

www.monoequip.com

SERIAL NO. _____
In the event of an enquiry please quote this number.



MONO MINI MOULDER

OPERATING AND MAINTENANCE MANUAL

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


FILE 17



DECLARATION OF CONFORMITY

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

- The Machinery Directive 2006 / 42 / EC
- The Low voltage Directive 2014 / 35/ EC
- The requirements of the Electromagnetic Compatibility Directive 2004 / 108EC, 91 / 263 / EEC, 92 / 31 / EEC
Incorporating standards
EN55014-1:2006+A1:2009+A2:2011
EN55014-2:1997+A1:2001+A2:2008
- The General Safety of Machinery and food processing Standards applicable
- Materials and Articles intended to come into contact with food
Regulation (EC) No. 1935 / 2004

Signed	
G.A. Williams – Quality Manager	

Date	
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Machine FG Code.		Machine Serial No.	
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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 9, Bryggen Road,
North Lynn Industrial Estate,
Kings Lynn,
Norfolk,
PE30 2HZ

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

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

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

We Recommend:

- Supplementary electrical protection with the use of a residual current device (RCD)
- Fixed wiring appliances incorporate a locally situated switch 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.



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

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1.0 INTRODUCTION

The Mono Mini Moulder is an ideal machine for the small bakery and will provide perfect moulding for all morning goods, as well as bread.

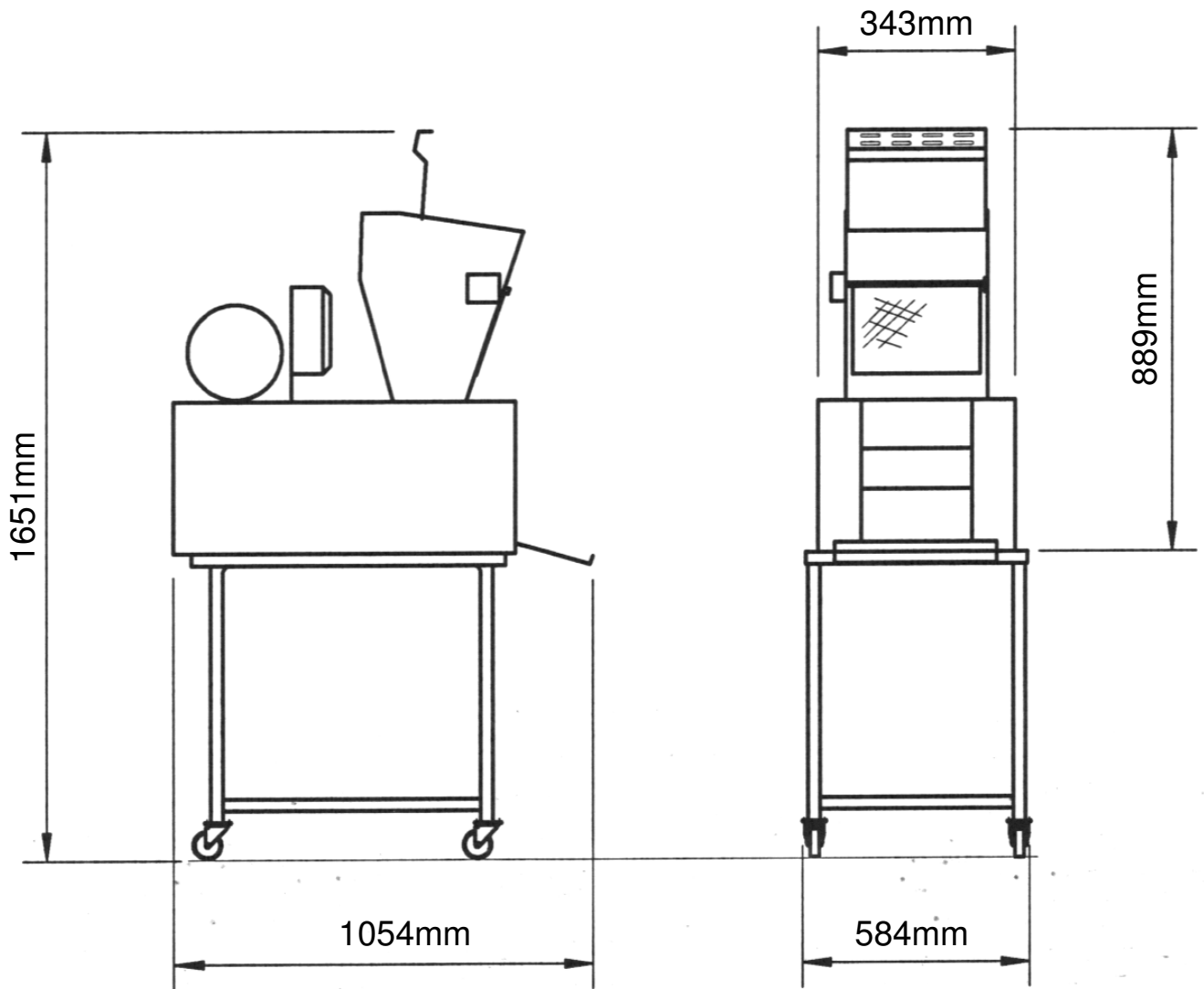
Fully adjustable sheeting rolls allow the mini moulder to be adjusted for dough pieces of varying consistency and size, ranging from 28g – 900g.

Special pressure boards and dough path inserts are available to increase the machines versatility making it ideal for the production of finger rolls.



All outer surfaces are manufactured from easy to clean stainless steel.

2.0 DIMENSIONS



Height: Table top **889mm**
with stand **1651mm**

Width: Table top **343mm**
with stand **584mm**

Length: **1054mm**

3.0 SPECIFICATIONS

Electric: Single or 3ph + N



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

Weight: Table top 110kg.
With stand 129kg

Noise Level: Less Than 85 dB.

