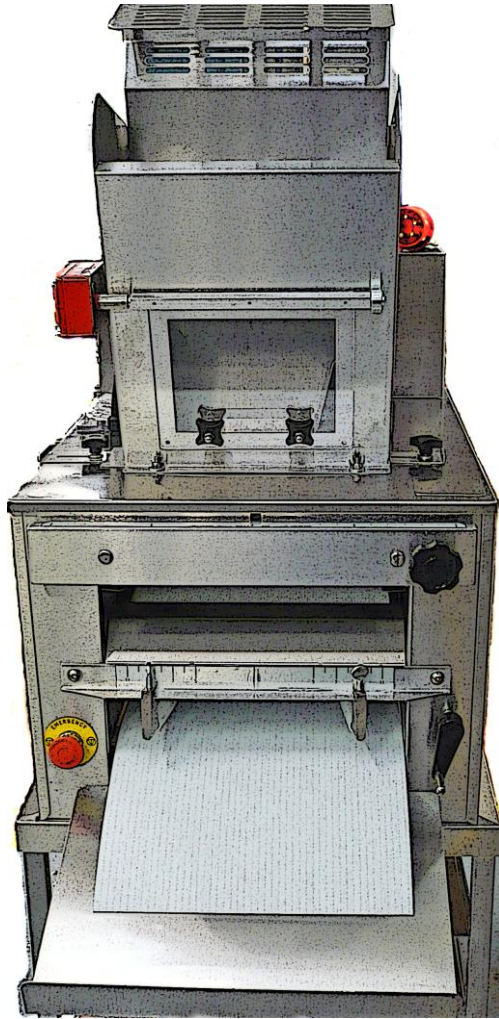


[www.monoequip.com](http://www.monoequip.com)

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

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



## OPERATING AND MAINTENANCE MANUAL


# MONO MULTI MOULDER



## 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 2006 / 95 / EC
- The requirements of the Electromagnetic Compatibility Directive 2004 / 108EC, 91 / 263 / EEC, 92 / 31 / EEC
- 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>	
G.A.Williams – Quality Manager	

<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 **A FE 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

# **IMPORTANT**

## **MODIFIED MONO MULTI MOULDER**

Current MONO Multi Moulders are fitted with an additional safety interlock on the top cleaning cover. The moulder will not start unless this guard is properly located and the safety interlock is correctly engaged.

**An additional emergency stop button has been fitted at the front of the machine. If the emergency stop button is used the moulder will not restart until the stop button is released by pushing and turning.**

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Primary adjustments

Sheeting gap

Moulding pressure

Starting

**11.0 Maintenance**

**12.0 MOULDER WILL NOT START**

**13.0 Service**

**14.0 Spares**

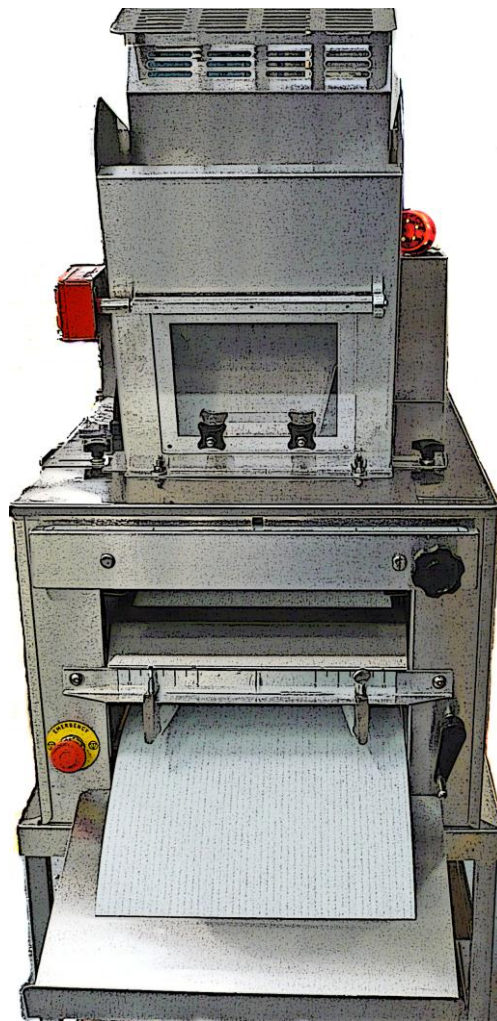
**15.0 Electrical diagrams**

# 1.0 INTRODUCTION

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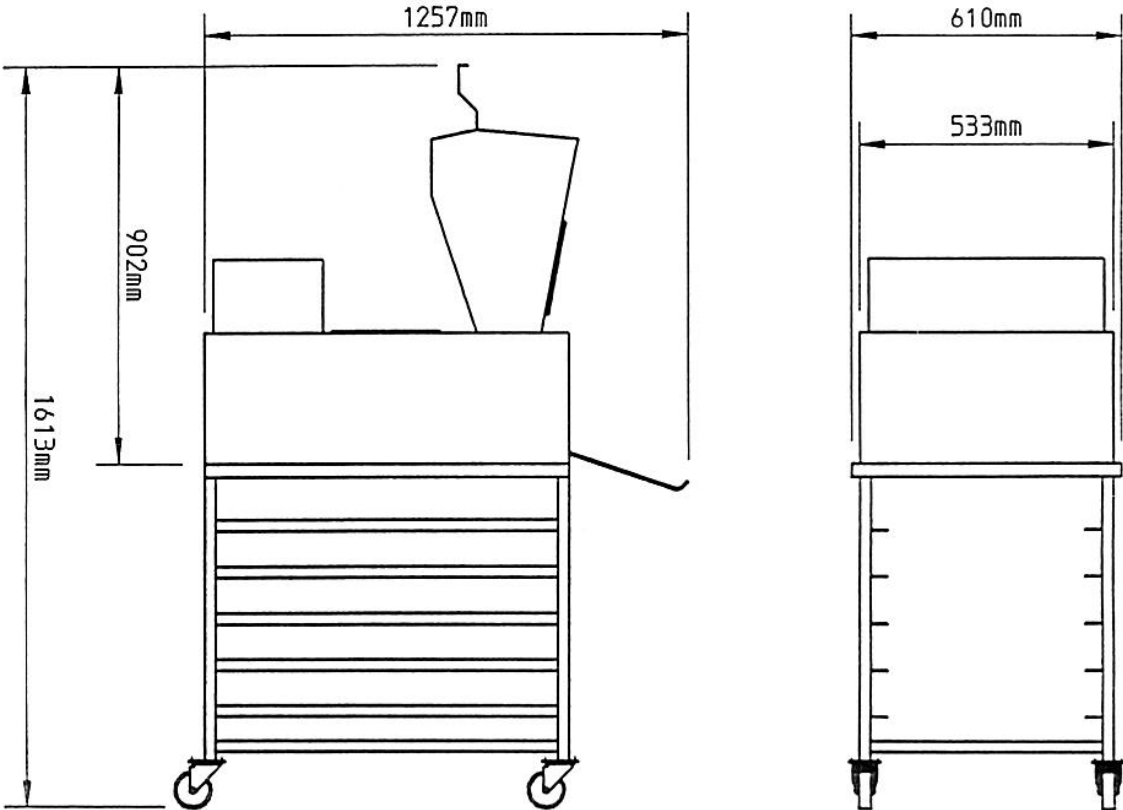
The Multi Moulder will process up to 1200 dough pieces an hour, but will still treat your dough gently, giving a tight mould with no tails.

