

SHAHI TANDOOR

GAS- FIRED (NAT & LPG)

From The Clay Oven Company Ltd.
Leading manufacturers of clay ovens since 1974



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CONFORMS TO ANS Z83.11b-2006
CONFORMS TO ANSI/NSF 4
CERTIFIED TO CSA 1.8a-2006
CONFORMS TO 90/396/EEC

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Introduction

The Clay Oven Company Ltd. Est. 1974 is the market leader in Tandoor catering, providing the most gas efficient and cost saving oven on the market. This product is for professional use and must only be operated by suitably trained personnel.

Its unique hygienic design makes the product extremely easy to clean and safe to use. As there are no exposed joints, the housing presents a flush surface that makes cleaning much more effective.

For Your Safety:

- Please post in a prominent location instructions to be followed in the event the user smells gas.
- Do not store or use flammable vapours or liquids in the vicinity of this or any other appliance.
- Whilst in operation, parts of the appliance will become hot. Suitable precautions must be taken to avoid accidental burns.
- Keep all combustible products away from the Tandoor.
- **This is a gas fired Tandoor ONLY. No charcoal use. The oven must not be exposed to rain/water.**
- Keep at least 6”(152mm) away from any other equipment.
- Must be installed by a professionally qualified technician.
- At all times keep this manual in the vicinity of the oven.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the following installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

Continuous product improvement is a policy of the Clay Oven Company Ltd. Specification and designs are subject to change without notice.

Consequential Loss

The Clay Oven Company Ltd does not accept responsibility for loss of food, production time, profit etc, which may result from the breakdown of the appliance.

This appliance must be installed in accordance with current local regulations and only used in a well ventilated area.

Installation Instructions

This product is made with the safest materials conforming to the United States NSF and according to the relevant CE directives. Proper installation must conform to all local codes and with US Fuel GAS Code, ANSI Z223.1-1988 or its latest edition. Within Europe, appliances should be installed in accordance with BS 6173:1982 code of practice for installation of gas catering appliances, taking into account Gas Safety Regulations 1984 as amended by the Gas Safety (Installation and Use) (Amendment) Regulations 1990, 1996 and Health and Safety at Work Act 1974.

Installation of this equipment must be performed by a registered gas-safe gas fitter.

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.5 kPa). In Europe a gas soundness test must be carried out.

Unpacking

- Un-crate the unit with extreme care, do not use a hammer or heavy tools to un-crate the unit, always use outward prying.
- Make sure the unit is in the upright position before starting to un-crate.
- **Before fixing the appliance in place, remove all protective plastic coating from the unit.**
- Oven is on 4”(100mm) wheel castors and can be rolled out easily to the designated installation area.
- Unit must be rolled around by hand. Do not use a lift jack.

Clearance and Positioning

- **Do not install propane (LPG) appliances below ground level.**
- This appliance requires a 6”(150mm) clearance from combustible and non-combustible materials.
- A clear space of at least 6”(150mm) should be left at the rear and sides of the appliance.
- There must be a minimum clearance of 32” in the US and (750mm in Europe) between top of the appliance and any overhanging shelf. Shelves must be of a non-combustible material.
- It is recommended that the appliance is not installed in draughty locations or near doors.
- If the appliance is positioned on a combustible floor, sheet metal (preferably stainless steel) equal to the base area of the appliance must be secured to the floor prior to fixing the appliance in place.
- Ensure that the appliance is level.

Ventilation

- The area in which the appliance is to be installed should have sufficient fixed ventilation to comply with the requirements of Approved Document J in the 1985 Building Regulations in Europe, with a minimum area of 4.5cm² per 1Kwh (3412 Btu/hr) of total heat input.
- Ventilation hood must be installed above the appliance according to all applicable codes by your local and state health & fire regulations.
- It is required that the Shahi Tandoor be interlocked to the hood ventilation system.
- There must be sufficient low-level ventilation to ensure that the appliance has a good supply of clean fresh air.

Gas Supply and Connection

- Check that the gas supply corresponds to that on the data plate. Gas connection must be the same size of the Shahi Tandoor NPT(BSP) 1/2" inlets
- The 1/2" NPT/BSP female thread is located behind the unit.
- A shut off valve must be installed on the gas service line ahead of the unit in case of emergency and for servicing purposes.
- **Connection to the appliance must be made with a flexible hose**; ensure that the hose is suitable for commercial catering appliances and a restraining wire and warning label are used.
- Fixed pipe work must not be used with this appliance.
- Installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69-CSA6.16, and a quick disconnect device that complies with the Standard for Quick Disconnect Devices for the use with gas fuel, ANSI Z21.41-CSA 6.9".

