MonoEquip.com

MONO Classic Deck Oven

EN

Installation and Operation Manual

Oven Version

- UK specification
- Classic control
- Fixed decks, standard depth

Oven Serial Number

In the event of an enquiry please quote this serial

Rev. A25 (February 2025)

Manual Revisions

Revision	Publication Date	Author	Description
A22	11-Sep-2022	CD	New user manual format.
			Global maintenance message added to the Chapter 12.
A23	12-Mar-2023	CD	RCD information updated to include "Type A".
A25	28-Feb-2025	CD	Title pages updated to latest standard.
			Corrected contents listing
			Updated Declaration of Conformity certificate.
			Chapter 3 (Safety) updated to latest information.
			Added JAN-2025 cable statement to the Chapter 4 (Installation).

Thank you for Purchasing MONO's Classic 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 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 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 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 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, labeled as an emergency shutdown device, and easily accessible.

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 **Chapter 5**).
- 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 **Chapter 13** for maintenance information.

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 only. Customers must never make any modifications or repairs to MONO's machines.

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

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Mr Alex Davies
Engineering Manager

QD 001

Dated 01/11/2022

Contents

1. Introduction

The electric DX 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

External and internal contact surfaces are stainless steel, so there's no fear of deterioration even after many years of hard use; plus, each deck is fitted with baking sheets manufactured from natural materials as a standard fitting.

The oven comes with an integral steaming system, which reduces energy consumption and the overall size of the oven. The system produces natural steam with all the advantages of spray steam, and you can enjoy it time and time again because rapid recovery has been designed into the oven. No drainage is required.

Classic ovens are supplied with **LED** displays. All programmable parameters have separate indicators for easy programming and extra bake time, if required. An energy saving 7-day timer is also standard. An i-button can be used to upgrade firmware without the need of dismantling the panels.

Simplified electrical circuits aid reliability with overheat protection (on controllers and oven) to ensure long life of controllers, all housed in splash-proof electrical enclosures.

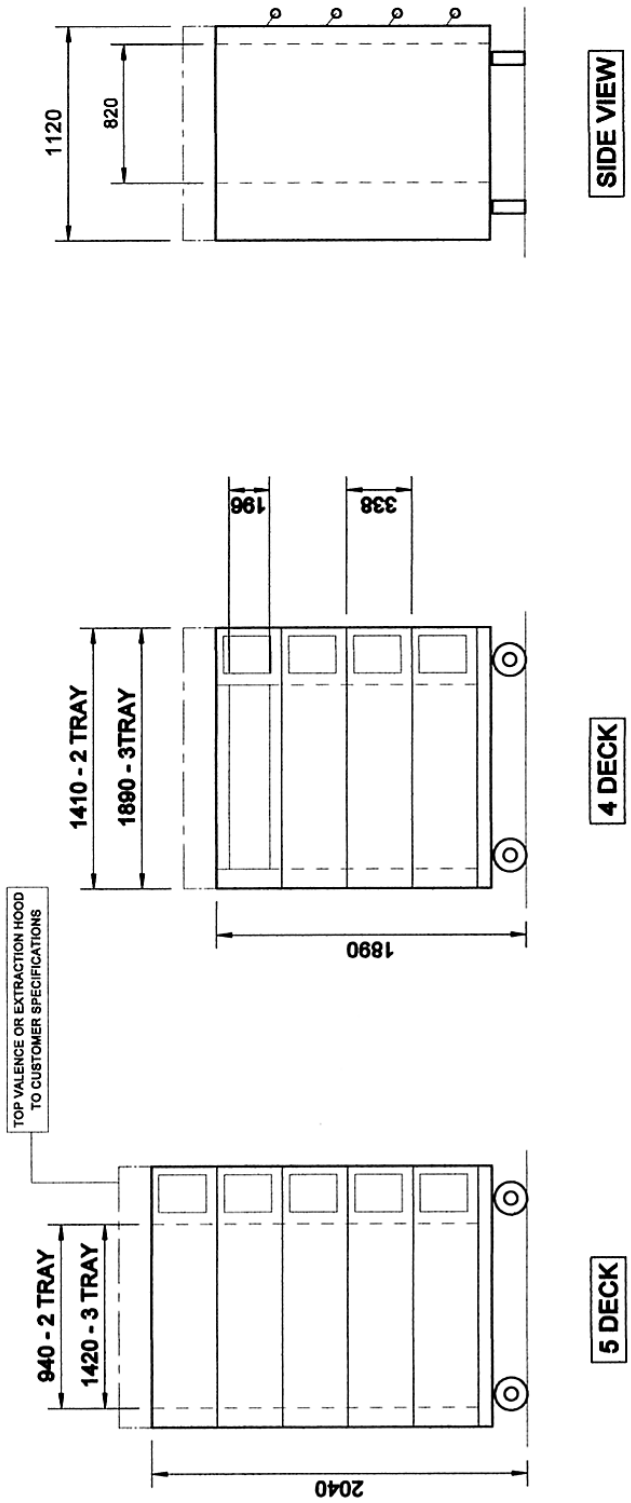
Fitted with hinged easy to clean doors, individual top and bottom heat controls and seven day bake timers for each deck, the oven gives the Master Baker a fast, even bake.

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

2. Specifications

Specifications sheet

WARNING ▪ An electrical socket must be protected by a 30mA Type ‘A’ Residual Current Device (RCD) before installation and commissioning of the oven.



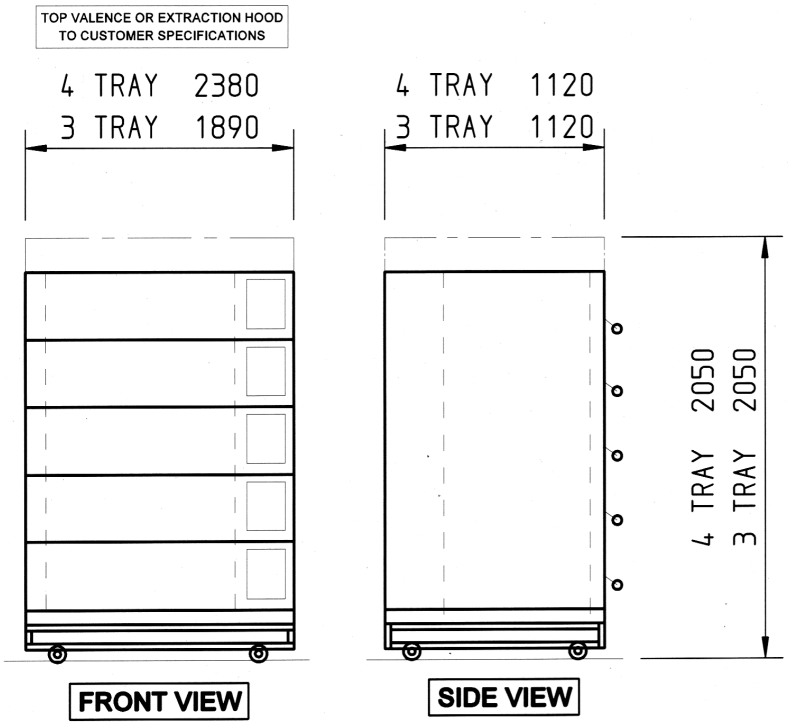
MONO DX11 OVEN RANGE

NOMINAL TRAY WIDTH	EXTERNAL AREA	POWER Kw (PER DECK) 5 DECK	POWER Kw (PER DECK) 4 DECK	VOLTAGE	INTERNAL SURFACE AREA	No. OF TRAYS (per deck) 600 X 800	600 X 400	18" x 30" (457 X 760)	18" x 26" (457 X 660)
3 tray	2.12Mtr²	8.24	8.24	AS REQUIRED IN THE COUNTRY OF USE	1.1Mtr²	2	3	3	3
2 tray	1.58Mtr²	NOT AVAILABLE	NOT AVAILABLE		0.7Mtr²	1	2	2	2

Environmental specifications

The noise level is less than 80 dB.

Overall dimensions



Note: All dimensions are in mm and are approximated.

5 DECK 3 TRAY

HEIGHT 2040 mm
WIDTH 1890 mm
DEPTH 1120 mm

5 DECK 2 TRAY

HEIGHT 2040 mm
WIDTH 1410 mm
DEPTH 1120 mm

4 DECK 3 TRAY

HEIGHT 1890 mm
WIDTH 1890 mm
DEPTH 1120 mm

4 DECK 2 TRAY

HEIGHT 1890 mm
WIDTH 1410 mm
DEPTH 1120 mm

3. Safety

General safety

CAUTION

- **Magnets information**
  - This deck oven carries a magnet behind each baking chamber door, which helps keep the deck oven's doors closed during the steaming process.
  - 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

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 the 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/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 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(1) with the oven door open.

(1) Selected ovens have a steam function.

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, labelled 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 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 for other product-baking machines.
- No unauthorised modifications to the oven are permitted.

4. Installation

General

- A hard and smooth level floor is recommended on which to position the oven. Access for maintenance should be considered.

  The oven is not designed to be ”built-in”. Sufficient clearance must be left in front of the access panels (right hand side) to allow for servicing.

- If not chosen as an oven option, it is recommended that an extraction hood be placed above the oven to disperse excess steam and heat, which could have an adverse effect on the bakery ceiling and ambient temperature.

- A chain retainer should be fitted, that is shorter than the power cables, to protect them from strain if the oven is moved. (Fit to the wall or floor and the base, using hole provided in castor fixing corner plates).

- Installation must be made by a trained authorised engineer and all utilities must conform to all local regulations.

Electrical connections

- The main connection point for all deck supplies is at the top of the oven.
  A power cable is not supplied with the oven. The customer is to supply the power cable in accordance with the appropriate regulations.

- Read the **Safety** section on **page 18**.

- Electrical loadings are in the **Specifications** section.

Water supply requirements

- All ovens with a steam function require a ¾” BSP hot or cold water supply at a pressure of 2 - 3 bar (29 – 44 psi). The water supply should comply with local water regulations.

