

# **Beta Maxi & Mini**





# **Operators Handbook**

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# **Preface**

Dear User

Welcome to the growing group of Beta Maxi and Mini Press users. The product you have purchased has been carefully designed and manufactured to ensure that you, the user, will gain the maximum benefit.

**All A. Adkins & Sons Limited products** are specifically designed to ensure ease of use with particular attention to safety requirements.

**Should you discover any fault** or damage upon receipt of this product, you should immediately contact your local supplier.

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# 1. Introduction Beta Maxi and Mini Presses

**The Beta Maxi and Mini Presses** are manually operated heat presses for transfer printing and material fusing. They are ideal for medium volume production.

**The work area** of the Beta Maxi and Mini Presses are 38 x 50 cms (15 x 20 ins) and 38 x 38 cms (15 x 15 ins) respectively, but machines may have, to special order, optional smaller sized interchangeable worktables of any size and various shapes within these table sizes.

**The Beta Maxi and Mini Press** are produced in two versions, nominally 230 Volts AC for the European market and nominally 120 Volts AC for the American market.

The Beta Maxi and Mini Presses have a heat plate which swings away from the operating position to clear the worktable for loading and unloading. After loading the work piece, and with the correct settings for temperature, pressure and dwell time, the heat plate is swung to the operating position with the handle provided. The cycle is started by pulling out the handle locking knob allowing the handle to be pressed down to the locking position. The micro switch is made which starts the timer. When the set time elapses, the buzzer sounds. The handle-locking knob can then be pulled out to permit the handle to be raised to the vertical locked position. The heat plate may then be swung to the unloading position.

#### 1.1 What did you receive?

**The Beta Maxi and Mini Presses** have been shrink wrapped or shrink wrapped and placed in a cardboard box, and held in place with foam and banded onto a pallet. The following articles should have been delivered:

- Beta Maxi or Mini Press complete with mains cable and plug
- Beta Maxi and Mini Press Users' Handbook
- Any extra items ordered

If there is any damage or any article is missing, please contact your supplier immediately.

# 1.2 Specifications of the Beta Maxi and Mini Presses

The Beta Maxi and Mini Presses are a manually operated heat press for transfer printing and material fusing. They are ideal for medium volume production.

**The work areas** of the Beta Maxi and Mini are 15 x 20 ins (38 x 50 cms) and 15 x 15 ins (38 x 38 cms) respectively, but machines may have, to special order, optional smaller sized interchangeable worktables of any size and various shapes within these table sizes.

#### **Specification**

#### **European Machine**

	Maxi	Mini
Power consumption	2500 Watts	1500 Watts
Power supply	230-240 Volts AC	230-240 Volts AC
Working temperature	70-235°C	70-235°C
Machine height open	65 cms	65 cms
Machine height closed	35 cms	35 cms
Machine width	51 cms	51 cms
Machine width, loading	94 cms	92 cms
Machine depth	89 cms	89 cms
Machine depth, loading	120 cms	108 cms
Net weight	45 kg	39.5 kg
Press pad dimensions	38 x 51 cms	38 x 38 cms
Fuses	12.5A	8A
A-weighted noise level	<70dB(A)	<70dB(A)

#### **Specification**

#### **USA Machine**

	Maxi	Mini
Power consumption	1600 Watts	1200 Watts
Power supply	120 Volts AC	120 Volts AC
Working temperature	160-455°F	160-455°F
Machine height open	25.5 ins	25.5 ins
Machine height closed	14 ins	14 ins
Machine width	20 ins	16 ins
Machine width, loading	37 ins	35 ins
Machine depth	35 ins	35 ins
Machine depth, loading	41 ins	41 ins
Net weight	99 lbs	87 lbs
Press pad dimensions	15 x 20 ins	15 x 15 ins
Fuses	16A	12.5A
A-weighted noise level	<70dB(A)	<70dB(A)

#### 1.3 Safety

The Beta Maxi and Mini Presses have been equipped with various safety features to ensure operator safety.

- a. **A thermal cut-out** on the heating element shuts off the power to the element if the temperature exceeds  $235^{\circ} \pm 15^{\circ}\text{C}$  (455  $\pm$  27°F).
- b. **The time/temperature** controller has a built in facility giving error messages in the event of faults with the element heating and control system.
- c. A safety locking system is fitted so that a button needs to be operated before the actuating handle can be moved to lower or raise the heat plate.

