

ADKINS

**ADKINS**

HEAT PRESS TECHNOLOGY

**BETA SWIFT**



## Operators Handbook

All products within the ADKINS range are labelled with CE marking and are manufactured and tested to comply with EC safety regulations.

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# Copyrights

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Adkins Beta Swift is a registered trademark of Charterhouse Holdings PLC.

Please read this manual carefully and keep it with your machine at all times for reference.

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# Preface

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## Dear User

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

**All Charterhouse Holdings PLC 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 supplier.

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# 1. Introduction Beta Swift Press

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**Initially designed for use** in the laundry industry, the Beta Swift has now been developed for more wide ranging use.

**Featuring a strong,** light, aluminium construction, the Swift is fitted with self-aligning spring mounted silicone pressure pad to ensure correct pressure and an audible buzzer on the timer mechanism. The simple, robust machine is powered by a microprocessor for control of both heat and dwell accuracy and ease of operation and requires minimal operating space.

**Each Swift Press** is produced in one version, nominally 230-240 VAC for the European market.

## 1.1 What did you receive?

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**The Beta Swift has been** placed in a box and held in place with foam. The following articles should have been delivered:

- Beta Swift complete with mains cable and plug.
- Beta Swift 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 Swift

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**The Beta Swift is a manually operated** heat press for transfer printing and material fusing. It is ideal for medium volume production.

### Specifications

Power consumption	0.5kW
Power supply	230-240 Volts AC
Display timer range	0 – 9.59 min
Working temperature	70-235°C (160-455°F)
Machine height open	61 cm (24 in)
Machine height closed	28 cm (11 in)
Machine width	23 cm (9 in)
Machine depth	47 cm (18.5 in)
Working area	23(W) X 61(H) X 43(D) cm
Net weight	10 Kg (22 lbs.)
Gross weight	14 Kg (31 lbs.)
Press pad dimensions	13.5 x 9.5 cm (5.25 in x 3.75 in)
Fuses	3.15 A
A-weighted noise level	<70dB (A)

### 1.3 Safety

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**The Beta Swift has 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  $235^{\circ}\text{C} \pm 15^{\circ}\text{C}$  ( $455^{\circ}\text{F} \pm 27^{\circ}\text{F}$ ).
- 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.

### 1.4 Safety Tips

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**Our customer service department** has its own service engineers and, if required, maintenance and advice is available upon request.

- ♦ **The Beta Swift** meets the European Legislation standard. Under normal conditions accidents are rare. However, listed below are some practical points to ensure your safety.
    - **Always** using both hands on the handle when pressing will ensure safety.
    - **Always switch off** and isolate the mains supply (i.e. remove plug) before undertaking any maintenance work.
    - **Keep other people** 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 BASE BOARD, CONTROLLER OR INSULATION COVER UNLESS QUALIFIED TO DO SO** - touching internal parts is dangerous and may cause shock hazard. All electrical connections inside covers are live. Never operate Press with any covers and/or guards removed.
  - ♦ **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.
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## Safety Tips (cont.)

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- ◆ **OPERATING AMBIENT TEMPERATURE RANGE** - the operating ambient temperature range is 0°C - 35°C, (32°F - 104°F) and humidity of 20 - 80%. This heat press is fitted with a thermal cut out to ensure that it cannot operate above 235°C  $\pm$  15°C (455°F  $\pm$  27°F).
- ◆ **MACHINE FUSES** - type: ultra rapid (FF) fuses 1¼". 230 VAC max 3.15 A.
- ◆ **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.**  
  
**Do not** allow the handle to move upwards, by the effect of the spring, use both hands to control movement.  
  
**Keep Fingers** away from the **trapping points** in the arm-lever toggle mechanism.  
  
**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 Swift machine.**

## 2. Installation

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### 2.1 Transport instructions

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**The machine comes to you** in a box. 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 and lower the handle to the locked position.

### 2.2 Installing the machine

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- 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. **The machine is light enough for handling by one person**
- 2.2.3 **Place the machine** on a sturdy horizontal surface that is within easy reach of the operator and allow space for the handle to move up to the loading position. Ensure that no items vulnerable to heat radiation are too close to the machine and that local lighting is adequate.

