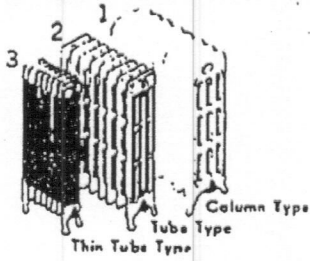


SIZING TO STANDING RADIATION

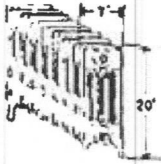
RADIATOR RATINGS

(All dimensions and ratings are approximate) Radiator output ratings should be used for checking the total radiation on an existing heating plant.

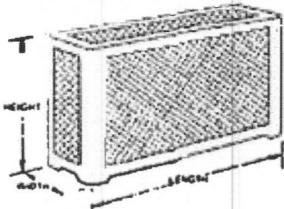
Sketch below shows relative sizes of radiator styles. All are 4 tube (column), 8 section radiators. Each rating is different.



To identify the style of a radiator, count the number of tubes or columns. Then check the width. When you have identified the style (1, 2, or 3), read the radiation per section beneath the radiator style. Example: Radiator sketched below is a 4-tube, 8-section, style 2 (tube type) radiator, 7" wide and 20" high. Multiplying the 2.2 square feet of radiation per section by 8 equals 17.6 square feet of radiation per radiator.



RADIATOR ENCLOSURES



To determine number of sections: divide length of cover in inches by two. For example, if length of cover is 24", then the radiator has 12 sections.

SECTIONAL WALL TYPE

Height	Sq. Ft. Radiation Per Section
37"	2½
28½"	1¾
21½"	1½
15"	1
13½"	¾

SQUARE FEET OF RADIATION PER SECTION

Columns or Tubes	1	2	3	4	5	6	7
OLD STYLE COLUMN RADIATORS							
Width →	4½"	7½"	9"	11½"	12½"	12½"	
Height	45"	38"	32"	26"	23"	22"	20"
	3.5	5.0	6.0	10.0			
	3.0	4.0	5.0	8.0	10.0		
	2.5	3.3	4.5	6.5	8.5		
	2.0	2.6	3.7	5.0	7.0	7.0	
	1.6	2.3	3.2	4.5			
	1.6	2.2	3.0	4.0	6.0	6.0	
	1.5	2.0	2.7	3.5	5.0	5.0	
	1.3	1.7	2.2	3.0	5.0	4.3	
					4.0	3.7	
		1.5					
					4.0	3.0	
					3.0	3.0	

TUBE TYPE

Width-Height					
	5"	7"	10½"	12½"	12½"
38"	3.5	4.2	5.0	6.0	
36"	3.5	4.2	5.0	6.0	7.0
32"	3.0	3.5	4.3	5.0	6.0
26"	2.3	2.7	3.5	4.0	5.0
23"	2.0	2.5	3.0	3.5	4.5
22"					4.5
20"	1.7	2.2	2.6	3.0	3.6
18"					3.5
17"					3.0
16"					3.0
14"					2.5

THIN TUBE

Width →					
Height	3½"	4"	4½"	6"	7½"
38"	2.5	2.8			
32"	2.0	2.6			
26"		2.4	2.4	3.0	3.4
25"	1.5	1.8	2.1	2.4	3.0
23"		1.7	2.0	2.3	
22"		1.6	1.8	2.2	
20"		1.5	1.7	2.1	2.3
19"	1.1	1.4	1.6		2.3

CONVERSION FACTORS

One sq. ft. of steam radiation
One sq. ft. of forced hot water

240 Net Btuh
185 Net Btuh at 190° F.

TABLE 2

RATINGS OF SMALL TUBE RADIATORS—SQUARE FEET

Number of Sections	Length 1 1/4 Inches per Section	3 TUBE		4 TUBE		5 TUBE		6 TUBE		
		25" Height	19" Height	25" Height	22" Height	25" Height	19" Height	25" Height	32" Height	
2	3 1/2	3.2	3.2	4	4.2	4.8	4.6	6		
4	7	6.4	6.4	8	8.4	9.6	9.2	12		
6	10 1/2	9.6*	9.6*	12*	12.6*	14.4*	13.8	18*		
8	14	12.8	12.8	16	16.8	19.2	18.4	24		
10	17 1/2	16.0*	16.0*	20*	21.0*	24.0*	23.0*	30*		
	21	19.2	19.2	24	25.2	28.8	27.6	36		
	24 1/2	22.4*	22.4*	28*	29.4*	33.6*	32.2*	42*		
	28	25.6	25.6	32	33.6	38.4	36.8	48		
	31 1/2	28.8*	28.8*	36*	37.8*	43.2*	41.4*	54*		
	35	32.0	32.0	40	42.0	48.0	46.0	60		
	38 1/2	35.2*	35.2*	44*	46.2*	52.8*	50.6*	66*		
	42	38.4	38.4	48	50.4	57.6	55.2	72		
	45 1/2	41.6*	41.6*	52*	54.6*	62.4*	59.8*	78*		
	49	44.8	44.8	56	58.8	67.2	64.4	84		
	52 1/2	48.0*	48.0*	60*	63.0*	72.0*	69.0*	90*		
	56	51.2	51.2	64	67.2	76.8	73.6	96		
	59 1/2	54.4	54.4	68	71.4	81.6	78.2	102		
	63	57.6	57.6	72	75.6	86.4	82.8	108		
	66 1/2	60.8*	60.8*	76*	79.8*	91.2*	87.4*	114		
	70	64.0	64.0	80	84.0	96.0	92.0	120		
	73 1/2	67.2	67.2	84	88.2	100.8	96.6	126		
	77	70.4	70.4	88	92.4	105.6	101.2	132		
	80 1/2	73.6	73.6	92	96.6	110.4	105.8	138		
	84	76.8	76.8	96	100.8	115.2	110.4	144		
	87 1/2	80.0	80.0	100	105.0	120.0	115.0	150		
	91	83.2	83.2	104	109.2	124.8	119.6	156		
	94 1/2	86.4	86.4	108	113.4	129.6	124.2	162		
	98	89.6	89.6	112	117.6	134.4	128.8	168		

