

Enter <b>Serial No</b>	here.
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In the event of an enquiry please quote this serial number.





NOTE: THIS MACHINE IS FOR USE WITH SOFT DOUGH ONLY

# Epsilon

## **OPERATING AND MAINTENANCE MANUAL**

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



### **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 2014/30/EU incorporating standards
  - EN 55014-1:2017/A11:2020
  - EN 55014-2:1997+A1:2001+A2:2008
- The General Safety of Machinery and food processing Standards applicable
- Materials and Articles intended to come into contact with food Regulation (EC) No.1935/2004
- Good manufacturing practice for materials intended to come in to contact with food Regulation
   (EC) No.2023/2006

Signed	( Pellin		
	Craig Petherbr	idge – Quality	Manager
Date			
Machine FG Code.		Machine Serial No.	

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

#### **MONO EQUIPMENT**

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

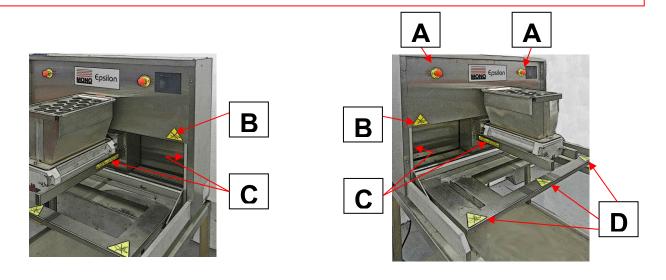
MONO EQUIPMENT is a business name of AFE GROUP Ltd
Registered in England No.3872673 VAT registration No.923428136

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

QD 001

Dated 22/07/2022

## SAFETY LABELS FOR EPSILON DEPOSITOR





PART NUMBER B801-15-025



PART NUMBER 080-00-00102

С

# KEEP HANDS CLEAR GARDER LES MAINS ÉLOIGNÉES

PART NUMBER 080-00-00101 (4off EACH LABEL)



PART NUMBER 077-11-00100

## ELECTRICAL SAFETY AND ADVICE REGARDING SUPPLEMENTARY ELECTRICAL PROTECTION

Commercial bakeries, kitchens and food service areas are environments where electrical appliances may be located close to liquids, or operate in and around damp conditions, or where restricted movement for installation and service is evident.

The installation and periodic inspection of the appliance should only be undertaken by a qualified, skilled and competent electrician, and connected to the correct supply suitable for the load as stipulated by the appliance data label.

The electrical installation and connections should meet the necessary requirements of the local electrical wiring regulations and any electrical safety guidelines.

#### We Recommend:

- Supplementary electrical protection with the use of a residual current device (RCD)
- Fixed wiring appliances incorporate a locally situated switch disconnector to connect to, which is easily accessible for switching off and safe isolation purposes. The switch disconnector must meet the specification requirements of IEC 60947.

#### Your attention is drawn to:

BS 7671:2018 - Guidance Note 8 - 8.13: Other locations of increased risk

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

- Automatic Disconnection of Supply (ADS) by means of a residual current device having a residual operating current not exceeding 30 mA;
- Supplementary protective equipotential bonding; and
- Reduction of maximum fault clearance time.

The provision of RCDs and supplementary bonding must be specified by the host organisation's appointed installation designer or electrical contractor and installed by a suitably qualified and competent electrician so as to comply with Regulations 419.2 and 544.2.



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

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



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

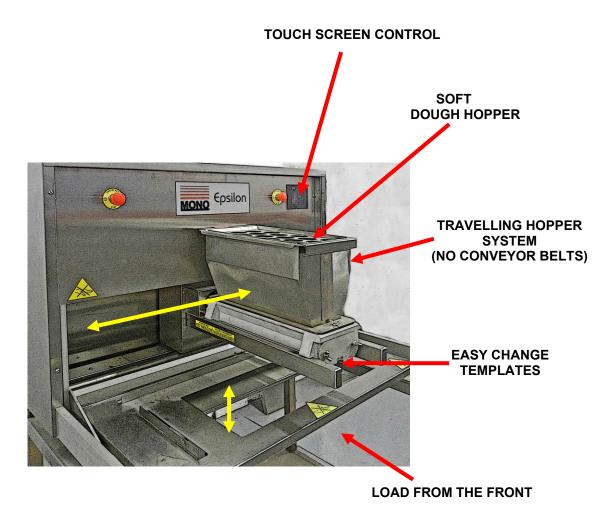
FOR SAFE WORKING, PAY SPECIAL ATTENTION TO ITEMS MARKED



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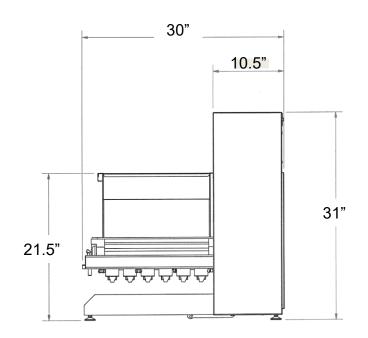
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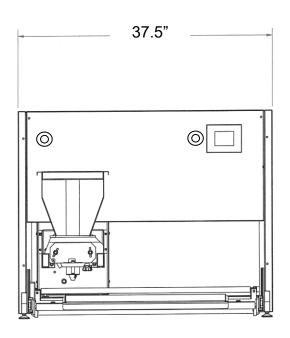
- The ground-breaking EPSILON tabletop confectionary depositor requires a small space to operate.
- The unique travelling hopper system removes the need for a conveyor belt which means trays can be loaded and unloaded in the most ergonomically efficient way directly from the front.
- The EPSILON can be transported through a normal doorway and plugged into a standard 13amp socket.
- Control is by a user-friendly tri-color touch screen (in 14 languages) and can be used to store up to 96 programs.
- Robust stainless steel construction for durability and ease of cleaning.
- A matching stainless steel table is also available to make the EPSILON freestanding.



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

## 2.0 DIMENSIONS







#### **SOFT DOUGH**

MODEL 400 (15.7") 450 (17.7")

(Nom. hopper width (mm))

Weight (with hopper fitted) (Kg): tba tba

**Standard hopper 20 (35 pints) 22.5 (39.5 pints)** 

Capacity (litre):

**Power:** Single phase,4.2A, 0.5kW, **120V**, 60Hz

or 2.1A, 0.5kW, 208-240V, 60Hz



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

Cycles per minute = Depends on product.

i.e. 5 across 30g drop = 16 per minute.

Max program storage = 96 Number of languages = 14

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 your intended product falls outside the above general machine specification.

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

- 1 Never use a machine in a faulty condition and always report any damage.
- 2 Only trained engineers may remove parts from this machine if a tool is required.
- 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 Epsilon 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 the hopper template fitted correctly.
- 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.

#### **CAUTION:**

The feed hopper and pump assembly can exceed 55lbs and will need to be lifted off by two people, or dismantled into smaller components while still on the machine.

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

## 5.0 INSTALLATION



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

- 1 Ensure that the depositor is connected to the 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.
- **3** The support table should be level and strong enough to support the machine and loaded hopper.
- **4** This machine should be lifted by more than one person.

## 6.0 ISOLATION



# IN AN EMERGENCY, SWITCH OFF AT THE MAINS WALL ISOLATOR, OR PUSH ONE OF THE EMERGENCY STOP BUTTONS.

To release an emergency stop button, turn clockwise.



## 7.0 CLEANING INSTRUCTIONS

**EPSILON** 

#### 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.

## **DOUGH HOPPERS**

#### **BETWEEN PRODUCT MIX CHANGES**

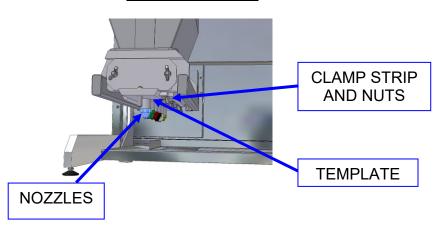
The feed hopper, pump assembly, template, nozzles etc. should be removed from the machine and dismantled for thorough cleaning between product mix changes.

- 1. Open top safety guard (lift front and unhook the back edge) and remove excess mixture remaining in the feed hopper.
- 2. <u>Slacken</u> template clamp strip nuts and remove fitted template from pump assembly by sliding out while supporting it to avoid damage.

#### NOTE.

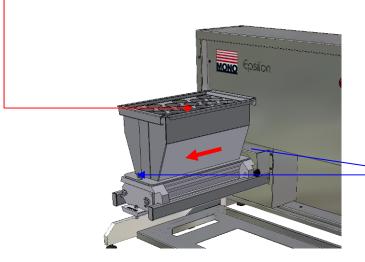
Thumbscrews only need to be released slightly to allow the template to slide away from the pump assembly. If loosened too much, the template will have to be supported.

#### **DOUGH HOPPER**



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

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.



