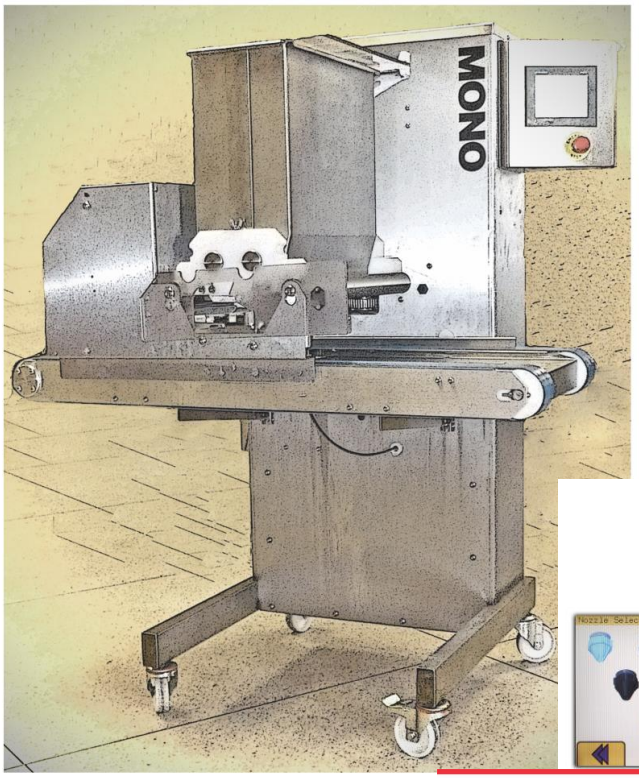
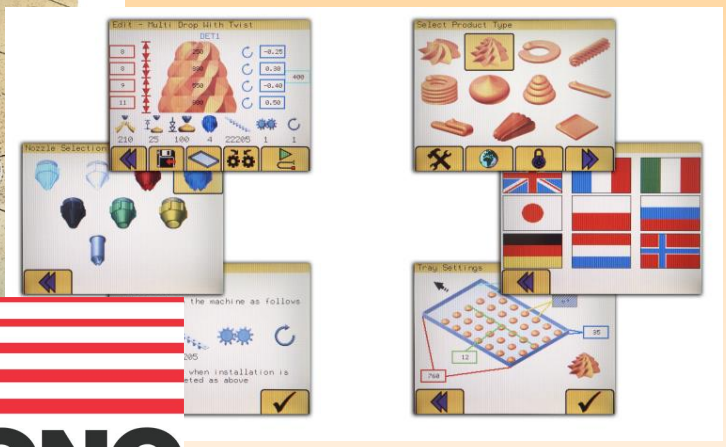
Enter **Serial No.** here. _____

MANUAL No.Y-OM-03E

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

Store this document safely and ensure it is available at all times.
Non-availability may affect the service / repair of your machine.





MONO

OPERATING AND MAINTENANCE MANUAL

"OMEGA PLUS"

WIRECUT VERSION

DEPOSITOR

(400, 450,)

01/09

-DECLARATION OF CONFORMITY-

MONO

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 73/23/EEC

**The requirements of the
Electromagnetic Compatibility Directive
89/336/EEC, 91/263/EEC, 92/31/EEC**

**and
General Safety of Machinery and
Food Processing Standards applicable.**

Signed: ..... (Quality manager)
G.A.Williams

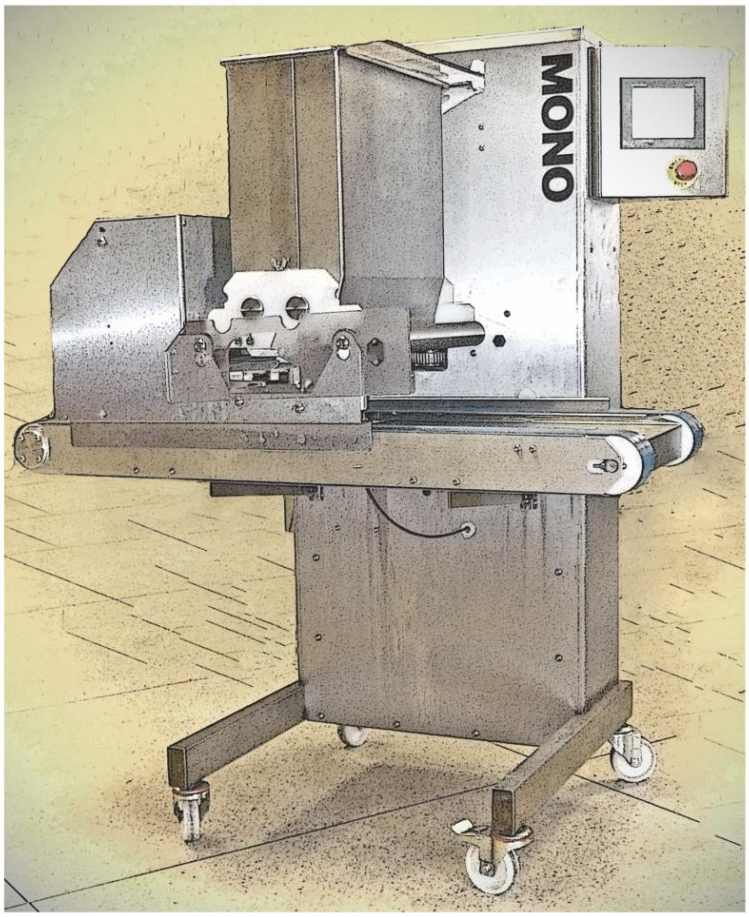
Date: .....

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

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

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

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



FOR SAFE WORKING, PAY SPECIAL ATTENTION TO ITEMS MARKED

CONTENTS

Omega PLUS

1.0 - INTRODUCTION

2.0 - DIMENSIONS

3.0 - SPECIFICATIONS

4.0 - SAFETY

5.0 - INSTALLATION

6.0 - ISOLATION

7.0 - CLEANING INSTRUCTIONS

8.0 - OPERATING CONDITIONS

9.0 - PREPARING FOR OPERATION

9A – FITTING THE HOPPER

9B – FITTING A TEMPLATE

10.0 - OPERATING INSTRUCTIONS

1 – SELECT PRODUCT TYPE

2 – SELECT SAVED NAME OF PRODUCT TYPE

3 – CONFIRM SETUP

4 – OPERATOR SCREEN

5 – EDIT SCREEN

5A – TRAY SETUP

6 – COPY

7 – DELETE

8 – PASSWORDS

9 – ENGINEERING SETTINGS

10 – FAULT INFORMATION SCREENS

11.0 - MAINTENANCE

12.0 - SPARES AND SERVICE

13.0 - SPARES LIST

14.0 - ELECTRICAL INFORMATION

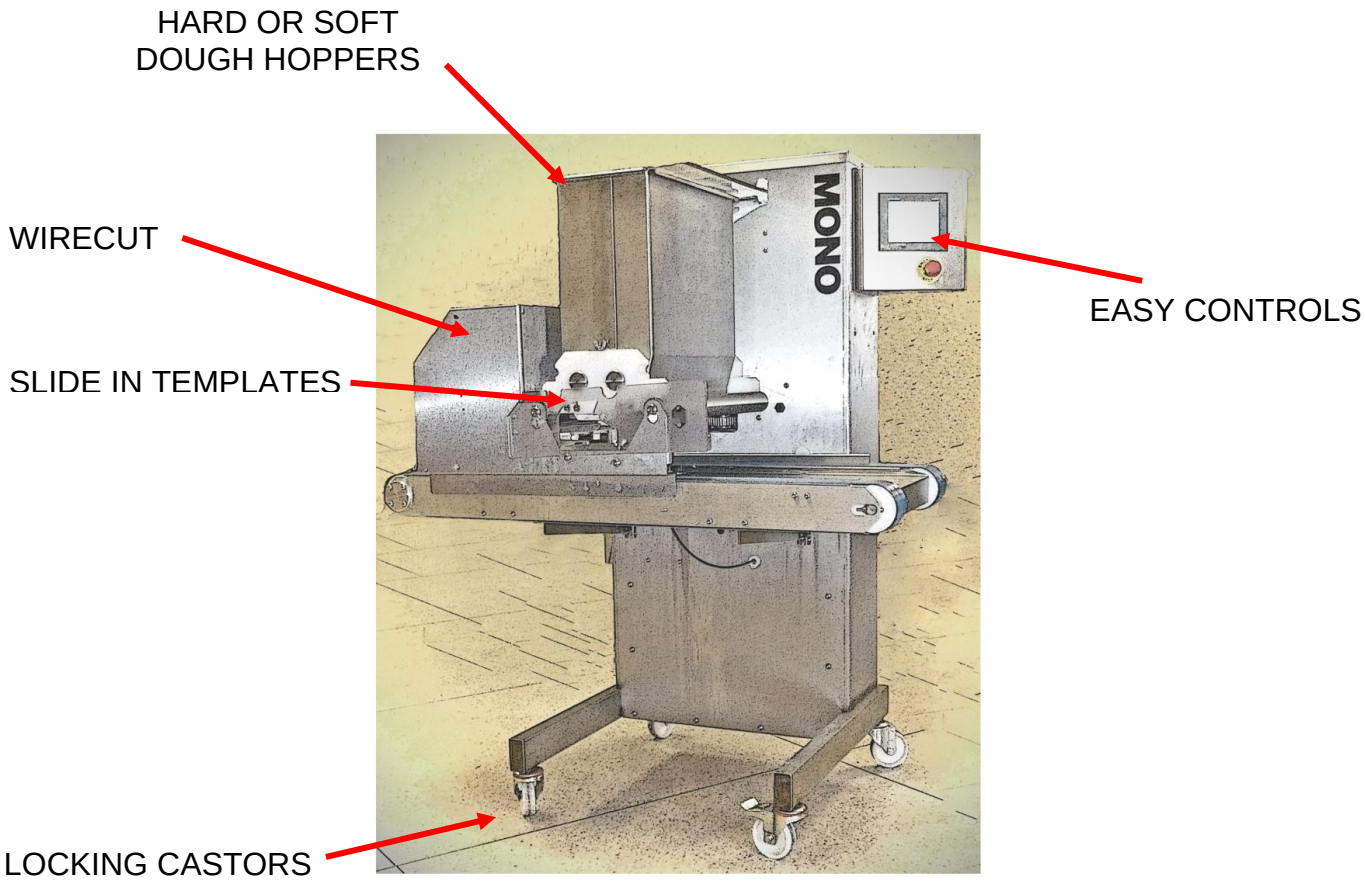
1.0 INTRODUCTION

- The innovative “five axis deposit” design of MONO’s **“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 650 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.

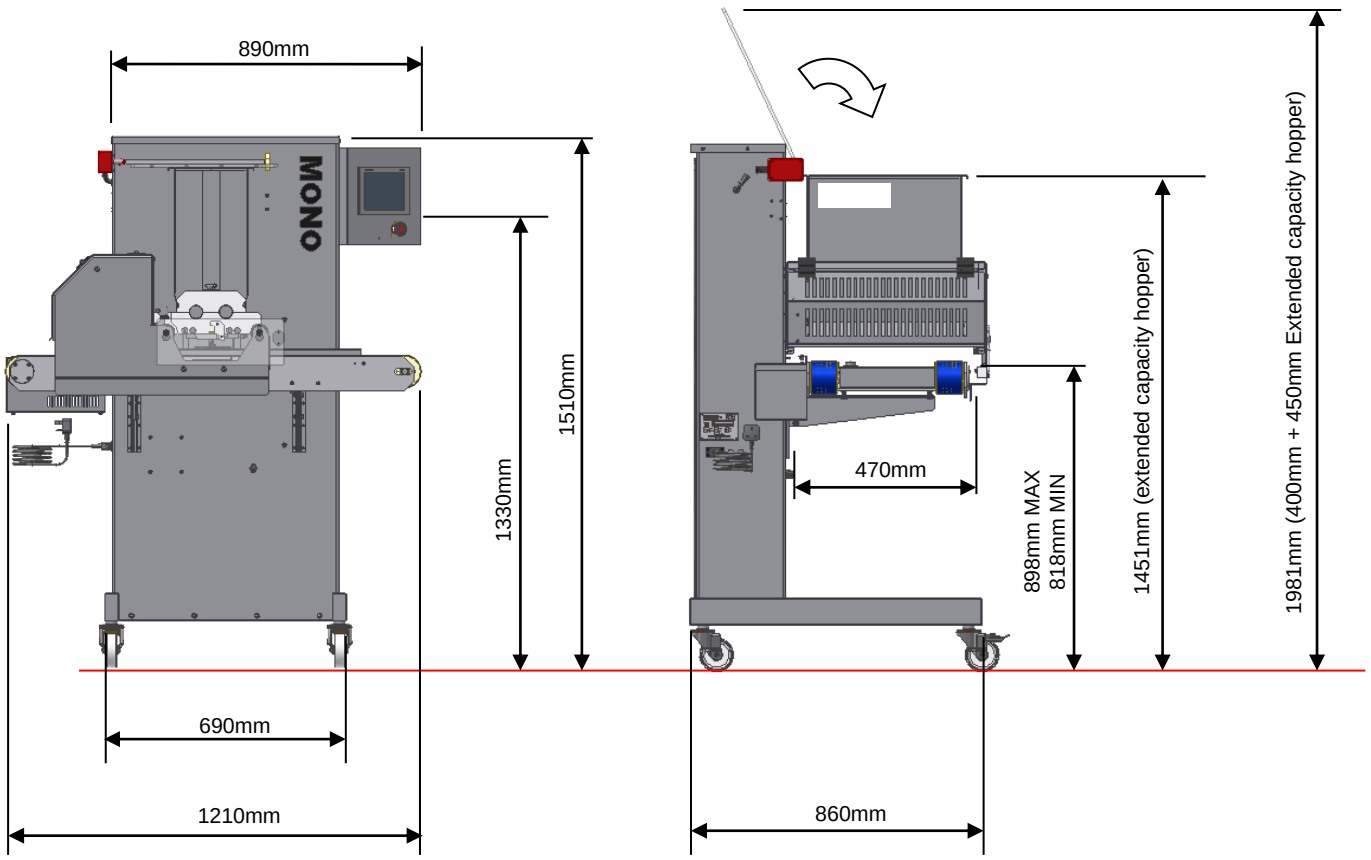
- It is available with soft and hard dough hoppers. There is also a large selection of templates and nozzles.

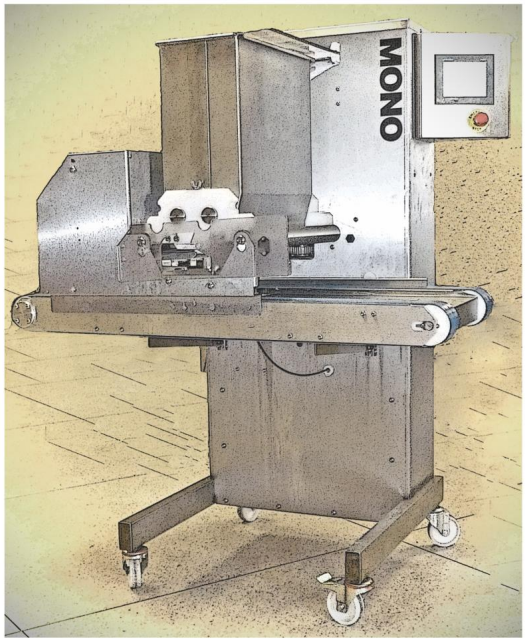


As it is our policy to improve our machines continuously,
we reserve the right to change specifications without prior notice

2.0 DIMENSIONS

Omega PLUS





3.0 SPECIFICATIONS

Omega PLUS

	SOFT DOUGH		HARD DOUGH	
MODEL (Nom. hopper width (mm))	**400**	**450**	**400**	**450**
Weight (with hopper fitted) (kg) **:**	**196**	**210**	**216**	**235**
Standard hopper Capacity (litre) **:**	**20**	**22.5**	**21**	**24**
Extended hopper Capacity (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
Cycles per minute	= 35
Min distance between trays	= 50mm
Max vertical travel	= 80mm
Max program storage	= 650
Number of languages	= 13
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**.

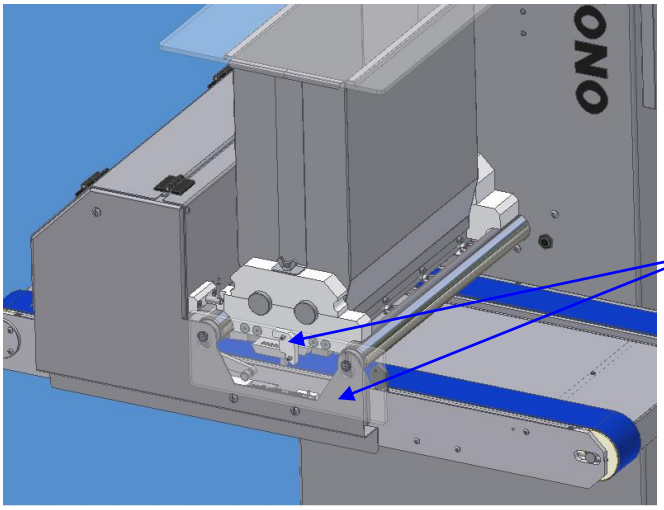
7 **Do not operate the machine with any panels or guards removed**.

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

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 hopper **template and guard fitted correctly**.



(11) HOPPER TEMPLATE AND GUARD FITTED

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 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.

2 Ensure that the correct fuse rating is fitted in the electrical supply

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.

7.0 CLEANING INSTRUCTIONS

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. -

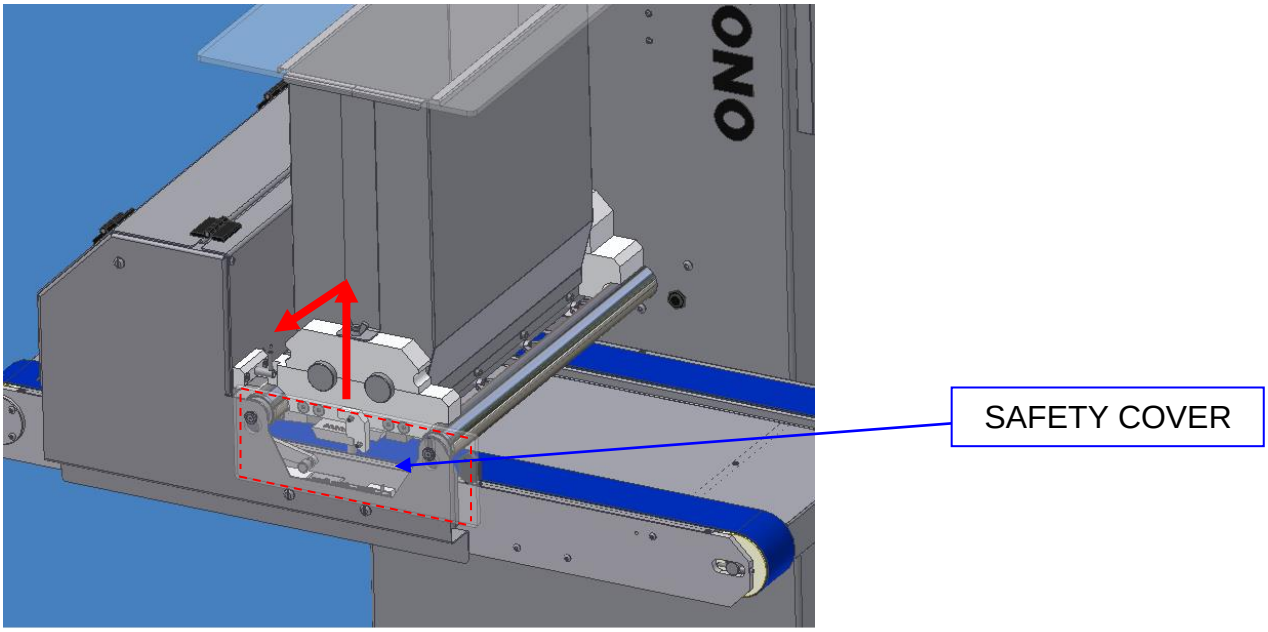
All the outer surfaces of the machine should be wiped over daily with warm soapy water.

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.

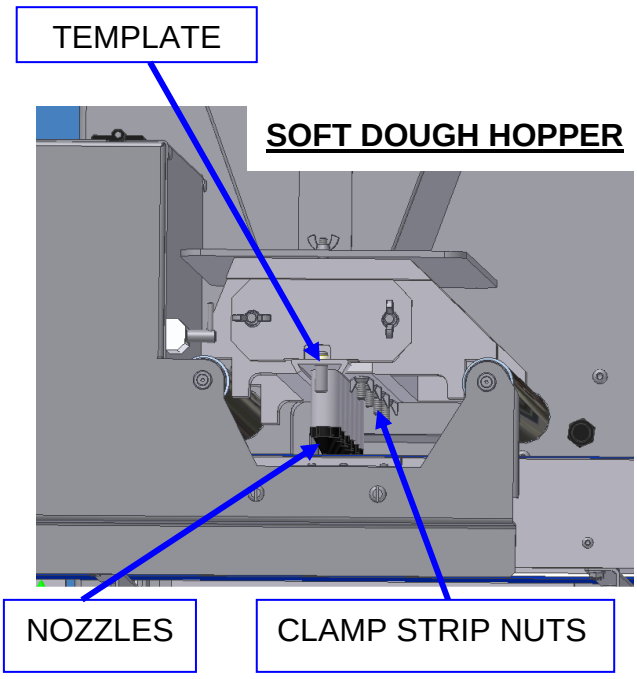
1. Open top safety guard and remove excess mixture remaining in the feed hopper.
2. Lift off front see-through safety cover.

