

# G3478 Steaming Oven

## INSTALLATION and SERVICING INSTRUCTIONS



**This appliance must be installed and serviced by a qualified person as stipulated by the Gas Safety (*Installation & Use*) Regulations.**

### **IMPORTANT**

The installer must ensure that the installation of the appliance is in conformity with these instructions and National Regulations in force at the time of installation. Particular attention **MUST** be paid to:

**Gas Safety (Installation & Use) Regulations  
Health and Safety at Work etc. Act  
Local and National Building Regulations  
Fire Precautions Act  
National Water Regulations**

Detailed recommendations are contained in Institute of Gas Engineers published documents:  
**IGE/UP1, IGE/UP2  
BS6173, BS5440 and EN1717**

These appliances have been UKCA/CE-marked based on compliance with the Gas Appliance Regulations/Product Safety and Metrology Regulations for the Countries, Gas Types and Pressures as stated on the data plate.

**WARNING: TO PREVENT SHOCKS, ALL APPLIANCES WHETHER GAS OR ELECTRIC,  
MUST BE EARTHED.**

On completion of the installation, these instructions should be left with the Engineer-in-Charge for reference during servicing. Further to this, The Users Instructions should be handed over to the User, having had a demonstration of the operation and cleaning of the Appliance.

**IT IS MOST IMPORTANT THAT THESE INSTRUCTIONS BE CONSULTED BEFORE INSTALLING  
AND COMMISSIONING THIS APPLIANCE. FAILURE TO COMPLY WITH THE SPECIFIED  
PROCEDURES MAY RESULT IN DAMAGE OR THE NEED FOR A SERVICE CALL.**

### **PREVENTATIVE MAINTENANCE CONTRACT**

To obtain maximum performance from this unit regular servicing of the appliance should be undertaken to ensure correct operation, it is functioning as intended, and safe to use. We recommend servicing in accordance with SFG20 Maintenance Schedules and as a minimum, after 2,500 hours of use, or annually, whichever comes first and that a maintenance contract be arranged with an appointed service contact. Visits may then be made at agreed intervals to carry out adjustments and repairs.



### **WEEE Directive Registration No. WEE/DC0059TT/PRO**

At end of appliance life, dispose of appliance and any replacement parts in a safe manner, via a licensed waste handler. Appliances are designed to be dismantled easily and recycling of all material is encouraged, whenever practicable.

### **Falcon Foodservice Equipment**

#### **HEAD OFFICE AND WORKS**

Wallace View, Hillfoots Road, Stirling, FK9 5PY, Scotland

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T100789 Ref.8

## SECTION 1 - INSTALLATION

UNLESS OTHERWISE STATED, PARTS WHICH HAVE BEEN PROTECTED BY THE MANUFACTURER ARE NOT TO BE ADJUSTED BY THE INSTALLER.

### 1.1 MODEL NUMBERS, NETT WEIGHTS and DIMENSIONS

Model	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
G3478 Steaming Oven	600	840	1625	96

### 1.2 SITING

The appliance must be installed upon a firm, level floor in a well lit position. It requires to be secured to this surface.

The oven MUST be positioned 150mm away from a combustible wall.

#### Important

If the appliance is to be installed in suite formation with other matching appliances of the DOMINATOR PLUS Series, the instructions for all appliances must be consulted to determine the necessary clearance to any combustible rear wall or overlying surface. Some appliances require greater clearance than others, and the largest figure quoted in the individual instructions will therefore determine the clearance for the complete suite of adjoining appliances.

### 1.3 VENTILATION

The appliance flue discharges vertically at the rear. There must be no direct connection of the flue to any mechanical extraction system or the outside air. Siting the appliance under a ventilated canopy is the ideal arrangement.

Adequate ventilation, whether natural or mechanical, must be provided to supply sufficient fresh air\* for combustion and allow easy removal of combustion products that may be harmful to health.

\*A minimum of 15 to 20m<sup>3</sup>/h of air is required.

Recommendations of ventilation for Catering Appliances are given in BS 5440:2.

For multiple installations, the requirements for individual appliances should be added together. Installation should be made in accordance with local and/or national regulations applying at the time. A qualified installer must be employed.

### 1.4 GAS SUPPLY

The incoming service must be of sufficient size to supply full rate without excessive pressure drop.