HOPPER WINGNUTS

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

**EPSILON** 

## **DOUGH HOPPER**

NOTE: THIS MACHINE IS FOR USE WITH SOFT DOUGH ONLY

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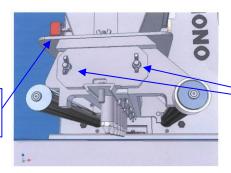
#### **CAUTION:**

The feed hopper and pump assembly can exceed 55lbs 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.*

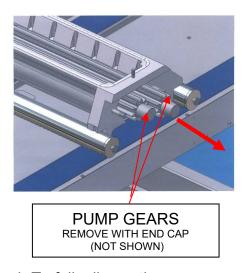
FEED HOPPER SEALING SURFACE

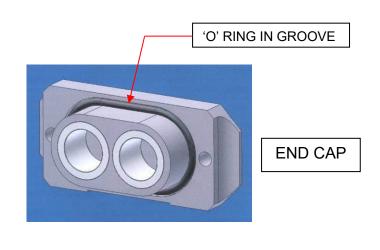


**ENDCAP NUTS** 

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.





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

PICTORIAL VIEWS SHOWN COULD BE DIFFERENT TO THE MACHINE BEING WORKED ON BUT THE INSTRUCTIONS ARE THE SAME FOR ALL MODELS.

#### To remove the table for cleaning:

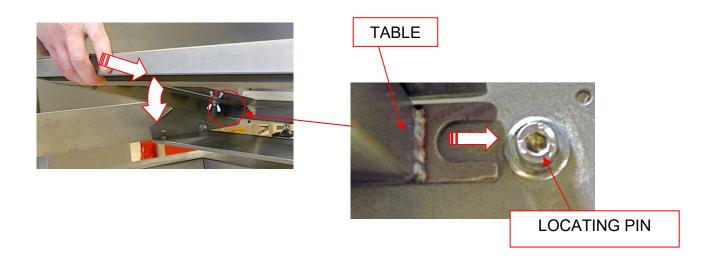
- 1. Push the table down to its lowest level.
- 2. Lift the front edge and lift the table towards you. The table will release from the back pins and can be placed in a washer for cleaning.



#### To replace the table after cleaning:

- 1. Hold table with the front edge raised and engage the slots over the pin on both sides.
- 2. Lower the table front edge.

When in the correct position the table will not slide forward.



## 8.0 OPERATING CONDITIONS

To obtain the best product results and consistent operation,

- ✓ Make sure the depositor is used on a level surface. (Adjust feet if required)
- ✓ Ensure **flat trays** are used.
- ✓ Ensure **undamaged** nozzles and templates are used.
- ✓ Keep the machine clean.
- ✓ Do not leave any components in the hopper.



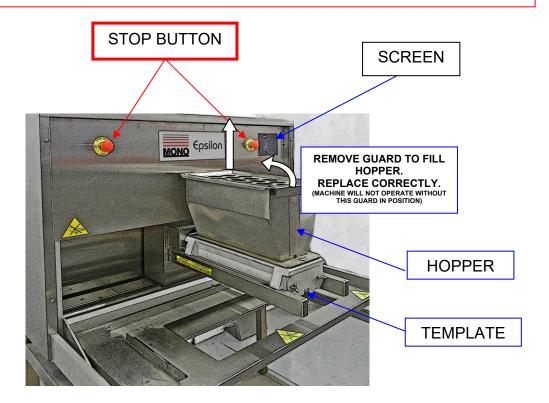
**EPSILON** 

## 9.0 PREPARING FOR OPERATION

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 required and fit as section 9a & 9b following. Fill hopper with mix and close hopper guard.

It is recommended that when heavy mixes are used, the inside of the hopper should be coated with vegetable oil and 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 the correct electrical supply.

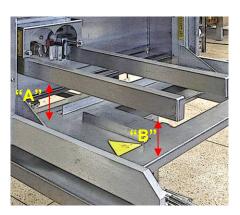
  Make sure stop button is in released position (turn clockwise if required).
- 3 Select an existing program or create a new program through the on-screen menus. (see section 10 operation)
- **4** The machine is now ready for operation.

#### TABLE ADJUSTMENTS

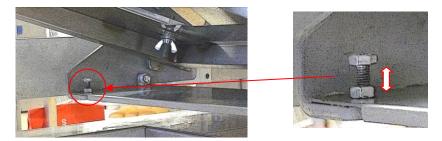
It is important that the table is parallel with the hopper.

(If this is not correct the nozzles will not be the same distance from the trays and the deposits will differ across the tray).

Measure the distance at "A" and "B" below and check that they are the same. This should be checked with the hopper bars positioned at both the full left position and the full right position.

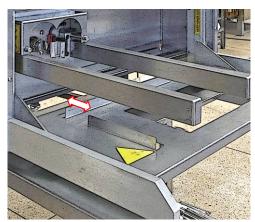


If not the same, an adjustment can be made by raising or lowering the adjusters under the table. There is one each side to allow the table to be adjusted evenly.



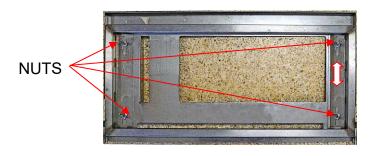
Lift the front edge of the table and, with a suitable spanner, release the locking nut. screw the adjuster bolt up or down and then lock it in position with the locking nut.

#### TRAY GUIDE ADJUSTMENT



MONO EPSILON DEPOSITOR FG080 | UL Version Rev. A23 (March 2023)

This allows different width trays to be accommodated. To adjust the position of the back guide, remove the table and turn it over. Loosen the thumb nuts and slide the sheet across to the desired position. Tighten the nuts and replace the table.



**EPSILON** 

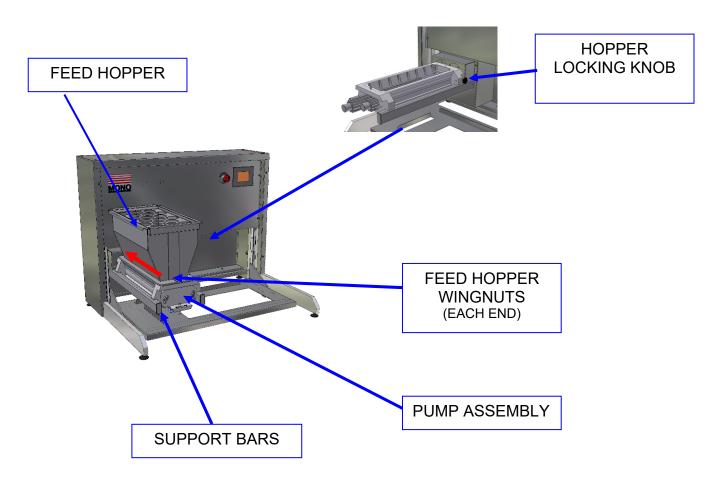
### 9a FITTING THE HOPPER

CAUTION SHOULD BE TAKEN WHEN FITTING HOPPER AND PUMP ASSEMBLY
AS WEIGHT EXCEEDS 55lbs ON SOME MODELS
It will need to be lifted off by two people, or
dismantled into smaller components while still on the machine.

MAKE SURE FLOOR AREA AROUND 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.
- 4 Screw hopper locking knob hand tight.





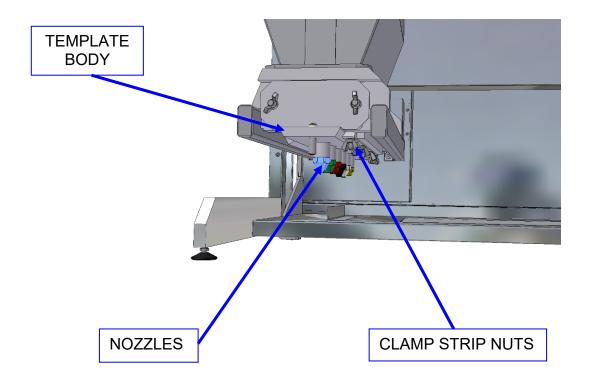
DO NOT OPERATE MACHINE WITHOUT TEMPLATE FITTED



## 9b FITTING A TEMPLATE

- 1 Select template and nozzles required.

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



- **3** Slide template into matching recess at base of pump assembly until 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



## 10.0 'Epsilon' OPERATION





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





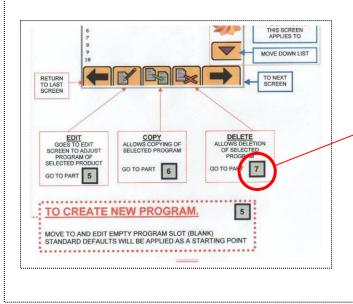
KEYBOARD ENTRY REQUIRED WHEN KEYBOARD APPEARS, A CODE MUST BE ENTERED BY TOUCHING THE NUMBERS IN THE CORRECT ORDER

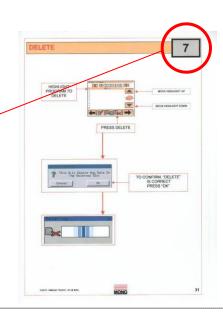
IF A GREY BOX IS SHOWN IN THE BUTTON DESCRIPTION

e.g. 7 GO TO THE CORRESPONDING PAGE FURTHER

ON IN THE INSTRUCTIONS.

