

DIMENSIONS OF STANDARD RADIATORS.

These tables will be found useful to architects and steam-fitters in determining the size and space occupied by standard radiators.

NASON'S "IMPROVED" VERTICAL TUBE WROUGHT-IRON RADIATORS FOR DIRECT HEATING.

Pattern No. 1.—Single row of Tubes. Outside width, $4\frac{3}{4}$ inches; usual height, 36 inches:

Sizes of Steam Openings.....Inlets, $\frac{3}{4}$ inch. Outlets, 1 inch.

Distances from center of open-

ings to the floor " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	6	8	10	12	16	20	24
Total number of Tubes	4	6	8	10	12	16	20	24
Outside length of Radiatorinches	$10\frac{3}{4}$	15	$18\frac{3}{4}$	23	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$
Square feet of heating surface	4	6	8	10	12	16	20	24

Pattern No. 2.—Two rows of Tubes. Outside width, $6\frac{3}{4}$ inches; usual height, 36 inches:

Sizes of Steam Openings.....Inlets, 1 inch. Outlets, $1\frac{1}{4}$ inch.

Distances from center of open-

ings to the floor..... " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	6	8	10	12	16	20	24
Total number of Tubes	8	12	16	20	24	32	40	48
Outside length of Radiatorinches	$10\frac{3}{4}$	$14\frac{3}{4}$	$18\frac{3}{4}$	$22\frac{3}{4}$	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$
Square feet of heating surface.....	8	12	16	20	24	32	40	48

Pattern No. 3.—Three rows of Tubes. Outside width, $8\frac{3}{4}$ inches; usual height, 36 inches:

Sizes of Steam Openings.....Inlets, 1 inch. Outlets, $1\frac{1}{4}$ inch.

Distances from center of open-

ings to the floor " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	8	12	16	20	24	28
Total number of Tubes	12	24	36	48	60	72	84
Outside length of Radiatorinches	$10\frac{3}{4}$	$18\frac{3}{4}$	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$	$58\frac{3}{4}$
Square feet of heating surface	12	24	36	48	60	72	84

The Nason Radiators—Continued.

Pattern No. 4.—Four rows of Tubes. Outside width, $10\frac{3}{4}$ inches; usual height, 36 inches :

Sizes of Steam Openings.....Inlets, 1 inch. Outlets, $1\frac{1}{4}$ inch.

Distances from center of open-

ings to the floor..... " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	8	12	16	20	24	28	32
Total number of Tubes	16	32	48	64	80	96	112	128
Outside length of Radiators ...inches	$10\frac{3}{4}$	$18\frac{3}{4}$	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$	$58\frac{3}{4}$	$66\frac{3}{4}$
Square feet of heating surface.....	16	32	48	64	80	96	112	128

CIRCULAR PATTERN.

USUAL HEIGHT, ABOUT THREE FEET.

Distances from center of openings to the floor—Inlets, $4\frac{1}{2}$ inches. Outlets, 4 inches.

Number.	No. of Tubes.	Square Feet of Radiating Surface.	Outside Diameters. Inches.	Inlets. Inches.	Outlets. Inches.
1	18	18	12	3	$1\frac{1}{4}$
2	30	30	18		$1\frac{1}{4}$
3	54	54	$20\frac{1}{2}$		$1\frac{1}{4}$
4	72	72	25	1	$1\frac{1}{4}$
5	102	102	$33\frac{1}{2}$	1	$1\frac{1}{4}$
6	130	130	38	$1\frac{1}{4}$	$1\frac{1}{4}$
7	160	160	38	$1\frac{1}{4}$	$1\frac{1}{4}$

COLUMN RADIATORS.

Made in halves to encircle columns. Made in five sizes. Usual height, 3 feet.

Distances from center of openings to the floor—Inlets, $4\frac{1}{2}$ inches. Outlets, 4 inches.

No.	No. of Tubes.	Square Feet of Radiating Surface.	Outside Diameters. Inches.	Inlets.	Outlets.	Diameter of Opening in the Base. Inches.
1	58	58	$26\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	12
2	80	80	$28\frac{1}{2}$	1	$1\frac{1}{4}$	12
3	102	102	$33\frac{1}{2}$	1	$1\frac{1}{4}$	16
4	130	130	38	$1\frac{1}{4}$	$1\frac{1}{4}$	16
5	160	160	38	$1\frac{1}{4}$	$1\frac{1}{4}$	16

GOLD'S "COMPOUND COIL" VERTICAL TUBE DIRECT HEATERS.