This versatile moulder will shape all oven bottom and tin bread to a standard that will please the most fastidious baker, and is easily adjustable for sheeting pressure, moulding width and moulding pressure.



# 2.0 DIMENSIONS

---



**Height:** 902mm (35<sup>1</sup>/<sub>2</sub>" ). *without stand.*  
1613mm (55<sup>5</sup>/<sub>8</sub>" ). *with stand.*

**Width:** 533mm (21" ). *without stand.*  
610mm (24" ). *with stand.*

**Length:** 1257mm (49<sup>1</sup>/<sub>2</sub>" ).

## 3.0 SPECIFICATIONS

---

**Electric:**

380v / 415v ,3 phase ,neutral and earth,50/60 Hz  
1.7 Amps per phase , 0.55kW.

**OR**

230v/240v , 1 phase/ 50 Hz  
4 Amps / 0.75kW.

**Weight:**

**170kg (375lb).**

**Noise Level:**

Less Than 85 dB.

**Output:**

**up to 1200 dough pieces an hour**

## 4.0 SAFETY

---

- 1 Never use a machine in a faulty condition and always report any damage.
- 2 No-one under the age of 16 may operate this machine.
- 3 No-one under the age of 18 may clean this machine under any circumstances.
- 4 Only trained personnel may remove any part from this machine that requires a tool to do so.
- 5 Always ensure hands are dry before touching any electrical appliance (including cable, switch and plug).
- 6 All operatives must be fully trained.
- 7 People undergoing training on the machine must be under direct supervision.
- 8 Do not operate the machine with any panels removed.
- 9 All guards must be fixed in place with bolts or screws unless protected by a safety switch.
- 10 No loose clothing or jewellery to be worn while operating the machine.
- 11 Switch off power at the mains isolator when machine is not in use and before carrying out any cleaning or maintenance.

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

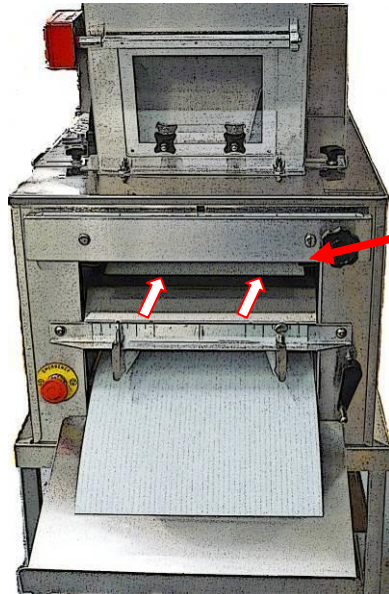
- 12 The Bakery Manager or the Bakery Supervisor must carry out daily safety checks on the machine.



## 5.0 INSTALLATION

---

- 1 The Multi Moulder should be connected to a mains wall isolator.
- 2 When installing machines with 3 phase electrics check :-  
At the discharge end of the machine the upper belt surface should travel back into the machine - see *direction of arrow in photograph*.  
If belt direction is incorrect, change any two of the three phase wires in the plug and check travel again.



CHECK THE DIRECTION OF THE  
MOULDING BELT TRAVEL  
BEFORE COMMENCING  
PRODUCTION

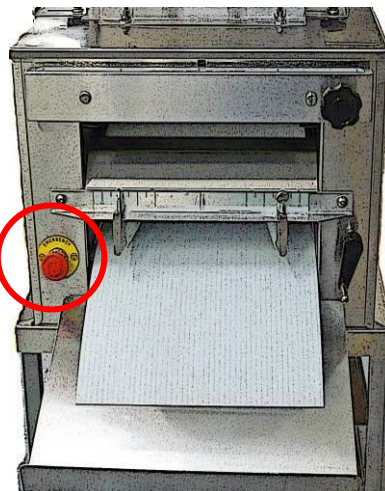
- 3 Ensure machine is standing on a solid level floor

## 6.0 ISOLATION

---

To stop the multi moulder in an emergency, switch off at the wall isolator or at the machine's emergency stop button.

