

Enter Serial No. here.

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



### MXT ROTARY RACK OVEN SET UP AND OPERATION INSTRUCTIONS (With programming instructions) ECOTOUCH CONTROL

IN PRODUCTION UP TO AUGUST 2017. FOR THE NEW VERSION SEE MXTE (ELECTRIC) AND MXTG (GAS)



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 2014 / 35/ EC
- The requirements of the Electromagnetic Compatibility Directive 2004 / 108EC, 91 / 263 / EEC, 92 / 31 / EEC Incorporating standards EN55014-1:2006+A1:2009+A2:2011 EN55014-2:1997+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

Signed	CHAD Minus.
	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

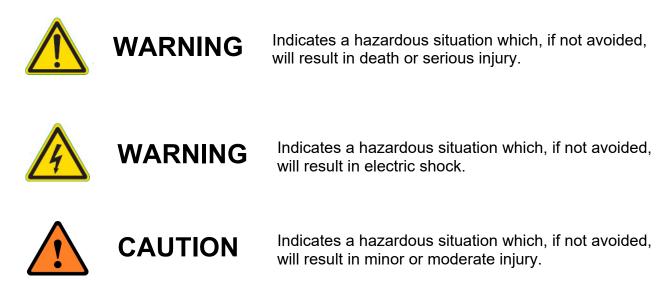
Queensway, Swansea West Industrial Park, Swansea SA5 4EB UK

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

Registered office: Unit 9, Bryggen Road, North Lynn Industrial Estate, Kings Lynn, Norfolk, PE30 2HZ

### SAFETY SYMBOLS

The following safety symbols are used throughout this product documentation. Before using your new equipment, read the instruction manual carefully and pay special attention to information marked with the following symbols.



### ELECTRICAL SAFETY AND ADVICE REGARDING SUPPLEMENTARY ELECTRICAL PROTECTION

Commercial bakeries, 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 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 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 electrical 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: BS 7671:2018 – Guidance Note 8 – 8.13 : Other locations of increased risk

It is recognised that there may be locations of increased risk of electrical shock other than those specifically addressed in Part 7 of BS 7671. Examples of such locations could include laundries where there are washing and drying machines in close proximity, and water is present, and commercial kitchens with stainless steel units, where once again, water is present. Where, because of the perception of additional risks being likely, the installation designer decides that an installation or location warrants further protective measures, the options available 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.



The supply to this machine must be protected by a 30mA RCD

### **CONTENTS**

	F	PAGE	_
Section - 1.0	Introduction	8	
Section - 2.0	Overall Dimensions	9	
Section - 3.0	Specifications	10	
Section - 4.0	Safety	12	
Section - 5.0	Installation	13	
Section - 6.0	Isolation	15	
Section - 7.0	Daily Cleaning Instructions	15	
Section - 8.0		15	
Section - 9.0	General Maintenance (Including bulb changing)	16	
	Section - 2.0 Section - 3.0 Section - 4.0 Section - 5.0 Section - 6.0 Section - 7.0 Section - 8.0	Section - 1.0IntroductionSection - 2.0Overall DimensionsSection - 3.0SpecificationsSection - 4.0SafetySection - 5.0InstallationSection - 6.0IsolationSection - 7.0Daily Cleaning InstructionsSection - 8.0Weekly Maintenance InstructionsSection - 9.0General Maintenance	Section - 2.0Overall Dimensions9Section - 3.0Specifications10Section - 4.0Safety12Section - 5.0Installation13Section - 6.0Isolation15Section - 7.0Daily Cleaning Instructions15Section - 8.0Weekly Maintenance Instructions 15Section - 9.0General Maintenance16

Section - 10.0 OP	ERATION	18	
10- 1.0	baking using favourites	20	
10- 2.0	baking using manual menu	23	
10- 3.0	baking using programmes	26	
10- 4.0	creating a program	29	
10- 5.0	setting 7-day timer	35	
10- 6.0	SettingS- Time/date, settings, passcodes	36	
10- 7.0	using usb port/stick	43	
10- 8.0	diagnostics	46	

#### **ENGINEERS SECTION**

Section - 11.0	Element Bank Removal	47
Section - 12.0	Element bank Replacement	47
Section - 13.0	Maintenance (rack drive/turntable)	50
	To renew rack drive seal	52
Section - 14.0	Spares and Services	53
Section - 15.0	Electrics (without pump)	54
Section - 16.0	Electrics (with pump)	65
Section - 17.0	Spares	78
Section - 18.0	Air door default settings	91

Failure to adhere to the cleaning and maintenance instructions detailed in this booklet could affect the warranty of this machine.



# <u>NOTE</u>

All reference to LEFT HAND ovens means that main door is hinged on the left and the control panel is on the right.



All reference to RIGHT HAND ovens means that main door is hinged on the right and the control panel is on the left.



## **1.0 INTRODUCTION**



The **MONO MXT** rotary rack oven is a compact, electrically fired oven with a computerized touch control panel. The oven is designed to accommodate a single rotating rack of up to eighteen trays capacity.

Ecotouch ovens are supplied with **TOUCH** displays for the user-friendly control panels. This can show pictures of product types or program numbers that have been set by the user. When not being used, the screen can show your company logo. A voice prompt facility is also available for the basic instructions like "Bake over".



The oven is of stainless steel construction, with easily cleaned interior and exterior surfaces and smart appearance.

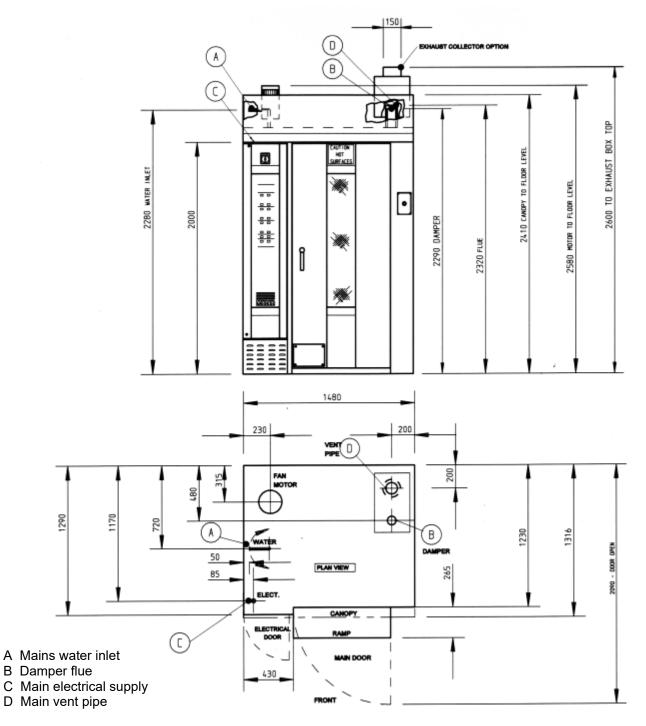
The fan and rack rotator have generously rated, totally enclosed, motors and a sealed for life gearbox.

The high-speed fan and 45 kW element array (36kW on low power version) give good, efficient air circulation via a diagonal cross-flow system.

Steam is generated within the oven chamber by means of a multi-point, water injection cascade.

Programmed damper control is provided as part of the programming controls.

### 2.0 OVERALL DIMENSIONS



(No drainage required)

Minimum door entry required:- 2000mm (78") high x 760mm (30") wide Minimum operational ceiling height:- 3000mm (118")

Total floor area:- 1.85 sq. Mtrs

### 3.0 SPECIFICATIONS

OVERALL WIDTH: OVERALL DEPTH: OVERALL HEIGHT:

INSIDE CLEAR DIAMETER: HEIGHT: INSIDE VOLUME:

FOOTPRINT WIDTH: FOOTPRINT DEPTH: FOOTPRINT AREA: 1480mm (58 1/4") 1290mm (50 3/4") 2580mm (101 1/2")

1000mm nominal (39 3/8") 1920mm (75 1/2") 1.5 cu. M

1480mm (58 1/4") 1290mm (50 3/4") 1.85 sq. m

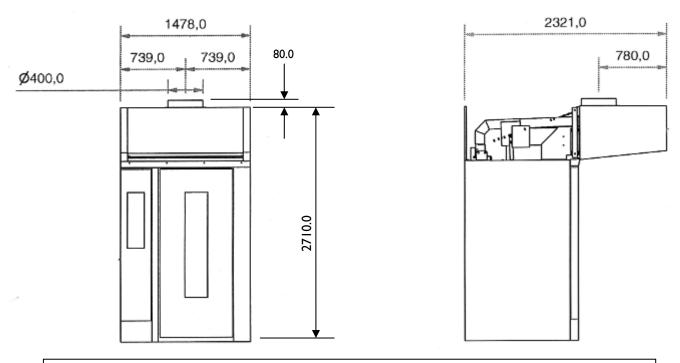
TOTAL POWER: ELECTRICAL SUPPLY: 50kW (41kW on low power version available) 415V. 3pH. 50Hz. ,70amps per phase



The supply to this machine must be protected by a 30mA RCD

HEATING ELEMENTS: HEATING ELEMENTS LOADING: HEATING ELEMENTS NUMBER:	Finned hairpin type 3kW. each 15 (12 on low power version available)
FAN MOTOR: FAN: FAN SPEED: FAN DRIVE:	3kW. Totally enclosed fan cooled Squirrel cage. Class F 2860 rpm 200mm dia x 82mm (8" dia x 3 1/4") 2860 rpm Direct Coupled
RACK DRIVE MOTOR: TURNTABLE:	.37 kW. Geared Motor Unit with Squirrel cage, enclosed fan cooled, class F motor: and sealed-for-life spur/worm reduction unit. Output speed, 6rpm: Single row ball bearing 410mm (16")
RACK SIZE:	30" x 18" (760mm x 460mm) tray size
RACK CARRIER:	'MONO' system 4 roller. Top hung.
STEAMER SYSTEM:	High mass 2-point water injection and solenoid operated supply:

WATER PRESSURE	
MAXIMUM:	4.0bar (60 psi)
MINIMUM:	2.0bar (30 psi)
WATER FLOW	6 litres/minute (at minimum pressure)
WEIGHT	Approx. 1100kg (2420lbs)
DAMPER	Solenoid operated trapdoor type. Semi-automatic.
ELECTRICAL SYSTEM:	Membrane operated dedicated.
CONTROL PANEL:	Microprocessor integrated system, with umbilical to main electrical panel
ELECTRICAL PANEL:	415V 3pH 50Hz mains, 24V DC auxiliaries.
NOISE LEVEL:	Less than 85 dB.



#### OPTIONAL EXTRACTION CANOPY DIMENSIONS (CANOPY PT.No.M164-00-01400)

Extraction rate of 1000 cu ft./min is easily sufficient to extract the air from the canopy whilst the oven is in use. Customers are responsible for make-up air.

## 4.0 SAFETY

In the interests of safety and efficient operation of this oven, it is essential that this manual **should be made available to all personnel** who may be required to operate the oven, **before** work is commenced.

The following points should be closely observed and rigorously pursued at all times.

- 1 This oven is designed for baking bread, confectionery and savoury bakery products. Do not use the oven for baking other items without consulting the manufacturers.
- 2 All repairs and maintenance of electrical units should only be carried out by authorised electricians.
- 3 Electrical panels and electrical distributor boxes should not be opened until the main supply to the oven has been turned off.
  - 4 When choosing and installing a flue, the precautions and instructions in this manual must be observed.
  - 5 All connections to this oven must be made in accordance with the statutory and technical regulations of the country in which the oven is installed.
  - 6 When work is being carried out inside the oven, the electrical mains isolator must be turned off and locked.



Whenever there is someone working inside the oven, the baking compartment door should be wedged open and a suitable warning notice hung on the door to prevent it being accidentally closed.



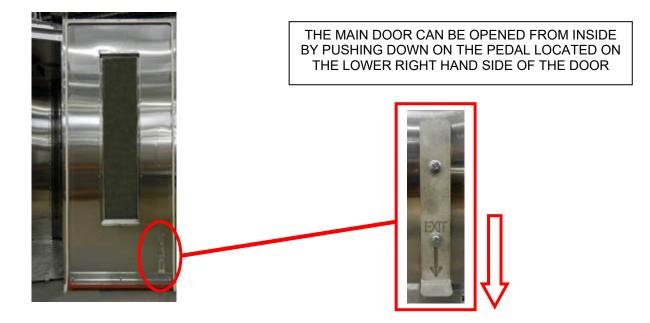
While the oven is in operation, and for some time after having been in operation, it is dangerous to touch the window glass or the metal surfaces in its vicinity.

- 9 The oven should be operated and maintained as described in this manual.
- 10 Use only **MONO** spare parts for this oven.
- 11 The construction of the oven must not be changed.
- 12 The owner of the oven is **legally obliged to instruct staff** using the oven in its operation and in these safety regulations. The instruction manual for the oven must not be removed from the oven work area.



**WARNING:** KEEP CLEAR OF LARGE FLUE PIPE ON ROOF OF OVEN WHEN DOING ANY MAINTENANCE ON TOP. **VERY HOT** AIR IS EJECTED.

#### **EMERGENCY INTERNAL-DOOR RELEASE PEDAL**



#### **5.0 INSTALLATION**

- 1 The **MONO MXT** oven is designed to operate as a freestanding unit, and must not be bolted down or fixed to the floor in any way. It can be installed flush against walls on two sides as access is only required at the top and one side.
- 2 The concrete floor beneath the oven must be smooth, flat and clear of any obstructions, and must be at least 150mm (6") thick.
- 3 The foundation must be flush with the overall bakery floor because racks are wheeled up a ramp (supplied with the oven) into the baking chamber.
- 4 A minimum headroom clearance of 3 metres (180") between the floor and the bakery ceiling must be maintained at all times.
- 5 Connect to a suitable water supply, making sure that the pipes are flushed out to remove all foreign bodies i.e. flux or solder.

NOTE : 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.

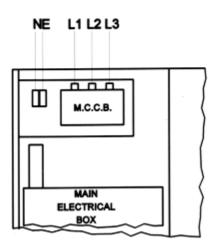
	DESCRIPTION	SPECIFICATION	REMARKS
A	Mains water inlet (steam solenoid)	Flexible hose to clients 15mm s/cock 3/4"B.S.P.Female	Connection by client. Water pressure:-Min 2 BAR (30PSI) Max 4 BAR (60PSI)
В	Damper flue	3" Pipe. Duty:-165 CFM at 210 C(410 F)	Discharge to atmosphere via an independently supported 3" flue pipe terminating with an air break collector cone or discharge directly into clients extract canopy.
с	Main electrical supply	45KW - 80 AMP (see note 2 below)	Three phase and neutral isolator 80 AMP FUSE and supply to oven by client
D	Main vent pipe	4" O.D Pipe (10swg wall thickness)	Leave open to atmosphere or discharge into suitable extract canopy,if provided by client. DO NOT CLOSE COUPLE TO OUTLET.
	Drainage outlet		None required



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2.Electrical Supply (BY CLIENT) Typical cables for UK are:-4off 25mm<sup>2</sup>- Coloured In flexible conduit 1off 25mm<sup>2</sup>- Earth

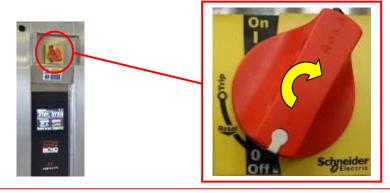
MAINS CONNECTIONS (RIGHT HAND OVEN SHOWN)



### 6.0 ISOLATION



In case of an emergency, switch oven off at mains isolator switch.



#### NOTE: IF WORKING ON ELECTRICAL BOX AND PANEL, ensure oven is DISCONNECTED from <u>CONSUMER POWER SUPPLY</u>. NOT ONLY OVEN ISOLATOR ABOVE, AS SOME PARTS STAY LIVE AFTER ISOLATOR SWITCH IS OPERATED

### 7.0 DAILY CLEANING INSTRUCTIONS

The oven has been designed with sealed components, which are used wherever possible. The minimum of routine cleaning is required, but it is essential that it be properly and regularly carried out.

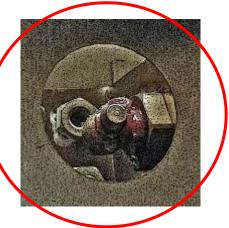
Clean up spillages of product on the oven floor. Wipe off splashes on door window.

**Note:** build up of spillages may result, because of incorrect rack rotation. Check for damage to door seals, particularly if operators are careless with rack handling.

### **8.0 WEEKLY MAINTENANCE INSTRUCTIONS**

• <u>Grease rack drive bearings.</u> The remote point for greasing is located in the door post (A). Two shots per week are required. Note, over greasing may cause over heating in the bearing and leakage of grease.





### 9.0 GENERAL MAINTENANCE

Check for frayed or bare cables. The oven should not be used if any are found.

Follow cleaning and greasing instructions in sections 7.0 and 8.0

Check condition of main door seals and replace if required.

Check all lights are in working order. If not, replace as shown in the next section.

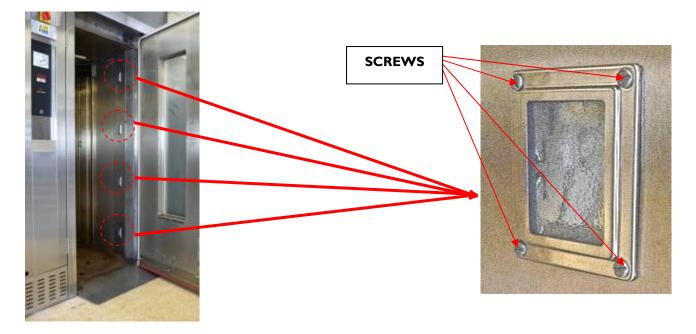
### **TO REPLACE LIGHTING BULBS**

In the event of a bulb failure, Instructions on how to change a bulb are as follows: -



Ensure oven is isolated from mains supply and allow to cool.

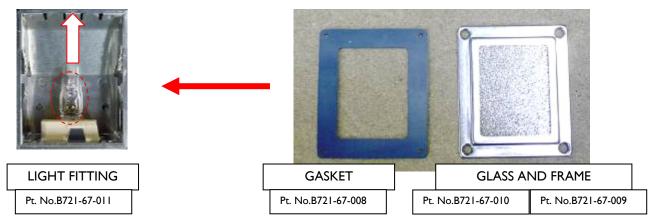
• Remove screws (4 per light) and take glass, frame and gasket off lamp unit.



#### DO NOT TOUCH BULBS WITH BARE HANDS. USE A CLOTH OR GLOVES TO STOP ANY MARKS THAT WILL

CAUSE HOT SPOTS AND PREMATURE BULB FAILURE.

