



MANUAL FOR THE RAPIDTAG LP4

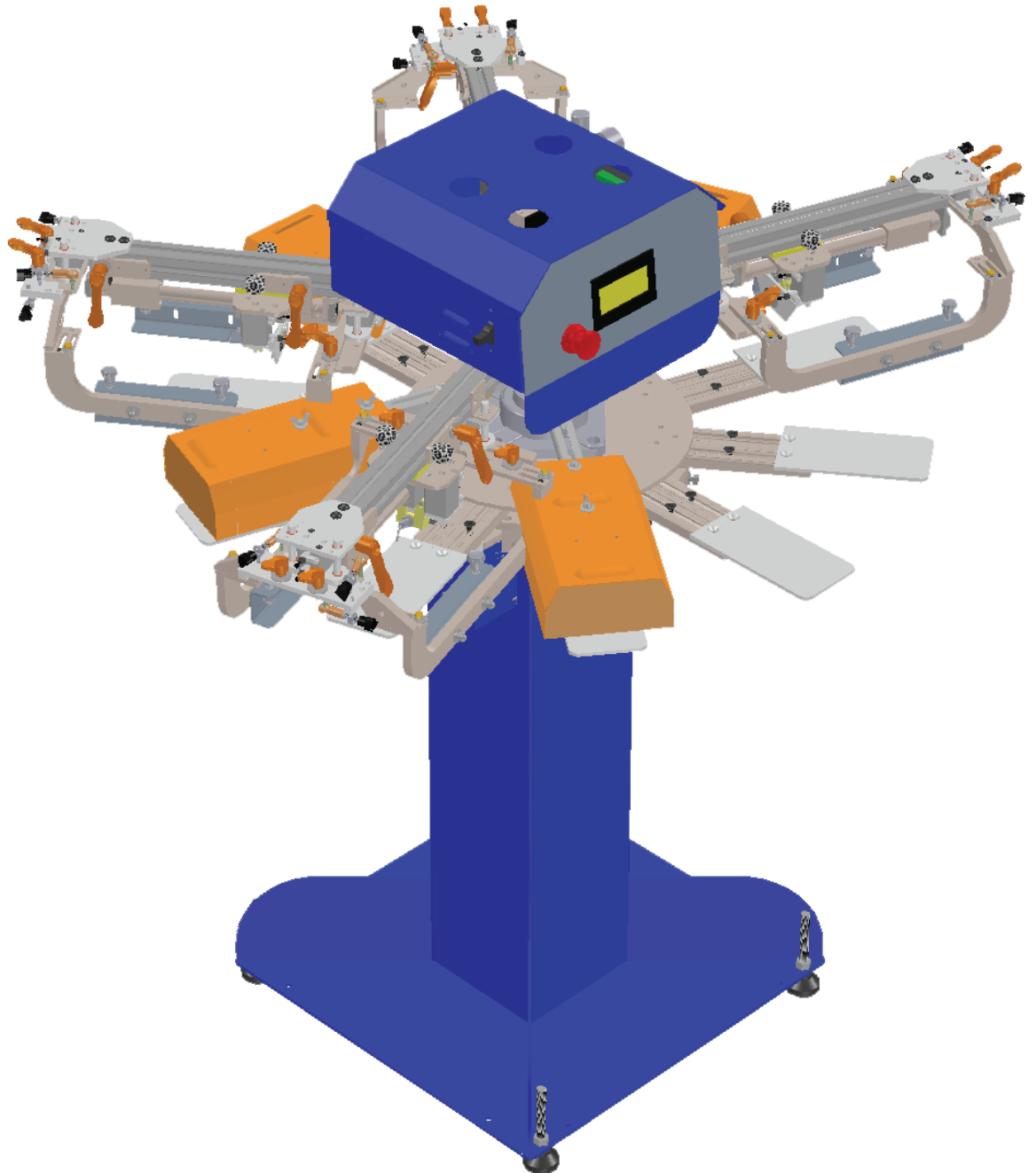




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Liability and Safety

Safety

The product described in this publication may operate at high speed and contain numerous moving parts. It may employ mechanical, and/or pneumatic forces, and/or hazardous voltages and may create other conditions that could, through misuse, abuse, negligence, unauthorized alteration or other retrofitting, inattention, or lack of understanding, result in personal injury, death, and/or damage or destruction to the product or to other equipment. In addition, improper operation may also depreciate the value of the machine and other assets of the owner, and impair the working efficiency of the machine.

