

Pipe & Hangers Technical Basic Conversions



VOLUME

Convert From	Into	Multiply By
Acre-feet	Cu feet	43560
	Cu meters	1233.482
	Cu yards	1613.33
Cu Centimeters	Gallons (US)	3.259 x 10 ⁵
	Cu feet	3.5315 x 10 ⁻⁵
	Cu inches	0.06102
	Cu meters	1 x 10 ⁻⁶
	Cu yards	1.308 x 10 ⁻⁶
	Gallons (US liq)	0.00026
	Liters	0.00099
	Ounces (US liq)	0.03381
	Pints (US liq)	0.00211
	Quarts (US liq)	0.00106
Cu Feet	Acre-feet	2.296 x 10 ⁻⁵
	Cu centimeters	28316.8
	Cu inches	1728.0
	Cu meters	0.02832
	Cu yards	0.03704
	Gallons (US liq)	7.48052
	Liters	28.316
	Ounces (US liq)	957.506
	Pints (US liq)	59.8442
	Quarts (US liq)	29.922
Cu Inches	Acre-feet	1.329 X 10 ⁻⁸
	Cu centimeters	16.3871
	Cu feet	0.000579
	Cu meters	1.639 X 10 ⁻⁵
	Cu yards	2.143 X 10 ⁻⁵
	Gallons (US liq)	0.00433
	Liters	0.01639
	Ounces (US liq)	0.55411
	Pints (US liq)	0.03463
	Quarts (US liq)	0.01732
Cu Meters	Acre-feet	0.00081
	Cu centimeters	1 x 106
	Cu feet	35.147
	Cu inches	61023.7
	Cu yards	1.30795
	Gallons (US liq)	264.172
	Liters	999.97
	Pints (US liq)	2113.38
	Quarts (US liq)	1056.69
	Acre-feet	6.198 X 10 ⁻⁴
Cu Yards	Cu centimeters	764554.9
	Cu feet	27
	Cu inches	46656
	Cu meters	0.76455
	Gallons (US liq)	201.974
	Liters	764.553
	Quarts (US liq)	807.896
	Acre-feet	3.068 X 10 ⁻⁶
	Cu centimeters	3785.41
	Cu feet	0.13368
Gallons (US liq)	Cu inches	231
	Cu meters	0.00378
	Cu yards	0.00495
	Liters	3.7853
	Ounces (US liq)	128
	Pints (US liq)	8
	Quarts (US liq)	4
	Acre-feet	8.106 X 10 ⁻⁷
	Cu centimeters	1.000.03
	Cu feet	0.03532

VOLUME - continued

Convert From	Into	Multiply By
Ounces (US liq)	Cu inches	61.002
	Cu meters	0.00100003
	Cu yards	0.00131
	Gallons (US liq)	0.26148
	Ounces (US liq)	33.81497
	Pints (US liq)	2.1134
	Quarts (US liq)	1.0567
	Cu Centimeters	29.5737
	Cu inches	1.80469
	Cu meters	2.957 x 10 ⁻⁵
Pints (US liq)	Gallons (US liq)	0.00781
	Liters	0.02957
	Pints (US liq)	0.0625
	Quarts (US liq)	0.0312
	Cu Centimeters	473.176
	Cu feet	0.01671
	Cu inches	28.875
	Cu yards	0.000619
	Gallons (US liq)	0.125
	Liters	0.47316
Quarts (US liq)	0.5	

