MonoEquip.com

MONO Eco Convection Oven

EN

Installation and Operation Manual

Oven Serial Number _____

Oven Code 138 ☐ 149 ☐ 150 ☐ 153 ☐ 158 ☐ 159 ☐ 170 ☐ 173 ☐

Condenser Serial Number _____ (if fitted)

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

DECLARATION OF CONFORMITY

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

- The Machinery Directive 2006 / 42 / EC
- The Low voltage Directive 2006 / 95 / EC
- The requirements of the Electromagnetic Compatibility Directive 2004 / 108EC, 91 / 263 / EEC, 92 / 31 / EEC
- The General Safety of Machinery and food processing Standards applicable
- Materials and Articles intended to come into contact with food - Regulation (EC) No. 1935 / 2004
- Good manufacturing practice for Materials intended to come into contact with food - Regulation (EC) No. 2023 / 2006

Signed	
D. Osmundsen – Quality and Conformance Manager	

Date	

Machine FG Code.		**Machine Serial No.**	

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

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

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

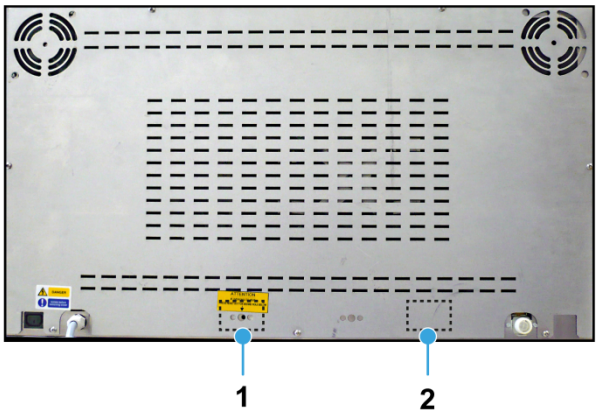
Registered office: Unit 35,
Bryggen Road,
North Lynn Industrial Estate,
Kings Lynn Norfolk,
PE30 2HZ

ATTENTION

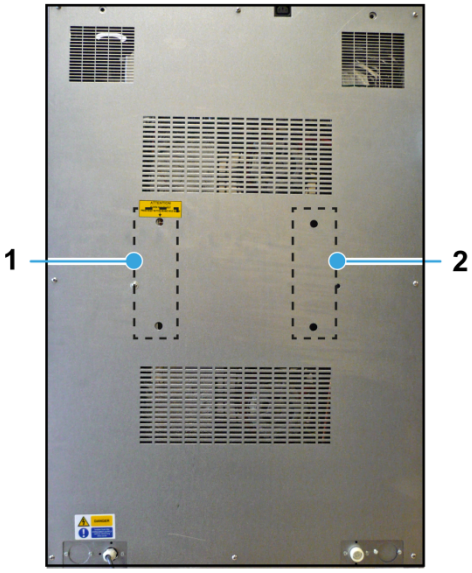
If the oven fails to heat up when first connected to a power supply or during use at any time, press the reset buttons located on the rear back panel.
(Do not remove the back panel)

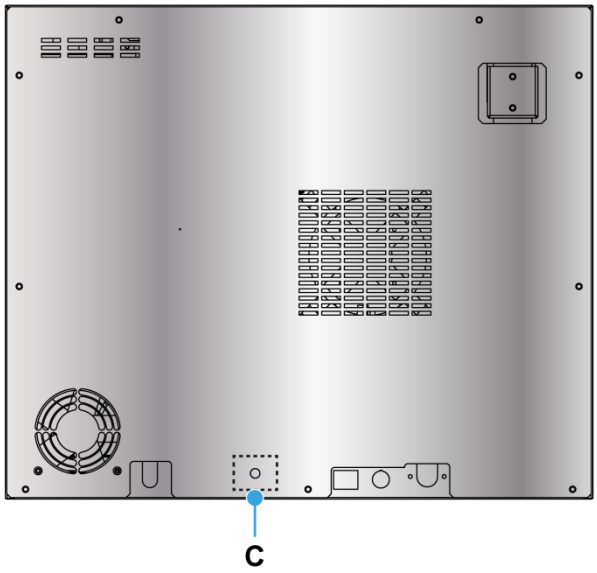
If this fails to correct the situation, please contact your supplier.

A



B





A. Rear panel of 4/5-tray oven. The reset-button hole can be at position **1** or **2** depending on the model
B. Rear panel of 10-tray oven. The reset-button hole can be at position **1** or **2** depending on the model
C. Reset-button hole on the rear panel of a 7-tray oven

Safety symbols

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

WARNING Indicates a hazardous situation which, if not avoided, could result in death or severe injury.

WARNING Indicates a hazardous situation which, if not avoided, could result in death or severe injury.

CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Opening the double-catch door

1. Turn the handle **left** to release the catch halfway.
   - This step allows the steam and heat to escape.
2. Turn the handle **right** to release the door fully.
3. Open the door.

NOTE

- These instructions apply to both left-hand and right-hand ovens.
- Close the door by pushing it shut.

Closed-door **Step 1.** Turn left **Step 2.** Turn right

Electrical safety and advice regarding supplementary electrical protection

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

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

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

We recommend:-

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

Your attention is drawn to:-
BS 7671:2018 – Guidance Note 8 – 8.13: Other locations of increased safety risk

It is recognised that there may be locations of increased risk of electrical shock other than those specifically addressed in Part 7 of BS 7671. Examples of such locations could include laundries where 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 includes:

- 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
- A 30mA-rated Type A RCD must protect the supply to this machine.

Important safety matters: fix a water leak immediately to help prevent 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:

- Isolate the oven from the electrical supply (see the **Isolation** section on page 15).
- Place an out-of-service notice on the oven.
- Contact MONO Equipment for assistance (see **Back Page**).

Ovens need to be maintained and serviced at appropriate intervals to help prevent water leaks from the internal plumbing and external hose connections. See the **Maintenance** section on page 44.

Contents

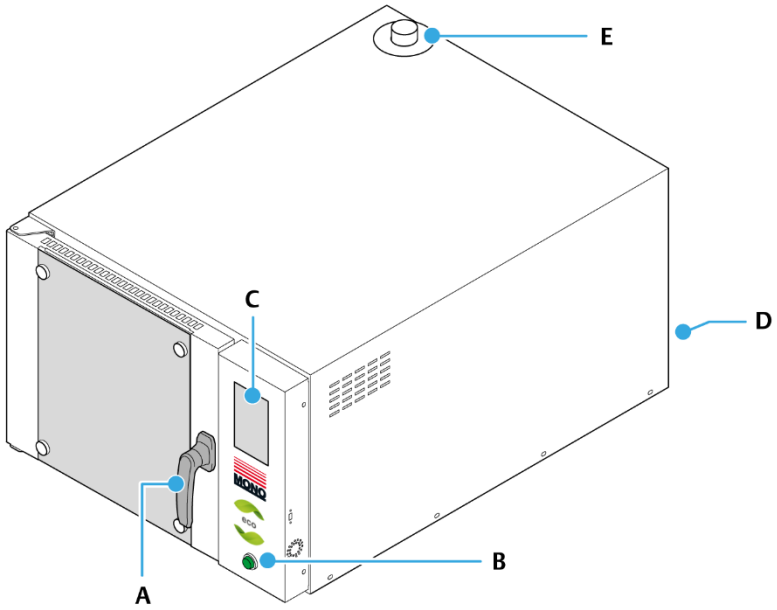
1. Introduction

Thank you for purchasing this MONO Eco Convection Oven.

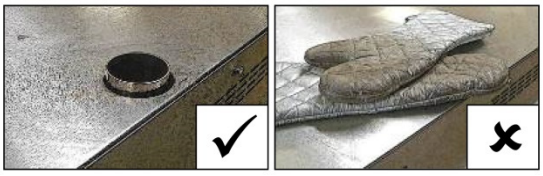
"A combination of clean industrial design and the latest technology."

- The MONO convection oven range is designed to take the baking Industry's standard trays.
- Ovens in the range are of **stainless-steel construction** and selected models have removable tray racks to aid cleaning.
- The smaller ovens are designed to be **stackable** without separate support, so your business can grow without taking up more ground space.
- The high-speed fans, elements and steam systems give **efficient air circulation** to produce a professional bake across a product range.
- The doors are **double-glazed** to increase the efficiency of the ovens well-insulated baking chamber.
- Ovens are fitted with user-friendly touchscreen display panels.
- An optional condenser unit can be fitted to any single oven or stacked ovens, as required. It can be adjusted with the thermostatic control to operate in most ambient temperatures.

Figure 1: Eco oven features



A. Double-latch door handle – see page 4
B. Power on/off switch
C. Touchscreen
D. Identification / Serial number plate.
E. Damper flue – do not cover the flue



2. Specifications

Table 1: Technical specifications summary

	4/5-Tray				7-Tray	10-Tray		
	FG159	**FG153**	**FG158**	**FG173**	**FG138**	**FG150**	**FG149**	**FG170**
Tray size (mm)	-	400 x 600	600 x 400	400 x 800	400 x 600	-	-	-
Tray size (inches)	18 x 30	-	-	-	-	18 x 30	400 x 600	400 x 800
Distance between trays	93 mm	93 mm	84 mm			100 mm	100 mm	100 mm
Height (oven only)	525 mm	525 mm	570 mm	570 mm	655 mm	1170 mm	1170 mm	1170 mm
Height (oven + base)	–	–	–	–	1255 mm	1870 mm	1870 mm	1870 mm
Width	840 mm	780 mm	1000 mm	780 mm	780 mm	840 mm	780 mm	780 mm
Depth, door closed (1)	1269 mm	1103 mm	890 mm	1103 mm	1103 mm	1209 mm	1109 mm	1309 mm
Depth, door open (1)(2)	1828 mm	1610 mm	1610 mm	1810 mm	1610 mm	1770 mm	1609 mm	1809 mm
Weight (kg), approximate	165	115	110	160	125	290	250	262
Total power required (kW)	8.5	7.5	7.5	7.5	10	17	15	17
Water supply (3)	■	■	■	■	■	■	■	■
Modularity	■	■	■	■	■	■	■	■
Landscape tray orientation			■					
Portrait tray orientation	■	■		■	■	■	■	■
Single (1) phase electrics (4)	■	■	■					
Three (3) phase electrics (4)	■	■	■	■	■	■	■	■
Steam function	■	■	■	■	■	■	■	■
Damp function	■	■	■	■	■	■	■	■
LED door lights	■	■	■	■	■	■	■	■
Stackable	■	■	■	■	(6)			
Variable fan speed	No	No	No	No	No	No	No	No
Optional extras								
Calcium treatment unit	☐	☐	☐	☐	☐	☐	☐	☐
Water condenser (5)	☐	☐	☐	☐	☐	☐	☐	☐
Valance	☐	☐	☐	☐	☐	☐	☐	☐
Base unit (7)	☐	☐	☐	☐	☐			

(1) Includes the handle.

(2) Excluding services. Allow room for water and electrical supply connections.

(3) See the **Water** section on pages 14 and 16 for further information.

(4) See the **Power** section on pages 10 and 13 for further information.

(5) See the **Condenser Unit** chapter on page 80.

(6) Can be stacked with a 4/5-tray oven only.

(7) Base units are 300 mm up to 920 mm high.

■ Available

☐ Optional extra

Electrical specifications

Power supply

WARNING

- An electrical socket must be protected by a 30mA Type A Residual Current Device (RCD) before installation and commissioning of the oven.
- Always fit a wall-mounted isolator switch to isolate the oven from the electrical supply completely. The isolator must be visible, labelled clearly, and easily accessible by an operator.
- Always check electrical requirements on the nameplate before connecting the power.

Table 2: Oven supply specifications

Oven		Electrical supply	Fused at	Total Power (kW)
4/5-Tray	18” x 26”	240 Vac (50 Hz), 1-phase	40 Amps	7.5
	26” x 18”			
	18” x 30”			
	40cm x 60cm			
	60cm x 40cm			
	40cm x 80cm			
	18” x 26”	380 Vac (50 Hz), 3-phase + neutral + earth	(Contact factory)	(Contact factory)
	26” x 18”			
	18” x 30”			
	40cm x 60cm			
	60cm x 40cm			
	40cm x 80cm			
	18” x 26”	415 Vac (50 Hz), 3-phase + neutral + earth	11 Amps per phase	7.5
	26” x 18”			
	40cm x 60cm			
	60cm x 40cm			
	40cm x 80cm			
	18” x 30”	414 Vac (50 Hz), 3-phase + neutral + earth	12 Amps per phase	8.5
7-Tray	40cm x 60cm	240 Vac (50 Hz), 1-phase	45 Amps	10
		380 Vac (50 Hz), 3-phase + neutral + earth	(Contact factory)	(Contact factory)
		415 Vac (50 Hz), 3-phase + neutral + earth	14 Amps per phase	10
10-Tray	18” x 26”	380 Vac (50 Hz), 3-phase + neutral + earth	(Contact factory)	(Contact factory)
	18” x 30”			
	40cm x 60cm			
	40cm x 80cm			
	18” x 26”	415 Vac (50 Hz), 3-phase + neutral + earth	32 Amps	17
	18” x 30”			
	40cm x 60cm			
	40cm x 80cm			

Power cable

- 2.5 metres of cable factory-fitted with a LEGRAND (or equivalent) plug

Display

- 7-inch HD TFT resistive touchscreen, portrait format

Environmental specifications

Table 3: Environmental specifications

Noise level	Less than 85 dB
Water supply	Required
Drainage	Not required

3. Safety

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

Only fully-trained and authorised persons are permitted to do any work on the oven. Authorised electricians must carry out all repairs and maintenance of electrical units. Always disconnect or isolate the power supply before starting any maintenance (i.e. opening panels) or cleaning work on the oven.

WARNING

- Before using the oven, check that:
  - All cover panels and pipe fittings are secure.
  - The door handles are not damaged.
- If the oven is damaged or malfunctioning, stop using it.
  - Do not attempt any repairs.
  - Contact the MONO Service Department for advice.
- All connections to the oven must comply with the statuary requirements of the country of installation.
- Operate the oven only as described in this manual.

WARNING

- An electrical socket must be protected by a 30mA-rated Type A Residual Current Device (RCD) before installation and commissioning of the oven.
- Always fit a wall-mounted isolator to isolate the oven completely from the electrical supply. The isolator must be visible, labelled, and easily accessible by an operator.
- Always check electrical requirements on the nameplate before connecting the power.
- Never use the USB port to power or recharge electronic devices e.g., mobile phones. Incorrect usage causes damage to the oven and could result in a fire.

CAUTION

- Be aware of hot surfaces:
  - Always use oven gloves when loading or unloading the oven.
  - Allow time for the oven to cool down before cleaning it. To prevent door glass from shattering, do not clean the oven glass when hot.
  - While the oven is in operation (and for some time after use), it is inadvisable to touch the oven window or the surrounds because of conducted heat.
- The oven owner is legally obliged to instruct staff on these safety points and the safe operation of the oven. Therefore, these instructions should not be removed from the working area.
- Do not store items on top of or behind the oven.
- Only use the oven for baking bread, pastries, and cakes.
  Contact MONO Equipment for other product-making machines.
- No unauthorised modifications to the oven are permitted.
  Only use MONO spare parts.

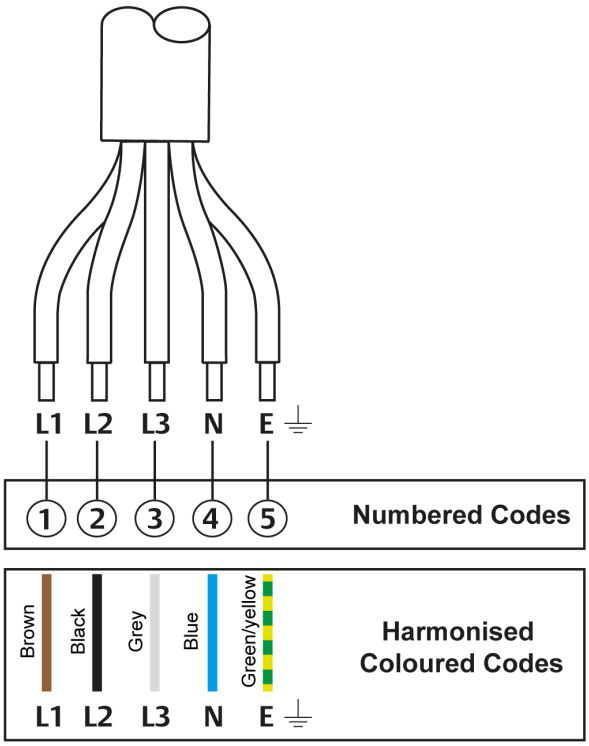
4. Installation

Power

WARNING

- An electrical socket must be protected by a 30mA-rated Type A Residual Current Device (RCD) before installation and commissioning of the oven.
- Always fit a wall-mounted isolator switch to isolate the oven completely from the electrical supply. The isolator must be visible, labelled clearly, and easily accessible by an operator.
- Always check electrical requirements on the nameplate before connecting power.

Figure 2: Main power supply connections



NOTE

- L2 and L3 are for three-phase installations only.
- See the **Specifications** section for electrical specifications.

Water

Connect to a suitable water supply 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 protects the water supply to the equipment. It is the customers' responsibility to install and maintain an adequate water supply to the oven, which should comply with local water regulations.

- The oven comes supplied with a one-metre flexible hose – ¾-inch BSP connections (both ends).
- Water pressure requirements: 2 to 4 bar
  - Domestic pressure is usually within this parameter.
- Water conditioning unit advised.
- No drain is required (unless fitting a condenser).

Ventilation

It is the customers' sole responsibility to arrange for adequate ventilation. It should be sufficient to ensure water does not condense on or around the oven.

- Allow a 50 mm gap at the sides and rear of this oven.
- Chimneys and evacuation ducts fitted above mono ovens should be insulated.

Before use

In the interests of hygiene, we strongly recommend that, before using the oven for the first time, you wipe the inside of the oven and all accessories thoroughly with a clean cloth soaked in warm soapy water. Although the utmost care is taken during assembly and pre-delivery inspection, there is always a possibility of residue contaminating the first bake if this is not done.

Ensure that the locking casters on the base unit (if supplied) are locked into position.

Safety

- Review the safety information on **page 12**.
- Allow sufficient space for the oven door to open fully and easy loading and unloading of product trays without people coming in contact with hot surfaces.
- Racks should be available to allow cooked products to cool safely.
- Oven gloves should be available at all times.

Note

This Installation and Operating Manual is available in Adobe PDF format at www.monoequip.com.

Ambient working temperatures

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 40 °C (115 °F) affects the functionality of the components, and any related guarantees become void. For example, motors are not sufficiently cooled, contactor efficiency is seriously impaired, and electronic components shut down.

It is the customers' sole responsibility to arrange for adequate ventilation. Any component malfunctioning during the guarantee period found to have been subject to excessive humidity or ambient working temperature above 40 °C (115 °F) will not be covered by the component manufacturer guarantee or MONO's product warranty.

5. Isolation

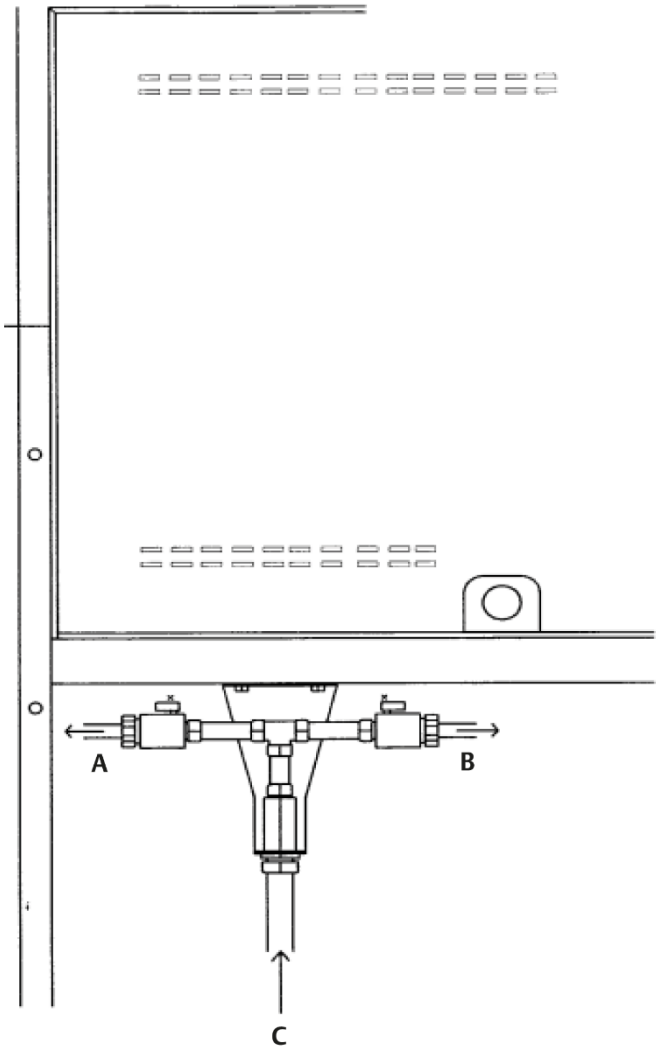
Electrical supply

To stop the oven **in an emergency**, switch off the electricity using the wall-mounted isolator switch.

Water supply

In an emergency, shut off the water supply to stacked ovens by closing the shut-off valves (Figure 3).

Figure 3: View of rear connections on a MONO Eco Convection Oven



Turn the appropriate valve 90° anti-clockwise (↺) to turn off the water supply.

A. Top oven supply
B. Bottom oven supply
C. Supply from water filter

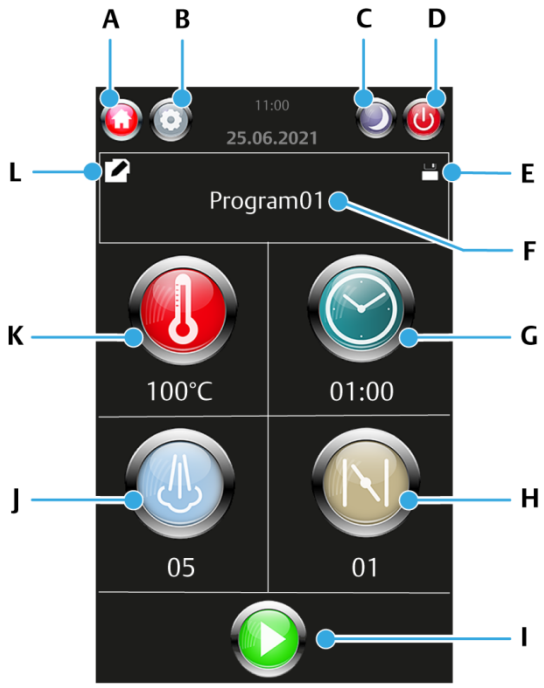
6. Touchscreen Operations

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

CAUTION

- Do not use excessive force. The pressure required to operate the touchscreen panel is adjustable in the **Settings menu**.

Figure 4: Main screen

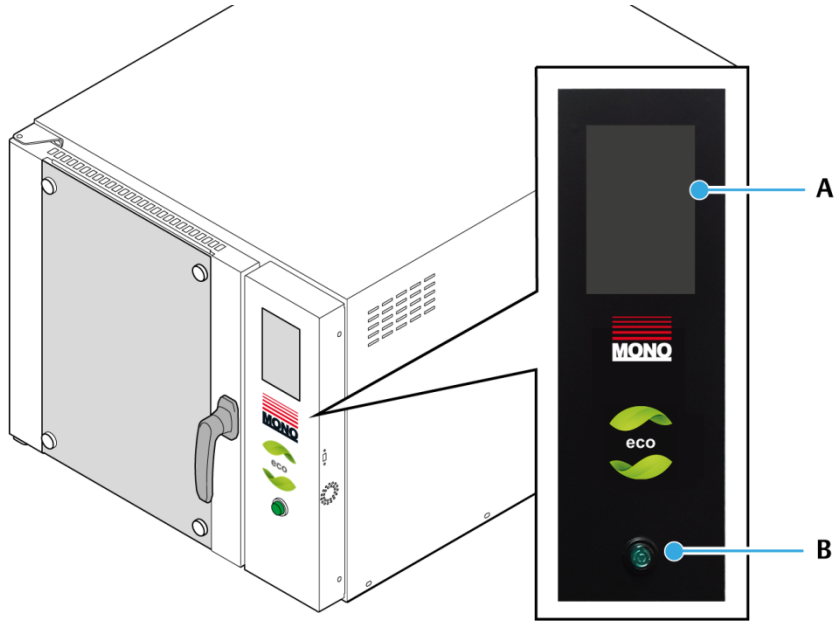


Callout	Function	Purpose of the function
A	Home	Return to Home screen.
B	Settings	Access to oven settings.
C	Sleep	Sleep mode – see page 31.
D	Standby	Standby mode – see page 31.
E	Save	Save the settings.
F	Program title	It shows the current program.
G	Timer	Timer for general use.
H	Damper	Damper control.
I	Start	Starts a baking program.
J	Steam	Steam control.
K	Temperature	Oven temperature control.

NOTE: The images are for illustration purposes and may differ from your oven.

Starting and operating using ready-made recipes (programs)

1. Ensure the power and water supplies are safely connected to the oven (see **Installation** on page 8).
2. If the display (**A**) is off, press the green power button (**B**) at the bottom of the front panel.
   The oven goes through a boot-up sequence. Please wait.

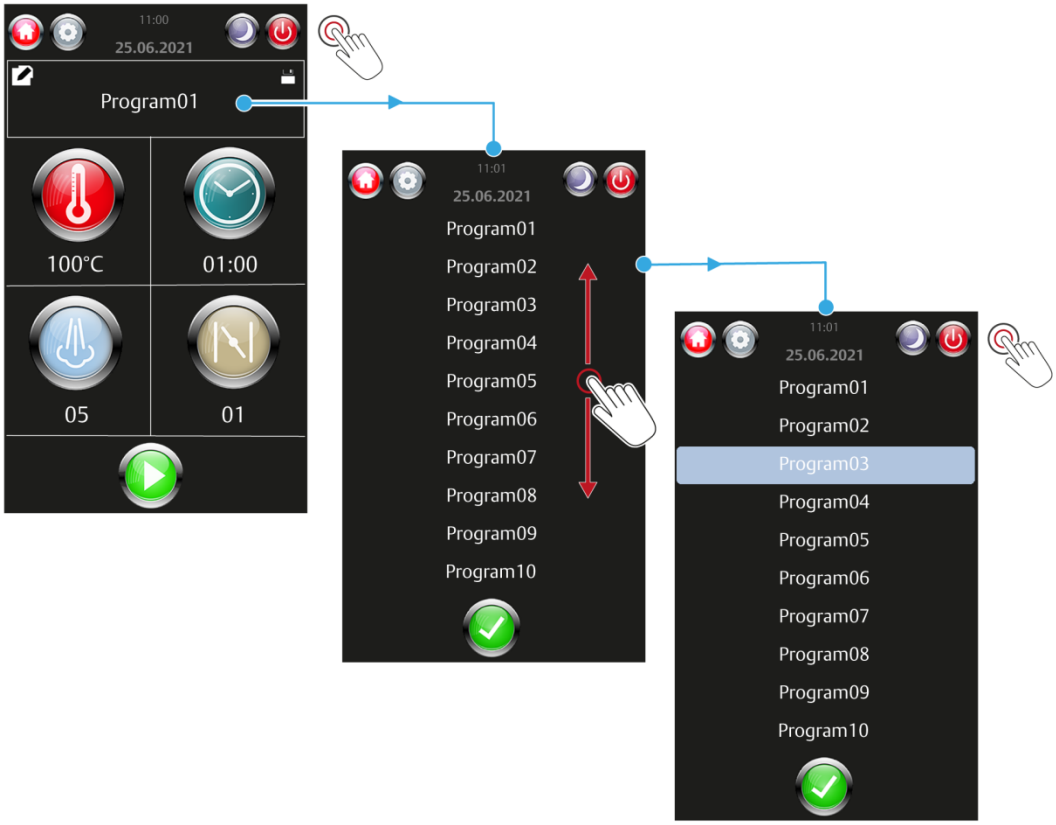


NOTE

The images are for illustration purposes and may differ from your oven.

