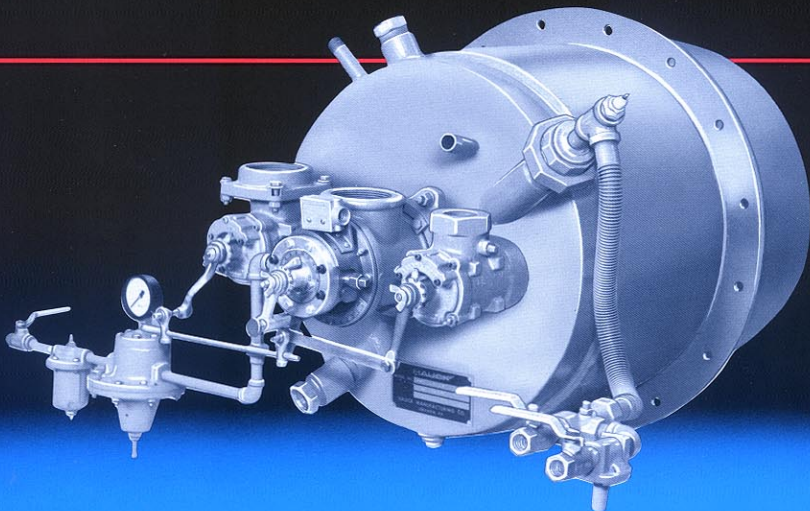

WRC/WRO WIDE RANGE BURNERS

Wide Range Burner Units designed for oil or gas/oil firing and both pressurized and nonpressurized applications. The output capacity is twice that of a 780 series burner and turndown range is greatly increased. These advantages are accomplished by supplying controlled combustion air through the burner and around the burner nose. Air flows are separately valved but jointly controlled.

Where there is much excess air, such as an air heater, the fuel capacities can be increased by as much as 2.5 times sealed-in stoichiometric capacity.



HAUCK



- **PRESSURIZED AND NONPRESSURIZED APPLICATIONS**
- **CONTROLLED COMBUSTION AIR THRU AND AROUND THE BURNER**
- **OPERABLE UP TO 2.5X SEALED-IN STOICHIOMETRIC CAPACITY**

Hauck's Wide Range Burner permits precise adjustment at all firing rates throughout its range. Combustion ratios can be precisely set and maintained at any constant value from high to low fire. When burning oil, atomization is excellent even with the wide turndown available. The atomizing air is delivered at full blower pressure from high to low and throttled at the point of atomization. The oil is introduced into the atomizing stream with zero forward velocity at the point of maximum air velocity, assuring complete atomization:

The burner is designed for single lever control, driven either manually or by means of a control motor. All operating levers are linked together: movement of one control lever adjusts all the valves.

The Wide Range Burner is provided with a spark ignited gas pilot, two observation ports, drain plug, a burner-mounted low fire micro switch. Provision has been made to permit monitoring either the main flame or both the pilot and main flames using UV scanners.

The basic burner unit consists of an oil or combination gas/oil Hauck 780 series burner and an adjustable flow valve mounted on a circular, metal air plenum. (On the smaller burner units, the plenum air control valve is mounted on the chamber itself.) Series 100 units include a separate ignition tile. The ignition chamber is constructed by the customer. Series 500 units include an Ignition Chamber Unit (ICU). The last six inches of the ICU are constructed of stainless steel.

The burner and plenum valves are controlled by the movement of one lever, which can be operated manually or automatically, providing accurate proportioning of fuel and air. For automatic operation, the lever is connected to a control motor which is usually activated by a temperature control instrument.

Use of a 20 osig blower is recommended for light oils or a combination of gas and light oil. Use of a 24 osig blower is recommended for heavy fuel oils or a combination of gas and heavy oil. Heavy oil firing is not recommended below 24 osig air pressure; light oil firing is not recommended below 16 osig air pressure. The type of oil and ambient conditions can affect burner and blower selections. The burner requires constant pressure and air piping should be properly sized to avoid excessive pressure drops in the system.

- **AVAILABLE WITH OR WITHOUT ICU IGNITION CHAMBER UNIT**
- **SINGLE LEVER CONTROL: MANUAL OR MOTOR CONTROLLED**

The burner must be supplied with a pressure regulated oil supply. The oil supply line pressure can range up to 50 psi at the inlet of the regulator.

The oil set-up assembly consists of a PRO oil regulator, edge plate filter, and shutoff valve. All components are prepiped into a single unit for easy installation and each unit is pre-sized to handle the burner requirements. The PRO functions as a self-contained pressure reducing valve, eliminating the need for external actuators or control lines.

A pressure regulated gas supply line must be provided to the burner. The required pressure normally ranges from 8" wc to 2 psi. The actual pressure required is determined by the Btu value of the gas, the burner size, the application, and the capacity required. The total pressure necessary is the sum of the pressure drops across the gas flow valve, the gas nozzle and various fittings, and a pressure head allowance to overcome any combustion chamber back-pressure. For specific requirements, contact your Hauck representative or the factory.

The Wide Range Burner utilizes Hauck's IPG blast type gas pilot designed to provide flame stability and long life even under adverse conditions. The pilot assembly consists of a flame retaining nozzle with stainless steel tip, an air-gas mixer, an air cock, a gas pressure regulator, spark plug assembly, and flexible pipe nipple. The pilot requires a constant air pressure in the 8 to 32 ounce range. The pilot will burn any clean, commercial gas. Gas pressure, at the pilot regulator inlet, must be between 1/2 and 1 psi.



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