EMERGENCY STOP  
BUTTON

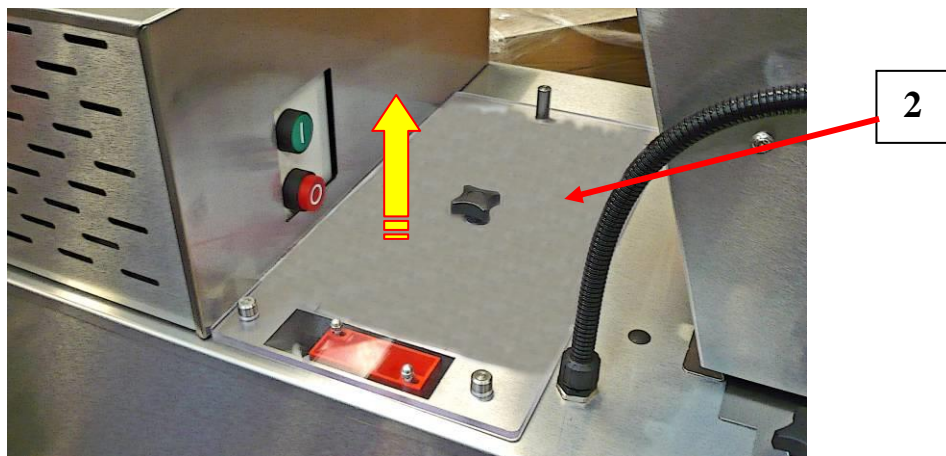


## 7.0 CLEANING INSTRUCTIONS

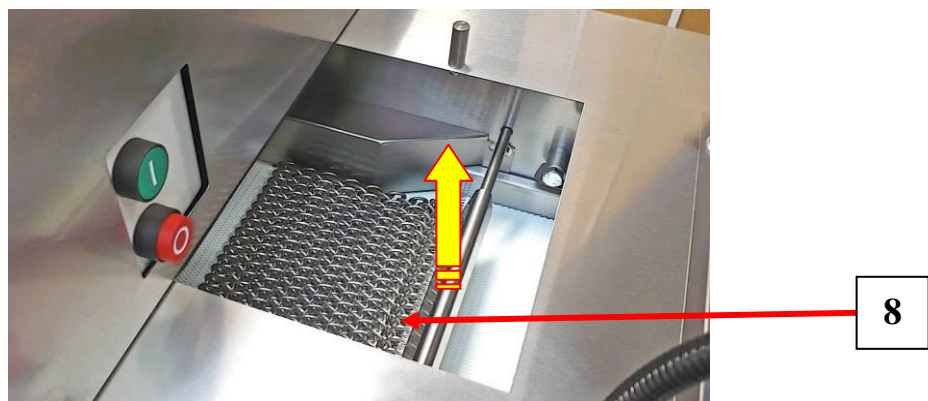
**NOTE:- SWITCH OFF AND ISOLATE FROM THE MAINS SUPPLY BEFORE COMMENCING ANY CLEANING.**

### Daily cleaning

- 1 Scrape off any dough residue with a plastic scraper.
- 2 Wipe over perspex window on hopper with cloth dampened in approved sterilising solution and hot water.
- 3 Remove central cover (2).



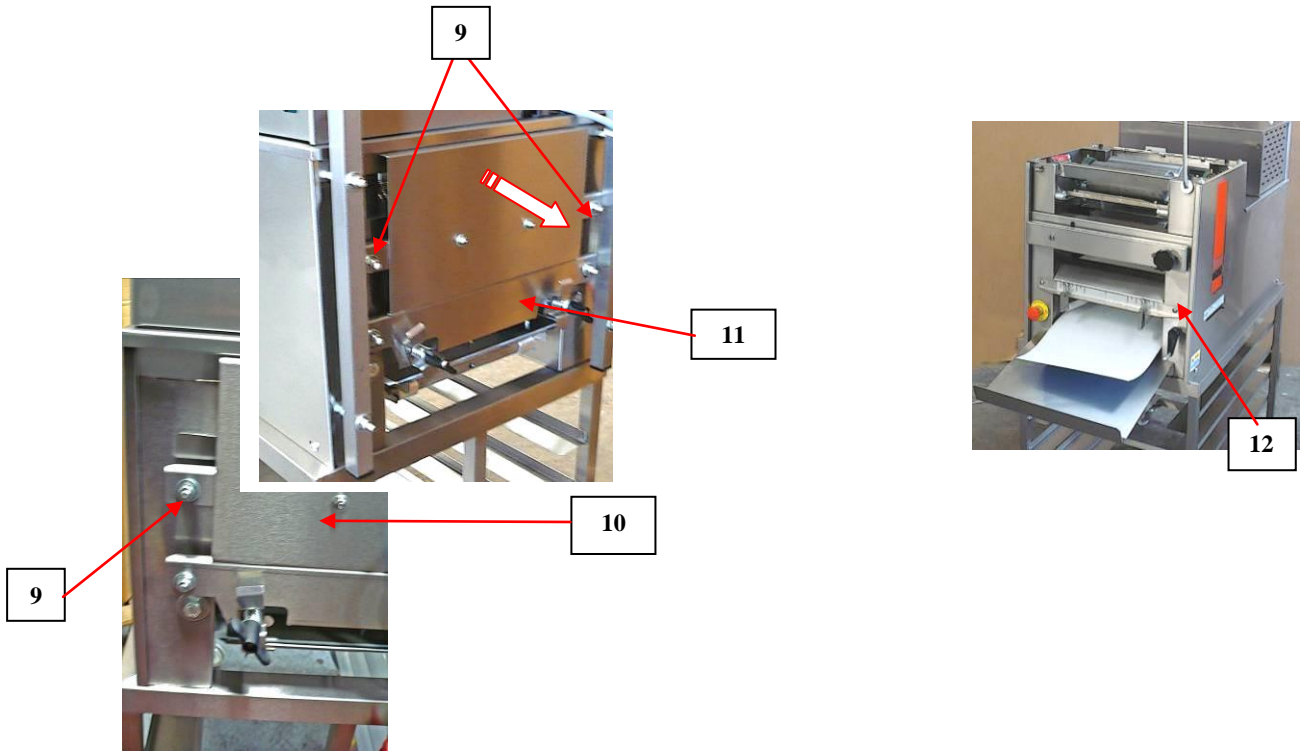
- 4 Lift out curling chain (3) and shake off any dough residue, then brush with a stiff nylon brush. **DO NOT WASH.**



- 5 Replace chain.

6 Unscrew rear panel nuts (9) using a spanner and remove rear panel (10). Clean belting on panel and remove any debris from around belt edges on machine.

7 Replace rear panel ensuring belting is correctly positioned before tightening nuts (9).



8 Remove pressure board (11) by first winding handle (12) to move it to its lowest position, lifting it out of its slots and sliding the board out from the front of the machine.

Wash board in solution of sterilising solution and hot water. Dry thoroughly.

9 Scrape dough belt with a **plastic scraper**. **DO NOT USE A METAL SCRAPER.** The belt will have to be inched forward to gain access to all parts of its surface.

