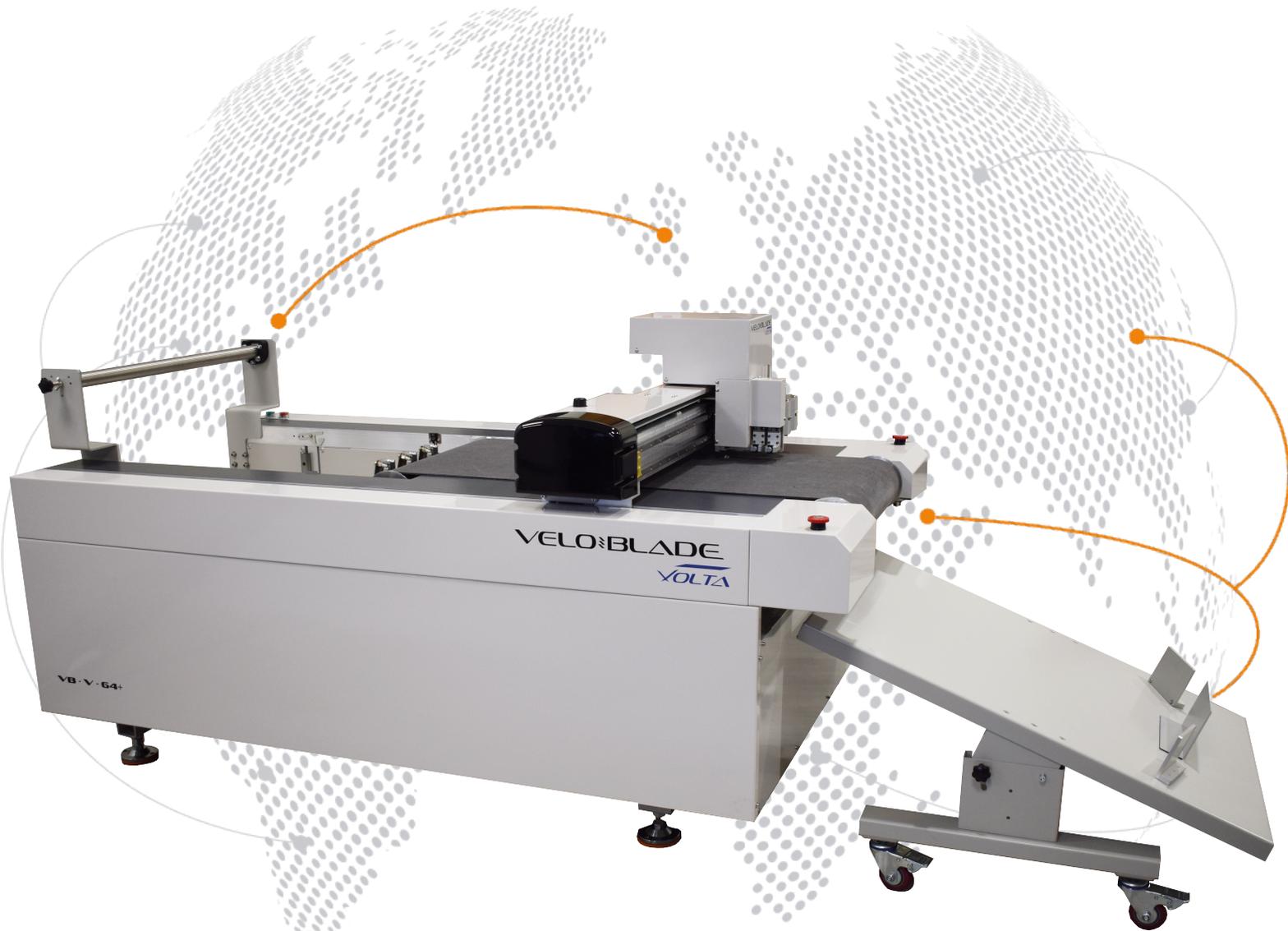


# VELOBLADE®

## VOLTA



**INTRODUCTION USER MANUAL VELOBLADE VOLTA PLUS RANGE®**

**VELOBLADE VOLTA®** DIGITAL DIE-CUTTING SYSTEMS  
FOR INTRICATE & ACCURATE CUTTING, CREASING & PERFORATING

**vivid.**

# Contents

Page 2-3: .....Chapter 1 – Machine Set Up

Page 4-6: .....Chapter 2 – Tools And Their Positions

Page 7-11: .....Chapter 3 – Setting Tool/Blade Depths

Page 12-17: .....Chapter 4 – Software Layout

Page 18: .....Chapter 5 – Importing Files

Page 19-22 : .....Chapter 6 – Software Modes

Page 23-25: .....Chapter 7 – Blade Changing

Page 26-28 : .....Chapter 8 – Maintenance

# 1. Machine Set Up

Power on the machine, ensure all switches are in the up position [figure 1.1]



Figure 1.1



Figure 1.2

Open the Veloblade software [figure 1.2]

If the feeder is needed please load the media onto the feed table. [figure 1.3]



Figure 1.3

Ensure the media has movement and the magnetic back stop and side lays are not too tight. The position of the magnetic sides are important, these can not be past the red line shown in figure 3. The red line represents where the movement of the feed head moves to pick up a sheet.

Once the material is loaded into the feeder press the green button and feed table will move into position and the lights will illuminate [Figure 1.4].



Figure 1.4

If you require a roll of material cutting, remove all media from the feed table, load the material onto the mandrel, put in the mandrel brackets and place the idle bar in position [Figure 1.5]. Now thread the material around the idle bar and place onto the cutting bed [Figure 1.6].

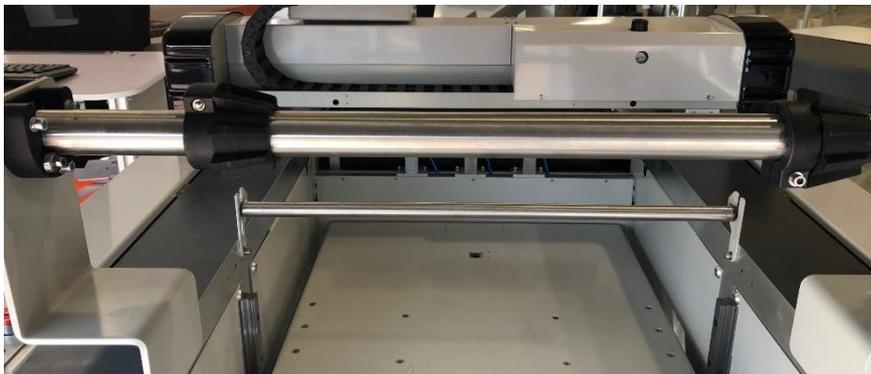


Figure 1.5



Figure 1.6

## 2. Tools And Their Positions

The popular tools used on the Veloblade Volta Plus range and their positions on the machine [see figure 2.1 below for positions]:

Position 1:

- EOT – Electric Oscillating Tool [for materials up to 10mm]
- DCT – Driven/Direction Cutting Tool [for materials up to 5mm]

Position 2:

- CTT – Crease tool

Position 3:

- RCT – Rotary Cutting Tool [for materials up to 2mm]

Position 4:

- PRCT – Pen Tool
- RCT – Rotary Cutting Tool [in this position we use the RCT for kiss cutting]

