

# CUTWORX™

Complete Finishing Solutions

Powered by

**CUTWORX™**  
Complete Finishing Solutions

Software Suite

**eclipse**  
Series

Software Suite  
**User Manual**



binding101.com  
(866) 537-2244

**BINDING 101**  
More than Binding... Much More

- **Please read the manual carefully before using the product**
- **To ensure production safety, please read the "Safety Instructions"**

**The design and use of this product comply with relevant specifications:**

---

EN 60204-2018 Safety of machinery – Electrical equipment of machines

EN 61000-2011 Electromagnetic compatibility(EMC)



## About CUTWORX USA

CutworxUSA is a leader in finishing equipment with over 150 years combined experience in finishing solutions. We are committed to providing the best small and wide format finishing equipment, installation, service and training to increase your efficiency and productivity.

Our Workflow and Application Specialist can demonstrate our complete line of finishing equipment to validate it will meet your finishing requirements at our Technology Center in Irving, Texas.

Virtual demonstrates are now available upon request.

### Copyright notice

Copyright 2022 CUTWORX USA.

This user manual can only be reproduced with the written authorization of CUTWORX USA. This regulation also applies to the excerpts of the manual.

CUTWORX USA reserves the right to interpret the contents described in this user manual.

### Trademark

The products, files, company names and logos listed in this user manual are registered trademarks of our company. December 2022



CUTWORX USA

8101 Tristar Dr STE 110

Irving, TX 75063

Email: [sales@cutworxusa.com](mailto:sales@cutworxusa.com) / [support@cutworxusa.com](mailto:support@cutworxusa.com)

Website: [www.cutworxusa.com](http://www.cutworxusa.com)

# Table of Contents

## **Safety Introductions**

<b>1. CUTWORX Design Manager Software</b>	<b>01</b>
1.1 Design Manager Overview	01
1.2 Design Manager Icons	01
1.2.1 Design Manager Command Icons	01
1.2.2 Design Manager Operation Icons	02
1.3 Design Manager Working Area	03
1.3.1 Design Manager Working Area	03
1.4 Design Manager Functions	03
1.4.1 CCD Camera & Barcode	03
1.4.2 Material Thickness	05
1.4.3 Layer Controls	05
1.4.4 Output Settings	05
1.4.5 Feed Mode	08
1.4.6 Park Position	08
1.4.7 Active Tool and Integrated Controls	08
1.5 Expanded Layer Settings	10
1.5.1 Layer Setting Functions	10
1.6 Design Manager Settings	12
1.6.1 Design Manager Options	12
1.6.2 File Interpretation Settings	13
1.7 Design Manager Command Settings	14
1.7.1 Simulation Settings	14
<b>2. CUTWORX Cut Control Software</b>	<b>19</b>
2.1 Cut Control Software Overview	19
2.2 Cut Control Icons	19



# Table of Contents

2.2.1 Cut Control Command Icons .....	19
2.2.2 Indicator Icons.....	20
2.3 Cut Control View Tabs .....	20
2.3.1 Tab Settings.....	20
2.4 Eclipse Tools Overview.....	21
2.4.1 Tool Position Functions .....	21
2.4.2 Tool Parameter Settings .....	21
2.5 Eclipse Tool & Blade Adjustments.....	26
2.5.1 PK-One Button-Tool Change.....	26
2.5.2 Manual Adjustment Configuration (Eclipse 3547) .....	30
2.6 Cut Control Parameter Settings .....	33
2.6.1 Password for Cut Control Software .....	33
2.6.2 Modification (P) Parameters .....	33
2.6.3 Expanded (E) Parameters.....	35
2.7 Other Cut Control Software Settings .....	36
2.7.1 Cut Control Shortcuts .....	36
2.7.2 Eclipse Machine Information .....	36
<b>3. Operational Procedures .....</b>	<b>37</b>
3.1 Network/HotFolder.....	37
3.1.1 Configuring Network .....	37
3.1.2 Configuring Hotfolder .....	37
3.2 File Preperation.....	38
3.2.1 Registration Mark Requirements.....	38
3.2.2 QR Code Placement.....	39
3.2.3 Cut Ready File Preperation .....	39
3.3 Conventional Cutting Operation .....	40

