

System International

Base units:	(abbrev.)	Quantity
C	the metre (m)	length
C	the kilogram (kg)	mass
C	the second (s)	time
C	the ampere (a)	electric current
C	the kelvin (K)	temperature
C	the candela (Cd)	luminous intensity
C	the mole (mol)	amount of substance

Prefixes:	(abbrev.)	Quantity
C	mega M	1 000 000
C	kilo k	1 000
C	centi c	0.01
C	milli m	0.001

Some rules:

1. Use no decimal after the abbreviated versions of metric units unless at the end of a sentence. For example, 35.6 N (short for newtons), 3.00 kg (short for kilograms), or 0.500 s (short for seconds) are correct forms; but 40.0 m. and 20.5 s. or 20.5 sec. are incorrect forms.
2. A centred dot (·) is used to separate abbreviated SI units involving combined quantities, such as N·s for newton seconds or kg·m² for kilogram metres squared. However, a decimal point (.) is also acceptable (and will be used throughout this text) and is usually much easier to use.

3. Use a slash (/) to indicate an arithmetic division of units, such as, m/s for metres per second or N/m² for newtons per square metre.
4. Do not capitalize a unit derived from a proper name when spelling out the unit even though the unit's abbreviation is a capital letter. Examples of such units include the watt (W), the newton (N), the hertz (Hz), the pascal (Pa) and the joule (J).
5. Do not mix abbreviations and unabbreviated forms in an expression. For instance, the following are incorrect forms: newtons per m, kg.metres and N.seconds.
6. The prefixes hecto, deca, deci, and centi should be avoided, excepting for the measurements of area, volume and length, such as hectare, centilitre and centimetre.
7. When pronouncing metric units that have a prefix, the accent should always be placed on the complete prefix, that is, kilo'-metre versus ki-lo'-metre or kilo-metre'.
8. Always type a space between the numeric part and the number except for EC, E (angle) and %. Examples: 76.4 W, 20.4EC, 13%, 678 N.m and 45E.
9. When writing out numbers with greater than four digits on either side of the decimal point, use a space instead of a comma to separate digits into groups of three as, for example, 23 400 m or 0.001 63 m. This is because the comma is used in many countries as a decimal point. It is permissible to omit the blank in four digit numbers, such as 1000, 7988, etc.

System International units of measure and abbreviations

Quantity	Name ¹	Symbol	Formula ²
Kinematic domain:			
length, linear displacement	metre	m	
area	square metre		m ²
volume	cubic metre		m ³
	litre	L	dm ³
linear velocity, speed	metre per second		m/s
linear acceleration	metre per second squared		m/s ²
plane angle, angular displacement	radian	rad	
	degree	deg	p/180 rad
	minute	'	1/60 deg
	second	"	1/360 deg
	revolution	r	2p rad
angular velocity	radian per second		rad/s
angular acceleration	radian per second squared		rad/s ²
Inertial property domain:			
mass	kilogram	kg	
	tonne	T	1000 kg
moment of inertia	kilogram metre squared		kg·m ²
density	kilogram per cubic metre		kg/m ³
Temporal domain:			
time	second	s	
	minute	min	60 s
	hour	h	3600 s
frequency	hertz	Hz	1/s
Kinetic domain:			
force	newton	N	kg·m/s ²
moment of force, torque	newton metre		N·m
pressure, stress	pascal	Pa	N/m ²
energy, work	joule	J	kg·m ² /s ²
power	watt	W	J/s
linear momentum/impulse	kilogram metre per second		kg·m/s or N·s
angular momentum/impulse	newton second		kg·m ² /s or N·m·s
Electrical domain:			
current	ampere	A	
voltage	volt	V	W/A
charge	coulomb	C	s·A
power	watt	W	J/s
resistance	ohm	Ω	V/A
capacitance	farad	F	C/V
Temperature domain:			
temperature	kelvin	K	
	degree Celsius	EC	

System International unit prefixes

Multiplication Factor	Prefix	Symbol
$1\ 000\ 000\ 000\ 000\ 000\ 000 = 10^{18}$	exa	E
$1\ 000\ 000\ 000\ 000\ 000 = 10^{15}$	peta	P
$1\ 000\ 000\ 000\ 000 = 10^{12}$	tera	T
$1\ 000\ 000\ 000 = 10^9$	giga	G
$1\ 000\ 000 = 10^6$	mega	M
$1\ 000 = 10^3$	kilo	k
$100 = 10^2$	hecto	h
$10 = 10^1$	deca	da
$0.1 = 10^{-1}$	deci	d
$0.01 = 10^{-2}$	centi	c
$0.001 = 10^{-3}$	milli	m
$0.000\ 001 = 10^{-6}$	micro	μ
$0.000\ 000\ 001 = 10^{-9}$	nano	n
$0.000\ 000\ 000\ 001 = 10^{-12}$	pico	p
$0.000\ 000\ 000\ 000\ 001 = 10^{-15}$	femto	f
$0.000\ 000\ 000\ 000\ 000\ 001 = 10^{-18}$	atto	a