• Remove bulb by pulling in direction of arrow and replace with new bulb.



- Refit glass front, take care that gasket is in position around stainless steel frame.
- Re-connect oven and test.



# Section 10

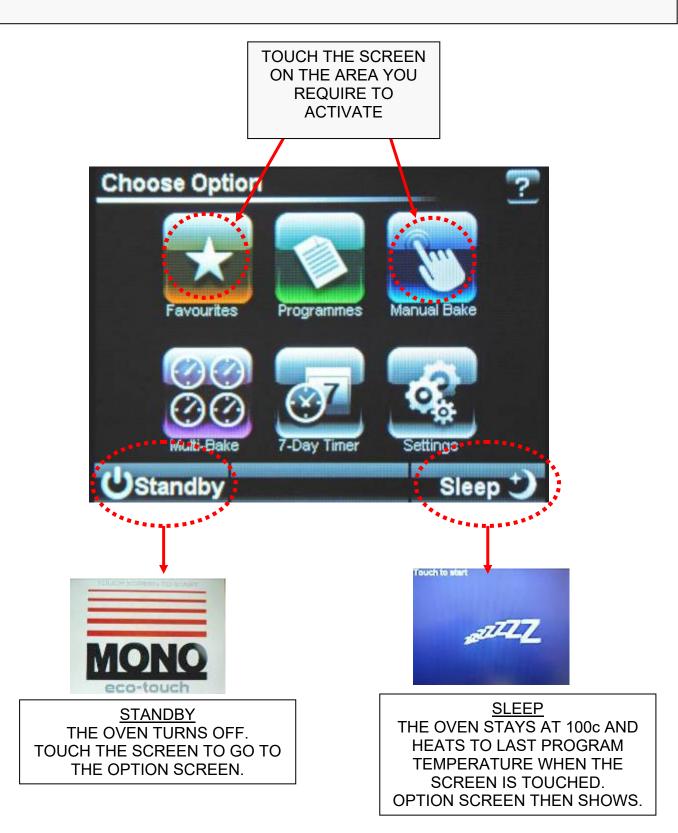
# TOUCH SCREEN OPERATING INSTRUCTIONS

# **BASIC OPERATION**

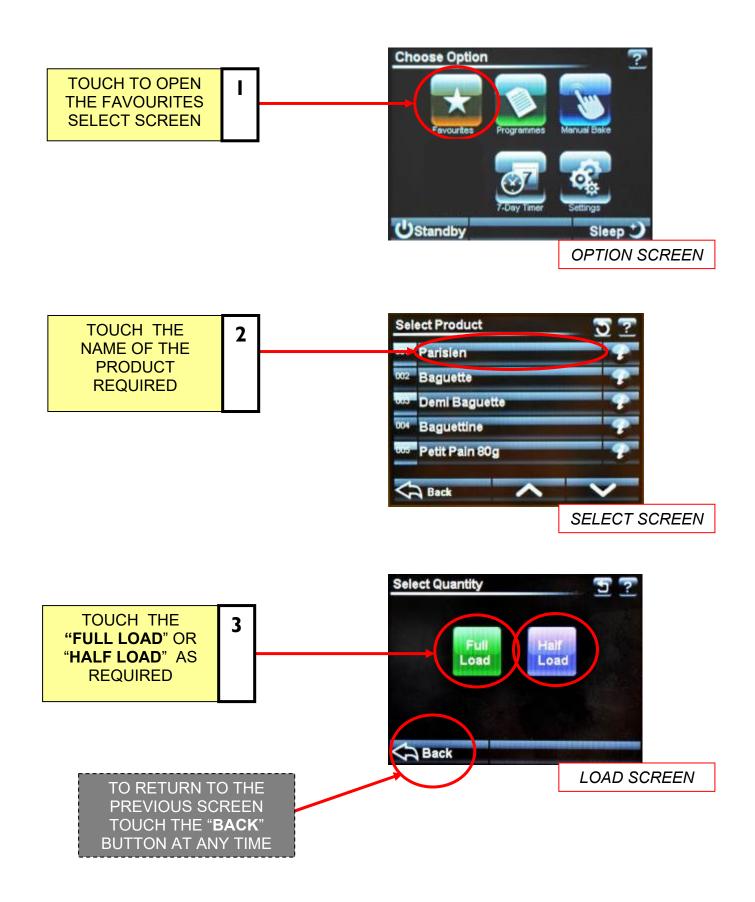
# ALL OPERATIONS ARE ACTIVATED BY TOUCHING AREAS ON THE SCREEN, WHICH WILL PASS YOU ON TO THE NEXT INFORMATION PANEL.

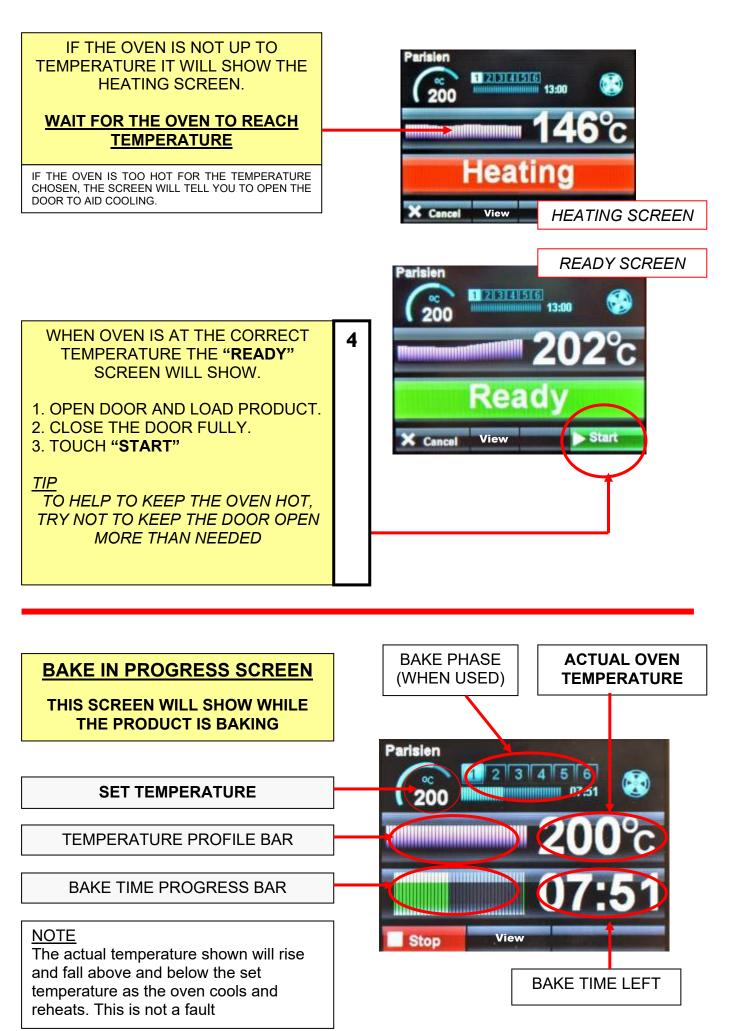
DO NOT USE EXCESSIVE FORCE.

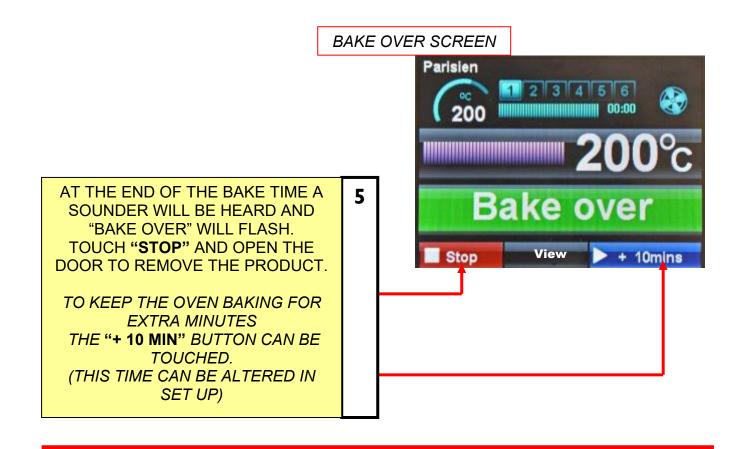
(THE PRESSURE REQUIRED TO OPERATE THE PANEL CAN BE ALTERED IN THE SETTINGS SECTION)



# **10 -1 BAKING USING FAVOURITES MENU**

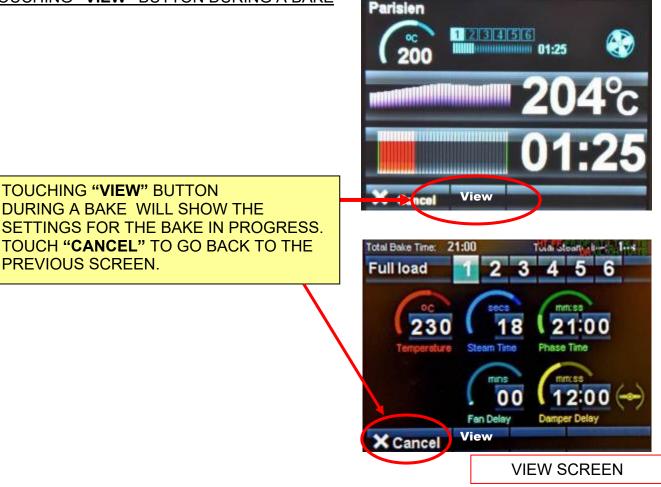




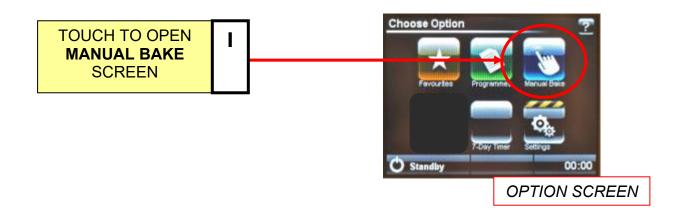


#### TOUCHING "VIEW" BUTTON DURING A BAKE

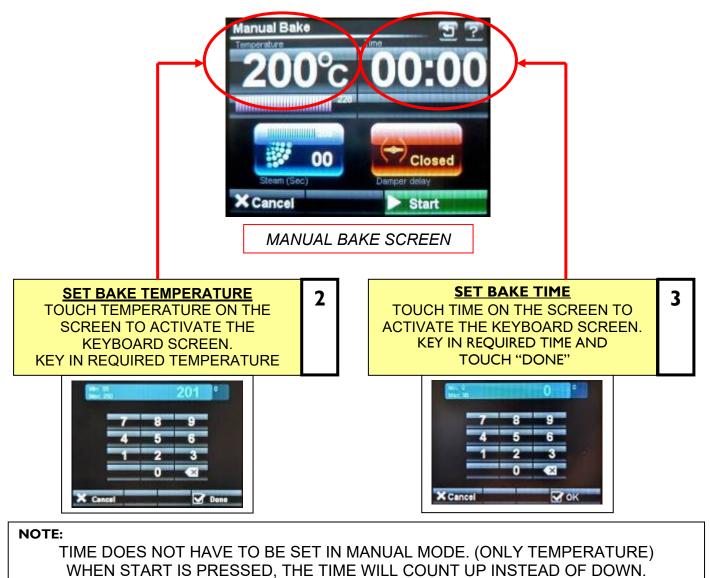
PREVIOUS SCREEN.



# **10 - 2 BAKING USING MANUAL MENU**

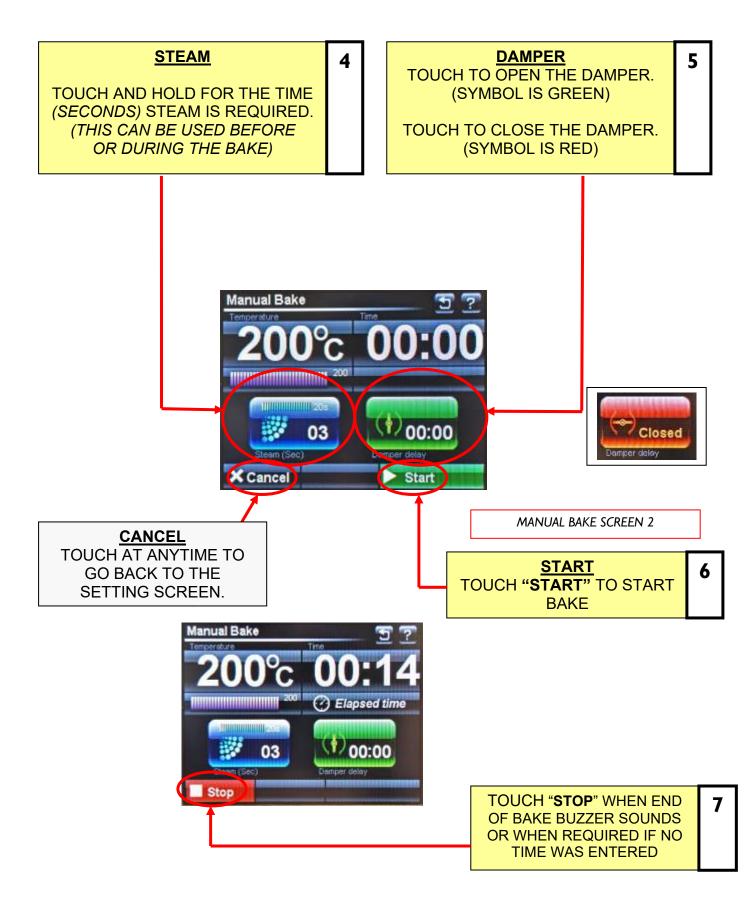


#### SET BAKE TIME AND TEMPERATURE

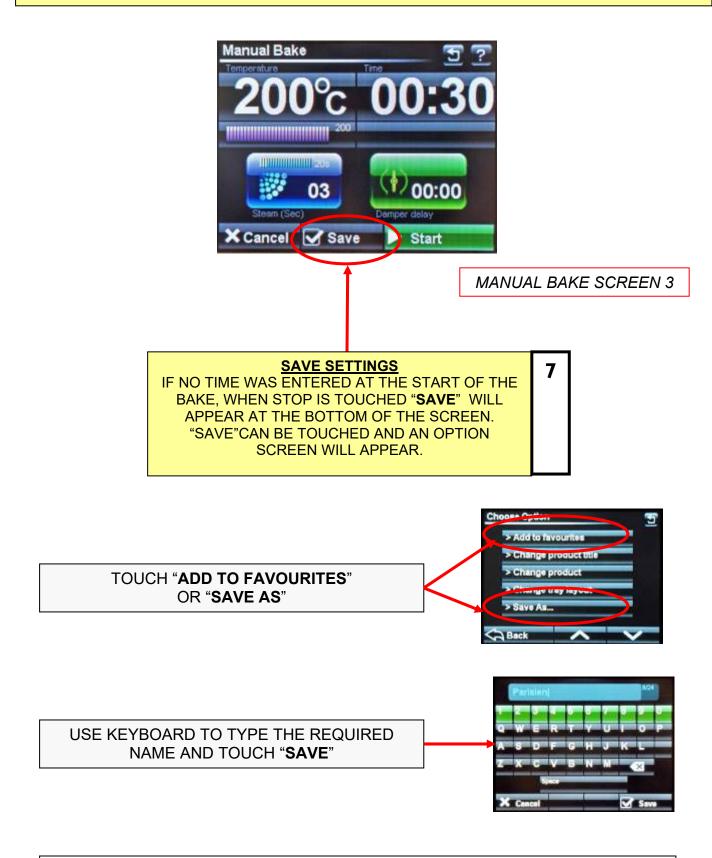


TOUCH STOP TO FINISH BAKE.