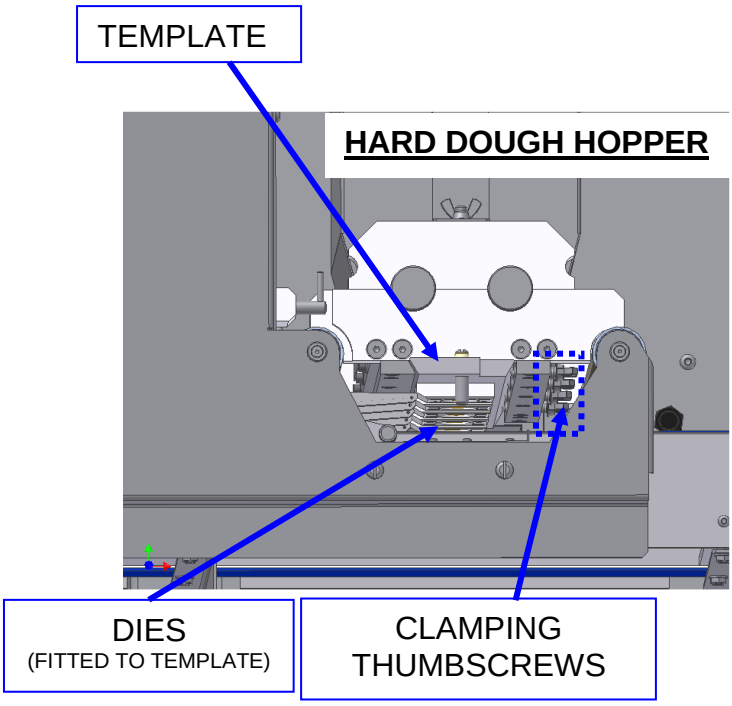


3. Slacken template clamp strip nuts or thumbscrews (depending on type of hopper) Remove fitted template from pump assembly by sliding out to avoid subsequent damage.

NOTE.

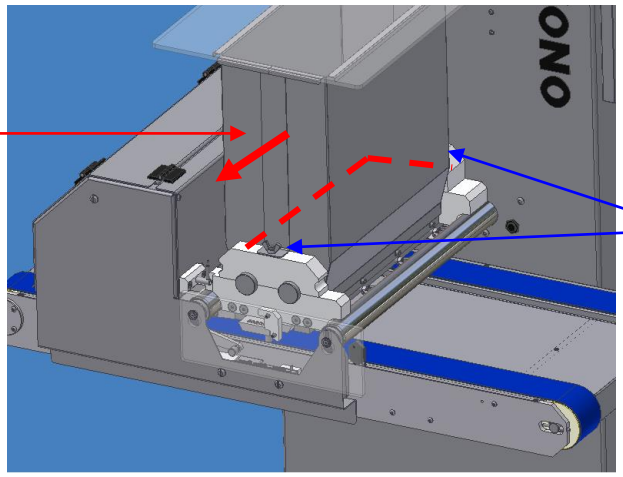
Thumbscrews only need to be released slightly to allow the template to slide away from the pump assembly. If loosened too much, the template will have to be supported.





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.



y will not be lost.

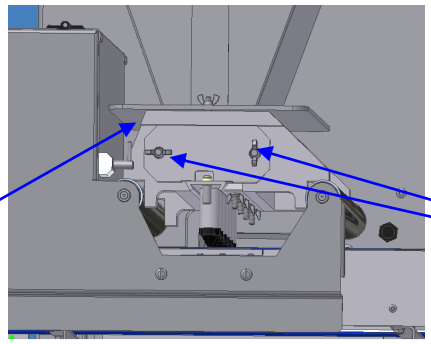
SOFT DOUGH HOPPER

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.

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

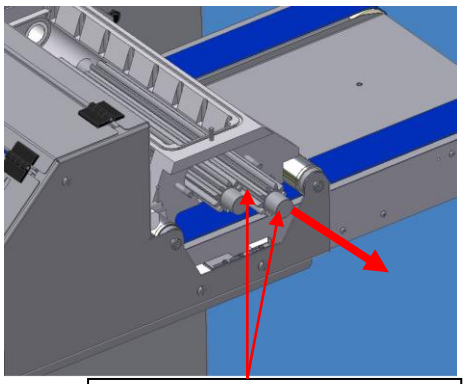
1. After removing the feed hopper, check condition of feed hopper seal.

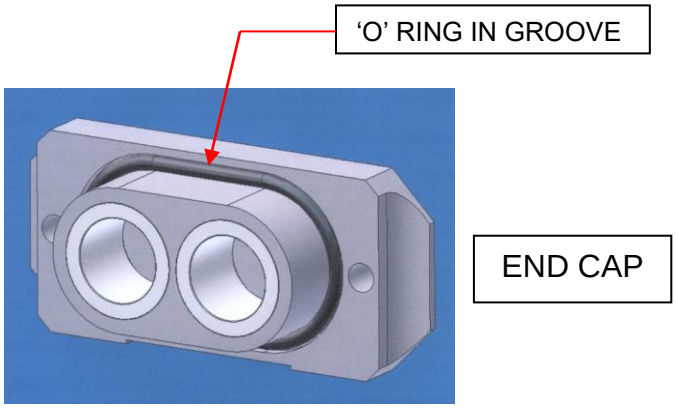
2. Unscrew the end cap retaining nuts from the accessible side of the pump assembly.
   [Ensure that the nuts are placed where they will not be lost.]



3. Withdraw the end-cap \

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





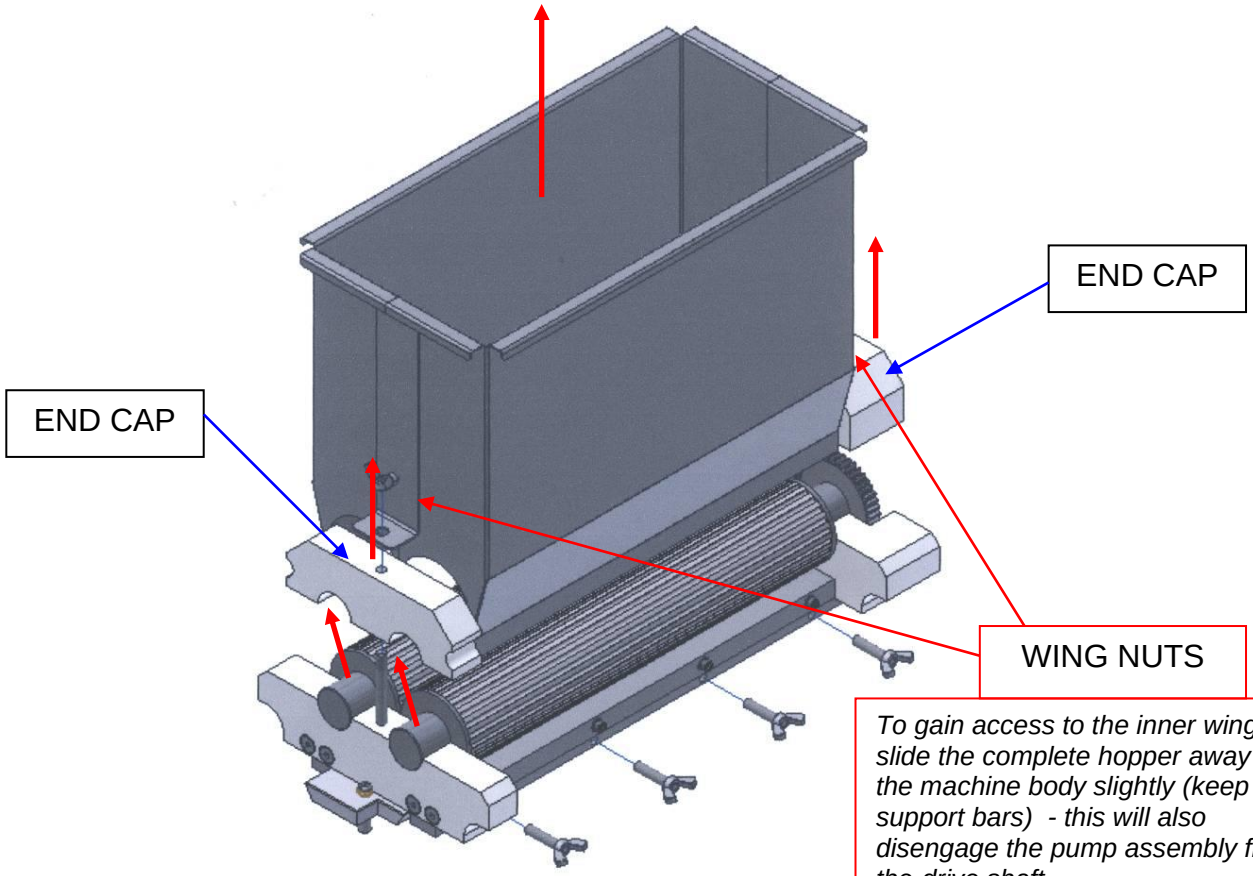
4. Remove remainder of pump assembly from the machine and remove remaining end-cap to fully dismantle pump assembly components for cleaning.

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.



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.

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.

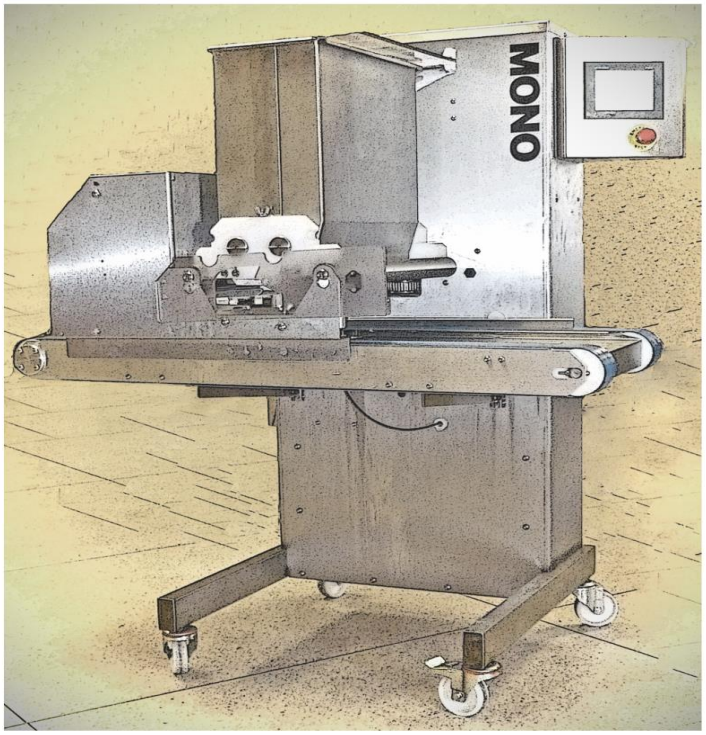
Do not leave any components in the hopper.

8.0 OPERATING CONDITIONS

Omega PLUS

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**.

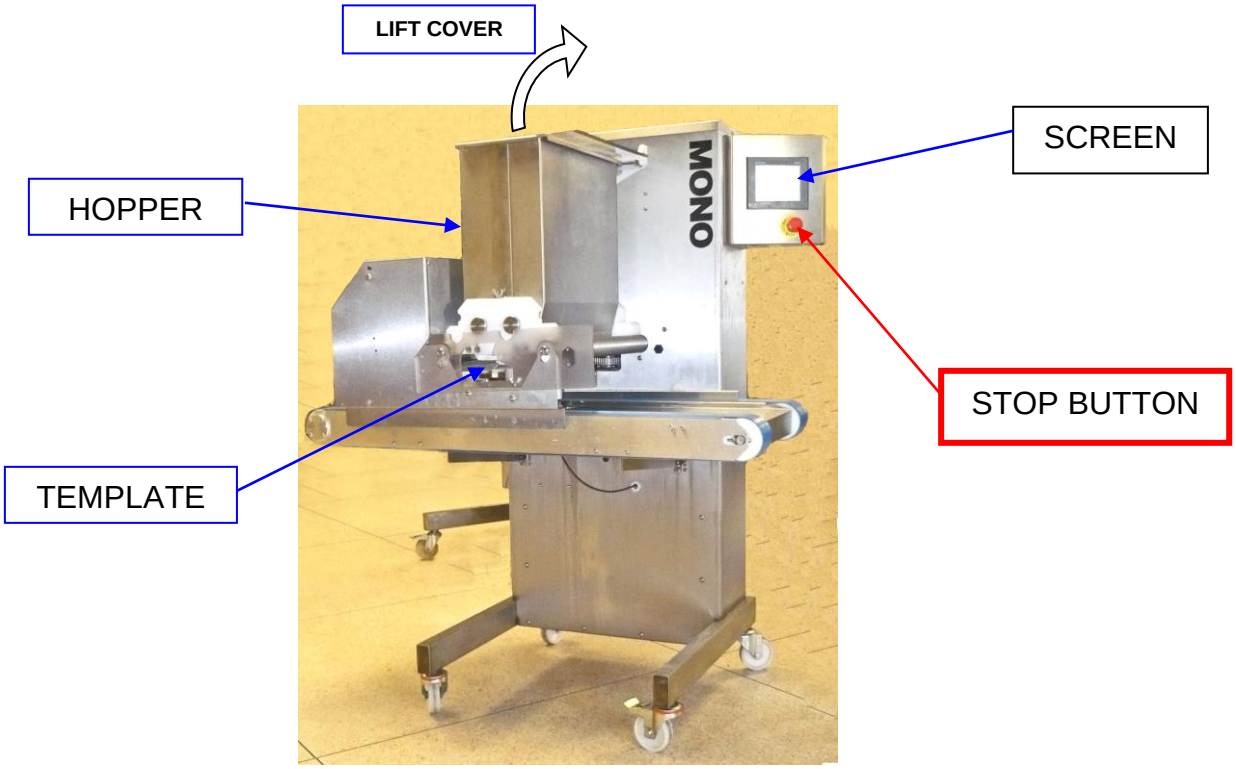


9.0 PREPARING FOR OPERATION

Omega PLUS

1 Select template and nozzles and finger frame required 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

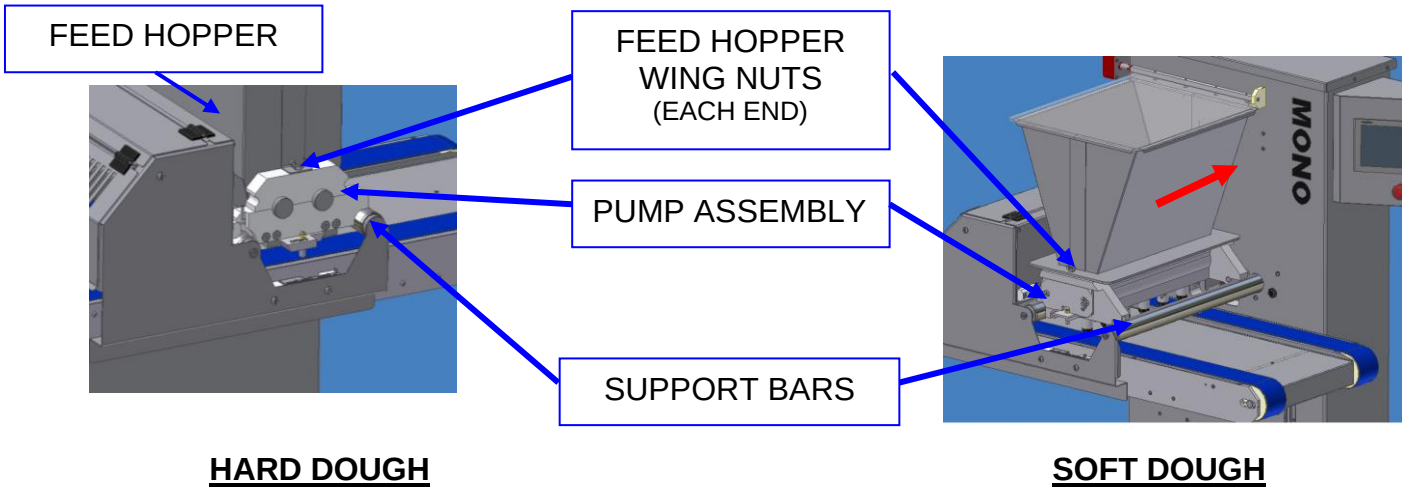
CAUTION SHOULD BE TAKEN WHEN FITTING HOPPER AND PUMP ASSEMBLY AS WEIGHT EXCEEDS 25kgs ON SOME MODELS
It will need to be lifted on by two people, or dismantled into smaller components before fitting on the machine.
MAKE SURE THE FLOOR AREA AROUND THE MACHINE IS CLEAN

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.

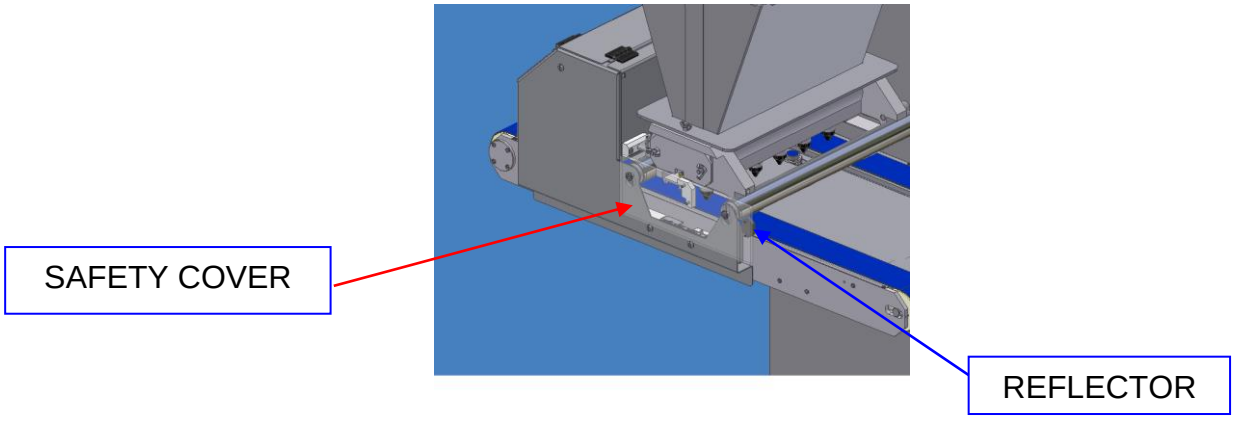
2 Fit hopper to pump assembly and secure with wing nuts.

3 Slide hopper on support bars until fully up against machine.



HARD DOUGH **SOFT DOUGH**

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



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).

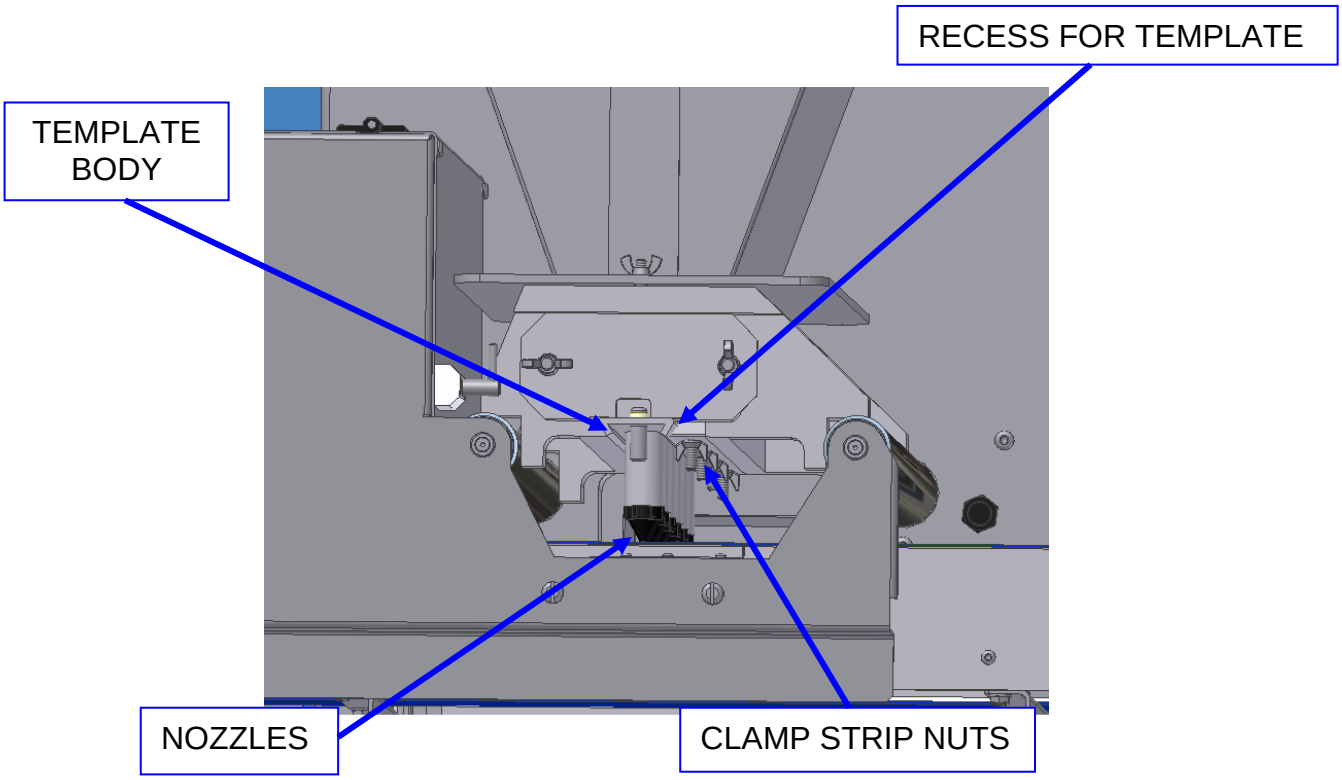
  OR

  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 tem ntil the stop is in position.

