

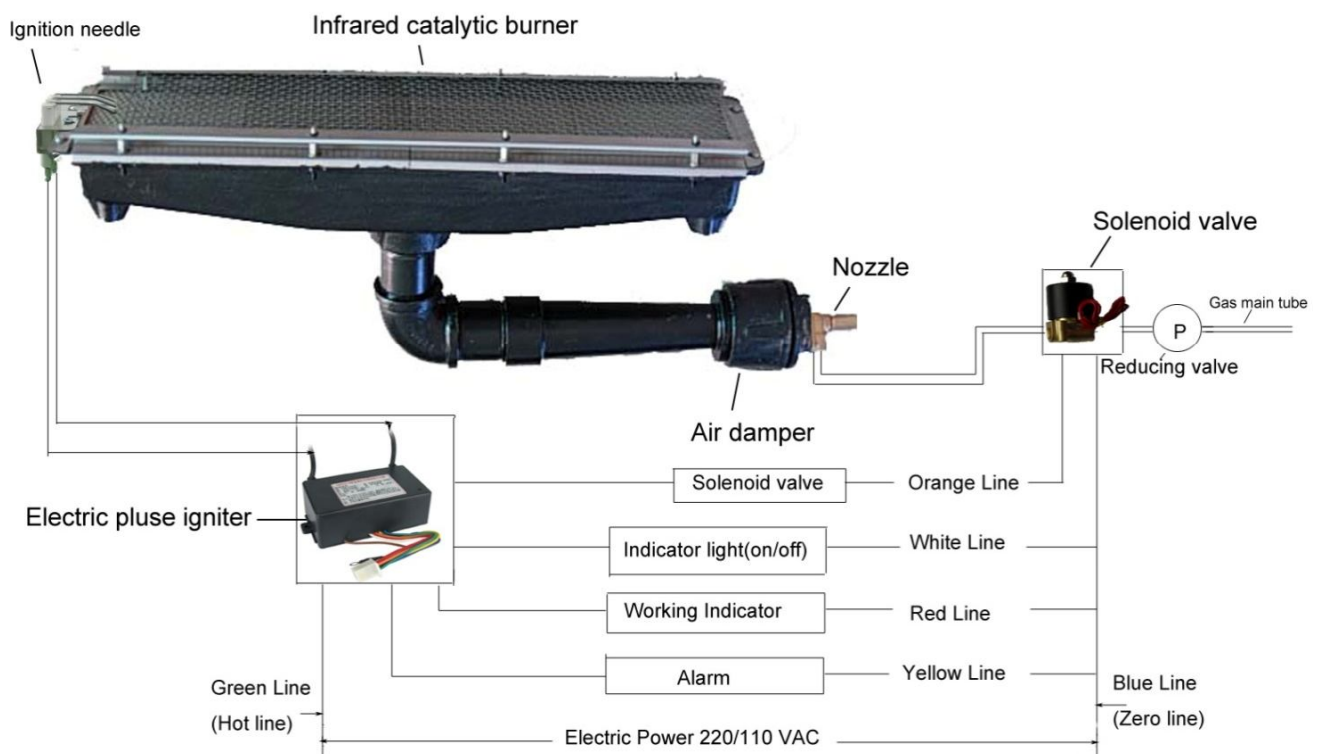
Infrared Catalytic Burner Use Direction

1. Technical Parameters

Items	Technical Parameters
Kinds of Gas	NG/LPG/Oil Field Gas/Artificial Gas
Initiation Temperature	$\geq 350^{\circ}\text{C}$
Perfect Combustion Temperature	$\leq 380^{\circ}\text{C}$
Heat Source Temperature	850°C
Heating-up Temperature Range	$30^{\circ}\text{C} - 850^{\circ}\text{C}$
Wavelength Range	1.9 μm - 15 μm
Starting Air Pressure	2000pa(NG)/2800pa(LPG)
Life Span	Above 11000hrs
Waste Gas Emission	$\text{CO} \leq 80\text{ppm}$; $\text{NOx} \leq 10\text{ppm}$; $\text{CHx} \leq 50\text{ppm}$
Conversion Rate	Above 90%