- A manifold supplies all decks from one connection point.

- For proper operation of the steam system, it is recommended that the water supply also has the following specifications:

Hardness	0 – 4 grains per gallon
PH range	7.0 to 8.5
Chloride concentration	0 – 20 ppm

  Consult Mono for proper water filtration system information.

- No drain is required for this oven.

- A non-return check-valve is supplied fitted to the water inlet manifold.

NOTE
The set-up procedure below must be followed to allow the steaming system to function correctly.

Oven water system setup procedure

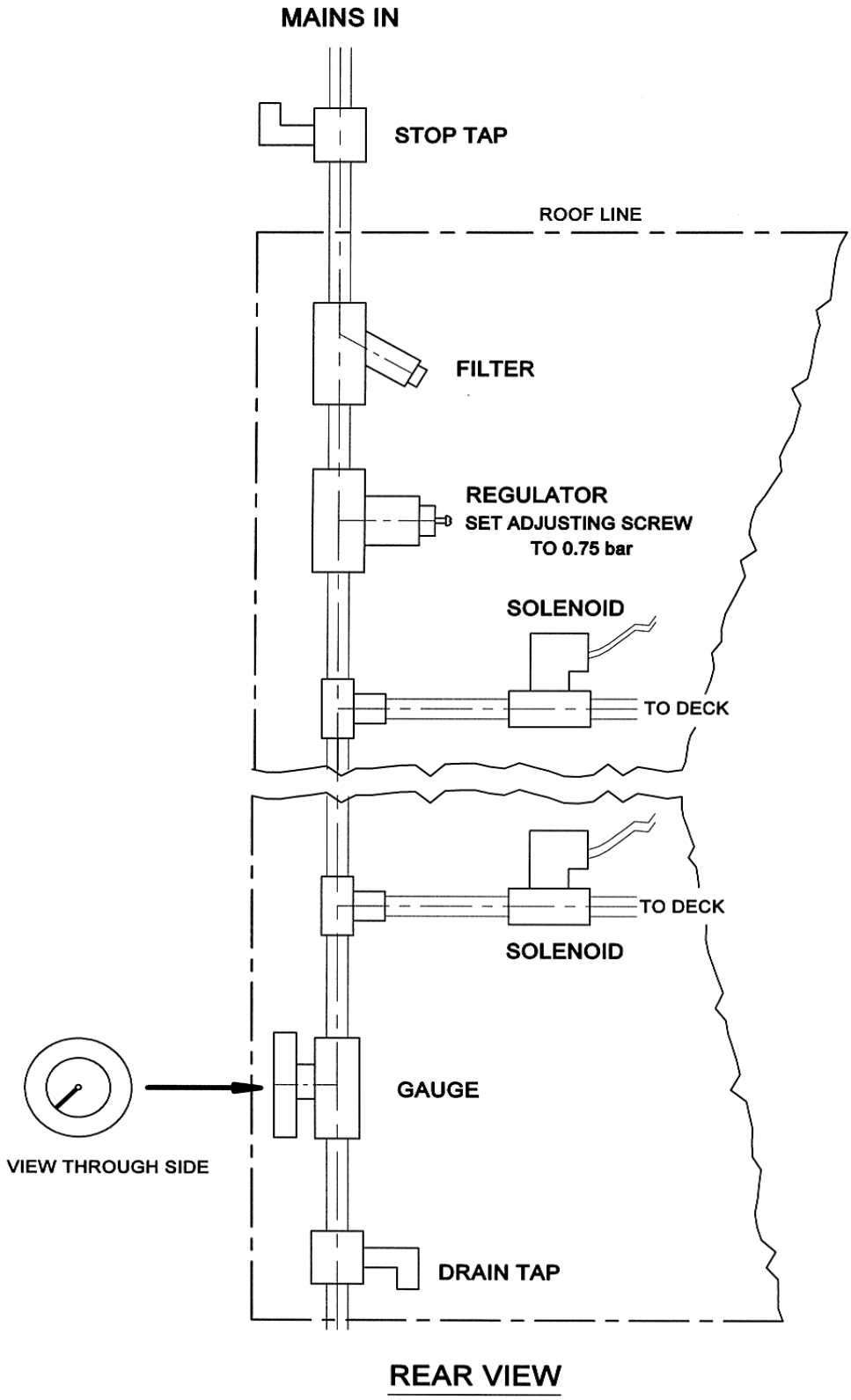
It is imperative that the water delivery to the deck oven is checked for the steam system to operate correctly.

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. Place a container under the test valve.
4. Slowly open drain valve and set the regulator to 0.5 bar using the screw underneath.
   - Never use the oven above this setting.
5. When the pressure has stabilised, shut the test valve.
6. Repeat steps 3 to 6 at the end of the installation.

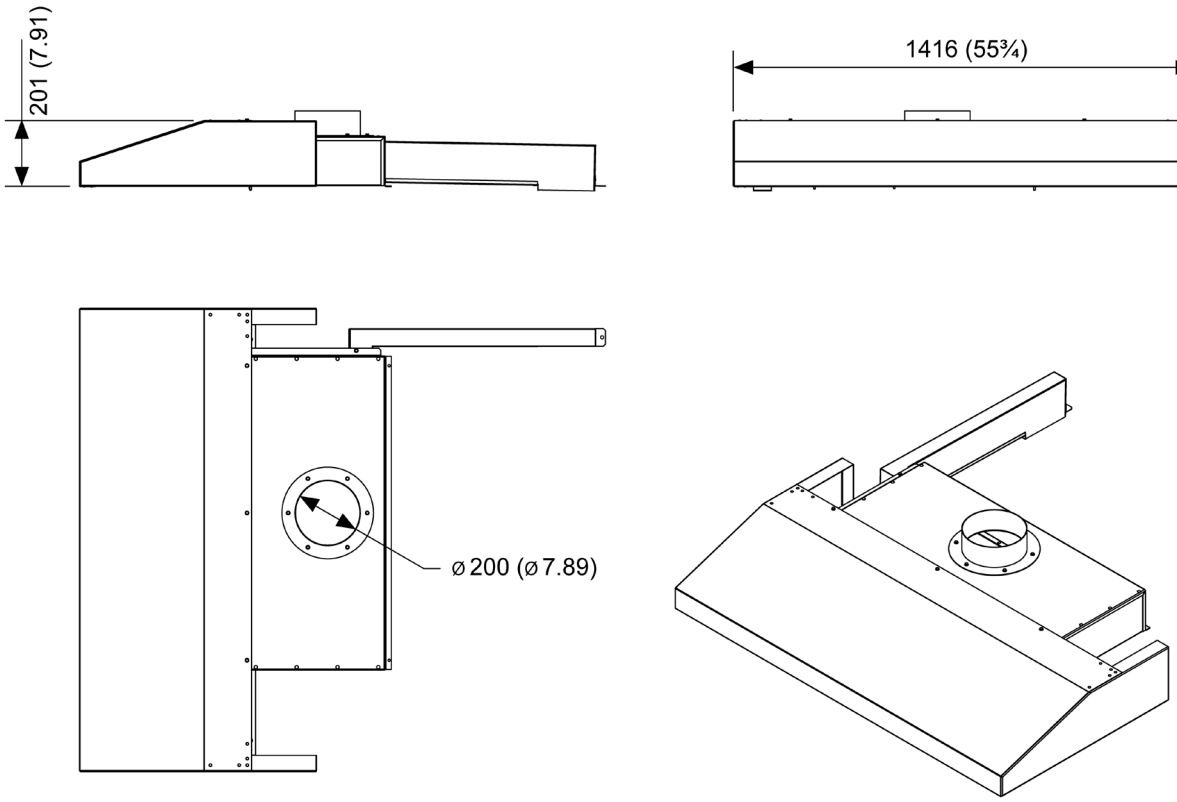
Figure 1: Water regulator setup (located on rear of oven)



Exhaust Connections (if canopy fitted)

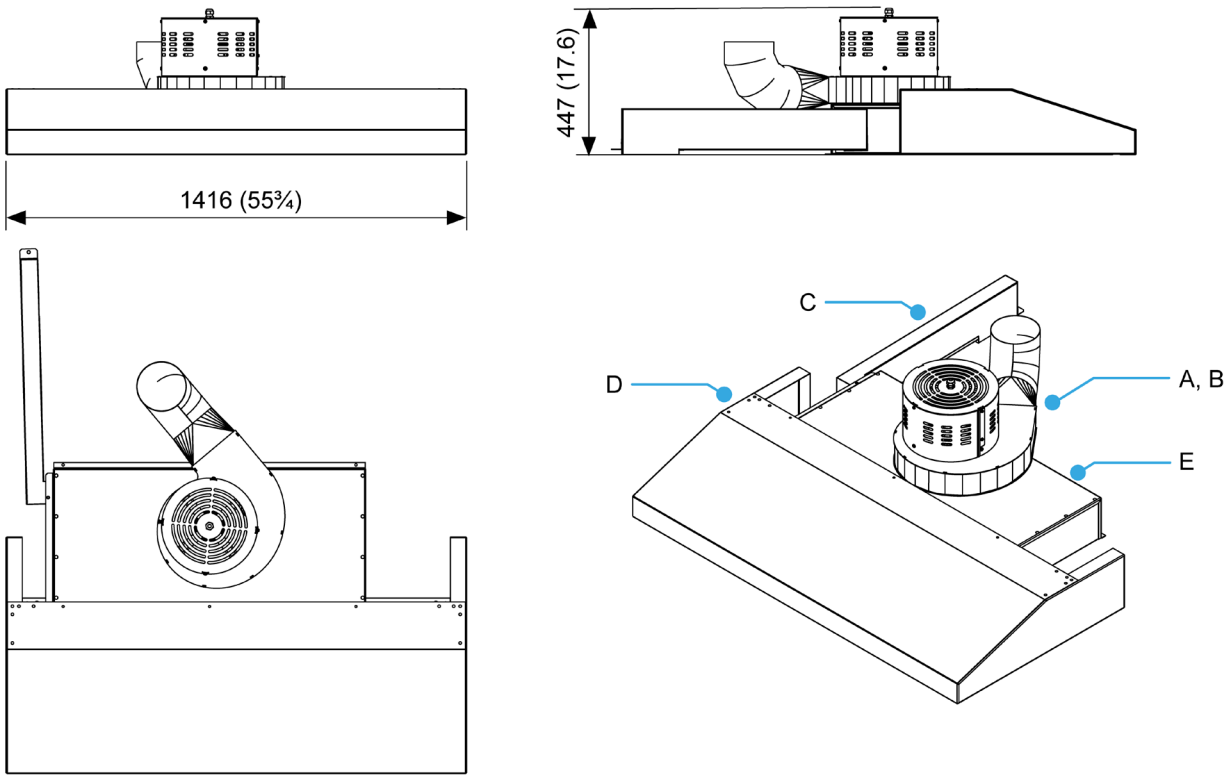
- Ideally, an exhaust duct should rise 2 metres above the bakery roof and be protected from wind and birds by a duct protector.
- It should be of a suitable material to take the high temperatures and humidity expected.
- It should be flexible and easily removable at the oven connection point.
  This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

