MONO

MonoEquip.com

Harmony Modular Bakery Deck Oven

EN

Installation and Operation

Product Version

- Standard and compact modular deck sizes
- 1, 2, 3, and 4-tray widths
- Classic controller
- UK specifications

Product Serial Numbers

Deck 1
Deck 2
Deck 3
Deck 4
Deck 5
Fan (if fitted)

Thank you

Thank you for purchasing MONO's Modular Bakery Deck Oven.

Before using your new oven for the very first time, please read and familiarise yourself with the contents of this User Manual and keep it handy for future reference.

If you have any queries regarding your oven, please contact MONO Equipment Limited directly:

- +44 (0)1792 561234
- sales@monoequip.com
- spares@monoequip.com
- techsupport@monoequip.com

We wish you the very best of success with your new professional Modular Bakery Deck Oven.

Happy baking!

The MONO Team

Safety Symbols

The following safety symbols are used throughout this user manual (available electronically at **MonoEquip.com**). Before using your new equipment, read the user manual carefully and pay special attention to information marked with the following symbols.

	**DANGER**	■ Indicates an immediate hazard with a high risk which, if not avoided, will result in death or serious physical injury.
	**WARNING**	■ Indicates a potential hazard with a medium risk which, if not avoided, could result in death or serious physical injury.
	**CAUTION**	■ Indicates a hazard with a low risk which, if not avoided, could result in minor or moderate physical injury.

Electrical Safety Notice

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 incorporate a locally situated switch disconnecter to connect to, which is easily accessible for switching off and safe isolation purposes. The switch disconnecter 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 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 there are washing and drying machines in close proximity, and water is present, and commercial kitchens with stainless steel units, where once again, water is present. Where, because of the perception of additional risks being likely, the installation designer decides that an installation or location warrants further protective measures, the options available include:

- Automatic Disconnection of Supply (ADS) by means of a residual current device having a residual operating current not exceeding 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 so as to comply with Regulations 419.2 and 544.2.

WARNING

- The supply to this machine must be protected by a 30mA-rated Type A Residual Current Device (RCD).
- Always fit a wall-mountable isolator switch to isolate the oven from the electrical supply completely. The isolator must be visible, labelled as an emergency shut-down device, and easily accessible.

Water Leak Safety Notice

WARNING **Take immediate action 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.
- Place an out-of-service notice on the oven.
- Contact your oven supplier or MONO Equipment Limited for technical assistance.

Ovens must be maintained and serviced at appropriate intervals to ensure the oven operates at optimum levels.

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**
  - As it is our policy to improve our machines continuously, 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 qualified and experienced persons (SQEP) only. Customers must never make any modifications or repairs to MONO's machines.

Declaration of Conformity Certificate

Declaration of Conformity

We the manufacturer:

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

Machine:

FG Code:

Serial No:

Hereby declare that this machine conforms with and complies with the following directives:

- → The Machine Directive 2006/42/EC
- → The Low Voltage Directive 2014/35/EC
- → The Electromagnetic Compatibility Directive 2014/30/EU Incorporating Standards EN 55014-1:2017/A11:2022 & EN 55014-2:1997+A1:2001+A2:2008
- → The General Safety of Machinery and Food Processing Standards
- → Materials and Articles Intended to Come into Contact with Food – Regulation (EC) No. 1935/2004
- → Good Manufacturing Practices (GMP) for Materials Intended to Come into Contact with Food - Regulation (EC) No. 2023/2006

A technical construction file for this machine is retained at MONO Equipment

MONO Equipment is a business name of **AFE Group Ltd** Registered in England No. 3872673

VAT Registration No. 923428136

Registered office: Unit 35,
Bryggen Road,
North Lynn Industrial Estate,
Kings Lynn Norfolk,
PE30 2HZ

Mr Craig Petherbridge
Quality & Compliance Manager

Mr Alex Davies
Engineering Manager

QD 001

Dated 01/11/2022

Engineer Notice

If these numbers appear in the temperature window, please check the following:

888	Indicates that the control board temperature is above 80°C (176°F). Using oven gloves, check that the cooling fan entry is not blocked.
999	Indicates there is a problem with the thermocouple. Check for connection problems or a faulty thermocouple.

Contents

1. Introduction

1.1. The MONO Modular Bakery Deck Oven

Designed by bakers for bakers, MONO's Harmony Modular Deck Oven delivers a beautifully mellow bake, making it ideally suited to producing authentic artisan breads and high-end confectionery products.

Each component of this modular deck oven is built separately, which means it can be delivered through a standard doorway and installed onsite; the perfect solution for bakeries with limited access, sited in basements or upper-story locations. It also offers the benefit of expanding the number of decks later if required.

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

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

MONO ovens combine the very best of traditional baking techniques with efficient modern engineering and unparalleled bake control. This easy-to-use deck oven is available with an Eco-Touch Controller or a Classic Controller.

Key features

- Standard and compact deck sizes
- 1-tray, 2-tray, 3-tray, and 4-tray wide decks
- Patented Cumulus steam generating system
- Single piece, heavy sole plates for evenly distributed bottom heat (ideal for classic oven-bottom bread)
- Each deck is separately controlled with its own touchscreen display
- Controllable top and bottom heating elements (0 to 100%) during bake
- Storage for your most frequently used bake cycles
- Low voltage lights, sealed from the chamber and easily accessed from outside.

Key benefits

- Provides a gentle, mellow bake each and every time
- Helps reduce energy consumption by only heating the decks required
- Modular components - make it suitable for installation in basements or above-ground-level locations
- Stackable up to five decks high
- Rapid heat recovery rate
- No drainage is required
- Manufactured in hygienic stainless steel inside and outside for ease of cleaning.

2. Safety

2.1. General safety

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**.

2.2. Oven safety

Only fully trained and authorised persons are permitted to do any work on the oven. Qualified electricians must carry out all electrical repairs and maintenance. Always disconnect or completely isolate the power supply before starting any 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 internal parts of the oven.

DANGER

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

WARNING

- Before using the oven:
  - Check that all covers, panels, and cabling are secure.
  - Visually examine the oven for obvious damage or signs of tampering.
- If the oven is damaged, malfunctioning, or missing parts:
  - Stop using it. Do not attempt any repairs to the oven.
  - Contact MONO Equipment Limited 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.
- Ensure this user manual is read thoroughly before operating the oven. Operate and maintain the oven only as described in this user manual.
- Never operate a steaming function with the oven door open.

WARNING

- An electrical socket must be protected by a 30mA-rated Type ‘A’ Residual Current Device (RCD) before installation and commissioning of the oven.
- There should always be a local disconnection switch for any person to isolate the electrical power in an emergency. The disconnection switch must be visible, labeled as an emergency shutdown device, and easily accessible.
- Check the electrical requirements on the oven’s information plate before plugging in the power cable and turning the power on for the first time. Contact MONO Equipment Limited if the electrical ratings are incorrect for your site.
- Before installation, it is recommended that a qualified and competent electrician first tests the electrical outlet (power socket) for electrical safety.
- Always ensure your hands are dry before touching any electrical components, including cables, switches, and plugs.

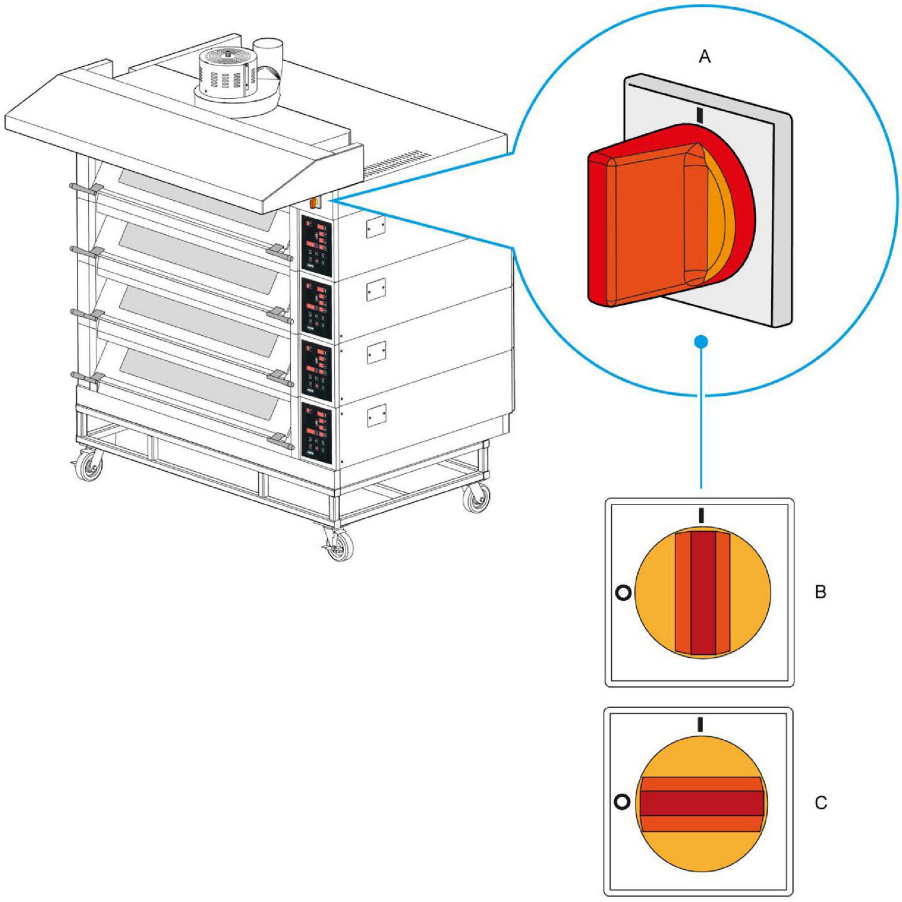
CAUTION

- 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 completely before cleaning it.
  - While baking (and for some time after use), touching the oven door or the surrounding panels is not advisable because of 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 machine. Anyone undergoing training must be under 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 Limited for other product-baking machines.
- No unauthorised modifications to the oven are permitted.

2.3. Isolating the oven from the electrical supply

To stop the oven in an emergency, turn the main isolator switch to the 0 (OFF) position.

A wall-mounted isolator switch, rated for the specific model of oven installed, must also be available to isolate the oven completely in an emergency.



A. Main isolator switch	B. Switch position = **I (ON)**	C. Switch position = **0 (OFF)**

WARNING ■ Always disconnect the oven from the consumer power supply if working on the electrical box and panel. Some components stay electrically energised even after the main isolator is in the 0 (OFF) position.

3. Installation

3.1. Safety messages

WARNING

- An electrical socket must be fitted with a 30mA-rated Type 'A' Residual Current Device (RCD) before installation and commissioning of the oven.
- Only fully trained and authorised persons are permitted to install the oven.
- There should always be a local disconnection switch for any person to isolate the electrical power in an emergency. The disconnection switch must be visible, labeled as an emergency shutdown device, and easily accessible.
- It is recommended that a qualified and competent electrician first tests the electrical outlet (power socket) for electrical safety. All electrical work must be in accordance with local and national regulations.
- Always check the electrical requirements on the machine's information plate before connecting the power for the first time. Contact MONO Equipment if the electrical information is not correct for your site.
- Always ensure your hands are dry before touching any electrical components, including cables, switches, and plugs.

3.2. Positioning the oven

- A smooth and level concrete floor is a recommendation for positioning the deck oven,
- Access for maintenance of the oven should be considered.
  - The oven is a freestanding unit and must not be bolted down or fixed to the floor in any way.
  - Sufficient clearance must be left in front of the access panels (right-hand side) to allow for servicing.
  - Leave a clear space of 2 metres (6½ feet) in front of the oven for ease-of-operation and safety.
- Install a chain-based retainer (shorter than the power cable) to prevent cable strain when the deck oven is moved. Fix the retainer to the wall (or floor) and the base using a hole in the castor fixing corner plates.
- If not selected when ordering the oven, an extraction hood should be placed above the oven to disperse excess steam and heat that could adversely affect the bakery ceiling and ambient temperature.

3.3. Electrical supply connections

- Read all of the safety information before connecting the oven to the electrical supply.
  - See **Section 2 on page 2** and **Section 3.1 on page 5** for safety information.
- The main connection point for all deck supplies is on top of the oven.
  - See **Appendix B** for the electrical specifications.
- Ensure the Earth (Ground) straps are fitted correctly (**Section 3.6 on page 9**).

3.4. Water supply connections

All ovens with a steam function are supplied with a one metre flexible hose (¾-inch BSP connections at both ends). A rubber washer must be fitted to ensure the hose has a full good seal with the mains water supply (**Figure 3.1** | **A**).

Connect the hose to a suitable fresh water supply after first making sure that the pipes are flushed out to remove all foreign bodies, i.e. flux or solder. Customers operating an oven in a hard water area must ensure that an efficient water-softening device is installed to prevent a build-up of minerals (scale) on the inside of pipes. See **Appendix B** for the recommended water quality specification.

Only one water supply is required per complete oven. A water inlet manifold supplies all decks from a single connection point and it has a non-return check-valve already fitted. No drain is required for this oven.

Figure 3.1: Rubber washer installation

A. Rubber washer (part number A900-05-261)

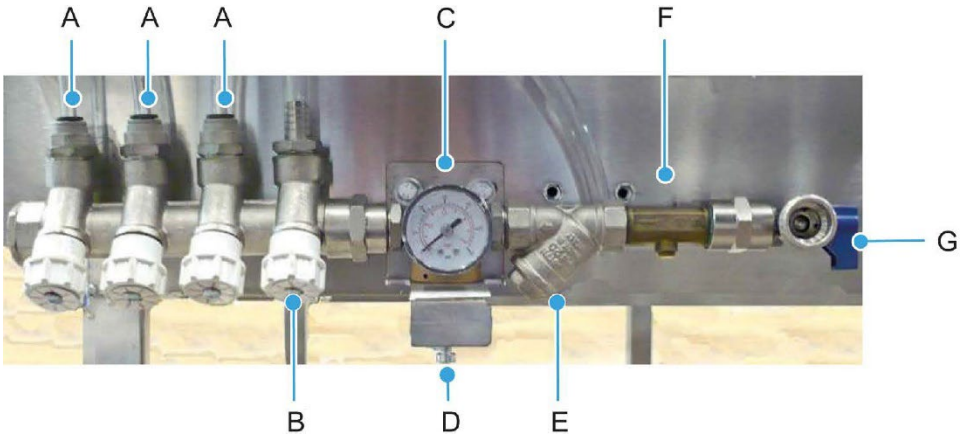
NOTE

- Customers are responsible for installing and maintaining an adequate water supply to the oven, which should comply with local water regulations (check with your local water authority).
- A water conditioning unit is advised for 'hard water' areas.

Water system setup 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 water inlet valve on the oven.
3. Connect flexible hoses to each individual deck (**Figure 3.2** | **A**).
4. Place a container under the test valve (**B**).
5. Set-up the regulator (**C**).
   - **a.** Slowly open the test valve fully.
   - **b.** With the water flowing, set the regulator to 0.75 bar (11 psi) using the screw underneath (**D**).
   - **NOTE:** Never use the oven above this setting.
6. When the pressure has stabilised, shut the test valve.
7. Repeat steps **4** to **6** at the end of the installation.

Figure 3.2: Water regulator set-up (located on rear of the oven)



A. Water outlet valve on the oven (one for each individual modular deck)
B. Test outlet valve
C. Regulator
D. Adjusting screw to set the regulator
E. Dual check valve backflow prevention device
F. Filter
G. Stop tap for isolating the oven from the main feed

NOTE

- Depending on the water supply area, the water treatment filter should be changed during yearly maintenance.

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

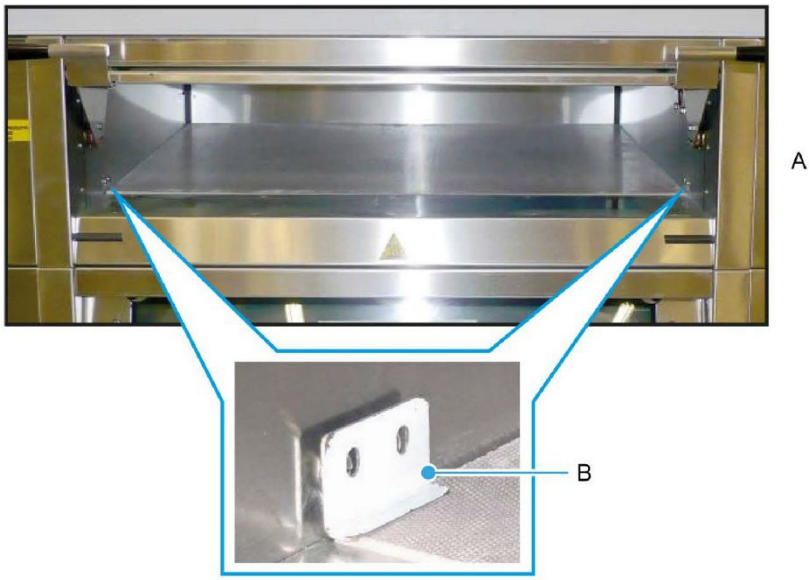
Procedure

1. Find the brackets and screws loose in a supplied plastic bag.
2. Position the bracket to touch the tile (as shown in **Figure 3.3 on page 8**).
3. Fix the bracket using two screws.
4. Repeat steps **1** to **3** for both sides of each deck.