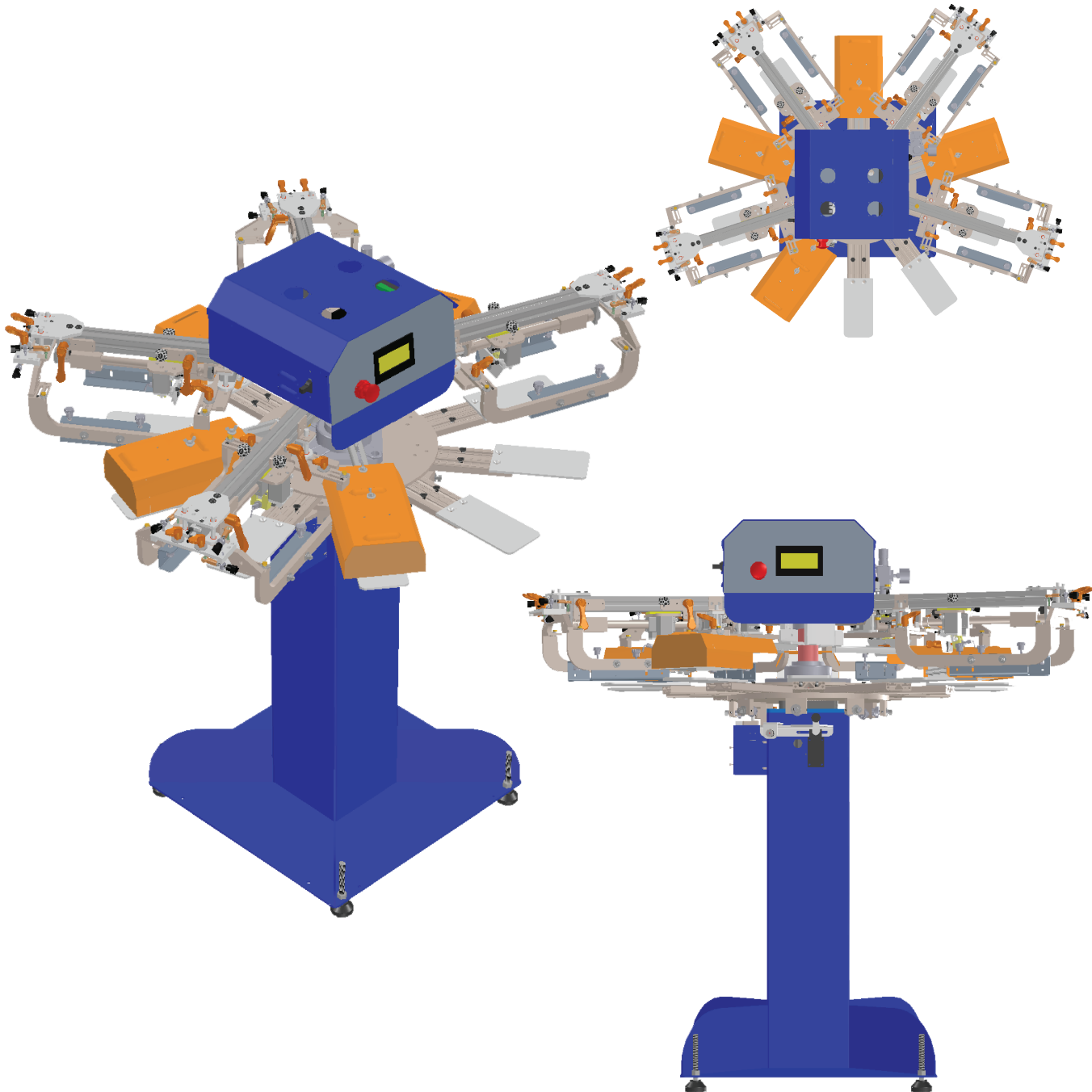
Electrical

The electrical specifications in this manual are based on mathematical calculations that assume ideal conditions exist for electrical supply line values, material used in the installation of electrical service and site preparation. Although every effort has been made to provide accurate electrical specifications, ASPE does not assume any liability for damages whether consequential or incidental, that may result from the use of the indicated electrical specifications.

Product

This document is based on information available at the time of its publication. While efforts have been made to be accurate, the information contain herein does not purport to cover all details or variations in hardware, software, features, or specifications, or to provide for every possible contingency in connection with installation, operation and maintenance. Features may be described herein which are not present in all variations of this product. ASPE reserve the right to alter specifications in the manufacture of their products, and they assume no obligation of notice to holders of this document with respect to changes subsequently made.

