Enter Serial No. here.\_

In the event of an enquiry please quote this serial number.







## **OVEN WITH WASH FACILITY** (INCLUDING CASSETTE LOADING VERSION)

### **OPERATION AND MAINTENANCE**

FILE 1	15
--------	----

Failure to adhere to the operation, cleaning and maintenance instructions detailed in this manual could affect the warranty of this oven.



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 EN 55014-1:2006 + A1:2009 + A2:2011 EN 55014-2:1997 + A1:2001 + A2:2008
- The General Safety of Machinery and food processing Standards applicable
- Materials and Articles intended to come into contact with food Regulation (EC) No. 1935 / 2004
- Tested in accordance with BSEN 203-1:2014, BESN203-2-2:2006 and BSEN 203-3:2009
- WRAS certified. Certificate No.1509321

Signed	CHED Whans.		
G.A.Williams – Quality Manager			
Date			
Machine FG Code.	Machine Serial No.		

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

### MONO EQUIPMENT

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

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

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

# **ATTENTION**

## **IF OVEN FAILS TO HEAT UP,** WHEN FIRST CONNECTED TO A POWER SUPPLY OR DURING USE AT ANYTIME.

### PRESS RESET BUTTON LOCATED THROUGH THE REAR BACK PANEL. (DO NOT REMOVE BACK PANEL)



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Do not use anything aluminium for the wash cycle. The cleaners will damage the item and possibly clog up the wash system

## **1.0 INTRODUCTION**

- A combination of clean industrial design and the latest technology, the **MONO BX wash oven** is designed specifically to take the baking Industry's standard 40cm x 60cm trays with the option of a quick and easy "Tray Loading Cassette system" which loads up to 14 trays in seconds.
- The ovens are constructed using stainless steel which makes them easy to clean.
- The variable fan, element and steam system give **efficient air circulation** to produce a professional bake across a range of products and work together to produce excellent conditions for the wash cycle.
- The door is **double glazed** to increase the efficiency of the ovens well-insulated baking chamber and contains LED lights to illuminate the interior.
- To prevent contact with any cleaning fluids or water during the cleaning cycle, the **main door locks** until all cleaning cycles are finished.
- Ovens are supplied with LCD TOUCH displays for the user-friendly control panels.
- So long as the Mono "Power Max Plus" cleaning cartridge is used, the ovens can be connected to a normal domestic drain system without any problems with the environment.
- Full control and monitoring via an app for smartphones or handhelds is available.
- The self-clean System provides 4 set programmes for hot flush, gentle, standard and power wash cycles or a custom wash facility to suit specific needs.
- The management programme provides diagnostics, fault-logging and even electrical power usage and costing



## 2.0 SPECIFICATIONS

	10 tray	4 tray	stacked
HEIGHT	1240	640	2000
HEIGHT OF OVEN ON BASE	1360		
WIDTH	1000	1000	
DEPTH – DOOR CLOSED	860	860	
DEPTH – DOOR OPEN	1620	1620	

POWER (uk versions)

TRAY SIZE

4/5 TRAY OVENS - 415 volts. 3 PHASE, + NEUTRAL + EARTH, 50HZ 11amps per phase, total power 7.5kW (element = 7kW 240v stainless steel)

600mm x 400mm

10 TRAY OVENS - 415 volts. 3 PHASE, + NEUTRAL + EARTH, 50HZ 21amps per phase, total power 15kW (element = 7kW 240v stainless steel x2)

#### POWER (export versions)

4/5 TRAY OVENS - 400 volts. 3 PHASE, + NEUTRAL + EARTH, 50HZ 12amps per phase, total power 7.5kW (element = 7kW 220v stainless steel)

#### WATER

<sup>3</sup>/<sub>4</sub>" B.S.P. Flexible hose.

WATER PRESSURE 2 bar – 4 bar Domestic pressure is usually within this parameter.

Water conditioning unit advised, especially in hard water areas.

#### DRAINAGE

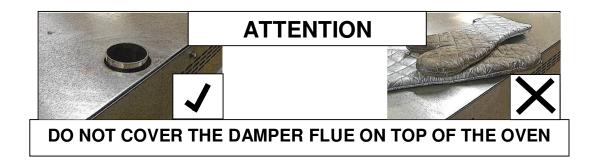
The oven must be connected to a drain via a standpipe or be connected to a drainage pipe that does not allow water flow-back into the machine.

3.0 SAFETY

In the interest of safety and efficient operation of the oven, it is essential that this manual should be made available to the operator before work is commenced.

The following points should be observed and followed at all times.

- 1. The oven is designed for baking of bread, confectionery and savoury products only. DO NOT use it for any other items without first consulting with MONO.
- 2. All repairs and maintenance of electrical units must be carried out by authorised electricians; even then, electrical access panels must not be opened unless the main electrical supply to the oven is isolated.
- 3. All connections to the oven must be made in accordance with the statuary requirements of the country of installation.
- 4. 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 from inside.
- 5. The oven must be operated as described in this manual.
- 6. Only **MONO** spare parts should be used on this oven.
- 7. The construction of the oven must not be changed.
- 8. The owner of the oven is legally obliged to instruct staff of these safety points and of the safe operation of the oven. These instructions should not be removed from the working area.
- 9. To prevent door glass damage -DO NOT CLEAN OVEN GLASS WHEN HOT.
- 10. Customers operating a BX oven must ensure that water quality is good or an efficient water-softening device protects the water supply to the equipment.
- 11. Oven gloves should be worn when moving products in or out of the oven.
- 12. Care should be taken when handling cleaning cartridges. Do not break open or use damaged cleaning cartridges. Store cleaning cartridges in original packaging.
- 13. If the oven is not going to be used for an extended period, switch off the electrical and water supplies.



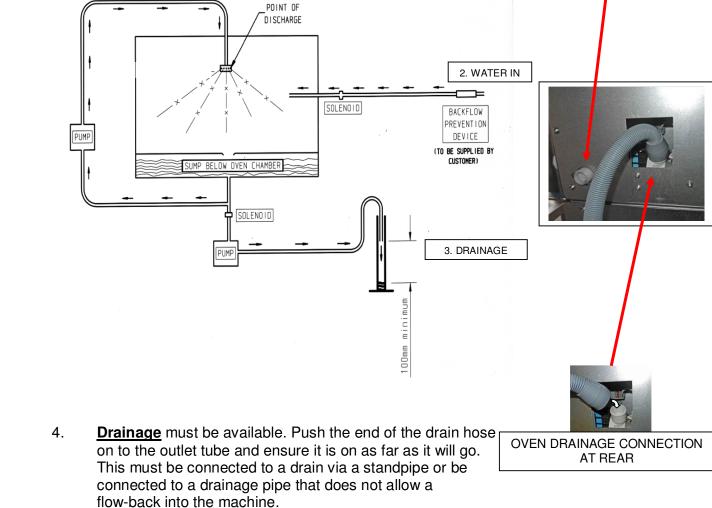
#### INSTALLATION 4.0

- 1. It is the customers' sole responsibility to arrange adequate ventilation and it should be sufficient to ensure water does not condense on or around the oven. A 50mm gap is recommended at the sides and rear of this oven and 250mm above.
- 2. Chimneys and evacuation ducts fitted above mono ovens should be insulated to stop condensate flowing back into the oven.
- 3. Water connection should be to a suitable clean water supply. making sure that the pipes are flushed out to remove all foreign bodies i.e. flux or solder. Customers in hard water areas must ensure that an efficient water treatment device protects the supply to the oven. It is the customers' responsibility to install and maintain an adequate water supply to the oven, which should comply with local water regulations. OVEN WATER CONNECTION In the UK a backflow prevention device must be fitted.



AT REAR

WASH WATER SYSTEM SCHEMATIC



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

6. Ensure that the locking castors on the base are locked into position.

#### 7. **AMBIENT WORKING TEMPERATURES**.

Ambient working temperatures for electric/electronic components such as solenoid switches, circuit breakers, motors etc. should be <u>no more than 40°C (115° f)</u>

Manufacturers of these and other electrical components advise that any ambient temperature above 40°C affects the functionality of the components and any related guarantees become void.

For example, above this temperature motors are not satisfactorily 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 that is found to have been subject to excessive humidity or ambient working temperature above  $40^{\circ}C$  (115°F) will not be covered by the component manufacturers guarantee or the MONO product warranty.

## 5.0 ISOLATION

### ELECTRICITY SUPPLY

**To stop the oven in an emergency.** Switch off electricity supply at the wall isolator.

#### WATER SUPPLY

The water supply should be shut off at the nearest shut-off point

## 6.0 CLEANING INSTRUCTIONS

## DAILY

- Sweep any debris (after it has been allowed to cool) onto removable oven trays and remove for cleaning.
- Brush down and wipe oven front, back and sides.
- Wipe clean with a damp cloth that has been soaked in a solution of mild detergent and hot water. Do not wash the control screen but wipe with a damp cloth only.
- Run the clean cycle if required. (Be aware that this takes some time to complete). SEE PAGE 27

### IMPORTANT: TAKE CARE CLEANING WATER DOES NOT ENTER CONTROL PANEL OR REAR ACCESS PANEL.

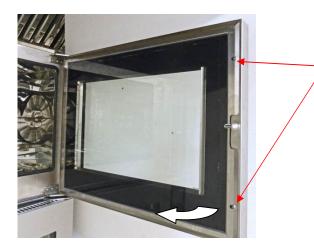
### **DOOR GLASS CLEANING**

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

To open, remove the two screws shown in the picture below.