Note: The assemblies with a * are considered stock assemblies. These ratings and stock assemblies are based on Simplified Practice Recommendation R-174-65, issued by the U. S. Department of Commerce.

TABLE 3

**HEAT EMISSION RATES FOR
CAST IRON RADIATORS**

Design or Average Water Temperature	Heat Emission Rates Btuh per sq. ft.
170	150
175	160
180	170
185	180
190	190
195	200
200	210
205	220
210	230
215	240

RADIATION TABLES

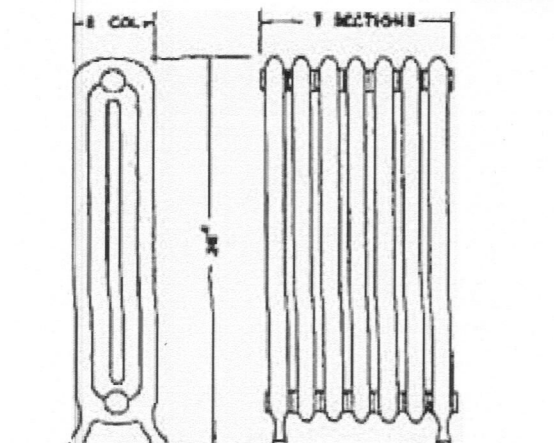
TABLE

Cast Iron Radiators

The output of a radiator is measured in square feet of radiation. To determine the number of square feet radiation in a radiator:

1. Measure the height of the radiator.
 2. Count the number of columns in a section.
 3. Count the number of sections.
- Multiply the total number of sections by the number of square feet per section as shown in the following table

COLUMN TYPE RADIATORS

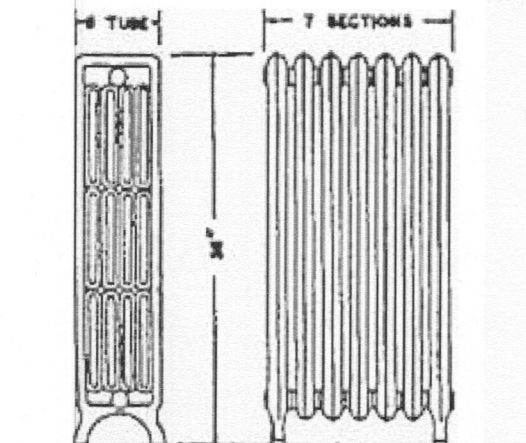


SIZE SHOWN 28 SQ. FT. RADIATION

SQ. FT. RADIATION PER SECTION

Height Inches	One Column	Two Column	Three Column	Four Column
13	...	...	...	...
16	...	...	...	...
18	...	...	2 1/4	3
20	1 1/2	2	...	...
22	...	...	3	4
23	1 1/2	2 1/2	...	...
26	2	2 3/4	3 1/4	5
32	2 1/2	3 1/2	4 1/2	6 1/2
38	3	4	5	R
45		5	6	

TUBE TYPE RADIATORS



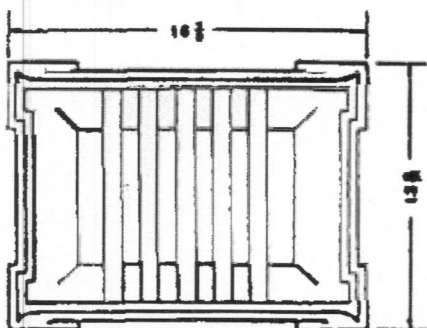
SIZE SHOWN 36 SQ. FT. RADIATION

SQ. FT. RADIATION PER SECTION

Height Inches	Three Tube	Four Tube	Five Tube	Six Tube
14	...	...	...	...
17	...	...	...	...
20	1 1/4	2 1/4	2 3/4	3
23	2	2 1/4	3	3 1/2
26	2 1/2	2 3/4	3 1/2	4
32	3	3 1/2	4 1/2	5
38	3 1/2	4 1/4	5	

WALL TYPE RADIATORS

Wall radiators are measured by their height, length and thickness. The following table shows the number of square feet of heating surface per section:



SIZE SHOWN 5 SQ. FT. RADIATION

SQ. FT. RADIATION PER WALL RADIATOR SECTION

Type of Section	Height Inches	Length or Width, In.	Thickness Inches	Heating Sq. Ft. Radiat.
			2 1/4	
			2 1/2	
			3 1/2	
			2 1/2	
			3 1/2	