

Conversion Tables

The following conversion table will provide a conversion between SI, metric, USA & Imperial systems.

Table 1 LENGTH

From To →	millimetre	centimetre	metre	kilometre	inch	foot	yard	mile
millimetre	1	0.1	0.001	—	0.03937	—	—	—
centimetre	10	1	0.01	—	0.393701	0.032808	—	—
metre	1000	100	1	0.001	39.3701	3.28084	1.09361	—
kilometre	—	—	1000	1	—	3280.84	1093.61	0.621371
inch	25.4	2.54	—	—	1	0.083333	0.027778	—
foot	304.8	30.48	0.3048	—	12	1	0.33333	—
yard	914.4	91.44	0.9144	0.000914	36	3	1	0.000568
mile	—	—	1609.344	1.609344	—	5280	1760	1

Table 2 AREA

From To →	cm ²	m ²	km ²	in ²	ft ²	yd ²	acre	mile ²
cm ²	1	0.0001	—	0.155	0.001076	0.0001196	—	—
m ²	10000	1	0.000001	1550	10.7639	1.19599	0.0002471	—
km ²	—	1000000	1	—	—	—	247.105	0.386102
in ²	6.4516	0.000645	—	1	0.006944	0.000772	—	—
ft ²	929.03	0.092903	—	144	1	0.111111	0.000023	—
yd ²	8361.27	0.836127	—	1296	9	1	0.0002066	—
acre	—	4046.86	0.004047	—	43560	4840	1	0.001562
mile ²	—	—	2.589987	—	—	—	640	1

Table 3 MASS

From To →	kg	ton	lb	UK cwt	UK ton	US cwt	US ton
kg	1	0.001	2.20462	0.019684	0.000984	0.022046	0.001102
ton	1000	1	2204.62	19.6841	0.984207	22.0462	1.10231
lb	0.453592	0.000454	1	0.008929	0.000446	0.01	0.0005
UK cwt	50.8023	0.050802	112	1	0.05	1.12	0.056
UK ton	1016.05	1.01605	2240	20	1	22.4	1.12
US cwt	45.3592	0.045359	100	0.892857	0.044643	1	0.05
US ton	907.185	0.907185	2000	17.8517	0.892857	20	1

Table 4 VOLUME AND CAPACITY

From To →	cm ³	m ³	litre (dm ³)	in ³	ft ³	yd ³	UK pint	UK gall	US pint	US gall
cm ³	1	—	0.001	0.061024	0.0000353	—	0.001760	0.00022	0.002113	0.000264
m ³	—	1	1000	61023.7	35.3147	1.30795	1759.75	219.969	2113.38	264.172
litre (dm ³)	1000	0.001	1	61.0237	0.035315	0.001308	1.75975	0.219969	2.11338	0.264172
in ³	16.3871	—	0.016387	1	0.0005787	0.0000214	0.028837	0.003605	0.034632	0.004329
ft ³	28316.8	0.028317	28.3168	1728	1	0.037037	49.8307	6.22883	59.8442	7.48052
yd ³	764555	0.764555	764.555	46656	27	1	1345.429	168.1784	1615.793	201.974
UK pint	568.261	0.0005683	0.568261	34.6774	0.020068	0.000743	1	0.125	1.20095	0.150119
UK gall	4546.09	0.0045461	4.54609	277.42	0.160544	0.005946	8	1	9.6076	1.20095
US pint	473.176	0.0004732	0.473176	28.875	0.01671	0.000619	0.832674	0.104084	1	0.125
US gall	3785.41	0.0037854	3.785411	231	0.133681	0.004951	6.661392	0.832674	8	1

Table 5 PRESSURE

From To →	atmos	mm Hg	m bar	bar	pascal	in H ₂ O	in Hg	psi
atmos	1	760	1013.25	1.0132	101325	406.781	29.9213	14.6959
mm Hg	0.0013158	1	1.33322	0.001333	133.322	0.53524	0.03937	0.019337
m bar	0.0009869	0.750062	1	0.001	100	0.401463	0.02953	0.014504
bar	0.9869	750.062	1000	1	100000	401.463	29.53	14.504
pascal	0.0000099	0.007501	0.01	0.00001	1	0.004015	0.0002953	0.000145
in H ₂ O	0.0024583	1.86832	2.49089	0.002491	249.089	1	0.073556	0.036127
in Hg	0.033421	25.4	33.8639	0.0338639	3386.39	13.5951	1	0.491154
psi	0.068046	51.7149	68.9476	0.068948	6894.76	27.6799	2.03602	1

Pascal = 1 N/m²

Table 6 POWER

From To →	Btu/h	W	Kcal/h	KW
Btu/h	1	0.293071	0.251996	0.000293
W	3.41214	1	0.859845	0.001
Kcal/h	3.96832	1.163	1	0.001163
KW	3412.14	1000	859.845	1