### 2.3 Electrical requirements

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**The Beta Swift Press should** be connected to the mains supply, (nominally 230 VAC for the European Market) by the mains cable provided and a suitable plug. A qualified person should carry out this work.

**The press is designed** for 230-240 VAC  $\pm$  50/60 hertz and requires exclusive use of a power outlet rated for at least 8 amps (Europe).

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

#### **MAINS LEAD**

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

230 VAC {	<b>Green and Yellow:</b>	<b>EARTH</b>
	<b>Blue:</b>	<b>NEUTRAL</b>
	<b>Brown:</b>	<b>LIVE</b>

## Electrical requirements (cont.)

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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 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.

### HEATING ELEMENTS

**The heating elements** fitted to these presses are rated at 0.5 kW.

**Never connect** to any outlet or power supply having a different voltage/frequency from that on the machine data plate.

## 3. How to Operate the Beta Swift

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### 3.1 Starting with the Beta Swift

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

**N.B.** 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 Swift; the on/off switch is to the right of the controller. Set the machine controls as necessary. See instructions for 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

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**This section** is divided into Transfer Marking/Transfer Printing and Heat Bonding and Fusing.

**First ascertain from the supplier** of the material that it is suitable to be used, and obtain the correct heat and time dwell setting for the material and transfer.

**Approximate settings may be as follows:-**

#### 3.2.1 Transfer Marking

200°C (392°F) - Heat setting 3 to 5 seconds - Time dwell setting
---

**NOTE: Transfer marking** is usually for the marking of materials for identification purposes and should not be confused with the transfer printing, as mentioned in the next section.

#### 3.2.2 Transfer Printing

190°C - 200°C (374°F - 392°F) - Heat setting 20 to 30 seconds - Time dwell setting
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**NOTE: Always ascertain** from the supplier of material and transfer paper, that the material to be used is suitable for, and has been prepared for transfer printing.

## Working with Heat Transfer Materials (cont.)

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### 3.2.3 Heat Bonding - Fusing

140°C - 200°C (284°F - 392°F) - Heat setting 5 to 15 seconds - Time dwell setting
--

**3.2.4** Ensure that the heat setting and dwell time setting are correct for the material being used.

**3.2.5** Place the work piece on the pressure pad, removing all wrinkles.

Place the transfer in the desired position.

**3.2.6** Using both hands gently pull the handle forward into the lock position, ensuring the work piece is firmly clamped between the heat plate and pressure pad.

**3.2.7** When the pre-set dwell time has been reached, a buzzer will sound. The heat plate should then be lifted by pushing the handle back to its full extent, again using both hands.

**3.2.8** For safety reasons, it is necessary to push the handle into the locked position after it is lifted. This will ensure the accidental lowering of the heat platen handle.

## 3.3 Material Fusing

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**3.3.1** When the press is to be used for the fusing of fusible interlining/heat bonding etc., ascertain from the supplier of the material to be used, the correct settings for time and temperature for the process.

Approximate settings are usually within the following:-

110°C - 170°C (250°F - 340°F) - Heat Setting 5 - 30 seconds - Time Dwell Setting
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The method of operation for fusing is the same as for transfer printing.

During the fusing operation it will be found to be advantageous to lay a piece of PTFE cover material (the same size as the heat plate), over the article being fused. This will act as an anti-stick barrier to prevent strike through of any surplus adhesive from the fusible materials adhering to the heat plate of the press.

## Material Fusing (cont.)

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### NOTE:

**It is not advisable** that this PTFE cover material be used when the press is being used for transfer printing.

## 3.4 Pressing Pad Assembly

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**The pressing pad** normally supplied with this machine is silicone rubber. 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 allow** the hot heat plate to rest on the pressing pad when the press is not being used as the pad may be damaged.

### IMPORTANT NOTE:

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

## 3.5 Shutting Down

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**To shut down the machine**, turn off the green illuminated rocker switch to the right of the controller. The handle should be in the up position.