NOTE

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

Figure 3.3: Installed tile-retaining brackets



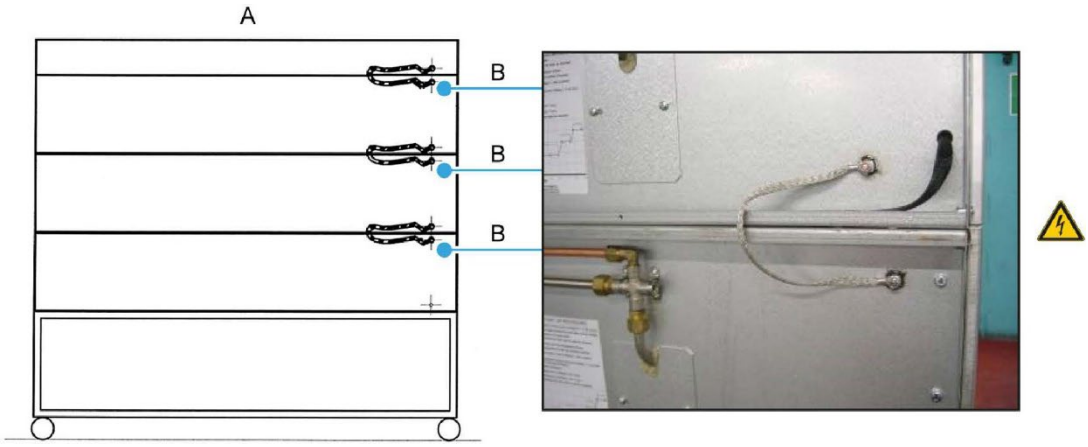
A. Retaining brackets in two positions on each deck
B. Positioning of bracket

3.6. Fit earth straps (part number 158-25-11200)

NOTE

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

Figure 3.4: Connected Earth (Ground) straps between each modular deck

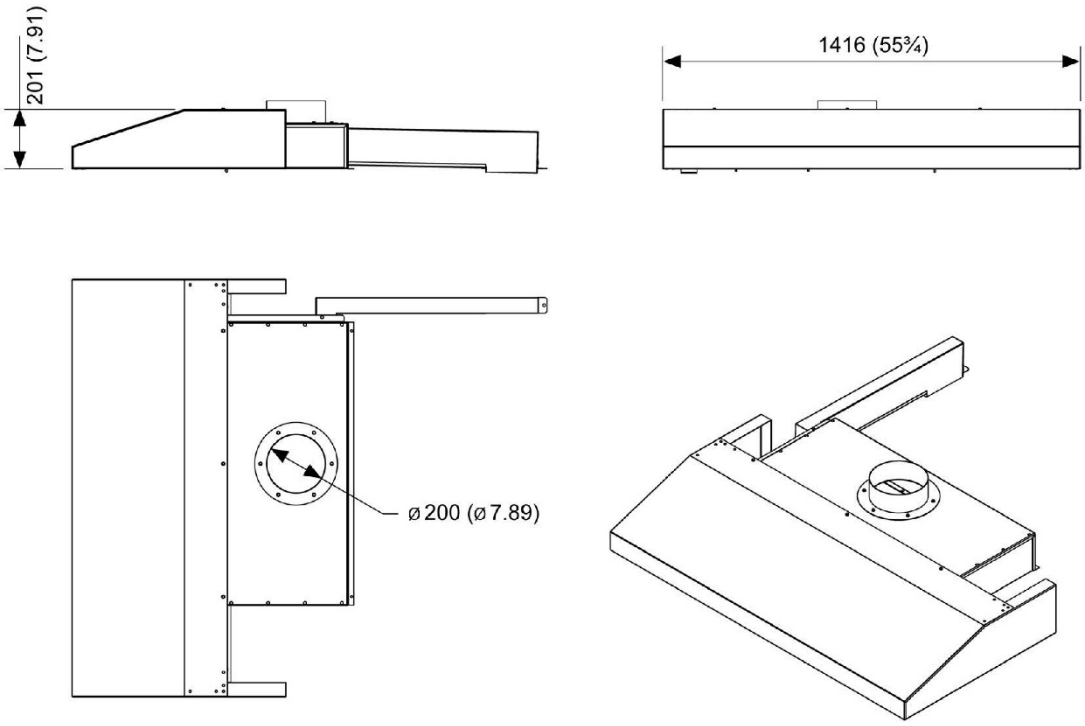


A. Rear of the modular deck oven
B. Earth (Ground) straps must be connected between each modular section

3.7. Exhaust connections (if a canopy is fitted)

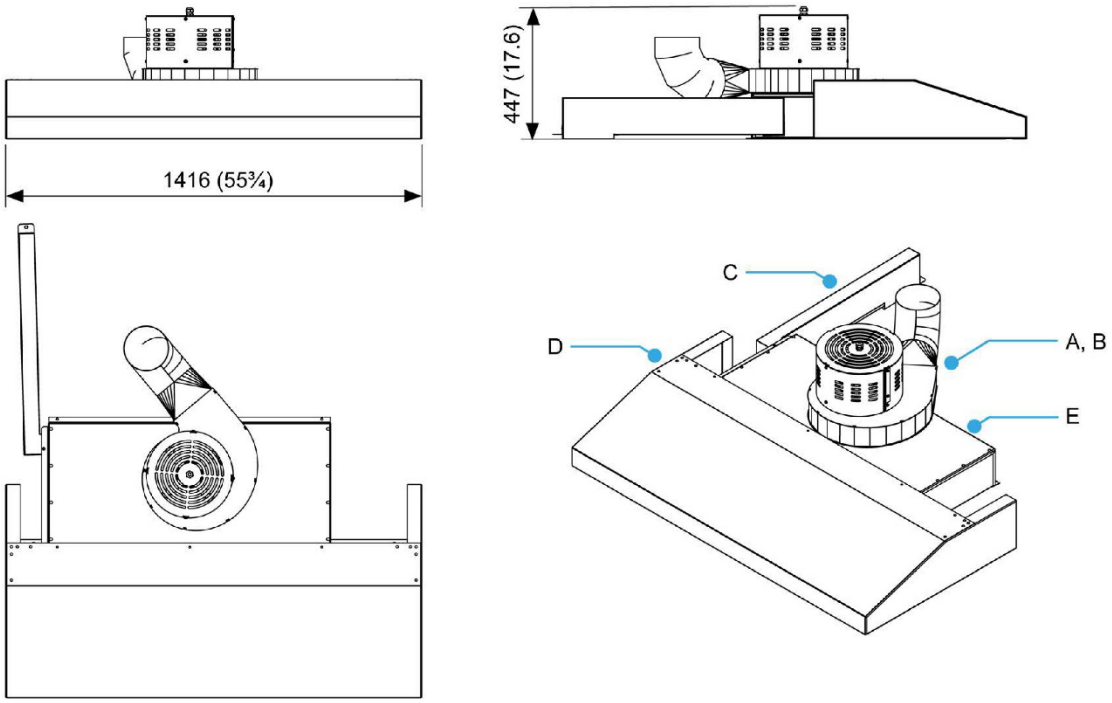
- Ideally, an exhaust duct should rise 2 metres (6½ feet) above the bakery roof and be protected from wind and birds by a duct protector.
- The duct should be:
  - A suitable material to take high temperatures and humidity levels.
  - Flexible and easily removable at the oven connection point. This allows the oven to be moved for cleaning and maintenance when required.

Figure 3.5: Canopy dimensions (without fan)



Dimensions are in mm (inches).

Figure 3.6: Canopy dimensions (with fan)



Dimensions are in mm (inches).

Table 3.1: Canopy parts list

Item No.	Part number	Description	Quantity
A	247-08-04900	Extraction fan assembly	1
B	247-08-05100	Inlet ring	1
C	257-10-00010	Flue assembly	1
D	257-10-00016	Canopy assembly	1
E	257-10-00022	Extraction duct assembly for 2-tray oven width (1)	1

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

4. Before first use of the deck oven

4.1. Operating conditions

The following actions are recommended before the first use of the oven.

- For hygiene reasons, MONO strongly recommends thoroughly cleaning the baking chamber and accessories using a cloth soaked in warm and 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 contaminating the first bake if this is not done.
- For safety reasons:
  - Leave a clear space of at least 2 to 3 metres (6 to 10 ft.) in front of the oven.
  - Ensure that the lockable wheel castors on a base unit are locked into position.
- Do not use bakery utensils to operate the control panel buttons.

4.2. Baking tile ‘seasoning’ instructions

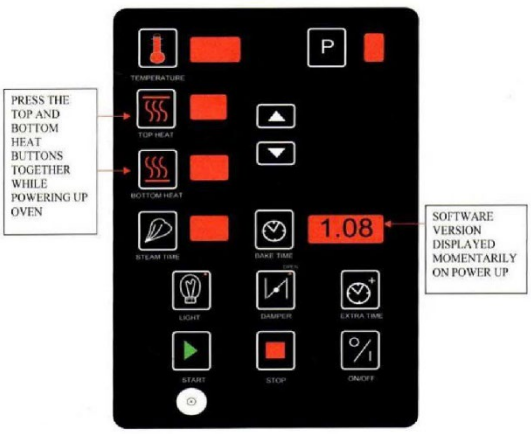
THIS PROCEDURE MUST BE FOLLOWED FOR THE OVEN’S WARRANTY TO REMAIN VALID.

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.

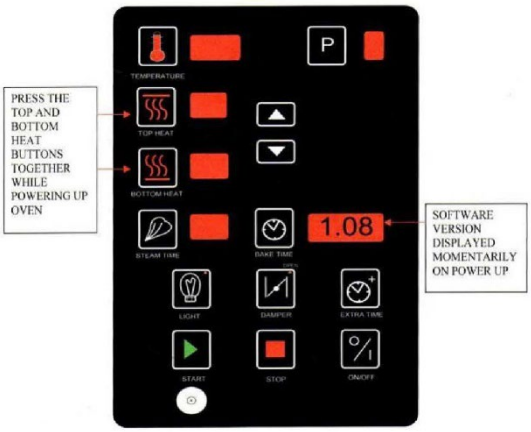
Tile seasoning procedure

1. Press and hold the top and bottom heat buttons while powering on the deck oven.



2. Release the heat buttons after the control panel beeps, and the software version is then displayed in the Bake Time window.

3. The oven's control panel now displays the **Target Temperature** and the **Remaining Process Time**.



4. The Target Temperature increases by preset increments over 5 hours and 45 minutes. The Remaining Process Time counts down accordingly. During this process, the Damper opens every hour for 30 minutes to vent the moisture from the baking chamber.
5. At the end of the procedure, the oven switches to Standby mode and 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.

4.3. Baking principles

NOTE

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

Baking heat

Products are baked 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:

- **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.
- **Place the product evenly within the oven.** Products bunched together are paler than those widely spaced.
- **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.
- **The door opening should be kept to a minimum because cold air enters the oven.** Cooling of the side walls 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.
- **The product can form a skin if the loading takes a long time**, which causes an imbalance and a less attractive finish. This condition can be minimised by using the pre-steam function before loading. The steam function turns the elements off and injects steam to increase the humidity.

Bake settings

Advice for bake settings is as follows:

- A good starting point for baking bread in MONO deck ovens is to set the temperature to 225 °C (437 °F), top heat to 60% or 65%, and bottom heat to 40%.
- For cookies (and similar products), the oven's heat can be turned almost off. However, placing the trays with the product, e.g. cookie dough, onto upturned trays on the oven sole may still be necessary.
- 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 as this can vary from oven to oven.

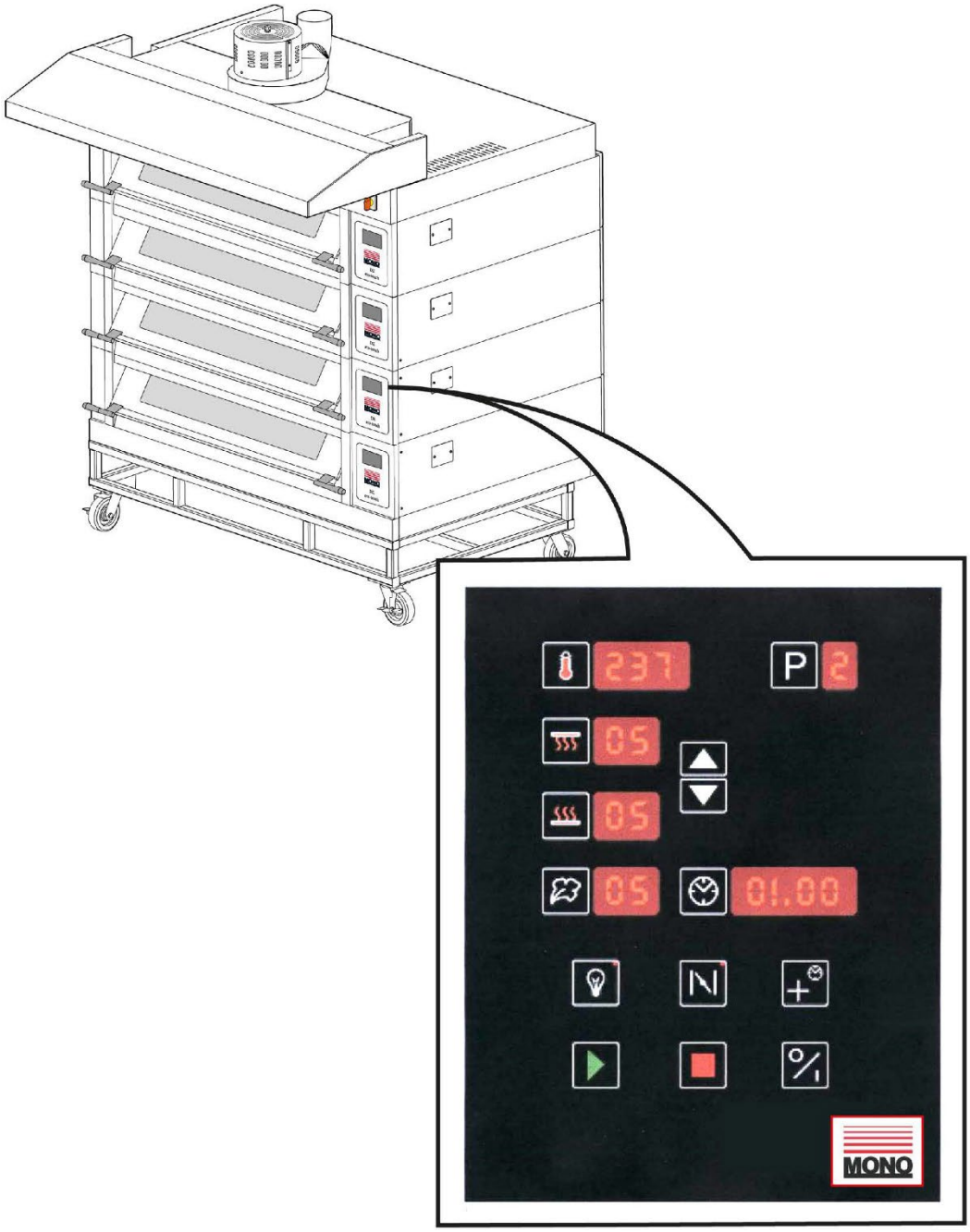
Improving product bake quality

Below are some tips for modifying the bake to improve product quality:

- 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, lower the top heat setting and extend the bake time.
- If the bake time is too long, increase the top heat first to speed recovery. If this does not give sufficient savings, increase the baking temperature.
- To thicken the crust, set the damper to open for longer. Different ovens require different lengths of time.

5. Operating Instructions

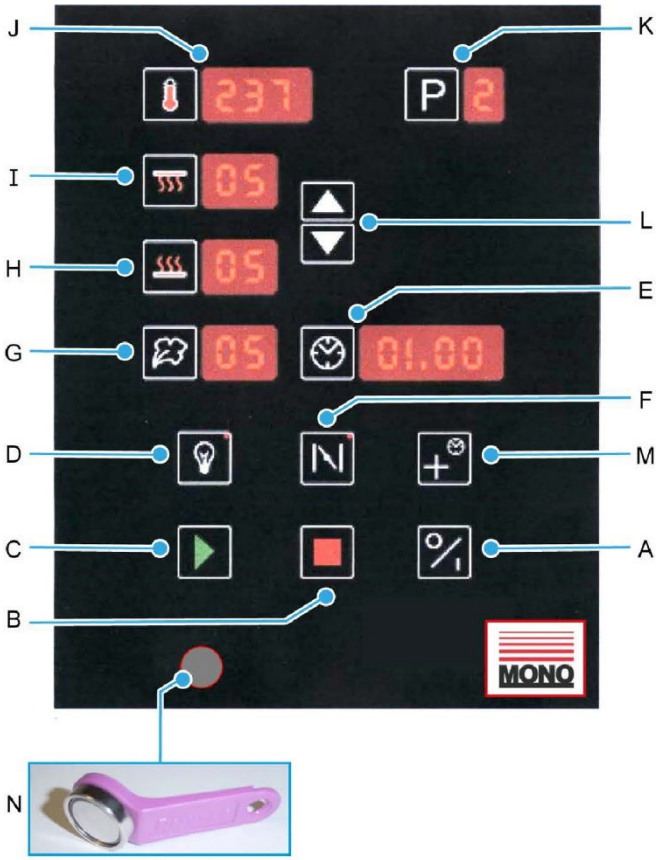
Each deck has an independent LED screen for operating the oven.



5.1. Basic operation

Perform operations by touching icons (function buttons) on the Classic controller panel display.

Figure 5.1: Classic LED controller panel display and function buttons



A. ON/OFF	B. STOP	C. START
D. LIGHT	E. AUTO-ON SET / ADD TIME	F. DAMPER
G. STEAM TIME	H. BOTTOM HEAT	I. TOP HEAT
J. TEMPERATURE	K. PROGRAM	L. UP/DOWN BUTTONS
M. BAKE TIME	N. iButton and CONNECTION POINT	

WARNING

- **Do not use the magnetic connection point on the control panel to store metallic items, e.g. your dough scoring knives or blades, as this results in error condition 'E01' and prevent the oven from working. It is only for use of the iButton by MONO authorised engineers when upgrading the oven's firmware.**

ON/OFF function (A)

This button function turns the controller on from standby mode. Also, use the button to exit setup mode.

STOP function (B)

This button function is used to stop a bake cycle. Also, use the **STOP** and **START** buttons to navigate to a function setup menu after powering up.

START function (C)

This button function is used to start a bake cycle and to silence the “2 minutes from the end-of-bake” alarm. Also, use the **START** and **STOP** buttons to navigate to a function setup menu after powering up.

LIGHT function (D)

Turn the baking chamber light on and off with this function button. A red light is visible when the light is turned on.

BAKE TIME/ADD TIME function (E)

This function button accesses the set bake time and the current time and day setup. Also, use the button to jump to the day/hours/minutes when setting a time and auto-on time.

If the **7-DAY TIMER** is enabled:

- Use this button during a bake cycle to add extra bake time (+1 minute for each press).
- Use this button at the end of a bake to extend the bake for an extra two minutes and then touch once for each extra minute required.

DAMPER function (F)

This function button opens and closes the Damper during a bake.

The Damper also closes when the STOP function button is touched at the end of a bake and while steaming. A red light shows when the Damper is in the open position.

STEAM TIME function (G)

Use this function button to access steam time and pre-steam mode.

If the pre-steam function is enabled:

1. Press the **STEAM TIME** button once (red dots appear).
2. Use the **UP/DOWN** buttons (L) to change to the required setting:
   - P0 = no pre-steam
   - P1 = 1 second
   - P2 = 2 seconds.

3. Press the **STEAM TIME** button again and set the steam time using the **UP/DOWN** buttons (L).
4. Press the **STEAM TIME** button again to save or wait 10 seconds to auto-save.

If the pre-steam function is not enabled:

1. Press the **STEAM TIME** button and then set the steam time using the **UP/DOWN** buttons (L).
2. Press the **STEAM TIME** button again to save or wait 10 seconds to auto-save.

