

[www.monoequip.com](http://www.monoequip.com)

Enter **Serial No.** here. \_\_\_\_\_

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



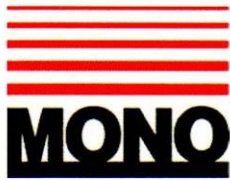
# **“OMEGA PLUS”**

## **INCLUDING WIRECUT VERSION DEPOSITOR (400, 450,)**

**OPERATING AND MAINTENANCE MANUAL**

**The use of templates and/or accessories not produced or supplied by MONO  
Equipment will invalidate the machine’s warranty**


**FILE 11**



## DECLARATION OF CONFORMITY

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

- The Machinery Directive 2006 / 42 / EC
- The Low voltage Directive 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
- Good manufacturing practice for materials intended to come into contact with food – Regulation (EC) No.2023/2006

<b>Signed</b>			
<b>G.A.Williams – Quality Manager</b>			
<b>Date</b>			
<b>Machine FG Code.</b>		<b>Machine Serial No.</b>	

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



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



**WIRECUT VERSION**

**The use of templates and/or accessories not produced or supplied by MONO Equipment will invalidate the machine's warranty**

# SAFETY SYMBOLS

The following safety symbols are used throughout this product documentation and manual (available at [www.monoequip.com](http://www.monoequip.com)).

Before using your new equipment, read the instruction manual carefully and pay special attention to information marked with the following symbols.



## **WARNING**

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



## **WARNING**

Indicates a hazardous situation which, if not avoided, will result in electric shock.



## **CAUTION**

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



## ELECTRICAL SAFETY AND ADVICE REGARDING SUPPLEMENTARY ELECTRICAL PROTECTION:

Commercial bakeries, kitchens and foodservice 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 disconnecter to connect to, which is easily accessible for switching off and safe isolation purposes. The switch disconnecter must meet the specification requirements of IEC 60947.



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

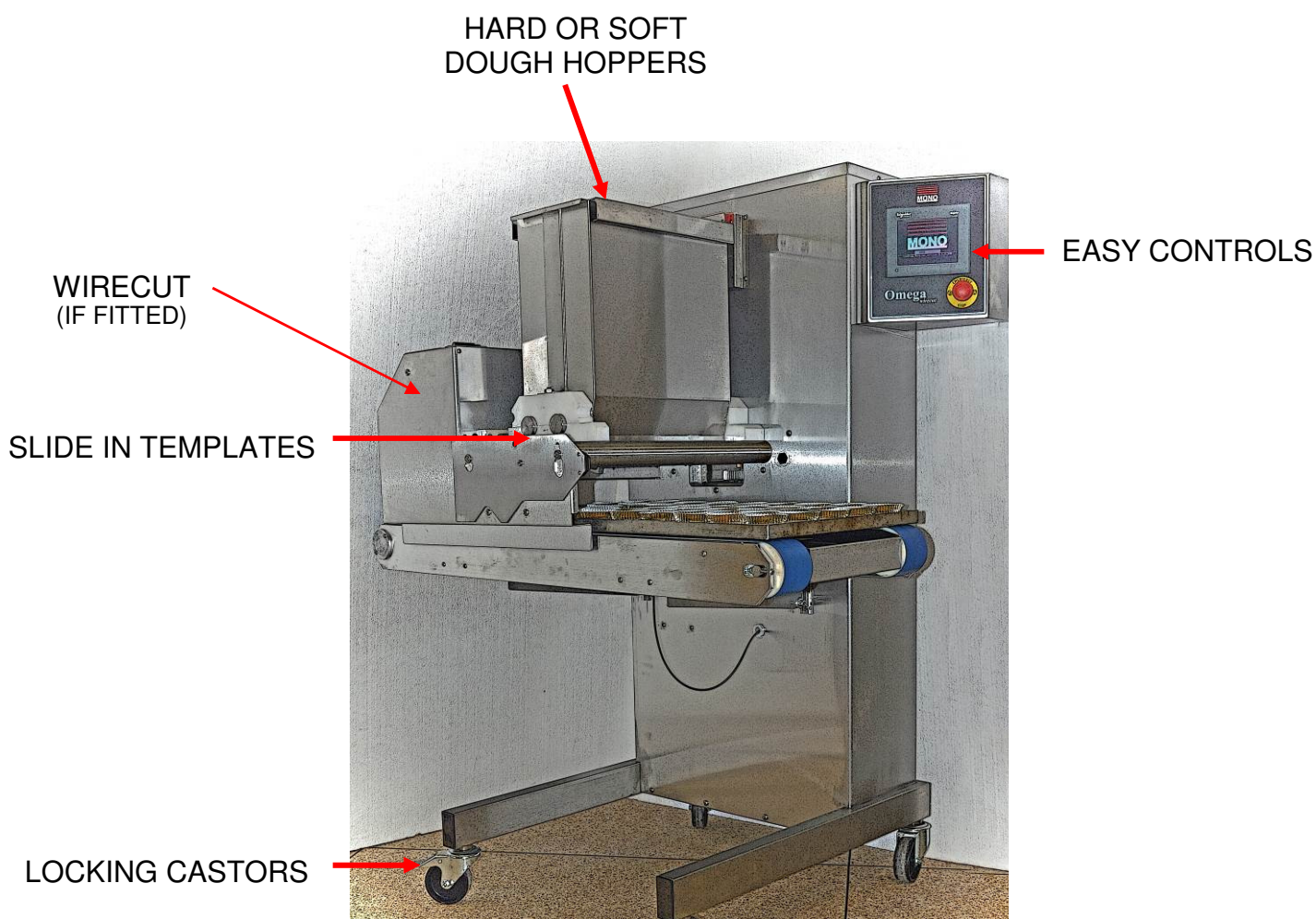
# CONTENTS

---

1.0	-	INTRODUCTION .....	Page 7
2.0	-	DIMENSIONS .....	Page 8
3.0	-	SPECIFICATIONS .....	Page 9
4.0	-	SAFETY .....	Page 10
5.0	-	INSTALLATION .....	Page 12
6.0	-	ISOLATION .....	Page 12
7.0	-	CLEANING INSTRUCTIONS .....	Page 13
8.0	-	OPERATING CONDITIONS .....	Page 17
9.0	-	<b>PREPARING FOR OPERATION</b> .....	Page 18
		<b>9A – FITTING THE HOPPER</b> .....	Page 19
		<b>9B – FITTING A TEMPLATE</b> .....	Page 20
10.0	-	<b>OPERATING INSTRUCTIONS</b> .....	Page 25
		<b>1</b> – SELECT PRODUCT TYPE .....	Page 28
		<b>2</b> – SELECT SAVED NAME OF PRODUCT TYPE .....	Page 29
		<b>3</b> – CONFIRM SETUP .....	Page 30
		<b>4</b> – OPERATOR SCREEN .....	Page 31
		<b>5</b> – EDIT SCREEN .....	Page 32
		<b>5A</b> – TRAY SETUP .....	Page 35
		<b>6</b> – COPY .....	Page 36
		<b>7</b> – DELETE .....	Page 37
		<b>8</b> – PASSWORDS .....	Page 38
		<b>9</b> – ENGINEERING SETTINGS .....	Page 39
		<b>10</b> – FAULT INFORMATION SCREENS .....	Page 45
11.0	-	MAINTENANCE .....	Page 47
		CHECK AND MAINTENANCE SCHEDULE .....	Page 48
12.0	-	SPARES AND SERVICE .....	Page 49
13.0	-	ELECTRICAL INFORMATION .....	Page 59
		<u><b>OMEGA TLCC/LMC TO M251 CONVERSION KITS</b></u> .....	Page 75
		TLCC to M251 Conversion Procedure .....	Page 77
		LMC20 to M251 Conversion Procedure .....	Page 87

# 1.0 INTRODUCTION

- The innovative “five axis deposit” design of MONO’s “**Omega PLUS**” and “**Omega PLUS with wirecut**” depositor allows it to recreate most of the hand movements of the Master confectioner. This makes the “**Omega PLUS**” capable of exceptional accuracy of product weight, size and shape.
- Maintenance is kept to a minimum and the smooth body design makes daily cleaning quick and easy.
- Easy to use computer software gives access to 550 programs, which are stored in the memory and easily recalled for use or modification. Control is via a colour touch screen with graphically represented products, already installed, that can be created or edited to the required product.
- It is available with soft and hard dough hoppers. There is also a large selection of templates and nozzles as well as various shape biscuit dies to use with the wirecut version.



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

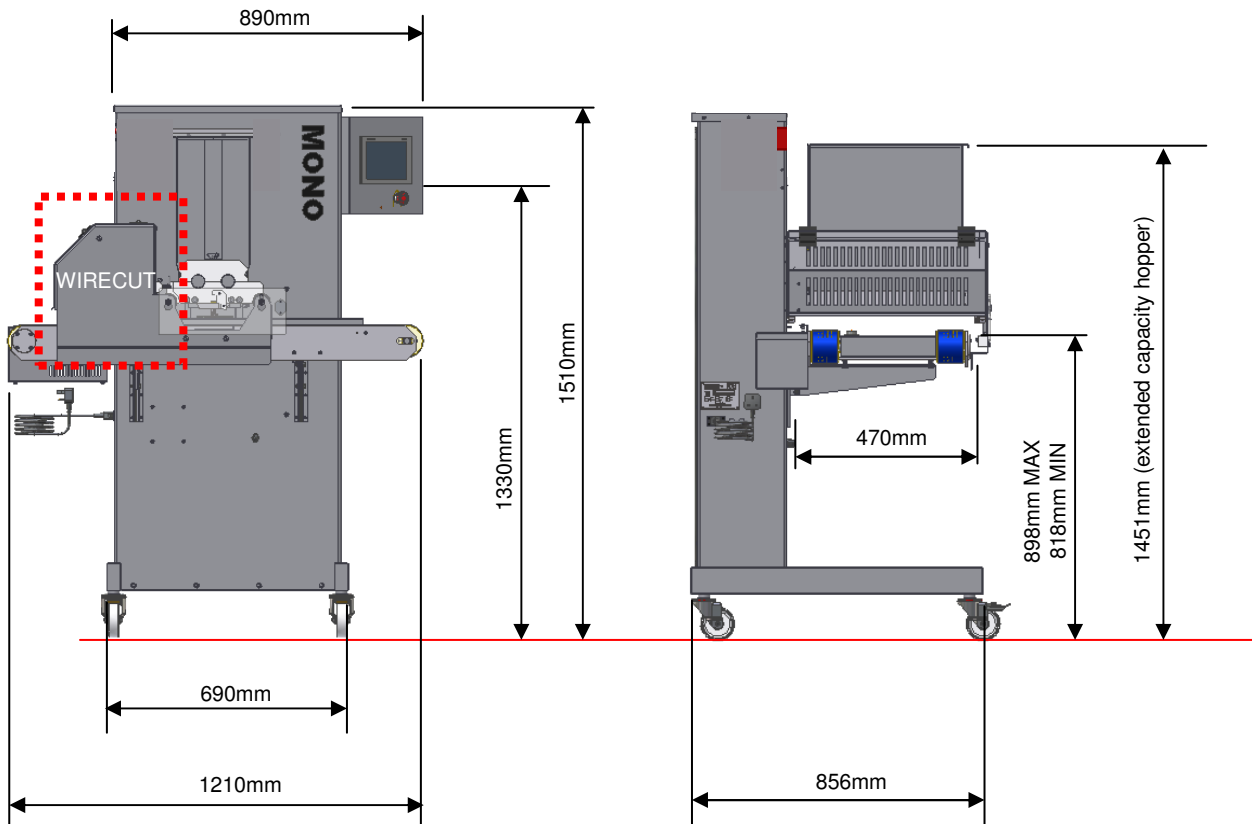
MODELS ARE AVAILABLE WITH OR WITHOUT WIRECUT OPTION



# 2.0 DIMENSIONS



MODELS ARE AVAILABLE WITH OR WITHOUT WIRECUT OPTION



# 3.0 SPECIFICATIONS



	<u>SOFT DOUGH</u>		<u>HARD DOUGH</u>	
<b>MODEL</b> (Nom. hopper width (mm))	400	450	400	450
<b>Weight</b> (with hopper fitted) (kg) :	196	210	216	235
<b>Standard hopper Capacity</b> (litre) :	20	22.5	21	24
<b>Extended hopper Capacity</b> (litre) :	36	41	31	35

**Power:** Single phase, 13A max load. Suitable for 200v, 220v, 230v, and 240v, 50-60 Hz supply.  
**MAX RATING** 2.5kW single phase fused at 13A



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

- Cycles per minute = Up to 35
- Min distance between trays = 50mm
- Max vertical travel = 80mm
- Max program storage = 650
- Number of languages = 18 (additional in future)
- Noise level = Less than 85dB
- Electronics = All microprocessor controlled

**NOTE:**

The minimum deposit that can be made depends on several factors - recipe, mixing method, template size, nozzle size and deposit speed.

As a guide the following is the minimum that should be attempted:

- Macaroons 6g.
- Meringues 3g.
- Choux Paste 5g.
- Viennese 4g.
- Sponge Drops 4g.

However, consult **Mono Equipment** if intended product falls outside the above general machine specification to determine the exact capabilities of the “Omega” with any specific product.

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

## 4.0 SAFETY

1 **Never use a machine in a faulty condition** and always report any damage.

2 **Only trained engineers** may remove parts that need a tool to remove them.



3 Always ensure hands are dry before touching any electrical appliance (including cable, switch and plug). **NEVER move machinery by pulling on the power cords or cables.**

4 **Ensure that the floor area around the OMEGA is clean to avoid slipping** – especially if carrying heavy hopper and template components to and from the machine.

5 **All operatives must be fully trained.**



Use of the machine can prove dangerous if:

- the machine is operated by **untrained or unskilled staff**
- the machine is not used for its **intended purpose**
- the machine is **not operated correctly**

**All safety devices applied to the machine during manufacture and the operating instructions in this manual are required to operate this machine safely. The owner and the operator are responsible for operating this machine safely.**

6 People undergoing training on the machine must be under **direct supervision**.

7 **Do not operate the machine with any panels or guards removed.**



They are there to protect you.

8 **No loose clothing or jewellery** should be worn while operating the machine.



They could cause damage to the machine and person.

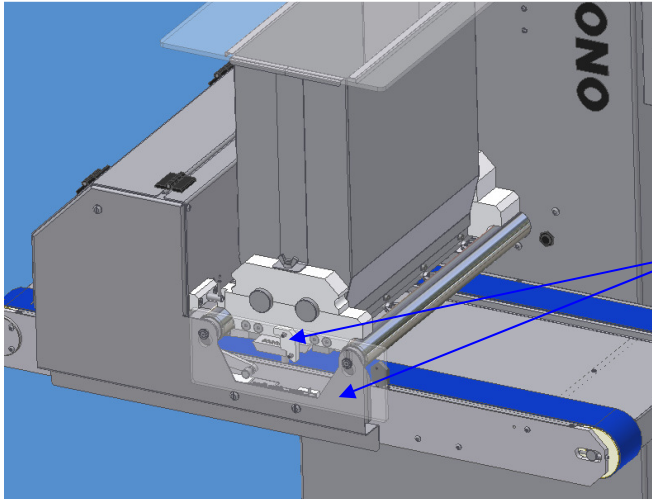
9 **Switch off power** at the mains isolator when machine is not in use and **before carrying out any cleaning or maintenance.**



- 10 The bakery manager or the bakery supervisor should carry out **daily safety checks** on the machine.



- 11 Do not operate machine without a hopper **template and the guard fitted correctly**.



**(11) HOPPER TEMPLATE AND  
GUARD FITTED**

**NOTE**

Guard can be plastic or metal depending on the machine model



- 12 Due to the essential requirement for handling heavy components during cleaning, it is recommended that **protective footwear** be worn when carrying out such procedures.

**ALL CLEANING AND MAINTENANCE OPERATIONS MUST  
BE MADE WITH THE MACHINE DISCONNECTED FROM  
THE POWER SUPPLY.**



## 5.0 INSTALLATION

1. Ensure that the depositor is connected to correct electric supply, as specified on the serial number plate on the side of the machine.



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

2. Ensure that the correct fuse rating is fitted in the electrical supply
3. Position the machine in the correct position for working and lock the two locking wheels to stop movement.

## 6.0 ISOLATION

 **IN AN EMERGENCY, SWITCH OFF AT THE ELECTRICAL MAINS WALL ISOLATOR, OR PUSH THE EMERGENCY STOP BUTTON.**

*To release the emergency stop button, turn clockwise.* 



**STOP BUTTON**

## 7.0 CLEANING INSTRUCTIONS

Omega  
PLUS

### NOTE:



- Cleaning must be carried out by fully trained personnel only.
- Isolate machine from mains supply before carrying out any cleaning.
- Do not steam clean or use a jet of water.

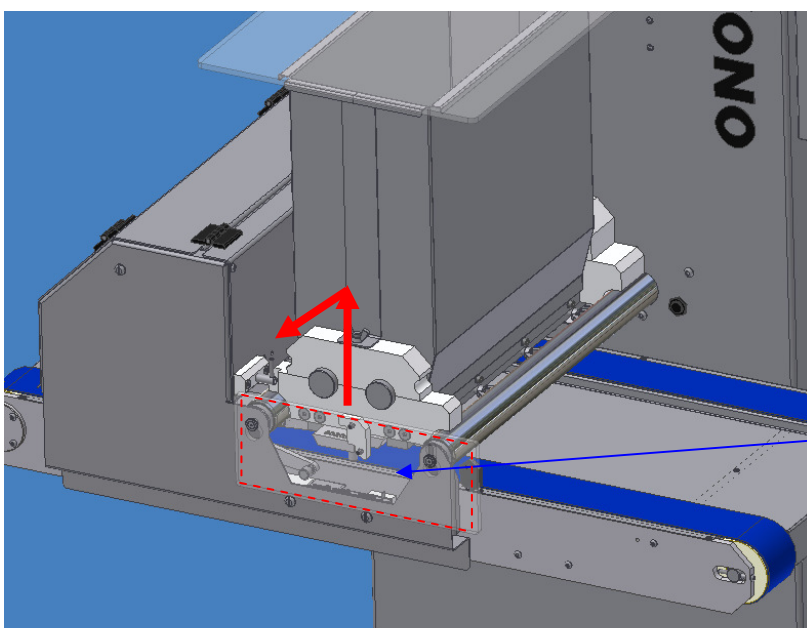
**-Do not use any form of caustic detergent or abrasive cleaners. -**

All the outer surfaces of the machine should be wiped over daily with warm soapy water.

## HARD AND SOFT DOUGH HOPPERS BETWEEN PRODUCT MIX CHANGES

*The feed hopper, pump assembly, template, nozzles etc. should be removed from the machine and dismantled for thorough cleaning between product mix changes.*

1. Open hopper and remove excess mixture remaining.
2. Lift off front safety cover.



SAFETY COVER

### NOTE

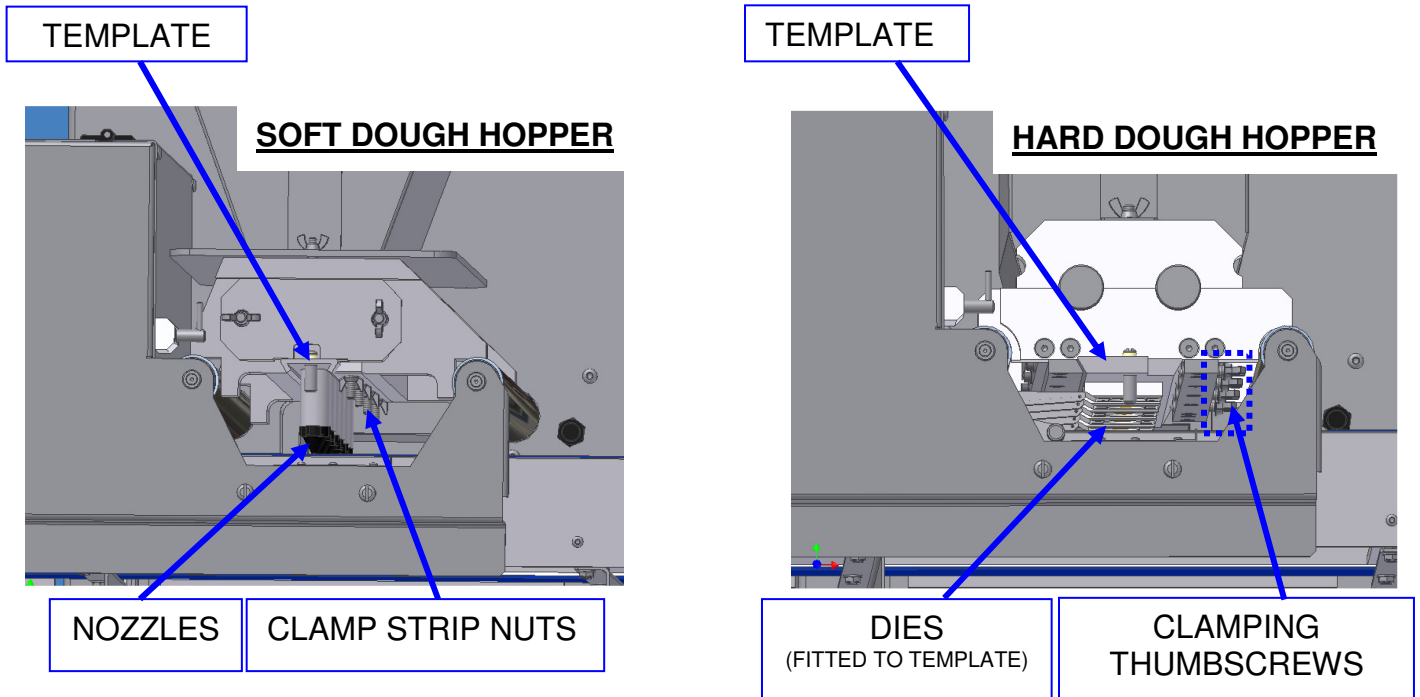
Guard can be plastic or metal depending on the machine model



3. Slacken template clamp strip nuts or thumbscrews (depending on type of hopper)  
Remove fitted template from pump assembly by sliding out to avoid subsequent damage.

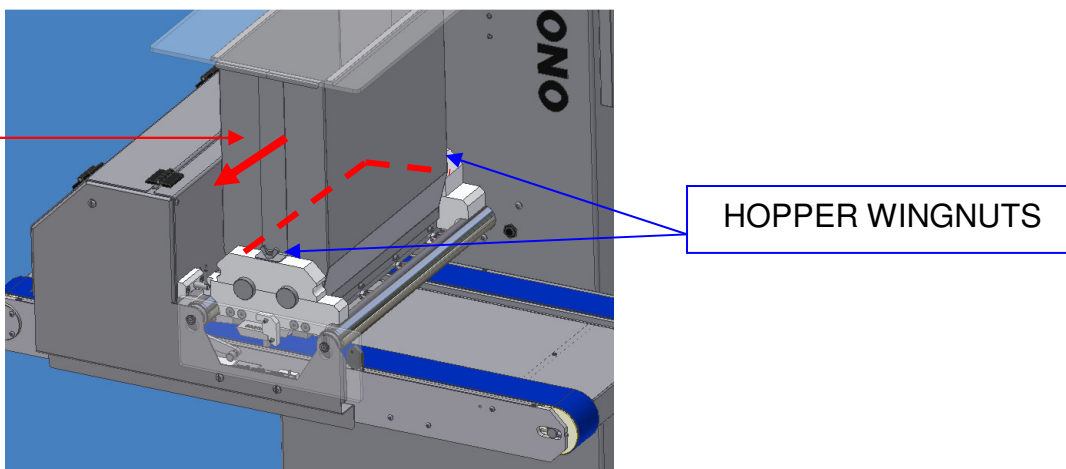
**NOTE.**

*Thumbscrews only need to be released slightly to allow the template to slide away from the pump assembly. If loosened too much, the template will have to be supported.*



- 4 To reduce weight and bulk, separate and remove empty feed hopper from pump assembly, whilst still on the machine, by unscrewing the wing nuts.

*To gain access to the inner wing nut, slide the complete hopper away from the machine body slightly (keep on support bars) - this will also disengage the pump assembly from the drive shaft.*



*Ensure that the nuts are placed where they will not be lost.*

# SOFT DOUGH HOPPER

Omega  
PLUS



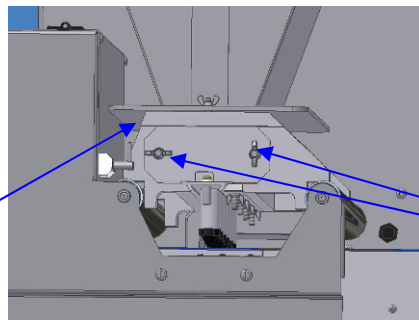
## **CAUTION:**

**The feed hopper and pump assembly exceeds 25kg and will need to be lifted off by two people, or dismantled into smaller components while still on the machine.**

Take care to avoid damage to the sealing surface of the feed hopper during removal, cleaning, assembly and storage.

1. After removing the feed hopper, check condition of feed hopper seal.
2. Unscrew the end cap retaining nuts from the accessible side of the pump assembly.  
*[Ensure that the nuts are placed where they will not be lost.]*

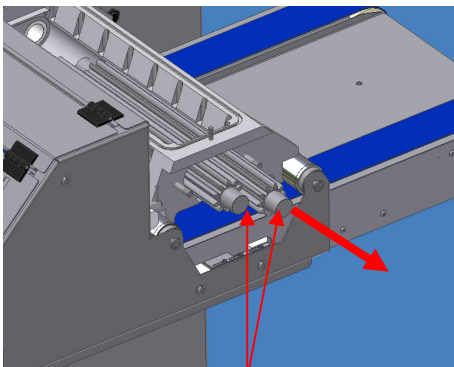
FEED HOPPER  
SEALING SURFACE



ENDCAP NUTS

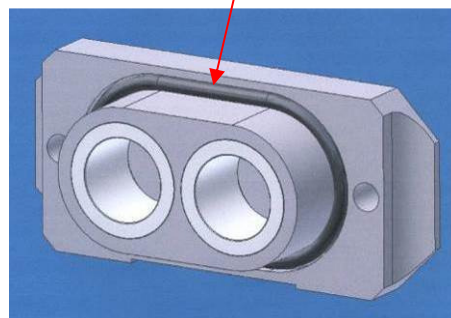
3. Withdraw the end-cap with the pump gears.

*Ensure that the 'O' sealing ring on the inside of the end cap is not damaged during cleaning.*



PUMP GEARS  
REMOVE WITH END CAP  
(NOT SHOWN)

'O' RING IN GROOVE



END CAP

4. Remove remainder of pump assembly from the machine and remove remaining end-cap to fully dismantle pump assembly components for cleaning.

## HARD DOUGH HOPPER



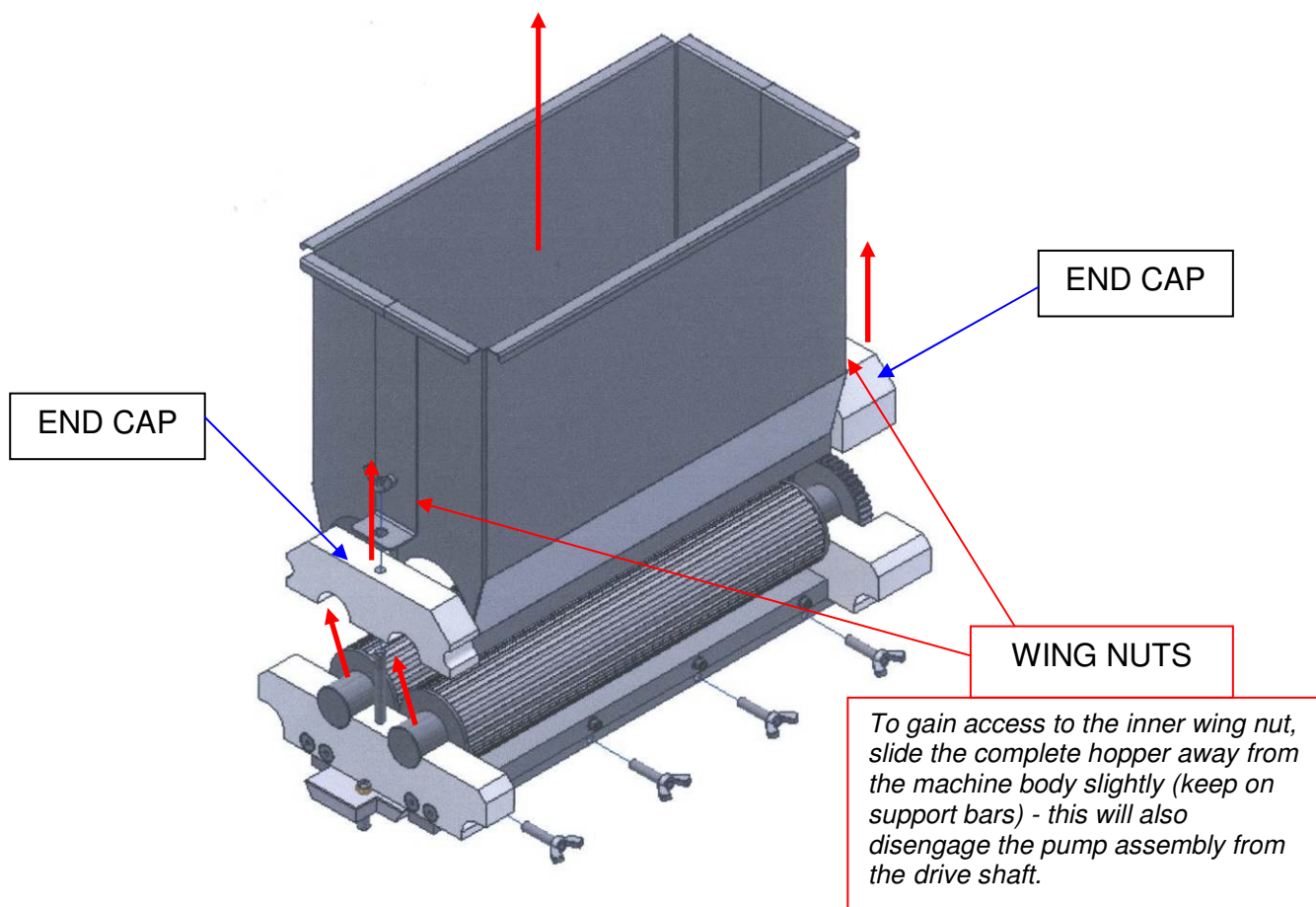
**CAUTION:**  
The feed hopper and pump assembly exceeds 25kg and will need to be lifted off by two people, or dismantled into smaller components while still on the machine.

To reduce weight and bulk, separate and remove empty feed hopper from pump assembly, whilst still on the machine, by unscrewing the wing nuts.

*(Ensure that the nuts are placed where they will not be lost.)*

The pump assembly will now be lighter and more easily removed.

1. Lift off both upper plastic end-caps.
2. Remove both gears from the assembly, one at a time, by lifting vertically.
3. Remove remainder of pump assembly from the machine for cleaning.