Figure 2: Canopy (without fan) dimensions



Dimensions are in mm (inches)

Figure 3: Canopy (with fan) dimensions



Dimensions are in mm (inches)

Table 1: Canopy parts

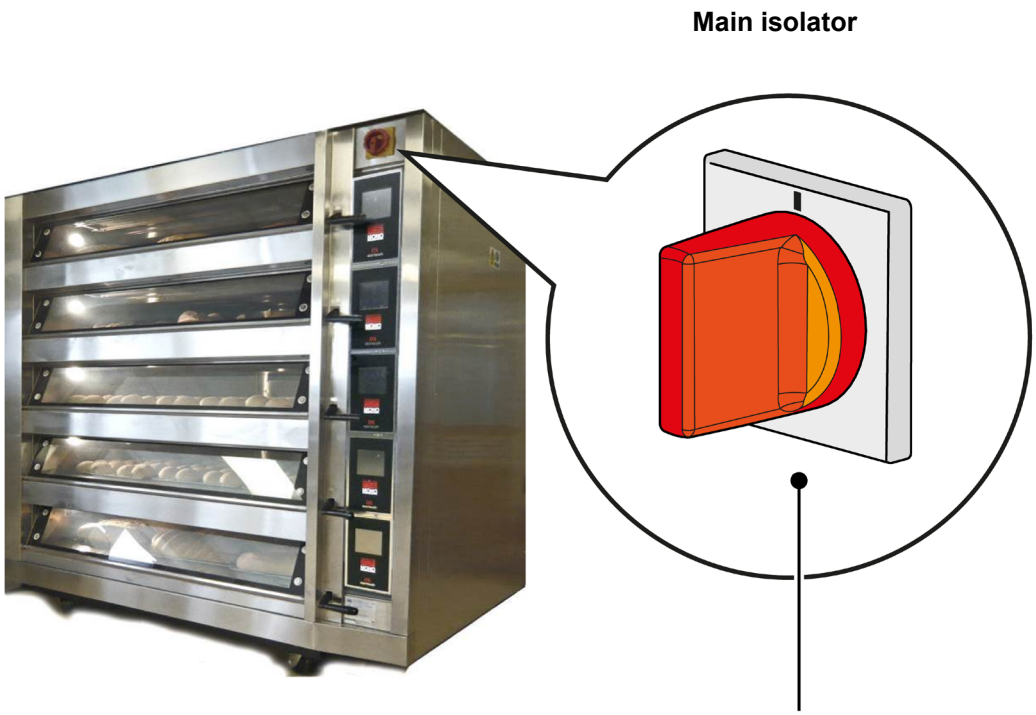
Item		Part number
A	Extraction fan assembly	247-08-04900
B	Inlet ring	247-08-05100
C	Flue assembly	257-10-00010
D	Canopy assembly	257-10-00016
E[(1)]	Extraction duct assembly for 2-tray oven width	257-10-00022

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

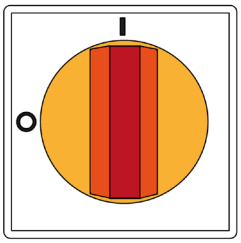
5. Isolation

To stop the oven in an emergency, switch off at the main isolator.

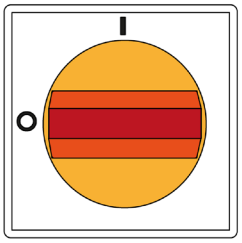
A wall-mounted isolator switch, rated for the specific model of oven installed, must also be available to isolate the oven completely in an emergency. The isolator must be clearly accessible and known to the oven operator.



Main isolator switch = I (on)
(not isolated)



Main isolator switch = 0 (off)
(isolated)



6. Cleaning

Daily cleaning instructions

Isolate the oven from the mains supply before cleaning.

Take care water does not enter the control-panel mounting or roof-mounting fan.

Procedure

1. Sweep any debris out of the oven and prover **after** they have been allowed to cool.

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

2. Brush and scrape off any flour and dough adhering to the prover cabinet inner surfaces. Use only a stiff brush or plastic scraper.

3. Brush down and wipe oven front, back and sides with a damp cloth.

4. Spot clean outside with a damp cloth, which has been soaked in a solution of mild detergent, and hot water, paying particular attention **to ensure excess water is not applied around the area of the electrical panels and switches.**

Weekly cleaning instructions

Isolate the oven from the mains supply before cleaning.

Take care water does not enter the control-panel mounting or roof-mounting fan.

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.

7. Operating Conditions

- Leave a clear space of at least 2 metres (6 ft.) in front of the oven for ease of operation and safety reasons.
- Do not use bakery utensils to operate the control panel buttons.

8. Principal of Oven Operation

NOTE
Operators should refer to their own 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:

Loading

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. **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.

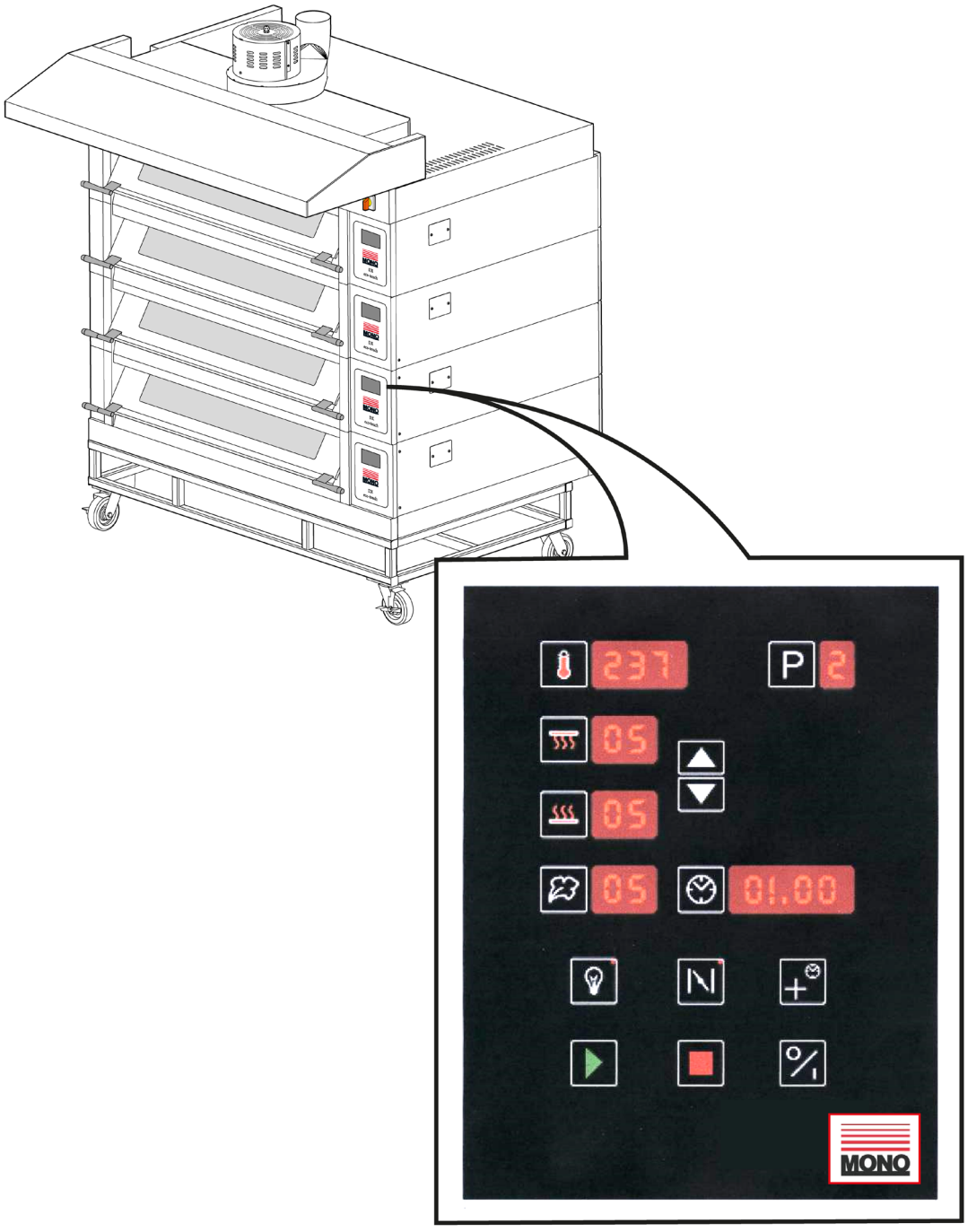
Is the product baked in the time and to the quality you require?

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.

