

Engineering & Technical Data R-2

Conversion Factors For Various Engineering Units

MULTIPLY	BY	TO OBTAIN
Acres	43,560	Sq. ft.
Acre Feet	43,560	Cubic feet
" "	325,851	Gallons
" "	1233.49	Cubic meters
Atmospheres	76.0	Cms. of mercury
"	29.92	Inches of mercury
"	33.90	Feet of water
"	14.70	Lbs./sq. inch
Barrels – Cement	376	Lbs.—cement
Bags or Sacks – Cement	94	Lbs.—cement
Board – Feet	144 sq. in. x 1 in.	Cubic in.
British Thermal Units	777.5	Foot lbs.
" " "	0.0003927	Horsepower–hrs
" " "	0.0002928	Kilowatts–hrs
B.T.U./min.	12.96	Foot lbs./sec.
" / "	0.02356	Horsepower
" / "	0.01757	Kilowatts
" / "	17.57	Watts
Centimeters	0.3937	Inches
"	0.01	Meters
"	10	Millimeters
Centimeters of Mercury	0.01316	Atmospheres
" " "	0.4461	Ft. of water
" " "	136	Kgs./sq. meter
" " "	27.85	Lbs./sq. ft.
" " "	0.1934	Lbs./sq. in.
Centimeters/Second	1.969	Feet min.
" / "	0.03281	Feet/sec.
Cms./Sec./Sec	0.03281	Feet/sec./sec.
Cubic Centimeters	0.00003531	Cubic ft.
" "	0.06102	Cubic inches
" "	0.000001308	Cubic yards
" "	0.0002642	Gallons
" "	0.03381	Ounces (fluid)
Cubic Cm./min.	0.002118	Cu. ft./hr.
" " / "	0.0002641	Gal./min.
Cubic Feet	1728	Cubic in.
" "	7.48052	Gallons
" "	59.84	Pints (liq.)
" "	29.92	Quarts (liq.)
Cubic Feet/Min.	472.0	Cubic cms./sec.
" " / "	0.1247	Gal./sec. 7.48 gal./min.
Cubic Feet/Sec.	0.646317	Million gal./day
" " / "	448.831	Gallons/min.
Cubic Inches	0.0005787	Cubic feet
" "	0.00002143	Cubic yards
" "	0.004329	Gallons
Cubic Meters	35.31	Cu. ft.
" "	61.023	Cu. in.
" "	1.308	Cu. yds.
" "	264.2	Gallons
Cubic Yards	27	Cu. ft.

MULTIPLY	BY	TO OBTAIN
Degrees (angle)	60	Minutes
" "	0.01745	Radians
" "	3600	Seconds
Degrees/Sec.	0.01745	Radians/sec.
" / "	0.1667	Revolutions/min.
" / "	0.002778	Revolutions/sec.
Fathoms	6	Feet
Feet	30.48	Centimeters
"	12	Inches
"	0.3048	Meters
Feet of Water	0.0295	Atmosphere
" " "	0.8826	In. of mercury
" " "	62.43	Lbs./sq.ft.
" " "	0.4335	Lbs./sq. in.
Feet/Min.	0.01667	Feet/sec.
" / "	0.01136	Miles/hr.
Feet/Sec.	0.6818	Miles/hr.
Foot Lbs.	0.001286	B.T.U.s
" "	0.000000505	Horsepower hrs.
" "	0.0000003766	Kilowatt hrs.
Foot Lbs./Min.	0.001286	B.T.U./min.
" " / "	0.01667	Ft. lbs./sec.
" " / "	0.0000303	Horsepower
" " / "	0.0000266	Kilowatts
Foot Lbs./Sec.	0.0717	B.T.U./min.
" " / "	0.001818	Horsepower
" " / "	0.001356	Kilowatts
Gallons	3785	Cubic centimeters
"	0.1337	Cubic feet
"	231	Cubic inches
Gallons (Imperial)	1.20095	U.S. gallons
" (U.S.)	0.83267	Imperial gallons
Gallons Water	8.3453	Pounds of water
Gallons/Min.	0.002228	Cu. ft./sec.
" / "	8.0208	Cu. ft./hr.
Grains/U.S. Gallons	17.118	Parts/million
" / " "	142.86	Lbs./million
" / " "	14.254	Parts/million
Grams	0.03527	Ounces
"	0.002205	Pounds
Grams/Cu. Cm.	62.43	Pounds/cu. ft.
" / " "	0.03613	Pounds/cu. in.
Grams/Liter	58.417	Grains/gal.
" / "	8.345	Pounds/1000 gal.
" / "	0.062427	Pounds/cu. ft.
" / "	1000	Parts/million
Horsepower	42.44	B.T.U./min.
"	33,000	Ft. lbs./min.
"	550	Ft. lbs./sec.
"	0.7457	Kilowatts
Horsepower (Boiler)	33,479	B.T.U. /hr.
" " "	9,803	Kilowatts
Horsepower Hours	2547	B. T. Units