#### 1.4 Safety Tips

If required, our customer service team can arrange maintenance service.

- ♦ The Beta Maxi and Mini Presses meet the European Legislation standard. Under normal conditions accidents are rare. However listed below are some practical points to ensure your safety.
  - Always switch off and isolate the mains supply (i.e. remove plug) before undertaking any maintenance work.
  - **Keep other peopl**e away from the machine during use.
  - Ensure that there is sufficient space around the machine. Cables and connections must not get jammed. Although the heat radiation of the press is low, there should be enough space for cooling down.
  - **Avoid contact** with the press element.
- ♦ DO NOT REMOVE THE TOP COVER UNLESS QUALIFIED TO DO SO touching internal parts is dangerous and may cause shock hazard.
- ♦ PROTECT THE MAINS CABLE damage to the mains cable may cause fire or shock hazard. When unplugging, hold by the plug only and remove carefully. Take care that the mains cable does not come into contact with the heat plate (or moving parts of the mechanism) during operation of the machine.
- ◆ **OPERATING AMBIENT TEMPERATURE RANGE** the operating ambient temperature range is 32°F 104°F,

(0°C - 35°C) and humidity of 20 - 80%. This heat press is fitted with a thermal cut out to ensure that it cannot operate above  $235^{\circ}$ C  $\pm 15^{\circ}$ C ( $455^{\circ}$ F  $\pm 27^{\circ}$ F).

♦ MACHINE FUSES - type: ultra rapid (FF) fuses 1¼". (230 Vac max. 12.5 amps maxi) (8 amps mini) (120 Vac max. 16 amps maxi) (12.5 amps mini).

# • WARNING - THIS APPARATUS MUST BE EARTHED (GROUNDED)

#### CAUTION

This machine gets hot whilst operating. Take care not to touch any surfaces that are labelled "Caution this plate is HOT".

#### MACHINE OPERATION

Only suitably trained personnel should operate this machine.

This machine is designed to be operated by one operator only.

For safety use both hands to move the handle up or down.

Keep fingers away from **trapping points** in the arm-lever toggle mechanism. Using both hands on the handle keeps the hands safe.

**Do not** allow the handle to move upward, by the effect of the spring effect, use both hands to control movement.

**Contact** your print media suppliers to ascertain whether **fumes** are given off during the process, and if so what precautions are needed for operator safety. These may include **air extraction** and / or masks for personnel.

Please refer to page 15 for an illustration of the Beta Maxi and Mini Presses.

## 2. Installation

#### 2.1 Transport instructions

The machine comes to you, shrink wrapped, or shrink wrapped and placed in a cardboard box, and held in place with foam and banded onto a pallet. If you have to transport the machine at any time it is recommended that you use a similar box and packing methods. Please let the machine cool down, lower the handle to the locked position and remove the swing head handle.

#### 2.2 Installing the machine

- **2.2.1 Remove all packaging** from the heat press.
- **2.2.2 Check to ensure** that no damage has been caused to the machine during transit.
- **2.2.3 Place the machine** on a sturdy horizontal surface that is within easy reach of the operator. Due to the weight we recommend that this be a 2-person task. There must be sufficient space for the machine's head to swing to the right until it hits the built in stop and for the operating handle to be raised to its full extent. Screw into place the head swing aside handle, which comes packed separately for safety during transport. (See page 14 for the position of the handle). Ensure that no items vulnerable to heat radiation are too close to the machine and that local lighting is adequate.
- **2.2.4 Under some circumstances** the machine becomes unstable when the heat plate is swung to the side for loading. A suitable bolt is provided with the machine to allow the machine to be fixed in place using the hole in the front legs casting.

#### 2.3 Electrical requirements

**The Beta Maxi and Mini Presses** should be connected to the mains supply, (nominally 230V AC for the European market or 120V AC for America) by the mains cable provided and a suitable plug. A qualified person should carry out this work.

**The press is designed** for 220-230 volts AC 50/60 hertz and requires exclusive use of a power outlet rated for at least 13 amps (Europe) or for 120 volts AC 15 amps (America).

**Ensure that the supply rating** on the machine specification plate corresponds with your local supply and that the correct plug is fitted.