Output: up to 1000 dough pieces an hour

Power output 0.37Kw ; single or 3ph + N

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 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, at the machine's stop button or emergency stop on the front.



STOP
BUTTON

EMERGENCY
STOP BUTTON



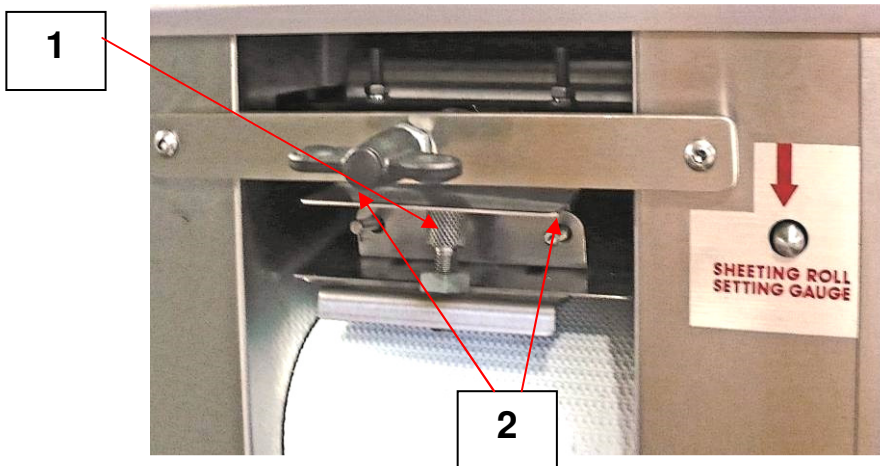
7.0 CLEANING INSTRUCTIONS



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

Daily cleaning

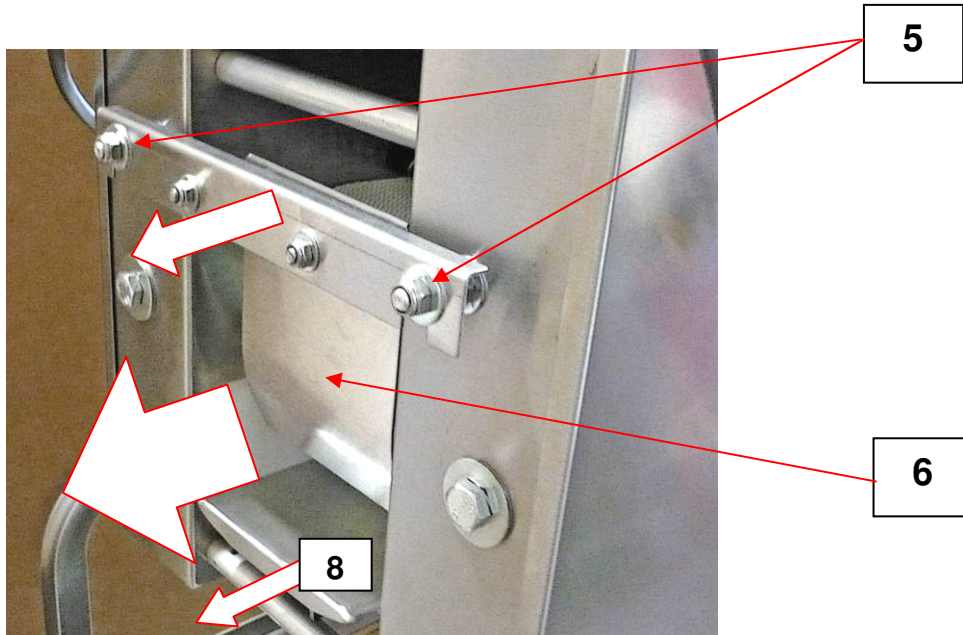
- 1 Scrape off any dough residue with a plastic scraper.
- 2 Wipe over perspex window on hopper with cloth dampened in approved sterilising solution and hot water.



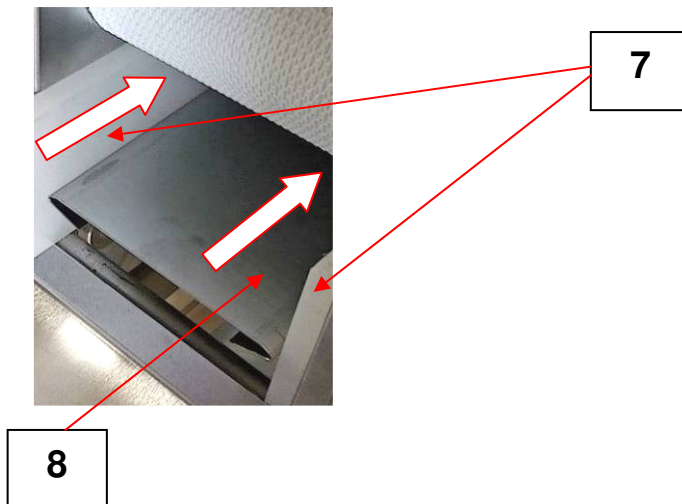
- 3 Turn down knurled bolt (1) and withdraw front scraper from retaining hooks (2). Wipe clean and replace.



- 4 Remove cover on top behind hopper. Loosen wing bolt (3) and lift out rear scraper (4). Wipe clean and refit.



- 5 Undo nuts (5) and remove dough return plate (6). Clean and refit
- 6 Remove side cheeks (7) by sliding out of machine to the rear. Wipe clean.



- 7 Slide out pressure board (8) to the rear and wipe clean.
- 8 Clean conveyor belt area with a damp cloth and scraper. Connect machine to the power supply and turn on machine for a short time to expose the uncleaned part of the belt. Disconnect power supply. Clean remaining part of belt and replace all parts removed for cleaning.
- 9 Wipe outside parts of the machine paying attention to handles, levers and controls.