**NOTE:**

**Use only warm soapy water to clean these parts. They should be rinsed and thoroughly dried before re-assembly.**

**The greatest care must be taken not to drop any parts.**



**Do not leave any components in the hopper.**



## 8.0 OPERATING CONDITIONS

To obtain the best product results and consistent operation,

- ✓ Make sure the depositor is used on a **level floor**.
- ✓ Ensure **flat trays** of consistent length, width, material and edge dimensions are used.
- ✓ Ensure **undamaged nozzles and templates** are used.
- ✓ Keep the machine **clean**.





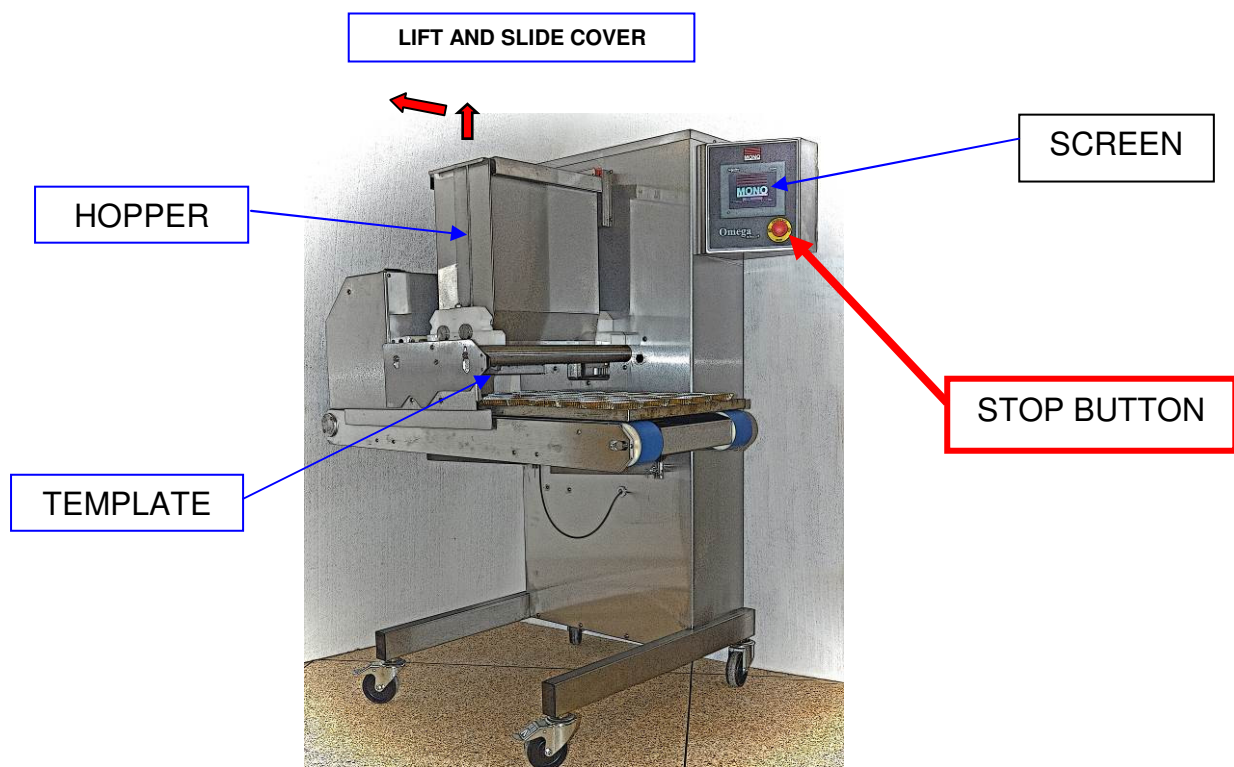
## 9.0 PREPARING FOR OPERATION

Omega  
PLUS

**The use of templates and/or accessories not produced or supplied by MONO Equipment will invalidate the machine's warranty**

- 1 Select template and nozzles (and finger frame, if wirecut is to be used) and fit as section 9a & 9b (following pages). Fill hopper with mix and close hopper cover.

*It is recommended that when heavy mixes are used, the inside of the hopper should be coated with vegetable oil; for lighter mixes such as meringue, dampen with water. The oil or water will help the mix to settle down the hopper walls and prevent air being sucked in.*



- 2 Connect power cable to electrical supply.  
*Make sure stop button is in released position (turn clockwise if required).*
- 3 Select an existing program or create a new program through the on-screen menus.  
(see section 10 operation)
- 4 The machine is now ready for operation.

9a **FITTING THE HOPPER**

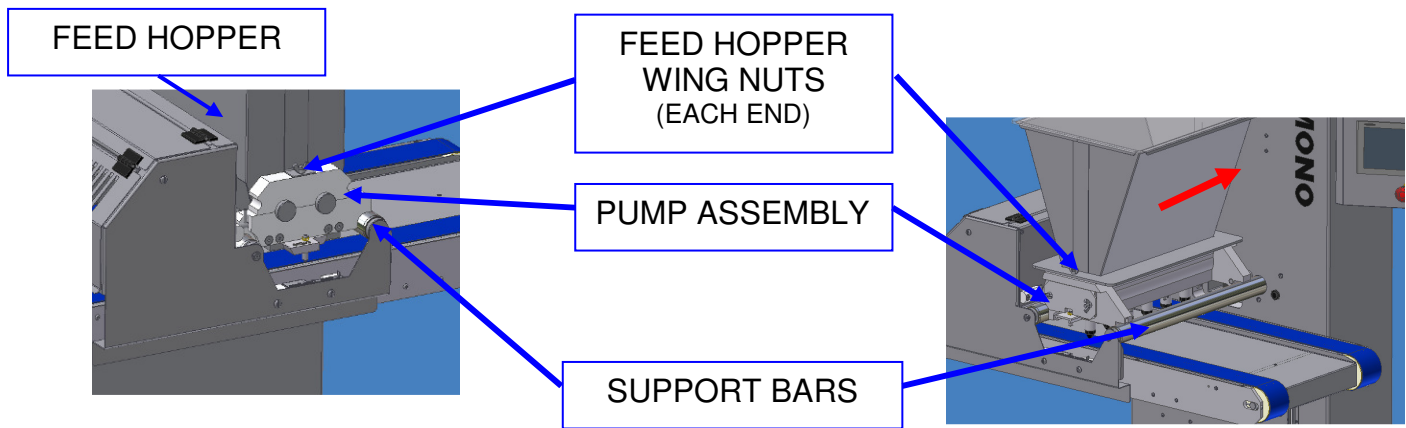


**CAUTION SHOULD BE TAKEN WHEN FITTING THE HOPPER AND PUMP ASSEMBLY, AS WEIGHT EXCEEDS 25kgs ON SOME MODELS. It will need to be lifted on by two people, or dismantled into smaller components before fitting on the machine. MAKE SURE THE FLOOR AREA AROUND THE MACHINE IS CLEAN**



To reduce weight and bulk, fit the complete hopper assembly in two stages - first the pump assembly onto the support bars, then the feed hopper body onto the pump assembly.

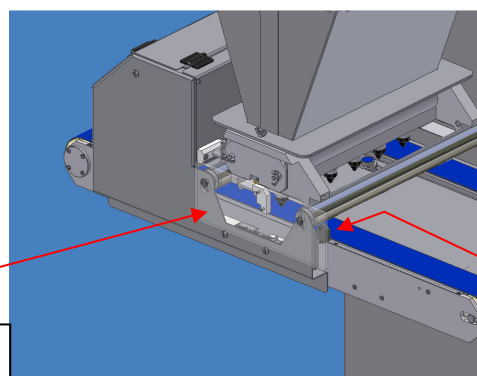
- 1 By hand, align pump assembly drive gear roller with drive shaft on machine.
- 2 Fit hopper to pump assembly and secure with wing nuts.
- 3 Slide hopper on support bars until fully up against machine.



**HARD DOUGH**

**SOFT DOUGH**

- 4 After the hopper is fitted, the safety guard **MUST BE** replaced with the reflector facing towards the machine body.



**SAFETY GUARD**

NOTE  
Guard can be plastic or metal depending on the machine model

**REFLECTOR**



**DO NOT OPERATE MACHINE WITHOUT TEMPLATE FITTED**

## 9b FITTING A TEMPLATE

- **Soft dough**

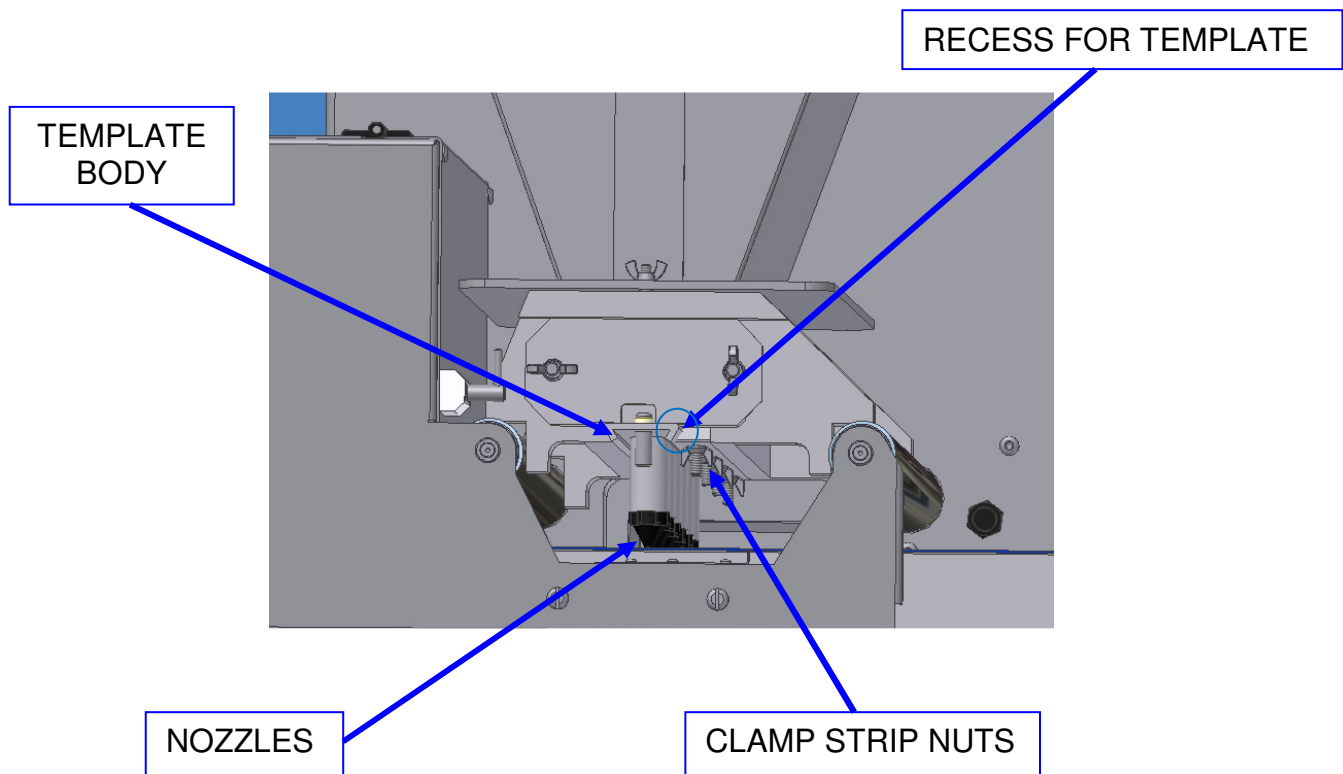
Non-rotary templates can be fitted with nozzles. This requires screwing the nozzles into the threaded holes provided.

Rotary templates can have plastic nozzles screwed into nozzle holders (straight or offset).

OR

Metal nozzles secured in place by a separate nut.

- 1 Select template and nozzles required.  
(Nozzles are not required for sheeting, staggered or stub templates)
- 2 Attach nozzles to template body:



- 3 Slide the template into the matching recess at the base of the pump assembly until the stop is in position.
- 4 Tighten the nuts on the clamp strip (on underside of pump assembly) to secure template.

**NOTE.** *If the nuts are not securely tightened, leakage of mix will occur, affecting deposit weights.*



**DO NOT OPERATE MACHINE WITHOUT TEMPLATE FITTED**

# **BEFORE USING STRAIGHT & OFFSET NOZZLE HOLDERS** **“O” RINGS MUST BE FITTED**

Nozzle holders provide the means of attaching standard plastic nozzles to the soft dough rotary templates and the sealing rings need to be fitted before using and may need replacing occasionally to ensure correct operation.

“O” RING PART NUMBER = A900-12-010 (SUPPLIED IN BAGS OF 20)



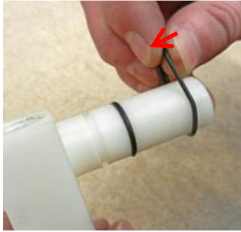
LOOP FIRST RING OVER END



SLIDE RING DOWN TO GROOVE



FIRST RING IN CORRECT POSITION



LOOP SECOND RING OVER END



SLIDE RING DOWN TO SECOND GROOVE,  
PASSING OVER FIRST RING



SECOND RING IN CORRECT POSITION



## • Hard dough

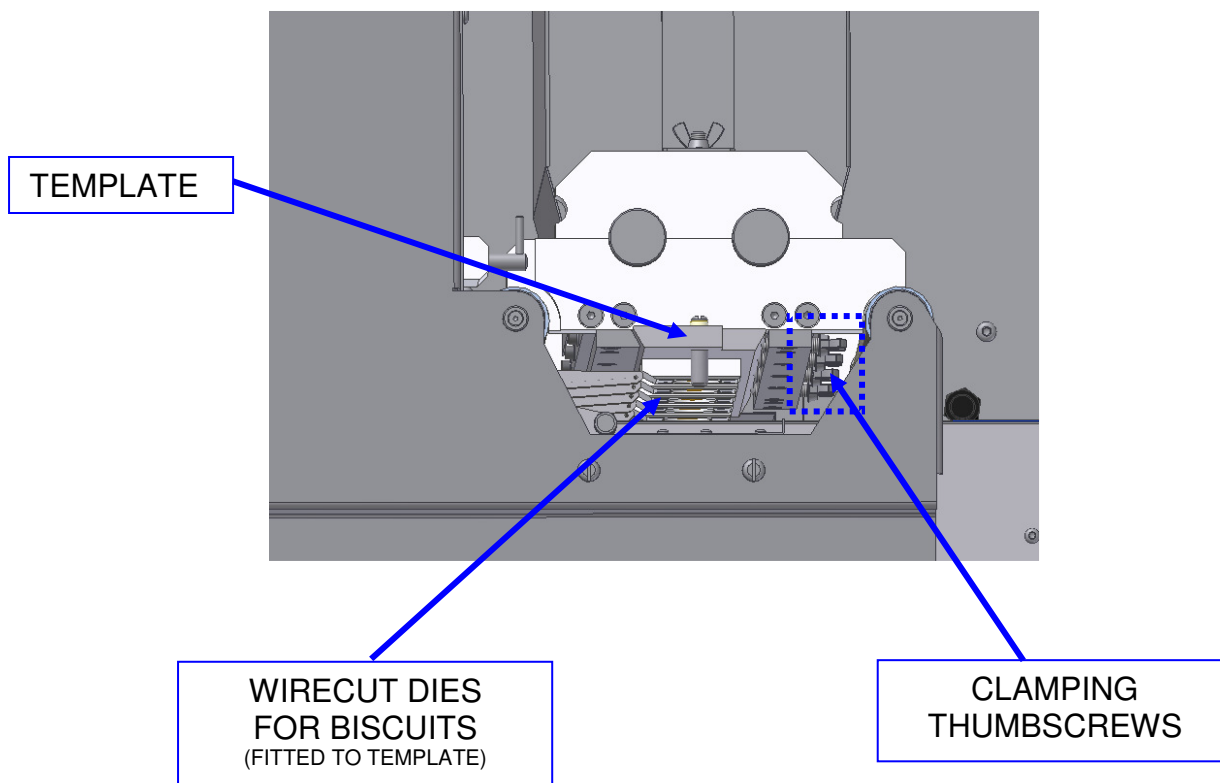
Non-rotary templates that can be fitted with nozzles require them to be secured in place with a separate nut. *Nozzles are not required for sheeting or wirecut templates.*

Rotary templates require nozzles to be secured in place with a separate nut.

- 1 Select wirecut template or template and nozzles required.
- 2 Attach nozzles (if required) to template body using special nut:
- 3 Slide template into position and hand-tighten thumbscrews.

### **NOTE.**

*Thumbscrews only need to be released slightly to allow the template to slide away from the pump assembly. If loosened too much, the template will have to be supported while the screws are tightened.*

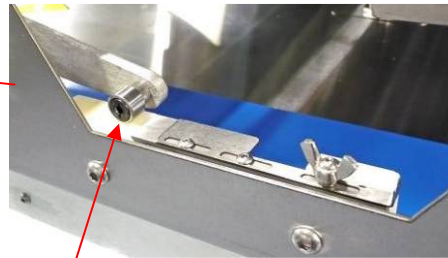
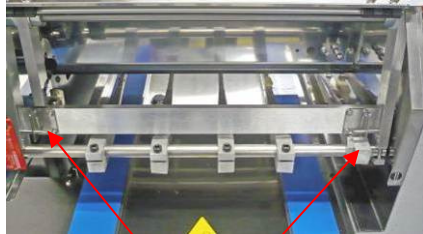


**DO NOT OPERATE MACHINE WITHOUT TEMPLATE FITTED**

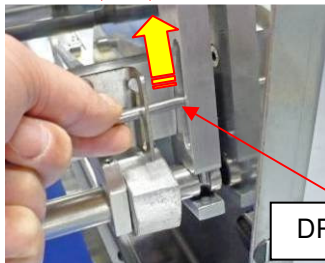
# IF WIRECUT IS FITTED

## FITTING WIRECUT FINGERS

1. Select wirecut fingers that suit the chosen template to be used.i.e. the correct number to match the number of dies across template.
2. Remove drop arm pins and insert finger frame into arms. Ensure that the follower arm roller is positioned on the cam track.



FOLLOWER ARM ROLLER

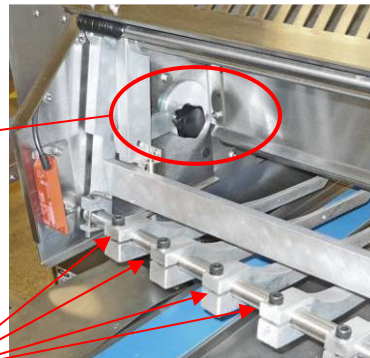


DROP ARM PINS

3. Replace drop arm pins.
4. Disconnect motor release knob and push fingers forward in order to line up the wire with the dies.



MOTOR RELEASE KNOB

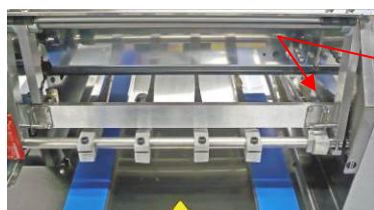


FINGER ADJUSTING BOLTS

5. Adjust individual finger bolts to raise the wire to touch the bottom surface of the dies used in the template.

OR

Adjust the spring loaded screw to raise or lower all fingers at the same time.



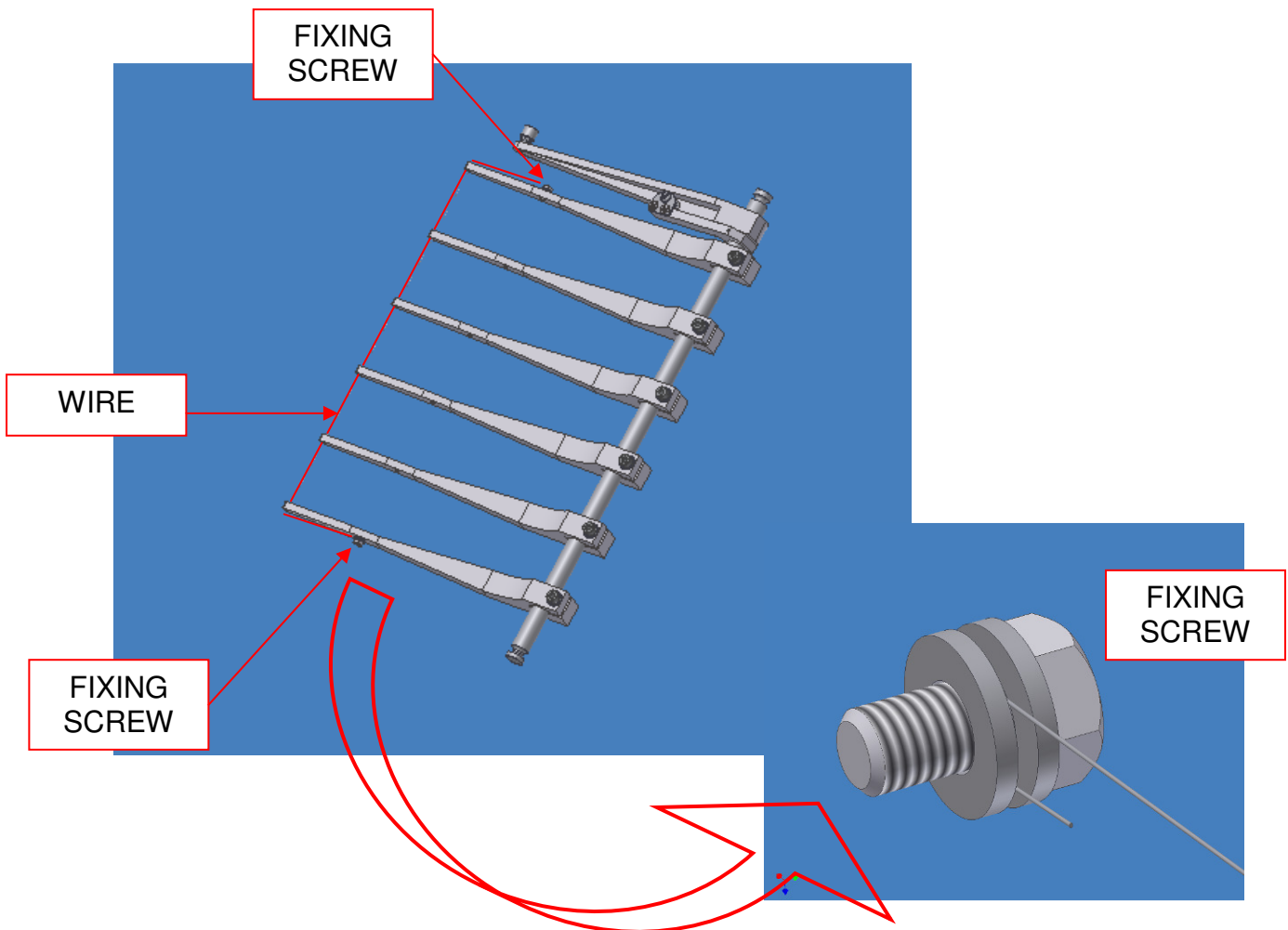
SPRING LOADED ADJUSTMENT SCREW

## IF WIRECUT FITTED

### REPLACING BROKEN WIRE

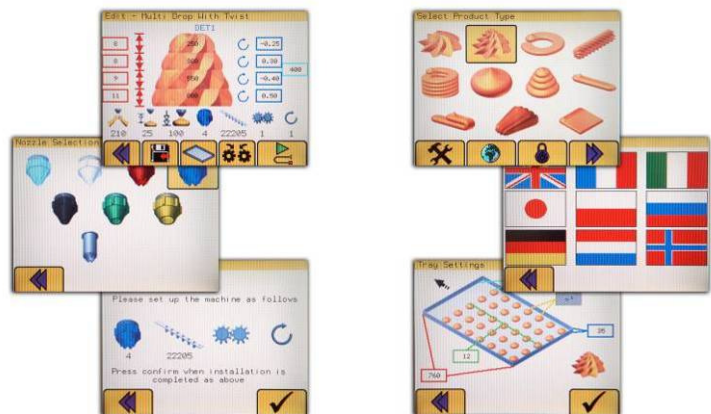
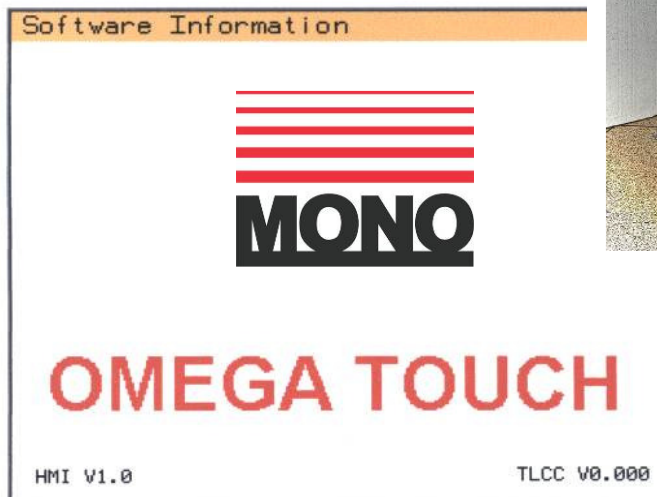
MAKE SURE THAT ALL PIECES OF WIRE HAVE BEEN FOUND BEFORE OPERATING MACHINE AFTER A WIRE REPLACEMENT.

1. Remove wirecut fingers from the machine.
2. Remove all parts of broken wire
3. Feed new wire round fixing screw, between washers and tighten screw.
4. Feed the wire through the eyehole in the end of each finger.
5. Feed new wire round other fixing screw, between washers. Pull wire tight and tighten screw. (wire should be like a guitar string).
6. Replace the fingers back in the machine and check set up and operation.



# 10.0 'OMEGA PLUS' OPERATION

Omega  
PLUS



ALL OPERATIONS ARE ACTIVATED BY TOUCHING AREAS ON THE SCREEN WITH A FINGER.  
DO NOT USE EXCESSIVE FORCE OR HARD OBJECTS AS THIS WILL INVALIDATE MACHINE WARRANTY.



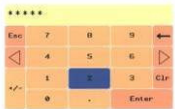
# OPERATING KEY FOR FOLLOWING INSTRUCTIONS

**BLUE = OPERATION**

FOLLOW BLUE ARROWS AND BOXES TO OPERATE THE DEPOSITOR WITH ALREADY SAVED PROGRAMS

**RED = CHANGE SETTINGS**

FOLLOW RED ARROWS AND BOXES TO CHANGE SETTINGS AND CREATE NEW PROGRAMS



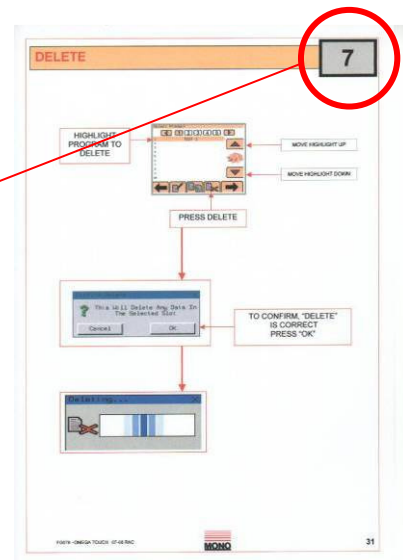
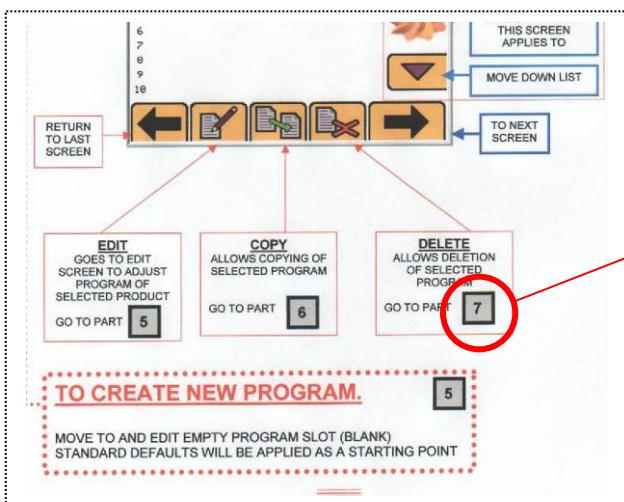
**KEYBOARD ENTRY  
REQUIRED**

WHEN KEYBOARD APPEARS, A CODE MUST BE ENTERED BY TOUCHING THE NUMBERS IN THE CORRECT ORDER

IF A GREY BOX IS SHOWN IN THE BUTTON DESCRIPTION

e.g. **7** GO TO THE CORRESPONDING PAGE FURTHER ON IN THE INSTRUCTIONS.

(MARKED IN TOP RIGHT HAND CORNER OF EACH PAGE)

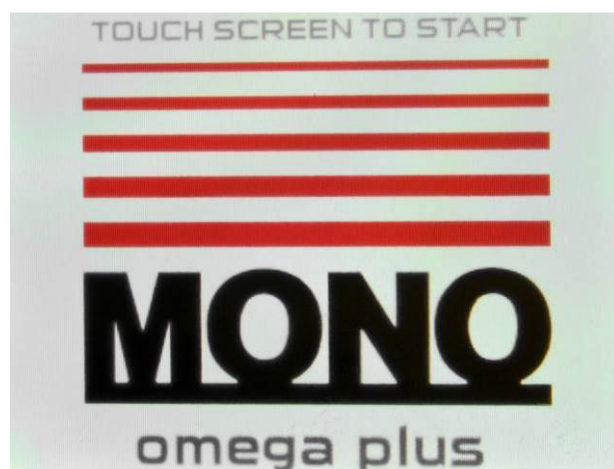


# START

To turn on the machine, plug in the power cord and turn on the power supply.



This screen will be seen. Wait for the following screen to be displayed.



When this screen appears the machine is ready for operation. Touch the screen anywhere to start setup and operation.

