SI DERIVED UNITS LIST (PHYSICSKEY.COM)

This file includes the most commonly used SI derived units in Physics. This file can be updated at any time to include new units, so make sure you have the most recent version of this PDF file.

Qunatity	Symbol	SI Unit Name	SI Unit	Conversion to Base Units	Remarks
Area	A	-	m^2	m^2	-
Volume	V	-	m^3	m^3	-
Force	F	Newton	N	$\mathrm{kg} \cdot \mathrm{m}/\mathrm{s}^2$	-
Weight	w	Newton	N	$\mathrm{kg} \cdot \mathrm{m}/\mathrm{s}^2$	-
Work	W	Joule	J or $\mathrm{N} \cdot \mathrm{m}$	$\mathrm{kg} \cdot \mathrm{m}^2/\mathrm{s}^2$	-
Kinetic Energy	K	Joule	J or $\mathrm{N} \cdot \mathrm{m}$	$\mathrm{kg} \cdot \mathrm{m}^2/\mathrm{s}^2$	-
Potential Energy	U	Joule	J or $\mathrm{N} \cdot \mathrm{m}$	$\mathrm{kg} \cdot \mathrm{m}^2/\mathrm{s}^2$	-
Energy	E	Joule	J or $\mathrm{N} \cdot \mathrm{m}$	$\mathrm{kg} \cdot \mathrm{m}^2/\mathrm{s}^2$	-
Power	P	Watt	W or J/s	$\mathrm{kg} \cdot \mathrm{m}^2/\mathrm{s}^3$	-
Impulse	J	-	$\mathrm{N} \cdot \mathrm{s}$	$\mathrm{kg} \cdot \mathrm{m}/\mathrm{s}$	-
Momentum (Linear)	p	-	$\mathrm{kg} \cdot \mathrm{m}/\mathrm{s}$	$\mathrm{kg} \cdot \mathrm{m}/\mathrm{s}$	-
Angular Momentum	L	-	$\mathrm{kg} \cdot \mathrm{m}^2/s$	$\mathrm{kg} \cdot \mathrm{m}^2/s$	-
Moment of Inertia	I	-	$\mathrm{kg} \cdot \mathrm{m}^2$	$\mathrm{kg} \cdot \mathrm{m}^2$	-
Torque	τ	-	$\mathrm{N} \cdot \mathrm{m}$	$\mathrm{kg} \cdot \mathrm{m}^2/\mathrm{s}^2$	The SI unit of torque is not

					Joule(J) even though we used Newton-meter as Joule for work and energy. Torque is not the work or energy.
Pressure	p	Pascal	Pa or $\mathrm{N/m^2}$	$\mathrm{kg/(m \cdot s^2)}$	-
Stress	-	Pascal	Pa or $\mathrm{N/m^2}$	$\mathrm{kg/(m \cdot s^2)}$	-
Density	ρ	-	$\mathrm{kg/m^3}$	$\mathrm{kg/m^3}$	-
Frequency	f	Hertz	Hz	$\mathrm{s^{-1}}$	-
Heat	Q	Joule	J	$\mathrm{kg \cdot m^2/s^2}$	-
Heat Current	H	Watt	W or $\mathrm{J/s}$	$\mathrm{kg \cdot m^2/s^3}$	-
Entropy	S	-	$\mathrm{J/K}$	$\mathrm{(kg \cdot m^2)/(K \cdot s^2)}$	-
Electric Charge	q or Q	Coulomb	C	$\mathrm{A \cdot s}$	-
Electric Flux	Φ	-	$\mathrm{N \cdot m^2/C}$	$\mathrm{(kg \cdot m^3)/(A \cdot s^3)}$	-
Electric Potential or Potential Difference	V	Volt	$\mathrm{J/C}$	$\mathrm{(kg \cdot m^2)/(A \cdot s^3)}$	-
Emf	$\mathcal{E}$	Volt	$\mathrm{J/C}$	$\mathrm{(kg \cdot m^2)/(A \cdot s^3)}$	-
Electric Field	E	-	$\mathrm{N/C}$ or $\mathrm{V/m}$	$\mathrm{(kg \cdot m)/(A \cdot s^3)}$	-
Capacitance	C	Farad	F or $\mathrm{C/V}$	$\mathrm{(A^2 \cdot s^4)/(kg \cdot m^2)}$	-
Resistance	R	Ohm	Ω or $\mathrm{V/A}$	$\mathrm{(kg \cdot m^2)/(A^2 \cdot s^3)}$	-

Magnetic Field	B	Tesla	T or $\mathrm{N/A \cdot m}$	$\mathrm{kg/(A \cdot s^2)}$	-
Magnetic Flux	Φ_B	Weber	Wb or $\mathrm{T \cdot m^2}$	$\mathrm{kg \cdot m^2/(A \cdot s^2)}$	-
Magnetic Dipole Moment	μ	-	$\mathrm{A \cdot m^2}$	$\mathrm{A \cdot m^2}$	-
Inductance	L	Henry	H or $\mathrm{Wb/A}$ or $\mathrm{V \cdot s/A}$ or $\mathrm{\Omega \cdot s}$	$\mathrm{(kg \cdot m^2)/(A^2 \cdot s^2)}$	-
Reactance	X	Ohm	Ω	$\mathrm{(kg \cdot m^2)/(A^2 \cdot s^3)}$	-
Impedance	Z	Ohm	Ω	$\mathrm{(kg \cdot m^2)/(A^2 \cdot s^3)}$	-