#### 2.3A Wiring the plug for a 230-240 VAC machine

The wires in this mains lead are coloured in accordance with the following code:

230 VAC 
Green and Yellow: EARTH (GREEN)
Blue: NEUTRAL (WHITE)
Brown: LIVE (BLACK)

**As the colours** of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:-

- 1. **The wire**, which is, coloured green and yellow must be connected to the terminal in the plug, which is marked by the letter E, or by the safety earth symbol coloured green, or green and yellow.
- 2. **The wire** coloured blue must be connected to the terminal, which is marked with the letter N, (Neutral connector)
- 3. **The wire** coloured brown must be connected to the terminal, which is marked with the letter L, (Live connector)

**NOTE:** Replacement of the mains cable must be done by a competent service engineer.

#### 2.3B Wiring the plug for a 120 VAC machine

- 1. **The wire, which has green insulation,** must be connected to the terminal in the plug coloured green or marked GR.
- 2. **The wire, which has white insulation,** must be connected to the terminal in the plug identified as neutral.
- 3. **The wire, which has black insulation,** must be connected to the terminal in the plug which is identified as live (line).

**Note:** Replacement of the power cord must be carried out by a qualified electrician in accordance with national and local electrical codes, and the instructions provided with the plug.

#### 2.4 Adjusting the pressure

**This press is fitted** with a pressure-adjusting unit, which enables the heat plate assembly to be raised or lowered by use of a pressure adjustment knob located on the top of the machine:

 To increase pressure or to use thinner materials turn knob clockwise.

#### Adjusting the pressure (cont.)

b) To decrease pressure or to raise the heat plate assembly to enable thicker materials to be used, turn the adjustment knob anticlockwise.

 $\frac{\underline{NOTE}}{\underline{DO}\ NOT}$  adjust the pressure when the machine is clamped shut

#### **CAUTION**

Never increase the pressure to the extent of requiring undue force to lower the toggle/heat plate assembly into the lock position, as this will place excessive stress on the press frame, resulting in permanent damage to the press.

Please refer to page 16 showing the operation of the control unit.

# 3. How to Operate the Beta Maxi or Mini Press

#### 3.1 Starting with the Beta Maxi or Mini Press

**3.1.1.** Plug into your supply outlet and switch supply on.

**NB** Please ensure the mains plug is easily accessible to the operator so that in the event of a fault the machine can be unplugged.

3.1.2 Turn on the Beta Maxi or Mini Press; the on/off switch is on the left side of the swing head. Ensure that the operating handle is in the up position. Set the machine controls as necessary. See instructions for adjusting the pressure, Section 2.4, and the operation of the time temperature unit, page 16. When the set temperature is steady in the display the machine is ready to use.

#### 3.2 Working with Heat Transfer Materials

**3.2.1 Ascertain from the supplier** of the transfer paper and/or the suppliers of the material, that the material to be used is suitable and has been prepared for transfer printing.

#### NOTE

Settings and conditions for the application of "Cotton Type" and "Plastic Type" motif transfers are usually different from the above and details of setting and method of operation must be obtained from the transfer supplier.

**3.2.2 Obtain from the supplier** of the transfer paper or the material to be used, the recommended temperature, time and pressure settings for the material to be worked on.

Approximate settings are usually within the following:-

180°C - 200°C (350°F - 400°F) Heat Setting 10 - 30 seconds Time Dwell Setting

- **3.2.3 Wait until the set temperature** has been reached, signalled by the temperature on the controller display reaching the required figure.
- **3.2.4 Swing the head to the right** using the handle on the left of the head. Spread the material to be printed on the worktable, removing all wrinkles. Place the printing paper in the desired location and carefully swing the head back to the pressing position.

#### **Working with Heat Transfer Materials (cont.)**

- 3.2.5 Start the sequence by pulling the button to unlock the handle from its vertical position. Pull the handle down to the lock position using both hands on the handle. This will make the micro switch, which starts the timer. When the set time has elapsed, the buzzer sounds. The handle is then unlocked and returned to the vertical position again using both hands. The head may then be swung aside for unloading and loading
- **3.2.6 For safety reasons,** it is necessary to push the handle into the locked position after it is lifted. This will ensure against the accidental lowering of the heat platen handle.