BOTTOM HEAT function (H)

Use this button to set the bottom heat cycle percentage:

1. Press the **BOTTOM HEAT** button.
2. Use the **UP/DOWN** buttons (L) to adjust the percentage value.
3. Press the **BOTTOM HEAT** button again to save or wait 10 seconds to auto-save.

TOP HEAT function (I)

Use this button to set the top heat cycle percentage:

1. Press the **TOP HEAT** button.
2. Use the **UP/DOWN** buttons (L) to adjust the percentage value.
3. Press the **TOP HEAT** button again to save or wait 10 seconds to auto-save.

TEMPERATURE function (J)

Use this button to set the baking temperature required:

1. Press the **TEMPERATURE** button.
2. Use the UP/DOWN buttons (L) to adjust the baking temperature.
3. Press the **TEMPERATURE** button again to save or wait 10 seconds to auto-save.

PROGRAM function (K)

Use the **UP/DOWN** buttons (L) to cycle to the required program.

To save the current settings, press and hold the **P (PROGRAM)** button for 5 seconds. All the displays flash, and an audible beep confirms that the settings are saved.

UP/DOWN function (L)

Use these buttons to adjust values of settings when required.

AUTO ON SET / ADD TIME function (M)

If the 7-DAY TIMER is enabled, use this button to access auto-switch-on times.

If the 7-DAY TIMER is not enabled:

- Press this button during a bake cycle to add extra bake time (+1 minute for each press).
- Press this button at the end of a bake to add two minutes and then once for each extra minute required.

iBUTTON CONNECTION function (N)

MONO authorised engineers use this button and a unique “iButton” storage device to change the oven’s firmware.

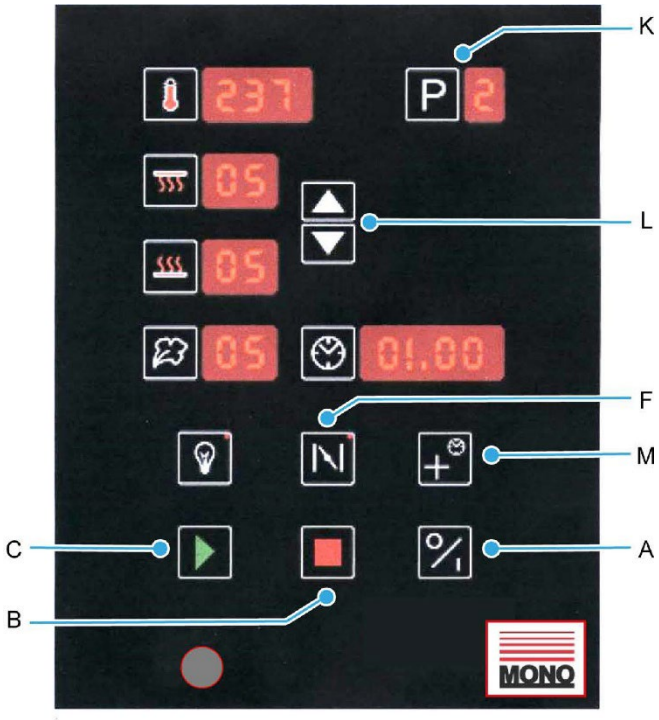
5.2. Operating the oven

Procedure

1. Press the **ON** button when the oven is in Standby mode (clock displaying).
2. Press the **P (PROGRAM)** button.
3. Using the **UP/DOWN** buttons, select the program required.
   - After selecting a program, the oven heats to the bake temperature required.
   - The oven is ready for baking when the display shows the temperature of the program chosen and, if steam is needed, the display stops flashing.
4. Load the oven with product.
   - To preserve heat, do not leave oven doors open for longer than needed.
5. Press the **START** button.
   - If required, press the **BAKE TIME** button during the baking to add 1 minute to the bake time.
   - If required during the bake, press the **DAMPER** button once to open the Damper and press it again to close it. A red light is visible when the Damper is in the open position. If left open for 90 minutes, it closes automatically.
6. If enabled in the oven setup, a buzzer sounds for 10 seconds when the baking is 2 minutes from completion. Press the **START** button to silence the buzzer.
7. At the end of the bake, the buzzer sounds. Press the **STOP** button to silence the buzzer.
8. If requiring extra baking at the end of a bake:
   a. Press the **BAKE TIME** button to set 2 minutes and 1 minute for each additional press.
   b. After selecting the extra time, press the **START** button or wait 5 seconds to start automatically.

	**NOTE**	■ The STEAM TIME function is not available after using the extra baking time function at the end of a bake.

Figure 5.2: Function buttons for baking

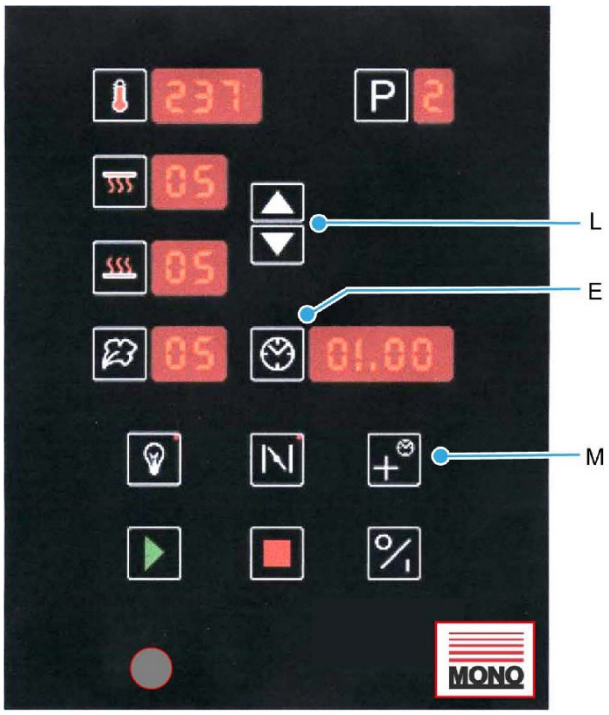


5.3. Setting the day and time

Procedure for setting the day and time

1. Turn the power on.
   - After the start-up, the oven enters Standby mode with only the clock showing.
2. Press the **CLOCK** button (**Figure 5.3** | **E**) and observe dots flashing under the hours in the time window.
3. Change the hours using the **UP/DOWN** buttons (**L**).
4. Press the **CLOCK** button and observe dots flashing under the minutes in the time window.
5. Change the minutes using the **UP/DOWN** buttons (**L**).
6. Press the **CLOCK** button and observe the day number appearing.
7. Change the minutes using the **UP/DOWN** buttons (**L**). Usually, day 1 is used as a Monday.
8. Press the **CLOCK** button within 5 seconds to save the settings.

Figure 5.3: Setting the day and time – Classic LED screen icons

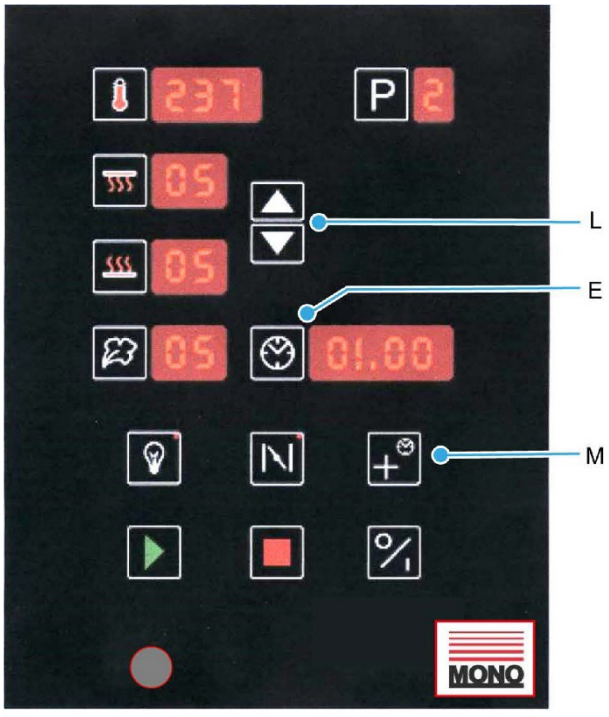


5.4. Setting the 7-day timer

Procedure for setting a timer event (if F15 is enabled)

1. Press the **I/O** (ON/OFF) button to enter Standby mode.
   - In Standby mode, only the current time is displayed in the BAKE TIME window.
2. Set the timer day of the week:
   - Press the **BAKE TIME** button (**Figure 5.4** | **M**).
   - Observe the timer day appearing in the **TEMPERATURE** window (and dots next to the day).
   - Usually, day “1” is used as a Monday.
   - Press the **UP/DOWN** button (**L**) to change the timer day.
3. Set the timer hours:
   - Press the **CLOCK** button (**E**) and observe dots flashing under the hours in the time window.
   - Change the hours using the **UP/DOWN** buttons (**L**).
4. Set the timer minutes:
   - Press the **CLOCK** button and observe dots flashing under the minutes in the time window.
   - Change the minutes using the **UP/DOWN** buttons (**L**).
5. Press the **BAKE TIME** button within 5 seconds to save the 7-day timer settings.

Figure 5.4: Setting the day and time – Classic LED screen icons



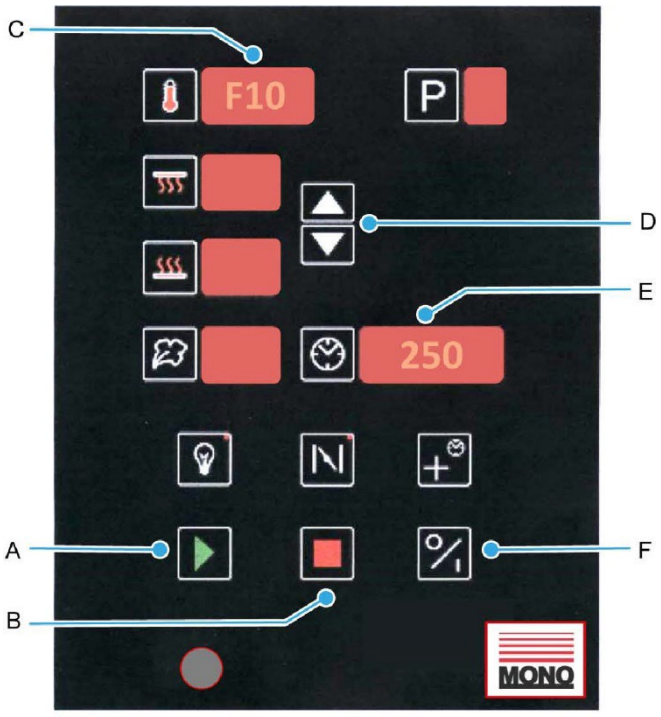
NOTE

- If you do not alter the hours/minutes within 6 seconds of being selected for editing, the timer setup defaults to the day-of-the-week setting, i.e. dots appear next to the **P -** in the TEMPERATURE window. Press the **BAKE TIME** time button to return to the time setup again.
- Setting a time of 00.00 in the timer setup is a non-event and does not switch on the controller.

5.5. Setup mode

1. To enter Setup mode, press and hold both the **START** and **STOP** buttons (**Figure 5.5** | **A** and **B**) at the same time as turning on the power supply.
2. Change the function in the TEMPERATURE window (**C**) using the **UP/DOWN** buttons (**D**).
   - See the next page for a function list
3. Press the **CLOCK** button (**E**) and observe dots appearing on the display.
4. Change the setting for the function using the **UP/DOWN** buttons (**D**).
5. Press the **CLOCK** button to confirm the setting for that function.
6. Repeat steps **2** to **5** for each function to be changed.
7. Press the **I/O (ON/OFF)** button (**F**) to exit Setup mode. See **Note 1**.

Figure 5.5: Setup mode – Classic LED screen icons



NOTE 1 ■ Any changes to the functions are only saved when exiting using the **I/O (ON/OFF)** button.

Table 5.1: List of function parameters

ID	Function parameter description	Default setting
F1	MONO constant (factory set)	210
F2	Top heat gain	50
F3	Bottom heat gain	50
F4	Front-top element offset	25
F5	Degrees C or F (0=C, 1=F)	0
F6	2 minutes from end-of-bake alarm (Enable=1, Disable=0)	0
F7	Pre-steam (Enable=1, Disable=0)	0
F8	Steam (Enable=1, Disable=0)	1
F9	Bake temperature offset (+/- 25 Degrees C)	-10
F10	Set temperature limit (Degrees C) – maximum 290 Degrees C)	250
F11	Bake controls lockout (Enable=1, Disable=0) (1)	0
F12	Sleep mode delay time (60 minutes maximum; Disable=0). See **Note 2**.	0
F13	Interior light auto-timeout – ON/OFF (1 to 20 minutes; Disable=0)	1
F14	Sets the number of programs [0-9] available to the operator.	9
F15	7-day time (Enable=1, Disable=0) (2)	1
F16	8-hour countdown timer (Enable=1, Disable=0) (3)	0
F17	Lamp output soft start (Enable=1, Disable=0)	0
F18	Steam type (Plate=0, Trough=1)	(Factory set)
F18	Steam target temperature (50 to 250 Degrees C)	(Factory set)

(1) The bake controls lockout prevents an operator from changing set bake parameters.
(2) If enabled, the Set Bake Time acts as an extra time button. If not enabled, Auto On Set acts as an extra time button.
(3) After 8 hours, the oven turns off (except during a bake cycle). Prior to switching off, the display flashes and an alarm will sound. If any button is pressed at this time, an hour is added to the timer.

NOTE 2

- After switching on the power, the sleep mode delay time (F12) is initiated (if enabled in F12) after the set bake temperature is reached, steam recovery time has elapsed, and a bake cycle is completed (started and stopped).
- After the **STOP** button has been pressed at the end of a bake, the Sleep mode delay timer counts down until it has timed out. When the control panel switches to Sleep mode (SLP displayed in the TEMPERATURE window), the baking chamber temperature falls to a pre-set fall-back temperature of 170 Degrees C (338 Degrees F) – which is maintained. The Damper closes when the oven switches to Sleep mode.
- Pressing any button during the Sleep mode countdown has no effect apart from the **O/I (ON/OFF)** button, which switches the control panel to Standby mode (clock displayed), and the START and STOP buttons, which resets the countdown timer.
- Pressing any button while in Sleep mode, apart from the **LIGHTS ON/OFF** and the **O/I (ON/OFF)** buttons, exits Sleep mode. The baking chamber heats up to its previous set bake temperature. A typical heat recovery from 170 to 230 Degrees C is 15 minutes.
- If no buttons are pressed after exiting Sleep mode, the control panel switches back to Sleep mode after the countdown timer has again timed-out.

6. Troubleshooting Bakes

None of the decks are switched on.

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

One deck is not switched on.

- Check if the individual deck timer is set for a specific time.

Uneven or patchy bake.

- If the front is pale and the back is burnt, the doors may have been opened too often or left open for too long during loading.
- Uneven loading.
- Faulty element.
- Top or bottom deck elements are not functioning.
- There is no supply voltage across one of the three phases.

The actual temperature far exceeds 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 products. If the elements continue to heat after reaching the set temperature, call MONO Equipment for technical assistance. (Please allow up to 15 °C (59 °F) difference before diagnosing a fault condition).

Heat recovery is poor after loading the oven.

- Doors may have been left open for too long during loading and allowed heat to escape.
- The Damper may have been left open during loading/baking, allowing heat to escape.
- The top or bottom heat may not be working.
- There is no supply voltage across one of the three phases.

The steam system is not operating correctly.

- Is the water supply 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.

7. Cleaning

7.1. Safety messages

WARNING

- Ensure the oven is switched off at the power socket and completely cooled before cleaning.
- Be aware that the surfaces of the oven can remain hot for several hours. Wear protective gloves and appropriate clothing when cleaning.
- Do not remove any covers, panels, or pipe fittings for cleaning.
- Do not clean the oven while it is powered or operating.

7.2. Daily cleaning

Before undertaking this task, ensure the oven is disconnected or isolated from the electrical supply and that the oven and elements are completely cold.

Daily cleaning tasks

1. Sweep any debris out of the oven after it has been allowed to cool.
   - Cooling down could take several hours.
   - Use a vacuum cleaner if necessary, **but only when the oven is completely cold**.
2. Wipe the oven front, back and sides with a damp cloth.
3. Spot clean outside with a damp cloth, soaked in a solution of mild detergent and hot water.
   - Pay particular attention to ensure excess water is not applied near electrical panels.

7.3. Weekly cleaning

Before undertaking this task, ensure the oven is disconnected or isolated from the electrical supply and that the oven and elements are completely cold.

Weekly cleaning tasks

1. Complete the daily cleaning procedure.
2. Clean any burnt-on debris by scrubbing it with a stiff brush and, if necessary, a damp cloth.
3. Use a nylon brush to scrub the wheels with a mild detergent and hot water.
   - Using too much water eventually rusts the metalwork.

8. Maintenance

8.1. Safety messages

WARNING

- Always disconnect or isolate the electrical supply before starting any maintenance work on the oven.
- Some components stay electrically energised even after the main isolator is in the 0 (OFF) position.

WARNING

- The Modular Bakery Deck Oven 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 and experienced persons (SQEP).
- You must immediately report any damage or defect arising with the appliance.
- Unsafe equipment is dangerous. Do not use the appliance. Isolate the electrical supply and contact MONO Equipment Limited or your appointed service agent.

8.2. General maintenance

The following general maintenance is recommended:

- Check for any visible damage or signs of tampering.
  - Do not use the machine if it is clearly damaged, i.e. frayed or bare wires are visible.
  - Report the damage but do not attempt to make any repairs yourself.
- Follow the cleaning instructions in **Chapter 7**.

8.3. Preventative maintenance

The following preventative maintenance schedule is recommended.

Every 3 months

- Door pivot:
  - Lubricate the door pivot with heat resistant grease.

