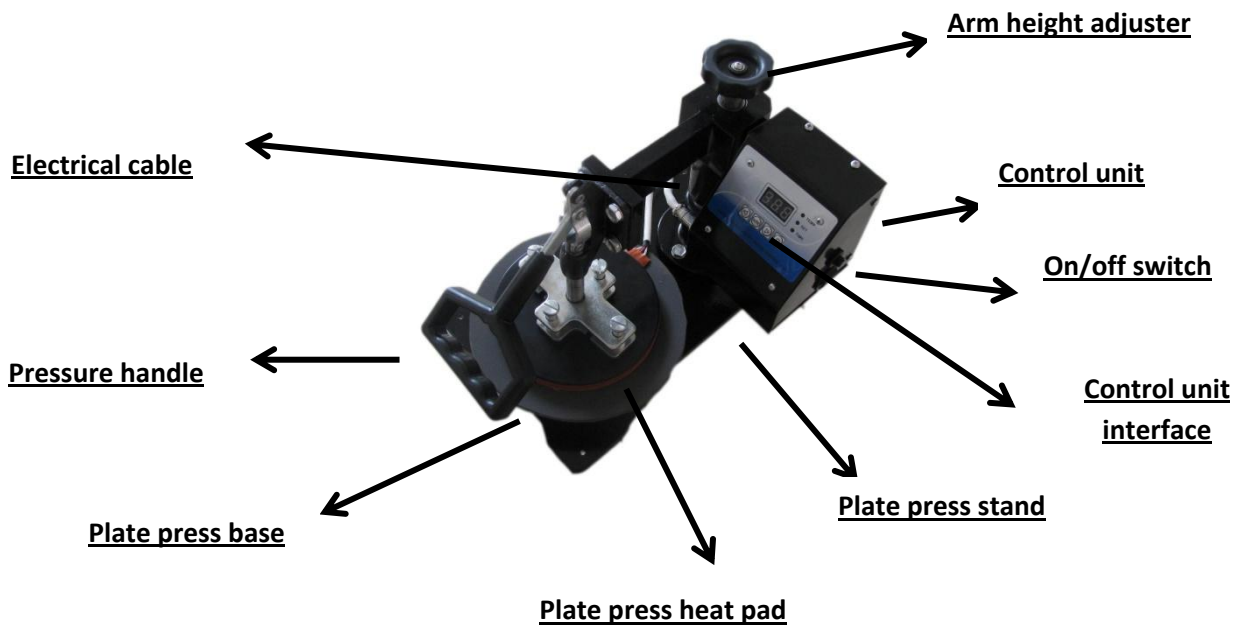


## PixMax™ Plate Sublimation Pressing Machine Instruction Manual



### About The PixMax Plate Sublimation Pressing Machine

The plate sublimation pressing machine enables you to transfer a design or a photo on to various plates of different shapes and sizes. The flexibility of the machine enables the user to produce products of high quality at a quicker rate and a lower cost. It also takes up less space and is easy to interchange the various plate presses meaning that manufacturing can be done in a relatively small space with less effort.

The features that come with the plate sublimation pressing machine are as follows:

- Detachable plate press pads which can be interchanged with other plate press pads
- Plate press base
- Plate press stand
- Control unit
- Adjustable pressure handle
- Teflon heat protective cover

# Control Unit Settings

- To set the preliminary temperature: Press the MODE KEY once and the set indication light will come on. Press the "<" or ">" keys to set the preliminary temperature. This will maintain the temperature so that it's quicker for continuous work and prevent the pad from burning while idle.
- To set the target temperature: Press the MODE KEY twice and the temperature indication light will come on. Press the "<" or ">" keys to set the target temperature. The target temperature is the temperature that is required to undertake the subliminal pressing process.
- To set the heat press time: Press the MODE KEY three times and the time indication light will come on. Press the "<" or ">" keys to set the max heat press time.
- To set it to operation mode: Press MODE KEY four times and the machine will go into the ready state. (Fig. 1.)



Figure 1: The control unit interface

## Attention:

- The preliminary temperature setting range is 200-380 degrees; the maximum temperature setting range is 200-430 degrees.
- The target heat press time setting range is 0-999 seconds.
- The machine has the function of temperature setting self-locking, so if the preliminary temperature is 340 degrees, the machine will control the target temperature range between 340-430 degrees automatically. Conversely, if the target temperature is set at 250 degrees, then the machine will control the preliminary temperature between 200-250 degrees.

## Safety Advice

This section outlines the basic operation and preparation of the plate press machine and how to use it safely.

