Direct-current (as adjective) ..... d-c
Electromotive Force ..... emf
Feet per minute ..... fpm
Feet per second ..... fps
Foot ..... ft

Foot-pound ..... ft-lb
Foot-pound-second (system) ..... fps
Freezing point ..... fp
Gallon ..... gal
Gallons per minute ..... gpm

Gallons per second ..... gps
Gram ..... g
Gram-calorie ..... g-cal
Horsepower ..... hp
Horsepower-hour ..... hp-hr

Hour ..... hr
Inch ..... in.
Inch-pound ..... in.-lb
Indicated horsepower ..... ihp
Indicated horsepower-hour ..... ihp-hr

Kilogram ..... kg
Kilowatt ..... kw
Kilowatthour ..... kwhr
Mass ..... mass
Melting point ..... mp

Meter ..... m
Micron ..... $\mu$ (mu)
Miles per hour ..... mph
Millimeter ..... mm
Minute ..... min

Molecular weight ..... mol. wt
Mol ..... mol
Ounce ..... oz
Pound ..... lb
Pounds per square inch ..... psi

Pounds per square inch, gage ..... psig
Pounds per square inch, absolute ..... psia
Revolutions per minute ..... rpm
Revolutions per second ..... rps
Second ..... sec

Specific gravity ..... sp gr
Specific heat ..... sp ht
Square foot ..... sq ft
Square inch ..... sq in.
Watt ..... w
Watthour ..... whr

## SYMBOLS

A letter symbol is a single character, with subscript or superscript if required, used to designate a physical magnitude in mathematical equations and expressions. Two or more symbols together always represent a product. The following have been compiled from a selected list of approved standards.[3] Additional symbols and variations in the standard symbols

[3] Letter Symbols for Mechanics of Solid Bodies, Z10.3–1942, and Letter Symbols for Heat and Thermodynamics, Z10.4–194 (*American Standards Association*).



found necessary in the individual chapters will be found in a list at the end of Chapters 3, 4, 12, 31, 35, 36, and 46.

Acceleration, due to gravity ..... $g$
Acceleration, linear ..... $a$
Area ..... $A$
Change in specific volume during vaporization ..... $v_{fg}$
Density, Weight per unit volume, Specific weight ..... $d$ or $\rho$ (rho)

$$d = \frac{1}{v}$$

Distance, linear ..... $s$
Dry saturated vapor, Dry saturated gas at saturation pressure and temperature, vapor in contact with liquid ..... *Subscript* g

Efficiency ..... $\eta$
Elevation above some datum ..... $z$, $Z$
Emissivity ..... $\epsilon$
Energy in general; work, total; work, molal ..... $E$
Entropy. (The capital should be used for any weight, and the small letter for unit weight) ..... $S$ or $s$

Force, total load ..... $F$
Gas Constant, in equation $pV = nRT$ ..... $R$
Head ..... $H$ or $h$
Heat content, Total heat, Enthalpy. (The capital should be used for any weight and the small letter for unit weight) ..... $H$ or $h$
Heat content of saturated liquid, Total heat of saturated liquid, Enthalpy of saturated liquid, sometimes called heat of the liquid ..... $h_f$

Heat content of dry saturated vapor, Total heat of dry saturated vapor, Enthalpy of dry saturated vapor ..... $h_g$
Heat of vaporization at constant pressure ..... $L$ or $h_{fg}$
Hydraulic radius ..... $R_H$
Internal energy, Intrinsic energy. (The capital should be used for any weight and the small letter for unit weight) ..... $U$ or $u$
Length of path of heat flow, thickness ..... $L$

Load, total ..... $W$
Mechanical efficiency ..... $e_m$
Mechanical equivalent of heat ..... $J$
Power, Horsepower, Work per unit time ..... $P$
Pressure, Absolute pressure, Gage pressure, Force per unit area ..... $p$

Quantity (total) of fluid, water, gas, heat; Quantity by volume; Total quantity of heat transferred ..... $Q$
Quality of steam, Pounds of dry steam per pound of mixture ..... $x$
Reynolds Number ..... $N_{Re}$
Saturated liquid at saturation pressure and temperature, Liquid in contact with vapor ..... *Subscript* f
Specific heat ..... $c$

Specific heat at constant pressure ..... $c_p$
Specific heat at constant volume ..... $c_v$
Specific volume, Volume per unit weight, Volume per unit mass ..... $v$
Temperature (ordinary) F or C. (*Theta* is used preferably only when $t$ is used for Time in the same discussion) ..... $t$ or $\theta$ (*theta*)
Temperature (absolute) F abs or K. (Capital *theta* is used preferably only when small *theta* is used for ordinary temperature) ..... $T$ or $\Theta$ (*capital theta*)
Thermal conductance:[4] heat transferred per (unit time) (degree) ..... $C$

$$C = \frac{1}{R} = \frac{kA}{L} = \frac{q}{t_1 - t_2}$$

[4] Terms ending *ivity* designate properties independent of size or shape, sometimes called *specific properties*. Examples: conductivity, resistivity. Terms ending *ance* designate quantities depending not only on the material, but also upon size and shape, sometimes called *total quantities*. Examples: conductance, transmittance. Terms ending *ion* designate rate of heat transfer. Examples: conduction, transmission.