

Assembly Instructions for: *2100 Ink System*

**EPSON PRINTER**

**Epson 2100  
Part No. A26421**

**IMPORTANT**

If your printer is new, set it up according to the enclosed manufacturers instructions.

This is a check to ensure your new printer and drivers are working correctly before the Eco-Flo System is installed.



It is very important you read these instructions carefully before you begin.

We will take you through the following steps:

- 1 Preparing your Injector
- 2 Setting up of the Inks in the bottle tray
- 3 Installation of the modified injector to your printer
- 4 Fitting of the Tube Supports System
- 5 Producing your first print.

**Only start work on the installation once you have read the instructions fully!**

**What you will need to Install the Eco-Flo 2100**

- Complete Eco-Flo 2100 Kit
- Sharp Blade (Stanley Knife type) & Scissors
- Measuring Tape or Ruler
- Marking Pen or Pencil
- Paper Towels

**Please read carefully before you continue and refer to the components diagram over the page.**

**What is included in your Eco-Flo 2100 Kit**

- Injector Set with tubes attached
- Set of 7 Inks & empty 100ml bottles
- Black Tube Support Bracket with Hook & Loop Fastener fitted
- Bottle Holder Tray
- Special Chip Block
- 1 Grey/White Tube Clip with adhesive pad
- Installation Instructions and Profiles CD
- 10ml Syringe & wing adaptor
- Pair of latex gloves
- Special Foam Block
- 7 Tube Clamps
- 7 Bottle Caps & Clear Piping Tubes

**Check List for components**

Set of 7  
125ml Inks

1 Wing Adaptor

Black Tube  
Support Bracket



**Check Printer Condition**

If you have a brand new printer, follow the Epson instructions for setting up your printer. Use the Epson injectors that came with the printer. Follow normal installation instructions for the software. Test the printer by printing pictures. Learn how to use the Epson utilities to run a Nozzle pattern check and to run a Cleaning Cycle.

**Make sure that the printer can produce a perfect nozzle pattern before proceeding with Eco-Flo installation.**

If you have been using the printer in the past, just make sure it produces a perfect nozzle pattern before proceeding with the Eco-Flo installation. If the Nozzle pattern has any gaps whatsoever, then run cleaning cycles until it prints perfectly.

### **DO NOT INSTALL THE ECO-FLO IF YOUR PRINTER IS NOT FULLY FUNCTIONAL**

#### **Disconnecting Power From the Printer**

Push, but **do not hold** the INK button on the printer. This will move the injectors to the “replacement” position. After they move to this position, which is just slightly to the left of the parked position, **SWITCH OFF THE POWER AT THE WALL SOCKET**. Now the injector head can be moved from side to side by hand. *We will tell you later when to reconnect the printer power supply. Remove the original Epson injectors from the printer (Power is disconnected). Set them aside on some paper towel. DONOT throw away, you may need them someday. Wrap in a zip-lock plastic bag for cool dry safe keeping.*

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#### **INSTALLATION OF YOUR ECO-FLO KIT**

##### **Step 1 Removing the Injector Lid**

You will need to remove the printer lid on the injector carrier as shown in this photo. Store this somewhere safe should you ever wish to return the printer to its original setup. It is held in place by two ‘Lugs’ on either side. Once you have one side disconnected, you will find it easy to slide out the lid. Use a fine screw driver to do this and push one of the lugs into the direction of the print head and from one side only as indicated below.

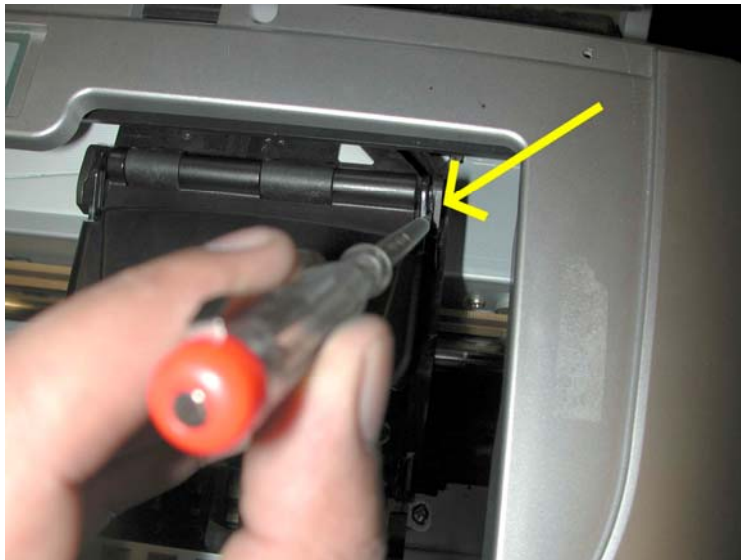


Fig.1

##### **Step 2 Moving the Printer Head**

You are now able to move the printer head manually to the centre area of the printer. See below.