9. Operating Instructions

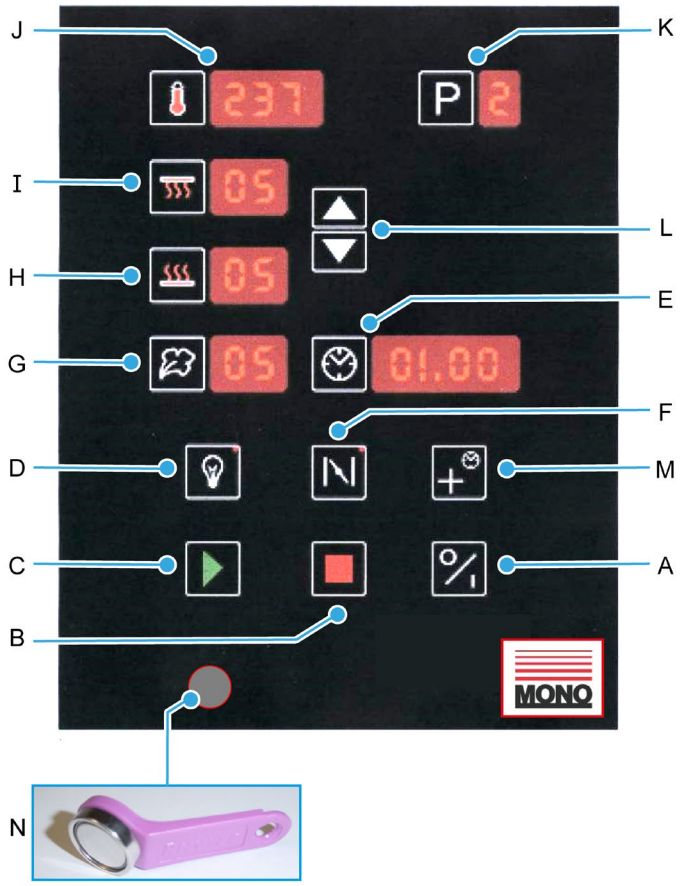
Each deck has an independent LED screen for operating the oven.



Basic operation

Perform operations by touching icons on the screen.

Figure 4: Classic LED screen icons



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 STORAGE DEVICE CONNECTION	

ON/OFF button (A)

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

STOP button (B)

This button stops the bake cycle. Also, use with button **C** to navigate to a function setup menu on power-up (with button **C**).

START button (C)

This button starts a bake cycle. Use with button **B** to navigate to a setup menu on power-up. Also, it silences the “2 minutes from the end-of-bake” alarm when sounding.

LIGHT button (D)

Interior light on/off.

- A red light shows when the light is on.
- Press to turn on, and press again to turn off.

BAKE TIME/ADD TIME button (E)

This button accesses the set bake time and the current time and day setup.
Also, for navigating the day/hours/minutes when setting time and setting auto on time.

If the 7-DAY TIMER is enabled:

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

DAMPER button (F)

Press to open the Damper, and press again to close the Damper. (It only works during a bake). Closes when stop pressed at the end of bake and while steaming. A red light shows when in the open position.

STEAM TIME button (G)

Press to access steam time and pre-steam mode.

If the pre-steam function is enabled:

- Press once (red dots appear). Use the UP/DOWN buttons (L) to change to the required setting. **P0** = no pre-steam, **P1** = 1 second, and **P2** = 2 seconds.
- Press again to set the steam time using the UP/DOWN buttons (L).
- Press the button again to save or wait 10 seconds to auto-save.

If the pre-steam function is not enabled:

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

BOTTOM HEAT (H)

Press to set the bottom heat cycle percentage. Use the UP/DOWN buttons (L) to adjust the value. Press the button again to save or wait 10 seconds to auto-save.

TOP HEAT (I)

Press to set the top heat cycle percentage. Use the UP/DOWN buttons (L) to adjust the value. Press the button again to save or wait 10 seconds to auto-save.

TEMPERATURE (J)

Press to set the baking temperature required. Use the UP/DOWN buttons (L) to adjust the value. Press the button again to save or wait 10 seconds to auto-save.

PROGRAM (K)

Use the UP/DOWN buttons (L) for cycling to the required program.

To save the current settings, press and hold the P button for 5 seconds. All the displays will flash, and a beep confirms the saved settings.

UP/DOWN BUTTONS (L)

Press to adjust values when required.

AUTO ON SET / ADD TIME (M)

If the 7-DAY TIMER is enabled:

- Use the button to access auto-switch-on times.

If the 7-DAY TIMER is disabled:

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

iBUTTON CONNECTION (N)

MONO engineers use this button and a unique “iButton” storage device to change the firmware of the oven. See the next page for details.

Firmware update using the i-BUTTON

Firmware update procedure

1. Place the deck into the standby state (clock displaying).

2. Place iButton onto the probe (**Figure 4** | **N**).

The controller now uploads data from 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. If this count reaches 08, the upload terminates (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 i-button from the reader probe. If the power is interrupted, the re-programming of the Flash memory will be incomplete, and the controller ceases 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 disconnecting the i-Button from the oven. After disconnection, the controller displays the clock and functions as usual.

Error conditions

If an 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 i-Button has been successful.

If an error is displayed, the oven waits for disconnection of the i-Button before resetting and functioning as usual. An upload (firmware update) can then be re-attempted.
If the i-Button is disconnected whilst uploading is in progress, the upload terminates and the oven resets.

E01
If the controller fails to read the i-Button 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 i-Button is incorrect or the i-Button is blank (unprogrammed).

E03
This error appears if the iButton file CRC (cyclical redundancy check) does not match that calculated by the controller after a download, i.e. a corrupted iButton file.

Operating the oven

1. With the oven in standby mode (power on), press the **ON** button **(**Figure 6 | A**)**.

2. Press **P** (program) button **(**Figure 6 | K**)**.

3. Using the **UP/DOWN** buttons **(**Figure 6 | L**)**, choose the set program required.

   The oven now heats to the temperature required. It is ready for use when the display shows the temperature of the program chosen and, if steam is needed, the display stops flashing.

4. Load the oven as required.

   To preserve heat, do not leave doors open more than needed to load the oven.

5. Press the **START** button **(**Figure 6 | C**)**.

   Press the **BAKE TIME** button **(**Figure 6 | M**)** at any time during the baking to add 1 minute to the bake time.

   If required during the bake, press the DAMPER button **(**Figure 6 | F**)** once to open the Damper, and press it again to close. A red light shows 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 will sound.

   Press the **STOP** button **(**Figure 6 | B**)** to silence the buzzer.

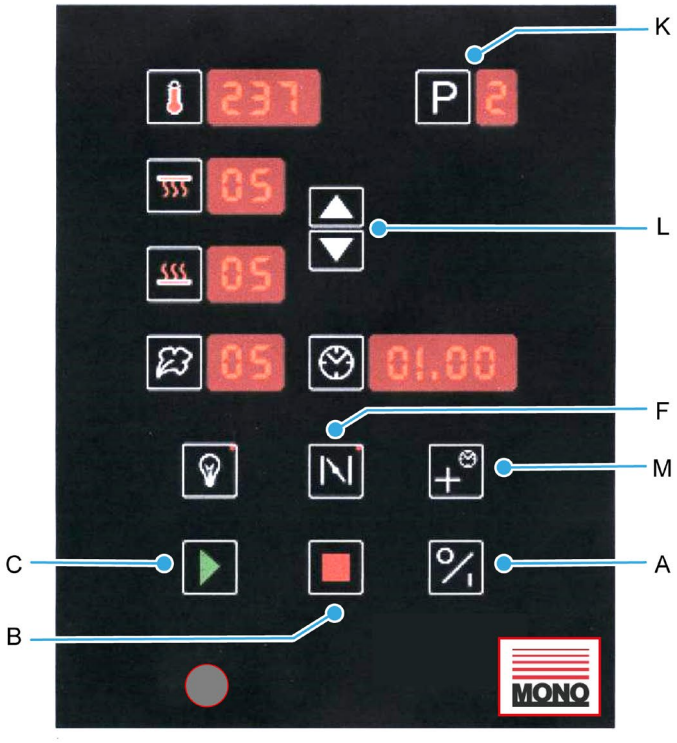
8. **If requiring extra baking at the end of a bake:**

   (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 for the bake countdown will start automatically.

NOTE
Steam is not available when using this extra time baking.

Figure 5: Operating the oven – Classic LED screen icons



Setting the day and time

1. Turn the power supply on.

   This will put the oven in “standby mode” with only the clock showing.

2. Press the **CLOCK** button **(Figure 7 | E)** and dots will flash under the hours in the time window.

   Change the hours using the **UP/DOWN** buttons **(Figure 7 | L)**.

3. Press the **CLOCK** button again and dots will flash under the minutes in the time window.

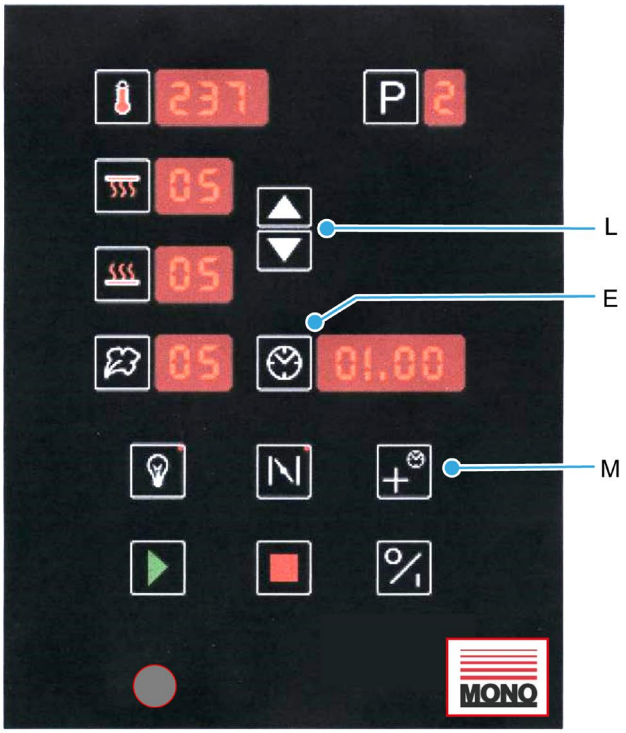
   Change the minutes using the **UP/DOWN** buttons **(Figure 7 | L)**.

