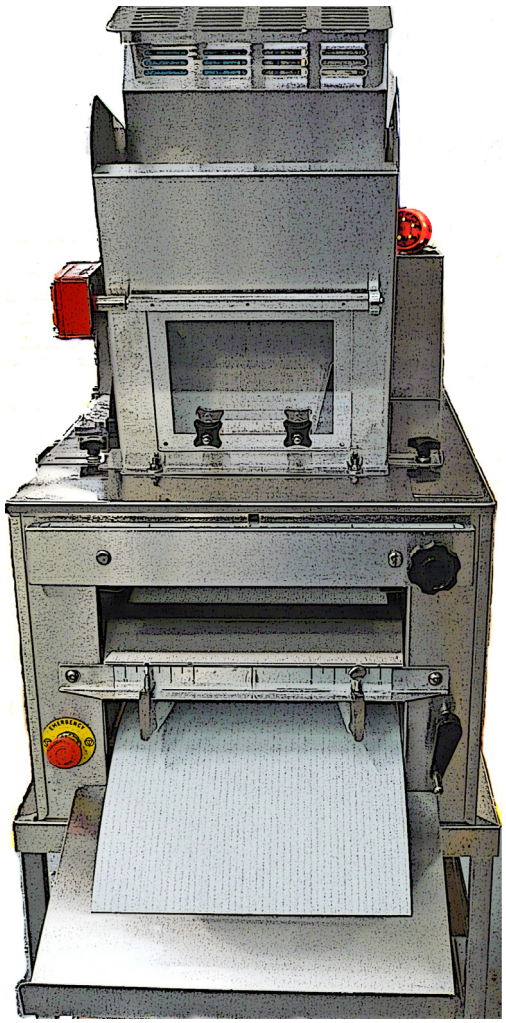
MONO

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

Signed	
D. Osmundsen – Quality and Conformance 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

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.

SAFETY SYMBOLS

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

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

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

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

ELECTRICAL SAFETY AND ADVICE REGARDING SUPPLEMENTARY ELECTRICAL PROTECTION

Commercial 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 the 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 power 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 safety guidelines.

We recommend:-

- Supplementary electrical protection with the use of a Residual Current Device (RCD)
- Fixed wiring appliances should also 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 safety 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.

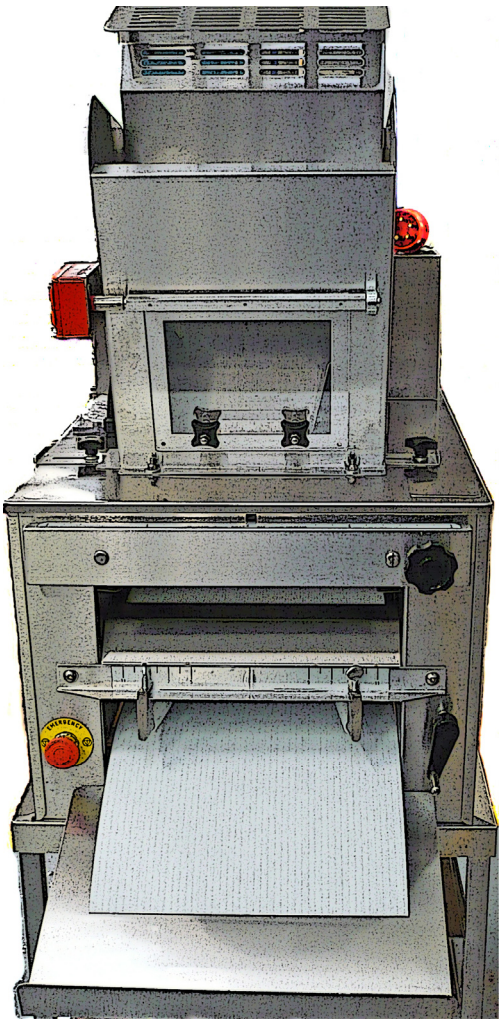
The supply to this machine must be protected by a **30mA Type A RCD**.