Fig.2

**Step 3 Bottle Preparation**

Locate the coloured bottle caps and straight lengths of plastic tubes. Insert the straight tube firmly into the bottom of each bottle cap see Fig.3



Fig.3

**Step 4 Tube Preparation**



Using a pair of scissors separate all tubes by snipping gently at the tube ends. Please see Fig.4 to the left.

Fig.4

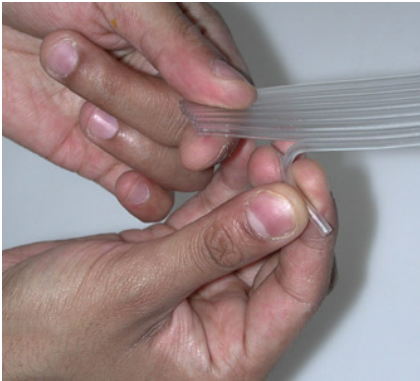


Fig.5

Strip back all the tubes by approx 150mm. Please note when assembling the tubes to the bottle caps you may need to strip back more of the tubing in order for the bottles to be seated correctly within the bottle tray.

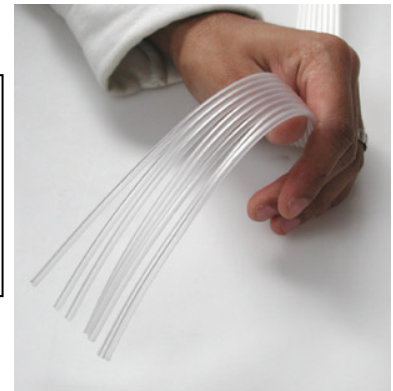


Fig.6 showing tubes stripped back

### **Step 5 Preparation of The Clamps & Inks**

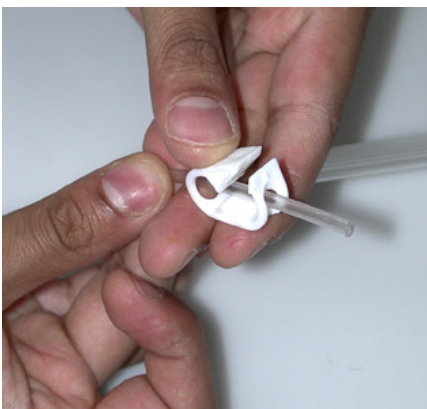


Fig.7

You are now ready to attach the tube clamp to the tubes as indicated in Fig.7 to the left.

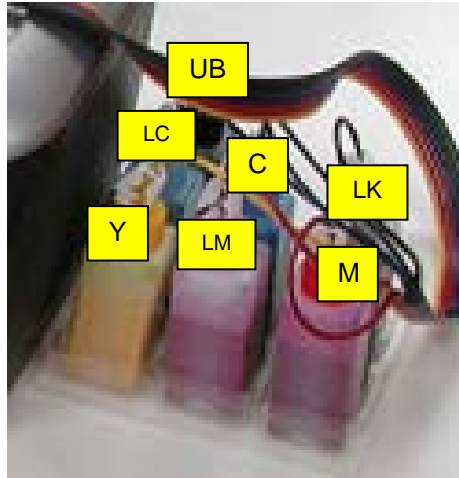
Now please fill all the bottles with the correct inks; please ensure that all ink has been filled correctly as indicated by the bottle caps that are colour coded, see Fig.8 to the right.



Fig.8

### **Step 6 Positioning the ink Bottles in the Tray**

You are now ready to position the ink bottles in the bottle holder tray as indicated below.



2100 Setup

**Step 7 Assembling the Tubing to the Bottle Caps**



Fig.9

When you have completed the above process insert the correct tube to the correct ink bottles. **PLEASE TAKE CARE** when doing this as if this is connected incorrectly there is no turning back see Fig.9 & Fig.10



Fig.10

**Step 8 Priming the Ink Through the Injectors**

You are now ready to start the ink priming process starting with the YELLOW injector.



