



**IRON FIREMAN®**

# **WhirlPower™ Gas-Oil Burners**

## **Model C-240 Forced Draft Commercial Gas, Oil, and Combination Burners**

### **Features**

The WhirlPower™ C-240 Gas-Oil Burners are complete fuel burning systems, assembled, wired and tested at the factory. The units have all necessary operating controls including an electronic combustion control system. All air for combustion is supplied under pressure by the forced draft fan.

The Gas-Oil Burners are particularly applicable to installations in localities where standby oil heating equipment is required. Quick changeover is accomplished by a fuel selection switch; it is not necessary to alter or readjust the burner.

Model C-240-SM Burners are constructed with fan housing below the draft tube with no burner parts projecting above the draft tube to interfere with boiler cleanout doors. This compact arrangement makes these models particularly adaptable to Scotch-Marine type boilers.

Model C-240 Burners have the conventional arrangement of fan housing above the draft tube and require a minimum amount of space beneath the burner.

Burners are listed by Underwriters' Laboratories, Inc., and are approved to operate with not heavier than No. 2 fuel oil, and Natural or L.P. Gases. Models also available to comply with FM and IRI requirements — refer to price sheets.

Models available for firing rates of 1,700,000 Btu to 5,250,000 Btu input for gas and 12 to 37.5 GPH for oil. (See Specification Table).

Gives highly efficient, pulsation free operation with boilers having either negative draft or pressure in furnace.

Eliminates need for draft producing or chimney induced draft fan when boilers sealed because burner fan handles pressure drop across boiler as well as burner.

Frees burner performance of deficiencies due to erratic or excessive overfire draft.

Provides a heretofore impossible efficiency of operation in conventional unsealed steel and cast iron boilers by permitting installation through fire door with refractory floor at mud ring level.

Cuts to negligible amount stand by loss during "off" periods, by minimizing heat robbing cold air flow because of small air passages in burner head.

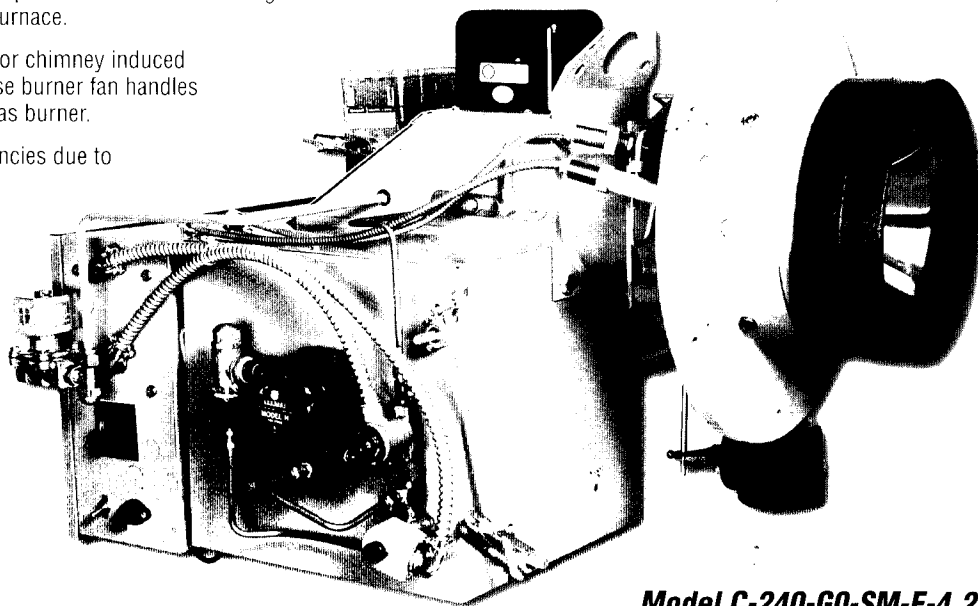
High resistance firing head mixes air and fuel instantly giving short clean flame with complete combustion.

No refractories necessary to assist combustion.

### **When Ordering Specify:**

1. *The Boiler Make and Model Number.*
2. *Steam Pressure or Water Temperature.*
3. *Insurance Approval Required (UL, FM or IRI).*
4. *Burner Model.*
5. *Firing Rate-GPH Light Oil or MBh Gas.*
6. *Electrical Characteristics for Blower Motor and Control Circuit.*
7. *Gas Type, Btu/cf and Gas Pressure.*

*Catalog information subject to change without notice.*



**Model C-240-GO-SM-F-4.2**



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## WhirlPower™

### Model C-240 Forced Draft Commercial Gas, Oil, and Combination Burners

#### U.L. Models

Model	Motor HP	Maximum Firing Rate		Max. Furnace Press W.C.	Approx. Shipping Wt.
		Gas	Oil		
C-240-*S	1-1/2	3220	23	+1.0"	200 lbs.
C-240-*F-4.2	2	4200	30	+2.5"	265 lbs.
C-240-*K-5.2	3	5250	37.5	+2.0"	300 lbs.