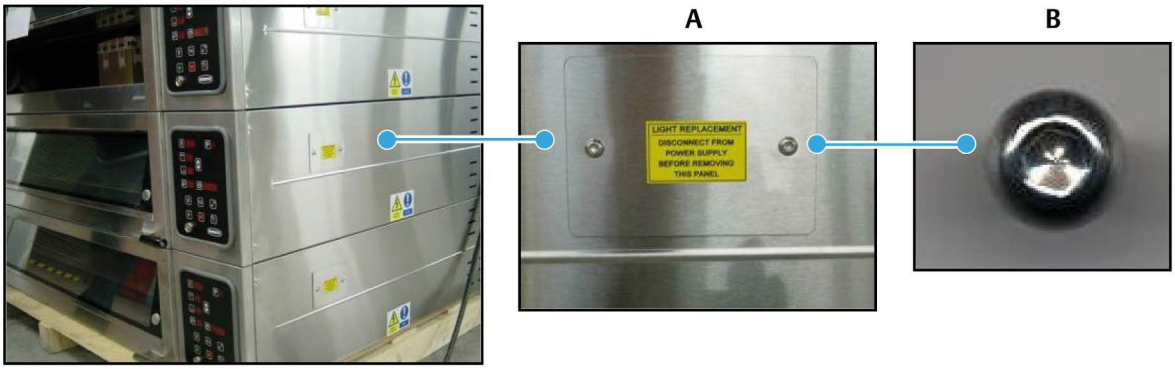
Every 12 months

- Door seals:
  - Do a visual check to ensure the door seals are in good condition.
  - Arrange for a suitably qualified and experienced person to replace them if necessary.
- Damper function:
  - Do a visual and auditory check to confirm if it opens and closes.
  - Arrange for a suitably qualified and experienced person to investigate and make repairs if necessary.
- Water hose connectors:
  - Do a visual check for signs of water leakage.
  - Tighten the connectors.
  - Replace the water hose if necessary.
- Solenoid valve operation (only if the oven has a steam function):
  - Do a visual and auditory check to test if steam is being generated.
  - Arrange for a suitably qualified and experienced person to investigate and make repairs if necessary.
- Condition and functioning of the heating elements:
  - Do a visual check for any signs of damage.
  - Arrange for a suitably qualified and experienced person to replace damaged elements.
- Fan motor bearings:
  - Do an auditory check to hear if there are any unusual sounds made when the fan is functioning.
  - Arrange for a suitably qualified and experienced person to investigate and make repairs if necessary.
- Baking tiles:
  - Check for any cracks or warping.
  - Arrange for a suitably qualified and experienced person to replace damaged baking tiles.
- General functioning of the oven:
  - Confirm the general functioning of the oven is as expected, e.g. the control panel is not ‘freezing’ and the oven is not underbaking or overbaking product.

8.4. How to replace the light

Spare part required: Dichroic Lamp, 20 watts (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.

8.5. Firmware update using the iButton

Firmware update procedure (MONO authorised engineers only)

1. Put the deck oven into the Standby mode (clock displaying).
2. Place the iButton onto the magnetic connection point (**Figure 5.1 on page 16** | **N**).

Result: The oven now uploads data from the iButton. During this process, a bake temperature window displays a countdown (going from 128 to 0) as data is uploaded.

The TOP HEAT window displays the number of failed reads from the iButton. The upload terminates if this count reaches 08 (see Error conditions below).

After the data has been uploaded and checked, the controller enters a programming state. The bake temperature window now displays Prg. This process should take approximately 8 seconds to complete.

NOTE

- During this programming phase, do not disconnect the power to the oven or remove the iButton from the magnetic connection point.
- If the power is interrupted, the re-programming of the Flash memory would be incomplete, and the control panel would cease to function. The only way to recover from this is to re-program the unit via a PC with a programming cable.

When the programming update is complete, the controller resets and displays the new firmware version in the time window. The display shows the firmware version continually until the iButton is disconnected from the oven. After disconnection, the oven displays the clock and functions as usual.

Firmware update troubleshooting

If a firmware upload fails, the bake temperature window displays errors as codes. No changes to the oven are applied when there is an upload error. Firmware is only updated if the upload from the iButton has been successful.

When an error code is displayed, the oven waits for the disconnection of the iButton before resetting and then functions as usual. An upload (firmware update) can then be re-attempted.

If the iButton is disconnected whilst uploading is in progress, the upload terminates and the oven resets.

Table 8.1: Firmware upload error codes

Error code	Meaning of error code
E01	If the controller fails to read the iButton successfully eight times (in succession), E01 appears in the bake temperature window. This error may be due to poor contact between the probe and the iButton, or bad data on the iButton. Try cleaning the surface of the probe – any small debris can affect the connection.
E02	This error appears if the file information on the iButton is incorrect or the iButton is blank (unprogrammed).
E03	This error appears if the iButton file CRC (Cyclical Redundancy Check) does not match what was calculated by the controller after a download, i.e., a corrupted iButton file.

9. Service

If a fault arises, please do not hesitate to contact MONO Equipment's Service and Spares department. Be prepared to provide the Serial Number from the machine's information plate or the front page of this User Manual in all communications.

9.1. Contact information for customer services

MONO Equipment Limited
Queensway
Swansea West Industrial Park
Swansea
SA5 4EB
United Kingdom
www.monoequip.com

Contacts

spares@monoequip.com
+44 (0)1792 564039

techsupport@monoequip.com
+44 (0)1792 564041

service@monoequip.com
+44 (0)1792 564048

Switchboard
+44 (0)1792 564039

9.2. Further information

Visit **MonoEquip.com** the for the latest versions of this user manual. Also find up-to-date information about all MONO's products.

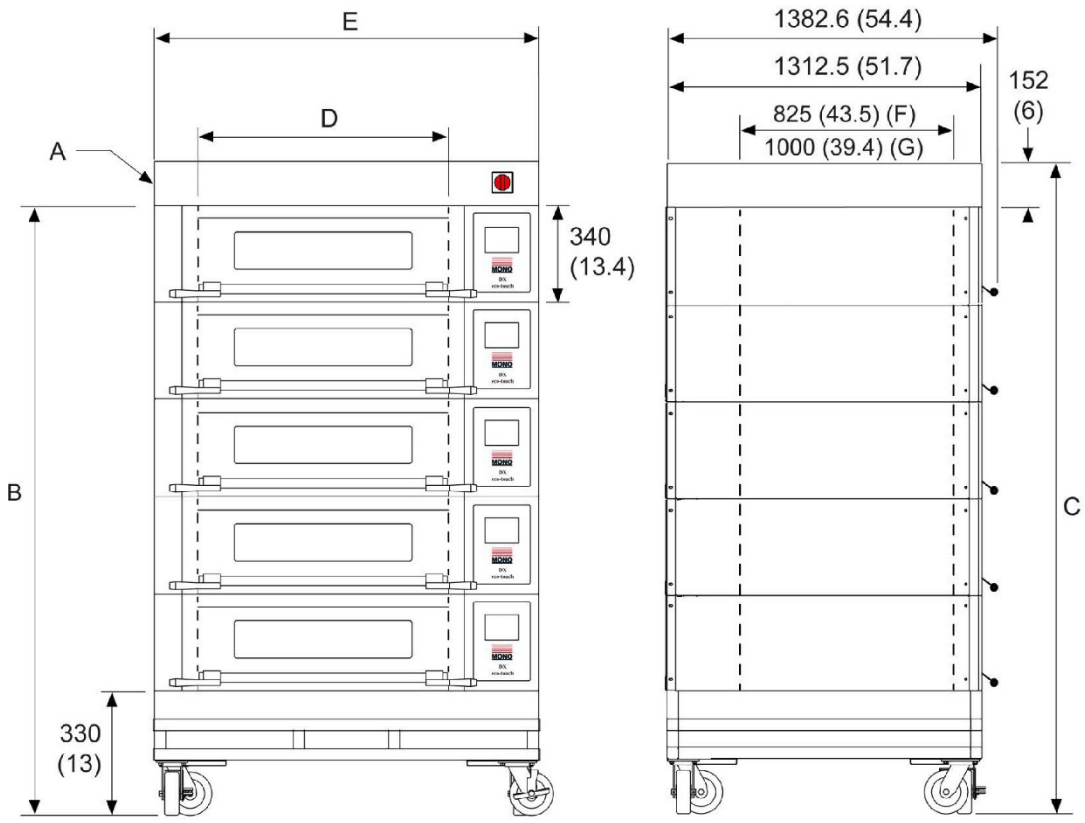
9.3. Environmental disposal

Dispose of the machinery with care when it comes to the end of its working life. Use the most environmentally friendly manner possible by recycling or other means of disposal which complies with local regulations. Only dispose of the machine safely and legally. The Environmental Protection Act 1990 applies in the United Kingdom.

A. Dimensional Drawings

A.1 Standard-size deck oven dimensions

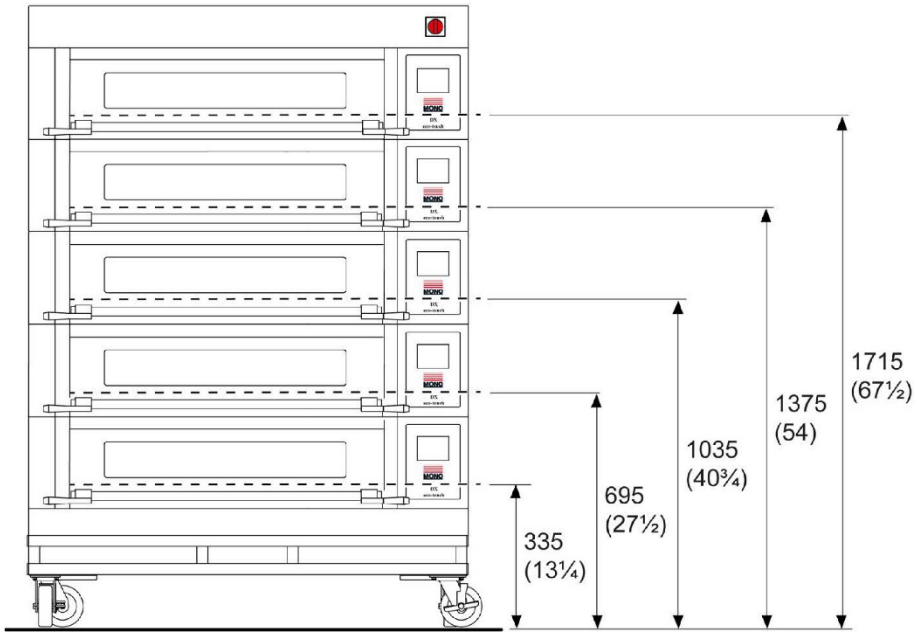
Figure A.1: Dimensions for a multi-deck oven on a base



Dimensions are in mm (inches).

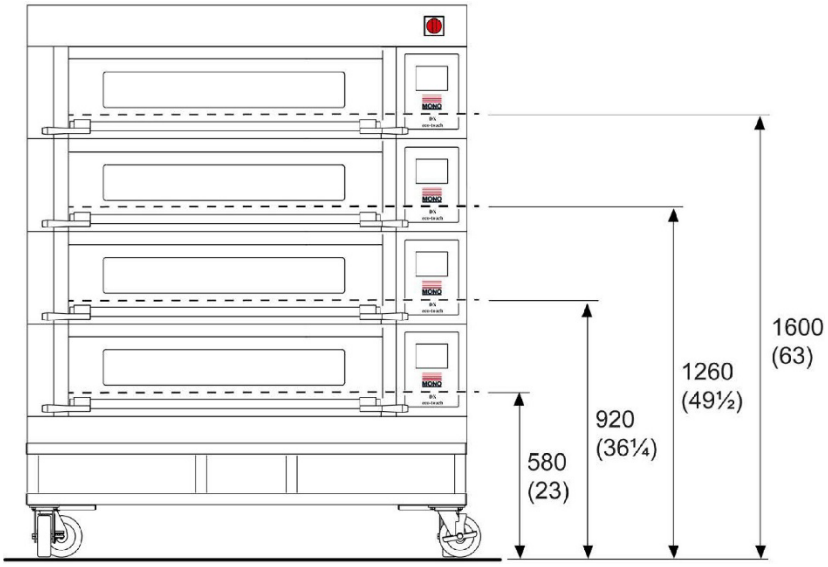
A. Top valence or extractor hood (to customer specifications)
B. 5-deck: 1985 mm (78 in.); 4-deck, 3-deck, and 2-deck: 1870 mm (73½)
C. 5-deck: 2140 mm (84¼ in.); 4-deck, 3-deck, and 2-deck: 2020 mm (79½)
D. Baking chamber width – see **Table A.2**
E. Overall deck width – see **Table A.3**
F. Baking tiles – see **Table A.2**
G. Chamber

Figure A.2: Deck plate heights (5-deck oven)



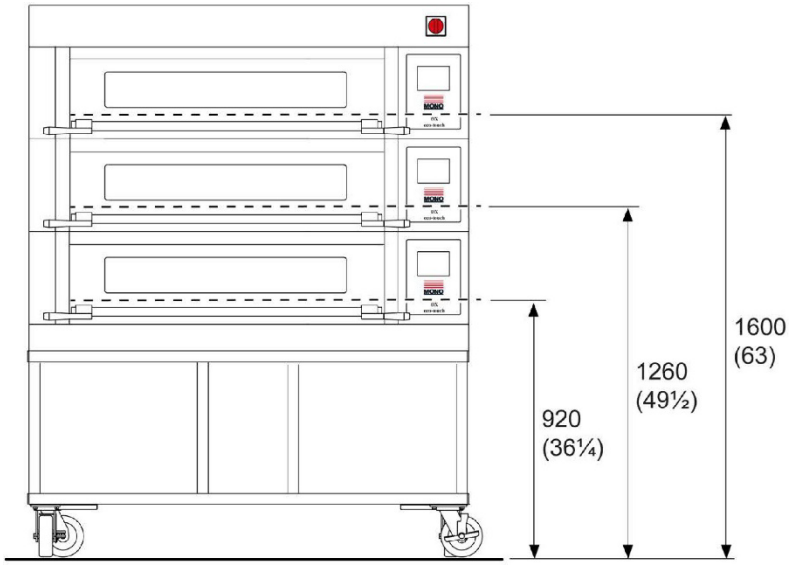
Dimensions are in mm (inches).

Figure A.3: Deck plate heights (4-deck oven)



Dimensions are in mm (inches).

Figure A.4: Deck plate heights (3-deck oven)



Dimensions are in mm (inches).

Table A.1: Internal usable surface areas and number of trays per deck

Nominal trays wide	Internal usable surface area (per deck)		Number of trays (per deck)			
	m^2	ft^2	60 cm x 80 cm (24 in. x 32 in.)	60 cm x 40 cm (24 in. x 16 in.)	18 in. x 30 in.	18 in. x 26 in.
1	0.39	4.2	-	1	1	1
2	0.77	8.28	1	2	2	2
3	1.16	12.5	2	3	3	3
4	1.55	16.7	3	4	4	4

Table A.2: Baking chamber widths and number of tiles

Number of trays	Chamber width		Number of baking tiles (pieces)
	mm	inches	
1	480	19	1
2	950	37	1
3	1420	56	1
4	1895	74½	2(1)

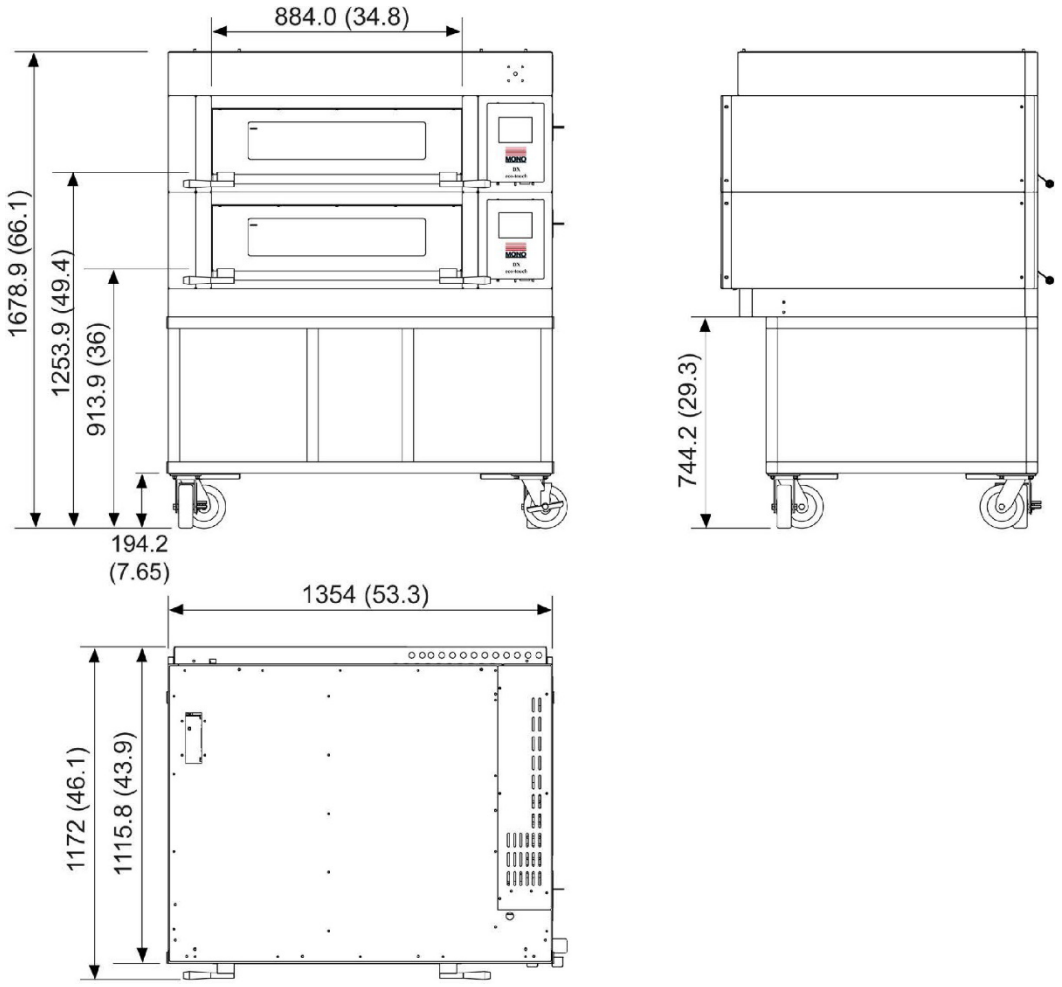
(1) Two tiles with a gap in the middle.

Table A.3: Overall deck widths

Number of trays	Chamber width	
	mm	inches
1	942	37
2	1415	55¾
3	1890	74½
4	2365	93

A.2 Compact deck oven dimensions

Figure A.5: Dimensions for two-deck oven on a base



Dimensions are in mm (inches).

B. Specifications

B.1 Electrical specifications

WARNING

- An electrical socket must be fitted with a 30mA-rated Type 'A' Residual Current Device (RCD) before installation and commissioning of the oven.
- Always fit a wall-mountable isolator switch to isolate the oven from the electrical supply completely. The isolator must be visible, labeled as an emergency shut-down device, and easily accessible by an operator.
- Always check the electrical requirements on the nameplate before connecting the power. Contact MONO Equipment Limited if the electrical information is not correct for your site.
- Never use this USB port to power or recharge electronic devices e.g., mobile phones. Incorrect usage causes damage to the oven and could cause a fire.
- Always ensure your hands are dry before touching any electrical components including cables, switches, and plugs.