The internal surfaces of the door glass can then be wiped clean or if needed use a suitable glass cleaner.

Ensure that the screws are replaced securely.



Remove these screws to release inner glass for cleaning

## 7.0 IDEAL OPERATING CONDITIONS

- Room should be allowed for the door to open and for the operation of the cassette loader if being used. There should be enough room to allow for easy loading and unloading of products so that people cannot come in contact with hot surfaces.
- Racks should be available to allow trays of cooked products to cool safely.
- Oven gloves should be available and used at all times.
- It is the customers' sole responsibility to arrange adequate ventilation and it should be sufficient to ensure water does not condense on or around the oven. A 50mm gap is required at the sides and rear of this oven and 250mm above.
- Chimneys and evacuation ducts fitted above mono ovens should be insulated to stop condensate flowing back into the oven.

#### AMBIENT WORKING TEMPERATURES.

Ambient working temperatures for electric/electronic components such as solenoid switches, circuit breakers, motors etc should be <u>no more than 40°C (115° f)</u>

Manufacturers of these and other electrical components advise that any ambient temperature above 40 °C affects the functionality of the components and any related guarantees become void.

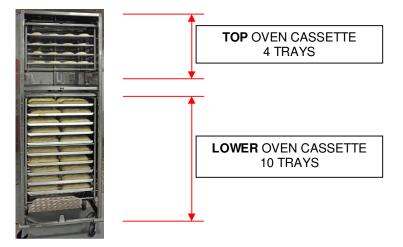
For example, above this temperature motors are not satisfactorily cooled, contactor efficiency is seriously impaired and electronic components shut down. It is the customers' sole responsibility to arrange for adequate ventilation.

Any component malfunctioning during the guarantee period that is found to have been subject to excessive humidity or ambient working temperature above 40 °C (115°F) will not be covered by the component manufacturers guarantee or MONO's product warranty.

## 8.0 **OPERATION**

### LOADING THE OVEN IF CASSETTE SYSTEM IS FITTED

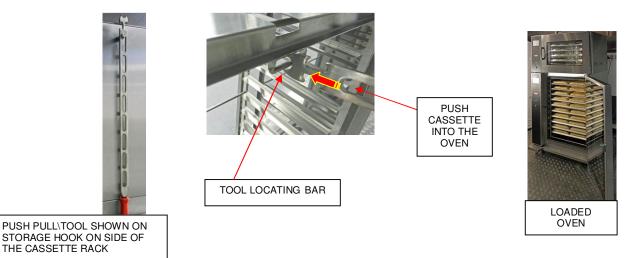
Slide full trays onto runners in the cassette holding rack at positions required.



When the oven is up to temperature and ready to bake, open the door(s) and push loaded rack up to oven using the central locator on the bottom front edge to give the correct positioning.



Using the push-pull tool, push the cassette into the oven as far as it will go.

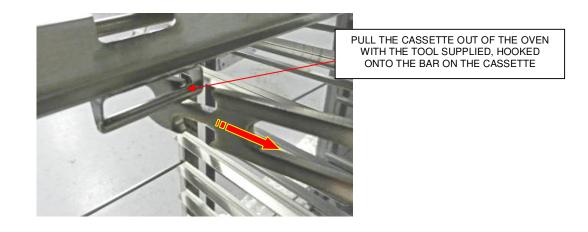


To stop heat escaping, pull the rack away from the oven and close the oven door as soon as possible.

### UNLOADING THE OVEN

When the bake is over, stop the oven and open the door required, the rack can now be placed back into position.

Hold the rack in place and using the push-pull tool provided hooked onto the bar on the cassette; unload the oven by pulling the cassette out of the oven and back into the rack. Remember the trays and rack will be hot.



Move the rack away from the oven and close the door to stop heat loss.

Using oven gloves transfer the hot trays to a cooling rack.

The cassette is then ready to be loaded with more products.



## TOUCH SCREEN OPERATING INSTRUCTIONS

## **BASIC OPERATION**

### ALL OPERATIONS ARE ACTIVATED BY TOUCHING AREAS ON THE SCREEN.

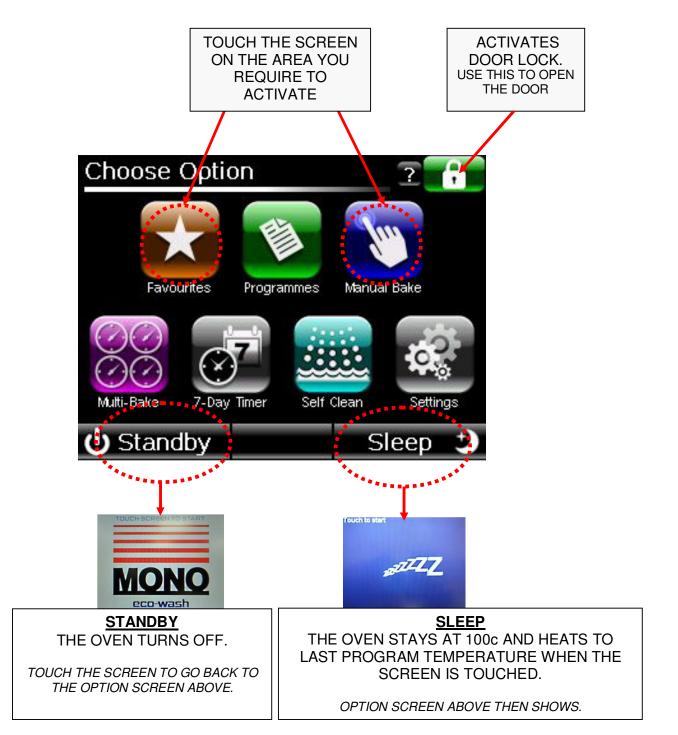
DO NOT USE EXCESSIVE FORCE.

(THE PRESSURE REQUIRED TO OPERATE THE PANEL CAN BE ALTERED IN THE SETTINGS SECTION)

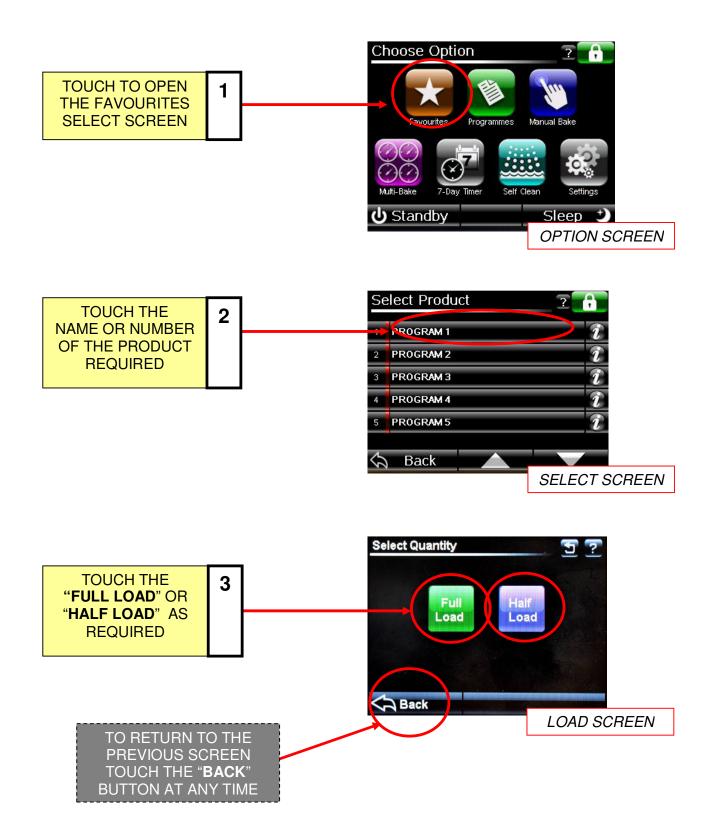
To open the door touch the lock icon on the screen and allow the door to unlock then pull the door open.

