

MONO Modular Deck Oven with Integrated Prover

EN

Installation and Operation Manual





Product Version

- UK specification
- Modular decks
- ECO Touch controller
- Prover base unit

Enter Serial Nos. here.

Deck 1

Deck 2

Deck 3

In the event of an enquiry please quote these serial numbers.

Safety Symbols

The following safety symbols are used throughout this product manual. Before using your new equipment, read the instructions carefully and pay special attention to the information marked with the following symbols:



DANGER Indicates an immediate hazard with a high risk of death or serious

physical injury if not avoided.



WARNING Indicates a potential hazard with a medium risk that could result in death

or serious physical injury if not avoided.



CAUTION Indicates a hazardous situation that could result in minor or moderate

injury if not avoided.

Electrical Safety Notice



Electrical safety and advice regarding supplementary electrical protection

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

The appliance installation and periodic inspection 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 mandatory requirements of the local electrical wiring regulations and any safety guidelines.

We recommend:

- Supplementary electrical protection with the use of a residual current device (RCD)
- Fixed wiring appliances should also 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 the following:

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

It is recognised that there may be locations of increased risk of electrical shock other than those specifically addressed in Part 7 of BS 7671. Examples of such locations could include laundries, where washing and drying machines are nearby, 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) using a residual current device having a residual operating current not exceeding 30 mA;
- Supplementary protective equipotential bonding; and
- Reduction of maximum fault clearance time.

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



WARNING

- Separate supplies to each deck must all be protected by a 30mA-rated
 Type 'A' Residual Current Device (RCD).
- Before installation, it is recommended that a qualified and competent electrician first tests the electrical outlets for electrical safety.

Water Leak Safety Notice



WARNING

■ Take action immediately to get a water leak fixed and prevent death or serious injury from electrocution.

It is essential to regularly check for any signs of a water leak from an oven installation. If there is evidence of a water leak, do not ignore it. Immediately report it to a manager or as applicable to your organisation.

Furthermore:

- Disconnect or completely isolate the oven from the electrical supply (see Emergency Instructions section on page 14).
- Place an out-of-service notice on the oven.
- Contact your oven supplier or MONO Equipment for technical assistance.

Ovens must be maintained and serviced at appropriate intervals to ensure the oven operates at optimum levels. See the **Maintenance** section on page **59**.

General Notices



CAUTION

Users with Implantable Cardioverter Defibrillators and Pacemakers

- Several common types of devices and machinery may interfere with implantable cardioverter defibrillators (ICDs) and pacemakers, including mobile phones, headphones, radios, machinery, and magnets.
- The electromagnetic waves generated by these devices can keep your ICD or pacemaker from functioning correctly. Try to avoid them, or at least minimise your exposure to them.
- Your healthcare professional can advise you about specific devices and machinery to avoid.



NOTICES

Warranty information

- Ambient working temperatures for electrical components, such as solenoid switches, circuit breakers and motors, should not exceed 40 °C (115 °F). Manufacturers of these, and other electrical components, advise that any ambient temperature above this affects the functionality of the components. Any related guarantees become void.
- It is the owners' responsibility to ensure adequate ventilation is provided. Any component malfunctioning during the guarantee period found to have been subjected to excessive humidity or ambient working temperatures is not covered by the component manufacturer's or MONO Equipment's product warranty.
- Failure to adhere to the cleaning and maintenance instructions detailed in this User Manual also could affect the warranty of this machine.
- Visit the MONO Parts and Labour Warranty page for further information.

Continuous improvements

- Our policy is to improve our machines continuously, and we reserve the right to change specifications without prior notice.
- Engineers/Electricians-only sections of the User Manual
 - Technical sections of this User Manual are for suitably experienced and qualified persons (SEQP) only. Customers must never make any modifications or repairs to MONO's machines.



DECLARATION OF CONFORMITY

We hereby declare that this machine complies with the essential health and safety requirements of :-

- The Machinery Directive 2006 / 42 / EC
- The Low voltage Directive 2014 / 35/EC
- The requirements of the Electromagnetic Compatibility Directive 2004 / 108EC, 91 / 263 / EEC, 92 / 31 / EEC Incorporating standards EN55014-1:2006+A1:2009+A2:2011

EN55014-2:1997+A1:2001+A2:2008

- The General Safety of Machinery and food processing Standards applicable
- · Materials and Articles intended to come into contact with food Regulation (EC) No. 1935 / 2004

Signed	CAEN Vious	
G.A.Williams – Quality Manager		
Date		
Machine FG Code.	Machine Serial No.	

A technical construction file for this machine is retained at the following address:

MONO EQUIPMENT

Queensway, Swansea West Industrial Park, Swansea SA5 4EB UK

MONO EQUIPMENT is a business name of AFE GROUP Ltd Registered in England No.3872673 VAT registration No.923428136

Registered office: Unit 9, Bryggen Road, North Lynn Industrial Estate, Kings Lynn, Norfolk, PE30 2HZ

Contents

		Page
1.	Introduction	9
2.	Overall Dimensions	. 10
3.	Specifications	. 11
	Electrical specifications	11
	Environmental specifications	11
	Mechanical specifications	11
4.	Safety	. 12
	General safety messages	12
	Oven safety messages	12
	Emergency instructions	14
5.	Installation	. 15
	General	15
	Electrical connections	15
	Fit earth straps (part no. 158-25-11200)	15
	Fit the tile retaining brackets (part no. 257-06-00015)	16
	Water supply requirements	16
	Oven's water system setup procedure	17
	Exhaust Connections (if canopy fitted)	18
6.	Before First Use of the Deck Oven	. 20
	Operating conditions	20
	Baking tile 'seasoning' instructions	21
	Baking principles	22
7.	Touchscreen Operation	. 24
	Basic operation	25
	Baking using the "Favourites" menu	26
	Baking using the "Manual Bake" menu	29
	Baking using the "Programmes" menu	32
	Creating a program	35
	7-Day timer	40
	Settings	42
8.	Using the USB port	. 47
9.	Diagnostics	. 52
10.	Passcodes	. 54
11.	Cleaning	. 55
	Daily cleaning instructions	55
	Weekly cleaning instructions	55

12.	Troubleshooting	. 56
13.	Service and Spares	. 57
	Oven spares	57
	Service Information	58
	Disposal	58
14.	Maintenance	. 59
	General maintenance	59
	Light bulb replacement	59
15.	Oven Electrics	. 61
	Electrical drawings	63
	Electrical panel main components	70
16.	Prover Operating Instructions	. 72
	Prover controls	72
17.	Prover Electrics	. 73
	Electrical drawings	73

1. Introduction

The electric modular Deck Oven is an easy-to-use practical, good-looking oven, giving an excellent heat recovery rate and an even bake across a wide range of bread and confectionery products.

Good looking and completely reliable

Conceived with the no-nonsense requirements of both the independent and in-store baker in mind, designed to be visually pleasing and give reliable service for many years visually. This oven will more than satisfy the most discerning customer.

Top-quality specification

The external and internal contact surfaces are stainless steel.

Each modular deck has durable reinforced one-piece tiles and increased high-grade insulation and high-temperature ceramic sealant to make the oven more efficient.

The oven comes with a patented integral steaming system, which reduces energy consumption and the overall size of the oven. The system produces natural steam with the advantages of spray steam. Pre-steam is also available to reduce the effects of long loading times.

No drainage is required.

Eco-touch ovens are supplied with **TOUCH** displays for user-friendly control. This display can show pictures of product types or program numbers that have been set by the user. When not being used, the screen can show your company logo. A voice-prompt facility is also available for basic instructions like "Bake over".





ECOTOUCH SCREEN CONTROLS

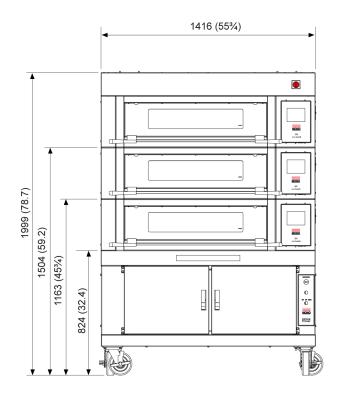


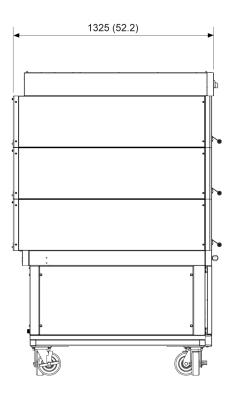
The lights are low voltage, sealed from the chamber and easily accessed from outside the oven.

Fitted with a choice of hinged easy to clean glazed doors (using low energy-loss reflective glass for high visibility) or metal doors, means low energy consumption and the high kW rating gives good recovery. (0-100% heating available both top and bottom).

As it is our policy to improve our machines continuously, we reserve the right to change specifications without prior notice.

2. Overall Dimensions







NOTE

All dimensions are in mm (inches) and are approximated.

Oven	2-trays wide		
Width	1416 mm (55¾ inches)		
Depth including handles	1325 mm (52.2 inches)		
Height (to first deck)	824 mm (32.4 inches)		

Prover		
Number of trays	8	
Size of trays	600 mm x 400 mm	

3. Specifications

Electrical specifications



WARNING

Separate electrical supplies to each deck and the prover base must have their own 30mA Type 'A' Residual Current Device (RCD).

Table 1: Electrical loading per modular deck (2 trays wide)

Voltage	Power	
400 Vac (50 Hz), 3-phase + neutral + earth	6 kW, 9 Amps	

Table 2: Electrical loading for prover unit

Voltage	Power
230 Vac (50 Hz), 1-phase	1.8 kW, 8 Amps

Environmental specifications

The noise level is less than 80 dB.

Mechanical specifications

Table 3: Weights for standard-size deck oven

Specification	Nominal travs wide Modular decks Weight (2)		ht ⁽²⁾	
Specification	Nominal trays wide	Modular decks	Lbs	Kg
Total oven weight (including base prover)	2	3	(1)	(1)
Weight per oven chamber module	2	-	421	191.5
Weight per oven canopy module	2	-	31	14
Weight per fan module	2	-	62	28
Weight of product (maximum) per deck	2	-	86	39
Weight of prover	2	-	(1)	(1)

⁽¹⁾ To be advised. Contact MONO Equipment for information.

⁽²⁾ All weights are approximate.

4. Safety

General safety messages



CAUTION

- Magnets information:
 - Magnetic fields in magnets, used in devices and machinery, can inhibit pulse generators for Implantable Cardioverter Defibrillators (ICDs) and pacemakers.
 Magnets can activate a switch prohibiting the ICD from delivering vital signals such as lifesaving shocks.
 - If you have an ICD or pacemaker, avoiding close or prolonged contact with magnets or their magnetic fields is advisable. Keep magnets at least six inches from where your device is implanted. If you feel any interference in any way, immediately move away from the source.

Oven safety messages

Only fully trained and authorised persons are permitted to work on the oven. Qualified electricians must carry out all repairs and maintenance. Always disconnect or isolate the power supply before starting maintenance or cleaning work on the oven.

A responsible Bakery Manager or Supervisor must carry out daily safety checks. Bakery staff **must not**, under any circumstances, remove covers or panels to access any part of the oven.



DANGER

Never use the USB port to power or recharge electronic devices, e.g. mobile phones. Incorrect usage causes damage to the oven and could result in a fire.



WARNING

- Before using the oven:
 - Ensure all covers, panels, cables, and pipe fittings are secure.
 - Visually examine the oven for apparent damage or signs of tampering.
- If the oven is damaged or malfunctioning, or missing parts:
 - Stop using it.
 - Do not attempt any repairs.
 - Contact MONO Equipment for technical assistance.
- Never operate the oven with any covers or panels removed.
- All utility connections to the oven must comply with the statuary requirements of the country where the oven is installed.
- Ensure this product manual is read thoroughly before operating the oven. Operate and maintain the oven only as described in this product manual.



WARNING

- Separate electrical supplies to each deck and the prover base must be protected by their own 30mA Type 'A' Residual Current Device (RCD). The RCDs must be fitted before installation and commissioning of the oven and prover base.
- Always fit a wall-mountable isolator switch to isolate the oven entirely from the electrical supply in an emergency. The isolator must be visible, labelled as an emergency shutdown device, and easily accessible.
- Check that the electrical requirements on the oven's information plate match the supply before connecting the power cable and turning the power on for the first time.
- Before installation, it is recommended that a qualified and competent electrician first tests the electrical outlet for electrical safety.
- Always ensure your hands are dry before touching any electrical components, including cables, switches, and plugs.