- 1.** Before you use this machine, please check whether the power supply conforms to the rated voltage of the machine. There should be a reliable protective ground wire for the top core.
- 2.** If you need to replace any heat press parts, it is essential to remove the plug from the socket first. When replacing the top of the heat press when it is still hot please use insulated gloves.
- 3.** After using the press, if you do not intend to use it again for a while then switch off the power. Please ensure the white Teflon heat pad covers are on at all times to prevent damage.
- 4.** Whilst using the heat press, avoid touching the heating components to prevent burns.
- 5.** Whilst using, avoid touching the pressure spring to prevent possible injury.
- 6.** If the press handle is difficult to push down, please adjust the arm height using the adjusting screw to raise the arm. This reduces the pressure and is important to preserve the machine's mechanical strength.
- 7.** When raising or lowering the arm, you must lock the press handle tightly in the upright position and loosen the adjusting screw. When the arm has reached its lowest limit there will be resistance on the adjusting screw. Please do not continue to wind any further as this may cause damage.
- 8.** Please do not exceed the locking limits of the press handle as this may cause damage.
- 9.** Do not let children use the machine, regardless of supervision and/or whether the machine is in use or not.
- 10.** When switching between heating components, you should power off first before switching the plugs into the socket of the control box.
- 11.** Please do not use the plate heating pad to bake or press any other goods. It is for sole use of the porcelain plates only!!!

# Printing Instructions

These instructions are generic to all of the plate sublimation press products and are important in ensuring that the product images are correctly designed and printed before being developed in the pressing stage. Please follow the step by step instructions.

1. Firstly, create or acquire the design that you wish to print on to the product. Any design or word processing software can be used to achieve this. Ensure that all boundaries and sizes are catered to fit the product and that the images are manipulated to your desire. This may include colour correction, cropping, transforming etc. (Fig. 2.)

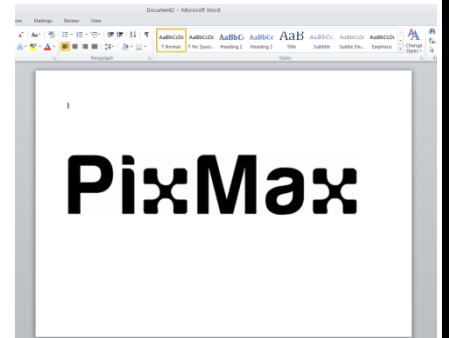


Figure 2: Design creation

2. Once this has been done and ready to print, set the print option to **mirror the image or design** (if the product requires it). You will find this option in the "Printer Settings" menu on the "Page Layout" tab. This is vitally important in ensuring that your design sublimates onto the product correctly. (Fig. 3.)

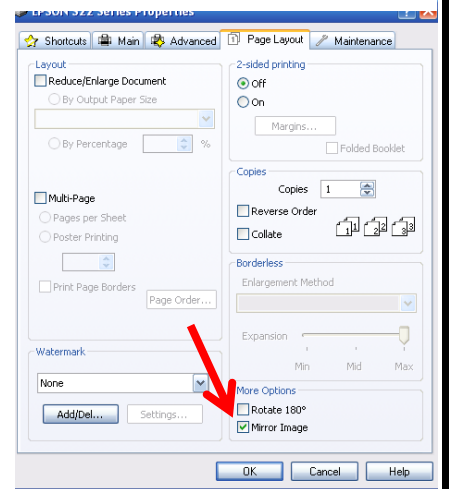


Figure 3: Mirror image

3. If using the CISS system ensure it is fully functioning within your Epson printer. This can be done by printing a test of your design on regular plain paper. If you are happy with the quality of the print

then move onto the next step. If you are not happy with the quality of the print then check your printer maintenance options. **Note: The colour depth of sublimation ink on regular paper will be less than that on sublimation paper.**

4. Load the PixMax high quality sublimation paper into the Epson printer with the whitest/ brightest side facing frontwards and print the design. **Note: This is important to ensure that the design will transfer onto the product correctly in the pressing stage.** (Fig. 4.)



Figure 4: Sublimation paper correct printing side

5. Once the image has printed, trim the sublimation paper around the image so it fits properly when wrapped around the product. (Fig. 5.)



Figure 5: Trimming the image

# Using the Plate Press

## Plate press components and requirements:

The following are the standard components that are required to use the plate press (Fig. 6.).

- The 8 and 10 inch plate sublimation top press plates.
- The main stand with control unit, adjustable arm and handle.
- The plate press base.
- The plate presses electrical cables.
- White Teflon heat protective pad covers.



Figure 6: Plate press components

The following are the required products needed for the plate sublimation.

- White or light coloured polymer coated 8 or 10 inch plates.
- High quality light sublimation paper.
- Sublimation ink and CISS (if you are not using a sublimation printer).
- Heat resistant tape.

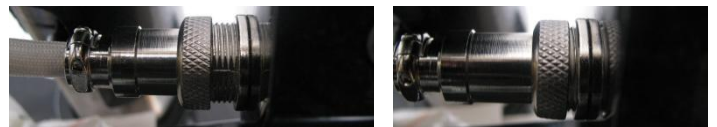


Figure 7: Inserting the plug into the control box and securing

## Plate sublimation instructions:

These instructions have been designed on tests undertaken using the product to ensure the best possible results. Temperatures and timings may vary depending on your requirements, however the information provided in these instructions will allow a greater understanding of the various possible outcomes.

**1.** Place the image facing onto the plate in the position that you require. Ensure that the image is in direct contact with the plate and that the blank side of the paper is facing outwards. Smooth the image down as much as possible so that it is in full contact with the polymer coated plate.