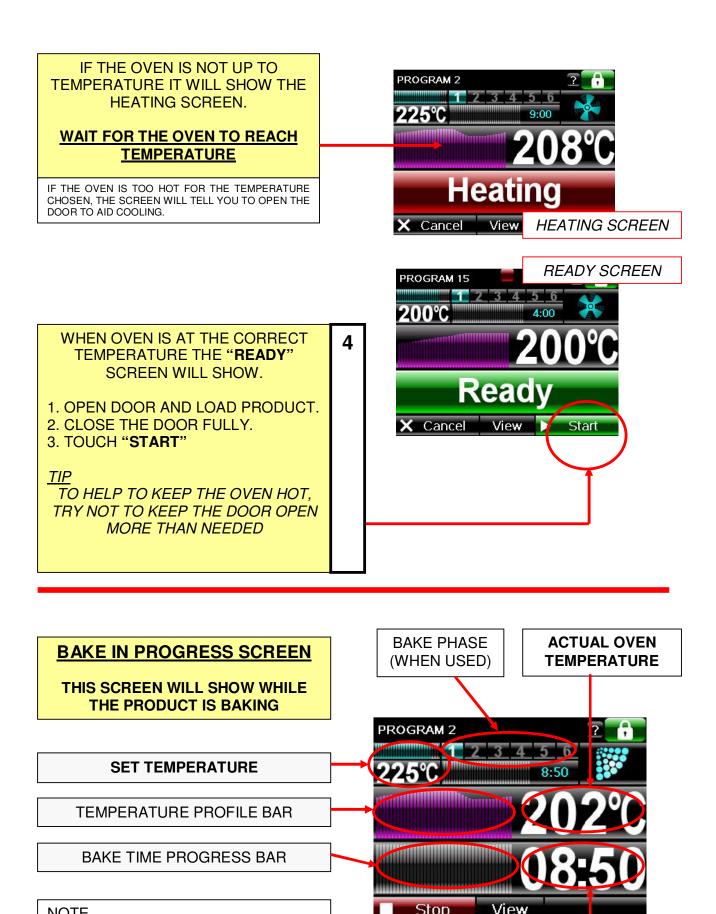
To close the door, just push shut and the door lock will take over and lock the door.

Do not restrict the unlocking by holding the door as this will cause the door lock to malfunction. If this happens and the lock icon has turned gold, press it between one and three times until the problem is cleared.



## 8 -1.0 BAKING USING "FAVOURITES" MENU



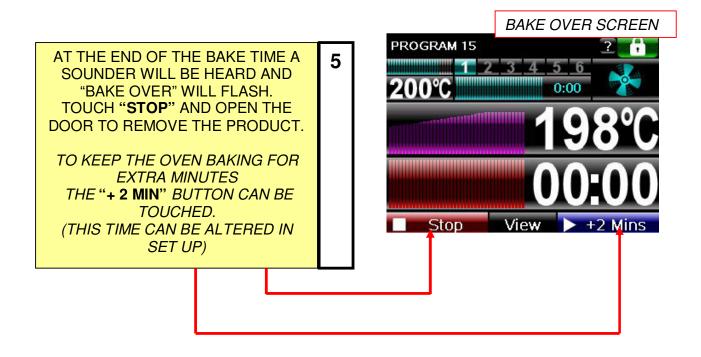


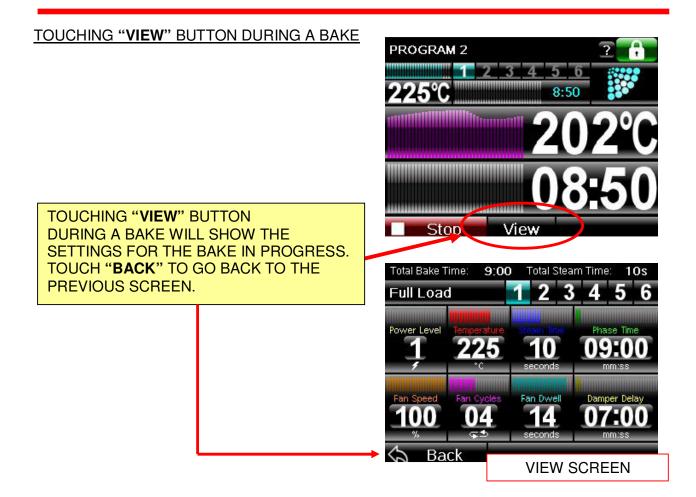
### NOTE

The actual temperature shown will rise and fall above and below the set temperature as the oven cools and reheats. This is not a fault

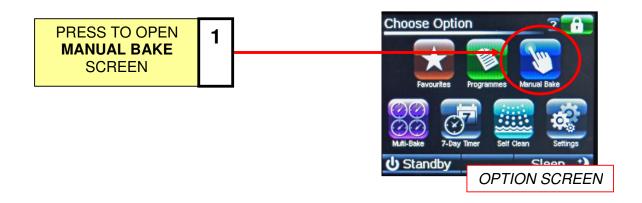
View

BAKE TIME LEFT

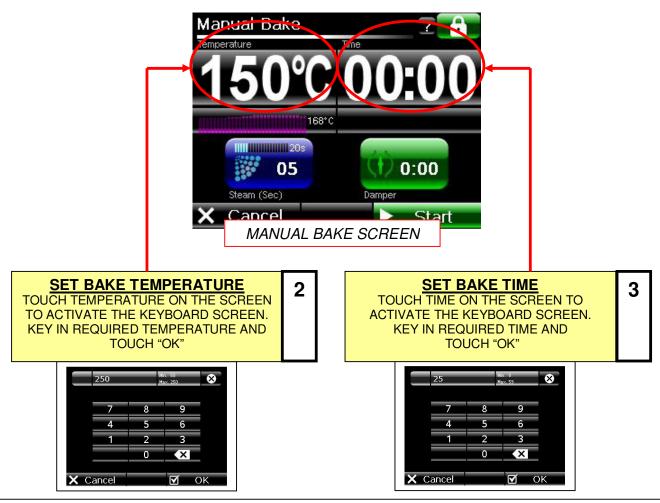




## 8 - 2.0 BAKING USING "MANUAL" MENU



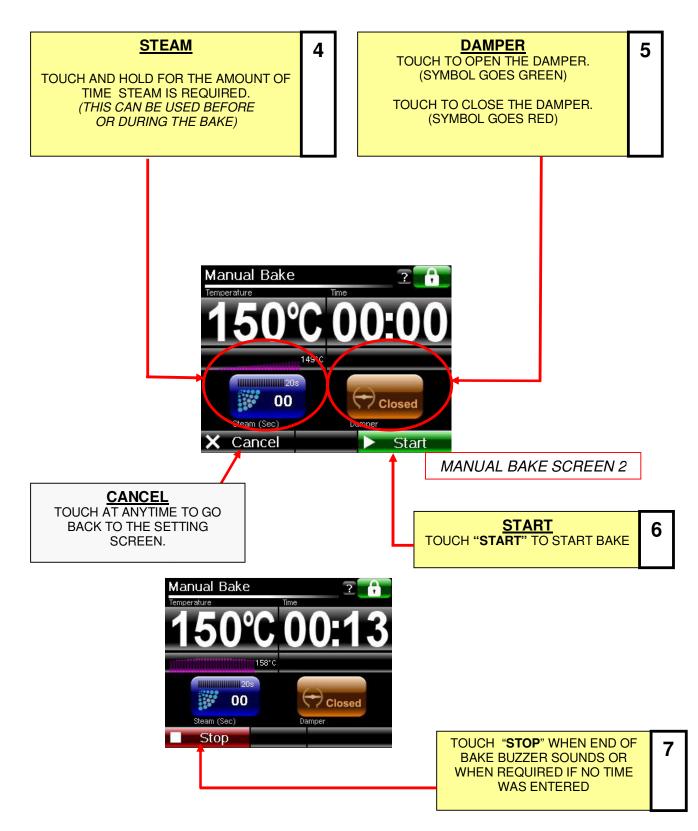
### SET BAKE TIME AND TEMPERATURE



#### NOTE:

TIME DOES NOT HAVE TO BE SET IN MANUAL MODE. (ONLY TEMPERATURE).WHEN START IS TOUCHED WITH NO TIME SET, THE TIME WILL COUNT UP INSTEAD OF DOWN. TOUCH STOP TO FINISH THE BAKE.

### **USING STEAM AND DAMPER IF REQUIRED**



## SAVE "MANUAL" PROGRAM, IF REQUIRED

NOTE:

MANUAL PROGRAMS CAN ONLY BE SAVED IF NO TIME WAS ENTERED AT THE BEGINNING OF THE BAKE

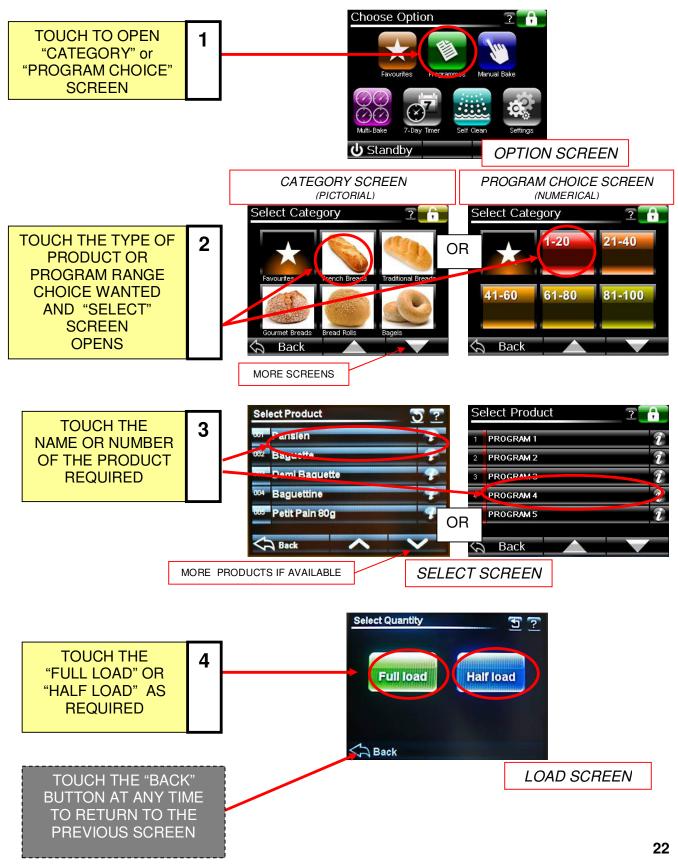


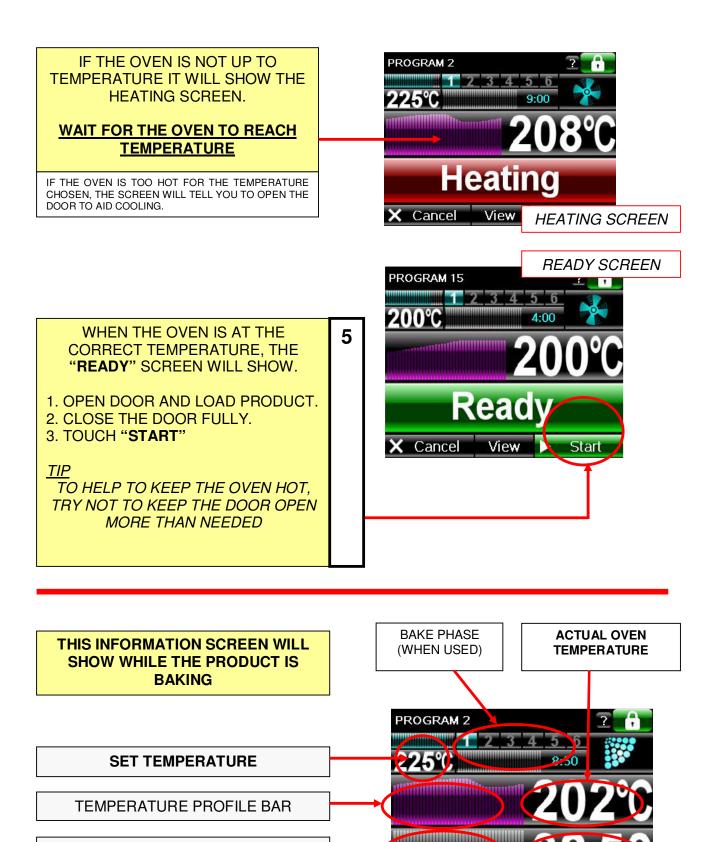
NOTE: In manual mode, only one operation of the steam or damper is saved.

## 8 - 3.0 BAKING USING "PROGRAMMES"

NOTE : THIS COVERS TWO VERSIONS OF FIRMWARE. THE OVEN CAN BE FACTORY SET TO SHOW EITHER

- 1. A PICTORIAL VERSION GIVING CHOICES OF PRODUCT CATERGORIES
- 2. A NUMERICAL VERSION THAT SHOWS RANGES OF PROGRAM NUMBERS.





Stop

View

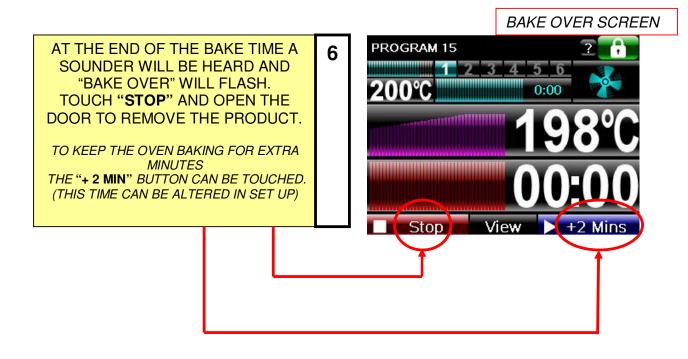
BAKE TIME LEFT

BAKE TIME PROGRESS BAR

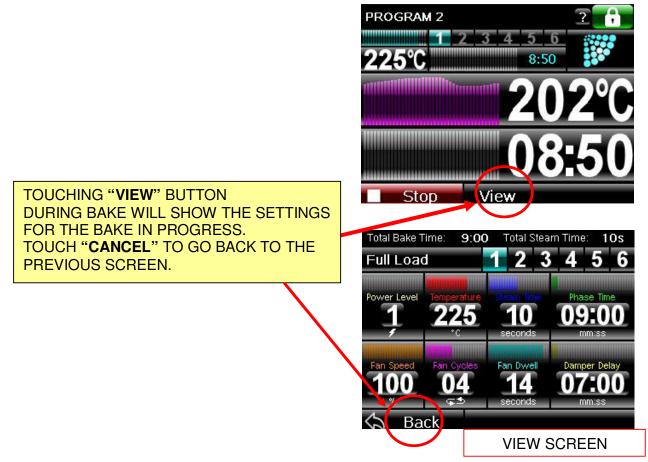
### <u>NOTE</u>

The actual temperature shown will rise and fall above and below the set temperature as the oven cools and reheats. This is not a fault

Bx oven Eco WASH 4-11-16 RevB16

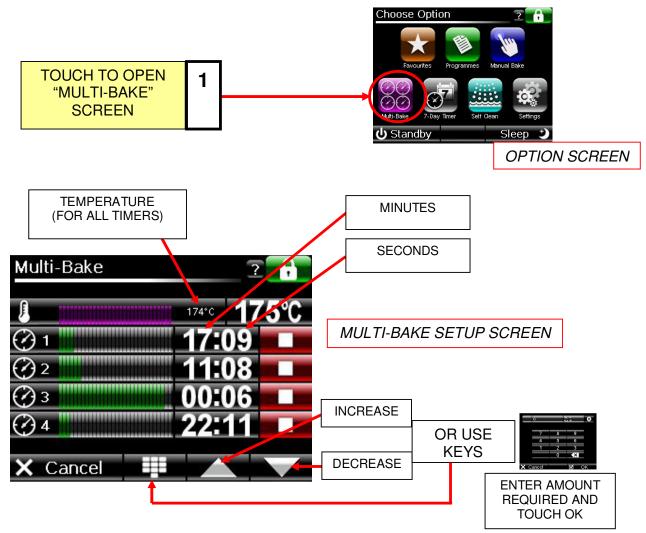


### TOUCHING "VIEW" BUTTON DURING BAKE

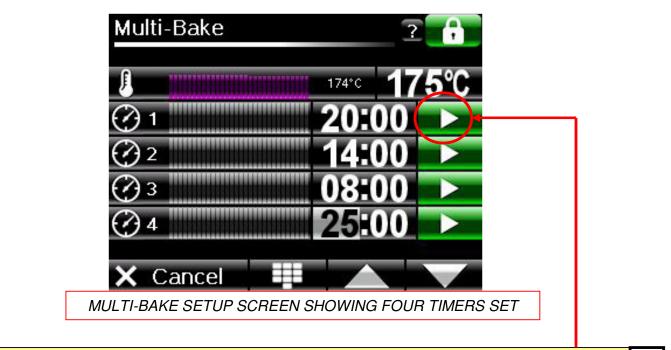


## 8-4.0 BAKING USING "MULTI-BAKE" MENU

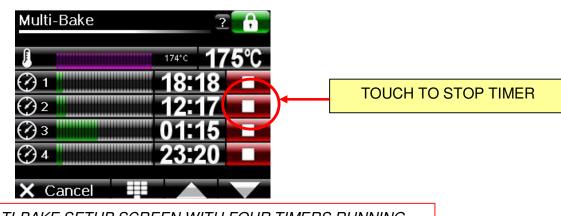
Multi-bake allows the setting of up to four bake timers so that up to four different products can be baked in the same load. (Products must all use the same temperature).



Touch temperature and set by using up and down keys (or press the number pad symbol and a keypad appears). Enter the value required and touch OK.	2
Set each timer as required. (You do not have to set all four)	
Touch minutes and set by using up and down keys (or touch the number pad symbol and a keypad appears). Enter the value required and touch OK.	
Touch seconds and set by using up and down keys (or press the number pad symbol and a keypad appears). Enter the value required and touch OK.	



TOUCH THE START BUTTON WHEN REQUIRED AND THE TIMER WILL COUNT DOWN. 3



MULTI-BAKE SETUP SCREEN WITH FOUR TIMERS RUNNING

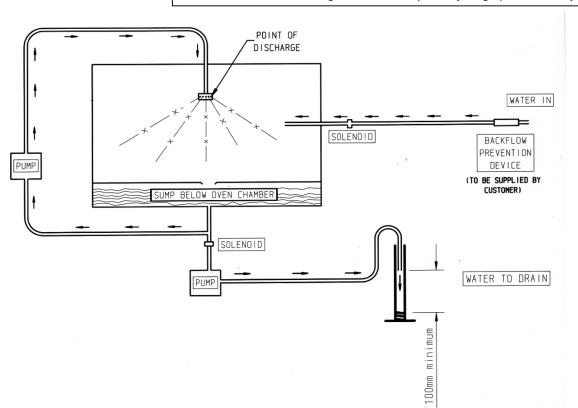


AT THE END OF A SET TIME A BUZZER SOUNDS. TOUCH RED BAR TO STOP

## 8-5.0 USING THE WASH CYCLE

#### THE WASH OPERATION

Do insert anything aluminium when using the wash cycle. The cleaners will damage the item and possibly clog up the wash system



1. When the wash cycle is required, the oven cools to the wash cycle temperature (80 degrees) as part of the chosen program – Opening the door for some time before a wash program is selected will speed up the wash time. (The actual wash cycle will not start until this temperature is reached).