Start Up and Operation

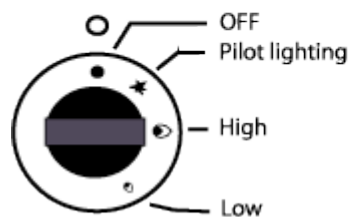
All appliances are operationally checked and adjusted before leaving our factory. Adjustments are made to assure effective operation making sure all local codes are met. The Shahi Tandoor uses a standard pilot to ignite the burner, the gas supply to the pilot and burner are fed through thermo-magnetic safety valve. A thermocouple is used to keep the gas line supply open.

- Fit burner plate over burner and place a layer of rocks evenly and level onto plate. Only use rocks as supplied with the appliance.

User Instructions

- Make sure that the Tandoor gas valves are off.
- Open the main gas line to the Tandoor oven
- Depress and hold the black knob on the 'star' position indicated by a star for 10 seconds to clear the air from the gas line.
- Repeatedly push the piezo igniter until the pilot burner lights. (The pilot light can be seen faintly at '5 o'clock' below the burner plate).
- Continue to keep the control knob pressed in for a further 20-30 seconds for the flame sensing device to establish itself.

- If the pilot burner extinguishes itself when the knob is released, repeat the above procedure.
- If the burner becomes extinguished for any reason while the oven is operating, switch control off and **WAIT 3 MINUTES BEFORE RELIGHTING**.
- Rotate the control knob anti-clockwise. The burner can now be set to the high flame position indicated by the large flame symbol. To turn to the low position, or anywhere between the two, continue to turn the control knob anti-clockwise towards the small flame symbol.
- The main burner should light smoothly and quietly. If ignition is delayed or becomes noisy, turn off the appliance and call a service engineer. Burner flames should be predominantly blue.
- When not in use, the control knob should always be left in the OFF position (see diagram below)



FIRST FIRING

It is important to gradually build up heat within the Tandoor the first time its being used. **The burner should be at a very low setting (control valve set at LOW) for at least 6 hours before gradually increasing the flame intensity. During this procedure the mouth of the Tandoor should be completely exposed. DO NOT cover the opening with the stainless steel lid.** Do not be alarmed if you see small fissures appear on the clay surface it will not affect the performance of the Tandoor.

Shutting Down of the Appliance

To turn off the appliance, turn the control knob clockwise until the indicator on the knob is in the off position indicated by the black dot symbol.

WARNING- after operation the appliance will remain hot for some time, therefore care should be taken to avoid injury.

Maintenance and Cleaning of Appliance

Slight hairline cracks are expected to appear in the clay pot during use. A tub of fire cement is supplied with the oven to effect repairs as follows (when the Tandoor has cooled down):

- Dampen the affected area with a moist cloth.
- Fill in the crack with the fire cement using a wooden spatula.
- Smooth the filled area with a soft moist cloth.
- Allow to air dry for approximately 6 hours. **DO NOT WET THE CLAY LINING.**
- Remove rocks and lightly brush clean.

Clean all external panels with a non abrasive detergent. To safely remove the build up of grease on the clay surface, wipe it down with a cloth that has been dampened with a solution of salt and white vinegar.

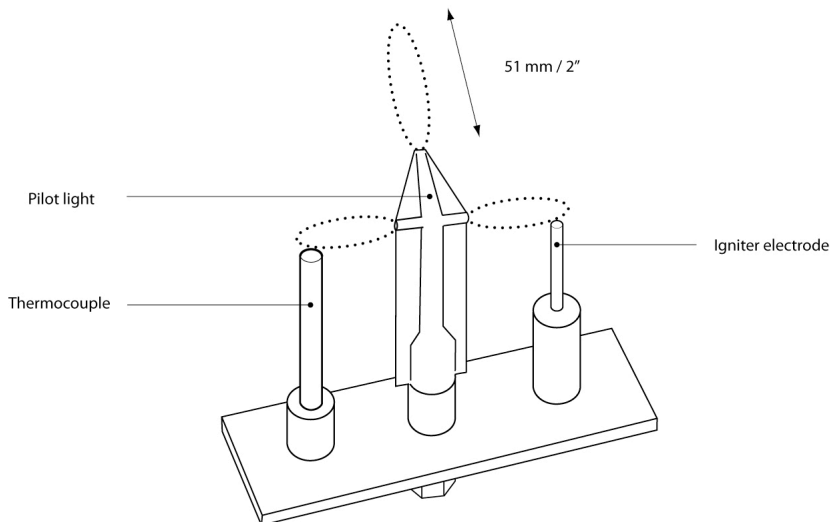
Servicing

Gas catering equipment should be routinely serviced to ensure a long trouble free life. It is recommended that the appliances are serviced every 6 months by a registered gas-safe fitter.

General Check

Remove the control knob and the 4 screws securing the front cover and lift cover off over the tap spindle.

