BLUE SEAL®

EVOLUTIONSERIES

INSTALLATION AND OPERATION MANUAL

ELECTRIC FRYERS

E43
E43E
E44
E44E

Date Purchased

Serial Number

Dealer

Service Provider

CE

For use in GB & IE

229099-10

MANUFACTURED BY
Moffat Limited
PO Box 10001
Christchurch
New Zealand
Ph: (03) 389 1007
Fax: (03) 389 1276

WORLD-WIDE BRANCHES

UNITED KINGDOM
Blue Seal
67 Gravelly Business Park
Gravelly Park
Birmingham
West Midlands
B24 8TQ
Ph: (121) 327 5575
Fax: (121) 327 9711

UNITED STATES

Moffat Inc
3765 Champion Blvd
Winston-Salem
North Carolina 27115
Ph: (336) 661 0257
Fax: (336) 661 9546

CANADA

Serve Canada
22 Ashwarren Road
Downview
Ontario M3J1Z5
Toll Free:800 263 1455
Ph: (416) 631 0601
Fax: (416) 631 0315
info@servecanada.com
www.servecanada.com
www.moffat.com

NEW ZEALAND

Christchurch
Moffat Limited
PO Box 10-001
16 Osborne Street
Christchurch
Ph: (03) 389 1007
Fax: (03) 389 1276

Auckland
Moffat Limited
4 Waipuna Road
Mt Wellington
Auckland
Ph: (09) 574 3150
Fax: (09) 574 3159

AUSTRALIA

Victoria
Moffat Pty Limited
740 Springvale Road
Mulgrave, Melbourne
Victoria 3171
Ph: (03) 9518 3888
Fax: (03) 9518 3838

New South Wales
Moffat Pty Limited
3/142 James Ruse Drive, Rose Hill
PO Box 913, Smithfield
Sydney, N.S.W. 2142
Ph: (02) 8833 4111
Fax: (02) 8833 4133

Western Australia
Moffat Pty Limited
67 Howe Street
Osbourne Park
WA 6017
Ph: (08) 9202 6820
Fax: (08) 9202 6836

Queensland
Moffat Pty Limited
30 Prosperity Place
Geebung, Brisbane
Queensland 4034
Ph: (07) 3630 8600
Fax: (07) 3630 8623

Contents

Blue Seal Electric Deep Fryer

E43	**'Fast-Fri' Electric Fryer, Manual Control**	**(Single Tank - 27ltr - 17kW).**
E43E	**'Fast-Fri' Electric Fryer, Digital Control**	**(Single Tank - 27ltr - 17kW).**
E44	**'Fast-Fri' Electric Fryer, Manual Control**	**(Twin Tank - 24ltr - 17kW-Non-UK).**
E44E	**'Fast-Fri' Electric Fryer, Digital Control**	**(Twin Tank - 24ltr - 17kW-Non-UK).**

Contents

We are confident that you will be delighted with your BLUE SEAL Electric Deep Fryer, and it will become a most valued appliance in your commercial kitchen.
To ensure you receive the utmost benefit from your new Blue Seal Electric Deep Fryer, there are two important things you can do.

Firstly:

Please read the instruction book carefully and follow the directions given. The time taken will be well spent.

Secondly:

If you are unsure of any aspect of the installation, instructions or performance of your appliance, contact your BLUE SEAL dealer promptly. In many cases a phone call could answer your question.

CE Only:

These instructions are only valid if the country code appears on the appliance. If the code does not appear on the appliance, refer to the supplier of this appliance to obtain the technical instructions for adapting the appliance to the conditions for use in that country.

WARNING:

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS APPLIANCE.

WARNING:

GREAT CARE MUST BE TAKEN BY THE OPERATOR TO USE THE EQUIPMENT SAFELY TO GUARD IT AGAINST RISK OF FIRE.

- **THE APPLIANCE MUST NOT BE LEFT ON UNATTENDED.**
- **IT IS RECOMMENDED THAT A REGULAR INSPECTION IS MADE BY A COMPETENT SERVICEMAN TO ENSURE CORRECT AND SAFE OPERATION OF YOUR APPLIANCE IS MAINTAINED.**
- **DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPOURS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**
- **DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.**

CAUTION:

This appliance is;

- **For professional use and is to be used by qualified persons only.**
- **Only authorised service persons are to carry out installation and servicing operations.**
- **Components having adjustments protected (e.g. paint sealed) by the manufacturer should not be adjusted by the user / operator.**
- **DO NOT operate the appliance without the legs supplied fitted.**

Model Numbers Covered in this Specification

E43	**'Fast-Fri' Electric Fryer, Manual Control**	**(Single Tank - 27ltr).**
E43E	**'Fast-Fri' Electric Fryer, Digital Control**	**(Single Tank - 27ltr).**
E44	**'Fast-Fri' Electric Fryer, Manual Control**	**(Twin Tank - 24ltr).**
E44E	**'Fast-Fri' Electric Fryer, Digital Control**	**(Twin Tank - 24ltr).**

General

These fryers are constructed in stainless steel and due to the swing out elements are easy to clean. The elements cannot be switched 'ON' in the raised position. A perforated stainless steel tray is fitted over the elements, serving the double purpose of protecting the elements and supporting the baskets. Two slots provided across the front of the splashback are to support the baskets to drain fat / oil after cooking. The fat / oil drained off is thus returned directly to the fryer tank.

Electrical Supply Requirements

Model	Power Supply			Total Power Input	Amps		
	Voltage	Type	Frequency		L1	L2	L3
E43 / E43E	400-415Vac	3 P+N+E	50 / 60Hz	17kW	23.6	23.6	23.6
E44 / E44E Non-UK	400-415Vac	3 P+N+E	50 / 60Hz	17kW	23.6	23.6	23.6
E44 / E44E UK Only	400-415Vac	3 P+N+E	50 / 60Hz	14kW	19.4	19.4	19.4

Electrical Connection

WARNING:

THIS APPLIANCE MUST BE EARTHED. IF THE SUPPLY CORD IS DAMAGED, IT MUST BE REPLACED BY A SUITABLY QUALIFIED PERSON IN ORDER TO AVOID A HAZARD.

E43 and E43E

Electrical supply connection point is located at the rear of the appliance, approximately 62 mm from the right hand side, 365 mm from the rear and 441 mm from the floor.

E44 and E44E

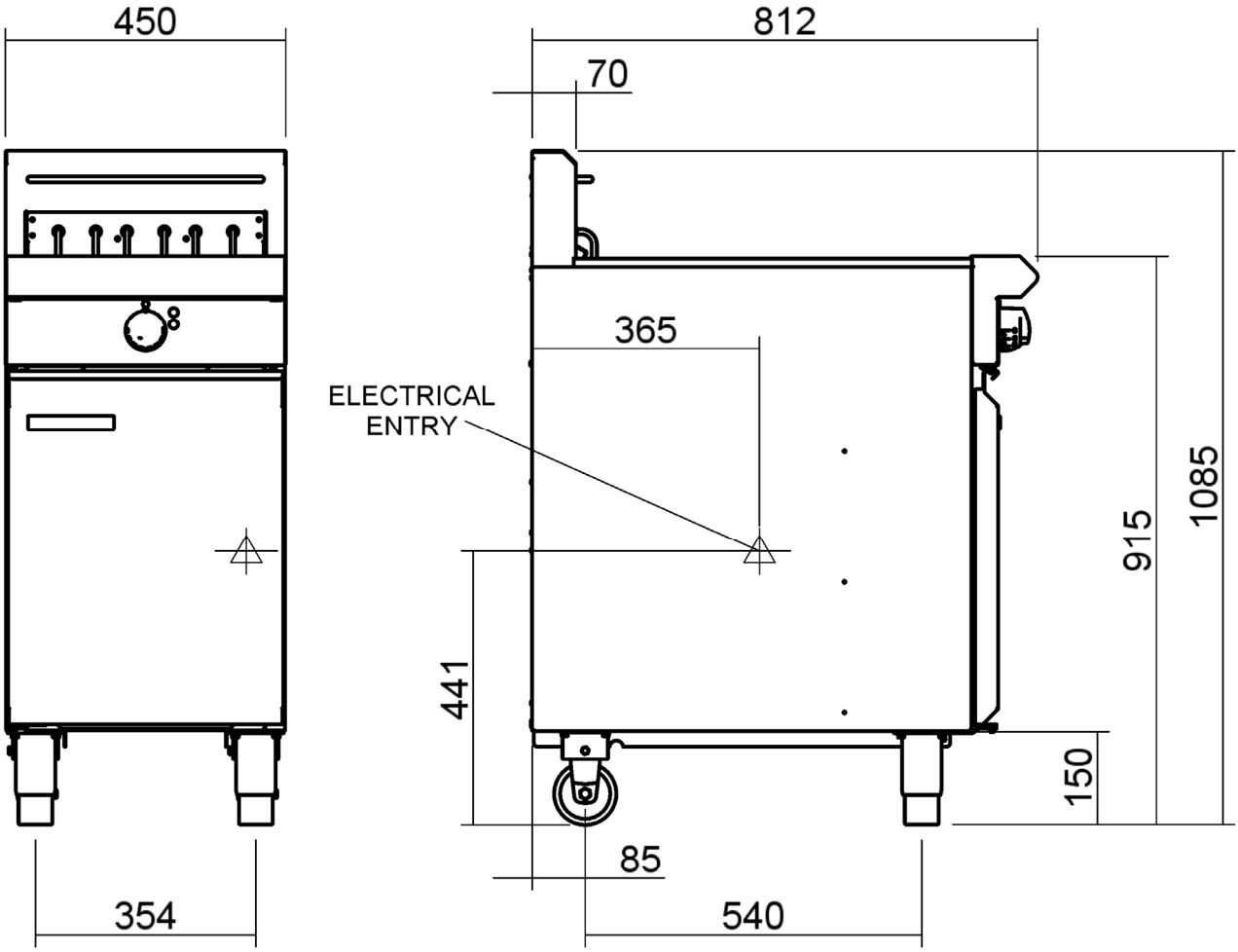
Electrical supply connection point is located at the rear of the appliance, approximately 62 mm from the right hand side, 365 mm from the rear and 440 mm from the floor.

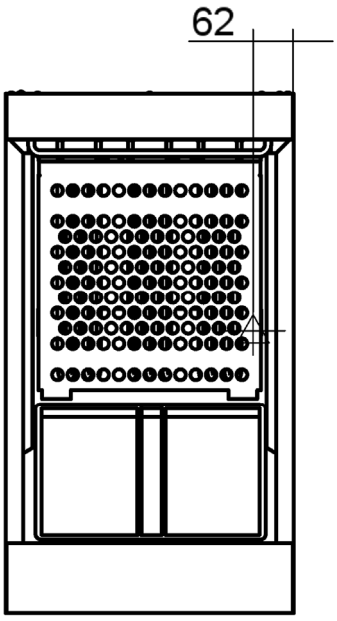
When connecting a this electric appliance to the mains supply, ensure that the following is carried out:-

- The supply cord shall not be lighter than ordinary tough rubber sheathed (oil resistant) cord. e.g. H05 RN-F with sufficient current carrying capacity cable sizes.
- The branch supply line shall be overload protected.
- The point of connection shall be as close as practicable to the appliance have an isolating switch accessible during manual operation of the appliance.
- The supply cord shall be protected against any mechanical or thermal damage.

