

E3901i / E3902i Induction Boiling Tables

INSTALLATION and SERVICING INSTRUCTIONS



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 –

BS7671 IEE Wiring Regulations
Health and Safety At Work Act

Electricity at Work Regulations
Fire Precautions Act

WARNING

READ THESE INSTRUCTIONS BEFORE INSTALLING THIS APPLIANCE.

BEFORE ATTEMPTING ANY MAINTENANCE, ISOLATE THE APPLIANCE AT THE MAINS ISOLATING SWITCH AND TAKE STEPS TO ENSURE THAT IT CANNOT BE INADVERTENTLY SWITCHED ON.

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 AND NEED FOR A SERVICE CALL.

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

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 unit life, dispose of appliance and any replacement parts in a safe manner, via a licenced waste handler.

Units are designed to be dismantled easily and recycling of all material is encouraged whenever practicable.

Falcon Foodservice Equipment

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

Service Contact

Phone: 01438 363 000 Email: servicesupport@service-line.co.uk

T100803 Ref. 10

IMPORTANT INFORMATION

ELECTRICAL SAFETY AND ADVICE REGARDING SUPPLEMENTARY ELECTRICAL PROTECTION

Commercial kitchens and foodservice areas are environments where electrical appliances may be located close to liquids, or operate in and around damp conditions or where restricted movement for installation and service is evident.

The installation and periodic inspection of the appliance should only be undertaken by a qualified, skilled and competent electrician; and connected to the correct power supply suitable for the load as stipulated by the appliance data label.

The electrical installation and connections should meet the necessary requirements to the local electrical wiring regulations and any electrical safety guidelines.

We recommend:-

- Supplementary electrical protection with the use of a type A residual current device (RCD)
- Fixed wiring appliances incorporate a locally situated switch disconnector to connect to, which is easily accessible for switching off and safe isolation purposes. The switch disconnector must meet the specification requirements of IEC 60947.

Your attention is drawn to:-

BS 7671:2018–Guidance Note 8 - 8.13 : Other locations of increased risk

It is recognized that there may be locations of increased risk of electric shock other than those specifically addressed in Part 7 of BS 7671. Examples of such locations could include laundries where there are washing and drying machines in close proximity and water is present, and commercial kitchens with stainless steel units, where once again, water is present.

Where because of the perception of additional risks being likely, the installation designer decides that an installation or location warrants further protective measures, the options available include:

- Automatic Disconnection of Supply (ADS) by means of a residual current device having a residual operating current not exceeding 30mA;
- Supplementary protective equipotential bonding; and
- Reduction of maximum fault clearance time.

The provision of RCDs and supplementary bonding must be specified by the host organization's appointed installation designer or electrical contractor and installed by a suitably qualified and competent electrician so as to comply with Regulations 419.2 and 544.2

Warranty Policy Shortlist

Warranty does not cover :-

- Correcting faults caused by incorrect installation of a product.
- Where an engineer cannot gain access to a site or a product.
- Repeat commission visits.
- Replacement of any parts where damage has been caused by misuse.
- Engineer waiting time will be chargeable.
- Routine maintenance and cleaning.
- Gas conversions i.e. Natural to Propane gas.
- Descaling of water products and cleaning of water sensors where softeners/ conditioners are not fitted, or are fitted and not maintained.
- Blocked drains
- Independent steam generation systems.
- Gas, water and electrical supply external to unit.
- Light bulbs
- Re-installing vacuum in kettle jackets.
- Replacement of grill burner ceramics when damage has been clearly caused by misuse.
- Where an engineer finds no fault with a product that has been reported faulty.
- Re-setting or adjustment of thermostats when unit is operating to specification.
- Cleaning and unblocking of fryer filter systems due to customer misuse.
- Lubrication and adjustment of door catches.
- Cleaning and Maintenance
 - Cleaning of burner jets
 - Poor combustion caused by lack of cleaning
 - Lubrication of moving parts
 - Lubrication of gas cocks
 - Cleaning/adjustment of pilots
 - Correction of gas pressure to appliance.
 - Renewing of electric cable ends.
 - Replacement of fuses
 - Corrosion caused by use of chemical cleaners.
 - Cleaning of all filters and airways
 - Faults occurring as a result of airway obstruction.
 - Use of the unit without filters.