3. When a start-screen (wallpaper) appears, touch the screen anywhere to display the main screen.

4. Touch the **Program** panel.
5. Select the program required.
   (a) Keeping a finger touching the screen, slide the finger up and down to scroll through the list.
   (b) Touch a program name (e.g., **Program03**) to highlight it.
   (c) Touch the **Tick** (✓) button to confirm the program choice.



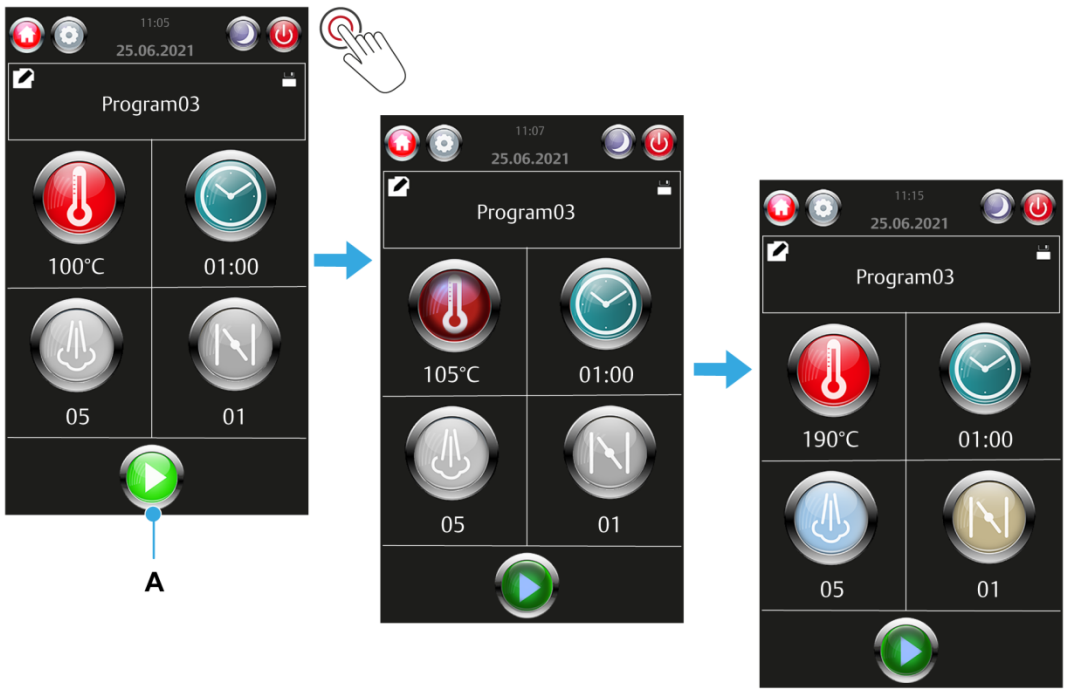
Note

- Touching the **Home** button at any time returns the display to show the main screen.

7. Touch the **Start** button (**A**).
8. Wait while the oven heats up to the programmed temperature.
   (a) The **Temperature** and **Start** buttons flash during this waiting phase.
   (b) When the oven is at the correct temperature, a series of beep-beep sounds are heard.
   – *The **Temperature** button stops flashing.*

Note

- If the oven is too warm, the **Temperature** button turns blue and flashes. Open the door to help to cool. When the oven is at the correct temperature, a series of beep-beep sounds are heard. Close the door to maintain temperature until ready for the next step.



9. Load the oven with trays of products and close the door.

NOTE
To maintain the heat in the oven, do not leave the door open for longer than needed. The actual oven temperature fluctuates during a bake – this is normal and not an oven fault.

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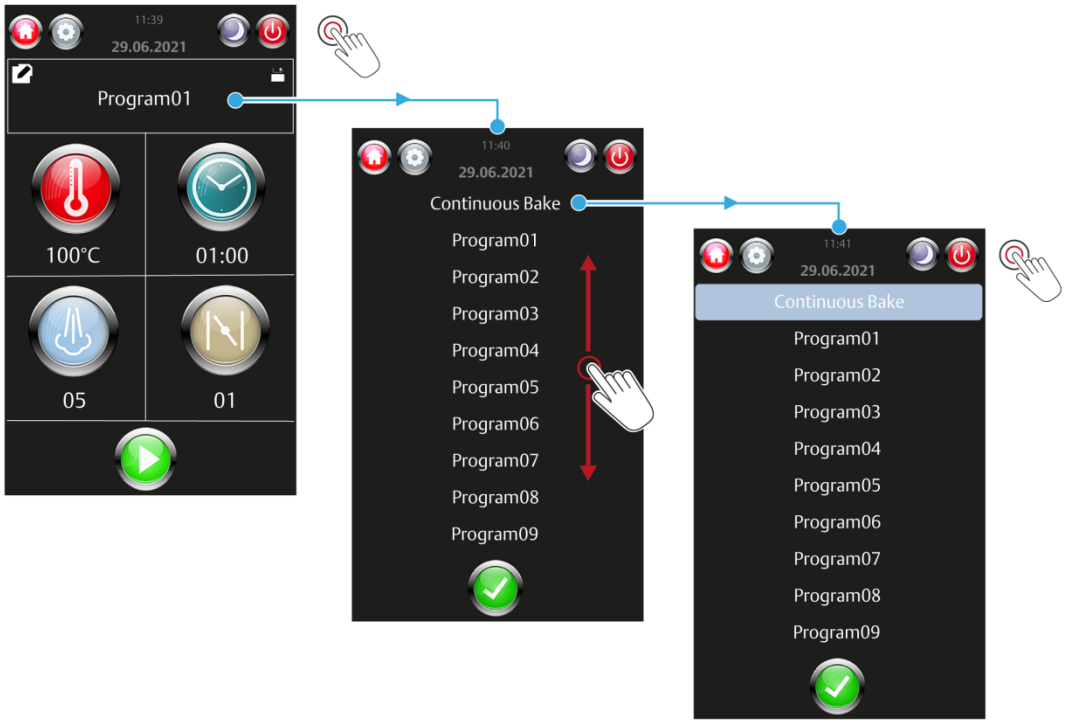
10. Touch the **Start** button to run the baking program.
    - If enabled in **Settings**, the oven starts baking as soon as the door is closed.
    - The **Start** button changes to a **Stop** button to end a bake at any time.
11. Wait for the baking program to complete.
    (a) The bake comes to an end when the timer counts down to **00:00**, and you hear a beep-beep alarm.
    (b) Touch the **Stop** button to switch off the oven alarm.

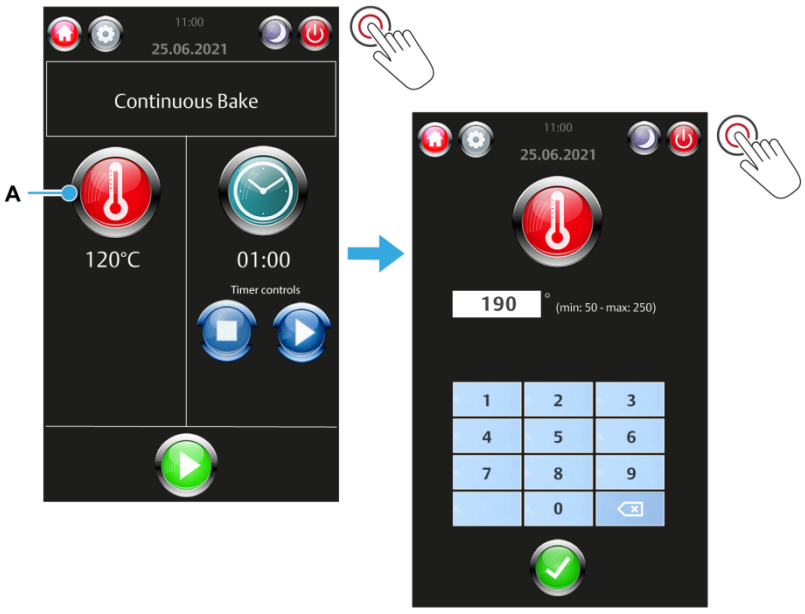
12. Carefully remove the trays and close the door to minimise heat loss.

Continuous bake (no program mode)

1. Touch the **Program** panel.
2. Select the **Continuous Bake** program.
   - **(a)** Keeping a finger touching the screen, slide the finger up and down to scroll through the list.
   - **(b)** Touch **Continuous Bake** to highlight it.
   - **(c)** Touch the **Tick** (✓) button to confirm the choice.

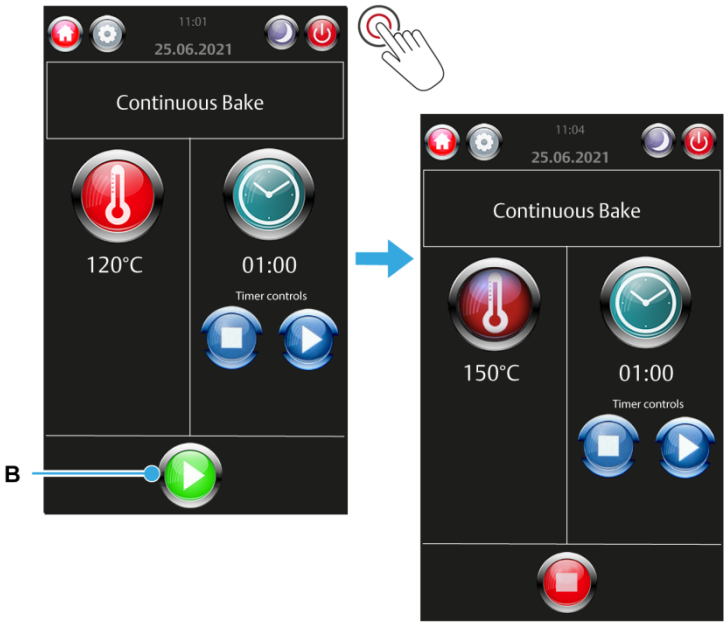


3. Set the baking temperature required.
   - **(a)** Touch the temperature button (**A**).
   - **(b)** Use the keypad to edit the temperature, and then touch the **Tick** (✓) button.



4. Touch the **Start** button (**B**) to begin heating the oven.

5. Wait while the oven heats up to the set temperature.
   - The **Temperature** button flashes while the oven is heating.
   - When up to temperature, the oven emits beep-beep sounds for a few seconds and “start” flashes.

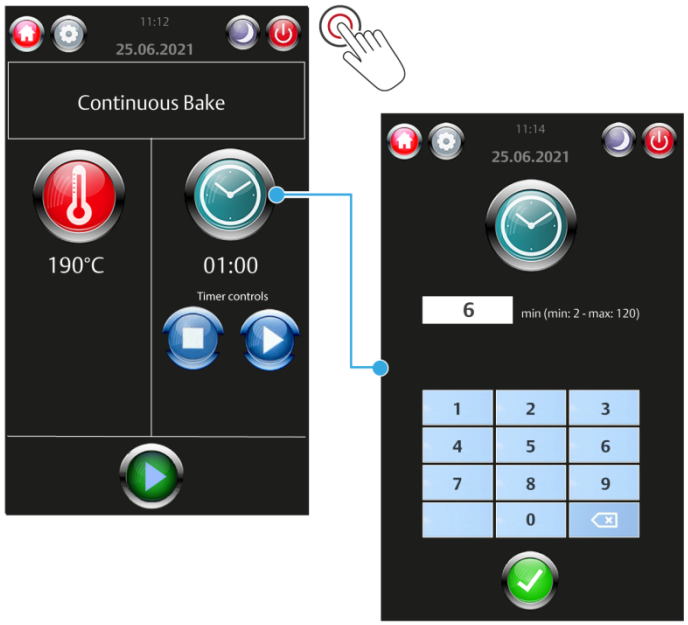


6. Set the timer (optional).

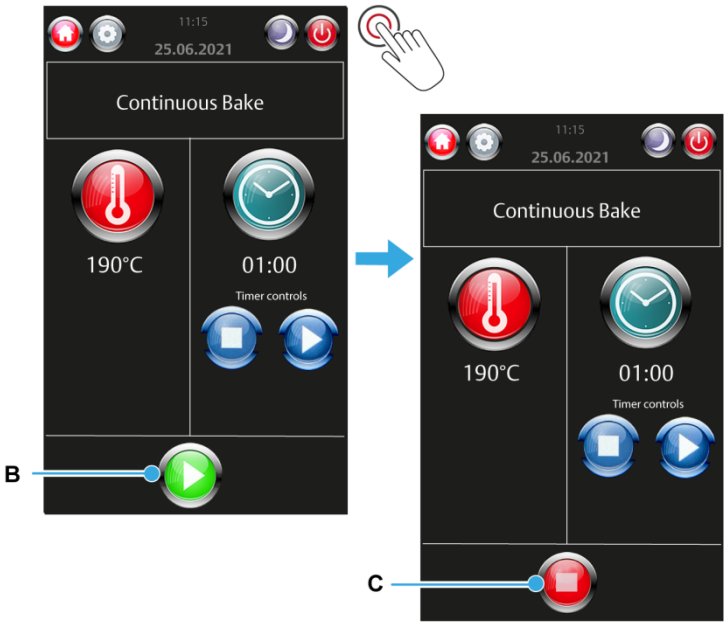
   This timer has no connection to the oven controls. The timer is usable only when the oven temperature is correct, and baking started.

   (a) Touch the **Clock** button to set the time required.

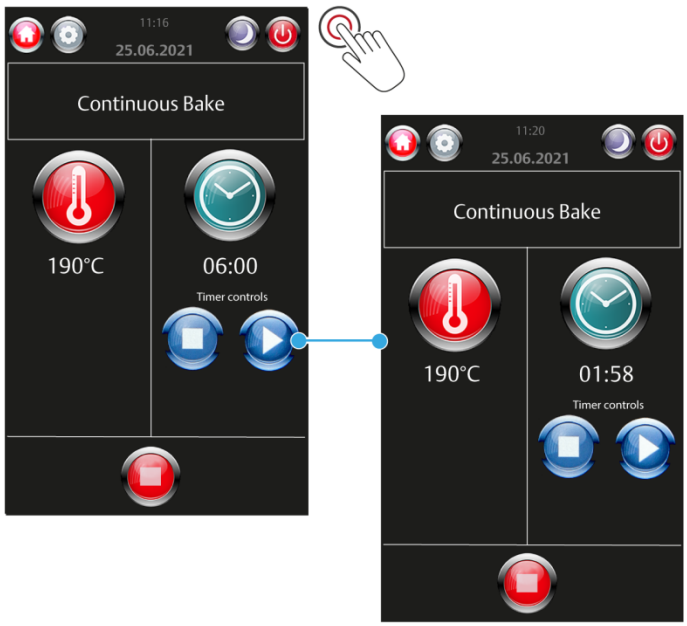
   (b) Delete the value shown (by using the backspace key) and then enter the value required (e.g., **6**).



7. Touch the **Start** button (**B**) to start baking.
   - Baking begins with the oven light switched on.
   - The oven maintains the temperature with the fan running in forward and reverse cycles.
   - If the **Stop** button (**C**) is touched now, the oven maintains temperature and the fan does not reverse.



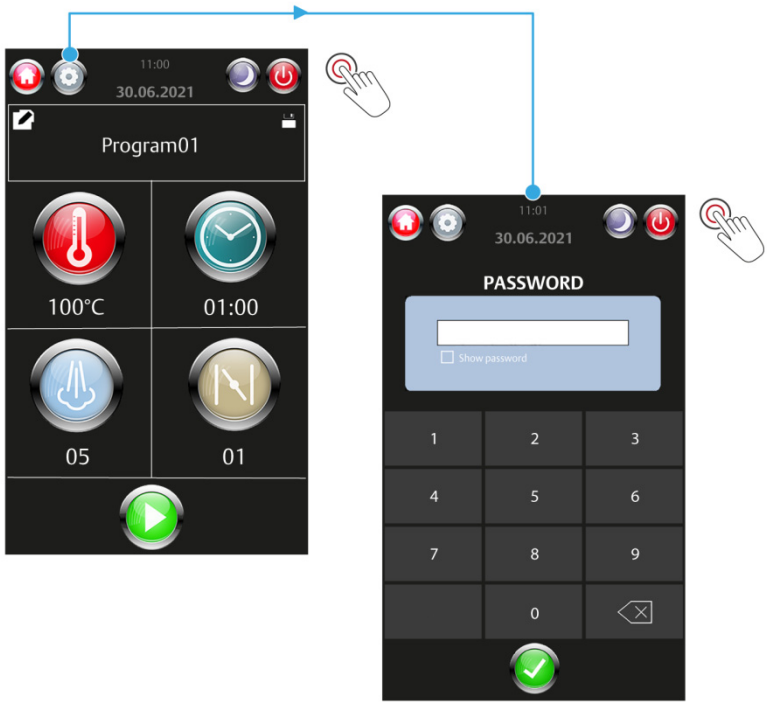
8. Start the timer (optional).
   - Touch the **Start** button in the timer panel.
   - When the timer reaches **00:00**, an oven alarm is audible for a short period.
   - To reset the timer (at any time), touch the **Stop** button in the timer panel.



9. Touch the **Stop** button in the bottom panel when finished with the continuous bake.

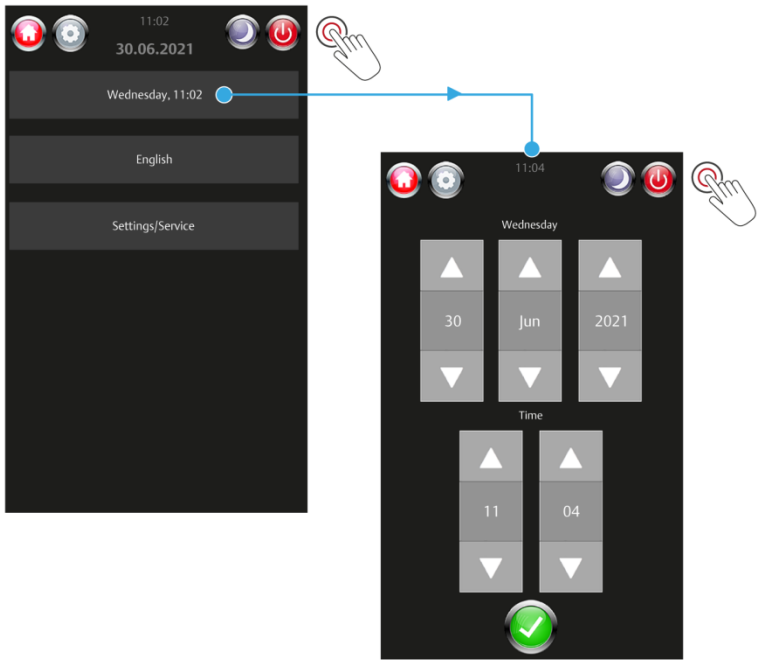
Setting the time and date

1. Touch the **Settings** button.
2. Enter the password, and then touch the **Tick** (✓) button.



NOTE
Default passwords for the various access levels are in the **Passwords** section. However, for security reasons, the passwords section may have been removed.

3. Touch the **Time & Date** box.



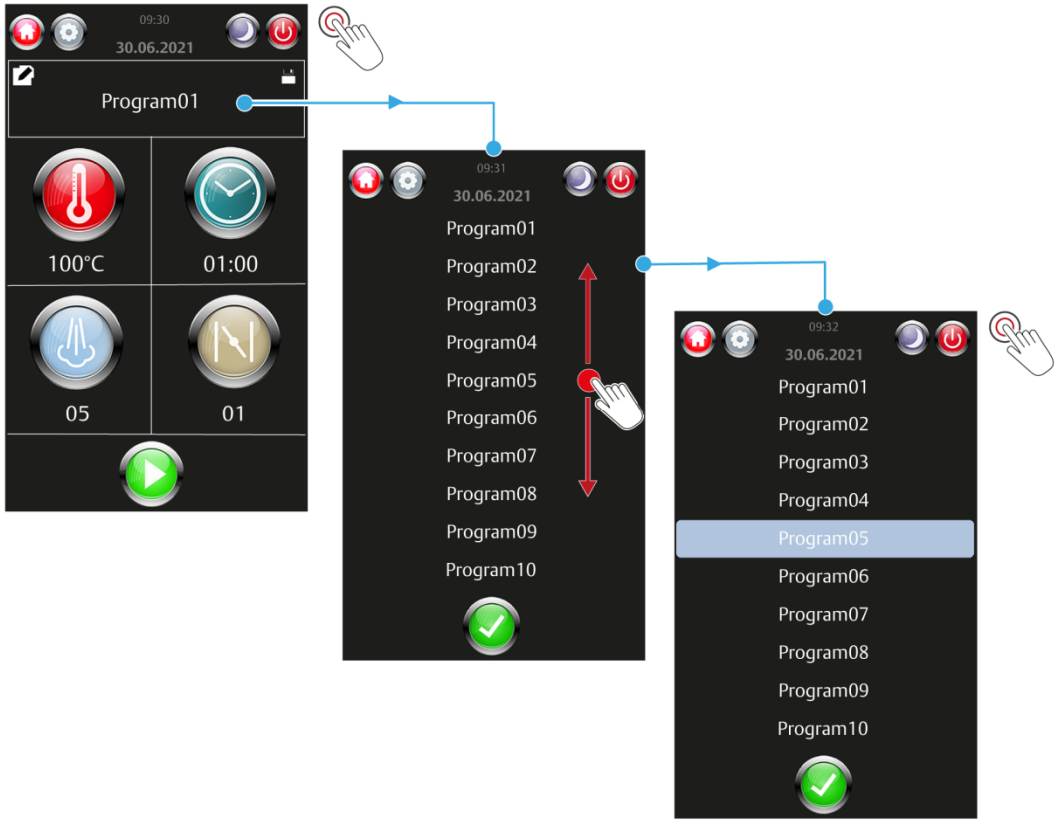
4. Use the up or down arrows to make adjustments.
   - The time, date, month, and year can be adjusted.
   - The day is not adjustable – it automatically updates using the date, month, and year.
5. Touch the **Tick** (✓) button to confirm the date and time settings.
6. Touch the **Home** button to return to the main screen.

NOTE

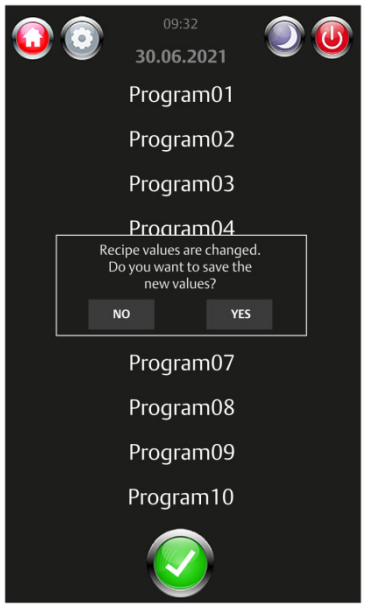
See page 30 for information about all the other oven settings.

Setting up a new program

1. Touch the **Program** panel.
2. Choose a new, unused program (e.g., **Program05**).



3. If a pop-up window appears asking to save values, touch the **No** option.



4. Set the baking temperature required.

   (a) Touch the temperature button (**A**).

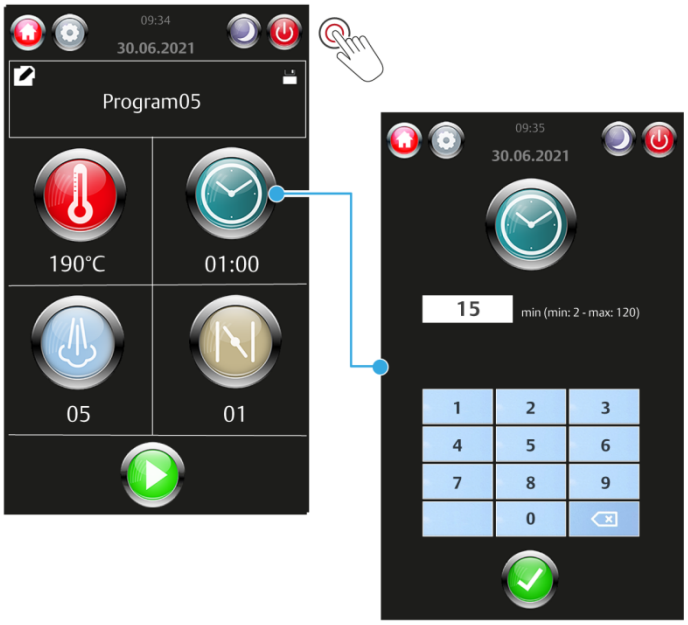
   (b) Use the keypad to edit the temperature, and then touch the **Tick (✓)** button.

5. Set the timer function.

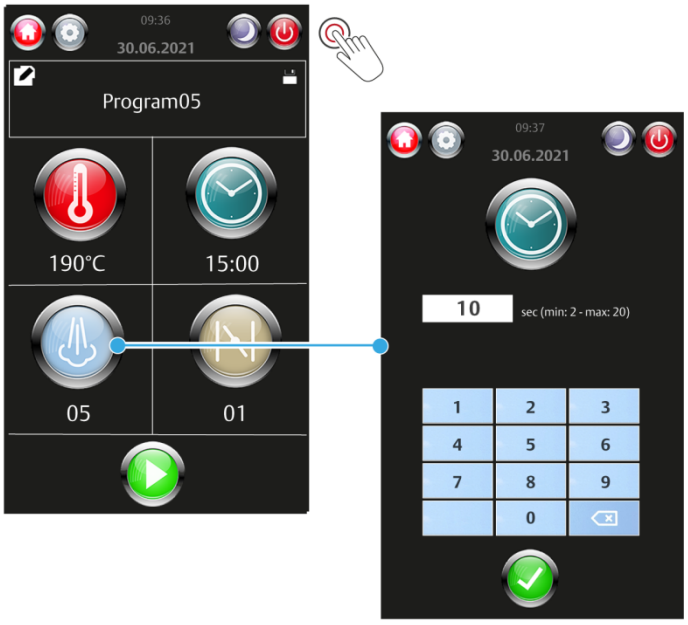
   (a) Touch the **Clock** button to set the countdown time required.

   (b) Use the keypad to enter the value required (e.g., **15**).

   (c) Touch the **Tick (✓)** button.



6. Set the steam function (optional).
   (a) Touch the **Steam** button to set the operation time.
   (b) Use the keypad to enter the seconds required (e.g., **10**).
   (c) Touch the **Tick (✓)** button.



7. Set the damper function (optional).
   (a) Touch the **Damper** button to set the operation time.
   (b) Use the keypad to enter the seconds required (e.g., **10**).
   (c) Touch the **Tick (✓)** button.

NOTE
The operation time availability is dependent on the baking time.

8. Save the recipe program by touching the **Save** icon.
   - Touch the **Yes** option when prompted to save the recipe changes.

9. Enter the password and touch the **Tick** (✓) button.

NOTE
Default passwords for the various access levels are in the **Passwords** section. However, for security reasons, the passwords section may have been removed.