PRESSURE

Convert From	Into	Multiply By
Atmospheres	BAR	1.01325
	Ft H ₂ O @ 68°F	33.96
	Grams/sq cm	1033.23
	In Hg @ 32°F	29.9213
	In H ₂ O @ 68°F	407.5
	Kg/sq cm	1.03322
	Kg/sq meter	10332
	kilo Pascals	101.3
	mm Hg @ 32°F	760
	Pounds/sq ft	2116
BAR	Pounds/sq in	14.6960
	Atmospheres	0.98692
	Ft H ₂ O @ 68°F	33.51
	Grams/sq cm	1019.72
	In Hg @ 32°F	29.530
	In H ₂ O @ 68°F	407.5
	Kg/sq cm	1.01972
	Kg/sq meter	10197
	kilo Pascals	100
	mm Hg @ 32°F	0.1333
Ft H ₂ O @ 68°F	Pounds/sq ft	2089.0
	Pounds/sq in	14.5038
	Atmospheres	0.98692
	BAR	2.984 X 10 ⁻²
	In Hg @ 32°F	0.8812
	In H ₂ O @ 68°F	12
	Kg/sq cm	3.043 X 10 ⁻²
	Kg/sq meter	304.3
	kilo Pascals	2.984
	mm Hg @ 32°F	22.38
Grams/sq cm	Pounds/sq ft	62.32
	Pounds/sq in	0.4328
	Atmospheres	0.00097
	BAR	0.00098
	In Hg @ 32°F	0.02896
	Kg/sq cm	1.01972
	Kg/sq meter	1000
	kilo Pascals	100
	mm Hg @ 32°F	0.73556



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PRESSURE - continued

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>	
In Hg @32°F	Pounds/sq ft	2.0481	
	Pounds/sq in	0.01422	
	Atmospheres	0.03342	
	BAR	0.03386	
	Ft H ₂ O @ 68°F	1.135	
	Grams/sq cm	34.532	
	In H ₂ O @ 68°F	13.62	
	Kg/sq cm	3.453 X 10 ⁻²	
	Kg/sq meter	345.3	
	kilo Pascals	3.386	
	mm Hg @ 32°F	25.4	
	Pounds/sq ft	70.73	
	Pounds/sq in	0.4912	
	In H ₂ O @ 68°F	Atmospheres	2.454 X 10 ⁻³
		BAR	2.49 X 10 ⁻³
		Ft H ₂ O @ 68°F	8.333 X 10 ⁻²
		In Hg @ 32°F	7.343 X 10 ⁻²
Kg/sq cm		2.53 X 10 ⁻³	
Kg/sq meter		25.38	
kilo Pascals		0.249	
mm Hg @ 32°F		1.865	
Pounds/sq ft		5.197	
Pounds/sq in		3.609 X 10 ⁻²	
Kg/sq cm		Atmospheres	0.9678
		BAR	0.98066
		Ft H ₂ O @ 68°F	32.87
		In Hg @ 32°F	28.959
		In H ₂ O @ 68°F	394.4
		Kg/sq meter	1 X 10 ⁴
		kilo Pascals	98.07
	mm Hg @ 32°F	735.6	
	Pounds/sq ft	2048	
	Pounds/sq in	14.22	
	Kg/sq meter	Atmospheres	9.678 X 10 ⁻⁵
		BAR	9.807 X 10 ⁻⁵
		Ft H ₂ O @ 68°F	3.287 X 10 ⁻³
		Grams/sq cm	0.1
		In Hg @32°F	0.0029
		In H ₂ O @ 68°F	3.944 X 10 ⁻²
		Kg/sq cm	0.001
kilo Pascals		9.807 X 10 ⁻³	
mm Hg @32°F		0.07356	
Pounds/sq ft		0.20482	
Pounds/sq in		1.422 X 10 ⁻³	
kilo Pascals		Atmospheres	9.869 X 10 ⁻³
		BAR	0.01
		Ft H ₂ O@68°F	0.3351
		In Hg @32°F	0.2953
		In H ₂ O @ 68°F	4.022
		Kg/sq cm	1.02 X 10 ⁻²
	Kg/sq meter	102	
	mm Hg @32°F	7.501	
	Pounds/sq ft	20.89	
	Pounds/sq in	0.145	
	mm Hg @32°F	Atmospheres	1.316 X 10 ⁻³
		BAR	1.333 X 10 ⁻³
		Ft H ₂ O@68°F	4.468 X 10 ⁻³
		Grams/sq cm	1.3595
		In Hg @32°F	3.937 X 10 ⁻²
		In H ₂ O @ 68°F	0.5362
		Kg/sq cm	1.36 X 10 ⁻³
Kg/sq meter		13.595	
kilo Pascals		0.1333	

