

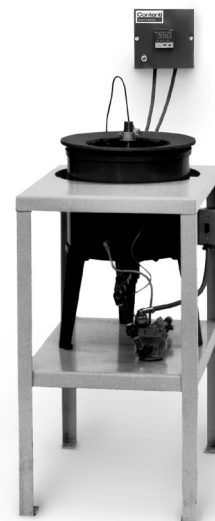
FURNACE SPECIFICATIONS

Electrical	120VAC
Inlet Pressure	11"WC min / 14" WC max
Gas Input	35,000 BTU/HR

INSTRUCTIONS FOR GFI60 GAS MELTING FURNACE

No. 175-802

CAUTION: ANY GAS APPLIANCE SHOULD BE INSTALLED BY A LICENSED PLUMBER WITH DUE REGARD FOR SAFETY. IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION.



Installation

1. Place the furnace in its permanent position, without installing the cast iron pot. Within the cast iron pot you will find a packet of graphite powder and a cast iron protection tube into which the temperature control thermocouple will be later installed. Place the packet of graphite powder aside, temporarily, and attach the protection tube to the flange of the pot with the nut and bolt provided.
2. The temperature control assembly with mounting brackets is packed inside the combustion chamber of the furnace. Remove the assembly and attach it to your wall using wood or masonry screws. Do not connect the power cord set to your power source yet.
3. Install the cast iron pot, positioning it so that the protection tube is located toward the rear of the furnace. Now retrieve the packet of graphite powder and follow the instructions written thereon for installing the temperature control thermocouple into the protection tube.
4. Connecting the furnace to your gas supply should be undertaken only by a licensed plumber. Make sure gas piping is pressure tested before the furnace is connected. Higher pressures can damage the gas control causing a hazardous condition. Do not subject the gas control to more than 14" W.C. (1/2 PSI) inlet pressure.
5. Once the gas connection has been made, the temperature control can be plugged into your wall outlet. Place a small amount of metal (50-100 lbs.) into the cast iron pot. Place ingots into the pot gently, never allowing them to strike the bottom of the pot, especially when hot.
6. Turn on the temperature control by adjusting the bat switch located in the bottom left corner. The temperature control will now display ambient temperature. To change the Set Point (desired heating temperature), first press the "SET/ENT" button. Then use the UP and DOWN buttons until the desired Set Point temperature is displayed. Press the "SET/ENT" button again to set the temperature. The control will now display ambient temperature again. To view the Set Point temperature at any time, press "SET/ENT".

REPLACEMENT PARTS

175-865	Pilot Thermocouple
175-885-01	Pilot Orifice, natural gas
175-886-01	Pilot Orifice, LP gas
175-885	Complete natural gas Pilot Assembly (includes mounting bracket, screws, and aluminum tubing)
175-886	Complete LP gas Pilot Assembly (includes mounting bracket, screws, and aluminum tubing)
175-865	Pilot Thermocouple, 24" long
175-862	Robertshaw Gas Control
175-880	Complete natural gas Burner Assembly
175-881	Complete LP gas Burner Assembly
175-853	Digital Temperature Controller only (case not included)
175-852	Temp. Control Thermocouple (Type J, 3/16" sensor)
175-841	Cast Iron Protection Tube
175-923	Graphite Powder, 1 oz.
175-810	Cast Iron Pot, 160 lb. lead capacity

Lighting The Furnace

1. When the furnace is not operating, the Gas Cock Dial of the gas control should remain in the OFF position (as indicated in **fig. A**). Dials must only be operated by hand. DO NOT use pliers, wrenches, or other tools to turn dials. The Gas Cock Dial cannot be turned to OFF position without first depressing dial in PILOT position and then rotating to OFF.
2. Adjust Gas Cock Dial to the PILOT position (**fig. B**). Depress and hold Gas Cock Dial while lighting pilot. Allow pilot to burn approximately one minute before releasing Gas Cock Dial. If pilot does not remain lighted, repeat operation allowing a longer period before releasing Gas Cock Dial.
3. The air intake of the furnace pilot is adjusted by sliding the small brass collar (highlighted in **fig. D**) partly over an array of holes. This brass collar should be adjusted so that the pilot flame turns blue, with only a slight trace of orange.
4. To ignite the furnace main burner, turn the Gas Cock Dial to the ON position (**fig. C**). The burner flame should also be blue with a trace of orange.
5. Flame adjustment is made by turning the spud assembly disc (highlighted in **fig. E**), located at the end of the burner at the front of the furnace. When operating the furnace for the first time with solid ingots, run the furnace for the first hour at 300° F. For the second hour, increase the temperature to 400° F. After these two hours, set the temperature control to the casting temperature you desire. Following this procedure will prevent the possibility of the pot cracking from thermal shock. When remelting a pot of solid metal, SP can be set at the casting temperature.
8. Your furnace is equipped with a safety control that cuts off any gas flow to the main burner should the pilot be accidentally extinguished. The thermocouple that senses this pilot blowout condition is a copper colored wire that leads from the pilot to the gas control. Always be sure that the sensing portion of this thermocouple is immersed within the pilot flame, otherwise the safety control will not allow gas to flow to the main burner.
9. To turn the furnace off, adjust the Gas Control to the OFF position (**fig. A**) along with the bat switch on the temperature control assembly.

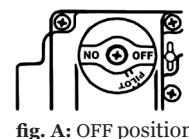


fig. A: OFF position

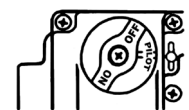


fig. B: PILOT position

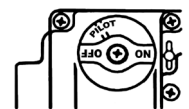


fig. C: ON position

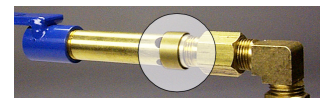


fig. D: Brass adjustment collar

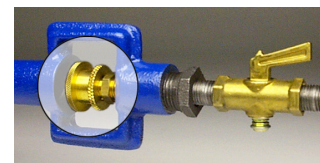


fig. E: Spud Assembly