



Eco Touch Convection Oven

Operation and Maintenance Manual (UL)



Oven Version

- EcoTouch
- 26 inch x 18 inch
- U.S.A. specifications

Oven Serial Number

Safety Symbols

Before using your new equipment, read the instruction 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.
-

Safety Labels on the Oven

- Warning label to reduce risk of fire or electric shock.
 - Do not remove the cover (or back).
 - No user serviceable parts inside.
 - Repair should be done by authorized personnel only.



- Warning label about keeping the oven away from combustible materials.
 - Sides: 50 mm (2 inches)
 - Rear: 50 mm (2 inches)
 - Top: 264 mm (10 inches)



Important Notices

National Sanitation Foundation (NSF) certification

NSF certification has the following requirements:

- Seal the oven to the stand, counter, or second oven using an NSF-approved sealant. Apply a small continuous bead around the perimeter.
- NSF requires that this equipment is to be installed with adequate back-flow protection to comply with applicable federal state and local codes.
- Failure to follow the cleaning and maintenance instructions detailed in this owner manual could affect the warranty of this oven.

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 recognized 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 organization's appointed installation designer or electrical contractor and installed by a suitably qualified and competent electrician so as to comply with Regulations 419.2 and 544.2.



WARNING

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

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1. Introduction

1.1. The BX Eco-Touch Convection Oven

The BX EcoTouch Convection Oven is a computerized, compact, electric convection oven with steam capability and a capacity of three 26-inch x 18-inch trays.

The oven is constructed of stainless steel and features the state-of-the-art Eco-Touch controller with color display and 240 programmable recipes each with up to six steps in which the bake time, temperature, steam time, fan and vent can be controlled.

Designed to be stackable, without the requirement for a separate support.

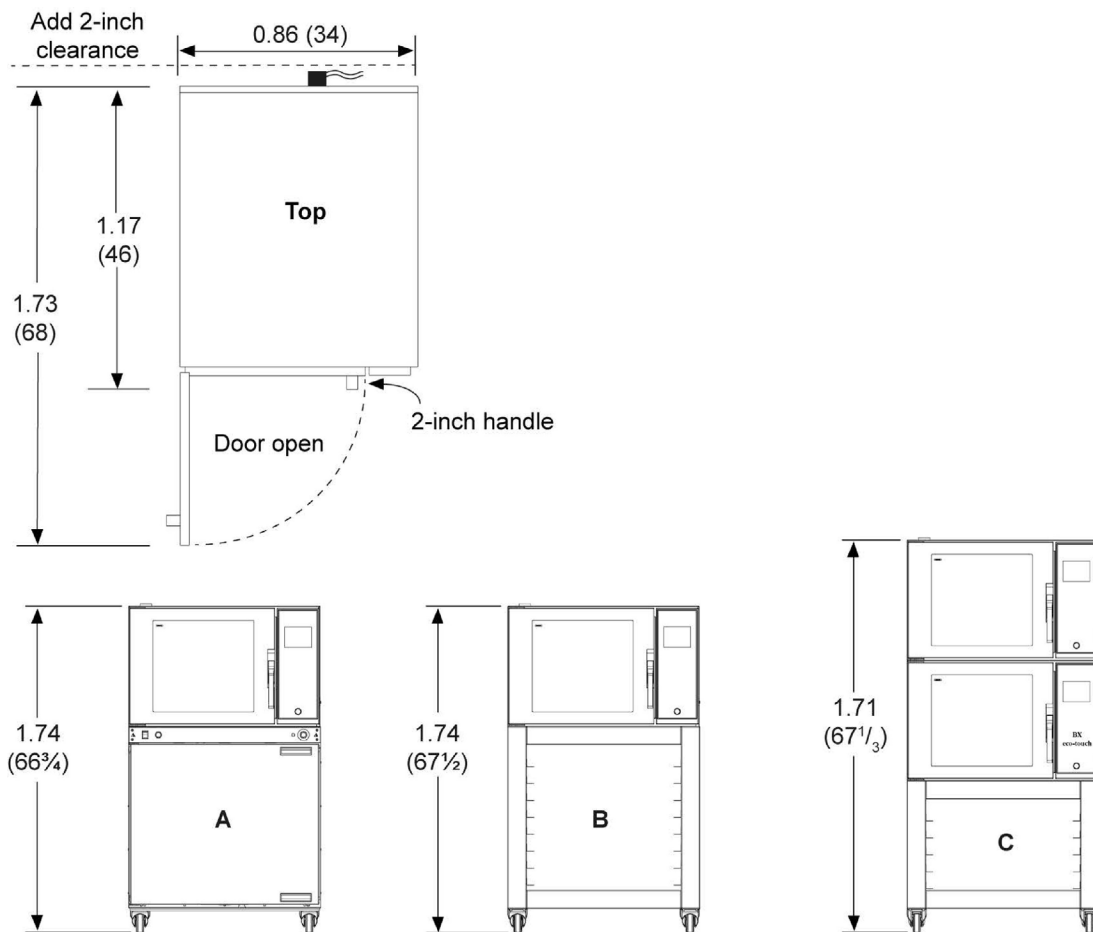
The high-speed fan and ring element provides efficient air circulation and an even bake across a range of products.



2. Dimensional Drawings

2.1. Dimensions of the ovens and bases

Figure 2.1: Dimensional drawings for the 3-pan oven



- A. Proofer
- B. Tall stand
- C. Short stand

Dimensions are in inches (mm) unless otherwise stated.

3. Specifications

3.1. Electrical specifications



WARNING

- Check that the electrical data on the oven's information plate. Contact BELSHAW if there is a mismatch between the nameplate information and the mains supply at the site.
- The oven must be connected to the mains supply using the factory-fitted mains plug and cable and a 30mA-rated Type 'A' Residual Current Device (RCD).
- The RCD is a safety device, which automatically switches off the supply if an earth fault develops. Test the RCD upon completion of the installation and quarterly for the lifetime of the oven.
- An experienced and qualified electrician must carry out all electrical work in accordance with national and local regulations.

Power supply

See [Table 3.1](#) for supply options.



The supply to this machine must be protected by a 30mA rated Type A Residual Current Device (RCD) prior to installation and commissioning.

Power cable options

Single, 6 ft. power cable with NEMA L15-30P plug (factory-fitted)


Table 3.1: Single supply specifications

Oven version	Voltage	Phase	Current	Total power
3-pans wide	208 to 220 Vac (60 Hz)	Three-phase	24 Amps per phase	7.5 kW ⁽¹⁾
3-pans wide	240 Vac (60 Hz)	Three-phase	24 Amps per phase	8.5 kW ⁽²⁾

(1) 1 x 7 kW ring element.

(2) 1 x 8 kW ring element.

3.2. Mechanical specifications

Weight (approximated)	Net weight (single oven) 370 lbs Net weight (short stand) 145 lbs Net weight (tall stand) 206 lbs
	 This equipment is too heavy for a single person to lift.
Fan drive	Direct to motor
Damper	Butterfly type
Pan size	26-inches x 18-inches
Number of Pans	3 or 4 (depending on model)

3.3. Environmental specifications

Noise level	Less than 85 dB
Ambient temperature	Up to 115 °F (40 °C)
Clearances	2 inches (50 mm) around the back and sides of the oven. 10 inches (250 mm) above the oven.

3.4. Water specifications

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

Pressure (minimum)	20 psi cold water
Hardness range	0 to 4 grains per gallon
PH range	7.0 to 8.5
Chloride	0 to 30 ppm
Calcium	0 to 4 ppm
Magnesium	0 to 4 ppm
Alkalinity	0 to 20 ppm

Note: Consult your water treatment company for proper water filtration system information.

4. Safety

4.1. General safety

**CAUTION****■ Magnets information**

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

4.2. Oven safety

Only fully trained and authorized 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., cell phones. Incorrect usage causes damage to the oven and could cause a fire.
-

**WARNING**

- Before using the oven:
 - Check that all covers, panels, and cabling are secure.
 - Visually examine the oven for obvious damage or signs of tampering.
- If the oven is damaged, malfunctioning, or missing parts:
 - Stop using it. Do not attempt any repairs to the oven.
 - Contact BELSHAW for technical assistance.
- Never operate the oven with any covers or panels removed.
- All utility connections to the oven must comply with the statutory 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.
- Do not block the damper vent on the top of the oven.