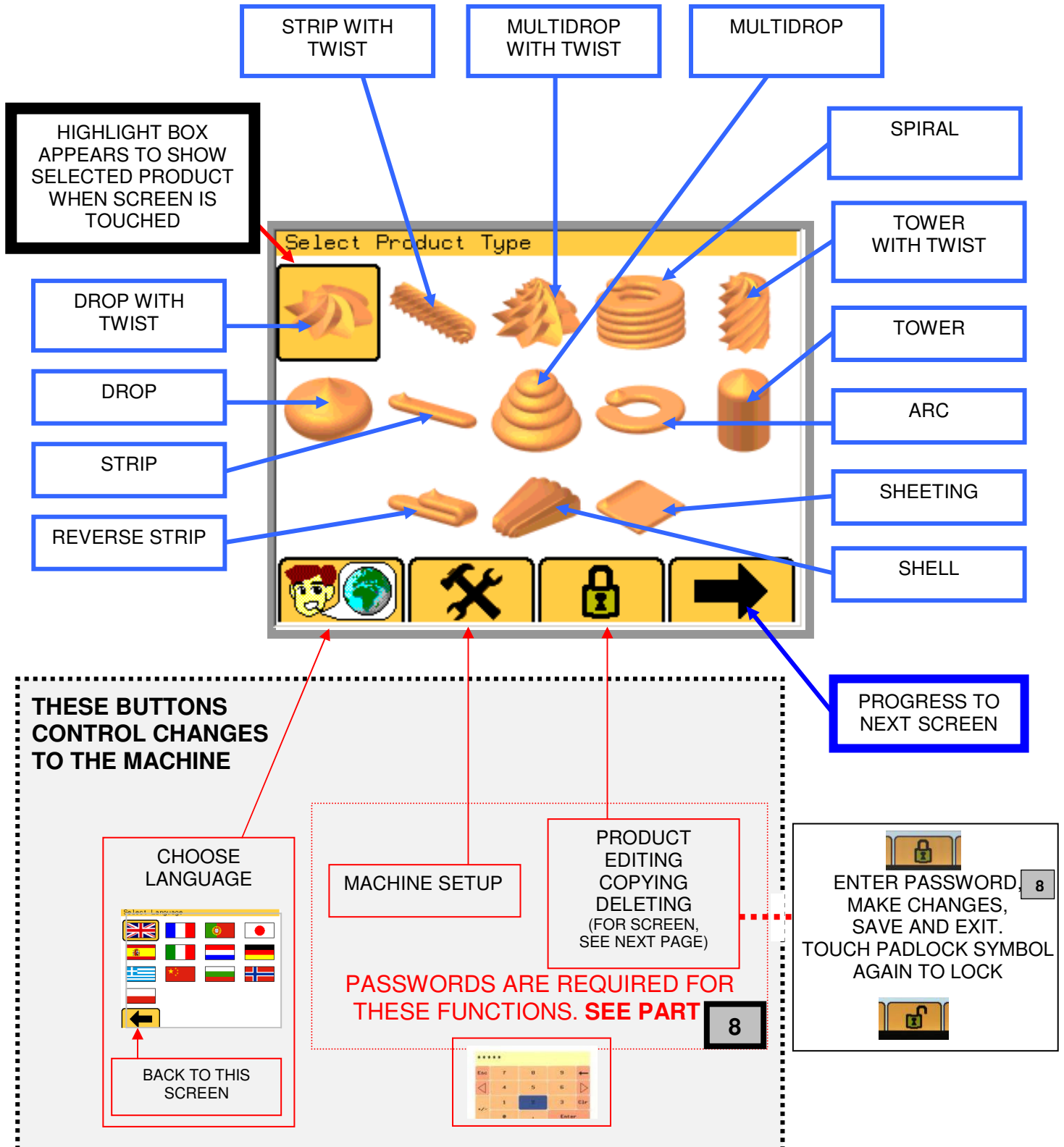
# SELECT PRODUCT TYPE

SELECT PRODUCT TO DEPOSIT OR TO CREATE A NEW PROGRAM

1

ALL OPERATIONS ARE ACTIVATED BY TOUCHING AREAS ON THE SCREEN WITH A FINGER.  
DO NOT USE EXCESSIVE FORCE OR HARD OBJECTS AS THIS WILL INVALIDATE MACHINE WARRANTY.

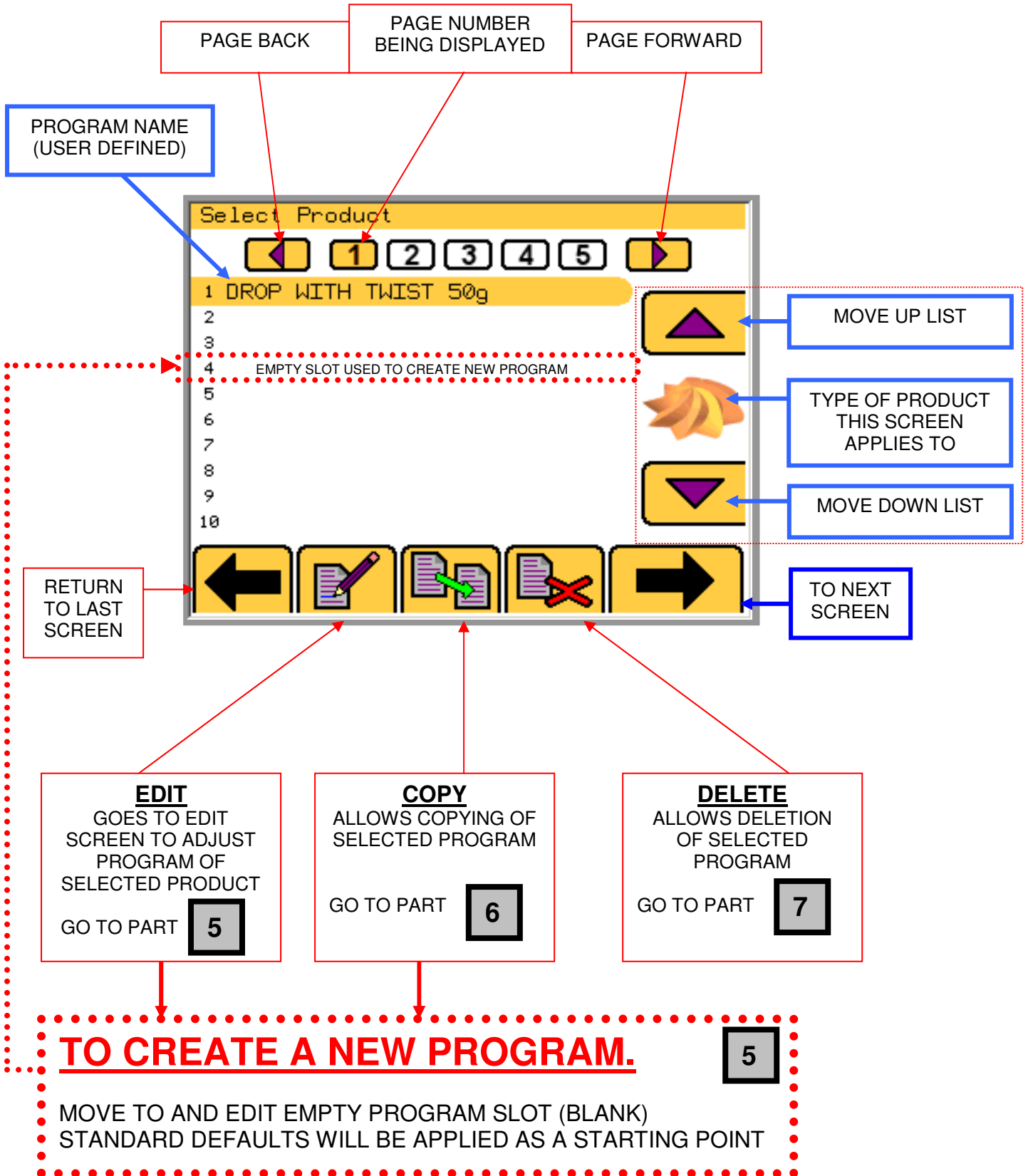
**TOUCH THE SCREEN FOR THE TYPE OF PRODUCT REQUIRED  
THEN → TO MOVE TO THE NEXT SCREEN**



# SELECT SAVED PRODUCT TYPE

OR CHOOSE EMPTY SLOT TO CREATE A NEW PROGRAM

2





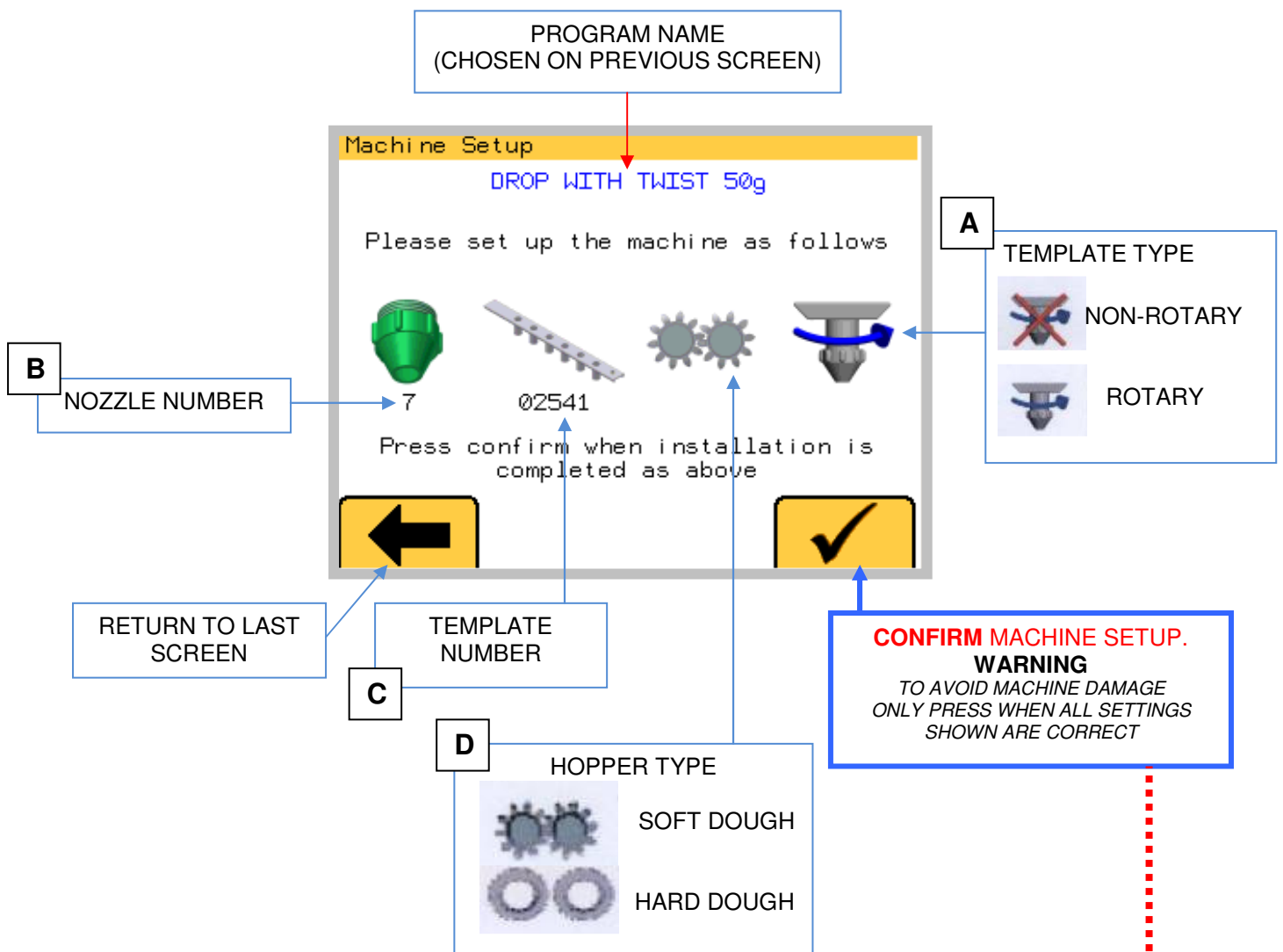
# CONFIRM SETUP OF MACHINE

3

MACHINE MUST BE SET AS SHOWN ON THE SCREEN.

- A. Check template type (Rotary/Non-rotary)
- B. Check nozzle type (Number)
- C. Template number
- D. Check hopper type (Soft dough/Hard dough)

THEN PRESS CONFIRM BUTTON. 



**TO AVOID MACHINE DAMAGE**  
**ONLY PRESS CONFIRM BUTTON WHEN ALL PARTS ATTACHED TO THE MACHINE ARE AS SHOWN ON THE SCREEN**

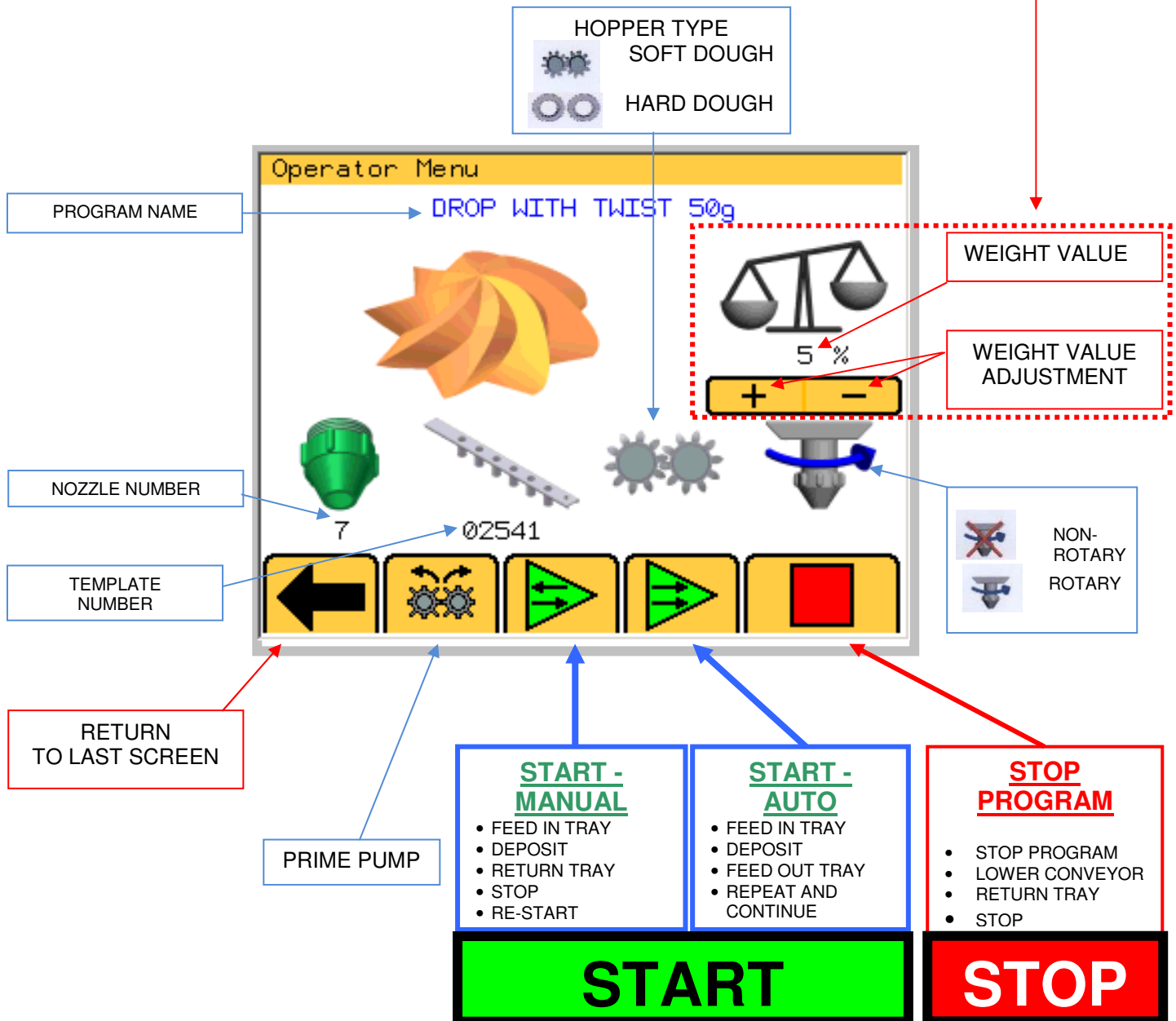
# OPERATOR (START) SCREEN

4

MACHINE SHOULD BE SET AS SHOWN ON THE SCREEN.  
THIS SCREEN CONTROLS THE ACTIONS REQUIRED BY THE OPERATOR.

1. Fill the hopper with the required product.
2. If the settings are correct, press the prime button to deposit a small amount onto a spare tray until all nozzles are depositing equally.
3. Place tray in place
4. Press “start-manual” or “start-auto”.
5. Press “stop” at any time to stop the program, lower the conveyor and return the tray.

Note: Temporary weight value adjustments can be made but the setting is not saved in the program.



# EDIT AND SAVE SCREEN

5

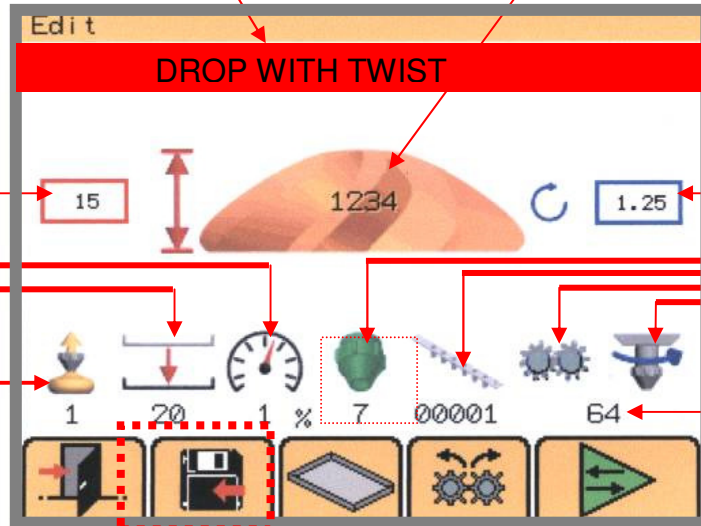
**EXAMPLE:  
DROP WITH  
TWIST**

**PROGRAM NAME**  
MUST BE ENTERED TO  
ALLOW PROGRAM TO SAVE

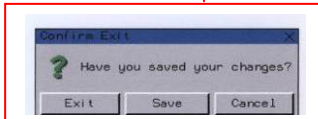
**PRODUCT QUANTITY**  
THIS IS A SETTING NUMBER AND  
DOES NOT INDICATE A MEASURE OF  
ACTUAL VOLUME

**NOZZLE HEIGHT (mm)**  
ABOVE TRAY SURFACE

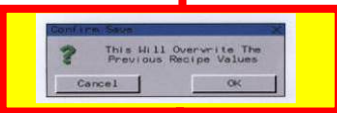
**NOZZLE ROTATIONS**  
NUMBER OF TURNS  
DURING A DEPOSIT CYCLE



EXIT THIS SCREEN



**SAVE EDITS**



**SUCK BACK  
QUANTITY**

**TABLE  
JOG DISTANCE (mm)**

**OVERALL  
MACHINE SPEED  
(% OF MAXIMUM)**

ENTER  
TRAY  
SETUP  
SCREEN

GO TO PART  
5A

**MAX HEIGHT FOR  
HOPPER/TEMPLATE  
COMBINATION**

**START  
MANUAL MODE**

**PRIME PUMP  
(SOFT DOUGH SHOWN)**

**TEMPLATE TYPE**  
ROTARY  
NON-ROTARY

**SELECT HOPPER**  
HARD DOUGH  
SOFT DOUGH

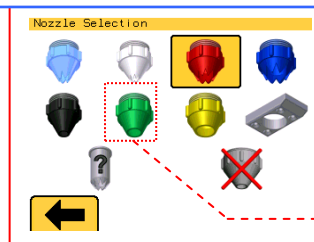
**TEMPLATE NUMBER**  
ENTER VIA KEYPAD  
THAT APPEARS WHEN  
PRESSED



**NOTE**

**A RED BACKGROUND TO  
ANY SETTING MEANS THAT  
THE VALUE MUST BE  
CORRECTED  
BEFORE STARTING**

**CHOOSE NOZZLE TYPE**



**EXAMPLE:  
MULTIDROP WITH  
TWIST**

**DEPOSIT QUANTITY FOR EACH LAYER**

**SETTING ERROR INDICATOR**  
BOXES TURN RED WHEN INCORRECT SETTING MADE

**NOZZLE HEIGHT (mm) FOR EACH LAYER**

**NOZZLE HEIGHT (mm) FROM TRAY SURFACE**

**NUMBER OF TURNS FOR EACH LAYER (-VE VALUES POSSIBLE)**

**PRIME PUMP (HARD DOUGH SHOWN)**

OTHER SETTING BUTTONS ARE THE SAME AS LAST PAGE

**EXAMPLE:  
SHEETING / STRIP**

**DEPOSIT QUANTITY FOR BEGINNING OF PRODUCT**

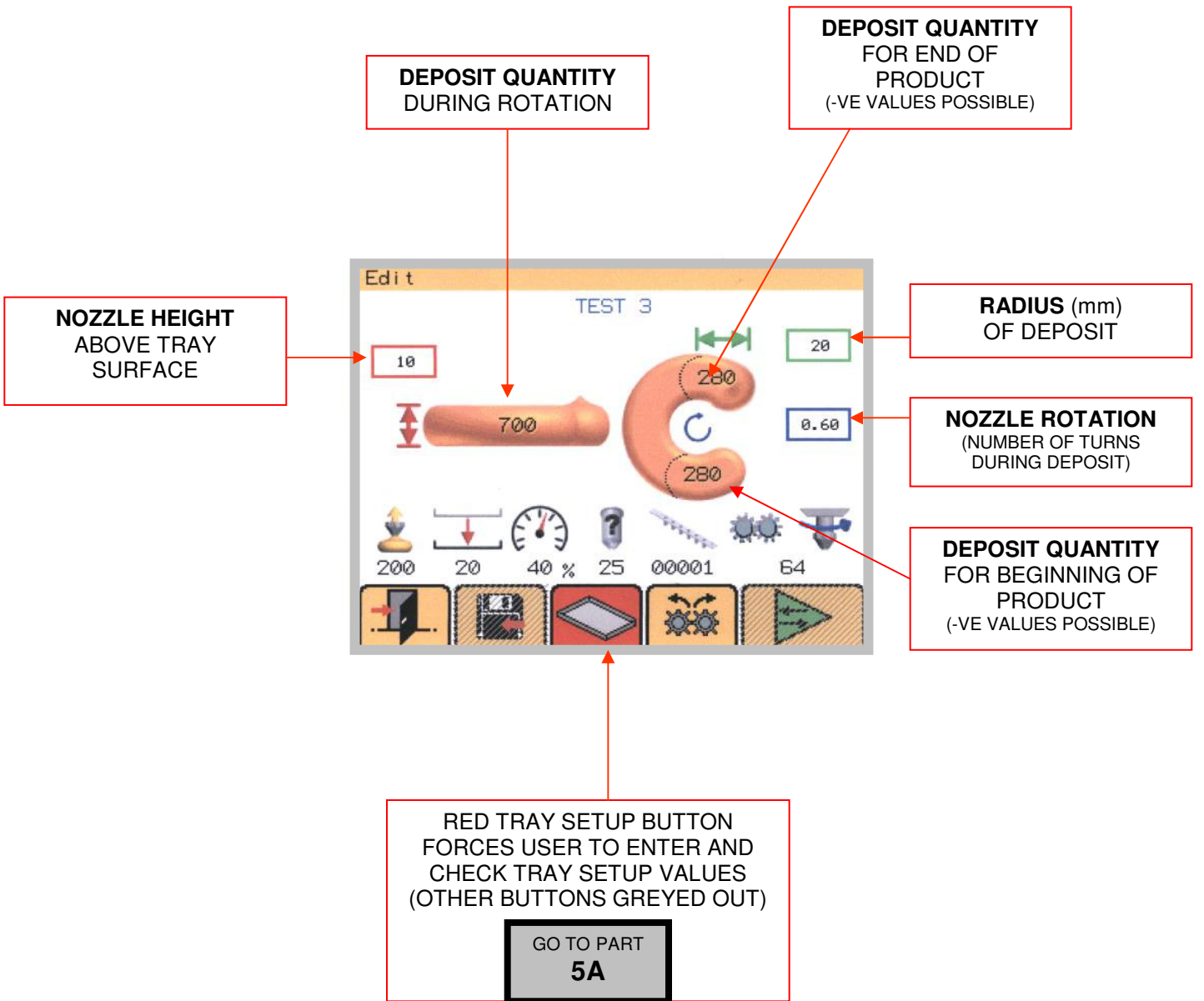
**DEPOSIT QUANTITY FOR LENGTH**

**DEPOSIT QUANTITY FOR END OF PRODUCT (-VE VALUES POSSIBLE)**

**NOZZLE HEIGHT ABOVE TRAY SURFACE**

**LENGTH (mm) OF TRAY MOVEMENT**

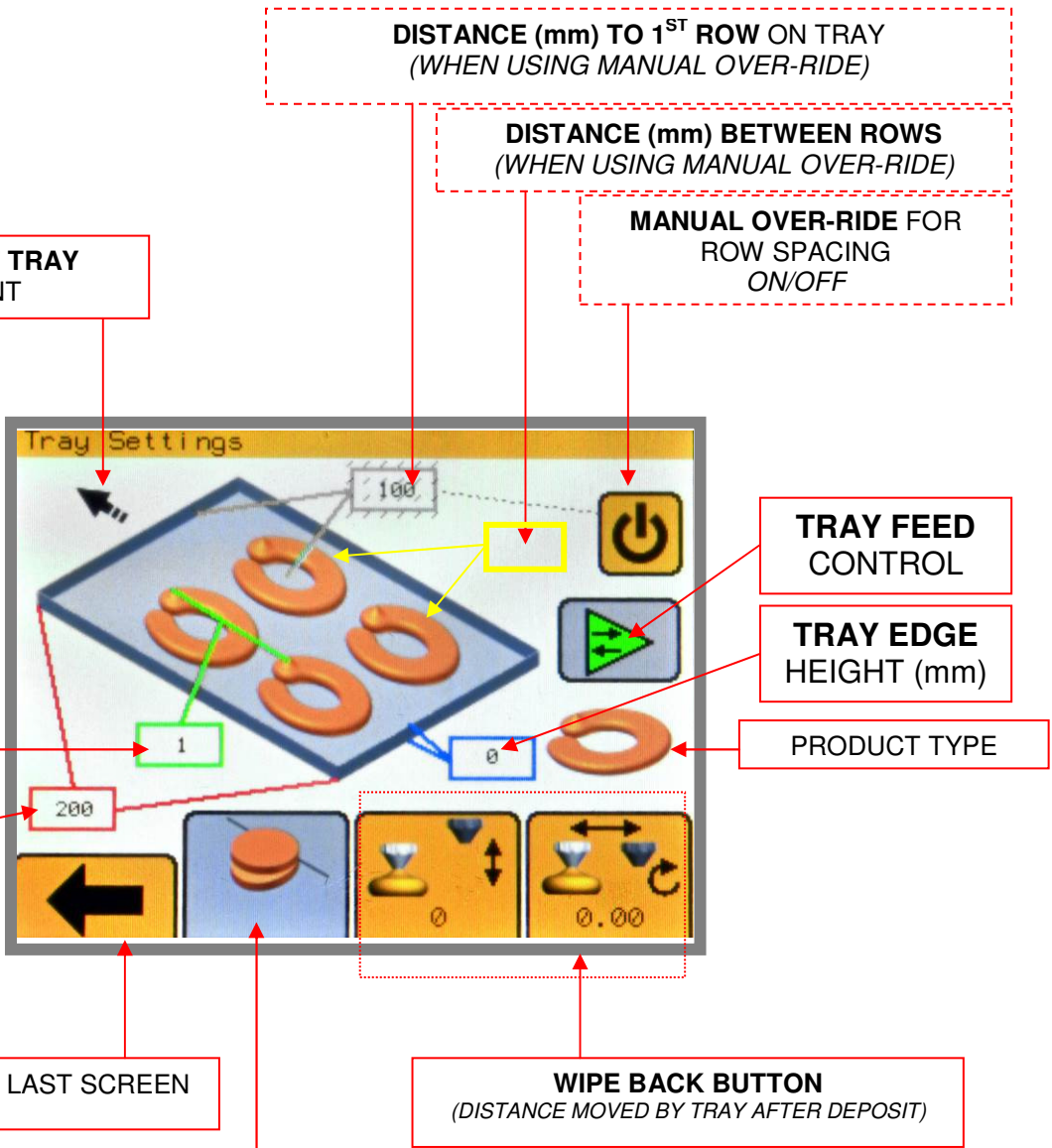
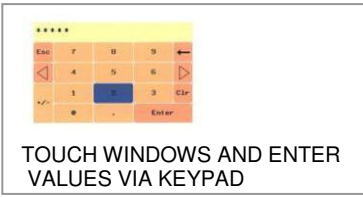
**EXAMPLE:  
“C” SHAPE  
(ARC)**