# Table of Contents

3.3.1 Importing Cutting File Data .....	40
3.3.2 Material Thickness Configuration.....	41
3.3.3 Layer & Tool Configuration.....	41
3.3.4 Output Setting Configuration .....	42
3.3.5 Starting Production .....	43
3.4 Non-Conventional Operation.....	44
3.4.1 Initial File Import and Configuration .....	44
3.4.2 Configuration Start Point .....	44
3.4.3 Start Production.....	45
3.5 Advanced Operation Methods .....	46
3.5.1 Crease Layering Optimization .....	46
3.5.2 Cutting from the Backside .....	47
3.5.3 QR Code Operation.....	48
3.6 Dual Sheet-Fed Production (Eclipse 3547) .....	51
3.6.1 Dual Sheet-Fed Production Configuration .....	51
<b>4. Roll Feed Operation .....</b>	<b>52</b>
4.1 Roll Feed Attachment .....	52
4.1.1 Roll Feed Attachment Installation .....	52
4.2 Roll Feed Operation Methods.....	53
4.2.1 Continuous Repeated Cutting of Non-Printed File.....	53
4.2.2 Continuous Repeated Cutting of Printed File .....	53
4.2.3 Segmenting Files Longer than Work Area.....	54
4.2.4 Segmenting Files with Registration Marks .....	55
<b>5. V-Cut Tool Operation .....</b>	<b>66</b>
5.1 Installation of V-Cut Tool .....	56
5.1.1 Single-Edge V-Cut Installation .....	56

# Table of Contents

5.1.2 Double-Edge V-Cut Installation .....	56
5.2 Cut Control Parameter Adjustments.....	57
5.2.1 Eclipse 1523/2029 Parameter Adjustments .....	57
5.2.2 Eclipse 3547 Parameter Adjustments .....	59
5.2.3 Cut Ready File Settings .....	60
5.2.4 Double-Edge V-Cut Tool .....	61
<b>6. CUTWORX Software Suite License .....</b>	<b>62</b>
6.1 License Key Expired.....	62
6.1.1 License Update Request .....	62
6.1.2 WIBU License Key.....	62
6.1.3 Sentinel License Key.....	63
<b>7. Support.....</b>	<b>64</b>
7.1 TeamViewer Remote Support.....	64
7.1.1 Downloading TeamViewer.....	64
7.1.2 Remote Support Request .....	64
7.2 Troubleshooting .....	65
7.2.1 Communication Errors .....	65
7.2.2 Loading Device Troubleshooting.....	69
7.2.3 Cutting Issues .....	72
7.2.4 Conveyor Not Advancing After Cutting .....	73
<b>8. Maintenance &amp; Warranty .....</b>	<b>74</b>
8.1 Maintenance Schedule.....	74
8.2 Warranty .....	75
About CUTWORX USA .....	76

# 1. CUTWORX Design Manager Software

## 1.1 Design Manager Overview

Design Manager Software has many advantages integrated to provide optimal production performance. The CCD digital vision system allows for precise registration control. The CCD has easy to use slider controls for adjustments to match production requirements of materials and lighting. Panel layouts are setup with sequenced workflow in mind. Material libraries and thickness controls are straight forward and easy to operate. Layering has many available options for organization and identification. Output options are available to switch from sheet to roll feeding, if roll feed attachment is purchased. The GUI is intuitive and user friendly, which allows for a quick learning curve. The interface in Design Manager is easy to navigate and has naming conventions to assist operators.

## 1.2 Design Manager Icons

All icons in Design Manager are enabled with a hint dialogue box, when the mouse cursor hovers over a icon.

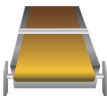
### 1.2.1 Design Manager Command Icons



**Start Cutting Icon:** Click this icon after the cutting task is determined. Click this icon when you need to pause; Click again to continue the cutting.



**Cutting Cancel Icon:** Click this icon when you need to cancel the current cutting task, the cutting task can not continue if you click this icon.



**Conveyor Icon:** Click this icon and the cutting machine will automatically feed material according to the set feeding length.