4 Tighten nuts on 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

- **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.

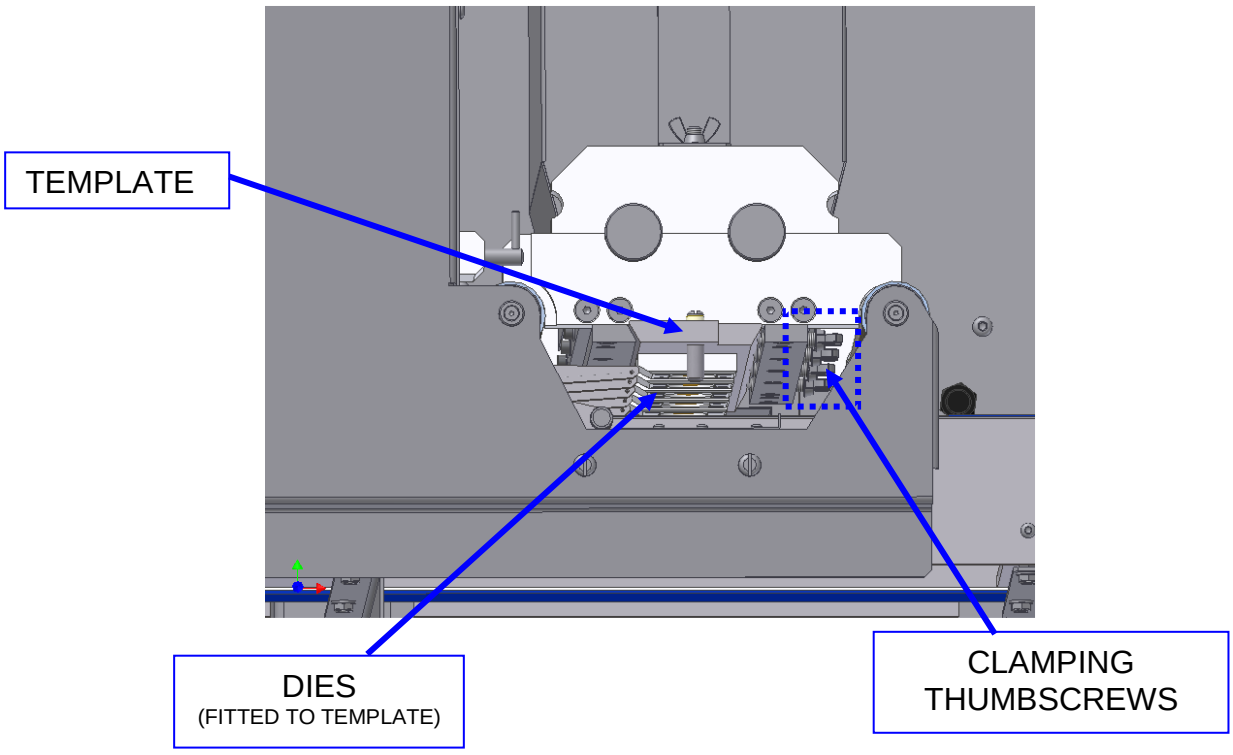
1 Select wirecut template or template and nozzles required.

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.

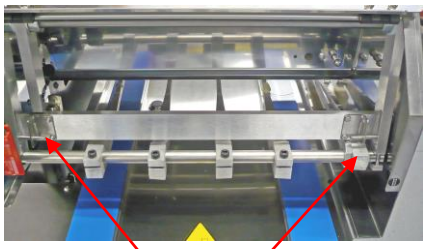


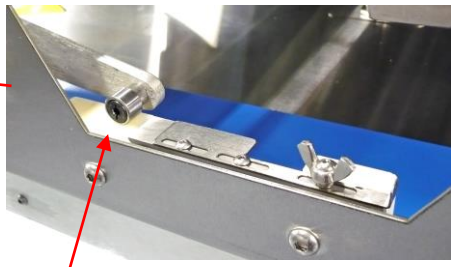
DO NOT OPERATE MACHINE WITHOUT TEMPLATE FITTED

FITTING WIRECUT FINGERS

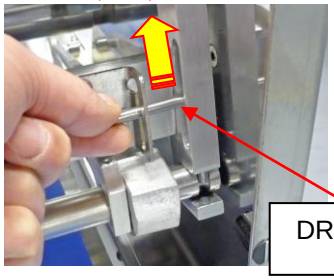
1. Select wirecut fingers that suit the chosen template to be used.i.e. the correct number to match the number of dies across template.

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

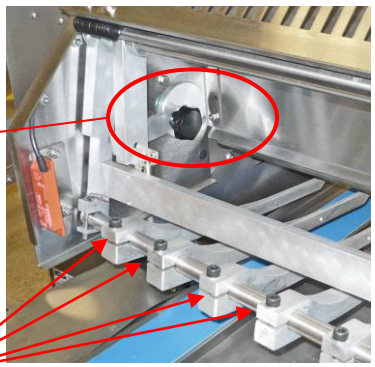


DROP ARM PINS

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

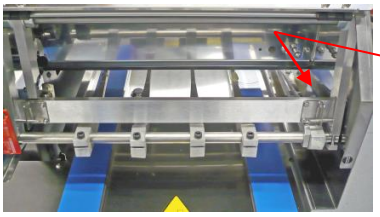


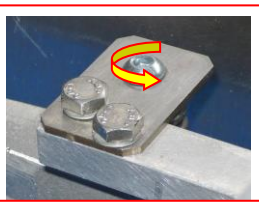
FINGER ADJUSTING BOLTS

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.



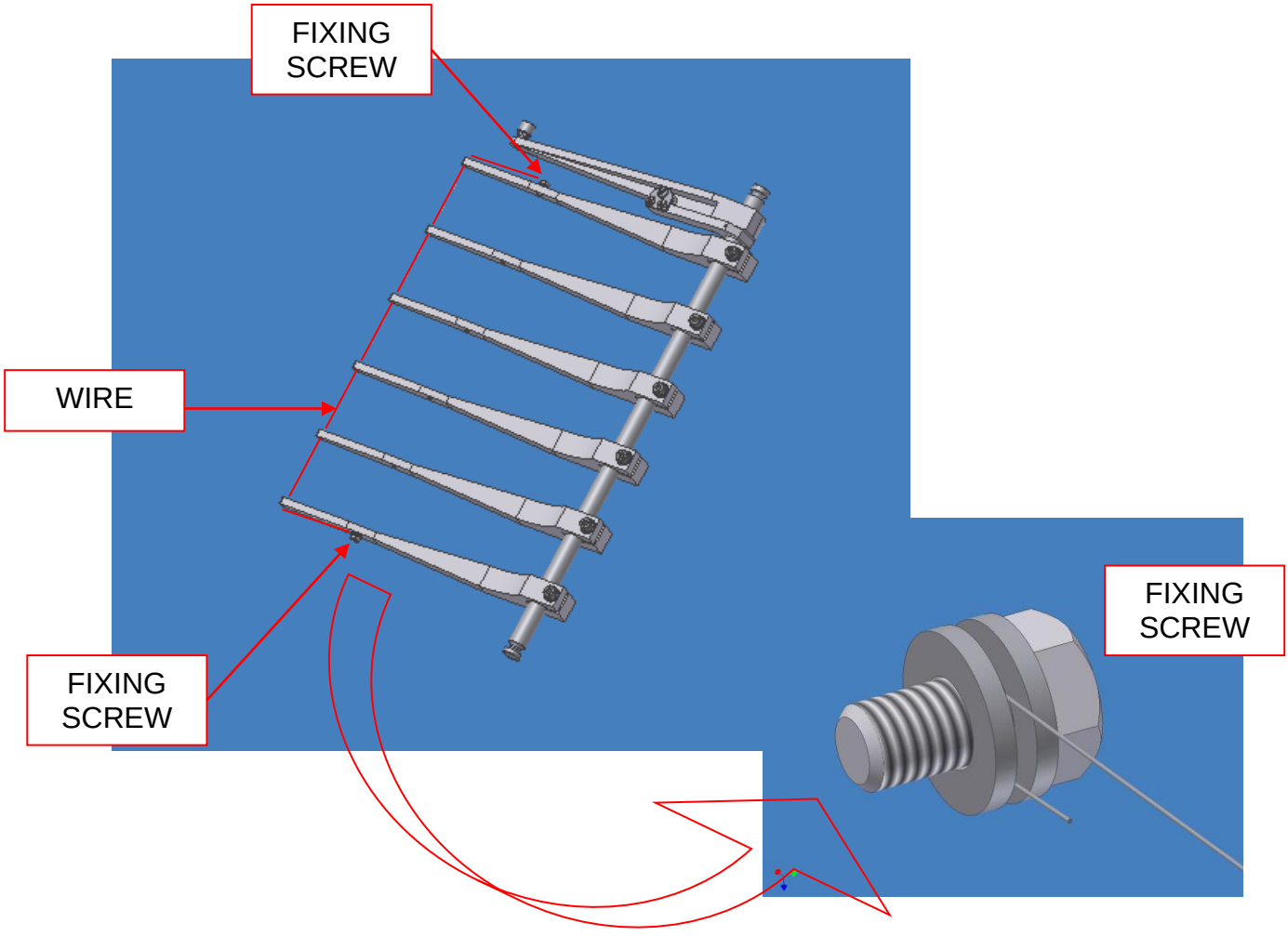


SPRING LOADED ADJUSTMENT SCREW

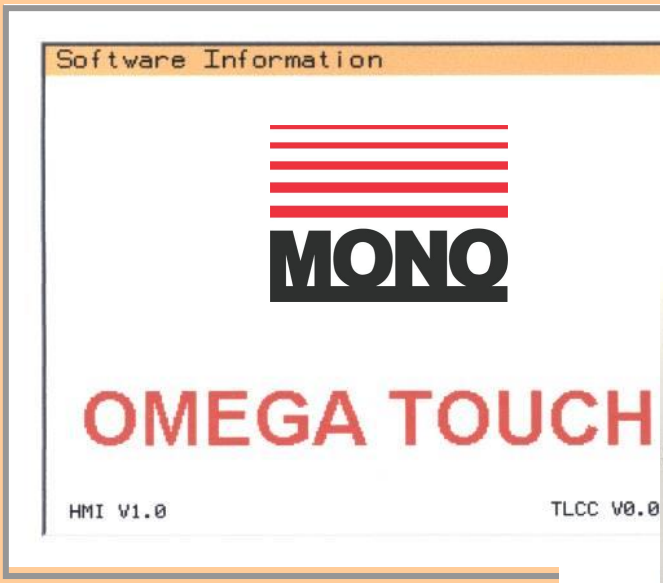
REPLACING BROKEN WIRE

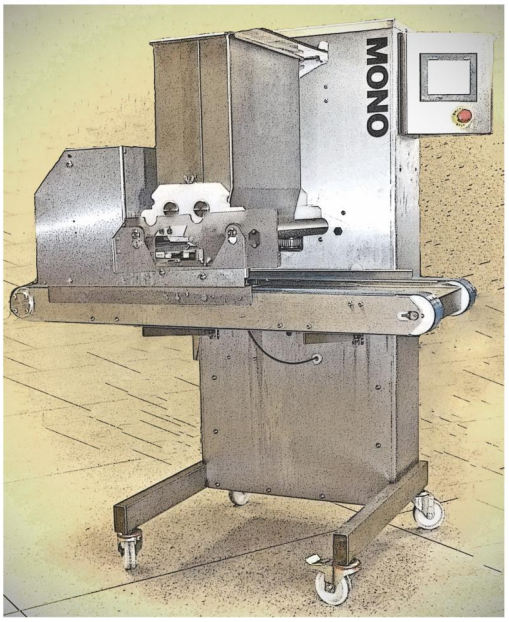
MAKE SURE THAT ALL PIECES OF WIRE HAVE BEEN FOUND BEFORE OPERATING MACHINE AFTER A WIRE REPLACEMENT.

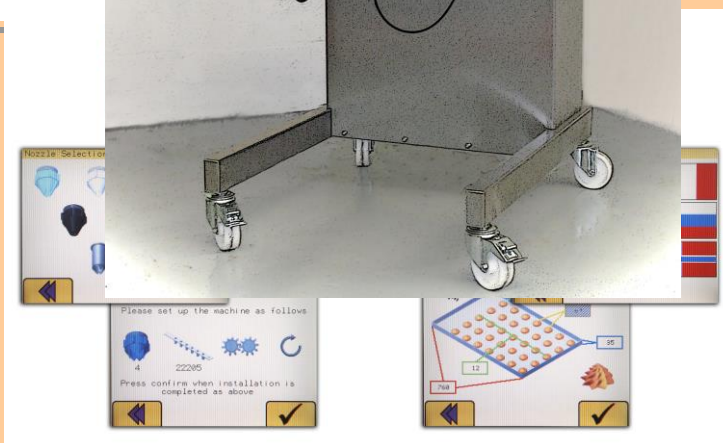
1. Remove fingers from the machine.
2. Remove broken wire
3. Feed new wire round screw between washers and tighten screw.
4. Feed the wire through the eyehole in the end of each finger.
5. Feed new wire round other screw between washers. Pull tight and tighten screw. (wire should be like a guitar string).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



10.0 'OMEGA PLUS' OPERATION







OPERATING KEY
FOR FOLLOWING INSTRUCTIONS

BLUE = **OPERATION** — FOLLOW BLUE ARROWS AND BOXES TO OPERATE THE DEPOSITOR WITH ALREADY SAVED PROGRAMS

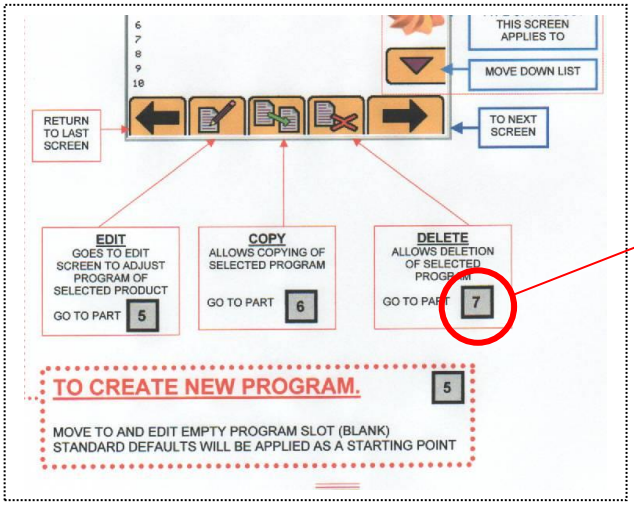
RED = **CHANGE SETTINGS** — FOLLOW RED ARROWS AND BOXES TO CHANGE SETTINGS AND CREATE NEW PROGRAMS

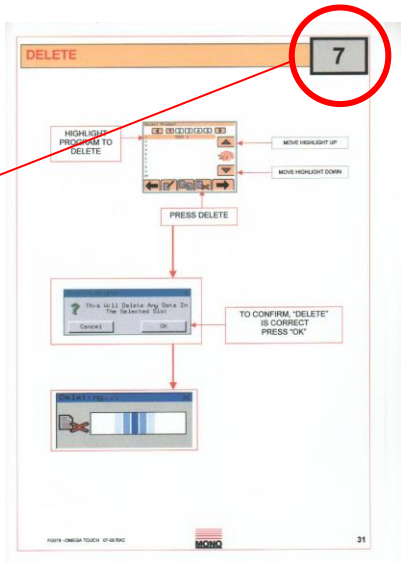
= **KEYBOARD ENTRY REQUIRED** — WHEN KEYBOARD APPEARS, A CODE MUST BE ENTERED BY TOUCHING THE NUMBERS IN THE CORRECT ORDER

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)