The electrical loadings in **Table B.1** and **Table B.2** are for an individual deck module, not the complete oven.

Table B.1: Electrical loading per standard-sized modular deck

Supply	1-tray wide	2-trays wide	3-trays wide	4-trays wide
400 Vac (50 Hz), 3-phase + neutral + earth	3 kW, 5 A per phase	6 kW, 9 A per phase	9 kW, 14 A per phase	12 kW, 17 A per phase

Table B.2: Electrical loading per compact modular deck

Supply	2-trays wide
400 Vac (50 Hz), 3-phase + neutral + earth	4.8 kW, 7.5 A per phase

B.2 Environmental specifications

Noise level

The noise level is less than 80 dB.

B.3 Mechanical specifications

Features

Number of decks and trays	See **Appendix A**
Full-colour touchscreen display	ECO Touch control panels (1 per deck) Panels can be on the left or right.
Sole plate	Solid, heavy composite sole plate
Connections	Electrical (single-point connection) Water (single-point connection) No drainage is required.
Insulation	RW5 solid slab insulation Superwool-insulated stainless steel doors
Doors	Non-magnetic door closures Interlocked door/fan safety switch
Safety	Emergency isolator switch Lockable castor wheels

B.4 Functional specifications

Energy saving	Sleep mode and Auto-shutdown
Maximum number of programs	9
USB programmable	Yes (dedicated USB port for data only)
Customisable wallpaper	Yes (displayed in Sleep and Standby modes)
Manual baking mode	Yes (selectable on HOME screen)
Favourites menu	Yes (selectable on HOME screen)
7-day, 24-hour timer	Yes (selectable on HOME screen)
8-hour countdown timer	Yes
Full-Load and Half-Load option	Yes
Phases during bake program	Up to 6
Heat	Independent top and bottom heat Programmable for each baking phase
Steam	Integrated steam generating system Pre-steam function
Damper	Programmable damper function
Diagnostics	Diagnostic screens for troubleshooting and testing

B.5 Water specifications

The following water specifications are recommended for correct operation of the steam system:

Pressure range	29 to 44 psi
Hardness range	0 to 4 grains per gallon
PH range	7.0 to 8.5
Chloride	0 to 20 ppm
Calcium	0 to 4 ppm
Magnesium	0 to 4 ppm
Alkalinity	0 to 20 ppm

NOTE

- Consult a water treatment company for information about water filtration systems.

C. Spares

Table C.1: Modular Bakery Deck Oven spare parts

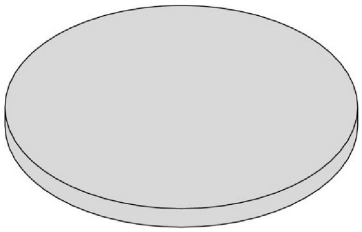
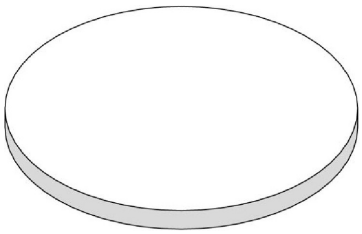
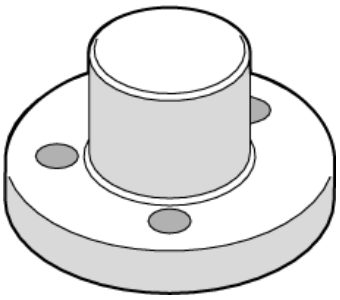
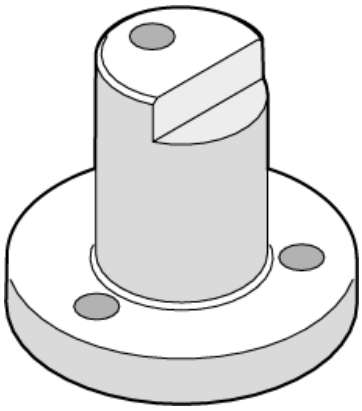
Part number	Item description	Quantity	Image
257-02-00027	Frosted glass (lights)	1	
257-02-00028	Plain glass (lights)	1	
257-03-00094	Door bumper stop	1	
257-03-00005	Hinge pin, right hand side	1	
257-03-00009	Hinge pin, left hand side	1	

Table C.1: Modular Bakery Deck Oven spare parts (Continued)

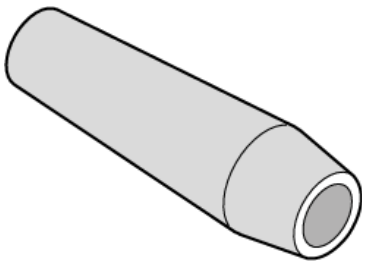
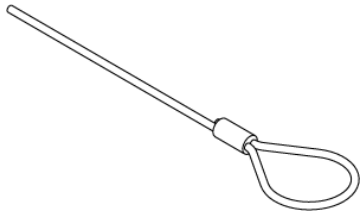
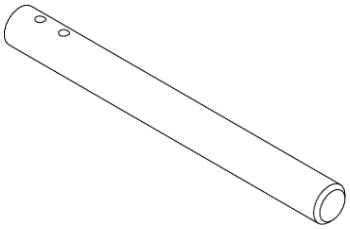
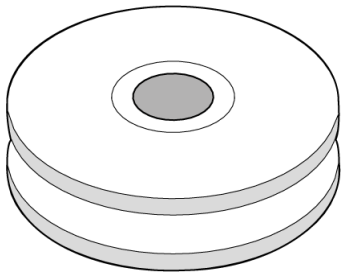
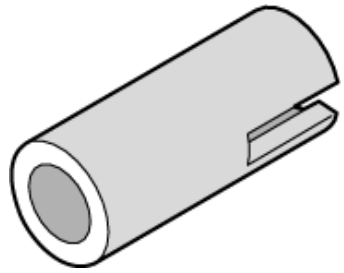
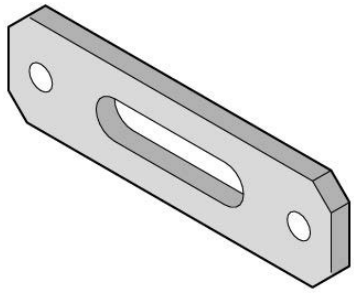
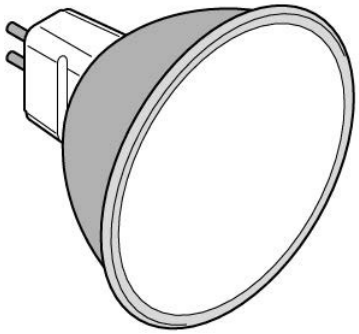
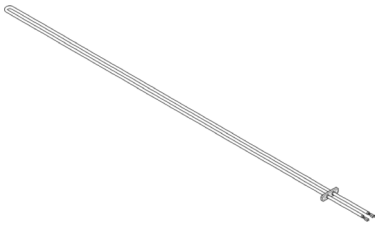
Part number	Item description	Quantity	Image
A900-27-192	Door handle (black)	1	
257-03-00017	Door spring	1	
257-03-00024	Wire rope	1	
257-03-00025	Spring retaining pin	1	
257-03-00015	Pulley	1	
257-03-00013	Pulley spindle	1	Image not available
257-07-00007	Damper drive coupling	1	

Table C.1: Modular Bakery Deck Oven spare parts (Continued)

Part number	Item description	Quantity	Image
245-02-01300	Element gasket	1	
B855-94-008	Dichroic Lamp, 20 watt, 24 Volts	1	
B854-04-102 B854-04-100 B854-04-101	Heating element, 0.66 kW (Top) Heating element, 0.4 kW (Top) Heating element, 0.5 kW (Bottom)	1 1 1	

D. Electrical Information

D.1 Parts lists for electrical drawings

Table D.1: Parts list for electrical drawings (3-tray wide)

Item reference	Description	Part number
F1 (single-phase only)	Heater MCB	B872-22-009
F2 (single-phase only)	Heater MCB	B872-22-009
F3 (single-phase only)	Heater MCB	B872-22-009
F4	Control circuit MCB	B872-22-062
F5	Overheat thermostat	B888-30-014
T1	24V power supply unit for control circuit	B801-93-005
K1	Heater element contactor (Top)	B801-08-021
K2	Heater element contactor (Bottom)	B801-08-021
Y1	Water solenoid (8mm pipe)	A900-34-365
H1	Interior light	B855-94-008
B1	Oven thermocouple	B873-95-007
U1	Eco-touch screen and PCB assembly	158-25-80000
D1	Damper solenoid	B749-83-004
R1	Heating element, 1 kW (Top)	B854-04-093
R2	Heating element, 0.6 kW (Top)	B854-04-091
R3	Heating element, 0.6 kW (Top)	B854-04-091
R4	Heating element, 0.6 kW (Top)	B854-04-091
R5	Heating element, 0.6 kW (Top)	B854-04-091
R6	Heating element, 0.6 kW (Top)	B854-04-091
R7	Heating element, 0.6 kW (Top)	B854-04-091
R8	Heating element, 0.75 kW (Bottom)	B854-04-092
R9	Heating element, 0.6 kW (Bottom)	B854-04-091
R10	Heating element, 0.6 kW (Bottom)	B854-04-091
R11	Heating element, 0.6 kW (Bottom)	B854-04-091
R12	Heating element, 0.6 kW (Bottom)	B854-04-091
R13	Heating element, 0.6 kW (Bottom)	B854-04-091
R14	Heating element, 0.6 kW (Bottom)	B854-04-091

Table D.2: Parts list for electrical drawings (2-tray wide)

Item reference	Description	Part number
F1 (single-phase only)	Heater MCB	B872-22-006
F2 (single-phase only)	Heater MCB	B872-22-006
F3 (single-phase only)	Heater MCB	B872-22-006
F4	Control circuit MCB	B872-22-062
F5	Overheat thermostat	B888-30-014
T1	24V power supply unit for control circuit	B801-93-005
K1	Heater element contactor (Top)	B801-08-021
K2	Heater element contactor (Bottom)	B801-08-021
Y1	Water solenoid (8mm pipe)	A900-34-365
H1	Interior light	B855-94-008
B1	Oven thermocouple	B873-95-007
U1	Eco-touch screen and PCB assembly	158-25-80000
D1	Damper solenoid	B749-83-004
R1	Heating element, 0.66 kW (Top)	B854-04-102
R2	Heating element, 0.4 kW (Top)	B854-04-100
R3	Heating element, 0.4 kW (Top)	B854-04-100
R4	Heating element, 0.4 kW (Top)	B854-04-100
R5	Heating element, 0.4 kW (Top)	B854-04-100
R6	Heating element, 0.4 kW (Top)	B854-04-100
R7	Heating element, 0.4 kW (Top)	B854-04-100
R8	Heating element, 0.5 kW (Bottom)	B854-04-101
R9	Heating element, 0.4 kW (Bottom)	B854-04-100
R10	Heating element, 0.4 kW (Bottom)	B854-04-100
R11	Heating element, 0.4 kW (Bottom)	B854-04-100
R12	Heating element, 0.4 kW (Bottom)	B854-04-100
R13	Heating element, 0.4 kW (Bottom)	B854-04-100
R14	Heating element, 0.4 kW (Bottom)	B854-04-100

Table D.3: Parts list for electrical drawings (1-tray wide)

Item reference	Description	Part number
F1 (single-phase only)	Heater MCB	B872-22-006
F2 (single-phase only)	Heater MCB	B872-22-006
F3 (single-phase only)	Heater MCB	B872-22-006
F4	Control circuit MCB	B872-22-062
F5	Overheat thermostat	B888-30-014
T1	24V power supply unit for control circuit	B801-93-005
K1	Heater element contactor (Top)	B801-08-021
K2	Heater element contactor (Bottom)	B801-08-021
Y1	Water solenoid (8mm pipe)	A900-34-365
H1	Interior light	B855-94-008
B1	Oven thermocouple	B873-95-007
U1	Eco-touch screen and PCB assembly	158-25-80000
D1	Damper solenoid	B749-83-004
R1	Heating element, 0.325 kW (Top)	B854-04-111
R2	Heating element, 0.2 kW (Top)	B854-04-109
R3	Heating element, 0.2 kW (Top)	B854-04-109
R4	Heating element, 0.2 kW (Top)	B854-04-109
R5	Heating element, 0.2 kW (Top)	B854-04-109
R6	Heating element, 0.2 kW (Top)	B854-04-109
R7	Heating element, 0.2 kW (Top)	B854-04-109
R8	Heating element, 0.25 kW (Bottom)	B854-04-110
R9	Heating element, 0.2 kW (Bottom)	B854-04-109
R10	Heating element, 0.2 kW (Bottom)	B854-04-109
R11	Heating element, 0.2 kW (Bottom)	B854-04-109
R12	Heating element, 0.2 kW (Bottom)	B854-04-109
R13	Heating element, 0.2 kW (Bottom)	B854-04-109
R14	Heating element, 0.2 kW (Bottom)	B854-04-109

D.2 Electrical drawings

Figure D.1: Top canopy Mk2 deck oven main circuit board drawing M257E25-52350

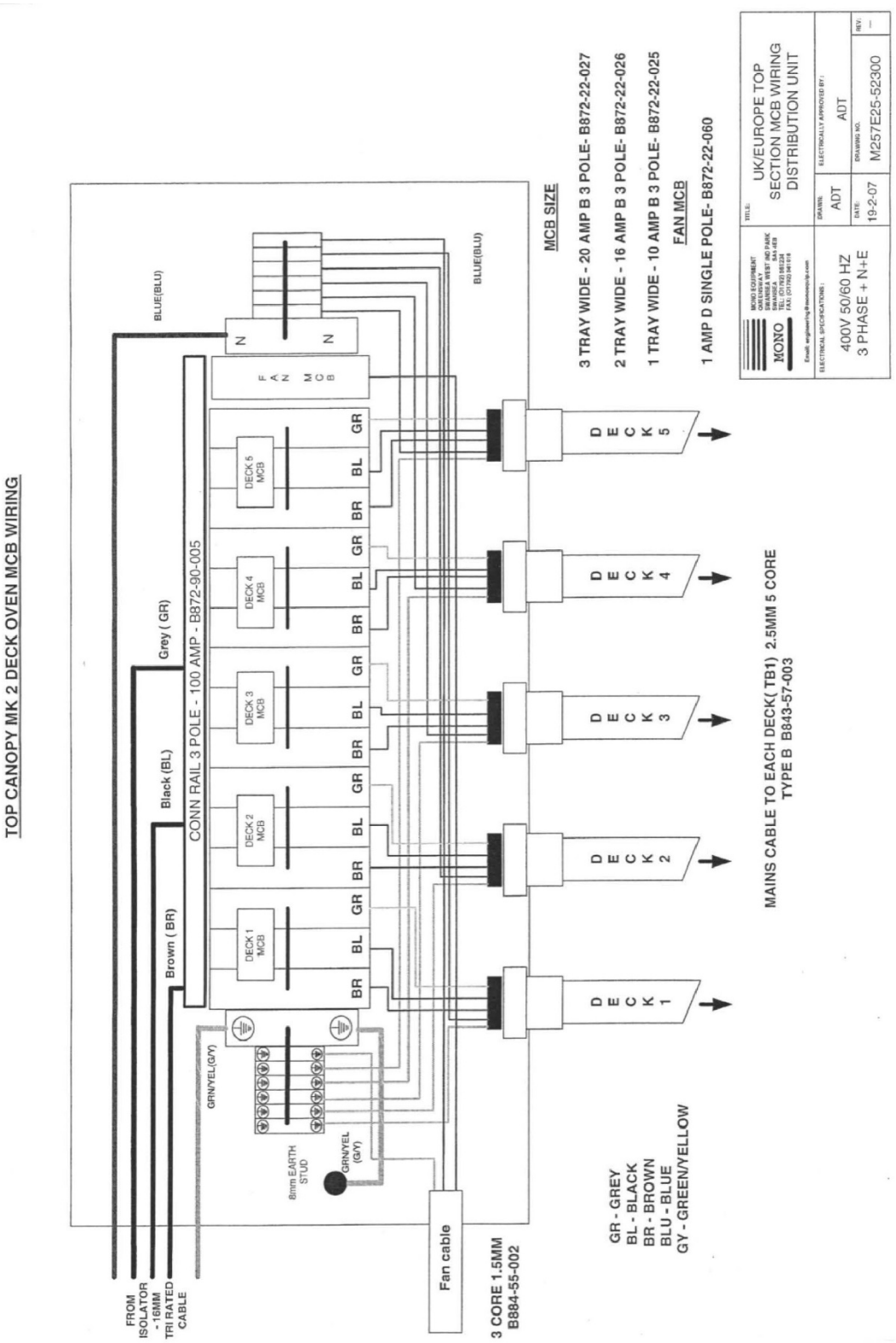


Figure D.2: Modular Mk2 deck oven interlink detail drawing M257E25-52350

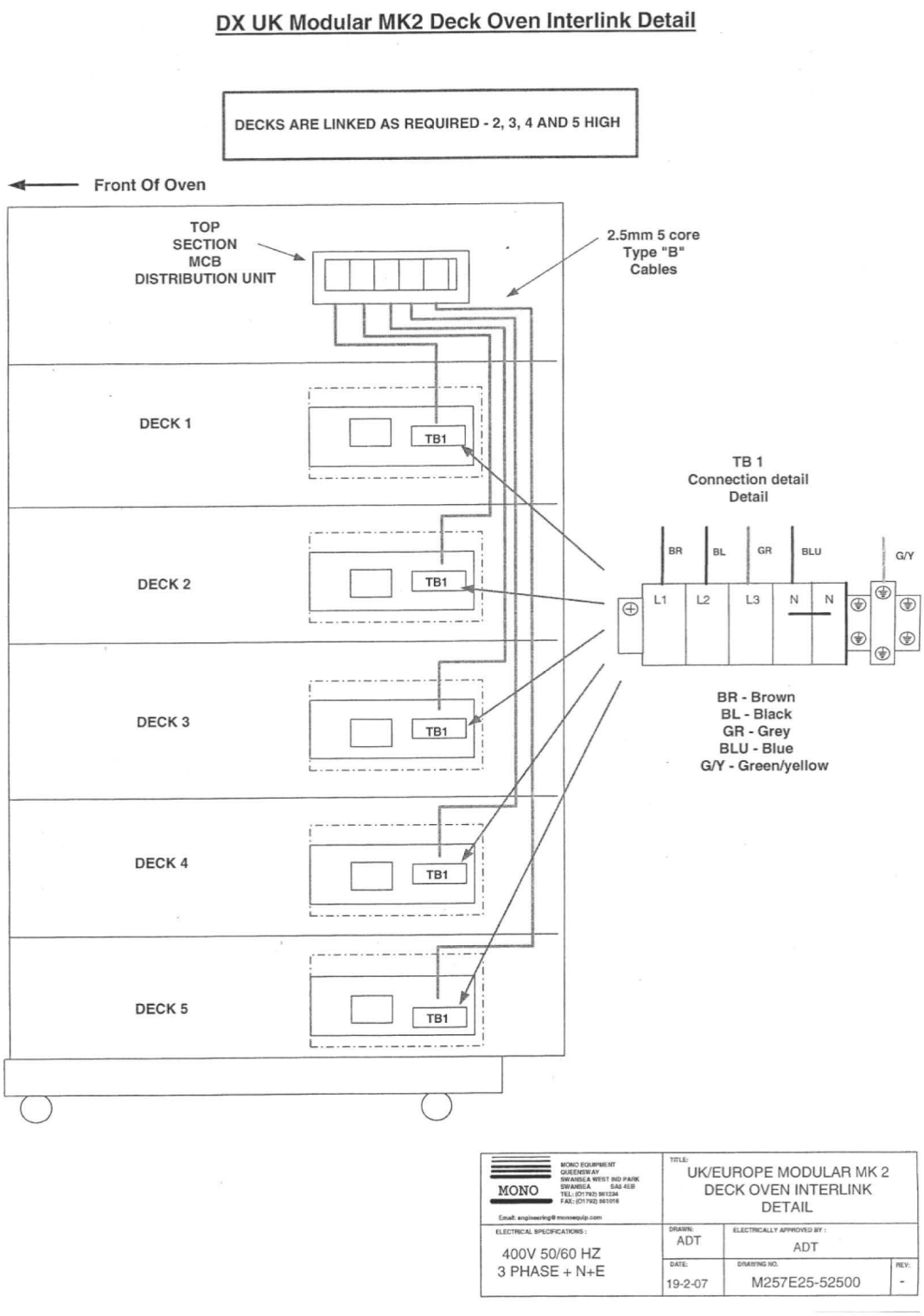


Figure D.3: Modular Mk2 deck oven power circuit top-bottom heat drawing M257E25-30000