**Vacuum Pump Icon:** Click this icon to turn the vacuum pump on and off.



**Machine Zero Point Icon:** Click this icon to return the cutting head to the zero point.



**Relative Origin Point Icon:** Click this icon and the head will return to the cutting start point of the last cut.



**File Open Icon:** Click this icon and the file import window will display allowing you to import cutting file.



File Save Icon: Click this icon to save your cutting file.



BRG File Icon: Save your cutting file in the software after completion of tool selection, layering order, rotation etc. as a .brg file type and next time you load this file, the parameters will automatically load.



Switch to Cut Control Icon: Click this icon to quickly switch between Design Manager & Cut Control.



CCD Camera Icon: Click this icon to open the continuous camera feed screen.



Cutting Direction Icon: Click this icon to display the cutting direction on the cut file.



Dynamic Simulation Icon: Click this icon to preview the actual cutting trajectory on the cut file.

### 1.2.2 Design Manager Operation Icons



Rotate 45° Icon: Click these icons with the file selected and rotate clockwise and counter clockwise by 45°.



Rotate 90° Icon: Click these icons with the file selected and rotate clockwise and counter clockwise by 90°.



Mirror at Line Icon: Click this icon to mirror your file at a line segment.



Mirror X-Axis Icon: Click this icon to with file selected to mirror your file at the X-Axis.



Mirror Y-Axis Icon: Click this icon to with file selected to mirror your file at the Y-Axis.



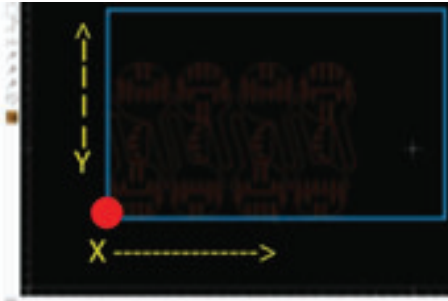
Start Point of Movement Icon: Click this icon with file selected to free move your file into any position.

## 1.3 Design Manager Working Area

### 1.3.1 Design Manager Working Area

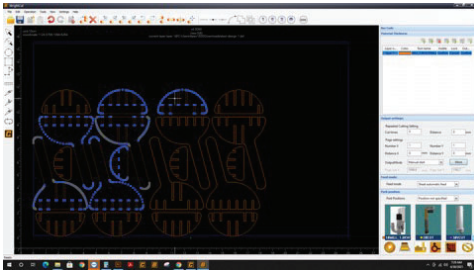
In the standard black background configuration, the numbered blue rectangle is the active working area. The panels are numbered in the event of long continuous roll feed production jobs.

The bottom left corner (red dot) is always the absolute 0,0 position of the Eclipse.



X direction extends towards the length of the Eclipse (towards end of table).

Y direction extends towards the width (towards left side of the table).



Design Manager cursor is enabled for multiple option selection. This means it is not necessary to hold shift key to select multiple items. Pressing shift will de-select an item in a group. Press ESC key to exit multi-select.