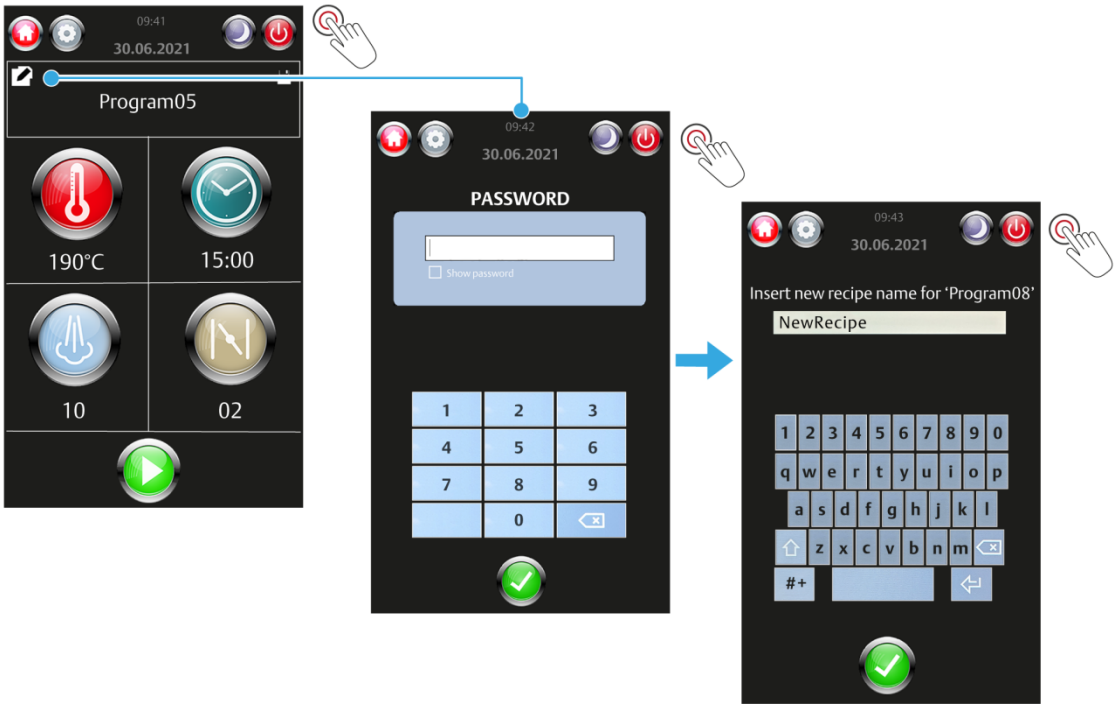
10. Change the program title.

(**a**) Touch the **Change Program Title** icon.

(**b**) Enter the password and touch the **Tick** (✓) button.

(**c**) Type the new name of the recipe program.

(**d**) Touch the **Tick** (✓) button to confirm the new name.

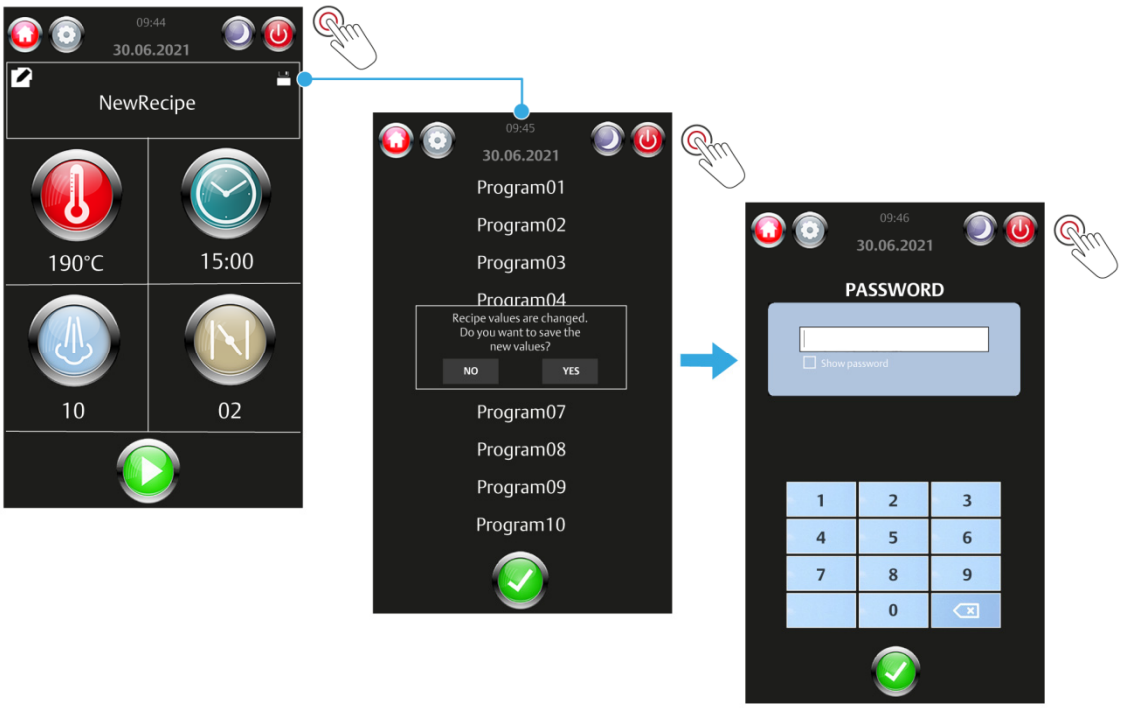


11. Save the change.

(a) Touch the **Save** icon.

(b) When a pop-up window appears asking to save values, touch the **Yes** option.

(**c**) Enter the password and touch the **Tick** (✓) button.



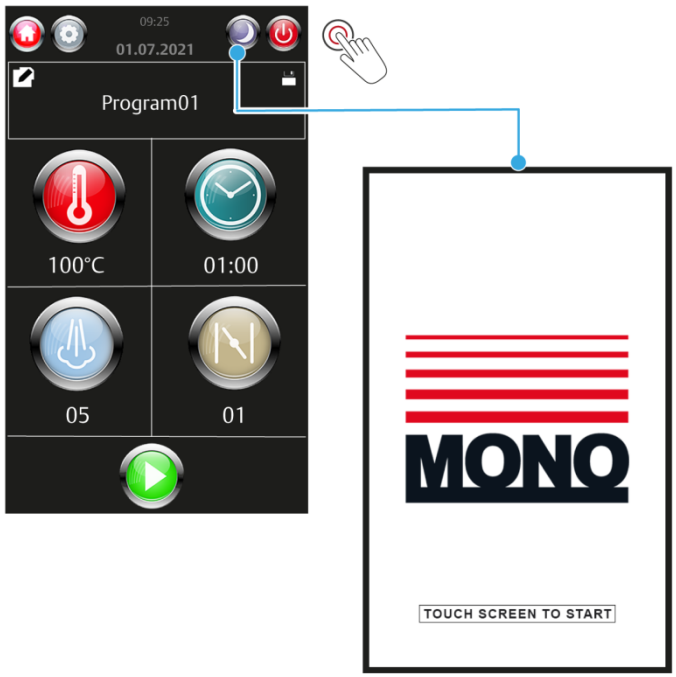
12. The display returns to the main operating screen.

Putting the oven into Standby mode

The **Standby** button turns the oven off until the screen is touched again.

Putting the oven into Sleep mode

The **Sleep** button instructs the oven to maintain temperature to a pre-set fall-back setting.



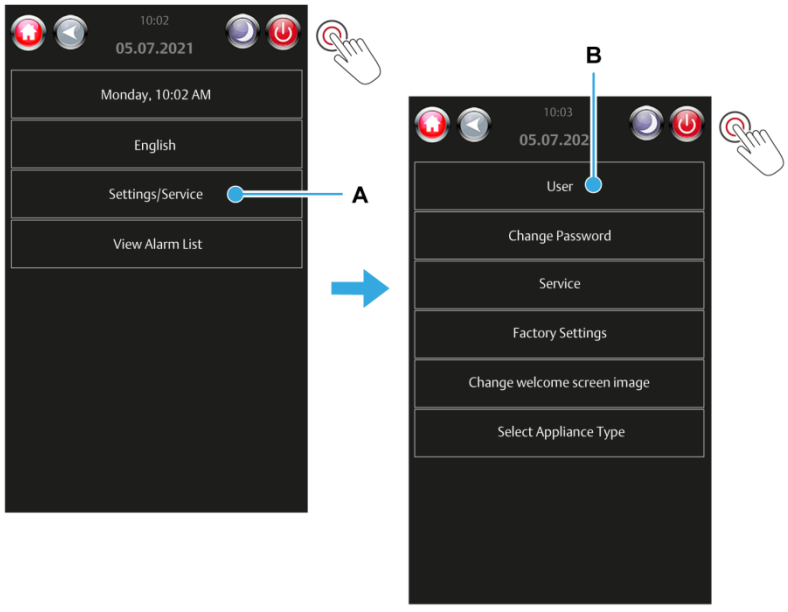
User settings (oven setup)

CAUTION ▪ Do not make changes to settings unless you are fully aware of the results.

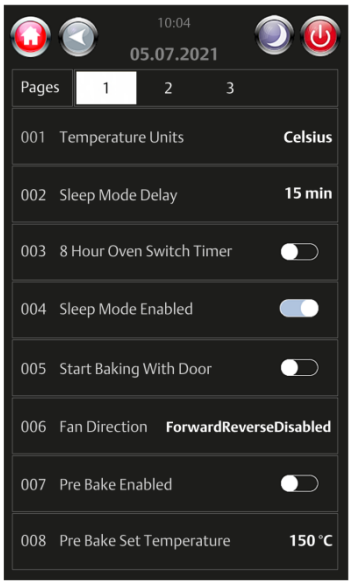
1. Touch the **Settings** button.
2. Enter the password and touch the **Tick** (✓) button.

NOTE
Default passwords for the various access levels are in the **Passwords** section. However, for security reasons, the passwords section may have been removed.

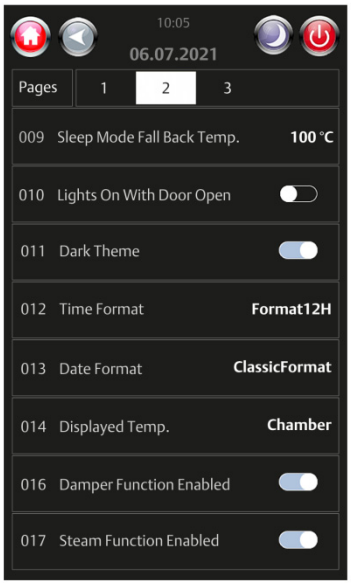
3. Touch the **Settings/Service** panel (**A**).
4. Touch the **User** panel (**B**).



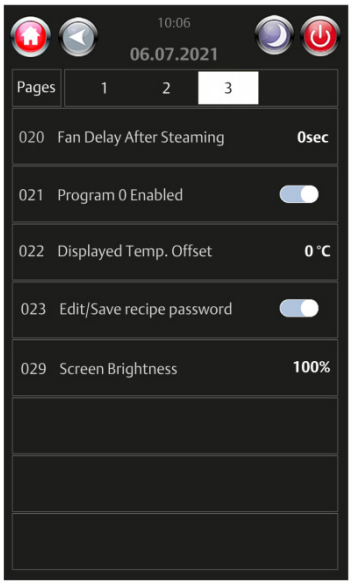
5. Touch the page required (i.e., **1**, **2**, or **3**).



Page 1



Page 2



Page 3

6. To make an adjustment, touch the item and edit a new setting.
7. Touch the **Home** button at the top of the screen when the settings are as required.

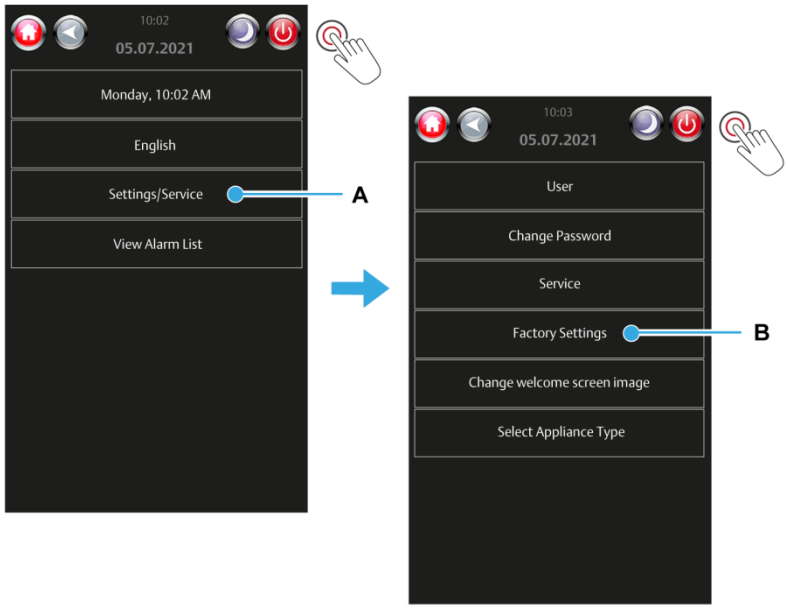
Factory settings (oven setup)

CAUTION ▪ Do not make changes to settings unless you are fully aware of the results.

1. Touch the **Settings** button.
2. Enter the password and touch the **Tick** (✓) button.

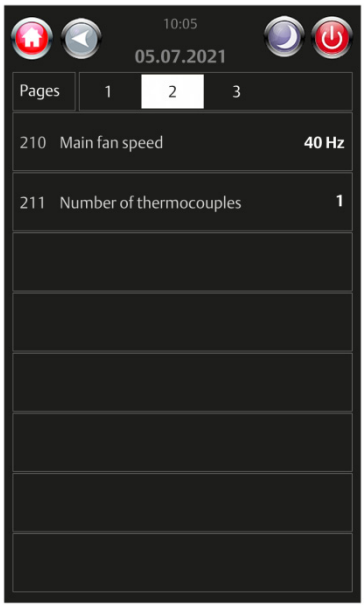
NOTE
Default passwords for the various access levels are in the **Passwords** section. However, for security reasons, the passwords section may have been removed.

3. Touch the **Settings/Service** panel (**A**).
4. Touch the **Factory Settings** panel (**B**).

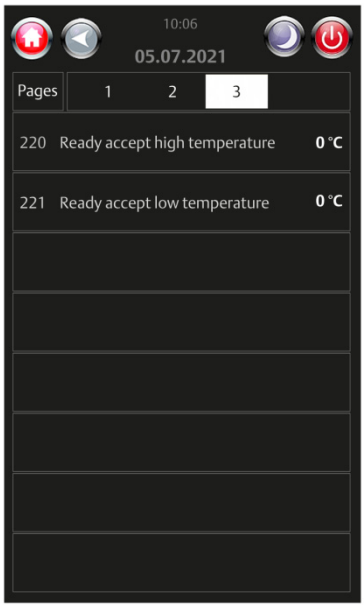


5. Touch the page required (i.e., **1**, **2**, or **3**).

Page 1



Page 2



Page 3

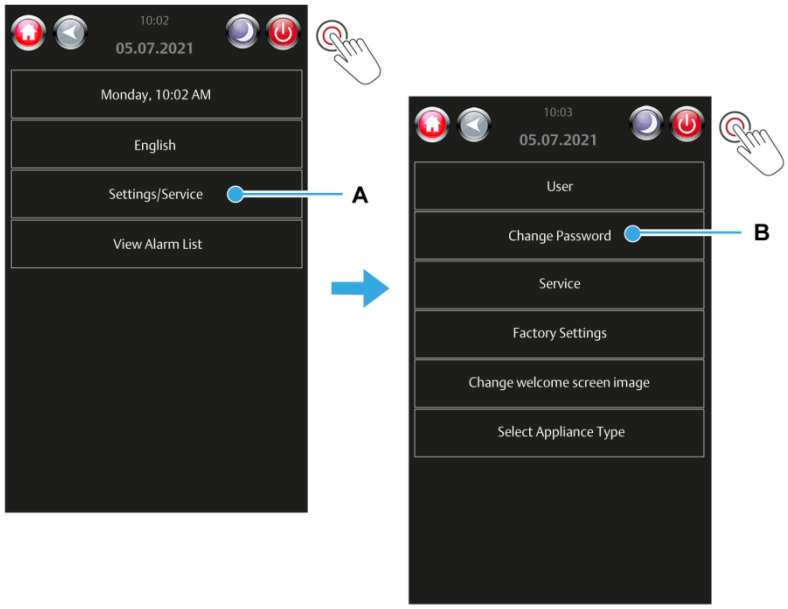
6. To make an adjustment, touch the item and edit a new setting.
7. Touch the **Home** button at the top of the screen when the settings are as required.

Changing passwords

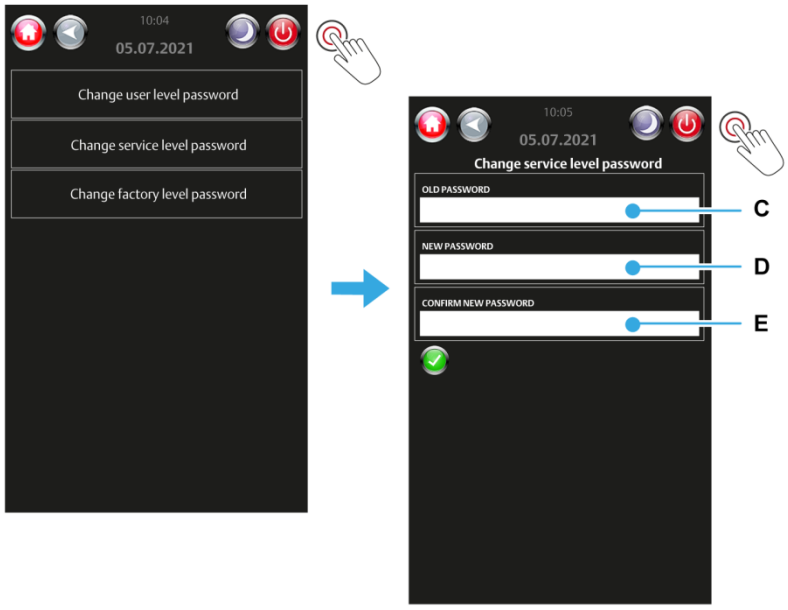
1. Touch the **Settings** button.
2. Enter the password and touch the **Tick** (✓) button.

NOTE
Default passwords for the various access levels are in the **Passwords** section. However, for security reasons, the passwords section may have been removed.

3. Touch the **Settings/Service** panel (**A**).
4. Touch the **Factory Settings** panel (**B**).



5. Touch the password level you want to change.
6. Change to password.
   (**a**) Touch the **Old Password** box (**C**), and enter the current password.
   (**b**) Touch the **New Password** box (**D**), and enter the new password.
   (**c**) Touch the **Confirm New Password** box (**E**), and enter the new password again.
   (**d**) Touch the **Tick** (✓) button.



7. Touch the **Home** button at the top of the screen when the settings are as required.

Diagnostics

The operation of the following items can be checked from the diagnostics screen:

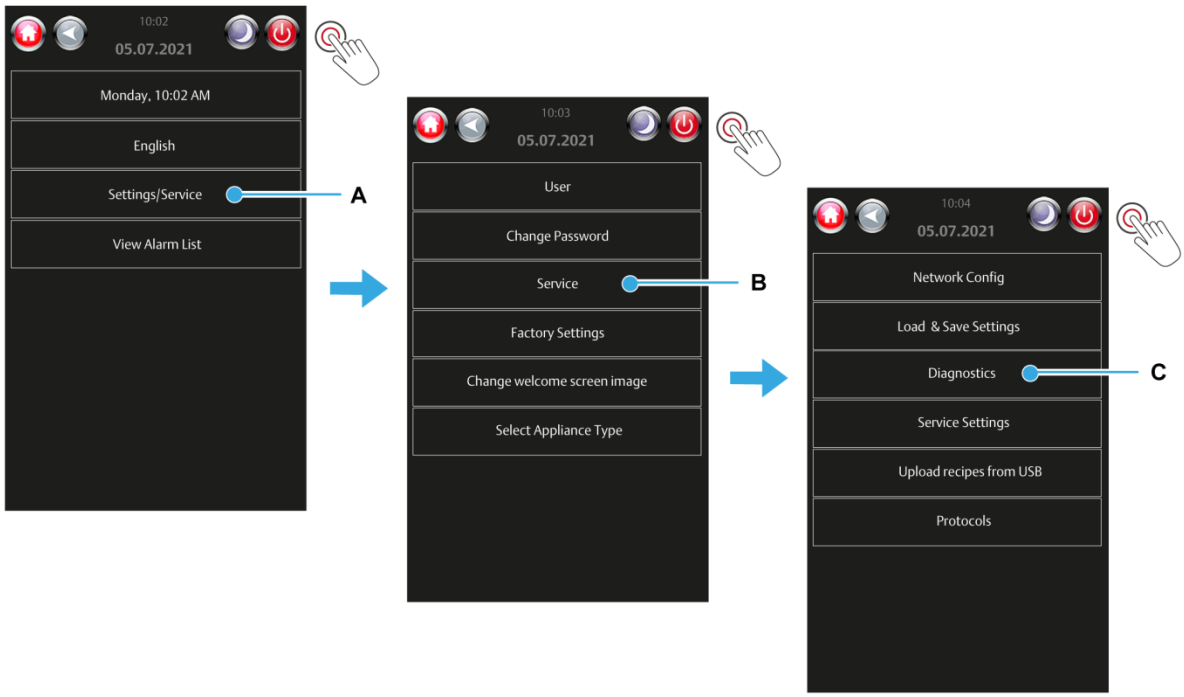
- Door switch operation
- Heater
- Fan forward
- Fan reverse
- Steam solenoid
- Damper solenoid
- Lights on/off
- Sound

Diagnostics procedure

1. Touch the **Settings** button.
2. Enter the password and touch the **Tick** (✓) button.

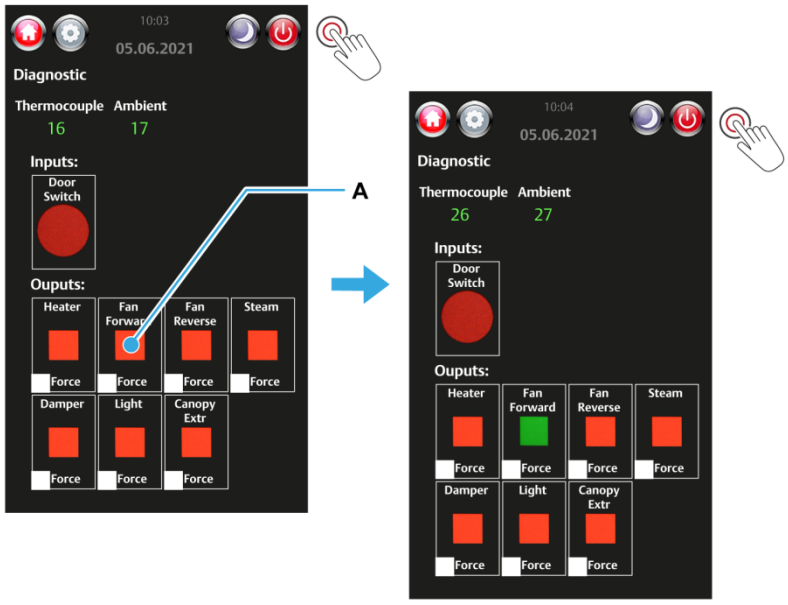
NOTE
Default passwords for the various access levels are in the **Passwords** section. However, for security reasons, the passwords section may have been removed.

3. Touch the **Settings/Service** panel (**A**).
4. Touch the **Service** panel (**B**).
5. Touch the **Diagnostics** panel (**C**).



Using the diagnostics screen

1. Touch the **Force** button next to the item to be tested.
   - A blue arrow appears.
2. Touch the **Test** button (**A**) of that item to start the test.
   - The red square changes to a green square.
3. Touch the same **Test** button (**A**) again to end the test.
   - The green square changes back to a red square.
4. Touch the **Home** button to exit diagnostics mode.



7. Cleaning

WARNING

- **Isolate the oven from the mains supply and allow time to cool before cleaning.**

WARNING

- **Do not remove the rear panelling inside the oven. That panel provides access to the fan assembly, which is not safety interlocked and could cause serious injury.**

CAUTION

- **Clean the equipment daily using approved chloride-free cleaning fluid.**
- **Take care that water does not enter the control panel or rear-access panel. Never use a pressure washer or water hose to clean the oven.**

Daily cleaning instructions

General instructions

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

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

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

3. Spot clean outside with a damp cloth, soaked in a solution of mild detergent and hot water.
   NOTE: Pay particular attention to ensure excess water is not applied around the area of the electrical panels.

Weekly cleaning instructions

General instructions

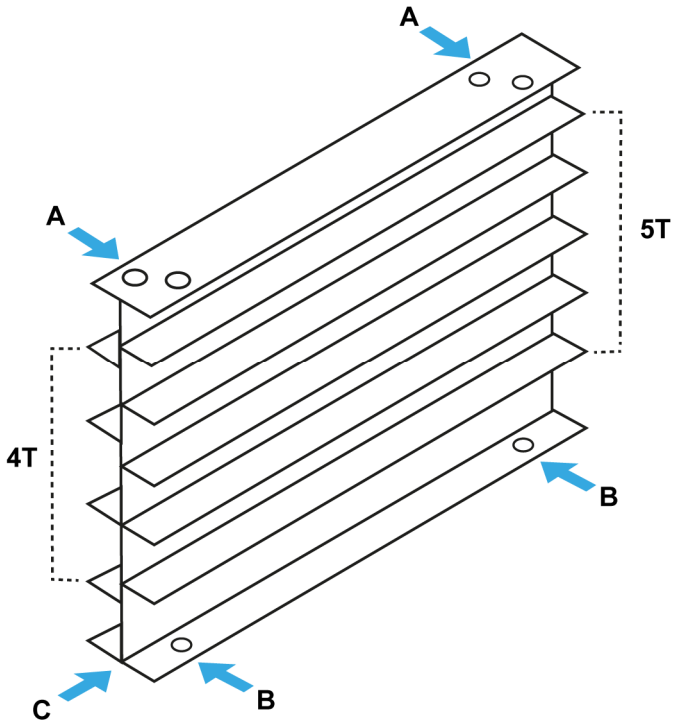
1. Complete the daily cleaning procedure, as above.
2. Clean any burnt-on debris by careful use of a proprietary oven cleaner, carefully following the manufacturer's instructions. Do not allow the oven cleaner to get onto the control panel.
3. Use a nylon brush to scrub the cabinet wheels (if fitted) with a mild detergent and hot water.

   Note: Using too much water eventually rusts the metalwork.

Additional internal cleaning for ovens with 60 cm x 40 cm trays (FG158 4-tray)

1. Open the oven door.
2. Lift and unlatch the internal racking.
3. Remove the internal racking from the sides of the oven (**Figure 5** and **Figure 7**).
   - This step allows access to wipe hidden areas in the oven with a damp cloth.
4. Wipe down, and clean racking with a damp cloth and replace.