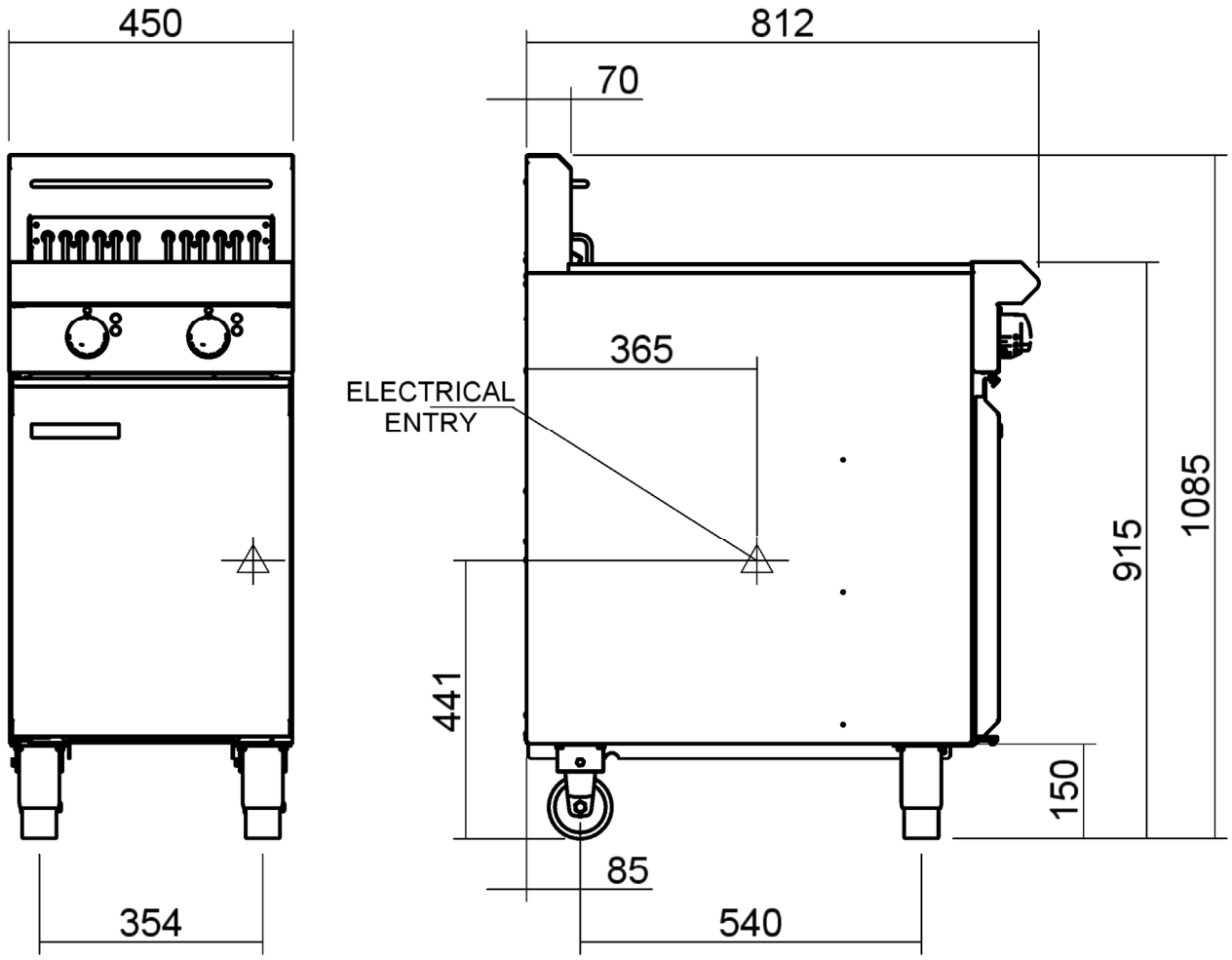
Refer to the appropriate wiring standards for the size of cable that is to be supplied to an appliance for the current drawn on that line.

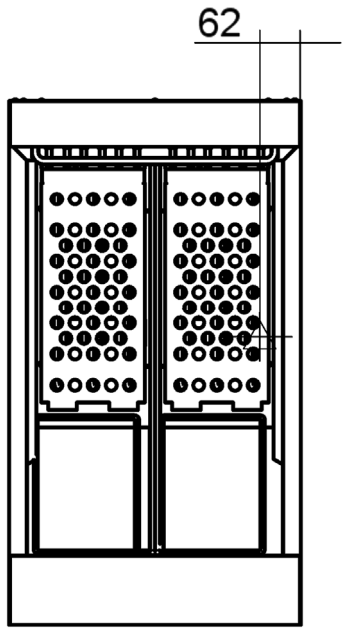
E43 FRYER



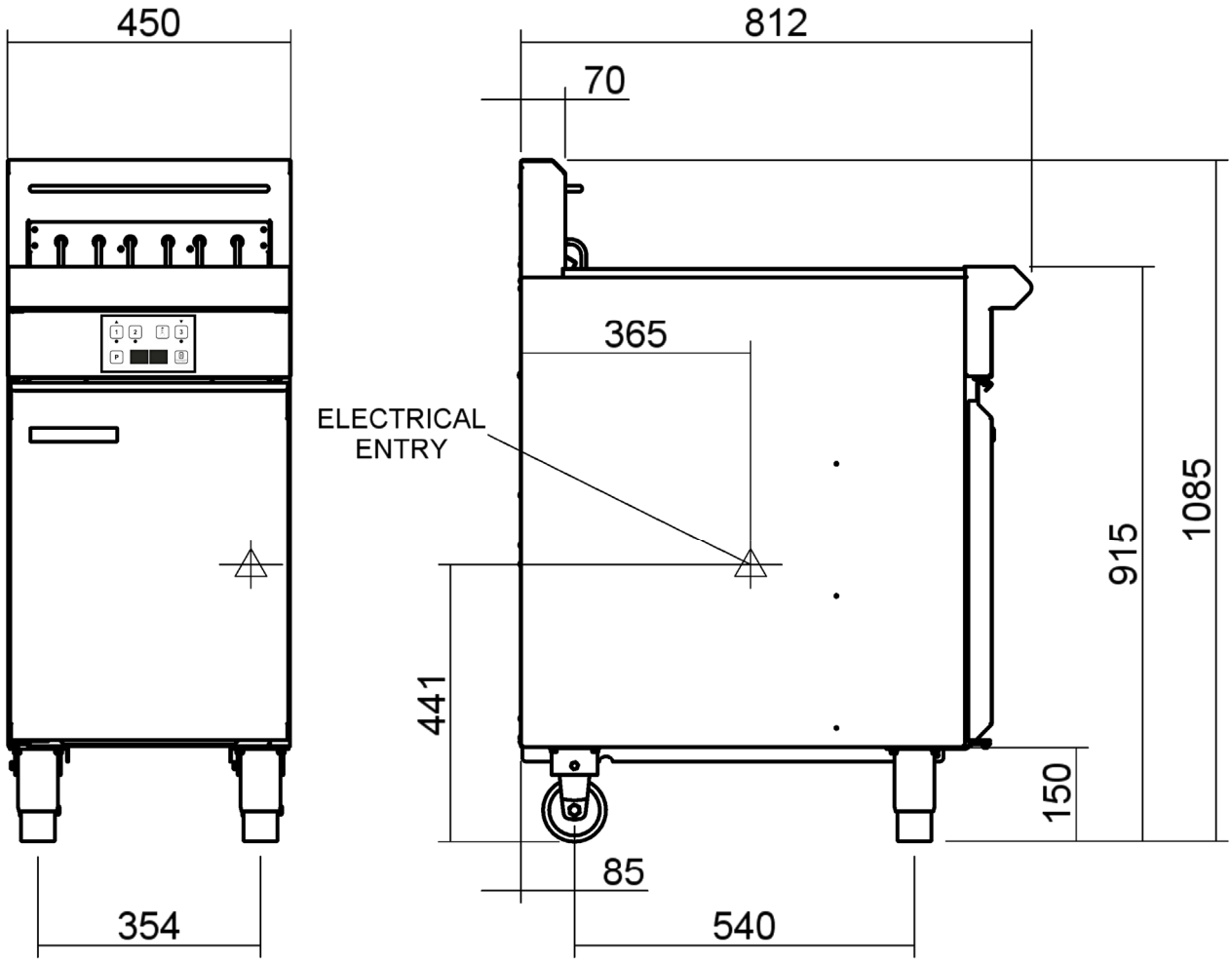


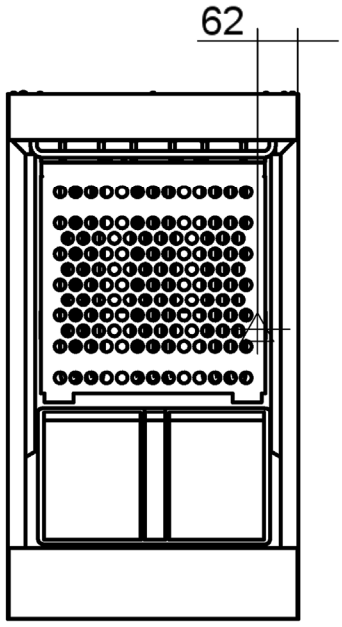
E44 FRYER



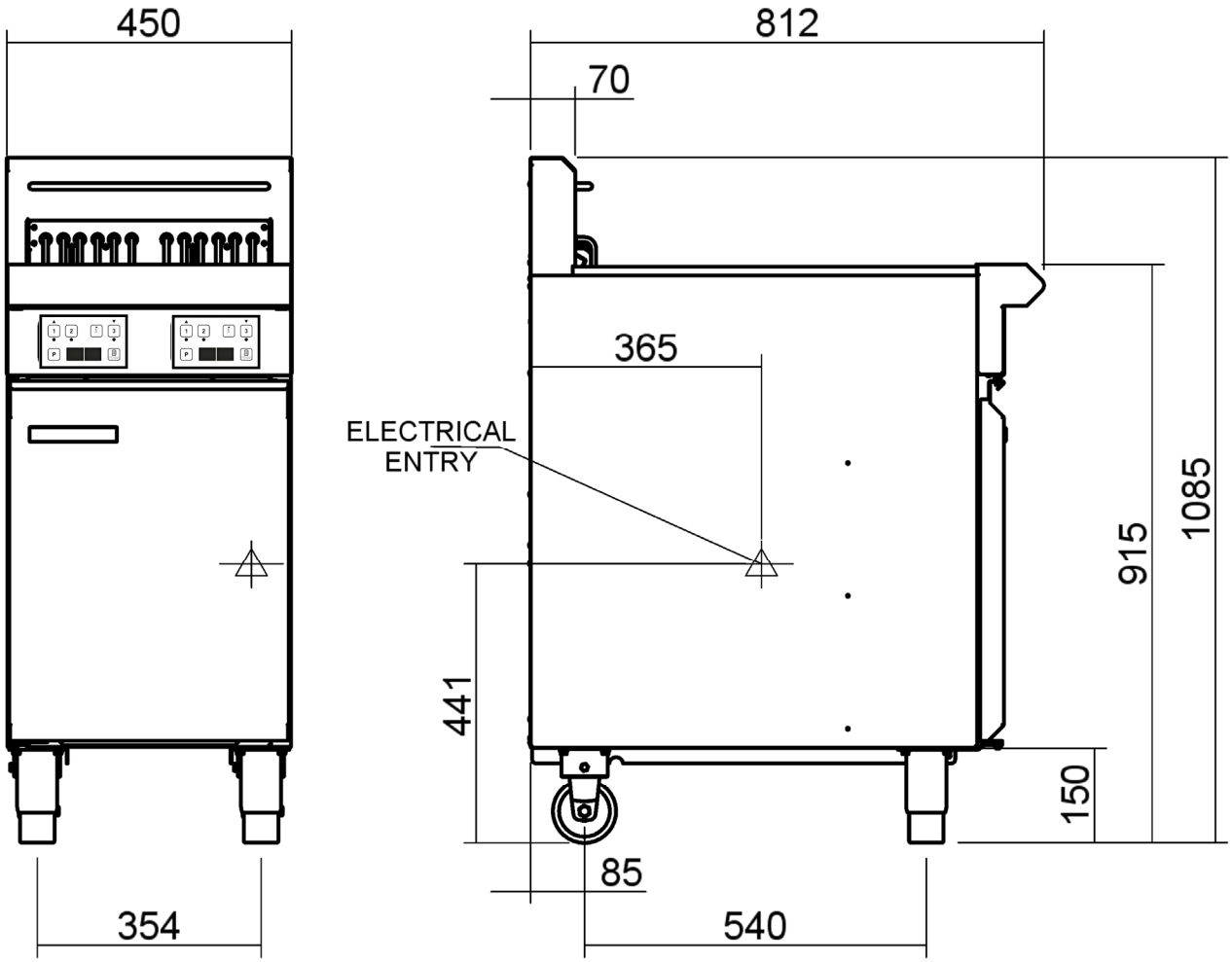


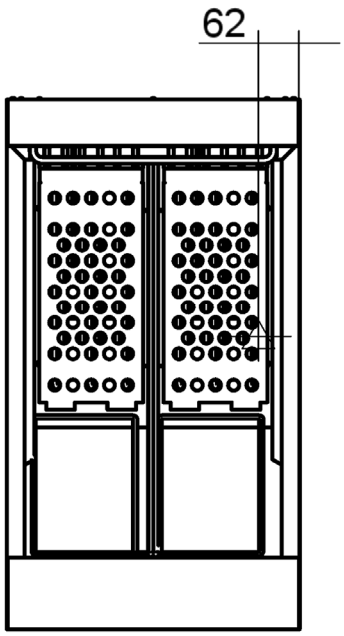
E43E FRYER





E44E FRYER





Installation Requirements

NOTE: It is most important that this appliance is installed correctly and that operation is correct before use. Installation shall comply with local electrical and health and safety requirements.