Wing Adaptor Shown

This process is carried out by inserting the 10ml syringe and wing adaptor at the base of the injector. **PLEASE ENSURE THAT THE WING ADAPTOR (TIP ONLY) IS GENTLY INSERTED INTO THE BASE OF THE INJECTOR, DO NOT** push the tip any further than 3mm (see diagram opposite) otherwise this will split the base of the injector.

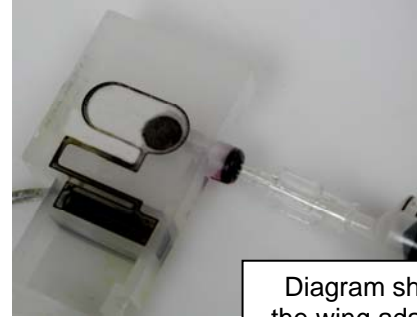
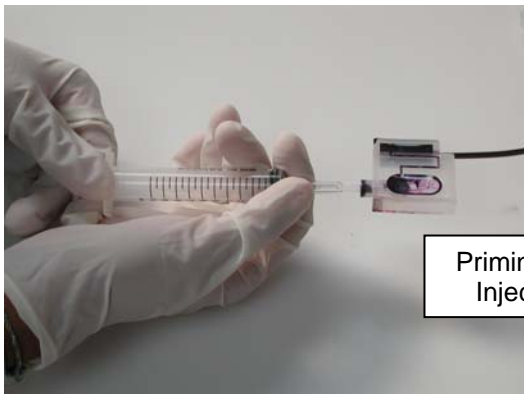


Diagram showing the wing adaptor tip only inserted gently in the base of the injector.

**PLEASE ENSURE** that you **DOUBLE CHECK** that the correct tube is located to the correct ink bottle before pulling back on the syringe (see Fig.11).

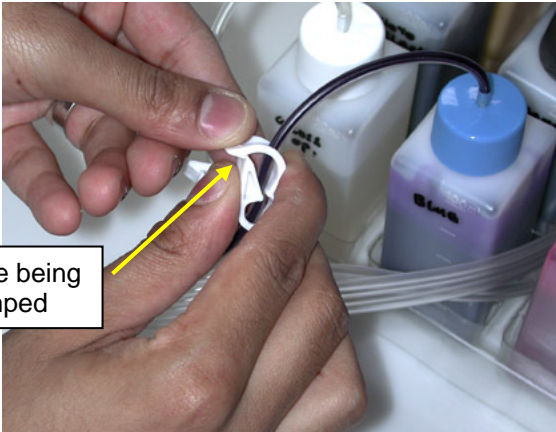
At this point **LOCK** the tube with the white clamp see Fig.12 before removing the syringe from the bottom base of the injector to avoid any air travelling in the injector.

Any ink remaining in the syringe can be put back into the correct ink bottle. **MAKE SURE** you wash the syringe with warm water ready for the next colour to be primed. Repeat this process for all the inks so that you finish up with a set of injectors and tubes full of ink as illustrated in Fig.13.



Priming an injector

Fig.11



Ink tube being clamped

Fig.12



Fig.13

### **Step 9 Install Chip Block & Injectors**

Please place the Chip block as indicated in Fig.14 below making sure that this is correctly positioned & installed. Once you have installed this you are ready to insert the set of 7 injectors in the printer carriage.

Carefully align them, and when you are happy the injectors are in position. **PLEASE BE CAREFUL NOT TO PUSH TOO HARD, AS THIS WILL CAUSE DAMAGE TO THE INJECTOR & PRINTER HEAD.** Push the injectors home until you feel a positive seated position see Fig.15 below.



Fig.14



Fig. 15 Picture shows injectors fully installed in a 2100

**Step 10 Positioning The Foam Block**

You will need to move the printer head towards the right of the printer in order to do this.

You are now ready to install and position the foam block that needs to be inserted on the back of the injectors as illustrated below. Please make sure that this has been pushed down correctly in place.