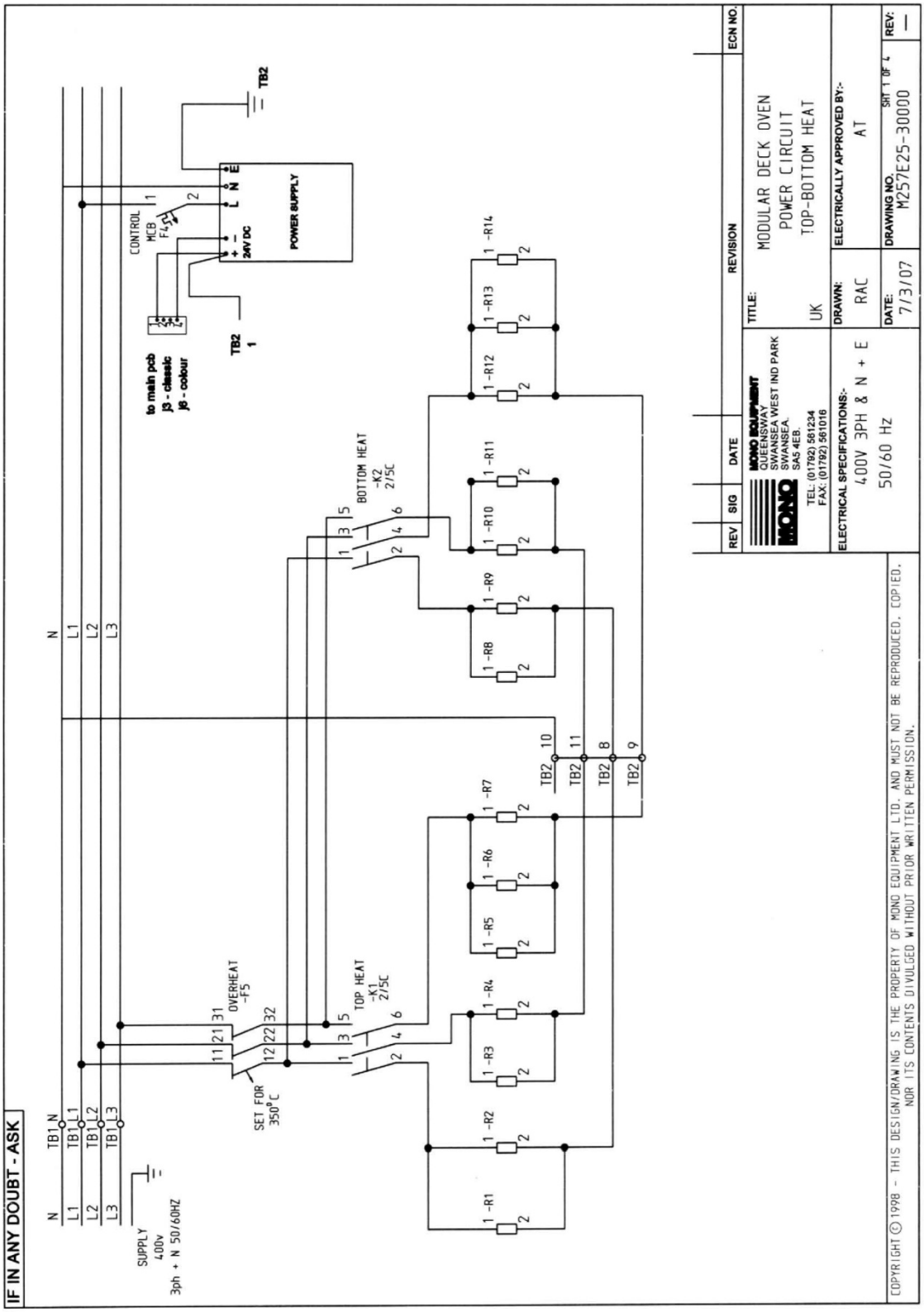


Figure D.4: Modular Mk2 deck oven control circuit wiring drawing M257E25-52000

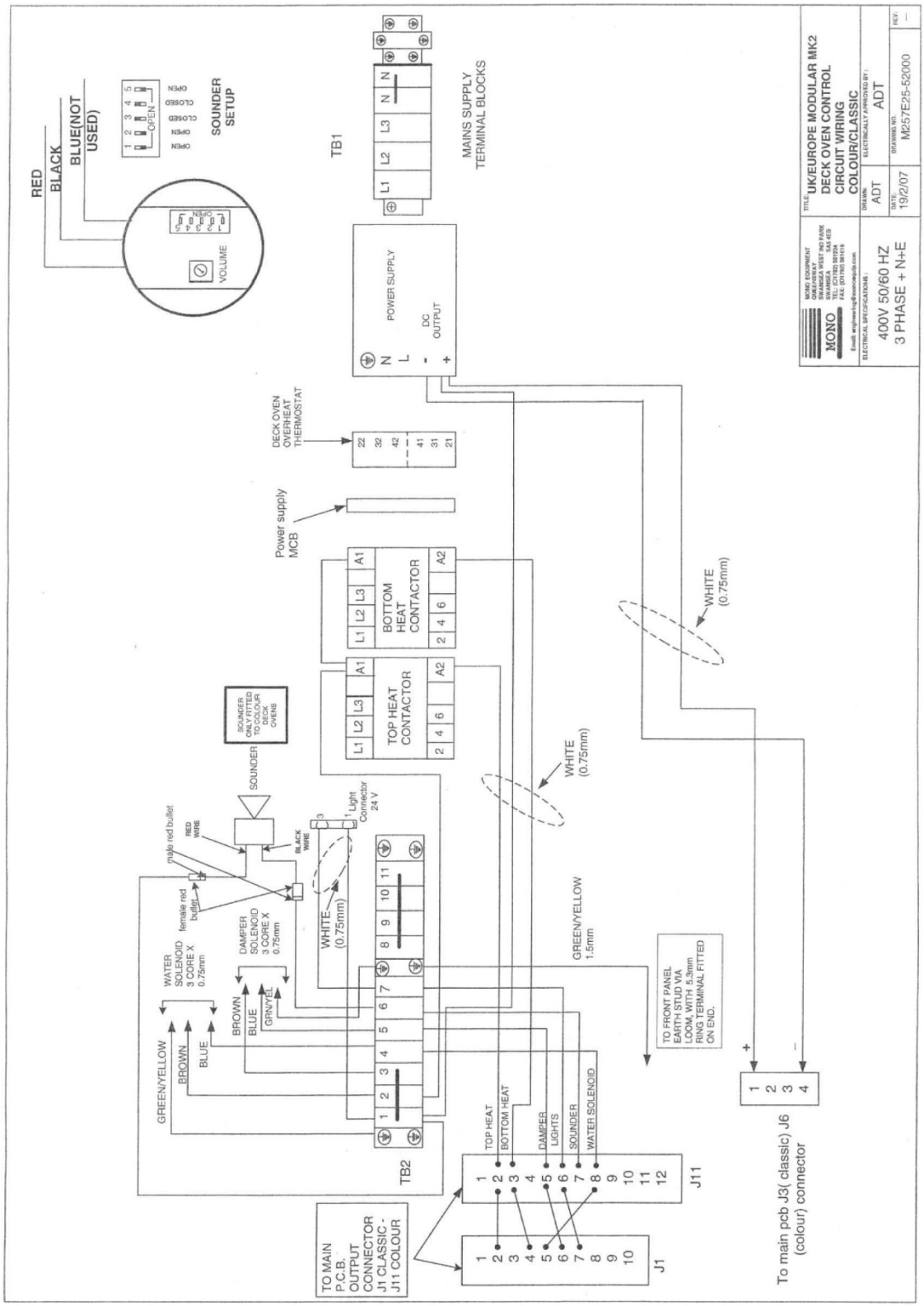


Figure D.5: Modular Mk2 deck oven power circuit wiring drawing M257E25-52100

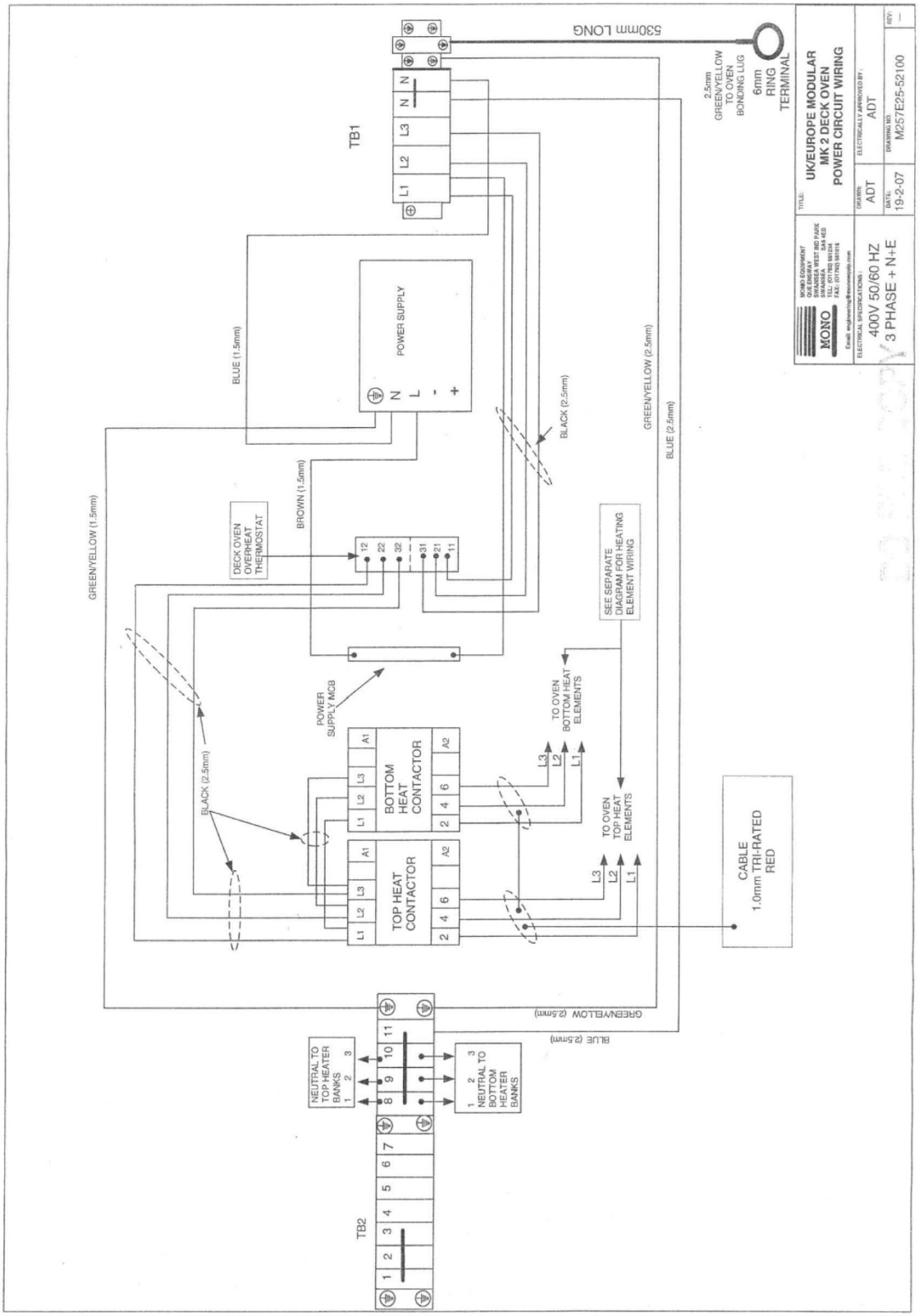


Figure D.6: Modular Mk2 deck oven heating element wiring drawing M257E25-52200

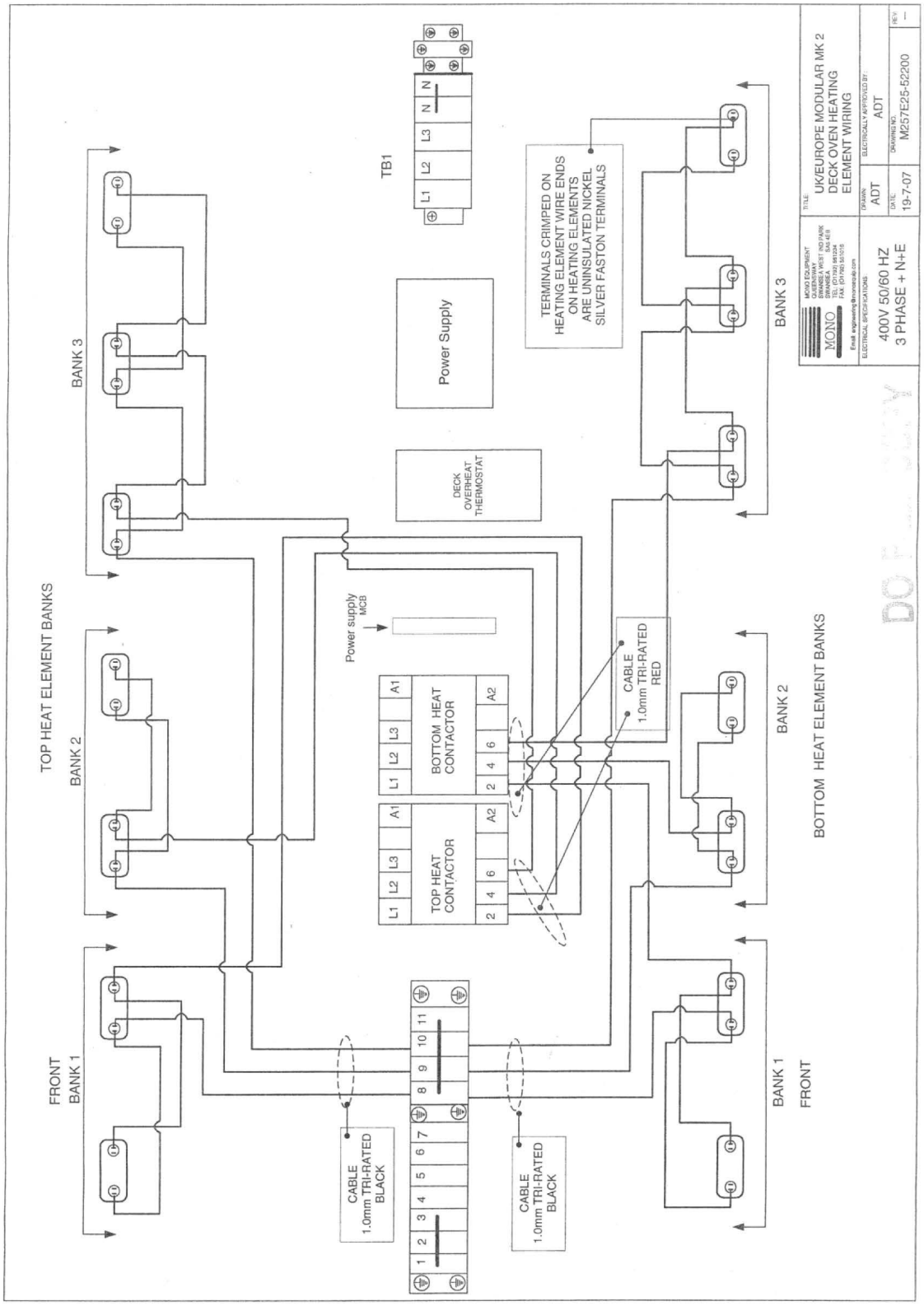


Figure D.7: Modular Mk2 deck oven isolator wiring drawing M257E25-52400

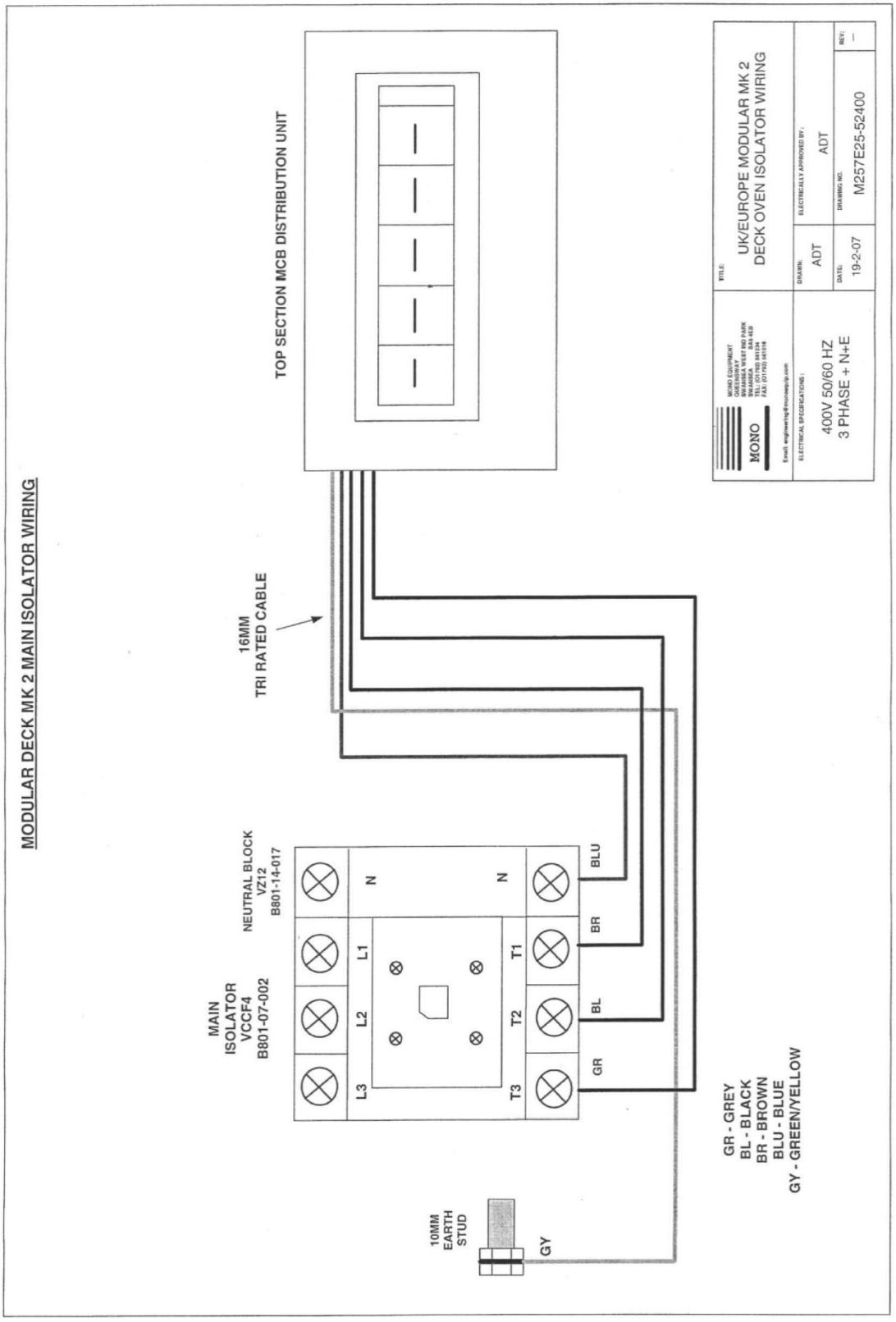