Blue Seal Deep Fryers are designed to provide years of satisfactory service, and correct installation is essential to achieve the best performance, efficiency and trouble-free operation.

This appliance must be installed in accordance with National installation codes and in addition, in accordance with relevant National / Local codes covering electrical, fire safety and health and safety.

Australia / New Zealand	**AS / NZS3000**	- Wiring Rules.
United Kingdom:	**BS7671**	- Requirements for Electrical Installations.

Installations must be carried out by authorised persons only. Failure to install equipment to relevant codes and manufacturers specifications in this section will void warranty.

Unpacking

- Remove all packaging and transit protection from the appliance including all protective plastic coating from the door outer panel and exterior stainless steel panels.
- Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
- Report any deficiencies to the distributor who supplied the appliance.
- Check that the available electrical supply is correct to that shown on the rating plate located on the inside of the access door.
- Check that the following parts have been supplied with the appliance:

	E43 / E43E	E44 / E44E
Baskets	2	2
Lid	1	1
Drain Extension	1	2

Location

1. Any appliance requires adequate clearance and ventilation for optimum and trouble-free operation. The minimum installation clearances shown below are to be adhered to.
2. Position the Deep Fryer in its approximate working position.
3. The legs must always be fitted. Ensure that the legs are securely attached.

Clearances

	Combustible Surface	Non Combustible Surface
Left / Right hand side	50 mm	0 mm
Rear	25 mm	0 mm

NOTE:

- **Only non-combustible materials can be used in close proximity to this appliance.**
- **In order to facilitate easy operation, drainage and servicing of the appliance, a minimum of 600 mm clearance should be maintained at the front of the appliance.**

Assembly

This model is delivered completely assembled. Ensure that the legs are securely attached.

NOTE:

- **This appliance is fitted with adjustable feet to enable the appliance to be positioned securely and level. This should be carried out on completion of the electrical connection. Refer to the 'Electrical Connection' section overleaf.**

Optional Accessories (Refer to Replacement Parts List)

- Plinth Kit. For installation details, refer to the instructions supplied with each kit.

Electrical Connection

NOTE: ALL ELECTRICAL CONNECTIONS MUST ONLY BE CARRIED OUT BY A QUALIFIED PERSON.

Each fryer should be connected to an adequately protected power supply and isolation switch mounted adjacent to, but not behind the fryer. This switch must be clearly marked and readily accessible in case of fire.

1. Check that the electricity supply is correct as shown on the Rating Plate attached to the inside of the access door.
2. The supply terminal connections are located at the lower front of the fryer.
3. Open the door and remove the service panel (6 screws) located behind the drain valve(s) to allow connection access for the electrical supply.
4. Bring the supply cable up through the grommet at the back of the fryer, and through the compression type gland provided on the rear of the main electrical switchgear panel.
5. Connect the mains supply to L1, L2 and L3 switch connections for 3 phases.
6. Connect neutral and earth conductors to neutral stud and earth stud respectively.
7. For all connections ensure that conductors are secure and appropriately terminated.
8. Tighten the cable gland to secure against tension on the cable.

NOTE:

- **This appliance must be grounded / earthed.**
- **Fixed wiring installations must incorporate an all-pole disconnection switch.**

Commissioning

1. Before leaving the new installation;
   a. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
      - Check the current draw and loading for the equipment. Refer specification section for correct electrical requirements.
      - Check that all the connections are correct and that all cover panels have been re-fitted.
      - Check that the unit functions in accordance with the operating instructions.
      - Ensure that the tank drain extension and this instruction manual are left with the appliance.
      - Ensure that all the relevant details and contacts have been added to the front of this manual.
   b. The thermostat operation check should be carried out by filling the fryer with oil / shortening to the appropriate oil 'FILL LEVEL' mark at the rear of the tank and setting the thermostat to 180°C. Light the pilot burners and turn on the elements in accordance with 'Operation Instructions' found in this manual.
   c. The calibration of the thermostat should be checked once the oil is up to temperature. If a discrepancy is found, the thermostat calibration should be referred to the supplier.
   d. Ensure that the operator has been instructed in the areas of correct operation and shutdown procedure for the appliance.

2. This manual must be kept by the owner for future reference, and a record of Date of Purchase, Date of Installation and Serial Number of Unit recorded and kept with this manual. (These details can be found on the Rating Plate fitted to the inside of the access door and in the 'Specifications' section of this manual.

NOTE:

- **If for some reason it is not possible to get the unit to operate correctly, turn off the electrical power supply and contact a qualified service person. The supplier of this unit will be able to recommend a suitable person.**
- **Make sure that the electrical supply is turned off before any service or maintenance work is carried out.**

Operation Guide

CAUTION:

- **This appliance is for professional use and is only to be used by qualified persons.**
- **Only authorised service persons are to carry out installation, or servicing operations.**

1. Blue Seal Deep Fryers have been designed to provide simplicity of operation and 100% safety protection.
   A commercial heavy duty, electric fryer using high performance elements and is available in 4 model types;-
   Electric Single Tank Fryer.
   Electric Twin Tank Fryer.
   Electric Single Tank Electronic Fryer.
   Electric Twin Tank Electronic Fryer.

   - Snap action thermostat sensitive to changes in oil temperature.
   - Open tank design for all appliances to simplify cleaning operation.

2. Improper operation is therefore almost impossible, however bad operation practices can reduce the life of the appliance and produce a poor quality product. To use this appliance correctly please carefully read the following sections:-

   - Description of Controls.
   - Turning 'On' the Appliance.
   - Setting the Operating Temperature.
   - Frying Temperature Guide and Care of Oil.
   - Draining and Cleaning.
   - Turning 'Off' the Appliance.

'Over-Temperature' Control System

These fryers have been fitted with a 'Fail Safe Over Temperature Safety Cut-Out' which will protect the oil / fat from excess temperature if the thermostat control should fail. The power light will turn off if either over temperature control has been triggered. The twin tank fryer (E44) has an individual 'Fail Safe Over Temperature Safety Cut-Out' for each tank.

Over-Temp Control

The over-temp thermostat is mounted behind the transformer panel, behind the door and its sensing bulb is located alongside the thermostat (All Models).

This control is set for approx. 225-235°C oil cutout temperature. To reset the 'Over-Temp Control', allow the oil to cool down to approx 160-180°C then operate the red switch behind the access door. The power light will then come on.

NOTE: On dual tank models, if either 'Over-Temperature Control' is triggered, a fault exists in the main thermostat and this must be reported and repaired. For temporary operation, Model E43E is fitted with a backup thermostat.

Description of the Controls (E43 and E44 Fryers)

E44 Manual Controls - Twin Tank

Fig 1

Temperature Control Knob
Temperature Graduations
60°C to 200°C.

Neon Indicator (White) — Power 'ON' Indicator. (When main power switch is 'ON').

Neon Indicator (Orange) — Heating 'ON' Indicator. (When thermostat is turned to a selected temperature.

Located Behind Main Access Door

Temperature Cut-Out Reset Switches — Operating the reset switch resets the element. (Press to operate).

Mains Isolation Switch — Turns power 'ON' and 'OFF' to the unit. (White LED Indicator illuminates (Green) when switched 'ON').

E43E Electronic Controls Single Tank

Fig 2

Electronic Controller
See description of Electronic Controller overleaf.

Located Behind Main Access Door

Temperature Cut-out Reset Switches — Operating the reset switches resets the elements. (One switch for each element. Press to operate).

Mains Isolation Switch — Turns power 'ON' and 'OFF' to the unit. (Green LED Indicator illuminates when switched 'ON').

Description of the Controls (E43E and E44E)

Control Panel Functions

Each control panel comprises the following:-

One 4 digit, seven segment display with a 0.5" high, bright green LED display.
Three green LED indicator lights located under each of the 3 Timer Controls.

6 Touch Control Keys;-

- 'ON' / 'OFF' Key.
- Programme Key (P).
- Left Timer - 'UP' Key and LED indicator light.
- Centre Timer - and LED indicator light.
- Right Timer - 'DOWN' Key and LED indicator light.
- Temperature Key (Thermostat).

The 3 Timer keys on each control panel can be used to program 3 different cook times for each tank.

NOTE: Only one temperature setting applies to all 3 timers.

Modes of Operation

The Fryer has the following Modes of Operation:-

- Power Up Mode.
- Melt Cycle Modes (Programmable in the Programming Mode).
- Idle Mode.
- Cook Mode.
- Temperature Display Mode.

Refer to the 'Operation of the Appliance' information for further details.

For Controller Programming refer to the 'System Programmable Default Settings' in the 'Controller Programming' section at the rear of this manual, to access the following options:-

Basic Programming Mode.
- Programming the Password Protection - (Unlock Lock).
- Programming the Timers.
- Programming the Temperature.

Advanced Programming Mode.
- Timing Mode (straight or flexi time cooking).
- Temperature Offset (calibration setting) - 14 to +14°.
- Temperature Display Mode Setting (Temp display or prompt display).
- Programming the Melt Cycle.
- Setting the Temperature Units (either °C or °F).

Operation of the Appliance

WARNING:

GREAT CARE MUST BE TAKEN BY THE OPERATOR TO USE THE FRYER SAFELY TO GUARD AGAINST THE RISK OF INJURY AND FIRE.

- **DO NOT LEAVE THE FRYER UNATTENDED DURING OPERATION.**
- **DO NOT REPLENISH THE OIL (FRYING MEDIUM) IN THE FRYER WHEN THE FRYER IS HOT.**
- **DO NOT OVER FILL THE OIL (FRYING MEDIUM) IN THE FRYER ABOVE THE TOP LEVEL MARK.**
- **DO NOT ALLOW THE OIL (FRYING MEDIUM) IN THE FRYER TO FALL BELOW THE LOWER LEVEL MARK.**
- **DO NOT ALLOW THE OIL (FRYING MEDIUM) IN THE FRYER TO OVERHEAT.**
- **DO NOT INTRODUCE WET FOOD OR WATER INTO THE HOT OIL (FRYING MEDIUM).**
- **DO NOT USE FLAMMIBLE SOLVENTS AND CLEANING AIDS ON OR IN CLOSE PROXIMITY TO THE FRYER WHILST THE FRYER IS STILL HOT.**

E43 and E44 Models.

1. Turn 'ON' the mains power at the mains supply, ensure that the Temperature Cut-Out Reset Switch has been reset (which is located behind the front access door, one for each tank on twin tank fryers E44 and E44E).
2. Turn 'ON' the Mains isolator switch which is located behind the front access door. The Clear neon indicator will illuminate to indicate that there is mains power to the fryer.
3. Set the tank control thermostat to the temperature required. The Orange neon indicator will illuminate to indicate that a temperature has been set.
4. When the tank reaches the set temperature, the Orange neon will extinguish to indicate that the fryer is up to the correct temperature.
5. To turn 'OFF' the fryer, turn the tank control thermostat to the 'OFF' position.
6. Open the front access door and turn the Temperature Cut-Out Reset Switch to the 'OFF' position.
7. Turn 'OFF' the mains power at the mains supply.

E43E and E44E Models.

NOTE: For Models E43E and E44E Controller Programming details refer to the 'Controller Programming' section at the rear of this manual.

Power-Up Mode:

1. With the mains power turned on at the mains supply, the appliance will automatically enter the 'OFF' Mode. The display and alarm buzzer will remain 'OFF'.
2. To turn the appliance 'ON', depress and release the 'ON' / 'OFF' key on the control panel.
3. The control panel will display 'CY' and within 10 seconds of being turned 'ON' the heat indicator (the dot to the left of the 'CY') will indicate that the element is now 'ON'.

Melt Cycle Mode:

NOTE: The only time that the appliance can enter the Melt Cycle, is immediately after "Power-Up".

