

GENERAL CONVERSION FACTORS FOR COMMON ENGINEERING TERMS

PROPERTY	TO COVERT FROM	TO	MULTIPLY BY
acceleration (angular)	revolution per minute squared	rad/s ²	1.745 329 x 10 ⁻³
acceleration (linear)	in./min. ²	m/s ²	7.055 556 x 10 ⁻⁶
	ft/min ²	m/s ²	8.466 667 x 10 ⁻⁵
	ft/s ²	m/s ²	3.048 000 x 10 ⁻¹
area	in. ²	m ²	6.451 6000 x 10 ⁻⁴
	ft ²	m ²	9.290 304 x 10 ⁻²
	yd ²	m ²	8.361 274 x 10 ⁻¹
	acre (U.S. Survey)	m ²	4.046 873 x 10 ³
density	pound mass per cubic inch	kg/m ³	2.767 990 x 10 ⁴
energy, work, heat, and impact energy	foot pound force	J	1.355 818
	Btu	J	1.054 350 x 10 ³
	calorie	J	4.187 000
	watt hour	J	3.600 000 x 10 ³
force	kilogram-force	N	9.806 650
	pound-force	N	4.448 222
length	in.	m	2.540 000 x 10 ⁻²
	ft	m	3.048 000 x 10 ⁻¹
	yd	m	9.144 000 x 10 ⁻¹
	mile (U.S. Survey)	km	1.609 347
mass	pound mass (avdp)	kg	4.535 924 x 10 ⁻¹
	metric ton	kg	1.000 000 x 10 ³
	ton (short 2000 lbm)	kg	9.071 847 x 10 ²
power	horsepower (550 ft lbf/s)	W	7.456 999 x 10 ²
	horsepower (electric)	W	7.460 000 x 10 ²
	Btu/min	W	1.757 250 x 10
	calorie per minute	W	6.973 333 x 10 ⁻²
	foot pound-force per minute	W	2.259 697 x 10 ⁻²
pressure	pound force per square inch	kPa	6.894 757
	bar	kPa	1.000 000 x 10 ²
	atmosphere	kPa	1.013 250 x 10 ²
tensile strength (stress)	ksi	MPa	6.894 757
torque	inch pound force	N · m	1.129 848 x 10 ⁻¹
	foot pound force	N · m	1.355 818
velocity (angular)	revolution per minute	rad/s	1.047 198 x 10 ⁻¹
	degree per minute	rad/s	2.908 882 x 10 ⁻⁴
	revolution per minute	deg/min	3.600 000 x 10 ²
velocity (linear)	in./min	m/s	4.233 333 x 10 ⁻⁴
	ft/min	m/s	5.080 000 x 10 ⁻³
	mile/hour	km/h	1.609 344
volume	in. ³	m ³	1.638 706 x 10 ⁻⁵
	ft ³	m ³	2.831 685 x 10 ⁻²
	yd ³	m ³	7.645 549 x 10 ⁻¹
	in ³	L	1.638 706 x 10 ⁻²
	ft ³	L	2.831 685 x 10
	gallon	L	3.785 412

Data contained in this publication are typical of the products and properties described, but are not suitable for specifications.
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