



Technical informations Informations techniques

Units conversion table Tableau de conversion des unités

Atmosphère:

1 atm = 101 325 Pa
= 1,013 x 10⁵ Pa
= 1,013 bar
= 760 mm Hg
= 10 332 mm CE
= 1,033 kg / cm²
= 14,696 PSI
= 14,696 lbf.in⁻²

Bar:

1 bar = 100 000 Pa
= 1,019 kg / cm²
= 750,06 mm Hg
= 10 197 mm CE
= 14,504 PSI

British thermal unit:

1 Btu = 1 055,06 J
= 1,055.10³J
= 0,252 kcal

Calorie:

1 cal = 4,185 J
= 10⁻⁶ th
1 kcal = 3,967 Btu

Calorie par heure:

1 cal / h = 0,001163 W
1 kcal / h = 1,163 W

Calorie par seconde:

1 cal / s = 4,185 W
= 0,4 268 kg.m / s

Centimètre carré:

1 cm² = 100 mm²
= 0,155 sq.in

Cheval vapeur:

1 ch = 0,7 355W

Cubic foot:

1ft³ = 28,316 dm³ (ou litre)
= 2,831 x 10⁻² m³
= 1.728 cu.in³

Cubic Inch:

1in³ = 1 cu.in = 16,387 cm³
= 1,6 x 10⁻⁵ m³

Cubic Yard:

1 yd³ = 0,764 m³
= 27.ft³

Degré Celcius:

t°C = $\frac{t°F - 18}{1,8}$
t°C = (t°F - 32) : 1,8
t°C = tK - 273

Degré Fahrenheit:

t°F = (t°C x 1,8) + 32

Kelvin:

tK = t°C + 273

Fluid ounce (U.K.):

1 fl.oz = 28,412 cm³

Foot:

1 ft = 30,5 cm
= 304,8 mm
= 12 in
= 0,33yd

ft . ibf:

1 ft.ibf = 1,356J

Foot of water:

1 ft.H₂O = 2 989 Pa
= 304,8 mm CE
= 12 in.H₂O

Gallon (U.K. ou British):

1 gal = 4,545 dm³ (ou litre)
= 4,545.10⁻³ m³
= 277,4 .in³

Gallon (U.S.A.):

1 gal = 3,785 dm³ (ou litre)
= 3,785 x 10⁻³ m³
= 231 cu.in

Gramme par cm²:

1 g / cm² = 98,066 Pa
= 10 mm CE
= 0,736 mm Hg
= 0,980 mbar

Gramme par cm³:

1 g / cm³ = 1 kg / dm³
= 1 kg / l
= 1000 kg / m³

Hundred weight:

1 cwt = 50,8 kg

Horse power:

1 HP = 0,745 kW

Inch:

1 in = 0,084 ft
= 25,4 mm
= 2,54 10⁻² m

Inch of water:

1 in.H₂O = 249,089 Pa

Inch of mercury:

1 in.Hg = 3 386,39 Pa

Joule:

1 J = 277,8.10⁻⁶ Wh

Kilocalorie:

1 kcal = 1 000 cal
= 4 185 J
= 10⁻³ th
= 3,967 Btu

Kilogramme:

1 kg = 1 000 g
= 2,204 lb

Kilogramme s / m²:

1 kgf s / m² = 98,1 Po

Kilogramme / m³:

1 kg / m³ = 10⁻³ g / cm³

Kilogramme / cm²:

1 kg / cm² = 98 066 Pa
= 0,980 bar
= 0,9 678 atm
= 10 000 mm CE
= 14,223 PSI
= 735,55 mm Hg

Litre:

1 l = 1 dm³
= 1 000 cm³
= 1 00 cl

Mètre:

1 m = 1,0936 l yd
= 3,280 ft
= 39,37 in

Mètre carré:

1 m² = 1 550 sq.in
= 10 763 ft²
= 1,1 959 yd²

Mètre cube:

1 m³ = 1 000 dm³ (ou litre)
= 35,314 .ft³
= 1,307 .yd³
= 6,289 barrel
of petroleum
1 dm³ = 1 litre
= 61,024 .in³
= 0,0 353 .ft³

Mile:

1 mi = 1.609 km
= 1,609.10⁻³ m

Millimètre de colonne d'eau:

1 mm CE = 9,806 Pa
= 10⁻⁴ kg / cm²
= 0,0736 mm Hg

Millimètre de mercure:

1 mm Hg = 133,32 Pa
= 13,59 mm CE
= 1 / 760 atm
= 1,357 g / cm²

Ounce:

1 oz = 28,34 g
= 2,834 x.10⁻² kg

Poiseuille:

1 Pl = 1 kg (m.s)
= 10 Po
= 1 Pa / s

Pascal:

1 Pa = 1 N / m²
= 7,510⁻³ mm Hg
= 0,1 019 mm CE
= 0,145.10⁻³ PSI
= 4,015.10⁻³ in.H₂O
= 10,19.10⁻³ g / cm²
1 MPa = 10 bar

Poise:

1 Po = 1 g / (cm.s)

Pound:

1 lb = 453,5 g
= 0,453 kg
= 16 oz

Pound per cubic foot:

1 lb / ft⁻³ = 16,018 kg / m³

Pound per square inch:

1 lb.in⁻² = 1 PSI = 0,0689 bar
= 0,0702 kg / cm²
= 51,68 mm Hg
= 6,89 x 10³ Pa

Square foot:

1 sq.ft = 929,03 cm²
= 9,29 dm² = 9,3 x 10⁻² in²
= 0,093 m²
= 144 .in²

Square inch:

1.in² = 645,16 mm²
= 6,45 cm²
= 6,451 x 10⁻⁴ m²
= 0,0694.ft²

Square yard:

1.yd² = 0,836m²
= 9 .ft²
= 1 296 .in²

Stoke:

1 St = 1 cm² / s

Thermie:

1 th = 1 000 kcal
= 10⁶ cal
= 4,18.10⁶ J
= 1,162 kW.h
= 3 967 Btu

Ton:

1 ton = 1,016 x 10³ kg

Tonne:

1 tonne = 1 000 kg

Tonne par m³:

1 t / m³ = 1 000 kg / m³
= 1 kg / dm³
= 1 g / cm³

Watt :

1 W = 1 j / s
= 0,860 kcal / h
1 kW = 0,238 kcal / s

Watt-heure :

1 W.h = 3600 J
1 kW.h = 860 kcal

Yard :

1 yd = 0,914 m
= 3 ft
= 36 in

Density: SI unit Reciprocal

Densité: Unité SI Réciproque
1 lb ft⁻³ = 16.018 463 kg m⁻³ 6.242 796 x 10⁻²
1 lb in⁻³ = 2.767 99 x 10⁴ kg m⁻³ 36.127 x 10⁻⁶

Energy: SI unit Reciprocal

Energie: Unité SI Réciproque
1 ft lbf = 1.355 817 J 0.737 562
1 Btu = 1.055 06 x 10³ J 9.478 134 x 10⁻⁴
1 kW/h = 3600 x 10³ J 2.7778 x 10⁻⁷

Pressure: SI unit Reciprocal

Pression: Unité SI Réciproque
1 lbf in⁻² (psi) = 6.894 757 x 10³ Pa 1.450 377 x 10⁻⁴
1 Nm⁻² = 1Pa 1
1 mbar = 10² Pa 10⁻²
1 bar = 10⁵ Pa 10⁻⁵
1 in H₂O = 2.490 89 x 10² Pa 4.014 63 x 10⁻³
1 in Hg = 33.863 9 x 10² Pa 2.953 x 10⁻⁴

Specific heat: SI unit Reciprocal

Chaleur spécifique: Unité SI Réciproque
1 BTU / lb °F = 4.186 8 kJ / kg K 0.238 846

Thermal conductivity: SI unit Reciprocal

Conductivité thermique: Unité SI Réciproque
1 lbf in⁻² (psi) = 6.894 757 x 10³ Pa 1.450 377 x 10⁻⁴

Dynamical viscosity / Viscosité dynamique:

1 lb / ft hr = 4.133 4 x 10⁻⁴ Pas 2.419 x 10³
1 kg / ms = 1 Pas
1 Ns / m² = 1 Pas
1 c P = 10⁻³ Pas

Kinematic viscosity / Viscosité cinématique:

1 ft² / h = 2.580 64 x 10⁻⁵ m²/s 3.87501 x 10⁴
1 cst = 10⁻⁶ m² / s 10⁶