Figure D.8: Modular Mk2 deck oven colour controller drawing M257E25-52600

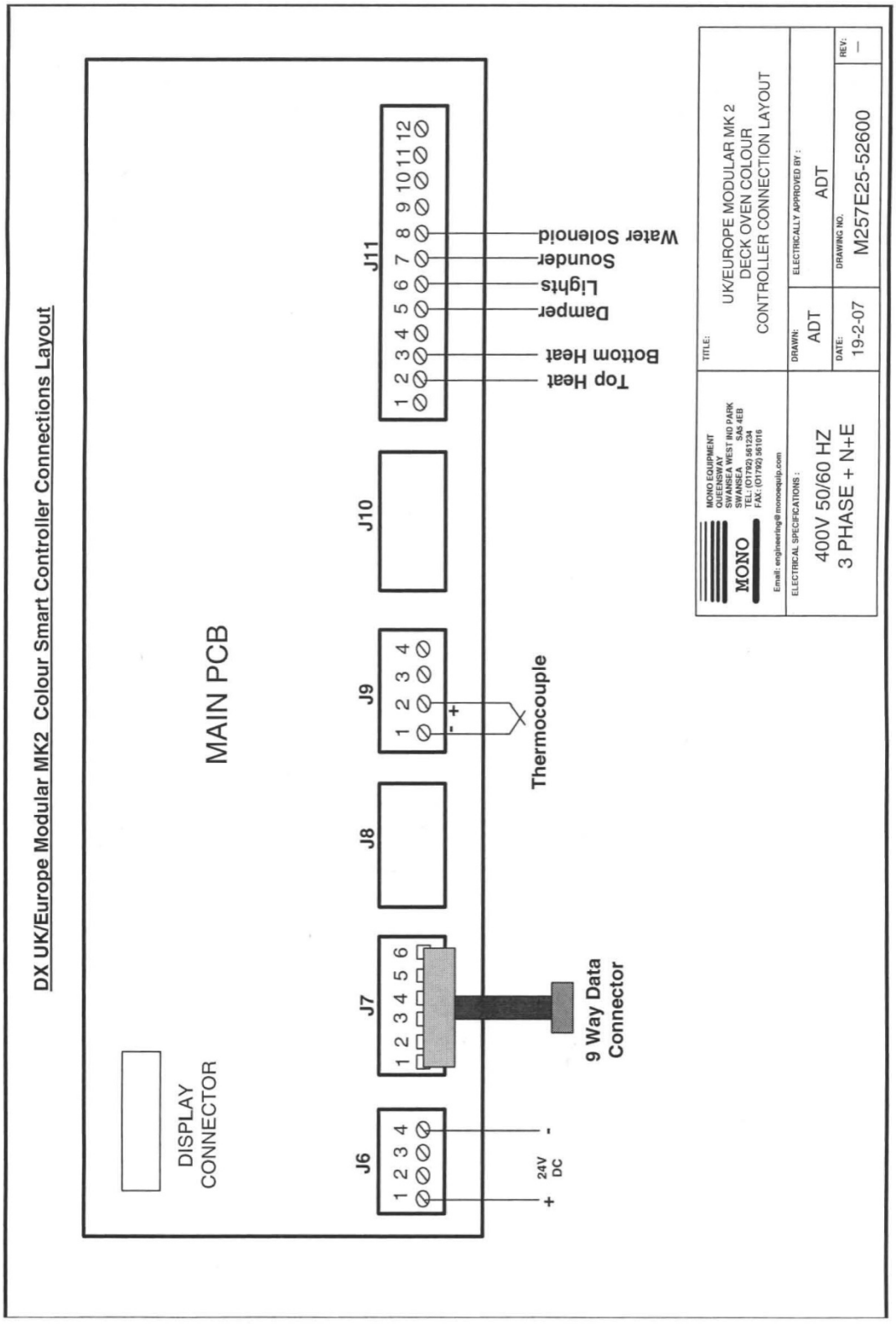


Figure D.9: Modular Mk2 deck oven canopy fan drawing M257E25-52700

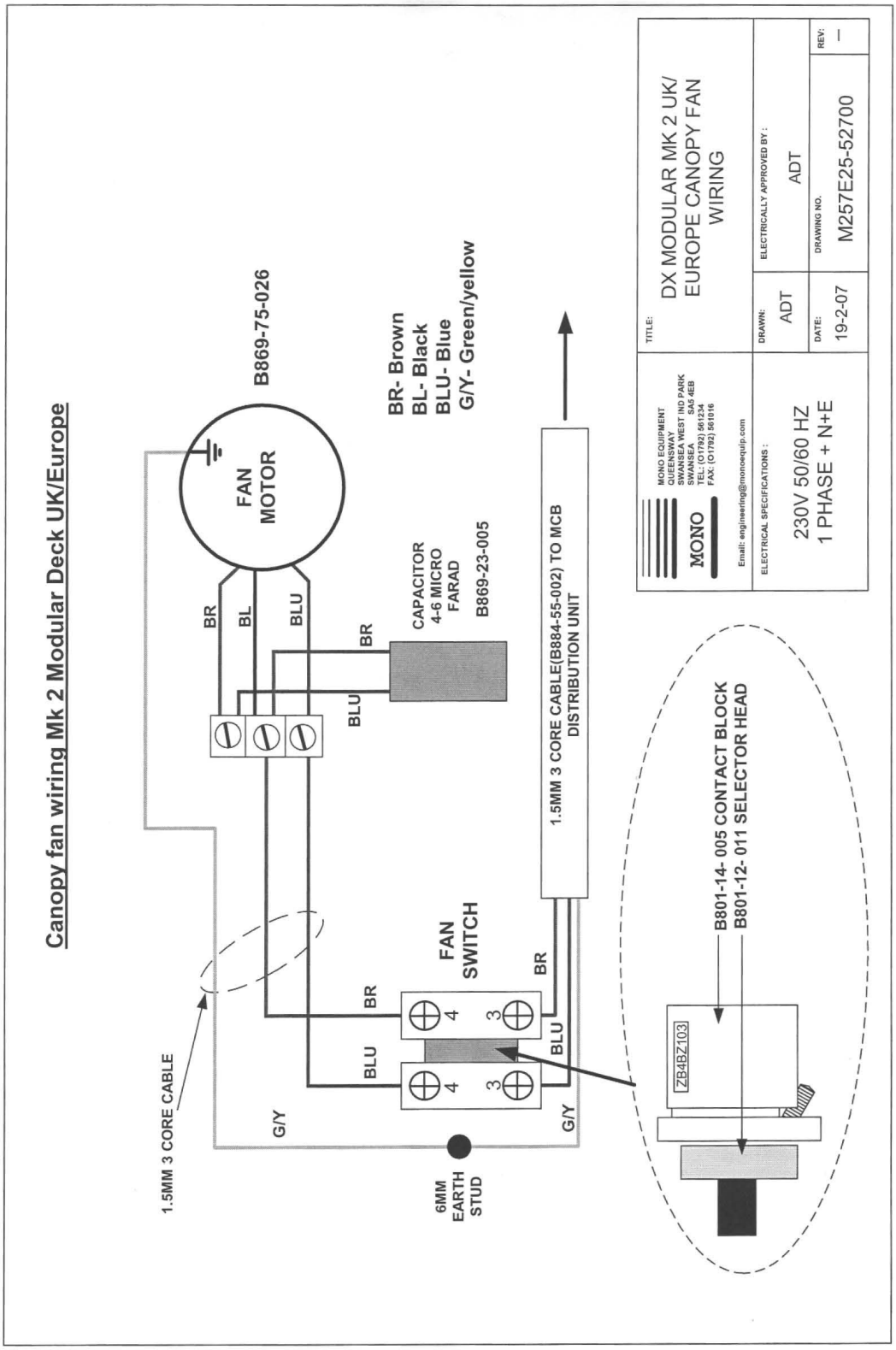


Figure D.10: Modular Mk2 deck oven electrical panel main components (three phase)

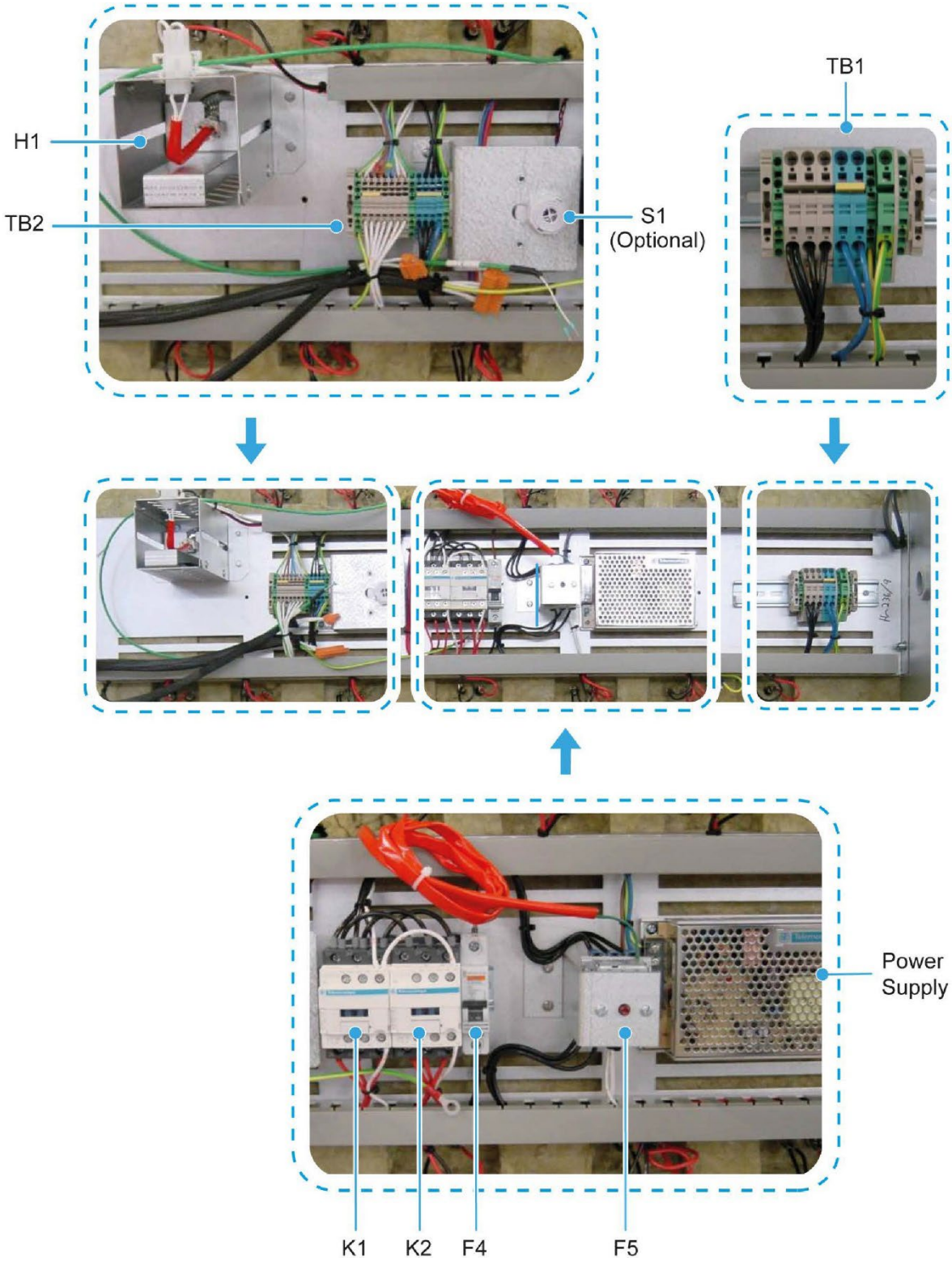


Figure D.11: Modular Mk2 deck oven electrical panel main components (single phase)

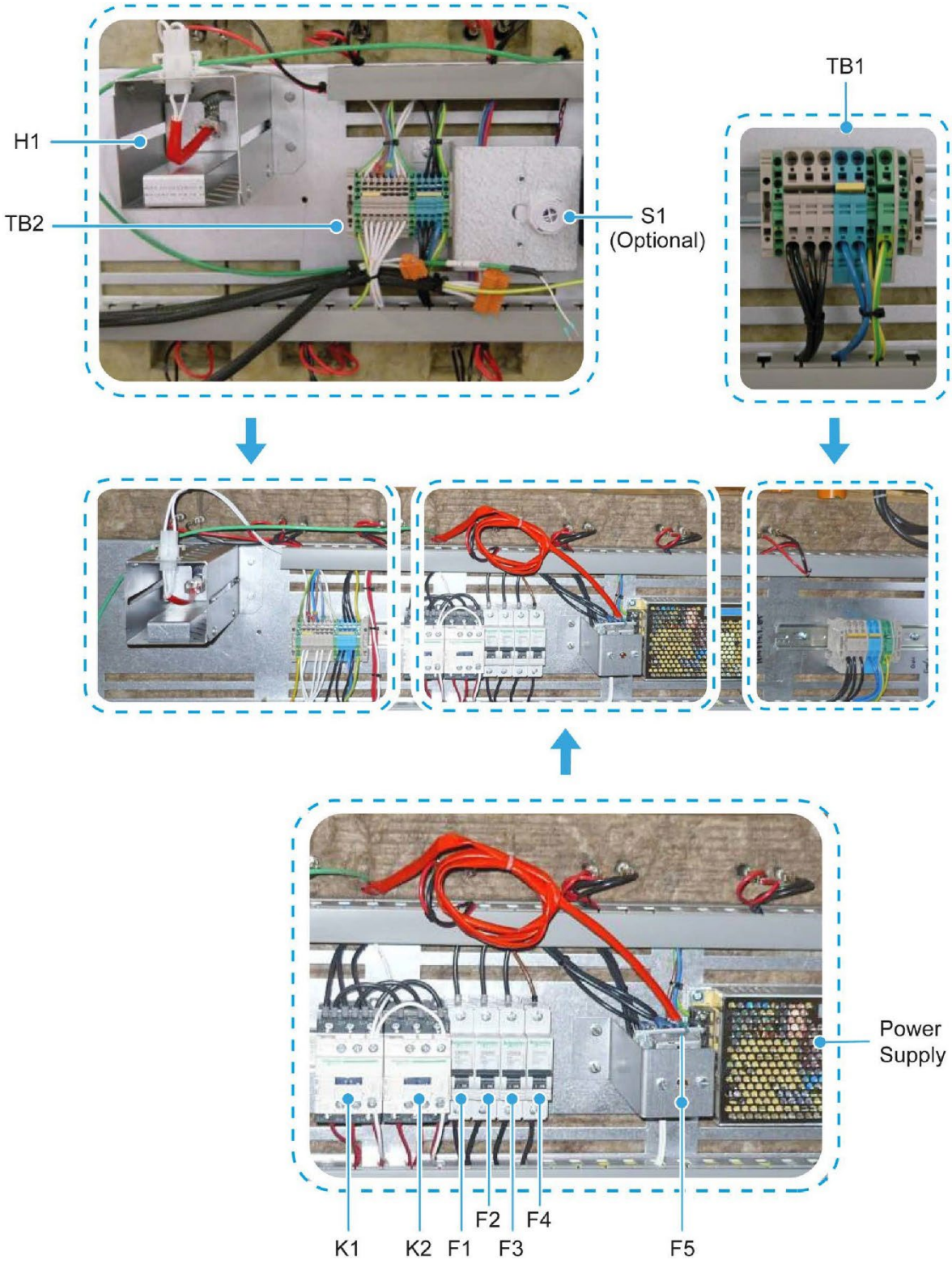


Figure D.12: Modular Mk2 deck oven control circuit wiring, colour classic (single phase, 240V)