CAUTION

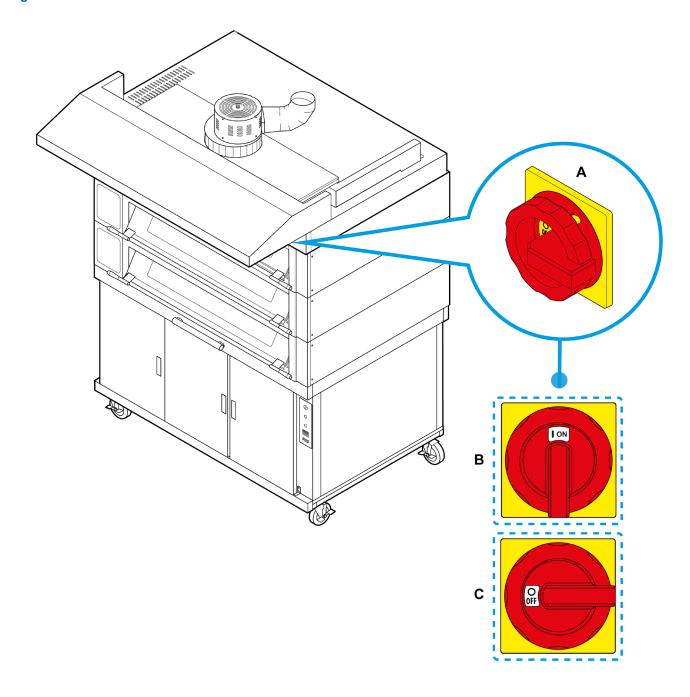
- Be aware of hot surfaces:
 - Do not touch the oven door with bare skin.
 - Always use oven gloves when loading or unloading the oven.
 - Allow time for the oven to cool down before cleaning it.
 - While the oven is in operation (and for some time after use), touching the oven door or the surrounding panels is inadvisable because of the conducted heat.
- When removing products from the oven, ensure the following:
 - Tins are knocked out and stored directly onto a tin storage trolley or rack.
 Do not leave hot tins on the floor or tables.
 - Trays are put into a rack and then wheeled to a safe cooling area.
- Fully train operatives before they use the oven. Anyone undergoing training must be under the direct supervision of someone experienced.
- Ensure there are no trip hazards around the oven, e.g. trailing cables.
- Check that the floor around the oven is not slippery, e.g. no liquid spills.
- Do not store items on top of or behind the oven.
- Never climb onto the roof of the oven.
- Only use the oven for baking bread, pastries, and cakes.
 Contact MONO Equipment for other product-baking machines.
- No unauthorised modifications to the oven are permitted.

Emergency instructions

To stop the oven in an emergency, switch it off using the main isolator on the oven.

A wall-mounted isolator switch, rated for the specific model of oven installed, must also be available to isolate the oven entirely from the electrical supply in an emergency. The isolator must be visible, labelled as an emergency shutdown device, and easily accessible.

Figure 1: Main isolator switch on the oven



5. Installation

General

A solid, smooth, level floor is recommended on which to position the oven, and access for maintenance should be considered.

The oven is not a "built-in" design. Sufficient clearance must be left in front of the access panels (right-hand side) for servicing.

- If not chosen as an oven option, an extraction hood should be sited above the oven to disperse excess steam and heat, which could adversely affect the bakery ceiling and ambient temperature.
- A chain retainer, shorter than the power cables, should be fitted to protect them from strain if the oven moves. Fit it to the wall or floor and the base, using the hole in the castor fixing corner plates.
- Only trained engineers are authorised to install this oven. All water and electrical connections must comply with local and national regulations.

Electrical connections

- The main connection point for all deck supplies is at the top of the oven.
- A wall isolator must be available to isolate the oven completely. This isolator must be easily accessible to the oven operator.
- Read the **Safety** section on page **12**.
- Electrical loadings are in the Specifications section on page Error! Bookmark not defined..

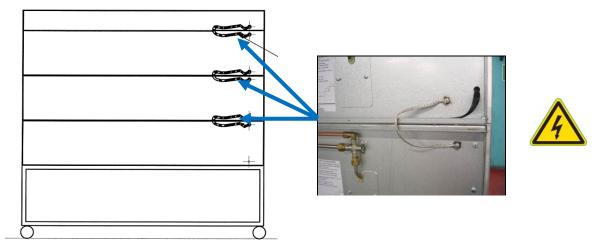
Fit earth straps (part no. 158-25-11200)



NOTE

Factory-built ovens already have them fitted, but always check that they are fitted.

Figure 2: Connect earth (ground) straps between each modular deck



Fit the tile retaining brackets (part no. 257-06-00015)



NOTE

 Only deck ovens built on-site need this procedure, but always check that they are fitted.

Procedure

- 1. Find the brackets and screws loose in a supplied plastic bag.
- 2. Position the bracket to touch the tile (as shown in the photograph)
- 3. Fix the bracket using two screws.
- **4.** Repeat steps **1** to **3** for both sides of each deck.

Figure 3: Installing the tile retaining brackets



Retaining brackets in two positions on each deck



Positioning of bracket

Water supply requirements



NOTE

The setup procedure on the next page must be followed to allow the steaming system to function correctly.

Oven

- All ovens with steam require a ¾" BSP hot or cold water supply at a pressure of 2 to 3 bar (29 to 44 psi).
- Only one water supply is required per oven and must comply with local water regulations.
- All decks are supplied from one connection point on the rear of the oven.
- For proper operation of the steam system, it is recommended that the water supply has the following specifications:

Hardness 0 to 4 grains per gallon

PH range 7.0 to 8.5 Chloride concentration 0 to 20 ppm

Consult MONO for proper water filtration system information.

- No drain is required for this oven.
- A non-return check valve is supplied and fitted to the water inlet manifold.

Prover

- The Prover Base requires a ¾" BSP cold water supply at a pressure of 2 to 3 bar (29 to 44 psi).
- Washing-machine-type hose

Oven's water system setup procedure



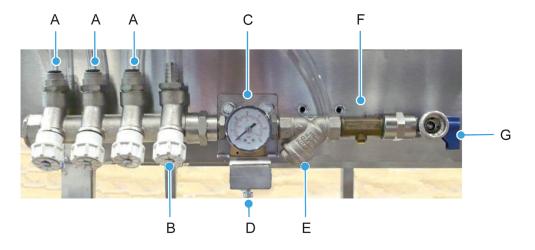
The water delivery to the deck oven must be checked for the steam system to operate correctly.

Note that dynamic pressure, not static pressure, is being measured.

Procedure

- 1. Flush out the main feed pipe to be used until water runs clear and free from debris.
- 2. Connect the main feed to the oven.
- 3. Connect flexible hoses to each deck.
- 4. Place a container under the test valve (B).
- **5.** Slowly open test valve **(B)** fully and, with the water flowing, set the regulator **(C)** to 0.75 bar using the screw underneath **(D)**.
 - Never use the oven above this setting.
- 6. When the pressure has stabilised, shut the test valve (B).
- 7. Repeat steps 4 to 6 at the end of the installation.

Figure 4: Water regulator setup (located on the rear of the oven)

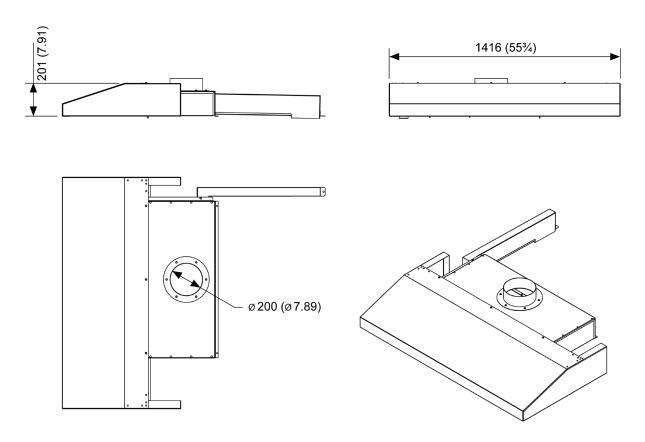


- A. To ovens
- B. Test valve
- C. Regulator
- D. Adjusting screw to 0.75 bar
- E. Filter
- F. Dual check valve backflow prevention device
- G. Stop tap

Exhaust Connections (if canopy fitted)

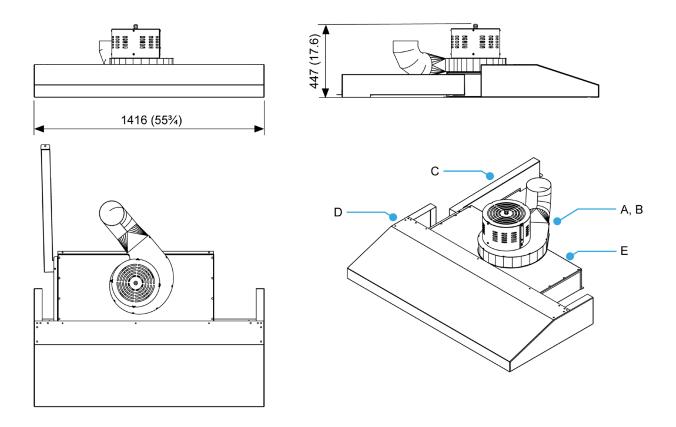
- Ideally, an exhaust duct should rise 2 metres above the bakery roof and be protected from wind and birds by a duct protector.
- It should be of a suitable material to take the high temperatures and humidity expected.
- It should be flexible and easily removable at the oven connection point. This allows the oven to be moved for cleaning when required.

Figure 5: Canopy (without fan) dimensions



Dimensions are in mm (inches)

Figure 6: Canopy (with fan) dimensions



Dimensions are in mm (inches)

Table 4: Canopy parts

Item		Part number	
Α	Extraction fan assembly	247-08-04900	
В	Inlet ring	247-08-05100	
С	Flue assembly	257-10-00010	
D	Canopy assembly	257-10-00016	
E ⁽¹⁾	Extraction duct assembly for 2-tray oven width	257-10-00022	

⁽¹⁾ Contact MONO Equipment for the availability of other extraction duct assemblies.

6. Before first use of the deck oven

Operating conditions

- Leave a clear space of at least 2 to 3 metres (6 to 10 ft.) in front of the oven for practical and safety reasons.
- Do not use bakery utensils to operate the control panel buttons.
- Ensure that the locking casters are locked into position.
- For hygiene reasons, MONO Equipment highly recommends thoroughly wiping the inside of the oven and all accessories with a clean cloth soaked in warm, soapy water before using the oven for the first time. Although the utmost care is taken during assembly and pre-delivery inspection, there is always a possibility of residue contaminating the first bake if this is not done.

Baking tile 'seasoning' instructions

THIS PROCEDURE MUST BE FOLLOWED FOR THE OVEN'S WARRANTY TO REMAIN VALID.

For the oven to give good, reliable service, the deck tiles must initially be brought up to temperature as stated below; this ensures all residual moisture in the tiles has been removed.

This procedure must be actioned **once** before the deck oven is used for the first time. After the tile seasoning procedure has been run, the oven can be used as required.

Tile seasoning procedure

1. From the Main Menu, select the **Settings** icon.



2. Enter the default password 123456 (unless changed) and touch OK.



3. Select the High Level Settings option.



- **4.** Enter the default password **561234** (unless changed) and touch **OK**.
- 5. Select the **Tile Seasoning** option to start running the seasoning program automatically.



6. The oven's controller shows the **Target Temperature** and the **Remaining Process Time**.



The oven now follows the **Tile Seasoning Temperature** rise over the time shown on the screen, with the damper opening and closing periodically during the process.

- 7. Wait until the oven returns to the standard wallpaper **Standby** screen at the end of the program.
- **8.** The tile seasoning is complete, and the deck oven can be used for baking.



NOTE

- To stop the tile seasoning procedure, cycle the deck oven off and then on using the main isolator switch.
- The deck oven reverts to standby mode when power is restored.

Baking principles



NOTE

 Operators should refer to their company's recipe manual for the oven temperature settings.

Baking heat

Products bake in an insulated, heated chamber with the temperature regulated by a thermocouple. A digital temperature read-out is visible on the control panel screen. Baking heat is radiant, with top and bottom heat adjustable by separate controls. This technology enables heat to be "balanced" according to product requirements.

Steaming function

Steam is provided from an integral steam unit and injected into the chamber on demand. Programmed parameters automatically control this function.

After being steamed, the oven does not allow more steaming until the steam unit has recovered heat, typically for 3 to 10 minutes, depending on the selected program.

All deck ovens have a steam damper that evacuates steam humidity into a vent at the rear of the oven.

Baking advice

Advice for getting the best results from deck ovens:

- 1. Do not place the products too close together. If the loaves are close to each other after the oven spring (expansion), it results in soft sides and may collapse on cooling.
- **2.** Place the product evenly within the oven. Products bunched together are paler than those widely spaced.
- **3.** Products should not be too close to the edge of the tile. As it expands towards the front, one side of the loaf may enter the cooler air by the door.
- 4. The door opening should be kept to a minimum because cold air enters the oven. Cooling of the sidewalls and roof causes the finished product to be lighter locally at the front and wastes heat. If loading times are consistently long, alter the front-top heat to put more heat at the front.
- **5.** The product can form a skin if the loading takes a long time, which causes an imbalance and a less attractive finish. By using the pre-steam function before loading, this can be minimised. The steam function turns the elements off and injects steam to increase the humidity.