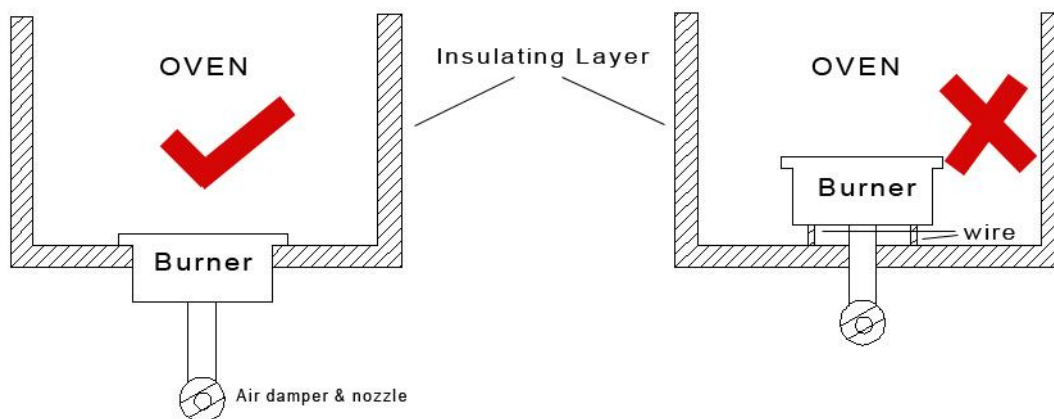
2. Installation

※Wire diagram



✂️ Operation

1. Keep the cylinder at least 5 meter far away from gas burner.
2. The cylinder must be matched with a main valve, cut off it when burner stops working.
3. Periodic inspect whether the gas pipe is leakage
4. Single burner should match the independent electromagnetic valve control, circuit switch must be closed when not in use, keep an eye on electromagnetic valve whether it is normal working.
5. When installation, the burner venturi tube must be exposed in the atmosphere, and shall not be installed in the oven department. (see following diagram)

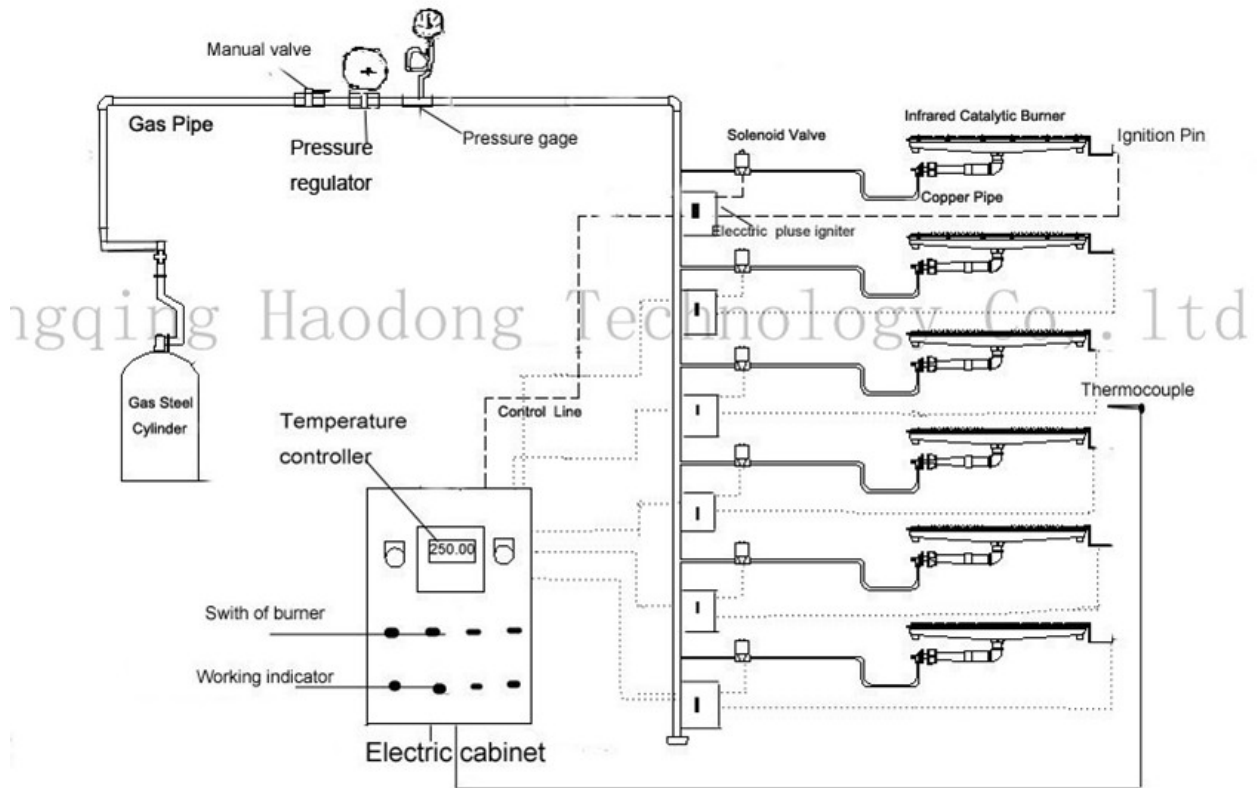


Please note: keep the burner body outside the oven as left installation.
Right installation will cause the wire destroyed.