2. A "Power Max Plus" cleaning cartridge is screwed into the locator on the rack cassette.



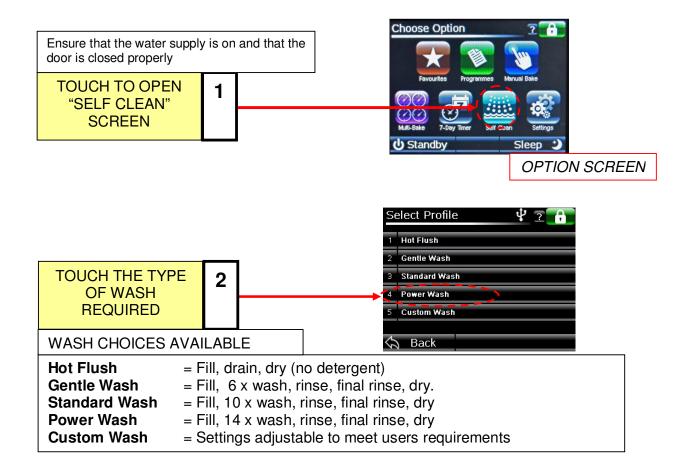
"Power Max Plus" Cleaning cartridge Part No.A900-26-037

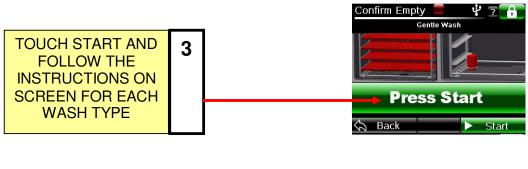
- 3. Water enters the chamber and gets heated by the element and slow moving fan up to the required temperature.
- 4. The cleaning solution now in the sump is pumped up through the spray nozzle and is spread around the chamber by the action of the fan. The oven is then left to soak.
- 5. The scrubbing program then starts which is where the cleaning fluid is recycled through the spray nozzle and the fan pulses giving a cleaning action. This can be set at light, medium or heavy.
- 6. After the scrub cycle, the oven drains and is left to soak again.
- 7. After a while the oven is flushed with clean water and rinsing agent and then heated to allow the interior to dry.
- 8. After a period of time a message will appear on the screen to say the oven is ready for use. The cleaning cartridge should be removed before baking is started. (The oven will remind you to do this).

## TO OPERATE THE WASH CYCLE

### Do not insert anything aluminium when using the wash cycle. The cleaners will damage the item and possibly clog up the wash system

**NOTE** When the wash cycle is required, the oven cools to the wash cycle temperature (80 degrees) as part of the chosen program – Opening the door for some time before a wash program is selected will speed up the wash time. (The actual wash cycle will not start until this temperature is reached).





### DURING THE WASH AN INFORMATION SCREEN INFORMS OF WHAT IS HAPPENING IN THE CLEAN CYCLE

Self C	lean	-		2
	G	entle Wa		
Time F	Remaining	1	1:2	7 53
1		æ		
3:28		53%		6:30
		Scrub		
XC	ancel			

Bx oven Eco WASH 4-11-16 RevB16

**4.** After the cooling part of the wash program, the oven will instruct the user to insert a "Power Max Plus" cleaning cartridge. This must be screwed into the locator on the rack tray-cassette or at the rear of a non-cassette oven.

This will not be required if the hot flush program is used.

SAFETY INFORMATION Care should be taken when handling cleaning cartridges. Do not break open or use damaged cleaning cartridges. Store cleaning cartridges in original packaging.



Mono "Power Max Plus" cleaning cartridge Re-order number A900-30-030



Unscrew and remove the protection cap. Do not try to puncture the wax plug.



Locator hole on the rackcassette

Locator hole at rear of oven without cassette system

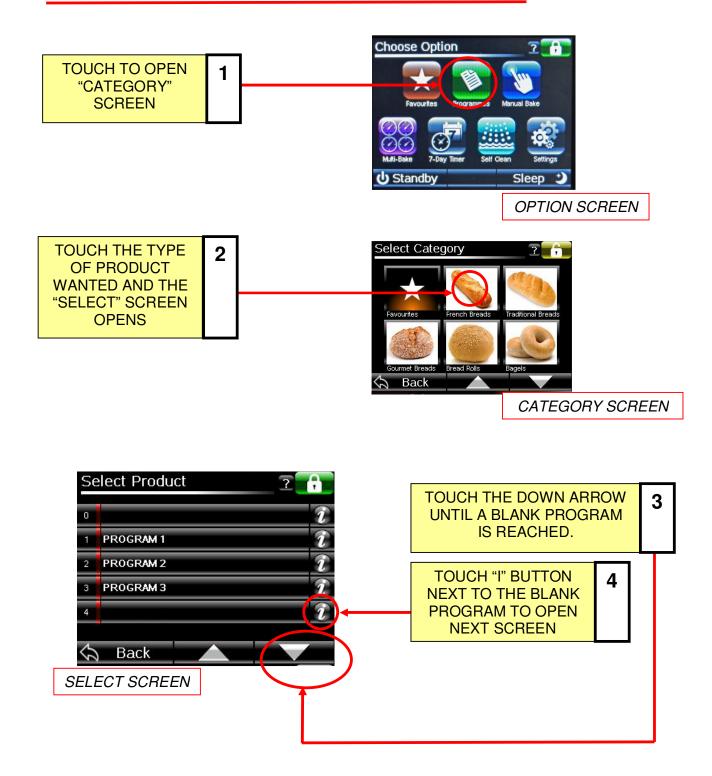


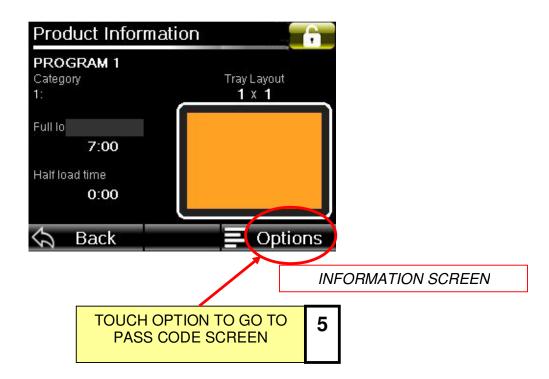


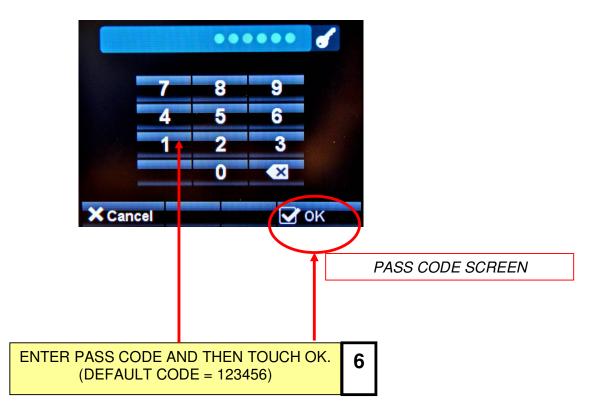
Screw cartridge face down into locator hole, firmly.