## 1.4 Design Manager Functions

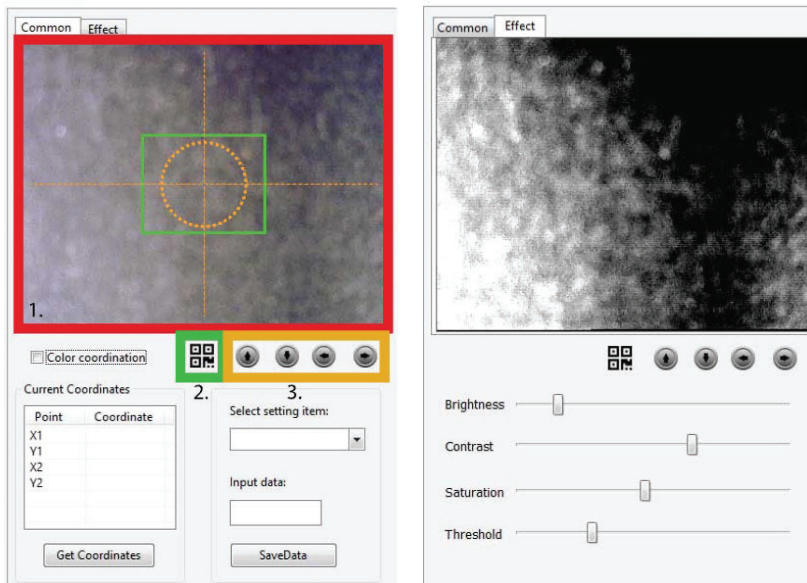
### 1.4.1 CCD Camera & Barcode

The CCD registration camera can manually be accessed by pressing the CCD icon. This process will automatically engage when set up files are output to be processed. When using QR code workflow production, the CCD icon will be used to read QR codes printed on materials.



### 1.4.1.1 CCD Registration

The CCD camera registration window:



In the **red**, the camera feed for registration.

The camera will target to acquire the registration mark when it is in the green window and centered on the dashed orange crosshair.

(optional) In **green**, the QR module function to scan can also be found in this display area.

In **orange**, micro adjust directional buttons are for manual registration when needed.



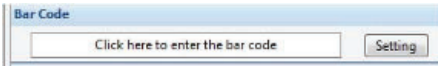
Control of the camera, gantry, and head module can be directed by using the arrow keys on the keyboard.

There are also common adjustment sliders to dial in the focus depending on application.

**Tip: Premask/transfer tape have various visual inconsistencies with the density and sizes of the paper pulp in most standard types. Reflective materials can also pose a challenge. The CCD camera has a built-in light switch to also reduce reflection.**

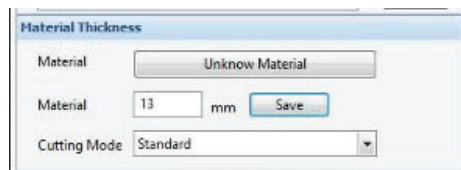
### 1.4.1.2 Barcode

**Barcode:** With the use of a hand scanner, workflow can be optimized by using this function to automatically locate a file within a mapped folder.



### 1.4.2 Material Thickness

**Material Thickness:** Input the thickness of the material being cut for proper lift height calculations of cutting tools.



### 1.4.3 Layer Controls



**Layer Tools:** There are a variety of options to best sequence production runs.

1. Add a command layer. This is for advanced functionality.
2. Add a layer to the job.
3. Remove a layer from a job.
4. Move up a layer in priority in a sequence orientated setup.
5. Move down a layer in priority in a sequence oriented setup.
6. Copy a selected layer.
7. Reset the details of set up layer.

Layer n...	Color	Tool name	Visib...	Lock	Out...
score		CREASE/CREASE_1	View	Hide	View
Layer 1		[DK1/]	View	Hide	View

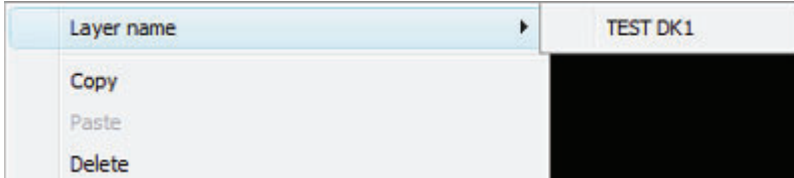
Layer n...	Color	Tool name	Visib...	Lock	Out...
Layer 1		D/Fast Contour Cut	View	Hide	View
Layer 2		[DK1/E15-02]	View	Hide	View
Layer 3		[DK2/E15-01]	View	Hide	View
Layer 4		CREASE/CREASE_1	View	Hide	View
Layer 5		[EOT/E19-3]	View	Hide	View

In a manual production scenario (left image), set up layers can be processed in the sequence from the top down. Jobs with registration have the registration marks take priority and are in the first position.

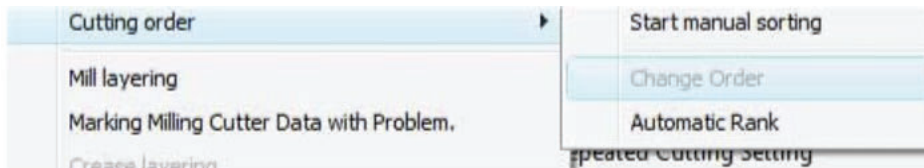
**Tips:** It is generally best to set up inside up cuts first in their own layer and then outside shapes in their own as well. This minimizes the chance of smaller pieces shifting due to vacuum surface area.