**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 BELSHAW 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.
- Where the appliance is installed on castors or in a manner that allows movement, a suitable restraint system must be fitted to prevent stress being transmitted to the electrical supply.
- 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.
 - Pans 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 BELSHAW for other product-baking machines.
- No unauthorized modifications to the oven are permitted.

5. Installation

5.1. Water supply

NSF requires that this equipment is to be installed with adequate backflow protection to comply with applicable federal, state, and local codes.

It is the customer's responsibility to provide an appropriate water treatment system that will supply water that meets the water specification listed in [Chapter 3](#). The supply must be provided with a shut-off valve, pressure reduction valve and pressure gauge.

A rubber wash should be fitted to ensure the hose has a full good seal with the mains water supply ([Figure 5.1](#)).

Figure 5.1: Rubber washer installation



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

5.2. Ambient temperatures

Maintain ambient temperatures below 115 °F (40 °C) around the oven.

5.3. Space around the ovens

Provide 2 inches (50 mm) clearance at the back and sides of this oven and 10 inches (250 mm) at the top to allow adequate air circulation.

5.4. Initial cleaning

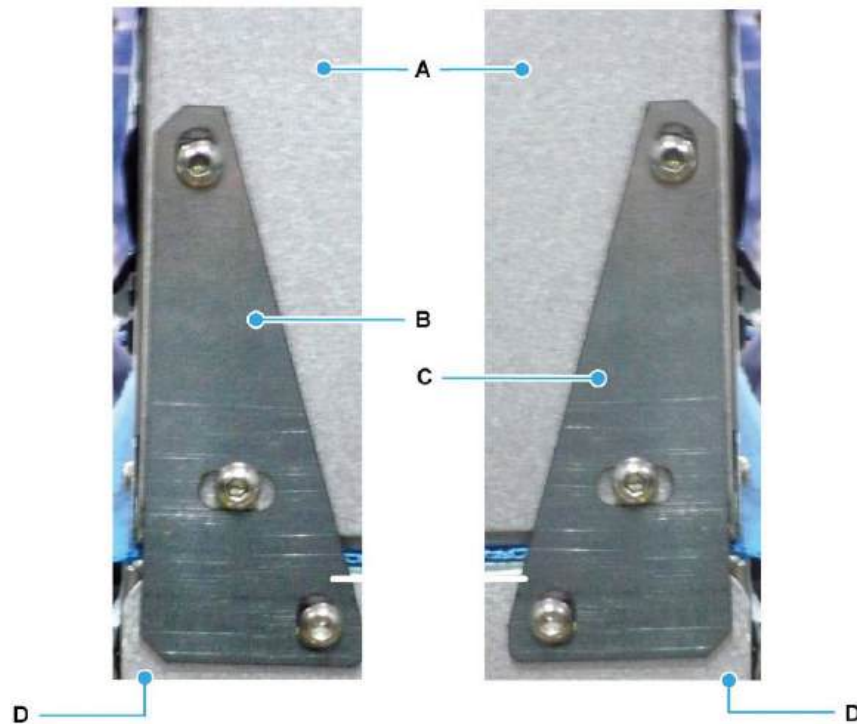
Carefully wipe the interior and exterior of the oven thoroughly with a clean cloth soaked in warm soapy water before using the oven for the first time.

5.5. Before use

Fix the top sealing ring over the top pipe with a silicone sealant (NSF-approved), as seen in the illustration for stacking two ovens ([Figure 5.3 on page 11](#)).

If an optional base unit (stand) is to be used under the oven, it must be sealed to the oven using a continuous bead of the same sealant around the perimeter and attached by clamping brackets at the rear ([Figure 5.2](#)).

Figure 5.2: Clamping brackets

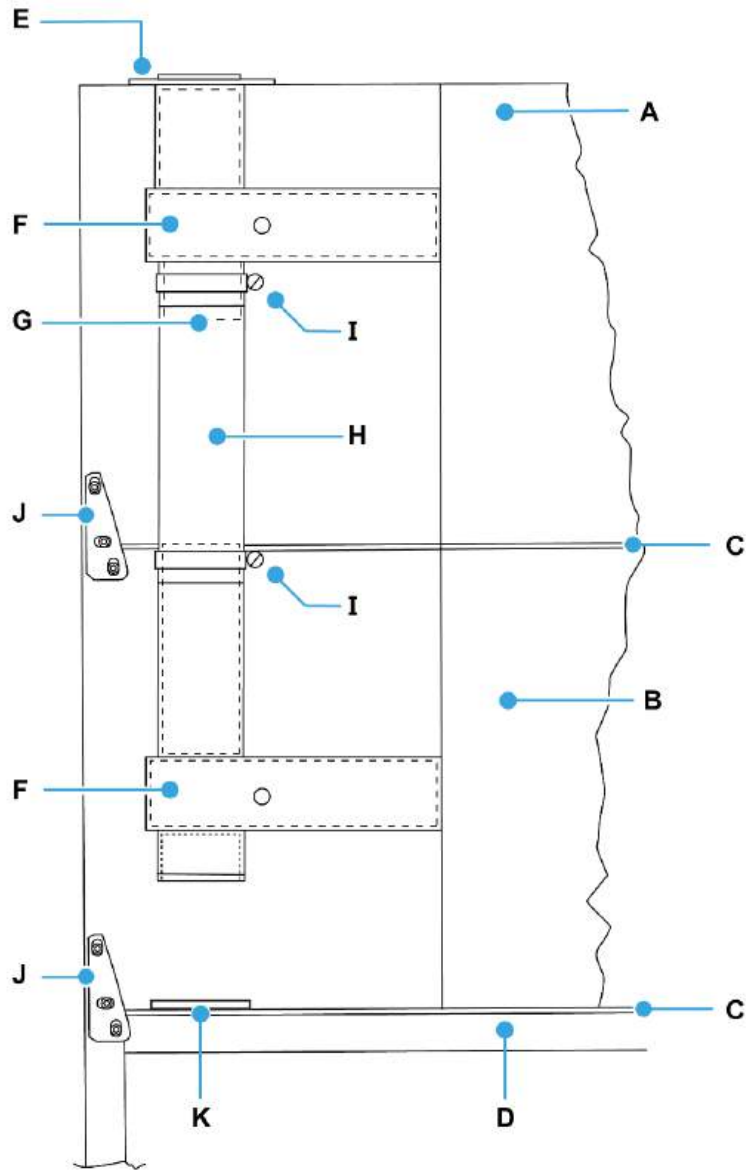


- A. Oven
- B. Left-side clamping bracket (189-05-00900)
- C. Right-side clamping bracket (189-05-00900)
- D. Optional base unit

5.6. Stacking two ovens

1. Apply a small, continuous bead of sealant (NSF-approved) around the perimeter of the 'lower' oven.
2. Position the 'upper' oven on top of the 'lower' oven.
3. Access the damper tube inside the ovens.
 - a. Remove the rear covers from both ovens.
 - b. Alternatively, remove the front control panels (complete with electrics and cables) and work from the front of the ovens.
4. Remove the blanking plate (fixed with silicone sealant) from damper tube of the upper oven.
5. Fit the flexible ducting in the upper oven.
 - a. Fit one end of the flexible ducting to the upper-oven's damper tube.
 - b. Attach the other end of the ducting to the lower-oven's damper tube.
 - c. Use silicone sealant and worm drive clips to fasten in position.
6. Replace the covers of both ovens.
7. Fix the ovens together using the provided clamping brackets (one each side at the rear).
8. If an optional base unit is used, seal it to the lowest oven (see [Section 5.5 on page 9](#)).
9. Fit the top sealing ring (see [Section 5.5 on page 9](#)).

Figure 5.3: Stacked oven arrangement



- | | | |
|-----------------------------------|------------------------------------|------------------------------------|
| A. Upper oven | E. Top sealing ring (189-01-02000) | H. Flexible ducting (189-01-01800) |
| B. Lower oven | F. Damper | I. Worm drive clip (A900-01-271) |
| C. Silicon sealant (NSF-approved) | G. Knockout blanking plate | J. Clamping bracket (189-05-00900) |
| D. Stand | | K. Blanking Disk (189-05-07400) |

6. Isolation

6.1. Isolating the oven from the electrical supply

To stop the oven in an emergency:

- Switch off the electricity at the wall-mounted isolator switch (if fitted), or
- Unplug the oven from the electrical outlet.



