



National Airoil Burner Company

ESTABLISHED 1912

INCORPORATED 1917

Salesroom and Offices: 1327 Girard Avenue

Factory

Ninth and Thompson Streets, Philadelphia, Pa.

Oil Burners, Gas Burners and Furnace Equipment

PRODUCTS—Oil Burners and Gas Burners for every industrial purpose: Motor-driven Rotary Burners, Air-driven Rotary Burners, Low Pressure Air Burners, Steam Atomizing Burners, Gas Burners, Combustion Units for Gas and Oil, Fuel Oil Pump Sets, Fuel Oil Strainers. Engineering advice, design, supervision or installation of complete oil or gas burning systems for every commercial and industrial purpose.

Type I-R Rotary Burner (Air Driven)

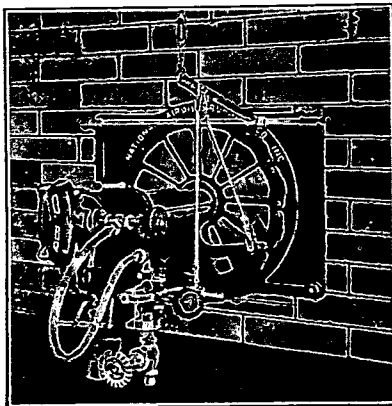


Fig. P-115—National Airoil, type I-R Rotary Burner, semi-automatic (high-low), type, in firing position

This Burner is of the mechanical-centrifugal atomizing type, air-driven, and is ideal for firing heating boilers, high pressure steam boilers and all types of industrial furnaces, especially where a battery of Burners is required. It will burn *without preheating* any commercial fuel oil down to 20° Baume (No. 5 Oil), and Bunker C fuel oil (No. 6 Oil), when preheated to 150° F. Oil pressure required only sufficient to deliver oil to atomizing cup. Air pressure required is from 8 ounces to 16 ounces. Write for Bulletin No. 60, giving details of **Type I-R Rotary Oil Burners** and also details on Combination Pump and Blower Units for operating these Burners.

Controls—This Burner can be arranged either for semi-automatic (high-low) operation (as shown), or manual operation.

Capacity—This Burner is made in two nozzle sizes, giving a capacity range of from 5 gallons to 40 gallons of oil per burner, per hour.

Capacities vary depending on furnace

dimensions. Write for Bulletin No. 61, giving complete chart of capacities and furnace dimensions.

Type D-R Rotary Burner (Motor Driven)

This Burner may briefly be described as a self-contained, motor-driven oil burner, of the mechanical-centrifugal atomizing type, with but three moving parts, consisting of totally enclosed motor, hollow shaft through which the oil is fed to the atomizing cup and on which is mounted a blower, a worm-driven, slow speed rotary fuel pump which draws oil from the storage tank and delivers it through proper regulating valves to the atomizing cup, and other necessary parts, such as Pressure Regulating Valve, Pressure Gauge, Indicating Oil Regulating Valve, Air Register, Refractory Burner Block, etc.

This Burner is ideal for firing heating boilers, high pressure steam boilers and various industrial furnaces, where fully automatic, semi-automatic or manual operation is desired.

Fuel Used—No. 5 oil without preheating, or No. 6 oil preheated to 150° F. Write for Bulletin No. 70 for complete details.

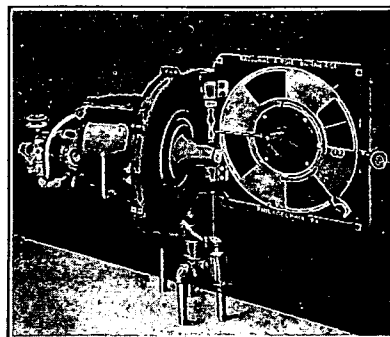


Fig. P-130—National Airoil type D-R Rotary Oil Burner for full automatic operation—swung out of firing position, showing atomizing cup, Air Register, and Furnace Plate with fire cone and pilot housing

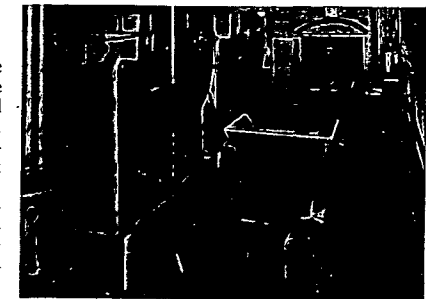


Combustioneer, Inc.

Automatic Anthracite or Bituminous Coal Burners

Goshen, Indiana

Factory Branches: CHICAGO—DETROIT



There is a Combustioneer for every size of boiler from the small house-heating type to a power plant where the hourly coal consumption does not exceed 1,200 pounds. Both Bituminous and Anthracite automatic coal burners for residences are built with automatic ash-removers.

Firing—The Combustioneer forced-draft, underfeed firing is the correct combustion method. The green coal is slowly warmed and fed into the fire from below—thus all gases are burnt—smoke and soot eliminated.

Controls—Combustioneer electric controls automatically regulate coal feeding to maintain the exact degree of temperature or pressure required.

Gear Case—Dial control for multiple speeds. Twenty speeds. All parts accessible from front.

Shearing Plate—Provides easy and

quick removal of any foreign substance that may form an obstruction.

Retort—Is built up of sections to take care of expansion and contraction.

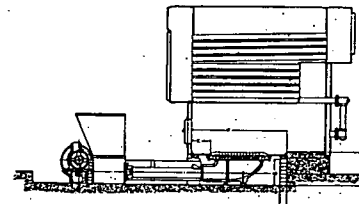
Installation—Combustioneer may be installed in any boiler from 6¾ to 240 H.P., and in a period of a few hours without interruption to business.

COMBUSTIONEER RATINGS

Based on 11,500 B. t. u. Coal—Motor Speed 1750 R. P. M.

The Model	Maximum Coal Burning Capacity Lbs. per Hour	Motor H. P.	Boiler H. P.	Capacity Steam Radiation Sq. Ft.	Capacity Hot Water Radiation Sq. Ft.	Average Maximum Projection Outside Boiler, Inches
**No. A-3 (Anthracite)	30	¼	6¾	750	1,200	62
**No. B-3 (Bituminous)	30	¼	6¾	750	1,200	62
No. A-4 (Anthracite)	40	¾	9	1,000	1,600	59
No. 6 (Bituminous)	60	¾	12	1,320	2,100	59
Furnastoker	50	¼	10	1,100	1,760	58
No. 9	90	½	18	2,000	3,200	65
No. 13	130	¾	26	2,900	4,640	65
No. 20	200	1	40	4,400	7,040	63½
No. 35	350	1½	70	7,700	12,320	68
No. 50	500	2	100	11,000	17,600	83½
No. 80	800	3 or 5	160	17,600	28,160	83½
No. 120	1200	5 or 7½	240	26,400	42,240	83½

**Based on 12,500 B. t. u. coal.



Combustioneer pit installation in a Steel Heating Boiler. Stoker should be located under the boiler so that a 12 inch end plate can be installed between the front edge of the retort and the front of the fire box. Pit should have two or three feet clearance back of gear case.

Combustioneer serves equally well in home, office building, power plant or factory—for heat, hot water and high or low pressure steam. It burns fewer tons of the lower priced sizes of coal, and eliminates smoke and soot. Combustioneer is recommended for reliable, economical, automatic heat. **FREE Engineering Service:** Our combustion and heating engineers will study your problems and make recommendations to you without cost or obligation. Descriptive folders, and special installation data sent on request.



Combustioneer Anthracite Burners are approved by the Anthracite Institute Laboratory.