# TRAY SETUP

# 5A



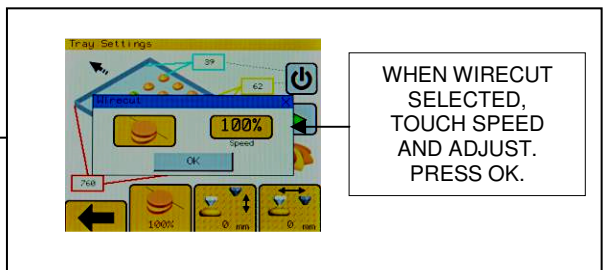
**NUMBER OF ROWS PER TRAY**

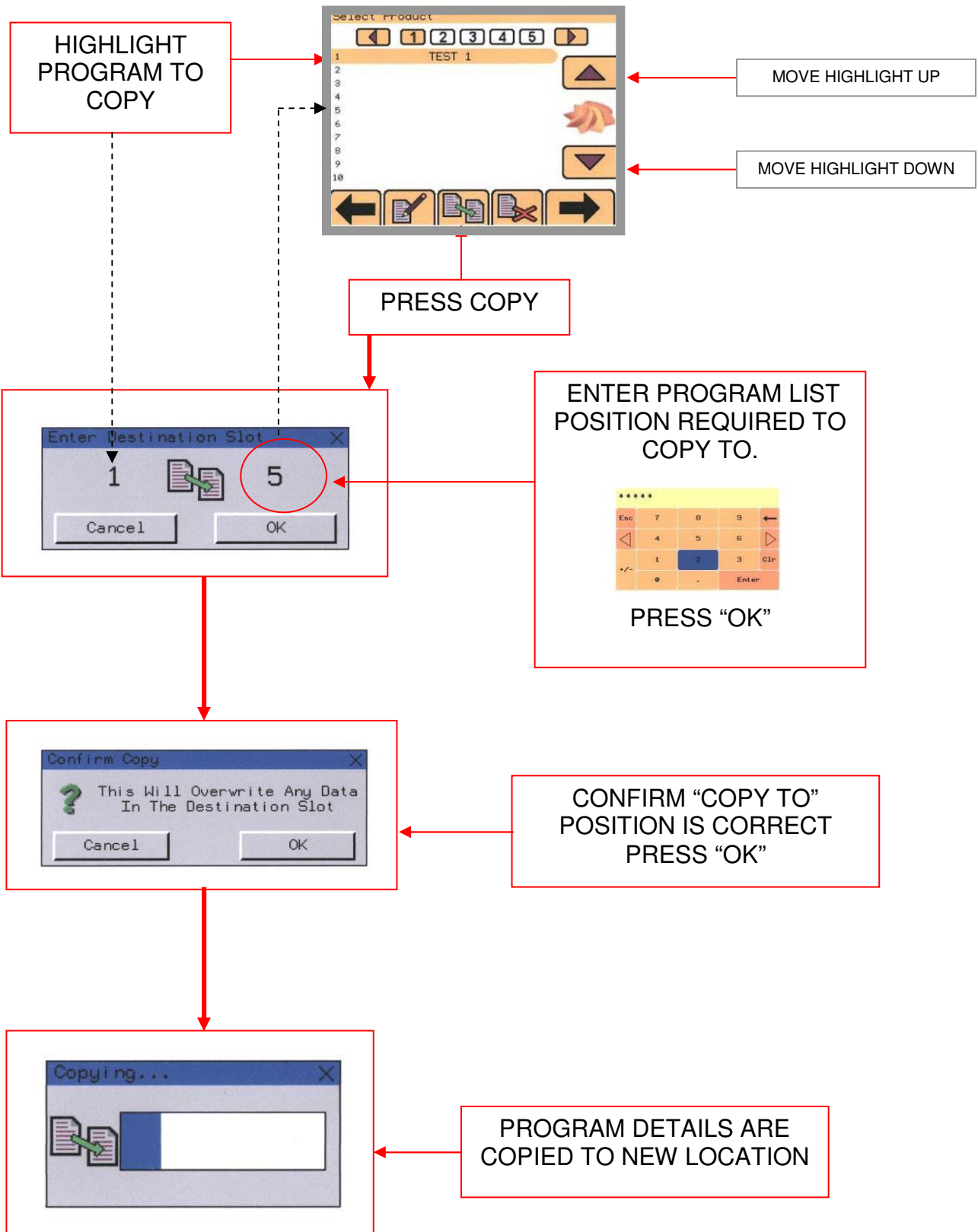
**TRAY LENGTH (mm)**

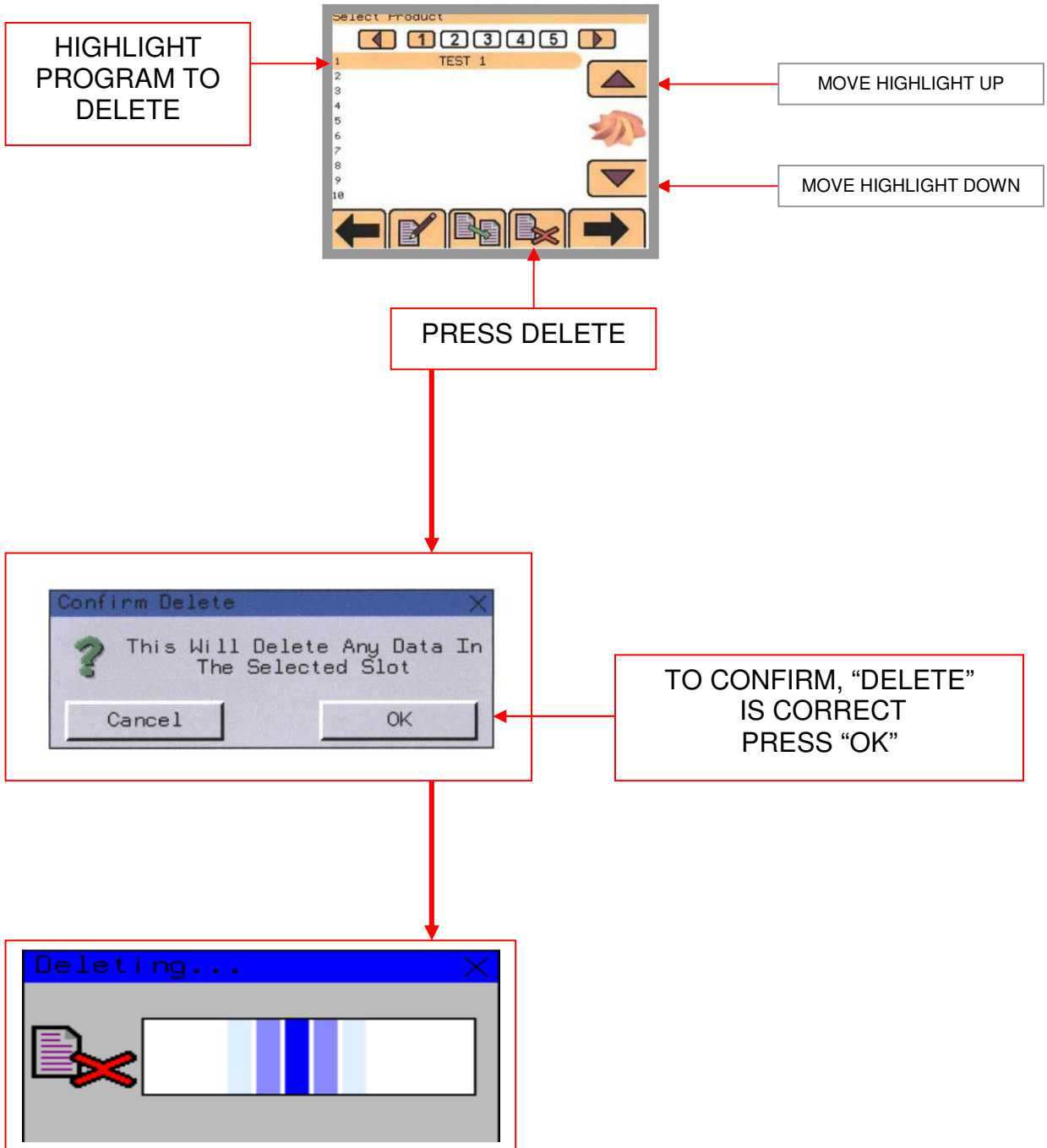
**TO LAST SCREEN**

**ACTIVATE WIRECUT ON/OFF IF WIRECUT FITTED**

**WIPE BACK BUTTON**  
(DISTANCE MOVED BY TRAY AFTER DEPOSIT)







# PASSCODES

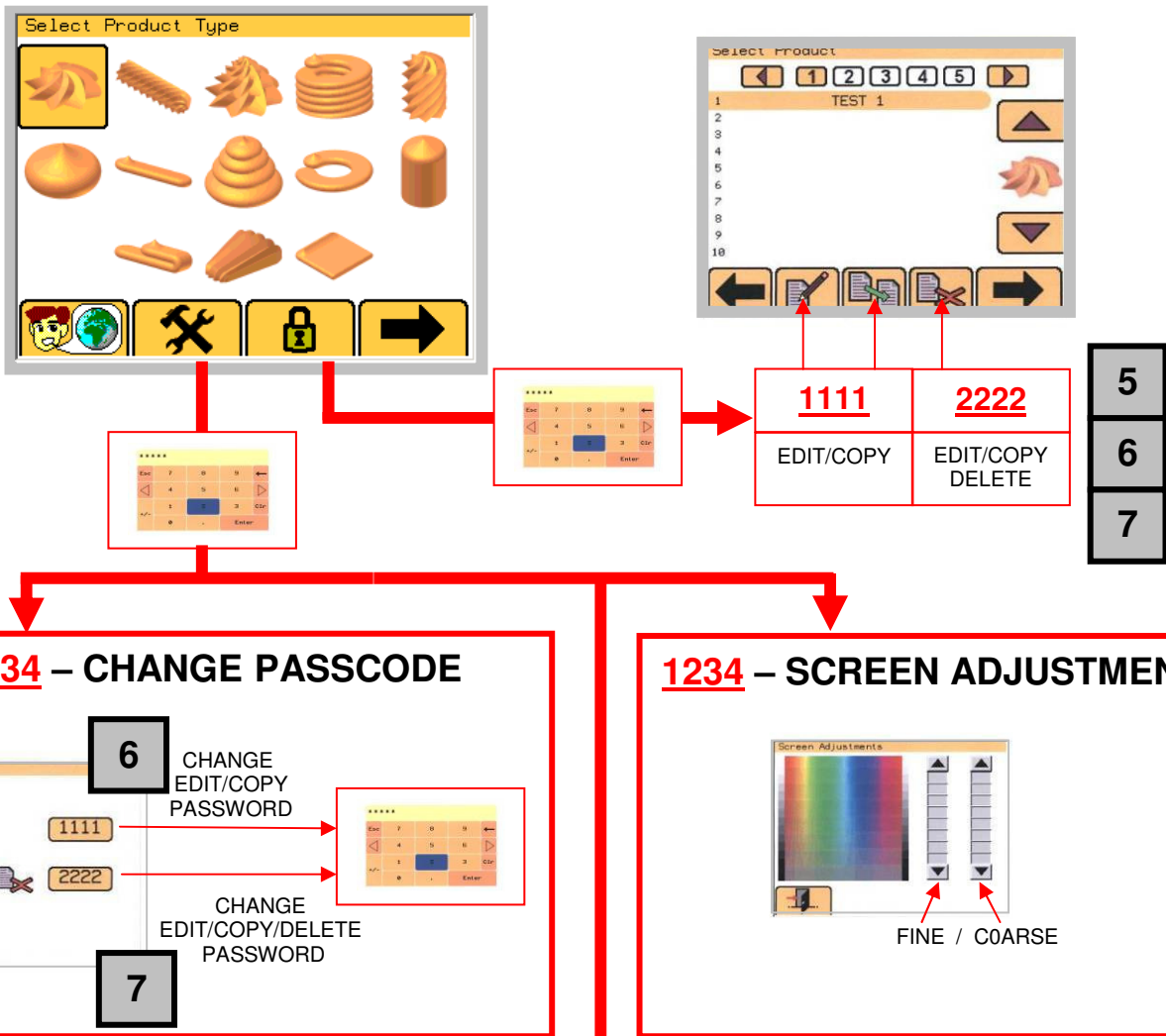
8

## SUGGESTION

To stop unauthorised changes to the Omega 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 also a good idea to change the passcodes at regular intervals.

## CAUTION

DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS

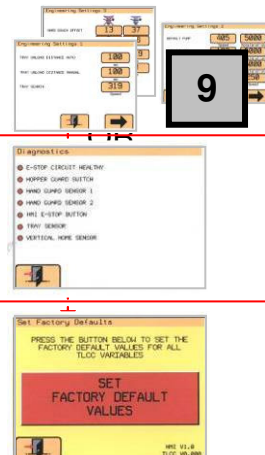


THIS SECTION IS FOR TRAINED ENGINEERS ONLY

**3142 -- ENGINEERING SETTINGS**

**2808 -- DIAGNOSTICS**

**RESET FACTORY DEFAULTS**  
**01554777460**



# ENGINEERING SETTINGS (1)

9/1

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

The screenshot shows the 'Engineering Settings 1' screen with the following settings:

- TRAY UNLOAD DISTANCE MANUAL: 100 mm
- TRAY SEARCH: 320 Speed
- TRAY SEARCH TIME-OUT: 3 Minutes
- TRAY REFERENCE MODE: EDGE

Navigation icons at the bottom include a back arrow (EXIT THIS SCREEN) and a right arrow (GO TO NEXT SCREEN ENGINEERING SETTING 2 (NEXT PAGE)).

Callouts provide additional details:

- IN MANUAL MODE:** DISTANCE THE LEADING EDGE OF THE TRAY IS BROUGHT BACK PASSED THE TRAY SENSOR, WHEN RETURNING TO OPERATOR (points to the 100 mm setting).
- SPEED VALUE THAT TRAY IS FED UP TO TRAY SENSOR** (points to the 320 Speed setting).
- TRAY SEARCH TIMEOUT** (points to the 3 Minutes setting).
- HOME OR EDGE** (points to the EDGE setting).

Two inset images show a numeric keypad with the number 3 highlighted, indicating the input method for the timeout setting.

## **CAUTION**

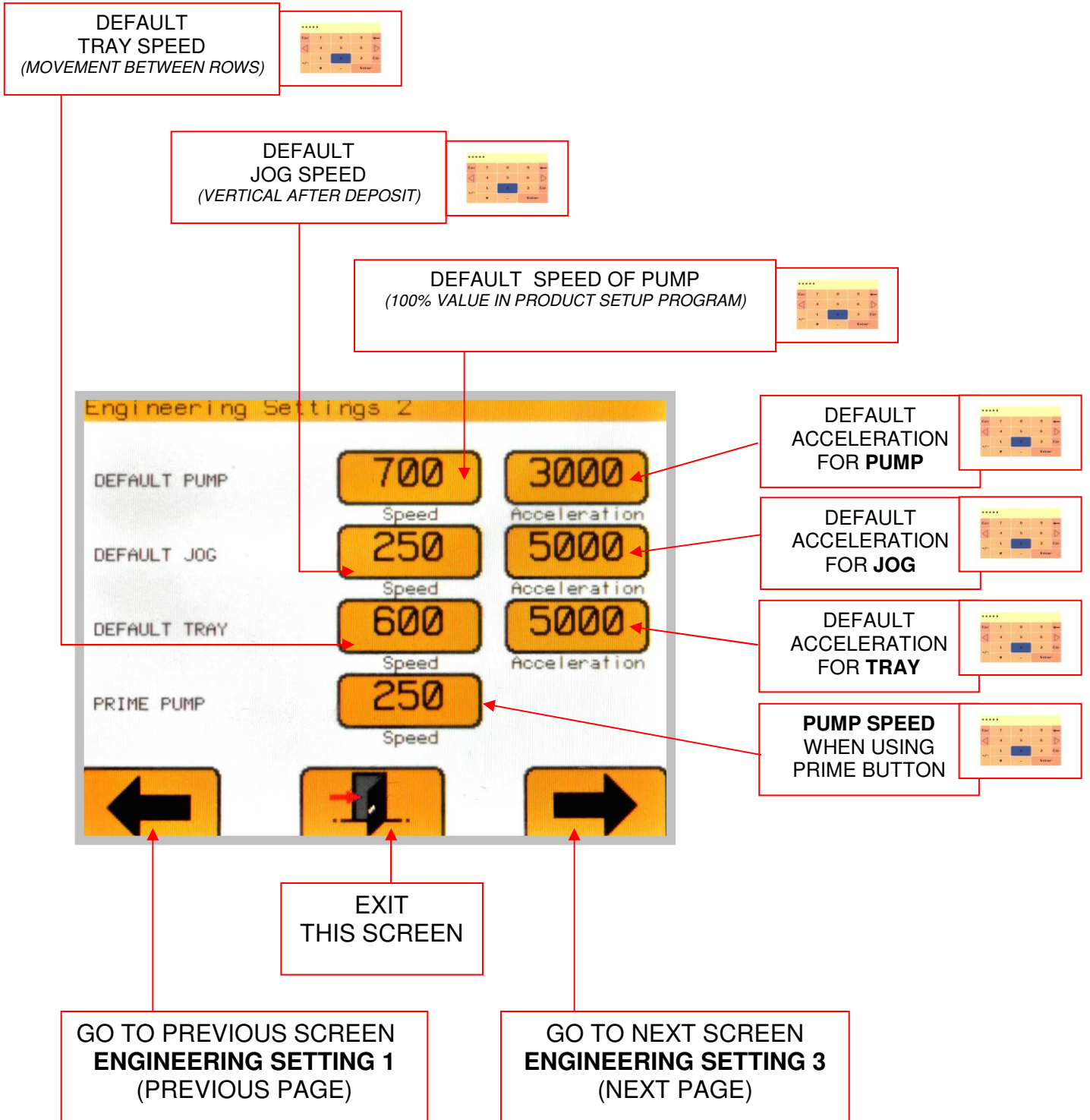
**DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS**



# ENGINEERING SETTINGS (2)

9/2

THIS SECTION IS FOR TRAINED ENGINEERS ONLY



## **CAUTION**

**DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS**

# ENGINEERING SETTINGS (3)

9/3

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

**OFFSET HEIGHT VALUE IS  
FACTORY SET AND SHOULD NOT  
BE CHANGED UNLESS  
INSTRUCTED TO DO SO.  
DAMAGE TO THE MACHINE  
COULD OCCUR**

OFFSET HEIGHT VALUE (mm)  
**HARD DOUGH HOPPER  
NON-ROTARY TEMPLATE**

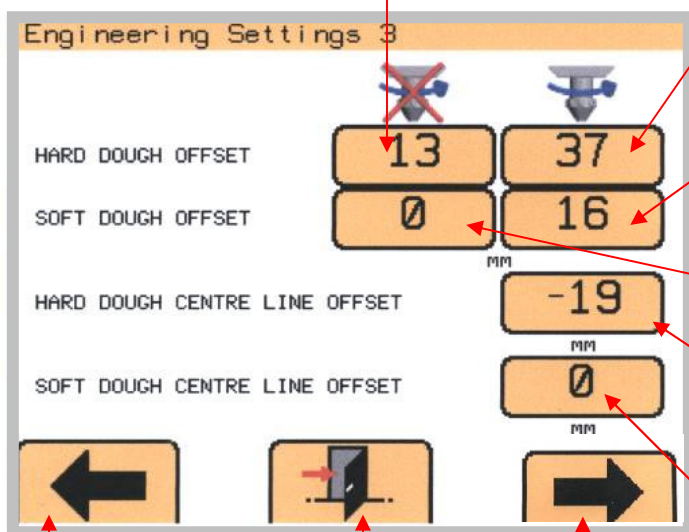
OFFSET HEIGHT VALUE (mm)  
**HARD DOUGH HOPPER  
ROTARY TEMPLATE**

OFFSET HEIGHT VALUE (mm)  
**SOFT DOUGH HOPPER  
ROTARY TEMPLATE**

OFFSET HEIGHT VALUE (mm)  
**SOFT DOUGH HOPPER  
NON-ROTARY TEMPLATE**

DISTANCE (mm) FROM **HARD**  
DOUGH HOPPER DEPOSITING  
CENTRELINE TO TRAY EDGE  
DETECTION POINT  
(USED IN ROW SPACING CALCULATIONS)

DISTANCE (mm) FROM **SOFT**  
DOUGH HOPPER DEPOSITING  
CENTRELINE TO TRAY EDGE  
DETECTION POINT  
(USED IN ROW SPACING CALCULATIONS)



EXIT  
THIS SCREEN

GO TO PREVIOUS SCREEN  
**ENGINEERING SETTING 2**  
(PREVIOUS PAGE)

GO TO NEXT SCREEN  
**ENGINEERING SETTING 4**  
(NEXT PAGE)

## **CAUTION**

**DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE  
FULLY AWARE OF THE RESULTS**

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

## GEARBOX RATIOS

The screenshot displays the 'Engineering Settings 4' screen with the following data:

Setting	Value 1	Value 2
PUMP GEARBOX RATIO	28	1
TRAY GEARBOX RATIO	10	1
JOG GEARBOX RATIO	15	1
ROTARY GEARBOX RATIO	10	1

Navigation and Callout Elements:

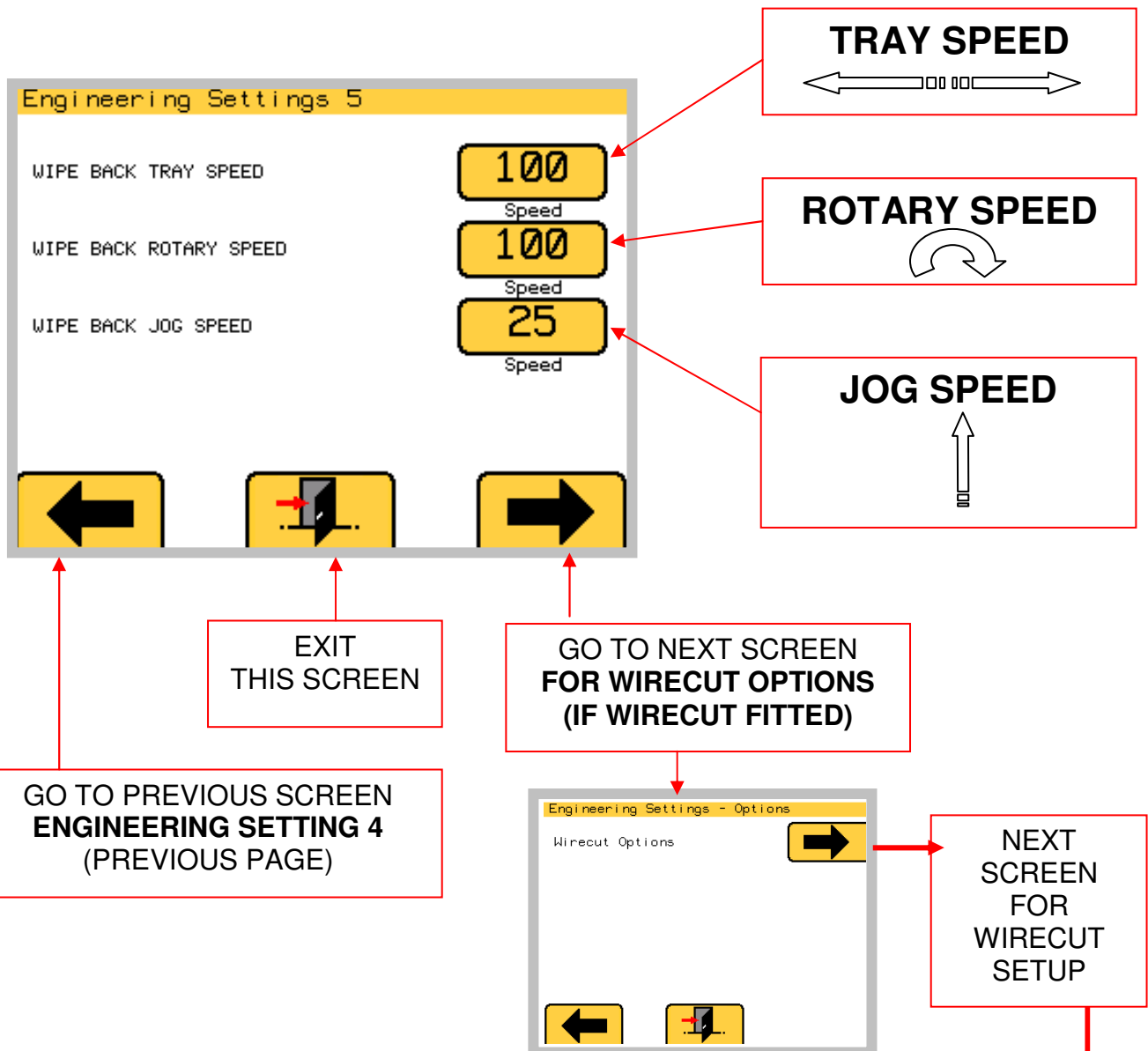
- GO TO PREVIOUS SCREEN ENGINEERING SETTING 3 (PREVIOUS PAGE)**: Callout for the left arrow button.
- EXIT THIS SCREEN**: Callout for the central gear icon button.
- GO TO NEXT SCREEN ENGINEERING SETTING 5 (NEXT PAGE)**: Callout for the right arrow button.
- PUMP**: Callout for the Pump Gearbox Ratio input field.
- TRAY**: Callout for the Tray Gearbox Ratio input field.
- JOG**: Callout for the Jog Gearbox Ratio input field.
- ROTARY**: Callout for the Rotary Gearbox Ratio input field.

### **CAUTION**

**DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS**

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

## WIPE BACK DEFAULT SETTINGS (SEE 5A )

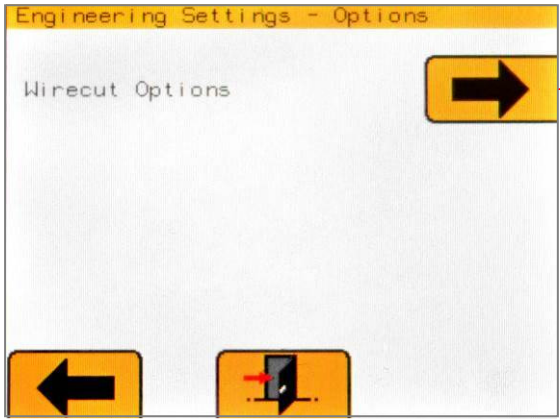


### **CAUTION**

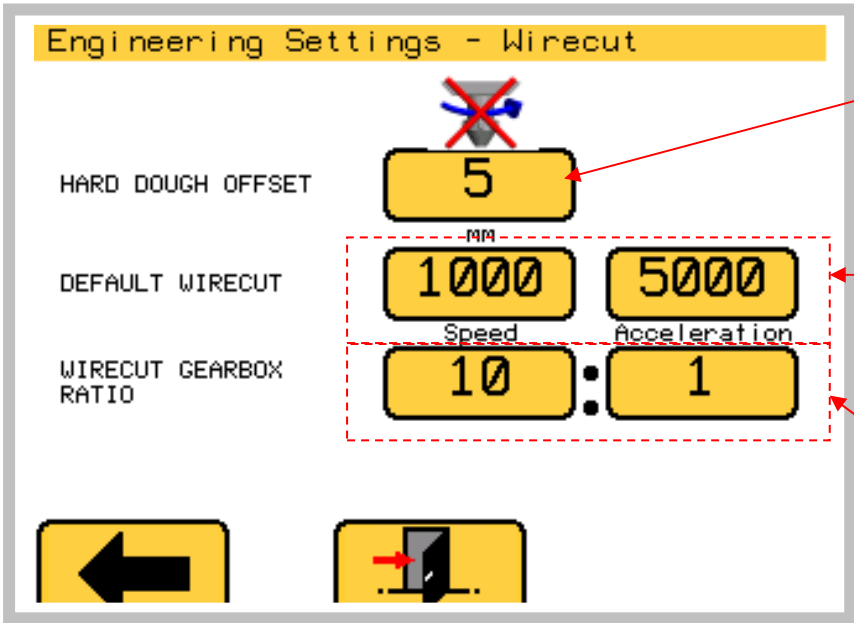
**DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS**

NEXT PAGE

# WIRECUT SETTINGS



**PROCEED TO WIRECUT SETTINGS PAGE**



**HARD DOUGH OFFSET**

**WIRECUT SPEED + ACCELERATION**

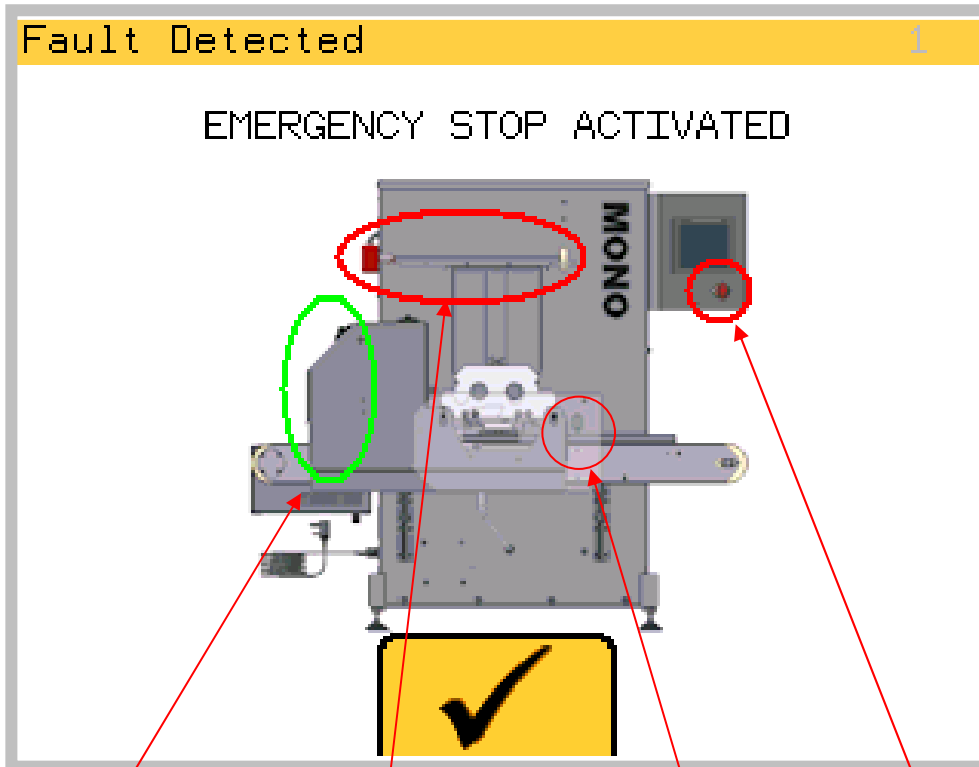
**WIRECUT GEARBOX RATIO**

**EXIT ENGINEERING SETTINGS**

**GO TO PREVIOUS SCREEN ENGINEERING SETTING 4 (PREVIOUS PAGE)**

**CAUTION**  
**DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS**





WIRECUT COVER  
(IF FITTED)

HOPPER COVER


SAFETY BEAM

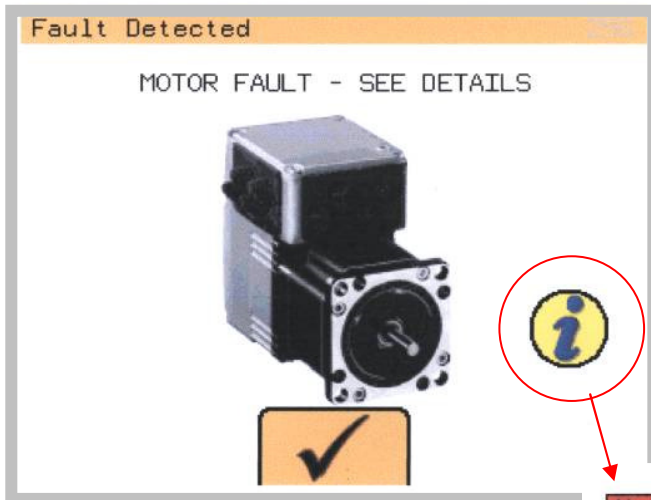
STOP BUTTON

THIS SCREEN INDICATES A FAULT CONDITION IN THE SAFETY AREAS.

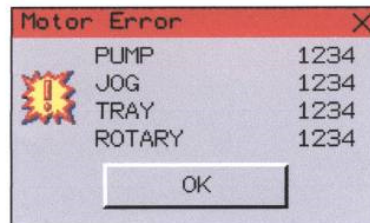
WHEN **RED**, CLOSE COVER OR CLEAR OBSTRUCTIONS TO CLEAR FAULT.  
WHEN INDICATOR GOES **GREEN**, FAULT HAS BEEN CORRECTED AT THAT POSITION.

WHEN ALL FAULTS HAVE BEEN CORRECTED, PRESS  BUTTON TO CLEAR SCREEN

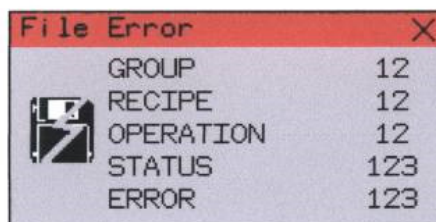
IF THE FOLLOWING SCREEN APPEARS, CHECK THAT THE TABLE MOVEMENT ETC. IS NOT JAMMED WITH SOMETHING. IF IT IS, CLEAR THE OBSTRUCTION AND PRESS  TO PROCEED.



PRESS THIS BUTTON IF MORE INFORMATION IS REQUIRED AS TO WHICH MOTOR IS AT FAULT



**IF THE FAULT IS NOT OBVIOUS AND NOT ABLE TO BE CLEARED SAFELY, A SUITABLY TRAINED ENGINEER SHOULD BE CALLED**



ERROR WHEN LOADING/SAVING RECIPE DATA TO HMI STORAGE CARD  
PLEASE CONTACT SERVICE DEPT. / ENGINEER IF PROBLEM PERSISTS

## 11.0 MAINTENANCE

Omega PLUS

Under most conditions the machine only needs to be kept clean and used as instructed in this manual.