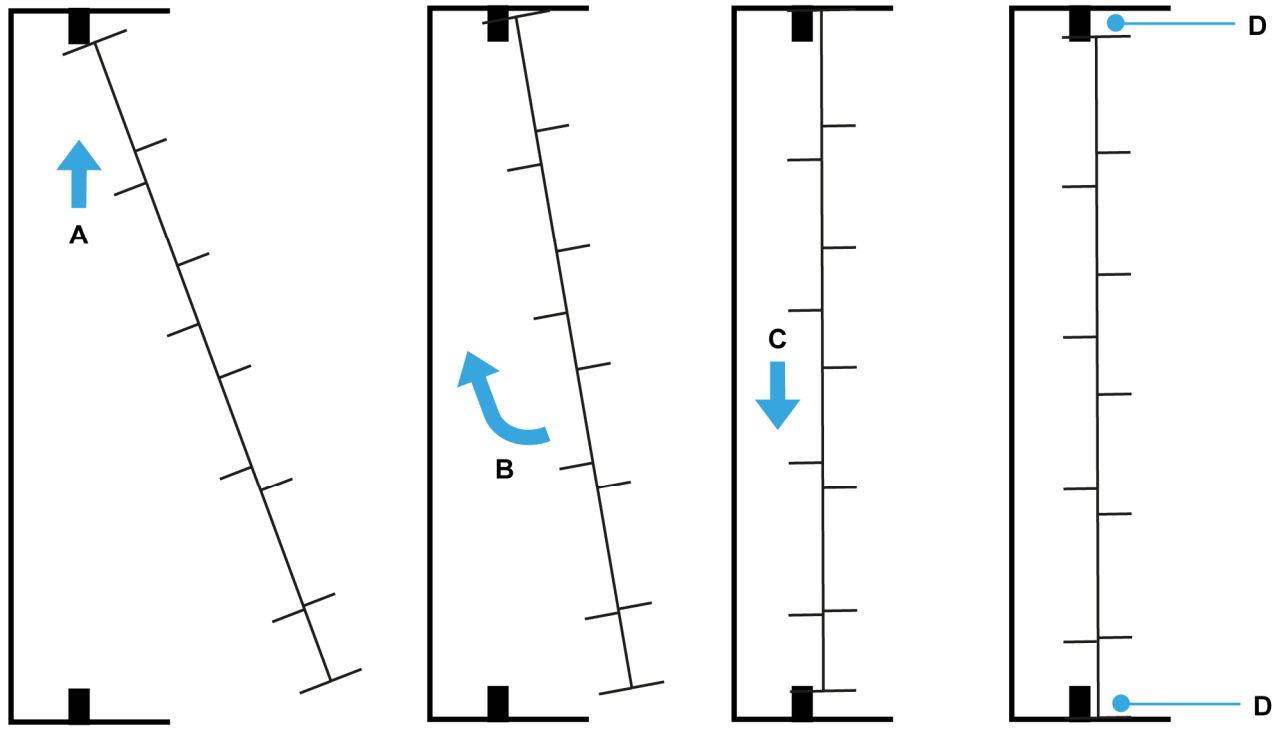
Figure 5: Removing and installing a runner rack



A. Top pin slots
B. Bottom pin slots
C. Instructions in **Figure 6** viewed from this direction and shows the left-hand rack.

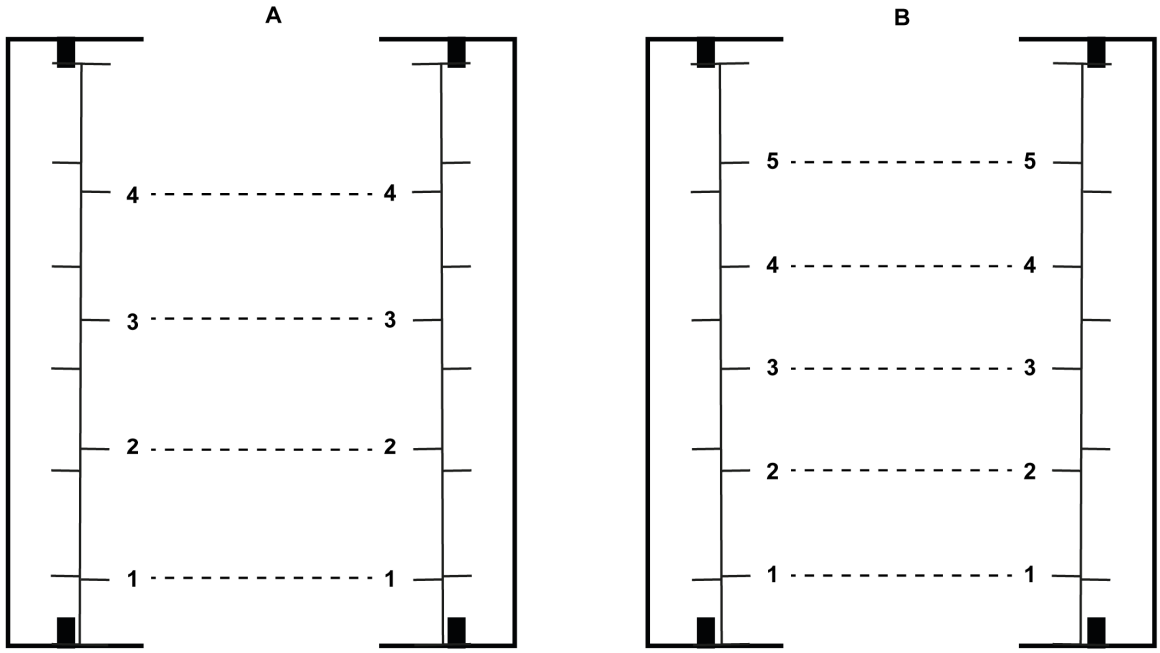
4T = 4-trays side
5T = 5-trays side

Figure 6: **Installing a runner rack (left-hand side shown)**



A. Place slots nearest oven wall over top pins
B. Swing rack into line up bottom slots with bottom pins
C. Lower rack onto bottom pins
D. Rack held in place by the top and bottom pins

Figure 7: Check for the correct number of runners on the left and right sides



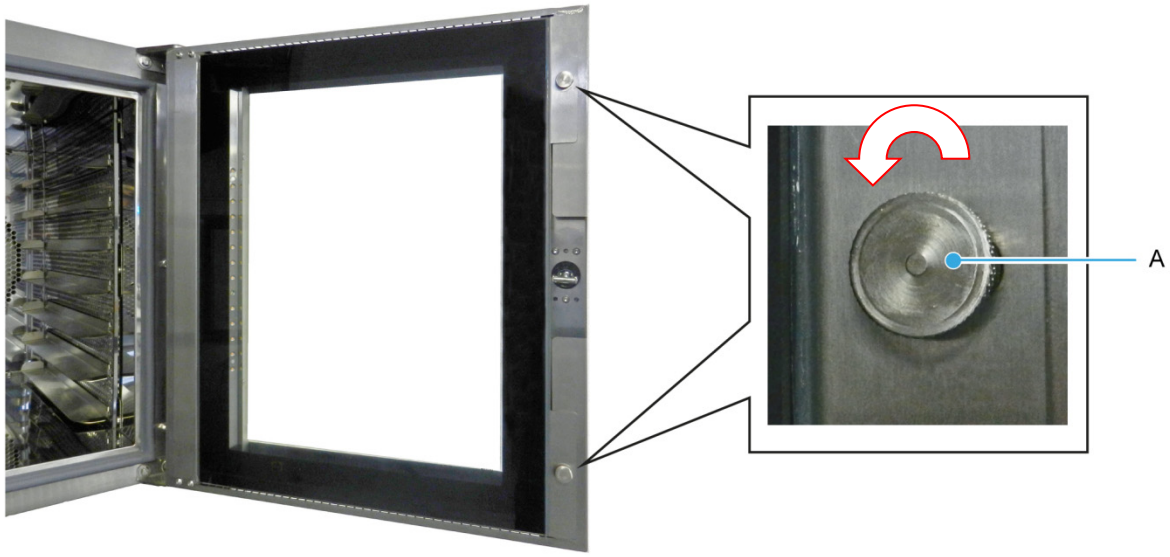
A. 4-tray runners
B. 5-tray runners

Door glass cleaning

The inner door glass is hinged to enable the cleaning of inner surfaces.

1. Undo the two screws shown in **Figure 8**.
2. Swing the inner glass panel away from the door (**Figure 9**).
3. Clean the inner surfaces of the door glass using a suitable glass cleaner.
4. Re-secure the inner glass with the two screws when finished cleaning.

Figure 8: Location of the two screws for releasing the inner glass



A. Undo the two screws to release the inner glass for cleaning

Figure 9: Inner glass panel moved away from the door

8. 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 39).

Steam system maintenance

- If it is noticed that the steaming operation has deteriorated, perhaps due to hard water scaling, contact your oven supplier.

Light bulb replacement

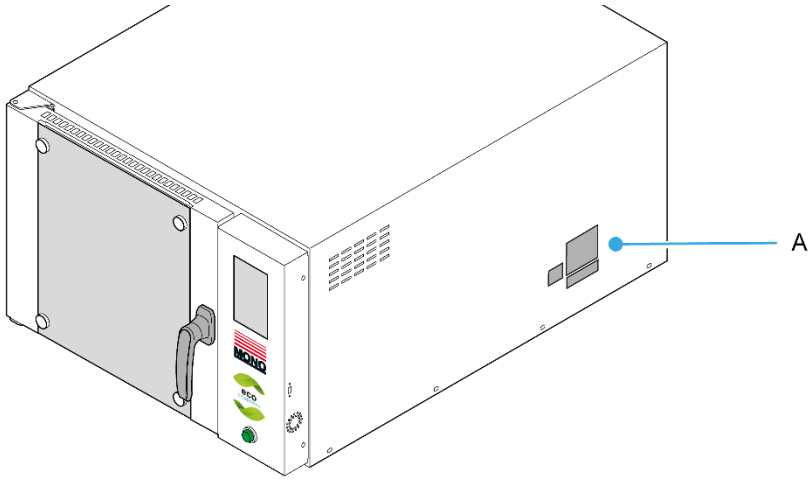
WARNING

- **In the event of a light failure, please contact your supplier.**
- **There are no customer-replaceable parts.**

9. Spares Parts

When ordering the spares, contact the Spares Department. Please quote the machine serial number (**A**) as found on the silver information plate of the machine and on the front cover of this manual.

MONO Equipment Limited
Queensway, Swansea West Industrial Park, Swansea, SA5 4EB, United Kingdom
E-mail: spares@monoequip.com
Phone: +44/0 1792 564039



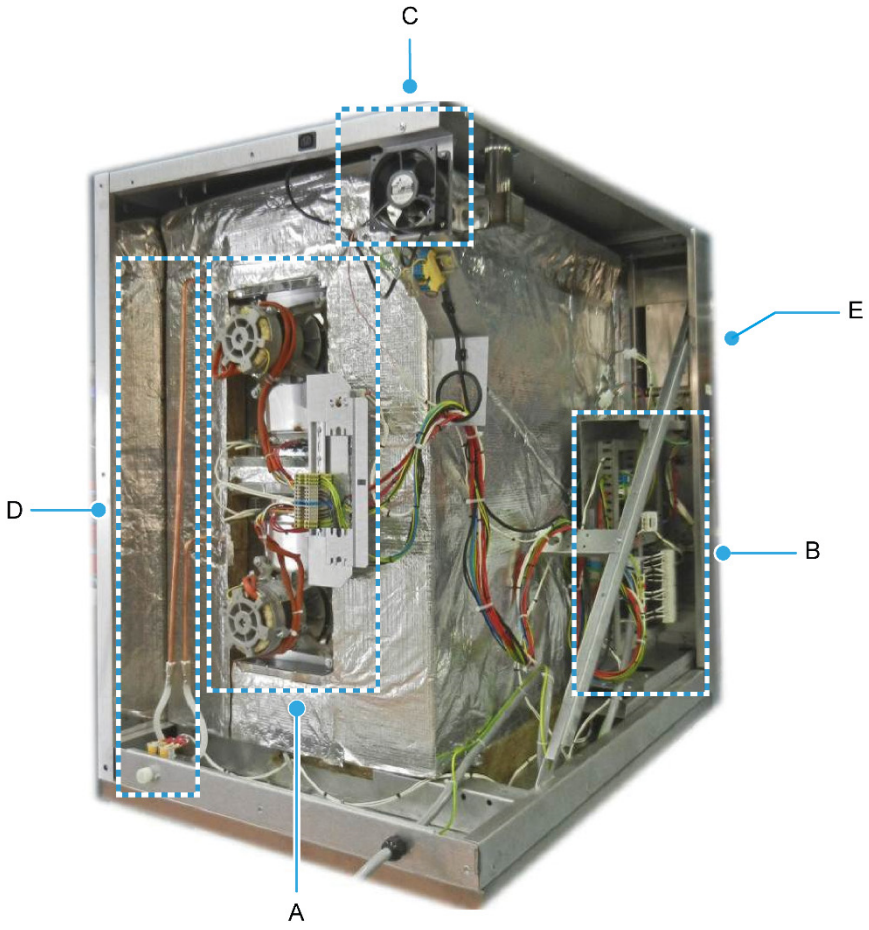
A. Machine serial number

Index

PART 1 10 Tray Oven Spares Section

Oven Code FG150

Figure 10: **Rear view with outer sheeting removed (FG150)**



Part 1 | Section 1 | Motors and Elements (FG150)

Figure 11: Motors and Elements (FG150) – 1

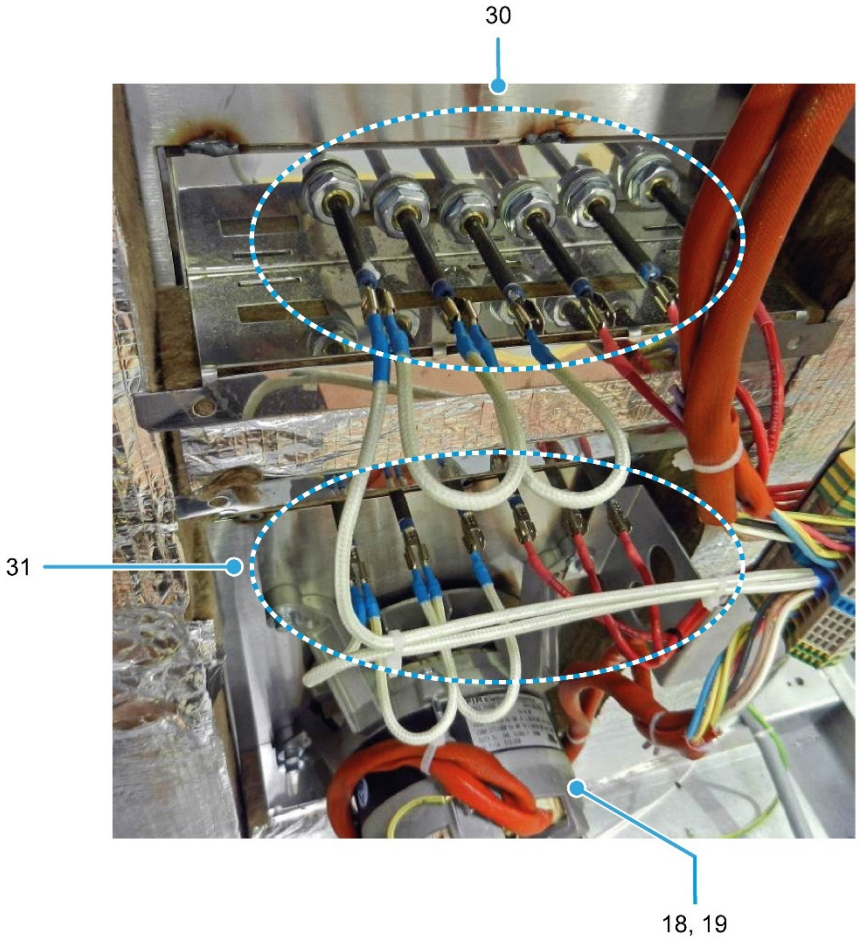


Table 4: Item numbers in Figure 11

Item Number	Part Number	Part Description
18, 19 (1)	B720-74-005	Fan motors
30, 31	B847-04-068	Heating element 240 Vac for 8 kW oven
	B847-04-073	Heating element 220 Vac for 8 kW oven
	B847-04-067	Heating element 240 Vac for 7 kW oven
	B847-04-074	Heating element 220 Vac for 7 kW oven

(1) Top not shown.

NOTE
Part numbers are referenced from electrical drawing M1500E25-75100 in the Electrical Manual.

Figure 12: 10-Tray Motors and Elements (FG150)

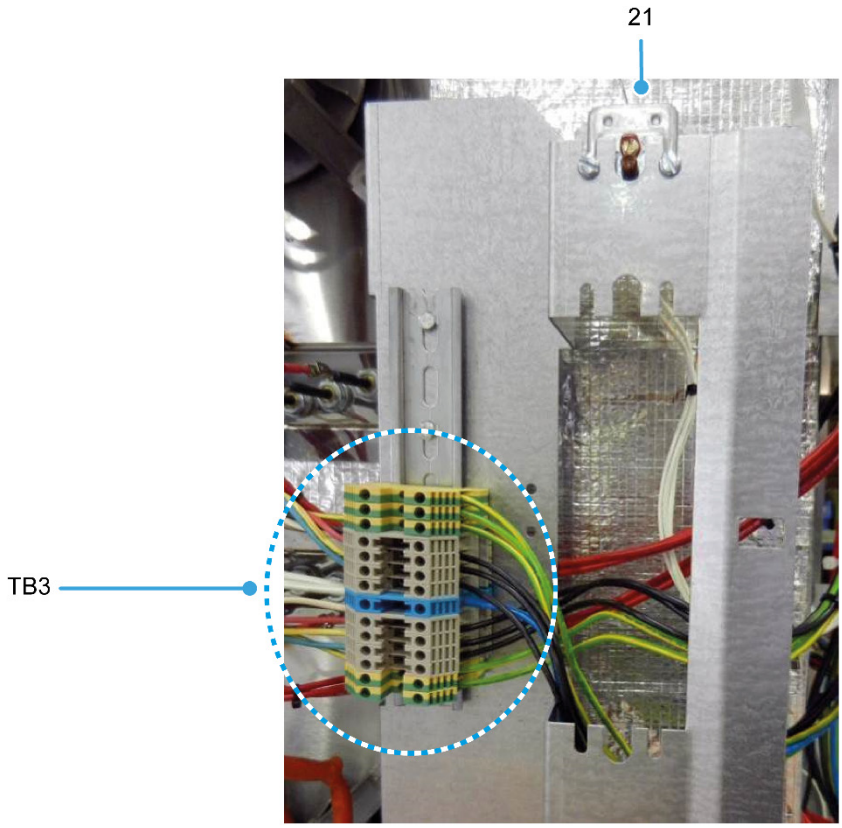


Table 5: Item numbers in Figure 12

Item Number	Part Number	Part Description
TB3	N/A	Motor and Element Connections
21	B888-30-014	Overheat thermostat

NOTE
Part numbers are referenced from electrical drawing M1500E25-75100 in the Electrical Manual.

Part 1 | Section 2 | Main Panel (FG150)

Figure 13: Main Panel (FG150)

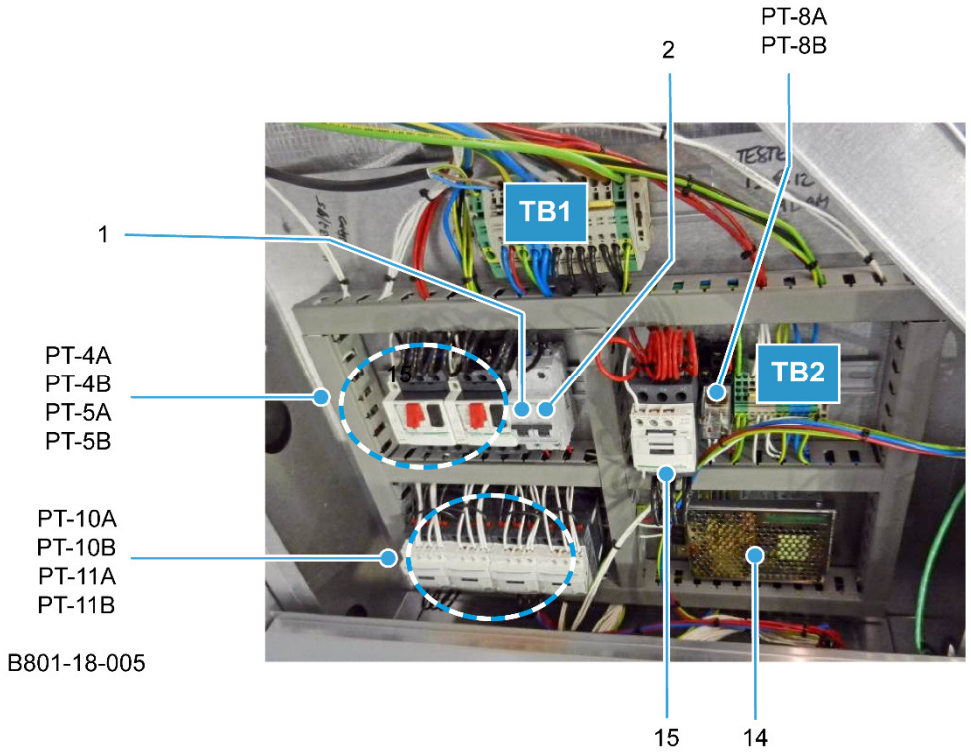


Table 6: Item numbers in Figure 13

Item Number	Part Number	Part Description
1	B872-22-063	Interior lighting MCB
2	B872-22-062	Control cuircuit MCB
14	B801-93-005	24 Vdc power supply unit
15	B801-08-020	Heating element contactor
PT-4A, PT-5A	B801-03-020	Fan motor overload
PT-4B, PT-5B	B801-14-012	Fan motor overload auxiliary contactor
PT-8A	B723-37-004	Interior light relay
PT-9B	B723-36-001	Interior light relay base
PT-10A (Top Forward)	B801-08-031	Fan motor contactors
PT-10B (Top Reverse)		
PT-11A (Bottom Forward)		
PT-11B (Bottom Reverse)		
N/A	B801-18-005	Interlock unit X2

NOTE
Part numbers are are referenced from electrical drawing M1500E25-75100 in the Electrical Manual.

Part 1 | Section 3 | Cooling Fan and Damper (FG150)

Figure 14: Cooling Fan and Damper (FG150)

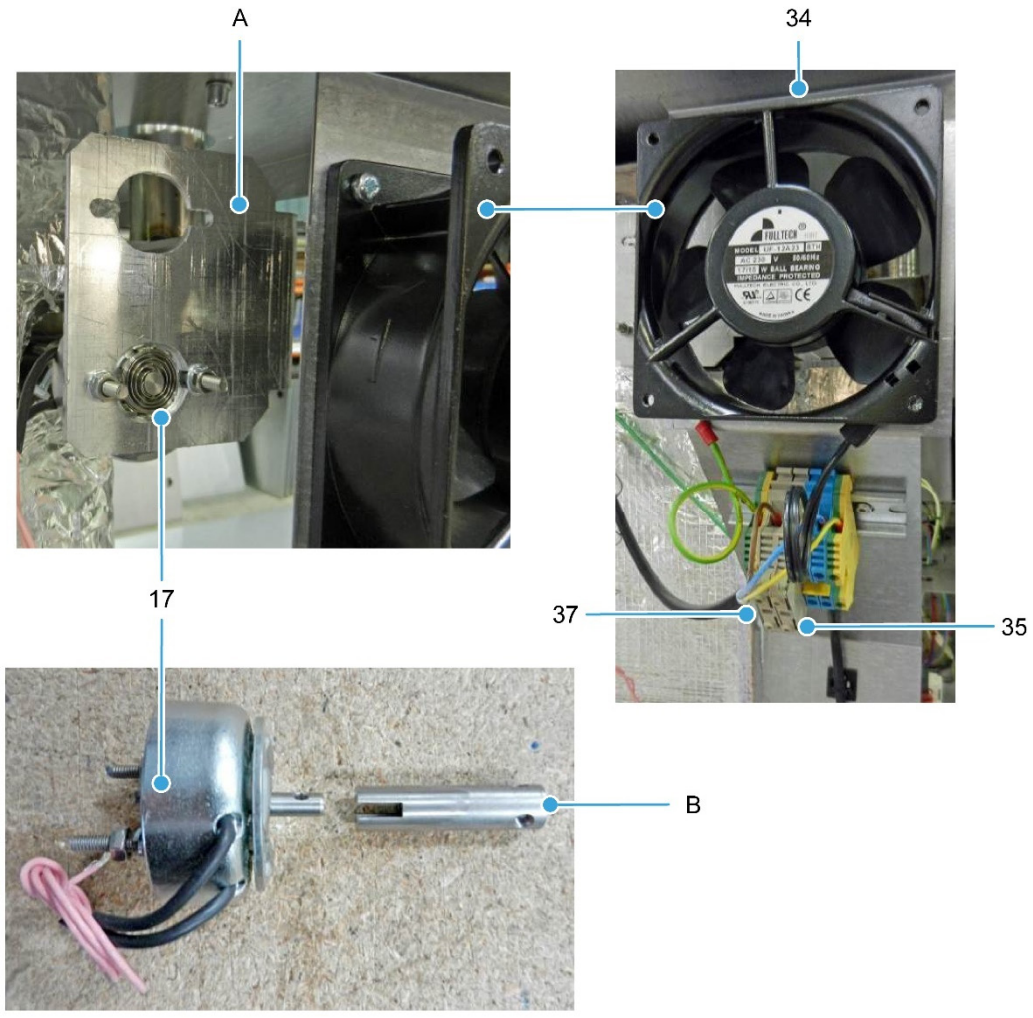


Table 7: Item numbers in Figure 14

Item Number	Part Number	Part Description
17	B749-83-003	Damper solenoid L/H oven
	B749-83-004	Damper solenoid R/H oven
34	B869-75-018	Rear fan unit
35	B842-85-025	Rear fan unit fuse
37	B842-85-039	Auxiliary power outlet fuse
A	150-02-01000	Damper bracket
B	158-02-00600	Coupling

NOTE
Part numbers are referenced from electrical drawing M1500E25-75100 in the Electrical Manual.

Part 1 | Section 4 | Water/Steam System (FG150)

Figure 15: Water/Steam System (FG150) – 1

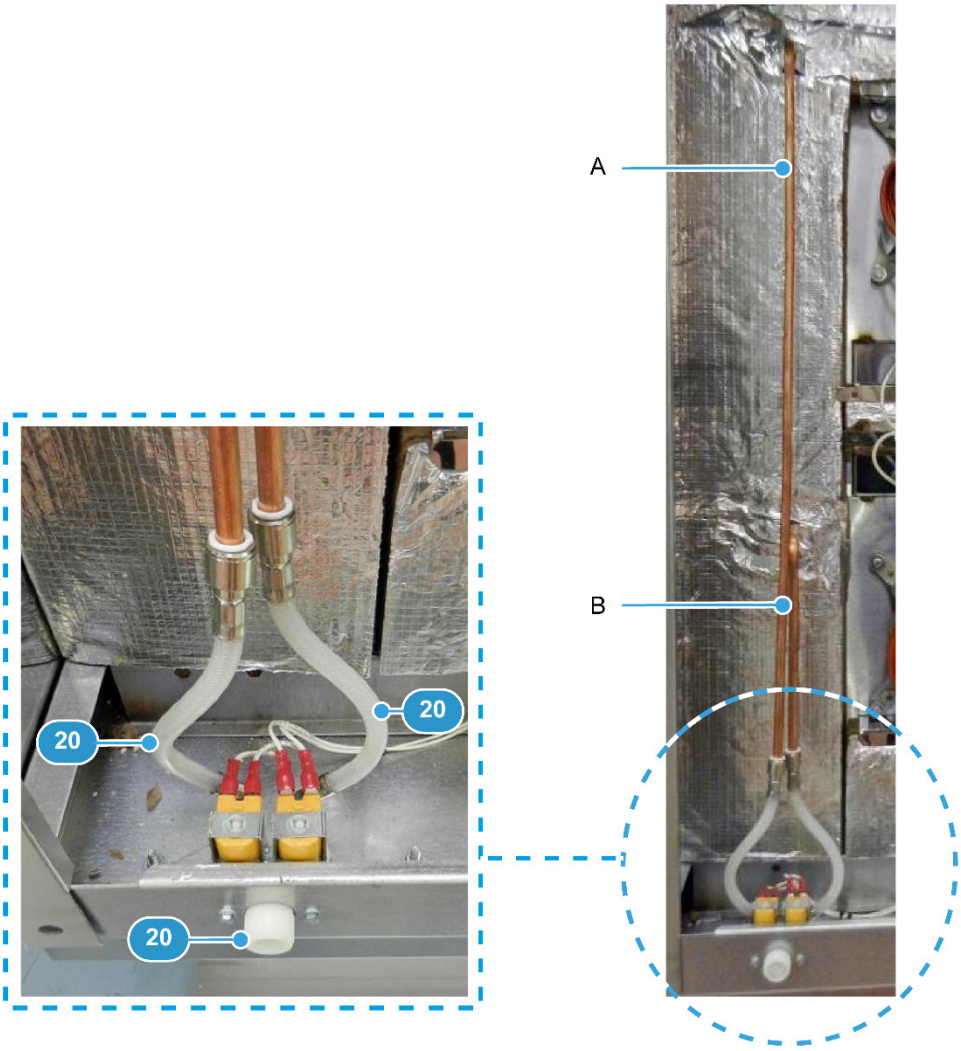


Table 8: Item numbers in Figure 15

Item Number	Part Number	Part Description
20	150-07-00400	Water solenoid (including hoses)
N/A	A900-34-087	Hose – blue (not shown attached)
A	150-07-00800	Delivery pipe – long
B	150-07-00700	Delivery pipe - short

NOTE
Part numbers are referenced from electrical drawing M1500E25-75100 in the Electrical Manual.