#### USE STEAM TIME AND DAMPER IF REQUIRED



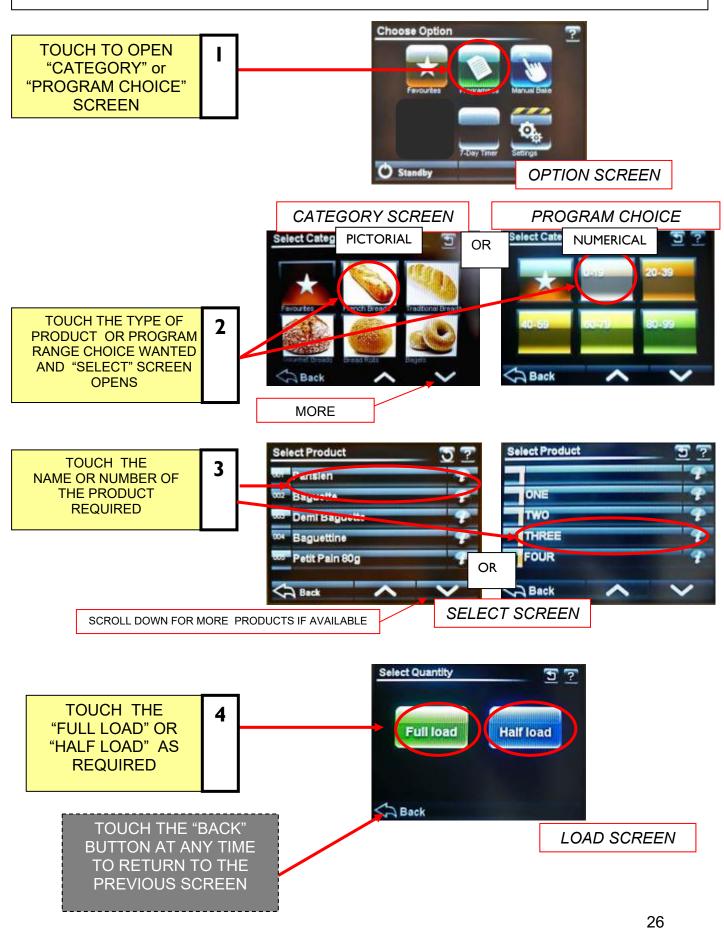
SAVE MANUAL PROGRAM, IF REQUIRED

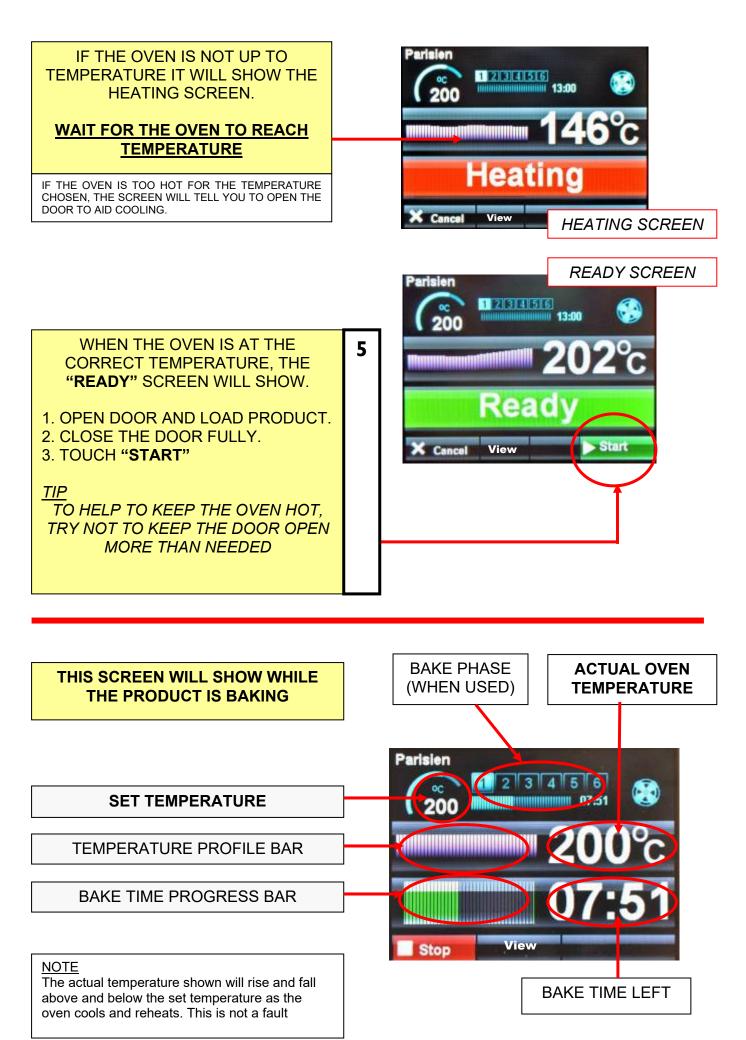


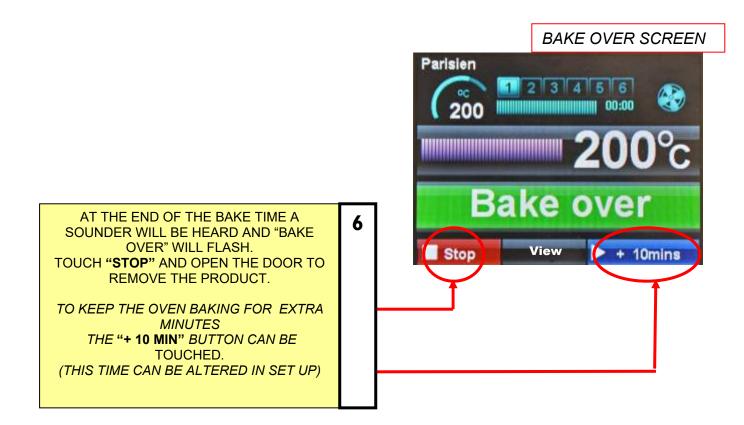
NOTE: In manual mode, only one operation of the steam or damper is saved.

# **10-3 BAKING USING PROGRAMMES**

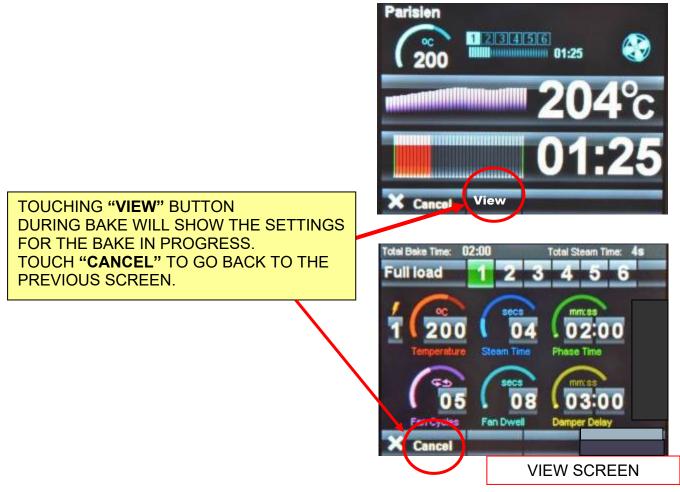
<u>NOTE</u> : THIS COVERS TWO VERSIONS OF FIRMWARE. (THE OVEN CAN BE PRE-SET TO SHOW ONLY ONE OF THEM). 1. **PICTORIAL** VERSION SHOWS CHOICES OF PRODUCT CATERGORIES 2. **NUMERICAL** VERSION SHOWS RANGES OF PROGRAM NUMBERS.



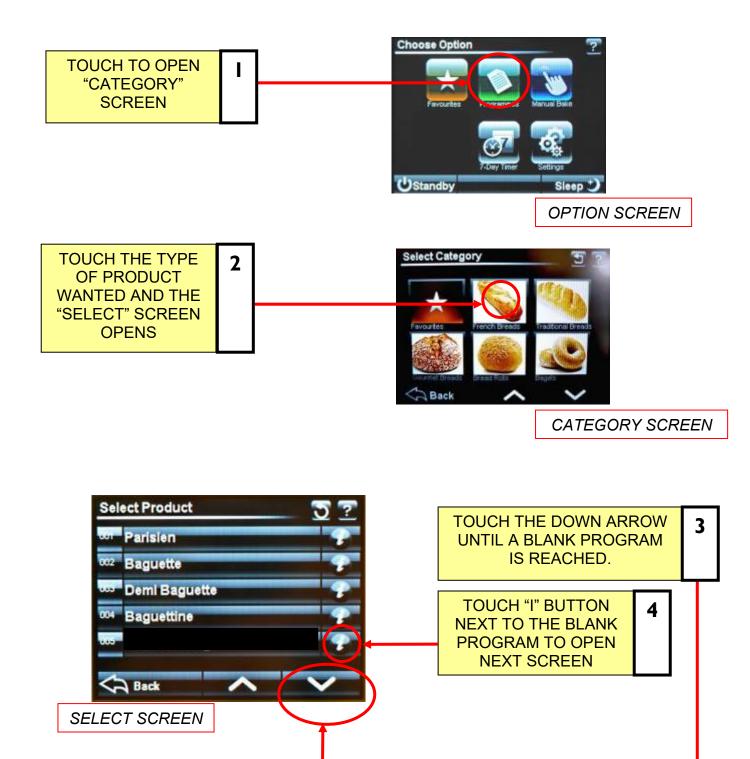


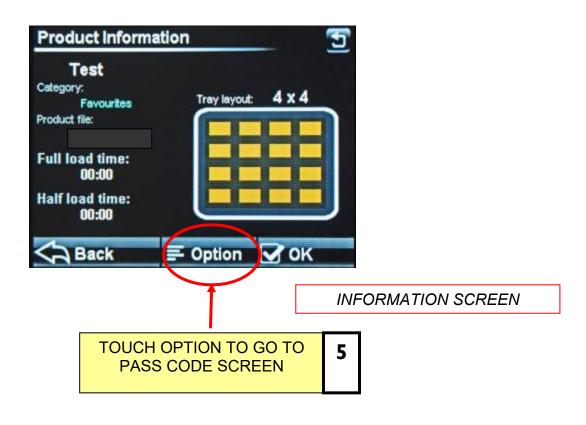


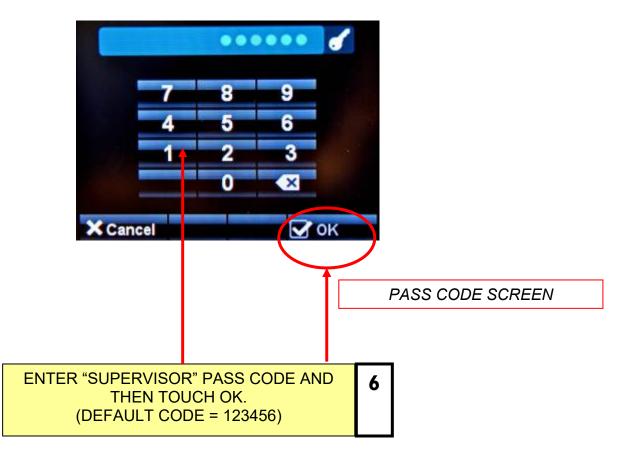
#### TOUCHING "VIEW" BUTTON DURING BAKE

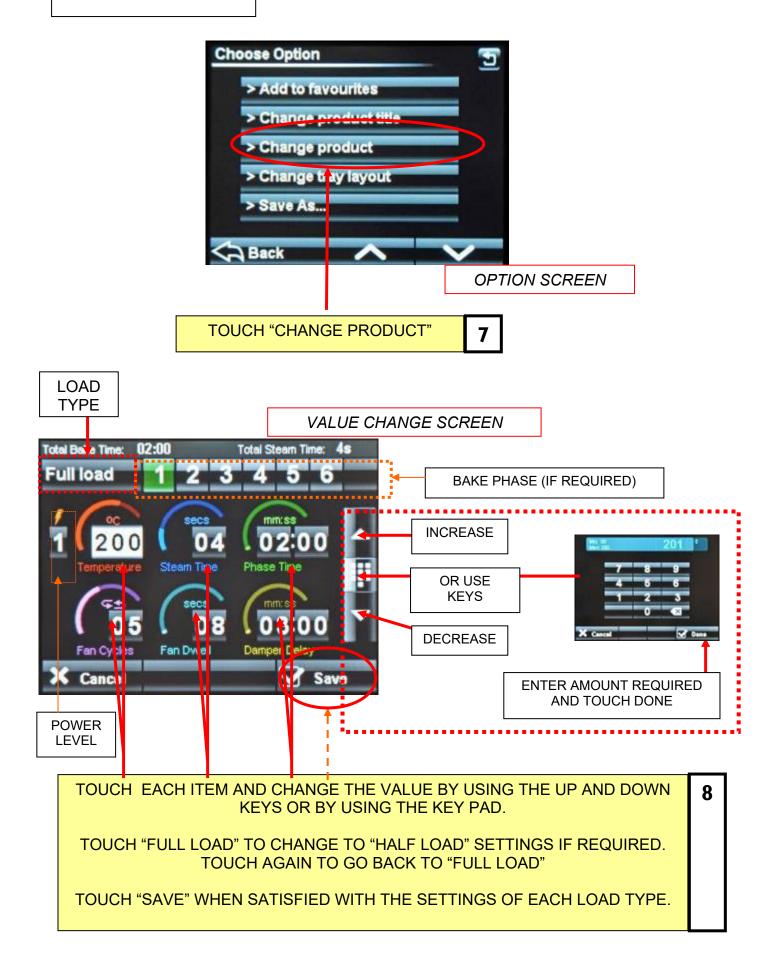


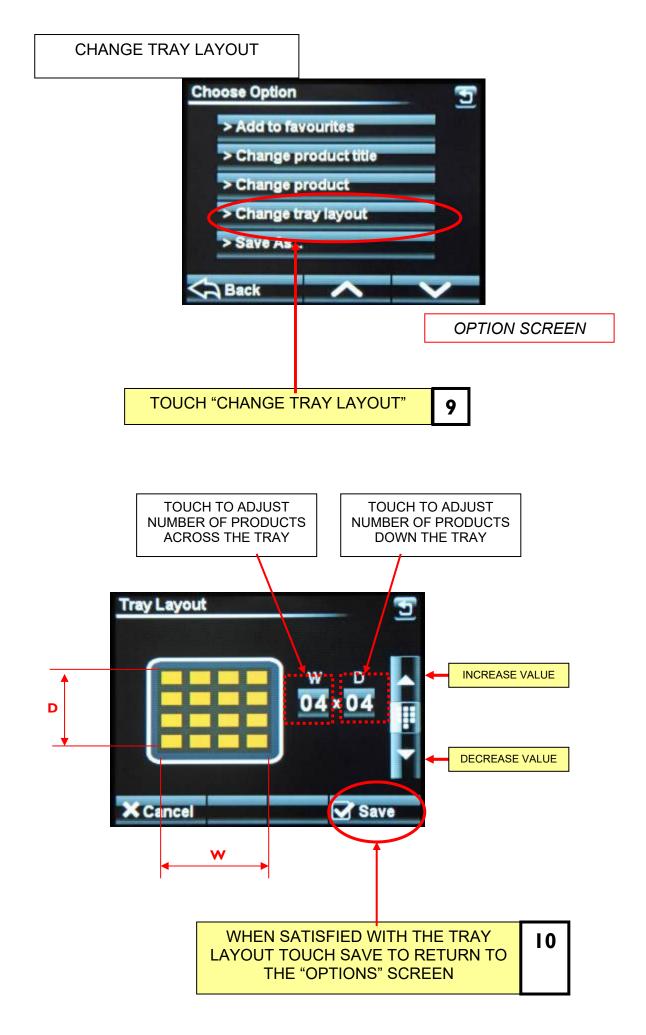
# 10 - 4 CREATING A PROGRAM

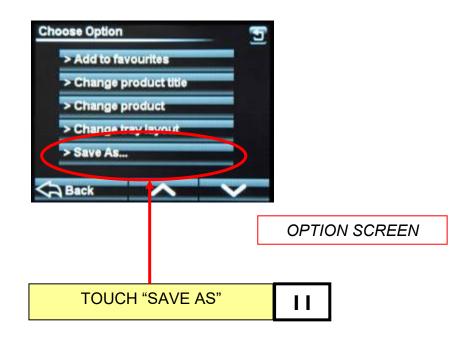


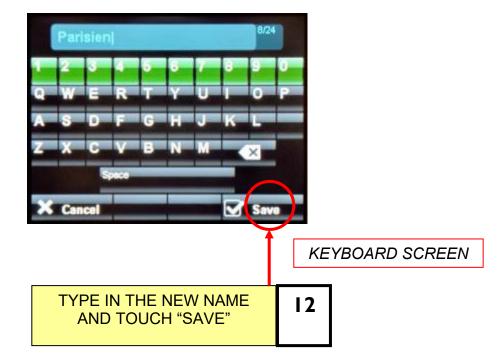








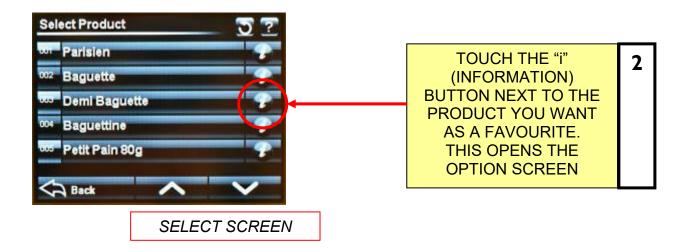


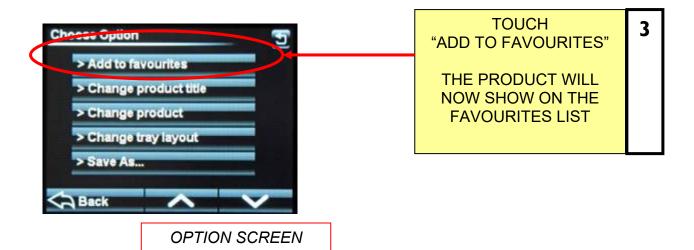




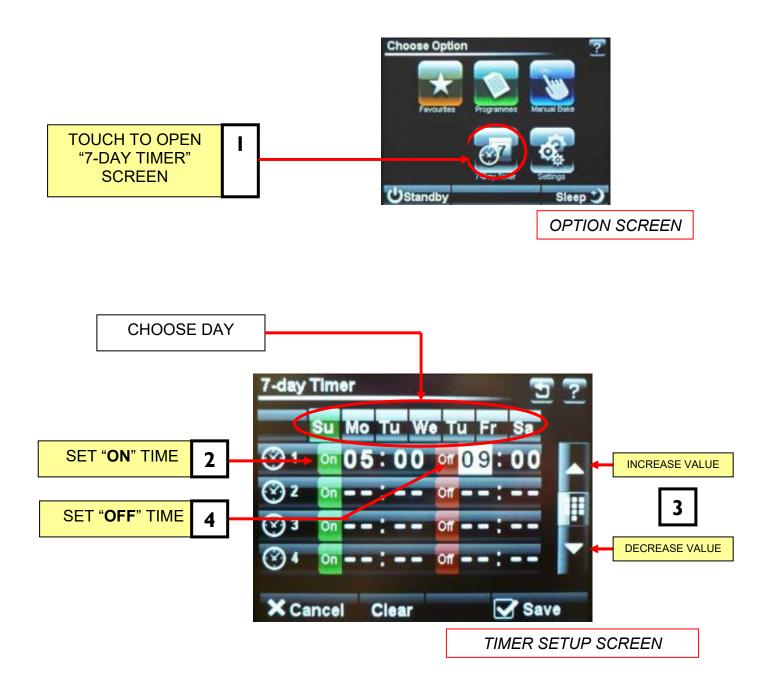
TOUCH THE TYPE OF	
PRODUCT WANTED	
AND THE "SELECT"	
SCREEN OPENS	

L





# 10 - 5 SETTING 7–DAY TIMER



#### <u>NOTE</u>

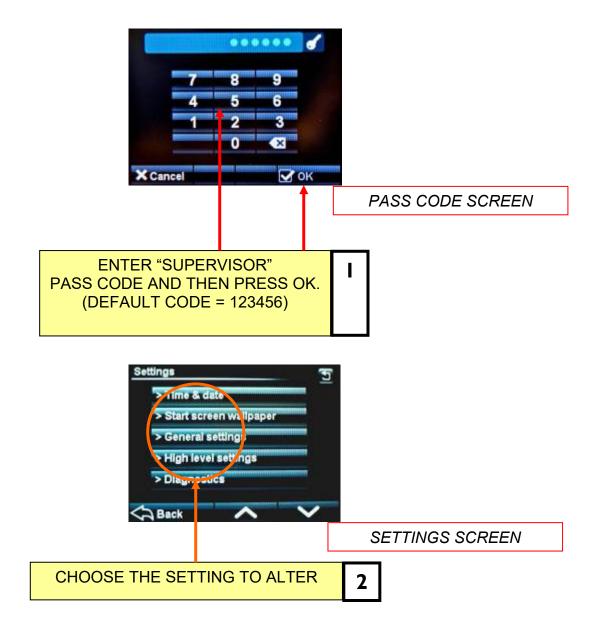
Up to four on/off times can be set for each day. Touch "clear" to clear the settings on the day shown. Touch "save" to activate the times set.