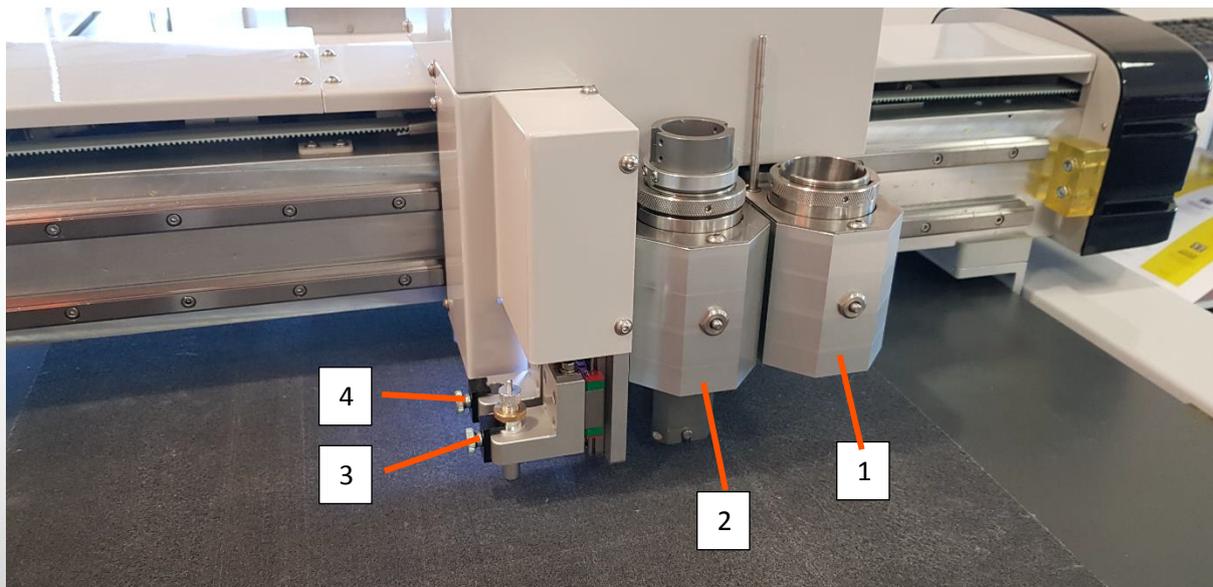


Figure 2.1

**EOT/DCT & Crease Tool:**

Insert the tool into tool holder position 1 ensure the dot on the tool aligns with the dot on the holder as shown in figure 2.2. Not applicable for Crease tool.

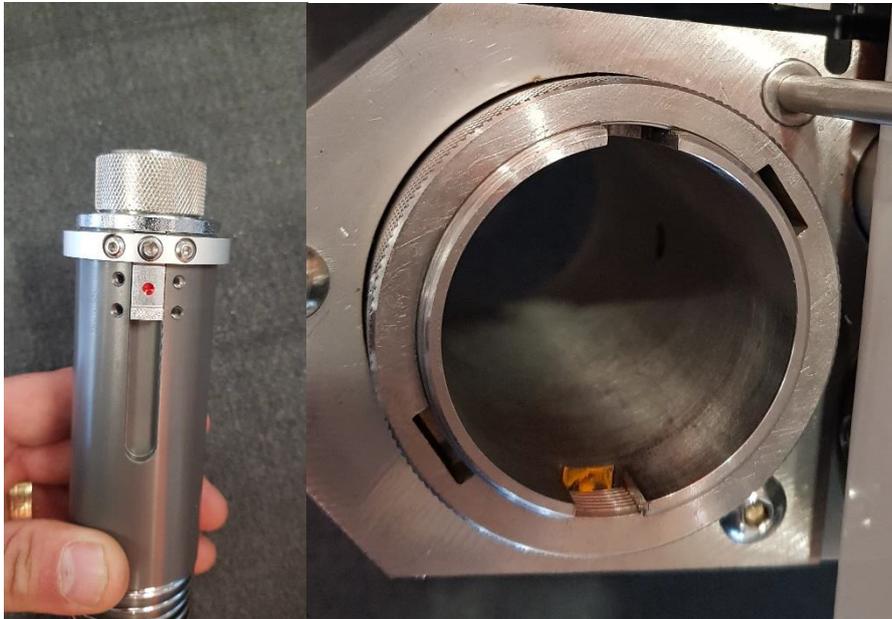


Figure 2.2

Align the locking cap before inserting, once tool is in place tighten the locking cap clockwise [Figure 2.3].

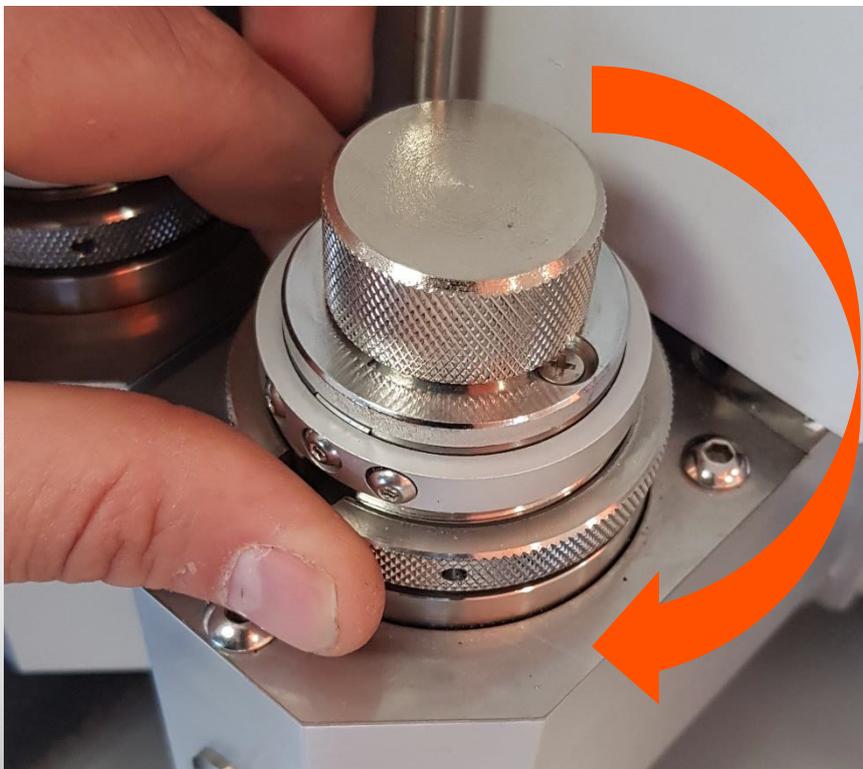


Figure 2.3

When inserting the EOT ensure the motor support clip is aligned with the tool holder [Figure 2.4] and power cable is connected [Figure 2.5]



Figure 2.4

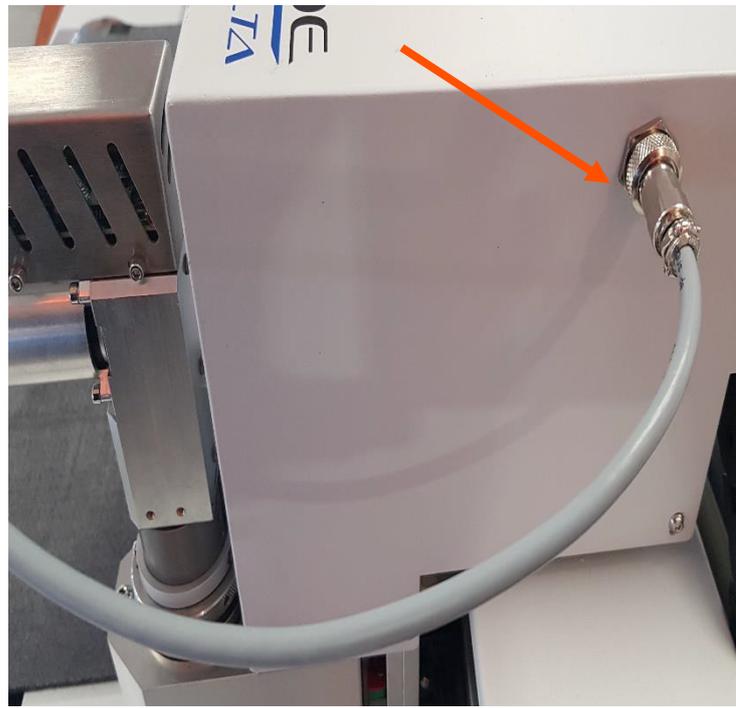


Figure 2.5

### **RCT/PRCT:**

Remove the locking screw and cap [Figure 2.6] and place the tool in the holder. Ensure the tool is pushed all the way into the holder to the lip on the tool [Figure 2.7] and reattach the locking screw and cap.