**WARNING: DO NOT UNDER ANY CIRCUMSTANCES USE A WATER HOSE OR PRESSURE WASHER TO CLEAN THIS MACHINE.**

# Mono Omega Touch

## Check and Maintenance Schedule

Operation	Daily	weekly	3 monthly	Yearly
Clean depositor as per instructions in manual	*			
Check condition of supply lead and plug	*			
check fit of guards	*			
Clean under conveyor belts		*		
Check hopper seals		*		
Check end cap seals		*		
Check condition and tension of conveyor, adjust / replace as required			*	
Check end cap bearings			*	
check alignment of sensors on guards			*	
Check tray sensor is secure			*	
Check condition of idle roller bearings				*
Check condition of drive shaft bearings				*
Check condition and tension of chain and grease as required				*
Grease slides as required				*
adjust eccentric guide rollers as required				*
adjust concentric guide rollers as required				*
Check and grease all slide plates as required				*
Check all motor mounts are tight				*
inspect electrical connections and tighten as required				*

**Under no circumstances should maintenance or cleaning of this machine be done with the power connected**

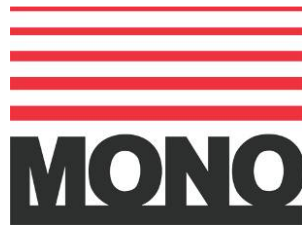


## 12.0 SPARES AND SERVICE

Omega PLUS

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

### UK SERVICE, SPARES and OVERSEAS SUPPORT:



Queensway  
Swansea West Industrial Estate  
Swansea.  
SA5 4EB  
UK

**email: [spares@monoequip.com](mailto:spares@monoequip.com)**  
**Spares Tel. +44(0)1792 564039**  
**Web site: [www.monoequip.com](http://www.monoequip.com)**

**Main Tel. 01792 561234**  
**Fax. 01792 561016**

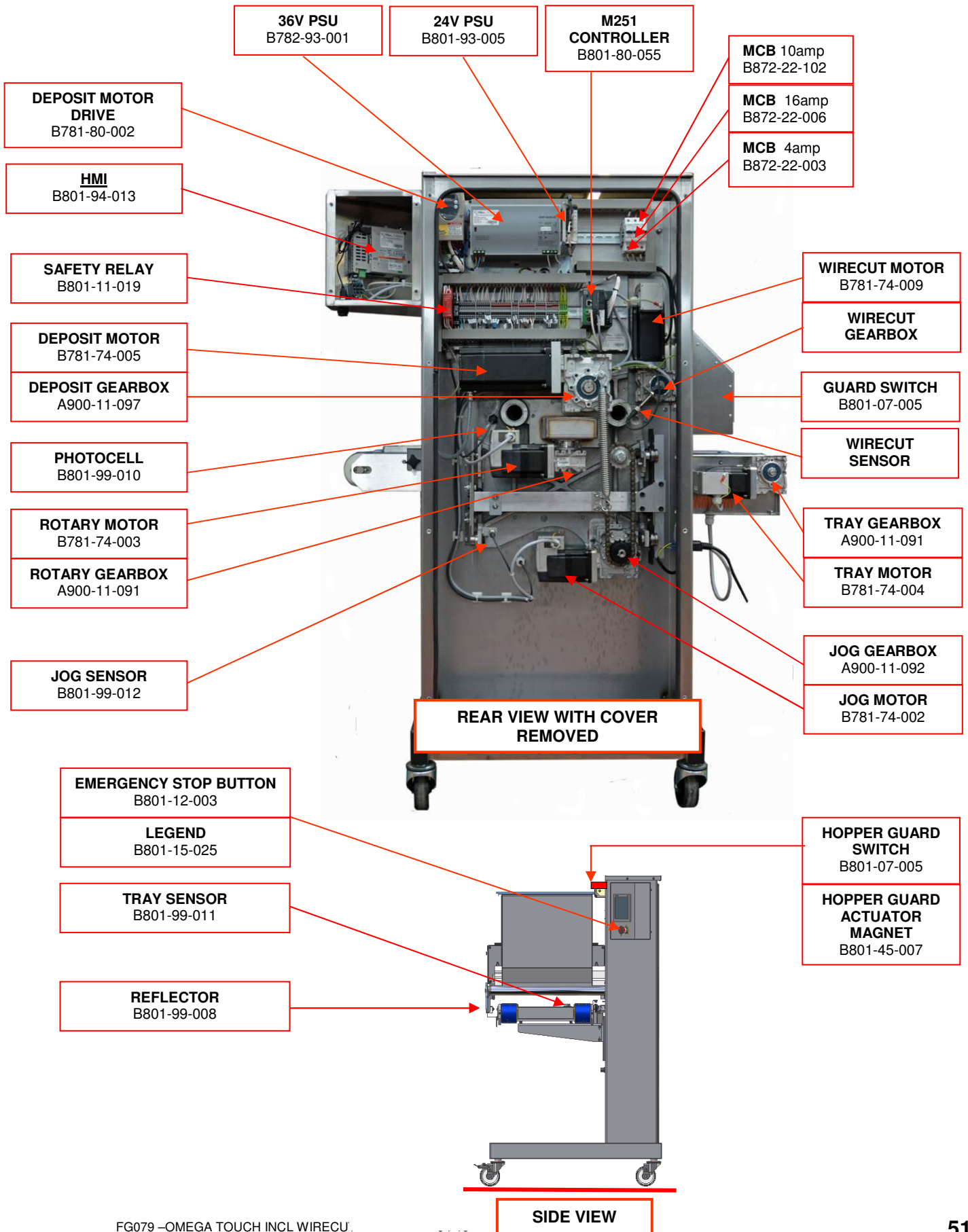


**BASE MACHINE SPARES LIST****Omega PLUS -- WIRECUT VERSION**

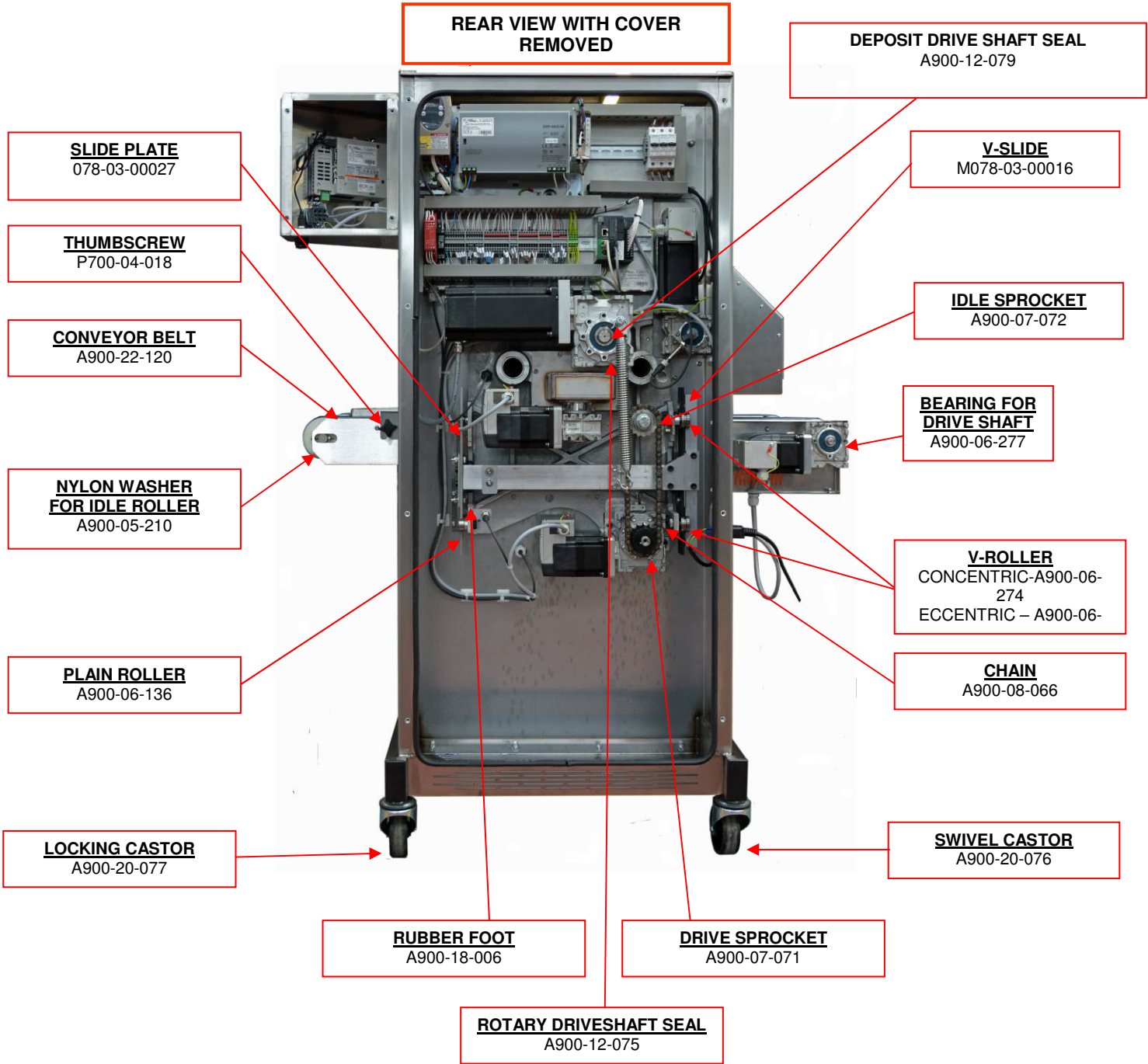
<b>Spares Item Description</b>	<b>Mono Part No.</b>	<b>Qty Req. per M/C</b>
Deposit Gearbox	A900-11-097	1
Jog Gearbox	A900-11-092	1
Rotary Gearbox	A900-11-091	1
Tray Gearbox	A900-11-091	1
Concentric Guide Roller	A900-06-274	2
Eccentric Guide Roller	A900-06-273	2
V Slide	078-03-00016	1
Slide Plate	078-03-00027	1
Jog Drive Chain	A900-08-066	1
Simplex Sprocket 16T 1/2" Pitch	A900-07-071	1
Idler Sprocket 16T 1/2" Pitch	A900-07-072	1
Circlip-Ext Metric 14mm Dia	A900-01-280	1
Circlip-Ext Metric 24mm Dia	A900-01-193	1
Drive Shaft – Hopper	078-03-00015	1
Rotary Drive Shaft	078-03-00011	1
Drive Gear - Rotary Template	078-03-00010	1
Lip Seal (Rotary Drive Shaft)	A900-12-075	1
Lip Seal (Deposit Drive Shaft)	A900-12-079	1
End Guard (Earlier plastic version)	078-11-00036 078-11-00005)	1
Retainer – End Guard (Earlier plastic version)	078-11-00035 078-11-00002)	2
Spacer – 450mm/580mm Hopper	078-11-00003	1
Spacer – 400mm Hopper	078-11-00004	1
Seal-Rear Cover	A900-25-309	1

**ELECTRICAL COMPONENT LAYOUT PARTS**

**Omega PLUS -- WIRECUT VERSION**



**REAR VIEW WITH COVER REMOVED**

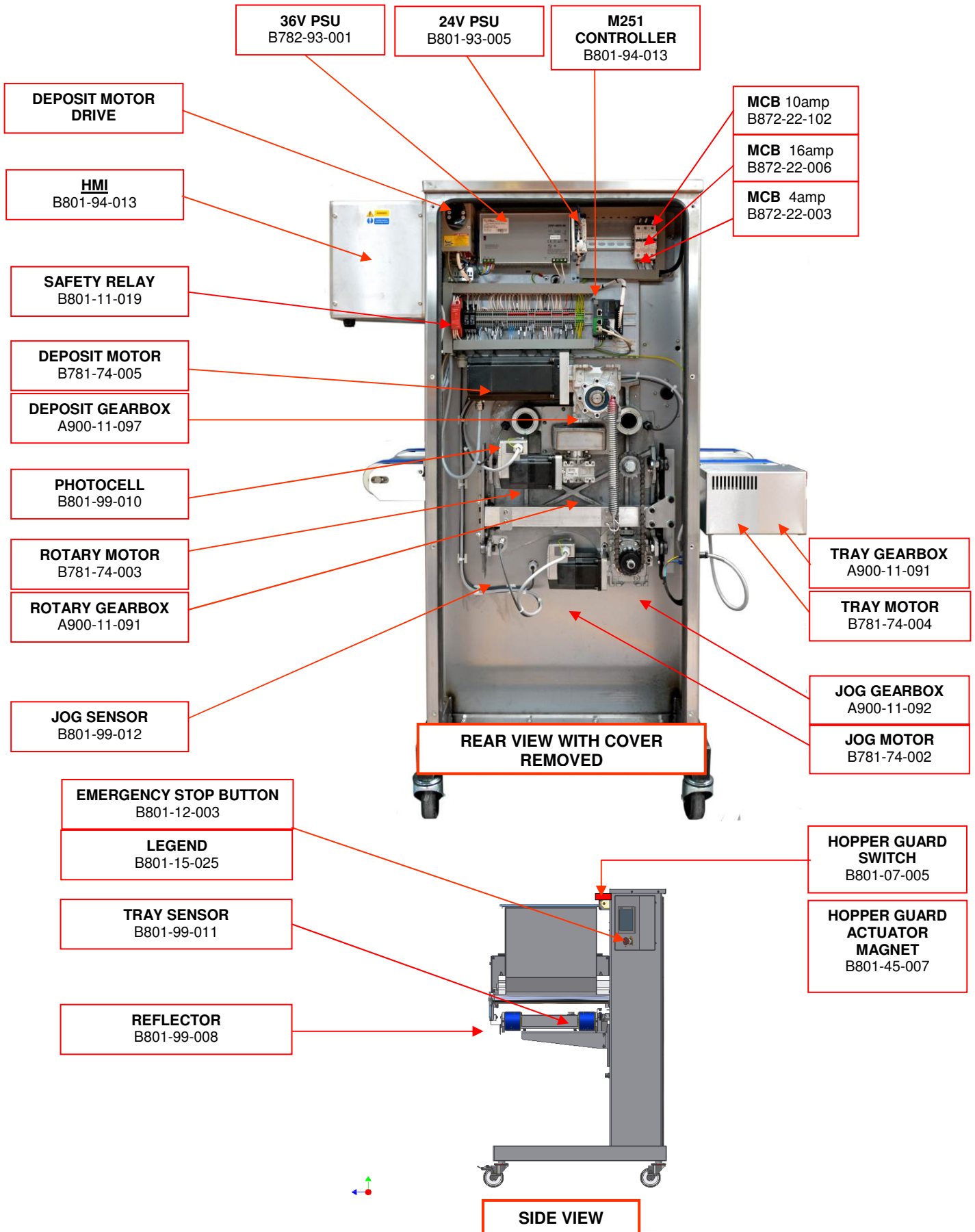


**BASE MACHINE SPARES LIST****Omega PLUS -- NO WIRECUT VERSION**

<b>Spares Item Description</b>	<b>Mono Part No.</b>	<b>Qty Req. per Machine</b>
Deposit Gearbox	A900-11-097	1
Jog Gearbox	A900-11-092	1
Rotary Gearbox	A900-11-091	1
Tray Gearbox	A900-11-091	1
Concentric Guide Roller	A900-06-274	2
Eccentric Guide Roller	A900-06-273	2
V Slide	078-03-00016	1
Slide Plate	078-03-00027	1
Jog Drive Chain	A900-08-066	1
Simplex Sprocket 16T 1/2" Pitch	A900-07-071	1
Idler Sprocket 16T 1/2" Pitch	A900-07-072	1
Circlip-Ext Metric 14mm Dia	A900-01-280	1
Circlip-Ext Metric 24mm Dia	A900-01-193	1
Drive Shaft – Hopper	078-03-00015	1
Rotary Drive Shaft	078-03-00011	1
Drive Gear - Rotary Template	078-03-00010	1
Lip Seal (Rotary Drive Shaft)	A900-12-075	1
Lip Seal (Deposit Drive Shaft)	A900-12-079	1
End Guard (Earlier plastic version)	078-11-00036 078-11-00005)	1
Retainer – End Guard (Earlier plastic version)	078-11-00035 078-11-00002)	2
Spacer – 450mm/580mm Hopper	078-11-00003	1
Spacer – 400mm Hopper	078-11-00004	1
Seal-Rear Cover	A900-25-309	1

# ELECTRICAL COMPONENT LAYOUT PARTS

Omega PLUS -- NO WIRECUT VERSION





# HARD DOUGH HOPPER PARTS

Omega PLUS ONLY

## HOPPER FABRICATION

### STANDARD CAPACITY

M078-09-00086 (400mm)  
M078-09-00042 (450mm)  
M078-09-00089 (580mm)

### EXTENDED CAPACITY

M078-09-00087 (400mm)  
M078-09-00088 (450mm)  
M073-09-00092 (580mm)

**WINGNUT**  
A900-04-147

**UPPER END BLOCK**  
(DRIVEN SIDE)  
M078-09-00144

## ROLLER OPTIONS

**M078-KMX004 400mm**  
4MM GROOVE - ALUMINIUM

**M078-KMX005 400mm**  
6MM GROOVE - ALUMINIUM

**M078-KMX006 400mm**  
8MM GROOVE - ALUMINIUM

**M078-KMX015 400mm**  
8MM GROOVE - PLASTIC

**M078-KMX007 450mm**  
4MM GROOVE - ALUMINIUM

**M078-KMX008 450mm**  
6MM GROOVE - ALUMINIUM

**M078-KMX009 450mm**  
8MM GROOVE - ALUMINIUM

**M078-KMX010 580mm**  
4MM GROOVE - ALUMINIUM

**M078-KMX011 580mm**  
6MM GROOVE - ALUMINIUM

**M078-KMX012 580mm**  
8MM GROOVE - ALUMINIUM

## TEMPLATES TO CUSTOMER REQUIREMENTS

### ROTARY

- SMALL BORE
- LARGE BORE

### STANDARD

- SMALL BORE
- LARGE BORE

### DIE

### SHEETING

### STANDARD(St Steel) ROLLERS

DRIVE	400MM	078-09-00066
	450MM	078-09-00060
	580MM	078-09-00074
DRIVEN	400MM	078-09-00067
	450MM	078-09-00061
	580MM	078-09-00075

**UPPER END BLOCK**  
(DRIVE SIDE)  
M078-09-00143

**LOWER END BLOCK**  
(DRIVE SIDE)  
M078-09-00141

**THUMBSCREW**  
M078-09-00043

**LOWER END BLOCK**  
(DRIVEN SIDE)  
M078-09-00142

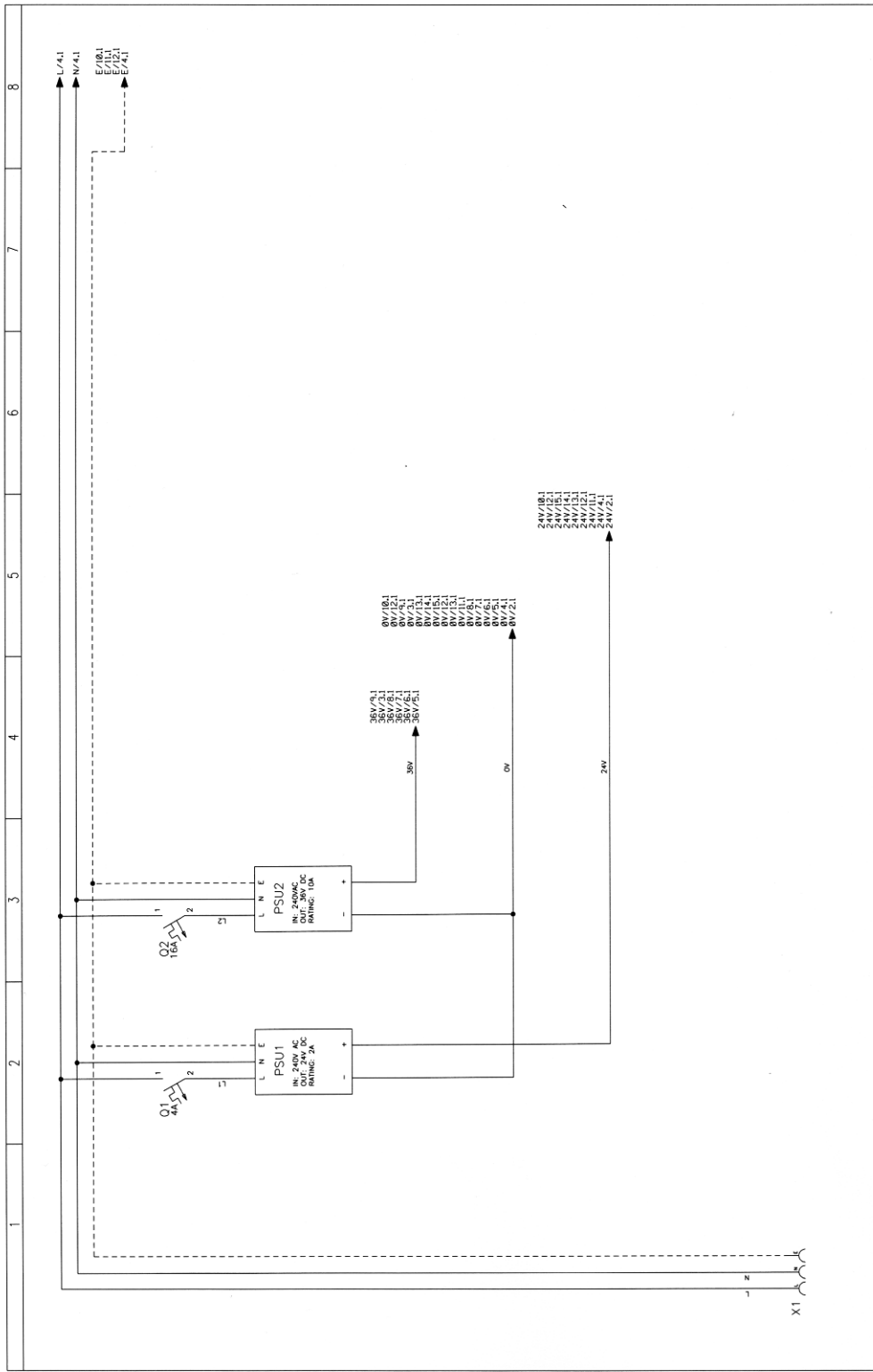
## POUR-THROUGH TOP GUARD (NOT SHOWN)

HARD DOUGH	400MM	078-11-00060
	450MM	078-11-00061
	580MM	078-11-00062

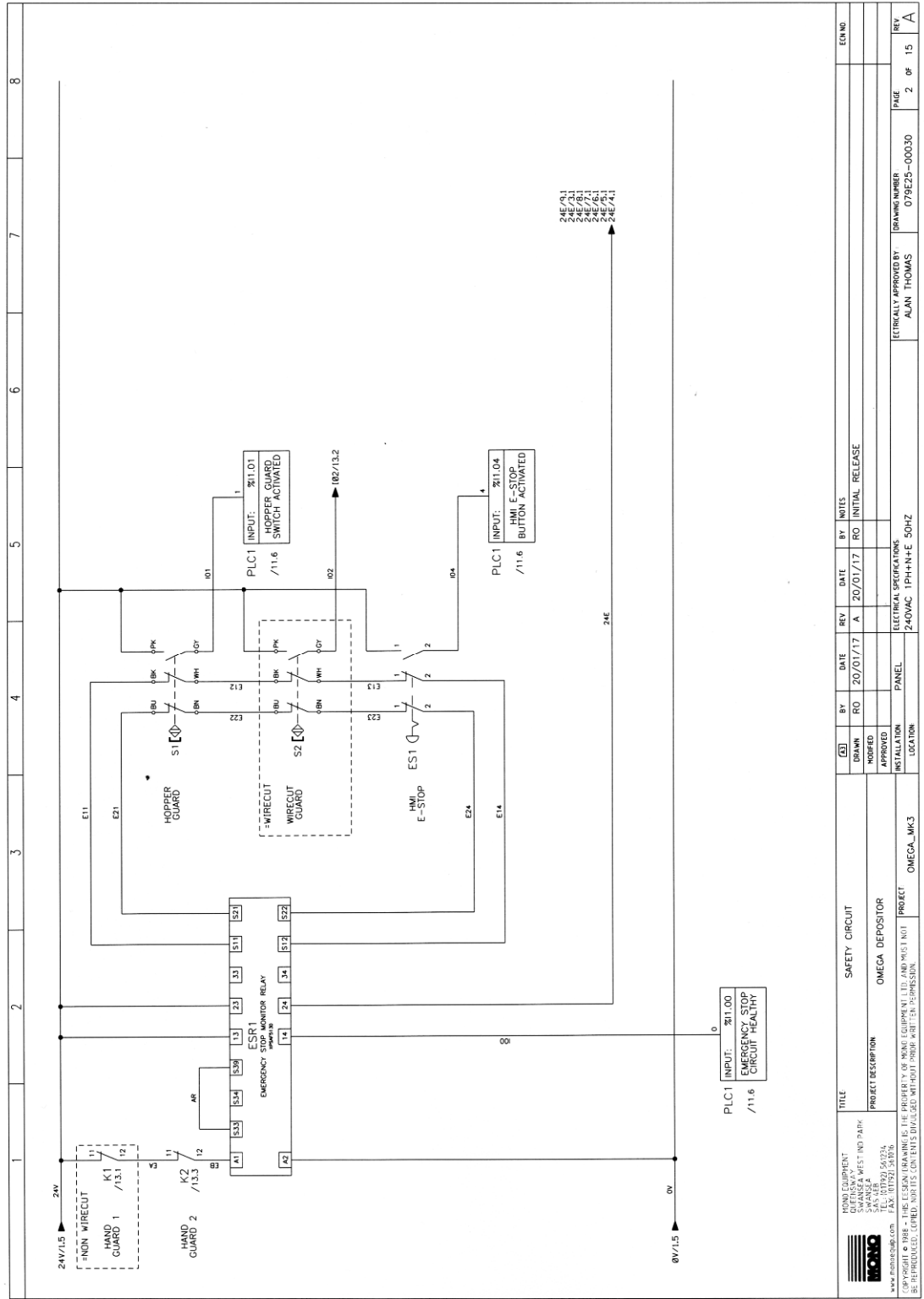




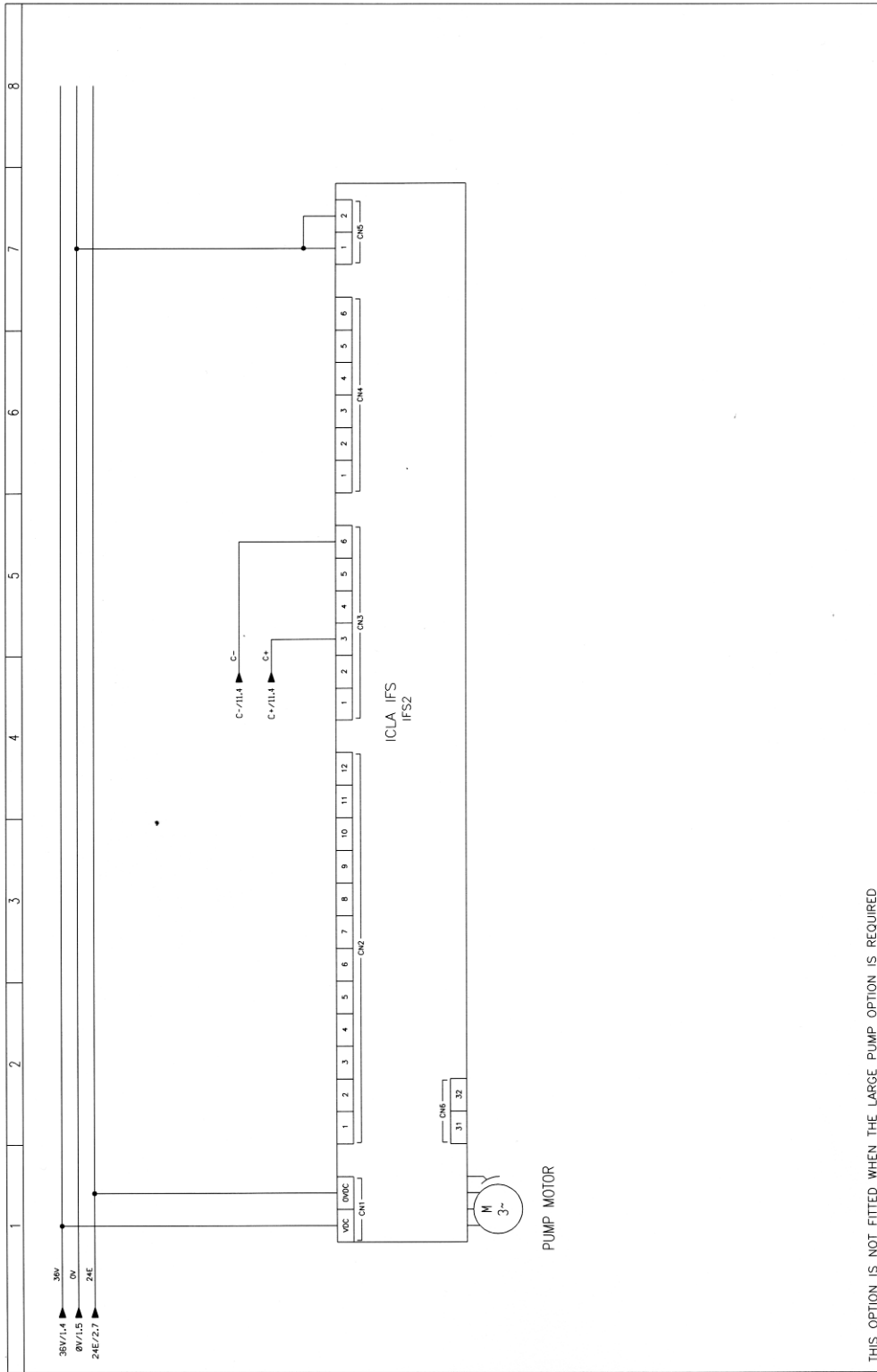
## 13.0 ELECTRICAL INFORMATION



TITLE		ELECTRICAL DISTRIBUTION		ECONO	
MONO EQUIPMENT	SWANSEA WEST IND PARK	DRWN	RO	DATE	REV
SWANSEA WEST IND PARK	SWANSEA WEST IND PARK	MODIFIED	RO	20/01/17	A
SWANSEA WEST IND PARK	SWANSEA WEST IND PARK	APPROVED			
SWANSEA WEST IND PARK	SWANSEA WEST IND PARK	INSTALLATION	PANEL	ELECTRICAL SPECIFICATIONS	
SWANSEA WEST IND PARK	SWANSEA WEST IND PARK	LOCATION		240VAC 1PH3LN+E 50HZ	
PROJECT	OMEGA_IMK3				
PROJECT DESCRIPTION		OMEGA DEPOSITOR		ELECTRICALLY APPROVED BY	
PROJECT		PROJECT		ALAN THOMAS	
PROJECT		PROJECT		DRAWING NUMBER	
PROJECT		PROJECT		079525-00029	
PROJECT		PROJECT		PAGE	
PROJECT		PROJECT		1 of 15	
PROJECT		PROJECT		REV	
PROJECT		PROJECT		A	