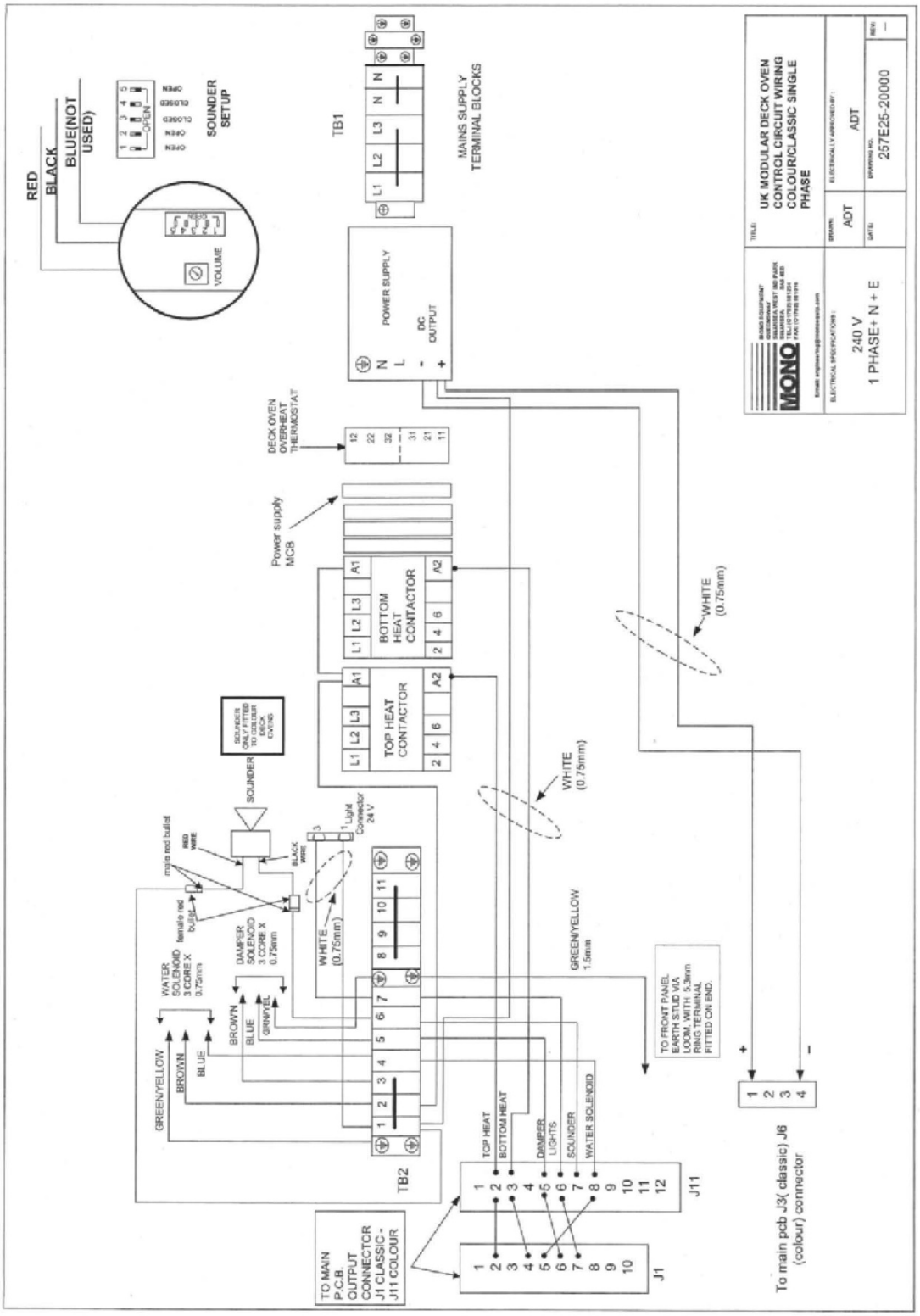


Figure D.13: Modular Mk2 deck oven power circuit wiring, colour classic (single phase, 240V)

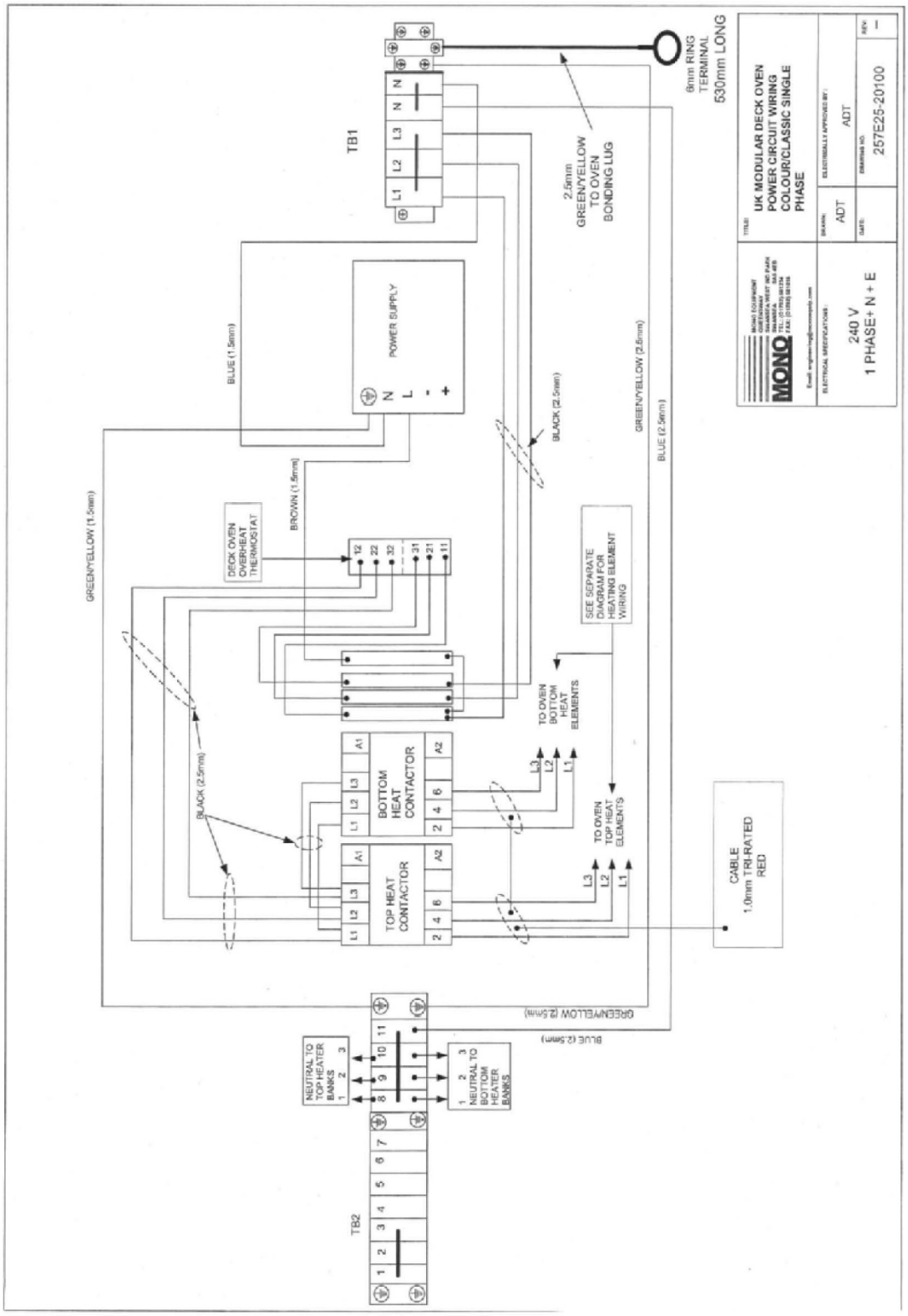


Figure D.14: Modular Mk2 deck oven heating element wiring, colour classic (single phase, 240V)

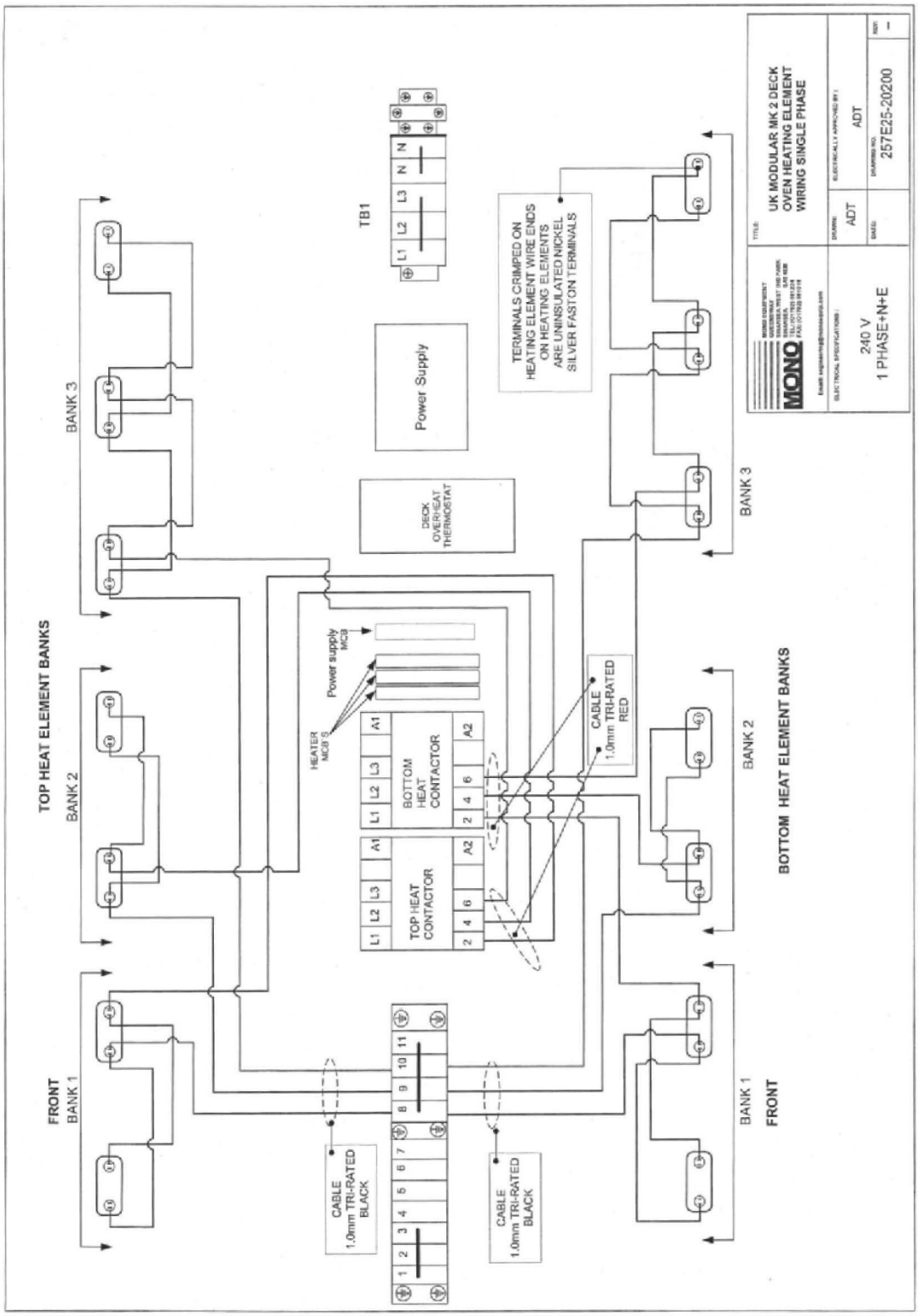


Figure D.15: Controller PCB layout

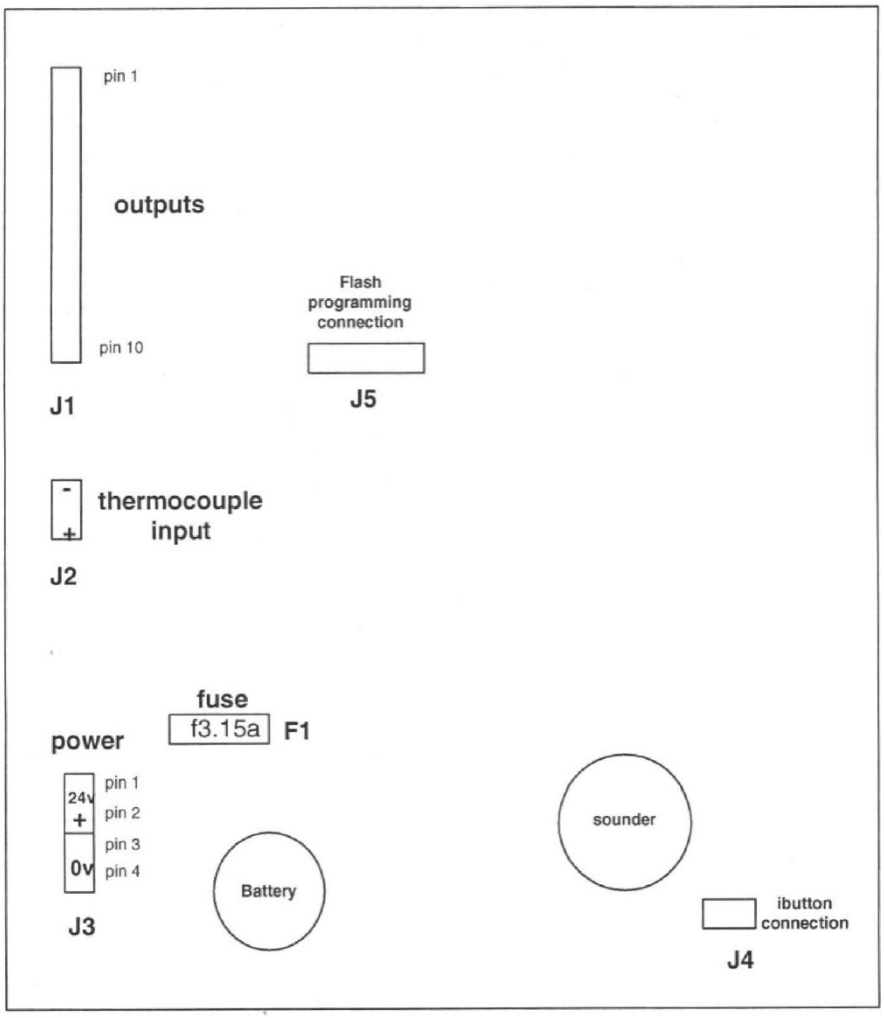
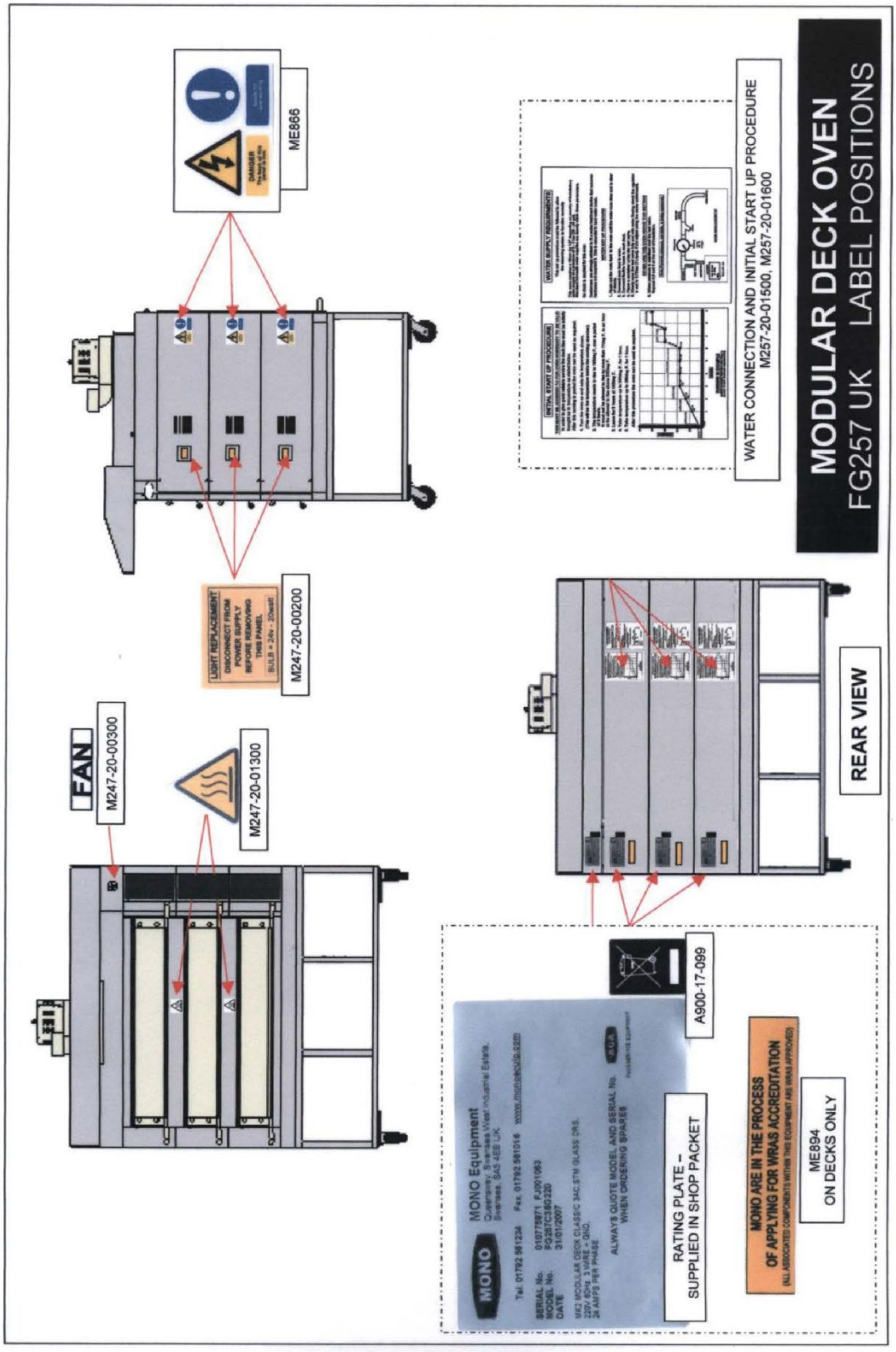


Table D.4: Outputs pin-out information

Pin ID	Description
1	24V
2	Top heat output
3	Top-front heat output
4	Bottom heat output
5	Steam output
6	Damper output
7	Light output
8	Canopy fan relay output
9	24V
10	24V

E. Warning and Information Labels

Figure F.1: Modular deck oven warning label positions



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)
Tel: +44 (0)1792 564 048 / +44 (0)1792 564 049 (Spares)
Fax: +44 (0)1792 561 016

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

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