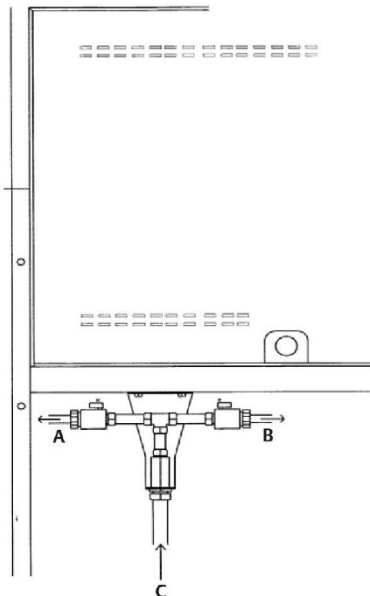
WARNING

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

6.2. Isolating the oven from the water supply

Shut off the water supply to stacked ovens by turning the appropriate shut-off valves 90° anti-clockwise ([Figure 6.1](#)). For non-stacked ovens the water supply should be shut off at the nearest shut-off point.

Figure 6.1: View of rear connections on the BX EcoTouch Convection Oven



A. Top oven supply.

B. Bottom oven supply.

C. Supply from water filter.

7. Cleaning

7.1. Cleaning guide for the BX EcoTouch Convection Oven

Regular cleaning and maintenance of an appliance is essential for optimal performance and longevity. Therefore, it is important to follow a manufacturer's recommended cleaning instructions.

Follow our simple daily, weekly, and monthly cleaning guidelines to ensure your BX EcoTouch Convection Oven functions correctly and maintains its durability.

7.2. Safety messages

**WARNING**

- Ensure the oven is switched off at the mains power supply and has been entirely cooled before undertaking any cleaning tasks.
 - Pay particular attention to ensuring excess water is not applied around the area of the electrical panels.
-

**WARNING**

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

**CAUTION**

- Use an approved chloride-free cleaning fluid to clean the oven daily.
 - Never use aggressive chemicals, such as solvents and thinners.
 - Take care to ensure cleaning liquid does not enter the control panel or any of the other access covers/panels.
 - Never spray the oven with water (or any kind of liquid) using a hose or pressure washer. Never use compressed-air jets on the oven.
-

7.3. Daily cleaning

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

Daily cleaning instructions

1. Brush any debris out of the oven **after** it has cooled.
 - Cooling down could take several hours.
 - Use a vacuum cleaner with metal attachments (i.e. able to take the heat), if available.
2. Wipe the oven's front and sides with a damp cloth.
3. Spot clean the outside with a damp cloth soaked in a solution of mild detergent and hot water.
 - Do not wash the touchscreen; wipe it with a damp cloth.
 - Pay particular attention to ensure excess water is not applied near electrical panels.
4. For stubborn stains, use a proprietary stainless steel cleaner on the outer surfaces of the oven.
 - A specially designed cleaning agent can dissolve any fat or grease deposits.
 - **Never use steel wool or other abrasive scourers to clean the oven's surfaces.**

Checking and cleaning the door seal

The door seal is a crucial part of your convection oven and is prone to wear. Animal fats, grease and caustic cleaning agents attack and weaken the seal material, resulting in an accelerated wear rate. A door seal must be cleaned regularly to help prolong its life and maintain its effectiveness.

1. Clean the seal every day using a mild grease solvent.
2. When clean, use fresh water to remove any remaining cleaning agent.

To help prolong the life of your oven's door seal, we also recommend the following:

- Leave the oven door open overnight to allow the seal to relax.
- Keep the oven door open when the oven is not in use.
- Regularly inspect the seal for signs of deterioration or damage, and replace it promptly to prevent steam or heat from escaping from the oven chamber.

7.4. Weekly cleaning

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

Weekly cleaning instructions

1. Complete the daily cleaning procedure.
2. Clean any burnt-on debris by carefully using a proprietary oven cleaner.
 - Carefully follow the oven cleaner manufacturer's instructions.
 - **Do not allow the oven cleaner to come into contact with the control panel.**
3. Scrub the cabinet wheels, if fitted, using a nylon brush soaked in a mild detergent and hot water.
4. Clean the inner door glass (see [Inner door glass cleaning instructions on page 15](#)).
5. Clean the interior side panel (see [Interior side panel cleaning on page 16](#)).

**NOTE**

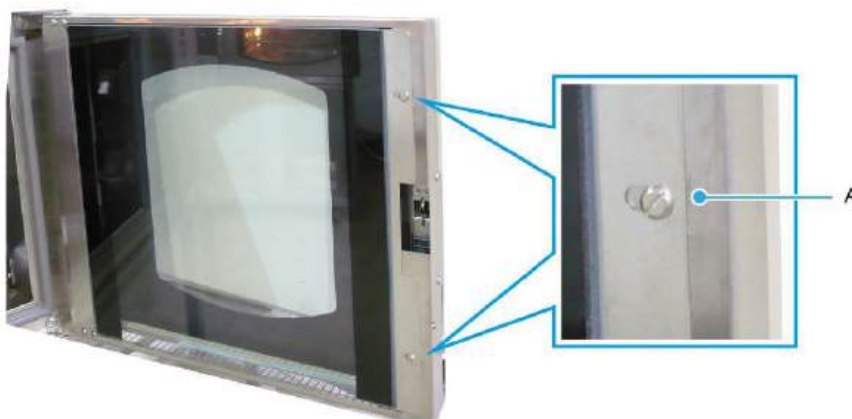
Using excessive water can eventually cause the metalwork to rust.

Inner door glass cleaning instructions

The inner door glass is hinged to enable the cleaning of inner surfaces. To open and clean, proceed as follows:

1. Remove the two screws (A) shown in [Figure 7.1](#).
2. Clean the inner surfaces of the door glass using a suitable glass cleaner.
3. After cleaning, secure the inner glass with the two screws.

Figure 7.1: Location of the two screws for releasing the inner glass

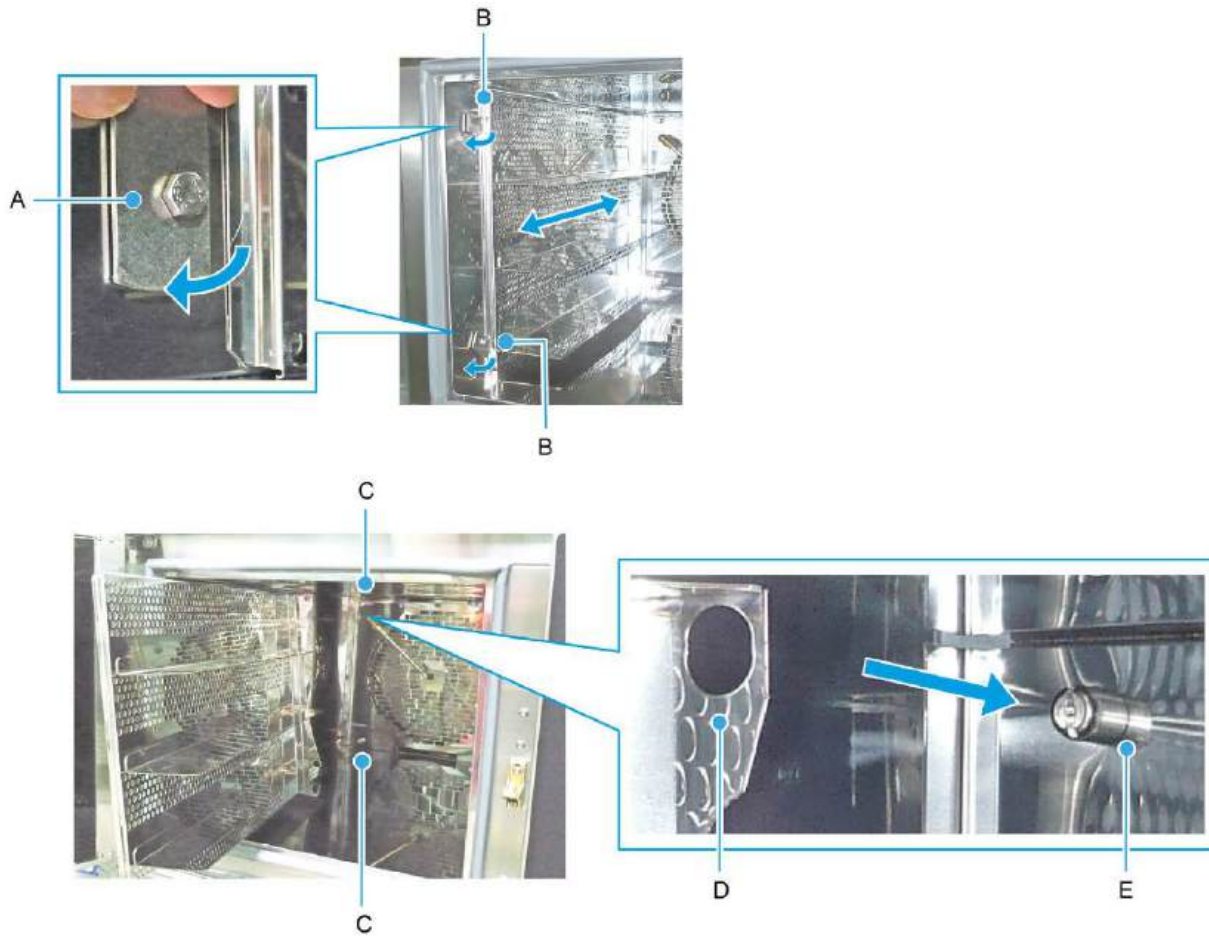


7.5. Monthly cleaning

Before undertaking these tasks, ensure the main power supply to the oven is switched off and that the oven has been allowed to cool for several hours.