10 Brush down external surfaces of machine and clean with solution of sterilising solution and hot water. Pay particular attention to handles, levers and controls.

## 8.0 OPERATING CONDITIONS ---

For best results the Multi Moulder should be used on a solid, level floor and all operating and cleaning instructions should be followed meticulously.

## 9.0 GENERAL REMARKS REGARDING MACHINE MOULDING OF DOUGH.

Where dough is hand weighed prior to moulding it is important that **as little flour as possible is used when handling.**

If floury dough pieces are fed into the machine, a poor mould will result giving a bad seal on the dough piece.

**A brief rest of the dough piece is desirable** prior to moulding. If a stock of scaled dough pieces can be built up by using trays, or a large table, and then fed to the moulder starting with the first piece scaled, a decided improvement will be seen in the moulding.

The action of the MONO Multi Moulder consists of sheeting out, curling, and final moulding of the dough piece under pressure.

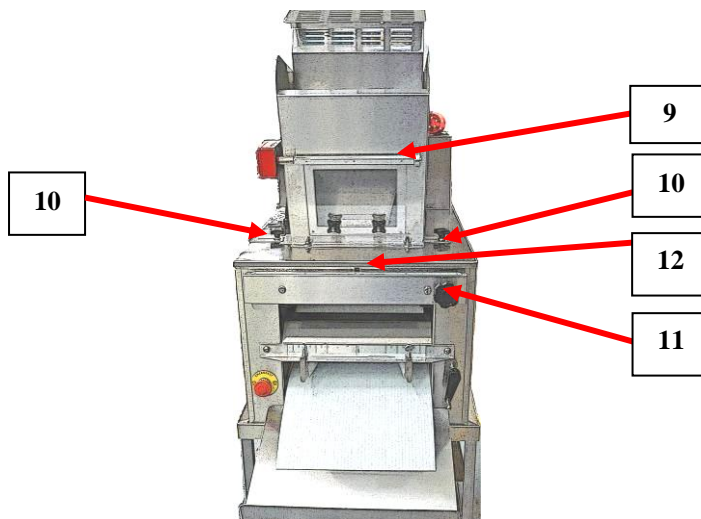
**Avoid allowing dough pieces to acquire a “skin”** as these could be difficult to mould. Attention to the setting of the moulder will be amply repaid in the superb results of which this machine is capable.

# 10.0 OPERATING INSTRUCTIONS

- A. Primary Adjustments
- B. Sheeting Gap
- C. Moulding pressure
- D. Starting

## A. PRIMARY ADJUSTMENTS

1. The feed hopper (9) must be set centrally to ensure that the dough piece is fed correctly through the machine.
2. Adjust hopper width to the size of dough piece by adjusting hopper cheeks evenly around the machine's centre line, using wing bolts (10).



## B. SHEETING GAP.

The sheeting roll gap can be set to the required width using the adjusting handle (11). The setting of the sheeting roll gap is shown on the indicator (12) across the front cover.



SHEETING ROLL GAP INDICATOR (12) ON FRONT OF MACHINE

Sheeting gap is too small-- this will result in **torn edges** to the dough pieces.

Sheeting gap is too large-- this will result in **poor curling** of the dough pieces.

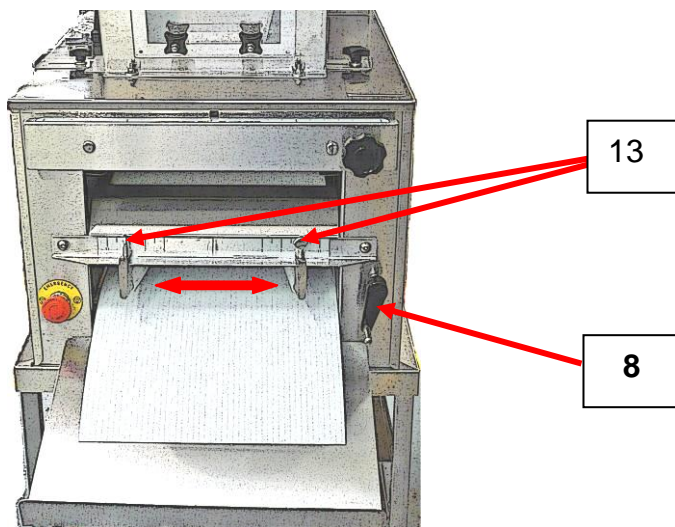
SUGGESTED SHEETING ROLL SETTINGS	
FINISHED LOAF	ROLL GAP SETTING
400 grms	No.5
800 grms	No.6

## C. MOULDING PRESSURE.

The moulding pressure applied to the dough pieces is adjusted by raising the pressure board (to increase pressure) or lowering it (to decrease pressure). This is done by adjusting the pressure board adjusting handle (8).

If the ends of the moulded piece are torn it indicates too great a pressure. Adjust accordingly by lowering the pressure board - turning the adjusting handle (8) anti-clockwise.

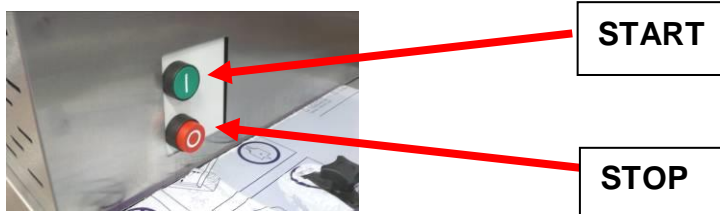
Insufficient pressure will result in a poor seal of the dough piece; rectify this by raising the pressure board by turning the adjusting handle (8) clockwise.



The pressure board dough guides (13) are adjusted by means of the guide clamps. The length of the dough piece required determines the width at which the dough guides are set. It should be noted that the dough guides and pressure board adjustments are relative to each other and should be adjusted accordingly.

## D. STARTING

Ensure moulder is set up and adequate tins and trays are available before starting. Start moulder by pressing green button behind hopper on the motor cover.



### **If moulder does not start check:-**

- 1 Check that the **power supply** is switched on.
- 2 Check that the **hopper door** is closed.
- 3 Check that all **safety interlocks** are properly engaged on the machine guards and covers.
- 4 Check that the **emergency stop** buttons are released.

If machine still does not run call Mono Service Department.