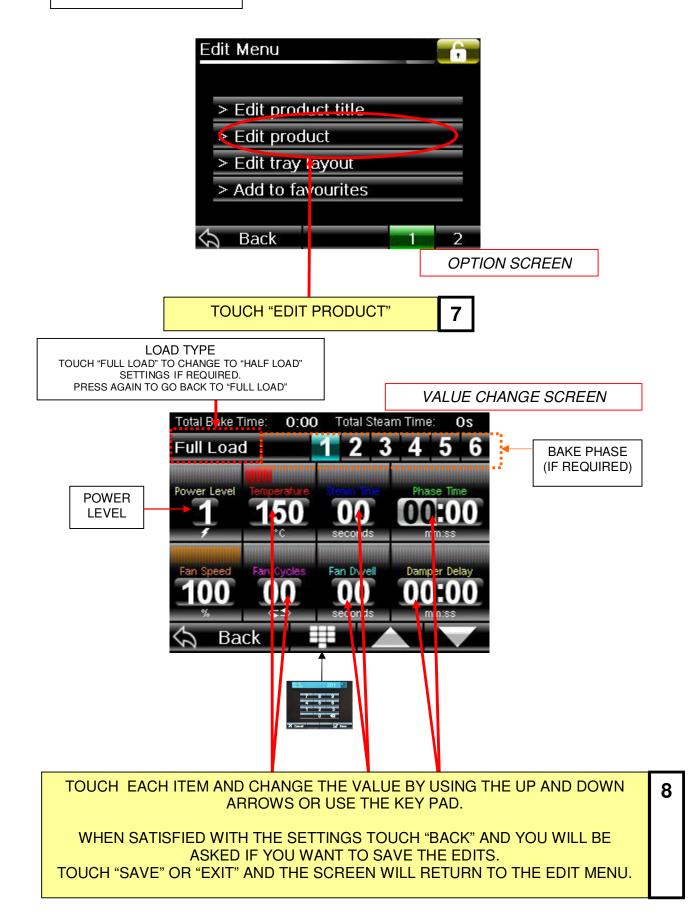


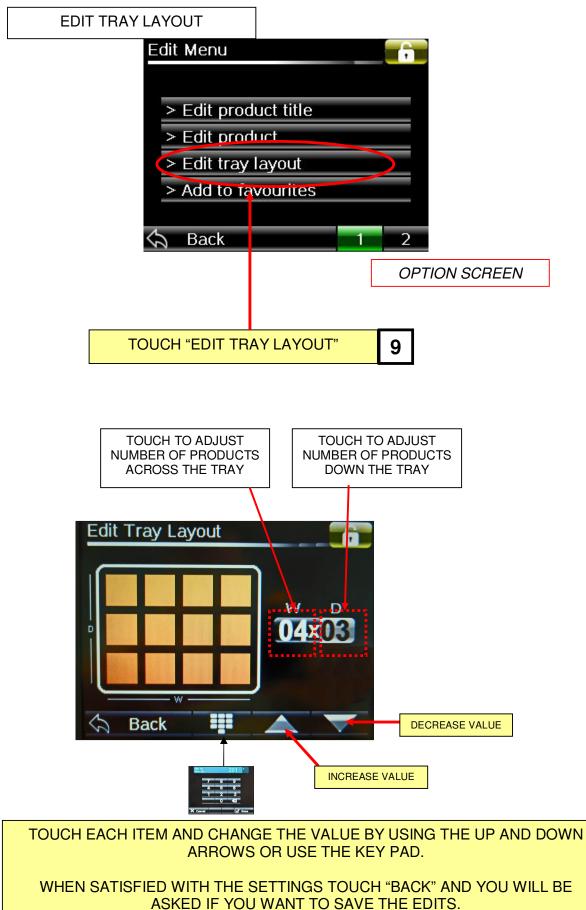
## 8 - 6.0 CREATING A PROGRAM









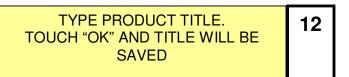


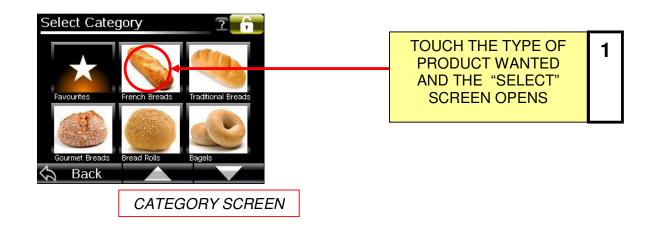
TOUCH "SAVE" OR "EXIT" AND THE SCREEN WILL RETURN TO THE EDIT MENU.

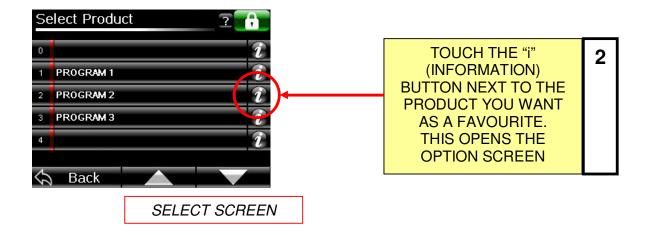
10

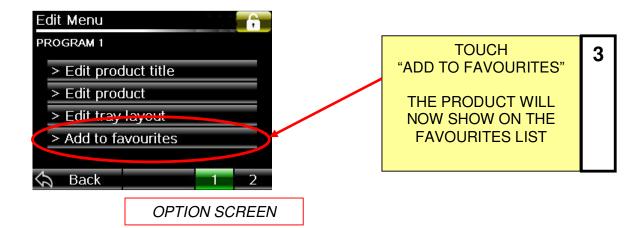




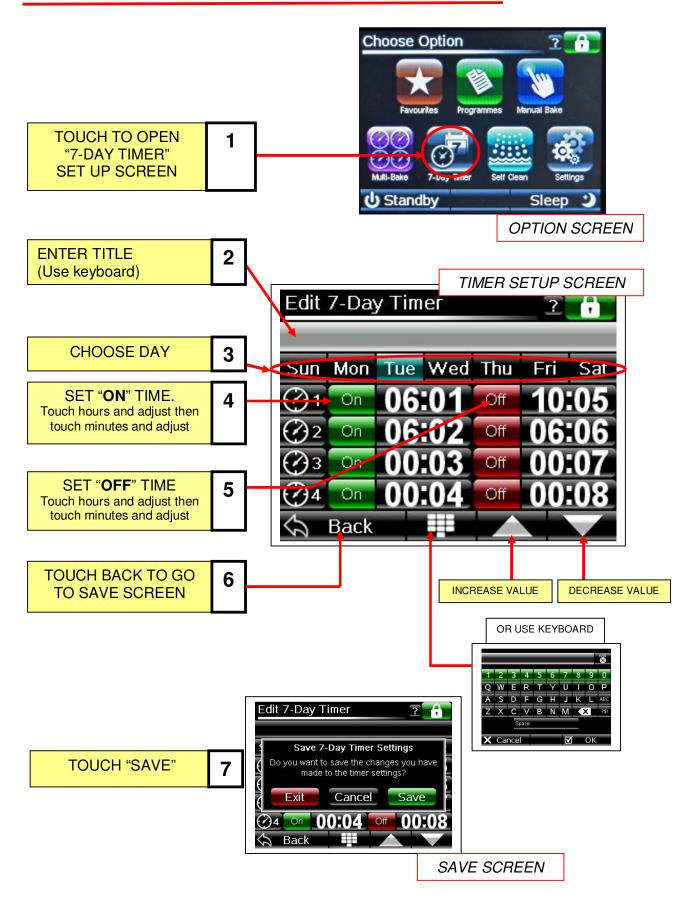








## 8 - 7.0 SETTING 7–DAY TIMER

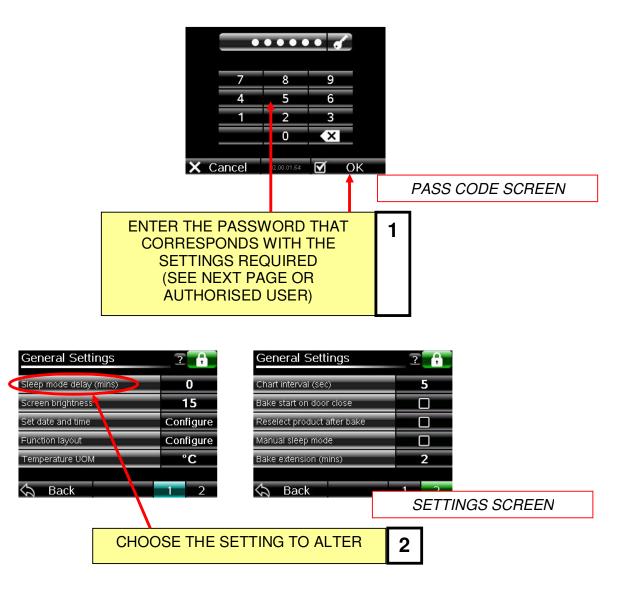


## 8 - 8.0 SETTINGS



OPTION SCREEN

TOUCH TO OPEN THE "SETTINGS" SCREEN



#### PASSWORDS

#### DEPENDING ON WHICH PASSWORD IS USED THE FOLLOWING SETTINGS CAN BE ACCESSED:

Settings menu 3142 General Settings - 2 pages Diagnostics – 2 pages 123456 Edit product (Default, user configurable) Advanced settings menu 777460 654321 High level - oven settings (3 screens) (Default, user configurable) Net HMI System Alarms menu 4321 Alarm - date, time and state logging Testing options 753951 Screen capture I O diagnostics overlay Advanced diagnostics Enable diagnostics mode logging Demo mode Device management menu 1793 Backup Update Restore **Customisation menu** 5678 Wallpaper Manufacturers options 561234 Reset to original settings System event log 789630 Wash settings Editor 456852 4682 Abort wash

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

Bx oven Eco WASH 4-11-16 RevB16

## 9.0 MAINTENANCE

- Check for frayed or bare cables. The machine must not be used if frayed or bare cables are visible.
- Follow cleaning instructions.

#### **10.0 STEAM AND CLEANING SYSTEM MAINTENANCE** ——

• If it is noticed that the steaming or cleaning operation has deteriorated, perhaps due to hard water scaling, please contact your oven supplier

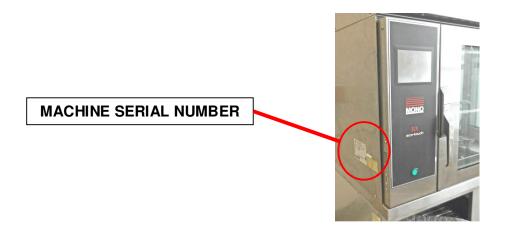
### 11.0 BULB REPLACEMENT -

In the event of a light failure, please contact Mono service department as there are no customer replaceable parts

## 12.0 SPARES

If a fault arises, please do not hesitate to contact the Customer Service Department, quoting the **machine serial number**.

