



## Peerless Pump Company

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# TECHNICAL INFORMATION

## Bulletin

### NUMBER TWENTY-SIX

## METRICATION

### LENGTH

1 km = 1000 m		1 m = 1000 mm = 100 cm	
cm	=	0.3937 in	
m	=	3.28 ft	
m	=	1.094 yd	
km	=	0.621 mi	
in	=	2.54 cm = 25.4 mm	
ft	=	0.3048 m	
yd	=	0.9144 m	
mi	=	1.61 km	

### CAPACITY

1 l = 1000 cc		1 l = 1000 ml	
1 l	=	0.0353 ft <sup>3</sup>	
1 l	=	0.2642 gal (U.S.)	
1 l	=	61.023 in <sup>3</sup>	
cu ft	=	28.32 l	
gal	=	3.785 l	
cu in	=	0.0164 l	

### AREA

sq cm	=	0.1550 sq in
sq m	=	10.76 sq ft
sq m	=	1.196 sq yd
ha	=	2.47 acres
sq km	=	0.386 sq mi
sq in	=	6.45 sq cm
sq ft	=	0.0929 sq m
sq yd	=	0.836 sq m
acre	=	0.405 ha
sq mi	=	2.59 sq km

### PRESSURE

1 kg per sq cm	=	14.2233 psi
1 kg per cm <sup>2</sup>	=	0.96784 std atm
1 kg per cm <sup>2</sup>	=	0.981 bar
1 psi	=	0.07031 kg per cm <sup>2</sup>
1 kg per m <sup>2</sup>	=	0.20482 lb/ft <sup>2</sup>
1 lb per ft <sup>2</sup>	=	4.8824 kg per m <sup>2</sup>
1 std atm	=	1.033228 kg per cm <sup>2</sup>
1 metric atm	=	1.033228 kg per cm <sup>2</sup>
1 std atm	=	14.6959 psi
1 N/m <sup>2</sup>	=	1.0194 x 10 <sup>-6</sup> KG/cm <sup>2</sup>

### CENTIGRADE/FAHRENHEIT

#### CONVERSION EQUATION

$$F^{\circ} = 9/5 \times (C^{\circ}) + 32 = 1.8(C^{\circ} + 17.8)$$

$$C^{\circ} = 5/9 \times (F^{\circ} - 32)$$

### WEIGHT

one kg = 1000 g		one g = 1000 mg	
grain	=	0.0648 g	
g	=	15.432 grains	
g	=	0.0353 oz	
oz	=	28.35 g	
lb	=	0.454 kg	
kg	=	2.2046 lb	
short ton	=	2000 lb	
short ton	=	907.18 kg	
kg	=	0.0011 short ton	
short ton	=	0.907 metric tons	
metric ton	=	1.1025 short ton	

### VOLUME

1 cu m = (100) <sup>3</sup> cm		1 l = 1000 cc = 1000 ml	
cu cm	=	0.061 cu in	
cu m	=	35.315 cu ft	
cu m	=	1.308 cu yd	
cu in	=	16.38 cm <sup>3</sup>	
cu ft	=	0.0283 m <sup>3</sup>	
cu yd	=	0.7645 m <sup>3</sup>	

### CONVERSION

CONVERT FROM	TO	MULTIPLY BY
gal (U.S.) per min	m <sup>3</sup> /hr	0.2272
m	ft	3.28
ft	m	0.3048
m <sup>3</sup> /hr	U.S. gpm	4.4021
m <sup>3</sup> /hr	l/sec	0.2778
hp (mech.)	hp (metric)	1.01387
hp (metric)	hp (mech.)	0.986320
kg/cm <sup>2</sup>	psi	14.2233
psi	kg/cm <sup>2</sup>	0.07031

### HORSEPOWER EQUATION

1 hp = 33,000 ft lb/min	
bhp = 0.7460 kw	bhp = $\frac{Q(\text{gpm}) \times H(\text{ft}) \times \text{sp. gr.}}{3960 \times E}$
= 550 ft lb/sec	
mhp = 0.7355 kw	$\frac{\text{m}^3/\text{hr} \times H(\text{m}) \times \text{sp. gr.}}{274.23217 \times E}$
= 75 kg/m/sec.	
mhp = 0.9863 x bhp	mhp = $\frac{\text{m}^3/\text{hr} \times H(\text{m}) \times \text{sp. gr.}}{278.04134 \times E}$

Note: For free downloadable conversion software (CONVERT) visit:

<http://joshmadison.net/software/>

## ABBREVIATIONS

ft	foot	acre	<i>(spell out)</i>	kPa	kilopascal	N	Newton
g	gram	atm	atmosphere	l	liter	oz	ounce
gal	gallon	bar	<i>(spell out)</i>	lb	pound	P	Pascal
gpm	gallon per min	bhp	brake horsepower	m	meter	psi	pounds per square inch
grain	<i>(spell out)</i>	C	Centigrade (Celsius)	m <sup>3</sup>	cubic meters	sp. gr.	specific gravity
ha	hectare	cc	cm <sup>3</sup>	metric	<i>(spell out)</i>	ton	<i>(spell out)</i>
hp	horsepower	cm	centimeter	mhp	metric horsepower	yd	yard
in	inch	cu	cubic	mi	mile	E=	pump efficiency
km	kilometer	F	Fahrenheit	mm	millimeter		