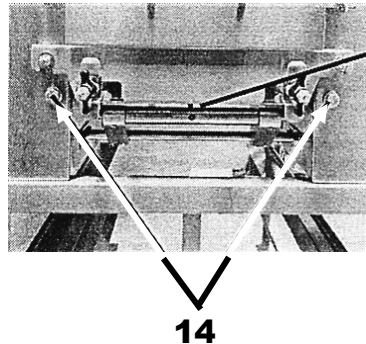
# 11.0 MAINTENANCE

---

**IMPORTANT** BEFORE REMOVING THE SIDE SHEETS OR MOTOR COVER, OR CARRYING OUT ANY CLEANING OR MAINTENANCE PROCEDURES, THE MACHINE MUST BE DISCONNECTED FROM THE MAINS SUPPLY.

## EVERY WEEK

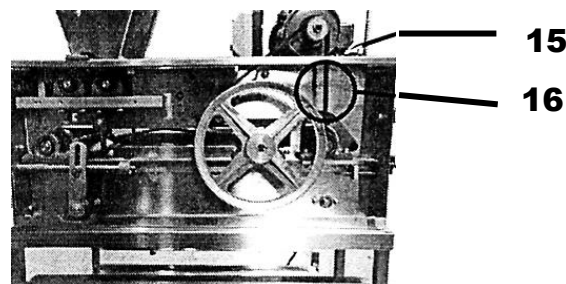
- 1 The tension of the moulding belt rarely requires adjustment. Should the belt show signs of slipping, then take up the slack by equal adjustment of the belt tensioning bolts (**14**).



## EVERY THREE MONTHS

- 1 Once every three months the side sheets must be removed and the inside of the machine thoroughly brushed clean. The chain drive can also be given a light greasing, if required.  
*(The bearings fitted to the machine will not normally require lubricating as they are sealed.)*
- 2 The drive belt from the motor rarely requires adjustment. If this becomes necessary, then remove the motor cover and adjust the motor in the desired direction by slackening off the four bolts (**15**) which secure the motor to its mounting. Tighten the bolts when the correct tension (**16**) is achieved.

**NOTE:-** WHEN BELT TENSION (**15**) IS CORRECTLY ADJUSTED, THE MAXIMUM TOTAL SIDWAYS MOVEMENT OF THE BELT AT THE CENTRE POINT OF ITS RUN SHOULD BE 20mm ( $\frac{3}{4}$ ").



## 12.0 MOULDER WILL NOT START

If moulder does not start check:-

- 1 Check that the **power supply** is switched on.
- 2 Check that the **hopper door** is closed.
- 3 Check that the **safety interlock** is properly engaged on the top cover.
- 4 Check that the **emergency stop** button is released.

If machine still does not run call Mono Service Department.



## **13.0 SERVICE**

---

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

**MONO**  
Queensway  
Swansea West Industrial Estate  
Swansea.  
SA5 4EB  
UK

**email: [spares@monoequip.com](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**

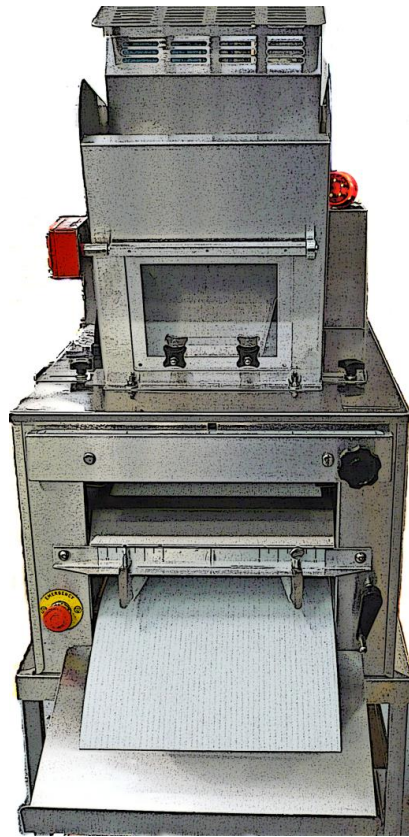
## 14.0 SPARES

---

<u>GENERAL SPARES</u>	<u>PART NUMBER TO ORDER</u>
RETURN FLAP	129K03P03700
MOULDING BELT	A900-22-041
PRESSURE BOARD FELT	A900-22-025
SWING PLATE HANDLE	P700-07-011
SWING PLATE INDICATOR ASSEMBLY (MATCHED PAIR OF SCREWS AND NUTS)	007-04-02600
12 TOOTH SPROCKET	129K08D01600
18 TOOTH SPROCKET	129K08D01500
CONVEYOR AND TRANSMISSION BEARING	A900-06-023
SHEETING ROLLER BEARINGS	A900-06-023
DRIVE CHAIN (SHEETING ROLL)	129K08P02000
DRIVE CHAIN	A900-08-007
JOIN LINK	A900-08-011
DRIVE CHAIN TENSIONER	007K08-D01100
DRIVE BELT	A900-21-025
<u>SHEETING ROLL SCRAPERS:-</u>	
FRONT	129K05D04200
REAR	129K05D04000
MOULDING FELT CLAMP	129K05D02500
MOULDING FELT HOOK	129K05D02600
OFFTAKE TRAY	169-02D04000
OFFTAKE TRAY SUPPORT PILLAR	P700-09-012