Figure 16: Water/Steam System (FG150) – 2

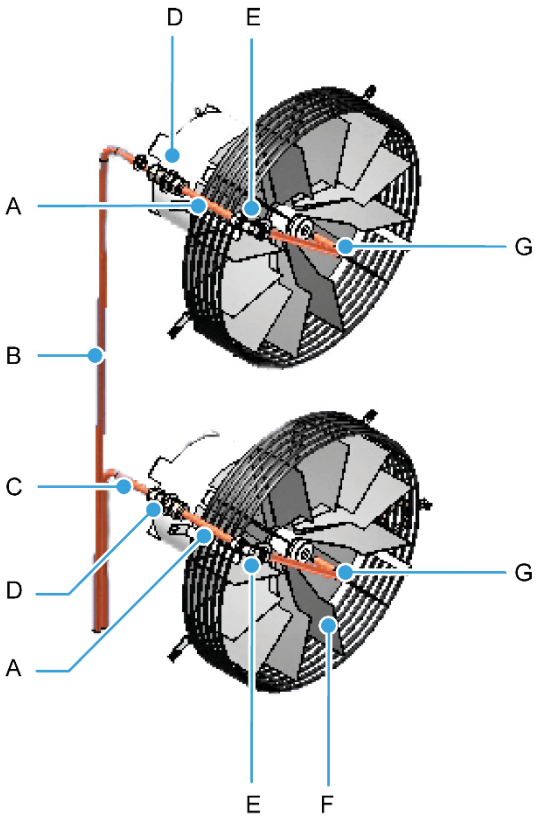


Table 9: Item numbers in Figure 16

Item Number	Part Number	Part Description
A	150-07-00900	Joint tube
B	150-07-00800	Delivery pipe - long
C	150-07-00700	Delivery pipe - short
D	A900-34-321	Bulkhead coupling
E	A900-34-387	Equal elbow
F	150-00-11300	Fan
G	150-07-00500	Delivery pipe

NOTE
Complete steam assembly kit is part number 150-07-00003.
Includes 150-01-07700 (pipe guide bracket x 2) and 150-07-00400 (double solenoid inlet valve).

Part 1 | Section 5 | Baking Chamber and Door Parts (FG150)

Figure 17: Baking Chamber and Door Parts (FG150)

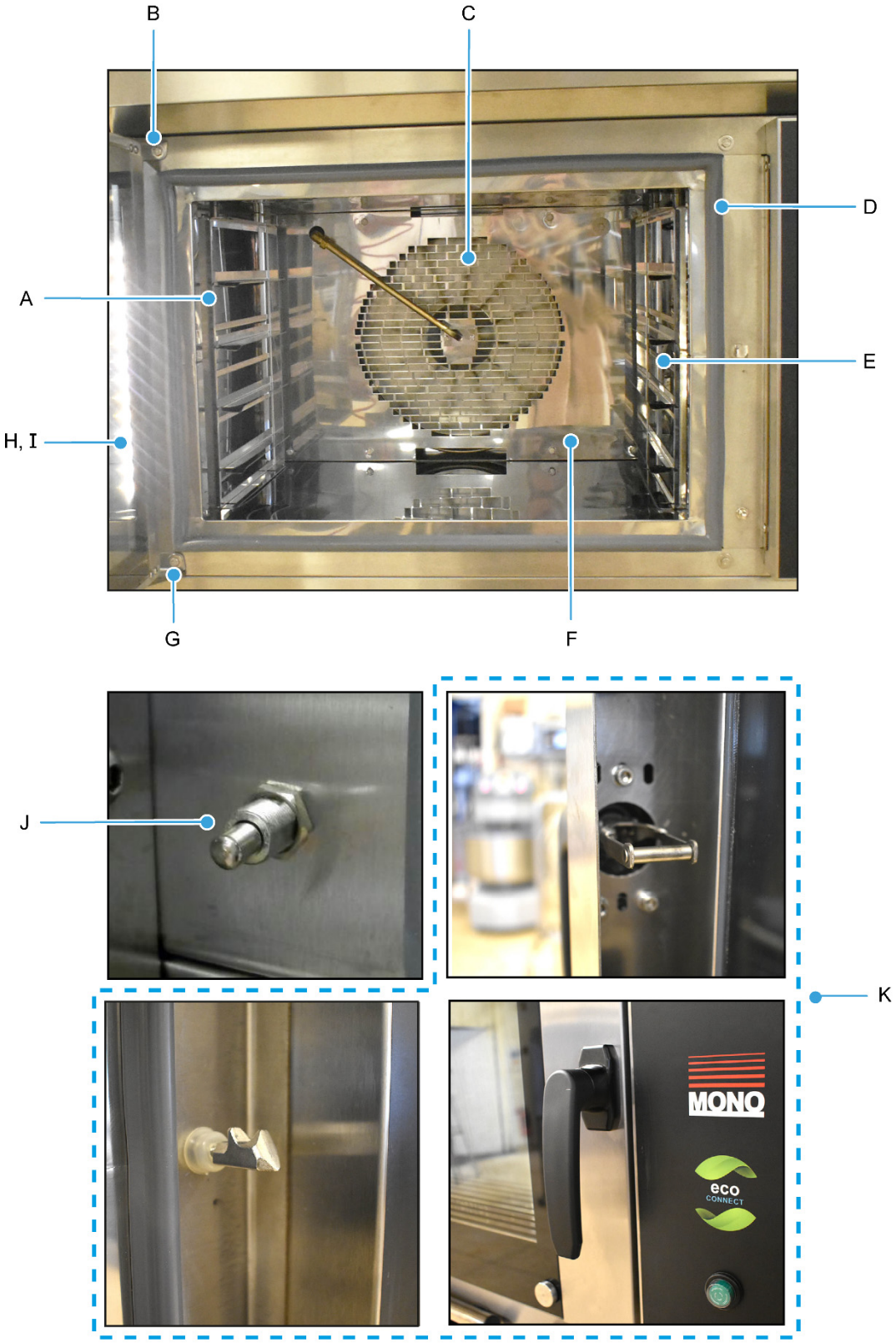


Table 10: Item numbers in Figure 17

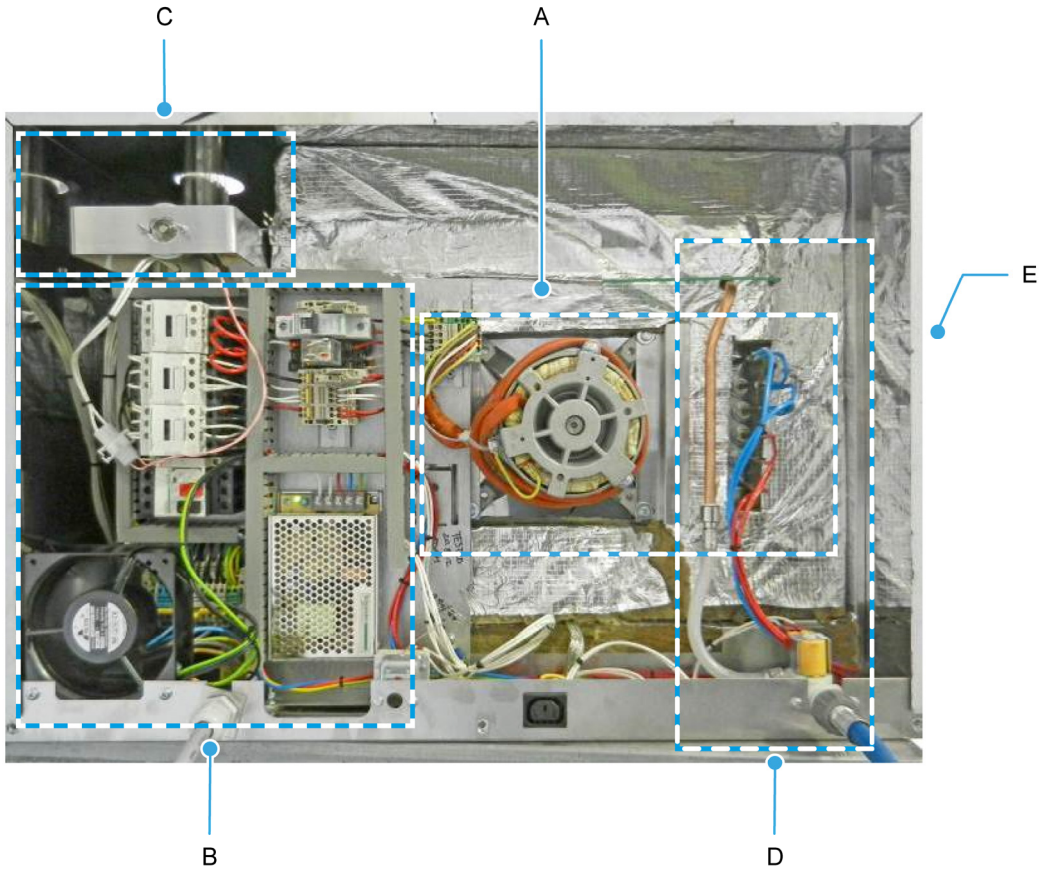
Item Number	Part Number	Part Description
A	150-01-07201	Side sheet L/H (with fixed runners)
B	149-03-03800	Top hinge L/H oven
	149-03-03801	Top hinge R/H oven
C	150-00-11300	Fan
D	150-03-02500	Door seal
E	150-01-07200	Side sheet R/H (with fixed runners)
F	150-01-06700	Rear sheet
G	150-03-04700	Bottom hinge L/H oven
	150-03-05400	Bottom hinge R/H oven
H	149-03-04100	Outer door glass
I	150-03-10100	Inner door glass
J	B482-07-037	Door switch
K	A900-27-254	Handle/Catch/Latch assembly

NOTE
Complete door assembly is part number 150-03-14400 (L/H) and 150-03-14401 (R/H).
State which is required.

PART 2 4/5 Tray 18” x 30” Oven Spares Section

Oven Code FG159

Figure 18: Rear view with outer sheeting removed (FG159)



Part 2 | Section 1 | Motor and Element (FG159)

Figure 19: Motor and Element (FG159)

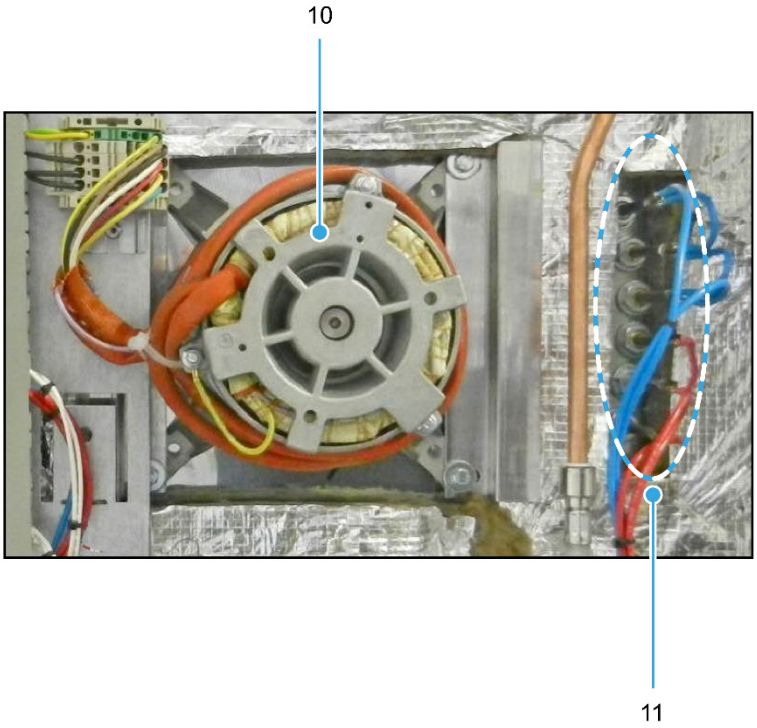


Table 11: Item numbers in Figure 19

Item Number	Part Number	Part Description
10	B720-74-005	Fan motor unit
11	B847-04-068	Heating element, 240 Vac
	B847-04-073	Heating element, 220 Vac

NOTE
Part numbers are referenced from electrical drawing M159E25-75000 in the Electrical Manual.

Part 2 | Section 2 | Main Panel (FG159)

Figure 20: Main Panel (FG159)

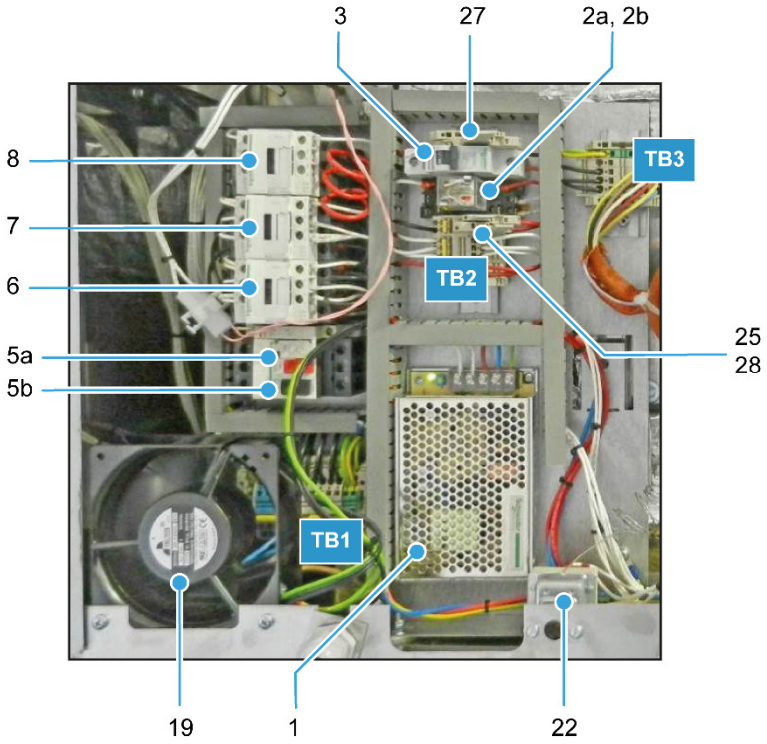


Table 12: Item numbers in Figure 20

Item Number	Part Number	Part Description
1	B801-92-005	Power supply
2a	B723-37-004	Light relay
2b	B723-36-001	Light relay base
3	B872-22-062	Control circuit MCB
5a	B801-03-020	Fan motor overload unit
5b	B801-14-012	Fan motor overload auxiliary contact
6	B801-08-031	Fan motor forward contact
7	B801-08-031	Fan motor reverse contact
8	B801-08-021	Element contactor
19	B869-75-018	Rear cooling fan
22	B888-30-014	Overheat thermostat
25	B842-85-042	Light fuse
27	B842-85-025	Fan fuse
28	B842-85-039	Auxiliary socket fuse

NOTE
Part numbers are referenced from electrical drawing M159E25-75000 in the Electrical Manual.

Part 2 | Section 3 | Damper (FG159)

Figure 21: Damper (FG159)

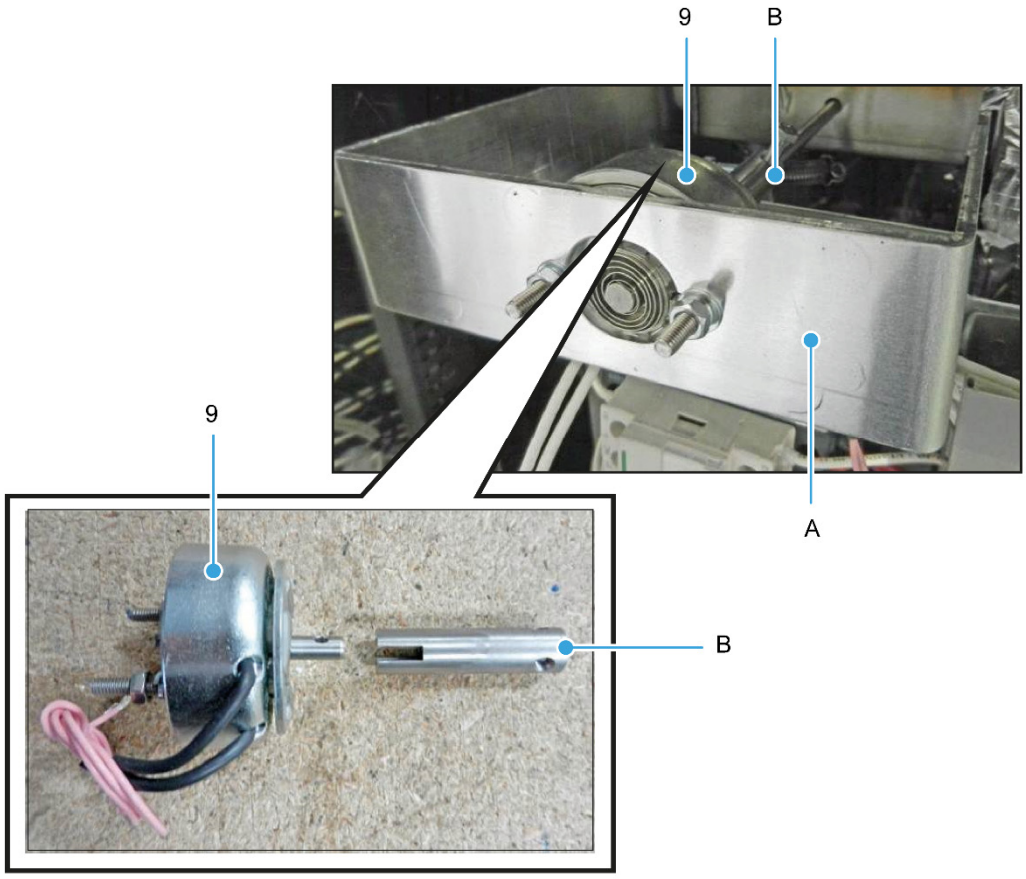


Table 13: Item numbers in Figure 21

Item Number	Part Number	Part Description
9	B749-83-003	Damper solenoid L/H oven
	B749-83-004	Damper solenoid R/H oven
A	158-02-00300	Damper solenoid bracket
B	158-02-00600	Coupling

NOTE
Part numbers are referenced from electrical drawing M159E25-75000 in the Electrical Manual.

Part 2 | Section 4 | Water/Steam System (FG159)

Figure 22: Water/Steam System (FG159) – 1

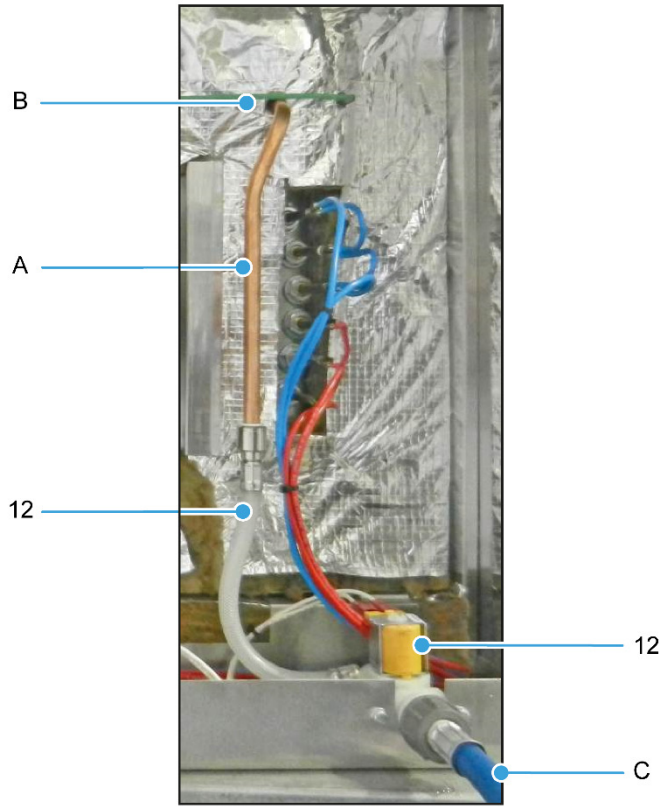


Table 14: Item numbers in Figure 22

Item Number	Part Number	Part Description
12	158-17-00400	Water inlet assembly (including hose)
A	A900-34-253	Copper pipe (10 mm OD x 20 SWG)
B	A900-34-321	Bulkhead coupling (under insulation)
C	A900-34-087	Hose – blue

NOTE
Part numbers are referenced from electrical drawing M159E25-75000 in the Electrical Manual.

Figure 23: Water/Steam System (FG159) – 2

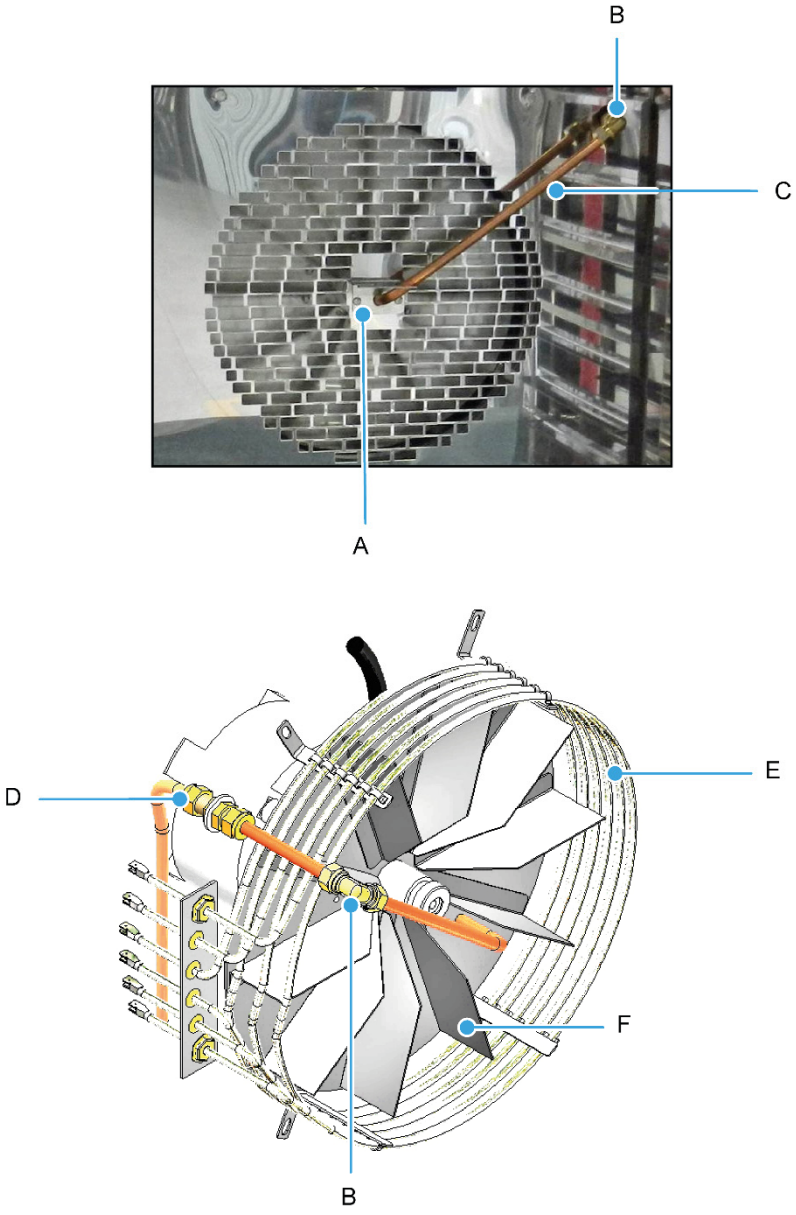


Table 15: Item numbers in Figure 23

Item Number	Part Number	Part Description
A	150-01-07700	Pipe guide bracket
B	A900-34-387	Equal elbow
C	(1)	Pipe
D	A900-34-321	Bulkhead coupling
E	B847-04-068	Heating element, 240 Vac
	B847-04-073	Heating element, 220 Vac
F	150-00-11300	Fan

(1) Individual part numbers not available for pipes. All pipes made from A900-34-253 Copper Pipe 10 mm O/D x 20 SWG wall.