Interior side panel cleaning

1. Turn the two latch plates in the front of the oven (**A** and **B** in [Figure 7.2](#)).
2. Slide the side panels out of the doorway.
3. Clean the side panels and interior surfaces with a mild detergent and hot water.
 - Use a nylon cleaning brush to clean the oven. Never use steel wool on the surfaces.
4. Carefully re-install the interior side panels.
 - a. Align the pins in the rear of the oven with the side panel slots (**C**, **D**, and **E**).
 - b. Ensure that the panel is pushed fully back.
 - c. Turn the latch plates to secure the panel in its correct place.

Figure 7.2: Interior side panel removal and replacement

-
- A. Latch plate
 - B. Top and bottom latches
 - C. Slide the side panel over the locating pins (top/bottom)
 - D. Slot
 - E. Locating pin
-

8. Touchscreen Operations

8.1. Basic operation

Operations are performed by touching an area of the screen to bring up another window or activate a function.

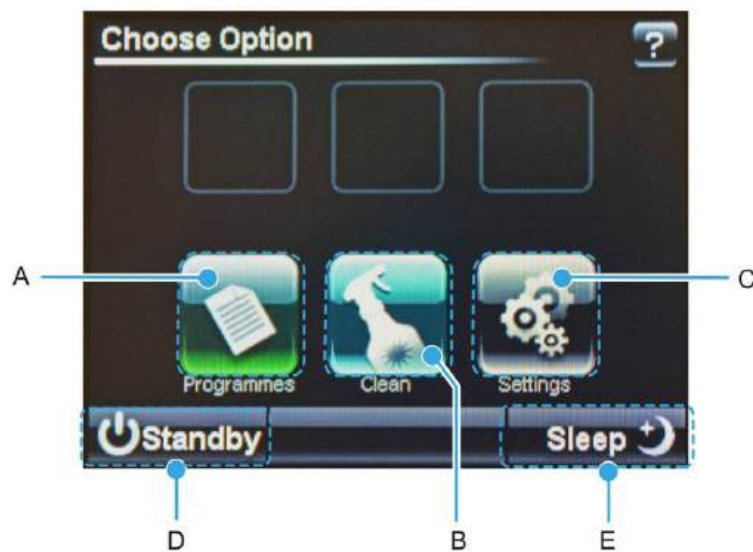


NOTICE

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

Figure 8.1: Main eco-touch screen

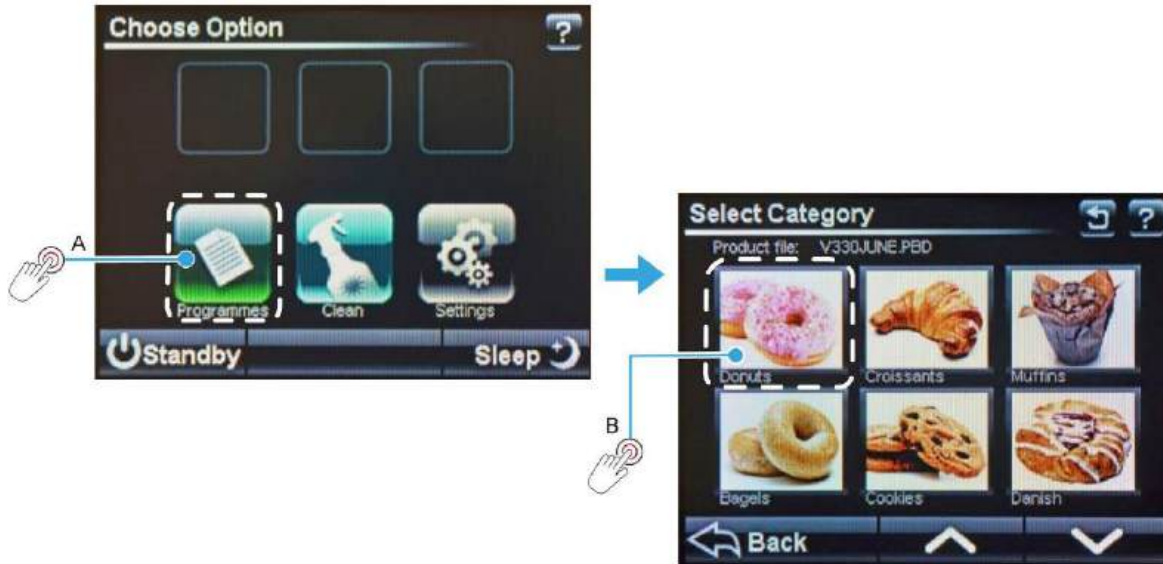
Touch the screen in the ringed areas to choose an option.



- A. Programmes ([Section 8.2](#))
- B. Cleaning ([Section 8.3](#))
- C. Settings ([Section 8.4](#))
- D. Standby mode
- E. Sleep mode

8.2. Baking using the “Programmes” menu

1. Touch the Programmes icon (A).
2. Touch a category (B), e.g. Donuts.



3. Touch the programme name (C), e.g. Non Glazed Donut.
4. Touch the "1 Pan", "2 Pan", or "3 Pan" icon (D).



5. Wait for the oven to reach the required temperature (E); 320 °F in this example.
 - If the oven is too hot for the temperature chosen, the screen tells you to open the door for cooling.
 - **Take care to avoid burns.**
6. When the oven is at the correct temperature ("Heating" changes to "Ready"):
 - a. Open the door.
 - b. Carefully load the oven with the prepared pans of product.
 - c. Close the door.
 - d. Touch the Start button (F).



7. After starting the bake, the screen changes to show time information.



G. Set temperature
 J. Bake time remaining

H. Temperature profile bar
 K. Actual temperature

I. Bake time progress bar
 L. Bake phase (when used)

- 8. Touch the **View** button to show a screen with settings for the bake in progress.
 - The **Cancel** button returns the display to the previous screen.



- 9. The Stop button can be pressed at any time to cancel the bake cycle.



10. When the bake is finished, a sounder is heard and Bake Over flashes on the screen.
- Touch the Stop button (M) and remove the product from the oven, or
 - Touch the + MIN button (N) for additional bake minutes (adjustable in the Settings menu).

**NOTE**

- The actual oven temperature fluctuates. It may briefly drop below, or rise above, the required temperature by a few degrees during baking. This is normal and not a malfunction of the oven.
- To minimize heat loss from the oven, do not leave the oven door open for longer than needed. The oven will automatically recover from the heat lost when the door is closed.

