047	kg
	1.12	ton (short)
tonne (metric)	1000	kg
	2204.62	lb
torr	1.316 x 10 ⁻³	atm
	1.0	mm Hg at 0° C
watt	44.254	ft-lb/min
	1.340 x 10 ⁻³	hp
	3.41304	Btu/hr
week	168	hr
	10,080	min
	604,800	sec

yard	91.4402	cm
	5.68182×10^{-4}	mi

year	365.256	day
	8766.144	hr