Figure 2.6

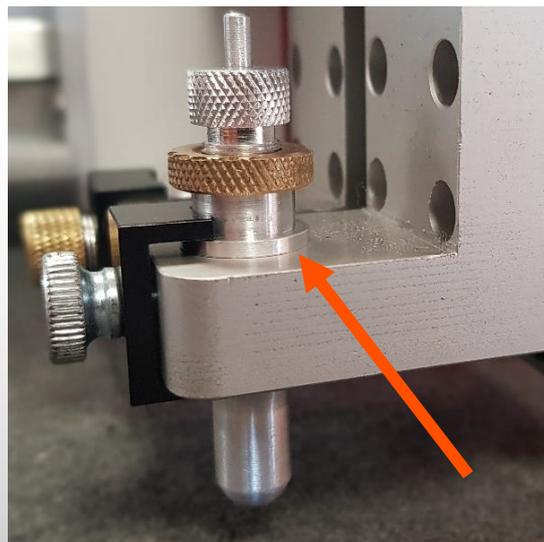


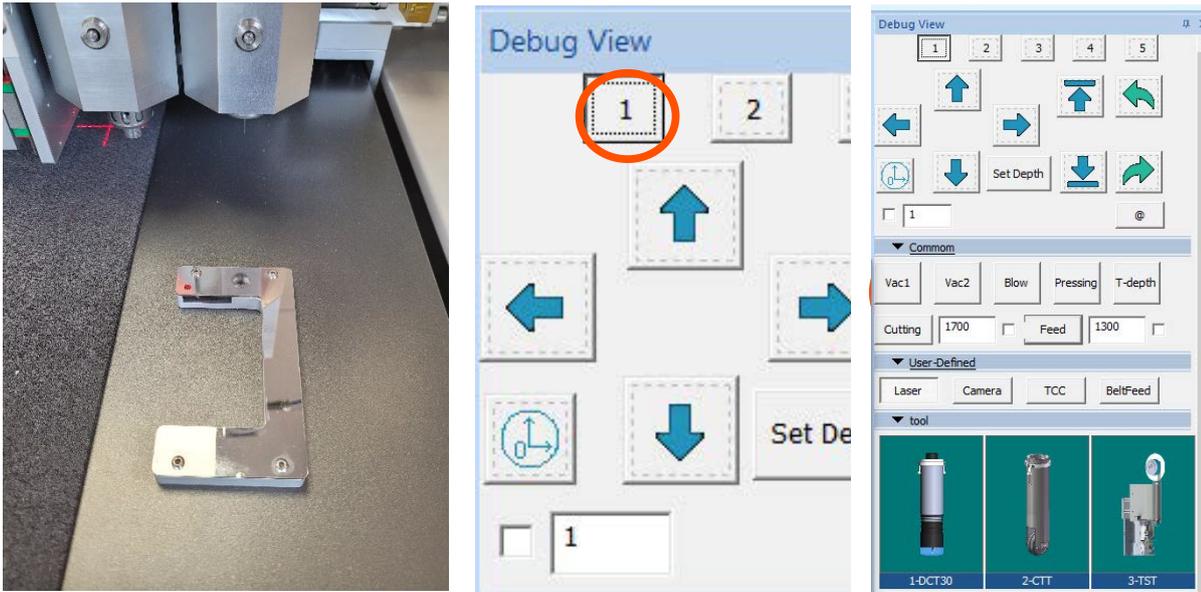
Figure 2.7

For blade changing please see chapter 7.

### 3. Setting tool/blade depths

#### TCC/Auto Depth

Your Veloblade Volta comes complete with an Auto-Depth, this is set up to the Vivid blade already see Figure 3.a



Once you have replaced your blade in the DCT/EOT select tool apron 1 at the top of the Debug View [Figure 3.b] and then press TCC as shown in Figure 3.c.

**Please Note: The TCC/Auto Depth is set up only for one Blade. As a standard all auto depth is set up as per below:**

- EOT = VV-BLADE-N73
- DCT = VV-BLADE-N17-05

**If a Vivid engineer has installed your machine we will set the TCC/Auto Depth to the blade you will use the most.**

**For all other blades please use the manual depth setting as shown on the following page.**

## EOT/DCT/CTT:

Switch the window to Debug View and select the tool position you are setting the depth for [Figure 3.1].

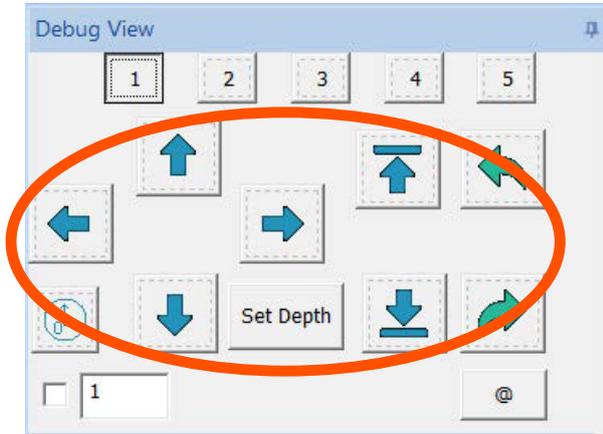


Figure 3.1

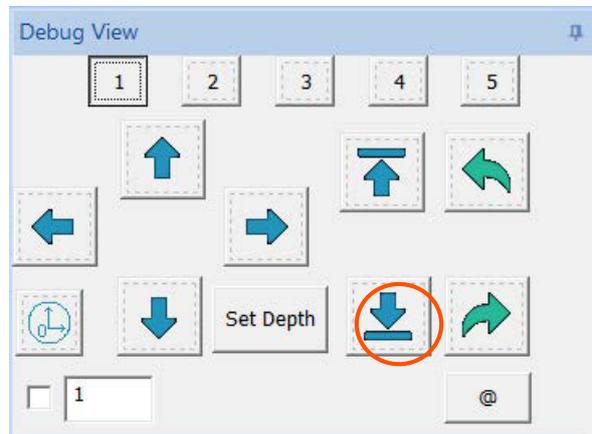


Figure 3.2

Press the Tool down button and start lowering the tool [Figure 3.2]. Lower the tool until the blade is nearly touching the belt. If you cannot see where the blade is, you will manually have to hold the white locking cap pushed up against the spring on the tool while lowering.

Turn on the vacuum [Vac1], change the lowering value to a smaller number and tick the box next to the number [Figure 3.3].

