

Williams Oil-O-Matic Heating Corporation

Manufacturers of Automatic Oil Burners

Bloomington, Illinois

NEW YORK, N.Y., 101 Park Avenue

CHICAGO, ILL., 185 N. Michigan Avenue

Authorized Dealers and Factory Trained Installation and Service Organization in all Principal Cities of the United States and Canada, also in 75 other large Cities throughout the Civilized World

Oil-O-Matic Automatic Oil Burners

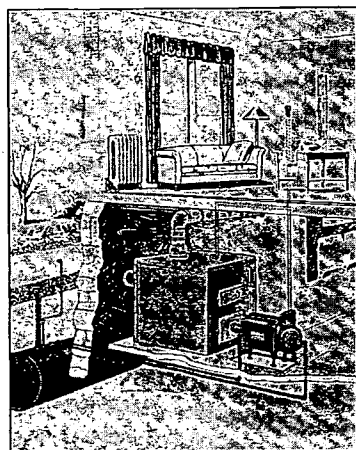
Advantages—To burn oil efficiently:

- (1) Oil must be atomized, not vaporized.
- (2) Oil must be mixed with a fixed minimum quantity of air.
- (3) Oil must burn in suspension.
- (4) Oil must burn in the presence of a refractory material.

OIL-O-MATIC operation complies strictly with these well-known natural laws governing the combustion of liquid fuel, as outlined in Dyson's "Naval Engineering," and the reference works of Harding and Willard Kent, and other like authorities.

The patented exclusive OIL-O-MATIC metering pump permits burning cheap 28 to 30 deg. Baume fuel oil, but will handle equally well, all lighter furnace oils. Change in-fuel does not necessitate a change in burner adjustment. OIL-O-MATIC method of atomization eliminates all high pressure and needle valve atomization. OIL-O-MATIC air control permits use of a low velocity air blast, adjustable over a wide range of service, to meet the requirements of all existing types of heating plants. Continuous gas pilot is not used. Automatic intermittent spark and gas ignition operates for about ten seconds only, when burner starts. Room thermostat controls on and off operation of burner. Controls safeguard heating plant temperatures and pressures. Wear is automatically adjusted.

Domestic Hot Water Supply—The mechanically fired, automatically controlled heating plant has permitted the development of a practical and inexpensive, fully automatic domestic hot water supply system, which provides an in-



Typical Installation of Oil-O-Matic

exhaustible supply of hot water at a very low cost.

Complete description will be found in "Oil Heating—What It Means to the Architect." (See Catalogues).

Operating Efficiency—Combustion efficiency in domestic heating systems, the equal of industrial power plant operation, is obtainable with OIL-O-MATIC. A test run by A. H. Hansen, Engineer, Metropolitan Utilities, Omaha, reads:

"Burner was tested for fuel consumption, gas consumption for ignition, and flue gases were analyzed for combustion efficiency.

"Atmosphere was 29 deg. Fahr., house was maintained at 72 deg. Fahr. Burner operated 22 per cent of the time. Flue gas analysis—CO₂ 12.2 per cent; O, 4.4 per cent; CO, none. Flue and combustion chamber was entirely free of soot."

Details of this and many other tests on request.

Models—Type 1200 is designed for steam heating system serving 1500 sq. ft. direct steam radiation or less; hot water system serving 2400 sq. ft. direct hot water radiation or less; hot air furnace of 36 in. grate diameter or less.

Type 1800 designed for heating systems larger than the model 1200. Will handle up to maximum of 4000 sq. ft. direct steam radiation; 6400 sq. ft. direct hot water radiation, or hot air furnace with maximum grate area of 14 sq. ft.

Additional load in larger boilers carried by installation of two or more burners.

Model I, industrial, manually controlled oil burner. Capacity same as Type 1800 or for any furnace operation requiring not more than 14 gallons of oil per hour.

OIL-O-MATIC oil burners operate on standard 110- and 220-volt, 60-cycle A.C. or D.C. current, or other usual electrical service.

The New OIL-O-MATIC Junior—becomes available for specifying, approximately January 15, 1928.

Burns cheap oil with the simplicity of gas. Highly efficient.

Perfect especially for the high class, well planned smaller homes. No pressure or noise.

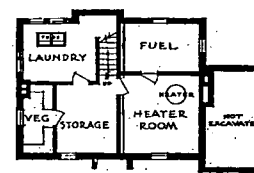
For any type furnace or small boiler.

Range of Service—OIL-O-MATIC oil burners are heating every type of building:

HOUSES	SCHOOLS
BANKS	THEATERS
STORES	HOSPITALS
HOTELS	CHURCHES
GARAGES	CLUBS
APARTMENTS	

Where questions arise regarding details of OIL-O-MATIC installations, counsel of OIL-O-MATIC engineers is available.

Installation—Grates and ash pit door are removed. Ash pit door is closed with fire brick after OIL-O-MATIC draft pipe is inserted, as illustrated.



Contractor should also figure oil storage, consisting of a 60-gallon tank, or other capacity, installed to comply with local ordinance; to be installed in basement; or a 1000 or 2000-gallon outside tank, buried not less than 3 ft. below grade and not more than 100 ft. from OIL-O-MATIC; bottom of tank to be not more than 12 ft. below suction pump on burner.

Installation must be made in accordance with Fire Underwriters rules, city ordinances and fire department regulations.

Specification—1—The oil burner must be approved by the National Board of Fire Underwriters' Laboratory to burn 28 deg. Baume fuel oil.

2—The oil burner must mechanically control, regulate or meter the flow of oil to the atomizing assembly, so that 28 deg. Baume fuel oil or any lighter oil may be burned, at will, without a change in burner adjustments.

3—The oil burner must mechanically atomize oil and be ignited and burned in suspension, before coming in contact with any surface; in the presence of a refractory material.

4—The oil burner installation must be provided with complete automatic controls, approved by the National Board of Fire Underwriters that—automatically operate the oil burner so as to safely maintain the desired room temperature; control maximum temperatures and pressures in the heating plant; immediately stop the oil burner and the flow of oil to the oil burner, in the event of any irregularities in operation, such as failure or oil supply or failure of oil to ignite in boiler.

5—The oil burner installation must comply strictly with all the National Board of Fire Underwriters' regulations and all local ordinances and must meet available electric current requirements.

6—The oil burner installation must be complete in every respect, tested and ready for service.

7—The contractor shall agree that the oil burner will be of sufficient capacity to operate the boiler (or furnace) continuously, at the manufacturer's full rated capacity.

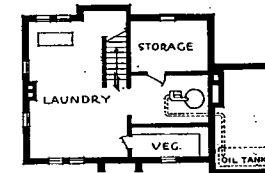
For outline of specification covering oil storage tank installation see "Installation."

Detailed OIL-O-MATIC specification is contained in "Oil Heating—What It Means to the Architect." (See Catalogues).

Catalogues

"Oil Heating—What It Means to the Architect."

"Oil Heating At Its Best."



A basement as originally planned (left). Alteration and improvement of same basement plan, permitted by Oil Heating (right).