1. The control panel will display 'CY' and perform the programmed 'Melt Cycle' (Either 'L' or 'S' with the 'ON' / 'OFF' times shown in the 'Programmable Default Settings' section.
2. There is a minimum Melt Cycle time of 10 minutes.
3. After the appliance has been in the Melt Cycle for 10 minutes and the cooking medium temperature is above the melt temperature, the system will exit the Melt Cycle.
4. If the Melt Cycle is programmed to Override (O), then the appliance will not perform the Melt Cycle and will go directly to the heat cycle and display 'HEAt' on the display.

Idle Mode:

1. After the appliance has exited the Melt Cycle Mode, or on Start-Up if the Melt Cycle Mode was by-passed, the appliance will go to the Idle Mode.
2. If the temperature is more than 10° below its Set Temperature, the display will show 'HEAt' and the heating element is 'ON'.
3. When the temperature is less than 10° below its Set Temperature the display will show 'droP'.
4. The appliance also displays 'droP' when the temperature is equal to or higher than the Set Temperature.
5. When the appliance displays 'droP' this indicates that the Fryer is ready to commence cooking operations.
6. If there is a **"."** displayed between the first and second characters of 'HEAt' this indicates that the heating element is 'ON'. The appliance uses a slope dependent (temperature vs time) heating algorithm.
7. When idling around its Set Temperature, the appliance will usually maintain a temperature range of 5° from the Set Temperature.

Cook Mode:

NOTE:

- **Each Control Panel has 3 timers for each tank, which can be programmed with separate cook times to allow different products with different cook times to be cooked in the same tank.**
- **IMPORTANT; Only one temperature can be set for all 3 timers.**
- **Entering the Cook Mode does not exit the melt Cycle Mode.**

1. The Cook Mode can be entered at any temperature, even when in the Melt Cycle Mode, by pressing either the '1'-(Left), '2'-(Centre) or '3'-(Right) Timer keys, this will start the pre programmed time set for each timer.
2. When only one timer is activated, the LED under the timer will blink rapidly and the time remaining will be displayed.
3. When more than 1 timers are activated, the LED under the timer with the least remaining time blinks more rapidly.
4. The LED's above the other active timers will blink less frequently.
5. When the first timer has expired and has not been cancelled the second timer's LED turns 'OFF' until cancellation of the first timer.
6. If the second timer has not expired while the operator was cancelling the first timer, then it's time remaining is displayed and it's LED will blink at the more rapidly.
7. When a timer expires, a beeping sound is generated and a blinking 'L' 'ctr' or 'r' is displayed for either the left, centre or right timers respectively. This will continue until the expired timer's key is pressed to cancel the cooking for that timer.
8. An active timer may be cancelled at any time by pressing its 'Timer' key.
9. To turn the appliance 'OFF' depress and hold in the 'ON' / 'OFF' key for approximately 3 seconds. 'Off' will show in the display window.

Temperature Display Mode:

1. The appliance actual temperature and set temperatures can be displayed by depressing the Temperature Key.
2. If the Temperature Key is depressed the actual temperature will be displayed.
3. If the Temperature Key is depressed again within approximately 3 seconds, the Set Temperature is displayed.
4. Further depressing of the Temperature Key will enter the Idle Mode.

NOTE: The temperatures can be checked at any time except when in the Program Mode.

Before Use

1. Check that the main power supply is turned on.
2. Check that there are no foreign articles in the tank(s).

WARNING:

DANGER OF FIRE EXISTS IF THE OIL LEVEL IS BELOW THE MINIMUM 'LO' INDICATED LEVEL

Filling the Tank(s)

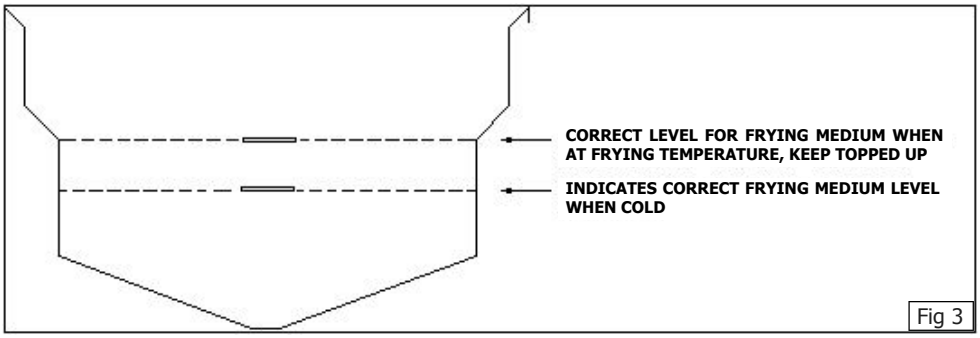


Fig 3

NOTE: BLUE SEAL 'Deep Fryers' can be used with both oil and shortening.

1. Before filling the tank, always check that the drain valve(s) behind the access door is (are) closed. A locking slide is provided on these valves and this should always be locked in position during use.
2. Ensure that the elements are swung down into the tank(s).
   a. **OIL** - Carefully fill fryer tank with oil until the 'FILL-LEVEL' mark is reached. Carefully pour the cold oil into the fryer tank(s) until the tank is filled to the 'LO' level marked on the tank side. Pre heat the oil to 120°C, the oil will expand as heated until it reaches the 'N' level when warm (100-120°C) and will reach the "HI" level when the oil is hot (180-190°C). Set the thermostat to the required operating temperature.
      - The E43 single tank fryer will hold 27 to 29 litres of oil (22 - 23kg of shortening).
      - The E44 twin tank fryer will hold 14 litres of oil per pan (11kg of shortening per tank).

   b. **SHORTENING** - Ideally shortening should be pre-melted prior to putting it into the tank. This is normally done in a suitable vessel on a boiling table burner(s). The liquefied shortening can then be poured into the tank until it reaches the 'FILL LEVEL' mark.

Pre-Heating

NOTE: When pre-melting shortening, only heat the shortening until it is just liquefied. Do not bring the shortening up to high temperature as handling of hot shortening is dangerous.

- If pre-melting of shortening is not possible, carefully cut the shortening into small pieces and pack below, all around and above the elements, ensuring that the element can fully lower to operate the element tilt microswitch otherwise the fryer will not operate.

  E43 and E44;- Set the tank control thermostat to 120°C and switch 'ON' the appliance for 30 seconds and then 'OFF' for 1 minute. Repeat the cycle until all the shortening is melted enough to apply full power to the heating elements. To speed up this process, break up the shortening and stir carefully during the melting process.

NOTE: Running the elements continuously will cause the shortening in contact with the tank to overheat, resulting in premature oil breakdown. Never allow the shortening to smoke while melting as this indicates that the temperature is too high. If the shortening starts smoking, increase the 'Off' intervals of the elements.

E43E - E44E;- Switch 'ON' the appliance, the control panel will display 'CY' and perform the programmed 'Melt Cycle'. The electric thermostat will automatically melt the solid shortening by cycling the elements 'ON' / 'OFF' until the cooking medium temperature is above the melt temperature, the system will exit the 'Melt Cycle' and go directly to the 'Heat Cycle' and display 'HEAt' on the display.

NOTE: Models E43E and E44E are fitted with an electronic auto-melt cycle control. Refer to the 'Controller Programming' section to change the preset 'Melt Cycle'.

- Add more shortening until the tank is filled to the level marked on the tank side. Refer to Fig 3 on the previous page.

CORRECT OIL FILL LEVELS

HI - When oil / fat is HOT (180-190°C).

N - When oil / fat is WARM (100-120°C).

LO - When oil / fat is COLD (20-30°C).

Setting the Operating Temperature

1. The temperature used for frying food is the most important aspect of fryer operation. Incorrect temperatures will result in poor product quality and will reduce the life of the oil / shortening.
2. BLUE SEAL 'Deep Fryers' feature a thermostat which is accurate to 1°C.
3. The temperature can be set from 60°C to 200°C, although we do not recommend any food to be cooked above 190°C.
4. To set the operating temperature simply turn the thermostat to the desired setting and allow the frying medium to reach the desired temperature before cooking the food.
5. The elements will operate automatically to maintain this temperature.
6. Turn the fryer to a lower temperature when there is no food being cooked. (Approximately 140°C). Any frying medium will break down faster if held for long periods at high temperature without frying food.
7. In order to obtain the best results with your fryer and the product cooked in it, the following pages detail recommended temperatures and a practical guide to frying. Time spent reading this information will assist in obtaining a cooked product of exceptional quality and taste.
8. As a safety precaution all Blue Seal 'Deep Fryers' feature an Over-Temperature control which will turn off the fryer in the event that the oil reaches over 220°C, should there be a thermostat failure.
9. Blue Seal E44 and E44E Fryers feature a split tank allowing distinctive products to be cooked in individual pans and at different temperatures. This allows products to be fried separately to prevent flavour contamination between products and allow products to be cooked at their optimum frying temperature.

Frying Guide.

1. Prepare the food correctly. Prepare the food in as nearly uniform pieces as possible and bring the food up to room temperature.
2. Ensure that the food is free from excessive moisture and also excessive crumbing when 'breading' is done.
3. Preheat the frying medium to the recommended temperature for the particular food to be cooked and no higher - specially prepared frying mediums are recommended.
4. The frying medium should be at the correct temperature for the food to be cooked before lowering the food into the tank.
5. Avoid heating the frying medium to any higher temperature than is recommended.
6. Also avoid holding the frying medium at the frying temperature when there is no food being cooked. *Any frying medium will break down if held for long periods at frying temperatures*.
7. Lower the food gradually into the hot frying medium using a wire basket, until all the food pieces are submerged.
8. Avoid overloading the basket, **we recommend no more that 1.5kg per basket**. *Overloading will cause the temperature to drop so low that a longer frying time will be needed and the foods will become grease soaked and unattractive*.

9. With a little experience you can determine what amount of food may be added to the fryer without causing an excessive drop in temperature.
10. If the temperature drop is excessive, either the food is too cold or there is too much food in the fryer.
11. Temperatures and cooking times quoted are based on average size batches being used in the fryer.
12. Continue cooking until the outside of the food is brown and crisp and the pieces are cooked through.
13. The exact cooking time depends upon the size of the food pieces and upon whether the food has been pre-cooked. When in doubt, test a sample and be sure.

NOTE: E43E / E44E Timers - set and start - To help prevent overcooking if the operator is busy elsewhere, the beeper will sound for 5 seconds and the timer 'ON' light will go out. *Please note that the cooking will not stop once the beeper has sounded. You decide when the food is cooked.*

14. Remove the food from the frying medium and allow the food to drain in the basket over the fryer. Draining the food will reduce fatty saturated foods and conserve the frying medium by returning it directly to the fryer tank.
15. Conserve the excess frying medium by letting it drain back into the fryer. This draining should not consume much time if the fried food is to be served at its hot, crisp and flavoursome best.
16. Serve the food immediately after frying and draining. Deep fried foods are at their flavour peak as soon as the frying is complete. Serve them within a minute or two after they are taken from the fryer. ***Fried foods should never be held.***

Care of Frying Fats and Oils

1. Fats and oils are unstable compounds. Even the best oils and fats will break down to some extent in the fryer.
2. There are a number of causes of frying mediums ceasing to be edible. Heat and moisture are two of the most important causes and we have both heat and moisture in the deep well fryer.
3. Frying medium is by far the most expensive item of deep well frying equipment, if the following points are carefully observed, the cost of frying can be kept to a minimum.
   a. Select one of the recommend mediums for deep frying (Hydrogenated shortening, high grade lards or salad oils made from peanuts, cottonseed or corn). Know the smoking temperature of the one you select, generally the heat temperate qualities and stability of frying oils, particularly peanut oil, are perhaps greater than that of the solid fats.
   b. Avoid burning the medium - either when putting new medium into fryer or during frying, *No food needs a deep well frying temperature higher than 195°C and most foods should be fried around 180°C*.
   c. Have rapid 'turnover' of the frying medium. The term 'turnover' means the rate at which fresh medium is added to the old medium in the fryer.
   d. Filter the frying medium daily, or more often if necessary, to remove crumbs and other sediment.
   e. Clean fryer each time the medium is filtered, to keep it free from gum. Also be sure that all soap and detergent is thoroughly removed from the fryer after cleaning it.
   f. Taste the frying medium daily to be sure there is no 'Off' flavour which may be transmitted to other foods.

4. If these simple precautions are taken consistently, fried foods can always be served at their delicious best. Furthermore, the breakdown of frying medium can be kept at a minimum and the cost of frying operations can be considerably lowered.