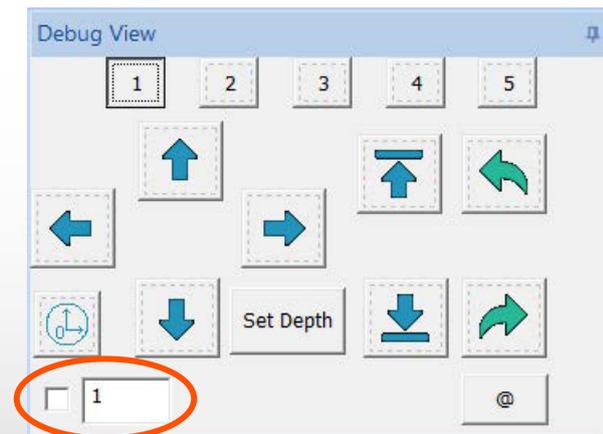


Figure 3.3

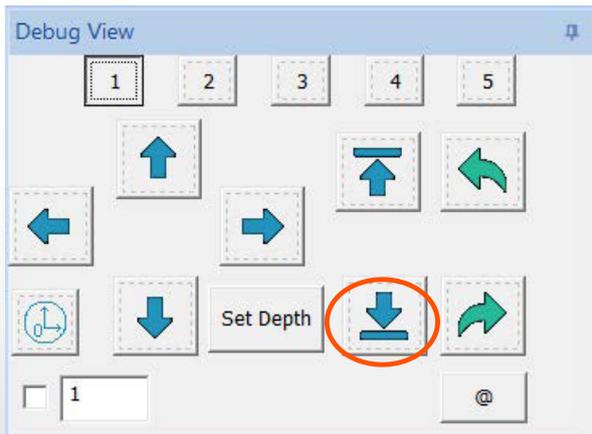


Figure 3.4

Press the tool down button until the blade comes into contact with the belt while being careful not to lower into the belt as this will damage it. When the blade is in position press the Depth button [Figure 3.4]. A pop up window will appear asking whether to set depth, click yes.

Move the head [using the arrow keys on the keyboard] over your test material ensuring the tool you are testing is positioned is above the material and press T-depth [Figure 3.5].

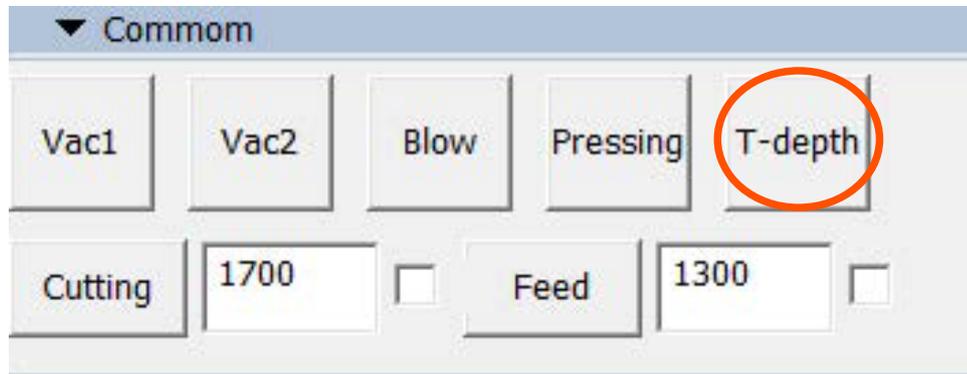


Figure 3.5

Turn off the Vacuum [Vac1] and move the head out of way using the arrows on the keyboard. Inspect the test cut, Ensure it is a clean cut all the way through the media. Too much blade will leave a rough cut and raised edges and not enough will not cut all the way through the media.

For fine adjustments click on Cutting tool configuration near the top of the screen [Figure3.6].

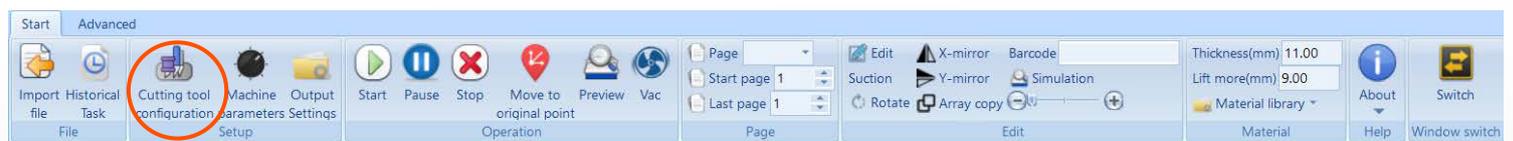


Figure 3.6

Select the tool position for the tool you are using and change the maximum knife lowering depth [Figure 3.7 on next page]. The higher the number the lower the blade will go. We would advise doing this in small increments i.e. 0.5 as to not damage the belt when testing.

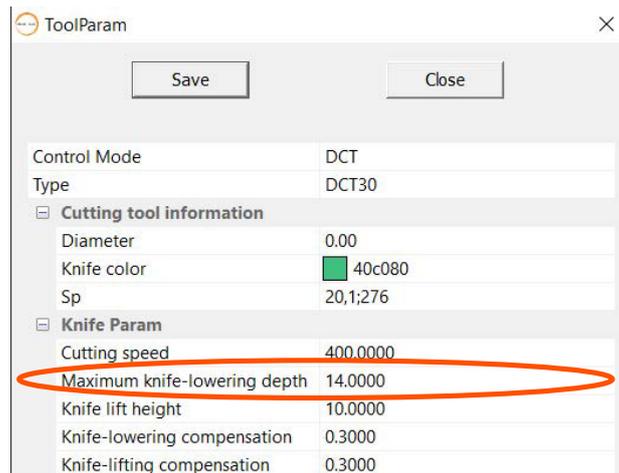


Figure 3.7

Click save and close the window. Test cut again and check the results.

### **PRCT/RCT:**

Changing the depth of the blade on these tools is done manually.

Remove the tool from its tool position, loosen the brass locking nut [Figure 3.8] and turn the top knurled knob for more or less blade [Figure 3.9].



Figure 3.8



Figure 3.9

Too much blade showing and it will leave a rough cut. To get the correct amount of blade for a through cut hold the material you wish to cut at the end of tool holder near the blade [Figure 3.10] and adjust the blade to the required depth.

For Kiss cutting on materials [i.e. crackback or vinyl] the blade depth needs to be minimal, see the difference between figure 3.11 [Set for through cut] and figure 3.12 [set for kiss cutting].



Figure 3.10



Figure 3.11



Figure 3.12

Manually test the tool to check if the blade is at the correct height, hold the tool firmly and straight, While applying a substantial amount of pressure draw a circle on test material [this must be done on the belt of the machine] see figure 3.13.



Figure 3.13

Once the blade is set and manually tested, return the tool to its position on the machine and secure. The next step is to do a test cut, place a piece of scrap material onto the belt, move the head into position over the media and press T-depth in the Debug View window.

If you're getting marking from the tool holder on the media [Figure 3.14] or the tool is not making contact with the media, You will need to change the pressure of the tool solenoid, Click on Cutting Tool Configuration, select the number of the tool your are using [3 or 4], change the maximum knife lowering depth.

Decreasing the number will apply less pressure.