## 3.6 Fault Diagnosis

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**This machine** has a built in fault diagnosis. The display may show the following:

### 1. H-F

**If the element** of the heat press, or the thermal cut-out go open circuit, after approximately 20 minutes the display will show “H-F” and a buzzer will sound. If this display is seen, contact your machine supplier immediately.

### 2. P-F

**If the probe** goes open circuit, the display will show “P-F” immediately and a buzzer will sound. Contact your machine supplier immediately.

## Fault Diagnosis (cont.)

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### 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.

## 3.7 Hints and Tips

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### 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 the transfer applied is locked in contact between pressing pad and heat plate.
3. **Pressing pad** is in good condition, and is 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.
  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.
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### 3.8 Heat Plate Temperature Measurement

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**Testing of the Heat Plate** for temperature consistency or fault condition should only be undertaken after consulting Charterhouse Holdings PLC, and then only using a wired Digital Thermometer (\*please see note below).



**\*Please Note:**

**The Digital Thermometer with external probe** is suitable for surface, air and immersion/penetration measurement, which is required for all Adkins heat presses.

**Laser Thermometers only measure air surfaces** which can be misleading due to currents of hot air floating on the surface of the heat plate.



## 4. Maintenance of the Machine

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### 4.1 Daily Maintenance

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**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 heat plates are hot and not in use, keep open position away from the silicone pad.

### 4.2 Periodic Maintenance

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**Put a few drops of oil** onto the various pivot pins 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.

### 4.3 General Maintenance

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**The following checks should be carried out at regular intervals by a qualified and competent person:-**

- Electrical connections
- Mechanical moving parts

Any enquiries to: [enquiries@aadkins.com](mailto:enquiries@aadkins.com)

### 4.4 Cleaning

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**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 spirits for cleaning a cold machine. Since mineral spirits are flammable, use precautions at all times and keep away from sparks, flames or hot heat platen.