Every three months an engineer should remove the side sheets and check, clean and lubricate the inner parts.

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. ---

IT IS NOT RECOMMENDED THAT DOUGH PIECES OR THE MOULDING BELT ARE SPRINKLED WITH FLOUR AS THIS WILL CAUSE MOULDING FAULTS.

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.

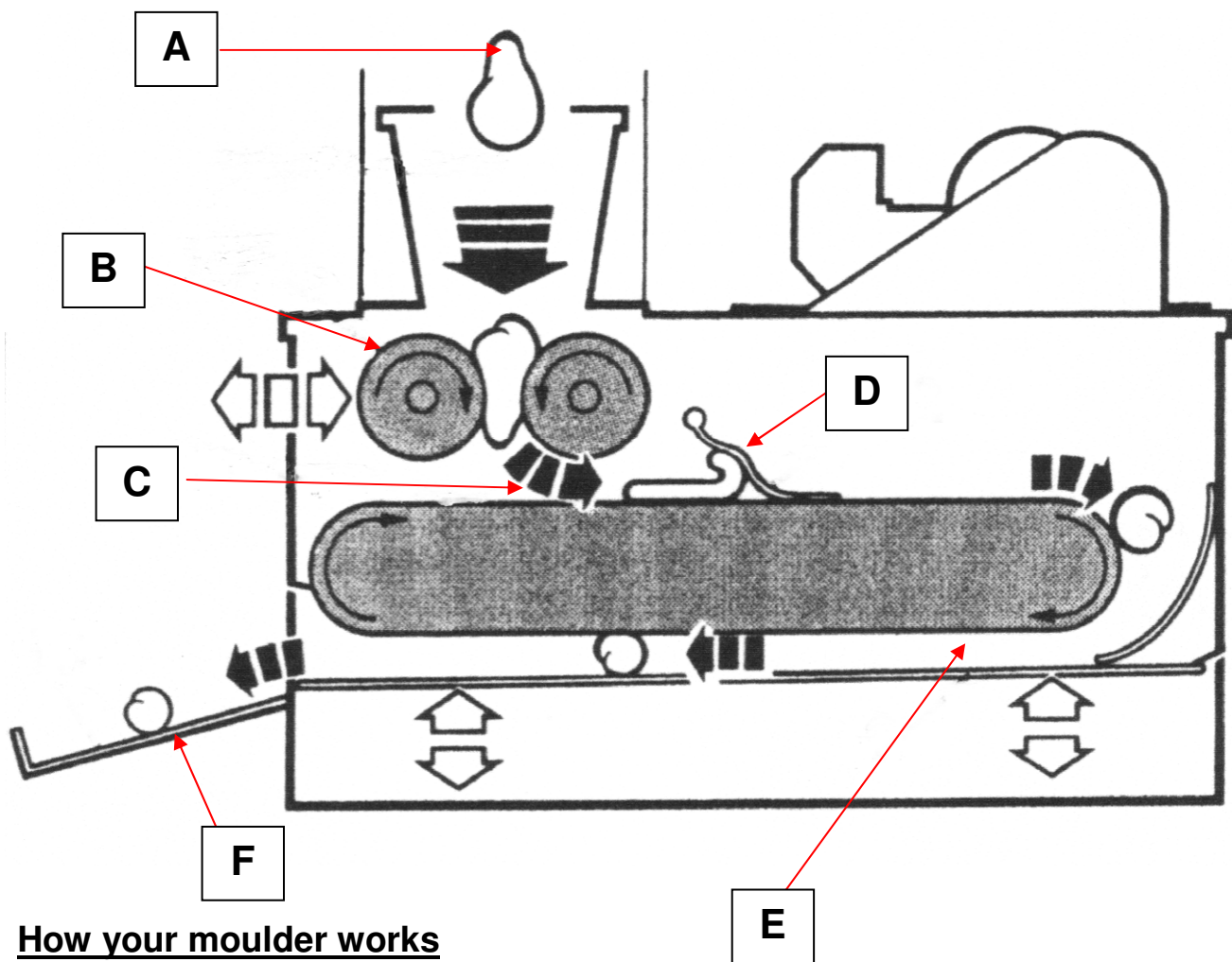
If a stock of scaled dough pieces can be built up by using trays, or a large table, and then fed to the moulder starting with the first piece scaled, a decided improvement will be seen in the moulding.

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 that this machine is capable of producing.

10.0 OPERATING INSTRUCTIONS



How your moulder works

Dough piece is fed in to the hopper (A).

Rollers form a sheet of dough (B).

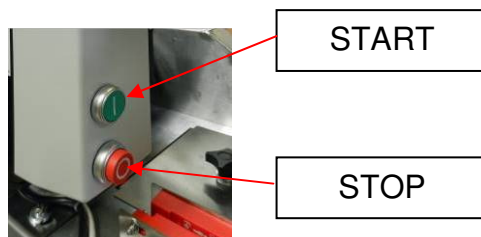
Sheet is carried along to the curling chain (C).

Curling chain picks up leading edge of sheet and forms a roll of dough (D).