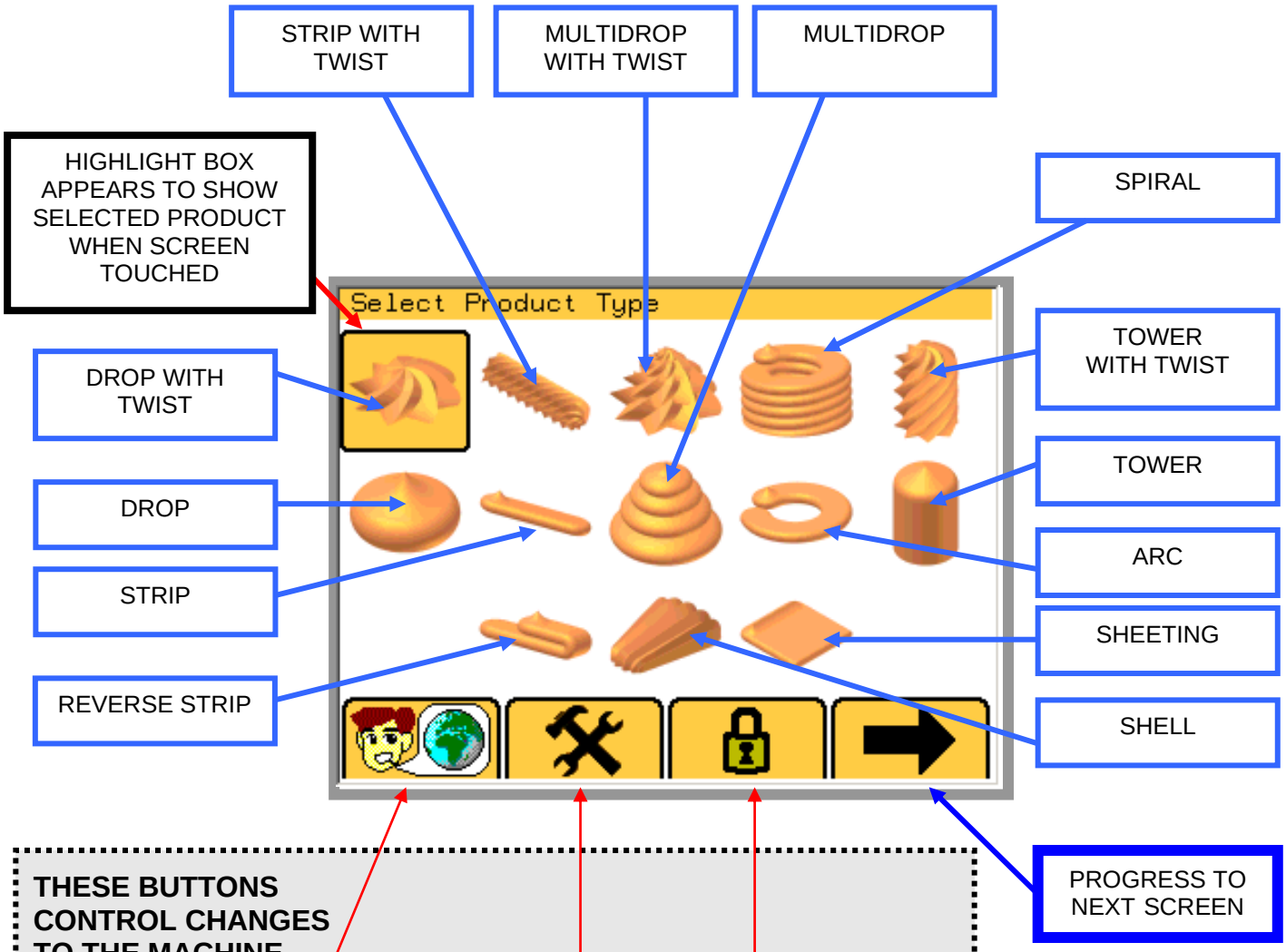


SELECT PRODUCT TYPE

SELECT PRODUCT TO DEPOSIT OR TO CREATE NEW PROGRAM

1

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



THESE BUTTONS CONTROL CHANGES TO THE MACHINE

CHOOSE LANGUAGE

BACK TO THIS SCREEN

MACHINE SETUP

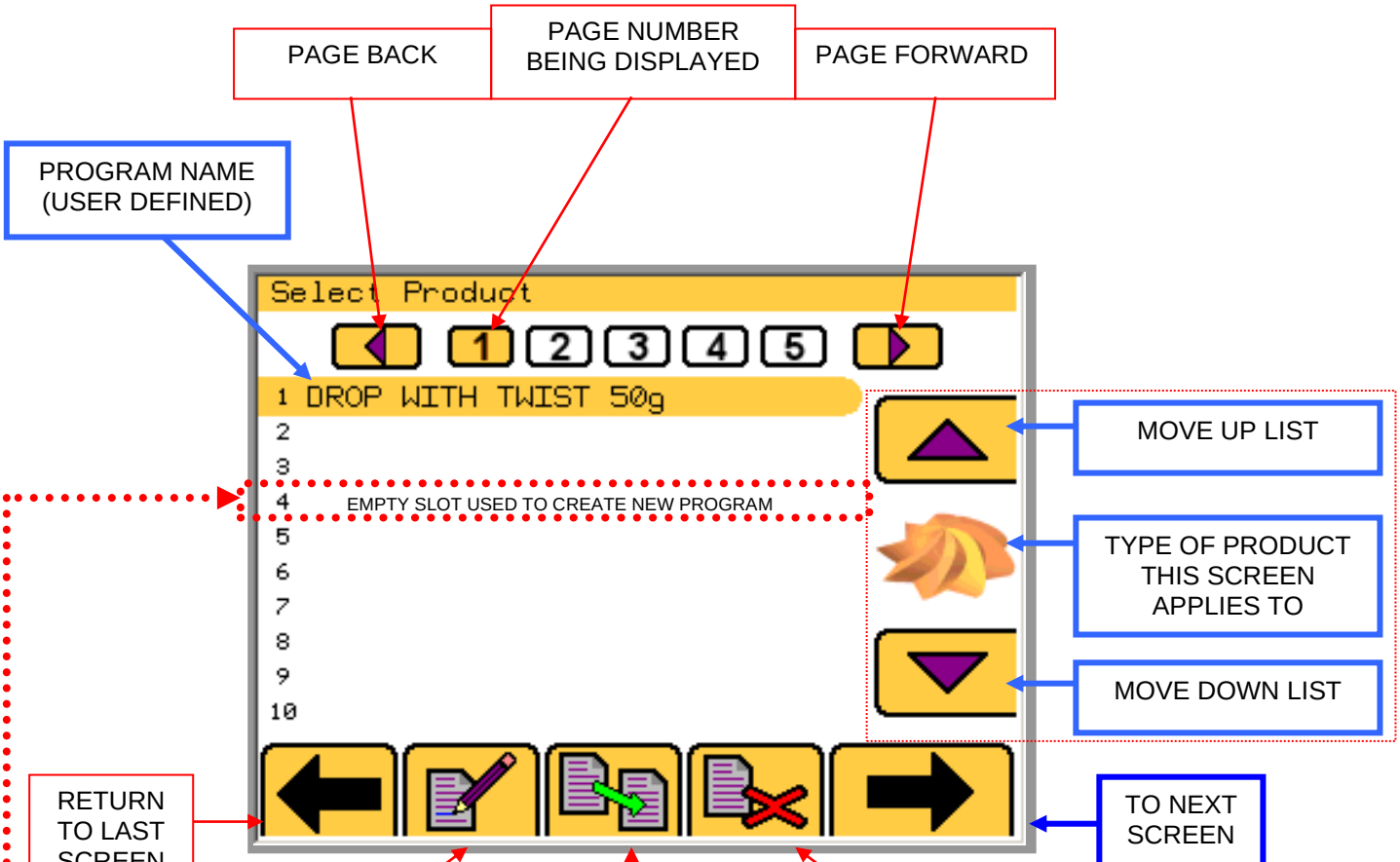
PRODUCT EDITING COPYING DELETING

PASSWORDS ARE REQUIRED FOR THESE FUNCTIONS. **SEE PART 8**

SELECT SAVED PRODUCT TYPE

OR CHOOSE EMPTY SLOT TO CREATE A NEW PROGRAM

2



EDIT
GOES TO EDIT SCREEN TO ADJUST PROGRAM OF SELECTED PRODUCT

GO TO PART **5**

COPY
ALLOWS COPYING OF SELECTED PROGRAM

GO TO PART **6**

DELETE
ALLOWS DELETION OF SELECTED PROGRAM

GO TO PART **7**

TO CREATE NEW PROGRAM. 5

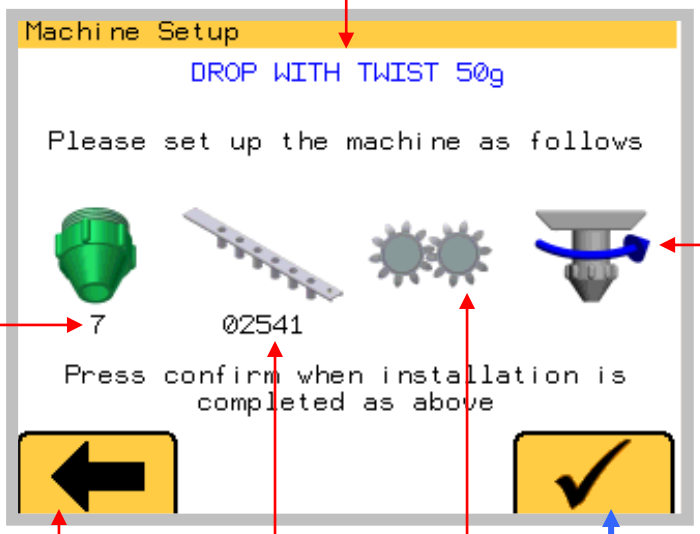
MOVE TO AND EDIT EMPTY PROGRAM SLOT (BLANK)
STANDARD DEFAULTS WILL BE APPLIED AS A STARTING POINT

CONFIRM SETUP OF MACHINE

3

MACHINE MUST BE SET AS SHOWN ON THE SCREEN.
THEN PRESS CONFIRM BUTTON.

PROGRAM NAME
(CHOSEN ON PREVIOUS SCREEN)



TEMPLATE TYPE

NON-ROTARY

ROTARY

NOZZLE NUMBER

RETURN TO LAST SCREEN

CONFIRM MACHINE SETUP.
WARNING
TO AVOID MACHINE DAMAGE ONLY PRESS WHEN ALL SETTINGS SHOWN ARE CORRECT

TEMPLATE NUMBER

HOPPER TYPE

SOFT DOUGH

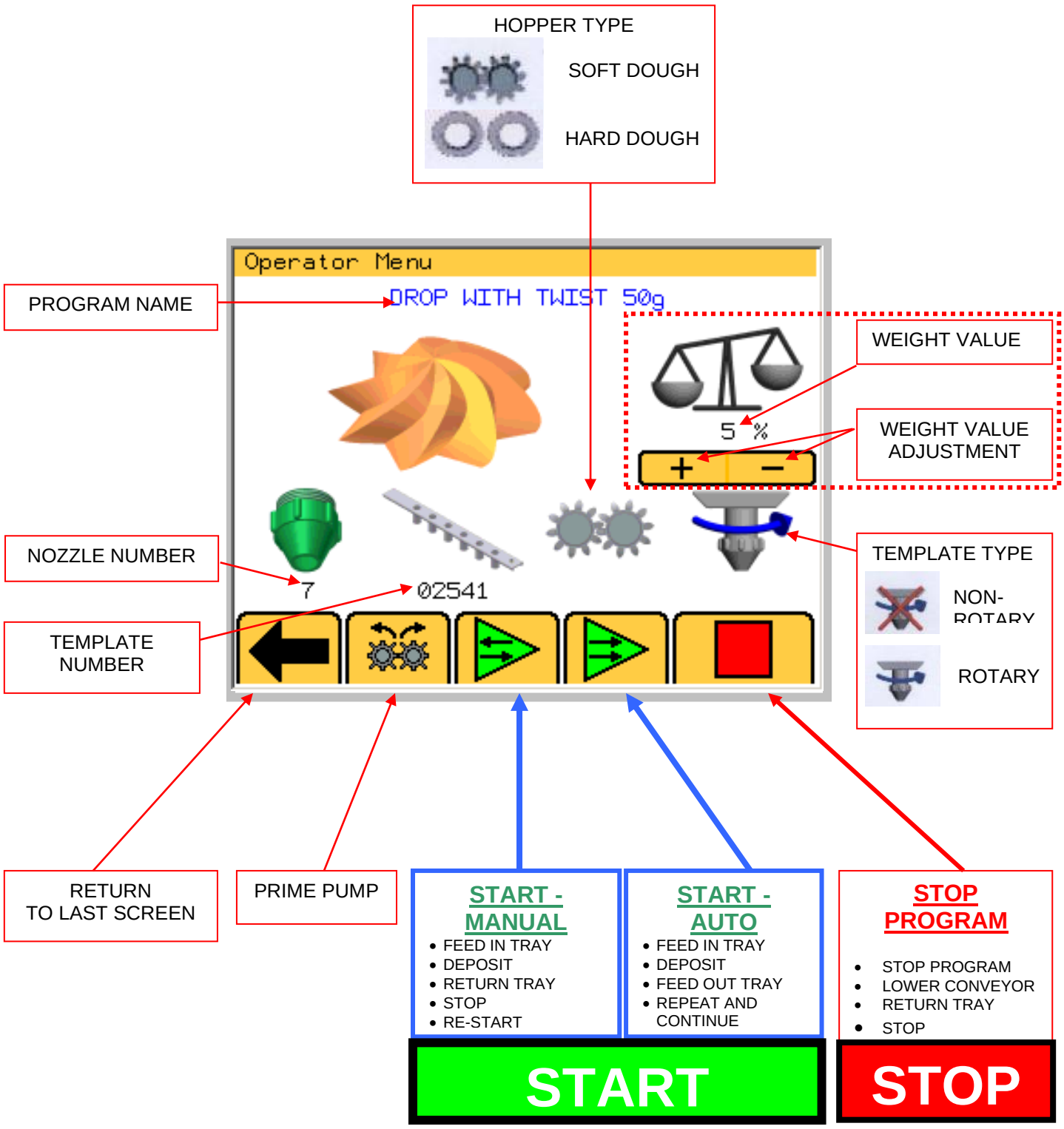
HARD DOUGH

<u>TO AVOID MACHINE DAMAGE</u>
ONLY PRESS CONFIRM BUTTON WHEN ALL PARTS ATTACHED TO THE MACHINE ARE AS SHOWN ON THE SCREEN

OPERATOR SCREEN

4

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



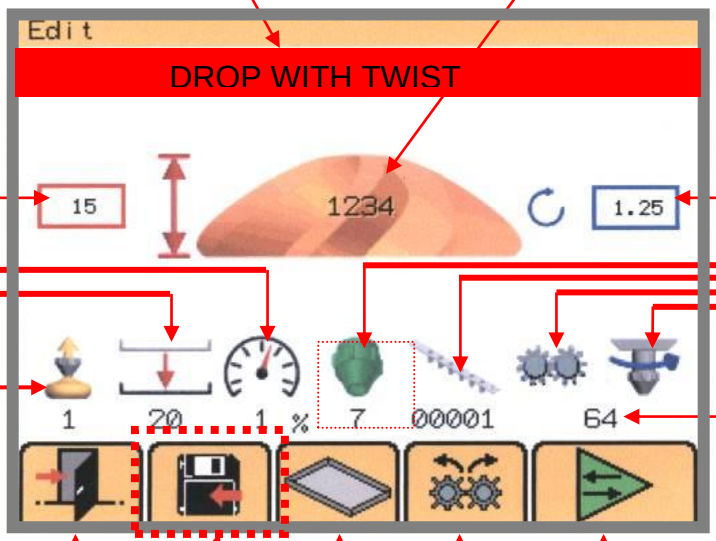
EDIT AND SAVE SCREEN

5

EXAMPLE:
DROP WITH TWIST

PROGRAM NAME
MUST BE ENTERED TO ALLOW PROGRAM TO SAVE

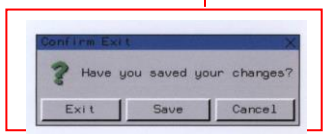
PRODUCT QUANTITY
THIS IS A SETTING NUMBER AND DOES NOT INDICATE A MEASURE OF ACTUAL VOLUME



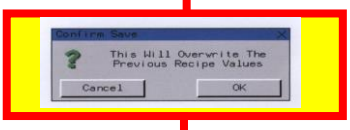
NOZZLE HEIGHT (mm)
ABOVE TRAY SURFACE

NOZZLE ROTATIONS
NUMBER OF TURNS DURING A DEPOSIT CYCLE

EXIT THIS SCREEN



SAVE EDITS



ENTER TRAY SETUP SCREEN

GO TO PART **5A**

MAX HEIGHT FOR HOPPER/TEMPLATE COMBINATION

START MANUAL MODE

PRIME PUMP
(SOFT DOUGH SHOWN)

NOTE
A RED BACKGROUND TO ANY SETTING MEANS THAT THE VALUE MUST BE CORRECTED

TEMPLATE TYPE
ROTARY
NON-ROTARY

SELECT HOPPER
HARD DOUGH
SOFT DOUGH

SUCK BACK QUANTITY

TEMPLATE NUMBER
ENTER VIA KEYPAD THAT APPEARS WHEN PRESSED

CHOOSE NOZZLE TYPE

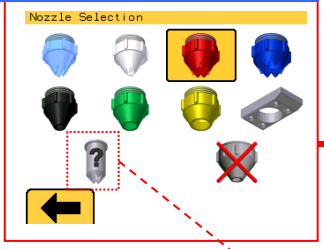


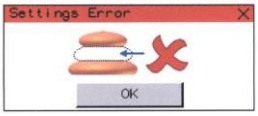
TABLE
JOG DISTANCE (mm)

OVERALL MACHINE SPEED
(% OF MAXIMUM)

EXAMPLE: MULTIDROP WITH TWIST

SETTING ERROR INDICATOR

BOXES TURN RED WHEN INCORRECT SETTING MADE

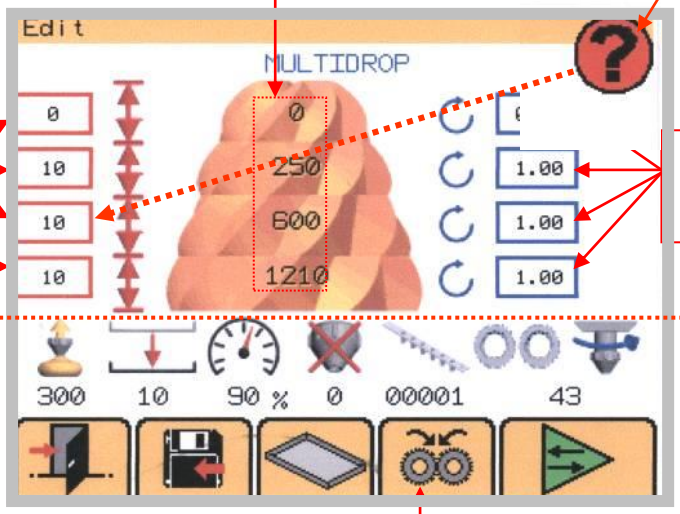


DEPOSIT QUANTITY FOR EACH LAYER

NOZZLE HEIGHT (mm) FOR EACH LAYER

NOZZLE HEIGHT (mm) FROM TRAY SURFACE

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



OTHER SETTING BUTTONS ARE THE SAME AS LAST PAGE

PRIME PUMP
(HARD DOUGH SHOWN)

EXAMPLE: SHEETING / STRIP

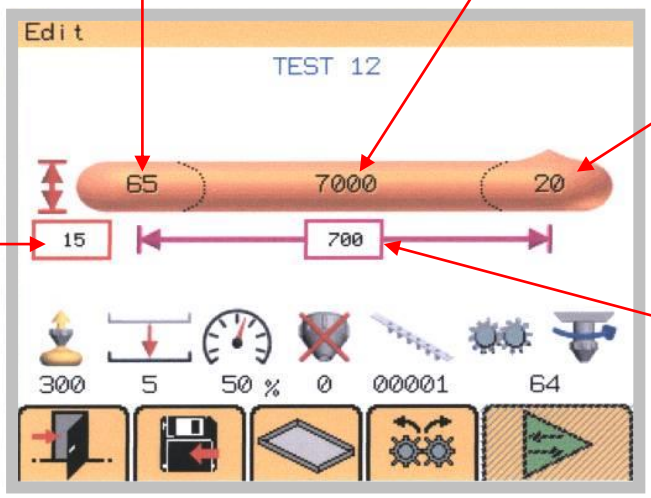
DEPOSIT QUANTITY FOR BEGINNING OF PRODUCT

DEPOSIT QUANTITY FOR LENGTH

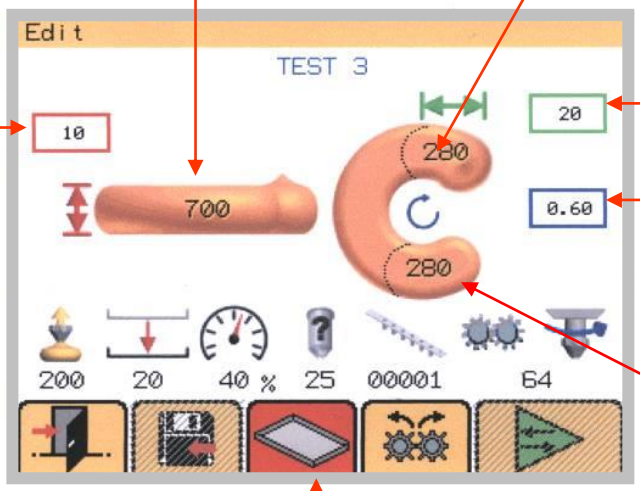
DEPOSIT QUANTITY FOR END OF PRODUCT
(-VE VALUES POSSIBLE)

NOZZLE HEIGHT ABOVE TRAY SURFACE

LENGTH (mm) OF TRAY MOVEMENT



EXAMPLE:
"C" SHAPE
(ARC)



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

DEPOSIT QUANTITY DURING ROTATION

NOZZLE HEIGHT ABOVE TRAY SURFACE

RADIUS (mm) OF DEPOSIT

NOZZLE ROTATION
(NUMBER OF TURNS DURING DEPOSIT)

DEPOSIT QUANTITY FOR BEGINNING OF PRODUCT
(-VE VALUES POSSIBLE)

RED TRAY SETUP BUTTON FORCES USER TO ENTER AND CHECK TRAY SETUP VALUES (OTHER BUTTONS GREYED OUT)

GO TO PART **5A**

TRAY SETUP

5A

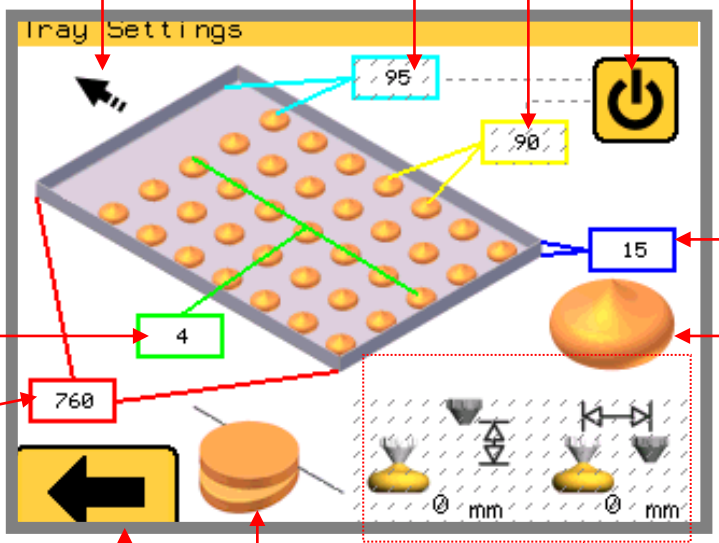
PRESS WINDOWS AND ENTER VALUES VIA KEYPAD

DISTANCE (mm) TO 1ST ROW ON TRAY
(WHEN USING MANUAL OVER-RIDE)

DISTANCE (mm) BETWEEN ROWS
(WHEN USING MANUAL OVER-RIDE)

MANUAL OVER-RIDE FOR ROW SPACING
ON/OFF

DIRECTION OF TRAY MOVEMENT



NUMBER OF ROWS PER TRAY

TRAY LENGTH (mm)

TRAY EDGE HEIGHT (mm)

PRODUCT TYPE

TO LAST SCREEN

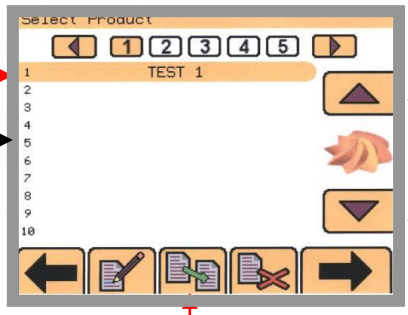
WIRECUT SELECTED

WIPE BACK BUTTON
(DISTANCE MOVED BY TRAY AFTER DEPOSIT)

COPY

6

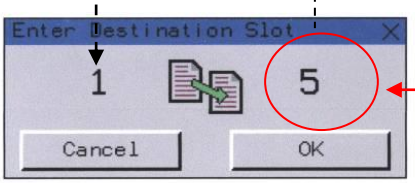
HIGHLIGHT PROGRAM TO COPY



MOVE HIGHLIGHT UP

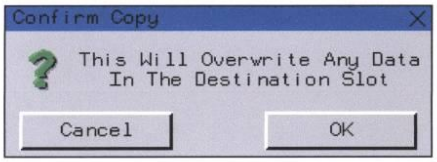
MOVE HIGHLIGHT DOWN

PRESS COPY

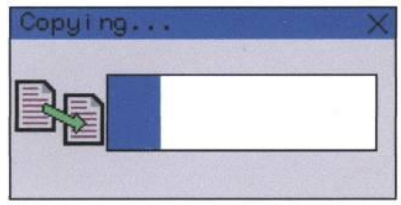


ENTER PROGRAM LIST POSITION REQUIRED TO COPY TO.