PRESSURE - continued

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>	
Pounds/sq ft	Pounds/sq ft	2.7845	
	Pounds/sq in	0.0193	
	Atmospheres	4.73 X 10 ⁻⁴	
	BAR	4.79 X 10 ⁻⁴	
	Ft H ₂ O@68°F	1.605 X 10 ⁻²	
	Grams/sq cm	0.48824	
	In Hg @32°F	2.036	
	In H ₂ O @ 68°F	0.1926	
	Kg/sq cm	4.88 X 10 ⁻⁴	
	Kg/sq meter	4.882	
	kilo Pascals	4.79 X 10 ⁻²	
	mm Hg @32°F	0.3591	
	Pounds/sq in	6.945 X 10 ⁻³	
	Pounds/sq in	Atmospheres	6.805 X 10 ⁻²
		BAR	6.895 X 10 ⁻²
		Ft H ₂ O @ 68°F	1.605 X 10 ⁻²
		Grams/sq cm	70.307
In Hg @ 32°F		2.036	
In H ₂ O @ 68°F		27.73	
Kg/sq cm		7.031 X 10 ⁻²	
Kg/sq meter		703.1	
kilo Pascals		6.895	
mm Hg @ 32°F		51.72	
Pounds/sq ft		144	

VELOCITY (Distance-time)

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>		
Feet/day	Feet/ second	1.157 X 10 ⁻⁵		
	Kilometers/hour	1.27 X 10 ⁻⁵		
	Meters/second	3.528 X 10 ⁻⁶		
	Miles/hour	7.891 X 10 ⁻⁶		
	Feet/ second	Feet/ day 8.64 X 10 ⁴		
		Kilometers/hour	1.097	
		Meters/second	0.3048	
		Miles/hour	0.6818	
		Feet/day	7.874 X 10 ⁴	
		Feet/ second	0.9113	
		Meters/second	0.2778	
		Miles/hour	0.6214	
		Kilometers/hour	Feet/day	2.835 X 10 ⁵
			Feet/ second	3.281
			Kilometers/hour	3.6
			Miles/hour	2.237
			Meters/second	Feet/day
Feet/ second				1.467
Kilometers/hour				1.609
Meters/second				0.447

DISCHARGE RATES (Volume-time)

<u>Convert From</u>	<u>Into</u>	<u>Multiply By</u>		
Acre-feet/day	Cu feet/second	0.5042		
	Cu meters/day	1234		
	Gallons/minute	226.3		
	Liters/second	14.28		
	Cu feet/second	Acre-feet/day	1.983	
		Cu meters/day	2447	
		Gallons/minute	448.8	
		Liters/second	28.32	
		Cu meters/day	Acre-feet/day	6.051 X 106
			Cu feet/second	3.051 X 106
			Gallons/minute	1.369 X 10 ⁹
			Liters/second	8.64 X 10 ⁷

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DISCHARGE RATES - continued

Convert From	Into	Multiply By
Gallons/minute	Acre-feet/day	4.419 X 10 ⁻³
	Cu feet/second	2.228 X 10 ⁻³
	Cu meters/day	5.45
Liters/second	Liters/second	6.309 X 10 ⁻²
	Acre-feet/day	7.005 X 10 ⁻²
	Cu feet/second	3.531 X 10 ⁻²
	Cu meters/day	86.4
	Gallons/minute	15.85

TORQUE

Convert From	Into	Multiply By
Foot-pounds	Inch-pounds	12
	KF force-meters	1382.552 X 10 ⁻⁴
	Newton-meters	1.356
Inch-pounds	Foot-pounds	0.8333
	KF force-meters	11547.344 X 10 ⁻⁶
	Newton-meters	11559.357 X 10 ⁻⁵
KF force-meters	Foot-pounds	7.233
	Inch-pounds	86.8
	Newton-meters	9.807
Newton-meters	Foot-pounds	7374.631 X 10 ⁻⁴
	Inch-pounds	8.651
	KF force-meters	10196.798 X 10 ⁻⁵

