

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	
	Cu Yards	Acre-feet	6.198 X 10 ⁻⁴
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	
Gallons (US liq)		Acre-feet	3.068 X 10 ⁻⁶
		Cu centimeters	3785.41
	Cu feet	0.13368	
	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	
Liters	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



Pipe & Hangers Technical Basic Conversions

PRESSURE - continued

Convert From	Into	Multiply By
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
	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
In H ₂ O @ 68°F	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
	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 cm	Atmospheres
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
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 meter		Kg/sq cm
	Kg/sq meter	102
	mm Hg @32°F	7.501
	Pounds/sq ft	20.89
	Pounds/sq in	0.145
	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

Convert From	Into	Multiply By
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
	Atmospheres	6.805 X 10 ⁻²
	BAR	6.895 X 10 ⁻²
	Ft H ₂ O @ 68°F	1.605 X 10 ⁻²
	Pounds/sq in	Grams/sq cm
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)

Convert From	Into	Multiply By	
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	
	Feet/ second	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
		Feet/day	2.835 X 10 ⁵
		Feet/ second	3.281
		Kilometers/hour	3.6
		Miles/hour	2.237
		Feet/day	1.267 X 10 ⁵
Feet/ second		1.467	
Kilometers/hour		1.609	
Meters/second		0.447	
Kilometers/hour		Feet/day	7.874 X 10 ⁴
		Feet/ second	0.9113
	Meters/second	0.2778	
	Miles/hour	0.6214	
	Feet/day	2.835 X 10 ⁵	
	Feet/ second	3.281	
	Kilometers/hour	3.6	
	Miles/hour	2.237	
	Feet/day	1.267 X 10 ⁵	
	Feet/ second	1.467	
	Kilometers/hour	1.609	
	Meters/second	0.447	
	Meters/second	Feet/day	2.835 X 10 ⁵
		Feet/ second	3.281
		Kilometers/hour	3.6
		Miles/hour	2.237
		Feet/day	1.267 X 10 ⁵
Feet/ second		1.467	
Kilometers/hour		1.609	
Meters/second		0.447	
Miles/hour		Feet/day	7.874 X 10 ⁴
		Feet/ second	0.9113
		Meters/second	0.2778
		Miles/hour	0.6214
		Feet/day	2.835 X 10 ⁵
		Feet/ second	3.281
		Kilometers/hour	3.6
		Miles/hour	2.237
		Feet/day	1.267 X 10 ⁵
	Feet/ second	1.467	
	Kilometers/hour	1.609	
	Meters/second	0.447	

DISCHARGE RATES (Volume-time)

Convert From	Into	Multiply By	
Acre-feet/day	Cu feet/second	0.5042	
	Cu meters/day	1234	
	Gallons/minute	226.3	
	Liters/second	14.28	
	Acre-feet/day	1.983	
	Cu meters/day	2447	
	Gallons/minute	448.8	
	Liters/second	28.32	
	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	
	Cu feet/second	Cu feet/second	0.5042
		Cu meters/day	1234
		Gallons/minute	226.3
		Liters/second	14.28
		Acre-feet/day	1.983
Cu meters/day		2447	
Gallons/minute		448.8	
Liters/second		28.32	
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	
Cu meters/day		Cu feet/second	0.5042
		Cu meters/day	1234
		Gallons/minute	226.3
		Liters/second	14.28
		Acre-feet/day	1.983
	Cu meters/day	2447	
	Gallons/minute	448.8	
	Liters/second	28.32	
	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
	BTU	1.285 X 10 ⁻³
Foot-pound	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
Short ton	Ounce	35273.98
	Pound	2204.62
	Kilogram	1000
	Short ton	1.1023
	Long ton	0.98421
Long ton	Ounce	35273.98
	Pound	2204.62
	Kilogram	1000
	Short ton	1.1023
	Long ton	0.98421

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