PRESS “OK”



CONFIRM “COPY TO” POSITION IS CORRECT PRESS “OK”

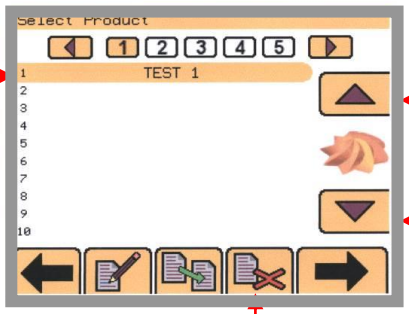


PROGRAM DETAILS ARE COPIED TO NEW LOCATION

DELETE

7

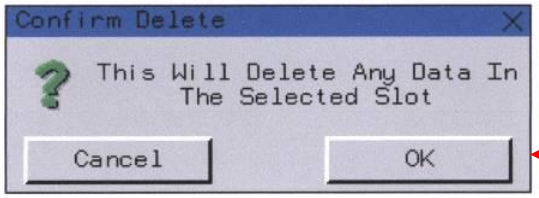
HIGHLIGHT PROGRAM TO DELETE



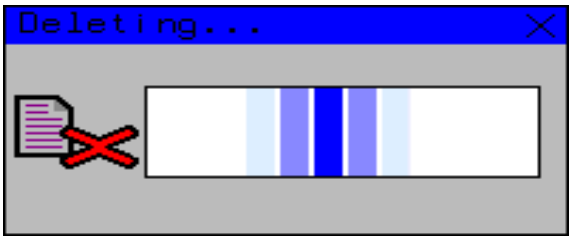
MOVE HIGHLIGHT UP

MOVE HIGHLIGHT DOWN

PRESS DELETE



TO CONFIRM, “DELETE” IS CORRECT PRESS “OK”

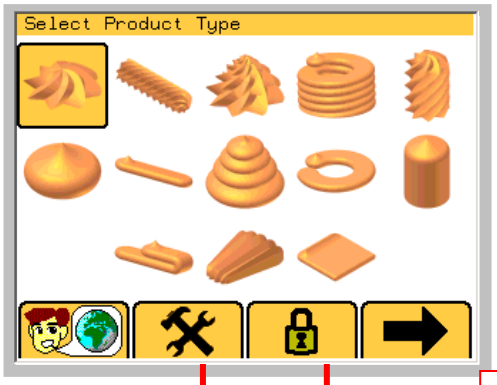


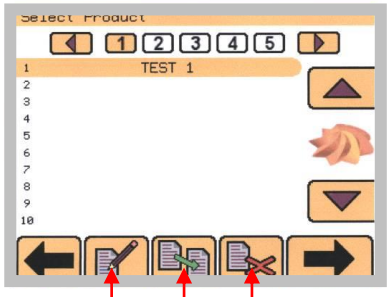
PASSWORDS

8

CAUTION

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



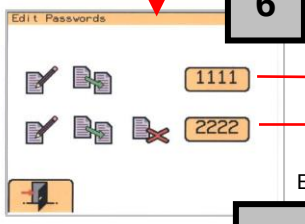


1111	2222
EDIT/COPY	EDIT/COPY DELETE

5
6
7

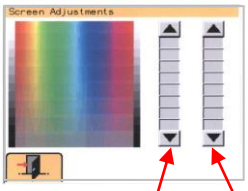
561234

1234 – SCREEN ADJUSTMENT



6 CHANGE EDIT/COPY PASSWORD

CHANGE EDIT/COPY/DELETE PASSWORD 7



FINE / C0ARSE

OR

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

3142–ENGINEERING SETTINGS

9

OR

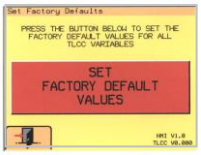
THIS SECTION IS FOR TRAINED ENGINEERS ONLY

2808--DIAGNOSTICS

OR

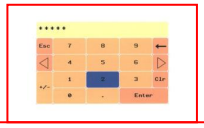
THIS SECTION IS FOR TRAINED ENGINEERS ONLY

01554777460
RESET FACTORY DEFAULTS

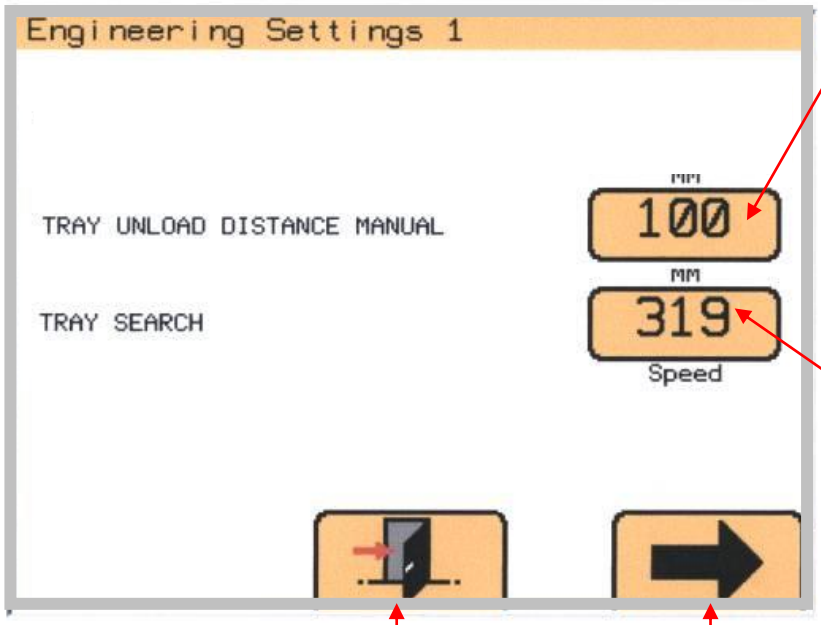


ENGINEERING SETTINGS (1)

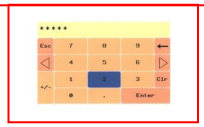
THIS SECTION IS FOR TRAINED ENGINEERS ONLY



IN MANUAL MODE:
DISTANCE THE LEADING EDGE
OF THE TRAY IS BROUGHT BACK
PASSED THE TRAY SENSOR, WHEN
RETURNING TO OPERATOR



SPEED VALUE THAT TRAY IS
FED UP TO TRAY SENSOR



EXIT
THIS SCREEN

GO TO NEXT SCREEN
ENGINEERING SETTING 2
(NEXT PAGE)

CAUTION

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

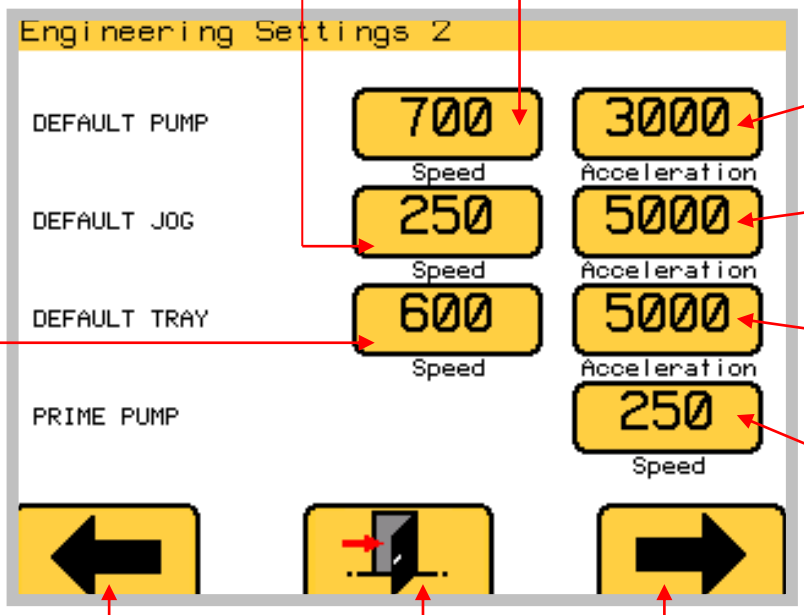
ENGINEERING SETTINGS (2)

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

DEFAULT
TRAY SPEED
(MOVEMENT BETWEEN ROWS)

DEFAULT
JOG SPEED
(VERTICAL AFTER DEPOSIT)

DEFAULT SPEED OF PUMP
(100% VALUE IN PRODUCT SETUP PROGRAM)



DEFAULT
ACCELERATION
FOR **PUMP**

DEFAULT
ACCELERATION
FOR **JOG**

DEFAULT
ACCELERATION
FOR **TRAY**

PUMP SPEED
WHEN USING
PRIME BUTTON

EXIT
THIS SCREEN

GO TO PREVIOUS SCREEN
ENGINEERING SETTING 1
(PREVIOUS PAGE)

GO TO NEXT SCREEN
ENGINEERING SETTING 3
(NEXT PAGE)

CAUTION

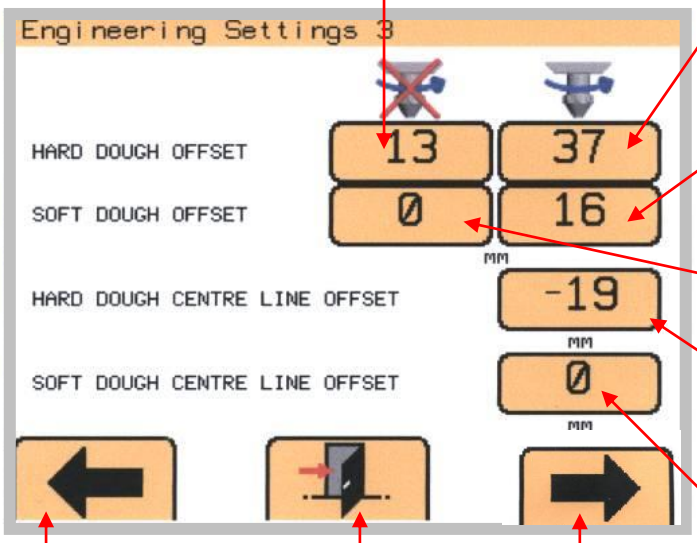
DO NOT ATTEMPT TO MAKE ADJUSTMENTS UNLESS YOU ARE FULLY AWARE OF THE RESULTS

ENGINEERING SETTINGS (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)

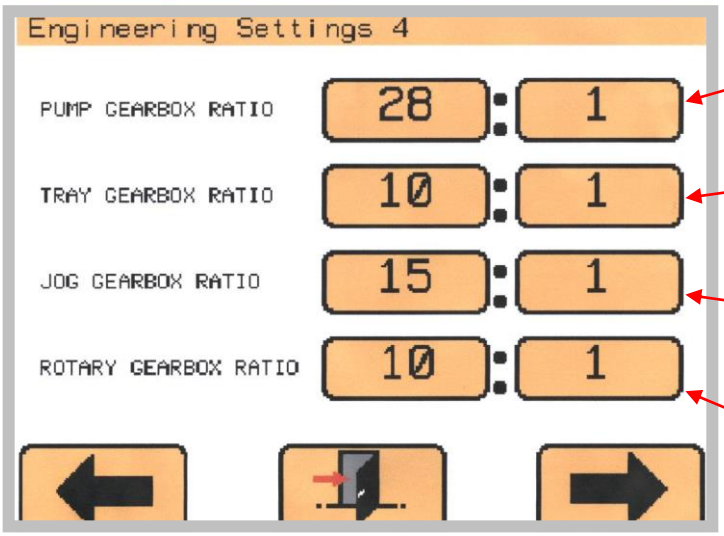
CAUTION

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

ENGINEERING SETTINGS (4)

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

GEARBOX RATIOS



PUMP

TRAY

JOG

ROTARY

EXIT
THIS SCREEN

GO TO PREVIOUS SCREEN
ENGINEERING SETTING 3
(PREVIOUS PAGE)

GO TO NEXT SCREEN
ENGINEERING SETTING 5
(NEXT PAGE)

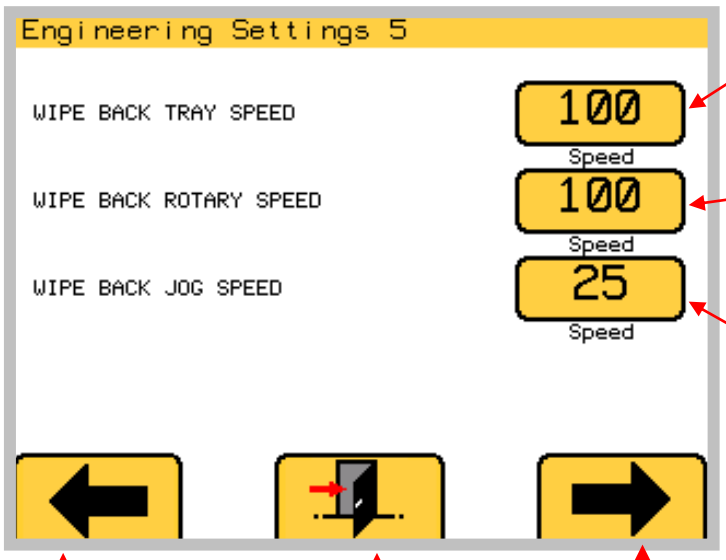
CAUTION

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

ENGINEERING SETTINGS (5)

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

WIPE BACK DEFAULT SETTINGS (SEE 5A)



TRAY SPEED

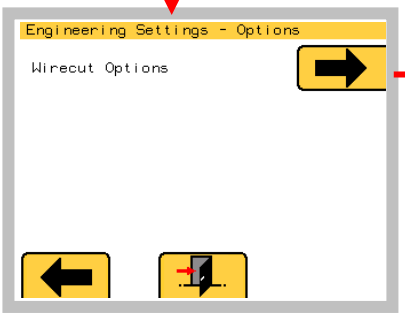
ROTARY SPEED

JOG SPEED

EXIT
THIS SCREEN

GO TO NEXT SCREEN
FOR WIRECUT OPTIONS

GO TO PREVIOUS SCREEN
ENGINEERING SETTING 4
(PREVIOUS PAGE)



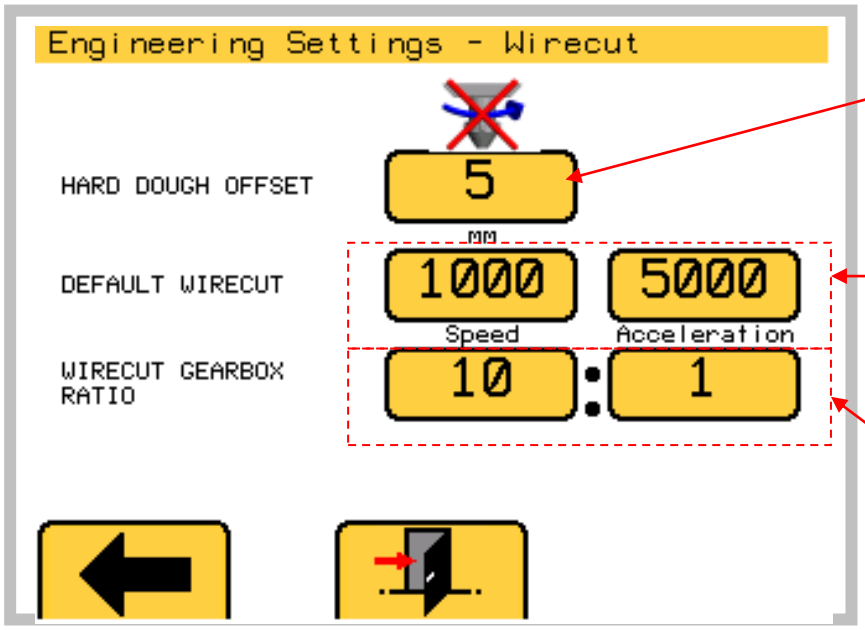
NEXT
SCREEN
FOR
WIRECUT
SETUP

CAUTION

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

NEXT PAGE

WIRECUT SETTINGS



HARD DOUGH OFFSET

WIRECUT SPEED + ECCELERATION

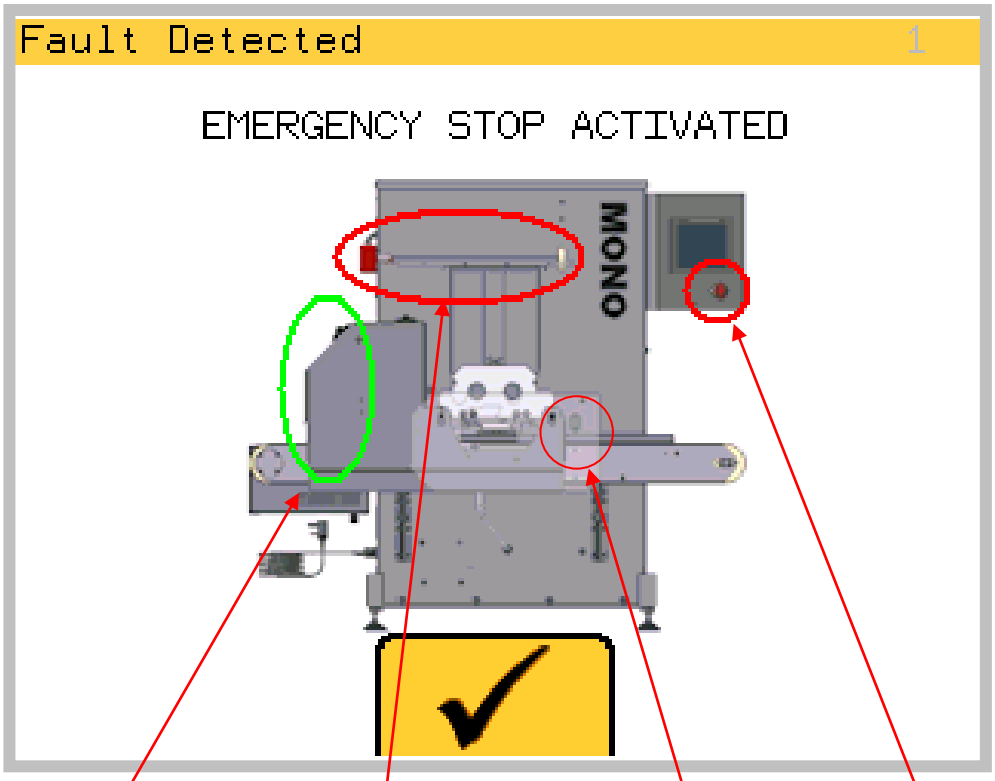
WIRECUT GEARBOX RATIO

EXIT
THIS SCREEN

GO TO PREVIOUS SCREEN
ENGINEERING SETTING 4
(PREVIOUS PAGE)

FAULT INFORMATION SCREENS

10



WIRECUT COVER | HOPPER COVER | SAFETY BEAM | STOP BUTTON

THIS SCREEN INDICATES A FAULT CONDITION IN THE SAFETY AREAS.

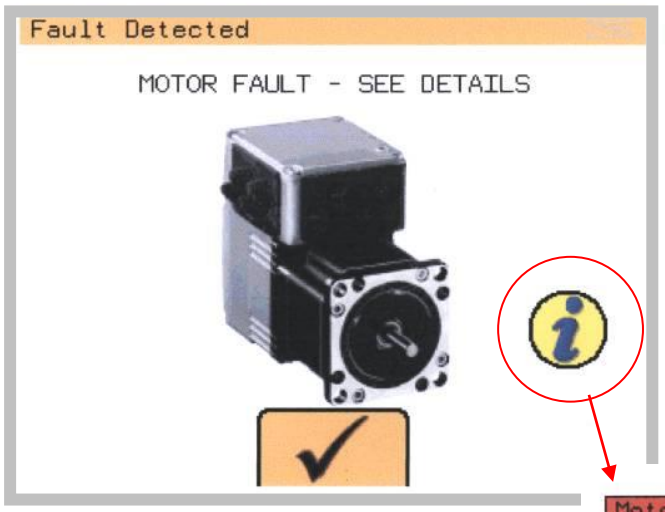
WHEN RED, CLOSE COVER OR CLEAR OBSTRUCTIONS TO CLEAR FAULT.
WHEN INDICATOR GOES GREEN, FAULT HAS BEEN CORRECTED AT THAT POSITION.

PRESS ✓ BUTTON TO CLEAR SCREEN

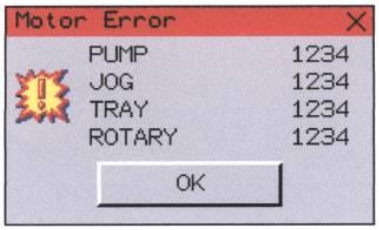
CAUTION

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

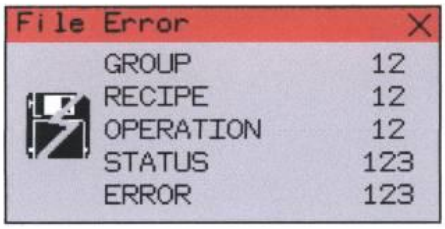
IF THE FOLLOWING SCREEN APPEARS, CHECK THAT THE TABLE MOVEMENT ETC. IS NOT JAMMED WITH SOMETHING. I F IT IS, CLEAR THE OBSTRUCTION AND PRESS ✓ TO PROCEED.



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

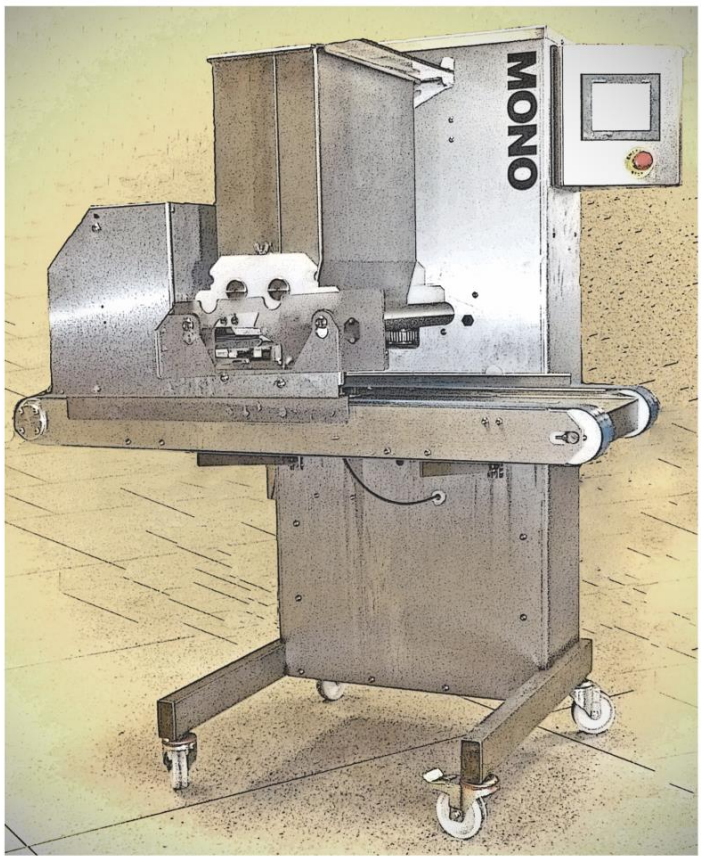


ERROR WHEN LOADING/SAVING RECIPE DATA TO HMI STORAGE CARD

PLEASE CONTACT SERVICE DEPT. / ENGINEER IF PROBLEM PERSISTS

11.0 MAINTENANCE

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.