Bake settings

1. A good starting point for baking bread in Mono deck ovens is 225 °C (437 °F).

Top heat: 60 to 65 **Bottom heat:** 40

- 2. For cookies (and similar products), the oven's heat can be turned almost off. However, it may still be necessary to place the trays with, e.g. cookies, onto upturned trays on the oven sole.
- 3. Steam should be kept to a minimum for energy efficiency, depending on the product and finish. Times of between 9 and 12 seconds should be adequate. It is a good idea not to focus on the temperature recovery this can vary from oven to oven.

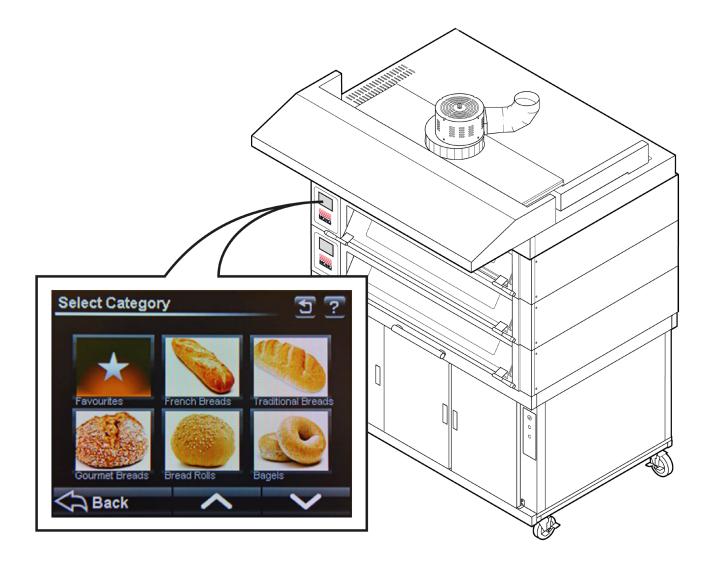
Is the product baked in the time and to the quality you require?

Below are some tips for modifying the bake to get the product that you require.

- If your product is **light on top**, decrease the bottom heat and extend bake time or increase the top heat.
- If the product **sides are pale** and the **top dark**, space the products well apart, drop the top heat, and extend the bake time.
- If the bake time is too long, first increase the top heat to speed recovery. If this does not give sufficient savings, increase the baking temperature.
- To thicken the crust, set the Damper to be open for longer. Different ovens require different lengths of time.

7. Touchscreen Operation

Each deck has an independent colour touchscreen for operating the oven.



Basic operation

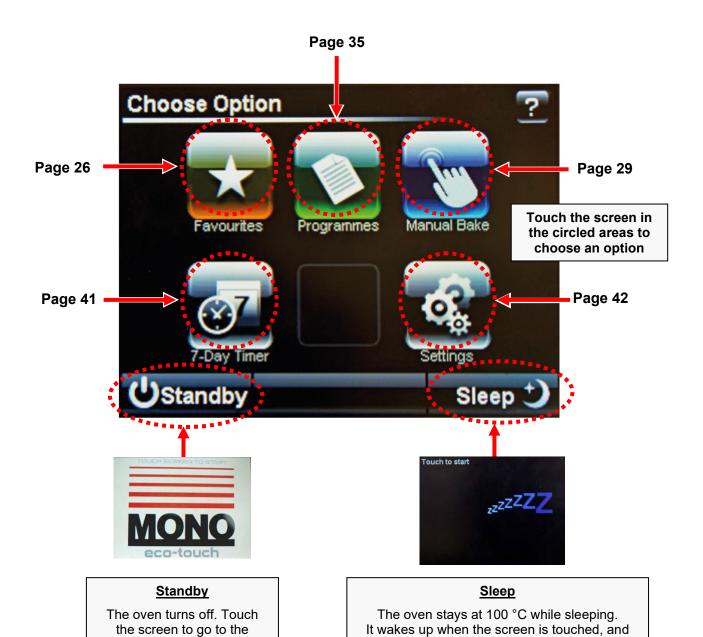
Operations are performed by touching an area of the screen, bringing up the next information panel or activating a function.



Do not use excessive force.

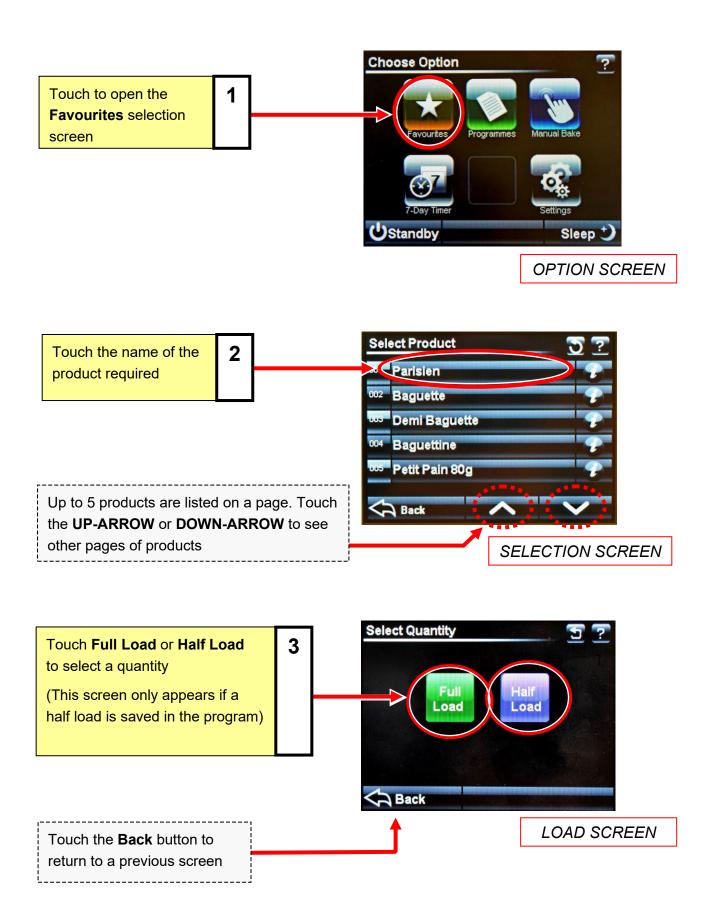
Choose Option screen

The pressure required to operate the panel is adjustable in the **Settings**.



heats to the last program temperature. The **Choose Option** screen reappears.

Baking using the "Favourites" menu



Wait for the oven to reach the required temperature (200 °C in this example)

(The **Heating** message remains on the screen while the oven is heating up)

If the oven is too hot for the temperature chosen, the screen tells you to open the door for cooling. **Take care to avoid burns.**

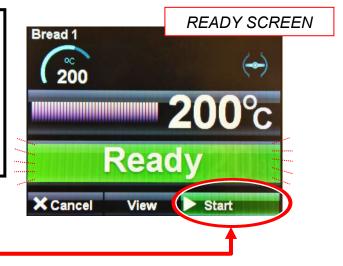
Bread 1
200
164°c
Heating

**Cancel View HEATING SCREEN

When the oven is at the correct temperature, the message changes to **Ready.** Now:

- **5.1.** Open the door and carefully load the oven with the prepared trays of product.
- **5.2.** Fully close the door.
- 5.3. Touch the Start button.

Tip! To help keep the oven hot, avoid opening the door more than needed.



The **Bake In Progress** screen shows the baking time remaining

6

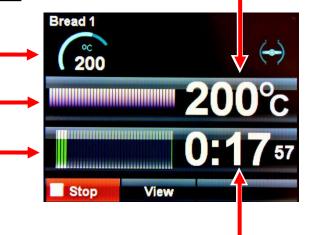
Required temperature

Temperature profile bar

Bake time progress bar

5

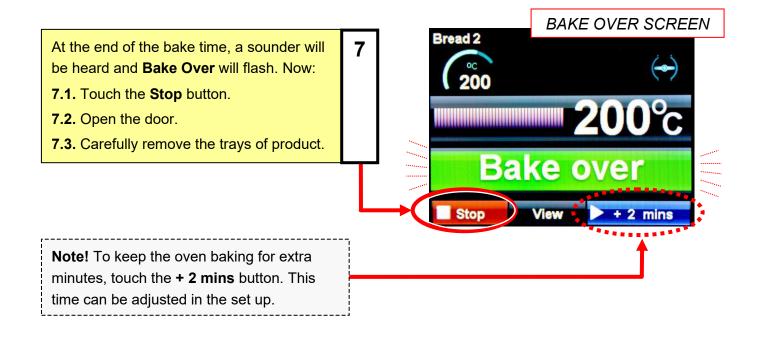
Actual oven temperature (This will rise and fall near to the required temperature)



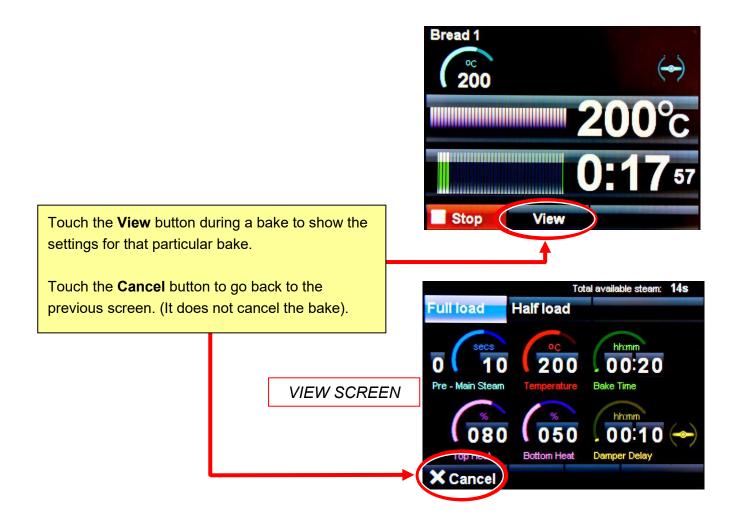
Note: The actual temperature shown will rise and fall above and below the required temperature as the oven cools and reheats.

This is not a fault.

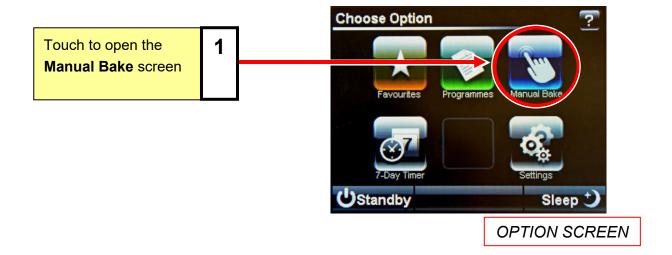
Baking time remaining

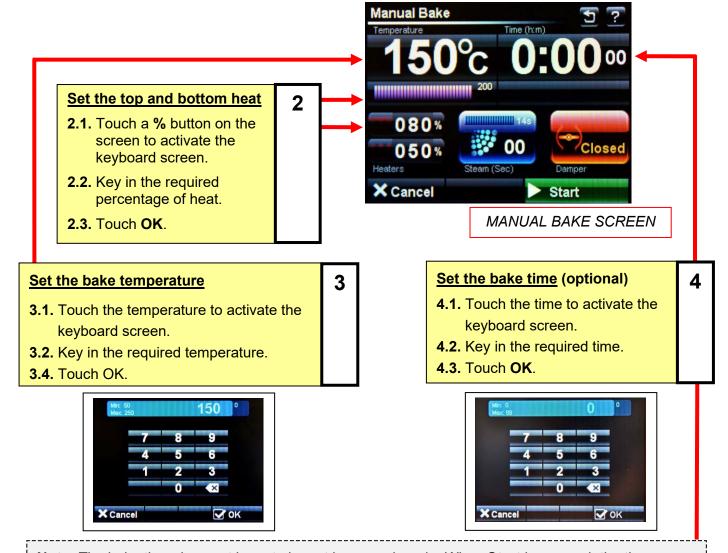


Touching the View button during a bake (optional)



Baking using the "Manual Bake" menu





Note: The bake time does not have to be set in manual mode. When **Start** is pressed, the timer increases instead of counting down. Touch **Stop** to finish the bake.

6

(Manual Bake)

Steam

Touch and hold for the time (seconds) steam is required.

(This can be used before or during the bake)

to the **Options** screen.

Damper

5

Touch to set the Damper to open during the bake. (Icon changes colour to green)

Touch again to close the Damper. (Icon changes colour to red)





Touch **Stop** when the end-of-bake buzzer sounds or when required time was entered.

8

(Manual Bake)

9



MANUAL BAKE SCREEN 3

Save settings

Touch Save to show an option screen.

(If no time was entered at the start of the bake, when **Stop** is touched at the start of the bake **Save** appears at the bottom of the screen)

> Add to favourites
> Change product title
> Change product
> Change tray layout
> Save As...

Use the keyboard to type the required name and touch Save.

