

Velocity: The time rate of motion of a body in a fixed direction. In the fps system it is expressed in units of one foot per second. $V = \frac{s}{t}$.

Velocity Pressure: The difference due to velocity between total pressure and static pressure. It is supposed to equal the kinetic energy per unit volume of the fluid at the point of measurement.

Ventilation: The process of supplying or removing air by natural or mechanical means, to or from any space. Such air may or may not have been conditioned. (See *Air Conditioning*.)

Warm Air Heating System: A warm air heating plant consists of a heating unit (fuel-burning furnace) enclosed in a casing, from which the heated air is distributed to the various rooms of the building through ducts. If the motive head producing flow depends on the difference in weight between the heated air leaving the casing and the cooler air entering the bottom of the casing, it is termed a *gravity* system. A booster fan may, however, be used in conjunction with a gravity-designed system. If a fan is used to produce circulation and the system is designed especially for fan circulation, it is termed a *fan furnace* system or a *central fan furnace* system. A fan furnace system may include air washers and filters.

Wet-Bulb Temperature: *Thermodynamic wet-bulb temperature* is the temperature at which liquid or solid water, by evaporating into air, can bring the air to saturation adiabatically at the same temperature. *Wet-bulb temperature* (without qualification) is the temperature indicated by a wet-bulb psychrometer constructed and used according to specifications. (A.S.M.E. Power Test Codes, Series 1932, Instruments and Apparatus, Part 18.)

Wet Return: That part of a return main of a steam heating system which is filled with water of condensation. The wet return usually is below the level of the water line in the boiler, although not necessarily so. (See *Dry Return*.)

Abbreviations, Symbols, Standards

Standard Abbreviations; Standard Symbols; Conversion Equations; Graphical Symbols for Piping, Ductwork, Heating and Ventilating, Refrigerating; Specific Heat Table; State Codes or Standards

THIS chapter contains information regarding abbreviations, symbols, conversion equations, and State codes, which are of particular interest to the engineer engaged in heating, ventilating, and air conditioning.

ABBREVIATIONS

Abbreviations are shortened forms of names and expressions employed in texts and tabulations and should not generally be used as symbols in equations. Most of the following abbreviations have been compiled from a list of approved standards¹. In general the period has been omitted in all abbreviations except where the omission results in the formation of an English word.

Absolute.....	abs
Air horsepower.....	air hp
Alternating-current (as adjective).....	a-c
Ampere.....	amp
Ampere-hour.....	amp-hr
Atmosphere.....	atm
Average.....	avg
Avoirdupois.....	avdp
Barometer.....	bar.
Boiling point.....	bp
Brake horsepower.....	bhp
Brake horsepower-hour.....	bhp-hr
British thermal unit.....	Btu
British thermal units per hour.....	Btuh
Calorie.....	cal
Centigram.....	cg
Centimeter.....	cm
Centimeter-gram-second (system).....	cgs
Cubic.....	cu
Cubic foot.....	cu ft
Cubic feet per minute.....	cfm
Cubic feet per second.....	cfs
Decibel.....	db
Degree.....	deg or °
Degree Centigrade.....	C
Degree Fahrenheit.....	F
Degree Kelvin.....	K
Degree Réaumur.....	R
Diameter.....	diam
Direct-current (as adjective).....	d-c
Feet per minute.....	fpm
Feet per second.....	fps
Foot.....	ft
Foot-pound.....	ft-lb
Foot-pound-second (system).....	fps
Freezing point.....	fp

¹Abbreviations for Scientific and Engineering Terms, Z10.1-1941 (American Standards Association).

²It is recommended that the abbreviation for the temperature scale, F, C, K, be included in expressions for numerical temperatures but, wherever feasible, the abbreviations for *degree* be omitted; as 68 F.