\*\* High Gas Switch furnished for firing rates over 2499 MBH.

#### Standard Equipment (U.L.)

##### General

Proven Flame Retention Head  
 Stainless Steel Diffuser  
 Heavy-Duty Cast Iron Choke Ring  
 Steel Forward Curved Blower  
 Flame Observation Port  
 Access Cover for Firing Head  
 208,230 or 460-60-1 Controls  
 Air Flow Safety Switch

##### Gas

Fireeye Flame Safeguard  
 U.V. Flame Scanner  
 Interrupted Gas Pilot Ignition  
 Jackshaft Fuel Linkage  
 Indicating Lights for Major Functions  
 High Gas Pressure Switch  
 Pilot Regulator, Shut-off Cock, and Solenoid Valve

##### Oil

Direct Spark Ignition "S" & "F"  
 Gas Pilot Ignition "K" Models  
 Two Stage Integral Oil Pump  
 (3/4 H.P. 115-60-1 Remote Pump Set with "K" Model)  
 Fireeye Flame Safeguard  
 U.V. Flame Scanner  
 Dual Solenoid Main Oil Valves  
 Jackshaft Linkage w/High-Low and Modulation Systems  
 Indicating Lights for Major Functions  
 Low Oil Pressure Switch with "K" Models

##### Gas/Oil Combination

All Items as Listed for Single Fuel Models Except Gas  
 Pilot Ignition ignites either fuel Manual Fuel Selector Switch  
 Separate "Gas" & "Oil" Indicating Lights

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## **Suggested Specifications For Iron Fireman "Whirlpower™" C-240 Gas/Oil Packaged Burner**

Furnish and install as shown on plans \_\_\_\_\_ Iron Fireman "Whirlpower™" packaged gas/#2 oil burner(s), model number C-240. Each burner(s) shall be capable of burning \_\_\_\_\_ cfh \_\_\_\_\_ of \_\_\_\_\_ Bth/cu. ft. (natural) (L.P.) (Manufactured) gas at a specific gravity of \_\_\_\_\_ with minimum gas pressure of \_\_\_\_\_ inches water column and/or maximum of \_\_\_\_\_ inches at inlet to burners' gas piping group; and \_\_\_\_\_ gph of No. 2 fuel oil.

Electrical current will be available in the boiler room at \_\_\_\_\_ volts \_\_\_\_\_ cycle \_\_\_\_\_ phase. Blower motor to be no smaller than \_\_\_\_\_ horsepower and 3450 RPM.

The complete burner shall be listed with Underwriters' Laboratories and be forced draft type, factory assembled, wired, and factory firetested. Equipment to include direct driven blower that supplies combustion air and forces products of combustion thru boiler and stack, totally enclosed hinged 14 gauge metal electrical control cabinet, containing a Fireye \_\_\_\_\_ combustion safeguard control system with integral pre-purge and post purge timers, motor starter(s) control circuit reducing transformer to 115 volts, manual on-off transfer switch, numbered terminal strips, separate oil and gas indicating signal lights, ignition light, flame failure light, flame observation port with glass, control circuit fuse and internal access.

Upon interruption of electrical power, the burner shall recycle before fuel valve(s), opens; and upon flame failure, the electronic

combustion control shall lockout and require manual reset. Burner motor shall not run during "lockout" condition. For dependability, the air flow safety switch is to be of the differential pressure sensing type.

The main fuel oil or gas is to be ignited by an internal gas pilot that includes a 6000 volt secondary transformer, manual gas cock, gas pressure regulator and solenoid valve. Ignition to be of the interrupted type.

Oil burning equipment to include two-stage fuel oil pump, oil filter and instantaneous cut-off oil valve.

Gas burning equipment shall include a completely piped gas train, including manual gas cock, gas pressure regulator, gas valve(s), safety gas solenoid valve and gas pressure gauge. The iron pipe size shall be not less than \_\_\_\_\_ inches.

A safety limit control is to be furnished by burner supplier. The control is to be suitable for \_\_\_\_\_ psi steam (or \_\_\_\_\_ °F water temperature).