Frying Temperature Guide and Care of Frying Medium

Table of Smoking Temperatures of Frying Mediums

Based on work by the American Meat Institute.

Medium	Smoking Temperature
Hydrogenated Fats.	190°C to 225°C.
Compounds.	194°C to 223°C.
Lards - Team-rendered.	165°C to 225°C.
Refined deodorised lard.	221°C.
Kettle-rendered.	190°C.
Oils.	190°C.
Corn.	208°C.
Cottonseed.	217°C.

Table of Recommended Frying Temperatures

Product	Temperature (°C)	Duration (minutes)
Chicken - Small Pieces. - Large Pieces.	175-185. 160-170.	8-10. 14-16.
Chops / Cutlets.	165-175.	5-8.
Fish Battered / Breaded.	170-175.	1-5.
Prawns / Shellfish.	170-175.	1-5.
Doughnuts - Cake type. - Yeast raised.	185-190. 175-180.	2. 2.
Fritters.	175-185.	3-5.
Vegetables.	185-190.	2-3.
Potato chips - Blanch. - Fry.	165. 190.	3-4. 3-4.
French Fries - Medium. - Shoe string.	190. 190.	3-4. 3-4.

This chart is intended as a guide only and should be marked with your preferred temperature and times should your operating experience prove these to be inadequate.

WARNING:

DO NOT USE FLAMMIBLE SOLVENTS AND CLEANING AIDS ON OR IN CLOSE PROXIMITY TO THE FRYER WHILST THE FRYER IS STILL HOT.

CAUTION:

Always turn off the electrical supply before cleaning the appliance.
This appliance is not water proof.
Do not use water jet spray to clean interior or exterior of this appliance.

General

To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts checked and adjusted periodically by a competent serviceman. If any small faults occur, have them attended to promptly. Don't wait until they cause complete breakdown. It is recommended that a service check is conducted every six months.

Clean the fryer regularly. A clean fryer looks better, will last longer and will perform better. A build up of grease on the surface will hinder the transfer of heat from the cooking surface to the food. This will result in loss of cooking efficiency.

NOTE:

- **DO NOT use abrasive detergents, sharp scrapers, strong solvents or caustic detergents as they could corrode or damage the fryer.**
- **Ensure that any detergent or cleaning material have been completely removed after each cleaning.**

To keep your fryer clean and operating at peak efficiency, follow the procedures below:-

Draining and Cleaning

WARNING:

DO NOT ATTEMPT TO MOVE THE FRYER WHILST THE FRYER IS FULL OF OIL.

BEFORE ATTEMPTING TO MOVE THE FRYER, ENSURE THAT ALL THE OIL HAS BEEN DRAINED FROM THE TANK. REFER TO THE INFORMATION BELOW ON HOW TO DRAIN THE OIL FROM THE FRYER.

CAUTION:

Never drain the fryer with power or elements switched 'ON'.
Always switch 'OFF' the fryer before draining or re-filling the tank.

Opening the Drain Valve

a. Lift the locking slide on valve handle (Fig 4) to release valve.
b. While holding the locking slide in the withdrawn position, rotate the handle anticlockwise (Fig 5) to open the valve.
c. When the valve is closed, the locking slide will drop down over the locking valve to prevent accidental opening of the valve as shown in Fig.4.

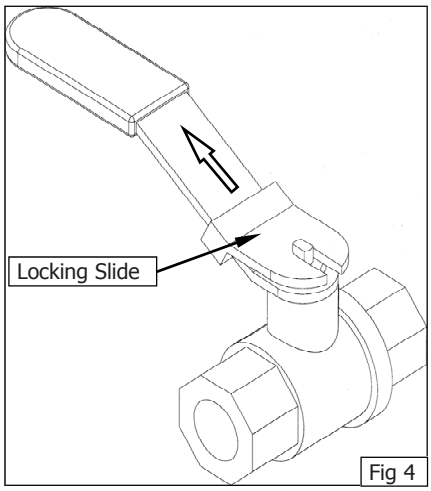


Fig 4

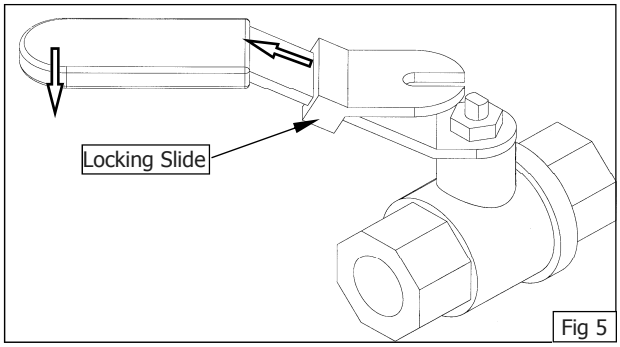


Fig 5

Daily Cleaning

CAUTION:

HOT OIL WILL BURN - DO NOT RUSH THIS JOB.

1. At the end of each day or at the end of each shift, if the frying schedule is heavy, the frying medium should be drained and filtered into a receptacle.
2. Always filter the fryer when the cool zone under the burners is hot and liquid. A cold fryer heated up won't drain, because the frying medium in this zone will remain hard if using solid fat / oils.
3. Screw the drain extension pipe onto the end of the drain valve and position a suitable container and filter under the drain extension pipe.
4. Do not empty the total contents into one large container, as this will be dangerous and may be difficult when lifted up, to pour the hot oil back into the tank.
5. Alternatively use a Filter-Max.
6. Slip a muslin or other suitable bag over the drain valve. Crumbs will be caught in the bag but frying medium will strain freely through into the receptacle.
7. Open the drain valve slowly to minimise splashing, and take care not to overfill the container.
8. If necessary, use a drain stick to stir up any solid medium into the top medium to melt it.
9. When the tank has been drained, use a ladle or small pan with a handle and dip into the hot frying medium from the receptacle and pour around the sides and bottom of the tank to wash out crumbs and particles adhering to the tank.
10. Continue to dip and pour until all crumbs are washed down and into the filter bag.
11. Open the drain valve fully and check for any particles or crumb residue lodged in the valve. Clean out with a stiff nylon brush. Do not use a wire brush or metal rods as these damage the seating in the valve and will eventually lead to valve leakage. If the obstruction in the valve cannot be removed with a brush, use a wooden probe to dislodge the obstruction.
12. Wipe all exterior panels with a cloth dampened with detergent and rinse off any residue with clean warm water.
13. Clean the Control Panel with a damp cloth lightly moistened with a solution of water and a commercial quality foodservice approved detergent.
14. Once the daily cleaning operation is completed, close the drain valve and pour the frying medium back into the tank and continue the days work.
15. Cleaning the tank takes less time than frying one load of potatoes and will pay dividends in food quality and saving of frying medium.

Weekly Cleaning

NOTE: If the fryer usage is very high, we recommend that the weekly cleaning procedure is carried out on a more frequent basis.

1. Proceed as for 'Daily Cleaning' to drain and filter the tank. Do not refill the tank with frying medium until it has been cleaned as shown below.
2. Fill the fryer with cold water to the normal fill level and add a high quality commercial cleaner that has been specifically formulated for fryers. *All purpose cleaners are not recommended.*

NOTE: Never use a caustic or lye solution, as this will leave a fat destroying film on the tank.

3. Ensure that the elements are lowered into the tank. Switch 'ON' the power and heat the water to approximately 80-90°C.
4. Clean the fryer baskets at the same time by simply immersing them in the cleaning solution. Allow the fryer to soak for 5-10 minutes or as directed on the cleaner instructions. Remove the baskets and switch 'OFF' the fryer.
5. Scrub the baskets and fryer tank lightly, but vigorously with a stiff nylon bristle brush to remove any remaining deposits. DO NOT use a wire brush, as this will scratch the sides of the tank.
6. Empty the fryer and rinse thoroughly with water. Use a 1 part vinegar to 15 parts water solution to rinse the tank and neutralise any cleaner residue. Use a weaker solution of up to 1 part vinegar to 25 parts water if this proves unsuitable for the cleaner being used.
7. Rinse the tank thoroughly with water, drain and dry.
8. Refill the tank with new filtered frying medium to the correct level as shown in the Operation section - 'Filling the Tank(s)'.

Stainless Steel Surfaces

a. With the tank(s) drained, cleaned and dried as shown above, clean the exterior surfaces of the fryer with hot water, a mild detergent solution and a soft cloth. Note that the gas control knobs are a push fit onto the gas control valve spindles and can be removed to allow cleaning of the front control panel.
b. Dry all components thoroughly with a dry cloth and polish with a soft dry cloth.
c. To remove any discolouration, use an approved stainless steel cleaner or stainless steel wool. Always rub in the direction of the grain.

Periodic Maintenance

WARNING:

DO NOT ATTEMPT TO MOVE THE FRYER WHILST THE FRYER IS FULL OF OIL.

BEFORE ATTEMPTING TO MOVE THE FRYER, ENSURE THAT ALL THE OIL HAS BEEN DRAINED FROM THE TANK. REFER TO THE INFORMATION ON THE PREVIOUS PAGES ON HOW TO DRAIN THE OIL FROM THE FRYER.

NOTE: All maintenance operations should only be carried out by a qualified service person.

To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts should be checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly. Don't wait until they cause a complete breakdown. It is recommended that the appliance is serviced every 6 months.

Guide to Cooking Problems with Fryer

This section provides an easy reference guide to the more common problems that may occur during the operation of your equipment. The fault finding guide in this section is intended to help you correct, or at least accurately diagnose problems with your equipment.

Although this section covers the most common problems reported, you may encounter a problem not covered in this section. In such instances, please contact your local authorised service agent who will make every effort to help you identify and resolve the problem. Please note that the service agent will require the following information:-

- **Model Code and the Serial Number of the appliance. (both can be found on the Rating Plate located on the appliance.**

Fault	Possible Cause	Remedy
Frying medium foaming.	Presence of soap or detergent residue from cleaning the tank.	Rinse the fryer thoroughly three times with clean water. Ensure fryer is perfectly dry before re-filling with frying medium.
	Excessive breakdown of frying medium.	Add fresh frying medium daily to replace contents every 3-5 days.
	Continual frying of food with excess moisture.	Remove excess moisture from foods to be fried.
	Continued overheating of oil.	Check setting of the thermostat. Turn down heat to around 120°C (Standby) when use is quiet
	Overloading.	Maintain 1-8 ratio of food to frying medium.
Gumming.	Heating frying medium too rapidly.	When charging fryer or starting up, melt frying medium gradually.
	Continued overheating of the frying medium.	Check the thermostat setting by using a 'Mercury In Glass' thermometer or thermocouple.
	Frying oil broken down.	Check amount of fresh frying medium added to fryer to be sure 'turnover' is adequate.
	Using wrong cooking frying medium.	Some frying mediums form gums when used in a deep fryer. e.g safflower oil.
Greasy foods.	Frying at too low temperatures.	Increase temperature and check thermostat setting.
	Inadequate preparation of food.	Be sure foods (especially potatoes) are 'cured' correctly.
	Excessive quantities of breading or batter.	Remove surplus breading or batter.
	Placing food in frying medium direct from the freezer.	Allow frozen foods to thaw before frying.
	Surplus moisture in and on surface of food.	Drain and dry foods before frying.
	Frying medium in advanced stages of breakdown.	Discard 'old' frying medium and refill the fryer with new frying medium.
	Use of dripping or other unrefined oil.	Due to low smoking point, cooking in these oils at lower temperatures will result in greater oil absorbtion by the food.
	Using the wrong kind of cooking oil.	Always use a completely refined and deodorised cooking oil.