# 10 - 6 SETTINGS

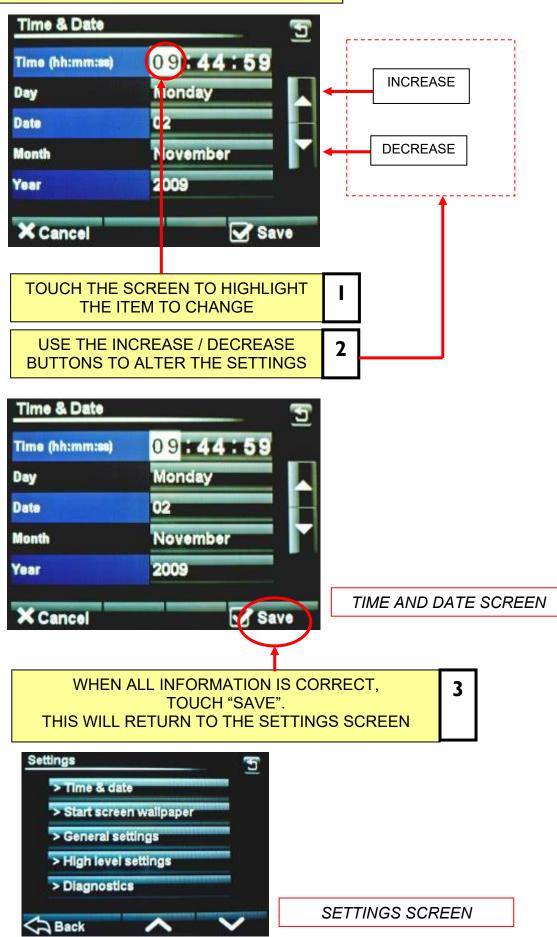


**OPTION SCREEN** 

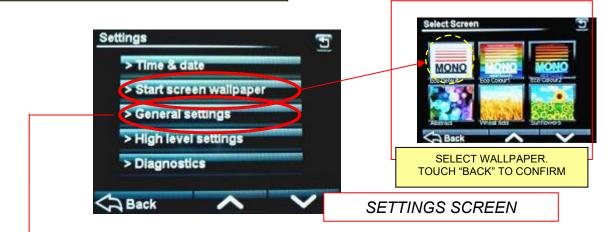
TOUCH TO OPEN THE "SETTINGS" SCREEN



### TIME AND DATE

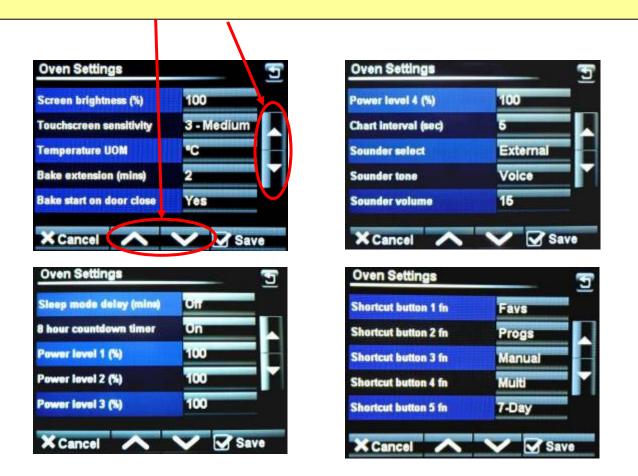


## OVEN SETTINGS (GENERAL)



#### TOUCH "GENERAL SETTINGS" AND THE FOLLOWING SCREEN WILL APPEAR.

SCROLL DOWN TO MOVE THROUGH ALL CHOICES AND ADJUST EACH ONE AS REQUIRED, USING THE ARROW KEYS.



### **OVEN SETTINGS EXPLAINED - GENERAL LEVEL**

#### SCREEN BRIGHTNESS -

Adjusts the brightness of the viewing screen for user comfort.

#### **TOUCHSCREEN SENSITIVITY -**

Adjusts the pressure required to operate the touch screen. (5 settings)

#### **TEMPERATURE UNIT OF MEASURE –**

Centigrade (Celsius) or Fahrenheit

#### BAKE EXTENSION (mins) -

Adjusts the extra time at the end of a bake for each "extra time" button touch. (10mins max)

#### **BAKE START ON DOOR CLOSE -**

This will start the set bake program as soon as the door closes.

#### SLEEP MODE DELAY –

Oven will go into sleep mode after the set minutes, providing it is up to temperature and has been through at least one bake cycle.

#### **8 HOUR COUNTDOWN TIMER -**

After 8 hours the oven gives a warning and then turns off. Touch any button for an extra hour if required.

#### POWER LEVEL (1-4) -

Set these as required for each level to be used.

#### CHART INTERVAL -

Time interval in seconds that the bars show on the heat and bake time progress charts.

#### SOUNDER SELECT -

Set as external or onboard.

#### SOUNDER TONE -

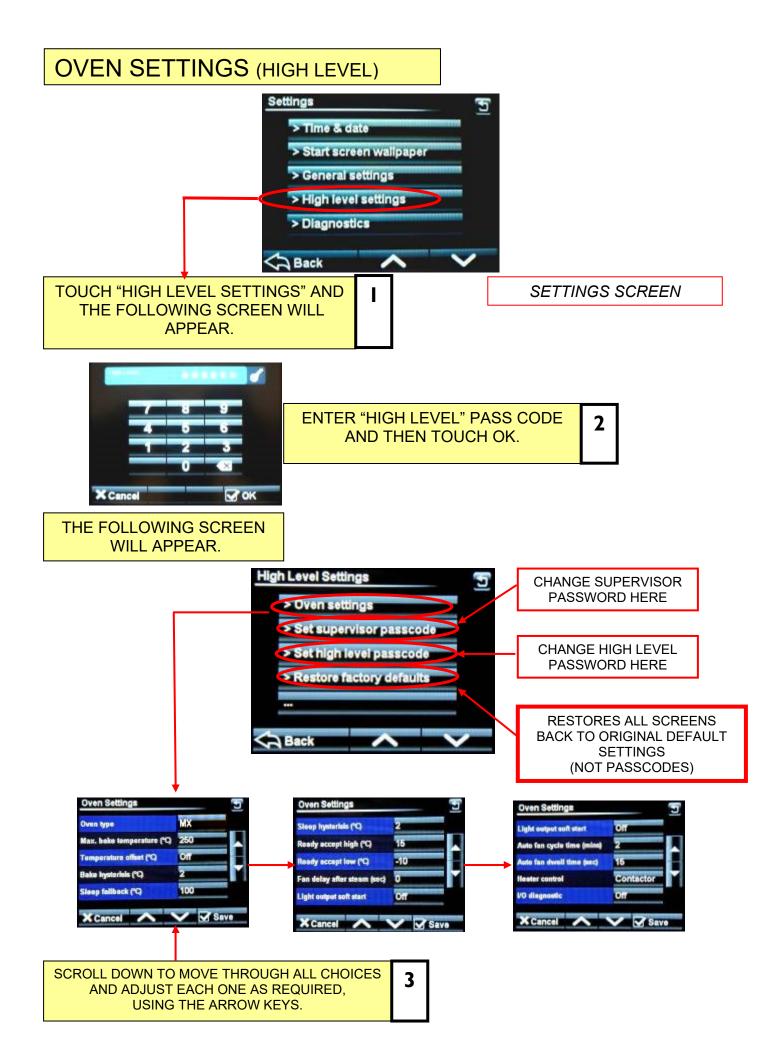
Select a tone – Voice or Off

#### SOUNDER VOLUME -

Adjust to suit the volume required. (onboard sounder only)

#### SHORTCUT BUTTONS -

Gives the choice of what buttons are active and in which order they appear on the options screen.
Options available = Favourites, Programs, Manual bake, Multi bake,
7-day timer . (Settings at <b>6fn</b> cannot be changed)



### **OVEN SETTINGS EXPLAINED - HIGH LEVEL**

#### OVEN TYPE -

Set this to MX.

#### MAX. BAKE TEMPERATURE -

Can be set up to 300C, (depending on the oven type)

#### **TEMPERATURE OFFSET –**

Can be used to adjust the display to the actual temperature in the oven.

#### **BAKE HYSTERISIS –**

Sets bake temperature cycling around a set point. (Above and below).

#### SLEEP FALLBACK -

Temperature of the oven in "sleep mode" (100C is suggested).

#### SLEEP HYSTERISIS -

Sets "sleep mode" temperature cycling around a set point. (Above and below).

#### **READY ACCEPT HIGH –**

Highest temperature for the oven to display "READY"

#### READY ACCEPT LOW -

Lowest temperature for the oven to display "READY"

#### FAN DELAY AFTER STEAM -

Delay before fan starts after the oven has steamed. (60 seconds max)

#### LIGHT OUTPUT SOFT START -

On/Off Some lights need this for cold start up to stop them blowing.

#### AUTO FAN CYCLE TIME (MINS) -

Set time required. Only used in manual and multibake modes.

#### AUTO FAN DWELL TIME -

Set time required. Only used in manual and multibake modes.

#### HEATER CONTROL -

Contactor or solid state. Defaults to contactor. (solid state not used at the moment)

#### I/O DIAGNOSTIC -

Displays outputs and inputs at the top of the screen to aid fault finding if needed.

# SUPERVISOR (LOW LEVEL) -- 123456

HIGH LEVEL -- 654321

MASTER -- 314159 (This is fixed)

# **SUGGESTION**

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.

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

# 10 - 7 USING THE USB PORT



Ensure the Start screen is showing

and a second sec

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

<u>NOTE</u> The USB stick will only fit in one way. <u>Do not force into the socket.</u>

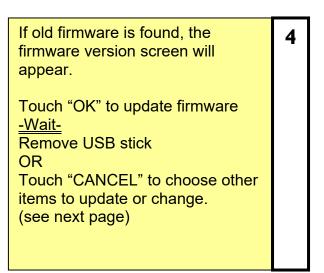


Wait for the USB symbol to finish moving

3

L





Load Products Load Start Scre	
	ens
Save Products Load Skin	
Load Sounds	

Choose action you would like to do.

5



Select the file required.	
---------------------------	--

6

USB Drive	
Load Products	Load Start Screens
Save Products	Load Skin
Save Log	Load Sound
× Cancel	

When confirmation of "file loaded ok" Shows, remove the usb stick.

## **NOTES ON USING USB STICKS**

For a USB stick to function correctly it must have the following folder in the root folder .

#### Mono

Then into that folder add the following: Firmware Products

Skins Sounds

Startup

Place your recipe/product files in the "products" folder.

The oven will find the "**Mono**" folder automatically when the stick is plugged into the oven. Any stick can be used (does not have to be blank) but the Mono folder must be in the root folder.

The most used folders are explained below:

#### <u>SKINS</u>

These control the way the screen looks in different modes.

**<u>Pictorial</u>** is when the screen displays catergories using pictures.



**Numerical** is when the screen displays program numbers.



#### **STARTUP SCREENS**

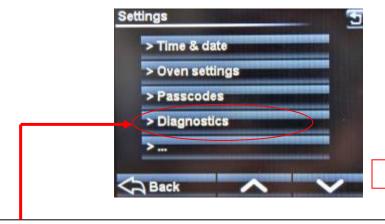
This is the picture/logo you see when the oven is started.



#### PRODUCT FILES (PROGRAM FILES)

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

# 10 - 8 DIAGNOSTICS

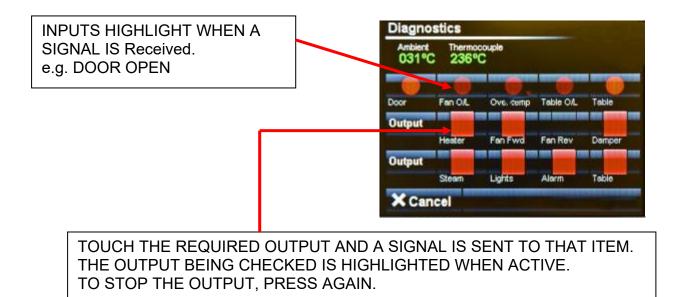


SETTINGS SCREEN

TOUCH "DIAGNOSTICS" AND THE FOLLOWING SCREEN WILL APPEAR.

Ambient 031°C	C 236°	C		
)oor	Fan OiL	Ove. temp	Table OfL	Table
Dutput	Heater	Fan Fwd	Fan Rev	Damper
Dutput	Steam	Lights	Alarm	Table

DIAGNOSTICS SCREEN



### 11.0 ELEMENT BANK REMOVAL (SEE DRAWINGS ON NEXT PAGES)

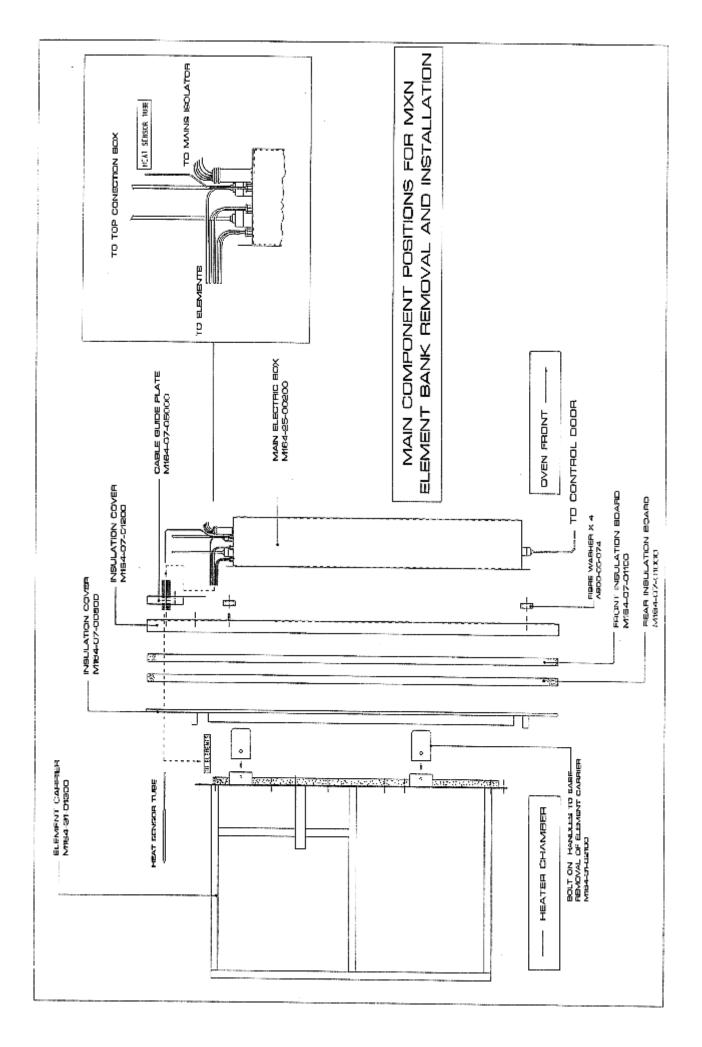


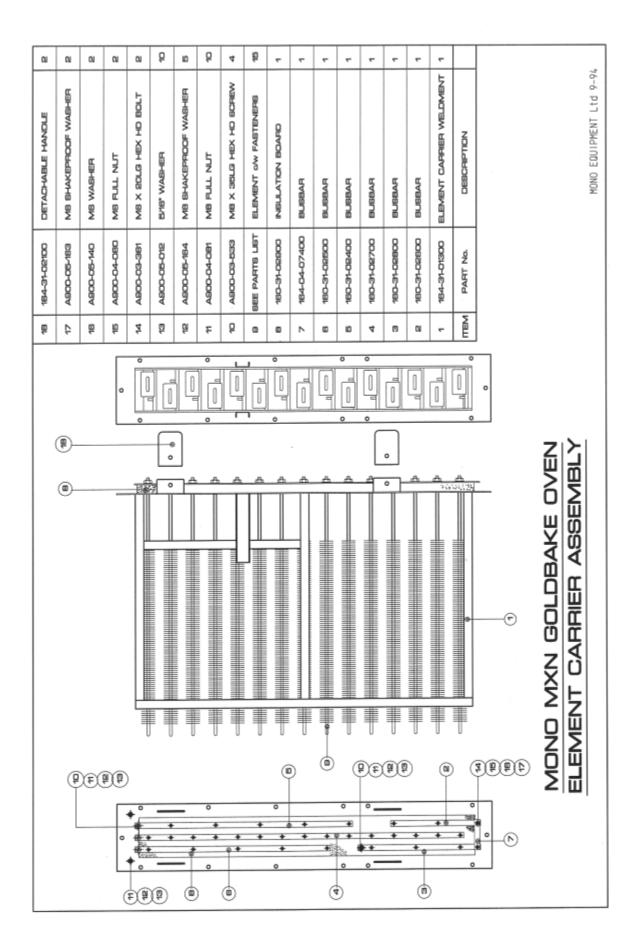
#### Ensure oven is DISCONNECTED from consumer power supply. ----(DO NOT ONLY USE OVEN ISOLATOR)----

- 2 Disconnect two plug connectors from sockets at the top of main electrical box and one plug connector from the bottom of the box.
- 3 Disconnect element supply cables from inside the box.
- 4 Disconnect cables from mains isolator.
- 5 Unscrew cable guide plate and slide away down heat sensor tubing.
- 6 Remove insulation material from cable guide plate area.
- 7 Unscrew retainer screw on heat sensor holder and slide out sensor tube leaving holder in place.
- 8 Loosen nuts clamping conduit tube to main isolator bracket.
- 9 Loosen bottom electrical box holding nuts.
- 10 Remove top electrical box holding nuts.
- 11 Pull top of box forward, disengaging conduit from bracket and lift slots off studs at bottom. (Be careful not to damage heat sensor tube.).
- 12 Slide insulation covers and insulation boards out of chamber to reveal element carrier front face.
- 13 Bolt on two handles (part no. M164-31-02100) to fixing lugs on front face of carrier assembly.
- 14 Remove 14 hex. head bolts from around front face of carrier and slide complete assembly out of heater.