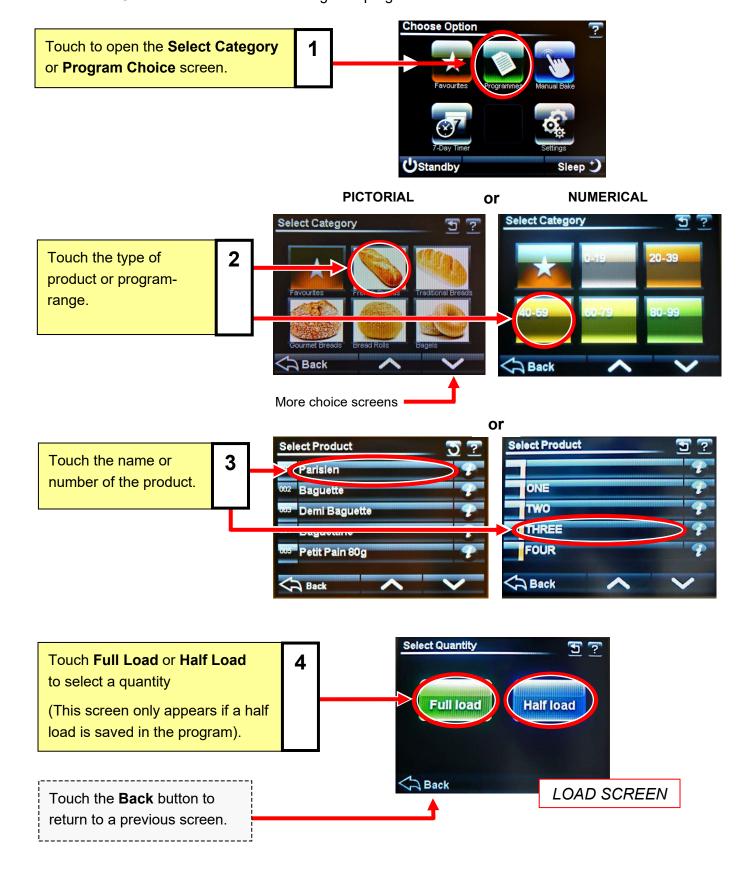


Note: In manual mode, only one operation of the steam or damper is saved.

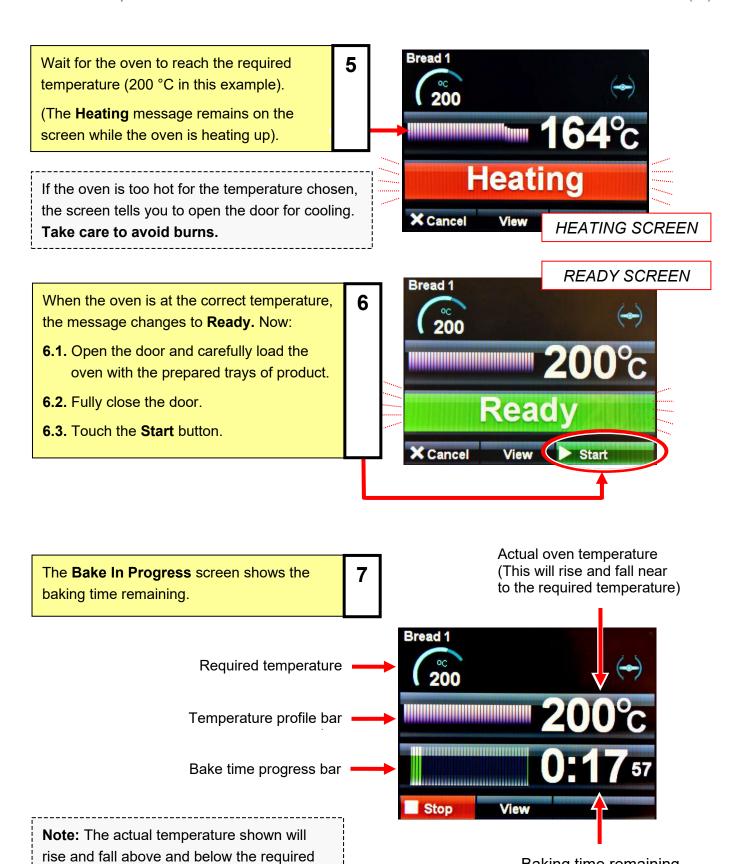
Baking using the "Programmes" menu

Note: This manual covers two versions of the firmware. (The oven is pre-set to show one only).

- PICTORIAL version shows choices of product categories
- NUMERICAL version shows ranges of program numbers

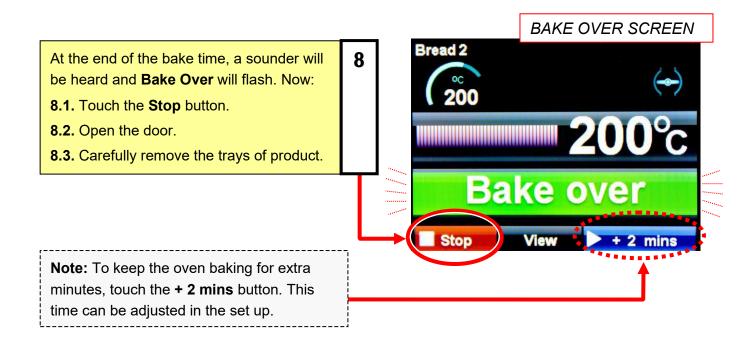


Baking time remaining

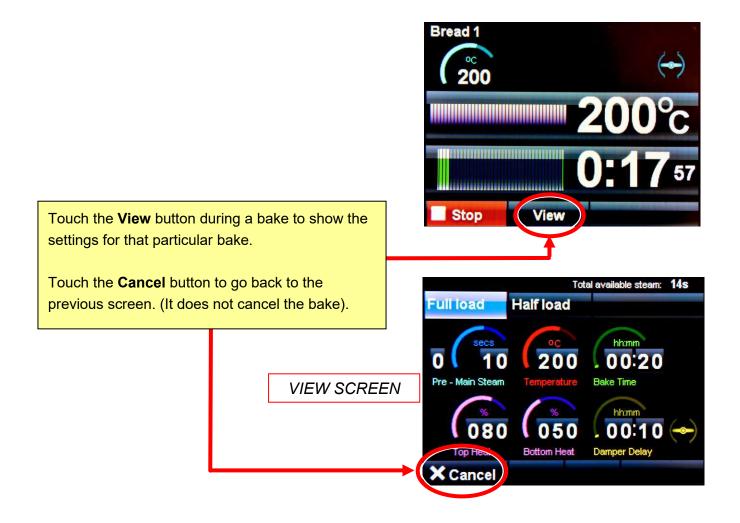


temperature as the oven cools and reheats.

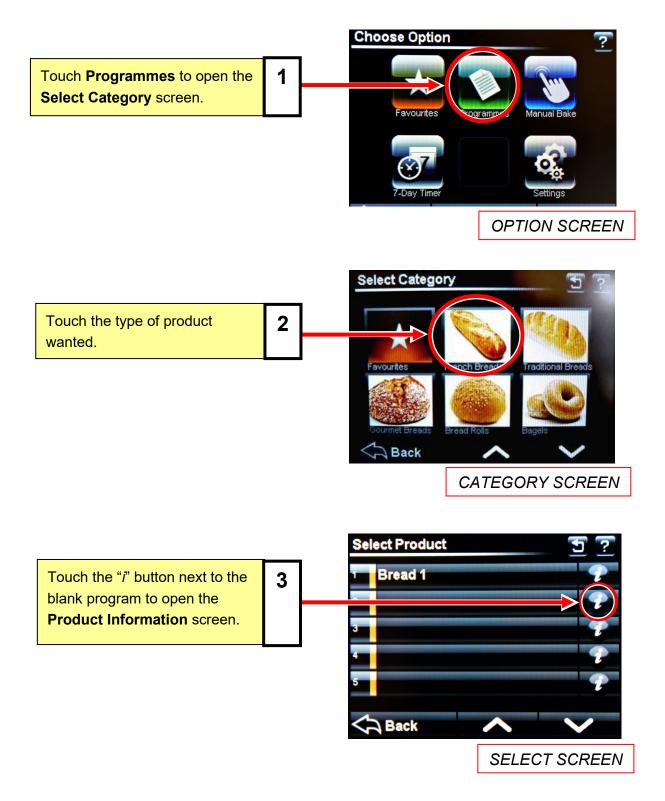
This is not a fault.



Touching the View button during a bake (optional)



Creating a bake program



Enter the Supervisor passcode

(Creating a Bake Program)

INFORMATION SCREEN



Touch **Option** to open the Pass Code screen.

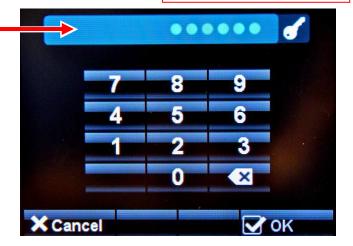
4

5

PASS CODE SCREEN

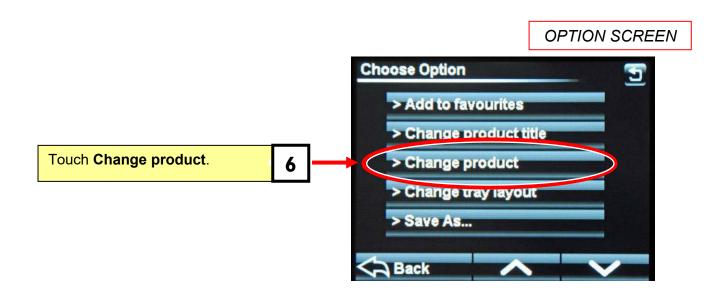
Enter the Supervisor pass code and then touch **OK**.

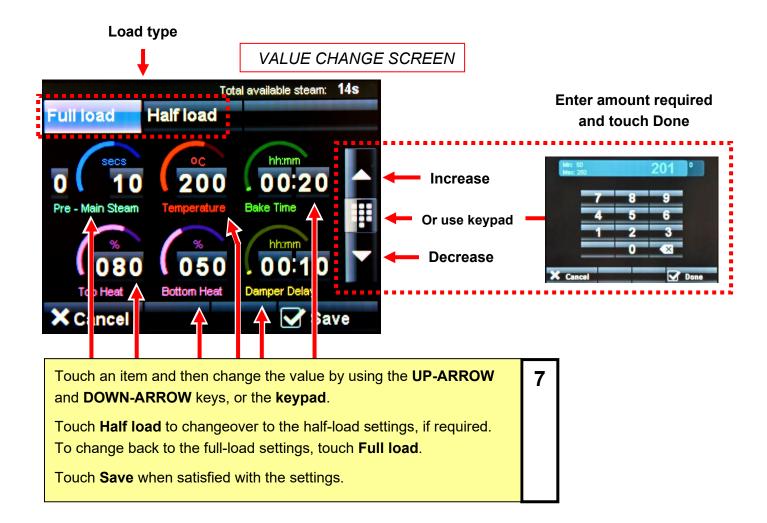
Note: Default code = 123456. This can be changed in the Settings menu).



Enter the product bake details

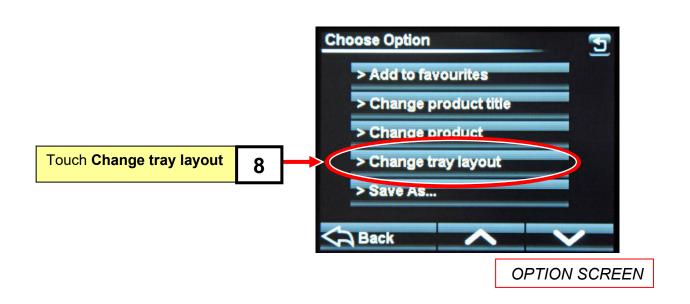
(Creating a Bake Program)

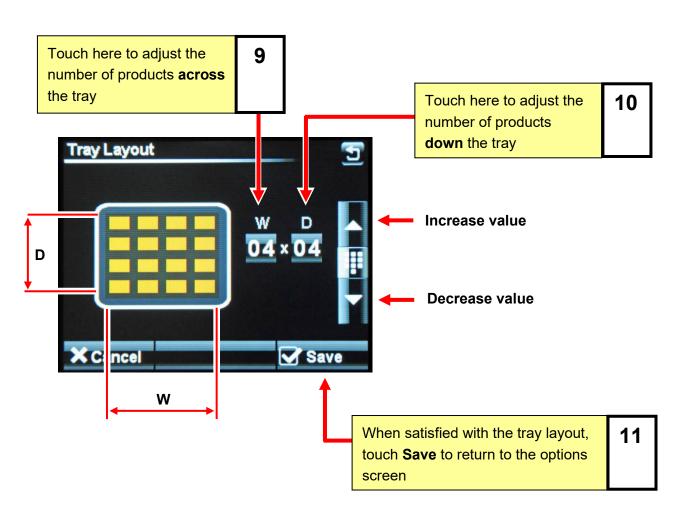




Changing the tray layout

(Creating a Bake Program)





Save the product

Touch Save As...

(Creating a Bake Program)

OPTION SCREEN



KEYBOARD SCREEN

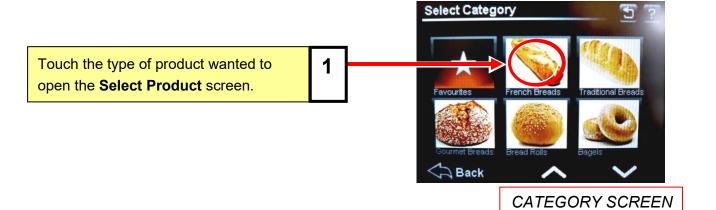


Type in the new name and touch **Save**.