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 NUMBER, NETT WEIGHT and DIMENSIONS

Model	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
E3901i Induction Table on legs	400	820	890	42
E3901i Induction Table on castors	400	820	890	57
E3902i Induction Table on legs	400	820	890	42
E3902i Induction Table on castors	400	820	890	57

1.2 SITING

The appliance should be installed in a well-lit position on a firm, level, non-combustible floor. The unit is provided with rear stand-off plates to ensure a 50mm gap between appliance and rear wall.

These must NEVER be bent, twisted or deformed, the 50mm gap must never be covered, blocked or reduced.

Nothing shall be placed UNDER the appliance.

Where unit is to be positioned in close proximity to a wall, partition, kitchen furniture, decorative finishes, etc., it is recommended that these be constructed of a non-combustible material.

Close attention should be paid to Fire Regulations.

1.3 ELECTRICAL SUPPLY

The unit is suitable for AC supplies only. The standard terminal arrangement is:
3 phase/no neutral 4 wire connection (400V 3~)



WARNING – THIS APPLIANCE MUST BE EARTHED

Phase 1 **BROWN**
Phase 2 **BLACK**
Phase 3 **GREY**
Earth **YELLOW / GREEN**

1.4 SUPPLY CONNECTION

Mains input connecting cable will conform to code designation 60245 IEC 57, H07RN-F cable, 4mm² (4 core) is suitable.

Cable entry is at unit rear and is suitable for 25mm conduit. A suitably rated isolating switch with contact separation of at least 3mm in all poles must be installed and wiring executed in accordance with relevant regulations.

Access to terminal block is gained by removing the access panel close to cable entry gland on rear panel.

1.5 ELECTRICAL RATINGS

Electrical loadings are as stated below.

Model	L1	L2	L3
E3901i	10.7A	10.7A	10.7A
E3902i	15.3A	15.3A	15.3A

After installation, the engineer should check satisfactory operation and demonstrate method of use to kitchen staff. Location of mains isolating switch should be identified for use in the event of an emergency or during cleaning.

SECTION 2 - ASSEMBLY and COMMISSIONING

NOTE: Users MUST be made aware that individuals fitted with a pacemaker should consult their doctor if in close proximity to this unit. This induction unit emanates an 18 - 22Khz output that may effect older types of pacemaker.

2.1 ASSEMBLY

- a) Unpack and level appliance.
- b) Ensure fan intake filter is fitted and secured in position below control panel.

2.2 CONNECTION TO AN ELECTRICAL SUPPLY

Connect as detailed in Sections 1.3 and 1.4.

2.3 STARTING UP

- a) Switch both cooking zones on to position 10.
- b) Ensure both LEDs light and begin to flash.
- c) Place a suitable pan (*filled with water*) upon a cooking zone. (*Pan bases should be constructed of a ferrous material and cannot be less than 120mm (12cm) in diameter.*)
- d) Ensure that corresponding LED stops flashing and remains lit.
- e) Lift pan from zone: LED should again begin to flash.
- f) This indicates that "*Pan Detection*" feature is working.
- g) Repeat on the other zone.
- h) Switch control off.

2.4 INSTRUCTION TO USER

After installation and commissioning is completed, please hand User Instructions to user and ensure that the person(s) responsible understand the instructions regarding correct operation and cleaning of the appliance. Particular emphasis should be given to:

- suitable pan type,
- Regular cleaning of air filter.
- Keeping cooking zone surface free from all objects, particularly metal utensils, at all times.

The user must also be made aware of potential to heat jewelry and to disrupt electronic equipment placed over the cooking zones.

SECTION 3 - SERVICING, MAINTENANCE AND CONVERSION



BEFORE ATTEMPTING ANY MAINTENANCE, ISOLATE THE APPLIANCE AT THE MAINS ISOLATING SWITCH AND TAKE STEPS TO ENSURE THAT IT CANNOT BE INADVERTENTLY SWITCHED ON.

MAINTENANCE CHECK



Regular servicing of the appliance should be undertaken to ensure correct operation, it is functioning as intended, and safe to use. We recommend servicing after 2,500 hours of use, or annually, whichever comes first.