A meter is connected to the service pipe by gas supplier. Any existing meter should be checked by supplier to ensure it is of adequate capacity to pass the required rate of gas for the appliance, in addition to any other gas equipment installed.

Installation pipe work should be fitted in accordance with IGE/UP/2. The pipe work should be of adequate size, but not be smaller than the appliance gas inlet connection, i.e. Rp $\frac{1}{2}$  ( $\frac{1}{2}$ " BSP).

If flexible tube is used, the gas supply tubing or hose shall comply with national requirements in force and shall not exceed 1.5m in length. These will be periodically examined and replaced as necessary.

An isolating cock must be located close to appliance to allow shut-down during an emergency or servicing.

The installation must be tested for gas tightness. Details of this procedure can be found in IGE/UP/1.

### 1.5 ELECTRICAL SUPPLY

Not applicable to these appliances.

## 1.6 WATER SUPPLY (IRN R001)

**Warning - The unit shall not be used empty.**

**The unit must be connected in accordance with R160 and that an `Approved` double check valve, or some other no less effective device providing backflow prevention protection to at least fluid category three, shall be fitted at the point of connection(s) between the water supply and the fitting or appliance.**

Supply pressure must be within range of 0.5 to 5 bar. The installation shall be connected to the potable water supply in accordance with national regulations. A stop cock must be fitted in an easily accessible position on the supply to enable shut off for cleaning and maintenance.

Front trough drain should be situated over a floor grating, where possible.

## 1.7 HEAT INPUTS

### Full Rate

Gas type	kW (nett)	Btu/hr (gross)
Natural gas	12.1	45,400
Propane gas	12.7	47,700

### Low Rate

Gas type	kW (nett)	Btu/hr (gross)
Natural gas	6	22,500
Propane gas	6.5	24,500

### Pilot Rate

Gas type	kW (nett)	Btu/hr (gross)
Natural gas	0.18	675
Propane gas	0.18	675

## 1.8 INJECTOR SIZES

Gas type	Main burner	Pilot burner
Natural gas	Ø3.2mm	SIT No. 36
Propane gas	Ø1.9mm	SIT No. 19

## 1.9 GAS PRESSURES

### Full Rate

Gas type	Burner Pressure		Supply Pressure	
	mbar	inches w.g.	mbar	inches w.g.
Natural gas	9.5	3.8	20	8
Propane gas	37	14.8	37	14.8

### Low Rate

Gas type	mbar	inches w.g.
Natural Gas	2	0.8
Propane Gas	7.5	3

## 1.10 BYPASS RATE SETTING

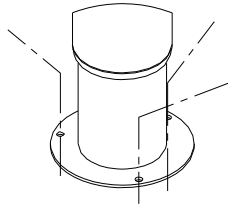
The burner has a fixed aeration inlet and injector orifice. NO ADJUSTMENT IS AVAILABLE.

## SECTION 2 - ASSEMBLY and COMMISSIONING

### 2.1 ASSEMBLY

1. Position appliance and level by adjusting screwed feet. Secure to floor using fixing points provided. (See *Figure 1*)
2. Ensure all packing material is removed from oven and cistern. Check also that steam vent is clear.
3. Hang shelf runners inside compartment and insert trays or baskets.

**Figure 1**



### 2.2 CONNECTION TO GAS SUPPLY

The gas supply piping and connection to appliance must be installed in accordance with the various regulations listed on the cover of this manual.

On natural gas appliances, an adjustable governor **MUST** be fitted in the supply.

On propane appliances, a governor is **NOT** fitted.

### 2.3 CONNECTION TO WATER SUPPLY

1. Connect water services including overflow from cistern.
2. Turn on water and allow cistern to fill. Ensure that water depth within oven chamber well is up to 60mm level mark. Adjust ball arm valve if necessary. An additional mark is provided on cistern inner wall to assist adjustment.

### 2.4 CONNECTION TO ELECTRICITY SUPPLY

Not applicable to this appliance.

### 2.5 PRE-COMMISSIONING CHECK

After installation and assembly, the following checks must be carried out to ensure satisfactory operation of the appliance. Failure to do this may result in damage to appliance or necessitate a service call for rectification.

#### 2.5.1 Gas Tightness

Turn on main gas supply and check gas tightness.

