



**IRON FIREMAN®**

# **WhirlPower™ Gas Burners**

## **Models MF-35 & MF-85 Forced Draft Gas Burners**

### **Features**

The WhirlPower™ MF-G Gas Burners are complete fuel burning systems, assembled, wired and checked 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.

Model MF-G-SM Burners are constructed with the 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 MF-G Burners have the conventional arrangement of fan housing above the draft tube and require a minimum amount of space beneath the burner. The same efficient performance is obtained with any model of the MF-G burner.

These burners are listed by Underwriters' Laboratories, Inc. and are approved to operate with Natural Gas or L.P. Gas.

MF-35 and MF-85 models are available for firing rates of 100,000 Btu to 1,000,000 Btu input.

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

The MF burners eliminate the need for draft producing chimney or induced draft fan when boiler is sealed because burner fan handles pressure drop across boiler as well as burner.

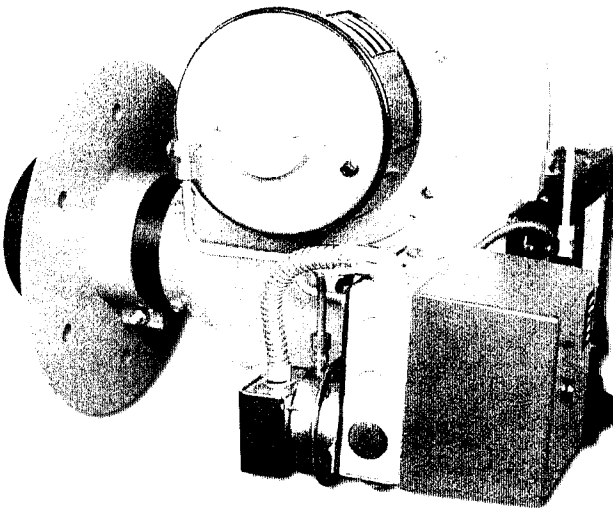
The forced draft frees burner performance of deficiencies due to erratic or excessive overfire draft.

High static capability along with a very compact and versatile design, these burners are suitable for many different uses. Boilers, commercial and industrial water heaters, pressure washers, hot air furnaces, make-up air heaters, and bakery ovens are just a few of the applications.

No specially shaped refractory combustion chamber is necessary to assist combustion.

### **When Ordering Specify:**

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



- **Two Housing Designs for Adaptability to Most Applications**
- **100,000 to 1,000,000 Btu/hr Input**
- **3-Year Firing Head Warranty**
- **Super Compact Design**
- **High Static Capability**
- **Natural or LP Gas**





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## WhirlPower™

### Models MF-35 & MF-85 Forced Draft Gas Burners

#### Standard Equipment

* Max. Firing Rate	Min. High Firing Rate	** Max. Furn. Press.	Ins. Opt.	Model Number	Blower Motor	Junction Box Model	Enclosed Control Panel Model	Gas Piping Group		Approx. Shipping Weight Pounds
		In. W.C.						Standard Pipe Size	*** Min. W.C. Press.	
MBh	MBh	In. W.C.			HP				In.	
500	100	.75	UL	MF-35G Upright	1/4	Std.	Opt.	1"	5.0	100
				MF-35GSM Inverted		Std.	Opt.			
1000	350	.25	UL	MF-85G Upright	1/4	Std.	Opt.	1 1/4"	5.0	100
				MF-85GSM Inverted		Std.	Opt.			

\* Maximum firing rates are based upon test results at 1500 ft. elevation with combustion air at 70° F against maximum furnace pressure listed. Capacities may vary dependent upon elevation and air temperature, and combustion chamber, configuration, dimensions, etc. If combustion chamber is less than 14" diameter, consult factory to determine if the burner is suitable for such an unusual application.

\*\* When equipped with high static blower.

\*\*\* Minimum gas pressure at burner's gas piping group inlet at zero furnace pressure and at burner's maximum firing rate. (Maximum gas inlet pressure to pipe group is 14 in W.C.) For optional gas pipe groups for other gas pressures, consult factory. **CAUTION:** Add furnace pressure to arrive at total gas pressure required.

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## **Standard Equipment (cont.)**

### **All Models**

Fixed fire operation  
Flame safeguard  
Flame rod flame detection  
Combustion air flow safety switch  
Gas pilot ignition system  
Pilot solenoid valve  
Pilot regulator  
Pilot manual valve  
Ignition transformer  
Flame observation port  
Choke ring  
115/60/1 voltage (motor & controls)  
Combination diaphragm gas valve & regulator  
Solenoid type safety gas valve  
Two ball type manual gas cocks

### **Enclosed Panel Models**

Burner mounted control cabinet  
Door latch  
"Pilot on" indicating light  
"Main gas on" indicating light  
"Lockout" indicating light  
Burner "On-Off" toggle switch  
Control circuit fuse

### **Options & Accessories**

We offer many options and accessories to tailor our burners to meet your specific job requirements, local codes, and insurance codes. Just contact your local Iron Fireman representative or our factory for assistance.

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## **Guide Specifications**

Furnish and install as shown on plans \_\_\_\_\_ Iron Fireman "WhirlPower™" packaged gas burner(s), model MF-35G or (MF-85G). Each burner(s) shall be capable of burning \_\_\_\_\_ cfh of \_\_\_\_\_ Btu/cu. ft. (natural) (L.P.) (Manufactured) gas at a specific gravity of \_\_\_\_\_ with minimum gas pressure of \_\_\_\_\_ inches water column and maximum of \_\_\_\_\_ inches at inlet to burner's gas piping group.