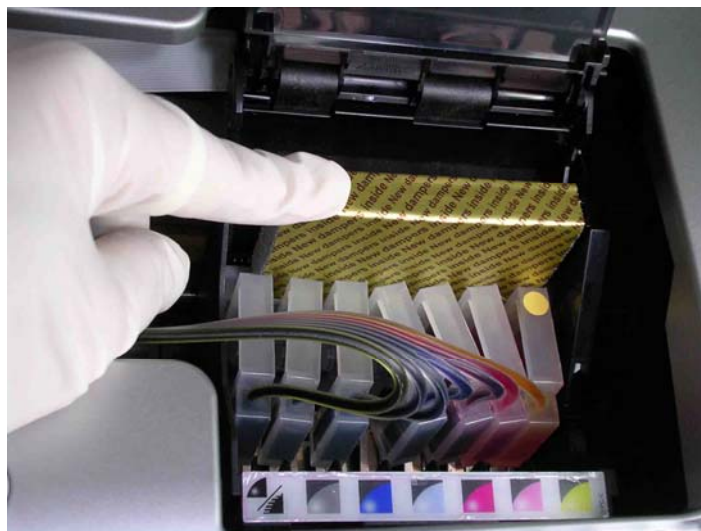


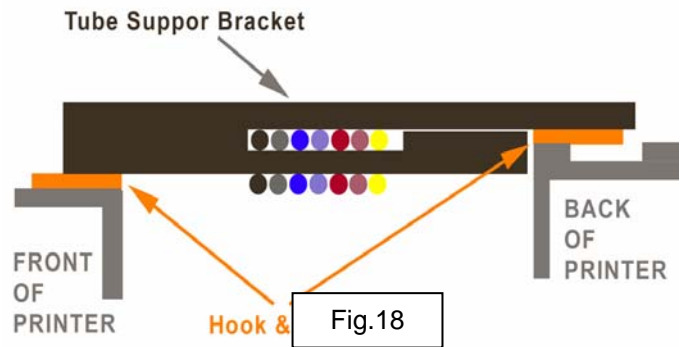
Fig.16

**Step 11 Installing the Central Tube Support Bracket & Aligning the Tubes**

The tubes can be inserted at this time through the available opening in the bracket – the tubing goes under the bracket, then up and then through. It is advisable to slide the tubes as far forward to the front of the printer within the tube support bracket as indicated in Fig.17 & Fig.18 below.



Fig.17



### Side View of Tube support Bracket

Next, you will notice that the Tube Support Bracket has both the Hook and Loop portions on it. The Hook portion of the Velcro is going to end up attached to your printer. The Loop portion will remain on the Tube Support Bracket. Do not separate the Hook and Loop.

Use an alcohol or cleaning solution and clean the top of the printer housing where the Black Tube Support Bracket is going to be attached. Then make sure the area is dry before proceeding.

Keeping them together, remove the adhesive backing from the Hook portion of the Velcro. Carefully install and align the Tube Support Bracket in its proper location 85mm from the right edge of the recess, as shown in Fig.19 below.

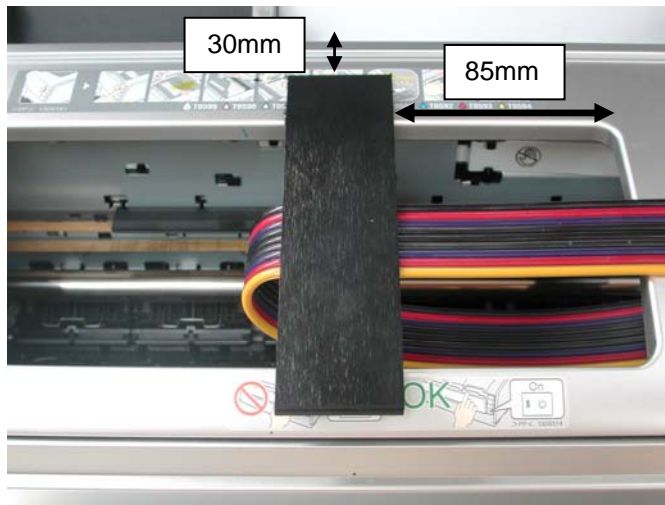


Fig.19

Please ensure that the Central Tube Support Bracket, the top and bottom Velcro and loop are firmly stuck down to the printer body.

Please ensure that the tubing has just enough slack to allow movement of the print head without restriction.

This can be done manually by moving the head to the left and right and checking that there is just enough tubing to allow the print head to move freely, without it dragging against any part of the printer see Fig. 20 & Fig. 21 below.