1. General check of the appliance, e.g. installation, ventilation, correct gas type, correct pipe/flexible hose, restrained wire fitted, isolation valve.
2. Check flame picture.
Diagram indicates required length of pilot flame (51 mm).



PILOT LIGHT ASSEMBLY

3. Check low flame setting, adjust as necessary.

4. Check general burner condition. Clean burner ports.
5. Clean aeration port and injector of any lint build up.
6. Carry out gas soundness test.

Component Replacement

Access to components is gained by removing the front cover. This is done by undoing the screws which secure the front cover and then removing it.

Thermocouple

1. Loosen the thermocouple and pilot light gas supply connection to the valve.
2. Undo the nut holding the pilot light assembly cradle and withdraw.
3. Replace the thermocouple
4. Replace as above in reverse order.

DO NOT OVERTIGHTEN THE CONNECTION VALVE

The tip of the thermocouple should be 1" (25mm) from the edge of the main burner and level with the top of the main burner.

The pilot flame should completely envelop the tip of the thermocouple.

Igniter Electrode

1. Remove the igniter lead from piezo.
2. Undo the nut holding the pilot light assembly cradle and withdraw.
3. Replace the electrode
4. Replace as above in reverse order.

Pilot Burner

1. Loosen the thermocouple and pilot light gas supply connection to the valve.
2. Undo the nut holding the pilot light assembly cradle and replace.

Gas Tap Assembly

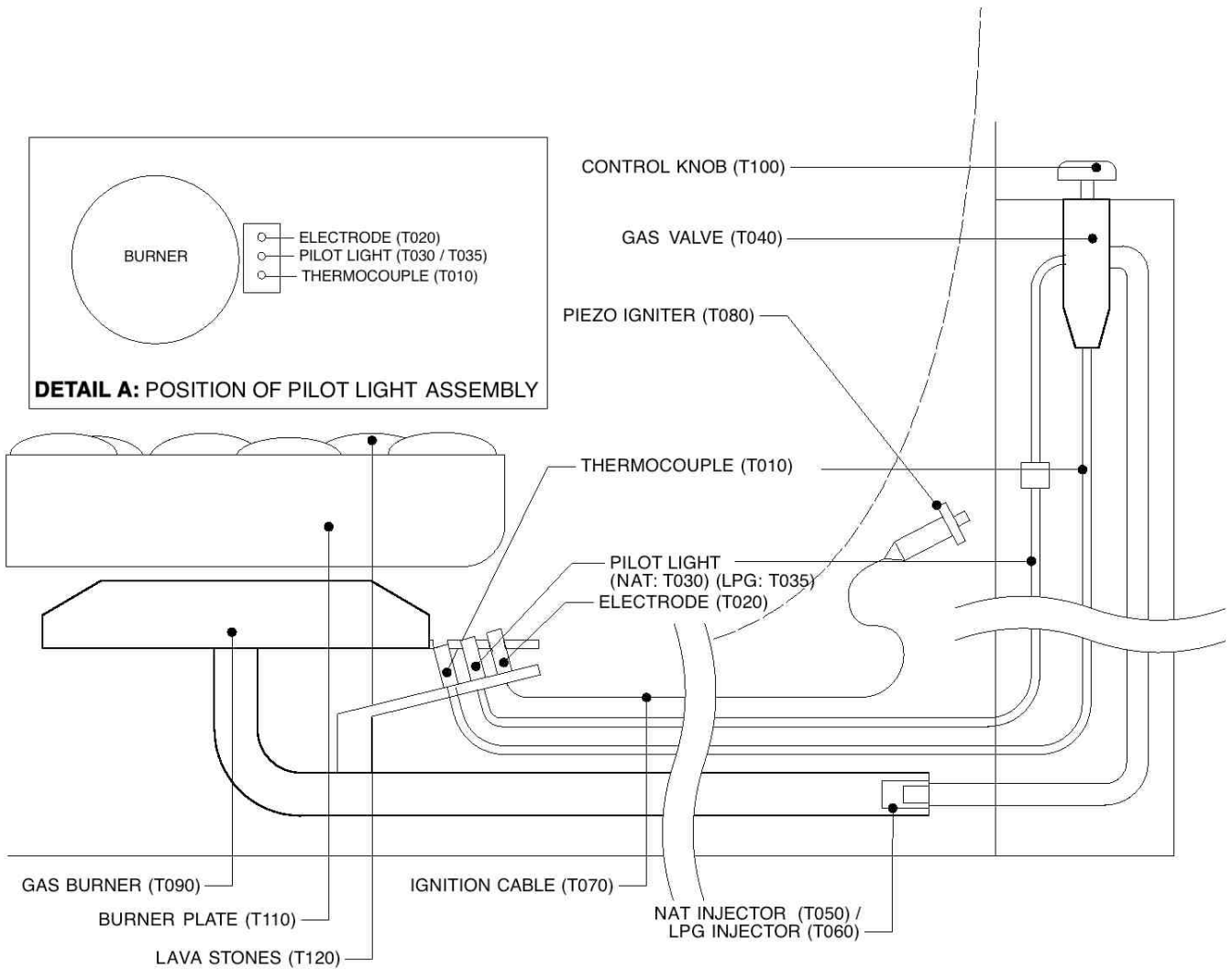
1. Loosen and remove connections to burner pipe and gas inlet pipe.
2. Loosen and remove connection to pilot burner
3. Loosen connection to thermocouple and remove.
4. Loosen and remove the holding plate nut
5. Withdraw tap assembly
6. Replace as above in reverse order.

