

Most widely used conversion factors between **English** and **metric units (SI)** in Hydraulics.



Nt = Newton

Atm = Atmosphere

cm Hg = cm Mercury

In Hg = in Mercury

HP = Horse Power

Kw = KiloWatts

oF Degres = Degres Farenheith

oC Degres = Degres Centigrades

LENGHT

1 mm

= 0.0394"

1"

= 25.4 mm

1 cm

= 0.394"

1"

= 2.54 cm

1 m

= 39.4"

1"

= 0.0254 m

1 ft

= 12"

1"

= 0.083 ft

AREA

1 mm²

= 0.00155 in²

1 in²

= 645.2 mm²

1 cm²

$$= 0.155 \text{ in}^2$$

$$1 \text{ in}^2$$

$$= 6.452 \text{ cm}^2$$

$$1 \text{ m}^2$$

$$= 1552.4 \text{ in}^2$$

1 in²

= 0.000645 m²

1 ft²

= 144 in²

1 in²

= 0.00694 ft²

VOLUME

1 mm³

= 0.0000612 in³

1 in³

= 16387.06 mm³

1 cm³

$$= .0612 \text{ in}^3$$

$$1 \text{ in}^3$$

$$= 16.38 \text{ cm}^3$$

$$1 \text{ m}^3$$

$$= 61163 \text{ in}^3$$

1 in³

= 0.00001638 m³

1 litre

= 1000 cm³

1 cm³

= 0.001 litres

1 gal

= 3.785 litres

1 litre

= 0.264 gals

1 gal

= 231 in³

1 in³

= 0.00432 gals

FORCE

1 Kg

= 2.204 Lbs

1 Lbs

= 0.454 Kgs

1 Ton

= 2204 Lbs

1 Lbs

= 0.000453 Tons

1 Kg

= 9.8 Nt

1 Nt

= 0.102 Kgs

1 Nt

= 0.225 Lbs

1 Lbs

= 4.44 Nt

PRESSURE

1 kg/mm²

= 1422 psi

1 psi

= 0.000703 kg/mm²

1 kg/cm²

= 14.22 psi

1 psi

$$= 0.0703 \text{ kg/cm}^2$$

1 Atm

$$= 14.7 \text{ psi}$$

1 psi

$$= 0.68 \text{ Atm}$$

1 Bar

= 14.5 psi

1 psi

= 0.69 Bar

1 Mpasal

= 145 psi

1 psi

= 0.00689 Mpasal

1 pascal

= 0.000145 psi

1 psi

= 6886 pascal

VACUUM (NEGATIVE PRESSURE)

1 Atm

= 76 cm Hg

1 cm Hg

= 0.0131 Atm

1 Atm

= 29.92 in Hg

1 in Hg

= 0.0334 Atm

1 cm Hg

= 0.193 psi

1 psi

= 5.17 cm Hg

1 in Hg

= 0.4912 psi

1 psi

= 2.036 in Hg

SPEED

1 cm/sec

= 0.394 in/sec

1 in/sec

= 2.54 cm/sec

1 m/sec

= 3.283 pies/sec

1 pie/sec

= 0.304 m/sec

1 Km/hour

= 0.6214 miles/hour

1 mile/hour

= 1.613 km/hour

POWER

1 Kw

= 1.341 HP

1 HP

= 0.746 Kw

1 BTU/min

= 0.0236 HP

1 HP

= 42.44 BTU/min

1 BTU/min

= 0.0176 Kw

1 Kw

= 56.82 BTU/min

TEMPERATURE

o F

= 1.8 oC + 32

o C

$$= (oF - 32)/1.8$$

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