

# CONVERSION TABLES

## LENGTH

1 in.	=	25.4 mm
1 mm	=	.03937 in.
1 ft.	=	30.48 cm.
1 meter	=	3.28083 ft.
1 micron	=	.001 mm.

## AREA

1 sq. in.	=	6.4516 sq. cm.
1 sq. ft.	=	929.03 sq. cm.
1 sq. cm.	=	0.155 sq. in.
1 sq. cm.	=	0.0010764 sq. ft.

## VOLUME

1 cu. in.	=	16.387 cu. cm.
1 cu. ft.	=	1728 cu. in.
1 cu. lt.	=	7.4805 U.S. gal.
1 cu. lt.	=	6.229 British gal.
1 cu. lt.	=	28.317 liters
1 U.S. gal.	=	0.1337 cu. in.
1 U.S. gal.	=	231 cu. in.
1 U.S. gal.	=	3.785 liters
1 British gal.	=	1.20094 U.S. gal.
1 British gal.	=	277.3 cu. in.
1 British gal.	=	4.546 liters
1 liter	=	61.023 cu. in.
1 liter	=	0.03531 cu. ft.
1 liter	=	0.2642 U.S. gal.

## WEIGHT

1 ounce av.	=	28.35 g.
1 lb. av.	=	453.59 g.
1 gram	=	0.03527 oz. av.
1 kg.	=	2.205 lb. av.
1 cu. ft. of water	=	62.425 lb.
1 U.S. gal. of water	=	8.33 lb.
1 cu. in. of water	=	0.0361 lb.
1 British gal. of water	=	10.04 lb.
1 cu. ft. of air at 32°F & 1 atm	=	0.080728 lb.

## VELOCITY

1 ft. per sec.	=	30.48 cm. per sec.
1 cm. per sec.	=	.032808 ft. per sec.

## FLOW

1 cu. ft. per sec.	=	448.83 gal. per min.
1 cu. ft. per sec.	=	1699.3 liters per min.
1 U.S. gal. per min.	=	0.002228 cu. ft. per sec.
1 U.S. gal. per min.	=	0.06308 liters per sec.
1 cu. cm. per sec.	=	0.0021186 cu. ft. per min.

## DENSITY

1 lb. per cu. ft.	=	16.018 kg. per cu. meter
1 lb. per cu. ft.	=	.0005787 lb. per cu. in.
1 kg. per cu. meter	=	0.06243 lb. per cu. ft.
1 g. per cu. cm.	=	0.03613 lb. per cu. in.

## VISCOSITY

1 Centipoise	=	.000672 lb. per ft. sec.
1 Centistoke	=	.00001076 sq. ft. per sec.

## PRESSURE

1 in. of water	=	0.03613 lb. per sq. in.
1 in. of water	=	0.07355 in. of Hg.
1 ft. of water	=	0.4335 lb. per sq. in.
1 ft. of water	=	0.88265 in. of Hg.
1 in. of mercury	=	0.49116 lb. per sq. in.
1 in. of mercury	=	13.596 in. of water
1 in. of mercury	=	1.13299 ft. of water
1 atmosphere	=	14.696 lb. per sq. in. (PSIA)
1 atmosphere	=	760 mm. of Hg.
1 atmosphere	=	29.921 in. of Hg.
1 atmosphere	=	33.899 ft. of water
1 lb. per sq. in.	=	27.70 in. of water
1 lb. per sq. in.	=	2.036 in. of Hg.
1 lb. per sq. in.	=	.0703066 kg. per sq. cm.
1 kg. per sq. cm.	=	14.223 lb. per sq. in.
1 dyne per sq. cm.	=	.0000145 lb. per sq. in.
1 micron	=	.00001943 lb. per sq. in.
PSI to Bar	PSI x 0.0689	

## ENERGY

1 B.T.U.	=	777.97 ft. lbs.
1 erg	=	9.4805 x 10 <sup>11</sup> B.T.U.
1 erg	=	7.3756 x 10 <sup>8</sup> ft. lbs.
1 kilowatt hour	=	2.655 x 10 <sup>6</sup> ft. lbs.
1 kilowatt hour	=	1.3410 h.p. hr.
1 kg. calorie	=	3.968 B.T.U.

## POWER

1 horsepower	=	33,000 ft. lb. per min.
1 horsepower	=	550 ft. lb. per sec.
1 horsepower	=	2,546.5 B.T.U. per hr.
1 horsepower	=	745.7 watts
1 watt	=	0.00134 horsepower
1 watt	=	44.26 ft. lbs. per min.

## TEMPERATURE

Temperature Fahrenheit (F)	=	9/5 Centigrade (C) + 32 = 9/4 R + 32
Temperature Centigrade (C)	=	5/9 Fahrenheit (F) - 32 = 5/4 R
Temperature Reaumur (R)	=	4/9 Fahrenheit (F) - 32 = 4/5 C
Absolute Temperature Centigrade or Kelvin (K)	=	Degrees C + 273.16
Absolute Temperature Fahrenheit or Rankine (R)	=	Degrees F + 459.69
Fahrenheit to Centigrade	=	C = (F - 32) / 1.8

## HEAT TRANSFER

1 B.T.U. per sq. ft.	=	.2712 g. cal. per sq. cm.
1 g. calorie per sq. cm.	=	3.687 B.T.U. per sq. ft.
1 B.T.U. per hr. per sq. ft. per °F	=	4.88 kg. cal. per hr. per sq. m. per °C
1 Kg. cal. per hr. per sq. m. per °C	=	.205 B.T.U. per hr. per sq. ft. per °F
1 Boiler Horsepower	=	33479 B.T.U. per hr.