



"H4" GAS SYSTEM SCHEMATIC
(As shown meets U. L. requirements)

APPLICATION

The "H4" gas system is used for high-low, low fire start control in firing. It is commonly used on burners with 2,500 MBh to 5,000 MBh capacity and is used in conjunction with the "F4H", "F4V" or "F4VT" oil systems for combination gas-oil models.

DESCRIPTION

The "H4" system uses a motorized hi-lo gas valve and a quick opening solenoid gas valve arrangement to control gas flow. Gas pressure is adjusted and maintained by a pressure regulator.

Combustion air available to the burner is controlled by connection of the air inlet louver to the motorized gas valve through a linkage arrangement.

OPERATING SEQUENCE

The burner motor starts on a call for heat by the operating control and the pre-purge cycle begins. The motorized valve is in the closed position, allowing low fire combustion air through the louver.

At the end of pre-purge, the ignition transformer is energized and the pilot valve opens, igniting the gas pilot.

The flame detector proves the flame and the safety shutoff gas valves open, slowly supplying gas to the orifices at the low fire rate, and the burner ignites in the low fire position.

The ignition transformer and pilot valve are de-energized.

The motorized gas valve continues to open, allowing the linkage to drive the air louver to the full open position and the burner goes to high fire.

HIGH-LOW OPERATION

The high fire controller, when satisfied, drives the motorized valve to the low fire position, allowing less gas flow through the burner. Simultaneously, the air louver is closed to the low fire position. If low fire cannot maintain pressure or temperature in the boiler, the high fire controller will re-energize the motorized valve and the air louver and the burner will sequentially return to high fire.

When the operating control is satisfied, the gas valves close and the burner motor is switched off, causing the burner to shut down and await the next call for heat.