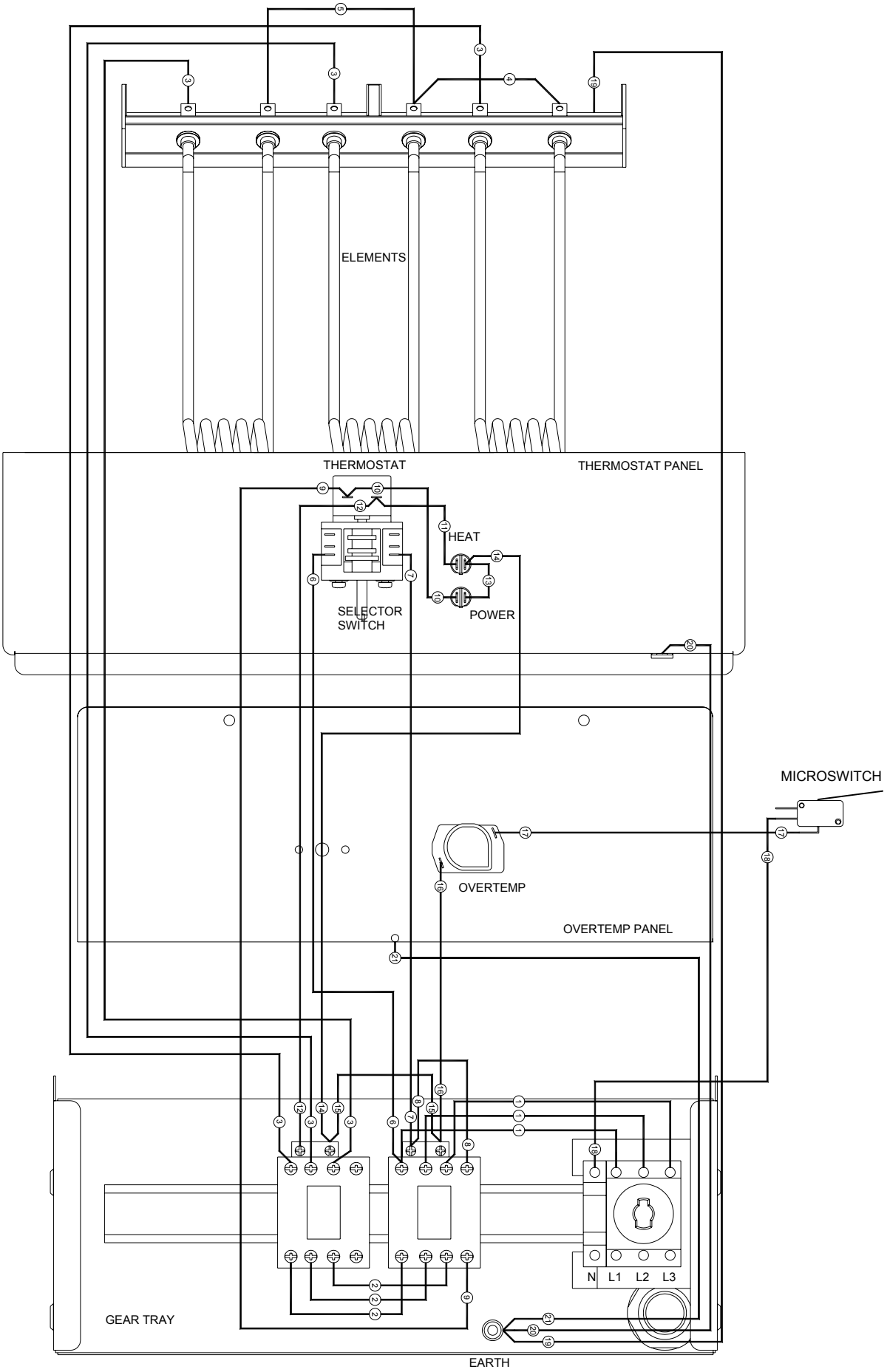
Fault	Possible Cause	Remedy
Rapid oil breakdown.	Inadequate frying oil turnover.	Adjust procedures to fry more food in the fryer to increase the turnover.
	Overheating of oil.	Check the setting of the thermostat with a 'Mercury In Glass' thermometer or thermocouple.
	Contamination.	Filter or strain the oil daily.
	Poor cleaning procedures.	Clean the fryer each day or at least once a week and rinse thoroughly. Dry the fryer before use.
	Presence of copper or brass in the fryer equipment.	Remove all copper or brass fittings from contact with the oil.
	Overloading fryer.	Maintain 1-8 ratio of food to frying oil.
	Food excessively moist.	Drain and dry the food before frying.
	Overheating oil on 'Standby' mode.	Reduce temperature of frying oil between 93°C during idle ('Standby') periods.
Oil smoking.	Insufficient turnover of oil.	Maintain a minimum quantity of oil in the fryer for more rapid turnover or increase the quantity of food fried in the fryer. Replace with fresh oil every 3 to 5 days.
	Continual frying with excess moisture on food.	Drain foods before frying, pat food dry.
	Contamination of oil.	Filter or strain daily to remove contaminants.
	Overheating of oil.	Check the setting of the thermostat with a 'Mercury In Glass' thermometer or thermocouple.
	Rapid breakdown of oil.	Use stable frying oil.
	Use of unrefined oils.	Dripping smokes at lower temperature than refined and deodorised oils.
Darkening of oil.	Presence of salt on the food.	Salt foods after frying and away from the fryer.
	Foods dipped in batter high in egg yolk.	Reduce egg content of the batter, replace part egg with milk.
	Contamination of oil.	Filter or strain oil daily to remove contaminants.
	Poor cleaning practice.	Clean the fryer at least once a week or each day in cases of heavy usage. Ensure fryer is perfectly dry before use.
	Overheating of oil.	Check the setting of the thermostat with a 'Mercury In Glass' thermometer or thermocouple.
	Insufficient oil turnover.	Top up daily to replace the contents of fryer in 3 to 5 days.
	Cooking foods with high sugar levels.	Potatoes at the end of a season are usually high in reduced sugars. When fried, they will darken quickly and colour the oil.

NOTE: Excessive usage of oil is an indication of high absorption of oil into the food. This is a function of temperature and character of the goods being fried - NOT due to the type of oil being used (unless refined oils are being used). Any variation in the apparent life of the oil is always due to one or more of the causes mentioned above.

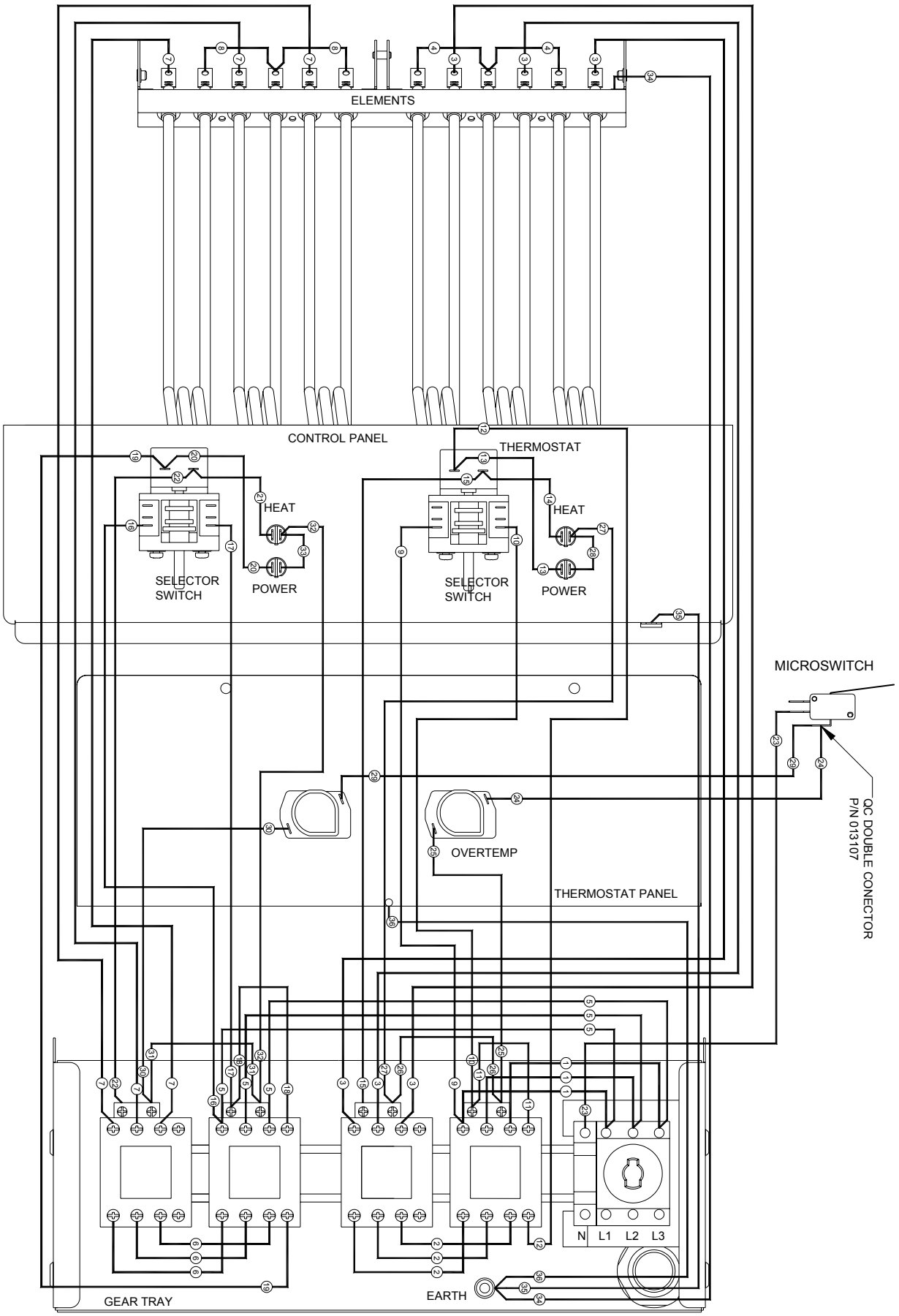
Fault Finding the Electrical System

Fault	Possible Cause	Remedy
Elements do not heat up.	Check the mains power is supplied to the unit and that a circuit breaker or fuse has not tripped / blown.	Turn on the power. Reset the circuit breaker or replace the blown fuse.
	Check that the element is flat and that the tilt microswitch is closed.	Adjust the microswitch so that the microswitch is activated when the element is fully down in the flat (cooking position).
	Check that the thermostat setting is correct and that the control knob is set to the 'ON' position.	Replace the thermostat. Call service provider.
Over-temperature thermostat cuts out.	Over-temperature thermostat faulty.	If the elements cut out and the power indicator light also drops below 320ºC, replace the over-temperature thermostat.
	Control thermostat not maintaining set temperature. a. Thermostat out of calibration. b. Thermostat does not open on temperature rise.	Check continuity through the thermostat leads, on temperature rise. If circuit does not open, replace the thermostat.
	Thermostat opens on temperature rise but control valve does not respond.	Check electrical connections are correct. If correct, replace the gas control valve. Call service provider.