OBLONG AND SQUARE HEATERS.

Number of Pipes.	Number of square feet of surface.	Size over all of Casing.			Weight of Heater without Casing. Lbs.	Weight of Heater with Casing. Lbs.	Number of Registers.	Size of each Register. Inches.	Size of Steam Inlet.	Size of Outlet.
		Length. Inches.	Width. Inches.	Height. Inches.						
2 x 4	16	18 $\frac{1}{4}$	8 $\frac{1}{2}$	38	75	98	1	6 x 10	in.	in.
2 x 6	24	18 $\frac{1}{4}$	8 $\frac{1}{2}$	38	100	131	1	6 x 16	"	"
2 x 8	32	23	8 $\frac{1}{2}$	38	130	166	2	6 x 9	"	"
3 x 6	36	19 $\frac{1}{4}$	13 $\frac{1}{4}$	38	145	186	1	10 x 16	"	"
2 x 10	40	27 $\frac{1}{4}$	8 $\frac{1}{2}$	38	163	207	2	6 x 10	"	"
3 x 8	48	24 $\frac{3}{4}$	12 $\frac{1}{4}$	38	181	239	2	9 x 9	1"	"
2 x 13	52	34 $\frac{3}{4}$	8 $\frac{1}{2}$	38	212	269	2	6 x 14	1"	"
3 x 10	60	28 $\frac{3}{4}$	13 $\frac{1}{4}$	38	260	320	2	10 x 10	1"	"
3 x 11	66	31 $\frac{3}{4}$	12 $\frac{5}{8}$	38	280	349	2	9 x 12	1"	"
3 x 13	78	36	12 $\frac{1}{2}$	38	314	386	2	9 x 14	1 $\frac{1}{4}$ "	1"
4 x 12	96	35	16 $\frac{3}{4}$	38	385	477	2	12 x 12	1 $\frac{1}{4}$ "	1"
4 x 13	104	37	16 $\frac{3}{4}$	38	420	522	2	12 x 15	1 $\frac{1}{4}$ "	1"
4 x 15	120	42 $\frac{1}{4}$	16 $\frac{3}{4}$	38	481	598	2	12 x 17	1 $\frac{1}{4}$ "	1"

GOLD'S "COMPOUND COIL" INDIRECT HEATERS.

Width over all, including Casing, ins.	No. of Leaves.	Total Number of 1-inch pipes.	Size of Openings for Steam and Return.	Approximate Weight, lbs.	Heating Surface, Sq. Feet.
11	3	6	1 $\frac{1}{4}$	72	24
13 $\frac{1}{4}$	4	8	1 $\frac{1}{4}$	96	32
16	5	10	1 $\frac{1}{4}$	120	40
18 $\frac{1}{4}$	6	12	1 $\frac{1}{4}$	144	48
21	7	14	1 $\frac{1}{4}$	168	56
23 $\frac{1}{4}$	8	16	1 $\frac{1}{4}$	192	64
26	9	18	1 $\frac{1}{4}$	216	72
28 $\frac{1}{4}$	10	20	1 $\frac{1}{4}$	240	80
31	11	22	1 $\frac{1}{4}$	264	88
33 $\frac{1}{4}$	12	24	1 $\frac{3}{8}$	288	96
36	13	26	1 $\frac{3}{8}$	312	104
38 $\frac{1}{4}$	14	28	1 $\frac{3}{8}$	336	112
41	15	30	1 $\frac{3}{8}$	360	120
43 $\frac{1}{4}$	16	32	1 $\frac{3}{8}$	384	128

All Compound Coils are 26 inches high by 49 inches long, over all.

THE "BUNDY" CAST-IRON RADIATORS FOR DIRECT HEATING.

Single Row of Loops.