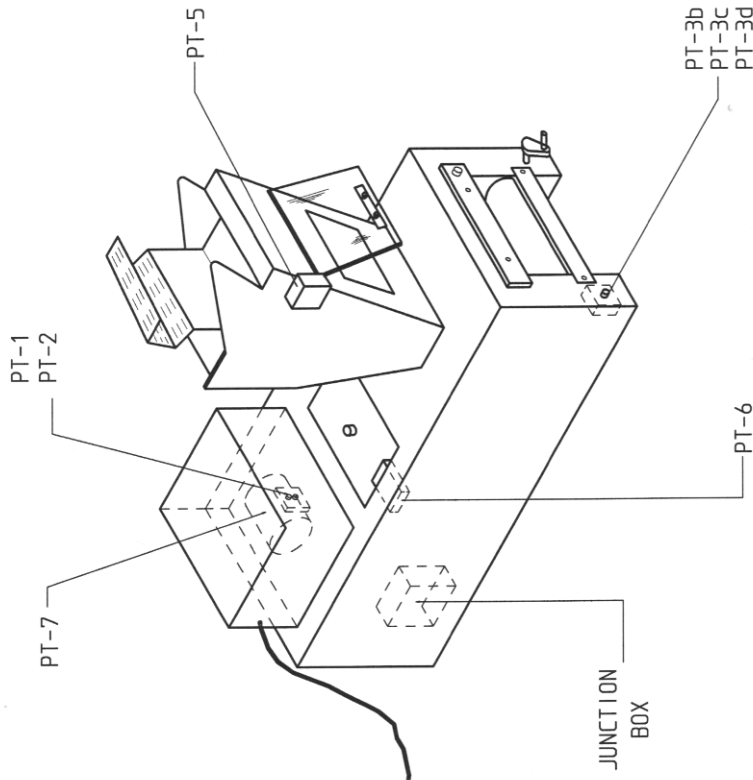
Continued on next page

SCRAPER SPRING	129-05-01700
SHEETING ROLLER	129K05D01000
SHEETING ROLL ADJUSTING HANDLE	P700-07-006
LIVE ROLL	129K03D02400
<u>CURLING CHAIN ASSEMBLY:-</u>	
CHAIN	129K06D00100
BRACKET	129K06D00400
DRIVE PULLEY	129K08D02200
DRIVEN PULLEY	129K08D02100
DRIVE ROLLER	129K03D01900
HOCKEY STICK LEFT HAND	124K03D02900
HOCKEY STICK RIGHT HAND	124K03D02901
HOCKEY STICK COVER	A900-18-014
HOCKEY STICK NUT	A900-04-048
HOCKEY STICK SPRING	A900-19-009
HOCKEY STICK WING NUT	P700-04-005
MOULDING BELT GUIDE	129K03D00600




## **15.0 ELECTRICS**

IF IN ANY DOUBT - ASK



<u>DRAWING</u> <u>PT-Ref</u>	<u>DESCRIPTION</u>	<u>MONO</u> <u>PART NUMBER</u>
PT-1	STARTER CONTACTOR 220-240v 50Hz	B850-03-001
PT-1	STARTER CONTACTOR 220v 60Hz	B809-03-006
PT-2	MAIN MOTOR THERMAL OVERLOAD	B850-01-002
PT-3b	REMOTE STOP BUTTON	B801-12-003
PT-3c	REMOTE STOP BUTTON CONTACT BLOCK	B801-14-001
PT-3d	"EMERGENCY STOP" LEGEND	B801-15-025
PT-5	HOPPER SAFETY SWITCH	B818-07-017
PT-6	DOUGH PATH COVER SAFETY SWITCH	B818-07-008
PT-7	MAIN MOTOR	B809-74-029

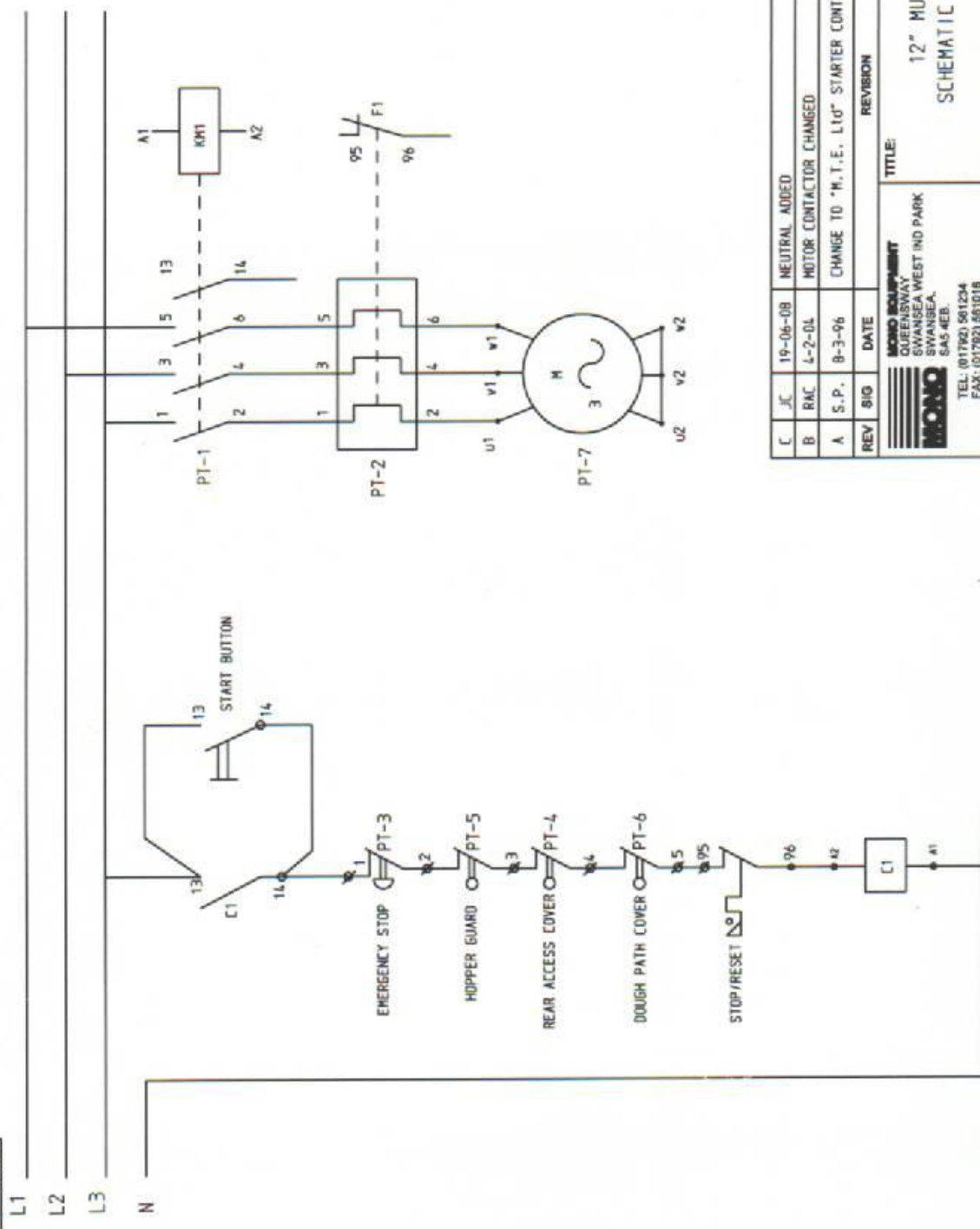
REV	SIG	DATE	REVISION	ECN NO.
G	RAC	11-8-10	PT1 WAS B809-03-005, PT2 WAS B809-01-004.	115/10
F	JC	15-09-08	PT1 B809-03-006 ADDED FOR 60HZ OPTION	148/08
E	JC	19-06-08	PT1 WAS B809-03-004.	091/08
D	JC	30-07-07	PT1 & PT2 WERE B775 (MTE)	3022
C	JC	23-12-04	PT5 WAS B871-07-001	2336
B	RAC	4-2-04	MOTOR CONTACTOR CHANGED(PARTS LIST REVISED)	2138
A	SP	13-3-96	NEW MTE STARTER. (PARTS LIST REVISED)	6097

