# Petroleum Heat & Power Company

**Manufacturers of**

**Petro & Nokol Commercial, Industrial, and Domestic Oil Burner Equipment, Arco-Petro Automatic Boilers for Oil or Gas, and Oil Burner Accessories**

***Distributors of Fuel Oil***

Factory and Main Offices: **Stamford, Conn.**

**Branch Offices In**

New York, N. Y. — Boston, Mass. — Providence, R. I. — Springfield, Mass. — Newark, N. J. — Philadelphia, Pa. — Baltimore, Md. — Washington, D. C. — Detroit, Mich. — Chicago, Ill.

**Subsidiary Companies**

Boston Harbor Oil Co. — East Coast Fuel Oil Co. — Power Plant Engineering Co.

## OIL BURNERS THAT FIT THE BOILER

**A Complete Line of PETRO & NOKOL OIL BURNERS Each Designed for Specific Types of Domestic, Commercial, and Industrial Boilers and Furnaces**

The Petroleum Heat and Power Company recognized early in its 30 years of experience that no one type of burner meets every oil heating requirement in an equally satisfactory way, or solves every oil burner problem.

### TYPES OF BURNERS AND RECOMMENDED APPLICATIONS

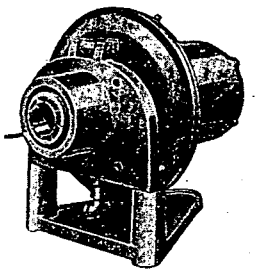
| Model No. | Type | Listed for Oil No. | Gals. Oil per Hr. | Radiation Sq. Ft. Steam | Radiation Sq. Ft. Hot Water | Ignition | Motor H. P. | Price Range and Applications |
|---|---|---|---|---|---|---|---|---|
| W-1A<br>W-1B<br>W-1C | Horizontal Direct Motor Driven Rotary Cup Type Burner | 3 | .5 to 1.0<br>1.0 to 1.75<br>1.75 to 2.6 | 350<br>615<br>910 | 560<br>985<br>1450 | Gas-Elec.<br>Gas-Elec.<br>Elec.-Gas | 1/10<br>1/10<br>1/10 | New, low cost rotary cup type burner for very small round or square boilers. Also for process steam and hot water service. |
| K | Wall-wiping Flame Rotary Type Burner | 2 (Gas)<br>2 (Elec.) | .8 to 2.1<br>.8 to 2.1 | 285 to 730 | 460 to 1170 | Gas or Elec. | 1/20 | Minimum cost, fully automatic burner for small round or square boilers and warm air furnaces. |
| P-1<br>P-1½<br>P-2 | Pressure Atomizing Gun Type Burner | 3<br>3<br>3 | 1.3 to 3.0<br>2.0 to 5.0<br>3.0 to 7.5 | 1050<br>1750<br>2620 | 1680<br>2800<br>4190 | Continuous Elec. | 1/6<br>1/6<br>1/4 | Low cost, quality built burner for rectangular firebox, sectional or tubular, boilers or furnaces. |
| | | | | Radiation Sq. Ft. Steam | Maximum Boiler H. P. | | | |
| W-2<br>W-3<br>W-4<br>W-5<br>W-6<br>W-7 | Horizontal Direct Motor Driven Rotary Cup Type Burner | 300 secs. Saybolt Universal at 100°F. max. viscosity or No. 6 Oil preheated | 1.5 to 7.0<br>5.0 to 15.0<br>10.0 to 25.0<br>20.0 to 33.0<br>25.0 to 45.0<br>25.0 to 62.0 | 2450<br>5250<br>8750<br>11550<br>15750<br>21700 | 17½<br>37<br>63<br>83<br>113<br>156 | Elec.-Gas with full automatic<br>Manual with semi-automatic or Manual Control | ¼<br>½<br>½<br>1<br>1½<br>2 | Manual, semi-automatic, or full automatic heavy duty burner for average Industrial and Commercial installations using heavier grades of oil. |
| | | | | Full Automatic | Full Automatic | | | |
| H | Air Turbine Driven Rotary Cup Type Burner | No. 6 Oil preheated | 15.0 to 75.0 | | | Manual | 1 to 5 | Manual and semi-automatic equipment for large multiple burner installations up to any capacity. |
| M | Mechanical Atomizing Type Burner Natural and Forced Draft | No. 6 Oil preheated | Up to 125.0 | | | Manual | | Manual equipment for large multiple burner installations up to any capacity. |