Any maintenance schedule should be carried out in accordance with SFG20 Maintenance Schedule. Should any issues with the integrity of the components be identified these should be replaced. If the appliance is not considered safe the unit should be removed from service and the responsible person advised why the unit is not safe to use and what remedial action is needed. Contents of the maintenance schedule should be agreed with the maintenance provider.

3.1 CONTROL PANEL

Remove fixings from below hob.

Release fixings from below control panel.

Pull panel slightly forward from below and allow it to slide down until clear.

3.2 MAINS ACCESS PANEL (*at Rear*) (*Refer to Figure 2*)

Remove fixings that secure access panel to rear. Replace in reverse order.

3.3 REMOVING THE GENERATOR

Remove fixings from glass hob (*2 front / 2 back*). Carefully remove glass hob assembly.

Remove fixings (*3 per side*) along top sides of generator/ coil assembly.

Carefully raise generator/coil assembly and rest this on a suitable support.

Disconnect all generator wires, note connection locations. Remove generator assembly.

Replace in reverse order.

REPLACING CONTROL / LED INDICATORS

Remove control panel as detailed in Section 3.1.

Note: Indicators are polarity driven. Green cable (-) connects to spade terminal beside LED body flat side.

Remove two wires connected to LED. Remove control knob.

Undo fixings that secure control to panel. Remove associated LED (*if required*).

Remove main access panel as detailed in Section 3.2.

Identify cables that relate to switch / LED that are connected to generator.

Disconnect associated pugs and pull cables through. Replace switch and re-assemble in reverse order.

3.4 CERAMIC HOB ASSEMBLY

Remove control panel as detailed in Section 3.1. Remove 2 fixings that secure hob at front.

Remove 2 fixings that secure hob to rear panel.

Carefully lift and remove top frame/glass-ceramic plate assembly, and lay on a flat surface.

If replacing hob in the event of glass damage, ensure any glass debris is cleared away from induction coils and from inside of unit.

Ensure that no coil spacers have been removed or disturbed when removing the glass panel. If this is so, then they must be restored to their locations.

Replace in reverse order.

3.5 INDUCTION COIL ASSEMBLY Warning

DO NOT USE THE UNIT IF THE CERAMIC TOP IS CHIPPED, CRACKED OR BROKEN. THE PANEL NEEDS TO BE REPLACED!

Remove control panel as detailed in Section 3.1.

Remove ceramic hob assembly as detailed in Section 3.5.

Trace coil cable to rear of generator. Insert screwdriver into spring-loaded green terminal below each cable (*black or white*). Raise handle enough to release cable.

DO NOT FORCE. DAMAGE CAUSED BY EXCESSIVE FORCE IS NOT COVERED BY WARRANTY!

Remove 2 thermocouple cables (*red*) from smaller green terminal block. Push small green post below each cable. Remove fixings at top corners of faulty coil assembly.

Take care to catch spacer and spring as screw is released.

The coil assembly can now be removed. Replace and re-assemble in reverse order.

Refer to wiring diagram A in Section 5 of this manual.

SECTION 4 - SPARES

When ordering spare parts, always quote appliance type and serial number.

This information will be found on data badge attached to base plate.

3.5kW Generator Assembly 5kW Generator Assembly 3.5kW Induction Coil

5kW Induction Coil Control Knob

Control Switch & LED (Green)

MCB

Ferrite Bead

SECTION 5 - TROUBLESHOOTING

If a fault occurs during use, an error code will be displayed in a series of flashes.

These correspond to the numbers in the code column of the following table.

For example, 6 short flashes followed by an extended flash would indicate error code 06 (*Generator internal temperature too high*).

The codes are provided to diagnose possible faults and the action required to remedy any such condition.

Note: Most faults can be rectified by simply switching the unit off for 10 seconds. After this time, turn power back on at mains supply.

If the fault continues to occur after this action then please refer to the table. This will provide the solution to rectify the condition.

SUPPLY PROTECTION DEVICE

The appliance is fitted with a miniature circuit breaker (MCB) as additional protection against over current.