 QUEENSWAY SWANSEA WEST IND PARK SWANSEA, SA5 4EB. TEL: (01792) 561234 FAX: (01792) 561016		TITLE: 12" MULTI MOULDER COMPONENTS PARTS LIST	
ELECTRICAL SPECIFICATIONS:- 380-415V 3PH N+E 50/60HZ		DRAWN: SP/JC	ELECTRICALLY APPROVED BY:-
		DATE: 4-5-94	DRAWING NO. M129E25-40400
			REV: G

REDRAWN ON CAD 10-98

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IF IN ANY DOUBT - ASK

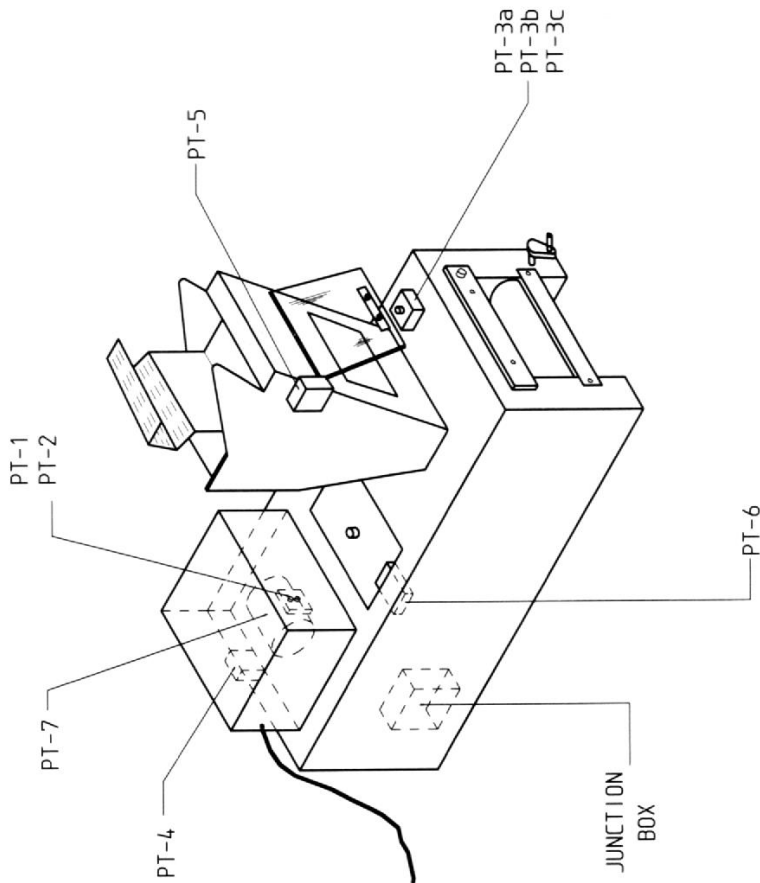


4.15V  
3PH +N  
50 Hz


C	J.C.	19-06-08	NEUTRAL ADDED	DP1/08
B	RAC	4-2-04	MOTOR CONTACTOR CHANGED	2136
A	S.P.	8-3-96	CHANGE TO "M.T.E. L10" STARTER CONTROL GEAR.	6097
REV	S/D	DATE	REVISION	ECN NO.
			TITLE: 12" MULTI-MOULDER SCHEMATIC WIRING DIAGRAM	
QUEENSWAY SWANSEA WEST IND PARK SWANSEA, S.A.S 4EB. TEL: (01792) 501204 FAX: (01792) 501018			DRAWN: S.P	
ELECTRICAL SPECIFICATIONS:- 4.15V 3PH N 50HZ			ELECTRICALLY APPROVED BY:-	
			DATE: 3-5-94	
			DRAWING NO. M129E25-40000	
			REV: C	