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 tested. 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 (Honeywell) combustion safeguard control system with integral prepurge timer, (manual on-off switch), (numbered terminal strips), flame observation port with glass, 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.

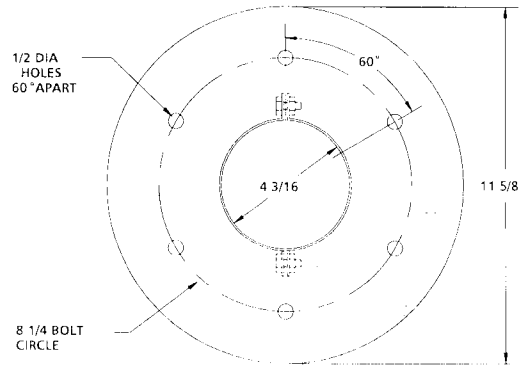
The main fuel gas is to be ignited by an internal gas pilot and includes an ignition transformer, manual gas cock, gas pressure regulator and solenoid valve.

Gas burning equipment shall include (2) manual gas cocks, gas pressure regulator, and (2) main gas valves. The iron pipe size shall be not less than \_\_\_\_\_ inches.

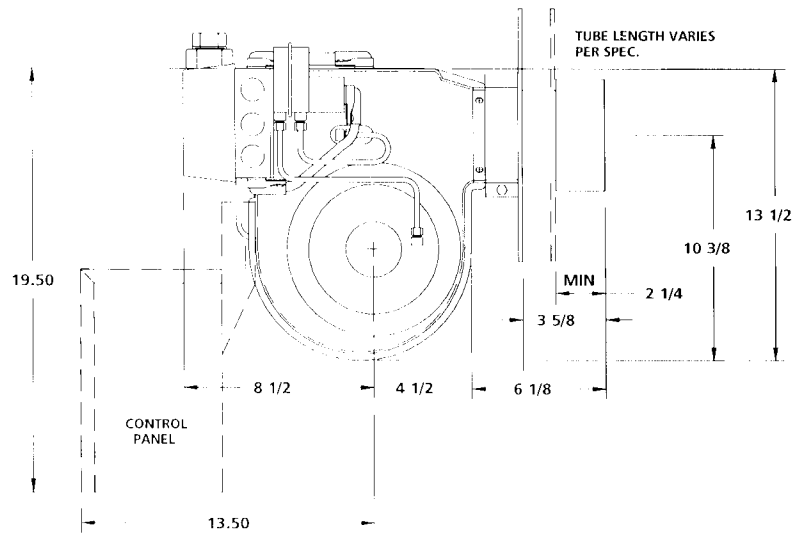
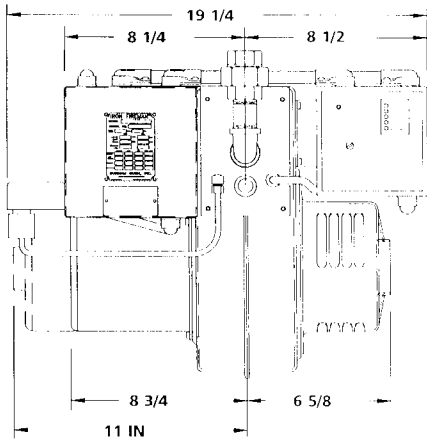
Each burner will be supplied with installation, operation, maintenance and service instructions, a wiring diagram, and replacement parts manual.

**NOTE:** *Optional items shown in ( ).*

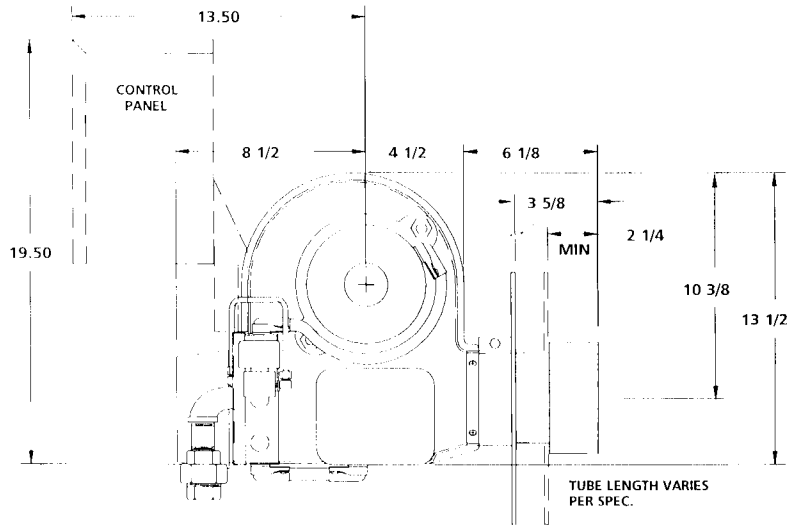
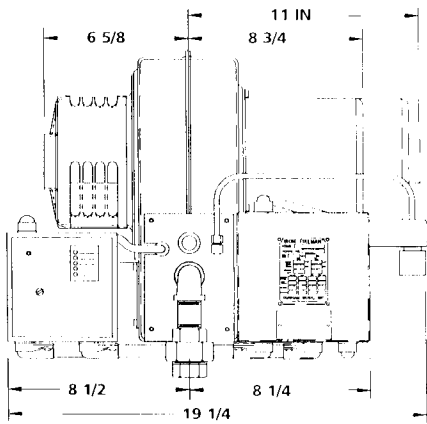
# Dimensions



**Mounting Flange**



**SM (Inverted) Model Shown**



**Upright Model Shown**



**IRON FIREMAN®**

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