6. Each work, gas and circuit switch order is:
 - A. Start work: Open the cylinder main valve - Control box main switch - Each burner's switch;
 - B. Stop work: Close related valves and circuit switch according to the reverse order.
7. This product is a low-pressure burner and the pressure before enter furnace is 2800-3500pa. Applicable gas is Natural Gas (NG) and Liquefied Petroleum Gas (LPG).
8. Open the damper and let gas in then ignite, adjust the damper till the ceramic plate getting red and no naked flame. It is no need to adjust the burner in working process.
9. Any installed position is ok, but when the burner is on top or side, you should keep a 15° gradient between the wall and burner ceramic surface so that the heat wave will rise up smoothly. It's better prevent dripping from the food or work piece.

✧ Combination using

When the burner is combined to use, the deployment diagram as follow:



Real picture for reference:



Electric Cabinet/Thermostat



Color plate film laminated industrial curing oven



※Electrical Working Principle

1. Working Purpose

When the oven temperature reach setting required temperature, the infrared catalytic burner stop working; While the oven temperature under setting required temperature, the infrared catalytic burner start working again.

2. Composition

1) Electrical System

Input Power(AC220 V /AC110 V)+ Thermocouple+ Electric Cabinet(Temperature Controller +Power switch+ Ignite switch+ working indicator light+ Alarm+ Air switch+ Relay) + Pulse igniter + Solenoid valve+ Ignition needle

2) Gas System

Gas + Barometer+ Pressure Regulating Valve+ Solenoid Valve+ Infrared Catalytic Burner

3. Working Principle

Open the gas valve, adjust the combustible gas pressure to 3500~5000pa by pressure regulating valve. Open the main power switch of electric cabinet and set the oven inside heating temperature on temperature controller, then open the burner ignition switch, the solenoid vale supply gas for the infrared catalytic burner when the pulse igniter is electrified. At the same time, the pulse igniter outputs high voltage to ignition needle, and ignition needle produces electric arc so as to ignite the combustibile gas in infrared catalytic burner.

After the infrared catalytic burner work normally, pulse ignition stop outputting high voltage, and ignition needle stop producing electric arc.

When the thermocouple reacts the oven temperature lower than setting temperature of controller, the solenoid valve will restart to supply gas after the pulse igniter gets signal from temperature controller. Meanwhile, the pulse igniter outputs high voltage to ignition needle, and ignition needle produces electric arc so as to ignite the combustibile gas, the infrared catalytic burner gets work.

4. Flameout Protection



When the electric arc produced by ignition needle doesn't ignite the flammable gas in infrared catalytic burner, pulse igniter will stop outputting high voltage and shutting solenoid valve to supply gas. It will prevent the gas from leakage and sure security.

If need to start again, you must open the ignition switch and pulse ignition of electric cabinet to get electricity, to reboot your ignition system normal working.

※ Solutions & Maintenance

1. Solutions of some phenomenon in burning

* Naked flame

Lack air — Adjust damper wider;

Loose nozzle — Tightening the nozzle.

* Emerging from the fire (flame leaves the ceramic surface)

High pressure — Decline the pressure down

* Backfire (flame burned in the cast iron shell)

Lack of gas — Increase exterior gas pressure, adjust the brass valve to let more gas in and close down the damper at the same time until the naked flame burned on the surface of ceramic plate, then withdraw the naked flame;

Small flue or insufficient exhaust volume —

Loose sealing of connector — check and tighten every connector up.

2. Maintenance

In order to prevent external dust blocked burning plate burner port and prolong service life, user must tidy and clean the burner with compressed air($P < 2\text{kg}$) at regular intervals(half a month).

How to do:

1. Blow the ceramic plate in vertical, and then blow inwards from the air pipe.
2. Be careful and avoid blow off the seal rock wool.
3. It's important to check whether the pipeline leak.