Part 2 | Section 5 | Baking Chamber and Door Parts (FG159)

Figure 24: Baking Chamber and Door Parts (FG159)

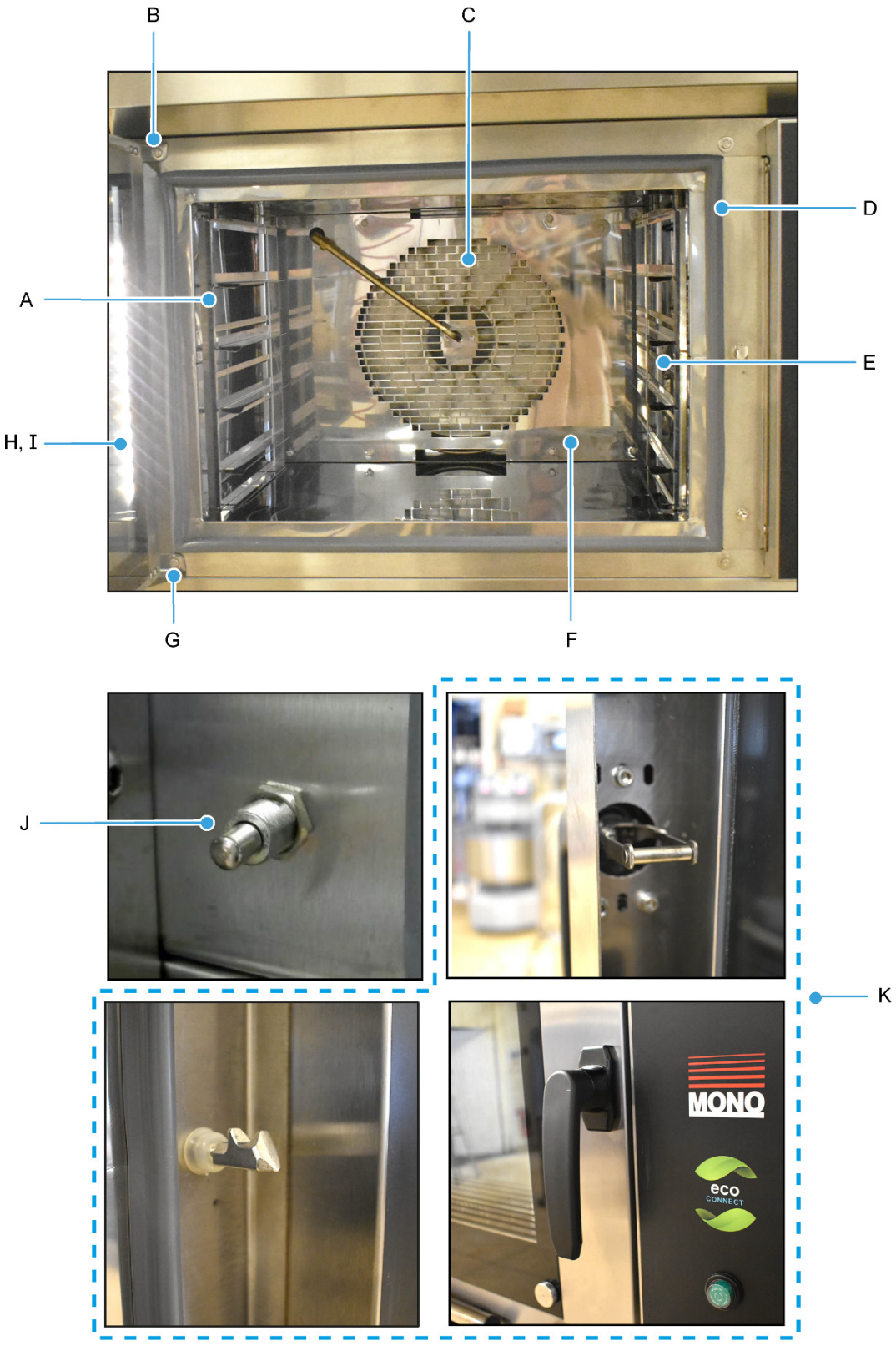


Table 16: Item numbers in Figure 24

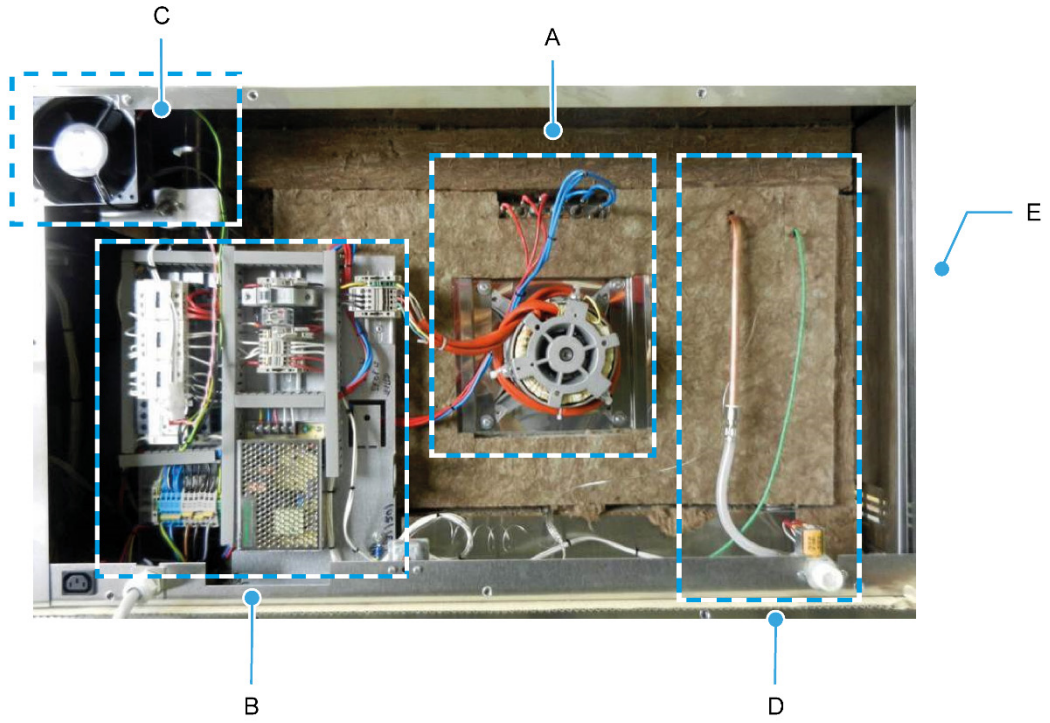
Item Number	Part Number	Part Description
A	159-01-05000	L/H fixed runners, 4 tray
	159-01-05200	L/H fixed runners, 5 tray
B	158-03-10501	Top hinge L/H oven
	158-03-10500	Top hinge R/H oven
C	150-00-11300	Fan
D	159-03-01500	Door seal
E	159-01-05001	R/H fixed runners, 4 tray
	159-01-05201	R/H fixed runners, 5 tray
F	159-05-00400	Rear sheet
G	158-03-05200	Bottom hinge L/H oven
	158-03-05201	Bottom hinge R/H oven
H	153-03-04000	Outer door glass
I	159-03-06600	Inner door including glass
J	B482-07-037	Door switch
K	A900-27-254	Handle/Catch/Latch assembly

NOTE
Complete door assembly part numbers are:
159-03-06500 (L/H hinge door) and 159-03-06501 (R/H hinge door).

PART 3 4/5 Tray 60cm x 40cm Oven Spares Section

Oven Code FG158

Figure 25: Rear view with outer sheeting removed (FG158)



Part 3 | Section 1 | Motor and Element (FG158)

Figure 26: Motor and Element (FG158)

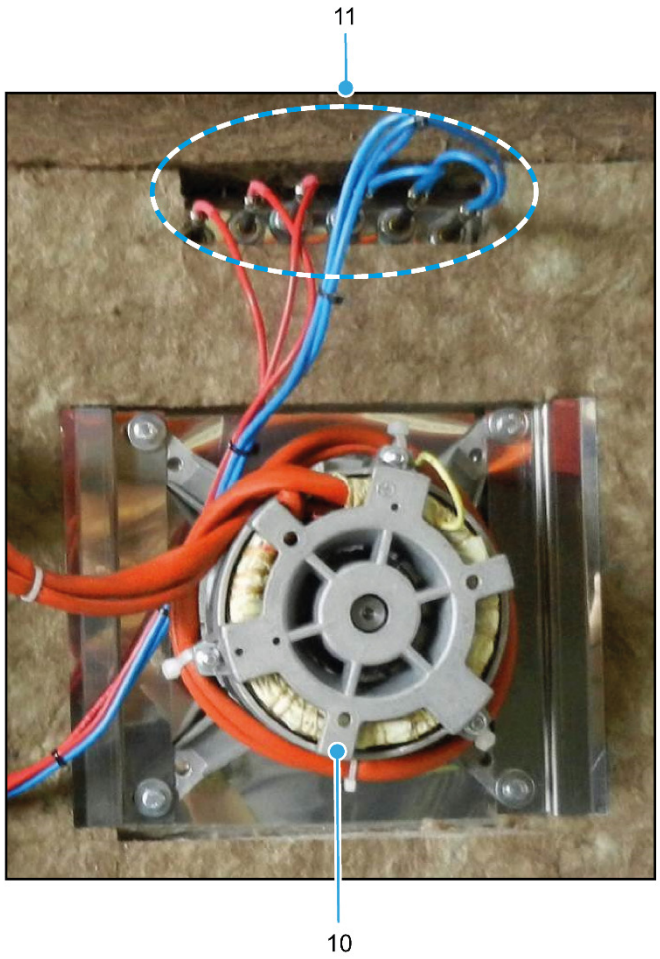


Table 17: Item numbers in Figure 26

Item Number	Part Number	Part Description
10	B720-74-005	Fan motor unit
11	B847-04-067	Heating element, 240 Vac
	B847-04-074	Heating element, 220 Vac

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Part 3 | Section 2 | Main Panel (FG158)

Figure 27: Main Panel (FG158)

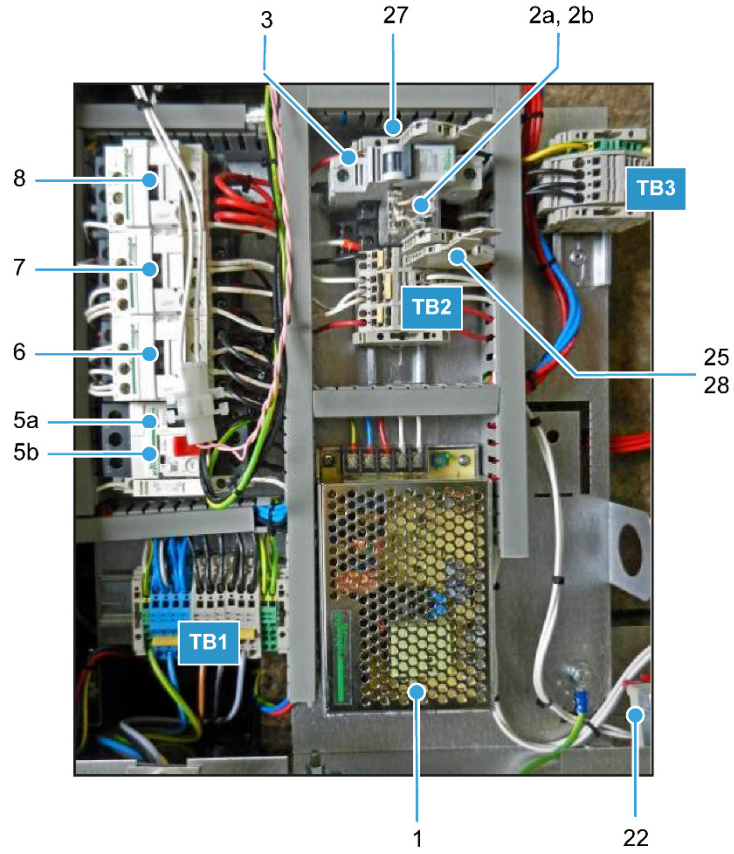


Table 18: Item numbers in Figure 27

Item Number	Part Number	Part Description
1	B801-93-005	Power supply
2a	B723-37-004	Light relay
2b	B723-36-001	Light relay base
3	B872-22-062	Control circuit MCB
5a	B801-03-020	Fan motor overload unit
5b	B801-14-012	Fan motor overload auxiliary contact
6	B801-08-031	Fan motor forward contact
7	B801-08-031	Fan motor reverse contact
8	B801-08-021	Element contactor
22	B888-30-014	Overheat thermostat
25	B842-85-042	Light fuse
27	B842-85-025	Fan fuse
28	B842-85-039	Auxiliary socket fuse

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Part 3 | Section 3 | Damper and Cooling Fan (FG158)

Figure 28: Damper and Cooling Fan (FG158)

Table 19: Item numbers in Figure 28

Item Number	Part Number	Part Description
9	B749-83-003	Damper solenoid L/H oven
	B749-83-004	Damper solenoid R/H oven
19	B869-75-018	Rear cooling fan
A	158-02-00300	Damper solenoid bracket
B	158-02-00600	Coupling

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Part 3 | Section 4 | Water/Steam System (FG158)

Figure 29: Water/Steam System (FG158) – 1

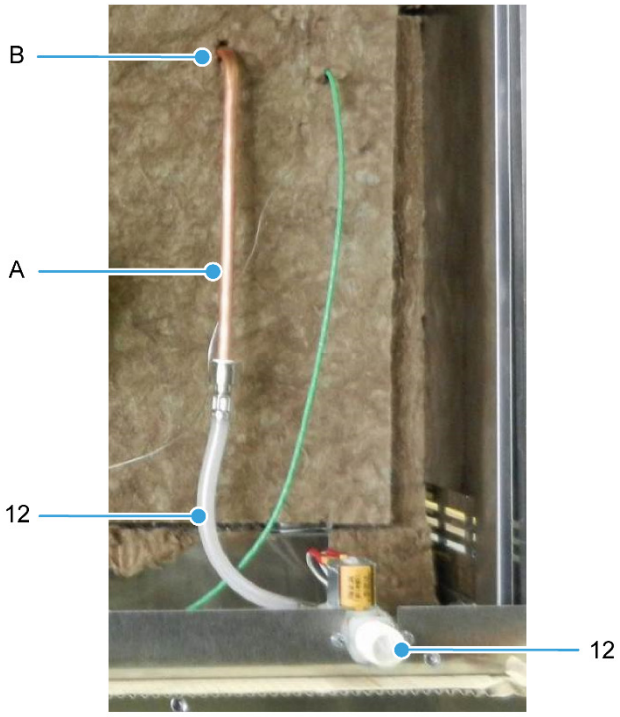


Table 20: Item numbers in Figure 29

Item Number	Part Number	Part Description
12	158-17-00400	Water inlet assembly (including hose)
A	A900-34-253	Copper pipe (10 mm OD x 20 SWG)
B	A900-34-321	Bulkhead coupling (under insulation)
N/A	A900-34-087	Hose – blue (not shown)

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Figure 30: Water/Steam System (FG158) – 2

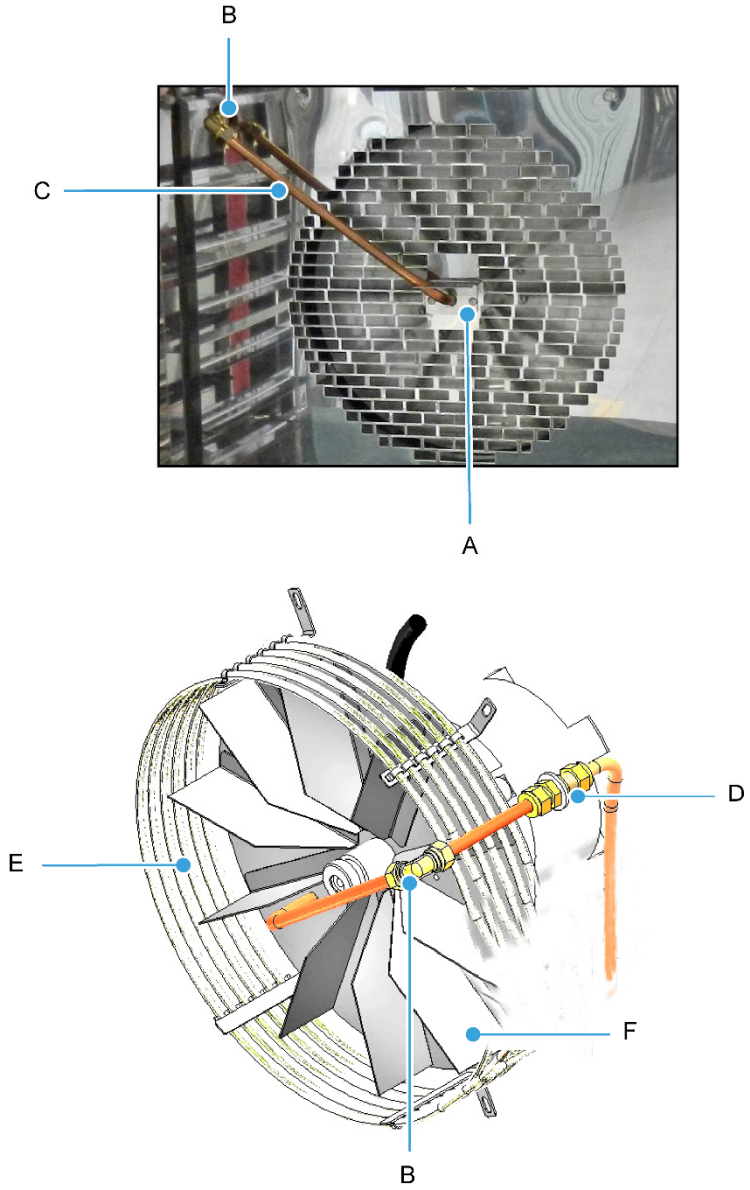


Table 21: Item numbers in Figure 30

Item Number	Part Number	Part Description
A	150-01-07700	Pipe guide bracket
B	A900-34-387	Equal elbow
C	(1)	Pipe
D	A900-34-321	Bulkhead coupling
E	B847-04-067	Heating element, 240 Vac
	B847-04-074	Heating element, 220 Vac
F	150-00-11200	Fan

(1) Individual part numbers not available for pipes. All pipes made from A900-34-253 Copper Pipe 10 mm O/D x 20 SWG wall.

Part 3 | Section 5 | Baking Chamber and Door Parts (FG158)

Figure 31: Baking Chamber and Door Parts (FG158)

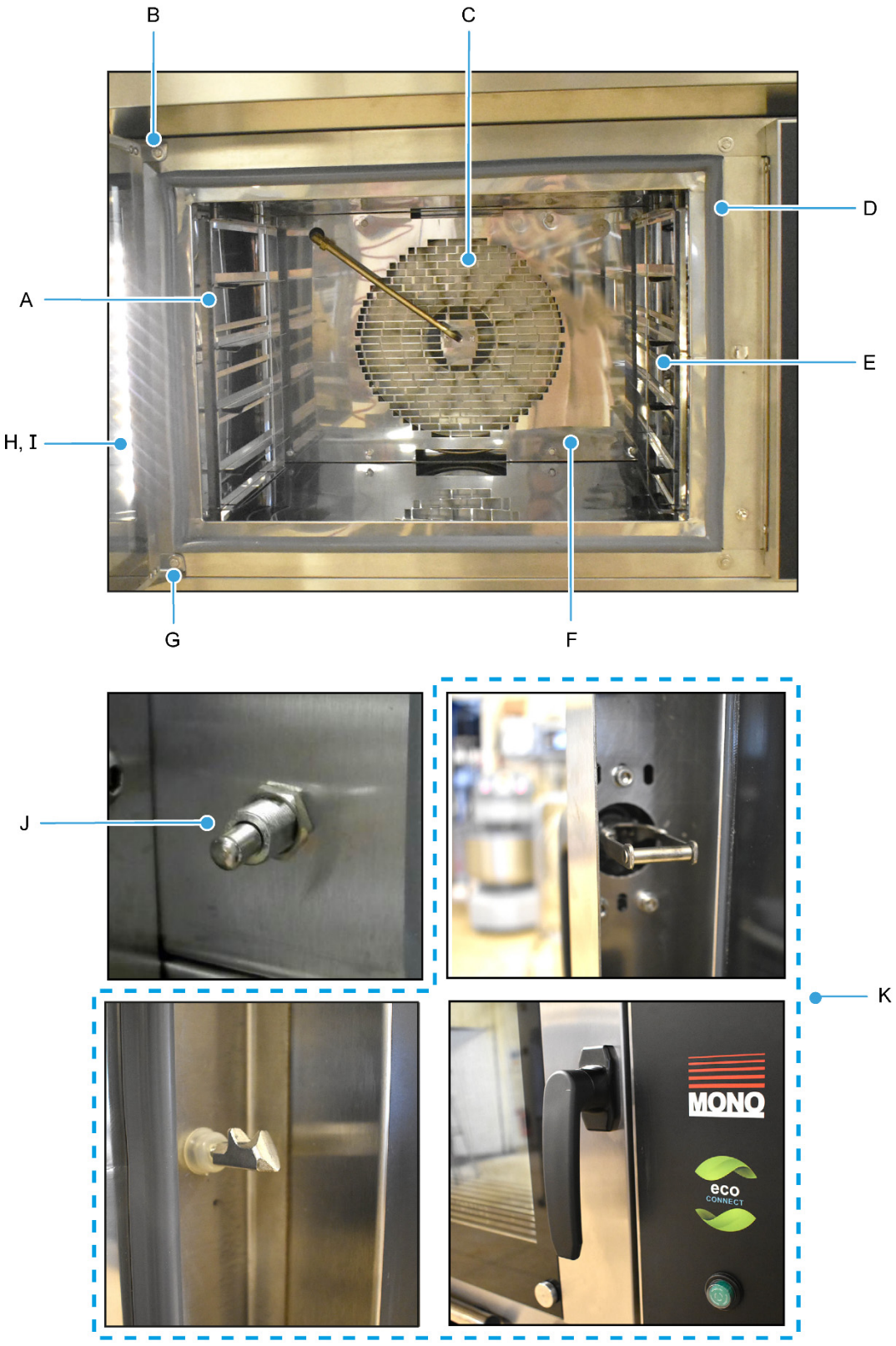


Table 22: Item numbers in Figure 31

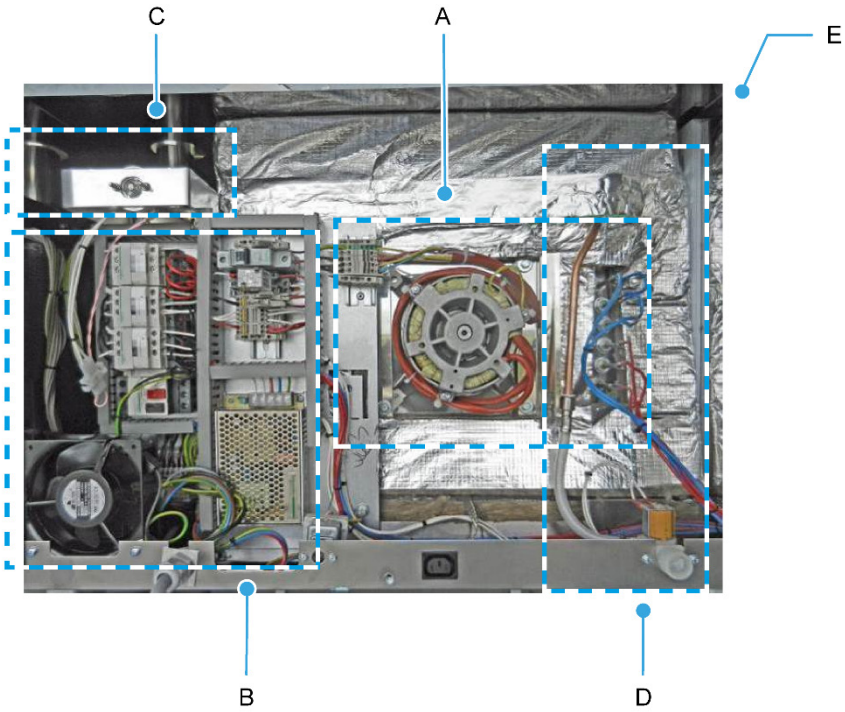
Item Number	Part Number	Part Description
A	158-04-01000	L/H runner rack, 4/5 tray
B	158-03-10501	Top hinge L/H oven
	158-03-10500	Top hinge R/H oven
C	158-00-11200	Fan
D	158-03-01500	Door seal
E	158-04-01001	R/H runner rack, 4/5 tray
F	158-05-13300	Rear sheet
G	158-03-05200	Bottom hinge L/H oven
	158-03-05201	Bottom hinge R/H oven
H	158-03-06000	Outer door glass
I	158-03-41600	Inner door glass
J	B482-07-037	Door switch
K	A900-27-254	Handle/Catch/Latch assembly

NOTE
Complete door assembly part numbers are:
158-03-05900 (L/H hinge door) and 158-03-05901 (R/H hinge door).

PART 4 4/5 Tray 40cm x 60cm Oven Spares Section

Oven Code FG153

Figure 32: Rear view with outer sheeting removed (FG153)



Part 4 | Section 1 | Motor and Element (FG153)

Figure 33: Motor and Element (FG153)

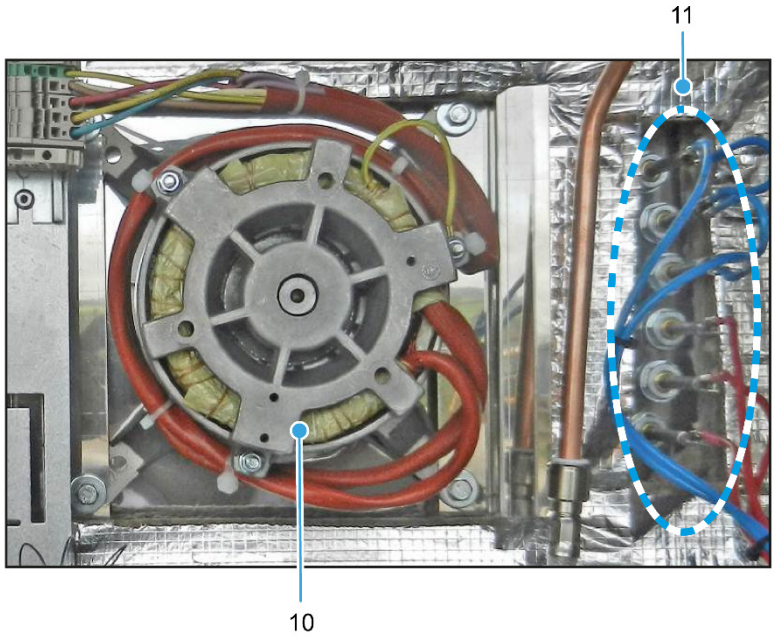


Table 23: Item numbers in Figure 33Figure 26

Item Number	Part Number	Part Description
10	B720-74-005	Fan motor unit
11	B847-04-067	Heating element, 240 Vac
	B847-04-074	Heating element, 220 Vac

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Part 4 | Section 2 | Main Panel (FG153)

Figure 34: Main Panel (FG153)

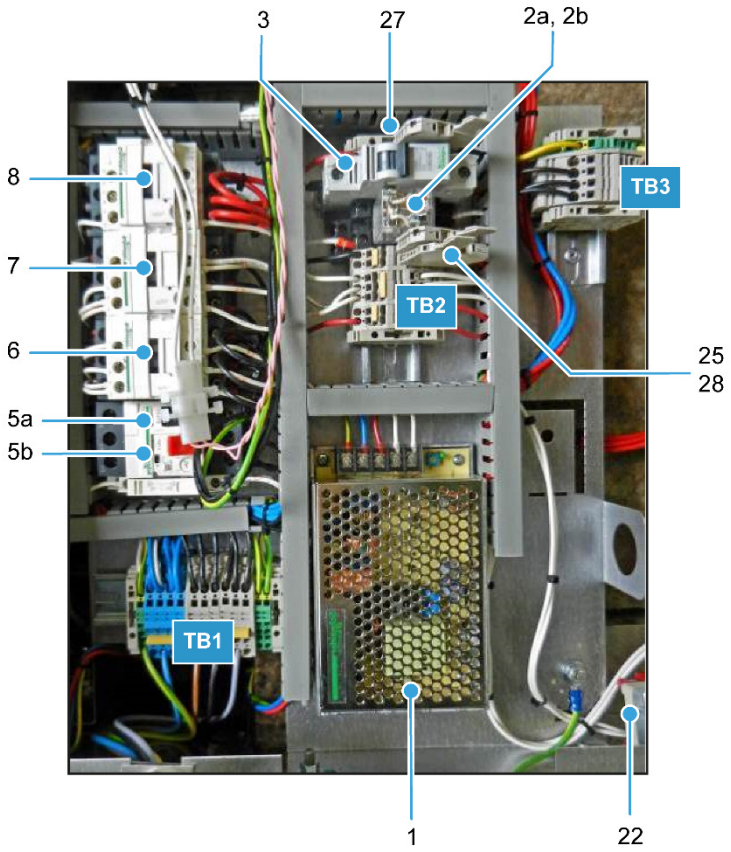


Table 24: Item numbers in Figure 34Figure 27

Item Number	Part Number	Part Description
1	B801-93-005	Power supply
2a	B723-37-004	Light relay
2b	B723-36-001	Light relay base
3	B872-22-062	Control circuit MCB
5a	B801-03-020	Fan motor overload unit
5b	B801-14-012	Fan motor overload auxiliary contact
6	B801-08-031	Fan motor forward contact
7	B801-08-031	Fan motor reverse contact
8	B801-08-021	Element contactor
22	B888-30-014	Overheat thermostat
25	B842-85-042	Light fuse
27	B842-85-025	Fan fuse
28	B842-85-039	Auxiliary socket fuse

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Part 4 | Section 3 | Damper and Cooling Fan (FG153)

Figure 35: Damper and Cooling Fan (FG153)

Table 25: Item numbers in Figure 35

Item Number	Part Number	Part Description
9	B749-83-003	Damper solenoid L/H oven
	B749-83-004	Damper solenoid R/H oven
19	B869-75-018	Rear cooling fan
A	158-02-00300	Damper solenoid bracket
B	158-02-00600	Coupling

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Part 4 | Section 4 | Water/Steam System (FG153)

Figure 36: Water/Steam System (FG153) – 1

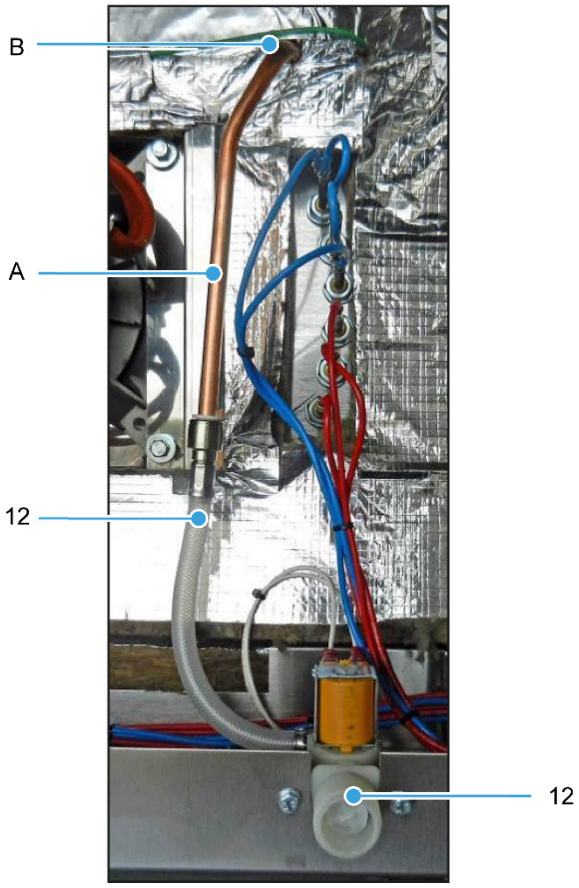


Table 26: Item numbers in Figure 36Figure 29

Item Number	Part Number	Part Description
12	158-17-00400	Water inlet assembly (including hose)
A	A900-34-253	Copper pipe (10 mm OD x 20 SWG)
B	A900-34-321	Bulkhead coupling (under insulation)
N/A	A900-34-087	Hose – blue (Not shown)

NOTE
Part numbers are referenced from electrical drawing M158E25-75200 in the Electrical Manual.