INDEX

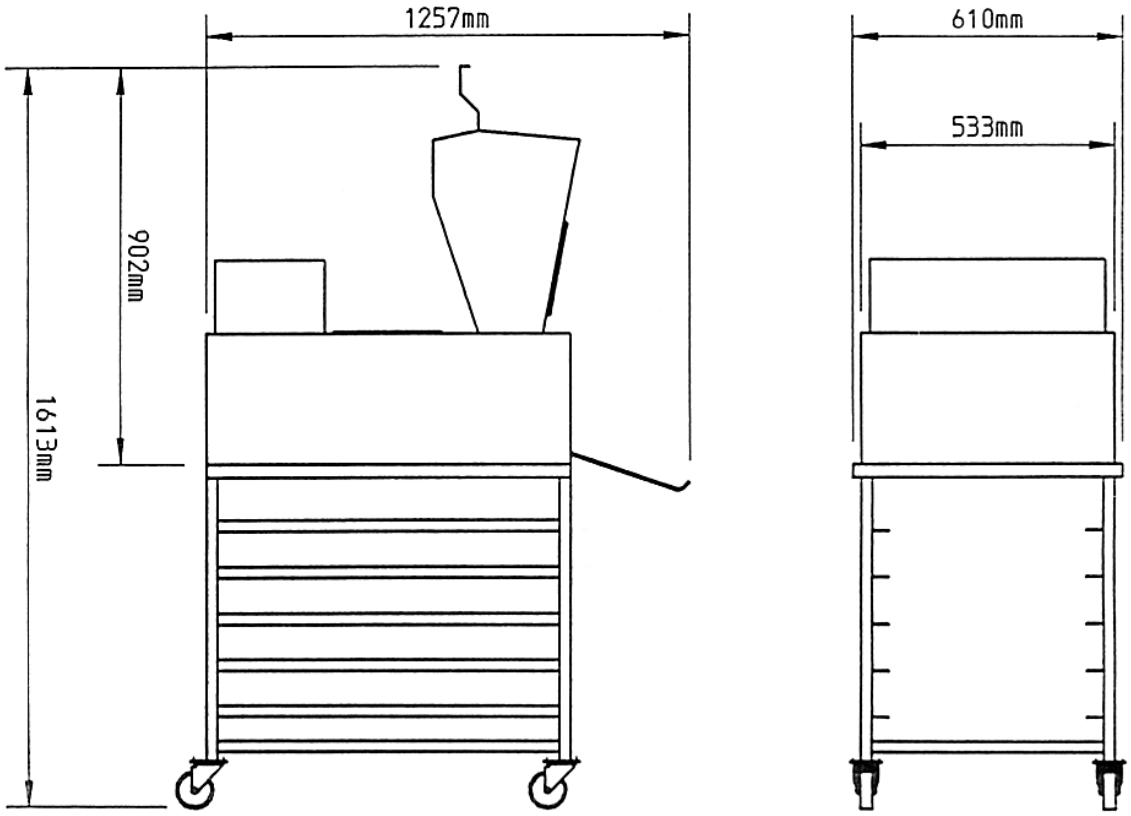
1.0 INTRODUCTION

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 1/2”). *without stand.*
1613mm (55 5/8”). *with stand.*

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

Length: **1257mm** (49 1/2”).

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.

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

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

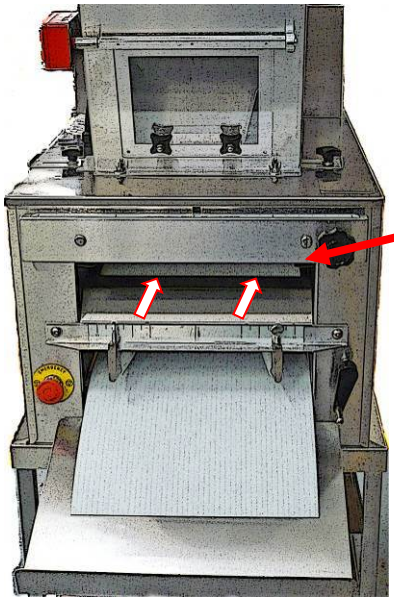
12 The Bakery Manager or the Bakery Supervisor must carry out daily safety checks on the machine.

5.0 INSTALLATION

1 The Multi Moulder should be connected to a mains wall isolator.

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

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.