13

12

Add a product to the favourites list (optional)



2

Touch the "*i*" (information) button next to the product you want as a favourite. (This opens the **Choose Option** screen)

Select Product

OUT Parisien

OUZ Baguette

OUS Demi Baguette

OUS Petit Pain 80g

Parisien

OUS Baguette

OUS Petit Pain 80g

SELECT SCREEN

Touch Add to favourites.

(The product now appears on the favourites list).

3

Choose Option

Add to favourites

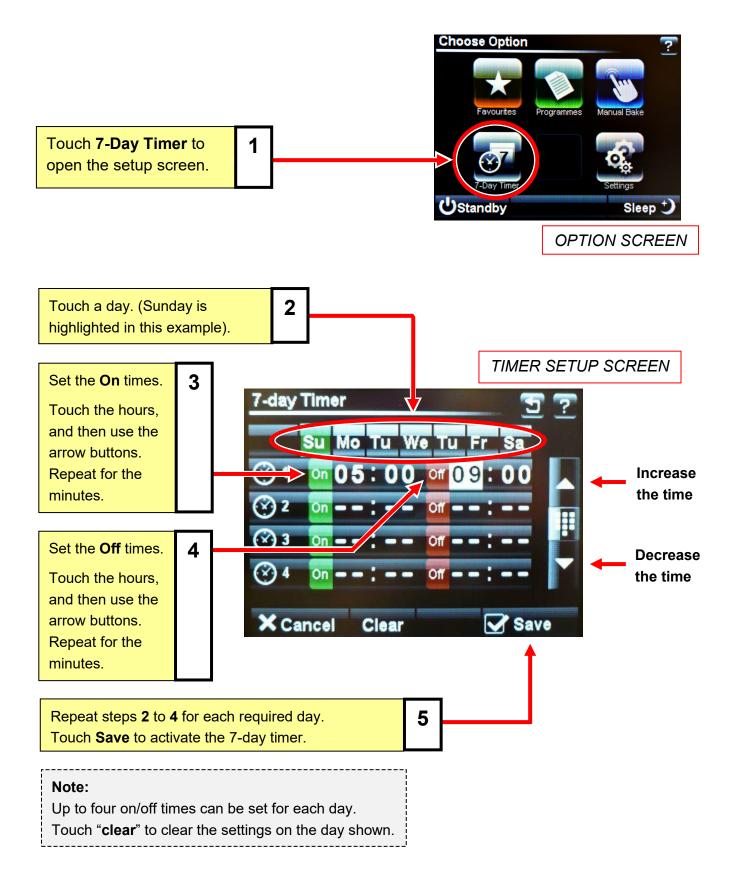
Change product

Change tray layout

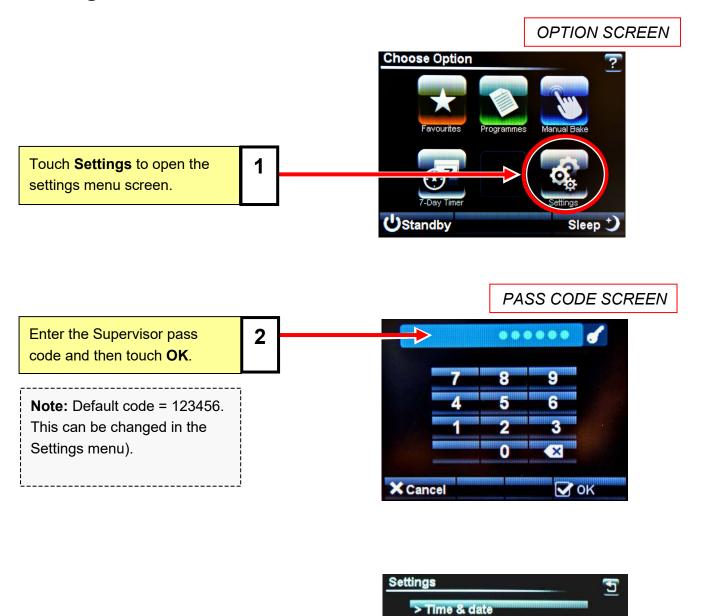
Save As...

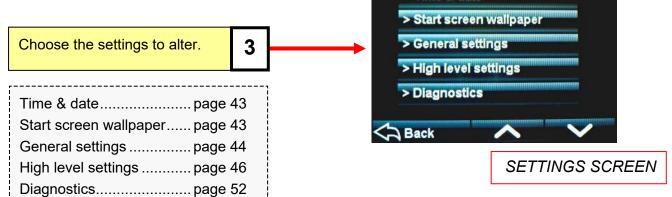
OPTION SCREEN

7-day timer

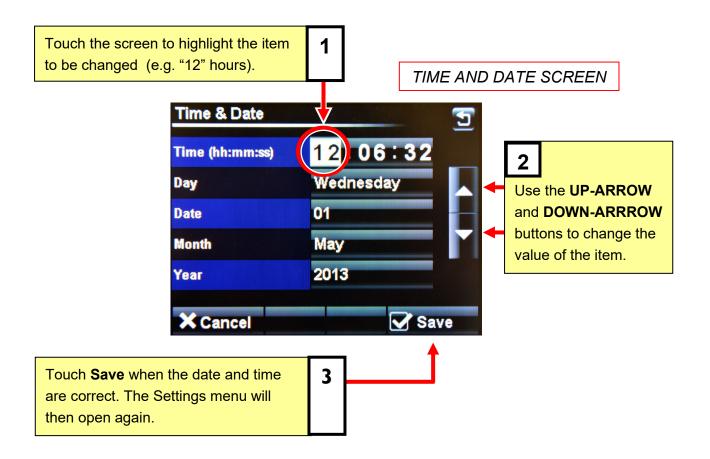


Settings





Set time and date (Settings)



Select a wallpaper for the start screen

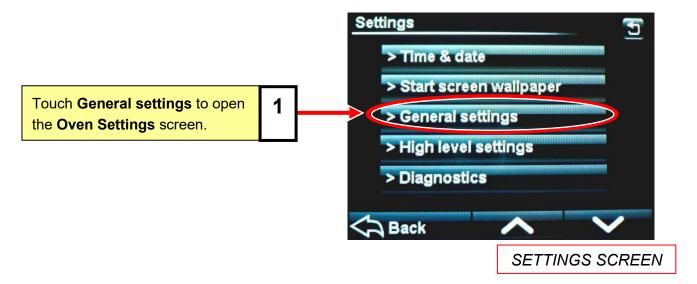
(Settings)



General oven settings

(Settings)

See Table 4 for a guide to each oven setting.



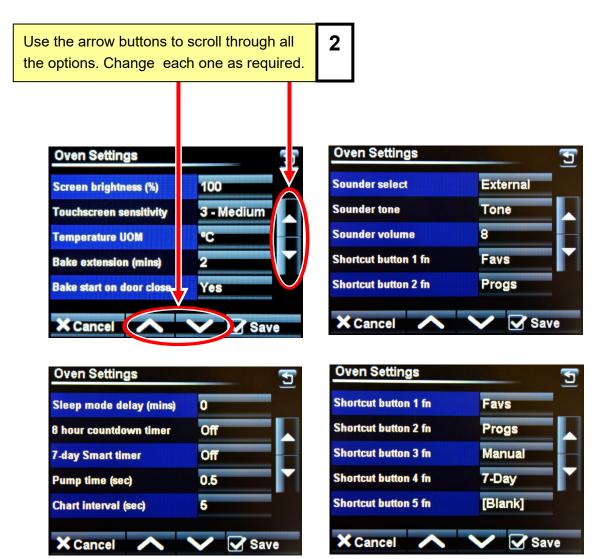


Table 5: Oven settings explained (general level)

Oven setting	Explanation of the settings	Default
Screen brightness	Adjusts the brightness level of the viewing screen. Settings are 5 to 100.	100
Touchscreen sensitivity	Adjusts the pressure required to operate the touch screen. (5 levels of sensitivity)	3 - Medium
Temperature unit of measure	Centigrade (Celsius) or Fahrenheit. Settings are °C and °F.	°C
Bake extension (minutes)	Adjusts the extra time at the end of a bake for each "extra time" button touch. Settings are 0 to 10 minutes.	2
Reselect product after bake	Resumes with the same product program without having to reselect it. Settings are Yes and No .	Yes
Sleep mode delay	The oven goes into sleep mode after the set minutes, providing it is up to temperature and has been through at least one bake cycle. Settings are 0 to 60 .	0
8-hour countdown timer	After 8 hours, the oven gives a warning and then turns off. Touch any button for an extra hour, if required. Off / On .	Off
7-day Smart timer	On = 7 -day timer fuction. Off = Controls set start time depending on oven temperature.	Off
Pump time (sec)	Increase pipe pressure before steaming. Settings 0.0 to 3.0 .	0.5
Chart interval (sec)	Time interval in seconds that the bars show on the heat and bake time progress charts. Settings are 1 to 60 .	5
Sounder select	Set as External or Onboard sounder.	External
Sounder tone	Select a tone – Voice , Tone , or Off .	
Sounder volume	Adjust to suit the volume required for the onboard sounder. Settings are 0 to 15.	
Shortcut buttons 1 fn to 5 fn	It gives the choice of what buttons are active and in which order they appear on the options screen. Settings are Fav (Favourites), Progs (Programs), Manual bake, Multi bake, 7-Day timer, and [Blank] (not used). (Settings for 6 fn cannot be changed)	1 fn = Fav 2 fn = Progs 3 fn = Manual 4 fn = 7-Day 5 fn = [Blank]
Door open alarm	Turns the alarm on or off for when the door is opened during baking. Settings are On and Off .	

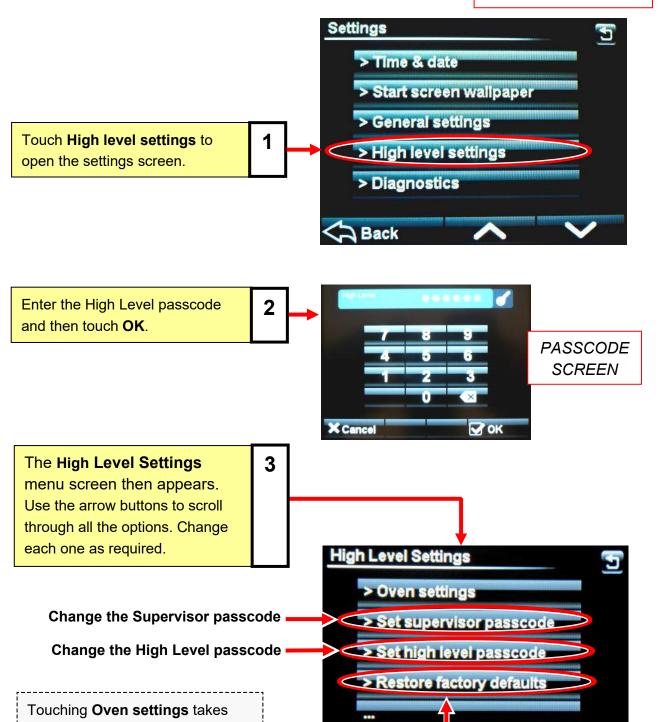
you to the settings menu. See

page 45 for guidance.

High-level settings (Settings)

See Table 5 for a guide to the high-level settings.

SETTINGS SCREEN



Restores all screens to original (factory default) settings

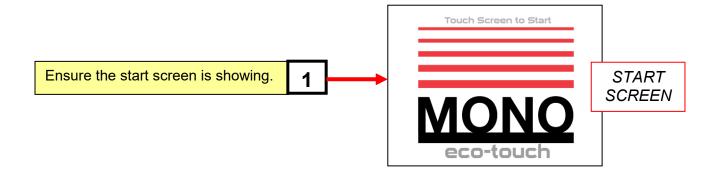
Table 6: Oven settings explained (high level)

Oven setting	Explanation of the settings	Default	
Oven type	Always fixed to DX for this oven.	DX	
Maximum bake temperature	It can be set from 250 °C (480 °F) up to 300 °C (572 °F) .	250 (°C) or 480 (°F)	
Temperature offset	Adjusts the display of the actual temperature in the oven. Usually, this is kept set to 0 .	0	
Bake hysteresis	Sets bake temperature cycling around a set point. (Above and below. Settings for above/below thresholds are 1 to 20.	2	
Bake cycle setpoint only	No = Shows the set temperature point and actual temperatures on screen Yes = Shows the set temperature point only	No	
Manual default temperature	Set for manual program default temperature.	150 (°C) or 302 (°F)	
Sleep fallback	Set the temperature required to be maintained by the oven while sleeping. Setting are 100 to 200 (°C) / 212 to 392 (°F).	170 (°C) or 338 (°F)	
Sleep hysteresis	Keeps "sleep mode" temperature cycling around a set point. Settings for above/below thresholds are 1 to 20 (°C).	2 (°C)	
Ready accept high	The highest temperature for the oven to display "Ready".	15	
Ready accept low	The lowest temperature for the oven to display "Ready".	-10	
Steam type	Plate or Spray – but keep this set to Plate.		
Top gain	Top and bottom heat gains.	50 (°C) or	
Bottom gain	Settings are 0 to 255 °C (32 to 491 °F)	122 (°F)	
Mono constant	Factory set. Do not change unless instructed to do so.	(Factory)	
Steam trough temp.	Not applicable to this oven.		
Steam hysteresis	Not applicable to this oven.		
Steam trough accept	Not applicable to this oven.		
Light output soft start	Some lights need this for a cold start-up to stop them blowing.		
Heater control	Always fixed to the Contactor setting for this oven.	Contactor	
I/P diagnostic Displays inputs and outputs at the top of the screen to aid fault-finding.		Off	

8. Using the USB port



Never use this USB port to power or recharge electronic devices, e.g. mobile phones. Incorrect usage causes damage to the oven and could result in a fire.