## **12.0 ELEMENT BANK REPLACEMENT**

• This is the reversal of 12.1 - 12.14, but ensure all insulation is replaced and that the insulation ladder tape on heater chamber front face is in good condition

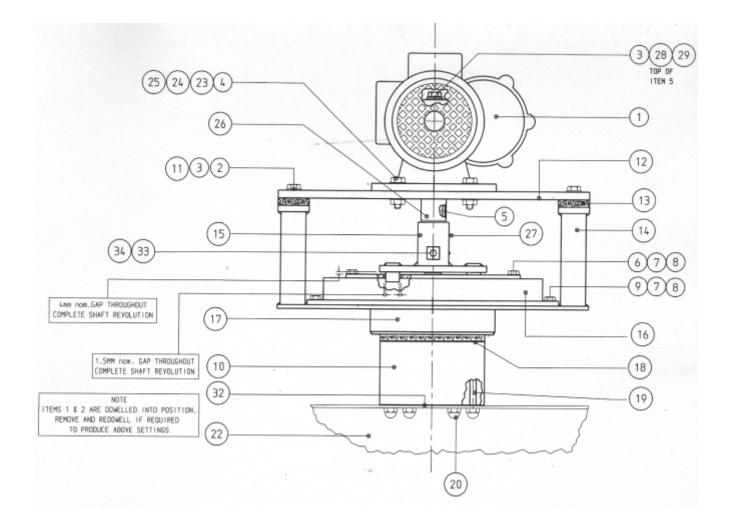




## **13.0 Rack Drive/Turntable parts**

# **WARNING:** KEEP CLEAR OF LARGE FLUE PIPE ON ROOF WHEN DOING ANY MAINTENANCE ON TOP OF OVEN. VERY HOT AIR IS EJECTED.

### **MONO MXT OVEN TURNTABLE DRIVE COMPONENTS**

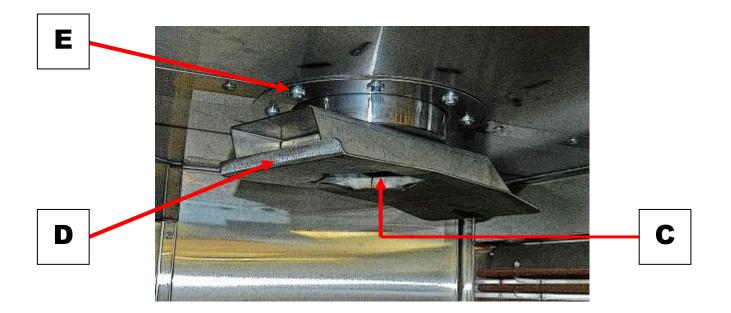


### MONO MXT OVEN TURNTABLE DRIVE COMPONENTS DESCRIPTION

(see drawing on previous page)

Item	Part no	Description	Qty
1	B912-74-009	Gearmotor unit (Varvel MRA70)	1
2	A900-05-143	M10 Plain washer	4
3	A900-05-142	M10 Spring washer	5
4	A900-03-387	M12 x 45LG Hex.Hd. setscrew	4
5	162-02-04100	Drive shaft assy (shaft key pin)	1
6	A900-03-383	M8 x 25LG Hex.Hd.setscrew	8
7	A900-05-144	M8 Plain washer	16
8	A900-05-141	M8 Spring washer	16
9	A900-03-439	M8 x 50LG Hex.Hd.setscrew	8
10	160-36-01000	Turntable drive (lower)	1
11	A900-03-438	M10 x 45LG. Hex.Hd.setscrew	4
12	160-15-00600	Top plate	1
13	160-15-00700	Insulation packing piece	4
14	160-36-00100	Bearing support plate assy.	1
15	162-02-04400	Drive spider	1
16	160-36-00300	Turntable bearing	1
17	160-15-00800	Turntable drive (upper)	1
18	160-15-01400	Insulation disc	1
19	160-36-01100	M10 Stud	6
20	A900-04-096	M10 Dome nut	6
21			
22	160-36-00600	Rack hanger. (ref. only)	1
23	A900-05-022	1⁄2" Plain washer	8
24	A900-05-059	1⁄2" Spring washer	8
25	A900-04-084	M12 Nut	4
26	162-02-04300	Spacer	7
27	A900-03-436	M6 x 10LG Grub screw	2
28	162-02-045	Washer (drive shaft)	1
29	A900-03-395	M10 x 16LG hex.Hd. setscrew	1
30	160-35-02000	Direction of rotation label	1
31	A900-03-628	M4 x 6LG slotted pan ho. screw	2
32	160-40-06102	Packing shim for rack hanger (14swg	) as required
	160-40-06103	(20swg	)"
33	A900-03-360	M6 x 12LG Hex.Hd. setscrew	1
34	A900-05-163	M6 Shakeproof washer	1

### **TO RENEW THE RACK DRIVE SEAL**



# This seal is situated inside the oven above the ring plate surrounding the Rack hanger shaft.

- 1 Release the six dome nuts (C) securing the rack hanger to its shaft and remove the hanger (D). Release the screws securing the ring plate and remove the plate (E).
- 2 Pick out the rubber ring seal and coiled rope seal from within the cavity and carefully coil in the new seal, ensuring that it is not distorted. Replace the rubber ring seal.
- 3 Refit the ring plate and the rack hanger.

ROPE SEAL PT No. A900-32-016 RUBBER SEAL PT No A900-12-060

## 14.0 SPARES AND SERVICE

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

## MONO

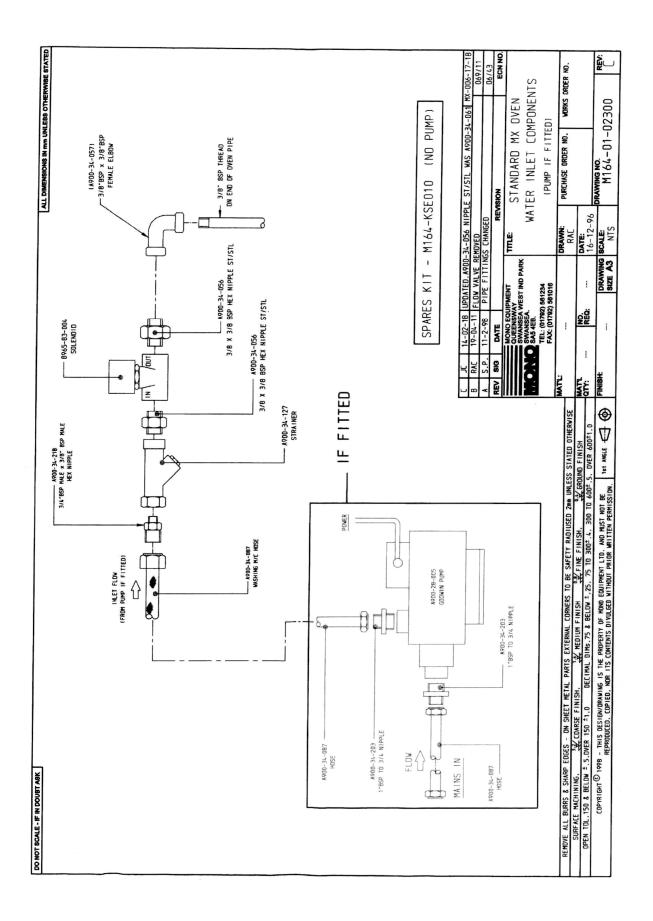
Queensway Swansea West Industrial Estate Swansea. SA5 4EB UK

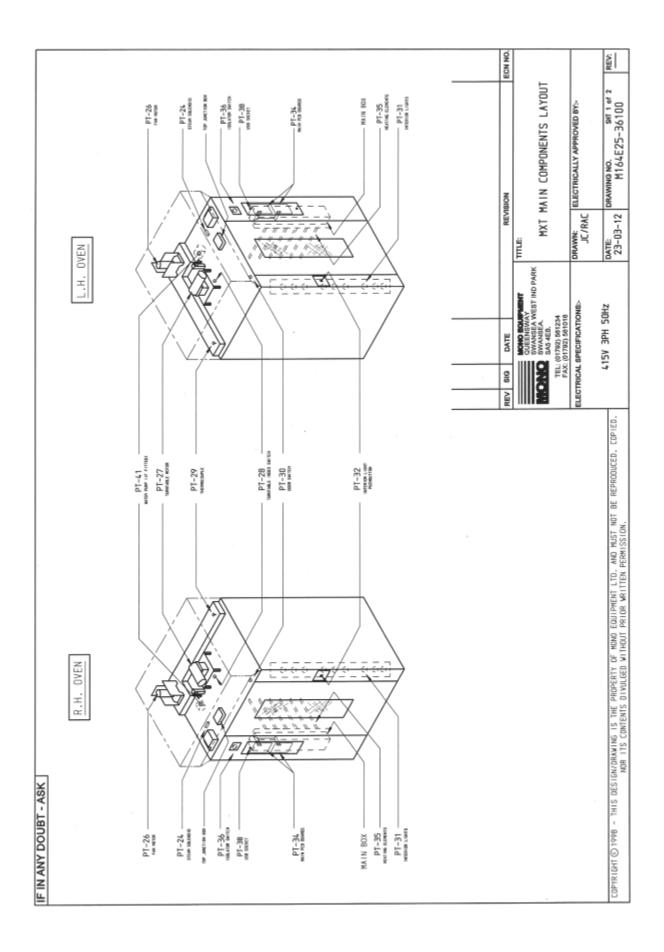
email:spares@monoequip.com Web site:www.monoequip.com

Tel. 01792 561234 Spares +44(0)1792 564039 Fax. 01792 561016

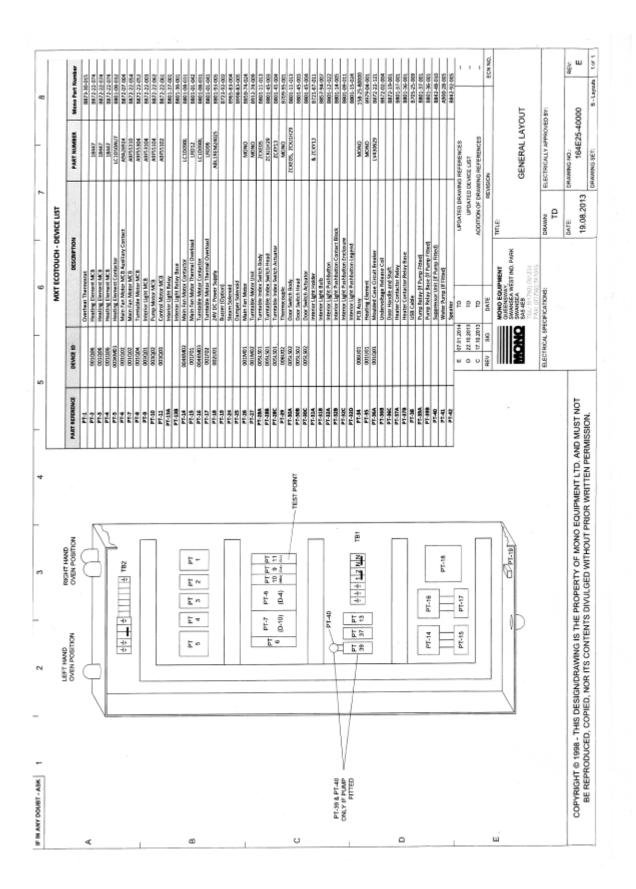


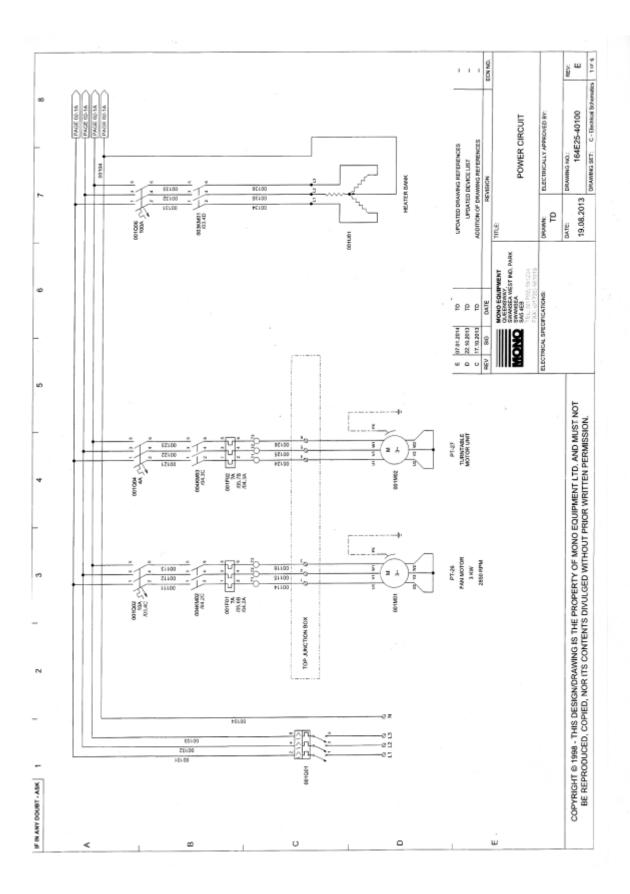
# 15.0 ELECTRICS (WITHOUT PUMP)