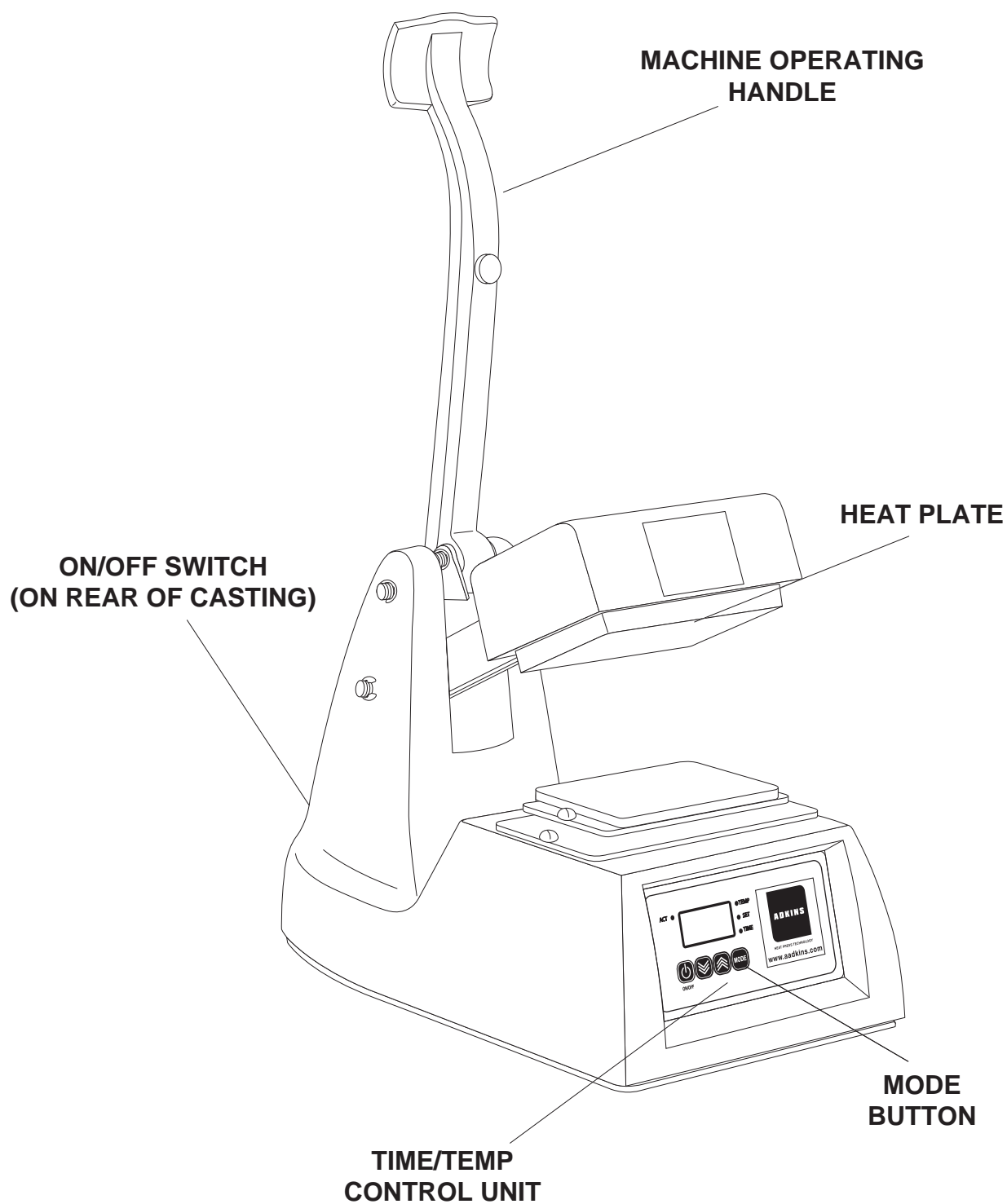
## **5. Machine Drawings and Diagrams**

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**On the following pages are the schematic diagrams for the Beta Swift machine.**

<b>5.1</b>	<b>General Layout.....</b>	<b>Page 15</b>
<b>5.2</b>	<b>Control Unit – Operation.....</b>	<b>Page 16</b>
<b>5.3</b>	<b>Exploded Diagram and Parts List.....</b>	<b>Page 17</b>
<b>5.4</b>	<b>Machine Electrical Diagram.....</b>	<b>Page 18</b>
<b>5.5</b>	<b>Controller Electrical Diagram.....</b>	<b>Page 19</b>