Insert the USB memory stick into the socket on the oven panel.
(A rubber plug may have to be removed first).

Note:

The USB stick only fits in one way. Do not force it into the socket.



Wait for the USB symbol to finish moving.

3 MURIO

If old firmware is found, the firmware version screen will appear.

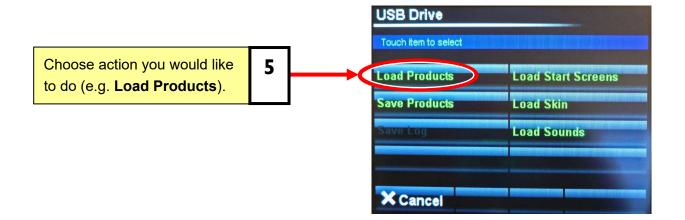
- **4.1.** Touch **OK** to update firmware.
- **4.2.** Wait until the eco-touch controller has restarted after the update is complete.
- 4.3. Remove the USB stick or touch Cancel to choose other items to update or change. (See next page)

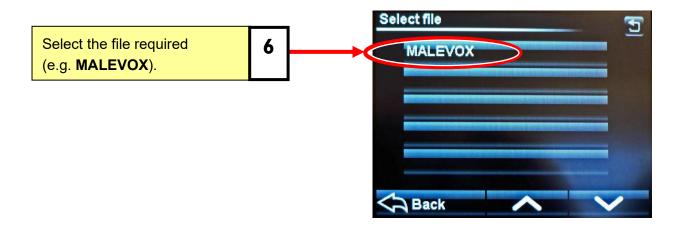


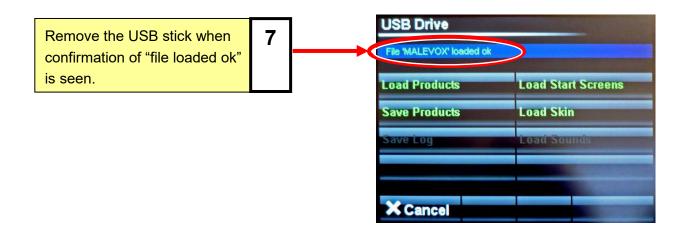
4

Other items to update

(Using the USB port)







Notes on using USB sticks

(Using the USB port)

For a USB stick (pen drive) to function correctly on a Mono oven with a port, it must have the following folder structure as a root folder.

Mono

(Create 5 sub-folders within the Mono folder)

Firmware

Products

Skins

Sounds

Startup

The oven automatically finds the **Mono** folder after plugging the USB stick into the port. Use any USB stick (as it does not need to be blank), but the Mono folder must be in the root.

Place your recipe and product files in the "**Products**" sub-folder. The most used sub-folders are **Product Files, Skins**, and **Startup Screens**.

SKINS

These files control the way the screen looks in different modes.

Pictorial type skins are for when the screen displays categories using pictures.



Numerical type skins are for when the screen displays categories using numbers.



PRODUCTS (PROGRAM FILES)

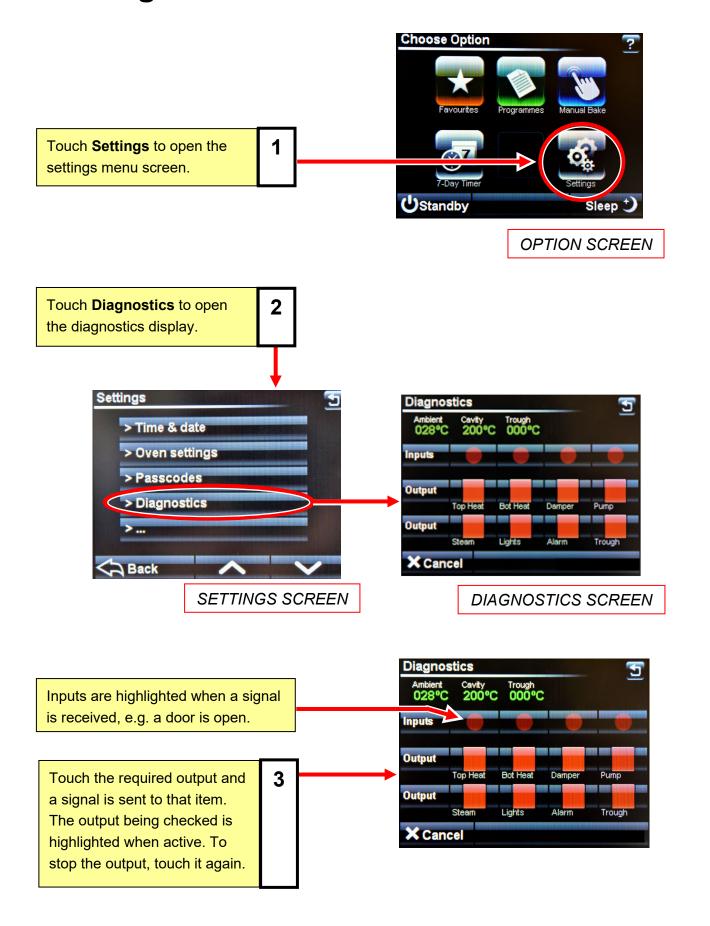
These files contain the information for baking each product, e.g. bread, buns, and cakes.

STARTUP SCREENS

These files show a picture or logo when the oven starts or wakes up.



9. Diagnostics



(Intentional Blank Page)

10. Passcodes

Default passcodes

Table 7: Security level and passcodes

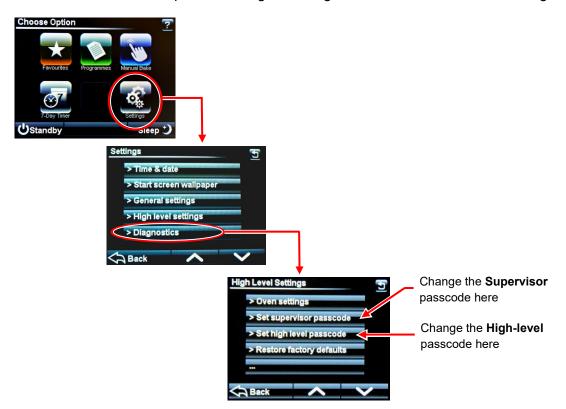
Security level	Passcode
Supervisor (low level)	123456 (default)
High-level	654321 (default)
Master	314159 (fixed)

To stop unauthorised changes to the oven setup, it is suggested that this section is removed from this manual and kept in a safe place for future reference.

If tampering could be a problem, it is a good idea to change the passcodes at regular intervals.

How to change the passcodes

Note: Passcodes are required to navigate through these screens and make changes.



11. Cleaning

Daily cleaning instructions



Isolate the oven from the electrical supply before cleaning.



Take care that water does not enter the control-panel mounting or roof-mounting fan. Never use a pressure washer or water hose to clean the oven.

Procedure

1. Sweep any debris out of the oven **after** it has been allowed to cool.

NOTE: Use a vacuum cleaner with metal attachments (i.e. able to take the heat), if available.

- 2. Brush down and wipe the oven front, back and sides with a damp cloth.
- Spot clean outside with a damp cloth, soaked in a solution of mild detergent and hot water.Ensure excess water is not applied around the electrical panels.

Weekly cleaning instructions



Isolate the oven from the electrical supply before cleaning.



Take care that water does not enter the control-panel mounting or roof-mounting fan. Never use a pressure washer or water hose to clean the oven.



Do not stand on the roof.

Procedure

- 1. Complete the daily cleaning procedure, as above.
- 2. Use a nylon brush to scrub the wheels with a mild detergent and hot water.

NOTE: Using too much water eventually rusts the metalwork.

3. Ensure the oven roof area is clear of debris and dust build-up.

12. Troubleshooting

None of the decks switched on

- Is the oven's main isolator set to the on (I) position?
- Check if a time clock of the bakery's mains power supply is working (if fitted).
- Is the clock set correctly to power the oven at the required day and time?

One deck has not switched on

■ Check if the individual deck timer is to come on at a specific time.

Uneven or patchy bake

- The deck door is open too often or too long whilst loading (front pale, back burnt).
- Uneven loading.
- Faulty element.
- Top or bottom deck elements are not functioning.
- No supply voltage across a phase.

Actual temperature is far exceeding the set temperature

When empty, the temperature of a deck oven can exceed the set baking temperature. This overheat is marginal when the deck is full of product. If the elements are continuing to work after the set temperature has been reached, call MONO service.
(Please allow up to 15 °C (59 °F) difference before diagnosing a fault condition).

Poor recovery of actual temperature after loading

- Doors may have been left open too long during loading, allowing heat to escape.
- Damper may have been left open during loading/baking, allowing heat to escape.
- Top or bottom heat may not be working.
- No supply voltage across a phase.

Steam system not operating correctly

- Is water connected correctly?
- Is the tap to each deck in the on position?
- Has enough time elapsed since the last steaming?

Once steamed, the oven does not steam until the steam unit has recovered heat, typically 3 to 10 minutes depending on the program selected.

13. Service and Spares

Oven spares

Table 8: Oven spares

Spare	Part number
Frosted glass (lights)	257-02-00027
Plain glass (lights)	257-02-00028
Door bumper stop	257-03-00094
Hinge pin, right-hand-side	257-03-00005
Hinge pin, left-hand-side	257-03-00009
Black door handle	A900-27-192
Door spring	257-03-00017
Wire rope	257-03-00024
Spring retaining pin	257-03-00025
Pulley	257-03-00015
Pulley spindle	257-03-00013
Damper drive coupling	257-07-00007
Element gasket	245-02-01300

Part number
B855-94-008
B854-04-102
B854-04-100
B854-04-101

Service Information

If a fault arises, please do not hesitate to contact the MONO Customer Service Department. Quote the machine serial number on the silver information plate of the machine and on the front cover of this manual.



Queensway, Swansea West Industrial Park, Swansea, SA5 4EB UK

+44/0 1792 561234

Spares +44/0 1792 564039 Email: mono@monoequip.com

www.monoequip.com

Disposal

When the oven comes to the end of its working life, dispose of parts in the appropriate place by recycling or other means as the law permits at that time.

14. Maintenance

General maintenance



WARNING

- This appliance must be maintained at regular intervals. The frequency of maintenance will depend upon your specific use and location. The maximum service interval should be 12 months.
- Service and maintenance should only be undertaken by suitably qualified, trained, and competent engineers.
- You must immediately report any damage or defect arising with the appliance.
- Unsafe equipment is dangerous. Do not use the appliance. Isolate the power supply and contact MONO or your appointed service agent.
- Check for frayed or bare cables.
 - Do not use the machine if frayed or bare cables are visible.
- Follow cleaning instructions (see **Cleaning** on page **55**).

Light bulb replacement



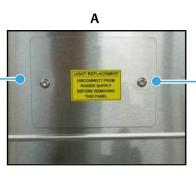
WARNING

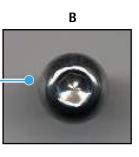
Disconnect from the supply before replacing light bulbs.

How to replace the 24Vac 20w lamp (part number B855-94-008)

- 1. Unscrew the plate (A) next to the light to be replaced.
 - Keep the hex head socket screws (B) safe.