8.3. Cleaning cycle

1. Touch the Clean icon (A).
2. Touch the Start button (B) to start a cleaning cycle.



3. The Stop button (C) can be touched at any time to cancel a cleaning cycle.

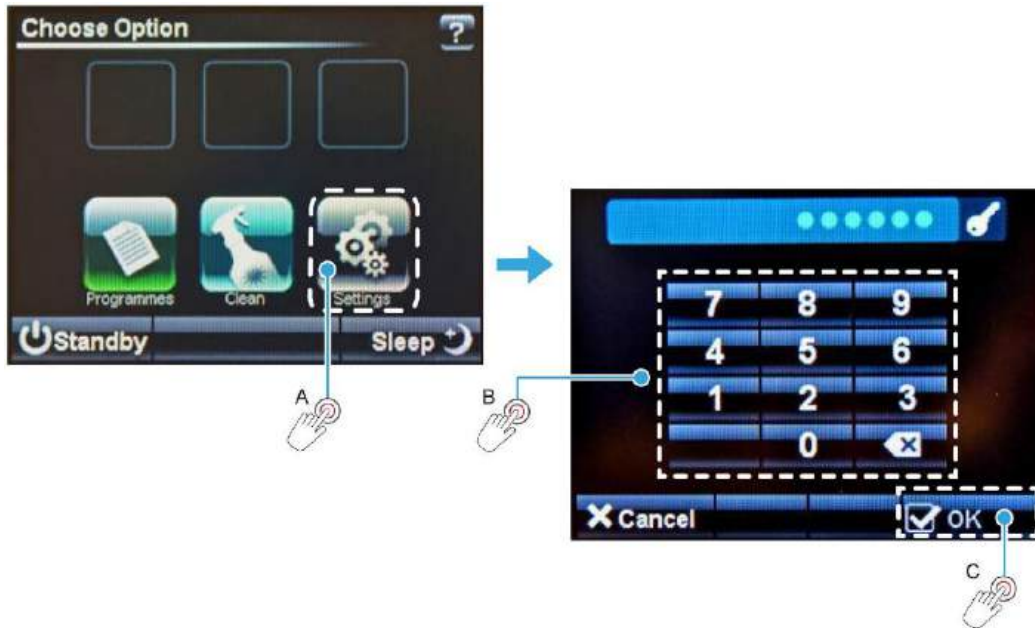


4. Touch the Stop button (D) when the "Bake Over" message is displayed.



8.4. General oven settings (user settings)

1. Touch the Settings icon (A).
2. Enter the Supervisor pass code (B) and then touch OK (C).



NOTE



Default passcodes for the various access levels are in [Appendix A](#). However, for security reasons, the passcodes section may have been removed.

3. Choose the settings to change.



4. Change the time and date (if required).
 - a. Touch **Time & Date**.
 - b. Touch the item that needs changing:
 - Time, Day, Date, Month or Year.
 - c. Use the up and down arrows to change the setting.
 - d. Touch **Save** to confirm the new settings.



5. Change the start screen wallpaper (if required).
 - a. Touch **Start Screen Wallpaper**
 - b. Touch a wallpaper and then touch **Back** to confirm the selection.



6. Change the general oven settings (if required).
 - a. Touch the **General Settings (G)**
 - b. Use the page-down and page-up arrows (**H**) to move through all the oven settings.
 - c. Touch an oven setting.
 - d. Adjust the oven setting value using the increase or decrease arrows (**I**).



Explanation of the general oven settings

Table 8.1: General oven settings (Sheet 1 of 2)

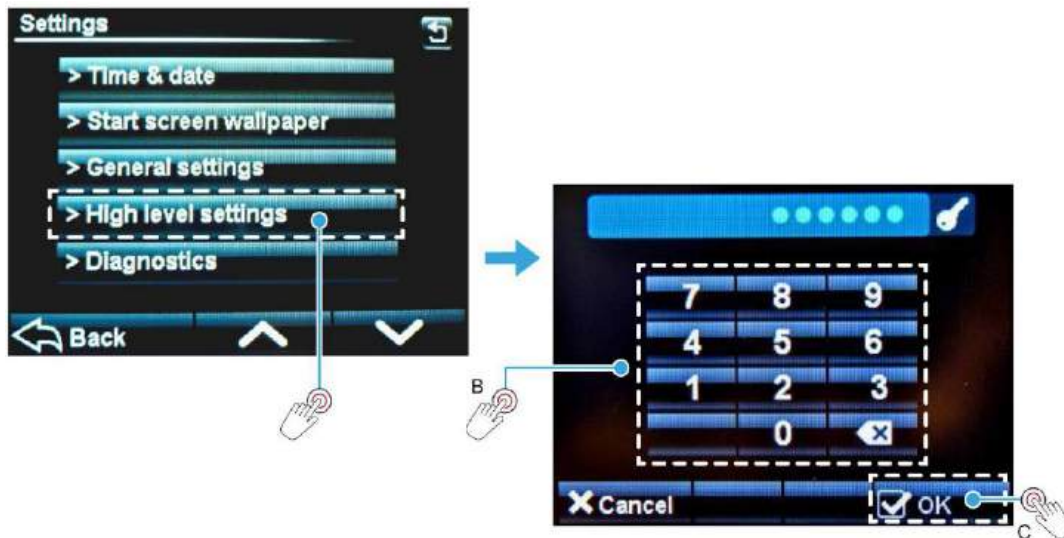
Oven setting	Explanation of the setting	Default
Screen brightness	Adjusts the brightness level of the viewing screen. Settings are 5 to 100 .	100
Touchscreen sensitivity	Adjusts the pressure required to operate the touch screen. There are 5 levels of sensitivity.	3 - Medium
Temperature unit of measure	Centigrade (Celsius) or Fahrenheit. Settings are °C and °F .	°F
Bake extension (minutes)	Adjusts the extra time at the end of a bake for each “extra time” button touch. Settings are 0 to 10 minutes.	2
Bake start on door close	This will start the set bake program as soon as the door closes.	Yes
Sleep mode delay	The oven goes into sleep mode after the set minutes, providing it is up to temperature and has been through at least one bake cycle. Settings are Off or a value up to 60 minutes.	0

Table 8.1: General oven settings (Continued) (Sheet 2 of 2)

Oven setting	Explanation of the setting	Default
8 hour countdown timer	After 8 hours, the oven gives a warning and then turns itself off. Touch any button for an extra hour, if required. Settings are On and Off .	Off
Power level (1 to 4)	Set these as required for use during different baking phases.	100%
Chart interval (sec)	Time interval in seconds for the bars that show on the heat and bake-time progress charts.	5
Sounder select	Set as External or Internal sounder.	External
Sounder tone	Select a tone - Voice , Tone , or Off .	Tone
Sounder volume	Adjust to suit the volume required for the on-board sounder. Settings are 0 to 15 .	15
Shortcut buttons 1 fn to 5 fn	It gives a choice of what buttons are active and in which order they appear on the options screen. Settings are: * Fav (Favorites) * Progs (Programs) * Manual (Manual bake) * Multi (Multi-bake) * 7-Day (7-day timer) * [Blank] (not used) (Settings at 6 fn cannot be changed).	1 fn = Fav 2 fn = Progs 3 fn = Manual 4 fn = 7-Day 5 fn = [Blank]

8.5. High level settings (factory settings)

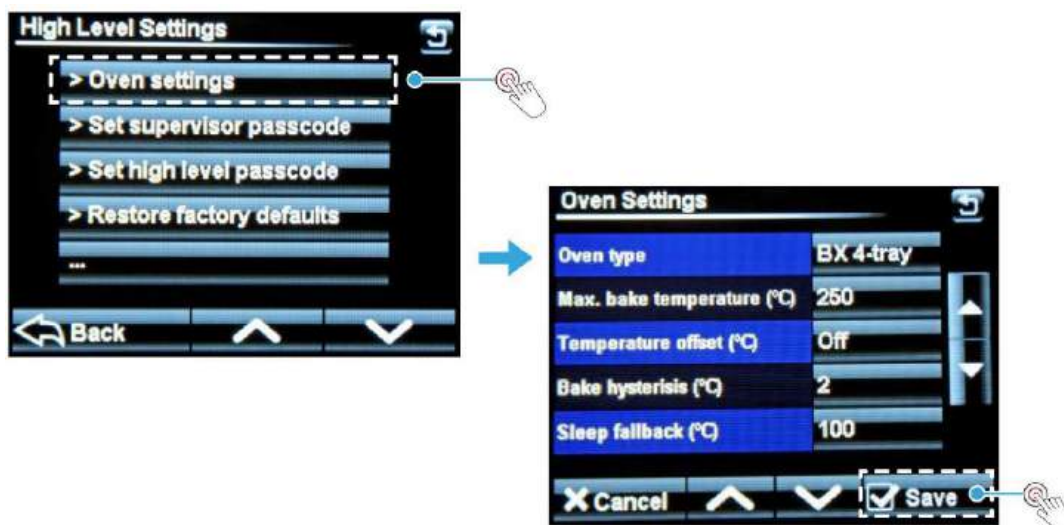
1. Touch **High level settings** (A).
2. Enter the High Level pass code (B) and then touch OK (C).