#### 2.5.2. Burner Operating Pressure

Fit a pressure gauge to test point on burner inlet manifold. Turn on main gas cock and purge service pipework of air. Light pilot and main burner as instructed in User instructions. Check pressures at full rate (See Section 1.9).

An adjustable governor is provided for use on **NATURAL GAS MODELS ONLY**.

The pressure may be set by removing screwed cap and inserting a screwdriver. Turning the inner adjusting screw clockwise will increase pressure whilst anti-clockwise rotation will decrease it.

Supply pressure adjustment on **PROPANE MODELS** must be made at supply regulator. No adjustment is provided on the appliance.

#### 2.5.3 Low Flame Setting

Turn control knob to low flame position and check that pressure corresponds with details in Section 1.9.

On completion, turn burner OFF. Remove pressure gauge and replace test point screw.

#### 2.5.4 Ignition

Having adjusted burner pressure, carry out lighting procedure to check smooth ignition of pilot and main burner.

### Important Note

It is essential the above checks are carried out before appliance is put into service. Failure to do so may result in damage to appliance, or necessitate a service call.

## 2.6 INSTRUCTION TO USER

After installing and commissioning appliance, hand User Instructions to user, or purchaser, and ensure person(s) responsible understands the instructions for lighting, cleaning and correct use of the appliance. Particular emphasis should be given to safe operation of drain valve. It is important to ensure that the location of gas isolating cock is made known to user and the procedure for operation in an emergency demonstrated.

## SECTION 3 - SERVICING and CONVERSION

### SERVICE INFORMATION

This unit carries an extensive mainland UK warranty. The warranty is in addition to and does not change your statutory or legal rights.

The warranty policy can be found on our website which details the conditions of the warranty and the exclusions.

<https://www.falconfoodservice.com/info-centre/policy>



Service calls to equipment under warranty will be carried out in accordance with the conditions of sale.

Warranty calls can be made between 8:30 am and 5:00 pm weekdays only.

To ensure your warranty enquiry is handled as efficiently as possible, ensure you have the following appliance information prior to calling us:

1. Model number – found on data plate
2. Serial number – found on data plate
3. Brief description of the issue

To contact Falcon for a warranty issue dial (UK only) 01786 455 200 and select Warranty Issues from the menu.

### Important

BEFORE ATTEMPTING ANY SERVICE OPERATION, TURN OFF ISOLATING COCK AND TAKE STEPS TO ENSURE IT IS NOT INADVERTENTLY TURNED ON DURING TASK.

ENSURE APPLIANCE HAS COOLED SUFFICIENTLY TO ALLOW SAFE MAINTENANCE TO BE CARRIED OUT.

AFTER ANY SUCH MAINTENANCE TASK, CHECK APPLIANCE TO ENSURE THAT IT PERFORMS CORRECTLY AND CARRY OUT ANY NECESSARY ADJUSTMENTS AS DETAILED IN SECTION 1.

After carrying out any servicing or exchange of gas carrying components - ALWAYS CHECK GAS TIGHTNESS!

### **3.1 GAS CONVERSION CHECK LIST**

For conversion to NATURAL GAS, add governor and set burner pressure.

For conversion to PROPANE GAS, remove governor from gas circuit.

Other considerations:

CHANGE INJECTORS

ADJUST BY-PASS SCREW AND SET LOW RATE

CHANGE DATA PLATE

### **3.2 TO REMOVE CONTROL PANEL**

Remove control knob and fixing bracket. Undo fixings from underside. Ease panel out and down to clear top locating pins.

### **3.3 BURNERS**

#### **3.3.1 To Remove Burner Assembly**

Remove pilot assembly (refer to section 3.3.2) to gain access to burner. Undo union supply pipe at burner inlet.

Remove fixings that secure burner brackets to cast iron base plate and lower burner away from base.

#### **3.3.2 To Remove Pilot Burner Assembly**

Undo pilot and thermocouple unions from gas valve. Also, remove nut that retains igniter lead to electrode (see *Figure 3*).

Undo pilot burner bracket from below burner. Withdraw pilot burner assembly from appliance.

Undo fixings to remove pilot burner from bracket.

### **3.4 INJECTORS**

#### **3.4.1 To Remove Burner Injector**

Remove injector, located inside air box of burner, with a 16mm short armed spanner.