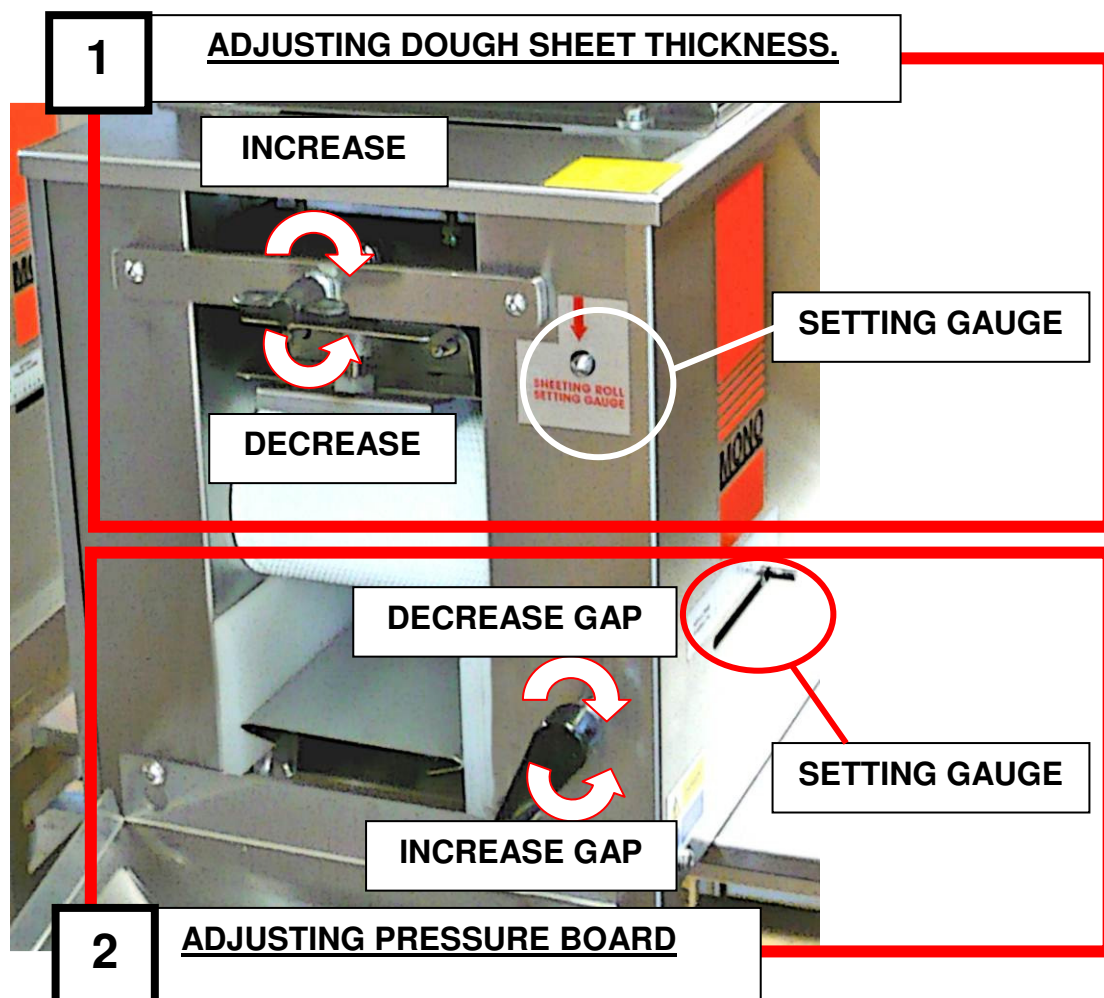
Rolled dough piece is carried round end of conveyor and over the pressure board (E).

Finished moulded dough rolls in to the collection tray (F).

STARTING MOULDER

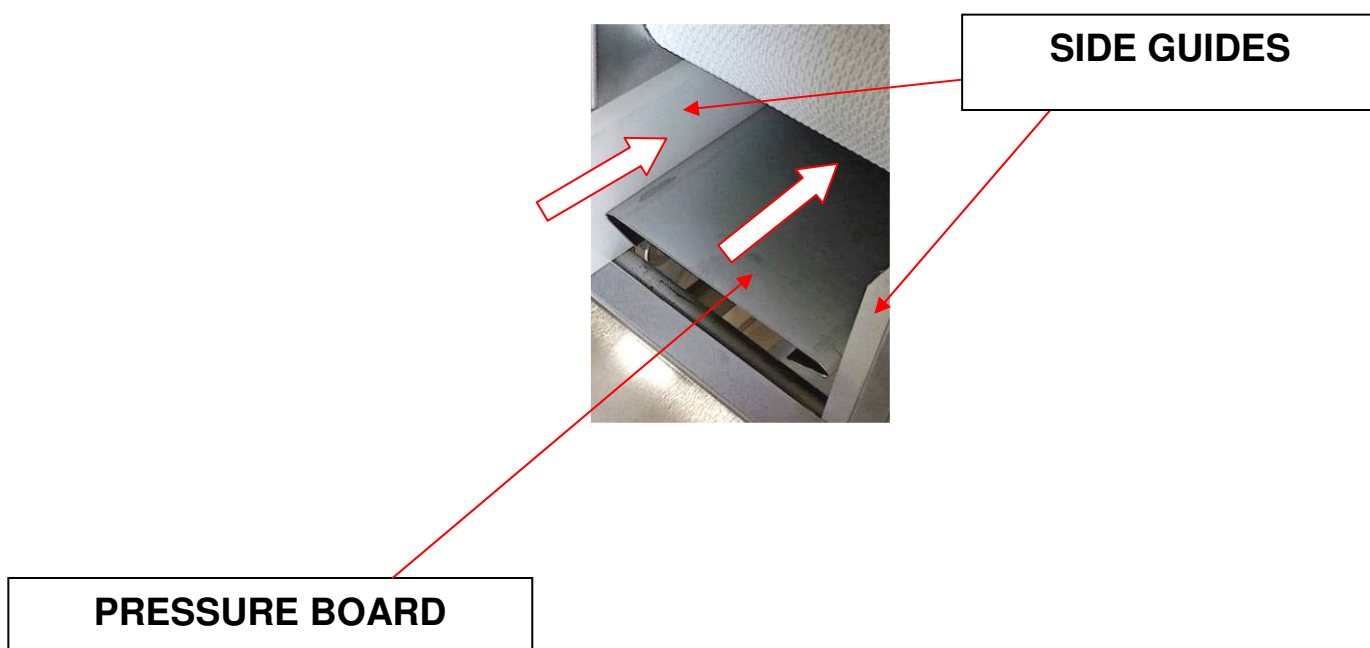


ADJUSTMENTS



- 1.** Turn the adjusting knob for the sheet thickness required. The setting gauge indicates the roller gap in 3mm increments.
- 2.** Turn the adjusting handle to adjust the gap between the pressure board and the conveyor. This moulding pressure should be set to the minimum required to achieve a uniform mould.