NOTE

- Default passcodes for the various access levels are in [Appendix A](#). However, for security reasons, the passcodes section may have been removed.

3. Touch **Oven settings**.
4. Use the up and down arrow keys to scroll through the pages of oven settings.
5. Change the settings and then touch **Save** to confirm all changes.



Explanation of the high-level oven settings

Table 8.2: High-level oven settings

Oven setting	Explanation of the setting	Default
Oven type	Select the oven version that the screen is installed on.	BX 4-tray
Maximum bake temperature (°F)	Settable maximum limit up to 572 °F .	482
Temperature offset (°F)	Use an offset to adjust the displayed actual temperature in the oven.	Off
Bake hysteresis (°F)	Sets the baking temperature to cycle around (above and below) a set point. Settings range from 1 to 20 .	2
Sleep fallback (°F)	Set the temperature required to be maintained by the oven whilst in sleep mode. Settings are 212 to 392 °F	212
Sleep hysteresis (°F)	Keeps the "sleep mode" temperature to cycle around (above and below) a set point. Settings range from 1 to 20.	2
Ready accept high (°F)	The highest temperature for the oven to display "Ready".	15
Ready accept low (°F)	The lowest temperature for the oven to display "Ready".	-10
Fan delay after steam (sec)	Settable delay up to 60 seconds before the fan restarts after the oven has been steamed.	0
Light output soft start	Set a delay of up to 60 seconds before restarting the fan after steaming.	0
Auto fan cycle time (mins)	Set how long a forward and reverse fan cycle lasts before reversing its direction.	2
Auto fan dwell time (secs)	Set how long the fan is stationary at the end of a fan cycle.	15
Heater control	Always fixed to the Contactactor setting for this oven. The Solid State option is not used at present.	Contactactor
I/P diagnostic	Displays the inputs and outputs at the top of the screen to aid fault-finding.	Off

8.6. Using the USB port

Prerequisite: See [Notes on using USB sticks on page 32](#).



DANGER

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

1. Ensure the start screen is showing.

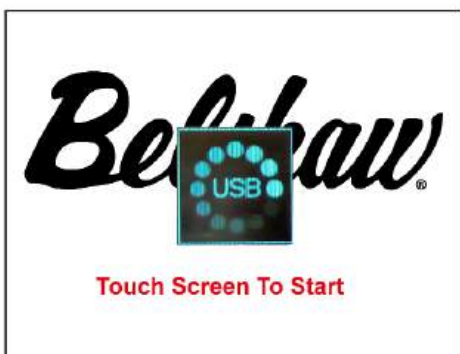


2. Insert the USB memory stick into the socket on the oven panel. (A rubber plug may have to be removed first).

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



3. Wait for the USB symbol to finish moving.



4. If old firmware is found, the firmware version screen will appear.
 - a. Touch **OK** to update firmware.
 - b. Wait until the eco-touch controller has restarted after the update is complete.
 - c. Remove the USB stick or touch **Cancel** to choose other items to update or change.



5. Choose the action you would like to do (e.g. **Load Products**).



6. Select the file required (e.g. **MALEVOX**).



7. Remove the USB stick when confirmation of "file loaded ok" is seen.

Notes on using USB sticks

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

Mono	(Create 5 sub-folders within the Mono folder)
	Firmware
	Products
	Skins
	Sounds
	Startup

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

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

Skins

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

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



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



Products (program files)

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

Startup screens

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

9. Maintenance

9.1. Safety notices

**WARNING**

- Switch off and electrically isolate the machine from the mains power supply before commencing any cleaning or maintenance work.
-

**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 BELSHAW or your appointed service agent.
-

9.2. General maintenance

The following general maintenance is recommended:

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

9.3. How to replace the LED strip

Prerequisite:

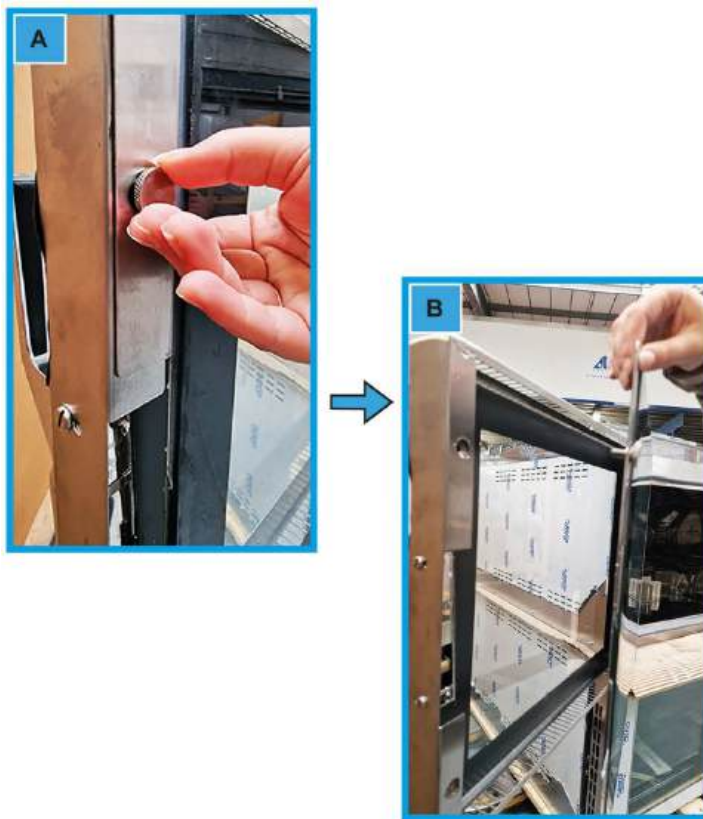
REPLACEMENT PART NUMBER: 153-03-03900

THIS SECTION IS FOR TECHNICIANS ONLY.

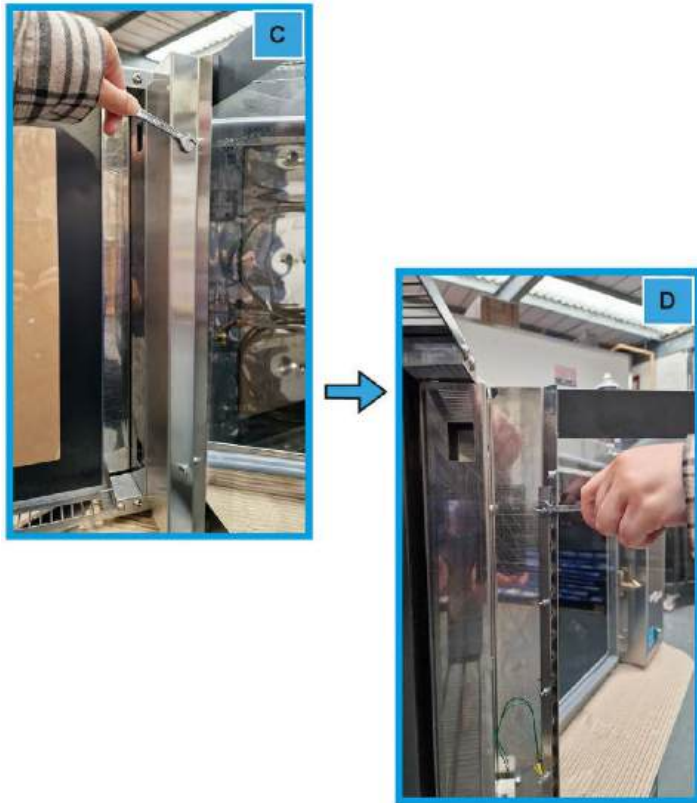
CUSTOMERS ARE NOT ADVISED TO ATTEMPT THIS REPLACEMENT PROCEDURE.