Conversion Tables

Table 7 VOLUME RATE OF FLOW

From To →	L/sec (dm ³ /sec)	L/hr	m ³ /sec	m ³ /hr	cfm	ft ³ /hr	UK gall/m	UK gall/hr	US gall/m	US gall/hr
L/sec (dm ³ /sec)	1	3600	0.001	3.6	2.118882	127.133	13.19814	791.8884	15.85032	951.019
L/hr	0.000278	1	—	0.001	0.000588	0.035315	0.003666	0.219969	0.004403	0.264172
m ³ /sec	1000	3600000	1	3600	2118.88	127133	13198.1	791889	15850.3	951019
m ³ /hr	0.277778	1000	0.000278	1	0.588578	35.3147	3.66615	219.969	4.402863	264.1718
cfm	0.471947	1699.017	0.000472	1.699017	1	60	6.228833	373.73	7.480517	448.831
ft ³ /hr	0.007866	28.3168	—	0.028317	0.016667	1	0.103814	6.228833	0.124675	7.480517
UK gall/m	0.075768	272.766	0.0000758	0.272766	0.160544	9.63262	1	60	1.20095	72.057
UK gall/hr	0.001263	4.54609	—	0.004546	0.002676	0.160544	0.016667	1	0.020016	1.20095
US gall/m	0.06309	227.125	0.0000631	0.227125	0.133681	8.020832	0.832674	49.96045	1	60
US gall/hr	0.001052	3.785411	—	0.003785	0.002228	0.133681	0.013878	0.832674	0.016667	1

Table 8 ENERGY

From To →	Btu	Therm	J	kJ	Cal
Btu	1	0.00001	1055.06	1.055	251.996
Therm	100000	1	—	105 500	25 199 600
J	0.00094	—	1	0.001	2388
kJ	0.9478	0.000009478	1000	1	238.85
Cal	0.0039683	0.0039683 x 10 ⁻⁵	4.1868	—	1

Table 9 SPECIFIC HEAT

From To →	Btu/lb °F	J/kg °C
Btu/lb °F	1	4186.8
J/kg °C	0.00023	1

Table 10 HEAT PER UNIT MASS

From To →	Btu/lb	kJ/kg
Btu/lb	1	2.326
kJ/kg	0.4299	1

Table 11 HEAT FLOW RATE

From To →	Btu/ft ² h	W/m ²	Kcal/m ² h
Btu/ft ² h	1	3.154	2.712
W/m ²	0.3169	1	0.859
Kcal/m ² h	0.368	1.163	1

Table 12 THERMAL CONDUCTANCE

From To →	Btu/ft ² h °F	W/m ² °C	Kcal/m ² h °C
Btu/ft ² h °F	1	5.67826	4.88243
W/m ² °C	0.176110	1	0.859845
Kcal/m ² h °C	0.204816	1.163	1

Table 13 LINEAR VELOCITY

From To →	ft/min	ft/s	m/s
ft/min	1	0.016666	0.00508
ft/s	60	1	0.3048
m/s	196.850	3.28084	1

Table 14 TORQUE

	Nm	kgf m	ft lb	in lb
Nm	1	0.1020	0.7376	8.851
kgf m	9.807	1	7.233	86.80
ft lb	1.356	0.1383	1	12
in lb	0.1130	0.01152	0.08333	1

Table 15 CONVERSIONS

SI Unit	Imperial Units	Conversion
bar	psi	1 bar = 14.504 psi
°C	°F	1°F = °C x 9/5 + 32
kg/h	lb/h	1 kg/h = 2.204 lb/h
l/s	gpm	1 l/s = 13.20 igpm
		= 15.85 usgpm
k _v	C _v	C _v = 1.13 k _v (usgpm)

Equivalent nominal sizes

DN	8 mm = 1/4"	250 mm = 10"
	10 mm = 3/8"	300 mm = 12"
	15 mm = 1/2"	350 mm = 14"
	20 mm = 3/4"	400 mm = 16"
	25 mm = 1"	450 mm = 18"
	32 mm = 1 1/4"	500 mm = 20"
	40 mm = 1 1/2"	600 mm = 24"
	50 mm = 2"	700 mm = 28"
	65 mm = 2 1/2"	750 mm = 30"
	80 mm = 3"	800 mm = 32"
	100 mm = 4"	900 mm = 36"
	125 mm = 5"	1000 mm = 40"
	150 mm = 6"	1050 mm = 42"
	200 mm = 8"	1200 mm = 48"

PRESSURE TEMPERATURE RATING

DIN Rating	ANSI Class
PN 10	125 lb
PN 16	150 lb
PN 25	
PN 40	300 lb
PN 63	
PN 100	600 lb
	900 lb
PN 160	
PN 250	1500 lb
PN 320	
PN 400	
	2500 lb
PN 630	