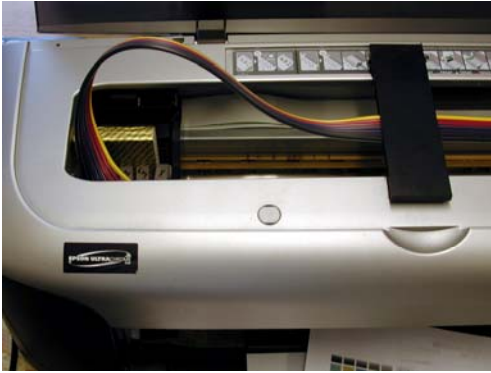


Fig.20

The tubing should look and be assembled as the diagrams opposite.



Fig.21

**PLEASE NOTE**, due to the nature of the tubing you may need to leave the head unit in the left hand position as illustrated in Fig.20 left overnight in order for the tube to mould in the correct manner, at this stage you may find that the FOAM BLOCK may not be required and in fact slide away, if this is the case remove the block.

**Step 12 Install Final Tube Clip**

The last tube clip goes on the right edge of the printer housing see Fig 22 opposite. Clean this area with alcohol and wipe dry with paper towel.

Place the plastic clip onto the printer body, making sure it is in the correct position to hold the tubes in a straight line along the length of the printer to the Black Tube Support Bracket.

All the tubes must lay flat so they do not interfere with print head motion. You must ensure that the tubes do not come into contact with the printer body.



Fig.22

**Step 13 Testing the System**

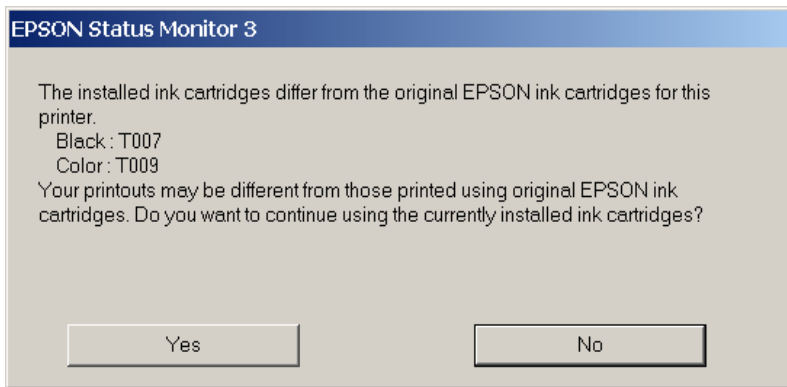
Push the injectors to the far right and plug the printer back on. Have your graphics program (e.g Photoshop) open and ready to use.

The printer should come on and the head should move back and forth a few times and do a cleaning cycle. When it stops moving, only the green light should be on.

A red light at this point indicates that one of the chips has not been recognized. If this is the case please LOCK all tubes with the white clamps and very carefully remove the Injectors, Foam Block and Special Chip Block, Now very carefully check the chip that is not registering. It is advisable to clean the chip by wiping the contacts with a soft cloth and re-install the system again.

## HOW THE SPECIAL PERMACHIP WORKS: -

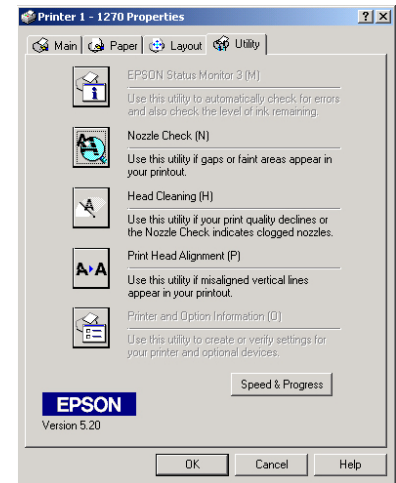
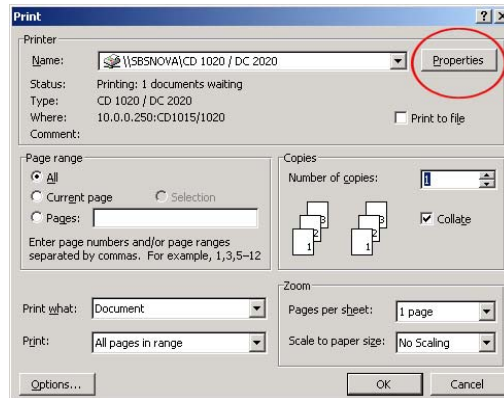
The PermaChips operate as a normal chip on an injector and while printing the ink levels will drop as a normal injector on the status monitor. When the levels reach a certain point the chips will reset to FULL. Please do not take any notice of the level indicator.