2. Slide the fitting out.



3. Remove the light from the holding slot and unclip from the cable.



4. Replace the light and refit all parts.



5. Reconnect the power supply and test.

15. Oven Electrics

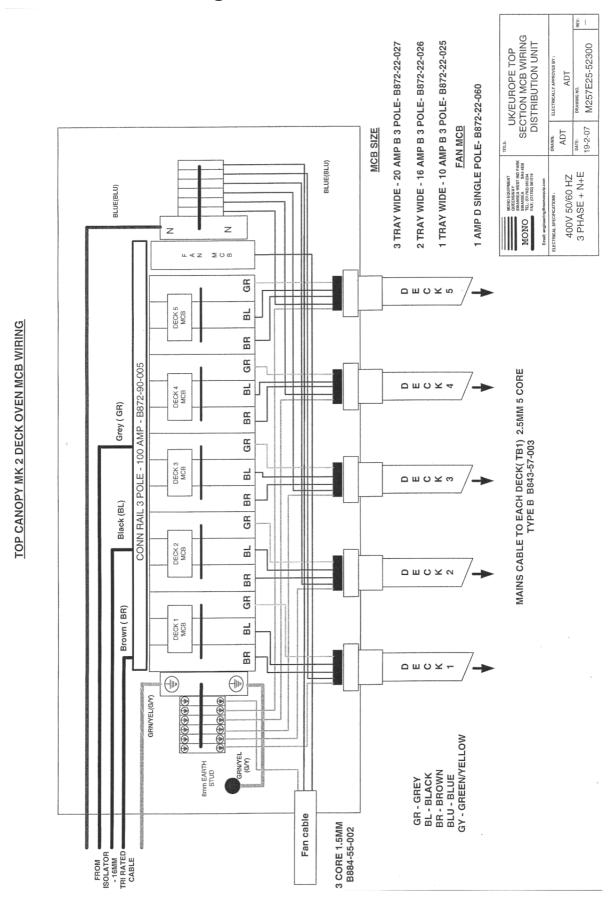
Table 9: Parts list for the electrical drawings (3-tray wide)

Reference in drawing	Description	Part number
F1 (single-phase only)	Heaters MCB	B872-22-007
F2 (single-phase only)	Heaters MCB	B872-22-007
F3 (single-phase only)	Heaters MCB	B872-22-007
F4	Control power supply MCB	B872-22-062
F5	Overheat thermostat	B888-30-014
T1	Control circuit power supply	B801-93-005
K1	Top heat contactor	B801-08-021
K2	Bottom heat contactor	B801-08-021
Y1	Water solenoid (8 mm pipe)	A900-34-365
H1	Interior light	B855-94-008
B1	Oven thermocouple	B873-95-007
U1	Main ECO printed circuit board	158-25-80000
D1	Damper solenoid	B749-83-004
R1	Top heat element, 1.0 kW	B854-04-093
R2	Top heat element, 0.6 kW	B854-04-091
R3	Top heat element, 0.6 kW	B854-04-091
R4	Top heat element, 0.6 kW	B854-04-091
R5	Top heat element, 0.6 kW	B854-04-091
R6	Top heat element, 0.6 kW	B854-04-091
R7	Top heat element, 0.6 kW	B854-04-091
R8	Bottom heat element, 0.75 kW	B854-04-092
R9	Bottom heat element, 0.6 kW	B854-04-091
R10	Bottom heat element, 0.6 kW	B854-04-091
R11	Bottom heat element, 0.6 kW	B854-04-091
R12	Bottom heat element, 0.6 kW	B854-04-091
R13	Bottom heat element, 0.6 kW	B854-04-091
R14	Bottom heat element, 0.6 kW	B854-04-091

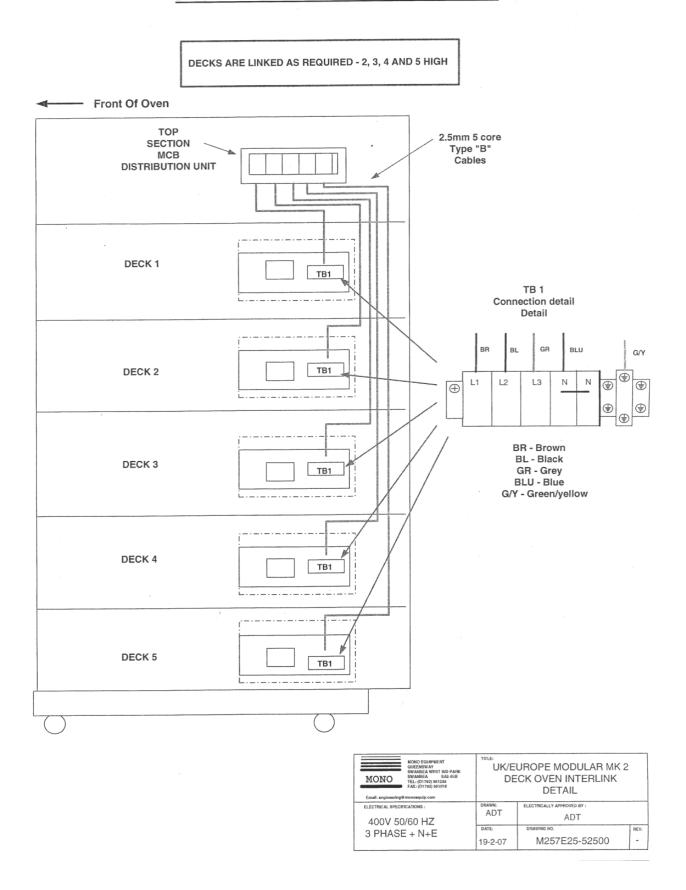
Table 10: Parts list for the electrical drawings (2-tray wide)

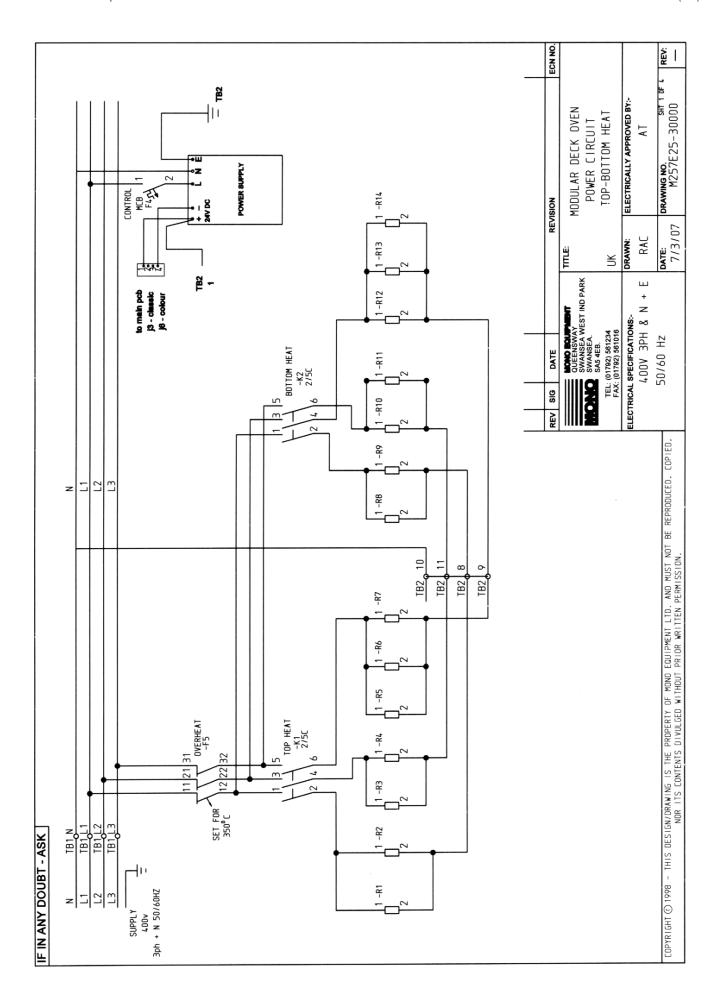
Reference in drawing	Description	Part number
F1 (single-phase only)	Heaters MCB	B872-22-006
F2 (single-phase only)	Heaters MCB	B872-22-006
F3 (single-phase only)	Heaters MCB	B872-22-006
F4	Control power supply MCB	B872-22-062
F5	Overheat thermostat	B888-30-014
T1	Control circuit power supply	B801-93-005
K1	Top heat contactor	B801-08-021
K2	Bottom heat contactor	B801-08-021
Y1	Water solenoid (8 mm pipe)	A900-34-365
H1	Interior light	B855-94-008
B1	Oven thermocouple	B873-95-007
U1	Main ECO printed circuit board	158-25-80000
D1	Damper solenoid	B749-83-004
R1	Top heat element, 0.65 kW	B854-04-102
R2	Top heat element, 0.4 kW	B854-04-100
R3	Top heat element, 0.4 kW	B854-04-100
R4	Top heat element, 0.4 kW	B854-04-100
R5	Top heat element, 0.4 kW	B854-04-100
R6	Top heat element, 0.4 kW	B854-04-100
R7	Top heat element, 0.4 kW	B854-04-100
R8	Bottom heat element, 0.5 kW	B854-04-101
R9	Bottom heat element, 0.4 kW	B854-04-100
R10	Bottom heat element, 0.4 kW	B854-04-100
R11	Bottom heat element, 0.4 kW	B854-04-100
R12	Bottom heat element, 0.4 kW	B854-04-100
R13	Bottom heat element, 0.4 kW	B854-04-100
R14	Bottom heat element, 0.4 kW	B854-04-100