FITTING OPTIONAL PRESSURE BOARDS



To reduce the width of the dough path for finger rolls etc. the side guides and pressure board have to be changed.

1. Withdraw the pressure board out of the rear of the machine.
2. Withdraw the side cheeks from the rear.
3. Slide the reduced width pressure board in from the rear.
4. Slide the thicker side cheeks in from the rear.
5. Adjust the machine settings as necessary.

11.0 MAINTENANCE

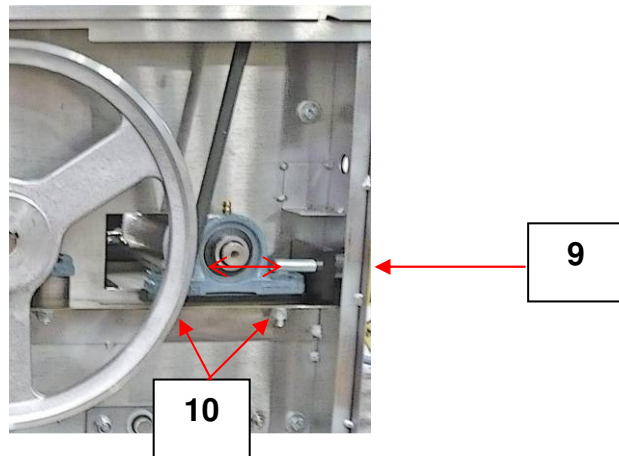
IMPORTANT



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.

MOULDING BELT ADJUSTMENT

- 1 The tension of the moulding belt rarely requires adjustment. Should the belt show signs of slipping, then the side sheets must be removed. After loosening the two bearing clamp bolts on each bearing (10), take up the slack by a small amount of equal adjustment of the belt tensioning bolts (9). Make sure the bearing bolts are tightened after adjustment.



EVERY THREE MONTHS

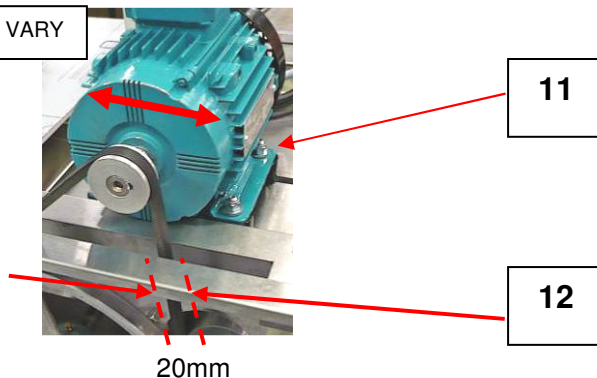
- 1 Once every three months the side sheets must be removed and the inside of the machine thoroughly brushed clean. The chain drive can also be given a light greasing, if required.
The bearings fitted to the machine will not normally require lubricating as they are sealed.

DRIVE BELT ADJUSTMENT

- 2 The drive belt from the motor rarely requires adjustment. If this becomes necessary, then adjust the motor in the desired direction by slackening off the four bolts (11) which secure the motor to its mounting. Tighten the bolts when the correct tension (12) is achieved.

NOTE:- WHEN BELT TENSION (12) IS CORRECTLY ADJUSTED, THE MAXIMUM TOTAL MOVEMENT OF THE BELT AT THE CENTRE POINT OF ITS RUN SHOULD BE 20mm.

MOTOR TYPE MAY VARY



12.0 MOULDER WILL NOT START

If moulder does not start check:-

- 1 that the **power supply** is switched on.
- 2 that the **hopper door** is closed.
- 3 that the **curling chain chamber** lid (on top) is closed