(MARKED IN TOP RIGHT HAND CORNER OF EACH PAGE)





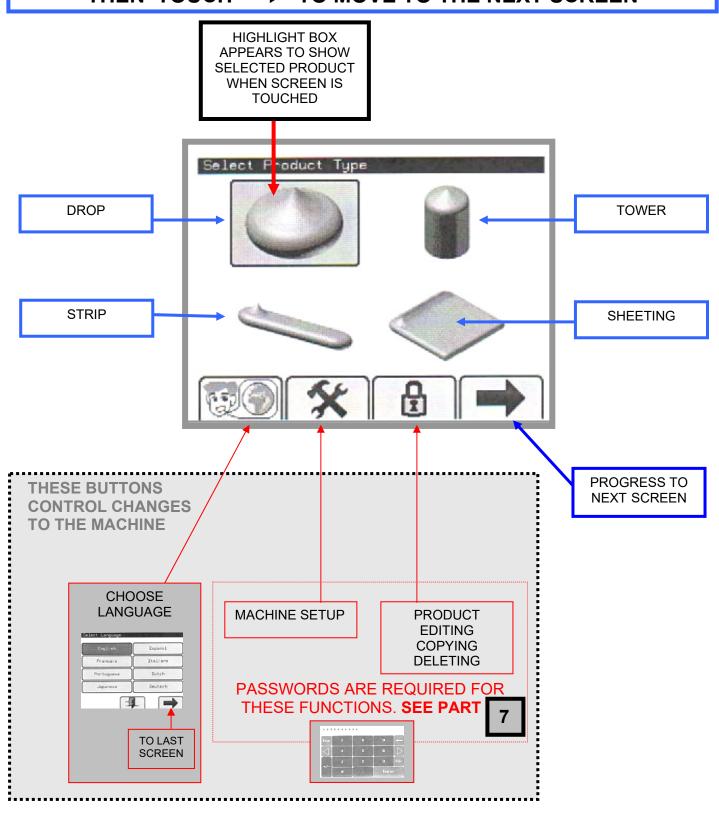
## **SELECT PRODUCT TYPE**

SELECT PRODUCT TO DEPOSIT OR TO CREATE NEW PROGRAM

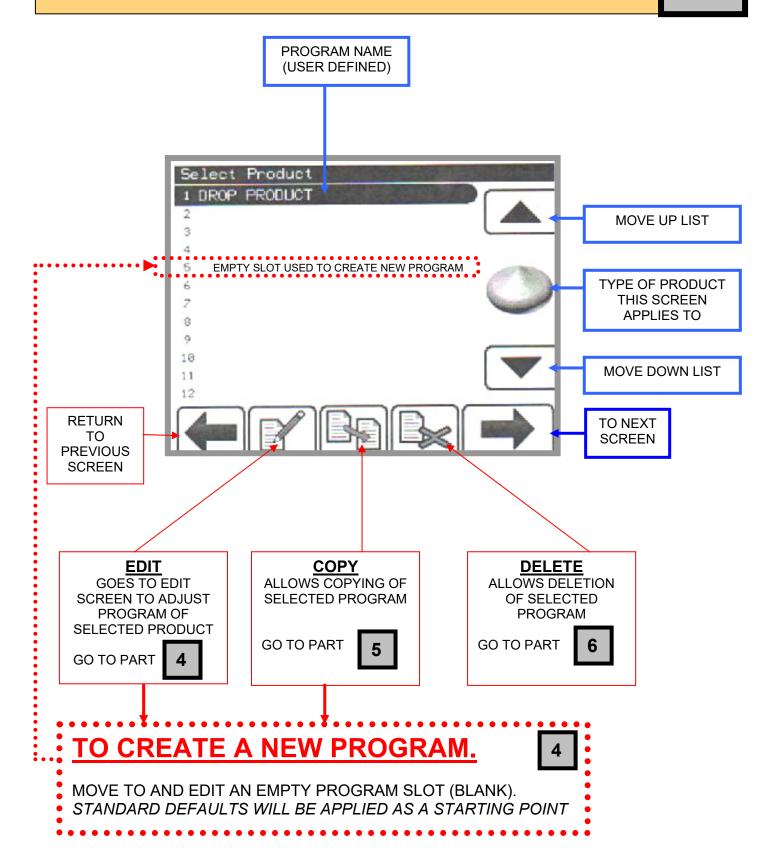


ALL OPERATIONS ARE ACTIVATED BY TOUCHING AREAS ON THE SCREEN WITH A FINGER. DO NOT USE EXCESSIVE FORCE OR HARD OBJECTS AS THIS WILL INVALIDATE MACHINE WARRANTY.

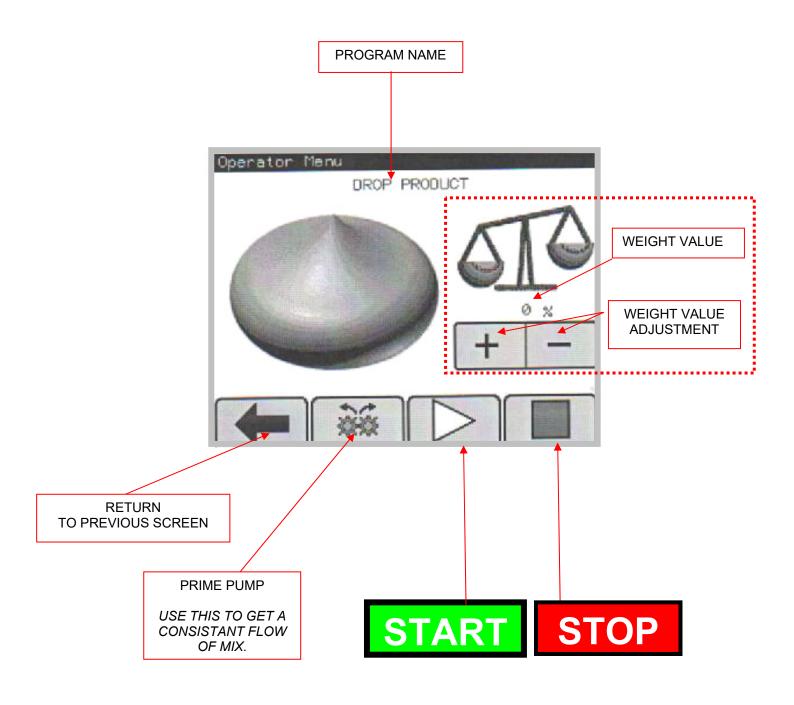
## TOUCH THE SCREEN FOR THE TYPE OF PRODUCT REQUIRED THEN TOUCH TO MOVE TO THE NEXT SCREEN



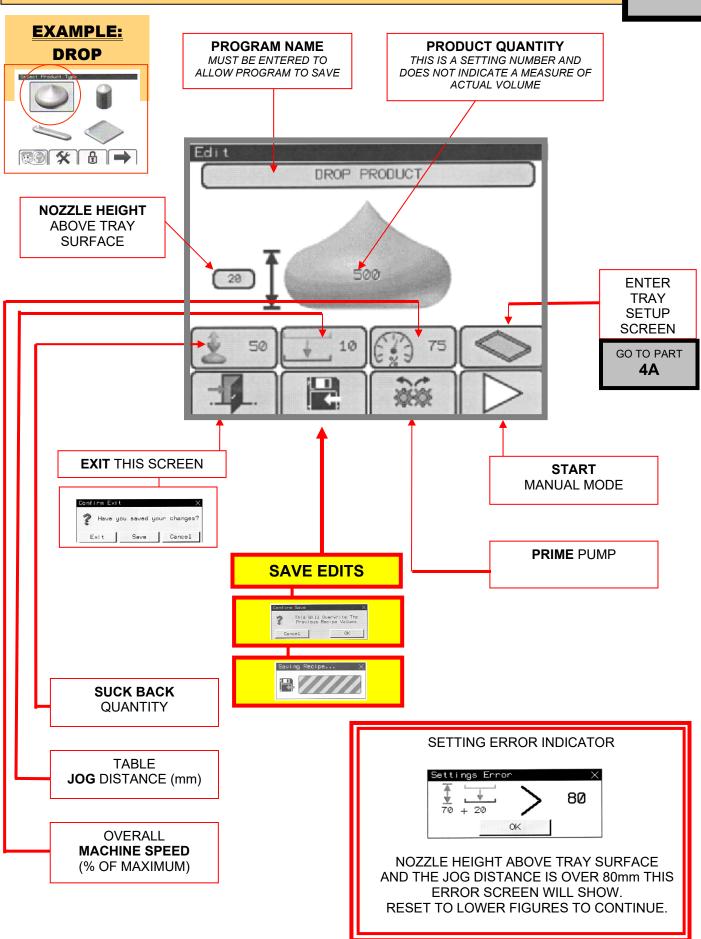
OR CHOOSE EMPTY SLOT TO CREATE A NEW PROGRAM

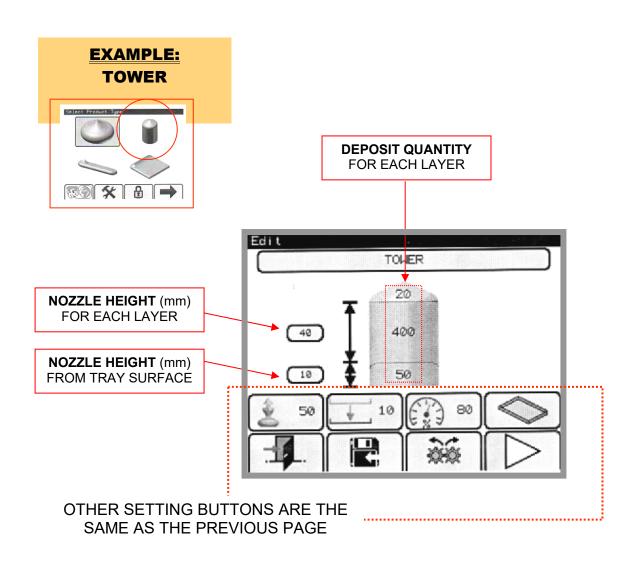


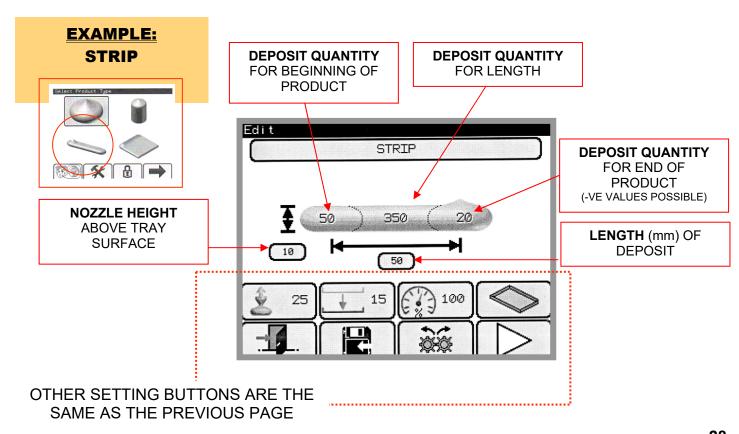
THIS SCREEN CONTROLS THE ACTIONS REQUIRED BY THE OPERATOR.