Figure 37: Water/Steam System (FG153) – 2

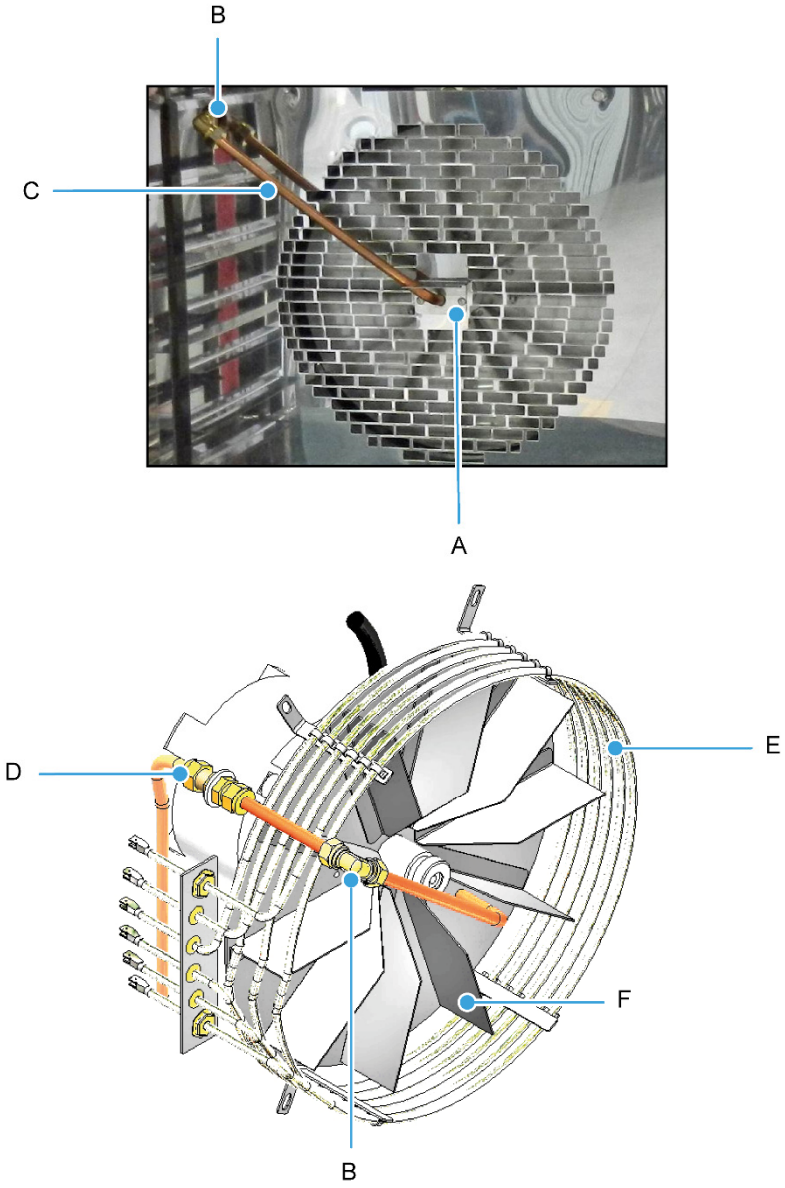


Table 27: Item numbers in Figure 37

Item Number	Part Number	Part Description
A	150-01-07700	Pipe guide bracket
B	A900-34-387	Equal elbow
C	(1)	Pipe
D	A900-34-321	Bulkhead coupling
E	B847-04-067	Heating element, 240 Vac
	B847-04-074	Heating element, 220 Vac
F	150-00-11200	Fan

(1) Individual part numbers not available for pipes. All pipes made from A900-34-253 Copper Pipe 10 mm O/D x 20 SWG wall.

Part 4 | Section 5 | Baking Chamber and Door Parts (FG153)

Figure 38: Baking Chamber and Door Parts (FG153)

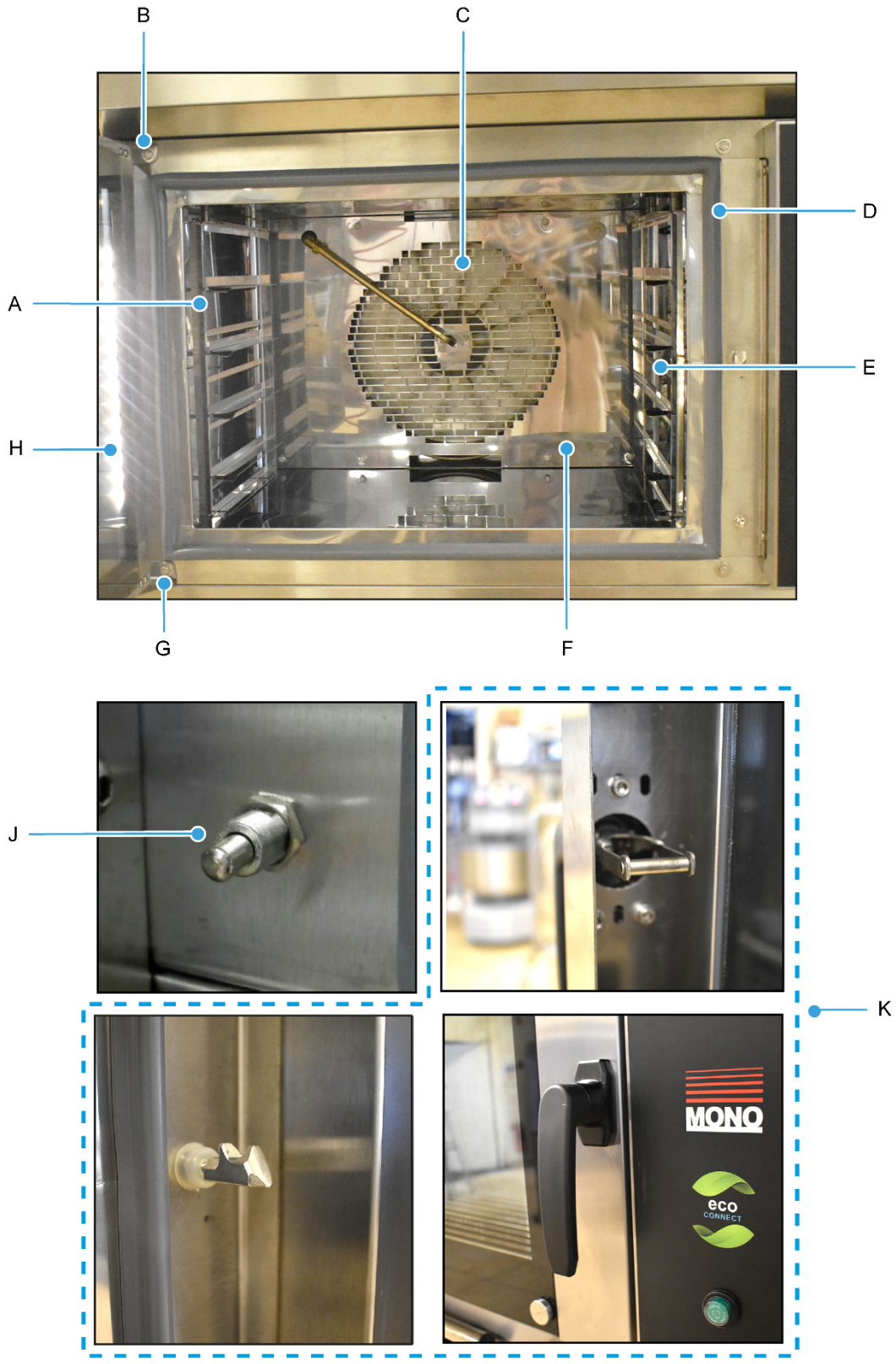


Table 28: Item numbers in Figure 38

Item Number	Part Number	Part Description
A	149-01-07101	L/H clip-on runner
B	158-03-10501	Top hinge L/H oven
	158-03-10500	Top hinge R/H oven
C	158-00-11200	Fan
D	153-23-00500	Door seal
E	149-01-07100	R/H clip-on runner
F	153-51-00900	Rear sheet
G	158-03-05200	Bottom hinge L/H oven
	158-03-05201	Bottom hinge R/H oven
H	153-03-01700	Outer/inner door glass
J	B482-07-037	Door switch
K	A900-27-254	Handle/Catch/Latch assembly

NOTE
Complete door assembly part numbers are:
153-03-05900 (L/H hinge door) and 153-03-05901 (R/H hinge door).

10. Condenser Unit (Option)

Caution!

- **All versions should be part of a regular cleaning schedule. Water should be drained and parts cleaned with an antibacterial wash.**

Index

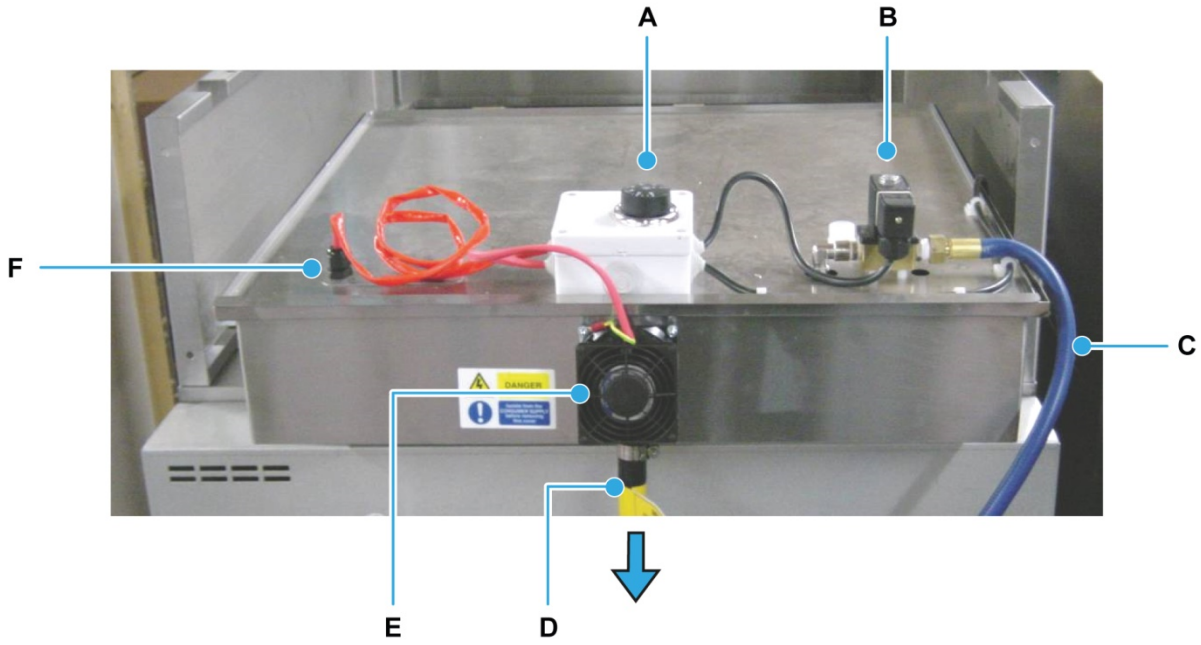
NOTE
See the Electrics Manual for electrical information.

Introduction (condenser unit)

A condenser unit can be fitted to any MONO oven (or stacked ovens) as required. The thermostatic control can be adjusted to operate in most ambient temperatures. A simple water connection (washing machine type fitting) and a hose to drain are required to operate efficiently.

Steam is drawn from the flue pipe of the oven through a thermostatically-controlled water-cooled chamber and condenses to drain away. When the cooling water reaches a set temperature, it is automatically replaced with cold water to keep the condensing process as efficient as possible.

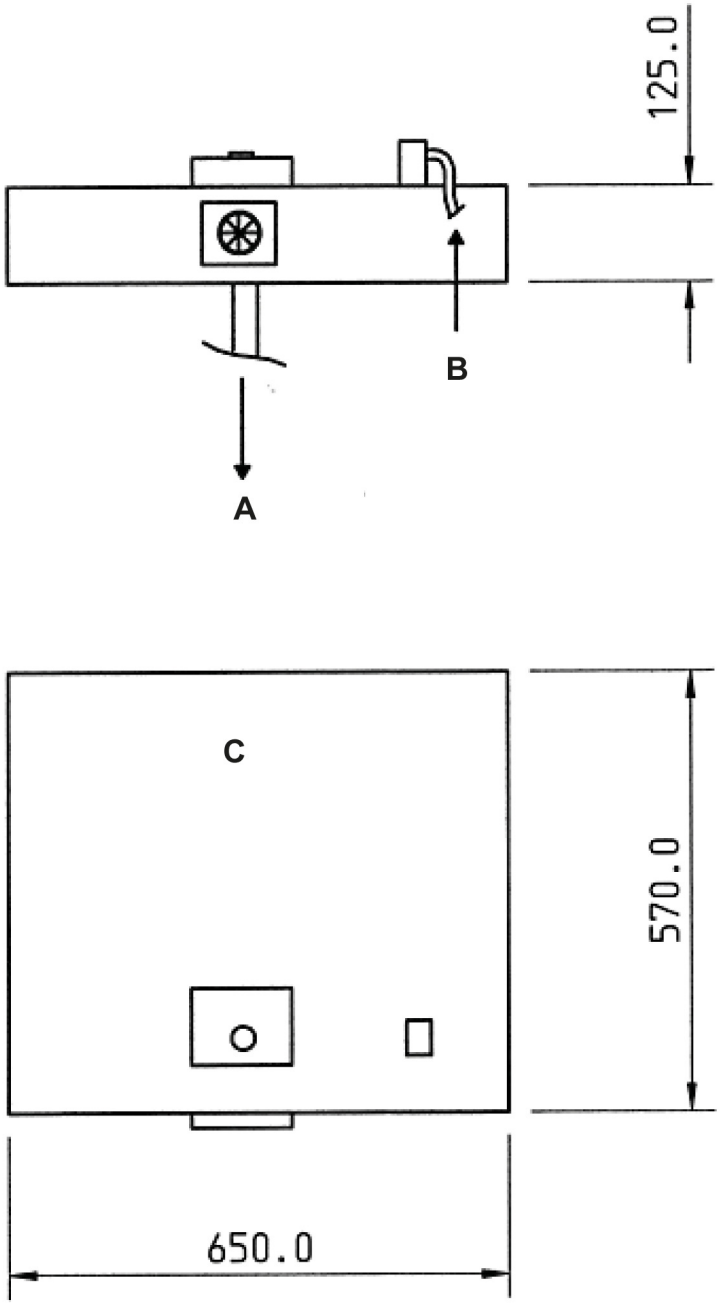
Figure 39: Features of a typical condenser unit



A. Thermostat control
B. Water solenoid
C. Water inlet
D. Water outlet to drain
E. Fan
F. Thermostat

Dimensions (condenser unit)

Figure 40: Dimensions of a condenser unit



A. Water out
B. Water in
C. Rear of the oven

Specifications (condenser unit)

Power

- 230 Vac (50 Hz), single phase
- 21 Watts
- Wired to the oven electrical panel.

Water

- Washing machine type connection to the normal water supply via steam water connection to the oven(s).

Noise

- Less than 85 dB

Weight

- Approximately 18 kg / 39.7 lb (excluding water)

Safety (condenser unit)

Always disconnect or isolate the power supply before installation, and allow time for the oven to cool. Only fully-trained and authorised electricians are permitted to do any electrical repairs and installation work on the oven.

WARNING

- Before testing the oven with the condenser, check that:
  - All cover panels and pipe fittings are secure.
  - The door handles are not damaged.
- Operate the condenser only as described in this manual.
- All versions should be part of a regular cleaning schedule. Water should be drained and parts cleaned with an antibacterial wash.

WARNING

- All connections to the oven must comply with the statuary requirements of the country of installation.

CAUTION

- Be aware of hot surfaces.
  - While the oven is in operation (and for some time after use), it is inadvisable to touch the condenser or the surrounds because of conducted heat.
- No unauthorised modifications to the condenser are permitted.
- Only use MONO spare parts on this condenser.

Installation (condenser unit)

1. Ensure that all power is disconnected and the oven is cool.

2. Before fitting the main condenser assembly, insert blanking plug **(A)** into the lower hole that will not be required for the type of oven being used.

3. Connect tube (**B**) to the spigot and retain with worm-drive clip (**C**).

4. Place condenser in position, ensuring that the tube (**B**) passes through the hole in the top of the oven and worm drive clip (**D**), then over spigot of the damper assembly on the oven.

5. Tighten worm-drive clip (**D**).

6. Fasten the condenser unit to the top of the oven with M6 x 12 mm long hex head screws and washers in four positions. (If holes have been drilled, nuts will have to be also used).

7. Connect wiring, depending on whether the oven is a 4-tray or 10-trays version, as shown in the corresponding Electricals manual.

8. Connect drain hose to a suitable drain.

9. Attach a water tap bracket to the base frame, as shown, and fasten the water hose to a water supply. (A tee pipe must be used on double ovens).

NOTE

If fixing holes are not present on the top sheet of the oven, they should be marked and drilled at this stage. Position condenser correctly and mark hole positions (centre of each slot). Remove condenser and drill holes of 6.5 mm diameter at four positions.

Figure 41: Installation of a condenser unit

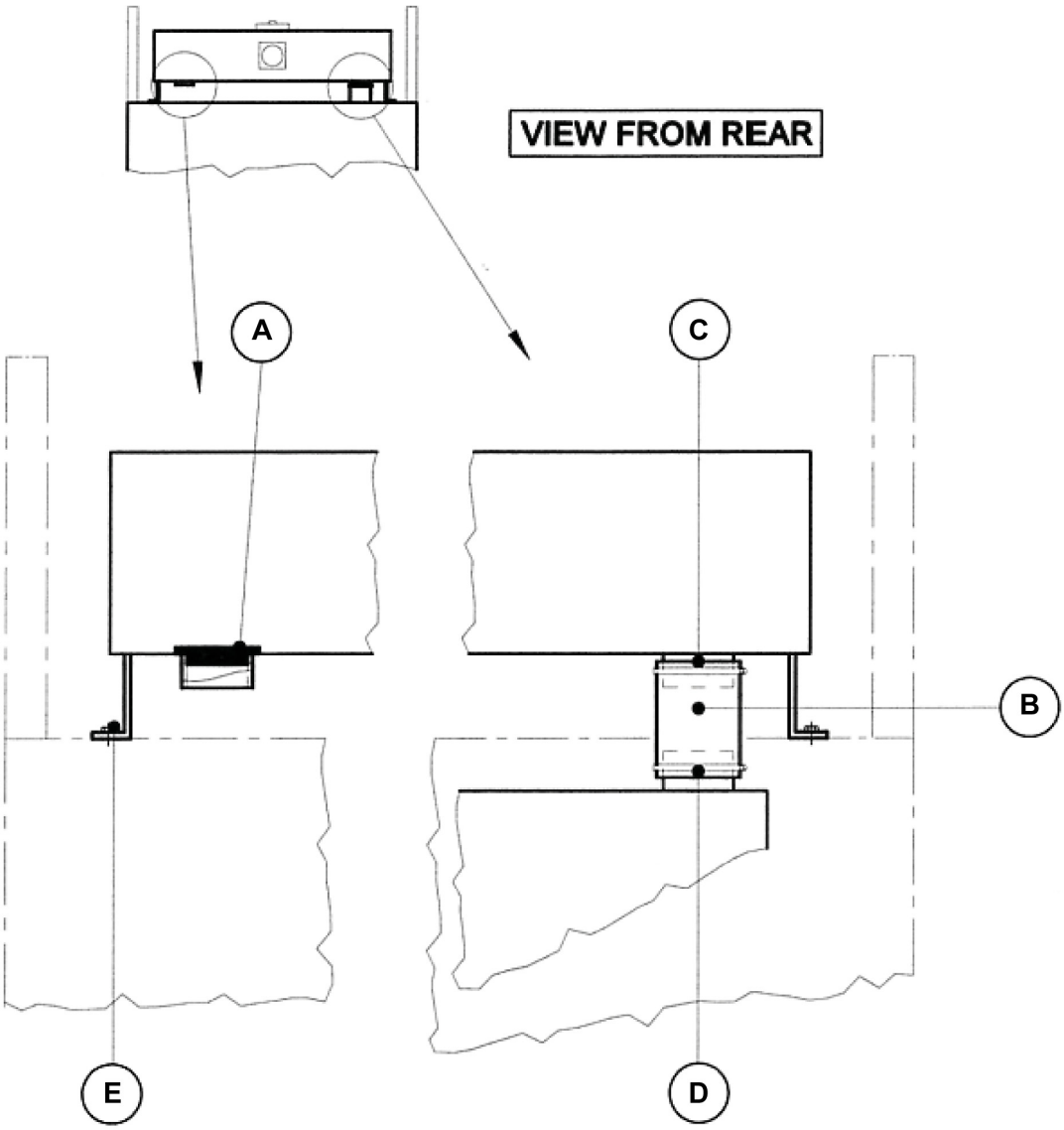
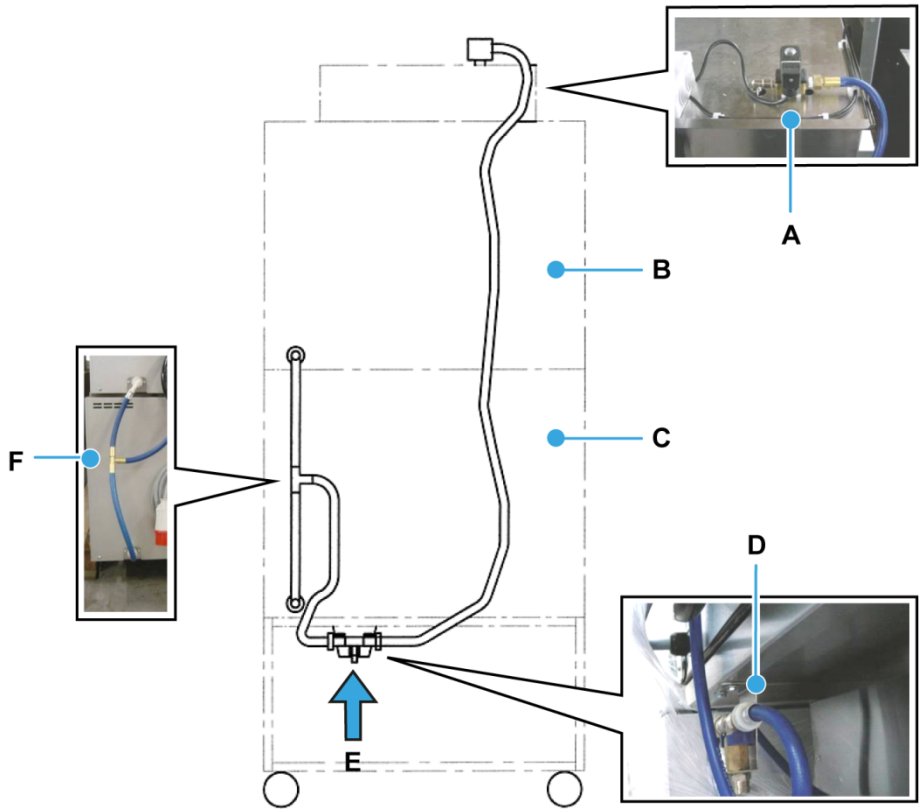


Figure 42: Water pipe connections



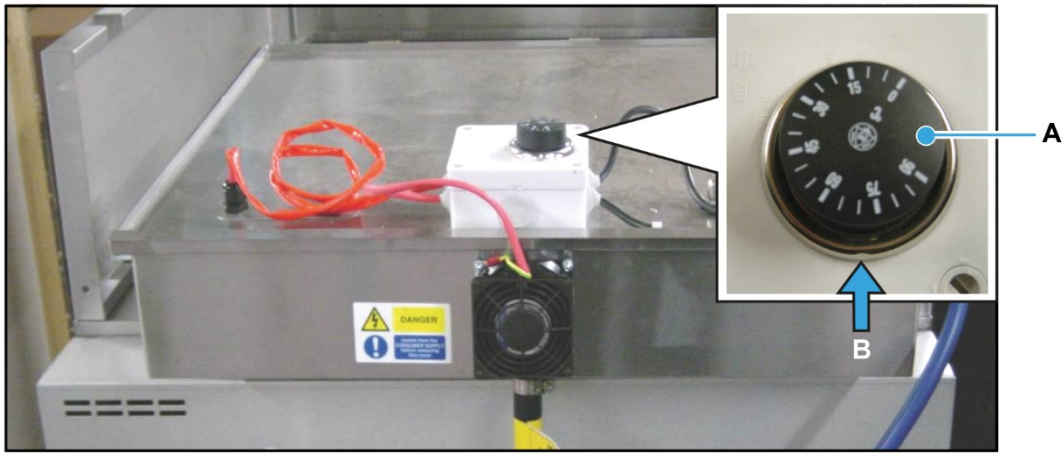
A. Condenser solenoid
B. Oven #1
C. Oven #2
D. Bracket fixings for the water tap
E. Mains water supply inlet
F. Tee-pipe for double oven connection

Operation (condenser unit)

1. Review all safety sections in this manual.
2. Ensure that the water is connected correctly and the oven power is on.
3. Adjust the thermostat control to the required position (Figure 43).

   It is suggested that, as a starting point, the thermostat is set at 60. It can then be decreased if the performance drops or increased if it is found that the water is being replaced too often.