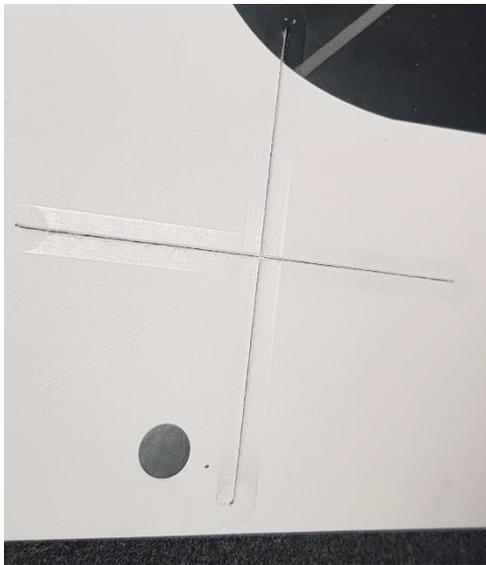


Figure 3.14

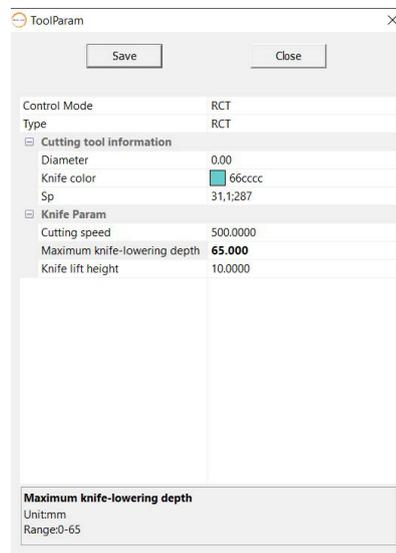


Figure 3.15

# 4. Software Layout & Editing

## Software layout:

Switch Button – to switch between CCD window and Debug view [Figure 4.1]



Figure 4.1

CCD Window is used to select the mode you require and mainly for Camera operation [Roll CCD and Board CCD]. See figure 4.2.

Debug View is used for manual controls, choosing the tools to use, test depth [t-depth] and blade depth. See figure 4.3

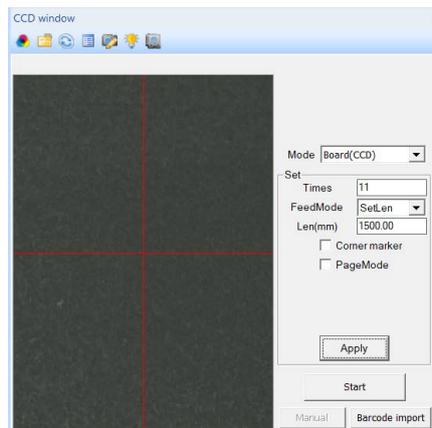
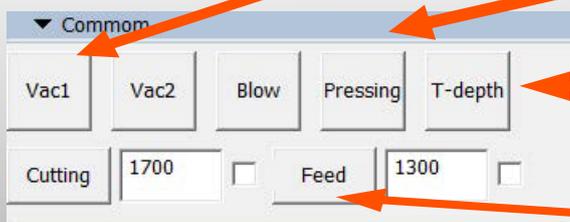


Figure 4.2

Figure 4.3



Manual button for Vacuum

Lowers the suction cups for the alignment of media

Test Cut

Manual feed button

At the bottom of the screen is Output window [Figure 4.4], this gives the information of any errors, if the machine is in run/pause mode and if the emergency stop buttons are pressed.



Figure 4.4

The Historic tasks button on the top left of the screen[Figure 4.4b] this saves previous cut files that have been used. When restoring a file, right click the file and press restore. Please note these files cannot be edited and can only be used in Direct cut mode.

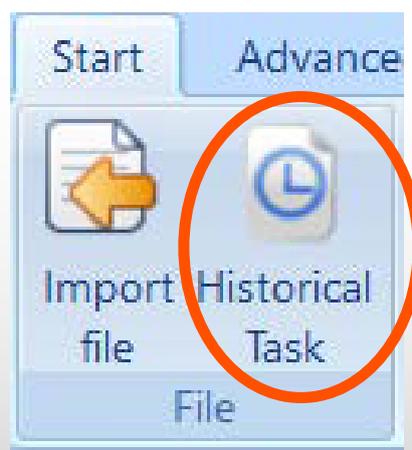


Figure 4.4b

## Tool Software Setup:

Click on Cutting tool configuration [Figure 4.5]

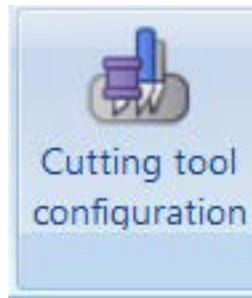


Figure 4.5

If you require the EOT or DCT select tool one, click on the name of the tool and use the drop down menu to change the tool see figure [Figure 4.5b]



Figure 4.5b

From this screen you can also change the machine speed, fine tune the blade depth/pressure and the lowering and lifting compensation [Figure 4.6].

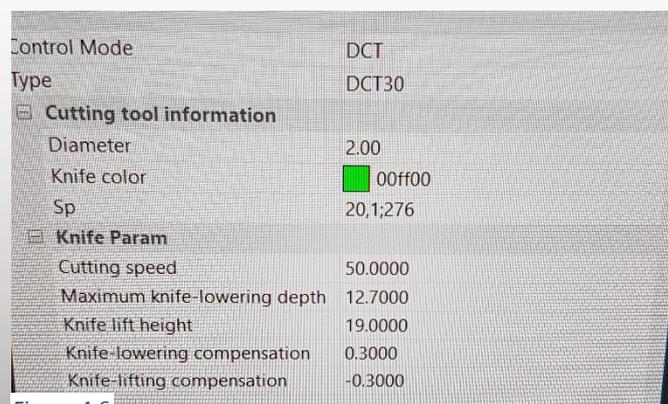


Figure 4.6

## **Editing:**

Click the edit button in the top middle of the screen

[Figure4.6].

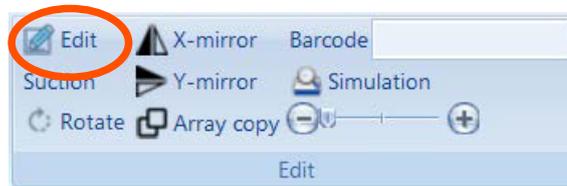


Figure 4.6

Advanced button: Top left of the window [Figure 4.7], in this section we have tick boxes for various needs, for example click the directional line showing and it will place an arrow on the artwork showing the direction of cut. Another example, Coordinate point showing when selected will show each node/point on the artwork.



Figure 4.7

Start window: Using the mouse you can zoom in and out of the artwork to check if lines are joined, to move the artwork up/down/left/right.

Move view [Figure 4.8]: Once selected you can move the artwork with the mouse.



Figure 4.8

Integrated pick up: Once selected you can delete, move and add extra nodes/points [Right click on any part of the artwork]. To move a selection of lines, press and hold the left mouse button and highlight the area you require.

Rotate button [Figure 4.9]: When selected, highlight the artwork/lines you wish to rotate and right click on the mouse [Figure 4.10].



Figure 4.9

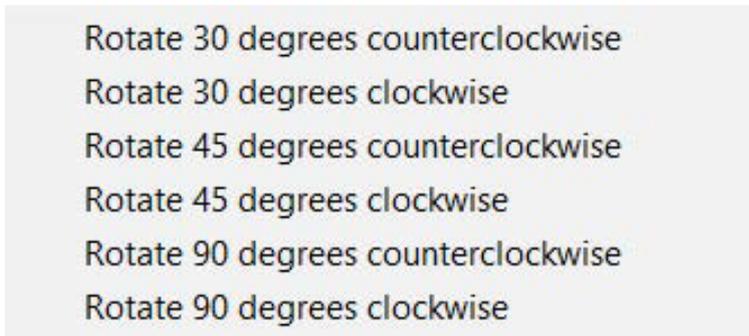


Figure 4.10

To the right of the screen we have the Property window, from here we can change the tool, stepping [half cutting or step cutting] and dash/perforated lines. Please note the artwork you are changing must be highlighted.