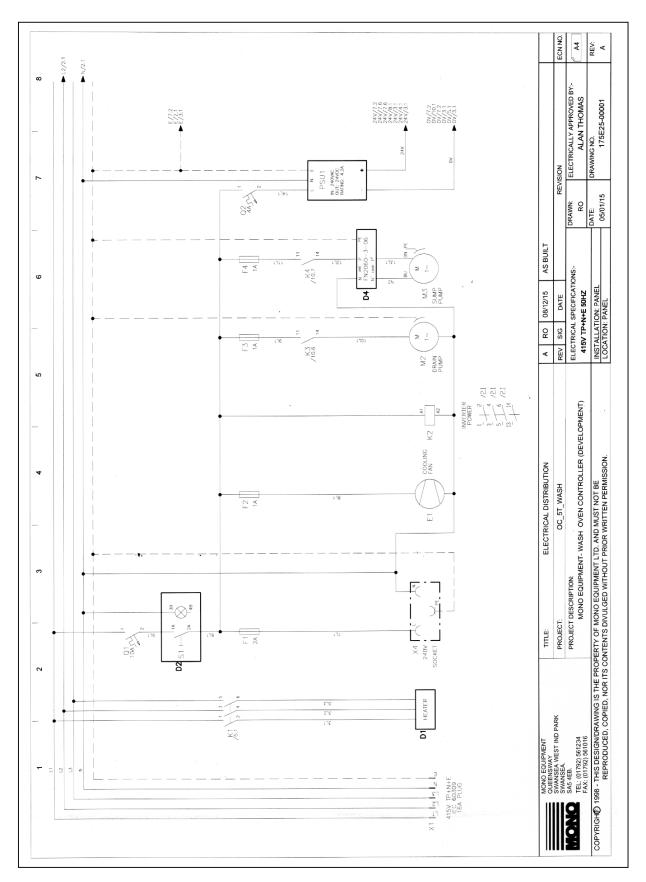
This can be found on the silver information plate of the machine and on the front cover of this manual.