Context: In the event of an LED failure, follow these instructions to replace the LED lighting strip:

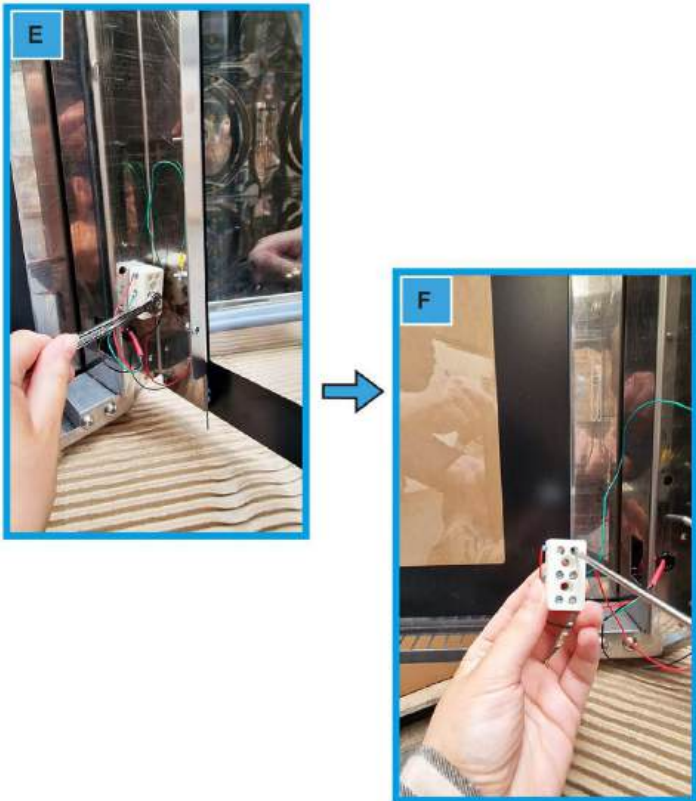
1. Unplug the oven from the electrical outlet and allow the oven to cool completely.
2. Remove the two thumbscrews (A), which retain the inner glass door panel against the door.
3. Open the inner glass door to reveal the LED protective stainless steel housing (B).



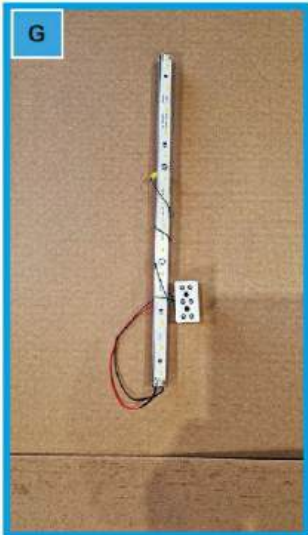
4. Using a 7mm spanner, remove two bolts holding the stainless steel LED protective cover strip (C) and remove it from the oven.
5. Using a 5.5mm spanner, remove the four nuts holding the LED strip (D). Ease the LED strip off the bolts and remove it from the oven door.



6. Using a 7mm spanner, remove the nut holding the porcelain connector block in place (E).
7. Using a small flat-headed screwdriver, loosen the screws holding the six connection wires in the porcelain connector block (F).
8. Carefully remove the six wires (three on each side) from the porcelain connector block.
 - Take note of the color sequence for connecting the new LED strip. From top to bottom: **Black**, **Green**, and then **Red**.



- 9. Attach the new LED strip (G), and then follow the previous instructions in reverse order to re-fit the parts and reassemble the oven door.



10. Frequently Asked Questions

- Q1** Why does the oven fan not run constantly while running different programs?
- A1** The fan is programmed to turn on and off, as well as change rotation, during the bake cycles of various products. This is done to promote an even bake and to create a gentler air flow in the oven.
- Q2** Why does the fan not run at all while running the Non-glazed Donut program?
- A2** In the Non-glazed Donut program, the fan is programmed to stay off the entire bake as to not overheat the donuts.
- Q3** Why do my glazed donuts not come out hot?
- A3** The programs for glazed donuts were developed to only heat the glaze on the donuts to 100°F such that the glaze will set and dry clear. It is not intended to raise the core temperature of the donuts.
- Q4** Why do my non-glazed donuts not come out hot?
- A4** The program for non-glazed donuts was developed to only heat shortening on the surface of the donut so it can be absorbed by the donut. It is not intended to raise the core temperature of the donuts.
- Q5** Why does the clean program not adequately clean the oven?
- A5** The Clean program is there to help the operator clean the oven and does not clean the oven on its own. The program sprays hot water for 20 seconds in the oven to start breaking down the carbonized glaze to make it easier to wipe out.
- Q6** Why do the lights not stay on all the time?
- A6** The lights are programmed to stay on after a product program is selected, i.e. while pre-heating (or cooling) and during the bake itself. The lights will turn off when the stop button is pressed at the end of a bake cycle and remain off until another bake cycle is initiated.
- Q7** Why am I getting black specks on my glazed donuts?
- A7** This is most likely due to not cleaning the oven sufficiently. As glaze collects in the oven, it is carbonized by the high temperature in the oven and eventually turns to black dust. Remove the interior side baffles and clean the interior surfaces of the oven as outlined in Cleaning.

- Q8** Why does the top of the display change colors?
- A8** The color coding is meant to help the operator know what is going on with the oven. If the bar on the top is red, the oven is pre-heating to a set temperature. If the bar on top is blue, the oven is cooling off to a set temperature. If the bar on top is green, the oven ready to start a bake cycle. If the bar on top is black, the oven is counting down in a bake cycle.
- Q9** What can be used to scrape off heavy build-up of carbonized glaze?
- A9** Regular cleaning after each session of glazed donuts will prevent the build-up from forming. Use a Scotch-brite pad to remove the heavy glaze build-up, or a stainless steel or non-metallic scraper.
- Q10** Who do I call for service?
- A10** Call the Belshaw at 800-578-2547 (USA/Canada). This is a 24/7 service dispatch call center.
-