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IF IN ANY DOUBT - ASK



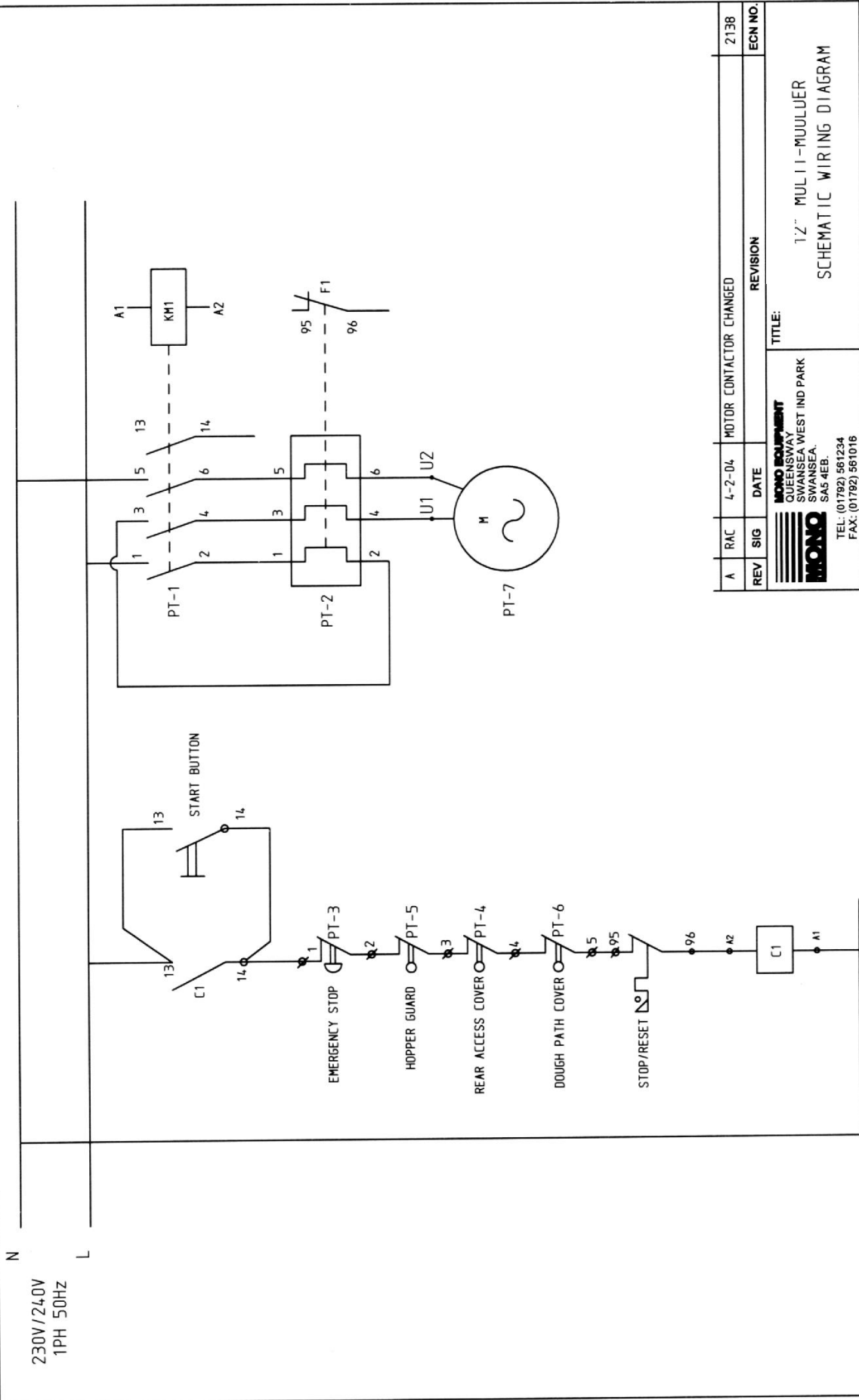
DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
PT-1	STARTER CONTACTOR	B824-08-001
PT-2	MAIN MOTOR THERMAL OVERLOAD UP TO 01-04	B824-01-008
PT-1	STARTER CONTACTOR	B809-03-005
PT-2	MAIN MOTOR THERMAL OVERLOAD	B809-01-004
PT-3a	REMOTE 1 GANG PUSHBUTTON STATION	B801-09-011
PT-3b	REMOTE STOP BUTTON	B801-12-003
PT-3c	REMOTE STOP BUTTON CONTACT BLOCK	B801-14-001
PT-3d	"EMERGENCY STOP" LEGEND	B801-15-025
PT-4	REAR ACCESS COVER SAFETY SWITCH	B818-07-008
PT-5	HOPPER SAFETY SWITCH	B818-07-017
PT-6	DOUGH PATH COVER SAFETY SWITCH	B818-07-008
PT-7	MAIN MOTOR	B859-74-004

C	JC	30-07-07	PT1 & PT2 WERE B775 (MTE)	3022
B	JC	23-12-04	PT5 WAS B871-07-001	2336
A	RAC	4-2-04	MOTOR CONTACTOR CHANGED	2138
REV	SIG	DATE	REVISION	ECN NO.
 <b>MONO EQUIPMENT</b> QUEENSWAY SWANSEA WEST IND PARK SWANSEA, SA5 4EB. TEL: (01792) 561234 FAX: (01792) 561016				
ELECTRICAL SPECIFICATIONS:-			TITLE: 12" MULTI MOULDER COMPONENTS PARTS LIST	
230V/24.0V 1PH 50Hz			DRAWN: JC	ELECTRICALLY APPROVED BY:- P. BOYLES
			DATE: 20-3-03	DRAWING NO. M129E25-25400
				REV: C

REDRAWN ON CAD 03-03

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IF IN ANY DOUBT - ASK

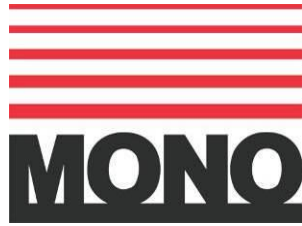


230V/240V  
1PH 50Hz

A	RAC	4-2-04	MOTOR CONTACTOR CHANGED	2138
REV	SIG	DATE	REVISION	ECN NO.
<p><b>MONO EQUIPMENT</b>          QUEENSWAY          SWANSEA WEST IND PARK          SWANSEA,          SA5 4EB.          TEL: (01792) 561234          FAX: (01792) 561016</p>				
<p>TITLE:          12" MULLER-MULLER          SCHEMATIC WIRING DIAGRAM</p>				
<p>ELECTRICAL SPECIFICATIONS:-          230V/240V 1PH 50HZ</p>			<p>DRAWN:          S.P./JC</p>	<p>ELECTRICALLY APPROVED BY:-          P. BOYLES</p>
<p>DATE: 5-96          20-3-03</p>				<p>DRAWING NO.          M129E25-25000</p>
				<p>REV:          A</p>

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Fax. 01792 561016

Spares Tel. +44(0)1792 564039

Email:mono@monoequip.com

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

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

□ **DISPOSAL**

**CARE SHOULD BE TAKEN WHEN THE MACHINE COMES TO THE END OF ITS WORKING LIFE. ALL PARTS SHOULD BE DISPOSED OF IN THE APPROPRIATE PLACE, EITHER BY RECYCLING OR OTHER MEANS OF DISPOSAL THAT COMPLIES WITH LOCAL REGULATIONS.**

(IN UK, ENVIRONMENTAL PROTECTION ACT 1990 APPLIES)