#### 3.3 Pressing Pad Assembly

The pressing pad normally supplied with this machine is silicone rubber. Alternatively a pad of foam with a "Nomex" cover may be supplied to special order. The pressing pad must be maintained in good condition at all times and replaced when showing signs of wear. A worn pressing pad will always affect the quality of printing/fusing. Do not insert items into the machine, which would tend to cut the pressing pad, i.e. buttons, pins, press studs or zips.

**Never leave** the hot heat plate in contact with the pressing pad when the machine is not in use.

#### **IMPORTANT NOTE:**

**The pressing pad** supplied with the machine is of the correct thickness. Using a thicker pad may invalidate your warranty.

#### 3.4 Shutting Down

**To shut down the machine**, turn off the green illuminated rocker switch on the operator's left side of the machine head. The handle should be in the up position.

#### 3.5 Fault Diagnosis

**The machines** have built in fault diagnosis. The display may show the following:

#### 1. Heat Fault

**If the element** of the heat press, or the thermal cut-out go open circuit, after approximately 20 minutes the display will show "Heat Fault". If this display is seen, contact your machine supplier immediately.

#### Fault Diagnosis (cont.)

#### 2. Probe Fault

**If the probe** goes open circuit, the display will show "Probe Fault" immediately. Contact your machine supplier immediately.

#### 3. "CAL" Fault

**If "CAL" appears** in the controller display the controller will need to be recalibrated. Switch off the machine and contact your supplier for an instruction sheet.

#### **CAUTION**

**In all fault conditions** switch off the power to the machine and unplug the machine from the electrical supply before contacting your machine supplier.

#### 3.6 Hints and Tips

#### **Transfer Printing**

**Extra care** should always be taken to ensure that transfer paper is placed print down onto the article, as mistakes will result in the heat plate becoming soiled with ink and spoiling following work.

When transfer printing, it may be found to be advantageous to cover the press pad with paper to prevent strike-through of surplus ink, particularly when printing thin material as surplus print on the pressing pad cover can also strike back on the following work.

#### Transfer Paper/Motifs Fail to Print Out Correctly

#### Check:-

- 1. **Heat and time** dwell settings are correct.
- 2. **Article** having transfer applied is locked in contact between pressing pad and heat plate.
- 3. **Pressing pad** is in good condition, is flat and making complete contact over the whole area of the heat plate. See Pressing Pad details.

#### "Ghosting" (Double Image) of Transfer Prints

#### Check:-

1. **Material being used** has been correctly heat set for transfer printing.

### Hints and Tips (cont.)

- 2. **Material being used** does not shrink during printing process, i.e. measure material before and after printing.
- 3. **Transfer paper** does not move after printing process upon lift off of the heat plate.
- 4. **If possible**, use adhesive coated paper, particularly to overcome fabric shrinkage.
- 5. **By pre-shrinking** of material in press before transfer printing.

## 4. Maintenance of the Machine

#### 4.1 Daily Maintenance

**For good press results** it is important to keep the press surfaces clean. Wipe the surface of the heat plate with a dry non-abrasive cloth before use when the plate is cold.

When the heat plate is hot and not in use, keep open position away from the silicone pad.

#### 4.2 Periodic Maintenance

**The grease nipple** (13 on the exploded diagram - on page 17) in the rear of the base (11) needs to have a small amount of molybdenum grease pumped into it annually.

**Put a few drops of oil** on the pivot pins and pressure adjustment screw every three months.

Periodically clean the Teflon® coated heat platen with a non-abrasive piece of cloth. Stubborn stains may be cleaned, when platen is cool, with mineral spirits.

#### 4.3 Cleaning

**First unplug the machine.** Clean the outside of the machine frequently with a clean, moist cloth. This may conveniently be carried out when the machine is cold.