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**

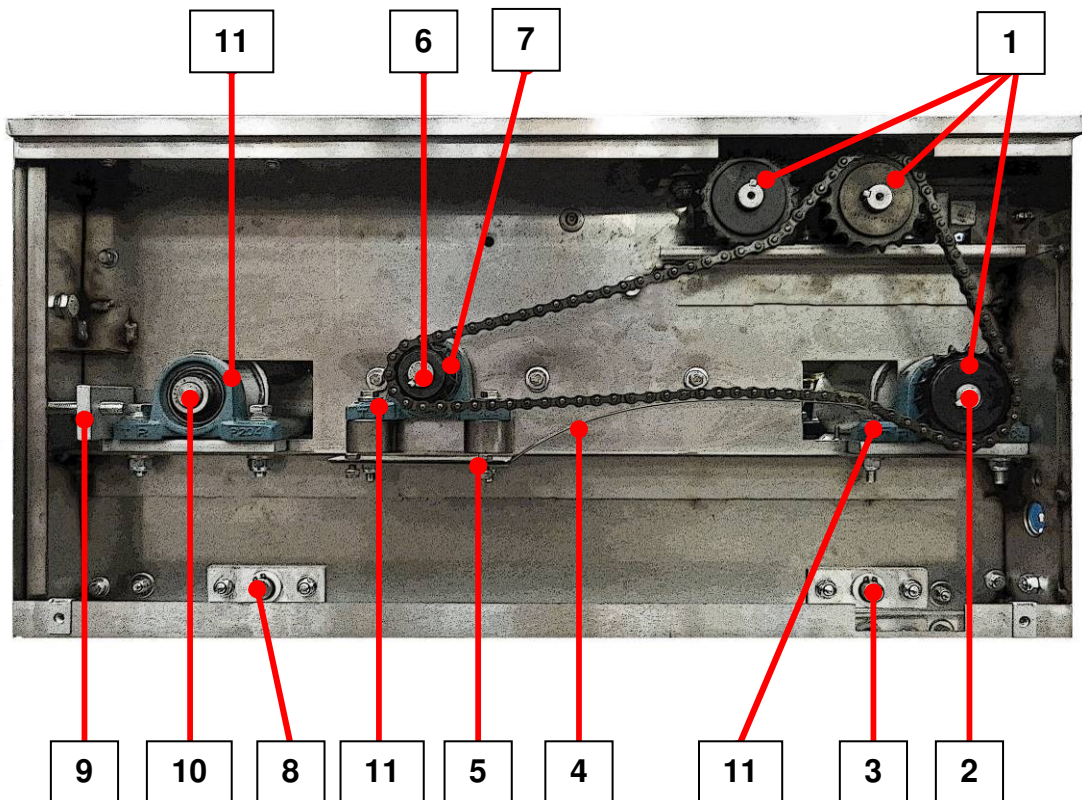
Web site: www.monoequip.com

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



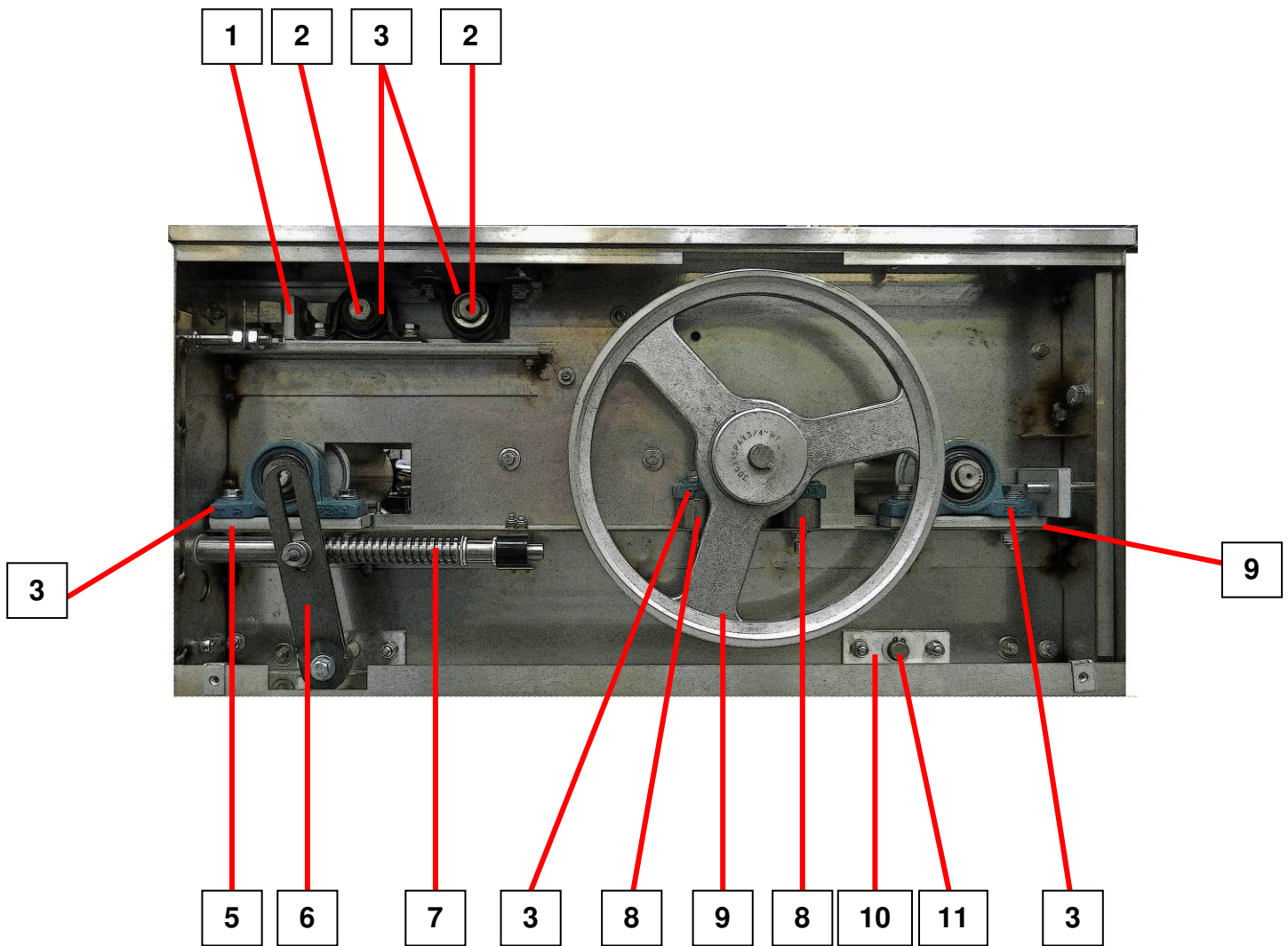
14.0 SPARES

CHAIN DRIVE SIDE PARTS



<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART No.....</u>
1	18T SPROCKET	M007-08D01200
2	DRIVE ROLL ASSEMBLY	M007-03D01400
3	LONG TOGGLE SHAFT	M007-04D00800
4	CHAIN TENSIONER	M007K08D01100
5	CHAIN TENSIONER PLATE	M007-08D00600
6	PULLEY SHAFT	M007-08D00200
7	12T SPROCKET	M007-08D01300
8	SHORT TOGGLE SHAFT	M007-04D01000
9	LH LIVE ROLL BEARING PLATE	M007-03D01000
10	LIVE ROLL ASSEMBLY	M007-03D01900
11	BEARING	A900-06-023