Size.	Loops.	Total Length.	Total Width.	Heating Surface.
1 x 3	3	13 inches.	6½ inches.	9 sq. feet.
1 x 4	4	16 "	6½ "	12 "
1 x 6	5	19 "	6½ "	15 "
1 x 6	6	22 "	6½ "	18 "
1 x 7	7	25 "	6½ "	21 "
1 x 8	8	28 "	6½ "	24 "
1 x 9	9	32 "	6½ "	27 "
1 x 10	10	35 "	6½ "	30 "
1 x 11	11	39 "	6½ "	33 "
1 x 13	13	45 "	6½ "	39 "
1 x 15	15	51 "	6½ "	45 "
1 x 20	20	67 "	6½ "	60 "
1 x 26	26	87 "	6½ "	78 "

Two Rows of Loops.

2 x 3	6	14 inches.	10½ inches.	18 sq. feet.
2 x 4	8	17 "	10½ "	24 "
2 x 5	10	20 "	10½ "	30 "
2 x 6	12	23 "	10½ "	36 "
2 x 7	14	26 "	10½ "	42 "
2 x 8	16	29 "	10½ "	48 "
2 x 9	18	32 "	10½ "	54 "
2 x 10	20	35 "	10½ "	60 "
2 x 11	22	38 "	10½ "	66 "
2 x 12	24	42 "	10½ "	72 "
2 x 13	26	45 "	10½ "	78 "
2 x 15	30	51 "	10½ "	90 "
2 x 20	40	67 "	10½ "	120 "
2 x 26	52	86 "	10½ "	156 "

Three Rows of Loops.

3 x 3	9	13 inches.	14 inches.	27 sq. feet.
3 x 5	15	19 "	14 "	45 "
3 x 7	21	26 "	14 "	63 "
3 x 9	27	32 "	14 "	81 "
3 x 11	33	39 "	14 "	99 "
3 x 13	39	46 "	14 "	117 "
3 x 15	45	52 "	14 "	135 "

The "Bundy" Cast-Iron Radiators—*Continued.*

Circular Radiators.

Loops.		
10	17 inches Outside.	30 sq. feet.
15	19 " "	45 " "
20	21 " "	60 " "
26	23 " "	78 " "
34	27 " "	102 " "
50	32 " "	150 " "
74	36 " "	222 " "

In Halves to Encircle Columns.

26	23 inches Outside Diameter.	9 Inside Diam.	78 sq. feet.
34	30 " " "	13 " "	102 " "
50	36 " " "	17 " "	150 " "

We have patterns of Radiators the following heights :

18 inches.	24 inches.	27 $\frac{1}{2}$ inches.	31 $\frac{1}{2}$ inches.
19 $\frac{1}{4}$ "	24 $\frac{3}{4}$ "	29 "	33 $\frac{1}{2}$ "
19 $\frac{3}{4}$ "	26 "	30 "	34 $\frac{3}{4}$ "
20 $\frac{1}{2}$ "	26 $\frac{3}{4}$ "	31 "	36 "
21 $\frac{3}{4}$ "			

THE GOLD'S "PIN" INDIRECT RADIATOR (CAST IRON).*

Each section is 40 $\frac{1}{2}$ inches long." " " 6 $\frac{1}{2}$ " deep at ends." " " 10 $\frac{1}{2}$ " " over all at center." " " 3 $\frac{1}{8}$ " thick over all at center.

" " should contain 925 pins to be standard.

The outside sections contain the inlets and outlets.

* Made by the A. A. Griffing Iron Co., Jersey City, N. J.; The Kelley & Jones Co., N. Y. City; The H. B. Smith Co., Westfield, Mass., and others.

THE "REED" CAST-IRON RADIATORS FOR DIRECT HEATING.
Single Row of Columns, 36 Inches High.

Size.	No. of Columns.	Total Width.	Total Length.	Heating Surface.
1 × 4	4	7½ inches.	12½ inches.	8 feet.
1 × 5	5	"	14½ "	10 "
1 × 6	6	"	17 "	12 "
1 × 7	7	"	19½ "	14 "
1 × 8	8	"	21½ "	16 "
1 × 9	9	"	23½ "	18 "
1 × 10	10	"	26 "	20 "
1 × 12	12	"	30½ "	24 "
1 × 14	14	"	35 "	28 "
1 × 16	16	"	39½ "	32 "
1 × 18	18	"	44 "	36 "
1 × 20	20	"	48½ "	40 "
1 × 22	22	"	53 "	44 "
1 × 24	24	"	57½ "	48 "

Double Row of Columns, 36 Inches High.