#### **Note**

When cleaning injector orifice, a soft fuse wire or wooden splint should be used.

METAL REAMERS MUST NOT BE USED TO AVOID ENLARGING THE ORIFICE.

#### **3.4.2 To Remove Pilot Injector**

Undo pilot union at pilot end of supply pipe and withdraw pipe from pilot burner (see *Figure 3*).

The injector is located by pilot pipe and care must be taken to avoid losing this upon withdrawal.

### **3.5 TO REMOVE THERMOCOUPLE**

Undo thermocouple retaining nut from pilot burner and slide thermocouple from pilot block (see *Figure 3*).

Remove thermocouple nut at gas tap body.

#### **Note**

When replacing union nut at gas valve end, it must be finger tight plus one sixth of a spanner turn. DO NOT OVERTIGHTEN.

### **3.6 PIEZO IGNITER / SPARK ELECTRODE**

#### **3.6.1 To Remove Piezo Igniter**

Pull off lead connection and remove fixings that secure igniter to bracket.

#### **3.6.2 To Remove Spark Electrode**

Undo electrode retaining nut and withdraw (See *Figure 3*).

### **3.7 GAS VALVE**

#### **3.7.1 To Remove Gas Valve**

Ensure knob is in OFF position.

Undo union nuts on inlet and outlet of valve; loosen union nuts on pilot supply and thermocouple.

Remove fixing at RH side of spindle and push valve back to clear mounting panel. Remove valve through bottom compartment.

### 3.7.2 To Re-grease Tap Plug

Undo fixings that retain securing plate to valve body. Remove securing plate, spindle and brass disc to expose plug.

Withdraw plug and clean it, and the body, with a soft rag before re-greasing with an approved high temperature lubricant. **DO NOT OVERGREASE.**

During re-assembly, it will be noticed that steel pin in operating spindle end will only locate in one position.

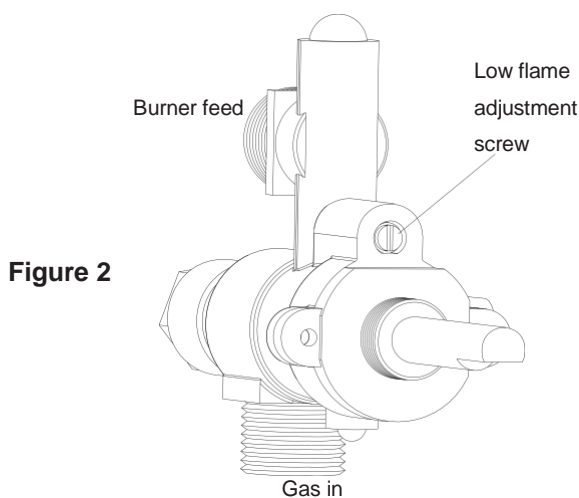
Re-assemble in reverse order.

#### **Important**

Following re-assembly, tap operation should be checked at all settings. Ensure that red spot on knob indicates correct position (*i.e. check that spindle adaptor has been replaced in correct position*).

### 3.7.3 Setting Low Rate

Low rate is set by adjustment. Remove test point screw and attach pressure gauge. Turn burner on. Turn control knob to low flame position. Turn low flame adjustment screw clockwise to reduce pressure. Value is indicated in Section 1.9. (See Figure 2).



**Figure 2**

Upon completion, turn burner OFF. Remove pressure gauge and replace test point screw.

### 3.8 GOVERNOR (*NATURAL GAS ONLY*)

This component is maintenance free. Check that blue dust cap for vent is fitted and in good condition. This protects breather hole. Ensure flow direction arrow points toward appliance inlet.

### 3.9 DOUBLE CHECK VALVE

This component is maintenance free.

This water supply safety feature must always be fitted to prevent backflow. Ensure flow direction arrow points toward ball valve inlet.

### 3.10 TO CLEAN BALL VALVE

Turn OFF mains water supply and drain steamer tank at draw off tap.

Remove cistern lid.

Remove split pin from valve body.

Raise ball valve arm slightly and withdraw from valve socket.

Unscrew cap at valve end and extract valve plug.

Clean all components with a soft rag. **DO NOT USE ABRASIVES.**

Replace in reverse order and test soundness. Flush out pipes to steaming oven and re-fit tank. Check water level as detailed in Section 2.3.