12.0 SPARES AND SERVICE

.

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

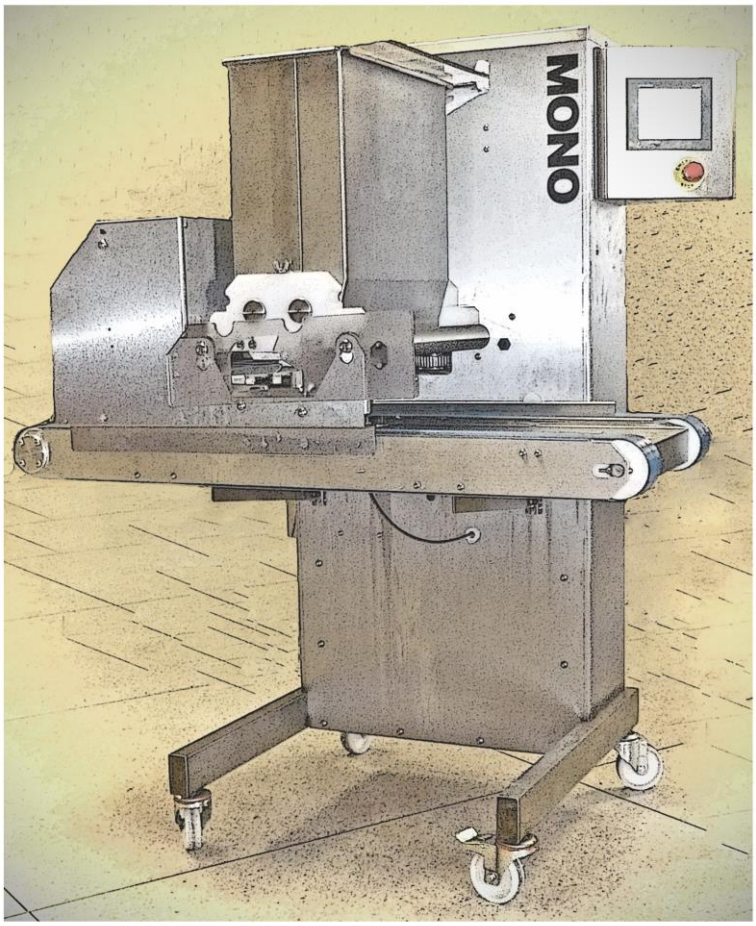
UK SERVICE, SPARES and OVERSEAS SUPPORT:

MONO

Queensway
Swansea West Industrial Estate
Swansea. SA5 4EB UK

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

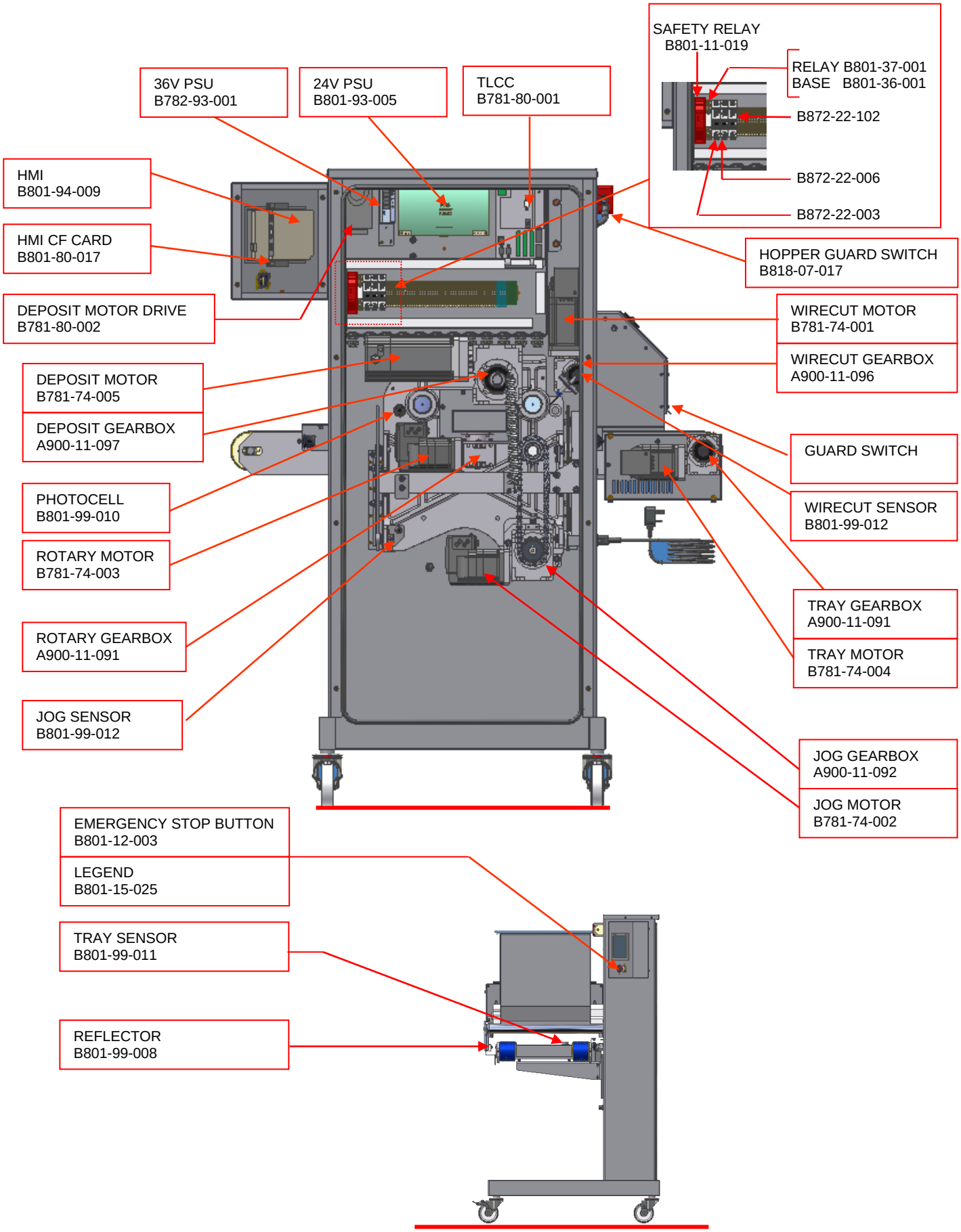
Tel. 01792 561234
Fax. 01792 561016



13.0 SPARES

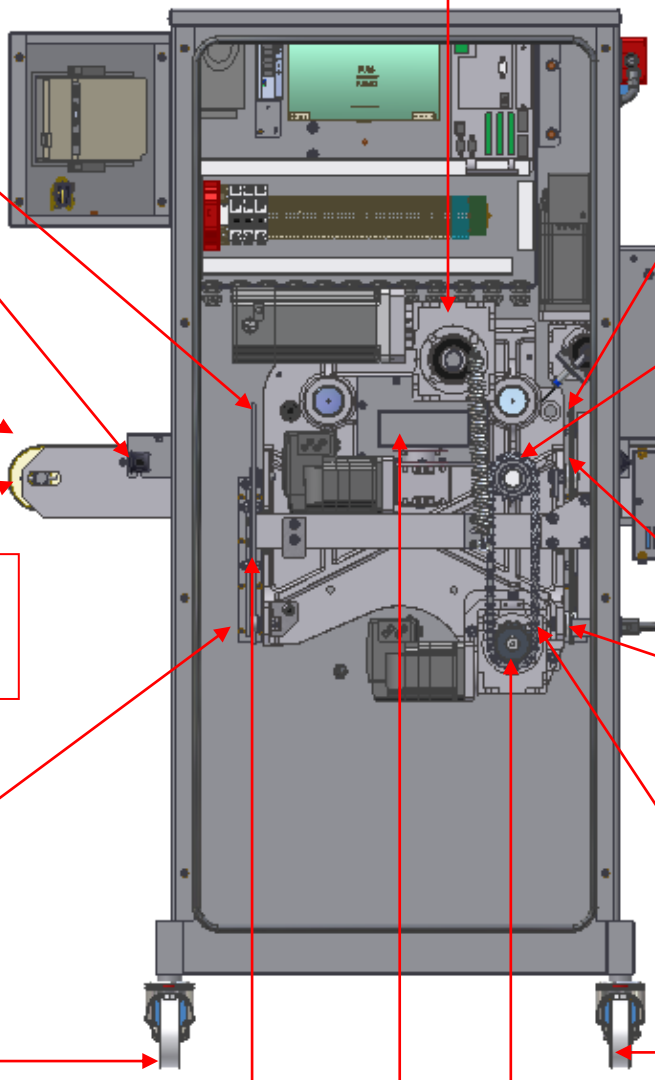
ELECTRICAL COMPONENT LAYOUT PARTS

Omega PLUS



MECHANICAL COMPONENT LAYOUT PARTS

Omega PLUS



DEPOSIT DRIVE SHAFT SEAL
A900-12-079

SLIDE PLATE
078-03-00027

THUMBSCREW
P700-04-018

CONVEYOR BELT
A900-22-120

BEARING – IDLE ROLLER
A900-06-261

NYLON WASHER – IDLE ROLLER
A900-05-210

PLAIN ROLLER
A900-06-136

LOCKING CASTOR
A900-20-043

RUBBER FOOT
A900-18-006

ROTARY DRIVESHAFT SEAL
A900-12-075

DRIVE SPROCKET
A900-07-071

V-SLIDE
M078-03-00016

IDLE SPROCKET
A900-07-072

BEARING-
DRIVE SHAFT
A900-06-277

V-ROLLER
CONCENTRIC-A900-06-274
ECCENTRIC – A900-06-273

CHAIN
A900-08-066

SWIVEL CASTOR
A900-20-002

REAR VIEW WITH COVER REMOVED

BASE MACHINE SPARES LIST

Spares Item Description	Mono Part No.	Qty Req. per M/C
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
Top Guard 400mm/450mm Hopper	078-09-00005	1
Top Guard 580mm Hopper	078-09-00044	1
End Guard	078-11-00020	1
Retainer – End Guard	078-11-00002	2
Seal-Rear Cover	A900-25-309	1

HARD DOUGH HOPPER PARTS

Omega PLUS

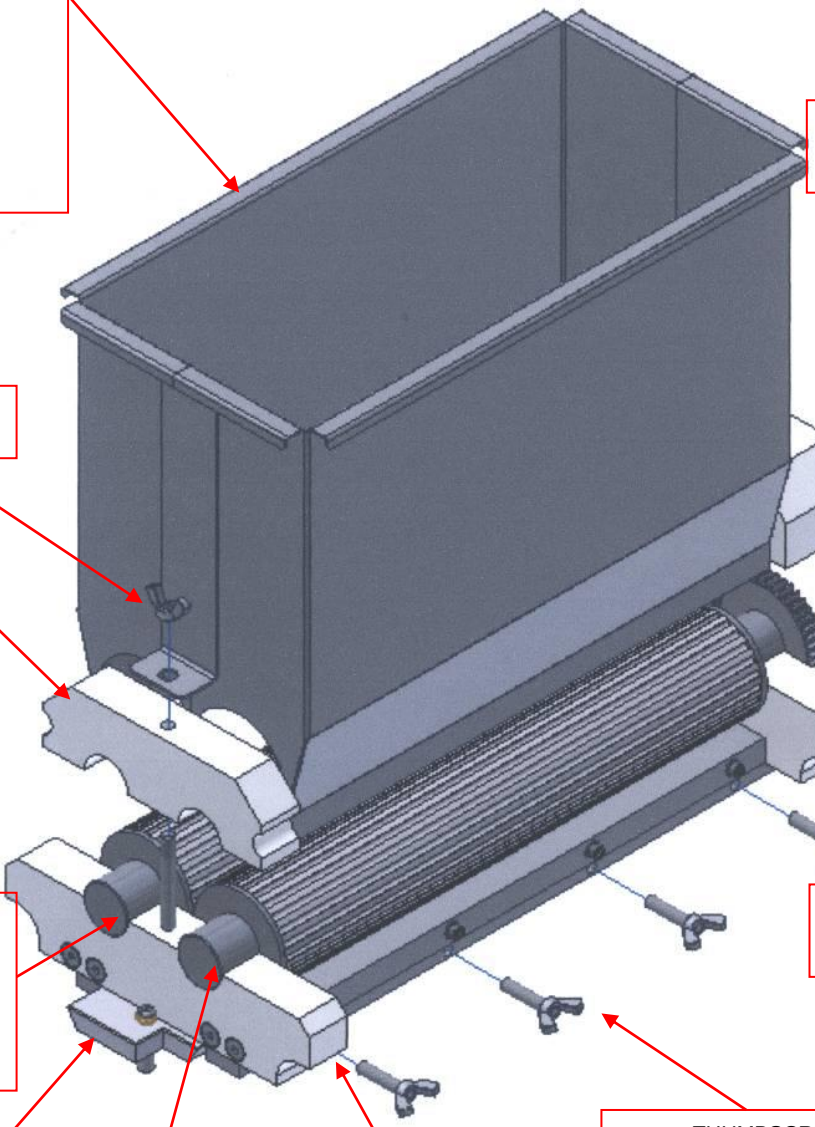
HOPPER FABRICATION

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)



UPPER END BLOCK
(DRIVE SIDE)
M078-09-00036

WINGNUT
A900-04-147

UPPER END BLOCK
(DRIVEN SIDE)
M078-09-00037

DRIVE ROLLER

M078-09-00066 (400mm)

M078-09-00060 (450mm)

M078-09-00074 (580mm)

LOWER END BLOCK
(DRIVE SIDE)
M078-09-00034

THUMBSCREW
M078-09-00043

TEMPLATES

ROTARY
- SMALL BORE
- LARGE BORE

STANDARD
- SMALL BORE
- LARGE BORE

DIE

SHEETING

DRIVEN ROLLER

M078-09-00067 (400mm)

M078-09-00061 (450mm)

M078-09-00075 (580mm)

LOWER END BLOCK
(DRIVEN SIDE)
M078-09-00035

SOFT DOUGH HOPPER PARTS

Omega PLUS

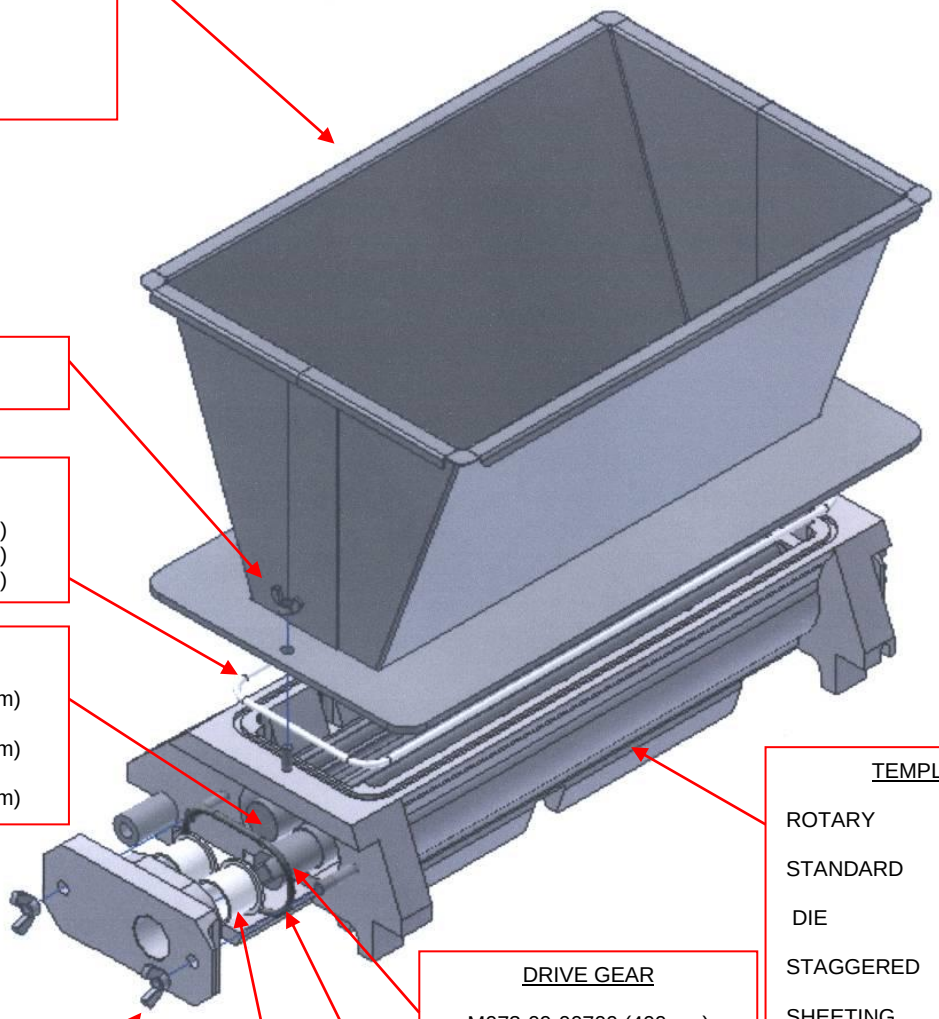
HOPPER FABRICATION

STANDARD CAPACITY

M078-09-00008 (400mm)
M078-09-00001 (450mm
M078-09-00046 (580mm)

EXTENDED CAPACITY

M073-09-00200 (400mm)
M073-09-00202 (450mm)
M073-09-00203 (580mm)



WINGNUT
A900-04-043

HOPPER SEAL

A900-12-083 (400mm)
A900-12-084 (450mm)
A900-12-085 (580mm)

DRIVEN GEAR

M073-09-00702 (400mm)

M073-09-01602 (450mm)

M073-09-01702 (580mm)

TEMPLATES

ROTARY

STANDARD

DIE

STAGGERED

SHEETING
- NON-DRIP
- MULTI SHEETING

INJECTION

DRIVE GEAR

M073-09-00700 (400mm)

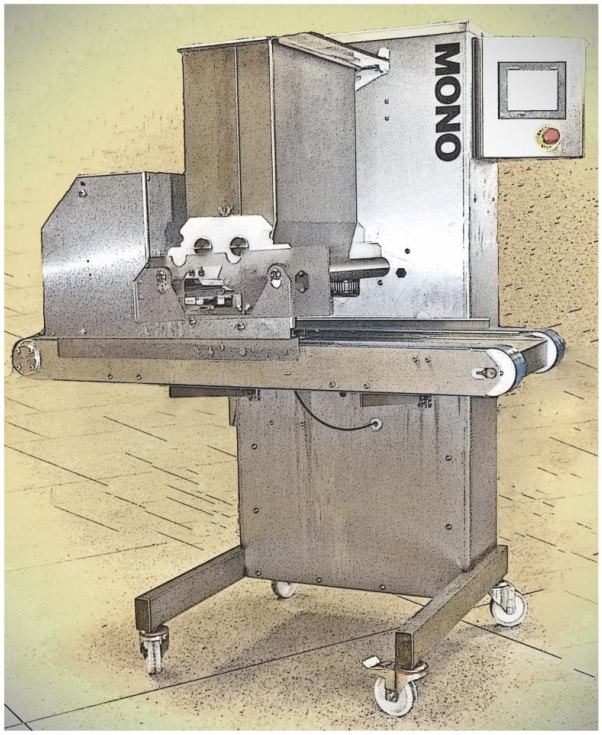
M073-09-01600 (450mm)

M073-09-01700 (580mm)