BELT DRIVE SIDE PARTS



ITEM	DESCRIPTION	PART No.....
1	SHEETING ROLL BEARING BRKT	M007-05-00500
2	SHEETING ROLL ASSY	M007-05D00800
3	BEARING	A900-06-023
4	BEARING PLATE LIVE ROLL LH	M007-03-01200
	BEARING PLATE LIVE ROLL RH	M007-03-01201
5	BEARING SOLE PLATE	M007-03D01100
6	SWING PLATE INDICATOR ARM	M007-04D00400
7	SWING PLATE INDICATOR SCREW	M007-04D02000
8	BEARING SPACER	M007-08D00300
9	"V" PULLEY	M129K08D02100
10	TOGGLE BEARING PLATE	M007K04D00200
11	LONG TOGGLE SHAFT	M007-04D008

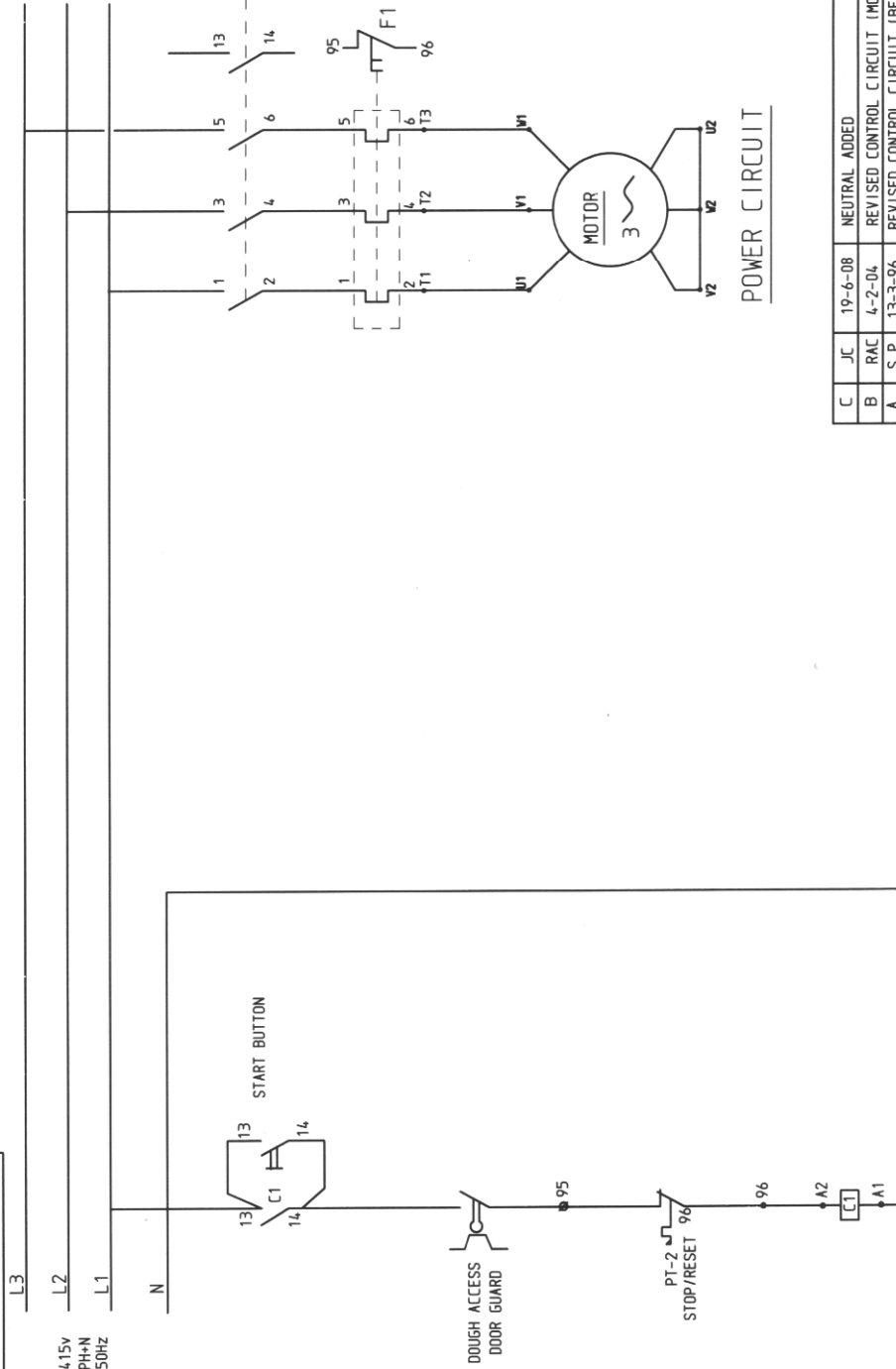
OTHER SPARES THAT MAY BE REQUIRED.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART No.....</u>
1	MOTOR	B809-74-026
2	TOP LID MAGNETIC SWITCH	B818-07-008
3	MOTOR PULLEY	M007-08D01000
4	MOULDING BELT	A900-22-031
5	CURLING CHAIN	A900-08-036
6	"V" BELT	A900-21-028
7	HOPPER SAFETY SWITCH	B818-07-017
8	CHAIN JOINING LINK	A900-08-013