### 3.11 ADJUSTING DOOR FIT

Check that door seal is in good condition.

When oven is operating on full steam there, should be no escape of steam around the door periphery. Condensed water should not drip into the trough when the door is securely closed.

If the seal is damaged, remove the seal by pulling away from the door.

Replace seal by firmly pushing the new seal into the door frame until fully home.

To adjust door catch:

Undo lock nut on the door catch

Adjust catch

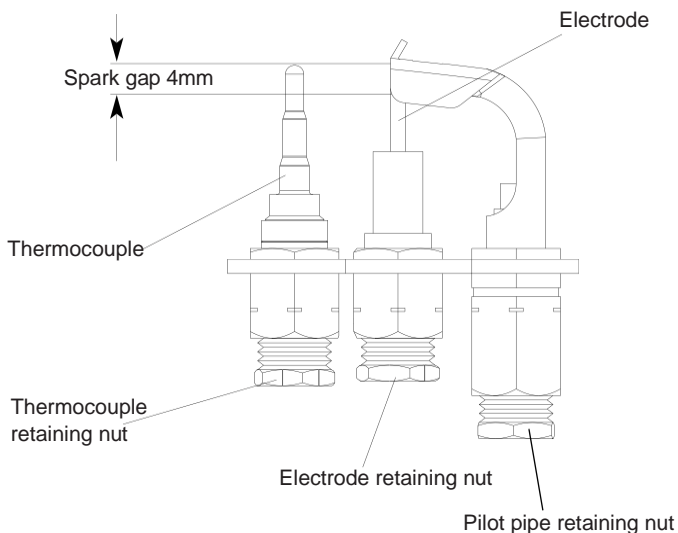
Tighten lock nut

### 3.12 IGNITION SYSTEM FAULTS

a) If spark igniter does not light pilot, check for a spark and gas. If no spark is evident, inspect electrode to ensure ceramic is not cracked and that igniter lead is correctly located. Check insulation on lead for damage.

Having established a spark, check gas flow to pilot by lighting with a flame. If there is no gas, inspect that pilot injector is not blocked.

b) If spark ignites pilot, but goes out when knob is released, ensure FFD operates correctly by following procedure detailed in Section 3.13.



**Figure 3**

### FLAME FAILURE DEVICE FAULTS

It is **IMPORTANT** that pilot burner is kept clean and properly adjusted. Frequency of cleaning will depend on the prevailing conditions in the kitchen.

Should FFD fail to engage, the following points should be checked. Details of access to individual components can be found in Section 3.

1. Ensure gas supply to appliance is turned ON.
2. Check pilot gas supply to ensure connecting pipes and/or pilot burner injector are not blocked.
3. Check position of pilot flame in relation to thermocouple. Flame should envelop and heat 10mm of thermocouple tip. Thermocouple tip should be at flame centre.
4. Ensure thermocouple is located firmly in the seating on pilot burner. Take care not to over-tighten retaining nut.
5. Check thermocouple connection to valve is clean and that satisfactory contact is made. The nut should be screwed (finger tight) into valve and a further sixth of a spanner turn (one spanner flat) to secure. The connection **MUST NOT BE OVER-TIGHTENED**, as this may cause damage to valve or thermocouple. No thread compound should be used as this is an electrical connection.
6. Press burner tap knob IN, turn to ignition setting and hold. Press igniter button fully in and release it. Check resultant spark has lit pilot burner.



If electrode fails to spark, check both electrode and igniter (see Section 3.12). If either component is faulty, pilot may be lit with a flame.

With pilot established, continue to hold tap knob IN for a further 20 seconds, then release. The pilot should now remain lit.

Should appliance fail to respond to these checks, then a replacement FFD magnet unit or thermocouple is required.

## **SECTION 4 - SPARE PARTS**

When ordering spares, always quote unit type and serial number.

This information will be found on the data plate.

The following parts may require replacing during unit life:

Spark ignition lead

Pilot burner assembly (*Natural gas*)

Pilot burner assembly (*Propane gas*)

Injector (*Natural gas*)

Injector (*Propane gas*)

Door seal

Door handle

Door pin (*single action*)

Drip tray

Control knob Shelf