

British Thermal Unit: The quantity of heat required to raise 1 lb of water from 63 F to 64 F. This is substantially equal to $\frac{1}{180}$ of the heat required to raise the temperature of 1 lb of water from 32 F to 212 F (*Mean Btu*).

Calorie (small): The quantity of heat required to raise one gram of water from 17 C to 18 C. This is substantially equal to $\frac{1}{100}$ of the heat required to raise one gram of water from 0 to 100 C (*Mean calorie*).

Central Fan System: A mechanical indirect system of heating, ventilating or air conditioning consisting of a central plant where the air is heated and/or conditioned and then circulated by fans or blowers through a system of distributing ducts.

Chimney Effect: The tendency in a duct or other vertical air passage for air to rise when heated due to its decrease in density.

Coefficient of Transmission: The amount of heat (Btu) transmitted from air to air in one hour per square foot of the wall, floor, roof or ceiling for a difference in temperature of one degree Fahrenheit between the air on the inside and outside of the wall, floor, roof or ceiling. (The velocity of air passing over the surfaces and the distances from the surfaces at which the temperatures are measured affect the coefficient of transmission.)

Column Radiator: A type of direct radiator. (This radiator has not been listed by manufacturers since 1926.)

Comfort Line: The effective temperature at which the largest percentage of adults feel comfortable.

Comfort Zone: The range of effective temperatures over which the majority (50 per cent or more) of adults feel comfortable.

Concealed Radiator: See convector.

Conductance: The amount of heat (Btu) transmitted from surface to surface in one hour through one square foot of a material or construction for the thickness or type under consideration for a difference in temperature of one degree Fahrenheit between the two outside surfaces.

Conduction: The transmission of heat through and by means of matter unaccompanied by any obvious motion of the matter.

Conductivity: The amount of heat (Btu) transmitted in one hour through one square foot of a homogeneous material one inch thick for a difference in temperature of one degree Fahrenheit between the two surfaces of the material.

Conductor (heat): A material capable of readily conducting heat. The opposite of an insulator (or insulation).

Convection: The transmission of heat by the circulation of a liquid or a gas such as air. (Convection may be *natural* or *forced*.)

Convector: A concealed radiator. An enclosed heating unit located (with enclosure) either within, adjacent to, or exterior to the room or space to be heated, but transferring heat to the room or space mainly by the process of convection. A shielded heating unit shall also be termed a convector. (If the heating unit is located exterior to the room or space

to be heated, the heat is transferred through one or more ducts or pipes; see Chapter 7.)

Degree-Day (Standard): A unit which is the difference between 65 F and the daily mean temperature when the latter is below 65 F. (The 65-F temperature is an empirically determined base which has been assumed by the *American Gas Association* to be the temperature above which heat is not required.)

Dew-Point Temperature: The temperature corresponding to saturation (100 per cent relative humidity) for a given moisture content.

Diffuser: A vaned device at an air supply opening.

Direct-Indirect Heating Unit: A heating unit located in the room or space to be heated and partially enclosed, the enclosed portion being used to heat air which enters from outside the room.

Direct Radiator: Same as radiator.

Direct-Return System (Hot water): A hot water system in which the water, after it has passed through a heating unit, is returned to the boiler along a direct path so that the total distance traveled by the water is the shortest feasible distance and so that there are considerable differences in the lengths of the several circuits composing the system.

Down-Feed One-Pipe Riser (Steam): A pipe which carries steam downward to the heating units and to which the condensation from the heating units drains.

Down-Feed System (Steam): A steam heating system in which the supply mains are above the level of the heating units which they serve.

Dry-Bulb Temperature: The temperature of the air as determined by a thermometer when dry. (The dry-bulb temperature is an indication of the sensible heat.)

Dry Return: A return pipe in a steam heating system which carries both water of condensation and air. See *wet return*.

Dynamic Head or Pressure: The total or impact pressure. This is the sum of the radial pressure and the velocity pressure at the point of measurement.

Effective Temperature: An experimentally determined temperature which unlike the dry-bulb and wet-bulb temperatures, is a true measure of a person's feeling of warmth in all combinations of temperature, humidity and air motion.

Extended Heating Surface: See *heating surface*.

Extended Surface Heating Unit: A heating unit having a relatively large amount of extended surface which may be integral with the core containing the heating medium or assembled over such a core, making good thermal contact by pressure, or by being soldered to the core or by both pressure and soldering. (An extended surface heating unit is usually placed within an enclosure and therefore functions as a convector.)

Fan Furnace System: See *warm air heating system*.

Furnace: That part of a boiler or warm air heating plant in which combustion takes place. Also, a fire-pot.

Gravity Warm Air Heating System: See *warm air heating system*.