## **5.1 General Layout of the Beta Swift Press**



## **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**

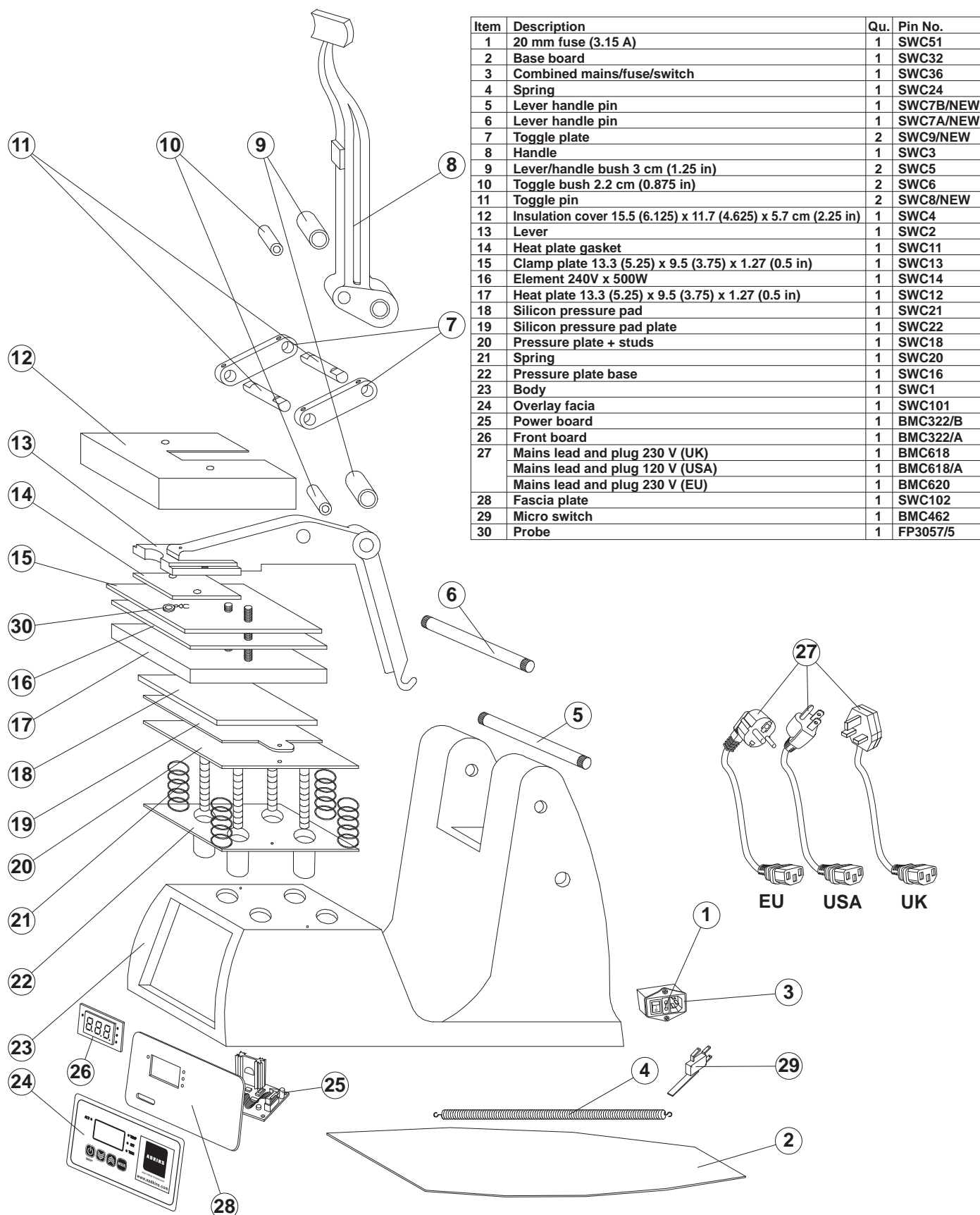
1. Switch on Press; Display and 'TEMP' indicator will light up.
2. Press 'MODE' button to select 'Set' on indicator.
3. The Display will start flashing.
4. Use the 'UP' and 'DOWN' arrow buttons to set the required temperature.
5. When you have set the required temperature the Display will stop flashing 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.