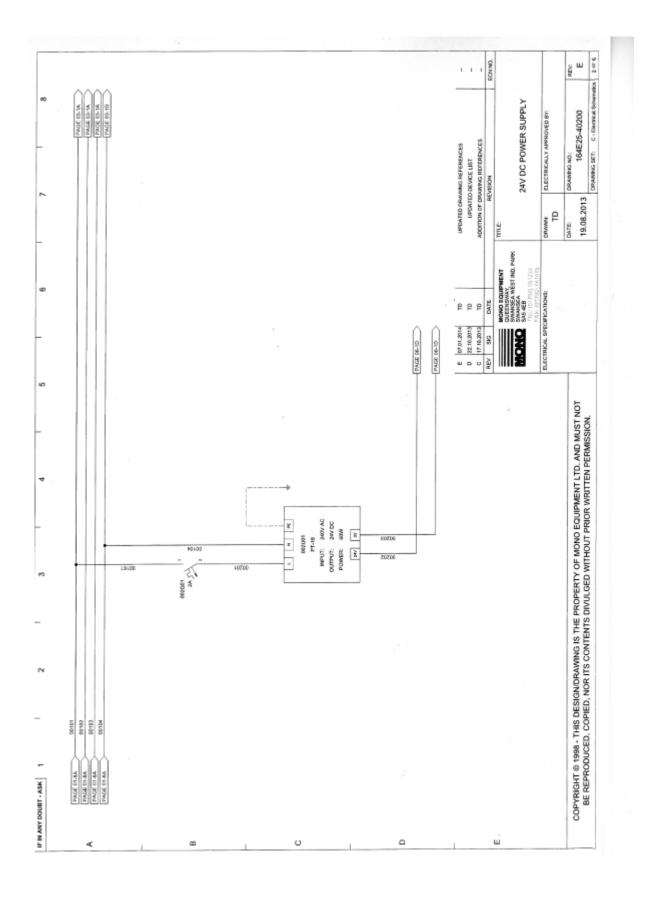


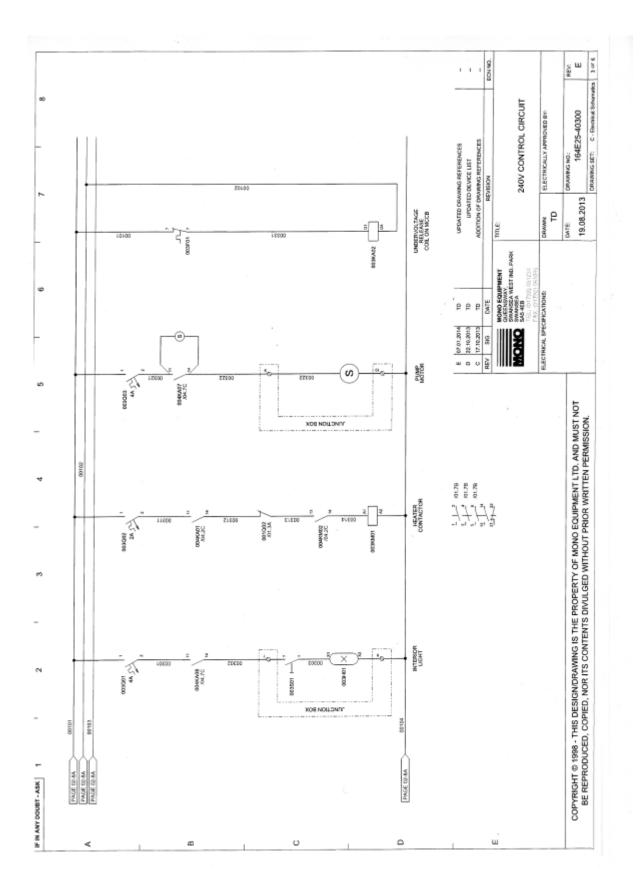


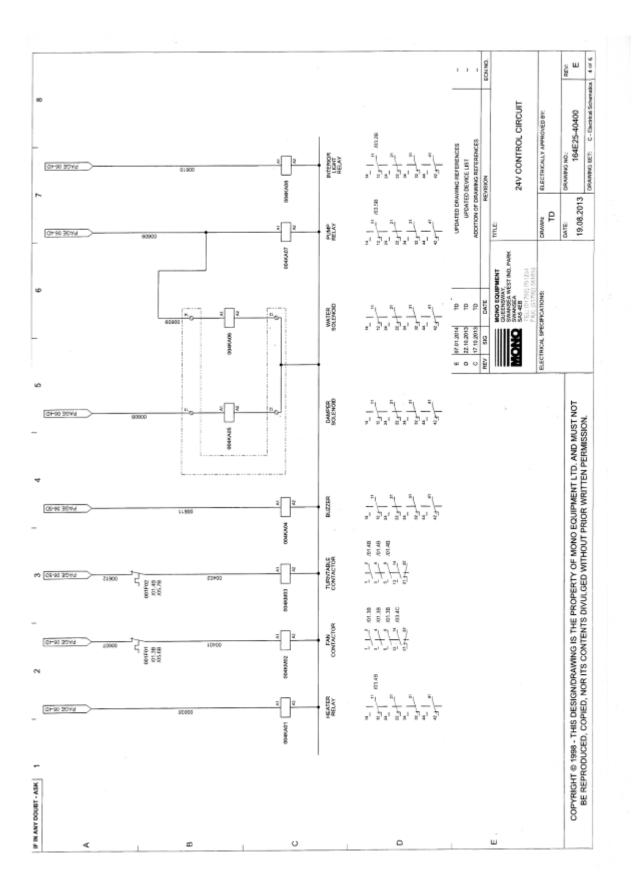
IF IN ANY DOUBT - ASK	JBT - ASK							
DRAWING	DESCRIPTION	NONO	DRAWING		DESCRIPTION	Z	MONO	
PT-Ref		PART NUMBER	PT-Ref				PART NUMBER	
PT-1	OVERHEAT THERMOSTAT	8873-30-015	PT-31A	I NTER I DR	INTERIOR LIGHT HOLDER.		B721-67-011	
PT-2	HEATING ELEMENT MCB.	8872-22-074	PT-31B	INTERIOR	INTERIOR LIGHT BULB.		8857-94-007	
PT-3	HEATING ELEMENT MCB.	B872-22-074	PT-32A	INTER I DR	NTERIOR LIGHT PUSHBUTTON.		BB01-12-022	
PT-4	HEATING ELEMENT NCB.	B872-22-074	PT-32B	INTERIOR	LIGHT PUSHBUTTON (	PUSHBUTTON CONTACT BLOCK	8801-14-005	
PT-5	HEATING ELEMENT CONTACTOR	8801-08-032	PT-32C	INTERIOR	LIGHT PUSHBUTTON ENCLOSURE.	ENCLOSURE.	B801-09-011	<i>.</i>
PT-6	MAIN FAN MDTOR MCB AUXILIARY CONTACT	B872-07-004	PT-320	INTERIOR	INTERIOR LIGHT PUSHBUTTON LEGEND.	LEGEND.	8801-15-024	
PT-7	MAIN FAN MOTOR MCB.	B872-22-054						
PT-8	TURNIABLE MOTOR MCB.	B872-22-052	DT-2/	DLB ACCV			158-25-80000	
PT-9	INTERIOR LIGHT MCB	B872-22-003		1000				
PT-10	PUMP MOTOR MCB.	B872-22-062	PT-35	HEATING ELEMENT.	LEMENT.		B979-04-001	
PT-11	CONTROL MOTOR MCB.	B872-22-061	PT-36A	MOULDED C	MOULDED CASE CIRCUIT BREAKER.	ER.	8872-22-078	
PT-13A	INTERIOR LIGHT RELAY.	B801-37-001	PT-36B	UNDERVOLT	UNDERVOLTAGE RELEASE COIL.		B872-02-004	
PT-138	INTERIOR LIGHT RELAY BASE.	BB01-36-001	PT-36C	DODR HAND	DODR HANDLE AND SHAFT.		8872-19-001	
PT-14	MAIN FAN MOTOR CONTACTOR.	8801-08-031	PT-37A	HEATER CO	HEATER CONTACTOR RELAY.		B801-37-001	
PT-15	MAIN FAN MOTOR THERMAL OVERLOAD.	BB01-01-042	PT-378	HEATER CO	HEATER CONTACTOR RELAY BASE	ű.	8801-36-001	
PT-16	TURNTABLE NOTOR CONTACTOR.	BB01-08-031	PT-38	USB CABLE			8705-25-009	
PT-17	TURNTABLE MOTOR THERMAL DVERLOAD.	BB01-01-041	PT-39a	PUMP RELA	PUMP RELAY (IF PUMP FITTED)		8801-37-001	
PT-18	24V DC POWER SUPPLY.	B801-93-005	PT-39b	PUMP RELA	PUMP RELAY BASE (IF PUMP FITTED).	ITTED).	B801-36-001	
PT-19	BUZZER (OPTION)	B723-92-002	PT-40	SUPPRESSO	SUPPRESSOR UNIT (IF PUMP FITTED).	ITTED).	B842-48-010	
PT-24	STEAM SOLENDID.	8965-83-004	PT-41	WATER PUP	WATER PUMP (IF FITTED).		A900-28-005	
PT-25	DAMPER SOLENDID.	8998-83-005	PT-42	SPEAKER			B842-92-005	
PT-26	MAIN FAN MOTOR.	8859-74-024						
PT-27	TURNTABLE MOTOR UNIT.	8912-74-009						
PT-28A	TURNTABLE INDEX SWITCH BODY.	8801-11-013	L					Τ
PT-28B	TURNTABLE INDEX SWITCH HEAD.	B801-45-003	1	and oto	PATE .	DEVELON		CN NO
PT-28C	TURNTABLE INDEX SWITCH ACTUATOR.	8801-45-004	2 11			TILE		
PT-29	THERMOCOUPLE.	B709-95-001		050	QUEENSWAY SWANSEA WEST IND PARK	COMPONENT	COMPONENT PART LIST FOR MXT	
PT-30A	DOOR SWITCH BODY.	8801-11-013			8.45 4EB.	COLC	COLOURSMART OVEN	
PT-30B	DOOR SWITCH HEAD.	8801-45-003		FAX: (017		ſ	A REAL OF A REAL OF A REAL AND A REAL	
PT-30C	DOOR SWITCH ACTUATOR.	B801-45-004	<u> </u>	ELECTRICAL SPECIFICATIONS:-		JC/RAC	ברבת ואמאררג איזיאמעבט 213-	
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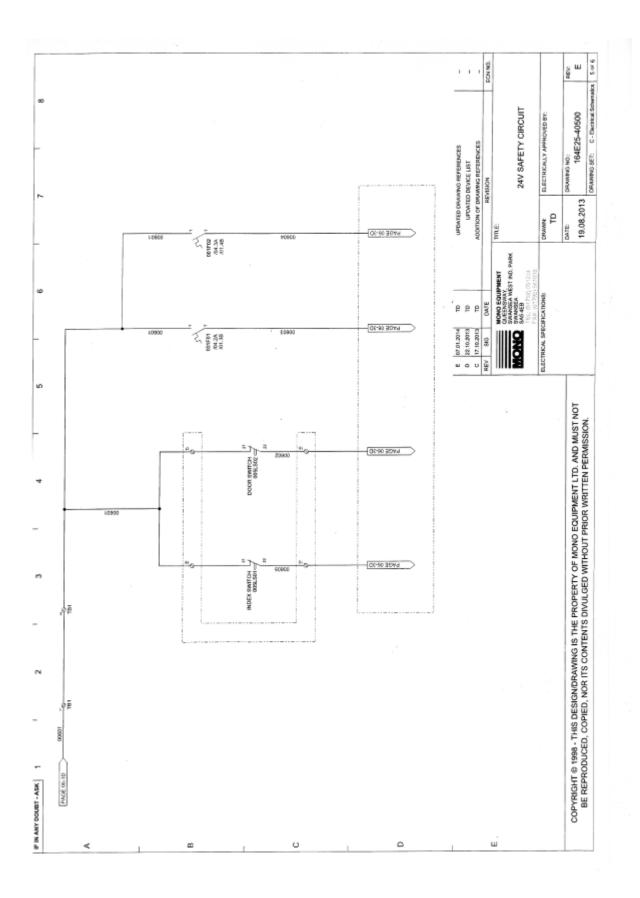


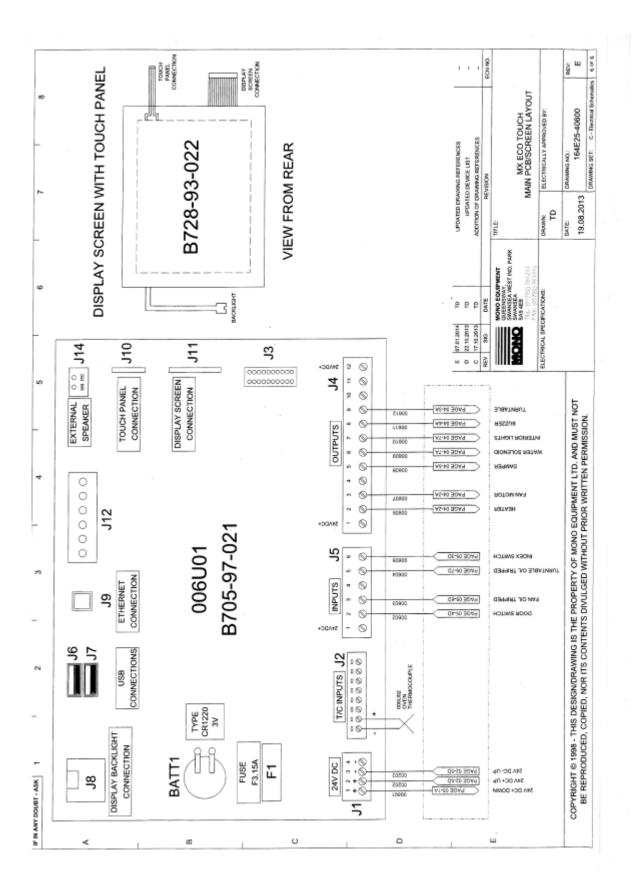






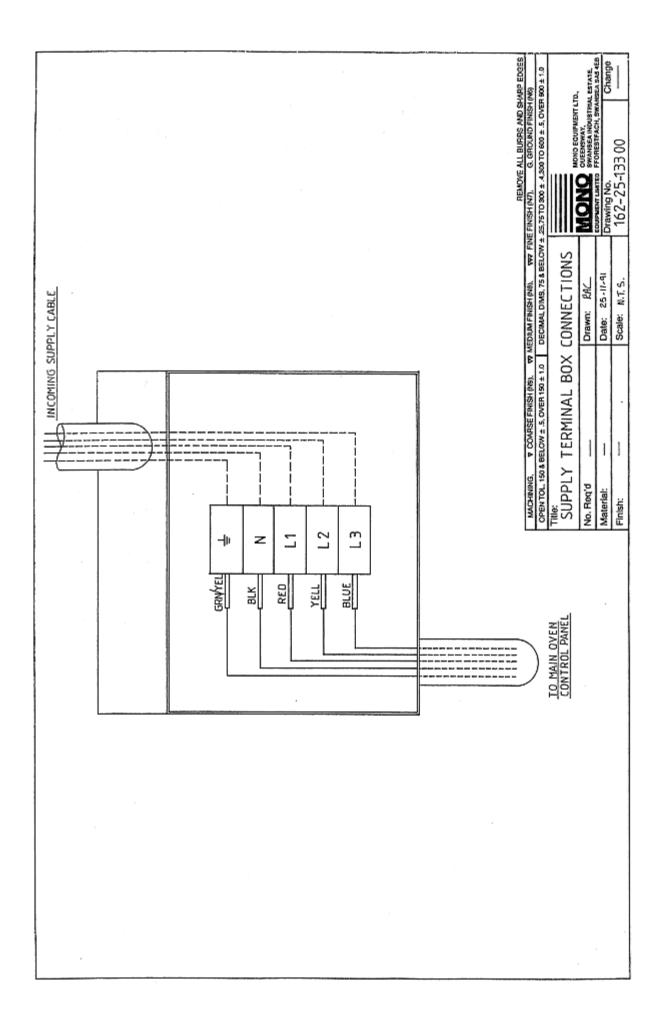


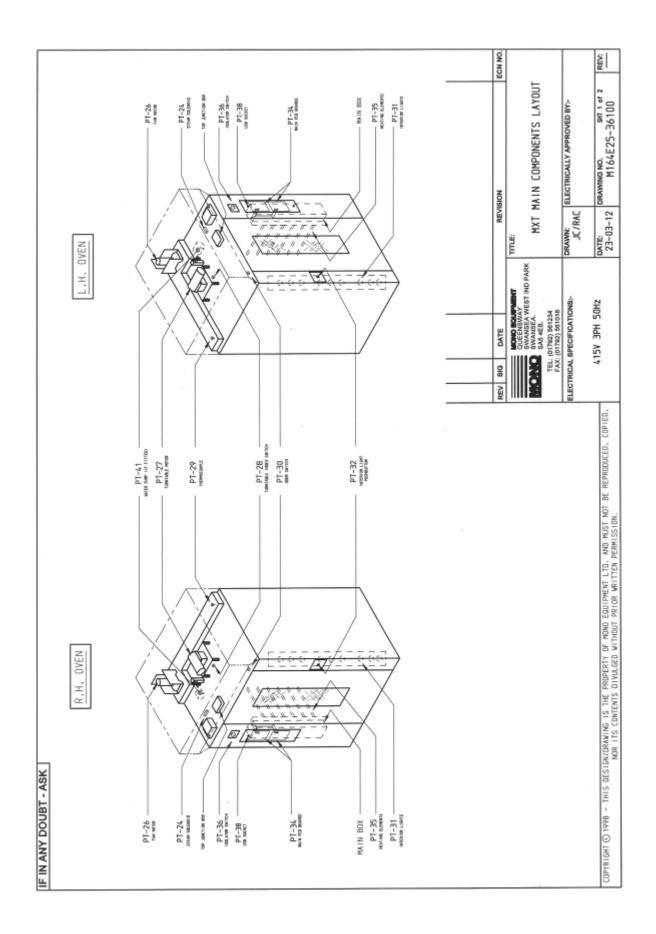




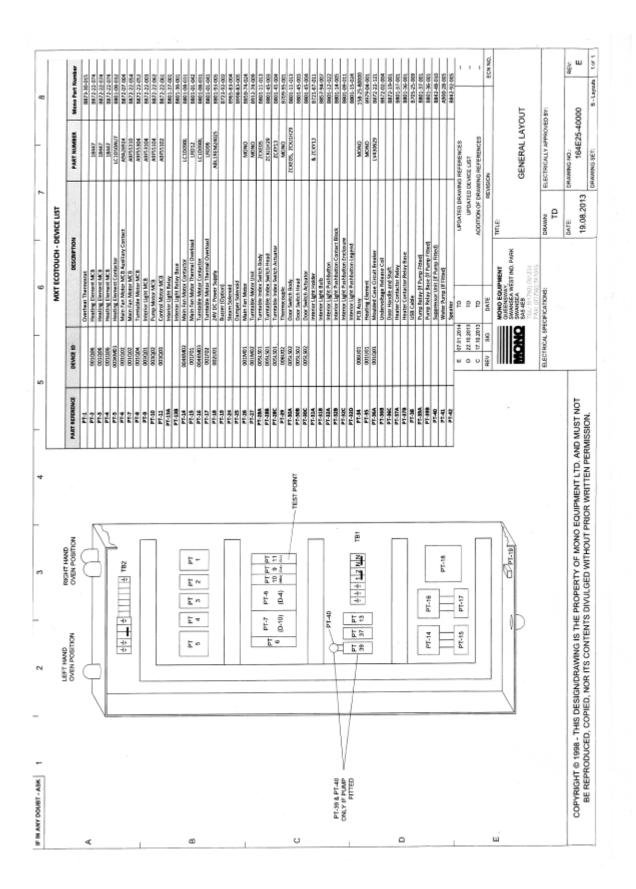


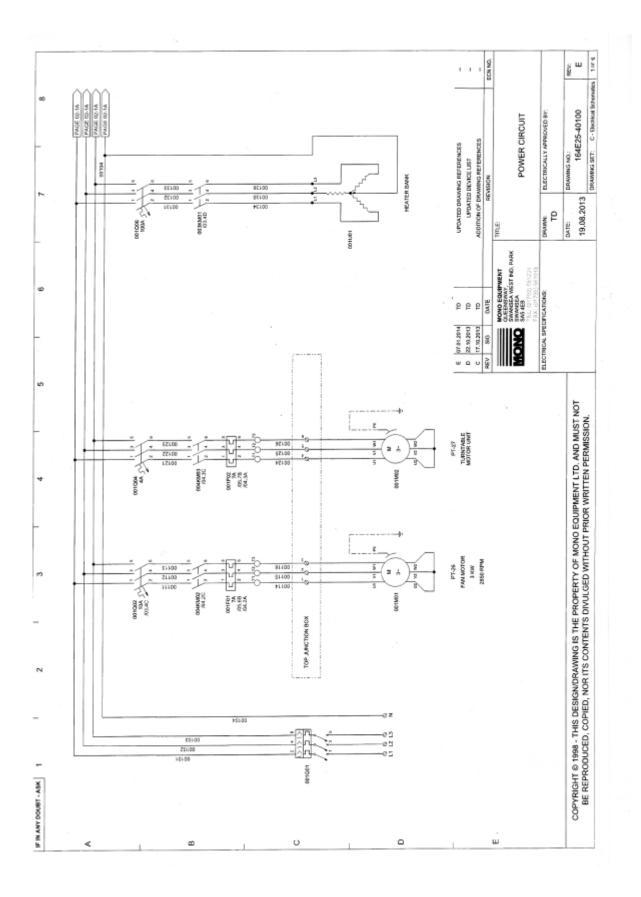
# 16.0 ELECTRICS (WITH PUMP)