4. Press the **CLOCK** button again and the day number will show.

   Change the minutes using the **UP/DOWN** buttons **(Figure 7 | L)**. Usually, day 1 is used as Monday.

5. Press the **CLOCK** button within 5 seconds to save the settings.

Figure 6: Setting the day and time – Classic LED screen icons



Setting the 7-day timer

NOTE
Enable F15 in the setup for the 7-day timer to function.

Procedure for setting a timer event

1. Press the **I/O** button to put the controller into standby mode.

   Only the current time is displayed in the bake time window.

2. Press the **BAKE TIME** button **(**Figure 7 | M**)**.

   The day of the week appears in the P window (and dots appear next to the day).
   Press the **UP/DOWN** button **(**Figure 7 | L**)** to change the day number.

3. Press the **CLOCK** button **(**Figure 7 | E**)** and dots appear under the hours in the time window.

   Change the hours using the **UP/DOWN** buttons **(**Figure 7 | L**)**.

4. Press the **CLOCK** button **(**Figure 7 | E**)** again and dots appear under the minutes in the time window.

   Change the minutes using the **UP/DOWN** buttons **(**Figure 7 | L**)**.

5. Press the **BAKE TIME** button **(**Figure 7 | M**)** to save and exit the timer setup.

NOTE
If you do not alter the hours and minutes within 6 seconds, the timer setup defaults back to day setting.
Dots appear next to the P window. Just press the **BAKE TIME** button to return to the time setup again.
Setting a time of 00.00 in the timer setup is a non-event so will not switch on the controller.

Setup mode

1. To enter setup mode, press and hold the **START** button **(Figure 8 | A)** and **STOP** button **(Figure 8 | B)** at the same as turning on the power supply.
2. Change the function in the temperature window **(Figure 8 | C)** using the **UP/DOWN** buttons **(Figure 8 | D)**.

   See the next page for a function list.
3. Press the **CLOCK** button **(Figure 7 | E)** – dots appear on the display.
4. Change the setting for the function using the **UP/DOWN** buttons **(Figure 8 | D)**.
5. Press the **CLOCK** button **(Figure 7 | E)** to save the setting for that function.
6. Repeat steps **2** to **5** for each function to be changed.
7. Press the **ON/OFF** button **(Figure 7 | F)** to exit setup mode.

NOTE
Any changes to the functions are only saved when exiting using **ON/OFF** button.

Figure 7: Setup mode – Classic LED screen icons

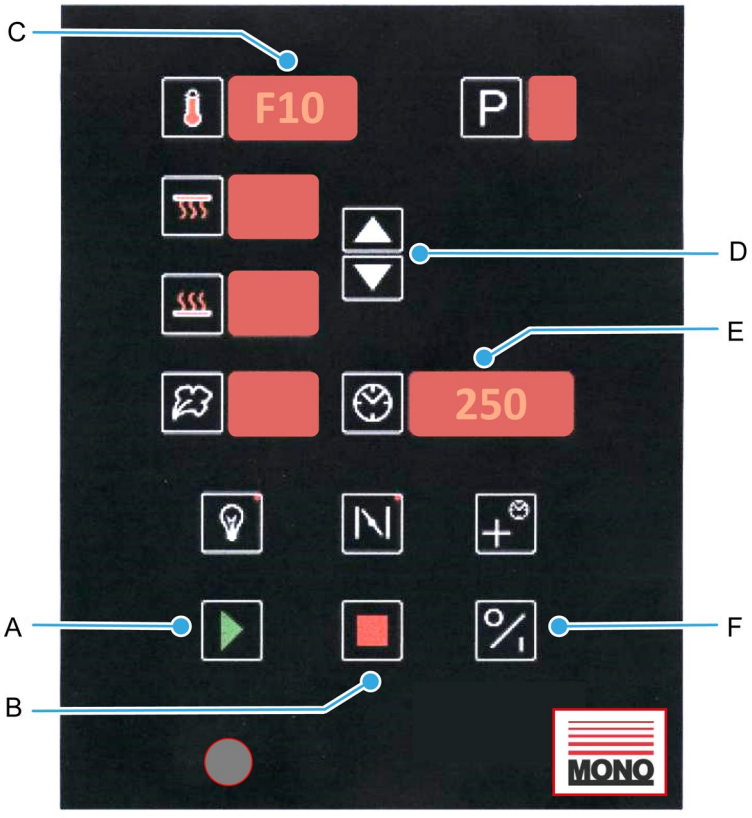


Table 2: Parameter function list

ID	Function description	Default setting
F1	MONO constant (factory set)	250
F2	Top heat gain	50
F3	Bottom heat gain	50
F4	Front-top element offset	25
F5	Deg “C”, Deg “F” (0=C, 1=F)	0
F6	2 minute from end-of-bake alarm (Enable=1, Disable=0)	0
F7	Pre-steam (Enable=1, Disable=0)	0
F8	Steam (Enable=1, Disable=0)	0
F9	Bake temperature offset (+/- 25 Deg C)	25
F10	Maximum set temperature limit (Deg C)	250
F11 (1)	Bake controls lockout (Enable=1, Disable=0)	0
F12	Sleep mode delay time (60 minutes maximum; Disable=0	0
F13	Interior light auto-timeout – ON/OFF (1 to 20 minutes; Disable=0)	0
F14	0-9 Program	0
F15 (2)	7-day time (Enable=1, Disable=0)	0
F16 (3)	9 hour countdown timer (Enable=1, Disable=0)	0
F17	Lamp output soft start (Enable=1, Disable=0)	0

(1) To prevent an operator from changing the set bake parameters.

(2) If enabled, the “SET BAKE” time acts as an extra time button. If disabled, “AUTO ON SET” acts as an extra time button.

(3) After 8 hours, the oven turns itself off (not during a bake cycle). Before going off, displays flash and an alarm sound. At this point, pressing any button adds an extra hour to the time.

NOTE

After switching on the controller, before the sleep delay time is initiated (if enabled in **F12**), the set bake temperature must be reached, steam recovery time elapsed, and a bake cycle started and stopped.

After the **STOP** button has been pressed at the end of a bake, the sleep delay timer counts down until it reaches 0. At this point, the controller switches into sleep mode (**SLP** displayed in temperature window) and the oven will drop to a pre-set fall-back temperature of 170°C (338°F), which it will maintain.

Be aware that the damper closes when oven goes into sleep mode.

Pressing any button during the sleep mode delay time will not affect the countdown, apart from the **ON/OFF** button which switches the controller off. Pressing the **START** or **STOP** buttons resets the countdown timer.
Pressing any button while in sleep mode (except the **LIGHT** button – which operates as normal – and the panel **ON/OFF**) brings the controller out of sleep mode. The oven then heats up to its previous set bake temperature.
A typical recovery time from 170°C to 230°C (338°F to 446°F) is approximately 15 minutes.

Be aware that if no buttons on the controller are pressed after exiting sleep mode, the controller returns to sleep mode after the sleep delay time has expired.

---

10. 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.

11. Service and Spares

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.

MONO Equipment

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

Tel. 01792 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.

12. 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.**

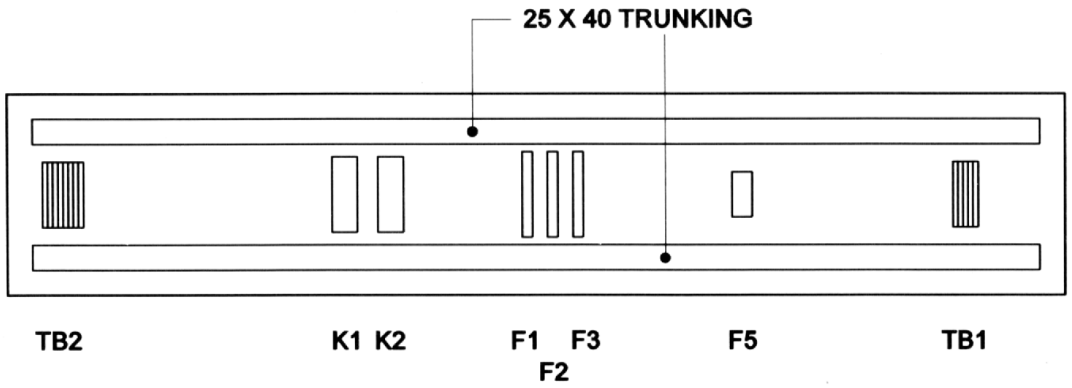
- Check for frayed or bare cables.
  - **Do not** use the machine if frayed or bare cables are visible.
- Follow cleaning instructions (see **Cleaning** on page 18).

13. Electrics

Table 3: Parts list for the MONO DX2 LED Deck Oven

Reference in drawing	Description	Part number
F1	Heater MCB	B872-22-008
F2	Heaters MCB	B872-22-008
F3	Heaters MCB	B872-22-008
F4	Control power supply MCB	B872-22-063
F5	Overheat thermostat	B888-30-014
F6	Cooling fan MCB	B872-22-061
T1	Control circuit power supply	B801-93-004
K1	Top heat contactor	B801-08-021
K2	Bottom heat contactor	B801-08-021
Y1	Water solenoid (8 mm pipe)	B867-83-007
Y2	Damper solenoid	B749-83-004
Q1	Mains isolator	B851-07-002
R1	Top heat element, 1.0 kW	B854-04-003
	Top heat element, 1.0 kW (220 Vac)	B854-04-012
R2	Top heat element, 0.6 kW	B854-04-004
	Top heat element, 0.6 kW (220 Vac)	B854-04-013
R3	Top heat element, 0.6 kW	B854-04-004
R4	Top heat element, 0.6 kW	B854-04-004
R5	Top heat element, 0.6 kW	B854-04-004
R6	Top heat element, 0.6 kW	B854-04-004
R7	Top heat element, 0.44 kW	B854-04-036
	Top heat element, 0.44 kW (220 Vac)	B854-04-045
R8	Bottom heat element, 1,0 kW	B854-04-003
	Bottom heat element, 1,0 kW (220 Vac)	B854-04-012
R9	Bottom heat element, 0.6 kW	B854-04-004
	Bottom heat element, 0.6 kW (220 Vac)	B854-04-013
R10	Bottom heat element, 0.6 kW	B854-04-004
R11	Bottom heat element, 0.6 kW	B854-04-004
R12	Bottom heat element, 0.6 kW	B854-04-004
R13	Bottom heat element, 0.6 kW	B854-04-004
R14	Bottom heat element, 0.6 kW	B854-04-004

IF IN ANY DOUBT - ASK



REV	SIG	DATE	REVISION	ECN NO.

MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA.
SA5 4EB.
TEL: (01792) 561234
FAX: (01792) 561016

TITLE: RIGID DX OVEN LCD CONTROL PANEL LAYOUT

ELECTRICAL SPECIFICATIONS:- 415V 3 PHASE + N

DRAWN: RAC

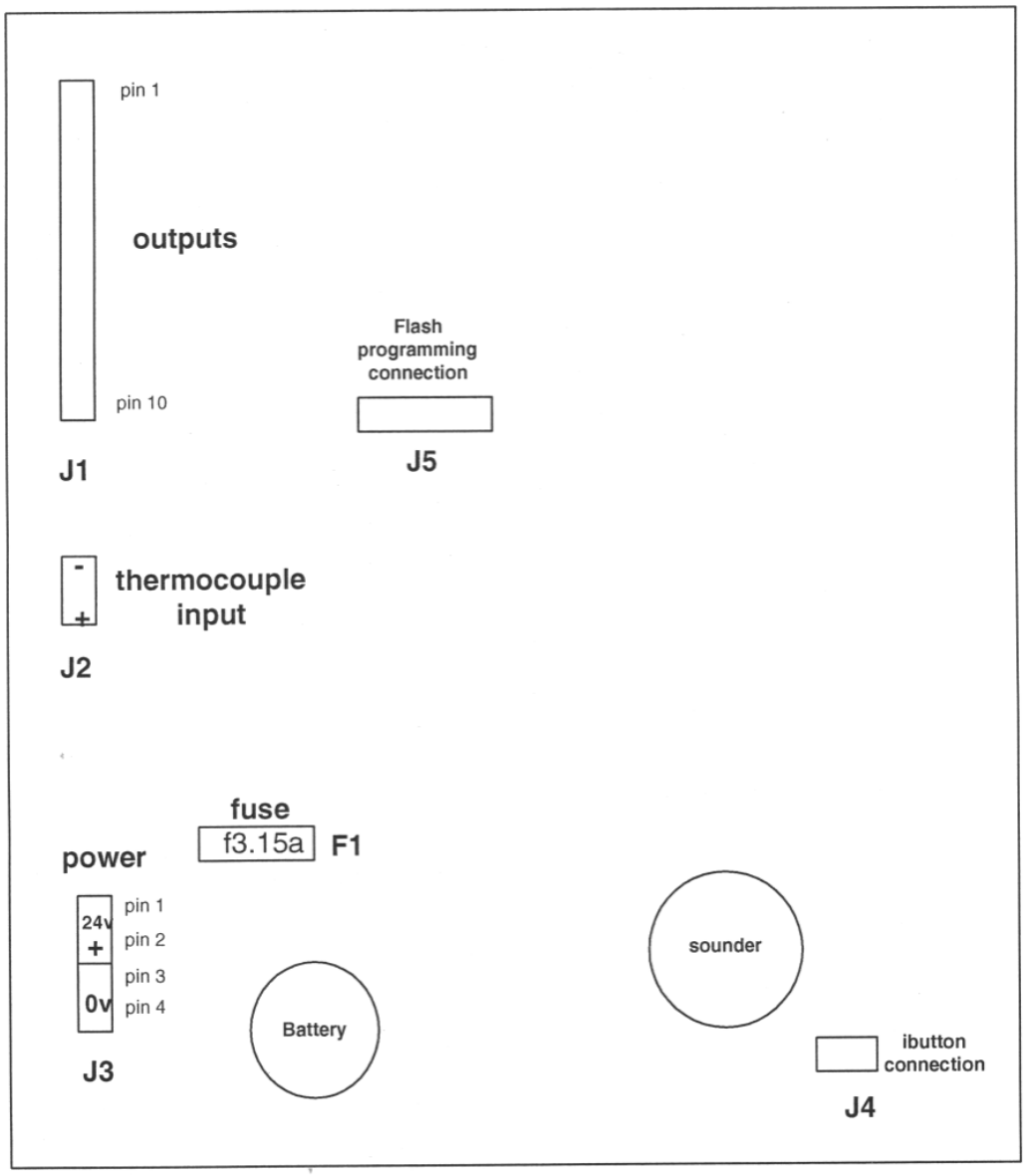
ELECTRICALLY APPROVED BY:- AT

DATE: 30/11/05

DRAWING NO. M245E25-50314

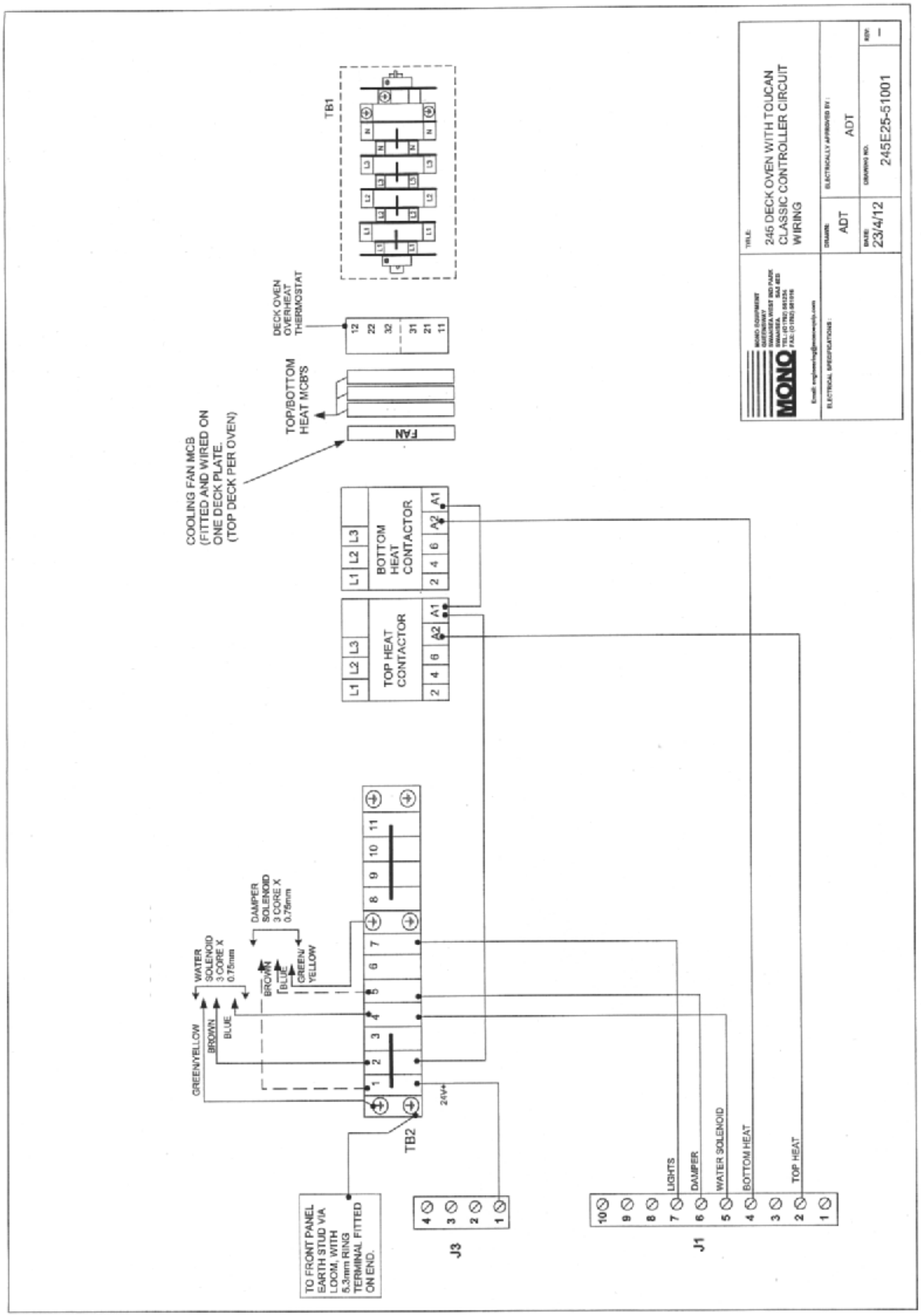
REV: --

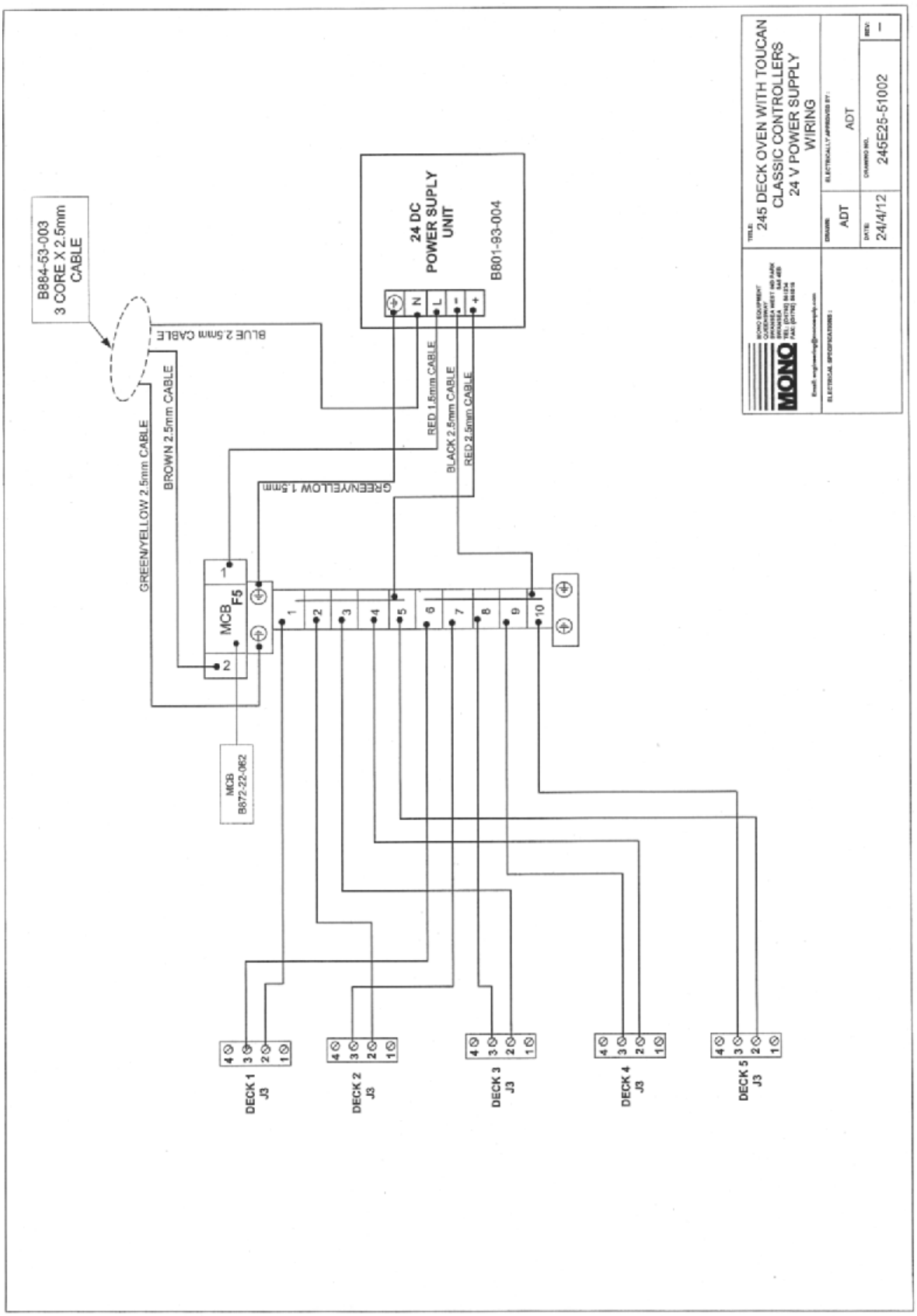
Figure 8: Controller layout

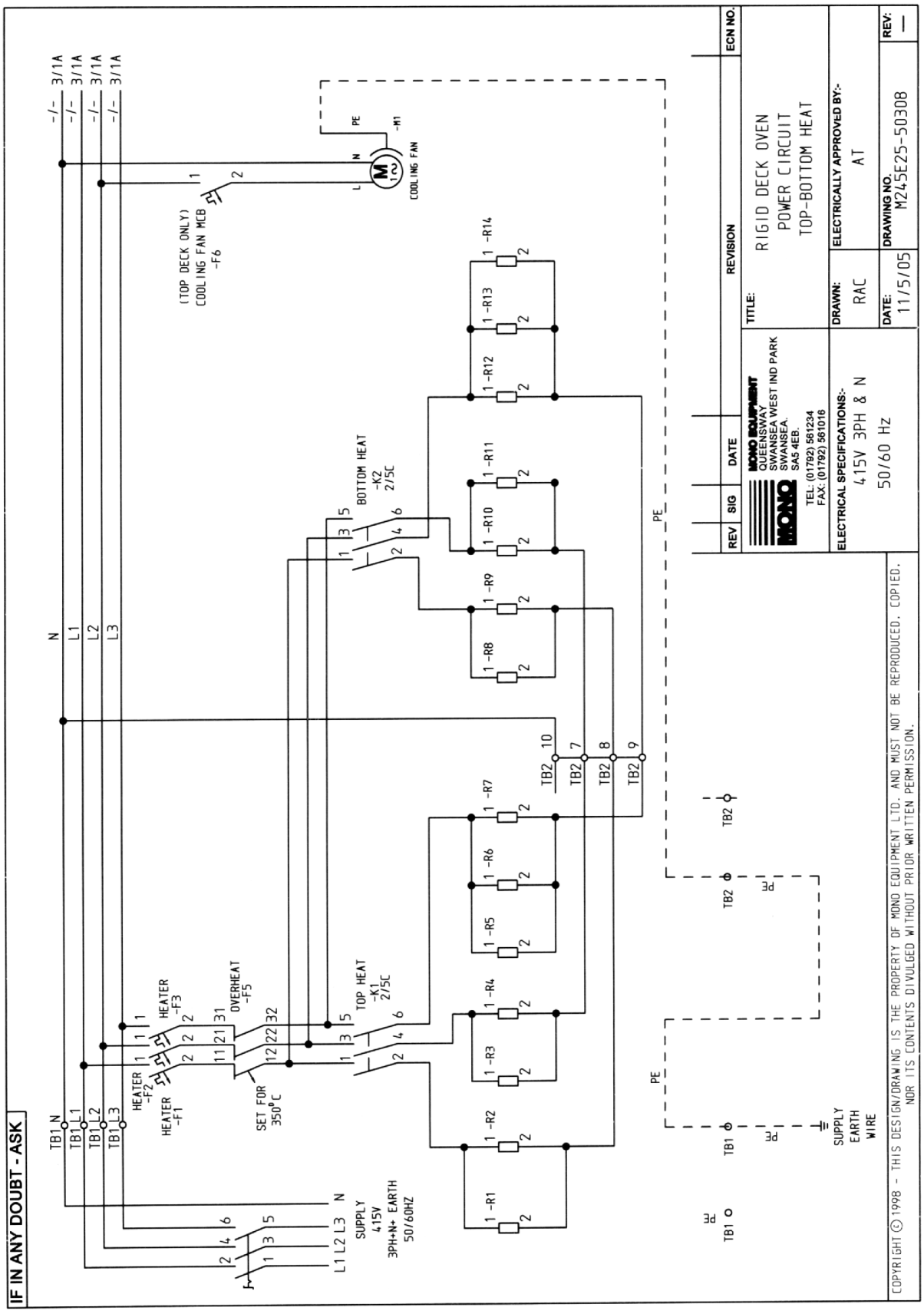


OUTPUTS

PIN 1 – 24v
PIN 2 – TOP HEAT OUTPUT
PIN 3 – TOP FRONT HEAT OUTPUT
PIN 4 – BOTTOM HEAT OUTPUT
PIN 5 – STEAM OUTPUT
PIN 6 – DAMPER OUTPUT
PIN 7 – LIGHT OUTPUT
PIN 8 – CANOPY FAN RELAY OUTPUT
PIN 9 – 24v
PIN 10 – 24v


TB1
DECK OVEN OVERHEAT THERMOSTAT
TOP/BOTTOM HEAT MCB'S
FAN
COOLING FAN MCB (FITTED AND WIRED ON ONE DECK PLATE. (TOP DECK PER OVEN)