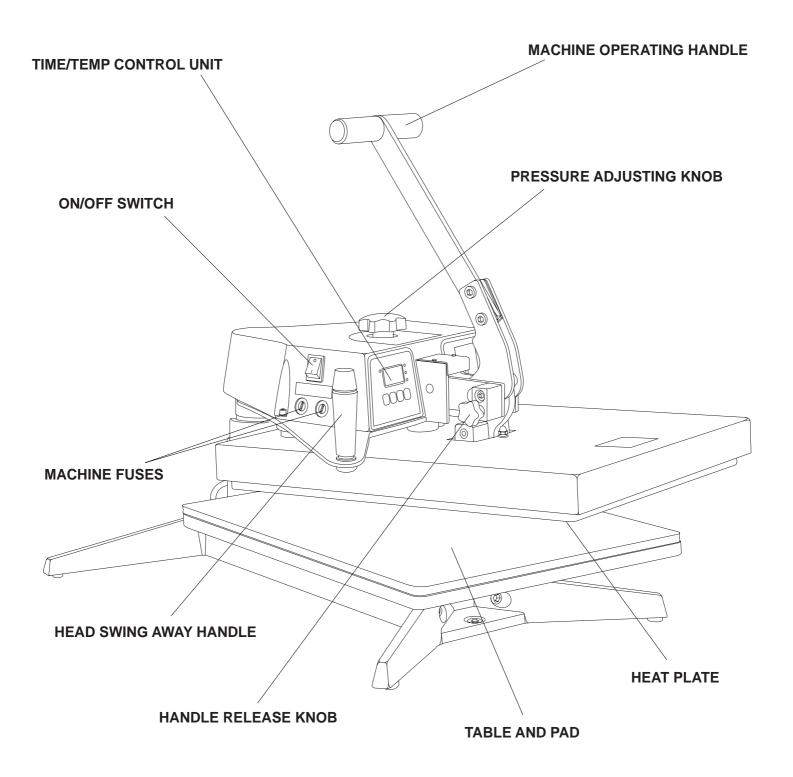
To prevent soiling of substrate, periodic wiping of entire exterior machine, including platens, with a clean rag is recommended. If necessary, use mineral sprits for cleaning a cold machine. Since mineral sprits are flammable, use precautions at all times and keep away from sparks, flames or hot heat platen.

# 5. Machine Drawings,Diagrams and Declarations

**On the following pages** are the schematic diagrams for the Beta Maxi and Mini Press machines.

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## 5.1 General Layout of the Beta Maxi and Mini Heat Press Machines



## 5.2 Operation of Control Unit, Setting Time and Temperature

(The head must always be in the up position before the controller is set)



### **Setting Temperature**

- 1. Switch on Press; Display and 'TEMP' indicator will light up.
- 2. Press 'MODE' button to select 'Set' on indicator.
- 3. The Display will start flashing.
- 4. Use the 'UP' and 'DOWN' arrow buttons to set the required temperature.
- 5. When you have set the required temperature the Display will stop flashing and the 'SET' indicator will go out.
- 6. Press the 'ON/OFF' button to start the Press heating to the selected temperature. The 'ACT' indicator will light up.