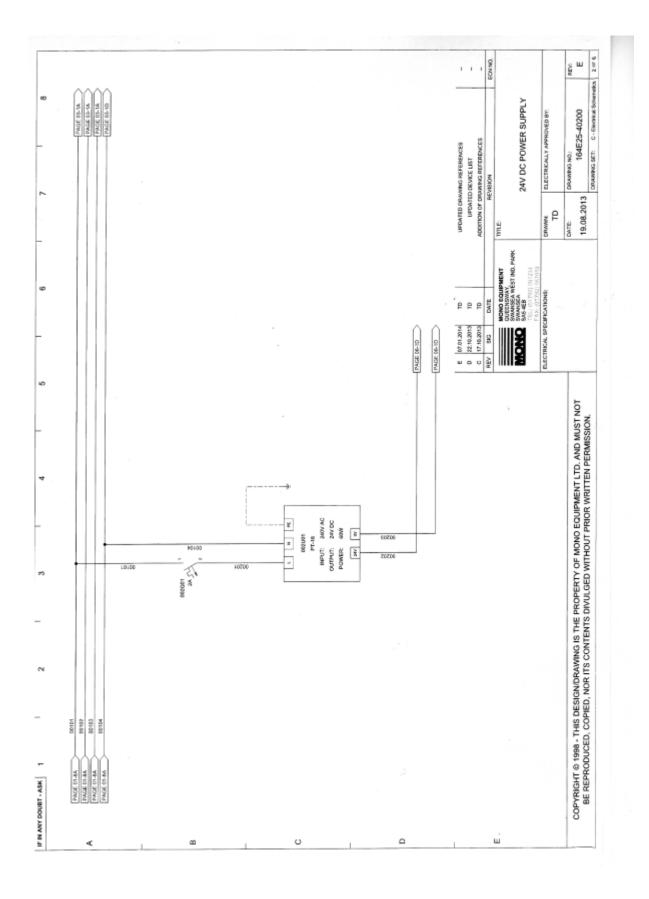


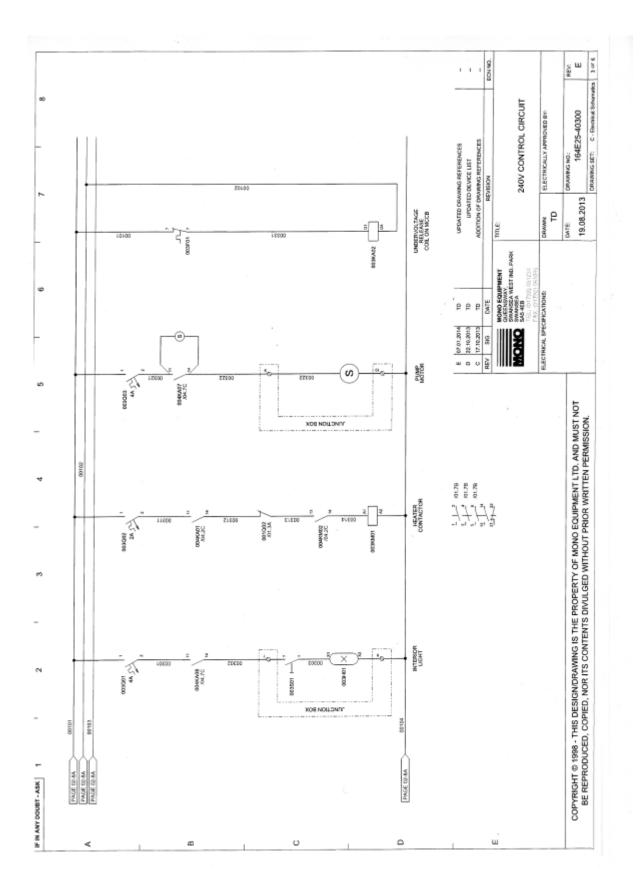


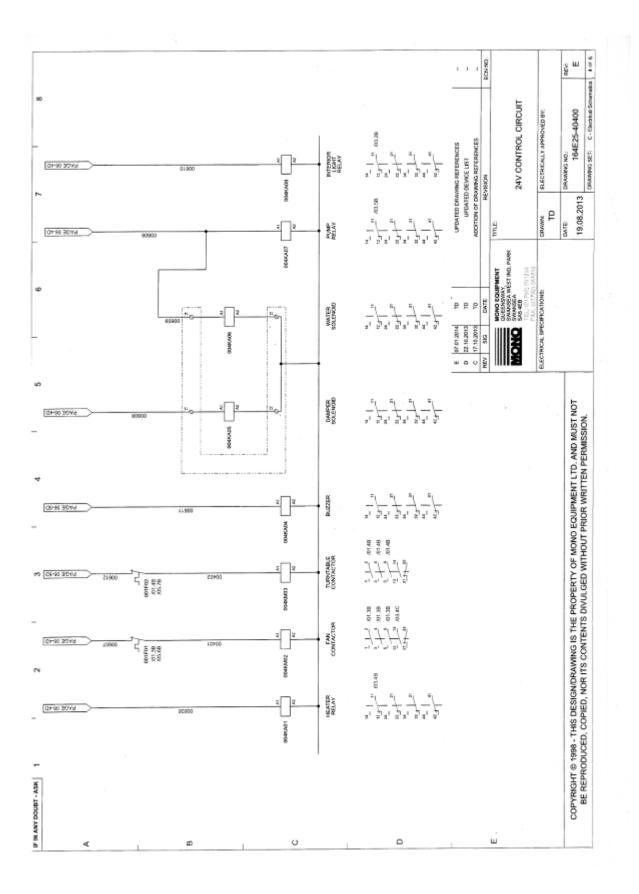
IF IN ANY DOUBT - ASK	JBT - ASK						Γ
DRAWING PT-Ref	DESCRIPTION	PART NUMBER	DRAWING PT-Ref	DESCRIPTION	ND	PART NUMBER	
PT-1	OVERHEAT THERMOSTAT	8873-30-015	PT-31A	INTERIOR LIGHT HOLDER.		8721-67-011	
PT-2	HEATING ELEMENT MCB.	BB72-22-074	PT-31B	INTERIOR LIGHT BULB.		8857-94-007	_
PT-3	HEATING ELEMENT MCB.	B872-22-074	PT-32A	INTERIOR LIGHT PUSHBUTTON.		B801-12-022	
PT-4	HEATING ELEMENT MCB.	B872-22-074	PT-32B	INTERIOR LIGHT PUSHBUTTON CONTACT BLOCK	CONTACT BLOCK	BB01-14-005	
PT-5	HEATING ELEMENT CONTACTOR	B801-08-032	PT-32C	INTERIOR LIGHT PUSHBUTTON ENCLOSURE.	ENCLOSURE.	BB01-09-011	
PT-6	MAIN FAN MOTOR MCB AUXILIARY CONTACT	B872-07-004	PT-32D	INTERIOR LIGHT PUSHBUTTON LEGEND.	LEGEND.	B801-15-024	
PT-7	MAIN FAN MDTOR MCB.	B872-22-054					
PT-8	TURNIABLE MOTOR MCB.	B872-22-052	7E-10	DCD ACCV		158-25-80000	
PT-9	INTERIOR LIGHT MCB	B872-22-003		1001		2222	
PT-10	PUMP MOTOR MCB.	BB72-22-062	PT-35	HEATING ELEMENT.		8979-04-001	
PT-11	CONTROL MOTOR MCB.	B872-22-061	PT-36A	MOULDED CASE CIRCUIT BREAKER.	KER.	8872-22-078	
PT-13A	INTERIOR LIGHT RELAY.	B801-37-001	PT-36B	UNDERVOLTAGE RELEASE COIL		8872-02-002	
PT-13B	INTERIOR LIGHT RELAY BASE.	B801-36-001	PT-36C	DOOR HANDLE' AND SHAFT.		8872-19-001	
PT-14	MAIN FAN MDTOR CONTACTOR.	B801-08-031	PT-37A	HEATER CONTACTOR RELAY.		BB01-37-001	
PT-15	MAIN FAN MDTOR THERMAL OVERLOAD.	B801-01-042	PT-37B	HEATER CONTACTOR RELAY BASE.	ISE.	BB01-36-001	
PT-16	TURNTABLE MOTOR CONTACTOR.	B801-08-031	PT-38	USB CABLE		8705-25-009	-
PT-17	TURNTABLE MOTOR THERMAL OVERLOAD.	B801-01-041	PT-39a	PUMP RELAY (IF PUMP FITTED)	(0	B801-37-001	
PT-18	24V DC POWER SUPPLY.	BB01-93-005	PT-39b	PUMP RELAY BASE (IF PUMP FITTED).	FITTED).	B801-36-001	
PT-19	BUZZER (OPTION)	8723-92-002	PT-40	SUPPRESSOR UNIT (IF PUMP FITTED).	FITTED).	8842-48-010	
PT-24	STEAM SOLENOID.	8965-83-004	PT-41	WATER PUMP (IF FITTED).		A900-28-005	
PT-25	DAMPER SOLENDID.	8998-83-005	PT-42	SPEAKER		8842-92-005	
PT-26	MAIN FAN MOTOR.	B859-74-024					
PT-27	TURNTABLE MOTOR UNIT.	B912-74-009					
PT-28A	TURNTABLE INDEX SWITCH BODY.	B801-11-013	L				Τ
PT-28B	TURNTABLE INDEX SWITCH HEAD.	8801-45-003	ŭ	BEV BIG DATE	REVISION		ECN NO
PT-28C	TURNTABLE INDEX SWITCH ACTUATOR.	8801-45-004	<u></u>		am		
PT-29	THERMOCOUPLE.	8709-95-001	IIIr	QUEENSWAY 8WANSEA WEST IND PARK 6WANSEA	-	COMPONENT PART LIST FOR MXT	
PT-30A	DOOR SWITCH BODY.	B801-11-013				COLOURSMART OVEN	
PT-308	DOOR SWITCH HEAD.	BB01-45-003		FAX: (01792) 581018	DRAWN. ELECTR	ELECTRICALLY ABBROMED BV.	Τ
PT-30C	DOOR SWITCH ACTUATOR.	B801-45-004	3	ELECTRICAL SPECIFICATIONS-	RAC		
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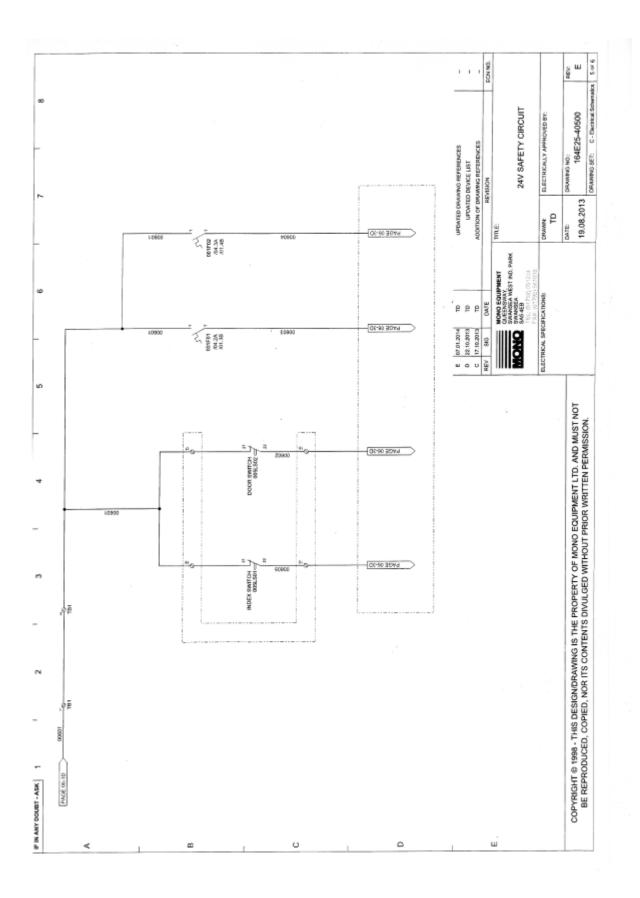