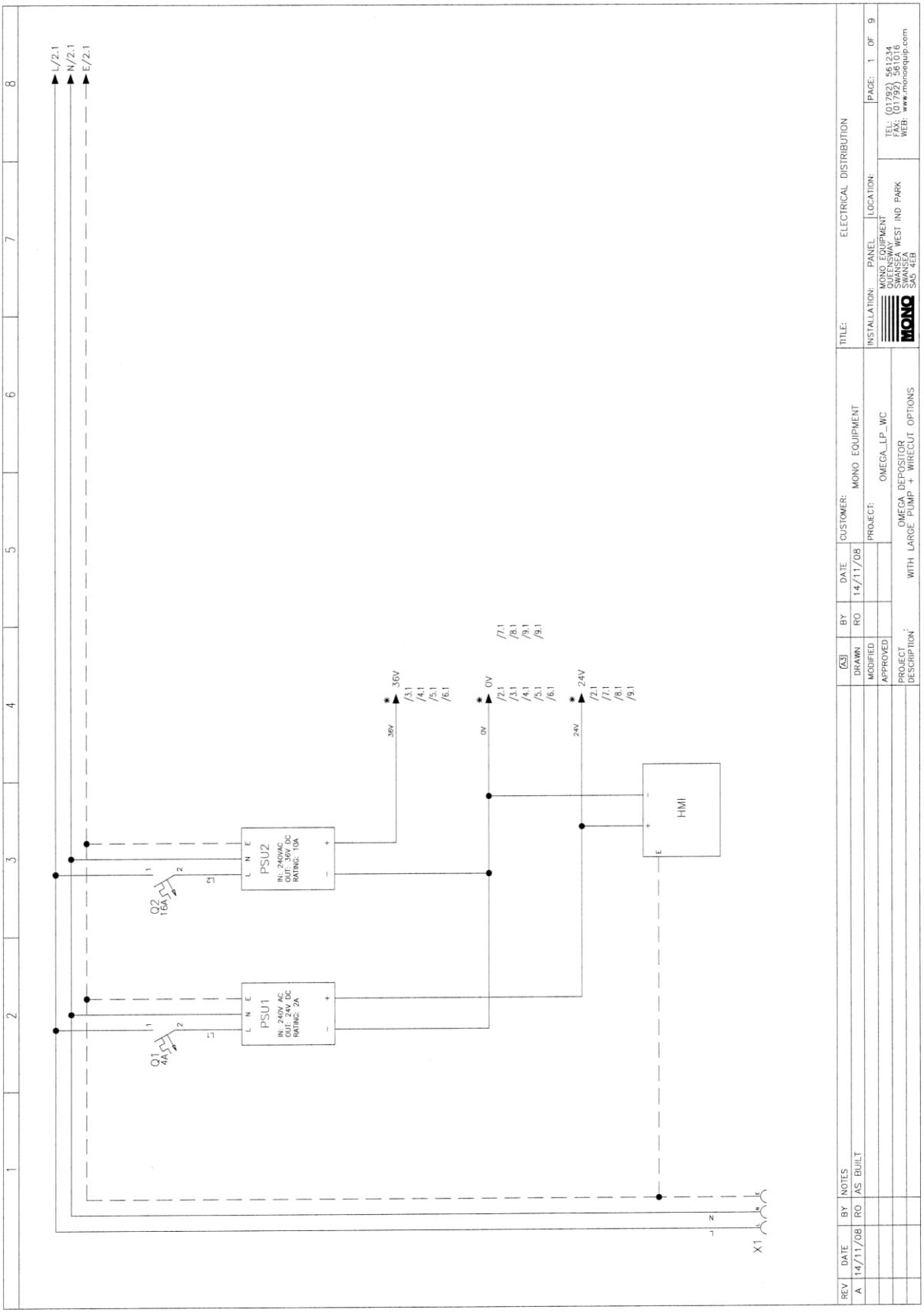
WINGNUT
A900-04-147

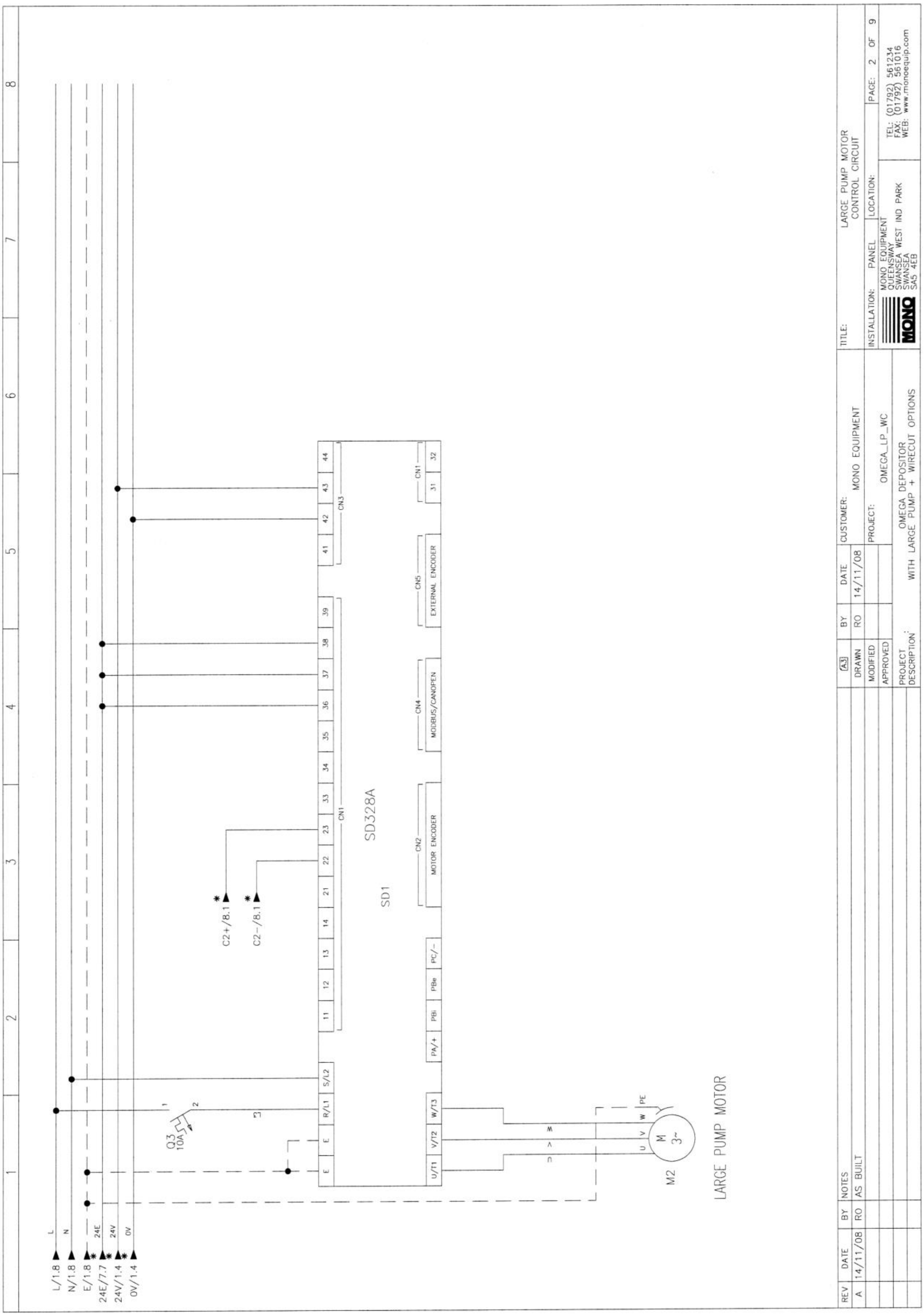
END CAP BUSH
M073-09-00600

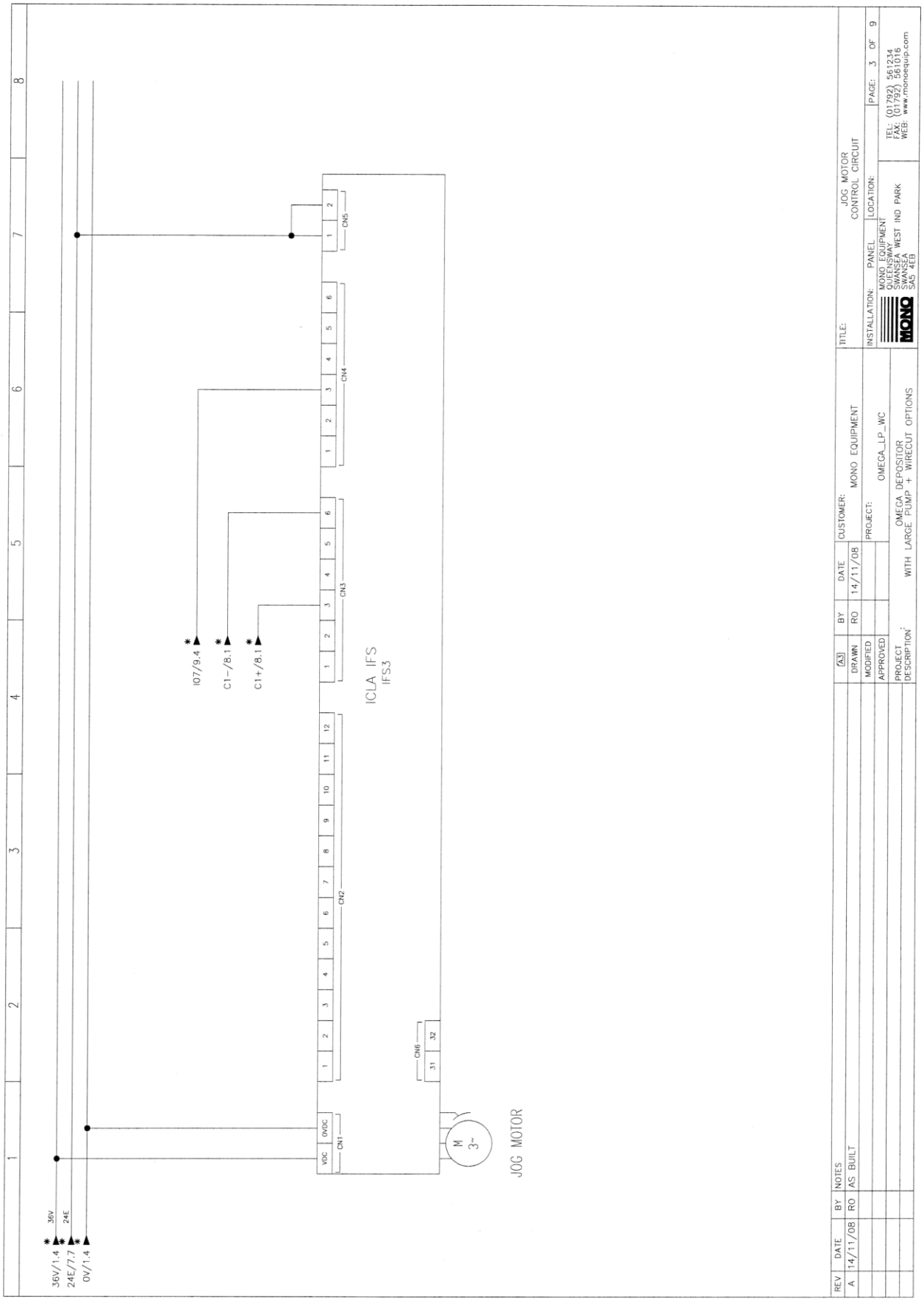
END CAP SEAL
A900-12-074

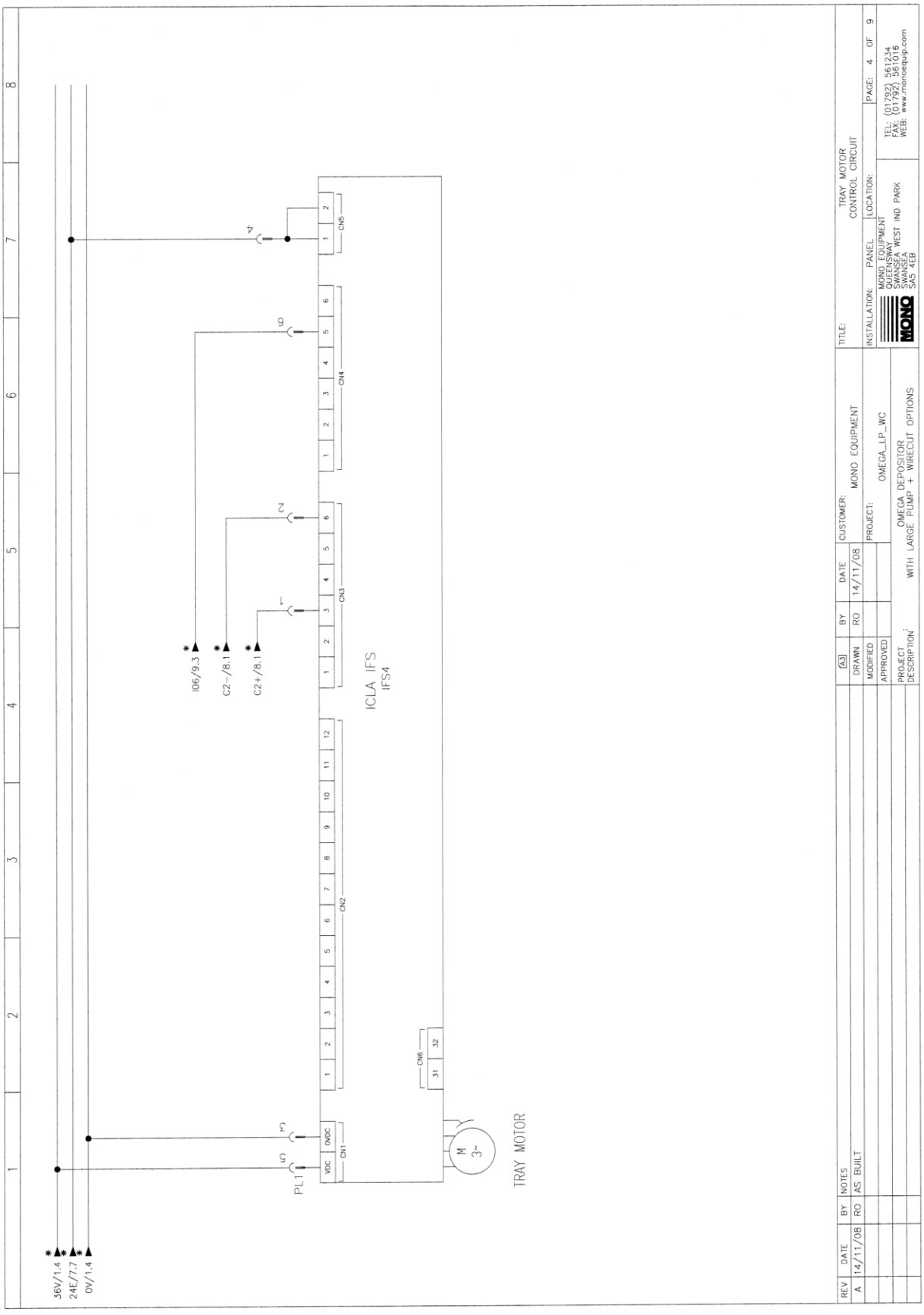


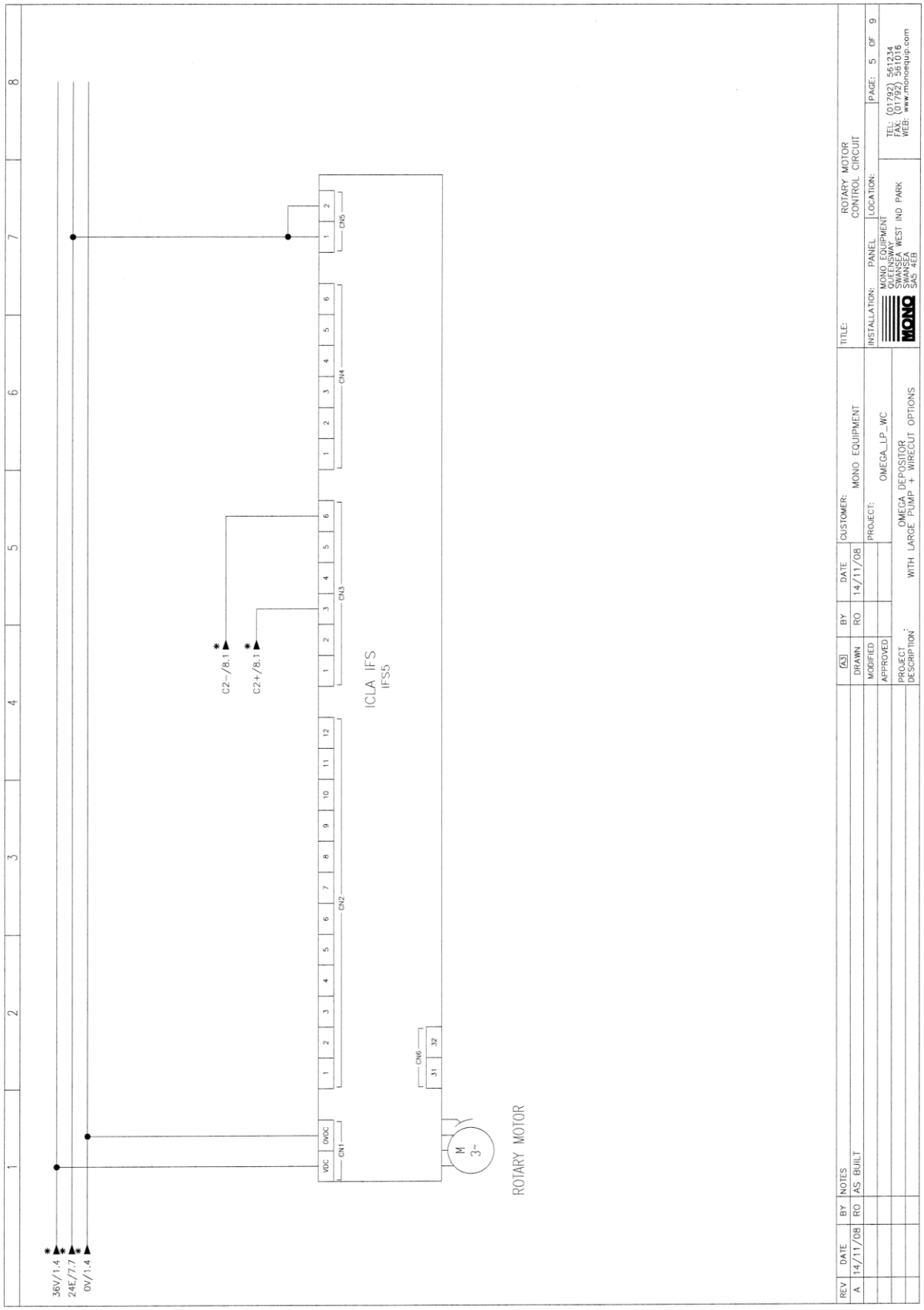
14.0 ELECTRICAL INFORMATION

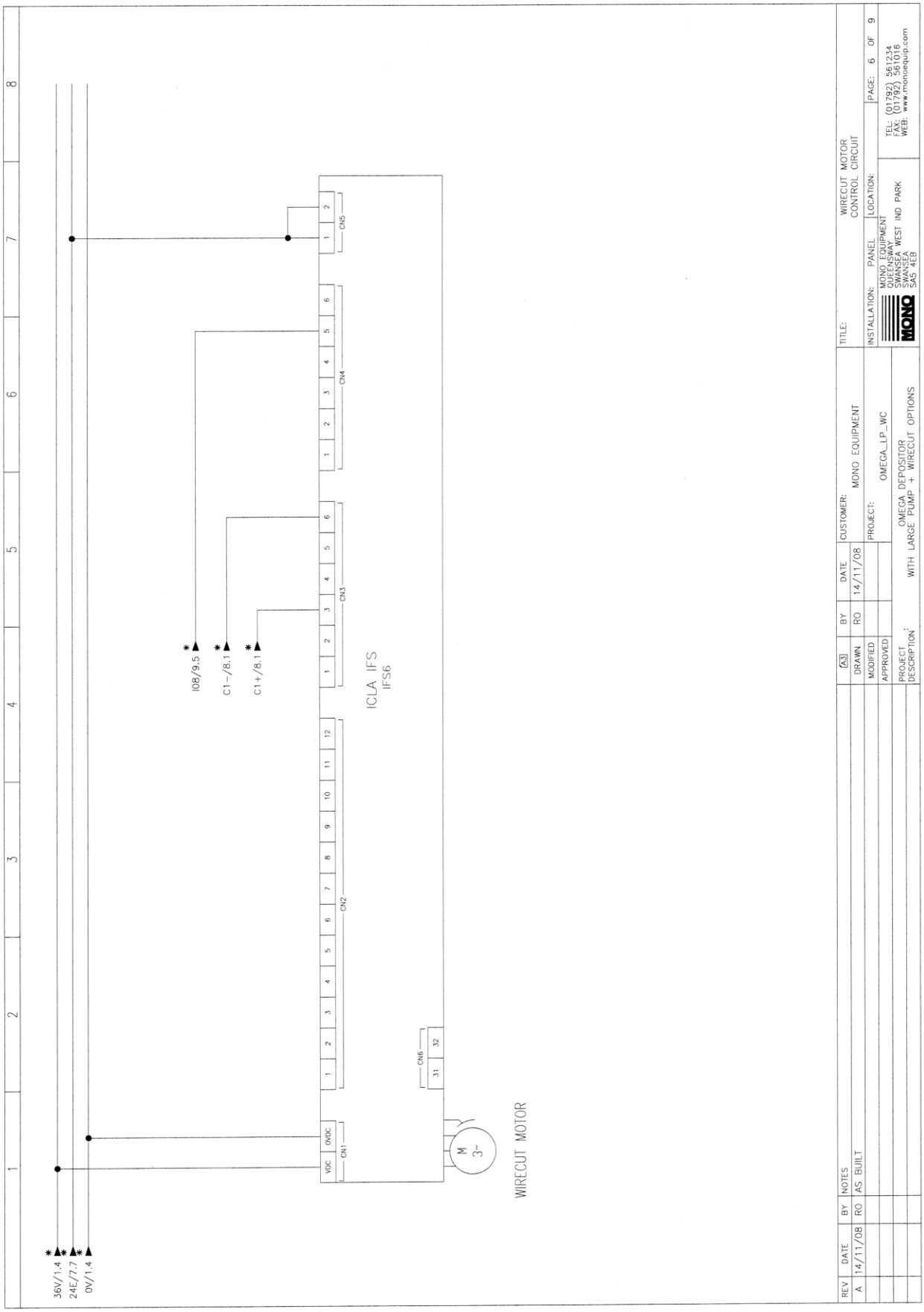

L/2.1
N/2.1
E/2.1
PSU2
IN: 240VAC
OUT: 36V DC
RATING: 10A
PSU1
IN: 240V AC
OUT: 24V DC
RATING: 2A
Q2
16A
Q1
4A
36V
/3.1
/4.1
/5.1
/6.1
0V
/2.1
/3.1
/4.1
/5.1
/6.1
/7.1
/8.1
/9.1
24V
/2.1
/7.1
/8.1
/9.1
HMI
X1
REV
DATE
BY
NOTES
A
14/11/08
RO
AS BUILT
DRAWN
MODIFIED
APPROVED
BY
DATE
RO
14/11/08
CUSTOMER:
MONO EQUIPMENT
PROJECT:
OMEGA_LP_WC
PROJECT DESCRIPTION:
OMEGA DEPOSITOR WITH LARGE PUMP + WIRECUT OPTIONS
TITLE:
ELECTRICAL DISTRIBUTION
INSTALLATION:
PANEL
LOCATION:
PAGE: 1 OF 9
MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA
SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com