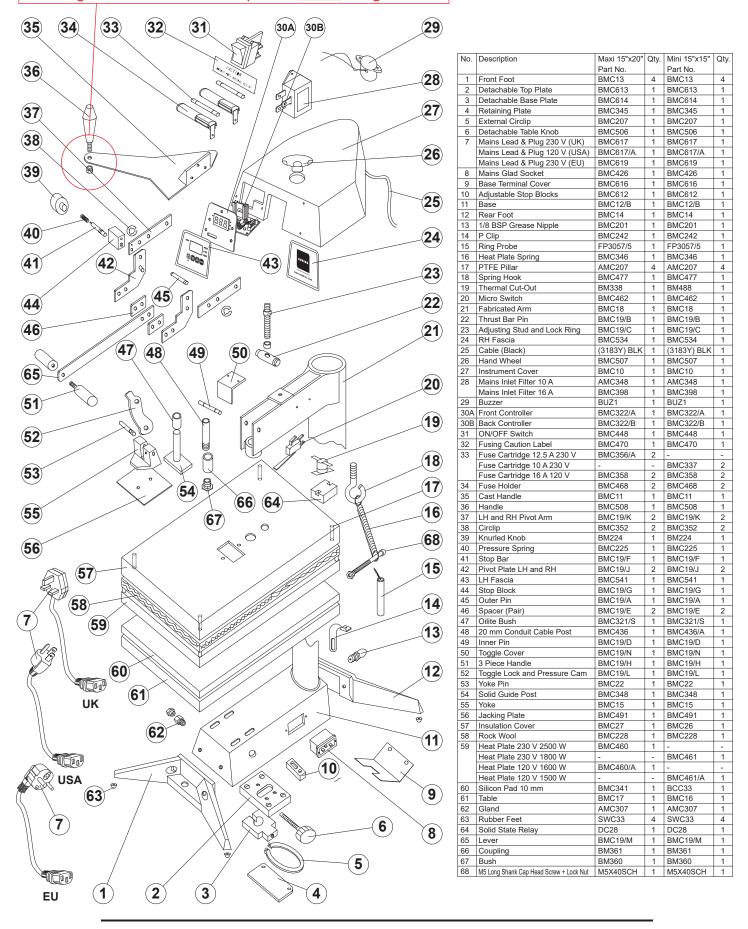


### **Setting Time**

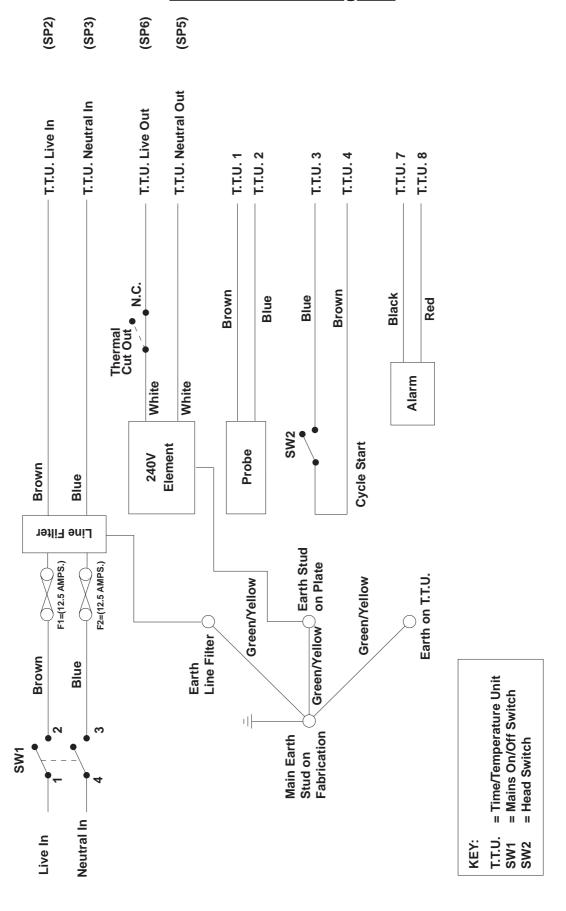
- 1. Switch on Press; Display and 'TEMP' indicator will light up.
- 2. Press 'MODE' button twice to select 'SET' and 'TIME' on indicator.
- 3. The display will start to flash.
- 4. Use the 'UP' and 'DOWN' arrow buttons to set the required time.
- 5. When you have selected the required time the Display will stop flashing and the 'SET' and 'TIME' indicators will go out.
- 6. Press the 'ON/OFF' button to start the Press. The 'ACT' indicator will light up.

## 5.3 Exploded Diagram & Parts List

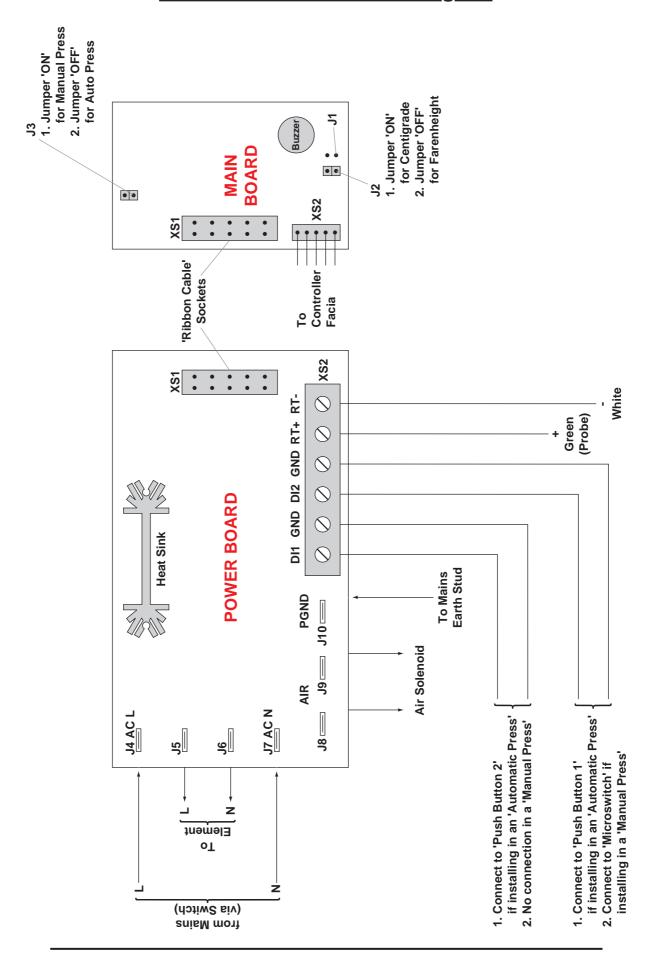
#### Please tighten nut with a 16 mm spanner before using machine