Renders





General Information

Carrousel

- Rotates counter clockwise
- Single / automatic / index

Print Head

- 6" x 6" (15.24 cm x 15.24 cm) Max print area
- 9" x 14" (22.86 cm x 35 cm) Max frame size
- Squeegee pressure
- Flood bar adjust
- Stop position front / Rear adjust
- Print speed adjust
- Flood speed adjust
- Off contrast adjust
- Multiple print stroke capable

Computer Controller HMI / PLC

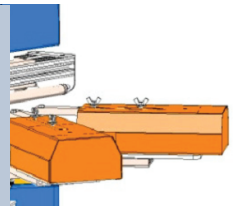
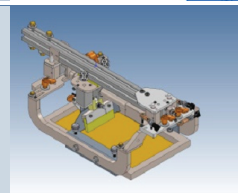
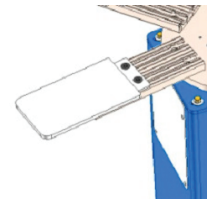
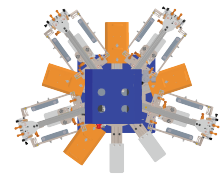
- Full index control (single)
- Dwell time control
- Flood bar adjust
- Squeegee pressure adjust
- Delay flood / Print time adjust
- Hash delay / Start time adjust
- Cure time adjust

Flash Cure Specs

- High density halogen / infrared bulbs
- Start / Delay time setup
- Cure time setup
- Controllable
- Flash unit distance adjustment

Product Specifications

Height	50 ¾" (129 cm)
Base to Pallet Height	39" (99 cm)
Base Width	24" (60 cm)
Carrousel Width	45" (114.3 cm)
Standard Pallets	8" x 4" (20.32 cm x 10.16 cm) Optional width: 4", 5", 6" or Custom shape
Print Head Length	7" (17.78 cm)
Flash Cure	11" x 5¾" (27.94 cm x 14.60 cm)
Control Screen Size	4" (10.16 cm)
Weight	400 lbs. / 185 kg
Power	230 v
Current	25 amps
Air Consumption	90 - 110 psi / 1.8 cfm 6 to 8 bar / 30 - 60 l/min





Getting Started

Receiving Machine

When you receive the machine it will come in a crate. In order to properly uncrate the machine you must have a drill and a Phillips drill bit in order to take out the screws. The easiest way to do this is to take out all the screws on one side of the crate. That way the machine will be able to slide out. Make sure you take out the screws that are on the base of the machine.



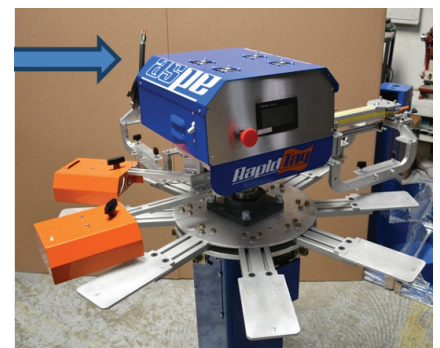
Unwrap any plastic or paper on the machine.

After you have the machine on the floor, you must put on the feet. The feet are attached to the base of the machine. Lift one side of the machine at a time and screw in the feet. The feet should be adjusted to the appropriate height of the loader. After all four feet have been installed, make sure that the machine is leveled and stable for production. Leveling the machine is NOT required but recommended by ASPE Inc.



Plug It in

Move the machine into position on the production floor. Make sure you have a 220v connection (single Phase) and at least 80-110 psi / 2cfm, We supply 1/4 inch tubing with 1/4 fitting npt. It is best to have a quick disconnect attached to the fittings. In regards to the connection, black is power, white is neutral, and green is ground. We prefer you to run the air and power from the ceiling and down onto the machine. That way you can move freely around the machine and not have to worry about tripping over cords. If you prefer the air and the power to run through the bottom then open the control box and run the tubing and extensions cord through the shaft. Run this all the way down (there is a hole on the bottom of the machine).



Adjustments on the Machine

Now that the machine has been properly installed, let's go over the different features and adjustments on the machine before we turn it on.