Highlight the line you want to change and use the drop down menu next to:

- Changing the tool used - Knife [Figure 4.11].

- Change a solid line to a Dash/Perforated line – Cutting Line [Figure 4.12].

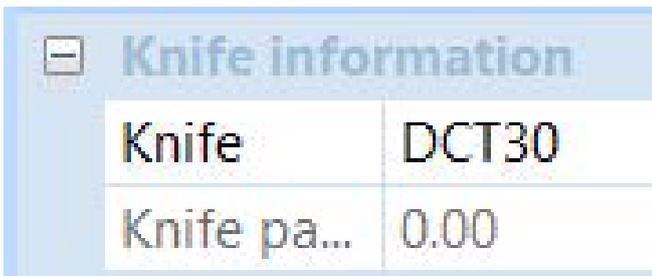


Figure 4.11

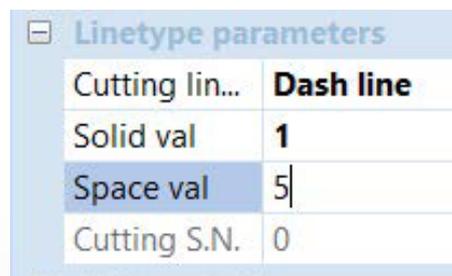
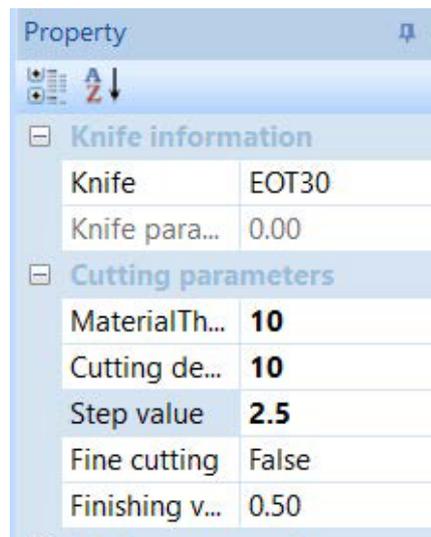


Figure 4.12

- Stepping [Figure 4.13 on next page]:
  - Material -Material thickness.
  - Cutting - Cutting depth, i.e. half cut for a 10mm board would be set at 5mm or through cut would be set at 10mm.
  - Step Value – the depth you want to cut each cycle, i.e. for a 10mm board and you select 2.5 as a step value it will cut 4 times.



The image shows a software interface window titled "Property". It contains two expandable sections: "Knife information" and "Cutting parameters".

Knife information	
Knife	EOT30
Knife para...	0.00

Cutting parameters	
MaterialTh...	<b>10</b>
Cutting de...	<b>10</b>
Step value	<b>2.5</b>
Fine cutting	False
Finishing v...	0.50

Figure 4.13

## 5.Importing Files

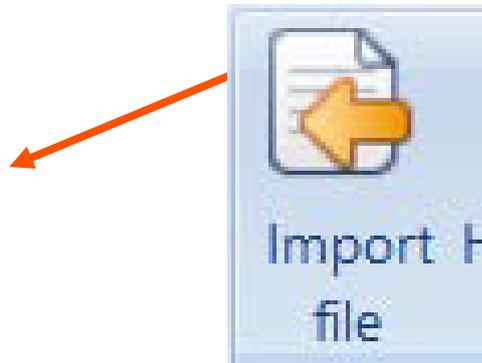


Figure 5.1

Before importing a file please ensure you are in the correct mode, i.e. Board CCD, Roll CCD or Direct Cut these are explained on the next page.

Click Import file and select the artwork required [Figure 5.1].

Once selected you will need to choose which tools are needed for which cut lines [Figure 5.2]. Select the drop down for each colour and select the tool needed [Figure 5.3].

Color	Tool name	Scheme name
<input checked="" type="checkbox"/> Match by color (SP)	<input type="checkbox"/> Match by layer	
	RCT	NULL
	RCT	NULL
	CTT	NULL
	NULL	NULL

Figure 5.2

Color	Tool name	Scheme name
<input checked="" type="checkbox"/> Match by color (SP)	<input type="checkbox"/> Match by layer	
	RCT	NULL
	RCT	NULL
	CTT	NULL
	NULL	NULL

Figure 5.3

When finished click ok.

## 6. Software Modes

- Board CCD – Printed material with registration marks
- Roll CCD – Printed rolls of material with registration marks
- Direct Cut – Material without registration marks.

**Board CCD:** Switch the Window to CCD Window and select Board CDD from the drop down mode. Select how many sheets you require cutting and press apply [Figure 6.1].

Switch the window into Debug view and press feed [Figure 6.2]

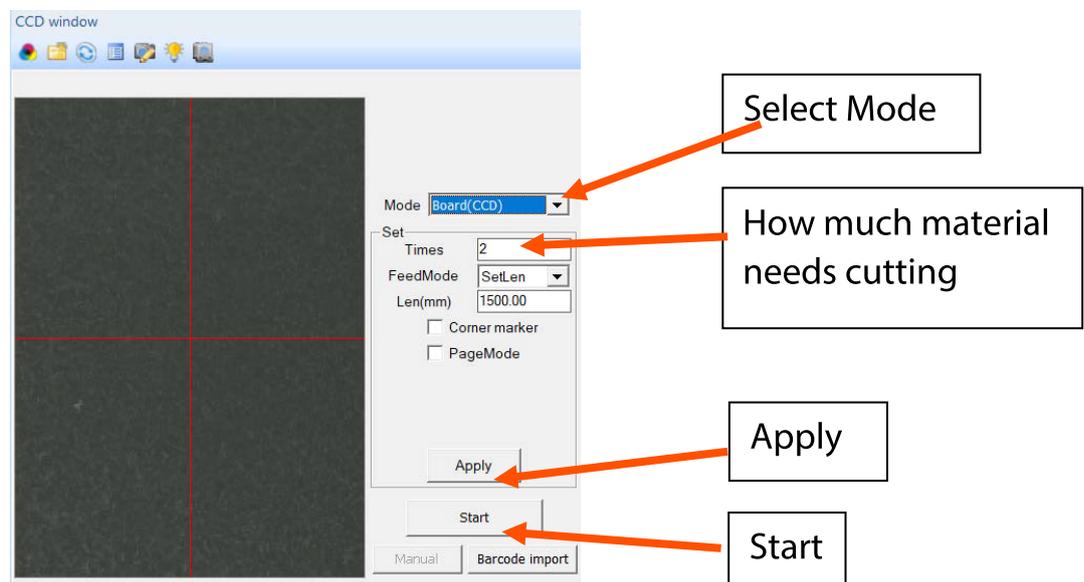


Figure 6.1

Import the artwork for cutting.

Ensure the artwork matches the direction on the screen [Figure 6.2]. Rotate the artwork if needed [Figure 6.3].

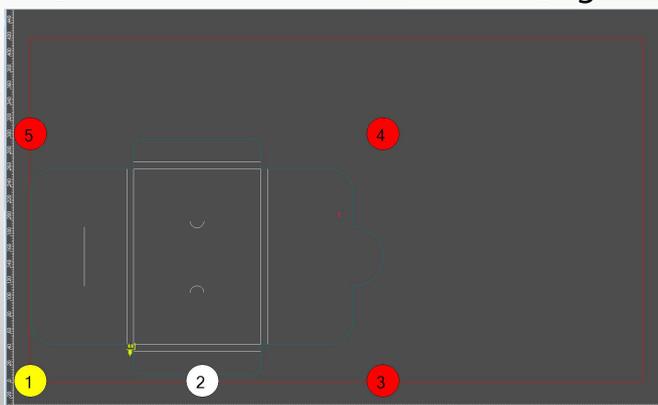


Figure 6.2

This is the front of the feeder closest to the belt and is the direction it feeds.