## **EDIT AND SAVE SCREEN**

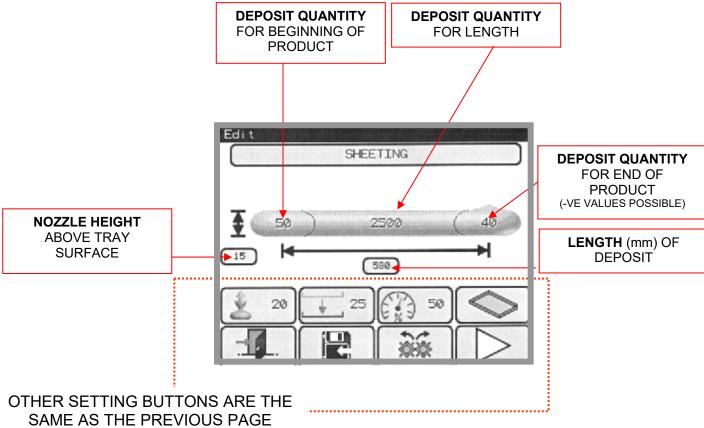






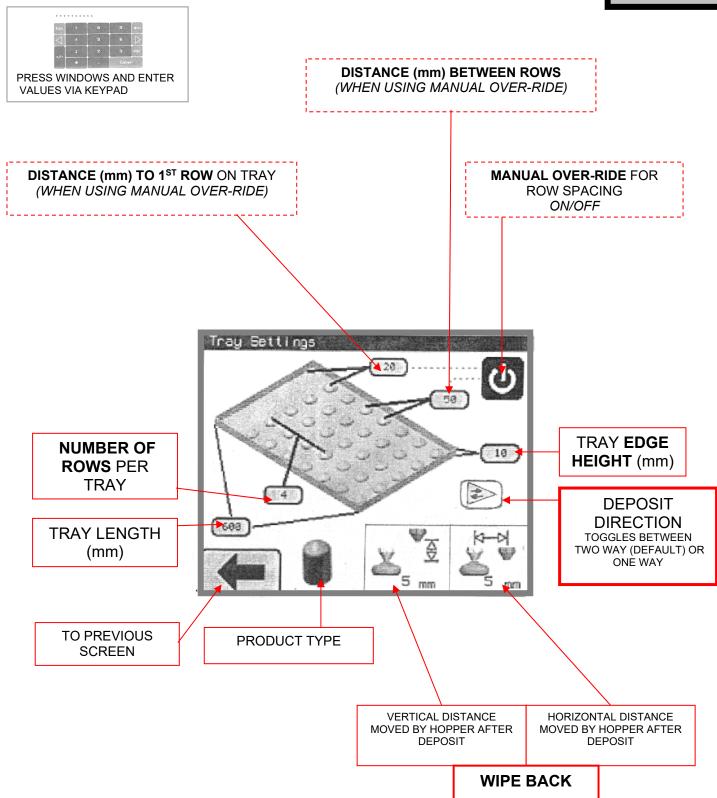
Rev. A23 (March 2023)