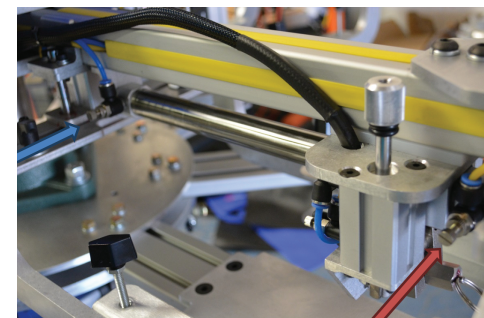
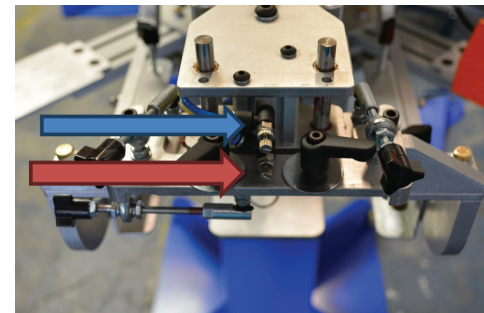
- Pressure

1. The Air Regulator adjusts the overall air pressure of the machine. Make sure it is 80-110 psi. You can adjust this by lifting the black cap on top of the regulator (blue Arrow). Once you pop it up you will be able to spin it. You will notice if you tighten it in the pressure will go up, if you loosen it then it will decrease the pressure.

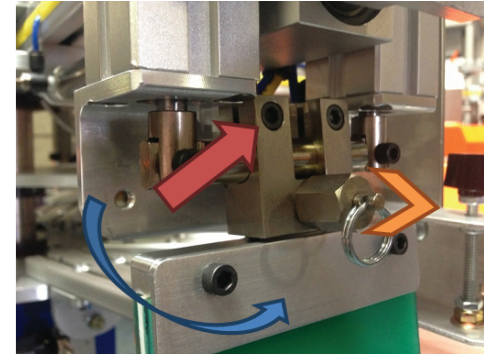
In the pictures you will see the air regulator on the left and the lubricator on the right. Set the knob on the lubricator to a minimum (red Arrow). The machine's lubricator is already pre-set. The Lubricator is calibrated to release one drop of oil for every 200 prints. The lubricator lubricates all of the pneumatic cylinders on the machines.

There are two flow control valves on top of each print carriage. These do not have to be adjusted simultaneously. The one on top (blue arrow) adjusts how fast the carriage will rise. The tighter you screw it in, the slower the carriage is going to rise. The one on the bottom (red arrow) controls how fast the carriage drops down. Make sure the locking nuts are locked into place.

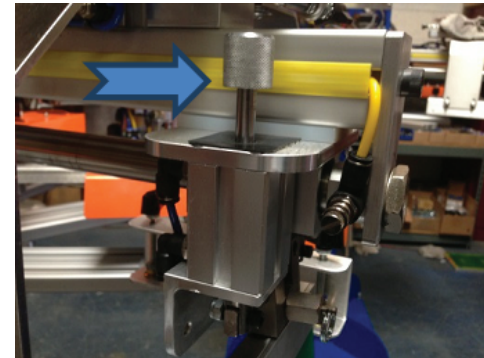
2. There is one flow control fitting on each end of the print head. These fittings control the speed of the flooding and printing. The fitting in the back (blue arrow) controls the stroke speed while the one that is in the front (red Arrow) controls the flooding speed. The deeper the screw is in the fitting, the slower the print stroke (or flood speed).



3. Squeegee Angle and Replacement: With a simple Allen wrench (red arrow) you can loosen up the squeegee holder and be able to adjust the squeegees angle (Blue arrow). And to take out your squeegee then pull the holding pin (orange arrow) and then the squeegee should come off.

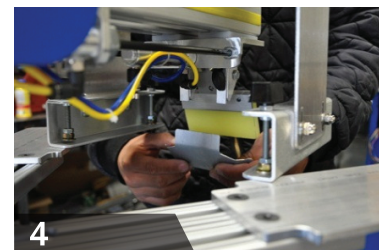
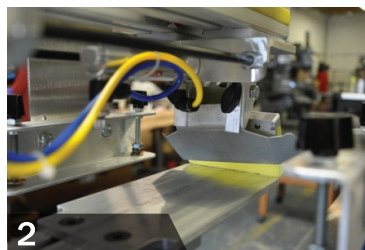


4. In this picture, the blue arrow is pointing to the chopper cylinders. There is one chopper cylinder on each side of each print head. Both correspond with the squeegee pressure. Tighten to increase pressure on your squeegee.



