

TABLE 1. COLUMN TYPE CAST-IRON RADIATOR

HEIGHT Inches	GENERALLY ACCEPTED RATING PER SECTION—Sq Ft ^a					
	One Column	Two Column	Three Column	Four Column	Five Column	Six Column or Window
13						3
15						3½
16		1½				4½
18			2¼			5
20	1½	2		3		
22		2¼	3	4		
23	1½	2½				
25	2	2¾	3½	5	7	
32	3½	3¾	4½	6½		
38	3	4	5	8	10	
45		5	6	10		

^a The square foot of equivalent direct steam radiation is defined as the ability to emit 240 Btu per hr, with steam at 215 F in air at 70 F. These ratings apply only to installed radiators exposed in a normal manner, not to radiators installed behind enclosures, grilles, or under shelves. (See A.S.H.V.E. Code for Testing Radiators.)

RADIATORS

Column and large-tube radiators are no longer manufactured, but since many of these units are still in use, Tables 1 and 2 are included to provide principal dimensions and average ratings of them.

The small-tube type radiators, with a spacing of 1½ in. per section, are about the only available cast-iron radiating surface for homes and office

TABLE 2. LARGE-TUBE CAST-IRON RADIATORS

Sectional, cast-iron, tubular-type radiators of the large-tube pattern, that is, having tubes approximately 1½ in. in diameter, 2½ in. on centers.

NUMBER OF TUBES PER SECTION	CATALOG RATING PER SECTION ^a	HEIGHT	WIDTH	SECTION CENTER SPACING ^b	LEG HEIGHT ^c TO TAPPING
	Sq Ft	In.	In.	In.	In.
3	1½	20	4¼	2½	4¼
	2	23	4¼	2½	4¼
	2½	26	4¼	2½	4¼
	3	32	4¼	2½	4¼
4	3½	38	4¼	2½	4¼
	2¼	20	6¼	2½	4¼
	2½	23	6¼	2½	4¼
	2¾	26	6¼	2½	4¼
5	3¼	32	6¼	2½	4¼
	4¼	38	6¼	2½	4¼
	3	20	8	2½	4¼
	3½	23	8	2½	4¼
6	4	26	8	2½	4¼
	4½	32	8	2½	4¼
	5	38	8	2½	4¼
	6				
7	2½	20	9¾	2½	4¼
	3¼	23	9¾	2½	4¼
	4	26	9¾	2½	4¼
	5	32	9¾	2½	4¼
8	6	38	9¾	2½	4¼
	2½	14	11¾	2½	3
	3	17	11¾	2½	3
9	3½	20	11¾	2½	3 or 4½

^a The square foot of equivalent direct steam radiation is defined as the ability to emit 240 Btu per hr, with steam at 215 F in air at 70 F. These ratings apply only to installed radiators exposed in a normal manner; not to radiators installed behind enclosures, grilles, or under shelves. (See A.S.H.V.E. Code for Testing Radiators.)

^b Maximum assembly 60 sections. Length equals number of sections times 2½ in.

^c Where greater than standard leg heights are required, this dimension shall be 6 in., except for 7-tube sections, in heights from 13 to 20 in., inclusive, for which this dimension shall be 4½ in. Radiators may be furnished without legs.

^d For 8-tube hospital-type radiation, this dimension is 3 in.

Radiators and Convectors

TABLE 3. SMALL-TUBE CAST-IRON RADIATORS

NUMBER OF TUBES PER SECTION	CATALOG RATING PER SECTION ^a	SECTION DIMENSIONS				
		A Height ^c	B Width		C Spacing ^b	D Leg Height ^d
			Minimum	Maximum		
	Sq Ft	In.	In.	In.	In.	In.
3 ^d	1.6	25	3¼	3¼	1¼	2¼
4 ^d	1.6	19	4¼	4¼	1¼	2¼
	1.8	22	4¼	4¼	1¼	2¼
	2.0	25	4¼	4¼	1¼	2¼
5 ^d	2.1	23	5¼	6¼	1¼	2¼
	2.4	25	5¼	6¼	1¼	2¼
6 ^d	2.3	19	6¼	8	1¼	2¼
	3.0	25	6¼	8	1¼	2¼
	3.7	32	6¼	8	1¼	2¼



^a The square foot of equivalent direct steam radiation is defined as the ability to emit 240 Btu per hr. with steam at 215 F, in air of 70 F. These ratings apply only to installed radiators exposed in a normal manner; not to radiators installed behind enclosures, grilles, etc. (See A.S.H.V.E. Code for Testing Radiators adopted January, 1927).

^b Length equals number of sections times 1½ in.

^c Overall height and leg height, as produced by some manufacturers, are one inch (1 in.) greater than shown in Columns A and D. Radiators may be furnished without legs. Where greater than standard leg heights are required this dimension shall be 4½ in.

^d Or equal.

buildings. Small-tube radiators occupy less space than the older column and large-tube radiators, and are particularly suited for installation in recesses.

After a study of the demand for various sizes of radiators, the *Institute of Boiler and Radiator Manufacturers*, in cooperation with the Division of Simplified Practice, *National Bureau of Standards*, established Simplified Practice Recommendation R174-47 for small-tube cast-iron radiators. Table 3 shows the size and dimensions now being manufactured.

Wall radiators are now rated in terms of equivalent square feet of direct radiation EDR. Tests have shown that the heat emitted from a wall-type radiator may be reduced from 5 to 10 percent if the radiator is placed near the ceiling with the bars horizontal and in an air temperature exceeding 70 F. When radiators are placed near the ceiling, there is usually such a large difference in the temperature between the floor level and the ceiling that it becomes difficult to heat the living zone of the rooms satisfactorily. Dimensions and heat emission rates for wall radiators are given in Table 4.

Baseboard radiation consists of long, low units which are made to resemble conventional baseboards, and are installed along the outside walls of rooms in place of the usual wooden baseboard. Units are made either of hollow cast-iron panels (with, or without fins on the back) or of ferrous or non-ferrous finned tubing installed behind a metal enclosure. They are pri-

TABLE 4. CAST-IRON WALL RADIATORS

APPROXIMATE DIMENSIONS—INCHES			HEAT OUTPUT, EDR
Height	Length or Width	Thickness	
13¼	16¼	3	6¼
13¼	22	3	8
22	13¼	3	8
13¼	29	3	11
29	16¼	3	11