DENSITY

Convert From	Into	Multiply By
Pounds/Cu inch	Pounds/Cu feet	1728
	Pounds/gallon	231
	Grams/Cu cm	27.68
Pounds/Cu feet	Grams/liter	2.768 X 10 ⁴
	Pounds/Cu inch	5.787 X 10 ⁻⁴
	Pounds/gallon	0.1337
	Grams/Cu cm	1.6 X 10 ⁻²
Pounds/gallon	Grams/liter	16.02
	Pounds/Cu inch	4.33 X 10 ⁻³
	Pounds/Cu feet	7.481
	Grams/Cu cm	0.1198
Grams/Cu cm	Grams/liter	119.8
	Pounds/Cu inch	3.61 X 10 ⁻²
	Pounds/Cu feet	62.43
	Pounds/gallon	8.345
Grams/liter	Grams/liter	1000
	Pounds/Cu inch	3.61 X 10 ⁻⁵
	Pounds/Cu feet	6.24 X 10 ⁻²
	Pounds/gallon	8.35 X 10 ⁻³
	Grams/Cu cm	0.001

ENERGY

Convert From	Into	Multiply By
British Thermal Unit (BTU)	Foot-pound	777.9
	Horsepower-hr	3.929 X 10 ⁻⁴
	Joules	1055
	Calorie	252
	Kilowatt-hr	2.93 X 10 ⁻⁴
Foot-pound	BTU	1.285 X 10 ⁻³
	Horsepower-hr	5.051 X 10 ⁻⁷
	Joules	1.356
	Calorie	0.3239
	Kilowatt-hr	3.766 X 10 ⁻⁷
Horsepower-hr	BTU	2545
	Foot-pound	1.98 X 10 ⁶
	Joules	2.685 X 10 ⁶
	Calorie	6.414 X 10 ⁵

ENERGY - continued

Convert From	Into	Multiply By
Joules	Kilowatt-hr	0.7457
	BTU	9.481 X 10 ⁻⁴
	Foot-pound	0.7376
	Horsepower-hr	3.725 X 10 ⁻⁷
	Calorie	0.2389
	Kilowatt-hr	2.778 X 10 ⁻⁷
	BTU	3.968 X 10 ⁻³
	Foot-pound	3.087
	Horsepower-hr	1.559 X 10 ⁻⁶
	Joules	4.186
Calorie	Kilowatt-hour	1.163 X 10 ⁻⁶
	BTU	3413
	Foot-pound	2.655 X 10 ⁶
	Horsepower-hr	1.341
	Joules	3.6 X 10 ⁶
	Calorie	8.601 X 10 ⁵

Convert From

Convert From	Into	Multiply By
Ounce	Pound	0.0625
	Kilogram	0.02834952
	Short ton	3.125 X 10 ⁻⁵
	Long ton	2.79 X 10 ⁻⁵
	Metric ton	2.835 X 10 ⁻⁵
	Ounce	16
	Kilogram	0.4536
	Short ton	0.0005
	Long ton	0.0004464
	Metric ton	0.0004536
Pound	Ounce	35.27396
	Pound	2.20462
	Short ton	0.001102
	Long ton	0.00098
	Metric ton	0.091
	Ounce	32000
	Pound	2000
	Kilogram	907.18
	Long ton	0.89266
	Metric ton	0.90718
Kilogram	Ounce	35840
	Pound	2240
	Kilogram	1016.05
	Short ton	1.12
	Long ton	1.10605

MASS

MASS - continued

Convert From	Into	Multiply By
Metric ton	Ounce	35273.98
	Pound	2204.62
	Kilogram	1000
	Short ton	1.1023
	Long ton	0.98421