A window will open when you make your first print. This informs you that these are not Epson injectors and gives you the option to continue or quit – choose **YES** and continue printing in the normal way.

At this stage, your Eco-Flo system is in a position to be used as your injectors are now filled with ink. You may need to carry out a head clean in order to get a complete nozzle check.

To execute a head clean you will need to open a document in any program and select the print option from the tool bar (this can normally be found in 'File'). Ensuring you have selected the correct printer driver, click on the 'Properties' button. This will open a new window in which you will need to select the 'Utilities' tab. In this window you will find all the options for head cleaning and nozzle checks. For more detailed instructions please refer to the Epson manual that came with the printer.



## ON THE COMPACT DISC :-

THERE IS A CD SUPPLIED WITH YOUR KIT. ON THE CD ARE COPIES OF THE FOLLOWING :-

- 1 *ECO-FLO INSTALLATION INSTRUCTIONS FOR ALL TYPES OF PRINTERS AND SYSTEMS*
- 2 *TROUBLE SHOOTING GUIDE*
- 3 *INK PURGE TEST FILES AND TONE CHARTS*
- 4 *ICC PROFILES FOR USE WITH PERMAJET COLOUR INK AND PAPER COMBINATIONS*
- 5 *CURVES FOR USE WITH MONOCHROMEPRO INK SYSTEM.*

**IN ORDER TO USE THE PERMAJET INK SYSTEM TO ITS FULL POTENTIAL, YOU SHOULD NOW TAKE THE TIME TO OPEN THE ENCLOSED CD AND PROCEED TO READ THE FULL SECTION ON PROFILES AND THE “HOW TO INSTALL AND USE ICC PROFILES” DOCUMENT.**

**FULL DATA IS INCLUDED IN THIS FILE TO EXPLAIN HOW TO GET THE FULL BENEFITS OF COLOUR MANAGEMENT AND BEST RESULTS WITH YOUR IMAGES.**



## **FAQ'S & Caring For Your Eco-Flo – READ CAREFULLY!!!**

**Here are some tips to make sure that your new system performs trouble-free.**

- **It is advised to gently shake by rotation each ink bottle on a regular weekly basis. This is to ensure the pigments stay suspended in solution and gives constant results.**
- **After printing, ink in the tubes should be close to the injectors. The next morning, the ink may have retracted a little this is absolutely normal.**  
**When you start to print again the ink will be drawn into the injectors and it will function normally. The system is designed to have some air at the top of the injector to prevent siphoning and spitting. This air will expand and contract with temperature and pressure changes. This is a characteristic of the system.**  
**However, if you see that any of the inks have retracted all the way back to the bottles, this may be a technical problem. Contact our technical line immediately before acting.**
- **It is advisable not to let your printer sit for long periods of time without printing something. The use of a timer to power up the printer should you be going away for a long period of time is recommended. Timers can be purchased from all good hardware stores. This approach will not require the computer being switched on and off manually. Simply plug the printer's plug in to the timer and plug the time into the wall socket or extension lead and set to come on once a week. This process will run a cleaning cycle and maintain your system.**
- **Keep the whole unit out of direct sunlight and sources of direct heat.**
- **Routine Maintenance: - Assuming that you have followed all routine maintenance guidance provided by the printer manufacturer (this includes print head alignment, lubrication & cleaning of moving parts and nozzle cleaning procedures), there may be times when you need to additionally carry out Eco-Flo maintenance. Therefore, always keep all the items that came with your kit in their original box in a safe place and retain this instruction manual with them. A charge is applicable for occasions where we have to send you maintenance items which you have mislaid.**

## **IMPORTANT**

**DO NOT** remove the injectors from the printer unless specifically instructed by an authorised Permajet technician to do so. **Removing the injectors once installed may cause system damage and invalidate further technical support.**

**DO NOT** lift the inks above the Printer. This would cause the ink to flood inside - keep the bottles at the same level as the printer by putting them on the same table.

**[www.permajet.com](http://www.permajet.com)**