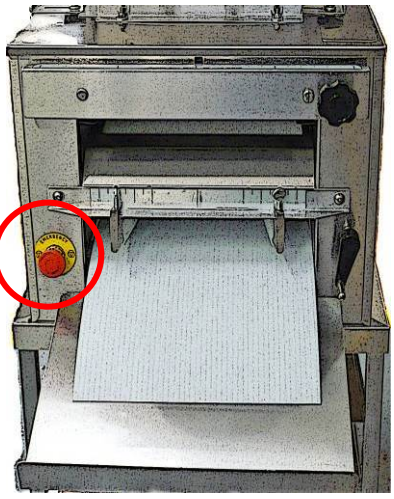
CHECK THE DIRECTION OF THE MOULDING BELT TRAVEL BEFORE COMMENCING PRODUCTION

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

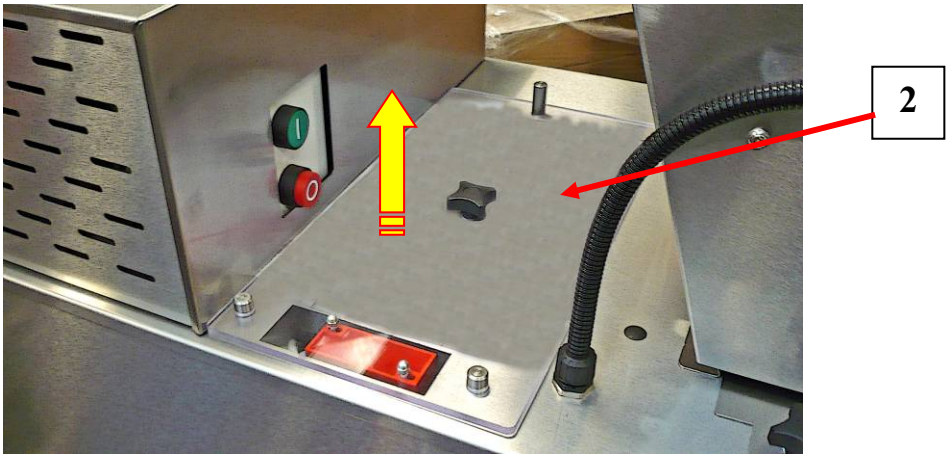
NOTE:- SWITCH OFF AND ISOLATE FROM THE MAINS SUPPLY BEFORE COMMENCING ANY CLEANING.

Daily cleaning

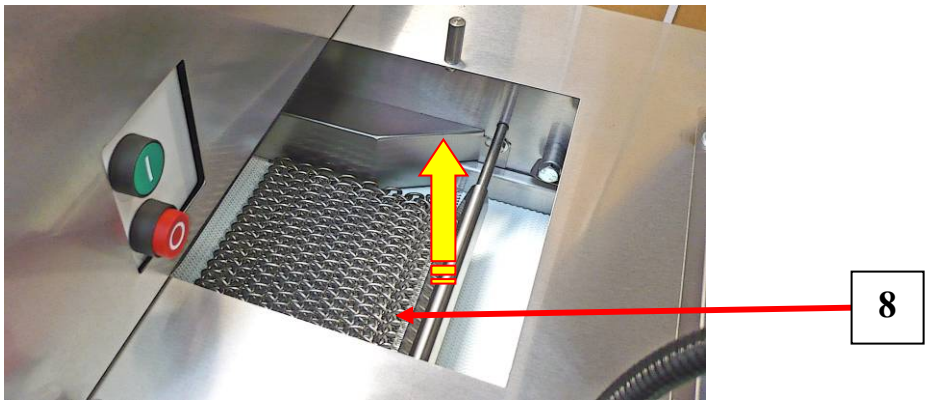
1 Scrape off any dough residue with a plastic scraper.

2 Wipe over perspex window on hopper with cloth dampened in approved sterilising solution and hot water.

3 Remove central cover (**2**).



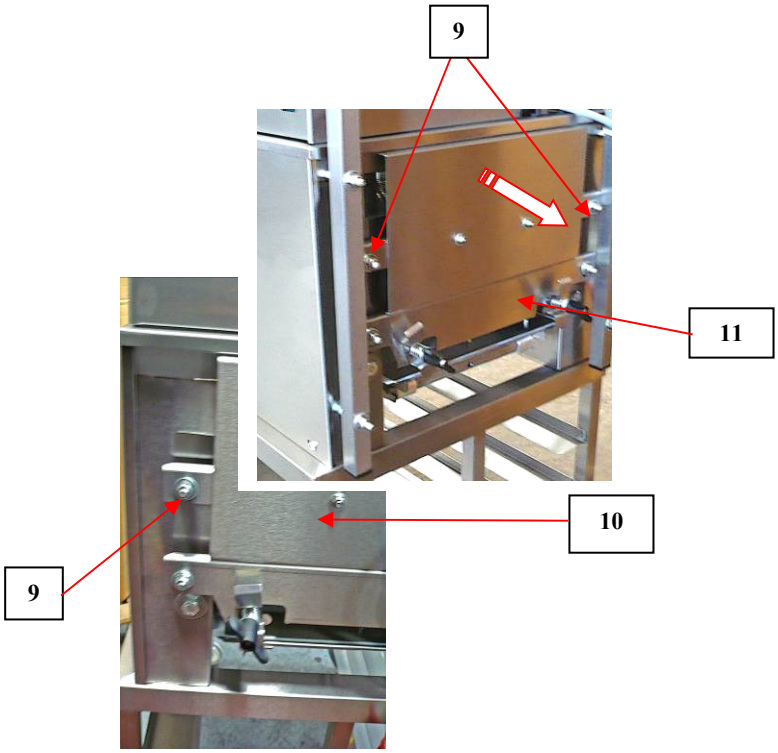
4 Lift out curling chain (**3**) and shake off any dough residue, then brush with a stiff nylon brush. **DO NOT WASH**.