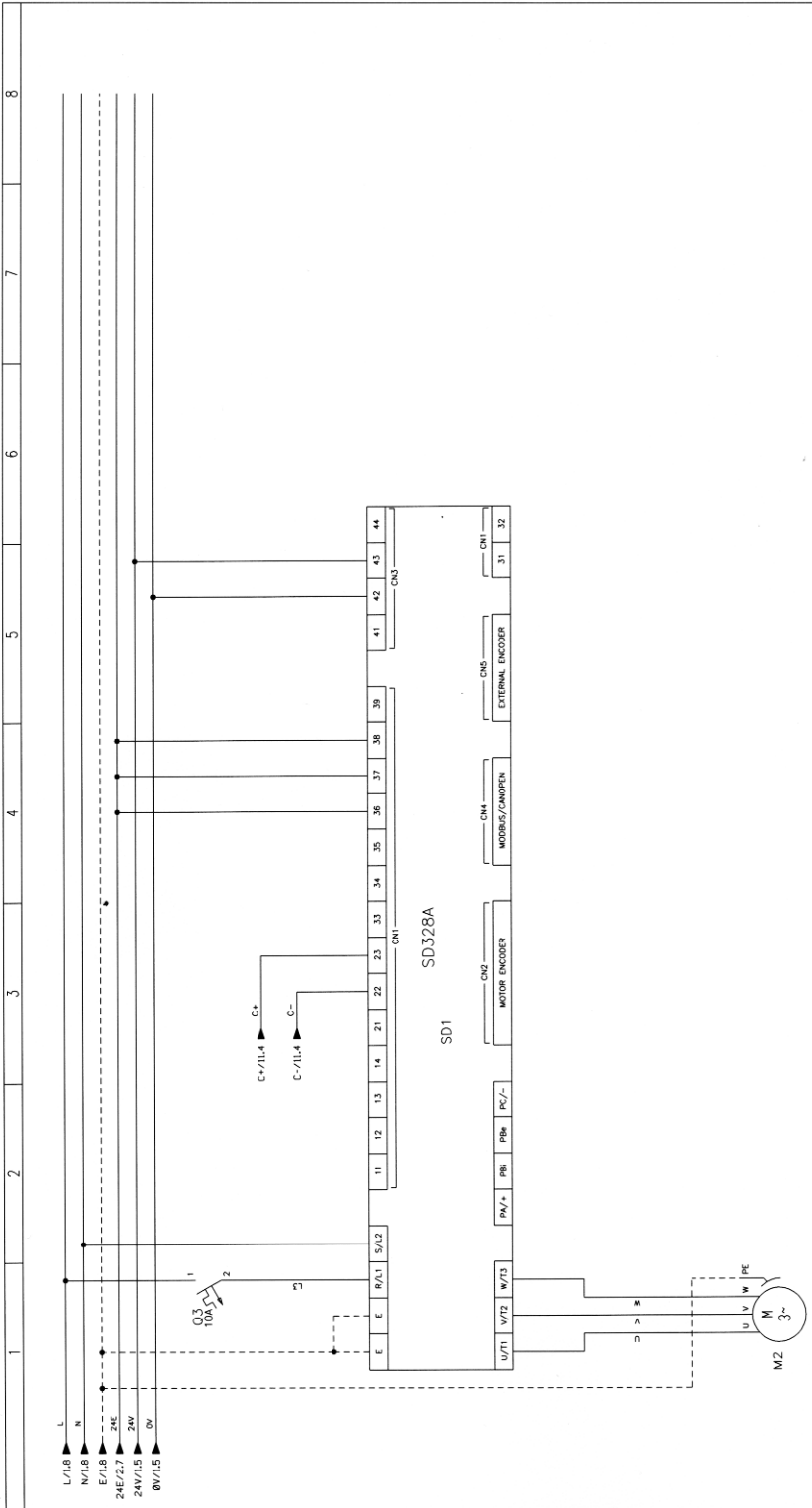


MONO EQUIPMENT		SAFETY CIRCUIT		EIN NO	
MONO EQUIPMENT SWANSEA WEST IND PARK SWANSEA TEL: 01792 567234 FAX: 01792 567235 WWW.MONO.CO.UK		PROJECT DESCRIPTION OMEGA DEPOSITOR		DRAWN RO	
BE REPRODUCED, EITHER WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION		PROJECT OMEGA_WM3		DATE 20/01/17	
		INSTALLATION PANEL		DATE 20/01/17	
		ELECTRICAL SPECIFICATIONS 240VAC 1PH+N+E 50HZ		REV A	
		ELECTRICALLY APPROVED BY ALAN THOMAS		PAGE 2 of 15	
		DRAWING NUMBER 079E23-00030		REV A	



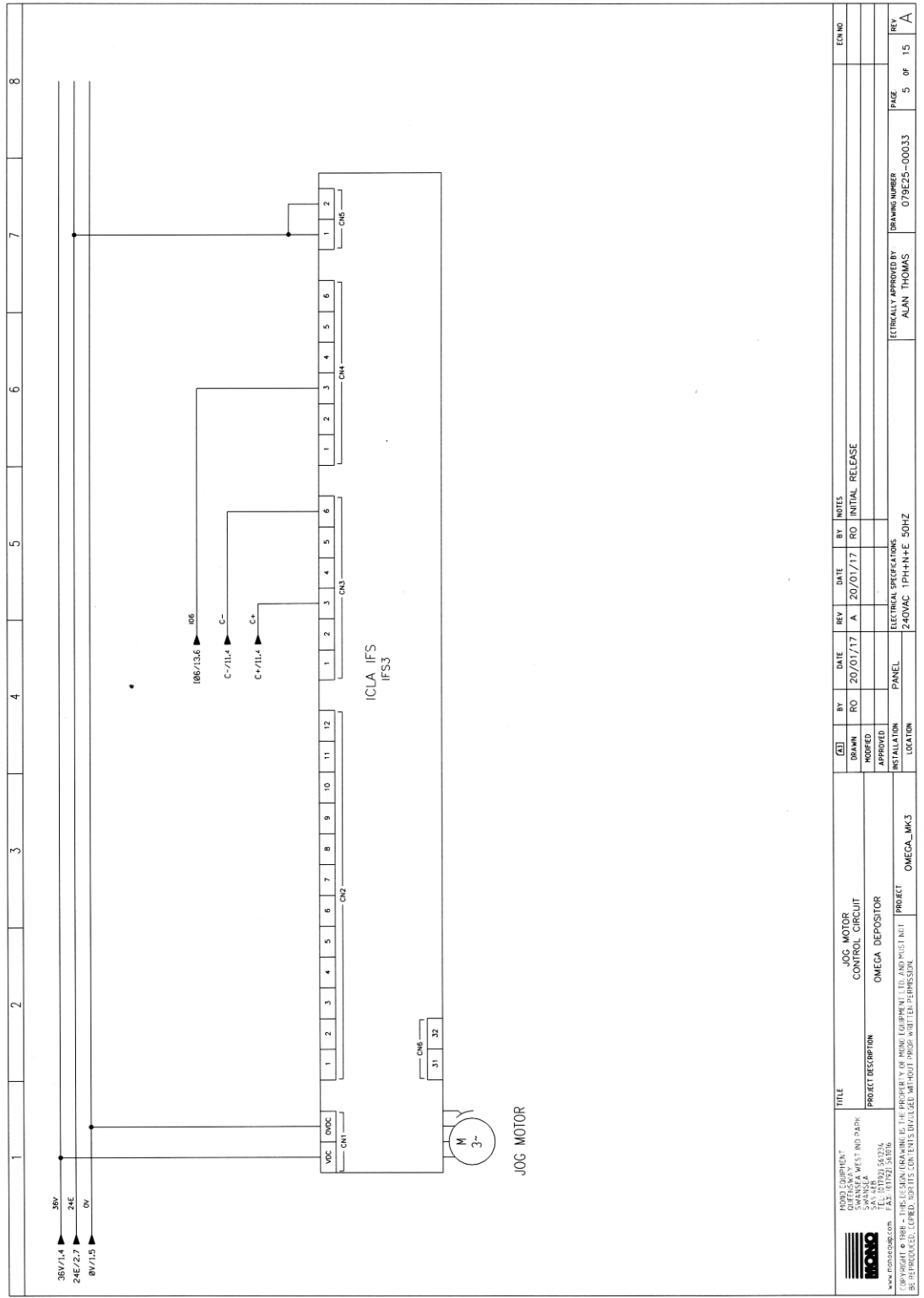
THIS OPTION IS NOT FITTED WHEN THE LARGE PUMP OPTION IS REQUIRED

DRAWING INFORMATION		DATE		REV		BY		NOTES		REV		PAGE		REV	
NO	DATE	NO	DATE	NO	DATE	NO	DATE	NO	DATE	NO	DATE	NO	DATE	NO	DATE
1	20/01/17	1	20/01/17	A	20/01/17	RO	20/01/17	RO	INITIAL	RELEASE			3	of	15
PROJECT DESCRIPTION		PROJECT		ELECTRICAL SPECIFICATIONS		LOCATION		DRAWING NUMBER		REV		PAGE		REV	
STANDARD PUMP MOTOR CONTROL CIRCUIT		OMEGA DEPOSITOR		240VAC 1PH+H+E 50HZ		OMEGA_MK3		07SE25-00031		ALAN THOMAS		3		A	
TITLE		PROJECT		ELECTRICAL SPECIFICATIONS		LOCATION		DRAWING NUMBER		REV		PAGE		REV	
STANDARD PUMP MOTOR CONTROL CIRCUIT		OMEGA DEPOSITOR		240VAC 1PH+H+E 50HZ		OMEGA_MK3		07SE25-00031		ALAN THOMAS		3		A	



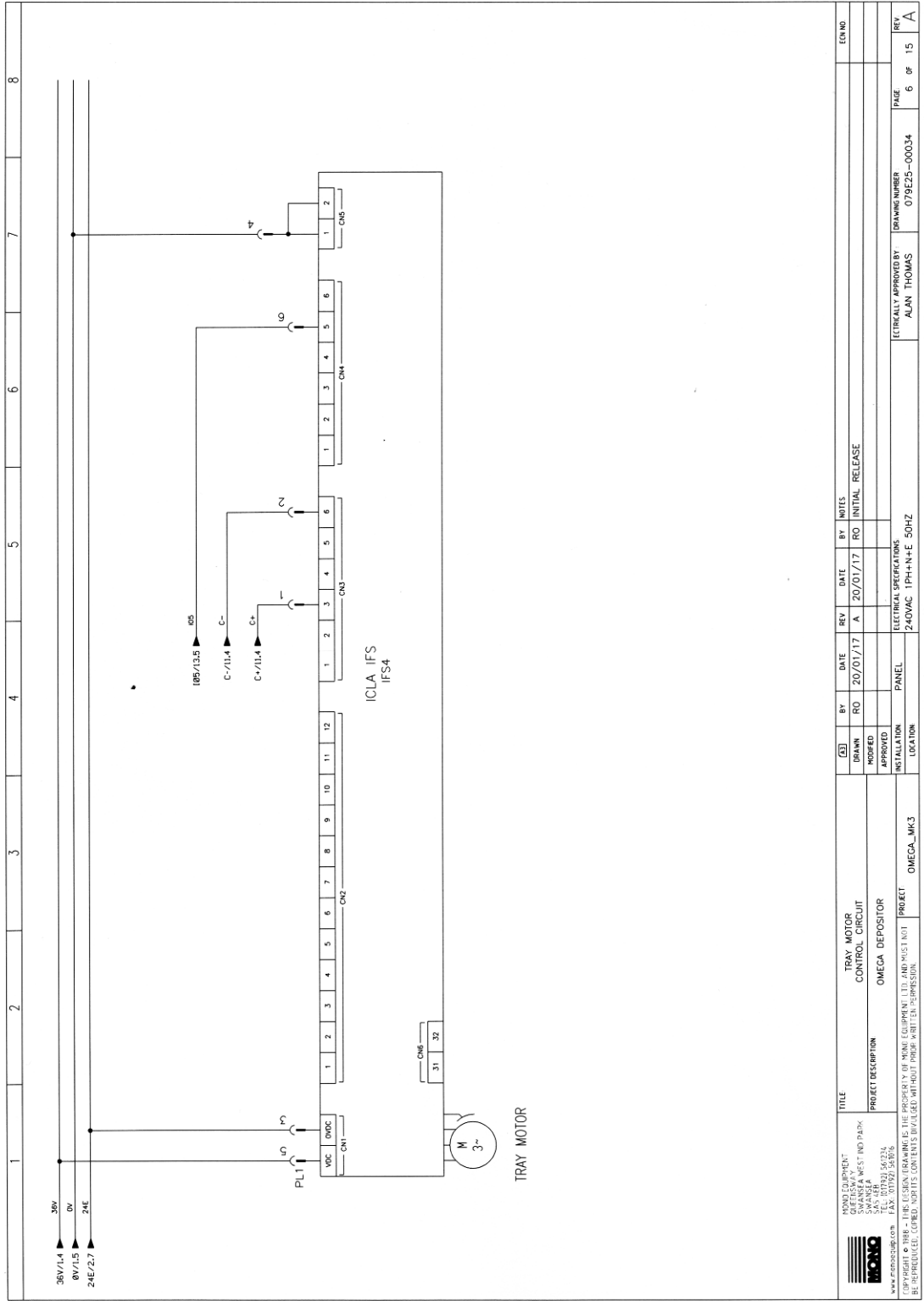
LARGE PUMP MOTOR

<p>MOND EQUIPMENT          5303 WINGRAVE ROAD          SWANSEA          WALES SA31 1AH          TEL: (01792) 561234          FAX: (01792) 348766          WWW.MONDEQUIP.COM</p>			<p>THIS OPTION IS FITTED ONLY WHEN THE LARGE PUMP OPTION IS REQUIRED</p>				<p>DATE: 20/01/17</p>		
<p>TITLE          LARGE PUMP MOTOR OPTION CONTROL CIRCUIT</p>			<p>PROJECT DESCRIPTION          OMEGA DEPOSITOR</p>			<p>DATE: 20/01/17</p>			
<p>PROJECT          OMEGA_MK3</p>			<p>INSTALLATION          PANEL</p>			<p>DATE: 20/01/17</p>			
<p>BY          ALAN THOMAS</p>			<p>APPROVED BY          ALAN THOMAS</p>			<p>DATE: 20/01/17</p>			
<p>REVISIONS          1. INITIAL RELEASE</p>			<p>NOTES          ELECTRICAL SPECIFICATIONS          240VAC 1PH+N+E 50HZ</p>			<p>DATE: 20/01/17</p>			
<p>DRAWING NUMBER          079E25-00032</p>				<p>PAGE          4 of 15</p>		<p>REV          A</p>		<p>CON NO</p>	

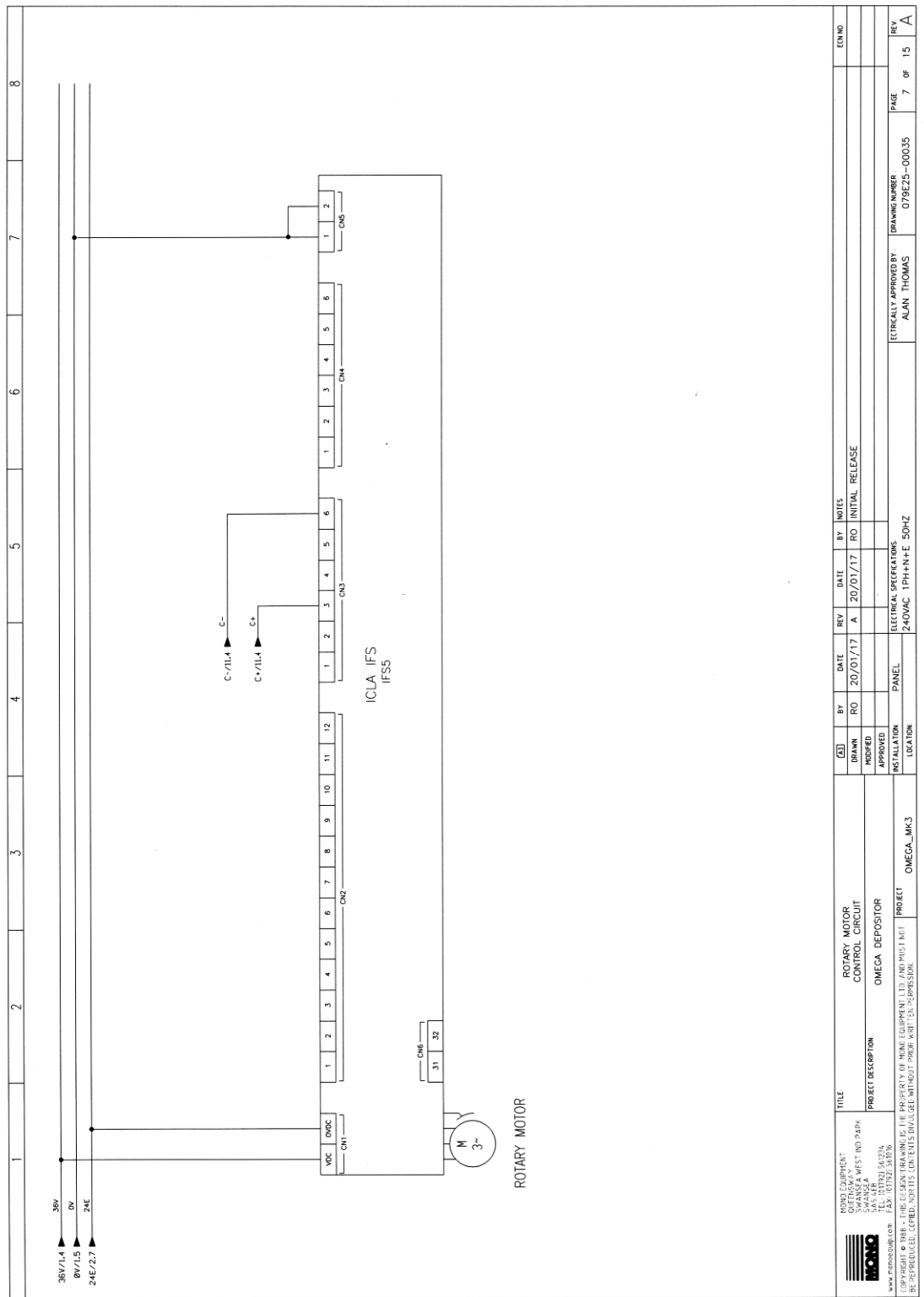


 MOJO EQUIPMENT™ 5 SWANSEA WEST IND PARK SWANSEA SALES SALES DEPT. 153, WITTENBERG RD. WILMINGTON, DE 19806 www.konigusa.com		<b>TITLE</b> JOG MOTOR CONTROL CIRCUIT		<b>DATE</b> 20/01/17		<b>REV</b> A		<b>BY</b> RO		<b>INITIALS</b> RO		<b>REVISION</b> INITIAL RELEASE		<b>ECN NO</b>	
<b>PROJECT DESCRIPTION</b> OMEGA DEPOSITOR		<b>INSTALLATION</b> PANEL		<b>ELECTRICAL SPECIFICATION</b> 240VAC 1PH50HZ 50HZ		<b>ETERNALLY APPROVED BY</b> ALAN THOMAS		<b>DRAWING NUMBER</b> 079E25-00033		<b>PAGE</b> 5 of 15		<b>REV</b> A			





TITLE				BY				DATE				REV				INITIALS				ECONO			
MONO EQUIPMENT 5050 WALKER RD. SWANSEA, MA 01903 TEL: 508/232-3673 FAX: 508/232-5886 WWW.MONO.COM				DRAWN				RO				A				RO				INITIAL RELEASE			
				PROJECT DESCRIPTION				OMEGA DEPOSITOR				PANEL				ELECTRICAL SPECIFICATIONS				ELECTRICALLY APPROVED BY			
PROJECT				OMEGA_MK3				LOCATION				240VAC 1PH-N+E 50HZ				DRAWING NUMBER				PAGE			
																079E25-00034				6 of 15			
																ALAN THOMAS				REV			
																				A			

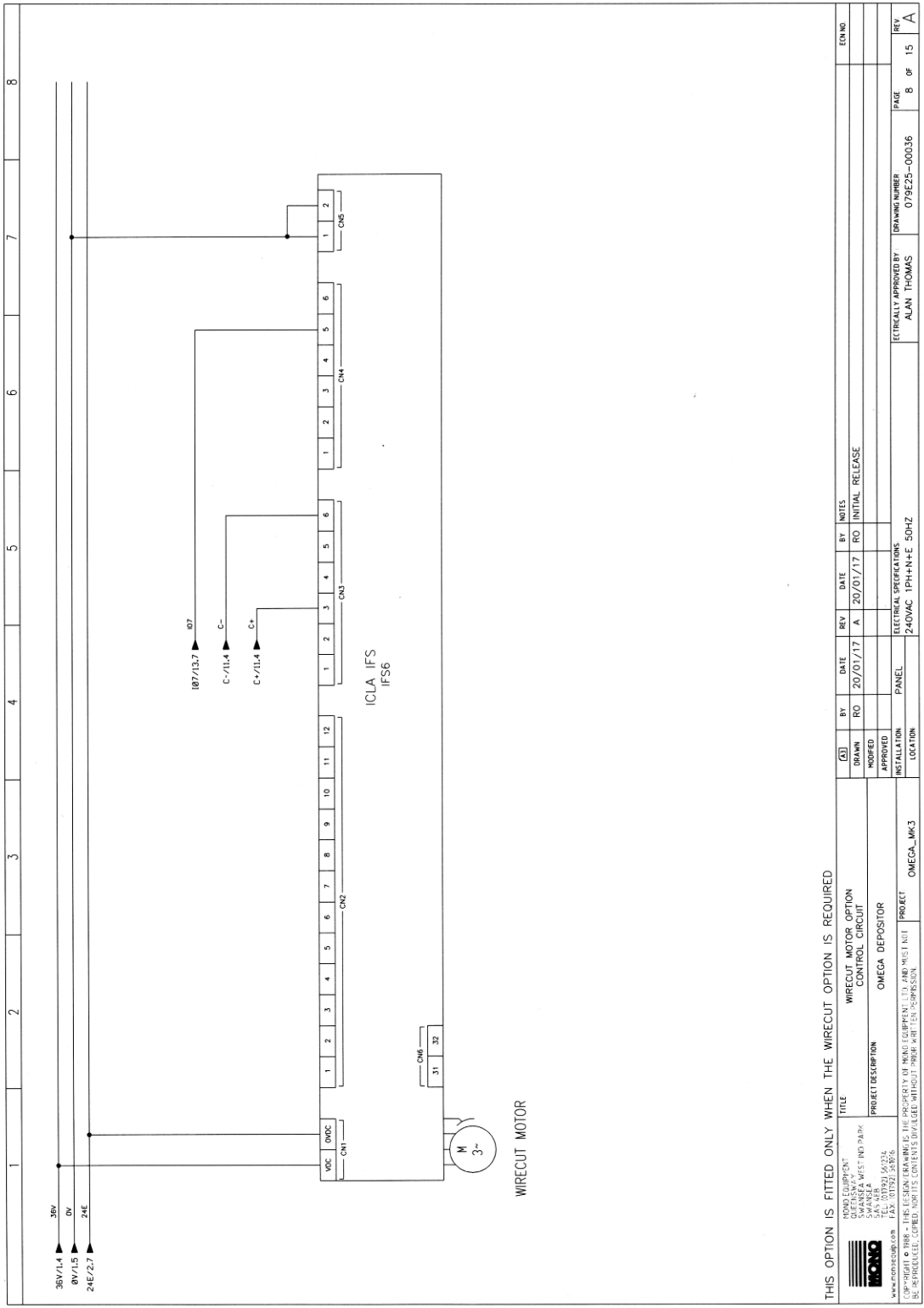


REV	DATE	BY	NOTES	REV	DATE	BY	NOTES	REV	DATE	BY	NOTES
A	20/01/17	RO	INITIAL RELEASE	A	20/01/17	RO	INITIAL RELEASE				

<p>OMEGA ELECTRICITY &amp; ELECTRONICS LTD. SHEPPARD AVENUE NORTH, WILLOWDALE, ONTARIO, CANADA</p>	<p>MOND EQUIPMENT SWANSEA WEST INDUSTRIAL PARK SWANSEA, SA4 8EP, SALES DEPT. TEL: 01792 525200 WWW.OMEGAELECTRIC.COM</p>	<p>TITLE ROTARY MOTOR CONTROL CIRCUIT</p> <p>PROJECT DESCRIPTION OMEGA DEPOSITOR</p> <p>PROJECT OMEGA_MK3</p>	<p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p>	<p>REV A</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p>	<p>REV A</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p>	<p>REV A</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p> <p>DATE 20/01/17</p> <p>BY RO</p> <p>INITIALS RO</p>
--	--	---	--	--	--	--

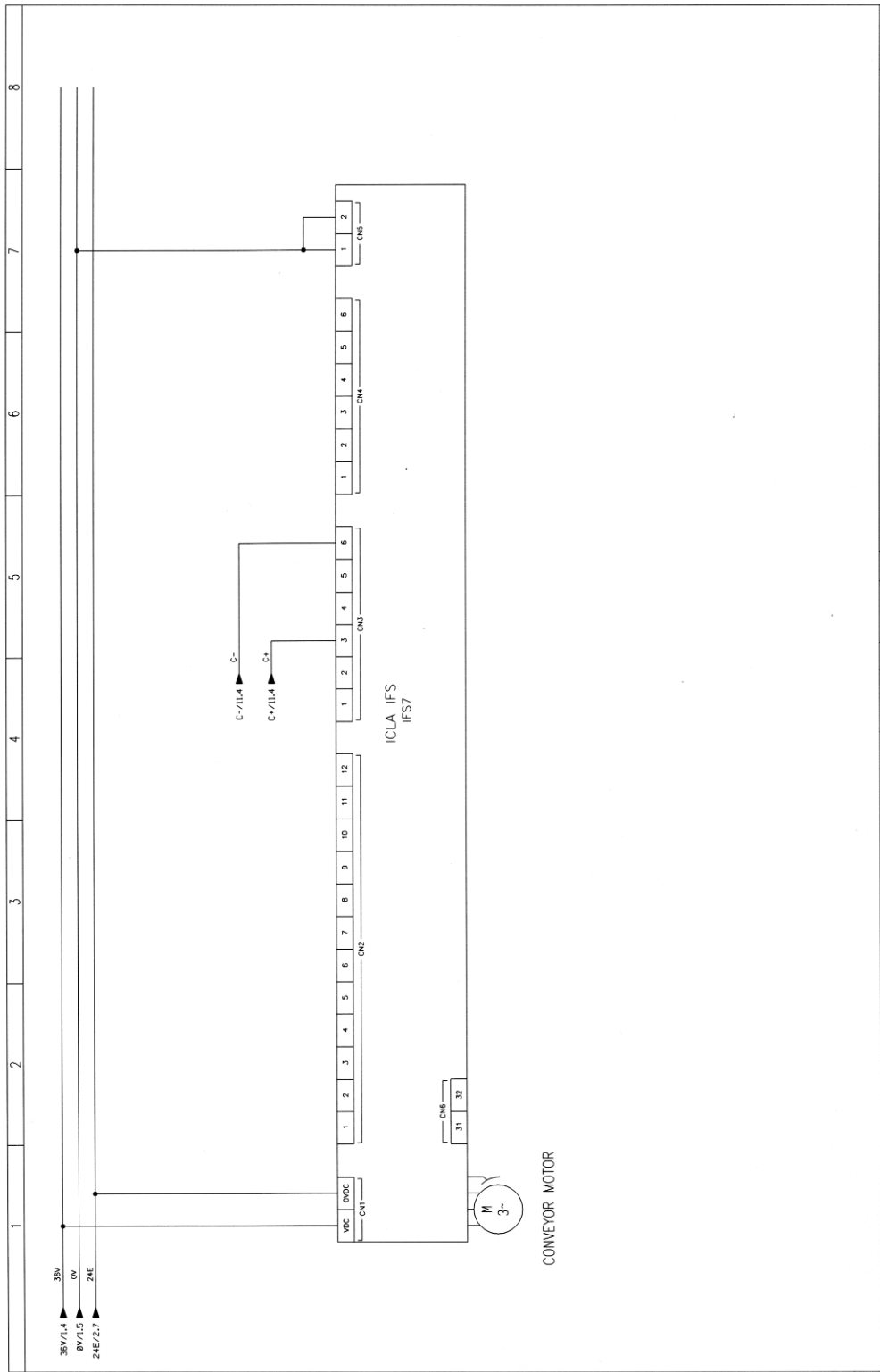
<p>WCC CHI</p>	<p>CHI</p>	<p>CHI</p>	<p>CHI</p>	<p>CHI</p>	<p>CHI</p>	<p>CHI</p>	<p>CHI</p>
--------------------	------------	------------	------------	------------	------------	------------	------------

<p>ELECTRICAL SPECIFICATION</p> <p>240VAC 1PH+PE 50HZ</p>	<p>ETRICALLY APPROVED BY ALAN THOMAS</p>	<p>DRAWING NUMBER 079E28-00035</p>	<p>PAGE 7 of 15</p>	<p>REV A</p>
---	--	--	-------------------------	------------------