11. Spares

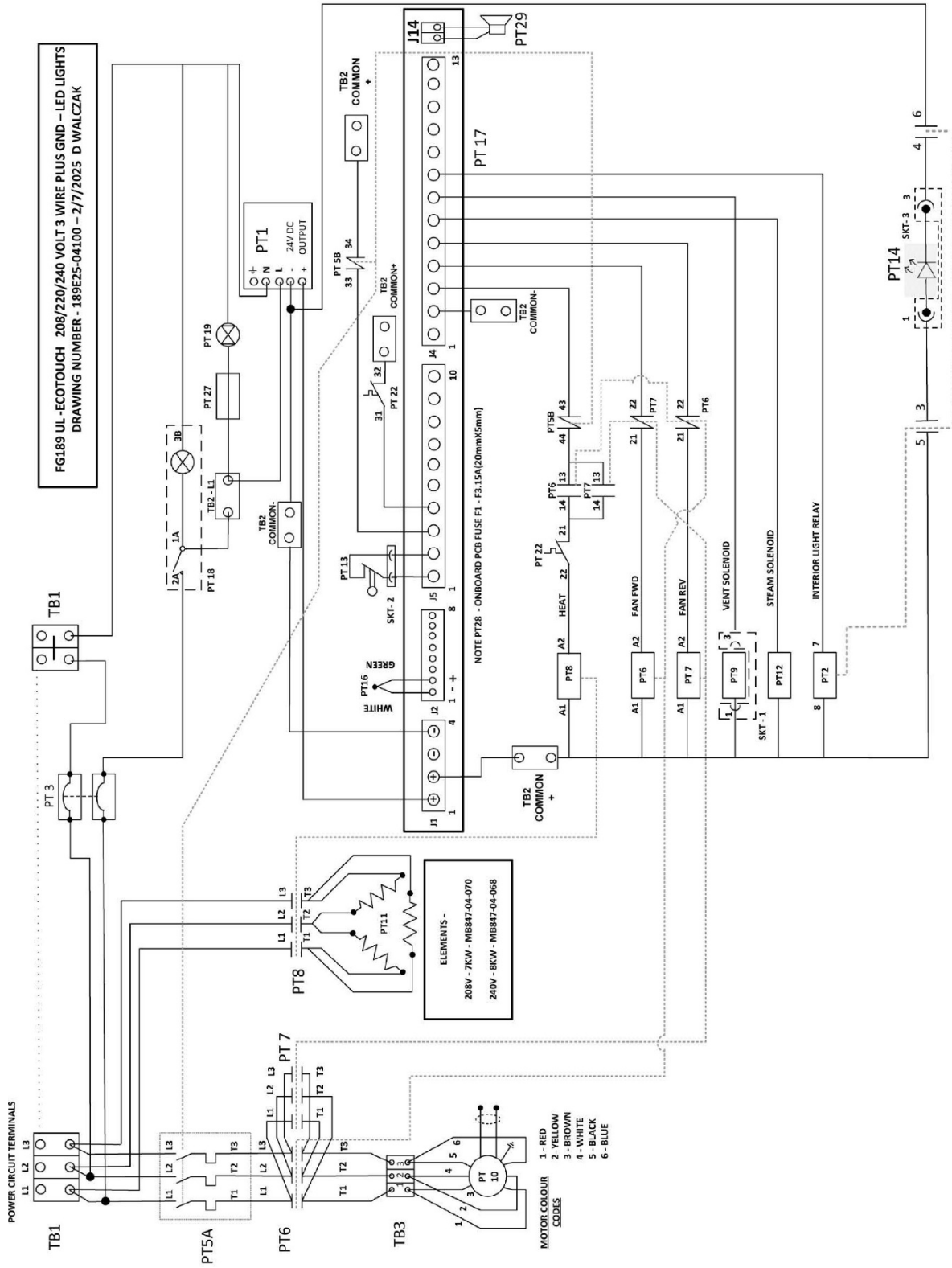
11.1. Oven Spare Parts Lists

Table 11.1: BX EcoTouch Convection Oven spare parts list

Item ⁽¹⁾	Part number	Description
PT-1	B801-93-005	24V power supply unit
PT-2	B723-37-004	Interior light relay
PT-3	B872-22-075	Control circuit MCB
PT-5A	B801-03-023	Fan motor overload unit, set, 3 Amp
PT-5B	B801-14-012	Fan motor overload auxiliary contactor
PT-6	B801-08-031	Fan motor contactor (Forward)
PT-7	B801-08-031	Fan motor contactor (Reverse)
PT-8	B801-08-022	Heating element contactor
PT-9	B749-83-003	Damper solenoid (L/H oven)
	B749-83-004	Damper solenoid (R/H oven)
PT-10	B720-74-005	Fan motor, stainless steel bearing
PT-11	B847-04-070	Heating element, 7kW (208 Vac)
	B847-04-068	Heating element, 8kW (240 Vac)
PT-12	158-17-00400	Steam solenoid
PT-13	B842-07-037	Door switch
PT-14	B855-94-010	LED light unit
PT-15	B982-92-002	Buzzer (Optional)
PT-16	B873-95-006	Oven thermocouple
PT-17	158-25-80000	Eco-touch screen and PCB assembly
PT-18	B836-07-010	ON/OFF power pushbutton switch
PT-19	B869-75-018	Cooling fan, compact size (Rear)
PT-22	B888-30-015	Overheat thermostat (689 °F)
PT-27	B842-85-025	Cooling fan fuse (Rear fan), 1 Amp, F rated
PT-28	B842-85-013	PCB fuse, F3.15A
PT-29	B842-92-005	Speaker unit

(1) Reference in [Figure 11.1](#)

Figure 11.1: Electrical schematic



A. Passcodes

A.1. Default passcodes

Table A.1: Default passcodes

Security access	Default passcode
Supervisor (low level)	123456
High level	654321
Master	314159 (fixed)

Suggestion

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

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

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B. Door Handing Change Instructions




How to change the opening direction of the door

The following instructions are a guide for technicians. It is not recommended that the customer tries this.



Mono Work Instructions

Door Handing Change Instructions

PROCEDURE OVERVIEW	INSTRUCTIONS & EXPLANATION
<p>PPE & SWI</p> <p>Required Safety Equipment</p>	<p>The purpose of this document is to assist with the changing of the door handing on 189 Led ovens.</p> <p> Safety Gloves</p> <p> Safety Boots</p> <p>Tools required ; Torque meter, flat screwdriver, 10mm spinner, 10mm spanner, 4mm allen key, 7mm spinner, terminal screwdriver.</p>
	


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Mono Work Instructions Door Hanging Change Instructions



Open the oven door




With the use of your fingers open the inner glass

Glass door retaining screws

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Mono Work Instructions Door Hanging Change Instructions



Remove the LED cover

Loosen 2 x 7mm bolts



Locate the 2 button heads under the door hinge

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Mono Work Instructions Door Hanging Change Instructions

Take off the 2 plates with a 4mm allen key and keep safe

Carefully feed the cable out from the door and out from the door hinge

Remove the top hinge


Use a 10mm spinner for the front retaining screw.

Use a 10mm spinner for the inner retaining screw

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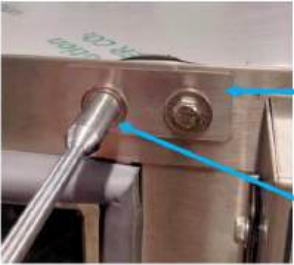


Mono Work Instructions Door Hanging Change Instructions



The door can now be taken off


Careful not to bend the door hinge



Swap the position of the blanking plate

Locate the blanking plate at the top right of the oven

Use a 10mm spinner remove the 2 screws and washers







Fit the blanking plate back onto the top left of the oven

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Mono Work Instructions Door Handing Change Instructions

	 <p>Swap the position of the door latch assembly</p> <p>Use a 10mm spinner to take off the latch from the panel side of the oven</p>  <p>Replace the latch on the opposite side of the oven</p> <p>Careful to keep the direction of the latch the same way when moving the position</p>
	 <p>Swap the position of the door blanking screws</p> <p>Use a 10mm spinner to remove 2 x blanking screws and washers</p> <p>Door side</p>  <p>Replace the door blanking screws on the panel side</p> <p>Panel side</p>

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Mono Work Instructions Door Hanging Change Instructions

	 <p>Remove the panel and carefully place inside the oven</p>  <p>Locate the pink LED cable</p>
	 <p>Pull the pink LED cable carefully through to the panel side.</p>  <p>Move the blanking plate from the bottom right to the bottom left of the oven</p>

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Mono Work Instructions Door Hanging Change Instructions


	 <p>Using the door hinge , screw and washers taken off the top left</p> <p>Apply pressure to the latch post to stop the door seal being loose.</p> <p>Fit the door hinge to the bottom right of the oven using a 10mm spinner</p>
	  <p>Put the spacer onto the hinge</p> <p>Fit the door back onto the bottom hinge</p>

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Mono Work Instructions Door Handing Change Instructions


Using the door hinge , screw and washers taken off the bottom left of the oven



Fit the hinge post into the door


Use a 10mm spinner for the front retaining screw

Use a 10mm spanner for the inner retaining screw



Open the inner glass with the 2 retaining screws

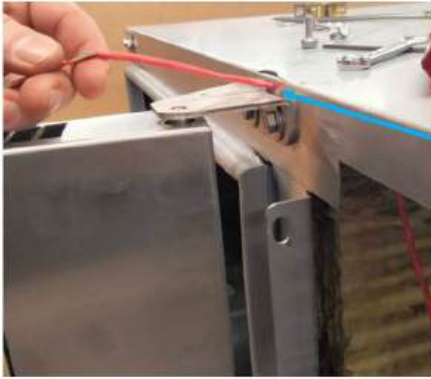
Check the door switch hasn't been damaged



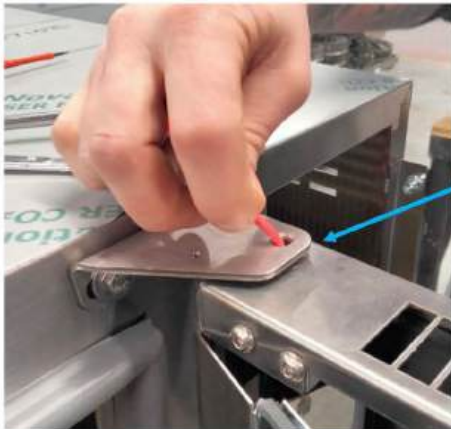
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Mono Work Instructions Door Handing Change Instructions



Feed the pink LED cable through the slot on the surround



Feed the pink LED cable through the hole in the door hinge

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Mono Work Instructions Door Hanging Change Instructions

Pull the pink LED cable through into the door

Connect the 3 wires back into the terminal block


Fit the 2 plates back onto the door hinge with the 2 button heads

Careful not to trap the LED cable

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Mono Work Instructions Door Handing Change Instructions



Replace the LED cover

2 X 7mm bolts


Remove the door handle



Use a 10mm spanner and flat screwdriver

Rotate the door handle 180°

Handle must be facing upwards



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Mono Work Instructions Door Handing Change Instructions



Tighten the retaining screws on the door

Replace the panel



Door handed swap complete

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Belshaw[®]

Belshaw

814 44th Street NW
Suite 103
Auburn
WA 98001
U.S.A.

Phone: 800-578-2547 (USA/CANADA)

Customer Service Email: info@belshaw.com

Technical Support Email: service@belshaw.com

www.belshaw.com