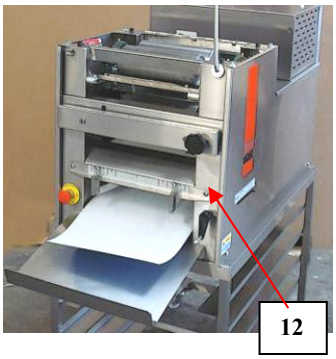


5 Replace chain.

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.

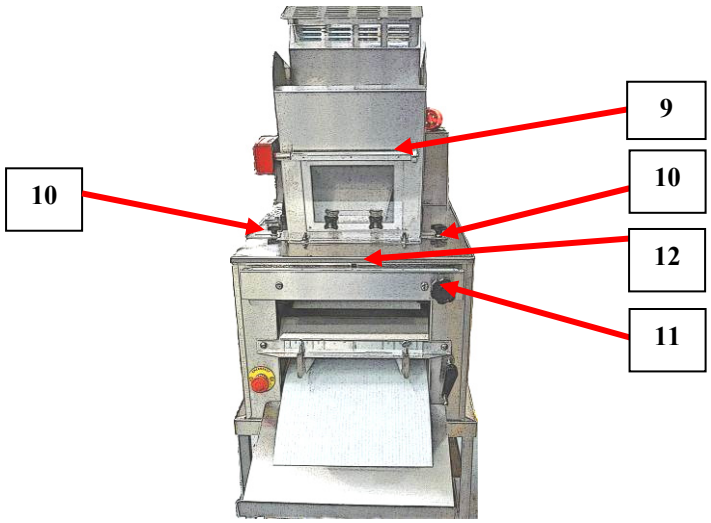
10.0 OPERATING INSTRUCTIONS

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.

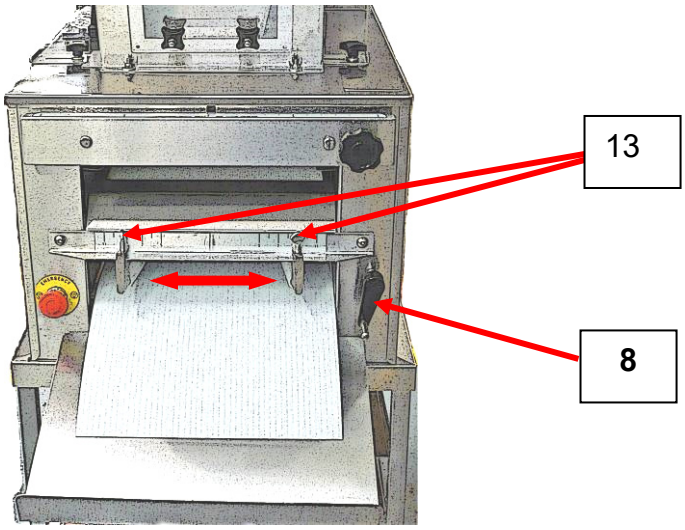
SUGGESTED SHEETING ROLL SETTINGS	
FINISHED LOAF	**ROLL GAP SETTING**
400 grms	No.5
800 grms	No.6

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.

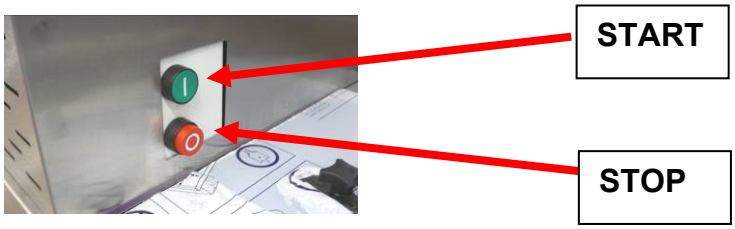
Insufficient pressure will result in a poor seal of the dough piece; rectify this by raising the pressure board by turning the adjusting handle (**8**) clockwise.



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.
…… machine still does not run call Mono Service Department…

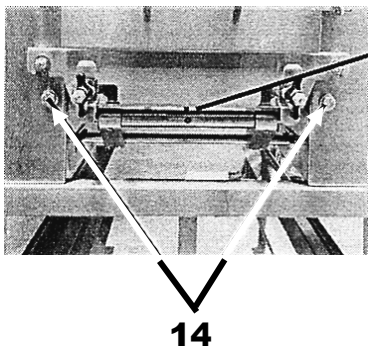
11.0 MAINTENANCE

	**WARNING**	▪ **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.**
	**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 MONO or your appointed service agent.**

IMPORTANT

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**).