Size.	No. of Columns.	Total Width.	Total Length.	Heating Surface.
2 × 3	6	12 inches.	11 inches.	12 feet.
2 × 4	8	"	13 "	16 "
2 × 5	10	"	15½ "	20 "
2 × 6	12	"	17½ "	24 "
2 × 7	14	"	20 "	28 "
2 × 8	16	"	22 "	32 "
2 × 9	18	"	24½ "	36 "
2 × 10	20	"	26½ "	40 "
2 × 11	22	"	28 "	44 "
2 × 12	24	"	31¼ "	48 "
2 × 13	26	"	33½ "	52 "
2 × 14	28	"	35½ "	56 "
2 × 15	30	"	37½ "	60 "
2 × 16	32	"	40 "	64 "
2 × 17	34	"	42 "	68 "
2 × 18	36	"	44½ "	72 "
2 × 20	40	"	49 "	80 "
2 × 22	44	"	53 "	88 "
2 × 25	50	"	59½ "	100 "
2 × 28	56	"	66½ "	112 "
2 × 31	62	"	73½ "	124 "

DIMENSIONS OF STANDARD RADIATORS.

These tables will be found useful to architects and steam-fitters in determining the size and space occupied by standard radiators.

NASON'S "IMPROVED" VERTICAL TUBE WROUGHT-IRON RADIATORS FOR DIRECT HEATING.

Pattern No. 1.—Single row of Tubes. Outside width, $4\frac{3}{4}$ inches; usual height, 36 inches:

Sizes of Steam Openings.....Inlets, $\frac{3}{4}$ inch. Outlets, 1 inch.

Distances from center of open-

ings to the floor " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	6	8	10	12	16	20	24
Total number of Tubes	4	6	8	10	12	16	20	24
Outside length of Radiatorinches	$10\frac{3}{4}$	15	$18\frac{3}{4}$	23	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$
Square feet of heating surface	4	6	8	10	12	16	20	24

Pattern No. 2.—Two rows of Tubes. Outside width, $6\frac{3}{4}$ inches; usual height, 36 inches:

Sizes of Steam Openings.....Inlets, 1 inch. Outlets, $1\frac{1}{4}$ inch.

Distances from center of open-

ings to the floor..... " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	6	8	10	12	16	20	24
Total number of Tubes	8	12	16	20	24	32	40	48
Outside length of Radiatorinches	$10\frac{3}{4}$	$14\frac{3}{4}$	$18\frac{3}{4}$	$22\frac{3}{4}$	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$
Square feet of heating surface.....	8	12	16	20	24	32	40	48

Pattern No. 3.—Three rows of Tubes. Outside width, $8\frac{3}{4}$ inches; usual height, 36 inches:

Sizes of Steam Openings.....Inlets, 1 inch. Outlets, $1\frac{1}{4}$ inch.

Distances from center of open-

ings to the floor " 4 " " $3\frac{3}{4}$ "

Number of Tubes in length.....	4	8	12	16	20	24	28
Total number of Tubes	12	24	36	48	60	72	84
Outside length of Radiatorinches	$10\frac{3}{4}$	$18\frac{3}{4}$	$26\frac{3}{4}$	$34\frac{3}{4}$	$42\frac{3}{4}$	$50\frac{3}{4}$	$58\frac{3}{4}$
Square feet of heating surface	12	24	36	48	60	72	84