- Carriage (Putting in the screen)

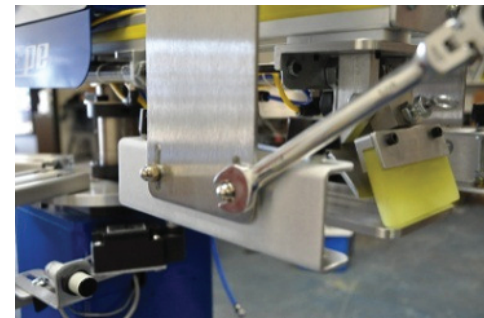
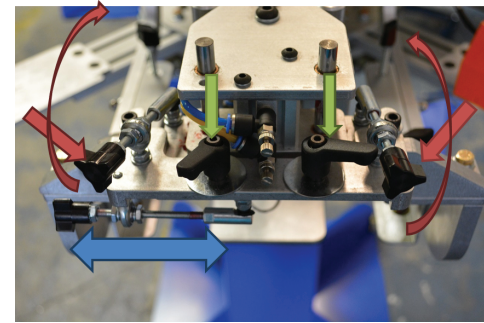
Once you burn an image onto your screen, you are ready to place it into the machine. First you should take out the squeegee and the flood bar from the print head. This will make it easier for you to set up off contact. Loosen the two black knobs above the flood bar in order to take it out. Pull the pin above the squeegee in order to take it out. If you need different sizes of squeegees, squeegee holders, or flood bars then we can customize those for you.



On the edge of every print is the micro registration. You will be using this feature to register your images together precisely. The registration tool has three pivot points. In order to start adjusting your registration you must first unlock the print head. Do this by undoing the black lock knobs (green arrow), please note there are also two located in the back of the print head that also need to be unlocked. Once you have done this then you can start adjusting. The two pivot points corresponding with the red arrows will move the print length wise (also up and down). The one knob below the registration device (blue arrow), moves the print head side to side.

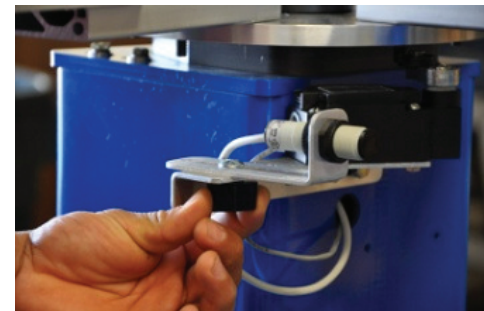
There are four dome nuts, two on each side of the screen holder. Loosen them up with a 7/16 wrench to be able to lift or lower the screen in order to set up off contact. We will show how to set up off contact later in the manual.

Place the flood bar and squeegee back into their positions on the screen.



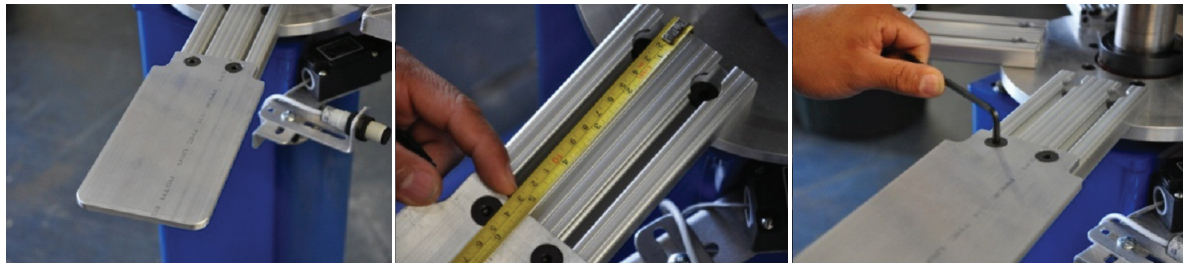
- Base of machine

On the base of the machine you will find the sensor. The sensor reads about 4 inches away. It was designed and placed in that spot in order to detect t shirts and other garments while it's moving on to the next station. Undo the black knob below the sensor. This will loosen the bracket and enables you to aim the sensor where you want. We suggest the sensor be pointed in-between the print head and the station previous to the print head .If you have questions about the sensor or want it to be placed in a different location for your product, then please contact ASPE so we can customize the machine for you.



- Pallets

The pallets have already been preset and leveled but if you need to adjust the pallets for whatever reason, you need a 3/16 Allen wrench, a right angle, and some sort of measuring device (ruler, caliper, etc.). First Measure from the edge of the arm to the pallet how much you think you need. Use the right angle to make sure the pallet is on straight. Tight up the screw when you are satisfied. Repeat on all pallets. If you have any question about pallets or if you need different sized pallets, please contact ASPE so we can customize your pallets.