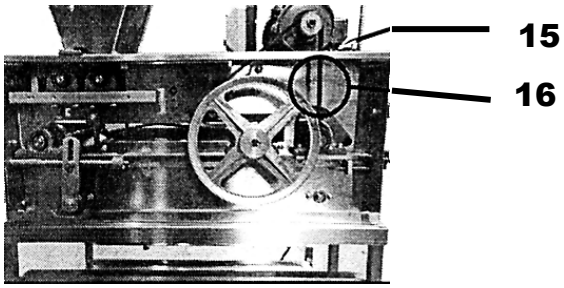


EVERY THREE MONTHS

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 (**16**) IS CORRECTLY ADJUSTED, THE MAXIMUM TOTAL SIDEWAYS MOVEMENT OF THE BELT AT THE CENTRE POINT OF ITS RUN SHOULD BE 20mm (¾").



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
Spares Tel. +44(0)1792 564039

Website: www.monoequip.com

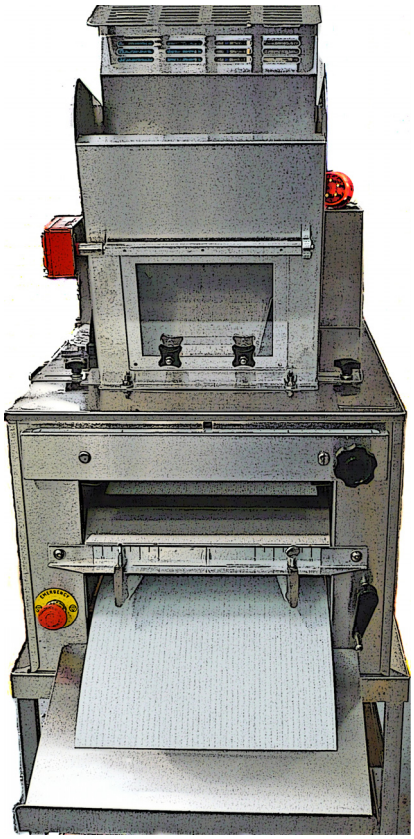
Main Tel. 01792 561234

14.0 SPARES

GENERAL SPARES	PART NUMBER TO ORDER
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
SHEETING ROLL SCRAPERS:-	
FRONT	129K05D04200
REAR	129K05D04000
MOULDING FELT CLAMP	129K05D02500
MOULDING FELT HOOK	129K05D02600
OFFTAKE TRAY	169-02D04000
OFFTAKE TRAY SUPPORT PILLAR	P700-09-012

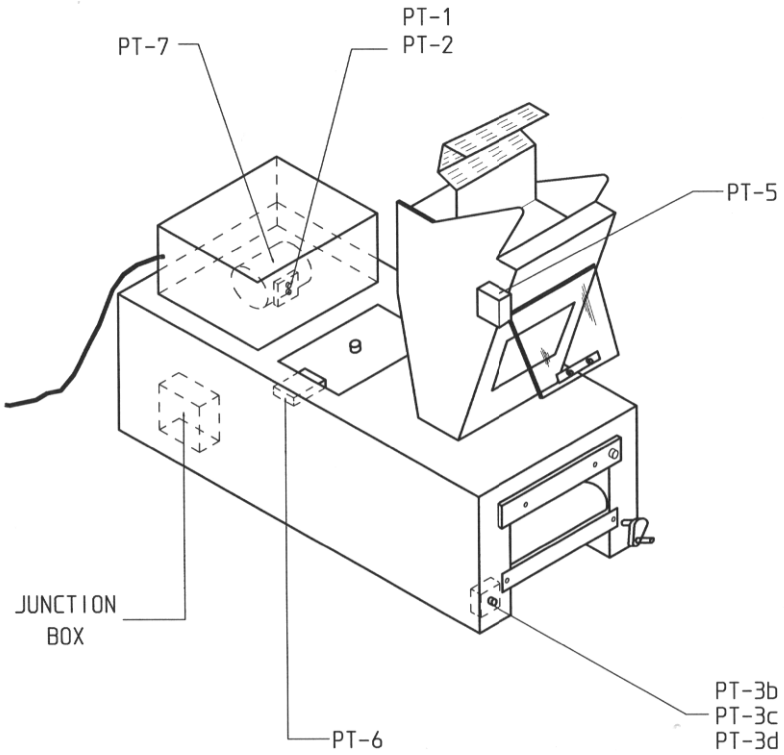
Continued on next page

SCRAPER SPRING	129-05-01700
SHEETING ROLLER	129K05D01000
SHEETING ROLL ADJUSTING HANDLE	P700-07-006
LIVE ROLL	129K03D02400
CURLING CHAIN ASSEMBLY:-	
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