Figure 43: Thermostat control on the condenser



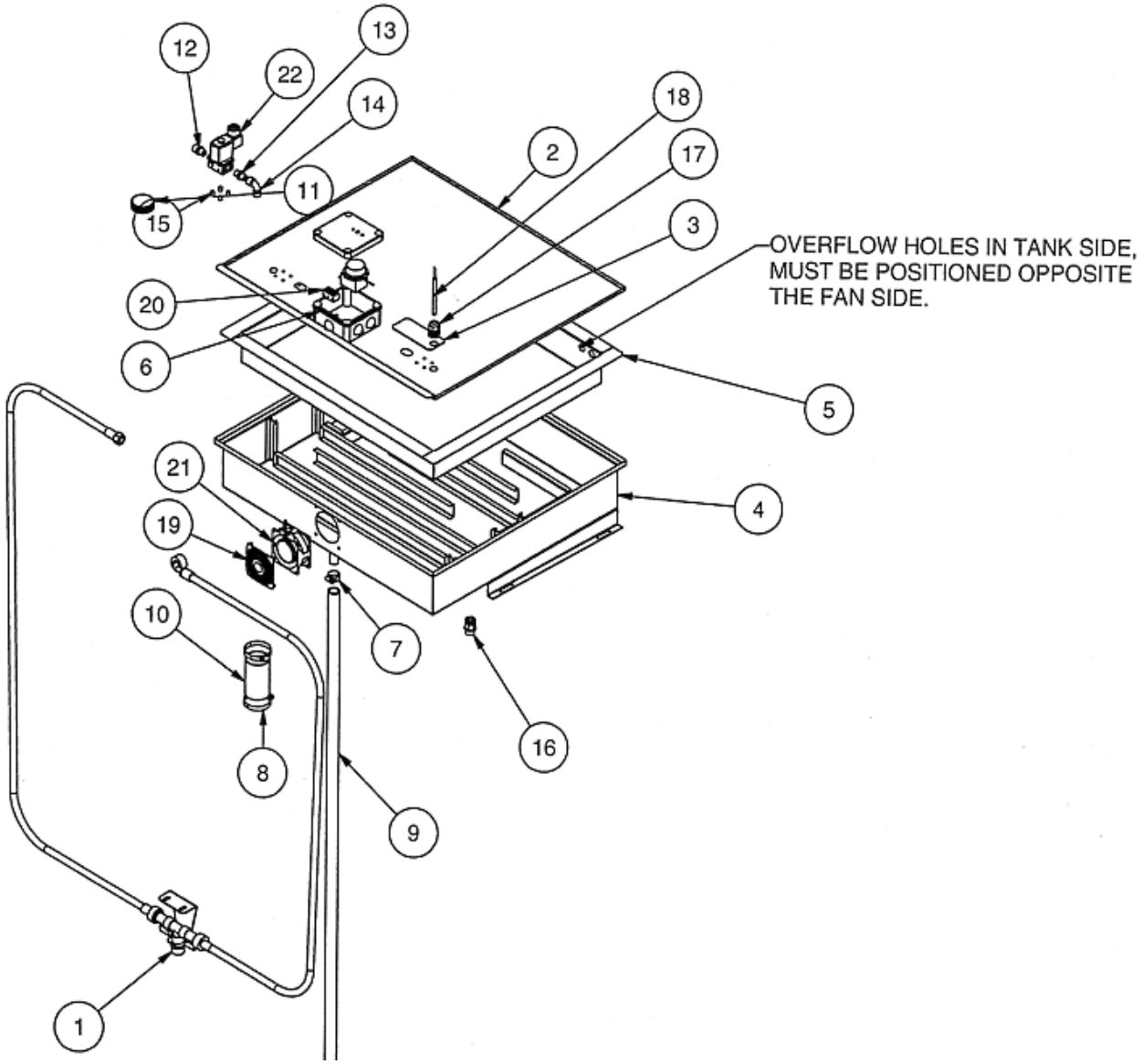
A. Thermostat control
B. Setting position

Spares (condenser unit)

This section is for Engineer use only

Do not attempt any modifications to the condenser or oven. If in doubt, contact Mono Equipment for advice.

Figure 44: Main parts of the condenser unit



Item	Part number	Description	Quantity
1	150-07-01300	Inlet water control unit	1
2	150-19-01700	Top sheet	1
3	150-19-02300	Cover plate	1
4	150-19-02600	Base tray	1
5	150-19-02700	Water tank	1
6	150-25-07100	Junction box	1
7	A900-01-196	Jubilee clip	1
8	A900-01-271	Jubilee clip (40 to 60 mm)	2
9	A900-23-004	Drain tube (2 metres)	1
10	A900-23-027	Flexible tube (duct hose)	1
11	A900-27-187	Plug insert	1
12	A900-34-191	Reducer ¼-in. BSP (male) x $^{3}/_{8}$-in. BSPT (male)	1
13	A900-34-244	Reducer ¼-in. BSP (male) x ¼-in. BSPT (male)	1
14	A900-34-245	Elbow	1
15	B811-33-001	Spacer	4
16	B839-17-003	Cable gland type 251	1
17	B842-17-005	Cable gland type 206-6096	1
18	B842-30-003	Thermostat	1
19	B842-40-002	Fan guard	1
20	B842-50-005	Porcelain connecting block	1
21	B869-75-033	Fan	1
22	B867-83-011	Solenoid valve	1

Other versions of the condenser that may be fitted

The following evaporation design versions could be fitted to your oven.

They only require to be plugged into the socket found to the rear of the oven (**Figure 45**). This connection powers the fan and evaporation pad. No drain is required.

Figure 45: Plugging in the condenser unit

Figure 46: **Condenser unit FG150/AC5**

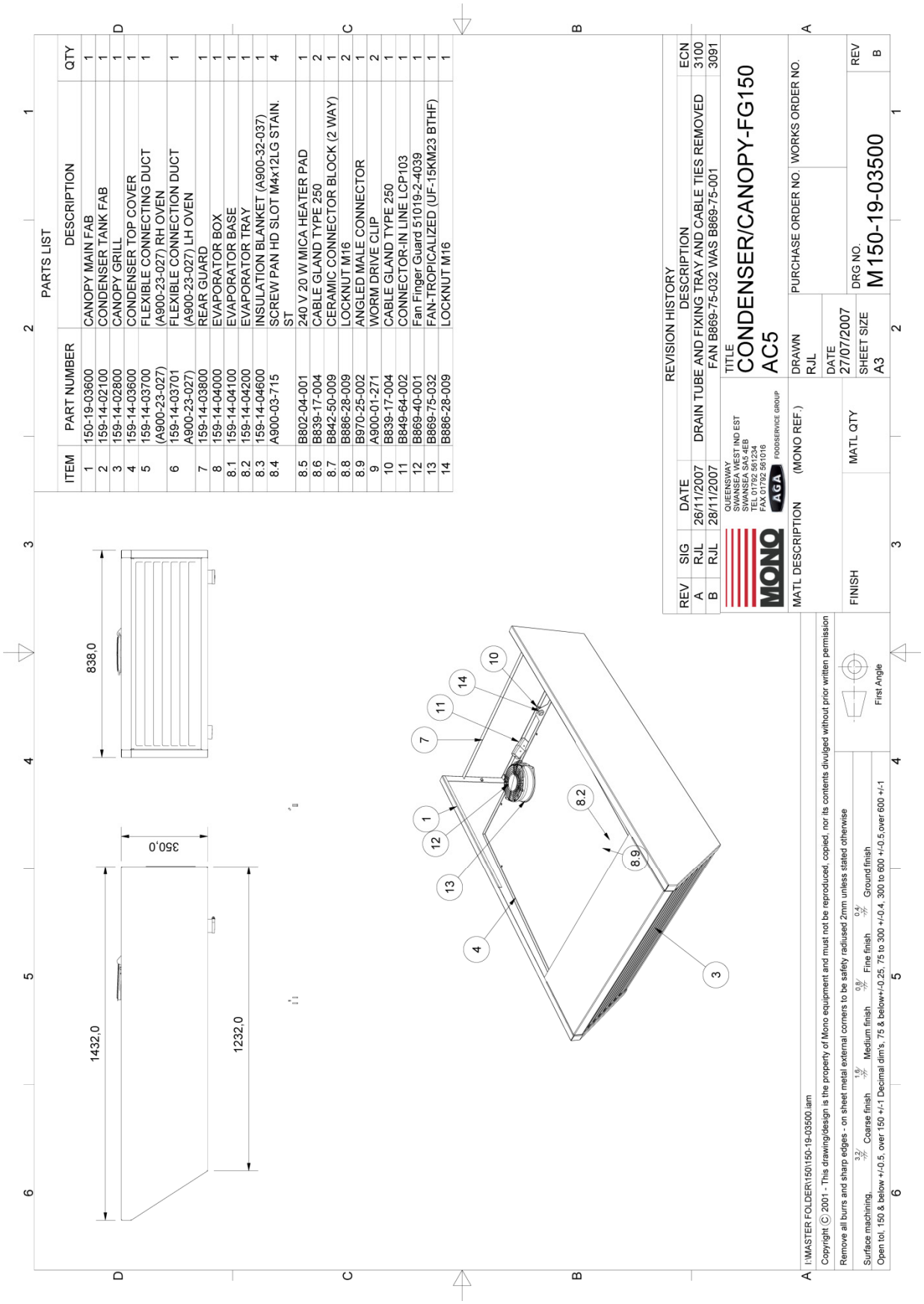


Figure 47: Condenser assembly FG155/X38

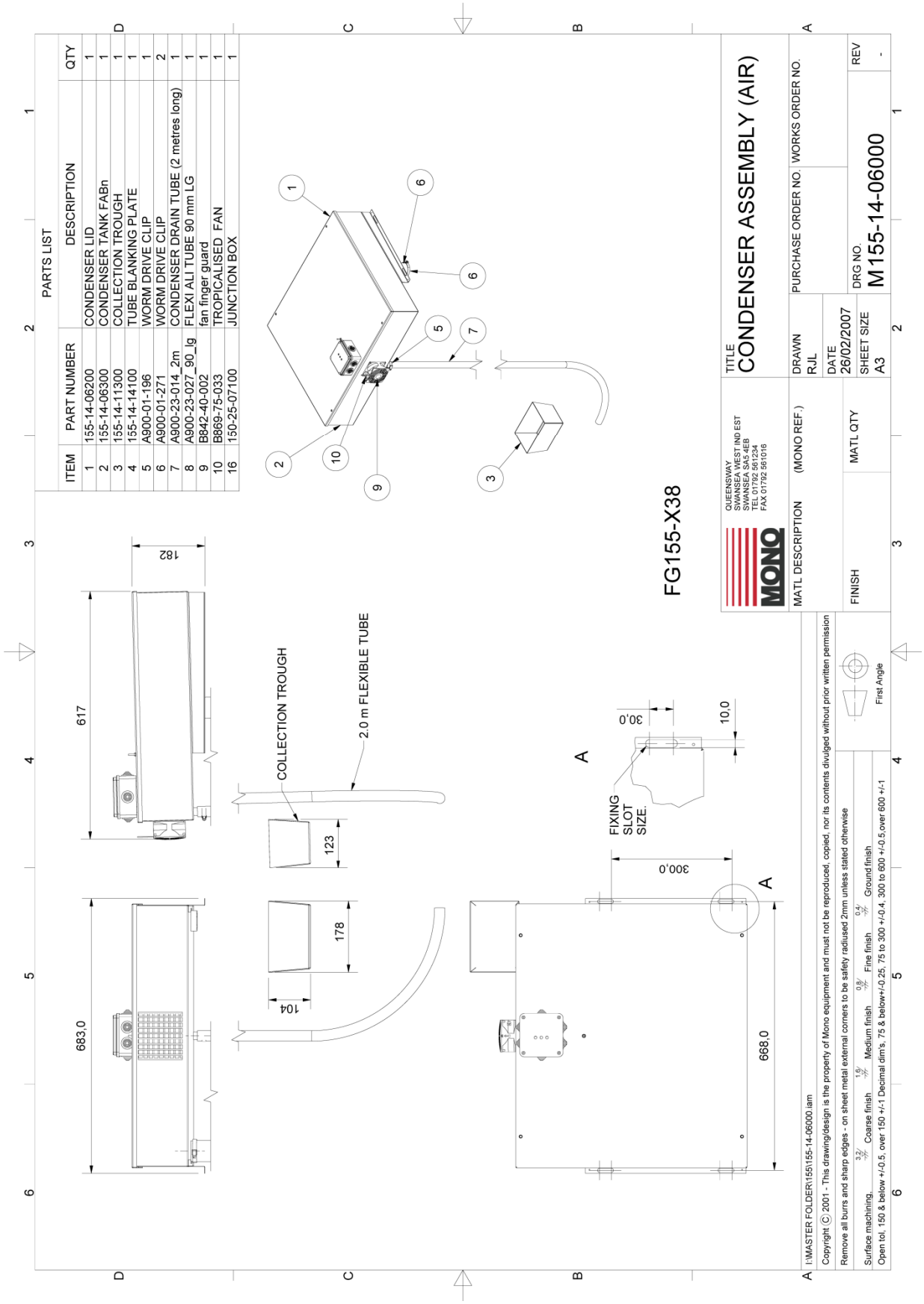


Figure 48: Condenser assembly FG158/AC1

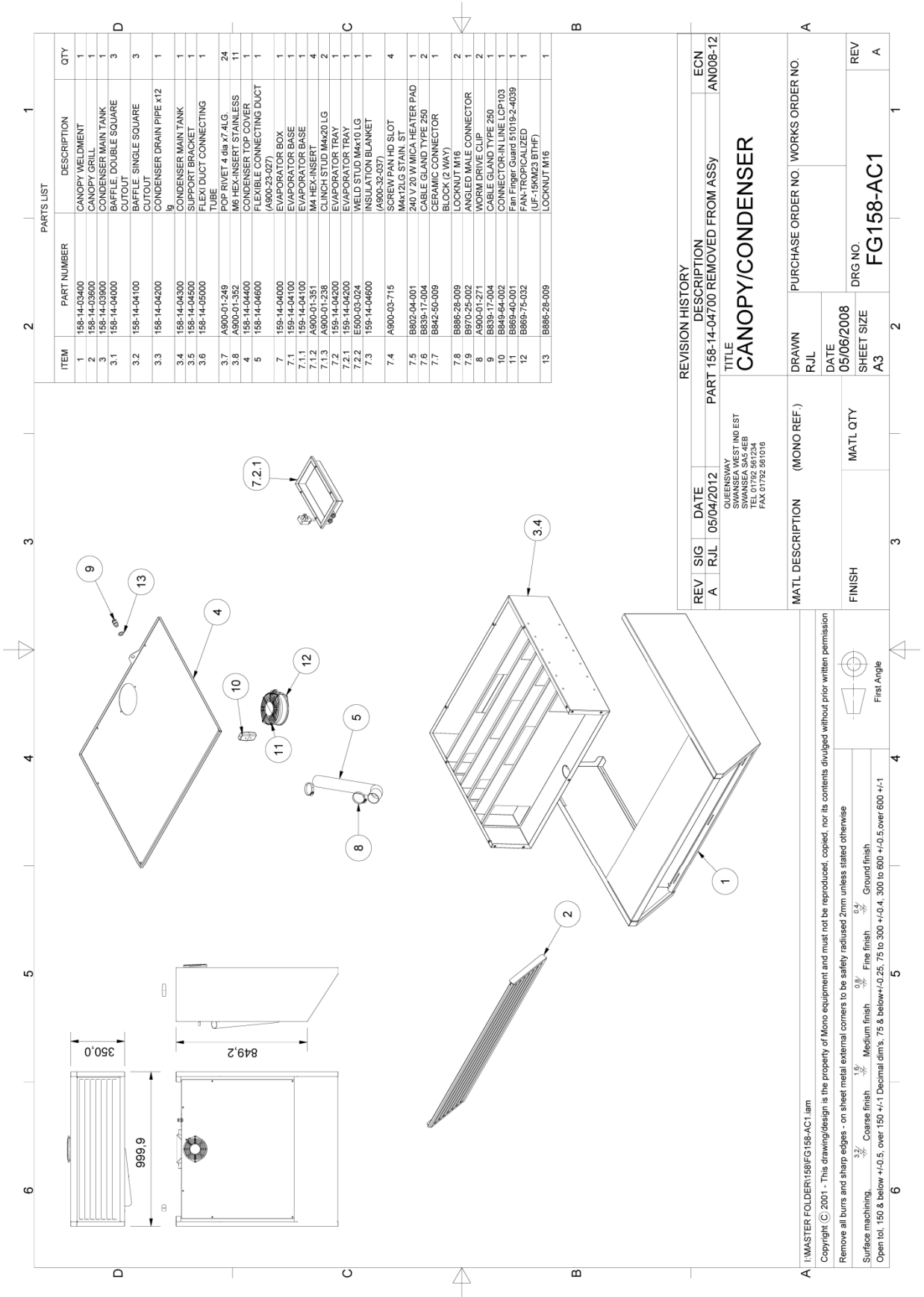


Figure 49: Reduced height condenser FG158/AC3

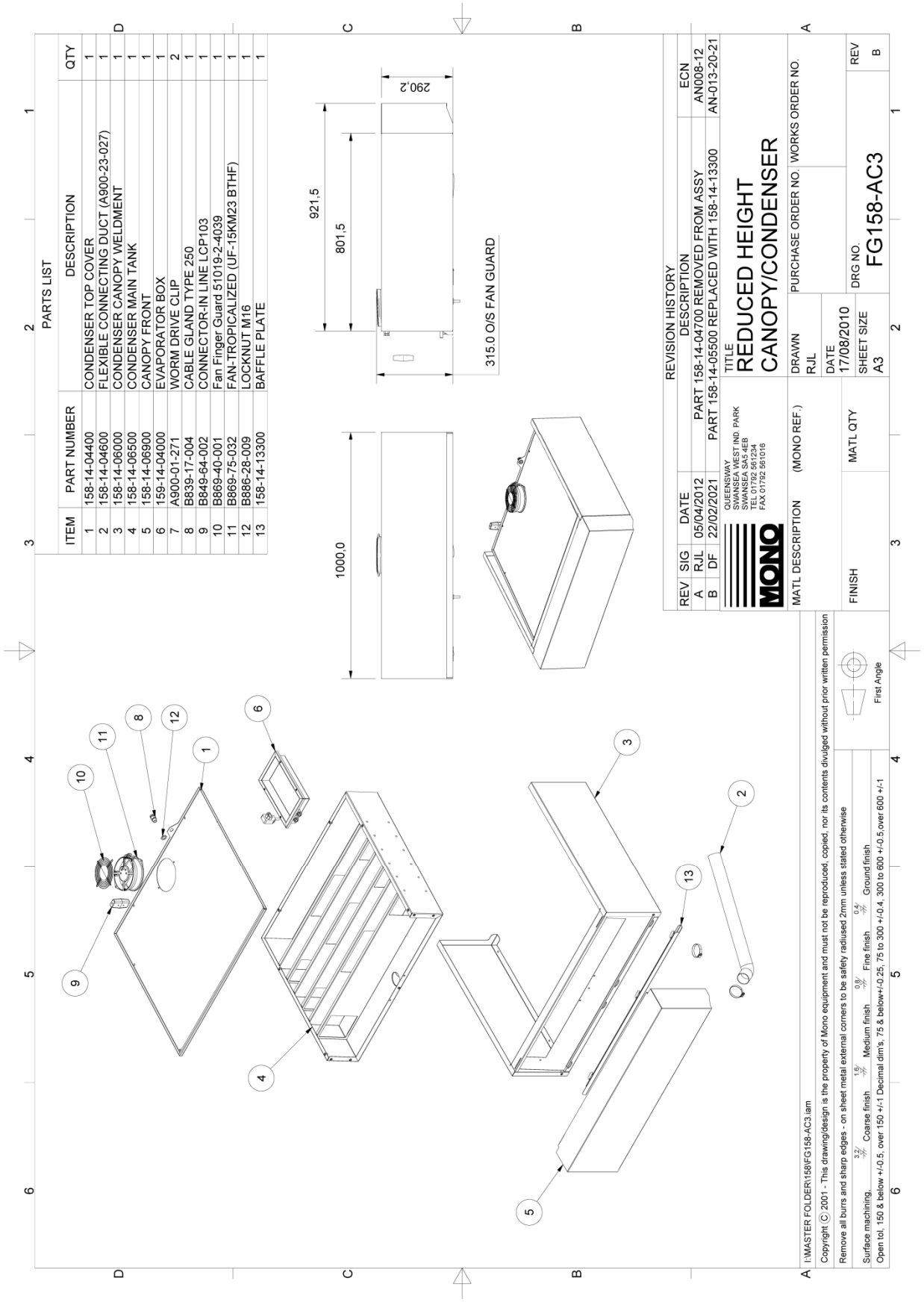


Figure 50: Reduced height condenser FG158/AC4

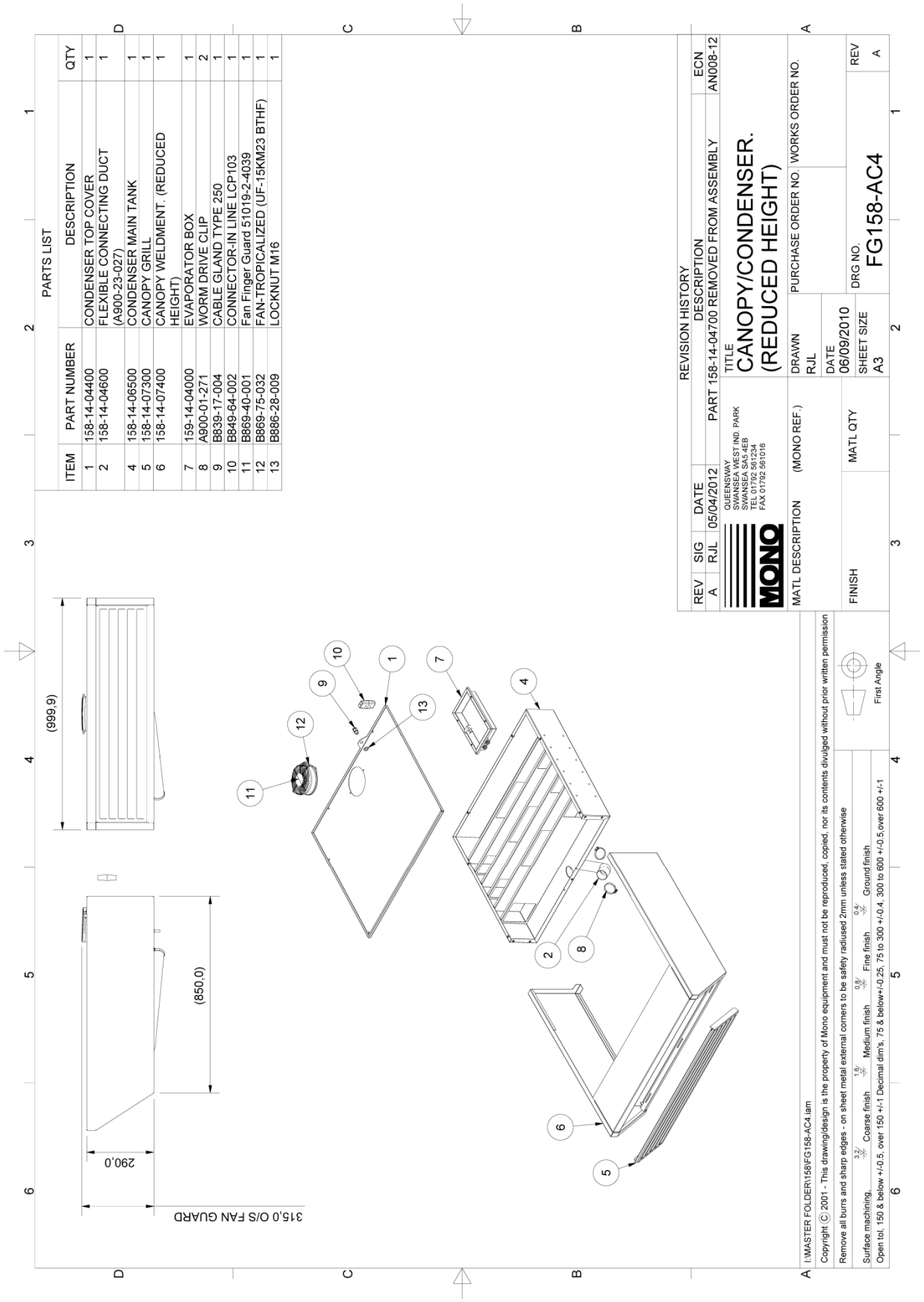
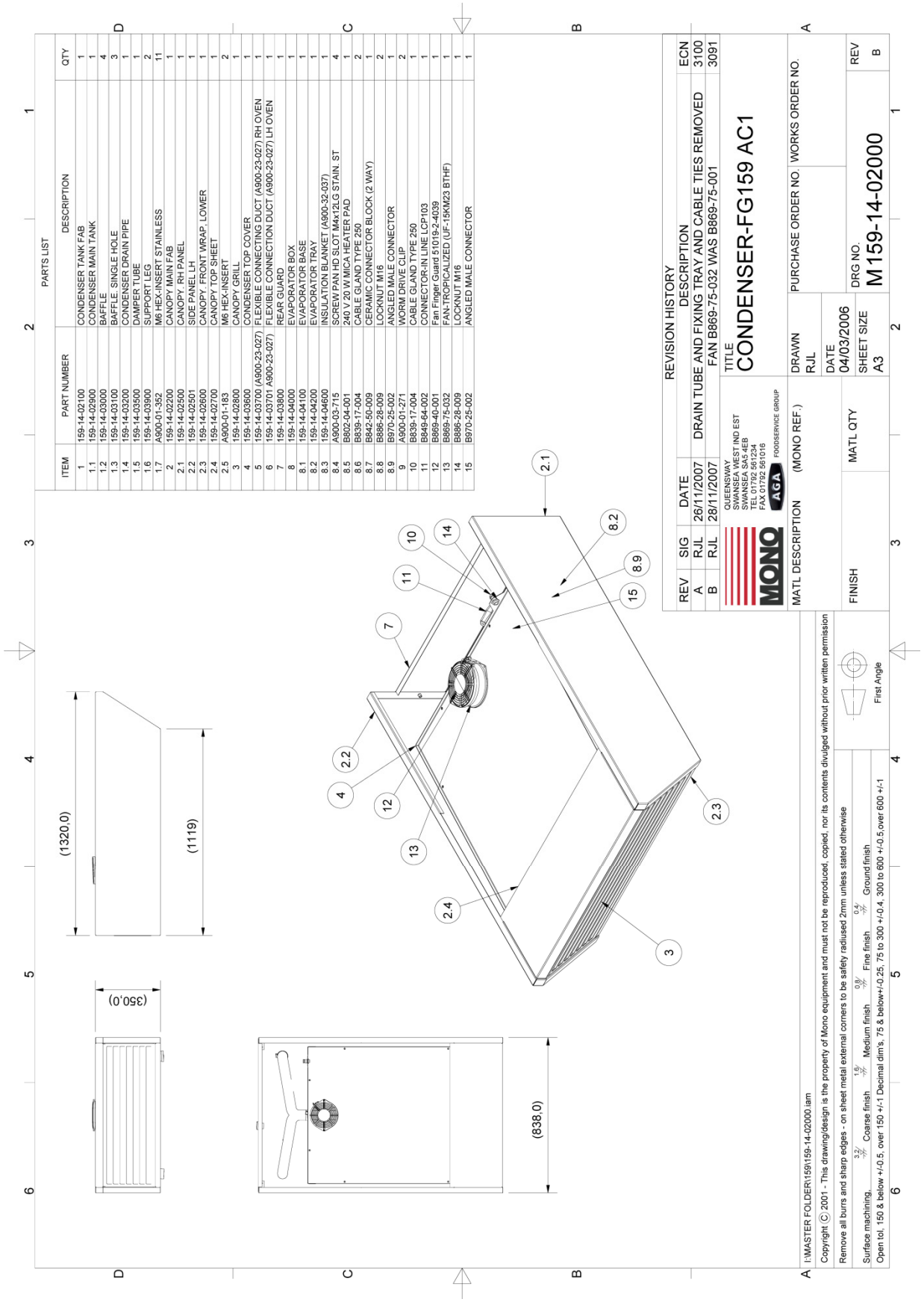


Figure 51: **Condenser FG159/AC1**



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11. Passwords

Remove this section if tampering could be a problem.

Passcodes

1111 Operator access – for saving or renaming bake programs.

2222 Oven setting access – setting time/date, etc.

3142 Oven factory settings access.

NOTE
If the passcodes have been changed and are not available, contact Mono Equipment for a master number that will open all screens.

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

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Oven Disposal

Care should be taken when the machine comes to the end of its working life. All parts should be disposed of in the appropriate place, either by recycling or other means of disposal that complies with local regulations.

(In the United Kingdom, the Environmental Protection Act 1990 applies.)