- Flash Cures

It is important for the flash cures to be directly above the pallets. You can move the flashes side to side and by undoing the black knobs on top, you can move the flashes forward and back. You can adjust the height of the flashes from the pallets by unscrewing the collar and raising it or lowering it. When installing the bulbs in the flash cures first make sure you have some plastic gloves handy. If you touch the light bulbs with your bare hands before installation then dirt, oil and other particles will get onto the bulb, resulting in discoloration and failure of the bulb. Each flash has three bulbs. Install as so: 300 w on the sides and 500 w in the middle of the flash. Remember that these flash cures get very hot so be aware of this while you are walking around the machine. ASPE is not responsible for anyone being burned or injured by the machine. Before you start your production, we suggest having the machine index for about five minutes in order to warm up the flash cures and pallets. You get the best curing when the pallets are hot!



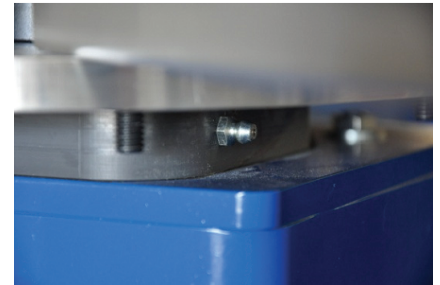
Maintenance

The only maintenance we require for you to do is to be cautious of the oil and grease on the machine. Oil is already put onto the machine. It takes pneumatic tool oil. This controls how many drops of oil are being pumped into the machine.

Grease is already in the machine as well but every month or so, you should put a little bit of red high temperature grease in the machine. There is grease fitting in the back of the machine below the index plate. We recommend high temperature grease. The bulbs on the flash cures will last you 2000 hours.

Also make sure the air that is being pumped into the machine is dry. There should be no moisture. The compressor needs a chiller in order for the machine to work at peak performance and for the warranty to be active.

Now that you are familiar with the outside components and variables of the machine, we can move on to the touch screen controls.



The Touchscreen

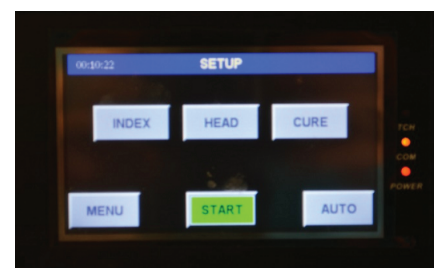
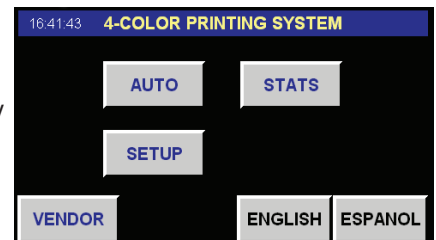
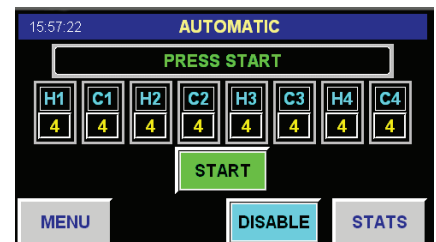
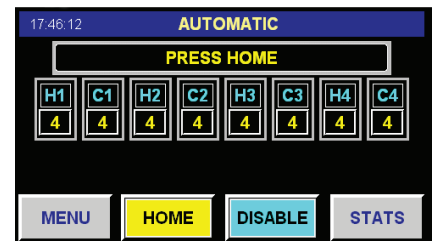
When you turn on the machine, you will be automatically taken to the welcome screen. This screen will show you your current setup of the machine. It will indicate which print head or flash cure is on/ off at that moment.

- H1= Head #1
- H2= Head #2
- H3= Head #3
- H4= Head #4
- C1= Flash Cure #1
- C2= Flash Cure #2
- C3= Flash Cure #3
- C4= Flash Cure #4

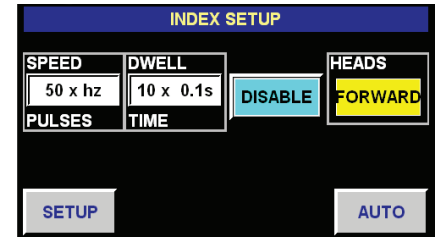
The numbers under H1, H2, H3 and H4 correspond with the number of strokes the print head will do while in production. The numbers below C1, C2, C3 and C4 correspond with their current curing times. In order to start indexing, you must home the pallets into their appropriate positions. Do this by pressing “Home”, then “Start” in order to start the index. You are able to stop and start the machine by pressing the “Start”. The “Start” button will only come on if the machine is already Home.