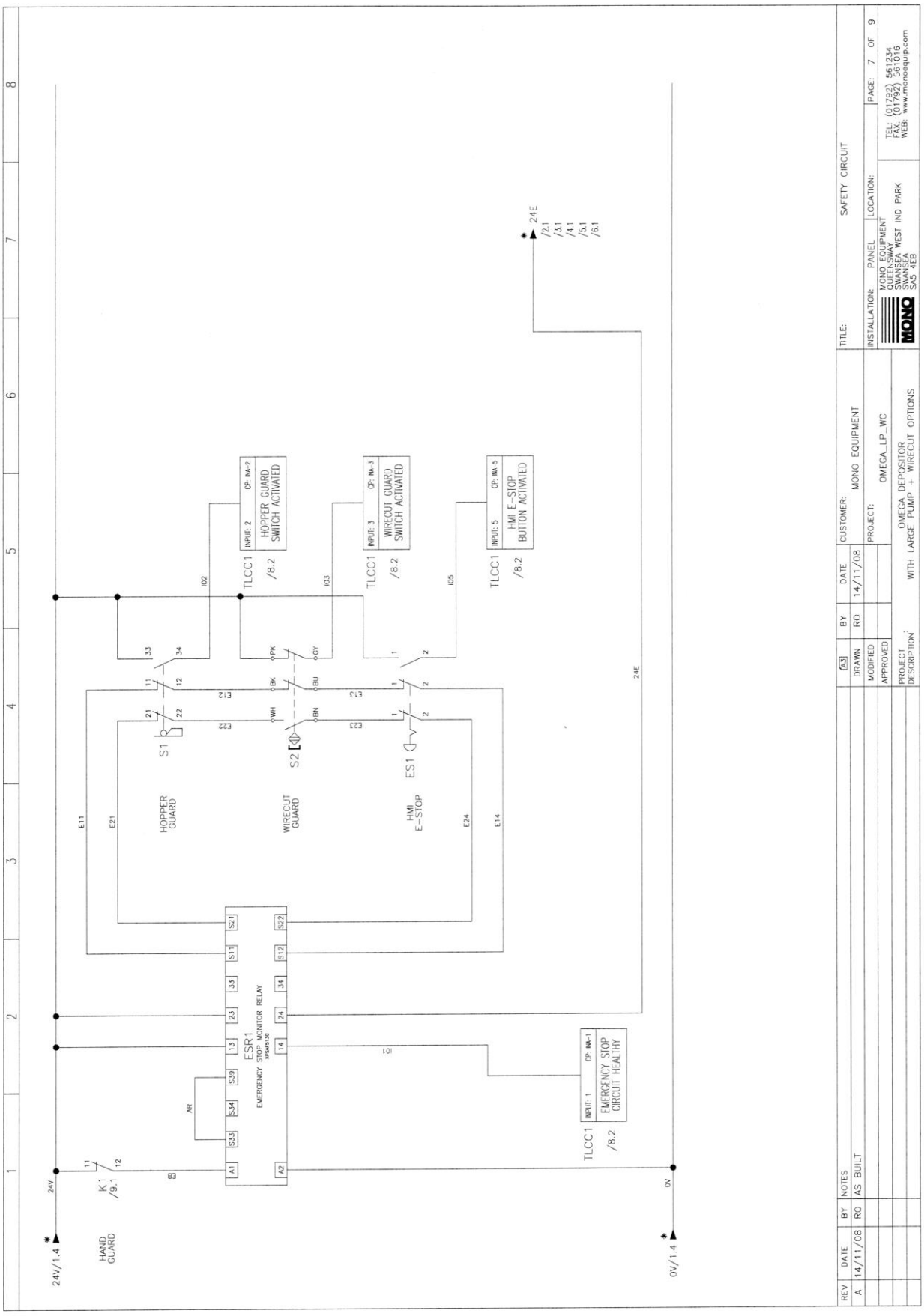

LARGE PUMP MOTOR CONTROL CIRCUIT
SD328A
SD1
LARGE PUMP MOTOR
M2
Q3 10A
C2+/8.1
C2-/8.1
L/1.8
N/1.8
E/1.8
24E/7.7
24V/1.4
0V/1.4
CN1
CN2
CN3
CN4
CN5
MOTOR ENCODER
MODBUS/CANOPEN
EXTERNAL ENCODER
CUSTOMER: MONO EQUIPMENT
PROJECT: OMEGA_LP_WC
OMEGA DEPOSITOR WITH LARGE PUMP + WIRECUT OPTIONS
INSTALLATION: PANEL
MONO EQUIPMENT QUEENSWAY SWANSEA WEST IND PARK SWANSEA SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com
PAGE: 2 OF 9
DRAWN RO 14/11/08
A 14/11/08 RO AS BUILT

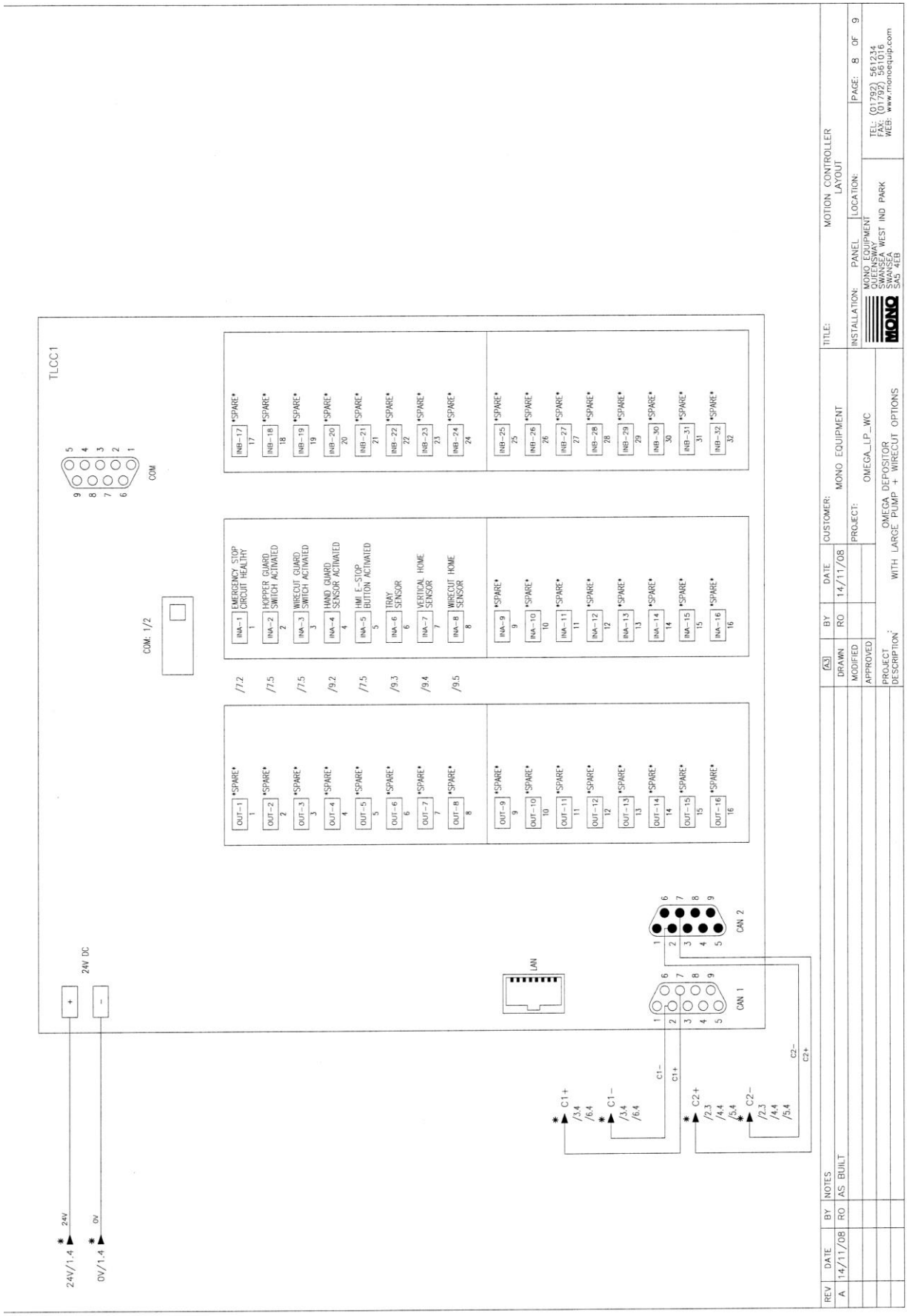

36V/1.4
24E/7.7
0V/1.4
36V
24E
I07/9.4
C1-/8.1
C1+/8.1
ICLA IFS
IFS3
CN1
CN2
CN3
CN4
CN5
CN6
VDC
0VDC
M
3~
JOG MOTOR
REV
DATE
BY
NOTES
A
14/11/08
RO
AS BUILT
A3
DRAWN
MODIFIED
APPROVED
BY
RO
DATE
14/11/08
CUSTOMER:
MONO EQUIPMENT
PROJECT:
OMEGA_LP_WC
PROJECT
DESCRIPTION:
OMEGA DEPOSITOR
WITH LARGE PUMP + WIRECUT OPTIONS
TITLE:
JOG MOTOR
CONTROL CIRCUIT
INSTALLATION:
PANEL
LOCATION:
PAGE: 3 OF 9
MONO EQUIPMENT
OLDFIELD WAY
SWANSEA WEST IND PARK
SWANSEA
SA5 4EB
MONO
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com

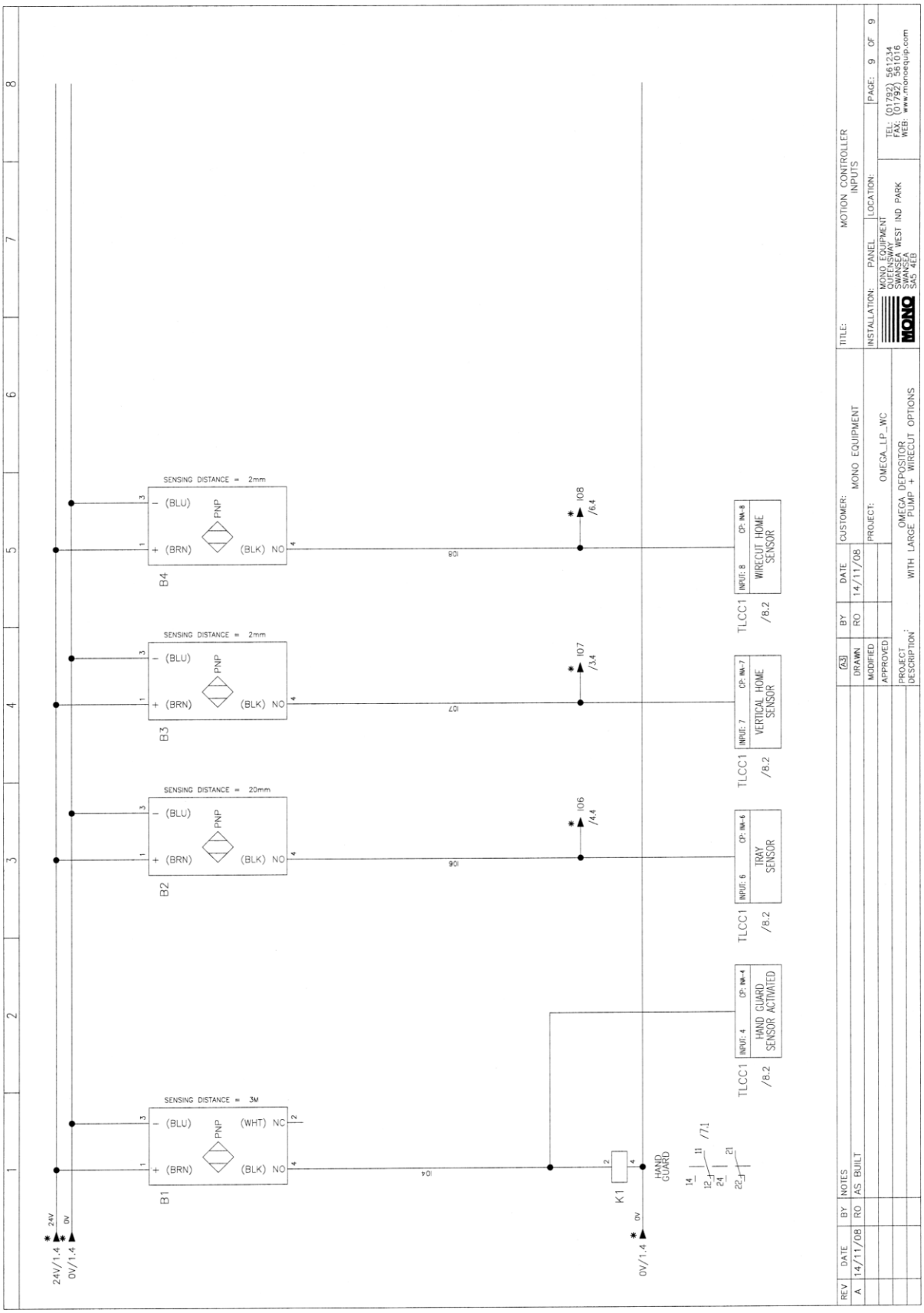

36V/1.4
24E/7.7
0V/1.4
I06/9.3
C2-/8.1
C2+/8.1
ICLA IFS
IFS4
CN1
CN2
CN3
CN4
CN5
CN6
PL1
TRAY MOTOR
M
3~
TITLE: TRAY MOTOR CONTROL CIRCUIT
CUSTOMER: MONO EQUIPMENT
PROJECT: OMEGA_LP_WC
INSTALLATION: PANEL
LOCATION:
PAGE: 4 OF 9
MONO EQUIPMENT
QUEENSWAY
CHANGE A WEST IND PARK
SWANSEA
SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561018
WEB: www.monoequip.com
DRAWN RO 14/11/08
MODIFIED
APPROVED
PROJECT DESCRIPTION: OMEGA DEPOSITOR WITH LARGE PUMP + WIRECUT OPTIONS
REV A DATE 14/11/08 BY RO NOTES AS BUILT


36V/1.4
24E/7.7
0V/1.4
C2-/8.1
C2+/8.1
ICLA_IFS
IFS5
CN1
CN2
CN3
CN4
CN5
CN6
VDC
0VDC
M
3~
ROTARY MOTOR
REV
DATE
BY
NOTES
A
14/11/08
RO
AS BUILT
DRAWN
MODIFIED
APPROVED
PROJECT
DESCRIPTION
CUSTOMER:
MONO EQUIPMENT
PROJECT:
OMEGA_LP_WC
OMEGA DEPOSITOR
WITH LARGE PUMP + WIRECUT OPTIONS
TITLE:
ROTARY MOTOR
CONTROL CIRCUIT
INSTALLATION:
PANEL
LOCATION:
PAGE: 5 OF 9
MONO EQUIPMENT
OLDFIELD WAY
SWANSEA WEST IND PARK
SWANSEA
SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com


36V/1.4
24E/7.7
0V/1.4
I08/9.5
C1-/8.1
C1+/8.1
ICLA IFS
IFS6
CN1
CN2
CN3
CN4
CN5
CN6
VDC
0VDC
M
3~
WIRECUT MOTOR
REV
DATE
BY
NOTES
A
14/11/08
RO
AS BUILT
DRAWN
MODIFIED
APPROVED
BY
RO
DATE
14/11/08
CUSTOMER:
MONO EQUIPMENT
PROJECT:
OMEGA_LP_WC
PROJECT
DESCRIPTION:
OMEGA DEPOSITOR
WITH LARGE PUMP + WIRECUT OPTIONS
TITLE:
WIRECUT MOTOR
CONTROL CIRCUIT
INSTALLATION:
PANEL
LOCATION:
PAGE: 6 OF 9
MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA
SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com

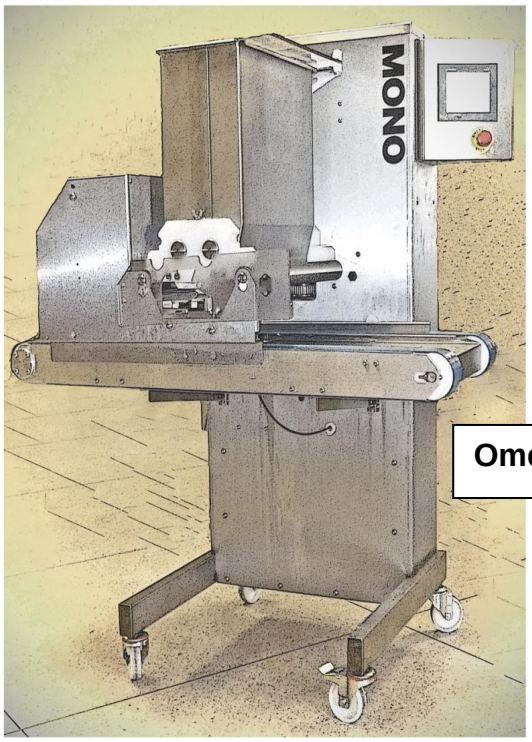

24V/1.4
HAND GUARD
K1 /9.1
ESR1
EMERGENCY STOP MONITOR RELAY
TLCC1 INPUT: 1 EMERGENCY STOP CIRCUIT HEALTHY /8.2
TLCC1 INPUT: 2 HOPPER GUARD SWITCH ACTIVATED /8.2
TLCC1 INPUT: 3 WIRECUT GUARD SWITCH ACTIVATED /8.2
TLCC1 INPUT: 5 HMI E-STOP BUTTON ACTIVATED /8.2
S1 HOPPER GUARD
S2 WIRECUT GUARD
ES1 HMI E-STOP
24E /2.1 /3.1 /4.1 /5.1 /6.1
0V/1.4
CUSTOMER: MONO EQUIPMENT
PROJECT: OMEGA_LP_WC
OMEGA DEPOSITOR WITH LARGE PUMP + WIRECUT OPTIONS
TITLE: SAFETY CIRCUIT
INSTALLATION: PANEL
LOCATION:
MONO EQUIPMENT QUEENSWAY SWANSEA WEST IND PARK SWANSEA SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com
PAGE: 7 OF 9
REV A DATE 14/11/08 BY RO NOTES AS BUILT
DRAWN RO 14/11/08
MODIFIED
APPROVED


TLCC1
COM
COM. 1/2
24V DC
LAN
CAN 1
CAN 2
INA-1 EMERGENCY STOP CIRCUIT HEALTHY
INA-2 HOPPER GUARD SWITCH ACTIVATED
INA-3 WIRECUT GUARD SWITCH ACTIVATED
INA-4 HAND GUARD SENSOR ACTIVATED
INA-5 HMI E-STOP BUTTON ACTIVATED
INA-6 TRAY SENSOR
INA-7 VERTICAL HOME SENSOR
INA-8 WIRECUT HOME SENSOR
SPARE
OUT-1 *SPARE*
OUT-2 *SPARE*
OUT-3 *SPARE*
OUT-4 *SPARE*
OUT-5 *SPARE*
OUT-6 *SPARE*
OUT-7 *SPARE*
OUT-8 *SPARE*
/7.2
/7.5
/7.5
/9.2
/7.5
/9.3
/9.4
/9.5
C1+ /3.4 /6.4
C1- /3.4 /6.4
C2+ /2.3 /4.4 /5.4
C2- /2.3 /4.4 /5.4
24V/1.4
0V/1.4
TITLE: MOTION CONTROLLER LAYOUT
CUSTOMER: MONO EQUIPMENT
PROJECT: OMEGA_LP_WC
OMEGA DEPOSITOR WITH LARGE PUMP + WIRECUT OPTIONS
INSTALLATION: PANEL LOCATION:
MONO EQUIPMENT DELTA BANK SWANSEA WEST IND PARK SWANSEA SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561016
WEB: www.monoequip.com
PAGE: 8 OF 9
REV A 14/11/08 RO AS BUILT
DRAWN 14/11/08 RO
MODIFIED
APPROVED


SENSING DISTANCE = 2mm
(BLU)
(BRN)
PNP
(BLK) NO
B4
108
/6.4
TLCC1
/8.2
INPUT: 8
OP: IMA-8
WIRECUT HOME SENSOR
SENSING DISTANCE = 2mm
B3
107
/3.4
INPUT: 7
OP: IMA-7
VERTICAL HOME SENSOR
SENSING DISTANCE = 20mm
B2
106
/4.4
INPUT: 6
OP: IMA-6
TRAY SENSOR
SENSING DISTANCE = 3M
(WHT) NC
B1
104
K1
HAND GUARD
/7.1
INPUT: 4
OP: IMA-4
HAND GUARD SENSOR ACTIVATED
24V/1.4
0V/1.4
0V
REV
DATE
BY
NOTES
A
14/11/08
RO
AS BUILT
DRAWN
MODIFIED
APPROVED
CUSTOMER: MONO EQUIPMENT
PROJECT: OMEGA_LP_WC
PROJECT DESCRIPTION: OMEGA DEPOSITOR WITH LARGE PUMP + WIRECUT OPTIONS
TITLE: MOTION CONTROLLER INPUTS
INSTALLATION: PANEL
LOCATION:
PAGE: 9 OF 9
MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA
SA5 4EB
TEL: (01792) 561234
FAX: (01792) 561015
WEB: www.monoequip.com

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

Queensway Swansea West Industrial Estate Swansea. SA5 4EB UK
Tel. 01792 561234 Fax. 01792 561016

Email:marketing@monoequip.com
Web site: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.