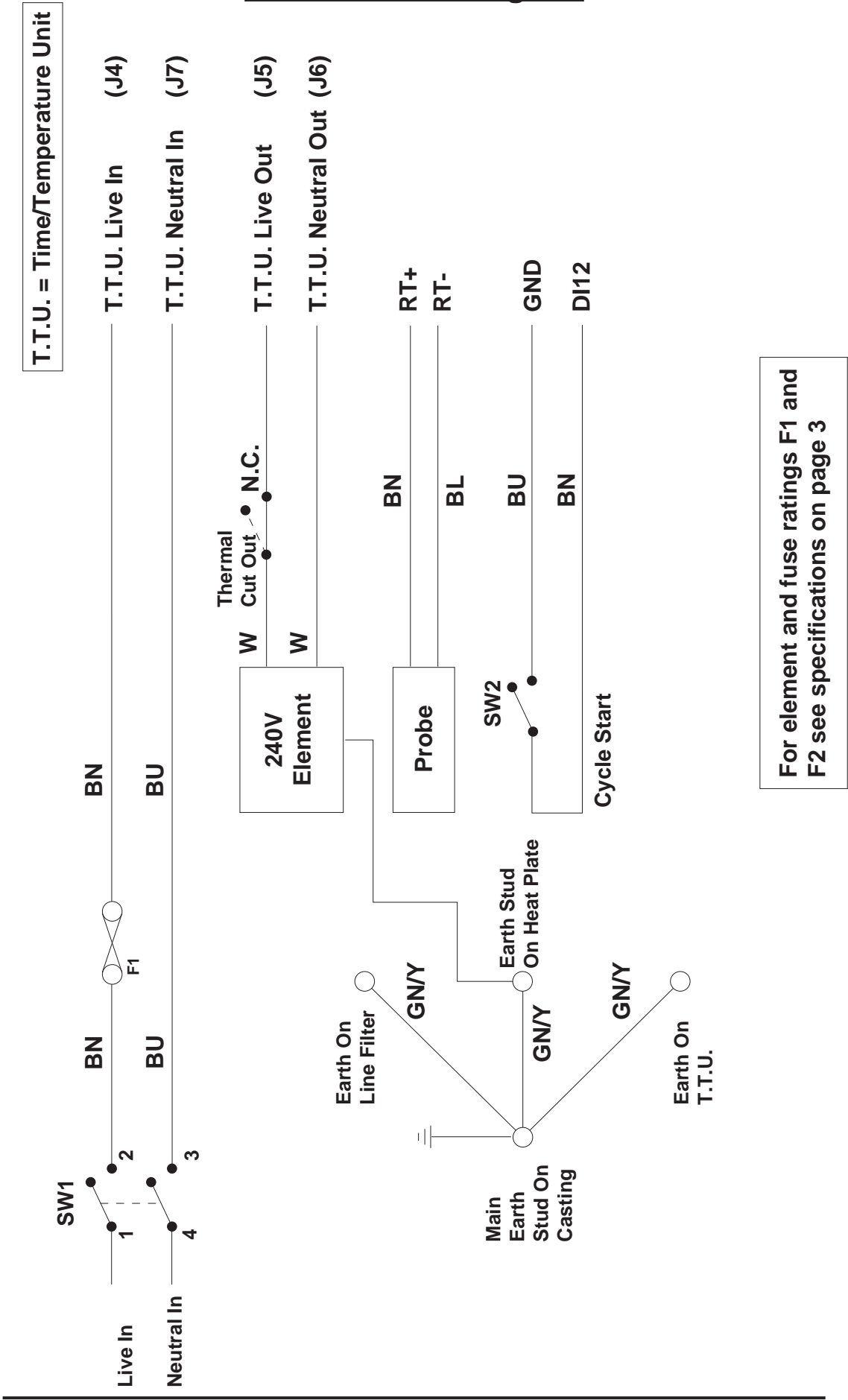
### **Setting Time**

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.