15.0 ELECTRICAL DIAGRAMS

IF IN ANY DOUBT - ASK



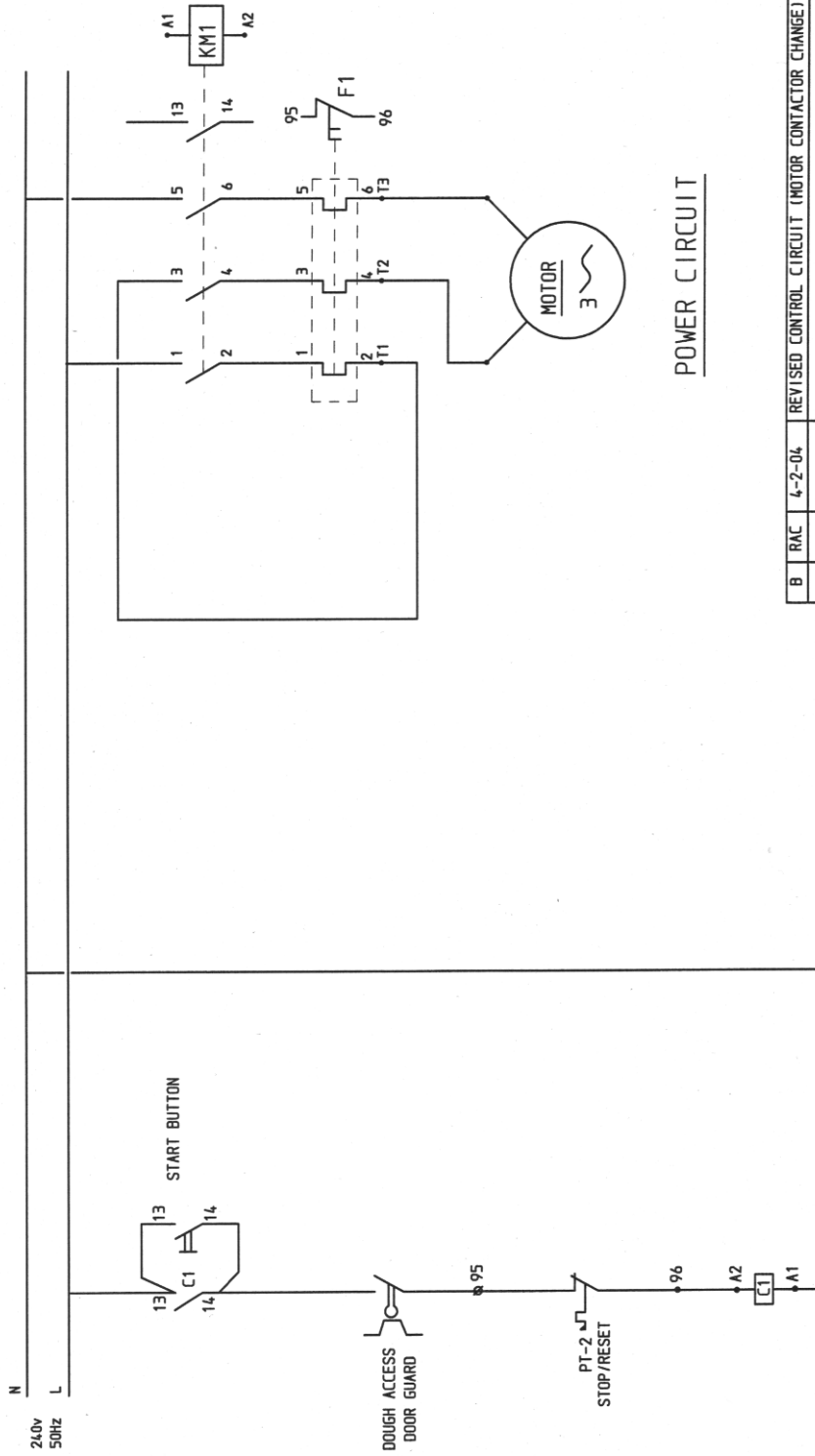
CONTROL CIRCUIT

POWER CIRCUIT

C	JC	19-6-08	NEUTRAL ADDED	091/08
B	RAC	4-2-04	REVISED CONTROL CIRCUIT (MOTOR CONTACTOR CHANGE)	2138
A	S.P.	13-3-96	REVISED CONTROL CIRCUIT (BECAUSE OF NEW MTE STARTER)	6097
REV	SIG	DATE	REVISION	ECN NO.
			TITLE: MINI MOULDER POWER/CONTROL DIAGRAM	
MONO EQUIPMENT QUEENSWAY SWANSEA WEST IND PARK SWANSEA, SAS 4EB. TEL: (01792) 561234 FAX: (01792) 561016			DRAWN: S.P. ELECTRICALLY APPROVED BY:-	
ELECTRICAL SPECIFICATIONS:- 4.15V/3PH+N/50HZ			DATE: 21-5-96 DRAWING NO. M007E25-03500	
			REV: C	

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IF IN ANY DOUBT - ASK



POWER CIRCUIT

CONTROL CIRCUIT

REV	SIG	DATE	REVISION	ECN NO.
B	RAC	4-2-04	REVISED CONTROL CIRCUIT (MOTOR CONTACTOR CHANGE)	2136
A	S.P.	13-3-96	REVISED CONTROL CIRCUIT (BECAUSE OF NEW MTE STARTER)	6097

TITLE: **MINI MOULDER**
POWER/CONTROL DIAGRAM
 (240v/1ph/50Hz)

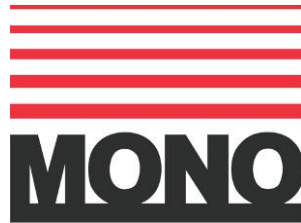
DRAWN: TCI
 ELECTRICALLY APPROVED BY:-

MONO EQUIPMENT
 QUEENSWAY
 SWANSEA WEST IND PARK
 SWANSEA, SA5 4EB.
MONO
 TEL: (01782) 561234
 FAX: (01782) 561016
 Email: engineering@monoequip.com

ELECTRICAL SPECIFICATIONS:-

DATE:	7.02.95	DRAWING NO.	M007E25-03000
REV:	B		

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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)