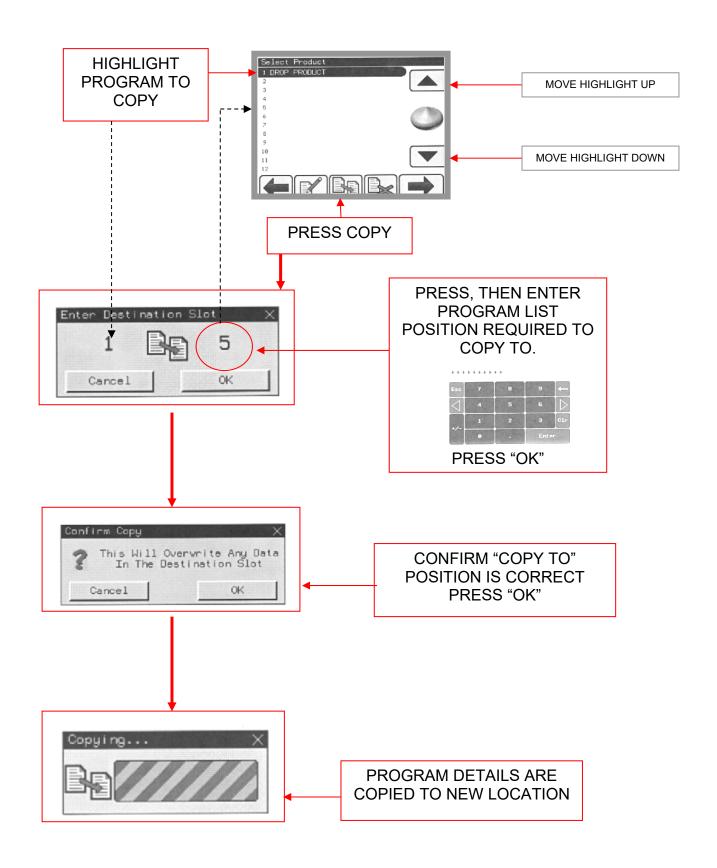




## TRAY SETUP

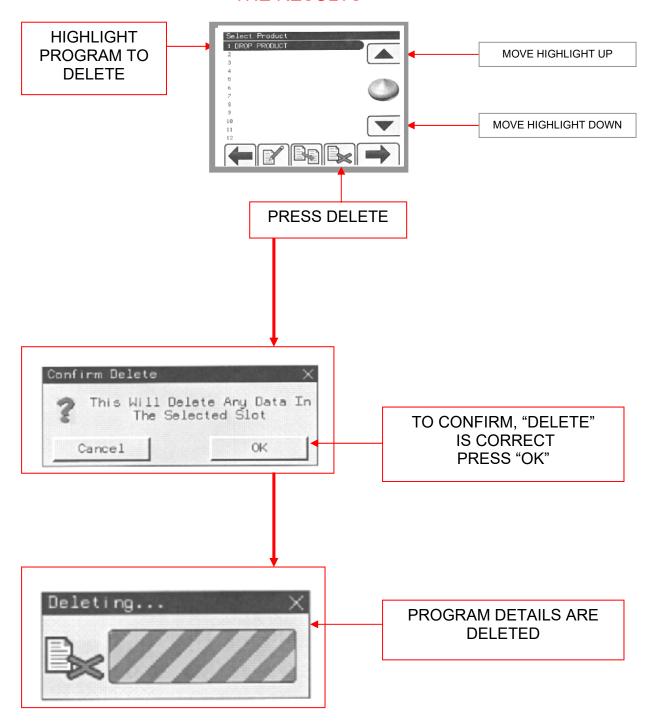




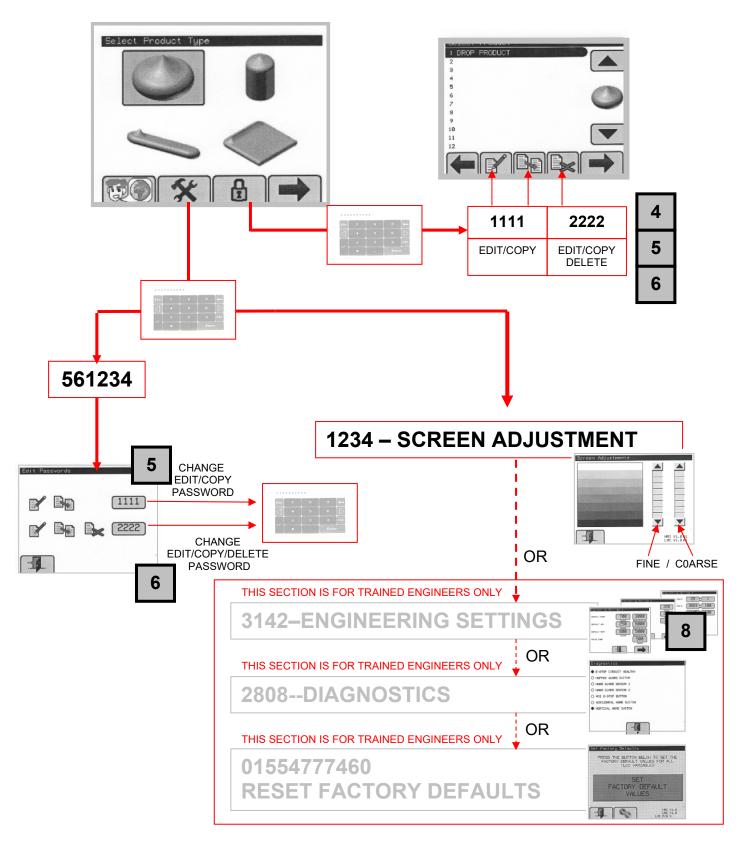


### **CAUTION**

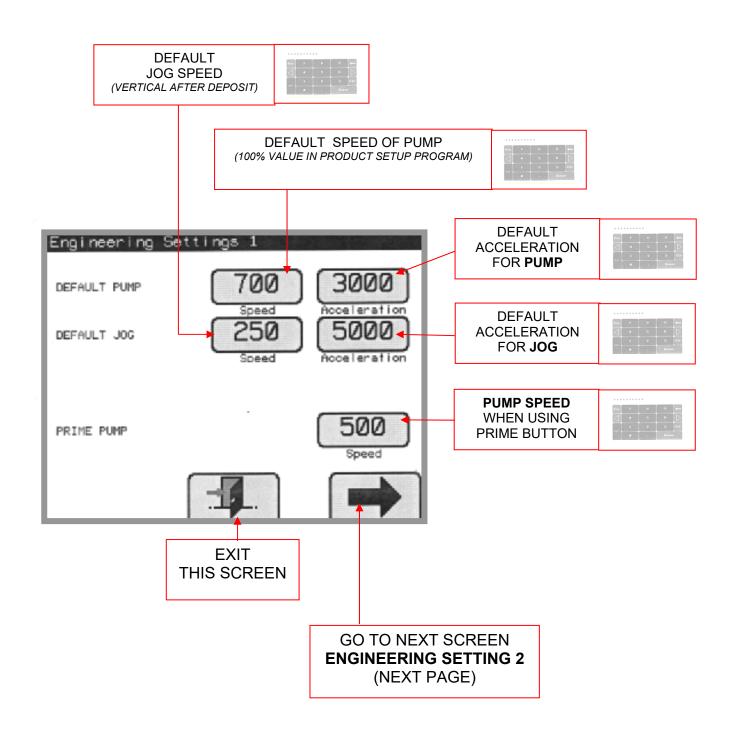
## DO NOT ATTEMPT TO DELETE, UNLESS YOU ARE FULLY AWARE OF THE RESULTS



## **CAUTION**



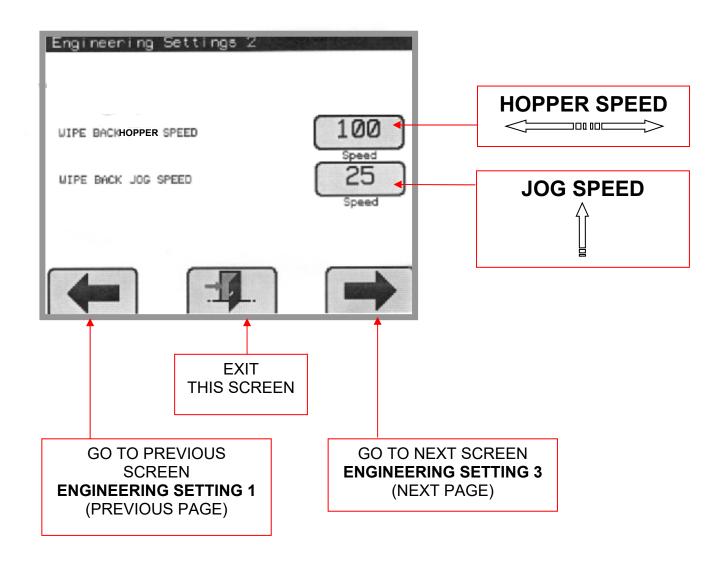
THIS SECTION IS FOR TRAINED ENGINEERS ONLY



## **CAUTION**

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

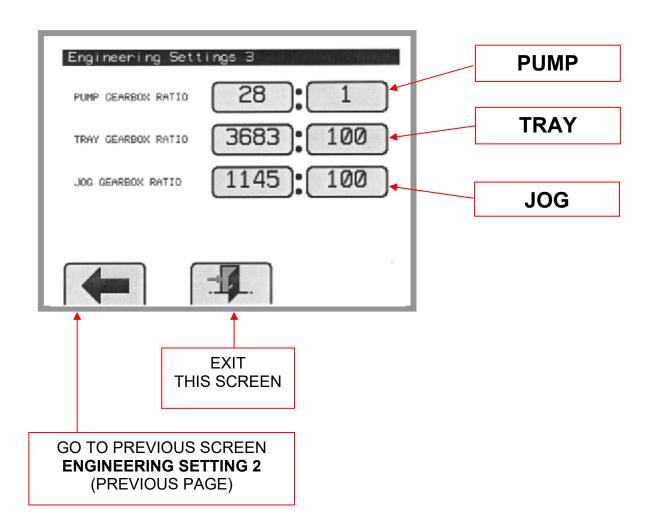
## WIPE BACK DEFAULT SETTINGS (SEE 4A )



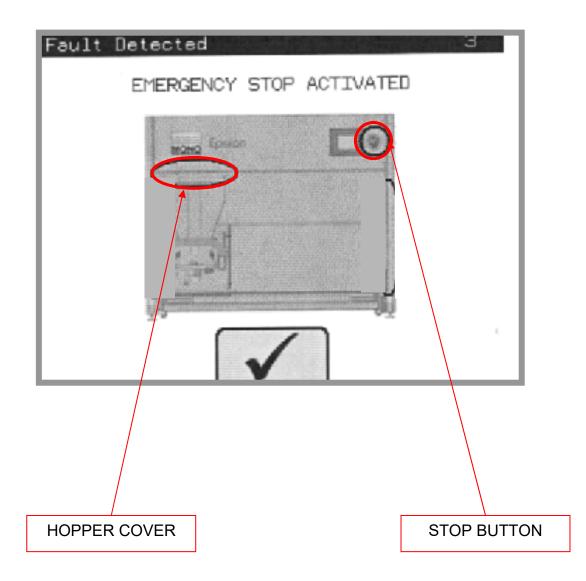
## **CAUTION**

THIS SECTION IS FOR TRAINED ENGINEERS ONLY

## **GEARBOX RATIOS**



## **CAUTION**

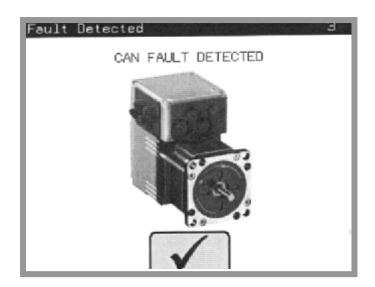


THIS SCREEN INDICATES A FAULT CONDITION IN THE SAFETY AREAS.

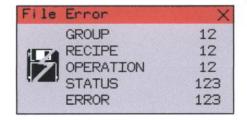
WHEN RED, CLOSE COVER OR CLEAR OBSTRUCTIONS TO CLEAR FAULT. WHEN SCREEN CLEARS, FAULT HAS BEEN CORRECTED.

PRESS BUTTON TO CLEAR SCREEN

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



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



- **WARNING** This appliance must be maintained at regular intervals. The frequency of maintenance will depend upon your specific use and location. The maximum service interval should be 12 months.
  - Service and maintenance should only be undertaken by suitably qualified, trained, and competent engineers.
  - You must immediately report any damage or defect arising with the appliance.
  - Unsafe equipment is dangerous. Do not use the appliance. Isolate the power supply and contact ERIKA RECORD.

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.** 

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



#### **SERVICE, SPARES and SUPPORT:**

ERIKA RECORD 37 Atlantic Way Clifton NJ 07012 USA

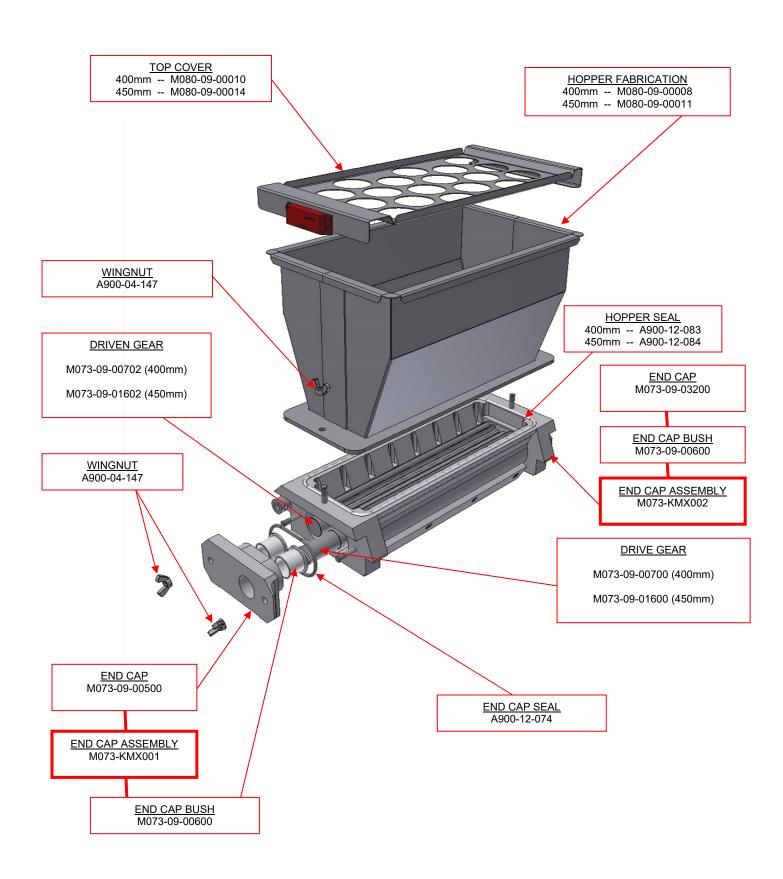
Office: 973-614-8500 Fax:973-614-8503 Toll Free: 800-682-8203