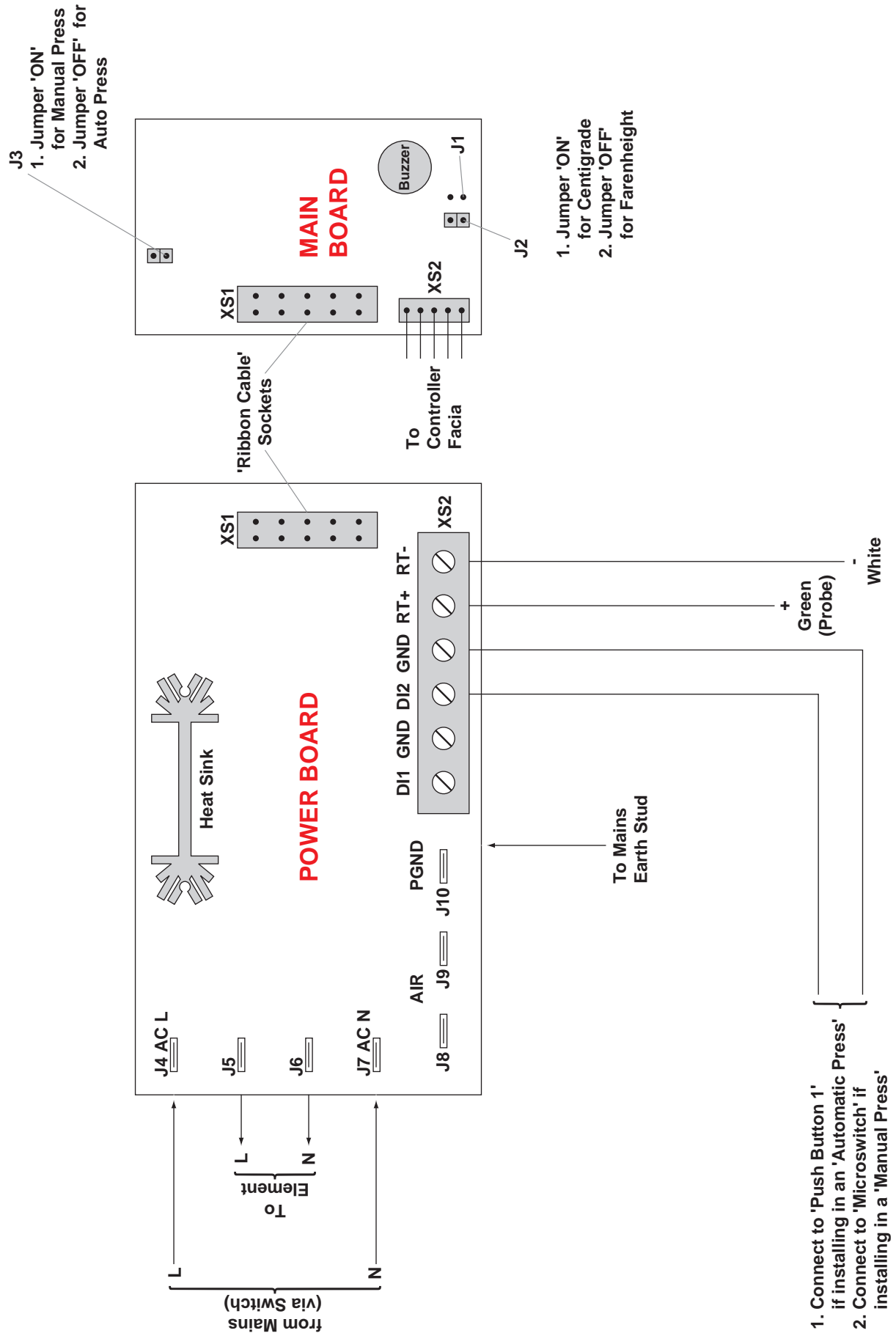
## 5.3 Exploded Diagram and Parts List



5.4 Electrical Diagram



## 5.5 Controller Electrical Diagram



## 6. Design Change

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**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)

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**Charterhouse Holdings PLC** warrants that the press is free from defects in material and workmanship for a period of 12 months from the date of supply to the customer. The machine comes with a 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, Charterhouse Holdings PLC will make every effort to repair the customers press. The warranty will only be effective when Charterhouse Holdings PLC 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 Charterhouse Holdings PLC 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". Charterhouse Holdings PLC 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 Charterhouse Holdings PLC** 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 Charterhouse Holdings PLC or its authorised agent had been advised of the possibility of such damage.

## **A. ADKINS AND SONS LIMITED** **DECLARATION OF CONFORMITY**

Application of Council Directives:	European Low Voltage Directive ( <b>LVD</b> ), European Machinery Directive ( <b>MD</b> ), Electro Magnetic Conformity ( <b>EMC</b> )
Standards to which Conformity is Declared:	<b>(LVD):</b> <u><b>EN 60204-1:2018</b></u> <b>(MD):</b> <u><b>EN ISO 12100:2010 2006/42/EC Annex1</b></u> <b>(EMC):</b> <u><b>EN 61000-6-2:2019</b></u>
Manufacturer's Name:	<u><b>A. Adkins and Sons Limited</b></u>
Manufacturer's Address:	High Cross, 18 Lancaster Road, Hinckley, Leicestershire LE10 0AW United Kingdom.
Type of Equipment:	Beta Swift Heat Press
Standards Compliance:	 
Model Number:	.SWC.....
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: 

Date: .....

Full Name: Marie McMahon

Position: General Manager