

NATIONAL RADIATOR COMPANY

General Offices: JOHNSTOWN, PA.

NEW YORK, 55 W. 42nd Street
PHILADELPHIA, 121 N. Broad Street
BALTIMORE, 2622 Frisby Street
WASHINGTON, 2205 Fifth St., N.E.

Branches

RICHMOND, 3032 Norfolk Street
PITTSBURGH, 1402 Arrott Building
CLEVELAND, 6308 Kinsman Road
CINCINNATI, Cor. Spring Grove and Elmira Aves.
CHICAGO, 2445 N. Keeler Ave.

Plants

NEW CASTLE, PA.

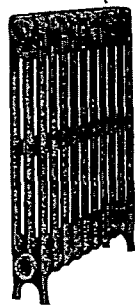
TRENTON, N. J.

Warehouses

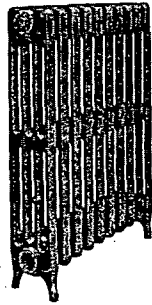
NEW YORK, NEW ROCHELLE, BALTIMORE, WASHINGTON,
RICHMOND, CLEVELAND, GARDEN CITY, CINCINNATI, CHICAGO

Manufacturers of

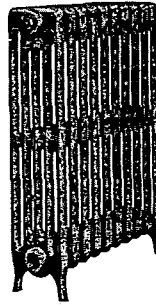
National Smokeless, Novus Upright and Sectional, Acme Round, Radium Gas and Hot Water Supply Boilers, and Aero Radiators.



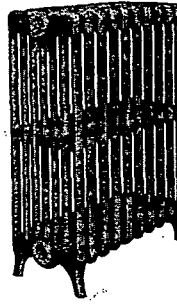
Three-Column



Four-Column



Five-Column



Seven-Column

Patents Applied For

AERO RADIATORS

Awarded Gold Medal at Sesqui-Centennial, Philadelphia, Pa., 1926

The Aero Radiator was designed by Engineers with more than 30 years experience in radiator manufacture. In the Aero line is represented a real effort to simplify the multiplicity of radiator patterns and heights.

Large buildings are now warmed with the more modern, efficient, economical and easily controlled vapor and vacuum systems. These necessitate the use of a radiator pattern with top and bottom nipple connection—the type known as a water section. The demand for the straight steam section, with bottom nipple connection only, is consequently negligible.

The Aero Radiator is made in one type only—the top and bottom nipple connected section.

It is tapped top and bottom both ends. The topappings are plugged and the bottom tappings bushed to size required.

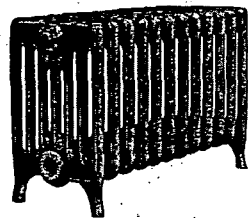
All radiators are vented for both steam and hot water. One vent is plugged. Any Aero Radiator can be used for either steam, hot water or vapor.

Aero Radiators are made in four patterns—Three, Four, Five and Seven Column. A total of 18 heights comprises the entire line.

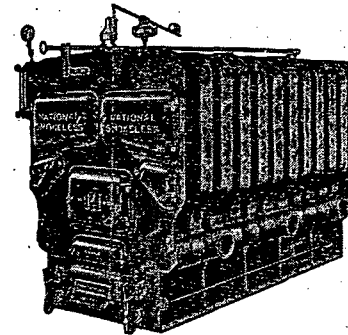
Roughing-in measurements are standard. All sections measure 2 1/2 in. from center to center.

The Three-Column pattern is 5 1/2 in. wide, the Four Column is 6 1/2 in. wide, the Five-Column pattern 8 1/2 in. wide and the Seven-Column pattern 12 in. With these widths and standard roughing-in measurements they can be used on any standard specification.

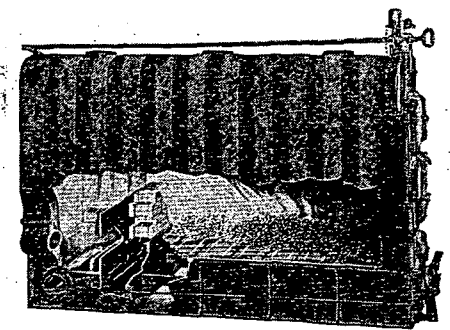
Aero Radiators are authoritatively rated by Cornell University, Ithica, N. Y.