BOTTOM HEAT CONTACTOR
TOP HEAT CONTACTOR
L1 L2 L3
2 4 6 A1 A2
WATER SOLENOID 3 CORE X 0.75mm
DAMPER SOLENOID 3 CORE X 0.75mm
GREEN/YELLOW
BROWN
BLUE
TB2
24V+
TO FRONT PANEL EARTH STUD VIA LOOM, WITH 6.3mm RING TERMINAL FITTED ON END.
J3
J1
LIGHTS
DAMPER
WATER SOLENOID
BOTTOM HEAT
TOP HEAT
MONO
245 DECK OVEN WITH TOUCAN CLASSIC CONTROLLER CIRCUIT WIRING
DRAWN: ADT
ELECTRICALLY APPROVED BY: ADT
DATE: 23/4/12
DRAWING NO: 245E25-51001
REV: –


245 DECK OVEN WITH TOUCAN CLASSIC CONTROLLERS 24 V POWER SUPPLY WIRING
ADT
24/4/12
245E25-51002
MONO
B884-53-003 3 CORE X 2.5mm CABLE
24 DC POWER SUPLY UNIT
B601-93-004
BLUE 2.5mm CABLE
BROWN 2.5mm CABLE
GREEN/YELLOW 2.5mm CABLE
GREEN/YELLOW 1.5mm
RED 1.5mm CABLE
BLACK 2.5mm CABLE
RED 2.5mm CABLE
MCB F5
MCB B872-22-062
DECK 1 J3
DECK 2 J3
DECK 3 J3
DECK 4 J3
DECK 5 J3