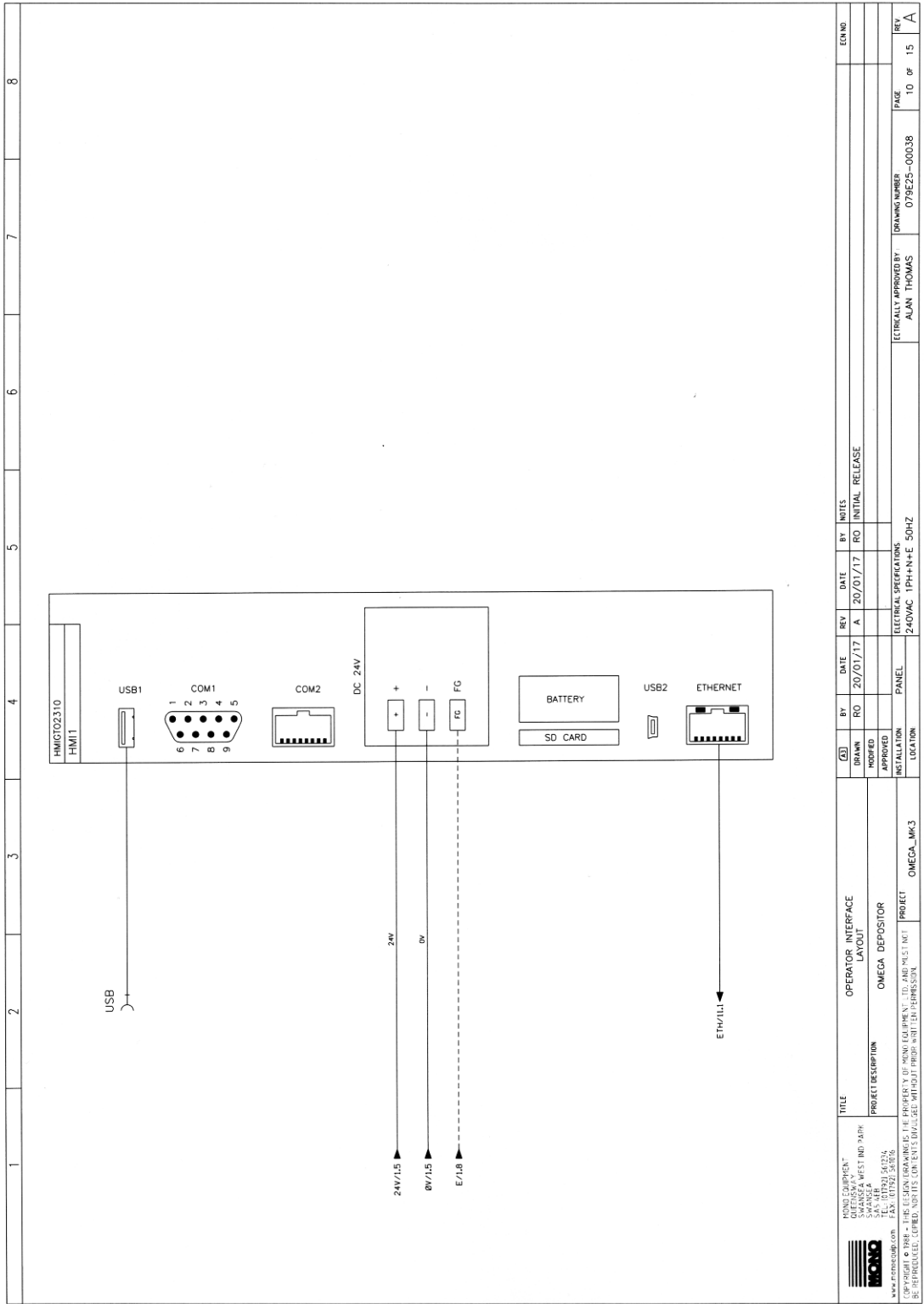


THIS OPTION IS FITTED ONLY WHEN THE WIRECUT OPTION IS REQUIRED

		<b>OMEGA</b> OMEGA TOUCH INCL WIRECUT MOTOR SWANSEA TEL: 01792 28734 FAX: 01792 28735 WWW.OMEGA.COM		<b>OMEGA DEPOSITOR</b> OMEGA TOUCH INCL WIRECUT MOTOR SWANSEA		<b>OMEGA_MW3</b> PROJECT		<b>OMEGA_MW3</b> PROJECT	
<input checked="" type="checkbox"/> DRAWN <input type="checkbox"/> MODIFIED <input type="checkbox"/> APPROVED <input type="checkbox"/> INSTALLATION	<input type="checkbox"/> BY <input type="checkbox"/> RO	<input type="checkbox"/> DATE 20/01/17	<input type="checkbox"/> REV A	<input type="checkbox"/> DATE 20/01/17	<input type="checkbox"/> BY RO	<input type="checkbox"/> INITIAL RO	<input type="checkbox"/> RELEASE	<input type="checkbox"/> DATE 20/01/17	<input type="checkbox"/> REV A
PROJECT DESCRIPTION OMEGA DEPOSITOR		WIRECUT MOTOR OPTION CONTROL CIRCUIT		ELECTRICAL SPECIFICATIONS 240VAC 1PH+N+E 50HZ		ELECTRICALLY APPROVED BY ALAN THOMAS		DRAWING NUMBER 079E25-00036	
LOCATION OMEGA_MW3		PANEL		LOCATION OMEGA_MW3		DRAWING NUMBER 079E25-00036		PAGE B of 15	

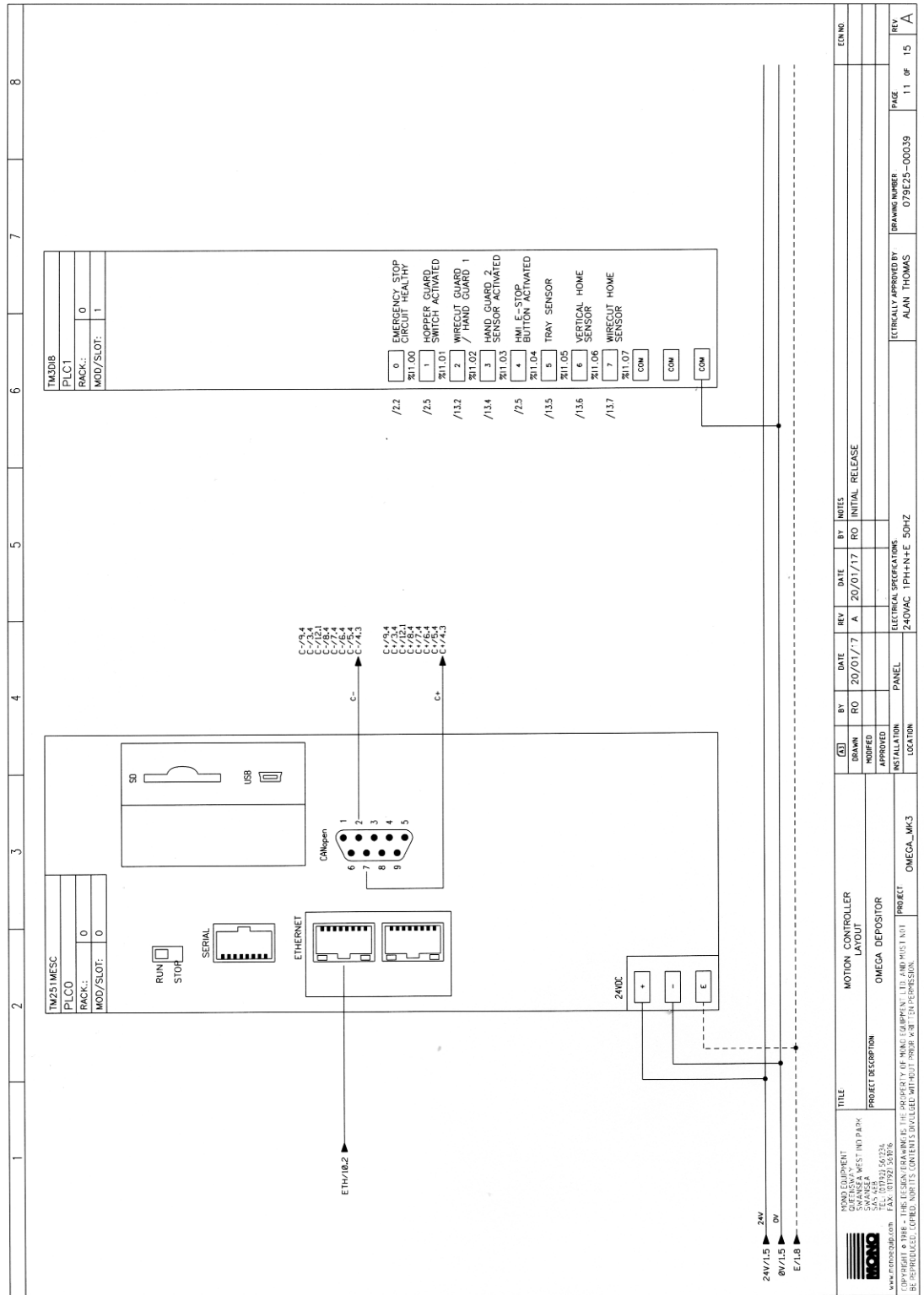


MONO EQUIPMENT		TITLE		REV		DATE		BY		NOTES		REV		DATE		BY		NOTES		REV		DATE		BY			
MONO EQUIPMENT SWANSEA WEST RD PARK SWANSEA TEL: 01792 302731 WWW.MONO.CO.UK		WIRECUT MOTOR OPTION CONTROL CIRCUIT		A		20/01/17		RO		INITIAL RELEASE		A		20/01/17		RO		INITIAL RELEASE		A		20/01/17		RO		INITIAL RELEASE	
				ELECTRICAL SPECIFICATIONS 240VAC 1PH-N+E 50HZ		A				RO				A				RO				A				RO	
PROJECT DESCRIPTION				PROJECT				LOCATION				DRAWING NUMBER				PAGE				REV							
OMEGA DEPOSITOR				OMEGA_LM3				PANEL				079E2S-00037				9				15							
ECRITICALLY APPROVED BY:				DRAWING NUMBER				PAGE				REV				A											
ALAN THOMAS				079E2S-00037				9				15				A											



1 2 3 4 5 6 7 8

 MOND EQUIPMENT OMEGA WEST IND PARK SWANSEA TEL: 01792 461724 FAX: 01792 28876 www.omega.com BE APPROVED! ECRMA, NOTICES CAN BE OBTAINED WITHOUT PRIOR WRITTEN PERMISSION	TITLE	OPERATOR INTERFACE LAYOUT	BY	DATE	REV	DATE	BY	INITIALS	ECN NO	
	PROJECT DESCRIPTION	OMEGA DEPOSITOR	DRAWN	RO	20/01/17	A	20/01/17	RO	INITIAL RELEASE	
			APPROVED							
			INSTALLATION	PANEL	ELECTRICAL SPECIFICATIONS					
			LOCATION		240VAC 1PH+N+E 50HZ					
					ELECTRICALLY APPROVED BY					
					ALAN THOMAS					
					DRAWING NUMBER					
					079E25-00038					
					PAGE					
					10 of 15					
					REV					
					A					



TM3DIB		TM25 IMESC		PLCO		PLC1	
RACK:	0	RACK:	0	RACK:	0	RACK:	0
MOD/SLOT:	1	MOD/SLOT:	0	MOD/SLOT:	0	MOD/SLOT:	1

DATE	REV	BY	INITIALS	DATE	REV	BY	INITIALS
20/01/17	A	RO		20/01/17	A	RO	

DESCRIPTION	DATE	REV	BY	INITIALS
INITIAL RELEASE	20/01/17	A	RO	

DESCRIPTION	DATE	REV	BY	INITIALS
INSTALLATION	20/01/17	A	RO	

DESCRIPTION	DATE	REV	BY	INITIALS
ELECTRICAL SPECIFICATIONS	240VAC 1PH+N+PE 50HZ			

DESCRIPTION	DATE	REV	BY	INITIALS
LOCATION	OMEGA_MK3			

TITLE	PROJECT DESCRIPTION	PROJECT
MOTION CONTROLLER LAYOUT	OMEGA DEPOSITOR	OMEGA_MK3

NO	DESCRIPTION	DATE	REV	BY	INITIALS
1	OMEGA DEPOSITOR	20/01/17	A	RO	

DESCRIPTION	DATE	REV	BY	INITIALS
PROJECT	OMEGA_MK3			

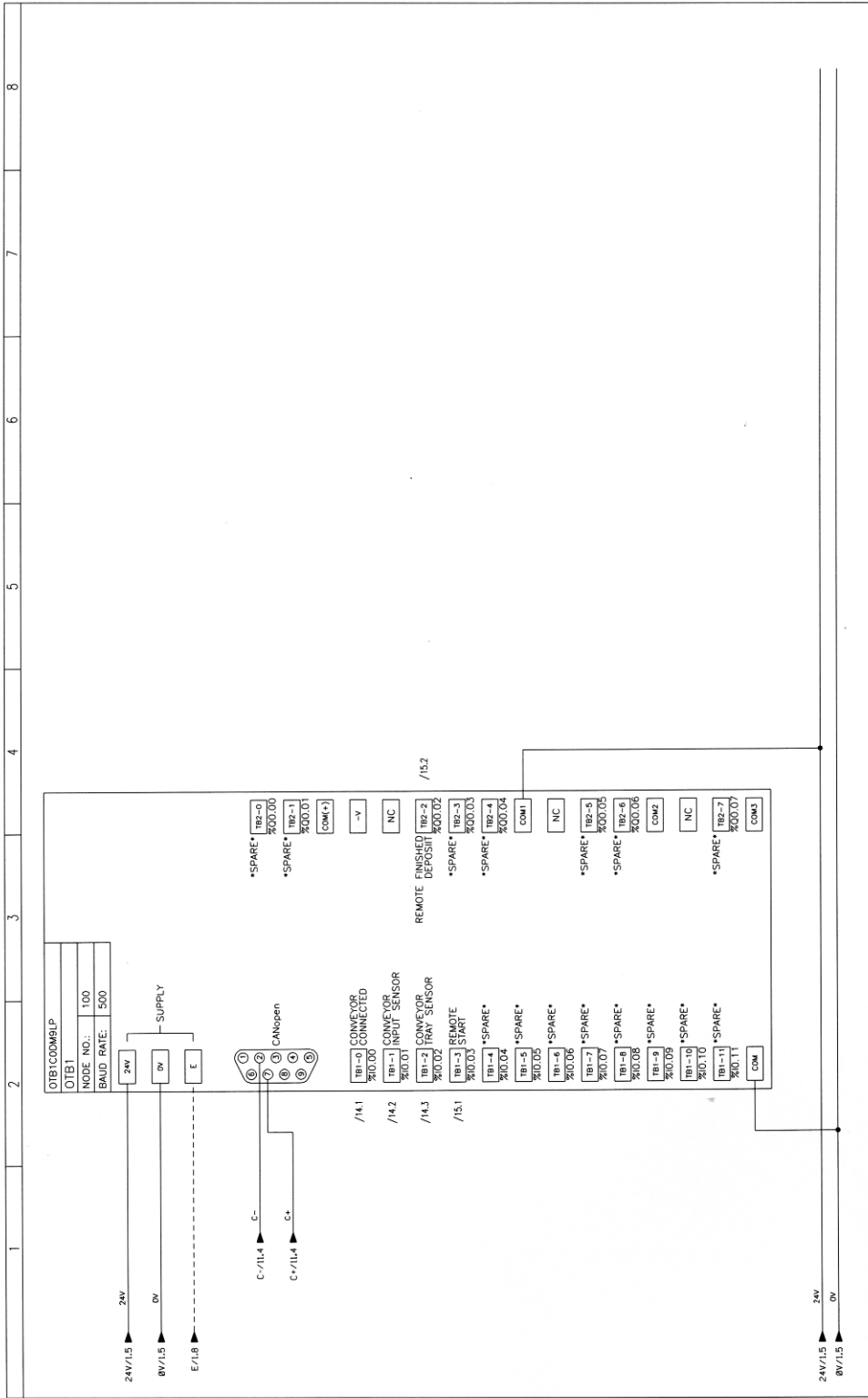
  

DESCRIPTION	DATE	REV	BY	INITIALS
ELECTRICALLY APPROVED BY	ALAN THOMAS			

DRAWING NUMBER	PAGE	REV
09L25-00039	11 of 15	A

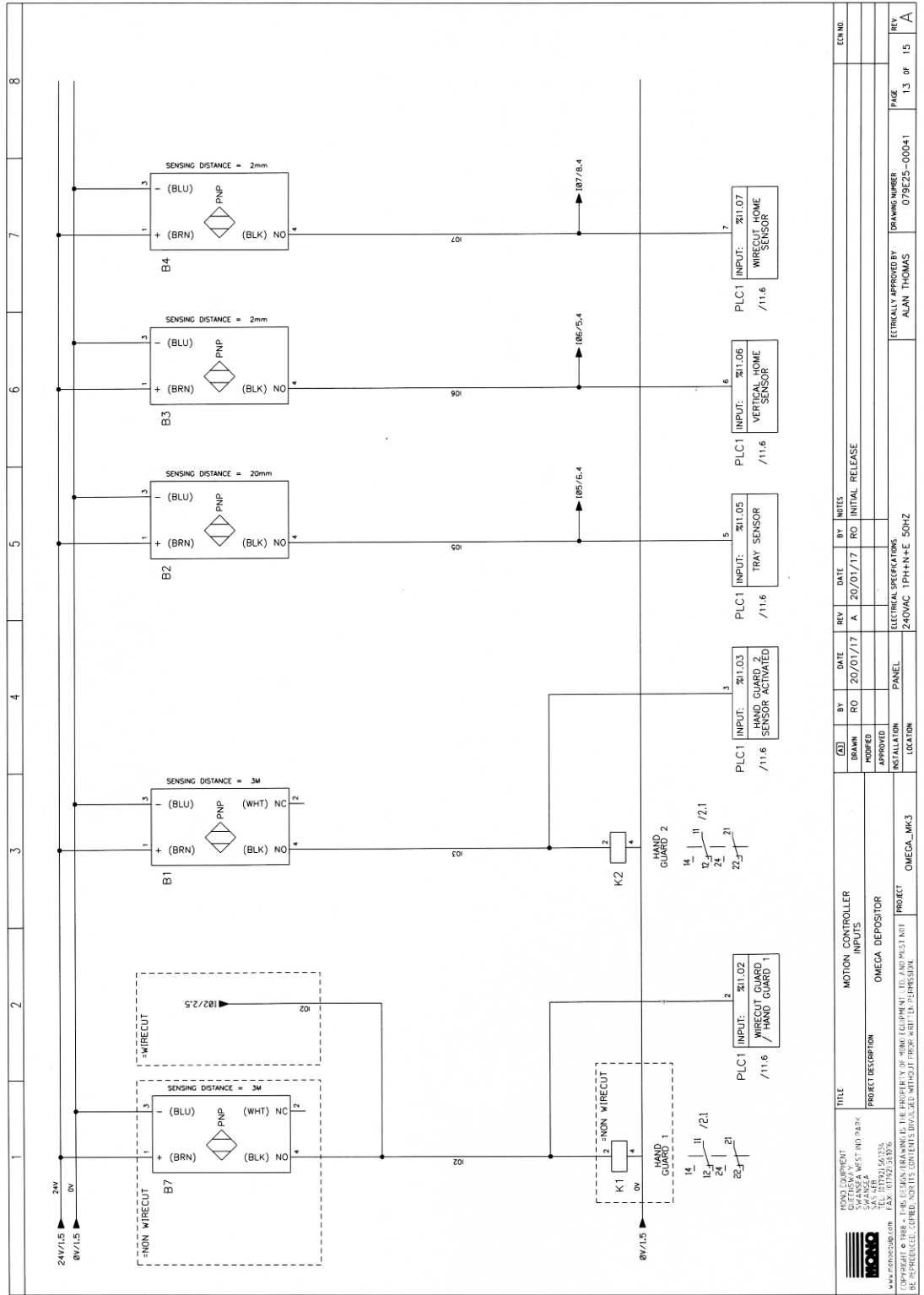


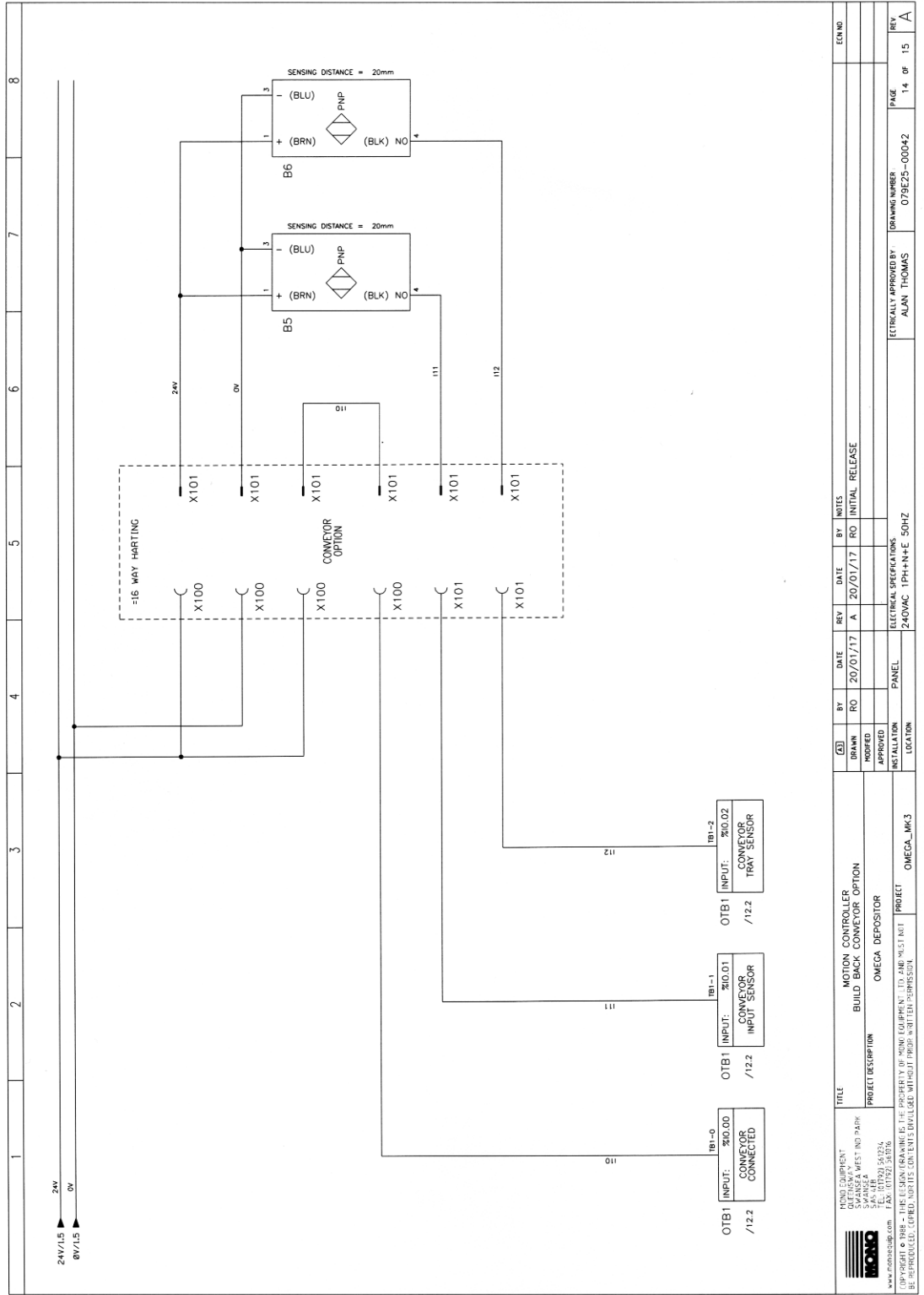


OTB1COM8PLP		OTB1		NODE NO.: 100		BAUD RATE: 500	
24V/15	24V	0V/15	0V	SUPPLY			
E/18	E						
C-/11.4	CANopen						
C+/11.4	C+						
/14.1		CONVEYOR CONNECTED		*SPARE*		TB2-0	
/14.2		CONVEYOR INPUT SENSOR		*SPARE*		TB2-1	
/14.3		CONVEYOR TRAY SENSOR		*SPARE*		TB2-2	
/15.1		REMOTE START		*SPARE*		TB2-3	
		*SPARE*		*SPARE*		TB2-4	
		*SPARE*		*SPARE*		TB2-5	
		*SPARE*		*SPARE*		TB2-6	
		*SPARE*		*SPARE*		TB2-7	
		*SPARE*		*SPARE*		TB2-8	
		*SPARE*		*SPARE*		TB2-9	
		*SPARE*		*SPARE*		TB2-10	
		*SPARE*		*SPARE*		TB2-11	
COM1				COM1			
		NC		NC			
		*SPARE*		*SPARE*		COM2	
		*SPARE*		*SPARE*		COM2	
		NC		NC			
		*SPARE*		*SPARE*		COM2	
		*SPARE*		*SPARE*		COM2	
		NC		NC			
		*SPARE*		*SPARE*		COM2	
		*SPARE*		*SPARE*		COM2	

THIS OPTION IS FITTED ONLY WHEN EITHER THE CONVEYOR OR REMOTE CONTROL OPTIONS ARE REQUIRED

TITLE		REMOTE INPUT/OUTPUT MODULE OPTION		DATE		REV		BY		NOTES	
PROJECT DESCRIPTION		OMEGA DEPOSITOR		20/01/17		A		RO		INITIAL RELEASE	
PROJECT		OMEGA_MK3		LOCATION		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		240VAC 1PH+N+E 50HZ		079E23-00040		12 of 15	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	
OMEGA DEPOSITOR		OMEGA_MK3		PANEL		ELECTRICAL SPECIFICATIONS		DRAWING NUMBER		PAGE	





8

7

6

5

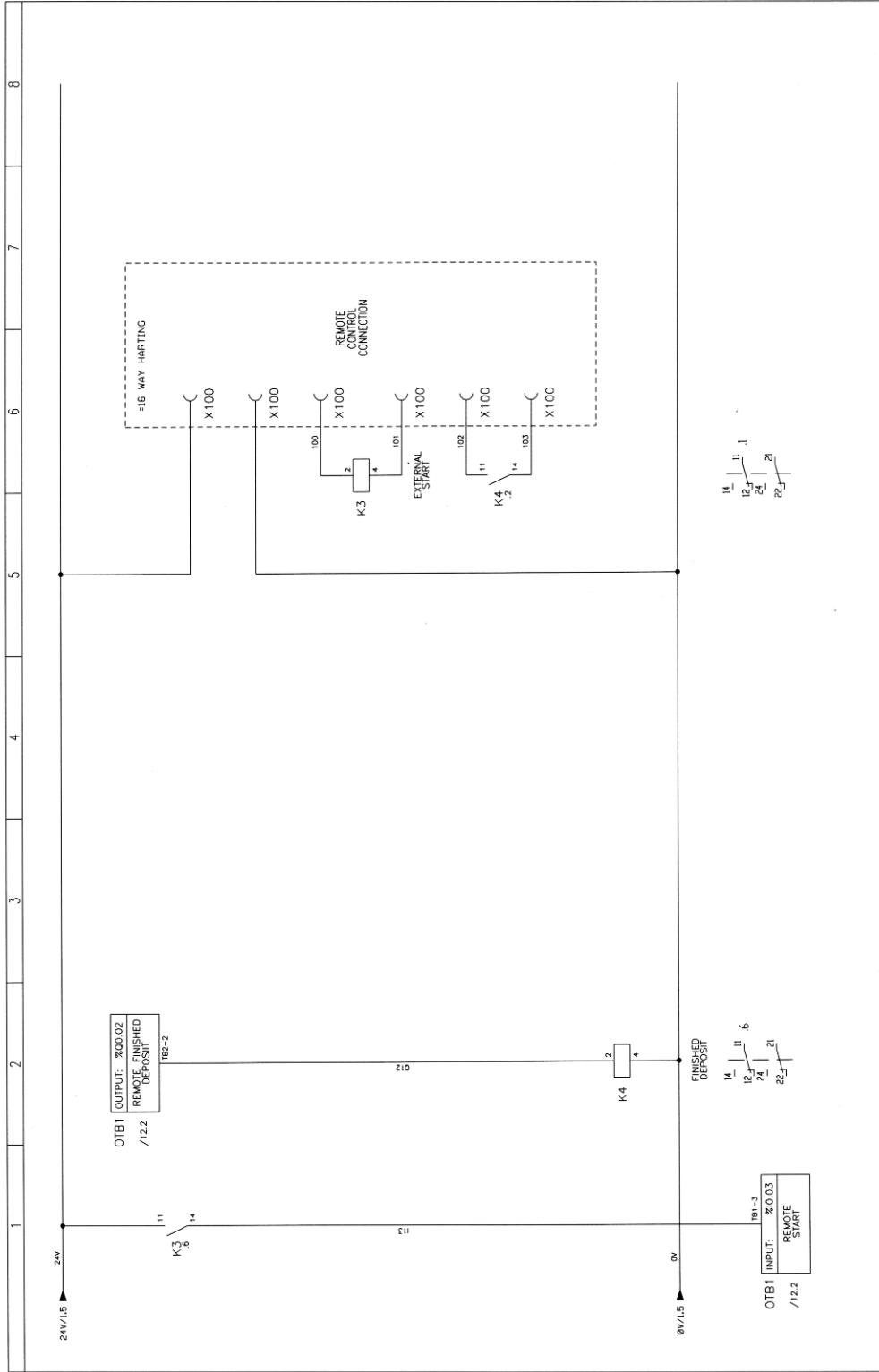
4

3

2

1

MOTION CONTROLLER BUILD BACK CONVEYOR OPTION		DATE	REV	BY	NOTES
20/01/17	A	20/01/17	RO	ALAN THOMAS	INITIAL RELEASE
PROJECT DESCRIPTION: OMEGA DEPOSITOR		DATE	REV	BY	NOTES
PROJECT: OMEGA_MK3					
TITLE: OMEGA DEPOSITOR PROJECT DESCRIPTION: OMEGA DEPOSITOR PROJECT: OMEGA_MK3					
Mوند EQUIPMENT OMEGA WEST IND PARK 5 MARBLE A FAH (0172) 34724 TEL (0172) 34726 FAX (0172) 34726 WWW.OMEGASIP.COM					
ELECTRICAL SPECIFICATIONS 240VAC 1PH+N+E 50HZ					
ETORICALLY APPROVED BY: ALAN THOMAS					
DRAWING NUMBER: 079E25-00042					
PAGE: 14 OF 15					
REV: A					



DRAWING NUMBER		PAGE		REV	
079E25-00043		15 of 15		A	
ELECTRICALLY APPROVED BY: ALAN THOMAS					
ELECTRICAL SPECIFICATIONS: 240VAC 1PH1N1E 50HZ					
LOCATION: OMEGA_MK3					
PROJECT: OMEGA DEPOSITOR					
PROJECT DESCRIPTION: MOTION CONTROLLER REMOTE CONTROL OPTION					
TITLE: MOTION CONTROLLER REMOTE CONTROL OPTION					
HONG COMPANY SWANSEA WEST IND PARK SWANSEA SA, WA TEL: (0772) 542111 WWW.HONGCOMP.COM					
COPYRIGHT © HONG - THIS DESIGN IS THE PROPERTY OF HONG COMPANY LTD. AND MUST NOT BE REPRODUCED, COPIED, ADAPTED OR ESTABLISHED WITHOUT PRIOR WRITTEN PERMISSION.					
DATE	REV	BY	INITIALS	DATE	REV
20/01/17	A	RO	INITIAL RELEASE	20/01/17	A
INSTALLATION: _____ APPROVED: _____ MODIFIED: _____ DRAWN: _____					
ECONO					

## **OMEGA TLCC/LMC TO M251 CONVERSION KITS**

**(Converts older machines to latest specification controller and screen)**

### **M079-KSE009 OMEGA DEPOSITOR TLCC TO M251 CONVERSION KIT**

Comprises of :

- 078-25-00051 CONVERSION BRACKET & FIXINGS (manufactured)
  - M079-KSE006 TLCC TO M251 CONVERSION (HAC Ref: H300-001-0063)
    - H200-004-038 Omega depositor MK3 M251 controller
    - H200-005-011 Omega depositor MK3 HMI
    - H200-007-010 Ethernet cat 6 patch cable 1.5m
    - H200-100-060 Omega TLCC to M251 IO and power loom
    - H200-007-011 Omega TLCC to M251 canopen comms cable.
    - H100-007-012 TM3 expansion module 8 input 24V DC
    - H200-003-073 USB stick blank FAT32
    - TS35 DIN Rail for mounting M251 (TLCC 90mm)
- Also to include instructions - M251 Conversion procedure (TLCC)

### **M079-KSE007 OMEGA DEPOSITOR LMC (GT) TO M251 CONVERSION KIT**

HAC Ref: H300-001-0064

Comprises of :

- H200-004-038 Omega depositor MK3 M251 controller
  - H200-005-011 Omega depositor MK3 HMI
  - H200-007-010 Ethernet cat 6 patch cable 1.5m
  - H200-100-061 Omega LMC to M251 IO and power loom
  - H200-007-012 Omega LMC to M251 canopen comms cable.
  - H100-007-012 TM3 expansion module 8 input 24V DC
  - H200-003-073 USB stick blank FAT32
  - TS35 DIN Rail for mounting M251 (LMC 410mm)
- Also to include instructions - M251 Conversion procedure (LMC)

### **M079-KSE008 OMEGA DEPOSITOR LMC (GTO) TO M251 CONVERSION KIT**

HAC Ref: H300-001-0065

Comprises of :

- H200-004-038 Omega depositor MK3 M251 controller
  - H200-003-064 Omega depositor MK3 HMI USB stick 4.3.0.0.A
  - H200-007-010 Ethernet cat 6 patch cable 1.5m
  - H200-100-061 Omega LMC to M251 IO and power loom
  - H200-007-012 Omega LMC to M251 canopen comms cable.
  - H100-007-012 TM3 expansion module 8 input 24V DC
  - H200-003-073 USB stick blank FAT32
  - TS35 DIN Rail for mounting M251 (LMC 410mm)
- Also to include instructions - M251 Conversion procedure (LMC)

# TLCC to M251 Conversion Procedure



**ONLY COMPETENT PERSONS TRAINED IN ELECTRICAL MAINTENANCE SHOULD ATTEMPT TO CARRY OUT THIS PROCEDURE. FAILURE TO OBSERVE SAFE WORKING PRACTICES AND FOLLOW THE INSTRUCTIONS IN THIS PROCEDURE COULD LEAD TO SERIOUS INJURY OR DEATH.**

**YOU MUST ISOLATE THE POWER SUPPLY BEFORE PROCEEDING.**

**YOU MUST WAIT FOR AT LEAST 10 MINUTES AFTER ISOLATION OF THE POWER SUPPLY BEFORE WORKING ON THE MACHINE.**

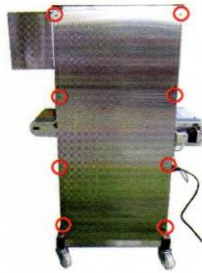


## REMOVE TLCC MOTION CONTROLLER AND WIRING

**A**

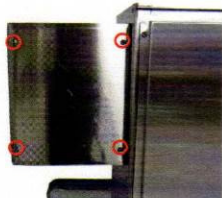
Follow the steps below to update the remove the TLCC motion controller and associated wiring :-

**1**



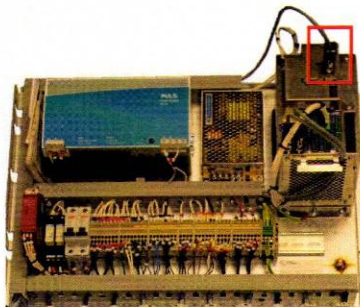
Remove the 8 screws securing the main enclosure cover to gain access to the electrical control panel.