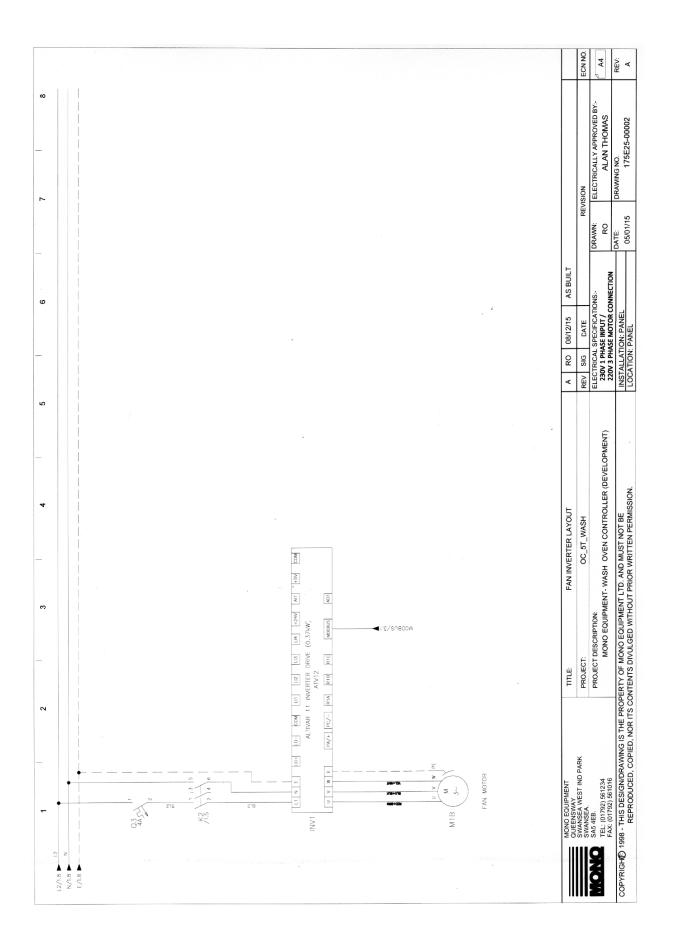


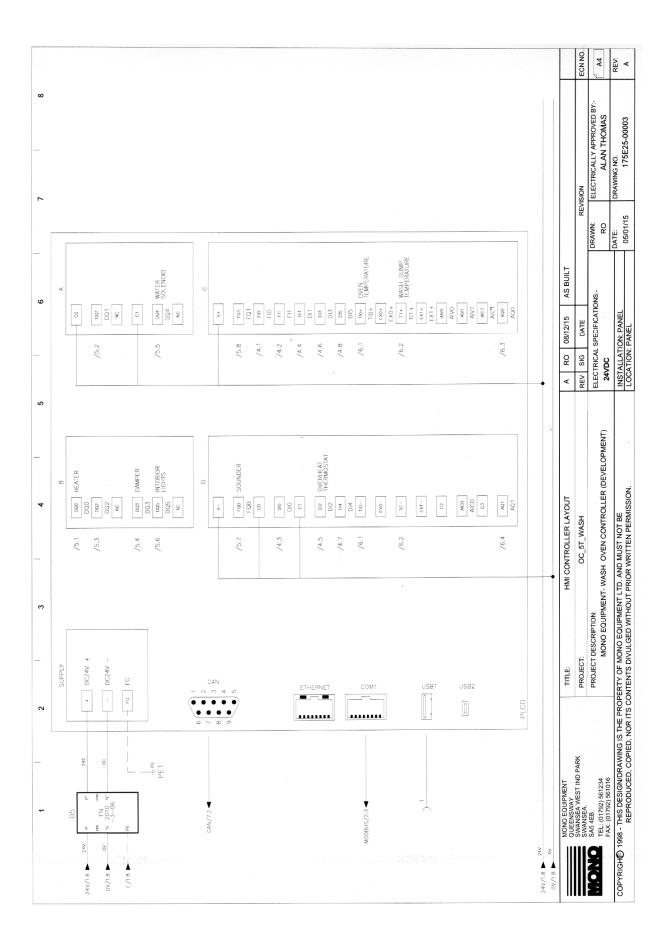
## email:spares@monoequip.com

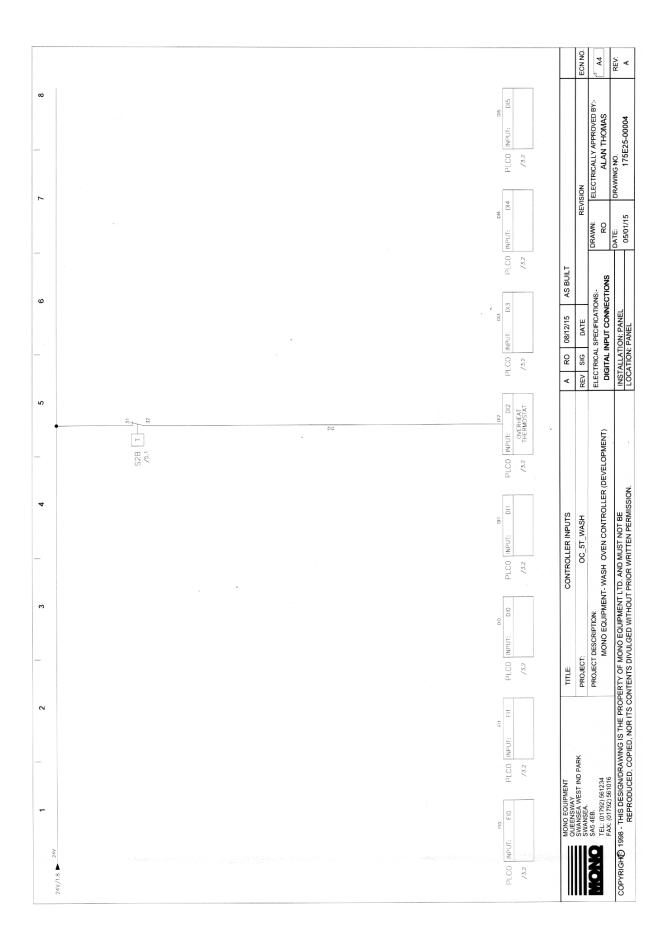
## Mono Spares TEL. +44(0)1792 564039

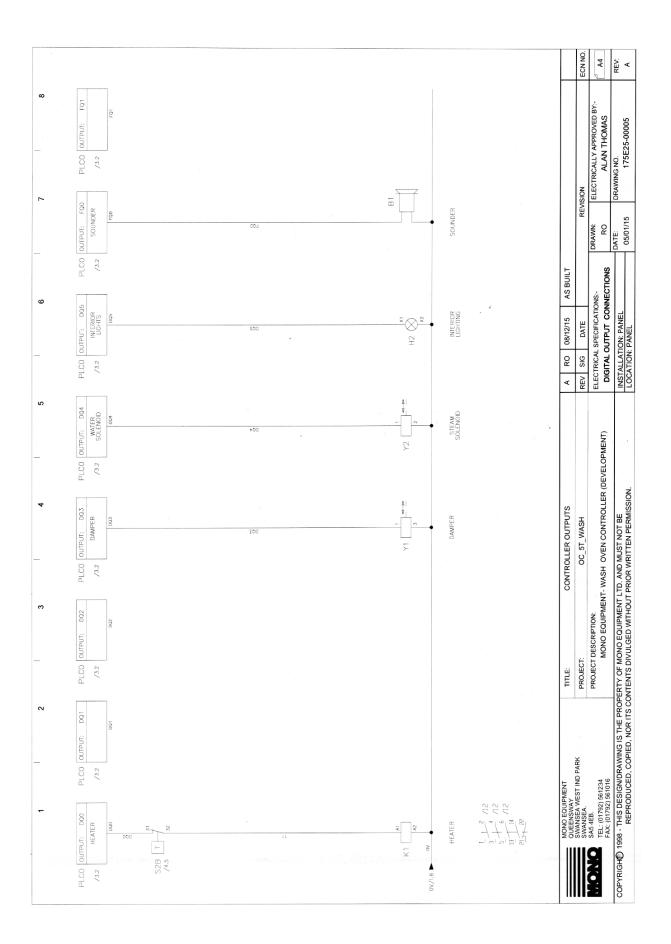
# **13.0 ELECTRICAL**

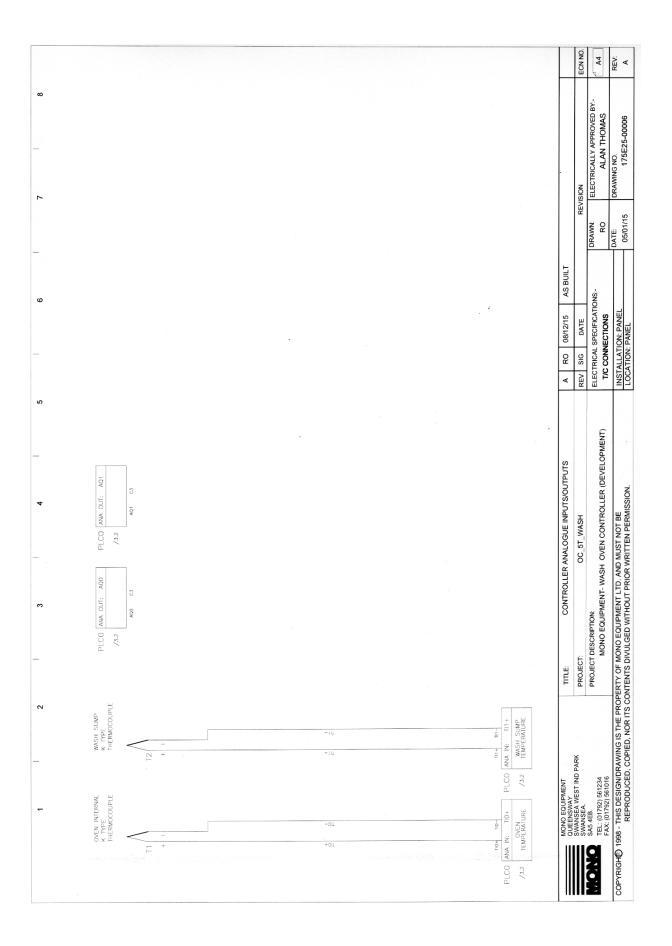




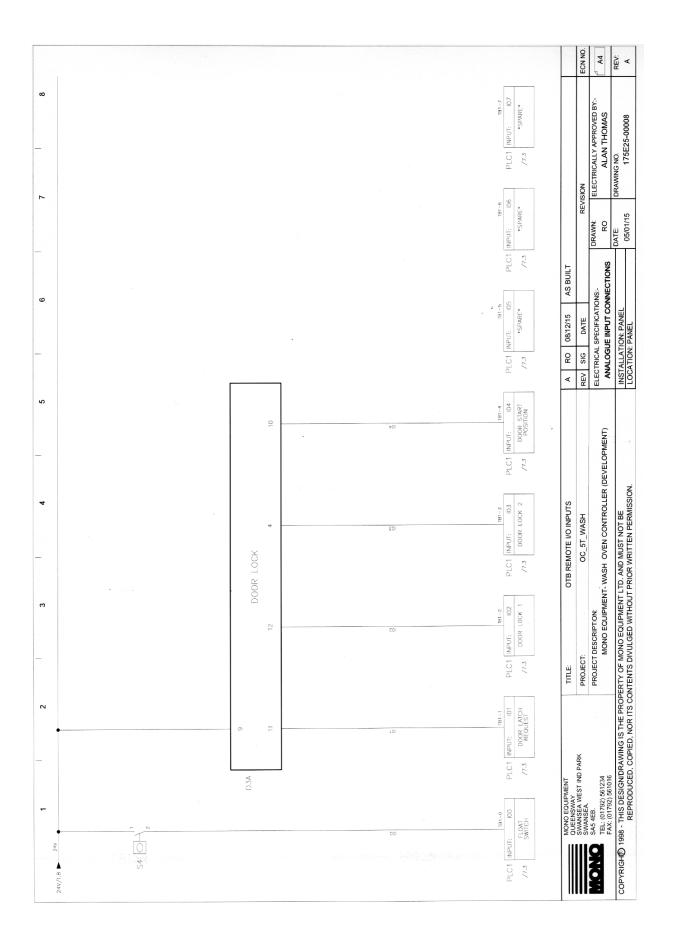


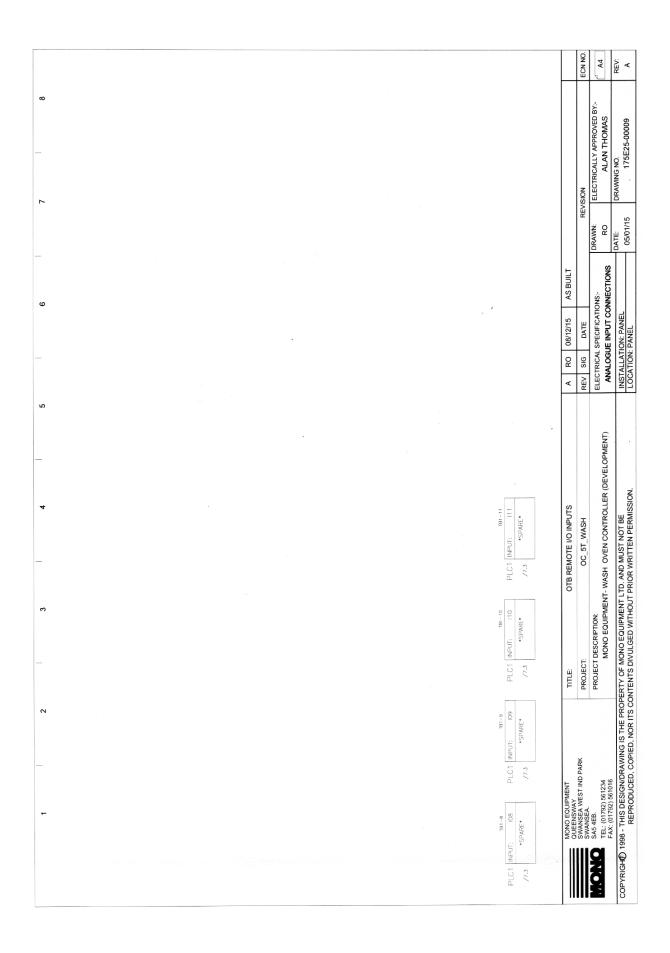


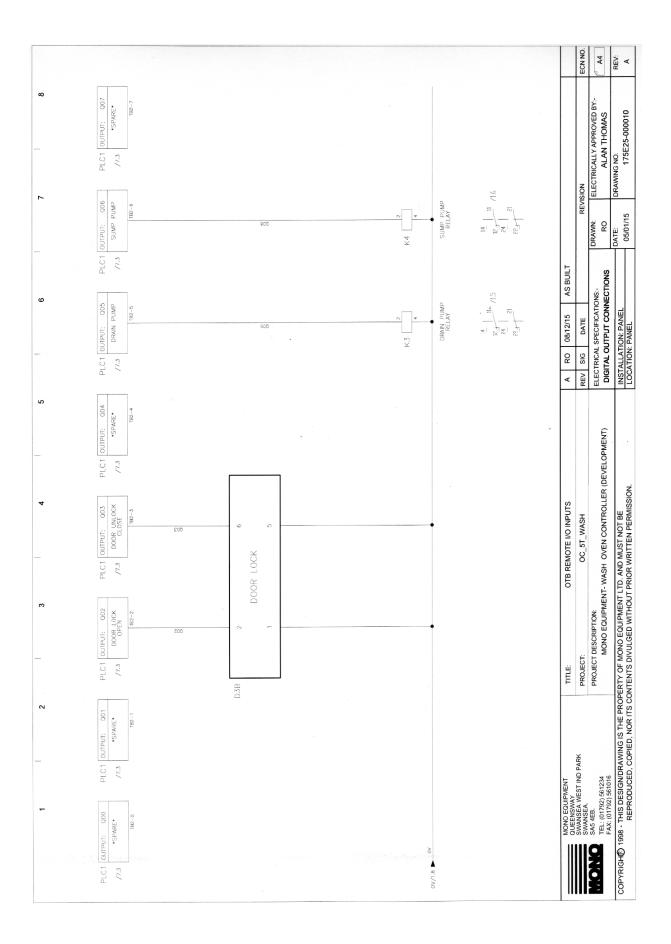














DESIGNED AND MANUFACTURED IN WALES BY:

### **MONO EQUIPMENT**

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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 UK, ENVIRONMENTAL PROTECTION ACT 1990 APPLIES)