## PETRO-NOKOL DOMESTIC OIL BURNERS

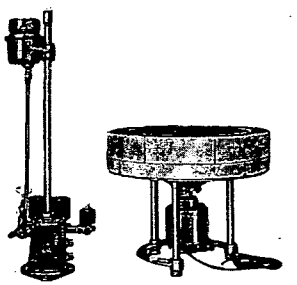
**Models "W-1A," "W-1B," "W-1C," Horiztonal, Rotary Cup Type Burners**



*Model "W-1A" Horizontal, Rotary Cup Type Burner*

Model "W-1" is a development and a refinement of the giant burners now heating some of the world's largest buildings. It embraces every operating principle—every important detail of design—the same precision in manufacture—the same economy and reliability. It is simply smaller—a giant in "junior" size—and of course simplified. In Model "W-1" a long, conical, whirling rotary cup reduces heavy fuel oil to a thin film before it reaches the edge of the cup. Here the high speed of the cup's edge breaks the oil up into a mist. Air from the fan in the burner passes down through the nozzle of the burner—and out over the edge of the cup where it is deflected by angular vanes in a direction opposite to the rotation of the cup. Air and oil meet off the end of the rotary cup, moving in opposite directions, and form a highly turbulent combustible mixture which ignites instantly and burns in suspension into an incandescent hot gas. The exact amount of air for the amount of oil required is governed by an adjustment built in the burner.

### Model "K" Rotary Type Burner



*Model "K": Rotary Burner*

The Model "K" is a fully automatic, forced draft, centrifugal atomizing burner for the small round boiler or furnace. Its design provides for complete control of the air for combustion over the oil consumption range. This assures maximum operating efficiency. The air and oil are delivered through a rotary head assembly revolving at a speed of 1750 r.p.m. Air and oil are thoroughly mixed in their passage across the deck installed to cover the grate area. Ignition, either gas or electric takes place slightly above the base of the sections of a refractory ring provided to aid combustion. Model "K" produces the brilliant luminous flame, characteristic of all Petro & Nokol Burners. It provides the radiant heat which most boilers are designed to take advantage of. This flame is concentrated at the grate level . . . . where the coolest water absorbs the maximum heat. Model "K" burners are built for operation with No. 2 oil or lighter, and have a capacity up to 2.1 gal. per hour.

**Control and Safety Devices**—All domestic and the smaller industrial burners are fully automatic in operation. All automatic burners are equipped with complete automatic control devices protecting both the burner and the boiler or furnace from abnormal operating conditions. Special controls and protective devices can be supplied to meet unusual operation conditions.

**Undivided Responsibility**—Throughout the Atlantic seaboard territory and in many of the more important mid-western centers, this company offers an undivided responsibility embracing the installation, servicing, provision of proper fuel oil, which insures satisfaction with Petro & Nokol equipment.

**A factory field engineering organization is available at all times for survey, and conference in all things related to the use of oil as a fuel.**

**Performance and Acceptance**—The parentage of the Petroleum Heat and Power Company extends back to 1903—to the development of the first modern industrial oil burner. In the intervening years more than 100,000 installations have been made from coast to coast. Today, Petro & Nokol oil burners are found in practically every type of building from the 52-story Metropolitan Life Insurance Building and the Ritz-Carlton Hotel in New York, to modern residences in suburban and rural districts.

### A Few Prominent Installations

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|---|---|
| Equitable Building | New York City |
| Riverside Memorial Church | New York City |
| New York Hospital—Cornell Medical | New York City |
| Mark Hopkins Hotel | San Francisco |
| Standard Oil Company, 26 Broadway | New York City |
| American Central Life Insurance Company | Indianapolis |
| Pacific Telephone & Telegraph Building | Los Angeles |
| Sinclair Building | San Antonio |
| University of Toledo | Toledo, Ohio |
| Detroit Public Library | Detroit, Mich. |

All Petro & Nokol burners are approved and listed by the Underwriters Laboratories, as well as by all other Government, State and Municipal authorities.