Window Radiator



National Smokeless Boiler



Patented

Sectional View

SIZES, RATINGS AND MEASUREMENTS

Size	Steam Rating	Water Rating	Number Sections	Number Grates	Fire Chamber Area Sq. Ft.	Height Water Line Inches*	Height Top Outlet Inches	Height Including Trimmings*	Width Boiler Inches	Width Including Trimmings Inches*	Length Including Smokehood Inches	Size Base Inches	No. Outlets and Size	Size Smoke Pipe
25-8	2450	4000	8	5	8.43	49	57 1/4	65 1/2	36 1/2	40 1/4	67 1/2	27 1/2 x 53 1/2	3-4"	12
25-9	2775	4550	9	6	9.59	49	57 1/4	65 1/2	36 1/2	40 1/4	74 1/2	27 1/2 x 60 1/2	3-4"	12
25-10	3100	5100	10	7	10.75	49	57 1/4	65 1/2	36 1/2	40 1/4	81 1/2	27 1/2 x 67 1/2	3-4"	12
25-11	3425	5650	11	8	11.91	49	57 1/4	65 1/2	36 1/2	40 1/4	88 1/2	27 1/2 x 74 1/2	3-4"	12
25-12	3750	6200	12	9	13.07	49	57 1/4	65 1/2	36 1/2	40 1/4	95 1/2	27 1/2 x 81 1/2	3-4"	12
31-8	3600	5925	8	5	11.93	52	61	71 1/4	50	54	73	33 1/2 x 59	3-5"	15
31-9	4050	6675	9	6	13.62	52	61	71 1/4	50	54	80 1/2	33 1/2 x 66 1/2	3-5"	15
31-10	4500	7425	10	7	15.31	52	61	71 1/4	50	54	88	33 1/2 x 74	3-5"	15
31-11	4950	8175	11	8	17.00	52	61	71 1/4	50	54	95 1/2	33 1/2 x 81 1/2	3-5"	15
31-12	5400	8925	12	9	18.69	52	61	71 1/4	50	54	103	33 1/2 x 89	3-5"	15
31-13	5850	9675	13	10	20.38	52	61	71 1/4	50	54	110 1/2	33 1/2 x 96 1/2	3-5"	15
36-8	5200	8600	8	5	16.00	60 1/4	70	78 3/4	56	60	79 1/2	41 3/4 x 65 1/2	3-5"	16
36-9	5900	9750	9	6	18.25	60 1/4	70	78 3/4	56	60	87 1/2	41 3/4 x 73 1/2	3-5"	17 1/4
36-10	6600	10,900	10	7	20.50	60 1/4	70	78 3/4	56	60	95 1/2	41 3/4 x 81 1/2	3-5"	17 1/4
36-11	7300	12,050	11	8	22.75	60 1/4	70	78 3/4	56	60	104 1/2	41 3/4 x 90 1/2	3-5"	17 1/4
36-12	8000	13,200	12	9	25.00	60 1/4	70	78 3/4	56	60	112 1/2	41 3/4 x 98 1/2	3-5"	17 1/4
36-13	8700	14,350	13	10	27.25	60 1/4	70	78 3/4	56	60	121	41 3/4 x 107	4-5"	17 1/4
36-14	9400	15,500	14	10	29.50	60 1/4	70	78 3/4	56	60	129 1/2	41 3/4 x 115 1/2	4-5"	17 1/4
36-15	10,100	16,650	15	11	31.75	60 1/4	70	78 3/4	56	60	137 1/2	41 3/4 x 123 1/2	4-5"	17 1/4
36-16	10,800	17,800	16	11	34.00	60 1/4	70	78 3/4	56	60	146 1/2	41 3/4 x 132 1/2	4-5"	17 1/4
48-9	9600	15,825	9	6	28.88	68	80	89	67	71	109 1/4	53 1/2 x 89 1/2	3-6"	20
48-10	10,775	17,775	10	7	32.43	68	80	89	67	71	119 1/4	53 1/2 x 99 1/2	3-6"	20
48-11	11,950	19,725	11	8	35.98	68	80	89	67	71	130 1/2	53 1/2 x 110 1/2	4-6"	20
48-12	13,125	21,675	12	9	39.53	68	80	89	67	71	141 1/2	53 1/2 x 121 1/2	4-6"	20
48-13	14,300	23,625	13	10	43.08	68	80	89	67	71	151 1/2	53 1/2 x 131 1/2	4-6"	20
48-14	15,475	25,575	14	10	46.63	68	80	89	67	71	162 1/2	53 1/2 x 142 1/2	5-6"	20
48-15	16,650	27,525	15	11	50.18	68	80	89	67	71	173	53 1/2 x 153	5-6"	20
48-16	17,825	29,475	16	11	53.73	68	80	89	67	71	183 1/2	53 1/2 x 163 1/2	5-6"	20

*Applies to steam boilers only.



Syph-Oil Air Regulator
Patents Applied For

The National Up-Draft Smokeless Boiler will conform to any smoke ordinance. Burning smoke depends upon the temperature to which the air discharged over the fire is preheated. The National Preheating Air device heats air to in excess of 1000 deg. It is discharged into the smoke and gases as they pass over the Refractory Bridge wall into the Combustion Chamber.

The National Smokeless Boiler will clear to the No. 1 Smoke Screen in from 10 to 15 seconds and to a clear stack in less than one minute after firing a charge of green coal. National Smokeless boilers show an average increase of 28 per cent in evaporation on the same fuel charge and consequently are very economical in operation.

The volume of preheated air necessary to burn smoke varies with the state of combustion. The air should be gradually decreased and cut off almost completely during a period of about 20 minutes from the time fuel is charged. Unless this is done the preheated air has a tendency to chill rather than increase the gas temperatures and the boiler efficiency and evaporation is decreased.

The Syph-Oil Regulator operates the Preheating Air Device automatically and positively can be regulated to close the air intake in any time from one half-a minute to one hour after fuel is charged.