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MULTIPLY	BY	TO OBTAIN
Horsepower Hours	7457	Kilowatt hours
Inches	2.540	Centimeters
Inches of Mercury	0.03342	Atmospheres
" " "	1.133	Ft. of water
" " "	70.73	Lbs./sq. ft.
" " "	0.4912	Lbs./sq. in.
Inches of Water	0.002458	Atmospheres
" " "	0.07355	Inches of mercury
" " "	5.202	Lbs./sq. ft.
" " "	0.03613	Lbs./sq. in.
" " "	0.5781	Ounces/sq. in.
Kilograms	2.205	Lbs.
Kgs./Meter	0.6720	Lbs./ft.
Kgs./Sq. Meter	0.003281	Feet of water
" / " "	0.2048	Lbs./sq. ft.
" / " "	0.001422	Lbs./sq. in.
Kilometers	3281	Feet
"	0.6214	Miles
"	1094	Yards
Kilometers/Hr.	27.78	Centimeters/sec.
" / "	54.68	Feet/min.
" / "	0.9113	Feet/sec.
" / "	0.6214	Miles/hr.
Kilowatts	56.92	B. T. Units/min.
"	44,250	Ft. lbs./min.
"	737.6	Ft. lbs./sec.
"	1.341	Horsepower
"	1000	Watts
Kilowatt hrs.	3415	B. T. U.
" "	0.000002655	Ft. lbs.
" "	1.341	Horsepower-hrs.
Liters	0.03531	Cu. ft.
"	61.02	Cu. in.
"	0.2642	Gallons
Meters	100	Centimeters
"	3.281	Feet
"	39.37	Inches
"	1.094	Yards
Meters/Sec.	196.8	Ft./min.
Millimeters	0.1	Centimeters
"	0.03937	Inches
Milligrams/Liter	1	Parts/million
Million Gal./Day	1.54723	Cu. ft./sec.
Ounces	437.5	Grains
"	28.349527	Grams
"	0.0625	Pounds
Ounces (Fluid)	1.805	Cu. in.
" "	0.02957	Liters
Ounces/Sq. In	0.0625	Lbs./sq. in.
Parts/Million	0.0584	Grains/U.S. gal.
" / "	8.345	Lbs./million gal.
Pounds	16	Ounces
"	7000	Grains

MULTIPLY	BY	TO OBTAIN
Pounds	453.5924	Grams
Pounds of Water	0.01602	Cu. ft.
" " "	27.68	Cu. in.
" " "	0.1198	Gallons
Pounds/Cu. Ft.	0.0005787	Lbs./cu. in.
Pounds/Cu. In.	1728	Lbs./cu. ft.
Pounds/Sq. Ft.	0.01602	Feet of water
" / " "	0.006945	Pounds/sq. in.
Pounds/Sq. In.	2.307	Feet of water
" / " "	2.036	Inches of mercury
Quarts (Liquid)	57.75	Cu. in.
Radians	57.30	Degrees
"	3438	Minutes
"	0.637	Quadrants
Radians/Sec.	57.30	Degrees/sec.
" / "	0.1592	Revolutions/sec.
" / "	9.549	Revolutions/min.
Revolutions	360	Degrees
"	4	Quadrants
"	6.283	Radians
Revolutions/Min.	6	Degrees/sec.
" / "	0.1047	Radians/sec.
" / "	0.01667	Revolutions/sec.
Square Feet	0.00002296	Acres
" "	144	Sq. inches
Square Kilometers	247.1	Acres
" "	10,760,000	Sq. ft.
" "	0.3861	Sq. miles
" "	1,196,000	Sq. yds.
Square Meters	0.0002471	Acres
" "	10.76	Sq. ft.
" "	0.0000003861	Sq. miles
" "	1.196	Sq. yards
Square Miles	640	Acres
" "	27,880,000	Sq. feet
Square Millimeters	0.00155	Sq. in.
Square Yards	0.0002066	Acres
" "	9	Sq. feet
" "	0.0000003228	Sq. miles
Temp (°C) +273	1	Abs. temp (°C)
" " +17.78	1.8	Temp (°F)
Temp.(°F) +460	1	Abs. temp. (°F)
" " -32	5/9	Temp. (°C)
Watts	0.05692	B.T. Units/min.
"	44.26	Ft. lbs./min.
"	0.001341	Horsepower
"	0.010	Kilowatts
Yards	91.44	Centimeters
"	3	Feet
"	36	Inches
"	0.9144	Meters

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