**2.** Tape the image onto the plate using the heat resistant tape on all sides ensuring there are no creases and that the entire area of paper is in full contact with the plate.

**Note: This is important to prevent the paper from scorching the plate.**

**3.** Ensure that the white Teflon protective sheet is covering the press plate. Raise the adjustable arm so that it clears the notch on the cylinder and using the handle on the top of the press, swing the press to either the left to allow for better access to the press base (Fig. 8. & 9.). Switch on the control unit (Fig. 10.) and adjust the settings for the preliminary and target temperatures and the time settings. These will vary



Figure 8: Clearing the notch

# Using the Plate Press

depending on whether you want to do a fast press or a slow press. **See below for recommended settings.**

4. Place the polymer plate with the design facing upwards on to the base in the position required. Swing the top press into position and lower the arm into position. Check to make sure that there is enough pressure on the plate by pulling the press handle down. Once happy with the pressure pull the press handle back up into the locked position.



Figure 9: Swing the plate press

5. **To do a fast press** allow the press to heat up to the required temperature and close it up against the plate using the press handle to ensure there is a good even pressure on the plate. The machine will beep when it reaches the preliminary temperature, however once the plate is inserted the press will cool down slightly. Wait until the temperature rises back up to the preliminary temperature where it will beep again and press the “□” button on the control unit to begin the timer. (Fig. 11. & 12.)



Figure 10: On/ off switch

6. **To do a slow press** ensure the control unit is switched/turned off. Push the press handle down until the press is against the plate with a good even pressure. Turn the control unit on and allow it to heat up to the preliminary temperature. The machine will beep when it reaches the preliminary temperature signalling that the “□” button needs to be pressed. The temperature will then continue rising until it reaches the target temperature. The timer will automatically start when the target temperature has been reached. (Fig. 11. & 12.)



Figure 11: Lock the press down on the plate

7. Once the timer has counted down to “000” the machine will beep to alert you that the plate is ready. Press the “□” button to stop the process. In a slow press the temperature will drop back to the preliminary temperature value allowing the machine to idle. In a fast press it is advisable to turn off the machine or set the preliminary temperature to 200 °F so that the press does not burn. Release the plate press using the lever and remove the plate. **Caution: Plate will be extremely hot.**



Figure 12: Control unit controls

8. Immediately dip the plate with the sublimation paper still attached into a bowl of room temperature water and allow it to cool down. Once cool, remove the sublimation paper and heat resistant tape to reveal the finished product. The plate may require a quick wash to reveal the best finish (Fig. 13.).

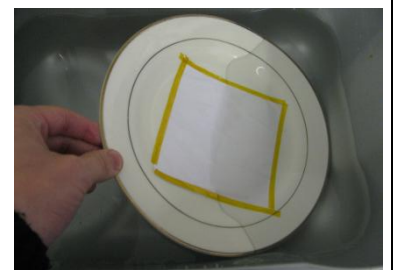


Figure 13: Dip plate in water

# Using the Plate Press

## **Recommended settings:**

The recommended values for the temperature and time settings shown on the digital display are those that are proven to work, however may vary depending on the requirements. Please check the charts below.

### **Fast Press:**

Temperature: (preliminary and target)	310 °F
Time:	120 Seconds

### **Slow Press:**

Temperature: (preliminary/ target)	200 °F / 330 °F
Time:	30 Seconds

# Sublimation Troubleshooting Guide

The troubleshooting guide aims to provide solutions to any problems that may arise with the quality of the sublimation print on the product. In most cases these can be solved by adjusting the temperature and time settings. Please consult the chart below if you feel you are experiencing difficulties with the print.

<u>Problem</u>	<u>Reason</u>	<u>Solution</u>
The colour of the design is light or faded.	The pressure is too low, the temperature is too low or the time is too short.	Ensure there is a firm, even pressure on the product. Increase the temperature incrementally by 10 °F and/or the time incrementally by 10 seconds until the desired result has been found.
The design has become indistinct.	The time is too long and has caused the ink to diffuse.	Shorten the time incrementally by 10 seconds until the design becomes clear and sharp.
The design has no lustre.	The pressure is too high or the temperature is too high.	Relieve the pressure but ensure that it is still firmly holding the product. Decrease the temperature in 10 °F increments.
Part of the design has become indistinct.	The heat printing area or the heat is inconsistent.	Ensure that the pressure is even on the product and that the sublimation paper is entirely flat against the product.
The design is scarred/broken.	The heat printing time is too long.	Decrease the time in 10 second increments until the image is full and clear.
The depth of colour on the design is uneven.	The pressure or the surface is not even.	Ensure the pressure is even on the product; ensure the surface is even.
The paper sticks to the product.	The temperature is too high or the surface of the product is low quality.	Lower the temperature in increments of 10 °F. Ensure that the surface of the product is appropriate for pressing.
There is browning/ yellow staining around and/or on the image.	The paper has burned out slightly and scorched the product.	Reduce the temperature in increments of 10 °F until the browning stops. If the image then looks washed out, increase the time in increments of 10 seconds.