

TABLE 1. INSIDE TEMPERATURES USUALLY SPECIFIED

TYPE OF BUILDING	DEG. FAHR.
SCHOOLS—	
Class Rooms.....	68
Assembly Rooms.....	66 - 68
Gymnasiums.....	55 - 65
Toilets and Baths.....	70
Wardrobe and Locker Rooms.....	65 - 68
Kitchens.....	66
Dining and Lunch Rooms.....	65 - 68
Playrooms.....	60 - 65
Natatoriums.....	75
THEATERS—	
Seating Space.....	68 - 72
Lounge Rooms.....	68
Toilets.....	68
HOSPITALS—	
Private Rooms.....	70
Private Rooms (surgical).....	70 - 80
Operating Rooms.....	70 - 95
Wards.....	68
Kitchens and Laundries.....	66
Toilets.....	68
Bathrooms.....	70 - 80
HOTELS—	
Bedrooms and Baths.....	70
Dining Rooms.....	70
Kitchens and Laundries.....	66
Ball Rooms.....	65 - 68
Toilets and Service Rooms.....	68
HOMES—	
Where 68 deg. is generally the desirable standard of temperature a guarantee of 70 deg. is customarily exacted.	
STORES.....	65 - 68
PUBLIC BUILDINGS.....	68 - 70
WARM AIR BATHS.....	120
STEAM BATHS.....	110
FACTORIES AND MACHINE SHOPS.....	60 - 65
FOUNDRIES AND BOILER SHOPS.....	50 - 60
PAINT SHOPS.....	80

TABLE 2. DESIRABLE INDOOR TEMPERATURES IN SUMMER CORRESPONDING TO OUTDOOR TEMPERATURES

DEGREES OUTSIDE	DEGREES INSIDE		
	Dry Bulb	Wet Bulb	Effective Temperature
95	80.0	65.2	73.4
90	78.0	64.5	72.2
85	76.5	64.0	71.1
80	75.0	63.5	70.2
75	73.5	63.0	69.3
70	72.0	62.5	68.2

is required for raising the temperature of the air, the building materials and the material contents of the building to standard inside temperature.

The rate at which this additional heat is required depends upon the heat capacity of the structure and its material contents and upon the time in which these are to be heated.

This additional heat may be figured and allowed for as conditions require, but inasmuch as the heating system proportioned for taking care of the heat losses will usually have a capacity about 100 per cent greater than that required for average winter weather, and inasmuch as most buildings may either be continuously heated or more time be allowed for heating-up, during the few minimum temperature days, no allowance is made except in the size of boilers or furnaces.

INSIDE TEMPERATURES

Winter

The inside air temperature which must be maintained within a building and which should always be stated in the heating specifications, is understood to be the temperature at the breathing line, 5 ft. above the floor and not less than 3 ft. from the outside walls. Inside air temperatures, usually specified, vary in accordance with the use to which the building is to be put and Table 1 presents values which are in conformity with good practice.

Effect of Humidification: In connection with inside temperatures for winter where humidifying means are provided, approximately 1 deg. variation for each 10 per cent variation in relative humidity should be provided. For example: If the relative humidity is raised from a condition of 15 per cent to one of 45 per cent by artificial humidification it is desirable to lower the indoor temperature about 3 deg. as indicated by the Effective Temperature Line on the Comfort Chart. (See Chapter 26, p. 404). The temperatures given in the table are for normal dry air with dew-points approximately equivalent to outdoor air. A reduction in the temperatures will be required corresponding to the raise of the moisture content by artificial humidification.

Temperature at Proper Level: In making the actual heat-loss computations, however, for the various rooms in a building it is often necessary to modify the temperatures given in Table 1 so that the air temperature at the proper level will be used. By *air temperature at the proper level* is meant, in the case of walls, the air temperature at the mean height between floor and ceiling; in the case of glass, the air temperature at the mean height of the glass; in the case of roof or ceiling, the air temperature at the mean height of the roof or ceiling above the floor of the heated room, and in the case of floors, the air temperature at the floor level. In the case of heated spaces adjacent to unheated spaces, it will usually be sufficient to assume the temperature in such spaces as the mean between the temperature of the inside heated spaces and the outside air temperature, excepting where the combined heat transmission coefficient of the roof and ceiling can be used, in which case the usual inside and outside temperatures should be applied. (See Table 32, Chapter 3, and discussion regarding the use of combined coefficients of pitched roofs, unheated attics and top-floor ceilings on p. 39).