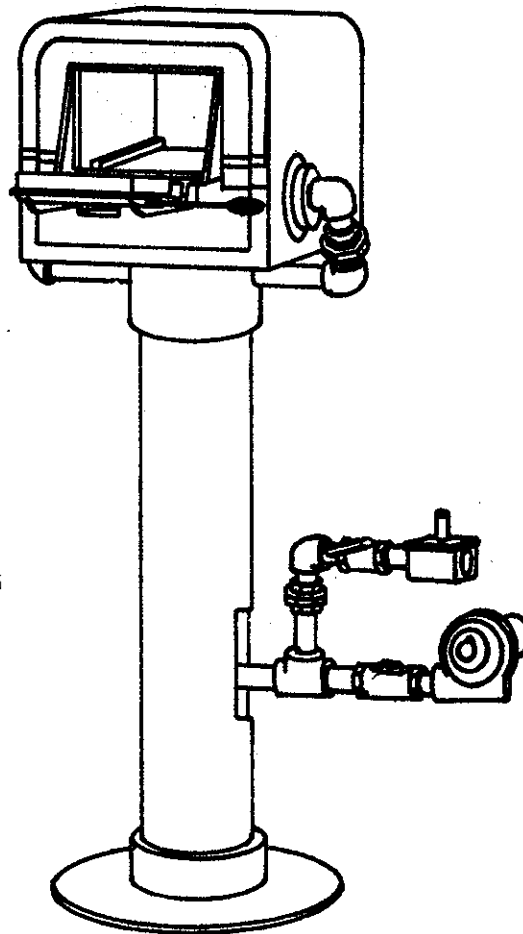


**INSTRUCTIONS**  
**INSTALLATION & OPERATION**  
**FURNACE NO.**



**JOHNSON GAS APPL. CO.**  
**CEDAR RAPIDS, IOWA**

INSTRUCTIONS FOR BLOWER TYPE DENTAL FURNACE WITH  
MANUAL TEMPERATURE CONTROLS AND NO SAFETY EQUIPMENT

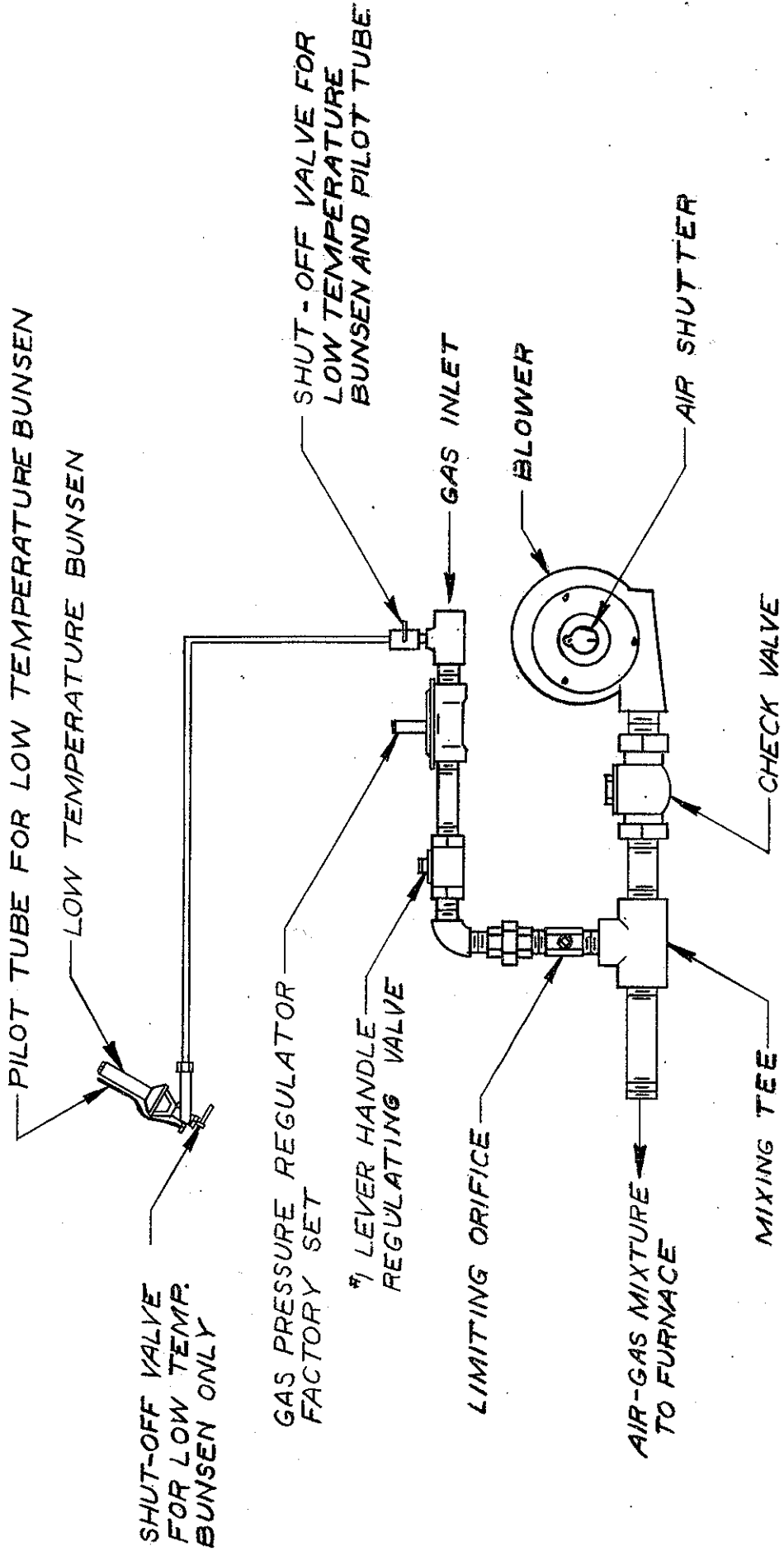
Connect Blower Motor to 115 Volt Electrical Source. Connect up the Gas Line. The Maximum Pressure for Natural Gas is (4) Ounces; the Maximum Pressure for L.P. Gas is (6) Ounces.