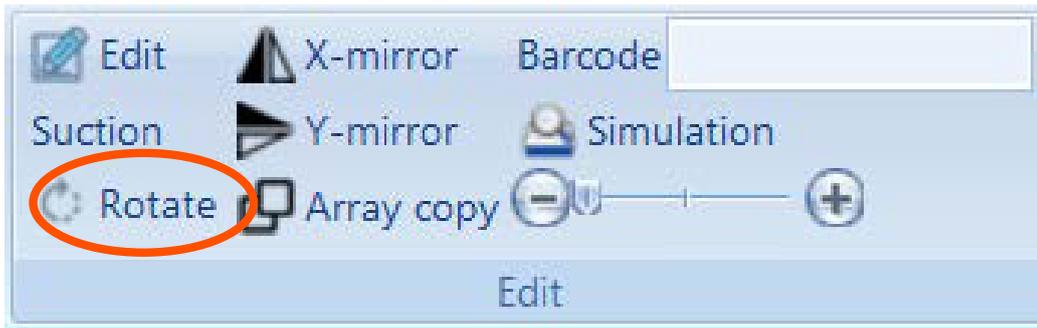


Figure 6.3

Using the arrow keys on the keyboard move the camera over the first registration mark numbered 1 on the screen, see Figure 3.9 bottom left corner.

Once in position, press the switch button and press start in the CCD window.

**Roll CCD:** Select Roll CDD from the drop down mode in CCD Window [Figure 6.4], Select how many printed media you require cutting [times], enter the page length [printed area of cut file] and input the gap [printed distance between the registration marks see Figure 6.5] and click apply.

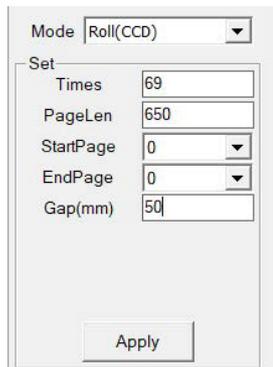


Figure 6.4



Figure 6.5

Thread the printed media onto the belt under the idle bar, ensure the media is straight to the edge of the belt and turn on the Vacuum [Vac1].

Import the cut file required, ensure the artwork matches the direction on the screen.

Using the arrow keys on the keyboard move the camera over the first registration mark numbered 1 on the screen.

Once in position, press start in the CCD window.

**Direct Cut:** Select Direct Cut from the drop down mode in CCD Window and switch the window.

Load the media into the feeder, press the red button to raise the feed table and press feed in the Debug View [if using heavy large material manually place onto the belt].

Import the cut file required, ensure the artwork matches the direction on the screen. If the artwork doesn't match and you can't turn the media around on the belt you will need to go into Edit and rotate the cut file.



Figure 6.6

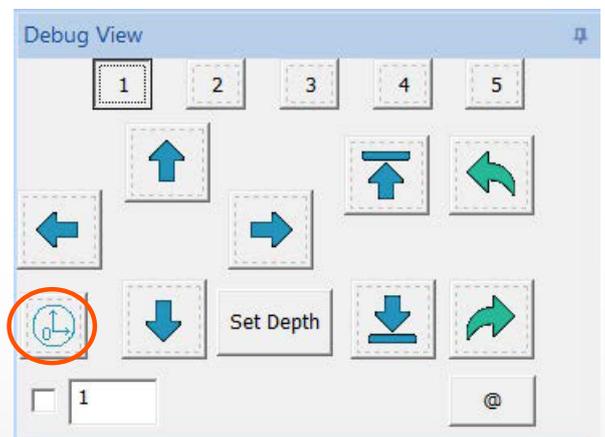


Figure 6.7

Using the arrow keys on the keyboard move the laser to just inside corner of the media as shown in figure 6.6.

In Debug window click on temporary origin [Figure 6.7], a window will open asking 'Whether to set origin', click yes.

Click on the imported file in the task list [Figure 6.8].

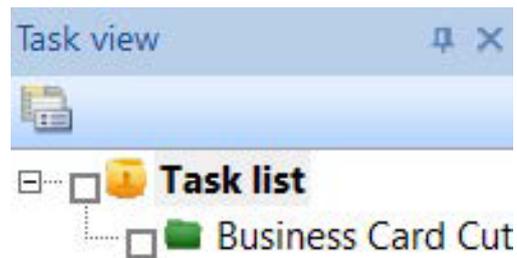


Figure 6.8

Enter the amount of media you require cutting [Figure 6.9].

<	>
Task na...	Business Card Cut...
Status	To be cut
Cuttin...	1
Config...	EOT30
Unconf...	
Size	309.24X422.00mm
Time	0m14s
Last Ti...	0m14s

Figure 6.9

Once finished click start [Figure 6.10]. if at any point you need to pause the machine or stop this is located next the start button.



Figure 6.10

# 7.Blade Changing

## EOT & DCT:

Hold the tool at the side of your body, grip the collar above the spring and pull away from the tool as shown in figure 7.1 & 7.2.

Loosen the two grub screws. For DCT refer to figure 7.3 and EOT refer to figure 7.4.



Figure 7.1



Figure 7.2



Figure 7.3



Figure 7.4

Take note of the direction of the blade replace the blade [ensure it inserts in the correct direction] and retighten. See figure 7.5 & 7.6 on next page.



Figure 7.5



Figure 7.6

Once the new blade is secure reattach the collar over the blade. Ensure the dots line up on the collar and tool as shown in figure 7.7. **DO NOT** push the collar on from the bottom as the blade will protrude once pushed on.