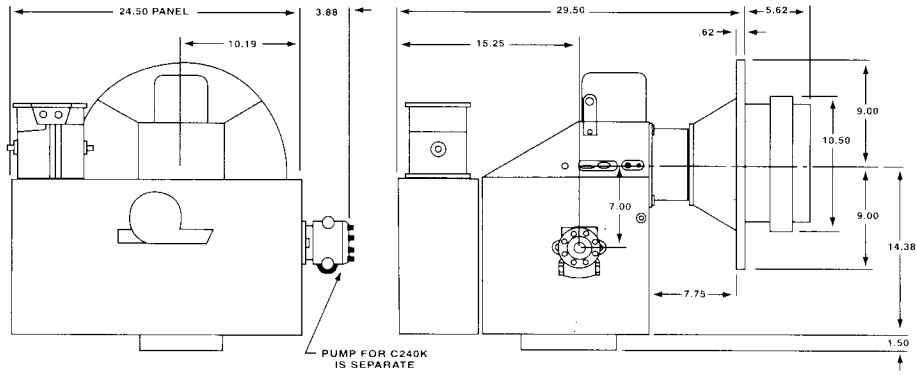
Each control cabinet is to contain a wiring diagram, installation, operation, maintenance, service instructions, and replacement parts manual; factory firetest report indicating actual factory firetest results, input, CO<sub>2</sub>, smoke reading, etc.

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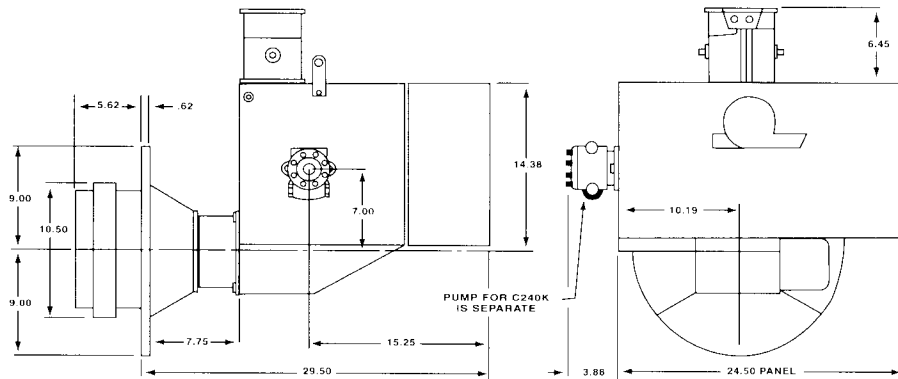
## **Optional Equipment at Extra Trade Price**

Additional Signal Lights	Microprocessor Control Systems
Alarms	Optional Voltage – Consult Factory
Gas Piping Group	
Limit Control	See Price Lists for other optional controls
Main Gas Regulator	
Operating Control	Modulation Control

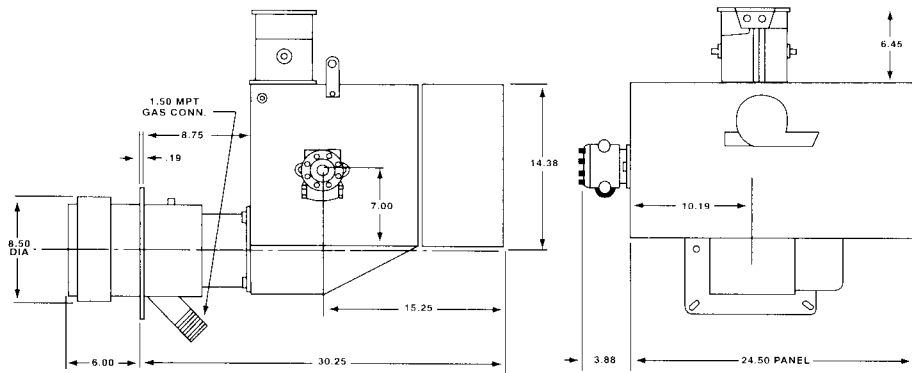
**Dimensions (In Inches)**



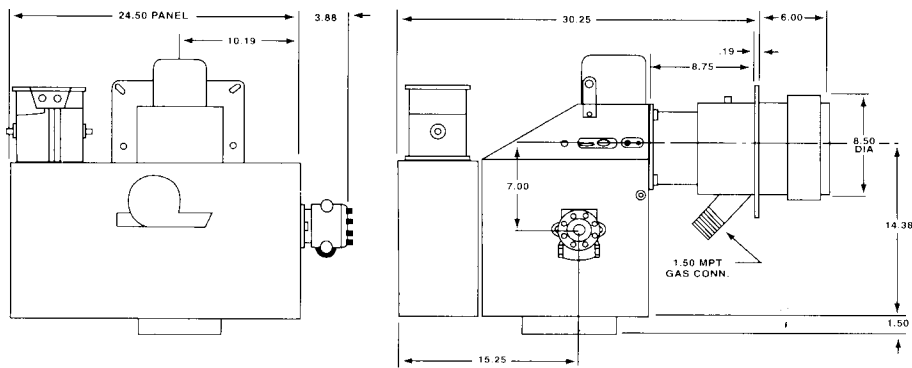
**C240-F and K "SM" Models**



**C240-F and K "Upright" Models**



**C240-S "Upright" Models**



**C240-S "SM" Models**