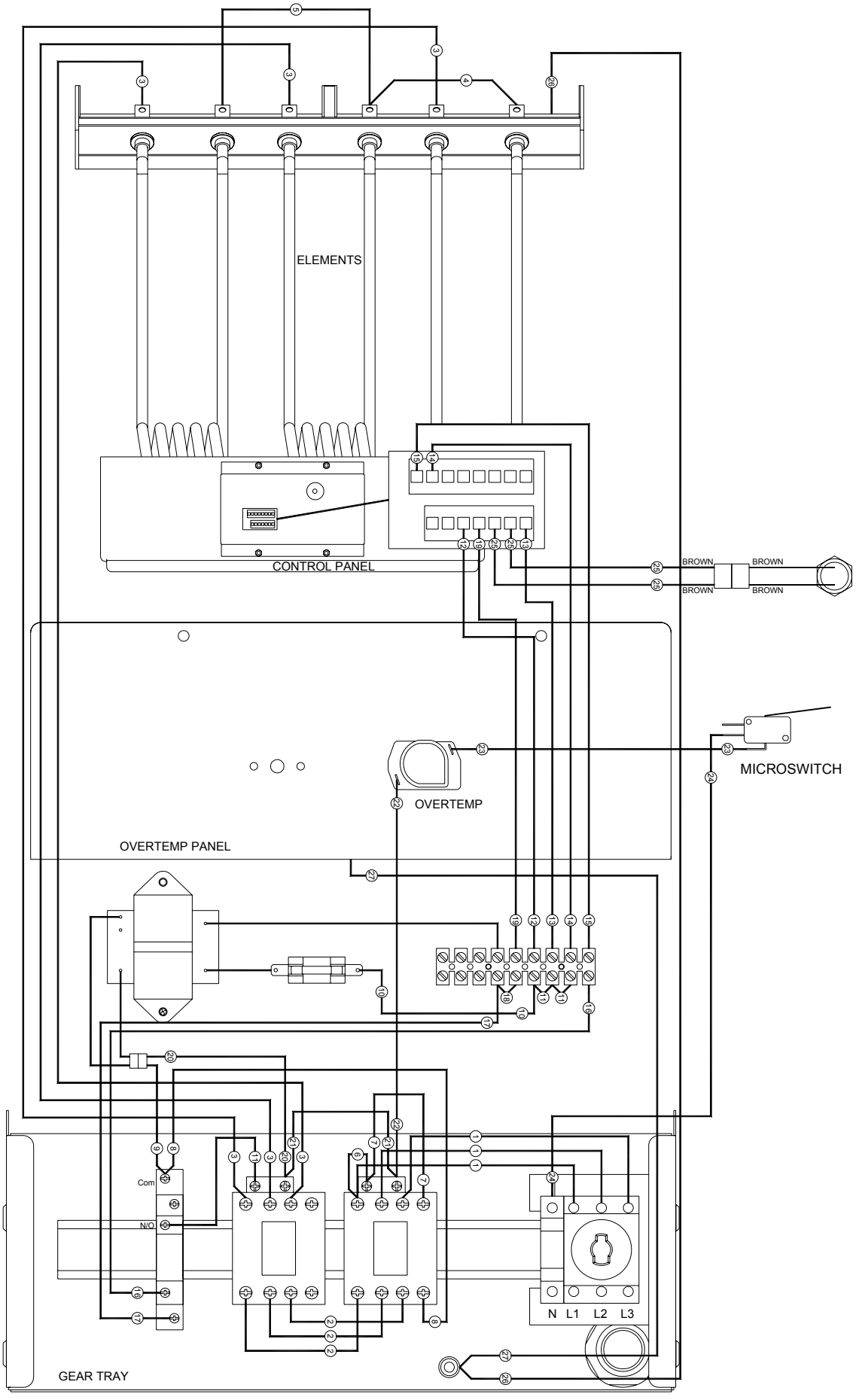
E43 Single Tank



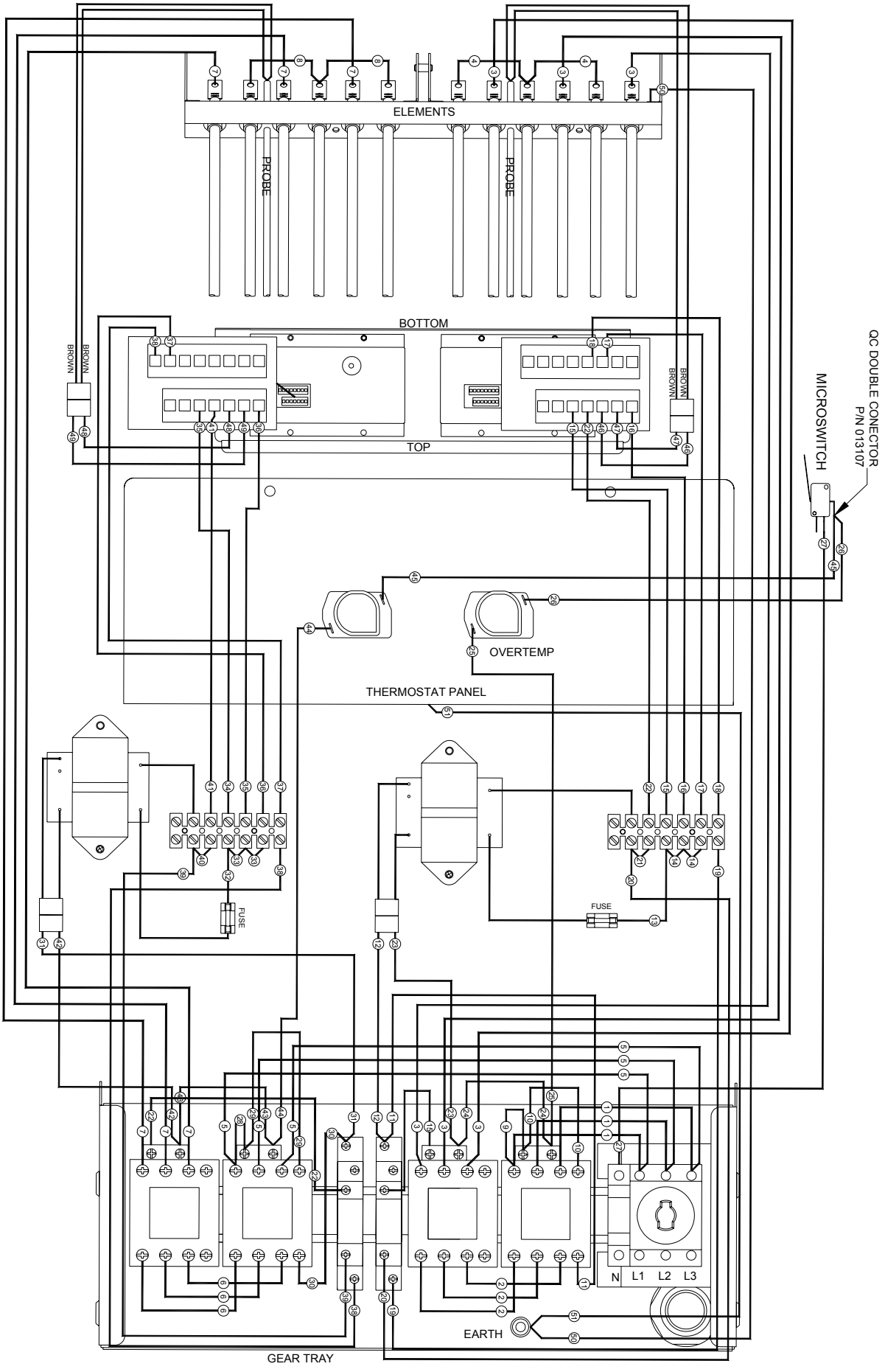
E44 Twin Tank



E43E Single Tank



E44E Twin Tank



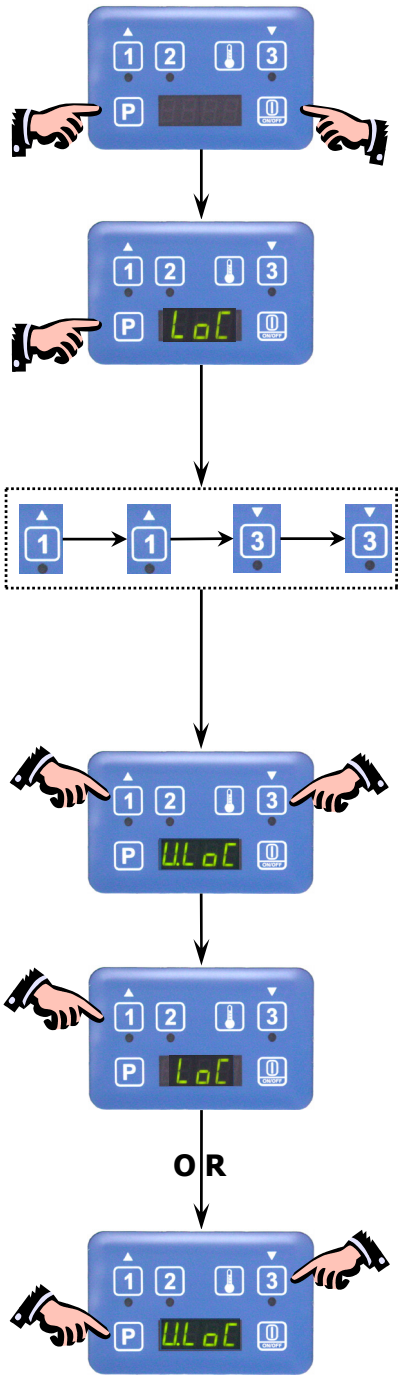
Controller Basic Programming Mode:

NOTE:

- **'Timer 1', 'Timer 2' and 'Timer 3' keys on each control panel can be programmed with 3 different cook times for each tank.**
- **The user may not enter Programming Mode whilst a timer is running. An alarm will sound indicating the key press, but the unit will not enter the Programming Mode.**

1. To enter the 'Programming Mode', press the 'ON / OFF' key to turn 'ON' the appliance.
2. Repeatedly press the Programme 'P' key to cycle through the programs to the program to be changed.

   a. If 'LoC' is displayed, password protection is turned 'ON', the control panel is locked which will prevent any change to the operating mode. To unlock the control panel, refer to 'Programming the Password Protection' below.



Programming the Password Protection

1. To unlock the display, enter the password by pressing, 'Timer 1', 'Timer 1', 'Timer 3', 'Timer 3'. **'ULoC'** will be displayed.

NOTE: If the password is not entered within 6 seconds, the appliance will return to the Idle Mode.

2. To change the 'Password Protection' press either 'Timer 1 - Up' key or 'Timer 3 - Down' key.
3. The user may select from;

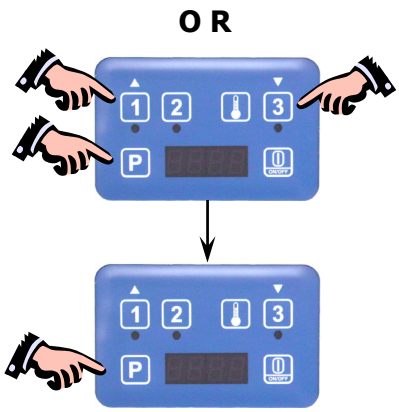
   a. **'Loc'** (Password protected).

   Or

   b. **'ULoc'** (No password protection).

4. Press the Programme Key 'P', the change will be accepted and the display will step on to the next parameter.

Programming the Timers

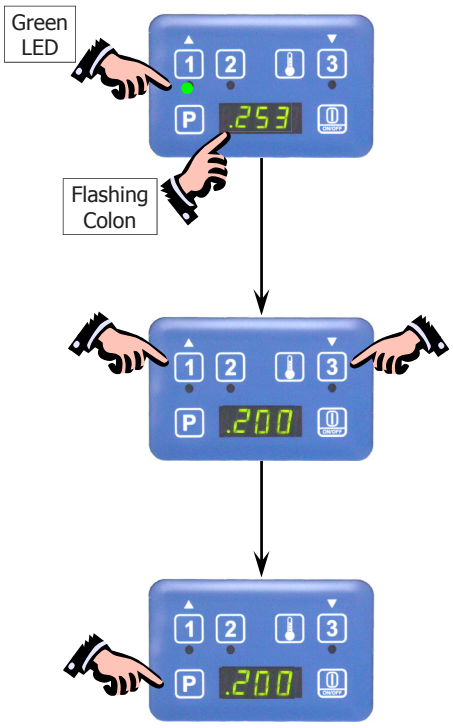


1. To change the settings, press either 'Timer 1 - Up' key or 'Timer 3 - Down' key.

2. Press the Programme Key 'P' to enter the 'Programme Mode'.

3. Once in the 'Programme Mode' the following 'options can be cycled through by pressing the Programme Key again.

NOTE: If only one parameter is to be changed, cycle through the parameters by depressing the Programme 'P' key to the desired parameter, change the parameter and then press and hold down the Programme 'P' key for approximately 3 seconds, the display will return to the 'Idle Mode'.



'Timer 1'.

a. The user access's 'Timer 1' immediately upon entering 'Programme Mode'.

b. The stored time is displayed (Default; 3:00) with flashing colon and the green LED indicator below 'Timer 1' remains 'ON'.

a. To change the time, press either;

   i. 'Timer 1 - Up ' to increase the time.

   Or

   ii. 'Timer 3 - Down' to decrease the time.

d. When changing the time, the value changes at a slow rate for the first 10 seconds and then at an increased rate.

a. Press the Programme Key 'P' once the desired time is reached, the time change will be accepted and the display will step on to the next parameter.

'Timer 2'.

'Timer 2' time can be changed as shown above for 'Timer 1'.

'Timer 3'.

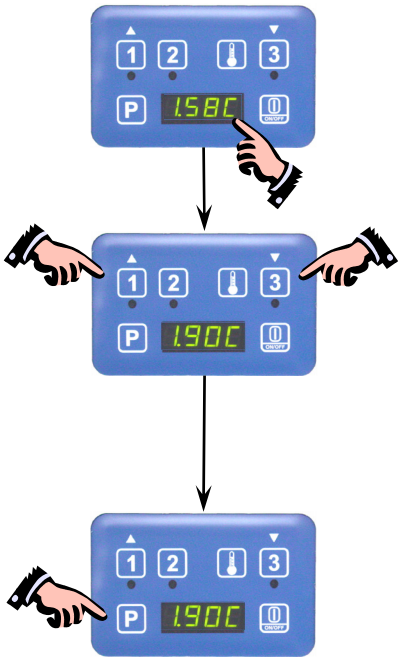
'Timer 3' time can be changed as shown above for 'Timer 1'.