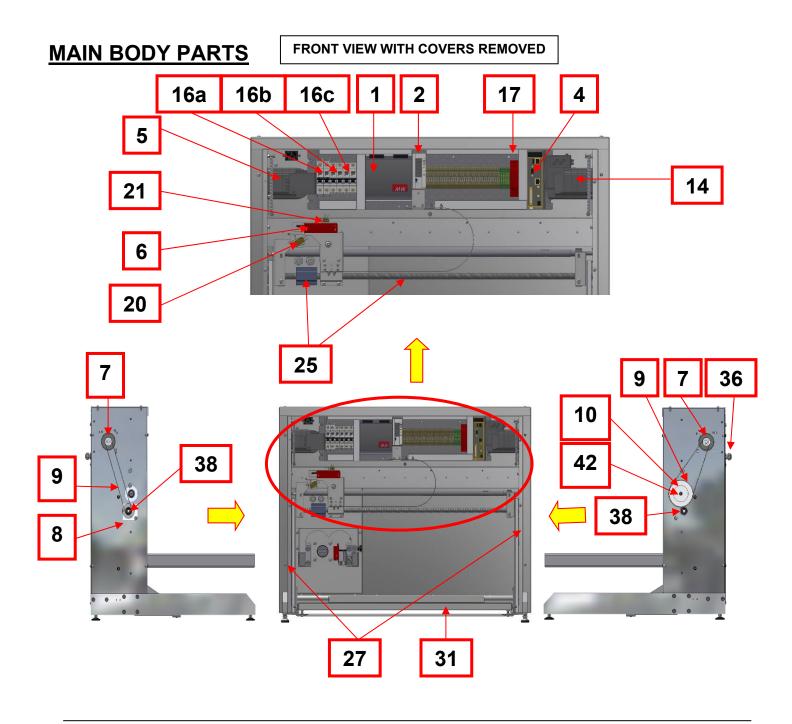


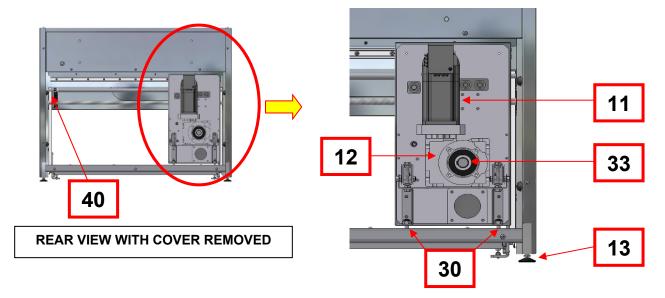
### 13.0 SPARES

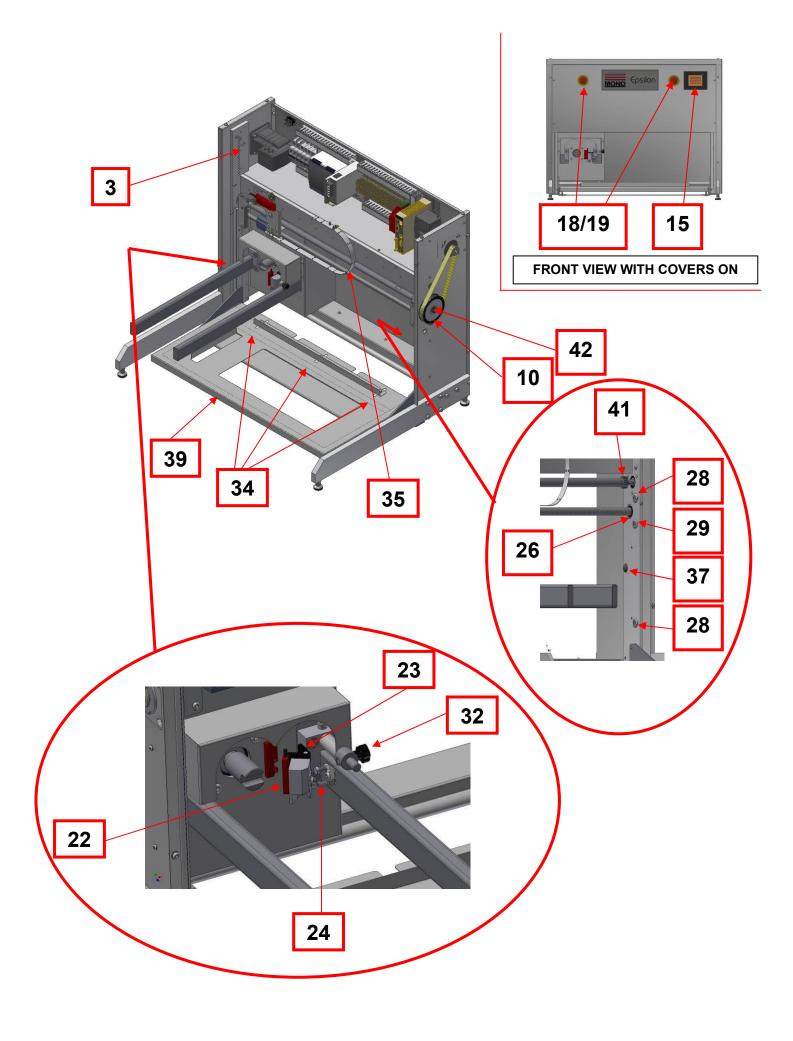
# **EPSILON**

#### **DOUGH HOPPER PARTS**









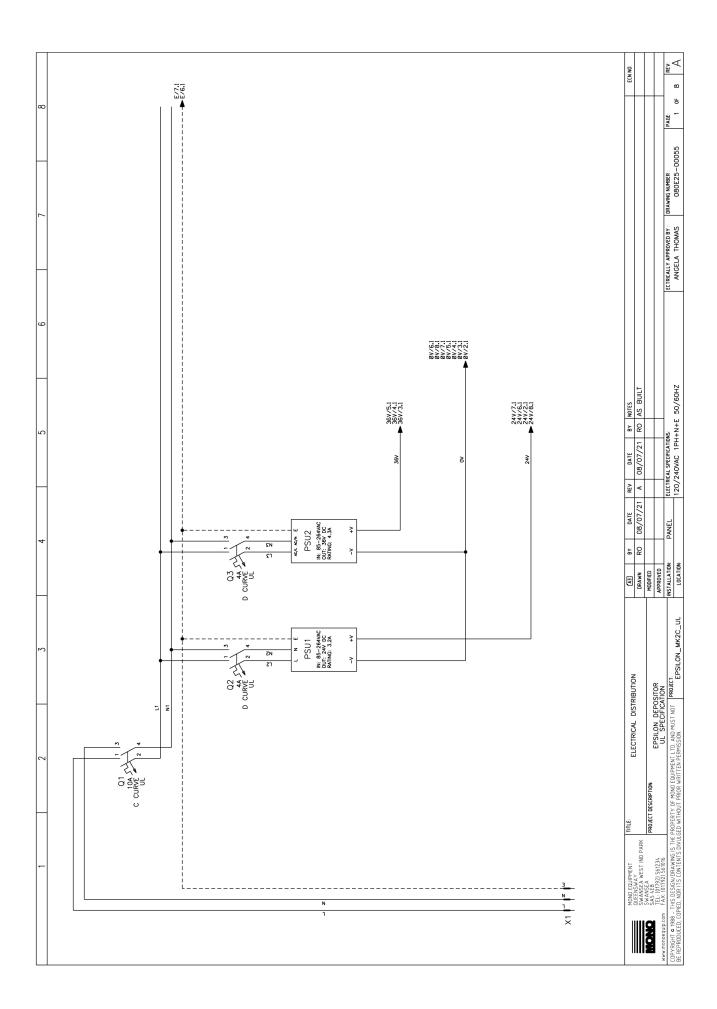
<u>ITEM</u>	DESCRIPTION	PART NUMBER
1.	POWER SUPPLY	B801-93-019
2.	POWER SUPPLY	B801-93-005
3.	TRAY SPRING	A900-19-021
4.	LMC20	B801-80-033
5.	TRAY MOTOR	B781-74-007
6.	SAFETY SWITCH	B801-07-005
7.	TIMING PULLEY	080-02-00026
8.	TIMING PULLEY	080-02-00020
9.	TIMING BELT	A900-21-107
10.	TIMING PULLEY	080-02-00021
11.	DEPOSIT MOTOR	B781-74-008
12.	GEARBOX	A900-11-095
13.	ADJUSTABLE FOOT	A900-27-227
14.	JOG MOTOR	B781-74-006
15.	НМІ	B801-93-018
16a. 16b. 16c.	CIRCUIT BREAKER CIRCUIT BREAKER CIRCUIT BREAKER	B872-22-118
17.	E-STOP RELAY	B801-11-019
18.	STOP BUTTON	B801-12-003
19.	CONTACT BLOCK	B801-14-008 (N/C), B801-14-004 (N/O)
20.	JOG SWITCH	B842-07-029
21.	TRAY SWITCH	B842-07-030

