Rotational Mechanics Symbols Used in This Book

Symbols that are **boldfaced** refer to vector quantities that have both a magnitude and a direction. Symbols that are *italicized* refer to quantities with only a magnitude. Symbols that are neither are usually units.

Symbol	Quantity
a_t	tangential acceleration
a_c	centripetal acceleration
α	(Greek *alpha*) angular acceleration
$d \sin \theta$	lever arm (for torque calculations)
$\mathbf{F_c}$, F_c	centripetal force
I	moment of inertia
KE_{rot}	rotational kinetic energy
L	angular momentum
ℓ	length of a rotating rod
s	arc length
τ	(Greek *tau*) torque
τ_{net}	(Greek *tau*) net torque
θ	(Greek *theta*) angle of rotation
$\Delta\theta$	(Greek *delta* and *theta*) angular displacement (in radians)
v_t	tangential speed
ω	(Greek *omega*) angular speed

Fluid Dynamics and Thermodynamics Symbols Used in This Book

Symbols that are **boldfaced** refer to vector quantities that have both a magnitude and a direction. Symbols that are *italicized* refer to quantities with only a magnitude. Symbols that are neither are usually units.

Symbol	Quantity
c_p	specific heat capacity
eff	efficiency of a simple machine, thermal efficiency of a heat engine
$\mathbf{F_B}$, F_B	buoyant force
L	latent heat
L_f	latent heat of fusion
L_v	latent heat of vaporization
N	number of gas particles or nuclei
P	pressure
P_0	initial pressure, atmospheric pressure
P_{net}	net pressure
ρ	(Greek *rho*) mass density
Q	heat
Q_c	energy transferred as heat to or from a low-temperature (cold) substance
Q_h	energy transferred as heat to or from a high-temperature (hot) substance
Q_{net}	net amount of energy transferred as heat to or from a system
T	temperature (absolute)
T_C	temperature in degrees Celsius
T_c	temperature of a low-temperature (cool) substance
T_F	temperature in degrees Fahrenheit
T_h	temperature of a high-temperature (hot) substance
U	internal energy