# 5.4 Electrical Diagram



## 5.5 Controller Electrical Diagram



# 6. Design Change

With the policy of constant improvement and/or modification to meet changing conditions, the right is reserved to change the design and/or specifications at any time without prior notification, and therefore specifications may vary and not be in accordance with this manual.

# 7. Guarantee (Limited Warranty)

**A. Adkins & Sons Limited** warrants that the press is free from defects in material and workmanship (excluding Pressing Pad Assembly) for a period of 12 months from the date of supply. The machine comes with a lifetime warranty on the heating element, one year warranty on parts and 90 days labour.

**This warranty covers** all parts to repair the defects, except when damage results from misuse or abuse, accident, alteration or negligence or when a machine has been improperly installed.

If a press covered by warranty should need to be returned to the factory for examination and repair, if on-site component replacement is not possible, A. Adkins & Sons Limited will make every effort to repair the customers press. The warranty will only be effective when A. Adkins & Sons Limited authorises the original purchaser to return the machine to the factory and only when the product upon examination has proven to be defective.

**Should in our opinion** any part of this press be defective in materials or workmanship, it will be replaced or repaired free of charge, provided that the press has been installed and operated in the correct manner and not subjected to misuse. If A. Adkins & Sons Limited authorise a replacement press, the warranty of the replacement press shall expire on the anniversary date of the original machines invoice to the customer.

In order for this warranty to be effective, no return of machine or parts may be made without prior factory authorisation. (This will exclude any travelling and/or carriage costs which will be charged at our discretion).

This is the sole warranty given by the company; there are no warranties, which extend beyond the description on the face hereof. The seller disclaims any implied warranty of merchantability and/or any implied warranty of fitness for a particular purpose; the buyer agrees that the goods are sold "as is". A. Adkins & Sons Limited does not warrant that the functions of the press will meet the customer's requirements or expectations. The entire risk as to use, quality and performance of the press lies with the customer. (No claim of any kind shall be greater than the sale price of the product or part to which the claim is made).

In no event will A. Adkins & Sons Limited be liable for any injury, loss or damage, including loss of profits, destruction of goods or any special, incidental, consequential or indirect damages arising from the use of the press or accompanying materials. This limitation will apply even if A. Adkins & Sons Limited or its authorised agent had been advised of the possibility of such damage.

# A. ADKINS & SONS LIMITED DECLARATION OF CONFORMITY



Application of Council Directives:	Machinery, Low Votage. E.M.C.	
Standards to which Conformity is Declared:	BS EN ISO 12100-1:2003+A1:2009 - Safety of machinery: Basic Technology. BS EN ISO 12100-2:2003 - Safety of machinery: Principles of Design. BS EN 60204-1:2006 - Safety of machinery: Electrical Equipment of Machines. BS EN 60529:1992 - Degrees of protection provided by enclosures. BS EN ISO 13850:2008 - Safety of machinery: Emergency Stops. BS EN ISO 141211:2007 - Safety of machinery: Principles for Risk Assessment. BS EN 55011:1998 - Class A Group 2 equipment - EMC Emissions. BS EN ISO 61000-6-4:2007 - EMC Conducted Emissions. BS EN ISO 61000-6-2:2005 - EMC Immunity.	
Manufacturer's Name:	A. Adkins & Sons Limited	
Manufacturer's Address:	High Cross, 18 Lancaster Road, Hinckley, Leicester, LE10 0AW, United Kingdom.	
Type of Equipment:	Beta Maxi Heat Press, Beta Mini Heat Press	
Model Number:		
Serial Number:		
Year of Manufacture:		
I, the undersigned, hereby declare that the equipment specified above conforms to the above directives and standards.		
Place: Hinckley, United Kingdom	Signature: M. Mcu	
Date:	Full Name: Marie McMahon Position: General Manager	