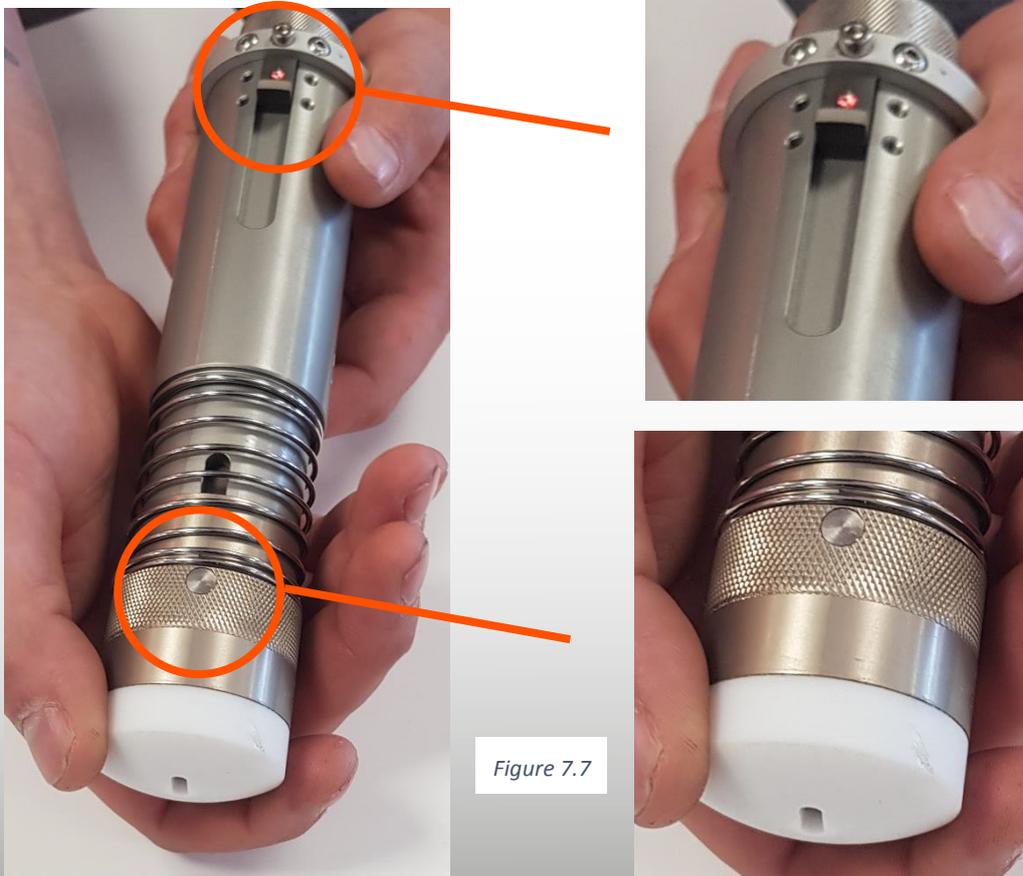


Figure 7.7

**RCT:**

Unscrew the tool using the silver knurled knob [Figure 7.8] and remove the blade.

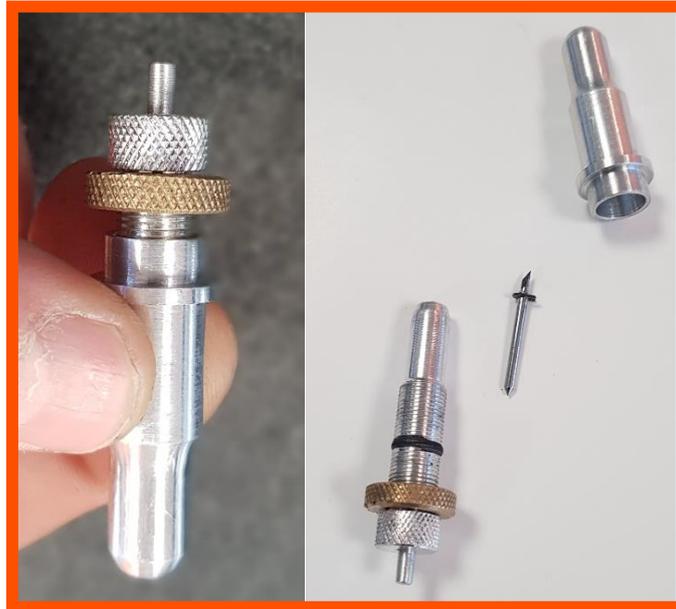


Figure 7.8

Insert new blade, reassemble the tool and set depth as required [Chapter 3].

## 8.Maintenance

### Compressor:

The compressor will require draining regularly, at a minimum of once a week.

Turn on the machine for the compressor to fill with air, once finished switch of the power to the machine and unscrew the drain valve [Figure 8.1]. Allow the compressor to completely drain and then tighten the drain valve.

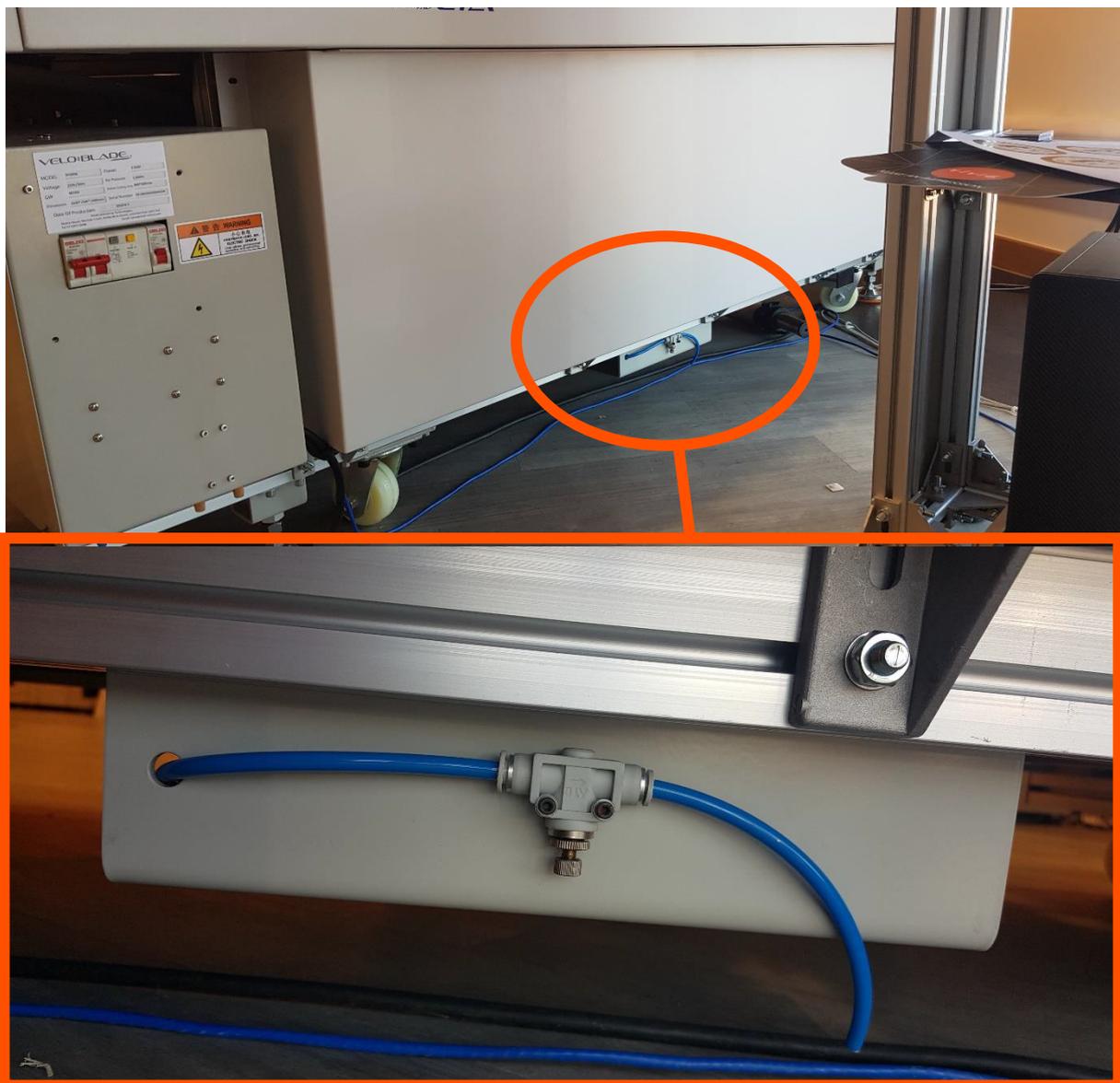


Figure 8.1

## **Linear Bearings:**

The Linea bearings will require cleaning and re lubricating at a minimum of every three weeks.

Using a cloth clean all linear bearings [feeder x 2 and head x 2] removing all dust and old lubricant [Figure 8.2]. Once finished re-lubricate all bearings using 3 in1 oil.



Figure 8.2

### **Cutting Belt:**

The cutting belt must be cleaned regularly, depending on usage this could be daily or weekly. If using heavily every day the belt must be cleaned at the end of each day.

To clean the belt use a plastic thistle brush or Hoover.