Programming the 'Temperature'.

Factory Default Settings

350°F - 176.5°C

1. The stored set 'Temperature' is displayed (default 350°F - 176.5°C) with a flashing 'F' or 'C' for Fahrenheit or Celsius.



2. To change the temperature, press either;

   i. 'Timer 1 - Up ' to increase the time.

   Or

   ii. 'Timer 3 - Down' to decrease the time.

3. When changing the temperature, the value changes at a slow rate for the first 8 degrees and then at an increasing rate.

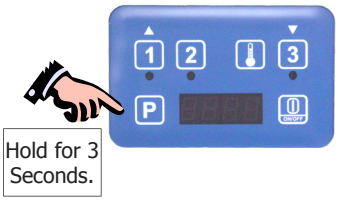
4. Press the Programme Key 'P' once the desired temperature is reached, the temperature change will be accepted and the display will step on to the next parameter.

Programming the Keypad 'Lock - Unlock'.

Refer to 'Programming the Password Protection' at the start of this section.

To Exit the Programming Mode.

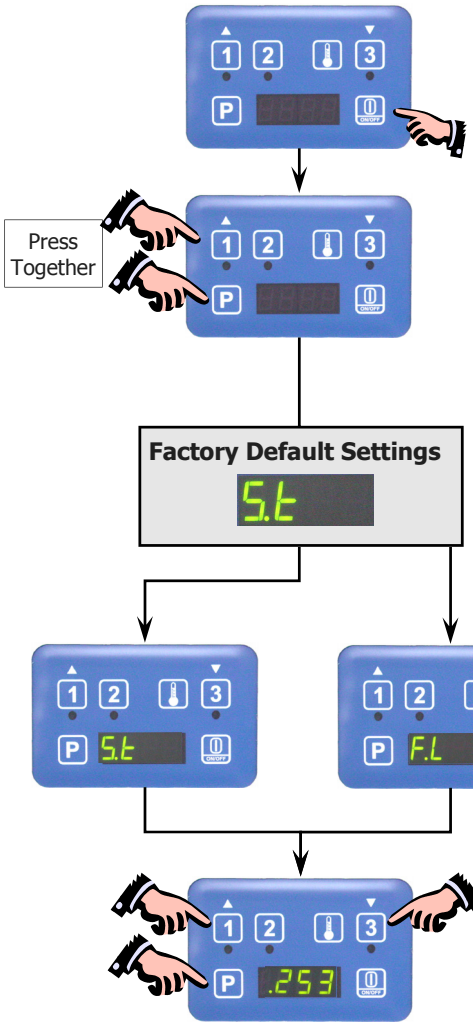
To exit the Programming Mode at any stage of the programming, press and holding the Programme Key 'P' for approximately 3 seconds, **or** do not press any key for 2 minutes. The display will revert to the 'Idle Mode'.



Hold for 3 Seconds.

Controller Advanced Programming Mode:

With mains power to the fryer turned 'On', press the 'ON / OFF' key to turn 'On' the appliance.



1. Enter the 'Advanced Programming Mode', by pressing the Programme Key 'P' and 'Timer 1' key simultaneously.

Timing Mode

2. One of the following options will display:-

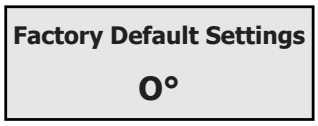
Straight Cook Time
Straight cook time refers to real time cooking.

Flexible Cook Time
Cook time can be automatically adjusted to compensate for load size being cooked.

3. To change the 'Timing Mode', press either 'Timer 1 - Up' key or 'Timer 3 - Down' key.
4. Press the 'Program' key to confirm the options, the change will be accepted and the display will step on to the next parameter.

Temperature Offset

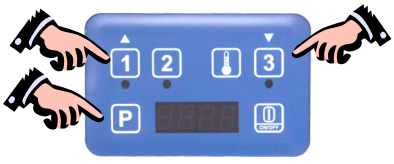
To calibrate the thermostat control of the display temperature in relation to the oil temperature, the display temperature can be adjusted by between -14° to +14°.



To Calibrate the Control Temperature

- Set the control temperature to 170°.
- Measure the oil temperature that the control is cycling at.
- If the oil temperature is ***higher*** than the reading on the control panel, enter a ***positive*** value of the difference between the oil temperature and the set temperature (170°).
- If the oil temperature is ***lower*** than the reading on the control panel, enter a ***negative*** value of the difference between the oil temperature and the set temperature (170°).

5. The temperature offset will appear on the screen.
6. To change the temperature offset option, press either 'Timer 1 - Up' key or 'Timer 3 - Down' key to change the selection required.
7. Press the 'Program' key to select the temperature display mode.



Temperature Display Mode

The temperature display can be set for two temperature display modes:-

Factory Default Settings

't -1' - *Display will show the oil temperature as an actual temperature.*

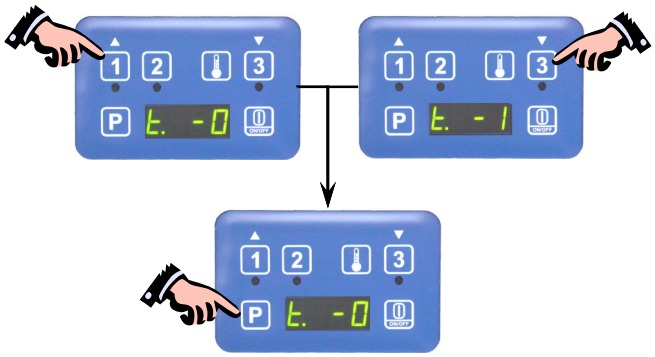
't - 0' - *The display will show the following temperature status;*

'HEAt' *- Awaiting for fryer to heat up to set temperature.*

'droP' *- When the fryer is within* 10° of the set temperature to indicate that fryer is ready for loading.

8. One of the following options will display:-

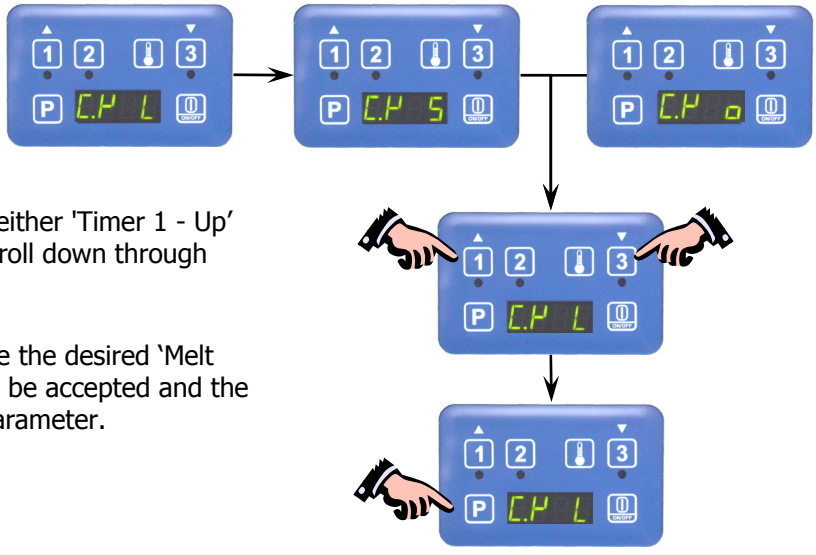
9. Press either 'Timer 1 - Up' key or 'Timer 3 - Down' key to select the option required.



10. Press the 'Program' key to confirm the options, the change will be accepted and the display will step on to the next parameter.

Programming the 'Melt Cycle'.

11. The user may select from 'L' (Liquid), 'S' (Solid) or 'O' (Override).

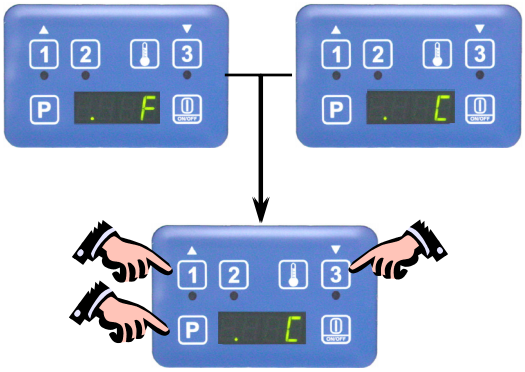


12. To change the 'Melt Cycle' press either 'Timer 1 - Up' key or 'Timer 3 - Down' key to scroll down through the selections.

13. Press the Programme Key 'P' once the desired 'Melt Cycle' is selected, the change will be accepted and the display will step on to the next parameter.

Setting the 'Temperature Units'.

14. The user may select from 'F' (Fahrenheit) or 'C' (Celsius).



15. To change the 'Temperature Units', press either 'Timer 1 - Up' key or 'Timer 3 - Down' key to change the selection.
16. Press the Programme Key 'P', the change will be accepted and the display will revert to the 'Idle Mode'.

NOTE: Pressing and holding the Programming Key for approximately 3 seconds during the Advanced Programming Mode (Or not pressing any keys for 2 minutes) the appliance will exit the Advanced Programming Mode and return to the 'Idle Mode'.

System Programmable Default Settings

This section shows the system parameters for this model and contains a table of the 'Programmable Default Settings', (These settings can be edited from the Control Panel when in either 'Controller Basic Programme Mode' or 'Controller Advanced Programming Mode').

Programmable Default Settings	
Basic Programming Mode	
Timer 1 'L' Cook Time	3:00 min.
Timer 2 'Ctr' Cook Time	3:00 min.
Timer 3 'R' Cook Time	3:00 min.
Temperature Set Point	177°C (350°F).
Melt Cycle Mode	L (Liquid).
Keypad Lock or Unlock	Unlock.
Degrees; °F or °C	°C.
Advanced Programming Mode	
Number of Product Timers	3.
Timing Mode	S.t (Straight).
Temperature Offset	0°.
Temperature Display Mode	t. -0 = 'HEAt' or 'droP'.

Replacement Parts List

IMPORTANT:

Only genuine authorized replacement parts should be used for the servicing and repair of this appliance. The instructions supplied with the parts should be followed when replacing components.
For further information and servicing instructions, contact your nearest authorized service branch (contact details are as shown on the reverse of the front cover of this manual).

When ordering replacement parts, please quote the part number and the description as listed below. If the part required is not listed below, request the part by description and quote Model and Serial Number which is shown on the rating plate.

Part No	Description	E43	E44	E43E	E44E
228922	Neon (Clear)	1	2		
227963	Neon (Orange)	1	2		
227389	Knob 6mm 60-200°C	1	2		
228375	Switch Actuator ON / OFF	1	1	1	1
228374	Load Switch ON / OFF	1	1	1	1
024018	Overtemp Thermostat	1	2	1	2
020256	Reset Relay 24V AC			1	2
011982	Thermostat 60°C - 200°C	1	2		
229355	Selector Switch	1	2		
024802	Door Microswitch	1	1	1	1
013977	Door Microswitch Insulator	1	1	1	1
014612	Fryer Element (Single Tank)	3		3	
015299	Fryer Element (Double Tank - Non UK)	6		6	
017560	Fryer Element (Double Tank - UK)	6		6	
017717	Temperature Probe			1	2
228660	Transformer 24Vac			1	2
229033	Fuse Holder			1	2
020109	Fuse 2 Amp			1	2
228707	Digital Controller			1	2
230101	Controller Overlay (3 Basket / Timer)			1	2
231739	Contactor	2	4	2	4
025948	Terminal Block - 6 Way			1	2
General					
018019	Basket (Standard).	3	3	3	3
227856	Door Magnetic Catch.	1	1	1	1
227449	Door Handle	1	1	1	1
018358	Drain Valve.	1		1	
019390	Drain Valve.		2		2
021885	Drain Extension.	1		1	
021932	Drain Extension.		1		1
228761	Fryer Lid.	1	1	1	1
015279	Lid Handle (Black)	1	1	1	1
227850	Leg Adjustable - 150mm	2	2	2	2
229674	Rear Roller Assy	2	2	2	2
Accessories					
228793	Plinth Kit - 450mm (Fryer).				