DRAWING PT-Ref	DESCRIPTION	MONO PART NUMBER
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

MONO EQUIPMENT
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

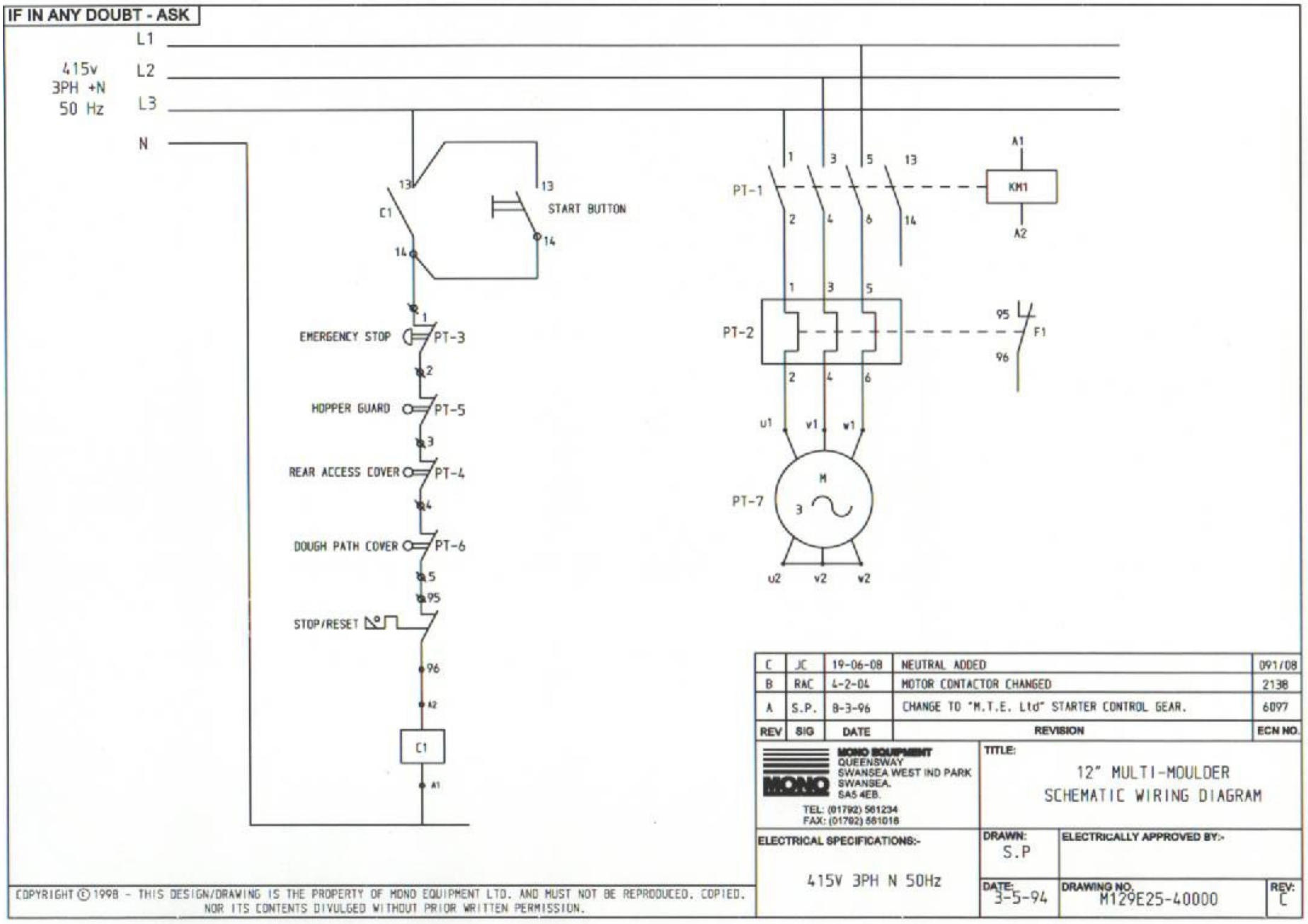
ELECTRICALLY APPROVED BY:-

DATE: 4-5-94

DRAWING NO. M129E25-40400

REV: G

REDRAWN ON CAD 10-98


IF IN ANY DOUBT - ASK
L1
415v
3PH +N
50 Hz
L2
L3
N
13
C1
14
13
START BUTTON
14
1
EMERGENCY STOP
PT-3
2
HOPPER GUARD
PT-5
3
REAR ACCESS COVER
PT-4
4
DOUGH PATH COVER
PT-6
5
95
STOP/RESET
96
A2
C1
A1
1
3
5
13
A1
PT-1
KM1
2
4
6
14
A2
1
3
5
95
PT-2
F1
96
2
4
6
u1
v1
w1
M
PT-7
3
u2
v2
w2
C JC 19-06-08 NEUTRAL ADDED 091/08
B RAC 4-2-04 MOTOR CONTACTOR CHANGED 2138
A S.P. 8-3-96 CHANGE TO "M.T.E. Ltd" STARTER CONTROL GEAR. 6097