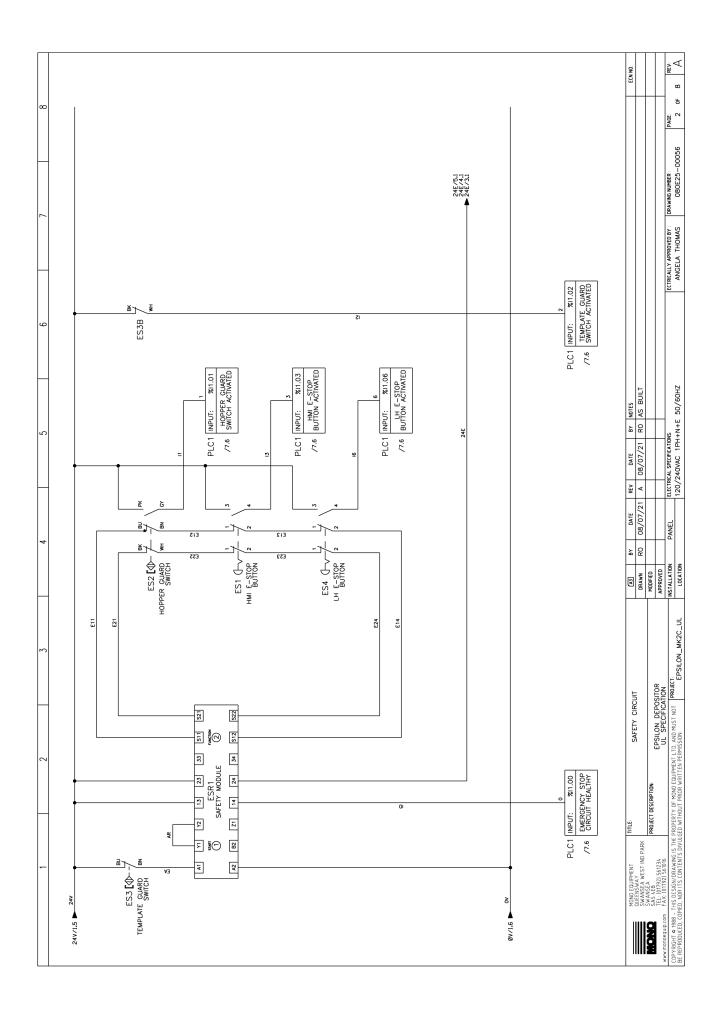
22.	TEMPLATE SAFETY SWITCH/MAGNET	B801-07-006
23.	HINGE FOR TEMPLATE SAFETY MAGNET	A900-27-217
24.	RETURN SPRING	A900-19-094
25.	BALLSCREW + NUT	080-02-00025
26.	BEARING FOR BALLSCREW	A900-06-009
27.	VERTICAL SLIDES	A900-31-054
28.	V-ROLLER – CONCENTRIC	A900-06-297
29.	V-ROLLER – ECCENTRIC	A900-06-298
30.	TRACK ROLLER	A900-06-136
31.	TRAY GUIDE	080-08-00015
32.	HOPPER LOCKING THUMSCREW	A900-27-213
33.	CIRCLIP – HOPPER DRIVESHAFT	A900-01-193
34.	WINGNUT FOR TRAY GUIDE	A900-04-043
35.	CABLE GUIDE STRAP	080-25-00006
36.	MAINS INLET	B842-06-031
37.	BUMP STOPS	A900-18-006
38.	CIRCLIPS – BALLSCREW	A900-01-112
39.	PLATFORM FABRICATION (400 HOPPER VERSION) =	080-08-00001 080-08-00011
40.	RACK	080-02-00032
41.	PINION	080-02-00032
42.	TRANS-TORQUE BUSH	A900-10-011