Nominal Size as given on List.	Opening to admit body of Register. Inches.	Extreme Dimension of Register Face. Inches.	Depth of the Register in inches.	
			Closed.	Open.
8 × 12	8 × 12	9 ³ / ₄ × 13 ⁵ / ₈	2	3
8 × 15	8 × 15	9 ¹ / ₂ × 16 ⁵ / ₈	2	3
8 × 18	8 × 18	9 ¹ / ₂ × 19 ¹ / ₈	2	3
9 × 9	9 ¹ / ₂ × 9 ¹ / ₂	10 ³ / ₄ × 10 ³ / ₄	2 ¹ / ₄	3 ³ / ₈
9 × 12	9 × 12 ¹ / ₄	10 ¹ / ₂ × 13 ³ / ₄	2 ¹ / ₄	3 ³ / ₈
9 × 13	9 ¹ / ₂ × 13 ¹ / ₄	11 ¹ / ₄ × 15 ¹ / ₄	2 ¹ / ₄	3 ³ / ₈
9 × 14	9 × 14	11 × 16	2 ¹ / ₄	3 ³ / ₈
10 × 10	10 ¹ / ₄ × 10 ¹ / ₄	12 × 12	2 ³ / ₈	3 ⁵ / ₈
10 × 12	10 × 12	11 ³ / ₄ × 13 ⁷ / ₈	2 ³ / ₈	3 ⁵ / ₈
10 × 14	10 ¹ / ₂ × 14 ¹ / ₂	12 ¹ / ₄ × 16 ⁵ / ₈	2 ³ / ₈	3 ⁵ / ₈
10 × 16	10 × 16	12 × 18	2 ³ / ₈	3 ⁵ / ₈
11 × 17	11 ¹ / ₄ × 17 ¹ / ₄	13 ³ / ₄ × 19 ¹ / ₄	2 ¹ / ₂	3 ¹ / ₂
12 × 12	12 × 12	14 × 14	2 ³ / ₄	4 ¹ / ₄
12 × 15	12 ¹ / ₂ × 15 ¹ / ₄	13 ¹ / ₂ × 16 ³ / ₄	2 ³ / ₄	4 ¹ / ₄
12 × 17	12 ¹ / ₂ × 17 ¹ / ₄	14 × 19	2 ³ / ₄	4 ¹ / ₄
12 × 18	12 × 18	14 × 20	2 ³ / ₄	4 ¹ / ₄
12 × 19	12 ¹ / ₂ × 19 ¹ / ₄	14 ³ / ₄ × 21	2 ³ / ₄	4 ¹ / ₄
12 × 20	12 ¹ / ₂ × 20 ¹ / ₄	13 ¹ / ₂ × 21 ⁷ / ₈	2 ³ / ₄	3 ¹ / ₂
12 × 24	12 × 24	13 ³ / ₄ × 25 ³ / ₄	2 ¹ / ₂	4 ¹ / ₄
14 × 14	14 ¹ / ₄ × 14 ¹ / ₄	16 ⁵ / ₈ × 16 ⁵ / ₈	2 ¹ / ₂	3 ¹ / ₂
14 × 18	14 ¹ / ₄ × 18 ¹ / ₄	16 ¹ / ₂ × 20 ¹ / ₄	2 ⁵ / ₈	3 ¹ / ₂
14 × 20	14 ¹ / ₄ × 20 ¹ / ₄	16 ¹ / ₂ × 22 ¹ / ₄	3 ¹ / ₈	4 ¹ / ₂
14 × 22	14 ¹ / ₄ × 22	16 ¹ / ₂ × 24 ¹ / ₄	2 ³ / ₄	4
15 × 25	15 ⁵ / ₈ × 25 ¹ / ₄	17 ¹ / ₂ × 27 ³ / ₄	3 ¹ / ₄	5 ¹ / ₂
16 × 16	16 × 16	18 ³ / ₄ × 18 ³ / ₄	3	4 ¹ / ₂
16 × 20	16 ¹ / ₂ × 20 ¹ / ₄	17 ³ / ₄ × 22 ¹ / ₂	3	4 ¹ / ₂
16 × 24	16 ³ / ₈ × 24 ¹ / ₄	18 ³ / ₄ × 27	3	4 ¹ / ₂
20 × 20	20 ¹ / ₄ × 20 ¹ / ₄	22 ¹ / ₄ × 22 ¹ / ₄	3 ¹ / ₄	5 ¹ / ₂
20 × 24	20 × 24	22 ¹ / ₄ × 26	3 ⁵ / ₈	5 ¹ / ₂
20 × 26	20 ¹ / ₄ × 26 ¹ / ₄	22 ¹ / ₄ × 28 ⁷ / ₈	3 ⁵ / ₈	5 ⁵ / ₈
21 × 29	20 ³ / ₄ × 29	23 ⁵ / ₈ × 31 ¹ / ₄	3 ³ / ₄	5 ³ / ₄
24 × 24	24 × 24	26 ¹ / ₄ × 26 ¹ / ₄	3 ³ / ₄	5 ³ / ₄
27 × 38	27 × 38	29 ¹ / ₄ × 40 ¹ / ₄	4 ³ / ₄	6 ¹ / ₂
30 × 30	30 ¹ / ₄ × 30 ¹ / ₄	32 ¹ / ₄ × 32 ¹ / ₄	4 ¹ / ₂	7