Burner

1. remove rocks and plate sitting on the burner
2. Loosen connection from burner pipe to gas tap and remove.
3. Withdraw burner through top of oven
4. Replace as above in reverse order

Injector

1. Loosen connection from burner pipe to gas tap and remove.
2. Loosen and remove injector carrier from burner.
3. Loosen and remove injector from injector carrier.
4. Replace as above in reverse order.



Spares List- See Fig B.

Part No.	Description
T-010	Thermocouple
T-020	Igniter Electrode
T-030	Pilot Light Injector (NAT)
T-035	Pilot Light Injector (LPG)
T-040	Gas valve
T-050	Injector (NAT)
T-060	Injector (LPG)
T-070	Ignition Cable
T-080	Piezo Igniter
T-090	Burner
T-100	Control knob
T-110	Gas burner plate
T-120	Lavastones

Technical Data

Dimensions: Size 1 H= 36”(915mm) W= 23.5”(600mm) D= 27.5”(700mm)
 Size 2 H= 35”(889mm) W= 28”(711mm) D= 32”(813mm)
 Size 3 H= 35”(889mm) W= 32”(813mm) D= 36”(915mm)

Weight Size 1= 280lbs (130kg)
 Size 2= 360lbs (165kg)
 Size 3= 400lbs (185kg)

Inlet connection ½” NPT (BSP)

For size 1 and size 2

	Natural Gas	Propane Gas (LPG)
Heat Input	10kW (net) 33,000 Btu	10 kW (net)
Gas Pressure	20 mbar	37mbar
Burner Pressure	High rate 15-16mbar Low rate 6-7mbar	35-36mbar 26-27mbar
Gas rate	0.95m ³ /hour	0.72kg/hour

For size 3

	Natural Gas	Propane Gas (LPG)
Heat Input	14kW(net) 45,000 Btu	14kW(net)
Gas Pressure	20mbar	37mbar
Burner Pressure	High rate 15-16mbar Low rate 6-7mbar	35-36mbar 26-27 mbar
Gas rate	1.15m ³ /hour	0.9kg/hour

FREQUENTLY ASKED QUESTIONS

1. **What is the average cooking temperature?** 550F/290C
2. **How long does it take to reach this temperature?** Approximately 30 minutes
3. **What can I do if the oven does not get hot enough?** Check to see that the control knob is at the correct setting. Make sure that the air intake to the gas burner is not obstructed.
4. **How do I clean the interior base of the oven?** Scrape away the carbon deposits and use a wet/dry vacuum cleaner to remove debris.
5. **How do I clean the gas burner assembly?** The gas burner assembly consists of 3 parts: the burner, the plate and ceramic lava stones. They may be cleaned with a wire brush.
6. **What do I do if the burner switches itself off during operation?** This means that the pilot light is lifting off the thermal sensor caused by either a) excessive draft due to high level of extraction from the ventilation system or b) some obstruction between the pilot light and the thermocouple or c) dirt lodged in the pilot light nozzle.

In the case of:

- a) Reduce the air flow through the tubular passage containing the burner by using non-combustible material (eg. aluminium foil).
 - b) Remove obstruction and clean the sensor point gently.
 - c) Undo pilot light connection and blow out obstruction.
7. **What do I do if the pilot light comes on but on release of the control knob it extinguishes?** First check the connection between the end of the thermocouple and the gas valve making sure it is tight. If this fails replace the universal thermocouple - see spares list.
 8. **What do I do if the pilot light will not come on at all?** The reason for this is maybe that the piezo igniter is faulty. To override this problem you can light the pilot light manually with a lit taper. If it still will not light, examine the main gas supply ensuring that gas connection to the Tandoor is in order.
 9. **How do I prevent the naan bread from sliding off the clay oven wall?** This could be due to a) the oven not being hot enough or b) the dough being too oily.

In the case of:

- a) See answers to question 3
 - b) Dab some water onto the dough before placing it into the clay pot.
10. **How can a smoky flavour be achieved when food is cooked in a gas oven?**
This flavour can be created by turning off the oven just when the items are cooked and allowing the smoke to permeate the cooked meats for a few minutes.