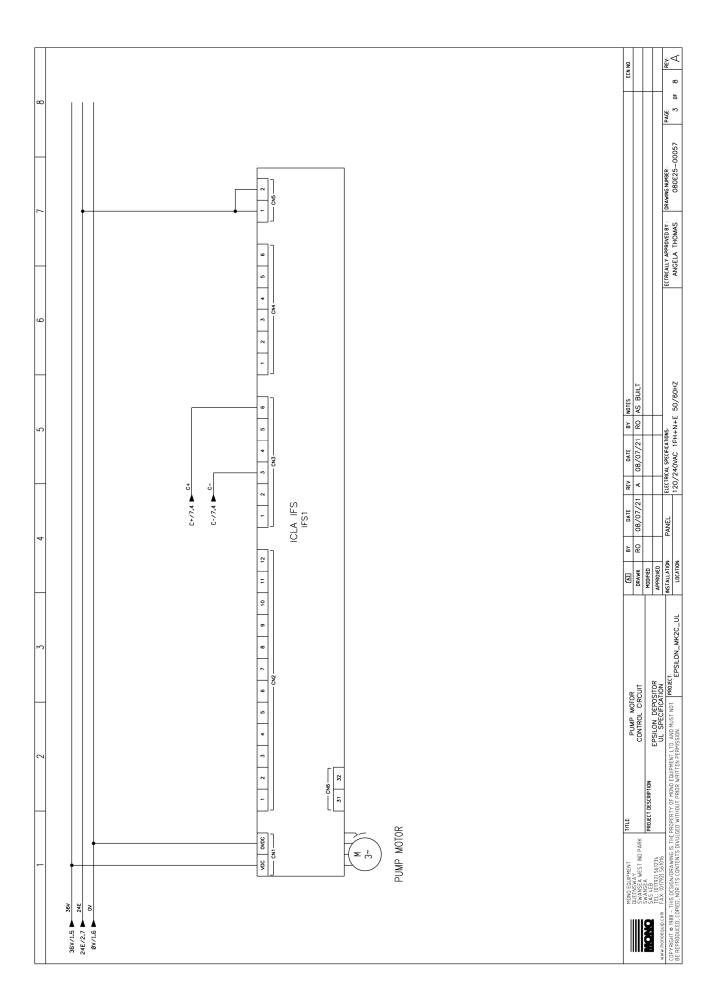


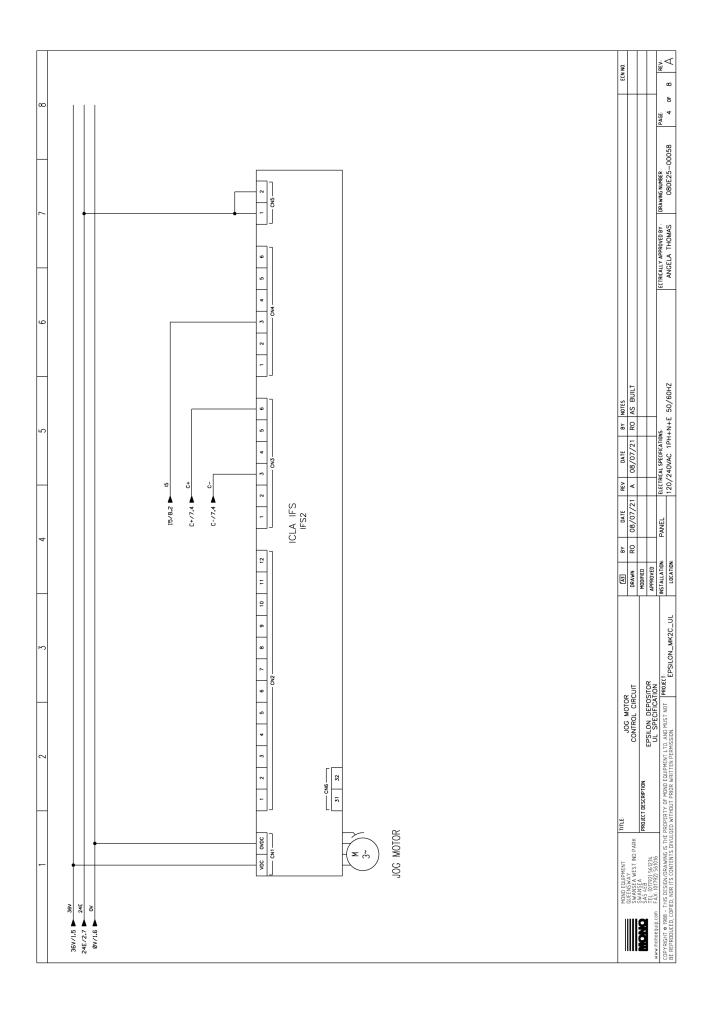
## 14.0 ELECTRICAL INFORMATION

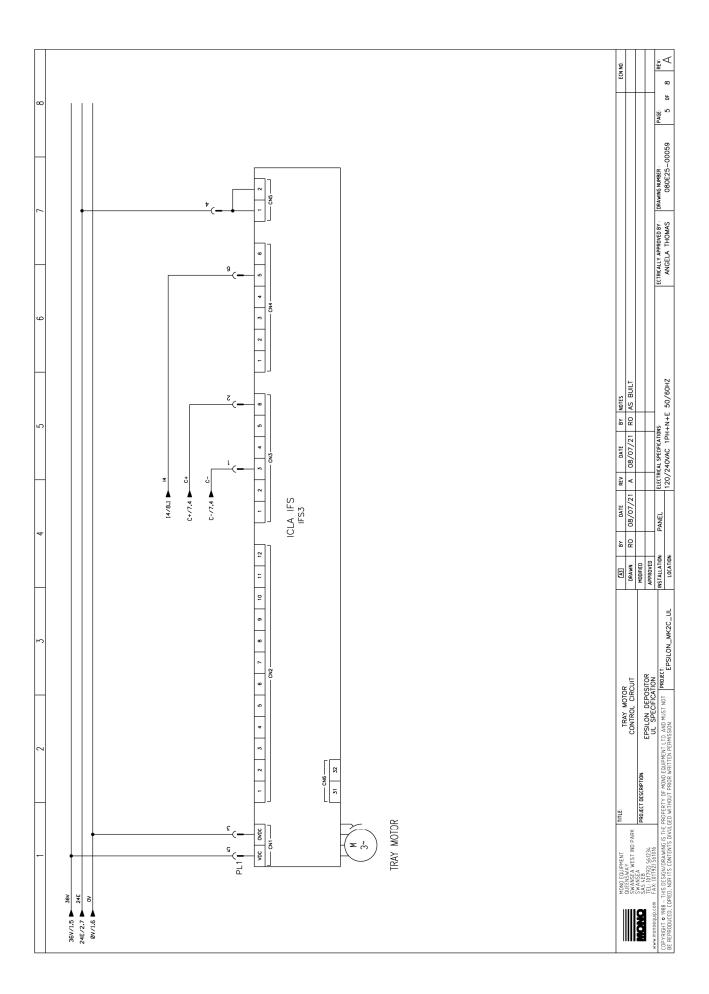
# **EPSILON**

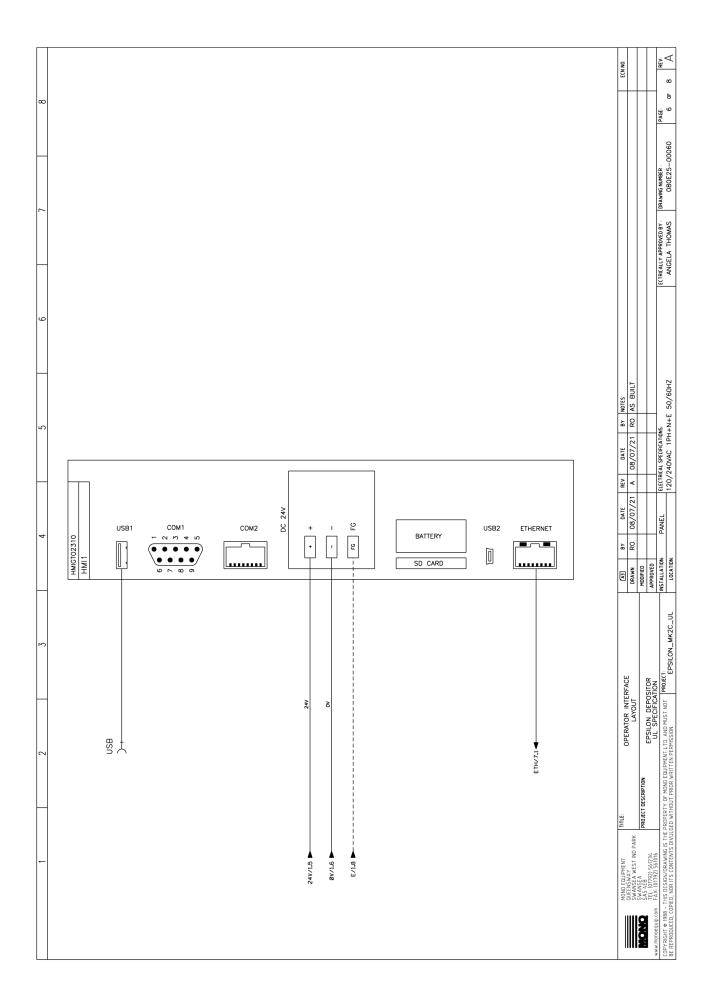


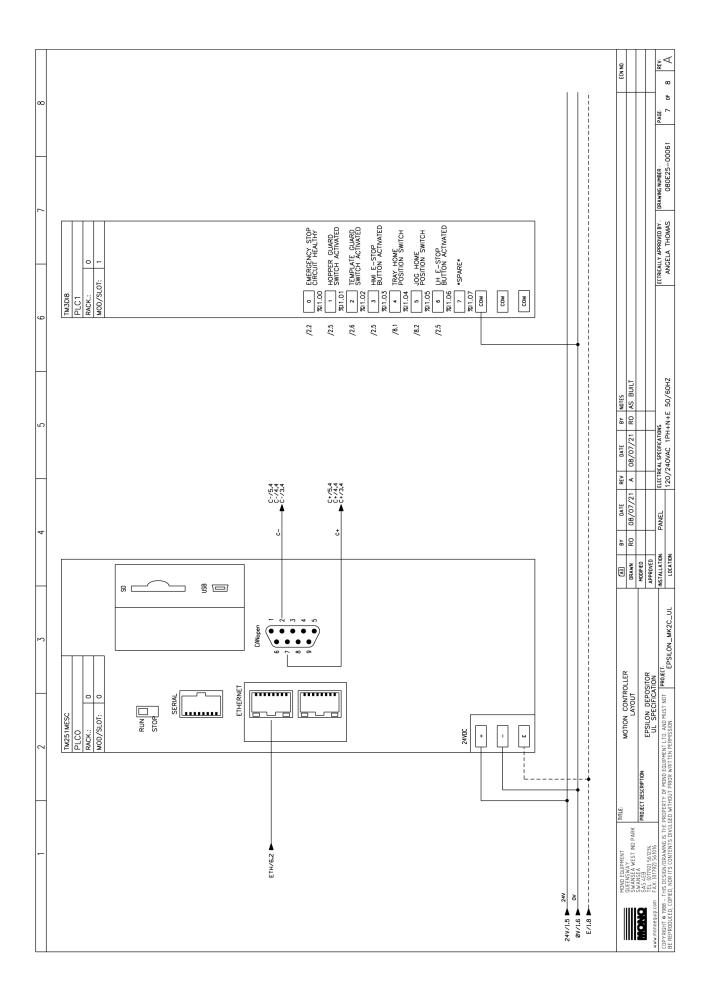


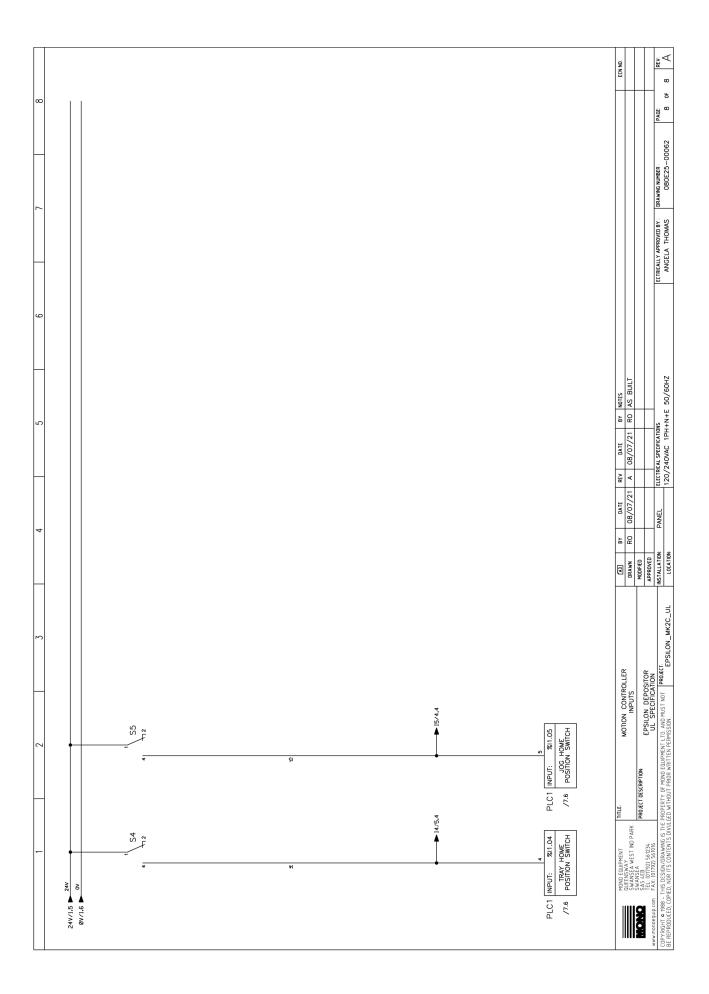












# Epsilon



ERIKA RECORD 37 Atlantic Way Clifton NJ 07012 USA

Office: 973-614-8500 Fax:973-614-8503 Toll Free: 800-682-8203

#### **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.