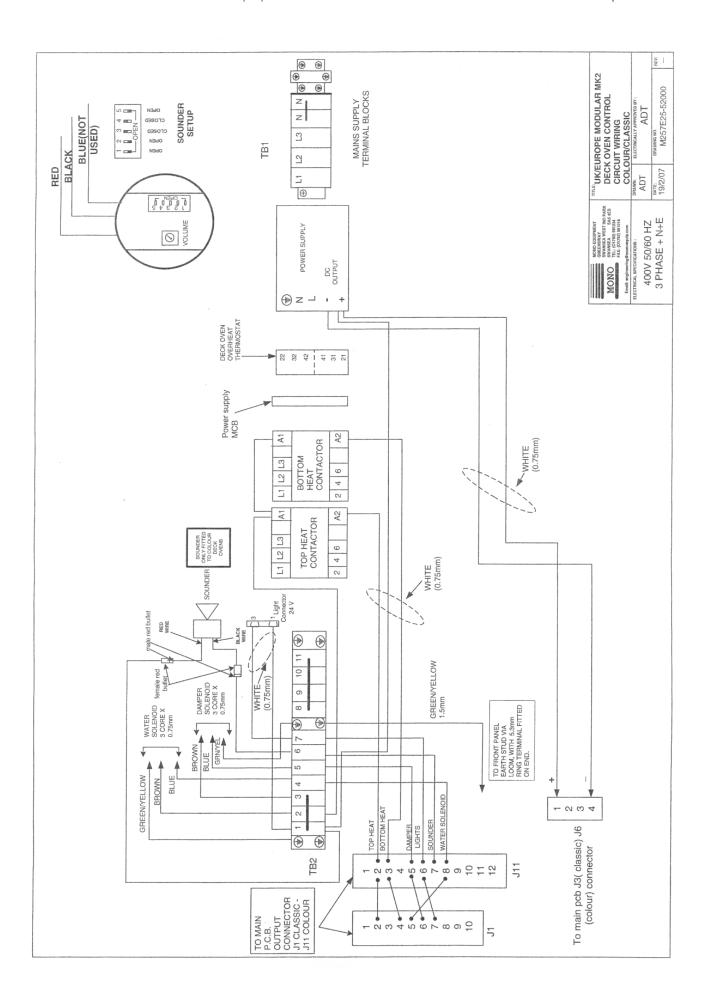
Electrical drawings

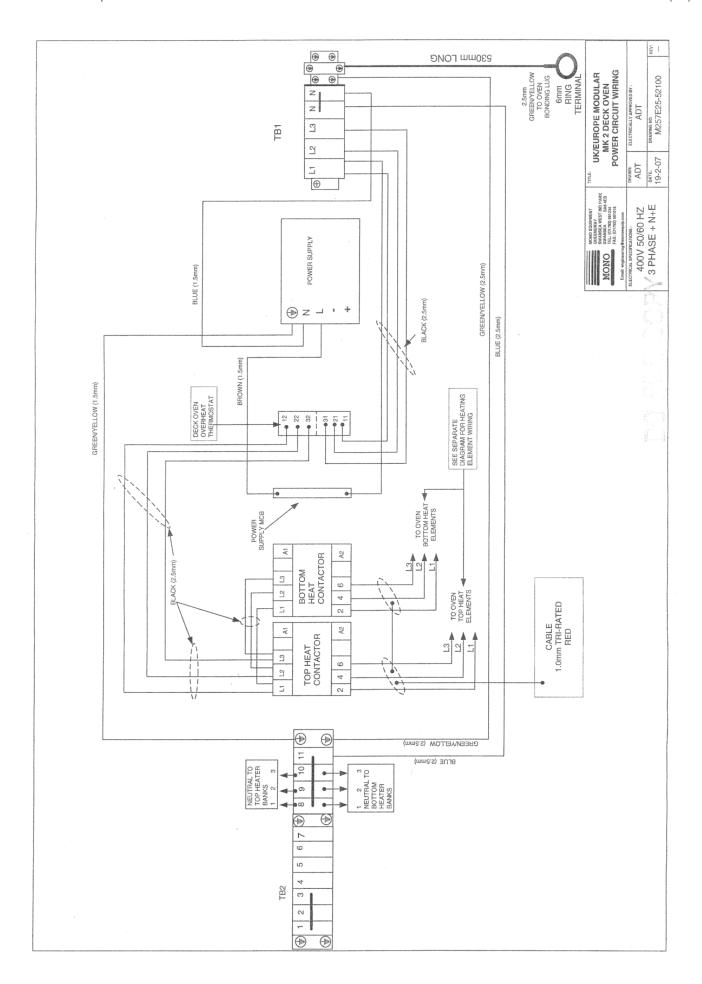


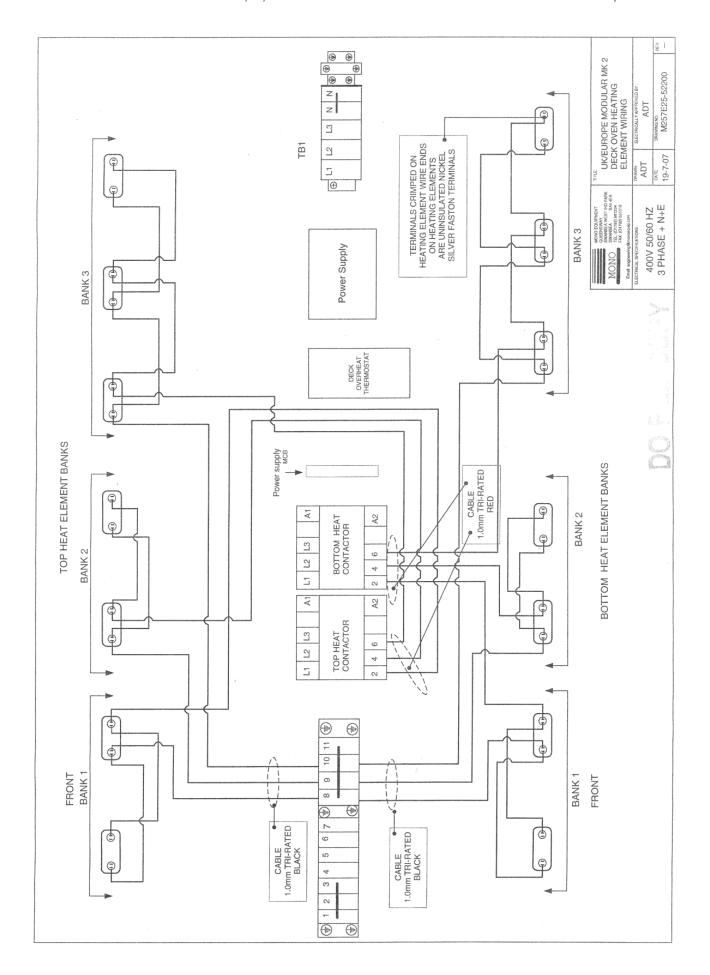
DX UK Modular MK2 Deck Oven Interlink Detail

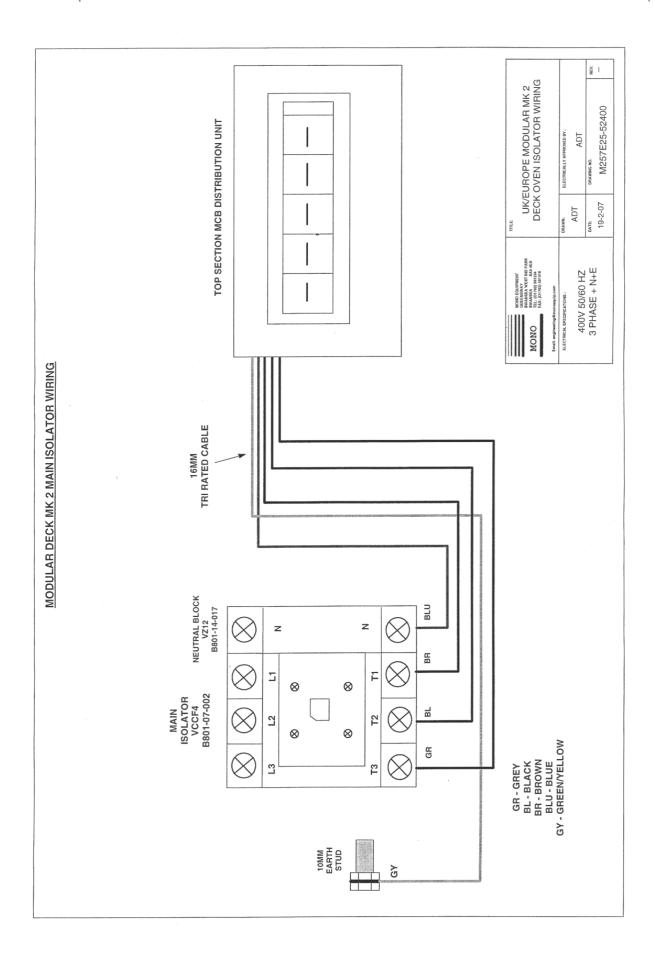












Electrical panel main components

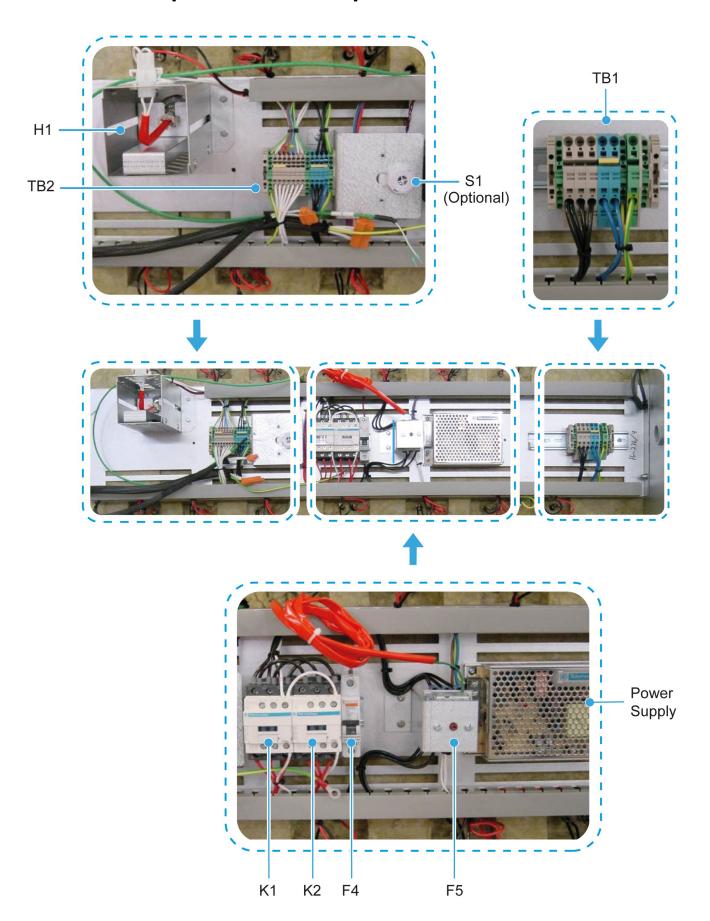


Table 11: Oven canopy layout parts list

Reference	Part description	Part number
C1	Canopy fan capacitor, 5 µF, 400VDB, metal	B869-23-005
Q1	Canopy fan on/off switch	B895-07-005
M1	Canopy fan motor R2E225-AG01-21 (230V, 1.4 Amp, 305 Watts)	B869-75-026

16. Prover operating instructions

Note

It is the customer's responsibility to install and maintain an adequate water supply.

Customers operating the prover in hard water areas must ensure that an efficient water treatment device protects the water supply to the prover. -- MONO is happy to advise on a suitable unit --

Prover controls

- 1. Ensure the water (washing machine type hose) is connected at the rear and the power is connected to a suitable socket.
- Turn the power switch (A) to "dry" or "steam"("Dry works like a hot cupboard and "steam" adds humidity (85%) and heat).
- **3.** Turn the temperature-setting button (**B**) to the required temperature; usually about 40 degrees. The heat indicator light (C) will come on.
- When the light goes out it means the prover is ready for use.
 (Usually about 30 minutes, depending on the ambient temperature)

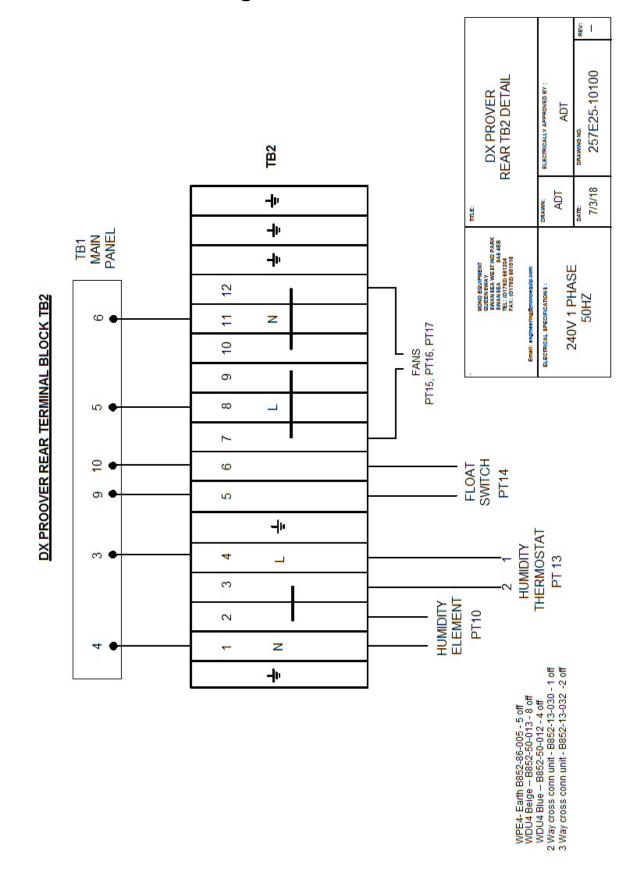
Note

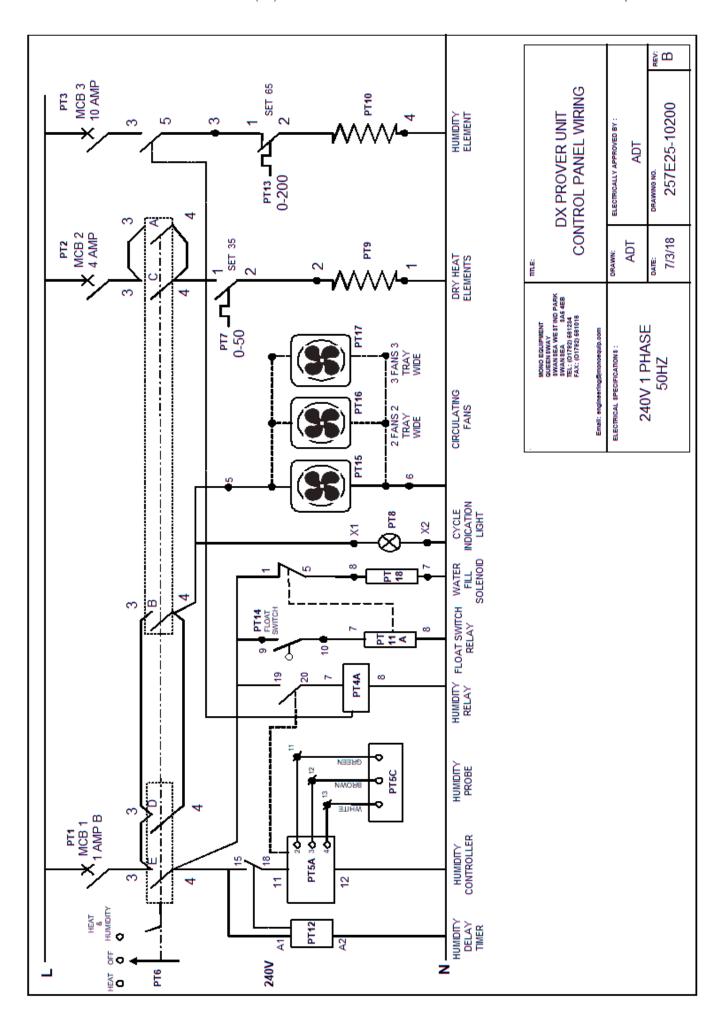
To maintain the humidity level within the cabinet, the doors should only be opened for a short time.



17. Prover electrics

Electrical drawings





MONO Equipment is the leading designer and manufacturer of bakery equipment in the United Kingdom. This proud heritage of British craftmanship, combined with a reputation for creating high-quality, innovative products, can be traced back to its origins in 1947.

All our bakery equipment is manufactured to the most stringent NQA ISO9001:2015 & NQA ISO14001:2015 standards and is crafted using the very latest, cutting-edge technology combined with the time-honoured skills of the master craftsman.

MONO Equipment truly excels in providing tailor-made solutions to a diverse range of clients, from the small independent artisan baker to the large retail chains found on every high street and in every out-of-town shopping centre. We can supply everything from a simple Food-2-Go cafe oven to the entire list of bakery equipment needed to set up a full scratch bakery.



MONO Equipment Limited

Queensway Swansea West Industrial Park Swansea SA5 4EB

Tel: +44 (0)1792 561 234 (Switchboard) Tel: +44 (0)1792 564 000 (UK Sales)

Tel: +44 (0)1792 564 004 (International Sales)

+44 (0)1792 564 048 / +44 (0)1792 564 049 (Spares) Tel:

Fax: +44 (0)1792 561 016

Email: sales@monoequip.com Web: www.monoequip.com



Scan using your smart phone to view our website.