1. Set the blower air shutter about 1/4" open and start the blower motor.
2. Light bunsen and use for a pilot or hold a lighted torch or taper near the main burners.
3. Slowly open the #1 lever handle valve until the main burners ignite. Make minor adjustments to this valve to obtain a steady roar from the burner. The door to the oven furnace can now be closed.
4. After the furnace has warmed up, adjust the #1 valve to obtain a sharp tail of flame from the furnace exhaust openings. No flame means not enough gas. A long, lazy flame means too much gas.
5. If it is desired to increase the gas input, open the blower air shutter slightly to decrease the tail of flame. Then open the #1 lever handle valve to bring back the sharp tail of flame. Repeat this procedure until the desired or maximum gas input is reached.
6. To shut down the furnace, always turn off the #1 gas valve first and then turn off the blower motor.

Low Temperature Bunsen

The natural gas bunsen will have an adjustable orifice (tighten or loosen orifice cap) to adjust to proper flame. The L.P. gas orifice is fixed and has no adjustment. Higher temperatures can be reached with the bunsen by partially closing the exhaust vents at the top of the furnace.

FORM 108



PIPING DIAGRAM FOR NO.120 AND NO.70 DENTAL FURNACES WITH MANUAL CONTROL

## INSTRUCTIONS FOR INSTALLING INDICATING PYROMETER

1. Mount instrument on a wall or other support in a level position free of vibration.
2. A short circuiting wire or bar will be found between the terminals to protect the instrument in shipment, and must be removed.
3. A Zero adjustment screw will be found either at top or front of instrument. Using a small driver, turn the screw so that the pointer indicates room temperature which can be checked by a thermometer.
4. Connect lead wires to the instrument terminals which are marked positive (+) and negative (-); the lead wires usually have a tag attached indicating polarity; if tag is not attached, proceed as above, then twist the bare wires at other end of lead wires together and hold a lighted match under the twisted joint. The instrument pointer should move up scale; if it moves down scale, reverse the connection at the instrument terminals.
5. Note the color of the covering or insulation on the lead wires; as example, if negative (-) wire is red, connect the red wire to the negative (-) terminal of the thermocouple and the other wire to the positive (+) terminal.
6. Handle the thermocouple carefully and insert it through the opening in the back of a box furnace or into the pot of a pot furnace. In the event the opening in the box furnace is closed with a blank flange, this should be removed and a 3/4" hole through the casing will be found; if closed by the furnace lining, this can be easily drilled out to receive the thermocouple.
7. After thirty days operation again check the 0 adjustment by removing one of the lead wires at the instrument, and adjusting if necessary.

FORM 62

VENTING REQUIREMENTS

JOHNSON FURNACES

1. POT FURNACES, FORGES, AND MELTING FURNACES

SINGLE UNITS OR MULTIPLE INSTALLATIONS

FOR EXHAUST HOODS APPROXIMATELY 6'6" TO 7' ABOVE FLOOR, THE EXHAUST FAN SHOULD BE SUFFICIENT TO PROVIDE A 200 FPM FACE VELOCITY AT THE HOOD.

2. OVEN TYPE FURNACES (INCLUDES OVEN FORGES)

A. SINGLE INSTALLATIONS

FOR SINGLE INSTALLATIONS THE VENT REQUIREMENTS SHOULD REDUCE FLUE GAS TEMPERATURE TO 500° OR BELOW. FOR CFM REQUIREMENTS DIVIDE BTU INPUT OF THE FURNACE BY 225. (APPLICABLE WHERE THE VENT HOOD IS 6" TO 8" ABOVE EXHAUST OPENINGS)

B. FOR SINGLE OR MULTIPLE INSTALLATIONS WHEN SINGLE EXHAUST HOOD IS 6'6" TO 7' ABOVE FLOOR PROVIDE FOR A 200 FPM FACE VELOCITY.