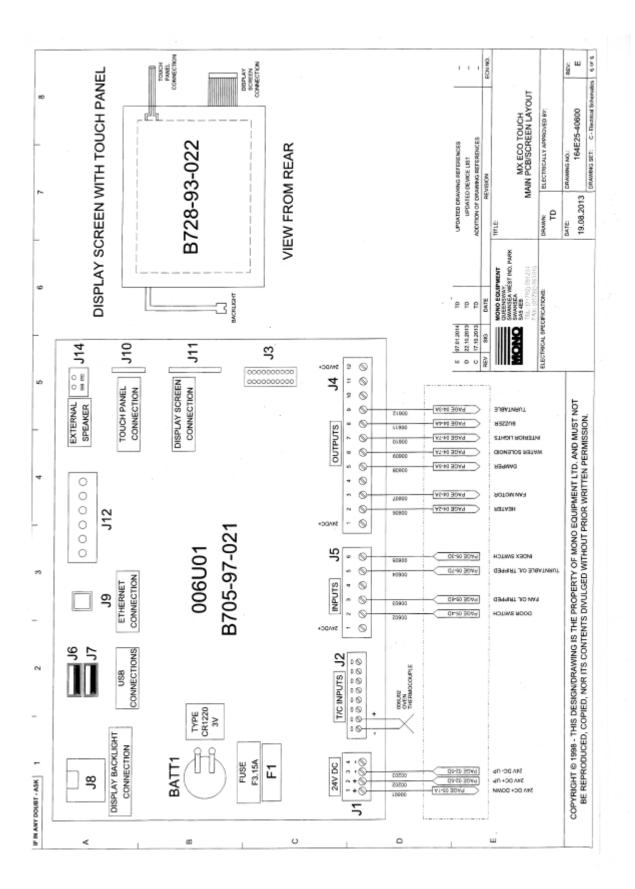


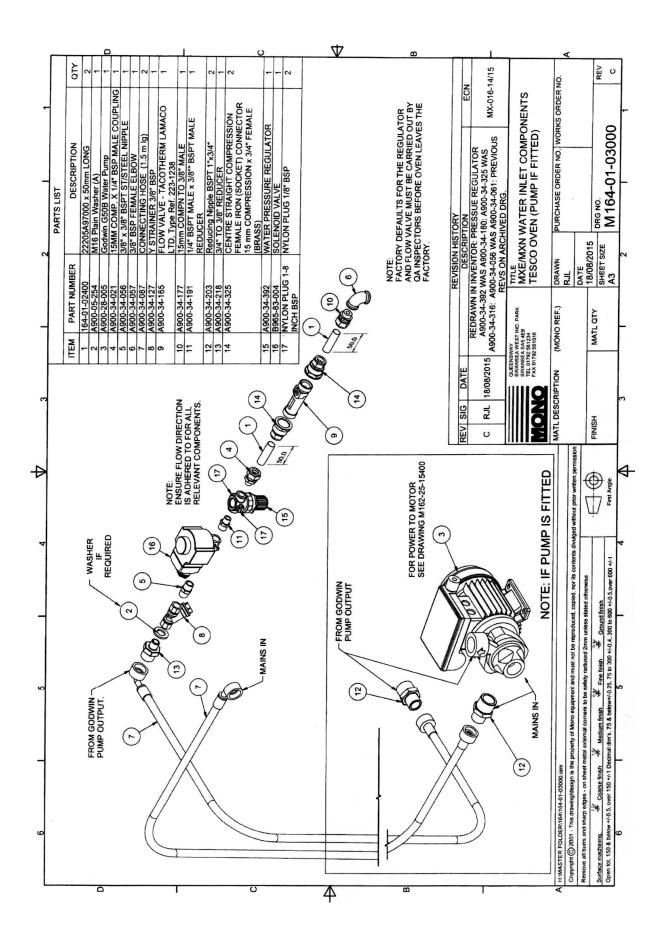


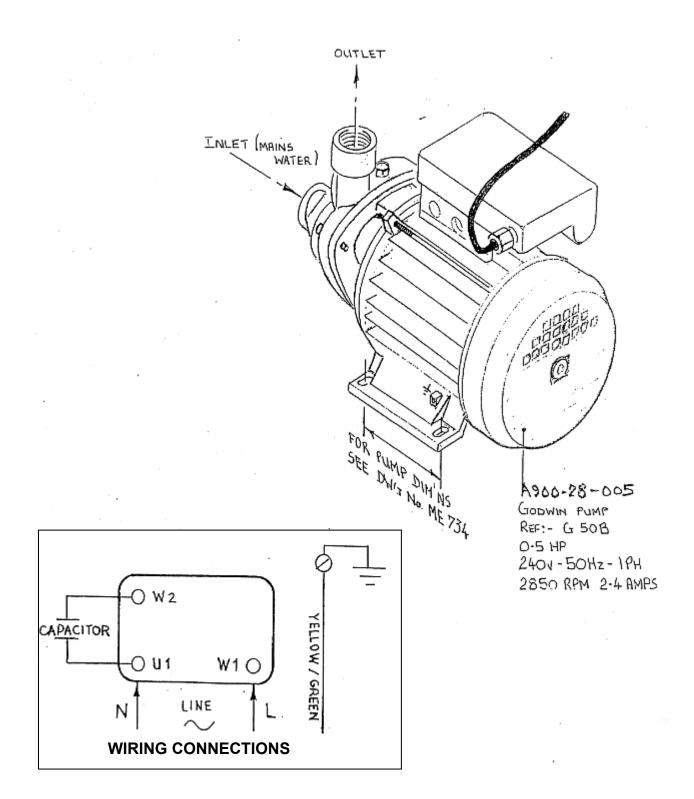








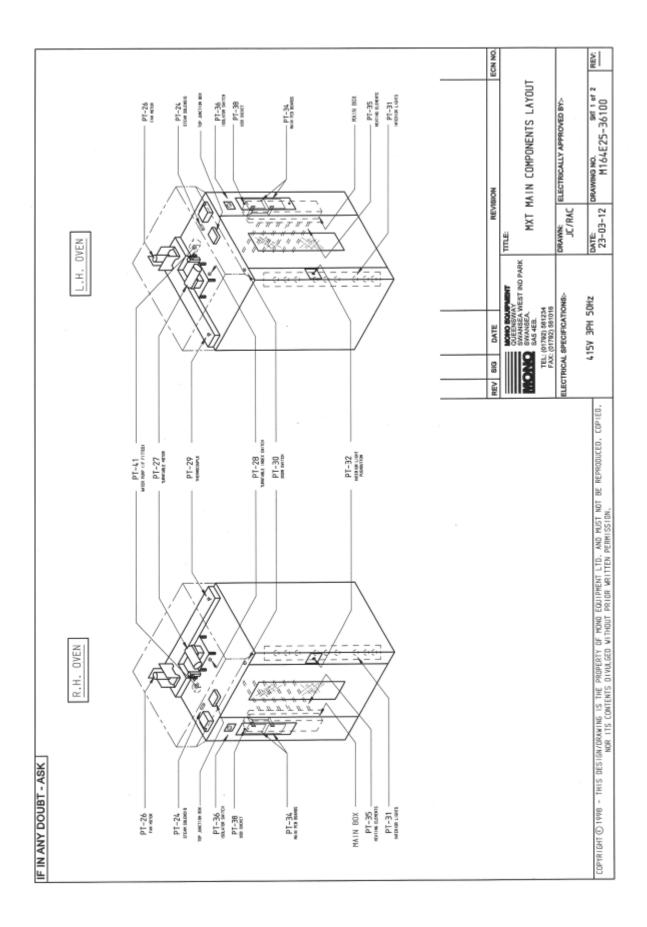


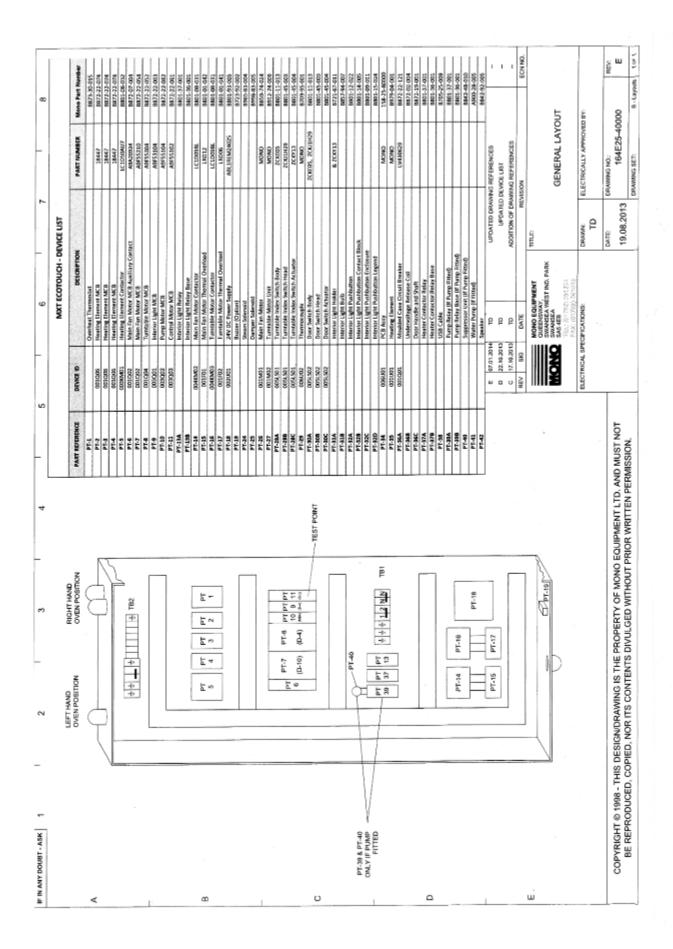


# WATER PUMP (GODWIN) DIAGRAM (IF FITTED)



17.0 SPARES

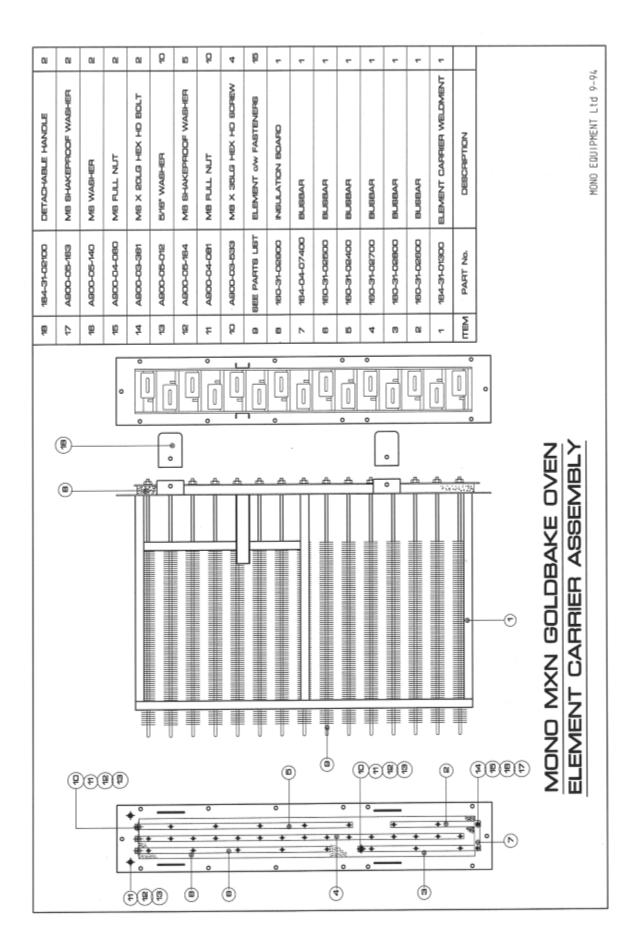


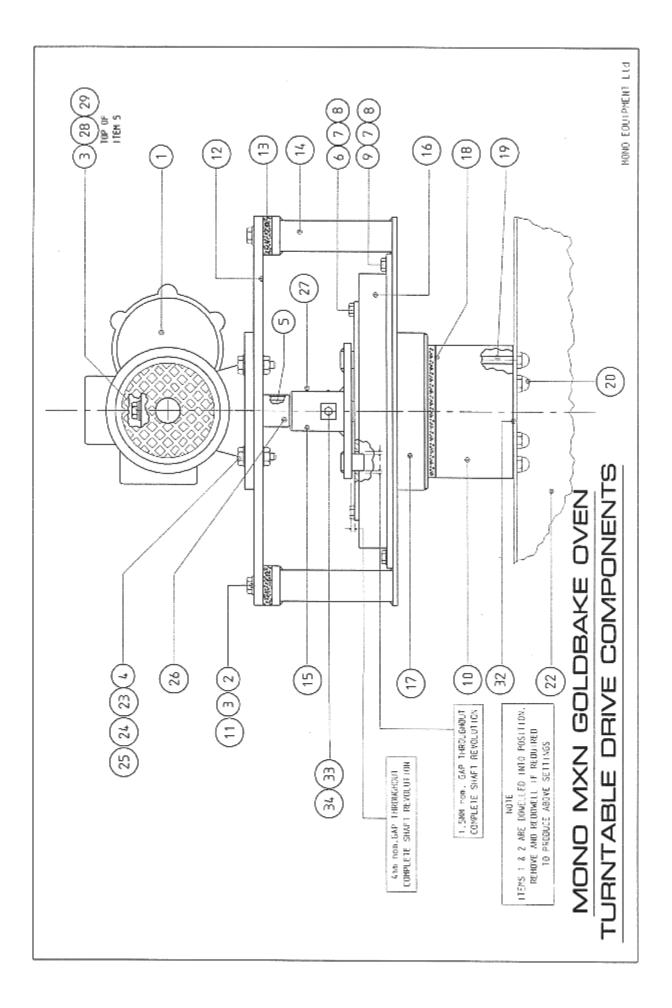


## MAIN FAN ASSEMBLY FOR MXN SMARTBAKE OVEN

ITEM NO.	DESCRIPTION	PARTNO.	OTY PER ASSY
1 2 3 4 5 6 7 8 9 10 11 12	Fan Shaft (Lower) Lower Fan Access Cover Driving Flange Main Fan Cooling Fan Fan Support Bracket Motor Retaining Washer Motor Slip Plate Assembly Fan Guard Side Fan Guard Front Fan Guard Rear	160-14-01700 160-35-01000 160-14-10000 A900-27-049 160-14-02400 160-35-00500 B859-74-024 160-14-10100 160-35-00100 160-35-01600 160-35-01600	1 1 1 1 1 1 1 2 1 1 2 1 1

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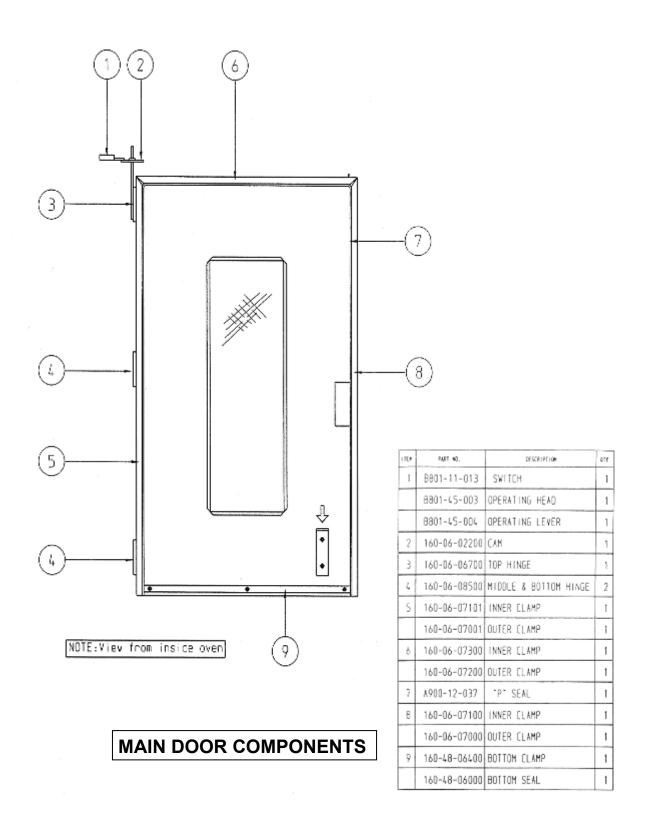


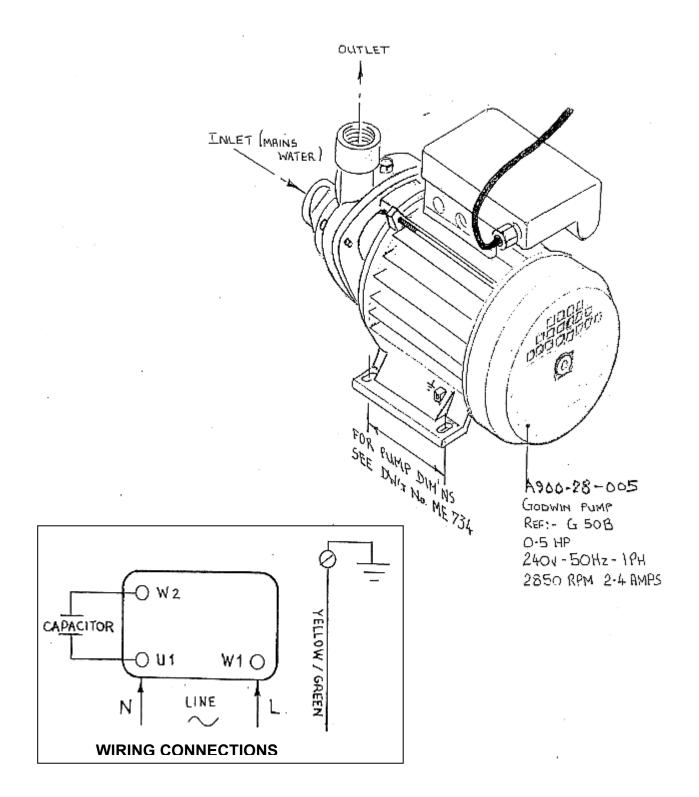
### MONO MXC GOLDBAKE OVEN TURNTABLE DRIVE COMPONENTS DESCRIPTION

(see drawing on previous page)

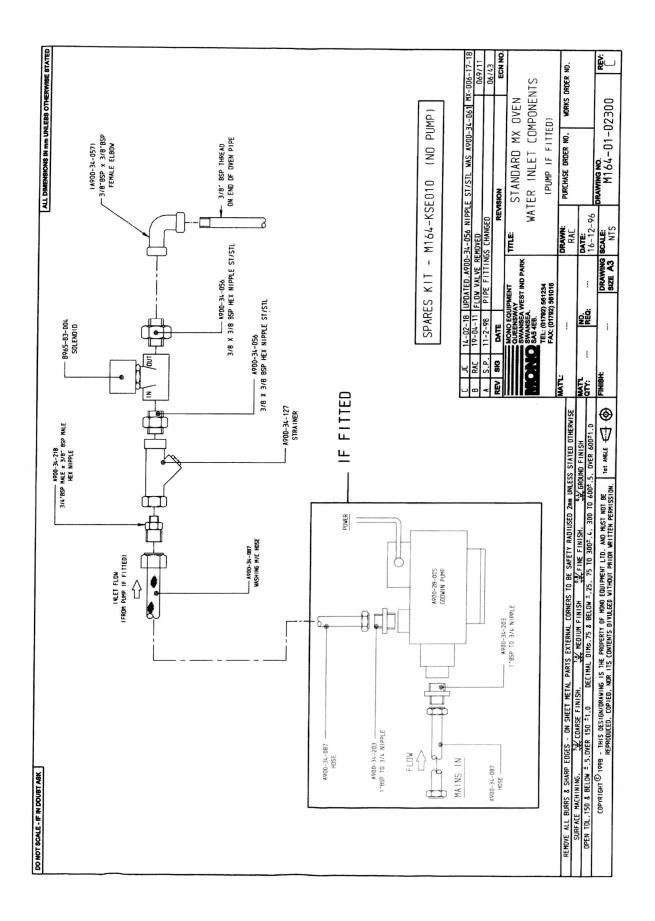
Item	Part no	Description	Qty
1	B912-74-009	Gearmotor unit (Varvel MRA70)	1
2	A900-05-143	M10 Plain washer	4
3	A900-05-142	M10 Spring washer	5
4	A900-03-387	M12 x 45LG Hex.Hd. setscrew	4
5	162-02-04100	Drive shaft assy (shaft key pin)	1
6	A900-03-383	M8 x 25LG Hex.Hd.setscrew	8
7	A900-05-144	M8 Plain washer	16
8	A900-05-141	M8 Spring washer	16
9	A900-03-439	M8 x 50LG Hex.Hd.setscrew	8
10	160-36-01000	Turntable drive (lower)	1
11	A900-03-438	M10 x 45LG. Hex.Hd.setscrew	4
12	160-15-00600	Top plate	1
13	160-15-00700	Insulation packing piece	4
14	160-36-00100	Bearing support plate assy.	1
15	162-02-04400	Drive spider	1
16	160-36-00300	Turntable bearing	1
17	160-15-00800	Turntable drive (upper)	1
18	160-15-01400	Insulation disc	1
19	160-36-01100	M10 Stud	6
20	A900-04-096	M10 Dome nut	6
21			
22	160-36-00600	Rack hanger. (ref. only)	1
23	A900-05-022	1⁄2" Plain washer	8
24	A900-05-059	1⁄2" Spring washer	8
25	A900-04-084	M12 Nut	4
26	162-02-04300	Spacer	7
27	A900-03-436	M6 x 10LG Grub screw	2
28	162-02-045	Washer (drive shaft)	1
29	A900-03-395	M10 x 16LG hex.Ho. setscrew	1
30	160-35-02000	Direction of rotation label	1
31	A900-03-628	M4 x 6LG slotted pan ho. screw	2
32	160-40-06102	Packing shim for rack hanger (14swg)as	
	160-40-06103	(20swg)	"
33	A900-03-360	M6 x 12LG Hex.Hd. setscrew	1
34	A900-05-163	M6 Shakeproof washer	1

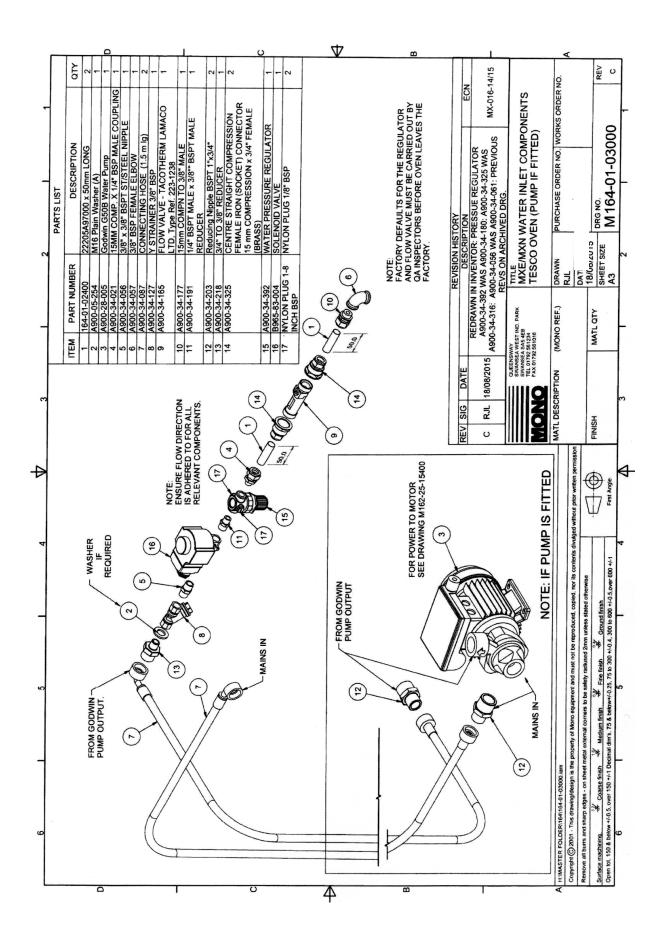
ROPE SEAL PT No. A900-32-016 (NOT SHOWN) RUBBER SEAL PT No. A900-12-060 (NOT SHOWN)

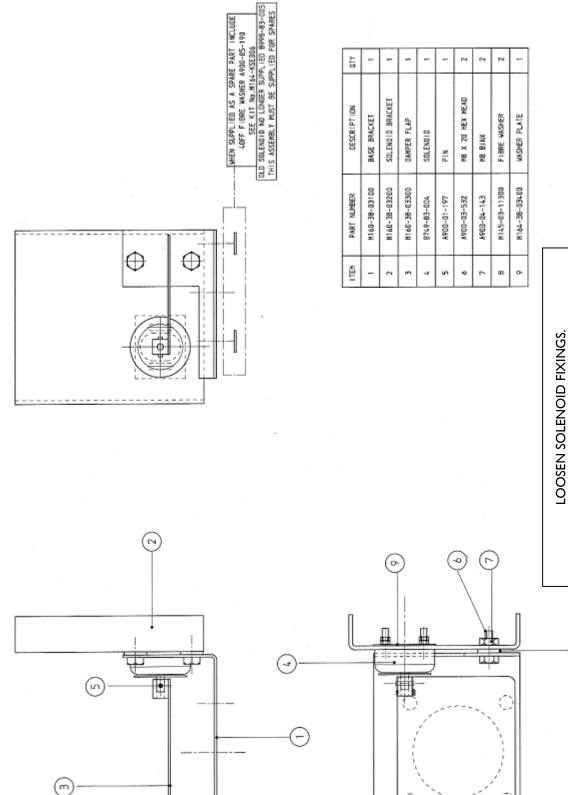




# WATER PUMP (GODWIN) DIAGRAM (IF FITTED)

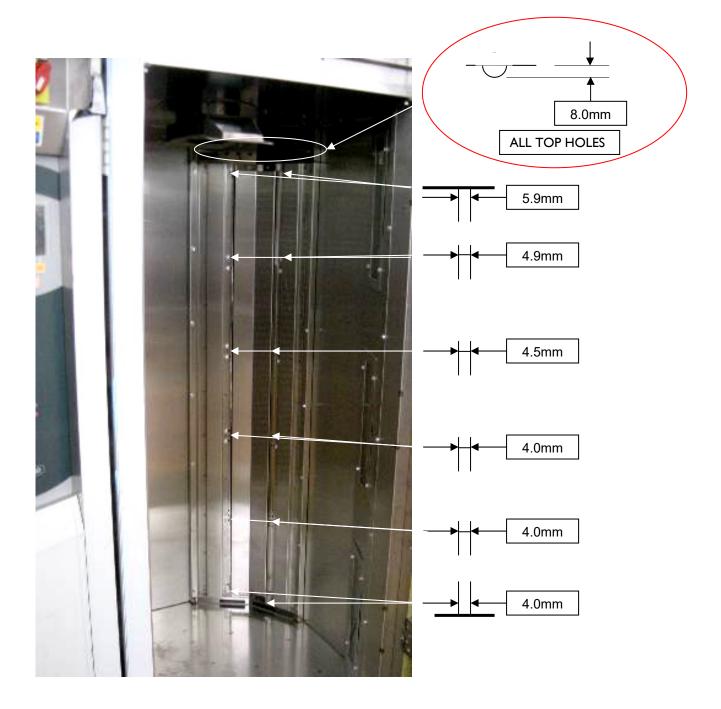




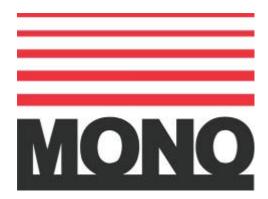


LUUSEN SULENUIU FIXINGS. HOLD DAMPER FLAP (3) FLAT ON TOP OF DAMPER TUBE AND TIGHTEN SOLENOID.

# **18.0 MX OVEN AIR DOOR DEFAULT SETTINGS**







#### **MONO Equipment**

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## www.monoequip.com

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

## 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)