IF IN ANY DOUBT - ASK
TITLE: RIGID DECK OVEN POWER CIRCUIT TOP-BOTTOM HEAT
MONO EQUIPMENT QUEENSWAY SWANSEA WEST IND PARK SWANSEA. SA5 4EB. TEL: (01792) 561234 FAX: (01792) 561016
ELECTRICAL SPECIFICATIONS:- 415V 3PH & N 50/60 Hz
DRAWN: RAC
DATE: 11/5/05
ELECTRICALLY APPROVED BY:- AT
DRAWING NO. M245E25-50308
REV: —
ECN NO.
REVISION
DATE
SIG
REV
SUPPLY 415V 3PH+N+ EARTH 50/60HZ
L1 L2 L3 N
TB1 N
TB1 L1
TB1 L2
TB1 L3
HEATER -F1
HEATER -F2
HEATER -F3
OVERHEAT -F5
SET FOR 350°C
TOP HEAT -K1 2/5C
BOTTOM HEAT -K2 2/5C
(TOP DECK ONLY) COOLING FAN MCB -F6
COOLING FAN -M1
-R1
-R2
-R3
-R4
-R5
-R6
-R7
-R8
-R9
-R10
-R11
-R12
-R13
-R14
TB2 7
TB2 8
TB2 9
TB2 10
PE
SUPPLY EARTH WIRE
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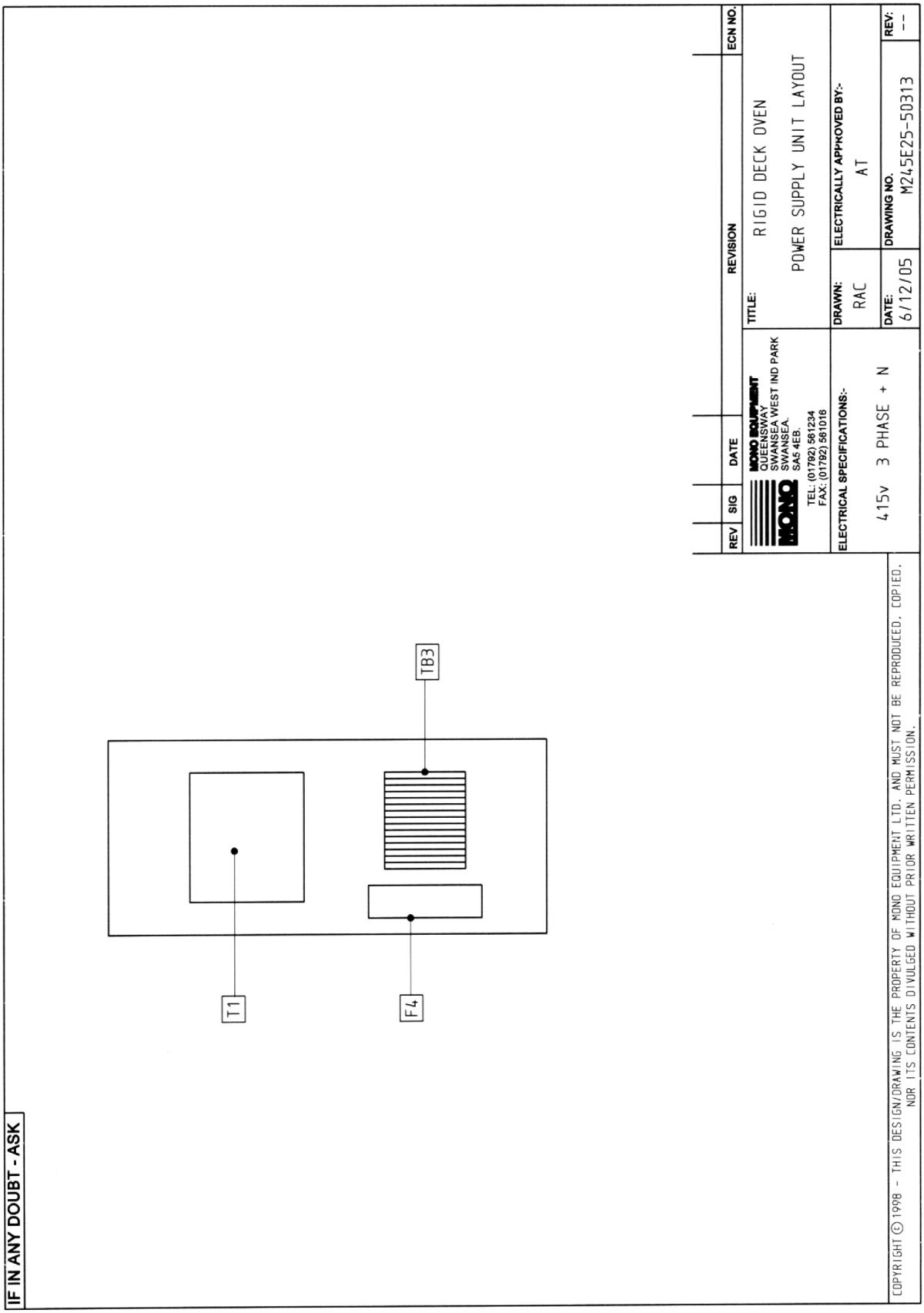
IF IN ANY DOUBT - ASK
TB3
T1
F4
REV
SIG
DATE
REVISION
ECN NO.
MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA.
SA5 4EB.
TEL: (01792) 561234
FAX: (01792) 561016
TITLE:
RIGID DECK OVEN
POWER SUPPLY UNIT LAYOUT
ELECTRICAL SPECIFICATIONS:-
415v 3 PHASE + N
DRAWN:
RAC
DATE:
6/12/05
ELECTRICALLY APPROVED BY:-
AT
DRAWING NO.
M245E25-50313
REV:
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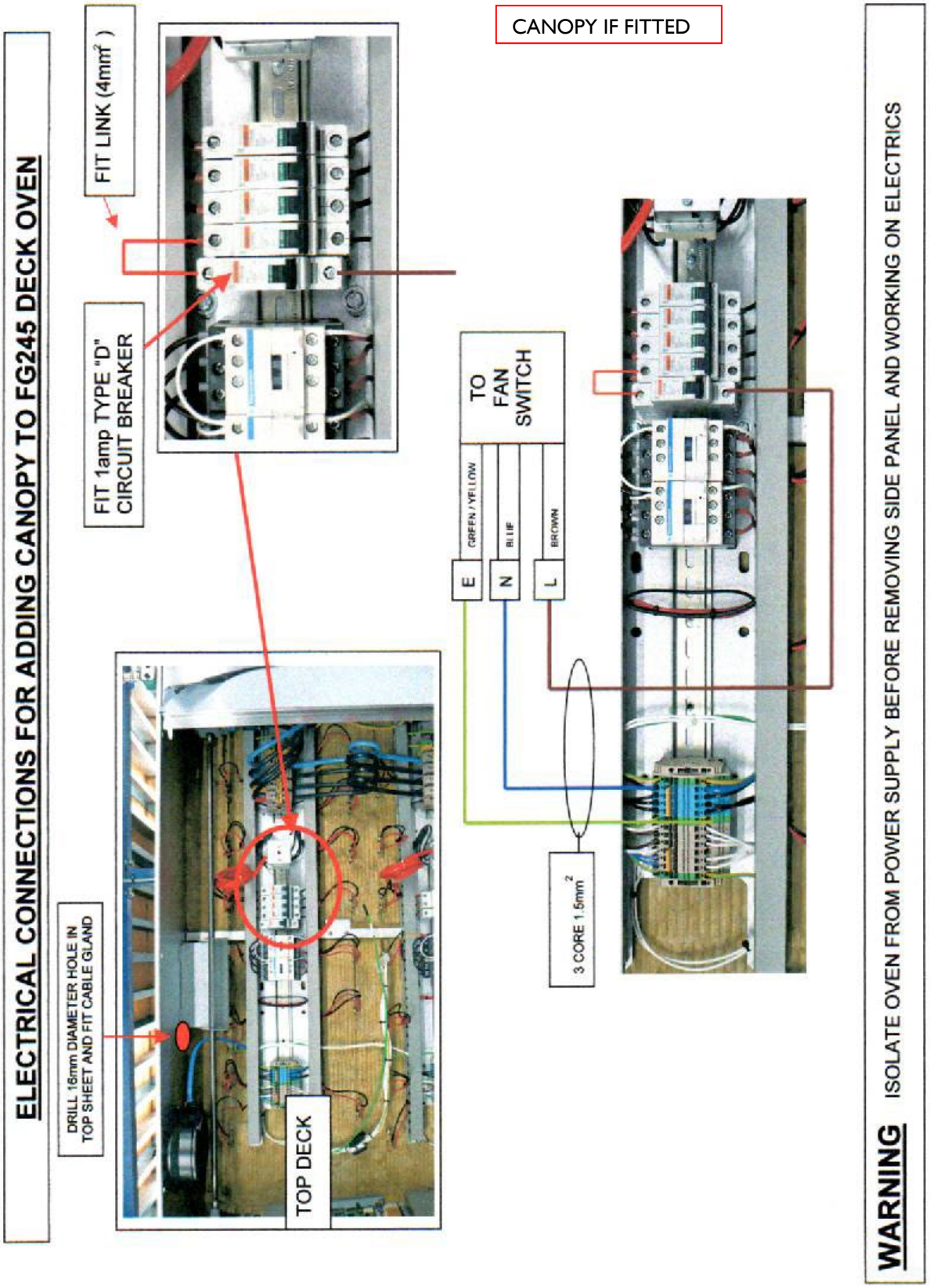
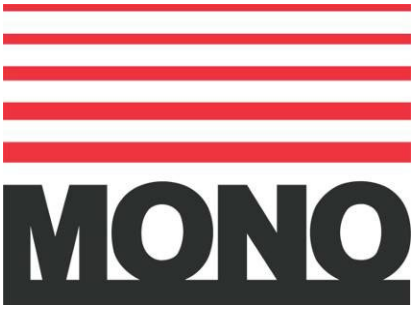

ELECTRICAL CONNECTIONS FOR ADDING CANOPY TO FG245 DECK OVEN
FIT LINK (4mm²)
FIT 1amp TYPE "D" CIRCUIT BREAKER
CANOPY IF FITTED
TO FAN SWITCH
E
N
L
GREEN / YELLOW
BLUE
BROWN
3 CORE 1.5mm²
DRILL 16mm DIAMETER HOLE IN TOP SHEET AND FIT CABLE GLAND
TOP DECK
WARNING ISOLATE OVEN FROM POWER SUPPLY BEFORE REMOVING SIDE PANEL AND WORKING ON ELECTRICS

(Blank Page Left Intentionally)



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