If unit fails to operate or show any operational indicators, carry out the following check:

- Isolate power at main switch.
- Remove rear access panel.
- Find MCB located on rear mains panel.
- Ensure MCB has not tripped during use or whilst in transit during delivery.
- MCB should be at 'ON' Position.
- Switch appliance mains power ON at isolator.
- Ensure appliance powers up and does not trip MCB again.
- Rear access panel MUST BE REPLACED.

5.1 TESTING THE COIL OR COIL SENSOR

Disconnect from mains supply.

Remove rear access panel. Refer to Section 3.3. Tilt terminal panel to access connection wires.

Identify appropriate wires, disconnect and test as follows: Use a multimeter on a resistance (Ω) setting.

A correct inductor coil reading will indicate 0 Ω .

A correct temperature sensor reading will indicate approximately 985 Ω

5.2 LOAD TEST

Check current in each phase by setting both cooking zones to Position 10.

Position a water-filled pan upon both zones.

Use a clamp meter to measure the following data.

5.2.1 10kW model

Terminal	/ Actual	/ Max	/ Min	_____	_____	_____	_____
L1	15.3A	16.8A	14.5A				
L2	15.3A	16.8A	14.5A				
L3	15.3A	16.8A	14.5A				
Total	45.9A	50.4A	43.5A				

5.2.2 7kW model

Terminal	/ Actual	/ Max	/ Min	_____	_____	_____	_____
L1	10.7A	12A	10.3A				
L2	10.7A	12A	10.3A				
L3	10.7A	12A	10.3A				
Total	32.1A	36A	30.9A				

Note:

If any current is out with these tolerances, the cause must be investigated and rectified.

SECTION 6 - TROUBLESHOOTING

SUPPLY PROTECTION DEVICE

The appliance is fitted with a miniature circuit breaker (MCB) as additional protection against over current.

If unit fails to operate or show any operational indicators, Follow details in Error Code Table before calling a service engineer. The symptoms may indicate a failed induction generator

ERROR CODES

DO NOT remove or attempt to repair or replace ANY part or parts of this appliance other than the air intake filter.

If an error occurs within the unit, the control panel LEDs will flash to indicate an error code.

The error code list that follows will help identify the faulty component.

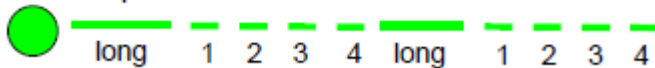
In the "action by user" list, you should follow the action listed, **before contacting a Service Engineer.**

There are two different error types:

- Generator errors (E1)
- Digital control errors(E2)

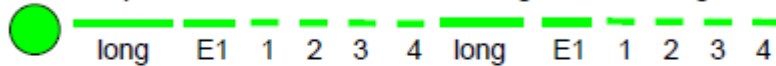
Generator errors are faults detected by the generator, faults can be detected according to the duration and frequency of the green light blinking. When using potentiometer knob, the green lamp lights one time long and then short regular flashes

For example:

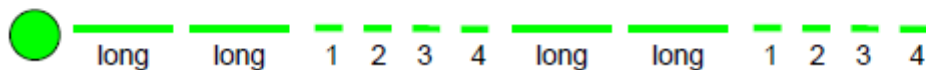


When using LIN knob, the green lamp lights one time long, one medium flash (E1) and then short regular flashes. The number of these short flashes is the error number. This pattern is constantly repeated.

For example: error code E1 - 04 from the generator using LIN knob:



Digital control errors are faults from the digital controls. On the display appears "E2", the green lamp lights two times long and then short regular flashes. The number of these short error flashes is the error number. The pattern is constantly repeated.



Note: Most faults can be rectified by simply switching the unit off for 10 seconds. After this time, turn the power back on at mains supply. If the fault continues to occur after this action then please refer to the table. The following codes can be assessed by the user; any others will require a service engineer.

Error	Name	Cause	Corrective action
E1-04	Cooking zone temperature too high.	Pan empty	Remove pan, switch off Appliance and wait a couple of minutes for the appliance to cool
E1-06	Internal Temperature too high	Air routes blocked.	Switch off appliance, clean air units
E1-07	Coil Temperature.	Coil temperature too high.	Remove pan, switch off appliance for a couple of minutes.
E1-15	Empty Pan protection.	Empty Pan.	Remove pan, switch off and wait for a couple of minutes until the cooking field has cooled down.

WIRING DIAGRAM