Press the Menu bar and the screen will show you your options for setting up the machine. Keep in mind, the button that says “Auto” was the screen that we were previously at.

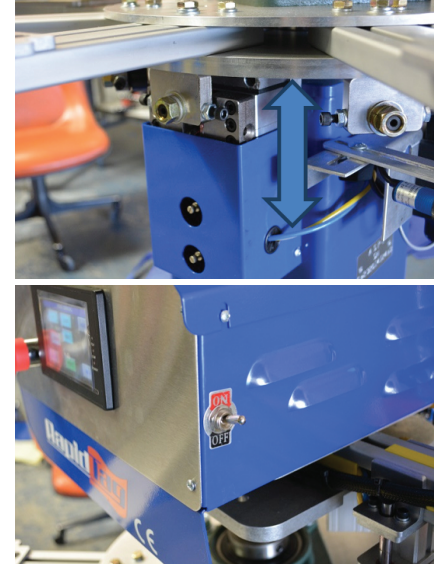
That being said, we will move on to the “Set Up” button.



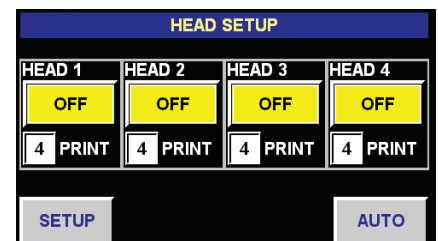
Pressing “Index” will take you to your indexing set up. From here you will set up your index speed and dwell time. Index speed is the speed of pallet moving from one station to the following station (or speed of one index). Dwell time is the amount of time the machine delays to move on to the next station. You will use your dwell time to control your production speed along with your curing dwell time, which we will talk about later on in the manual. You are also able to turn off/on your locking mechanism by the button all the way to the right. When turn it on this will tell the machine to lift the registration fork up. This lock is for multicolor jobs in order to get precise registration on your artwork, and proper placement.



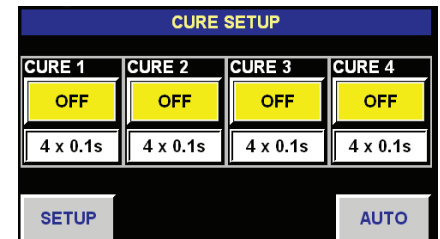
Locking Mechanism located right below you. The locking mechanism is needed for tight registration jobs. If your job is single color or does not have tight registration then you may turn the lock off. You can control the speed of the lock with the adjustable air fittings located below the fork. Once in a while it is good to put some grease on fork for lubrication quality. Also, there is a toggle switch to the right of the machine above our patent number. In order to activate the fork, you must have this switch pointing up.



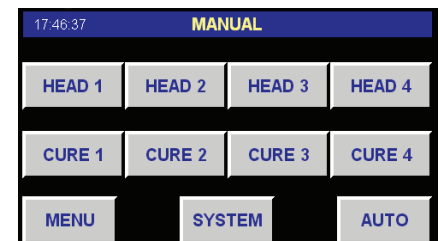
Go back to the “Set Up” screen and click on “Head”. On this screen you can choose which print head(s) to be on and off. You can also program each individual print head to print as many strokes as you tell it to do (max is 10 strokes). Do this by pressing the number below the on/off switch and then typing in your desired number.



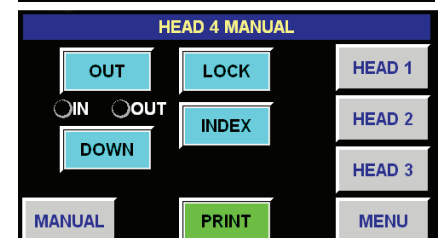
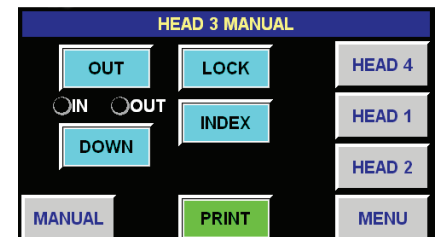
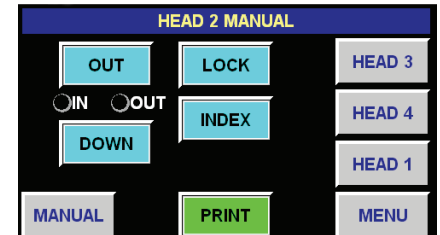
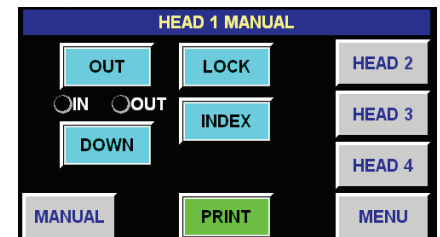
Now go back to “Set Up” and click on “Cure”. On this screen you will set up your curing time for each individual flash unit. Do this by pressing on the number and enter in your desired set up time. You can control which ones are active and which are not.