REV SIG DATE REVISION ECN NO.
MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA.
SA5 4EB.
TEL: (01792) 561234
FAX: (01792) 561018
TITLE:
12" MULTI-MOULDER
SCHEMATIC WIRING DIAGRAM
ELECTRICAL SPECIFICATIONS:-
415V 3PH N 50Hz
DRAWN:
S.P
ELECTRICALLY APPROVED BY:-
DATE:
3-5-94
DRAWING NO.
M129E25-40000
REV:
C
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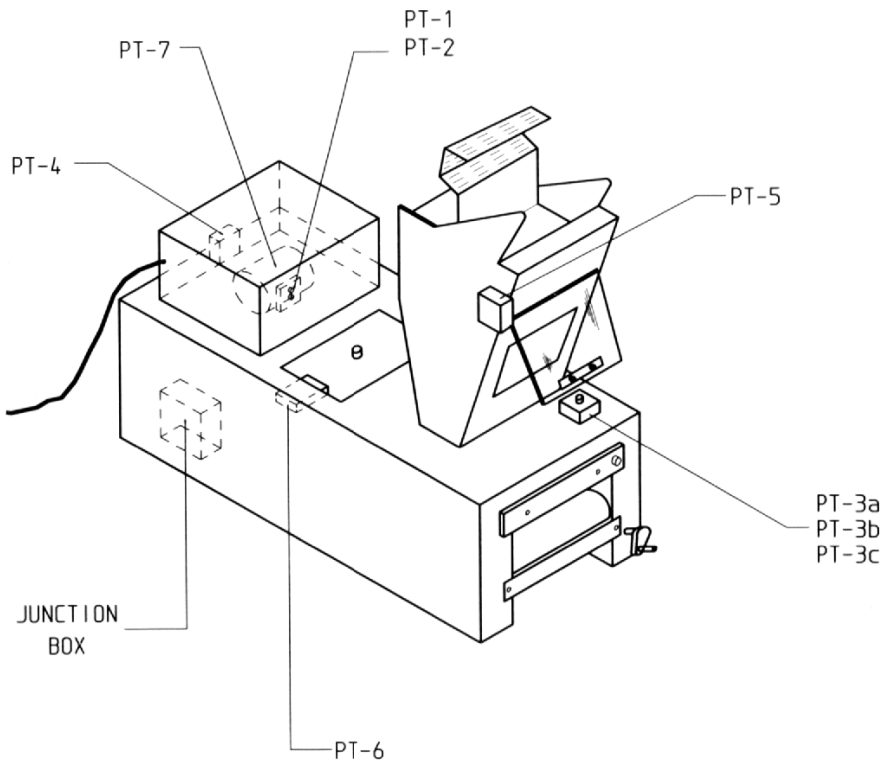
IF IN ANY DOUBT - ASK



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

REV	SIG	DATE	REVISION	ECN NO.
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

MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA.
SA5 4EB.
TEL: (01792) 561234
FAX: (01792) 561016

