Conversion factors

Common conversion factors

**Strength**

1 ft=12 in =30.48cm

1 m =3.28 ft

1 in =2.54 cm

1 mile =5280 ft =1.609 km

**Volume**

1 oil bbl =42 gal

1 ft3 =7.48 gal =28.32 liters

1 m3 =35.31 ft3

1 gal=231 in3

1 liter =1000 cm3

**Mass**

1 lb =453.6 gm =7000 grains

1 kg =2.2 lb

1 slug =32. 17 lbm

1 ton (metric) = 1000 kg =2204.6 lbm

1 oz =28.34 gm

**Force**

1 dyne =1 gm.cm/sec2

1 N =1 kg.m/sec2 = 105dyne

1 lbf = 4.446 N

1lbf =32.17 paundal

**Pressure**

1 atm =760 mmHg (torr) =29.92 in Hg

 =14.7 lbf/in2 (psi) =2117 lbf/ft2

 =33.93 ft water =1.013\* 106 dyne/cm2

 =1.013\*105 Pa (Pa=1N/m2)

bar =105 Pa =100 kPa

**Density**

1 gm/cm3 =62.43 lbm/ft3

 =1000 kg/m3 =8.34 lb/gal

**Energy**

1 Btu =252 cal =778 ft.lbf

1 J =1 N.m =107 erg

1 erg =1 dyne.cm

1 cal =4.184 J

**Power**

1 W =1 J/sec

1hp =550 ft.lbf/sec =745.7 W

1kW =737.56 ft.lbf/sec

**Temperature**

T (k) =T(C) +273

T(R) =T (F) +460

1degree C0 =1.8 degree F0

T (F) =T(C)\*1.8+32

T(C) =T (F)-32/1.8