Go back to “Menu” and click on “Manual”. In manual mode you are able to manually control your flash cures and print heads individually without indexing the machine. In each of these screens you will notice that there are two repeating buttons,”Lock” and “Index”. When you click “Lock” this will enable the registration fork to lock into the indexing plate. Clicking “Index” will index the machine once. So for as long as you have your finger on the button then that is how long it spins for.

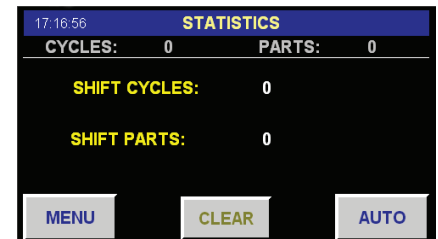
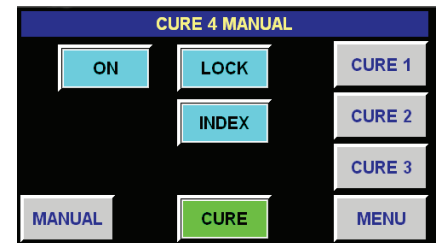
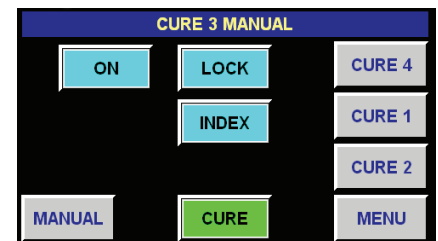
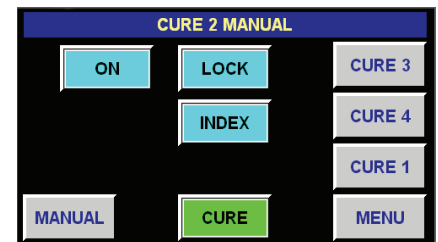
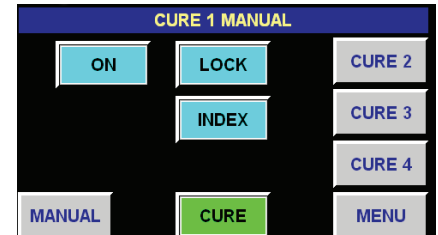


Go ahead and click on one of the “Head” buttons. This will bring you to a screen that enables you to manually print. You may do this two ways. You can simply click “Print” and the print head will cycle a full flooded print. Or you can click “out”, which brings the print head forward into the printing position, then click “down” to bring the squeegee down along with the screen, click “in” (same as “out”) one more time in order to do the actual print and then the squeegee will finish its print then the squeegee and screen will automatically come back up.



Go back to the “manual” screen. Now click on one of the “Cure” buttons. In this screen you are able to test each individual flash cure to see if it had dried the ink that was on the previous station (print head). If you click cycle then you will turn on the flash cure for as long as how you originally set it up as. Example, if you have your curing time as 0 on Flash Cure #1, and you click the “Cycle” button, nothing will happen. If you have the curing time as 10 and you click “Cycle”, then the Flash Cure will be on for about a second because, for our machine, 10 means about 1 second. The Off/On button on the upper left hand corner will activate the flash cure until you press the button again.

Go back to the “Menu” Page and click on “Stats”. You will be seeing four set of numbers. The two numbers at the top will never change (like mileage on a car). “Cycles” stand for number of indexes and “Parts” stand for how many products have been printed. The numbers below can be reset. You can do this by holding the “Clear” button for about 2 seconds. This way you can keep track of how many impressions you made in an hour, min, day, etc.



Thank you for taking the time to read the product manual. We wish you much success with our machine.

For any other questions regarding the machine or printing tips, please contact ASPE NOW!