TITLE: 12" MULTI MOULDER COMPONENTS PARTS LIST

ELECTRICAL SPECIFICATIONS:- 230V/240V 1PH 50Hz

DRAWN: JC

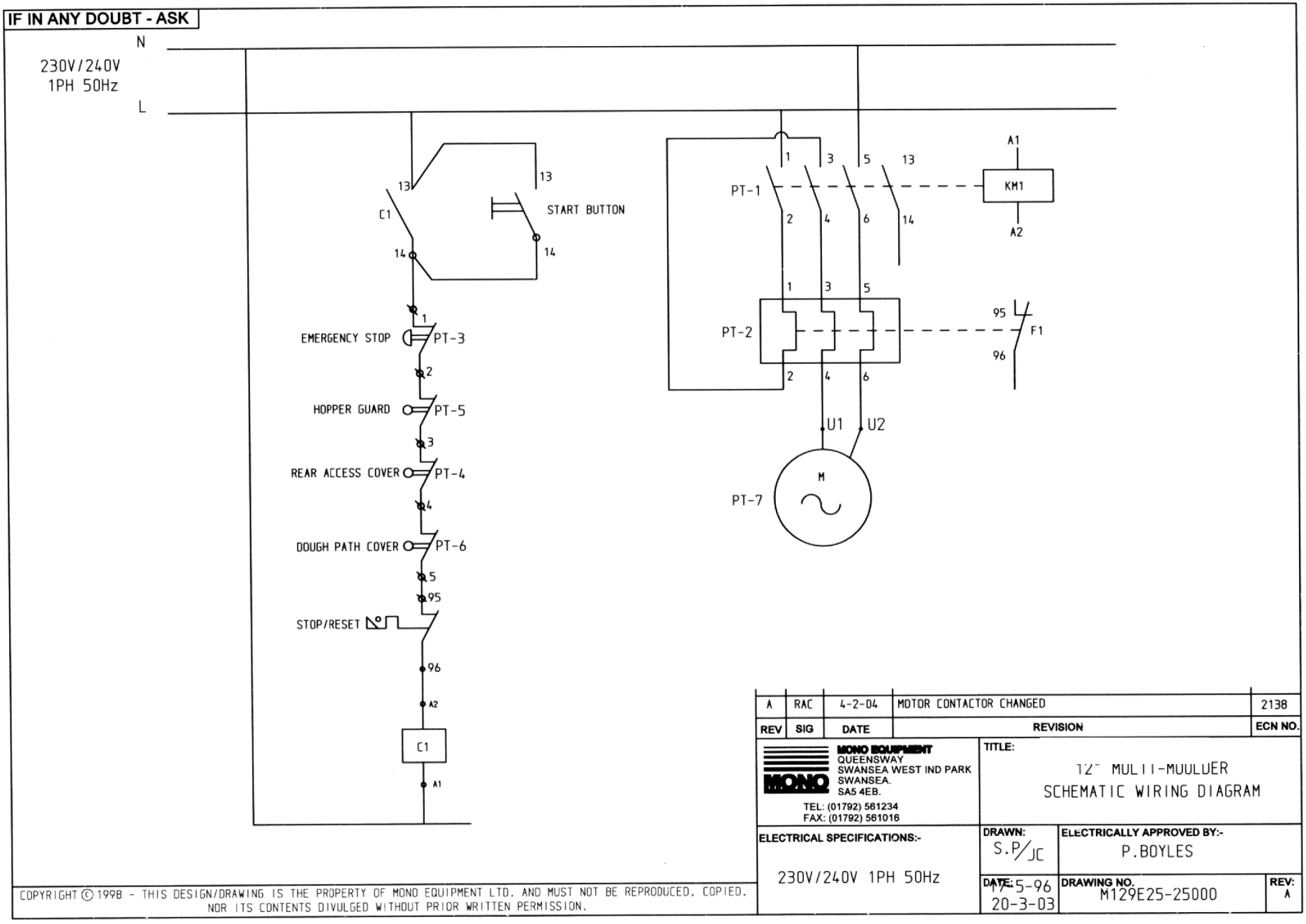
ELECTRICALLY APPROVED BY:- P.BOYLES

DATE: 20-3-03

DRAWING NO. M129E25-25400

REV: C

REDRAWN ON CAD 03-03


IF IN ANY DOUBT - ASK
N
230V/240V
1PH 50Hz
L
13
C1
14
13
START BUTTON
14
1
EMERGENCY STOP
PT-3
2
HOPPER GUARD
PT-5
3
REAR ACCESS COVER
PT-4
4
DOUGH PATH COVER
PT-6
5
95
STOP/RESET
96
A2
C1
A1
1
3
5
13
A1
PT-1
KM1
2
4
6
14
A2
1
3
5
95
PT-2
F1
96
2
4
6
U1
U2
M
PT-7
A | RAC | 4-2-04 | MOTOR CONTACTOR CHANGED | 2138
REV | SIG | DATE | REVISION | ECN NO.
MONO EQUIPMENT
QUEENSWAY
SWANSEA WEST IND PARK
SWANSEA.
SA5 4EB.
TEL: (01792) 561234
FAX: (01792) 561016
TITLE:
12" MULTI-MOULDER
SCHEMATIC WIRING DIAGRAM
ELECTRICAL SPECIFICATIONS:-
230V/240V 1PH 50Hz
DRAWN:
S.P/JC
ELECTRICALLY APPROVED BY:-
P.BOYLES
DATE: 17-5-96
20-3-03
DRAWING NO.
M129E25-25000
REV:
A
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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)