**2**



Remove the 4 screws securing the HMI enclosure cover to gain access to the rear of the HMI.

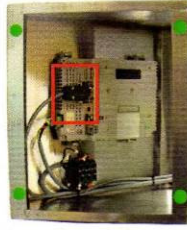
**3**



Remove the 'D' connector from the TLCC using a small screwdriver.

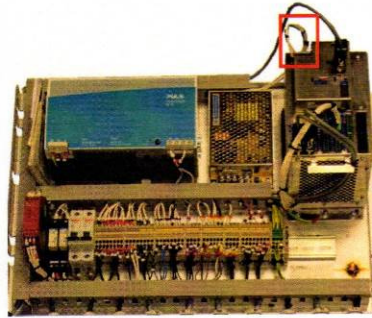


4



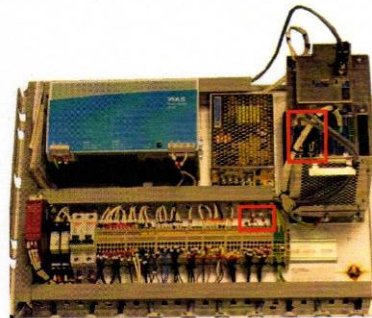
Remove the 'D' connector from the HMI using a small screwdriver.

5



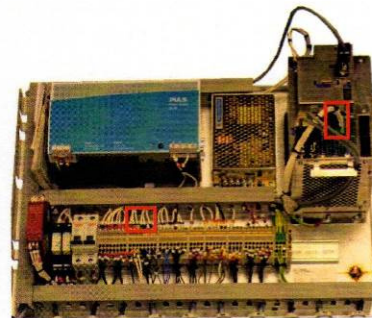
Remove wires to the power supply of the TLCC using a small screwdriver.

6



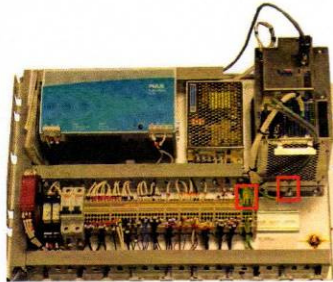
Remove the 2x 'D' connectors from the TLCC using a small screwdriver. Remove the trunking lids. Trace the wires back to the terminals (C1+ / C1- / C2+ / C2-) and remove using a small screwdriver.

7



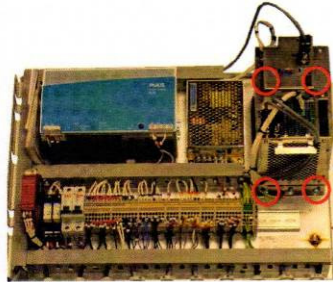
Remove the I/O connector from the TLCC (pull to remove). Trace the wires back to the terminals (I02 to I08) and remove using a small screwdriver. Trace the wire back to the emergency stop relay (I01) and remove with a small screwdriver.

8



Remove the earth wire from the TLCC using an M8 spanner/socket. Trace the wire back to the terminals and remove using a small screwdriver.

9

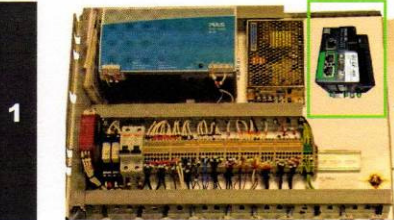


Remove 4x screws using a posidrive screwdriver and remove TLCC motion controller.

## INSTALL M251 MOTION CONTROLLER AND WIRING

**B**

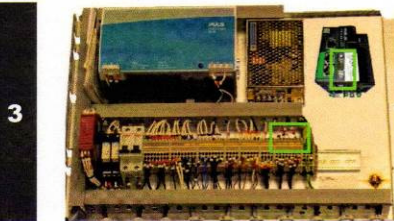
Follow the steps below to install the M251 motion controller and associated wiring :-



Fix the M251 to the control panel using the fixing kit supplied.



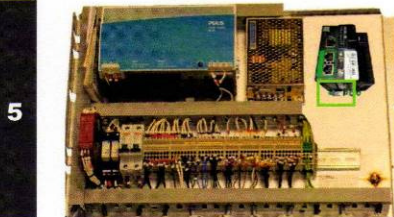
Take the CANOpen comms cable from the conversion kit.



Connect the CAN cable to the port at the top of the M251. Connect the wires at the other end of this cable to the terminals with the corresponding wire numbers (to the same location as the ones previously removed)



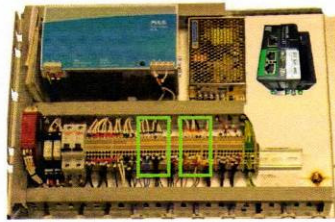
Take the IO and power loom from the conversion kit.



Connect the power supply plug to the M251 (connector at bottom).

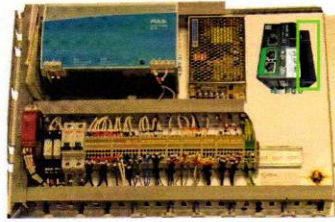


6



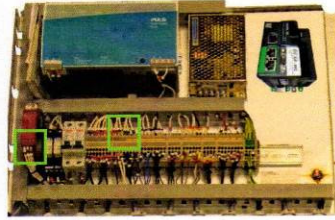
Connect the wires at the other end of the power cable to the terminals with the corresponding wire numbers (to the same location as the ones previously removed).

7



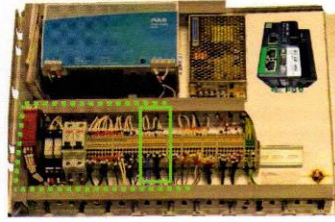
Connect the IO cable plug to the M251 expansion module at the right.

8



Connect the wires at the other end of the IO cable to the terminals with the corresponding wire numbers (to the same location as the ones previously removed) for wires I02 to I08. Connect I01 to the emergency stop relay connection point 14.

9



Connect the wire marked 0V to the terminals with the corresponding wire numbers. You will have to find a spare/unused terminal on the terminal rails, this may mean routing the cable to the bottom of the terminals.

10

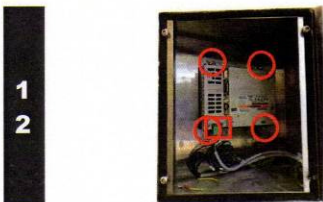


Remove the Modbus cable from the COM1 connector on the HMI by using a small screw driver to loosen the fastening screws and then pulling to release.

This cable will no longer be used and can be completely removed.



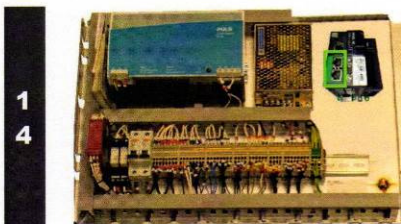
Unplug the HMI power cable and remove the old HMI by loosening and removing the 4x retaining clips with a small posidrive/flat head screwdriver. Then push the HMI out of the cut out.



Fit the new HMI (HMIGTO3210) using the 4x retaining clips supplied in the box with a small posidrive/flat head screwdriver. Then plug in the power connector.



Take the HMI cable from the conversion kit.



Connect the HMI cable to one of the connectors marked ETHERNET. Ensure that the cable is pushed in firmly, you should hear a "click".

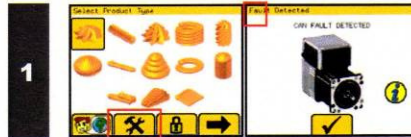


Connect the HMI cable to the connector marked ETHERNET. Ensure that the cable is pushed in firmly, you should hear a "click".

## CONFIGURE MACHINE FOR USE

**C**

Follow the steps below to configure the machine to recognise the connected hardware and to set factory defaults :-



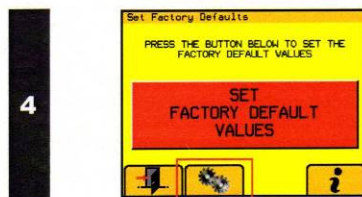
From the Select Product OR Fault page activate the tools password entry (Hidden button at top left of fault page) and type in **01792561234**



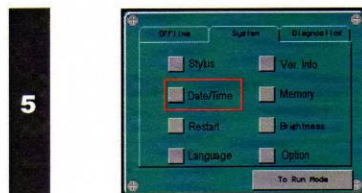
Select the options installed on your machine. Press the exit button.



From the Select Product OR Fault page activate the tools password entry (Hidden button at top left of fault page) and type in **01554777460**



Press the **SET FACTORY DEFAULTS BUTTON**. Then press The **COGS** Button to enter the System Menu.



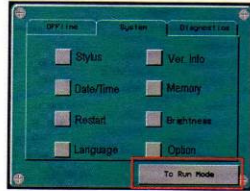
Select the **DATE/TIME** option to enter the date and time setting page.



Set the Date and Time to the correct settings and press **OK**.

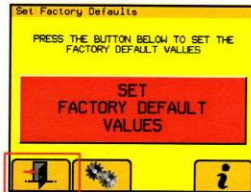


7



Press the **TO RUN MODE** button to return to the set factory defaults page.

8



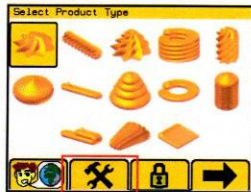
Press the **EXIT** button to return to the main menu.

**CYCLE POWER TO THE MACHINE BEFORE CONTINUING**

**CHECK I/O FUNCTIONALITY** **D**

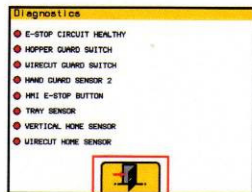
Follow the steps below to verify that the wiring has been completed correctly and that the I/O to the M251 is correct :-

1



From the Select Product page activate the tools password entry and type in **2808**

2



Test that **ALL** inputs are working correctly using the diagnostics page.

Inputs are shown as **RED** for **OFF** and **GREEN** for **ON**.

The E-Stop circuit healthy will switch if any one of the safety devices is switched (e-stop button / hand guard sensor / hopper guard)

To activate the tray / vertical / wirecut sensors you will need to place a metallic object in front of the sensor.

Press the **EXIT** button when all inputs are verified OK.



**SET MOTOR PARAMETERS (WHERE REQUIRED)**

**E**

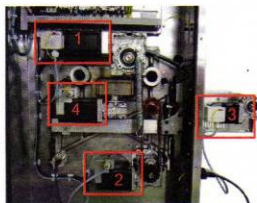


**YOU MUST ISOLATE THE POWER SUPPLY BEFORE PROCEEDING.  
YOU MUST WAIT FOR AT LEAST 10 MINUTES AFTER ISOLATION OF THE  
POWER SUPPLY BEFORE WORKING ON THE MACHINE.**



If the machine was previously running with a TLCC software version of v1.0, v1.1, v1.2 or v1.3 then the motor configuration will need to be updated in order for the machine to function :-

**1**



Identify the motors present in the rear of the machine.

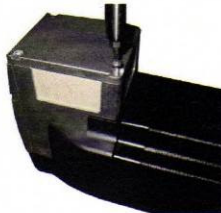
- 1 – Pump Motor
- 2 – Jog Motor
- 3 – Tray Motor
- 4 – Rotary Motor

**2**



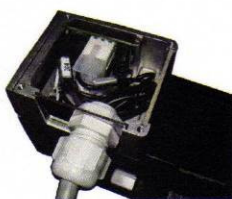
To access the tray motor remove the cover plate. There are 2 screws on the top and 2 screws on the bottom

**3**



Locate the motor control box for each motor and remove the 4 screws to gain access (tamper proof screws).

**4**



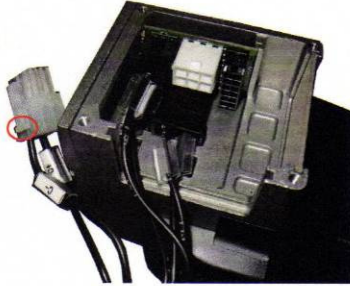
Remove the motor control box lid.

5



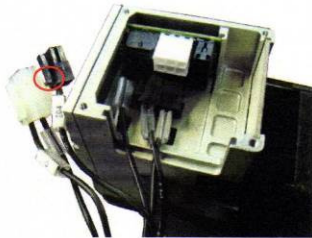
Slide the cable gland plate from the motor housing to gain access to the connectors.

6



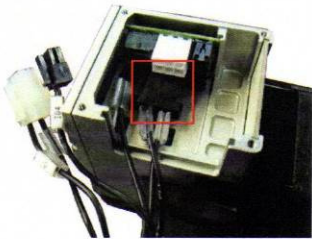
Carefully remove the CAN connector, press the locking pin to release and pull to remove.

7



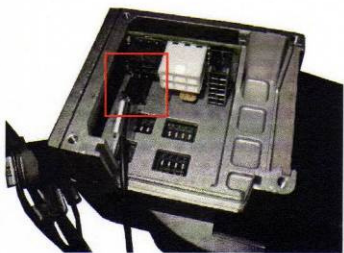
Carefully remove the I/O connector, press the locking pin to release and pull to remove.

8



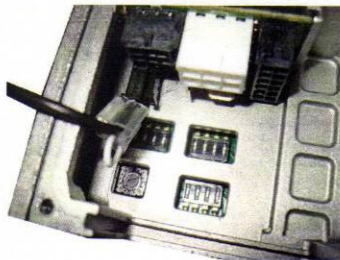
Carefully remove the POWER connector, pull to remove (long nosed pliers can be used).

9



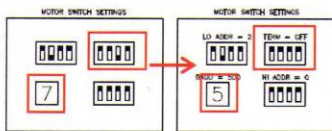
Do **NOT** remove the STOP connector, this cable can be moved out of the way to gain access to the switches.

1  
0



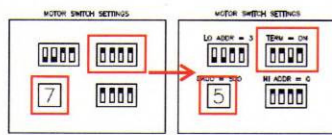
Using a small screwdriver adjust the settings of the switches and rotary dial as per the motor configurations below.

1  
1



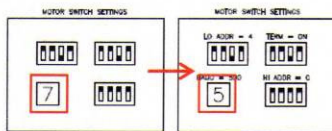
**Pump Motor (Standard)**  
Set the rotary dial to 5 and the DIP switches to the settings shown.

1  
2



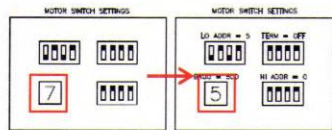
**Jog Motor**  
Set the rotary dial to 5 and the DIP switches to the settings shown.

1  
3



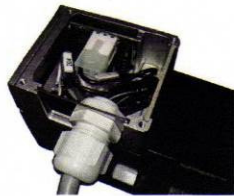
**Tray Motor**  
Set the rotary dial to 5 (as shown)

1  
4



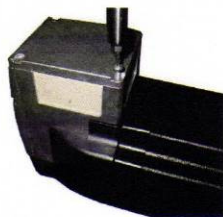
**Rotary Motor**  
Set the rotary dial to 5 (as shown)

1  
5



Re-fit all the motor wiring connectors (in reverse order to removal) and fit the gland plate in place.

1  
6



Re-fit the motor control box lid for each motor (ensure that the earth cable is connected).



# LMC20 to M251 Conversion Procedure



**ONLY COMPETENT PERSONS TRAINED IN ELECTRICAL MAINTENANCE SHOULD ATTEMPT TO CARRY OUT THIS PROCEDURE. FAILURE TO OBSERVE SAFE WORKING PRACTICES AND FOLLOW THE INSTRUCTIONS IN THIS PROCEDURE COULD LEAD TO SERIOUS INJURY OR DEATH.**

**YOU MUST ISOLATE THE POWER SUPPLY BEFORE PROCEEDING.**

**YOU MUST WAIT FOR AT LEAST 10 MINUTES AFTER ISOLATION OF THE POWER SUPPLY BEFORE WORKING ON THE MACHINE.**

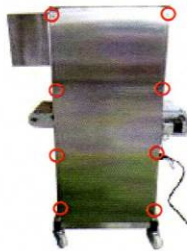


## REMOVE LMC20 MOTION CONTROLLER AND WIRING

**A**

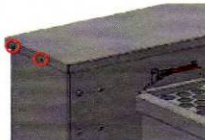
Follow the steps below to update the remove the LMC20 motion controller and associated wiring :-

**1**



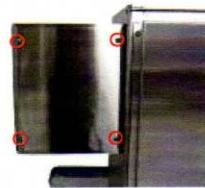
Remove the 8 screws securing the main enclosure cover to gain access to the electrical control panel.

**2**

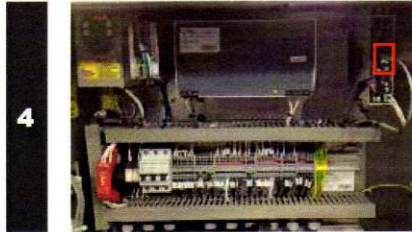


Remove the 4 screws securing the main enclosure lid (2 on each side) using 1 4mm allen key and 10mm spanner/socket to gain access to the electrical control panel. To remove the lid lift the lid at the front and slide to the rear then lift to remove.

**3**



Remove the 4 screws securing the HMI enclosure cover to gain access to the rear of the HMI.

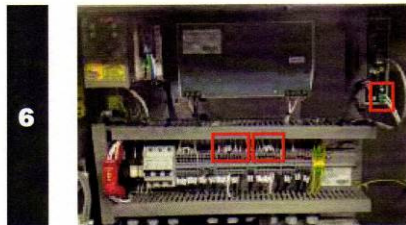


Remove the Modbus cable from the Modbus connector on the LMC20 by pressing the small tab on the connector and pulling.



Remove the Modbus cable from the RS485 connector on the HMI by pressing the small tab on the connector and pulling.

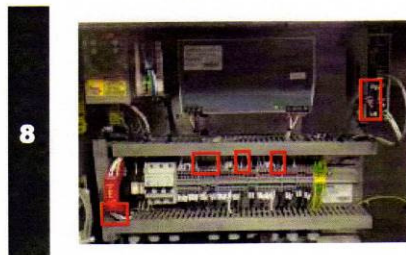
This cable will no longer be used and can be completely removed.



Remove the wires to the power supply of the LMC20 by pulling the green connector. Remove the trunking lids. Trace the wires back to the terminals (0V / 24V) and remove using a small screwdriver.



Remove the 'D' connector from the bottom of the LMC20 by pulling the connector. Trace the wires back to the terminals (C+ / C-) and remove using a small screwdriver.



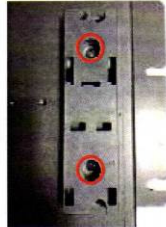
Remove the I/O connector from the LMC20 by releasing the retaining clips (top and bottom) and pulling the cable. Trace the wires back to the terminals (I01 to I07, 0V, 24V) and remove using a small screwdriver. Trace the wire back to the emergency stop relay (I00) and remove with a small screwdriver.

9



Unscrew the LMC20 from its mounting bracket using a posidrive screwdriver (you will need to access from the top of the machine). Then pull the LMC20 forward from the top, and then lift to remove from the mounting bracket.

10



Remove 2x screws using a posidrive screwdriver and remove LMC20 mounting bracket.

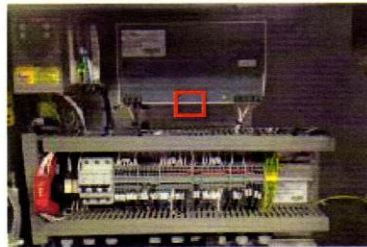


## INSTALL M251 MOTION CONTROLLER AND WIRING

**B**

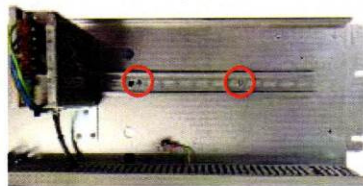
Follow the steps below to install the M251 motion controller and associated wiring :-

**1**



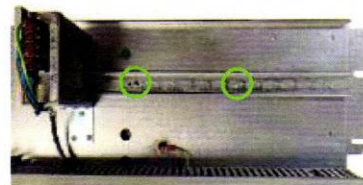
Release the 36 Volt power supply from the DIN rail by using a large flat head screwdriver to pull down on the retaining clip. Lift the power supply off the DIN rail.

**2**



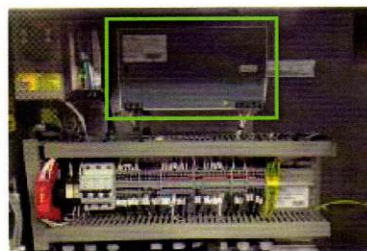
Remove the 2x DIN rail screws using a posidrive screwdriver and remove the DIN rail.

**3**



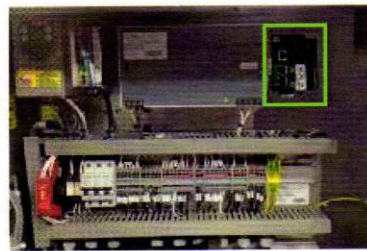
Fix the extended DIN rail in place using the 2x screws.

**4**



Fix the 36 Volt power supply onto the DIN rail – ensure it is mounted securely.

**5**



Fix the M251 to the DIN rail – ensure that the 3x retaining clips are in the out position before offering up to the DIN rail, then use a screwdriver to push the 3x retaining clips in – ensure it is mounted securely.

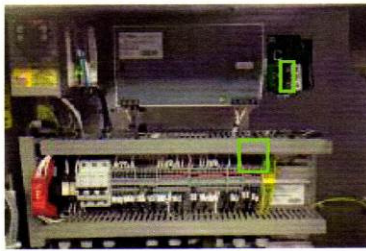
**6**



Take the CANOpen comms cable from the conversion kit.



7



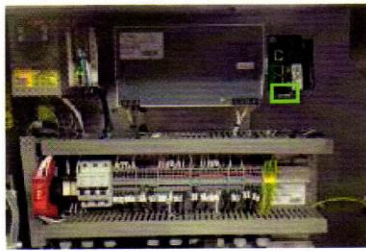
Connect the CAN cable to the port at the top of the M251. Connect the wires at the other end of this cable to the terminals with the corresponding wire numbers (to the same location as the ones previously removed)

8



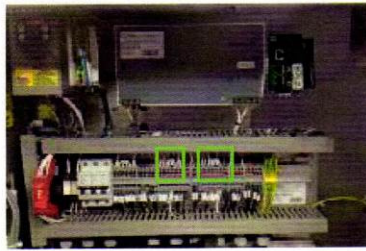
Take the IO and power loom from the conversion kit.

9



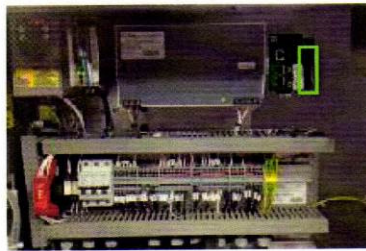
Connect the power supply plug to the M251 (connector at bottom). Note the retaining shroud hinges up to enable the connector to be inserted, insert then hinge the shroud down to fully engage.

10



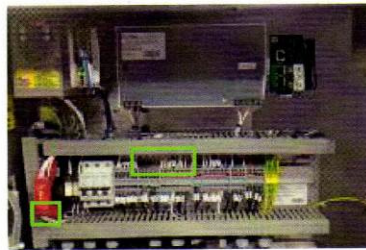
Connect the wires at the other end of the power cable to the terminals with the corresponding wire numbers (to the same location as the ones previously removed).

11



Connect the IO cable plug to the M251 expansion module at the right. Push the connector into the housing – ensure it is fully engaged.

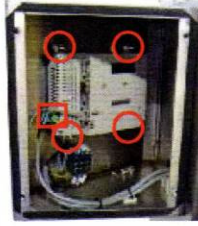
12



Connect the wires at the other end of the IO cable to the terminals with the corresponding wire numbers (to the same location as the ones previously removed) for wires I01 to I07 and 0V. Connect I00 to the emergency stop relay connection point 14.

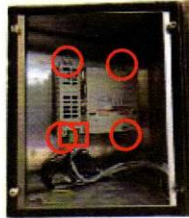
**IF YOU ALREADY HAVE THE HMIGTO2310 FITTED SKIP TO STEP 15**

**1  
3**



Unplug the HMI power cable and remove the old HMI by loosening and removing the 4x retaining clips with a small posidrive/flat head screwdriver. Then push the HMI out of the cut out.

**1  
4**



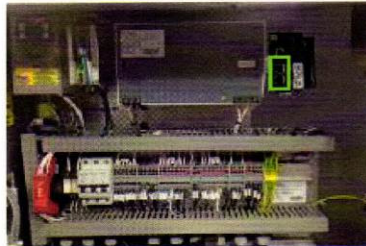
Fit the new HMI (HMIGTO3210) using the 4x retaining clips supplied in the box with a small posidrive/flat head screwdriver. Then plug in the power connector.

**1  
5**



Take the HMI cable from the conversion kit.

**1  
6**



Connect the HMI cable to one of the connectors marked ETHERNET. Ensure that the cable is pushed in firmly, you should hear a "click".

**1  
7**



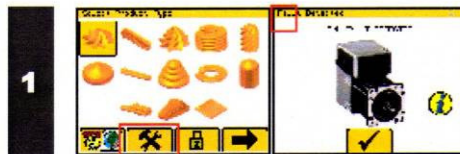
Connect the HMI cable to the connector marked ETHERNET. Ensure that the cable is pushed in firmly, you should hear a "click".



## CONFIGURE MACHINE FOR USE

**C**

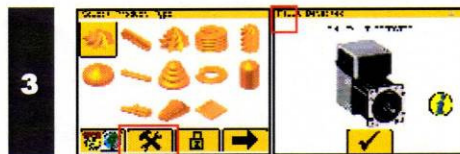
Restore power to the machine. Follow the steps below to configure the machine to recognise the connected hardware and to set factory defaults :-



From the Select Product **OR** Fault page activate the tools password entry (Hidden button at top left of fault page) and type in **01792561234**



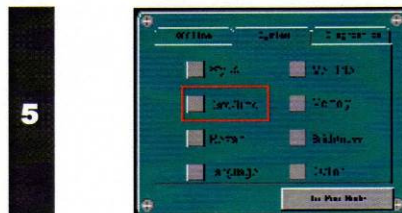
Select the options installed on your machine. Press the exit button.



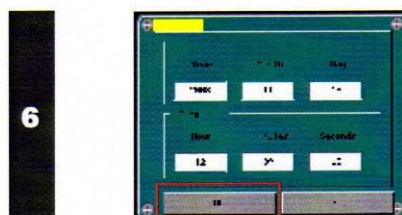
From the Select Product **OR** Fault page activate the tools password entry (Hidden button at top left of fault page) and type in **01554777460**



Press the **SET FACTORY DEFAULTS BUTTON**. Then press The **COGS** Button to enter the System Menu.

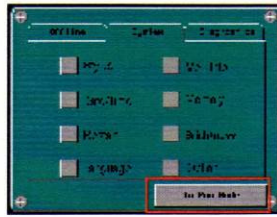


Select the **DATE/TIME** option to enter the date and time setting page.



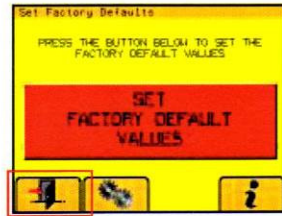
Set the Date and Time to the correct settings and press **OK**.

7



Press the **TO RUN MODE** button to return to the set factory defaults page.

8



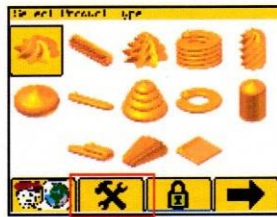
Press the **EXIT** button to return to the main menu.

**CYCLE POWER TO THE MACHINE BEFORE CONTINUING**

**CHECK I/O FUNCTIONALITY** **D**

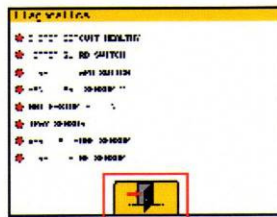
Follow the steps below to verify that the wiring has been completed correctly and that the I/O to the M251 is correct :-

1



From the Select Product page activate the tools password entry and type in **2808**

2



Test that **ALL** inputs are working correctly using the diagnostics page.

Inputs are shown as **RED** for **OFF** and **GREEN** for **ON**.

The E-Stop circuit healthy input will switch if any one of the safety devices is switched (e-stop button / hand guard sensor / hopper guard)

To activate the tray / vertical / wirecut sensors you will need to place a metallic object in front of the sensor.

Press the **EXIT** button when all inputs are verified OK.

The equipment mentioned in this manual has CE accreditation.

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



**Omega PLUS**



**Omega PLUS  
And WIRECUT**



Queensway,  
Swansea West Industrial Estate,  
Swansea.  
SA5 4EB  
UK

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

Email: [marketing@monoequip.com](mailto:marketing@monoequip.com)  
**Web site: [www.monoequip.com](http://www.monoequip.com)**

▪ **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 recycling or other means as the law permits at the time.