**Layer name:** Features in the file of the active working area are easily arranged in sequenced layers. Right-click on a feature and then send to a desired layer.



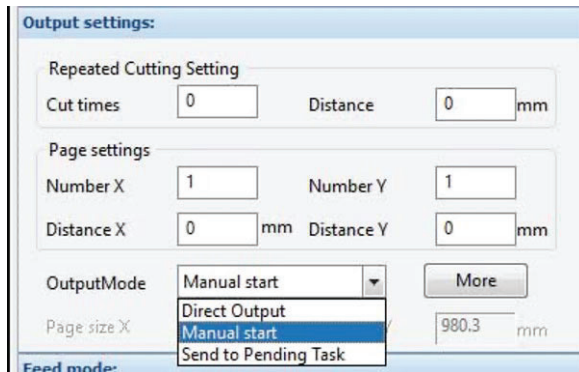
**Sorting:** Manual sorting will allow you to take a group of objects and based on the order you click on them, arrange the cutting order sequence. Automatic ranking will allow the algorithm to make the sequential order of cutting.



**Visible-Lock-Output:** These toggle options are to turn on and off layers for processing. Selecting a layer will cause all of its contents to become highlighted. This is an easy way to differentiate what is organized in which layer.

#### 1.4.4 Output Settings

There are a variety of options for processing jobs.



##### 1.4.4.1 Repeated Cutting Settings

**Cut times** - How many copies are to be made.

**Distance** - For a repeat, what is the distance between multiple pieces.

#### 1.4.4.2 Page Settings

**Number X** - How many copies in the x direction.

**Distance X** - What is the distance between copies in the X direction.

**Number Y** - How many copies in the Y direction.

**Distance Y** - What is the distance between copies in the Y direction.

#### 1.4.4.3 Output mode:

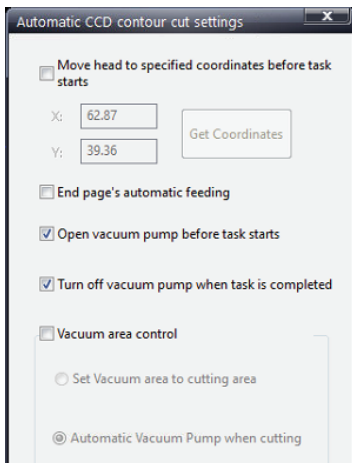
**Manual Start** - After the camera reads a job the machine will wait for confirmation prior to cut.

**Direct Output** - Once registration has been read, the machine will immediately execute task.

**Send to Tasks** - Enhanced workflow option with the use of enterprise software.

#### 1.4.4.4 Automatic CCD Contour Settings

**More** - Auto preparation settings for production workflow.



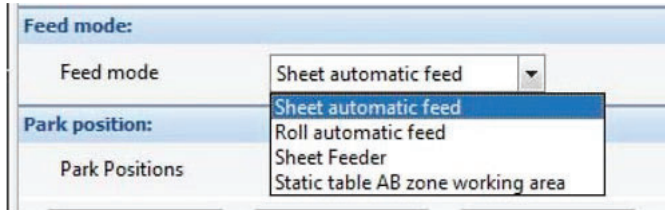
**Move Head to Specific Coordinate Before Task Starts** - Either with sheet feeding or continuous roll processing, the start position can be optimized. The camera position can be stored as a coordinate value to return to when every job is started. This can allow QR codes to be scanned and the workflow can be optimized.

**Open Vacuum Pump Before Task Starts** - Vacuum pump will automatically turn on when starting production.

**Turn off Vacuum Pump When Task is Completed** - Vacuum pump will automatically turn off when production run is completed.

**Vacuum Area Control** - Set the vacuum to either enable to size of cut file automatically or turn on automatically when cutting.

### 1.4.5 Feed Mode



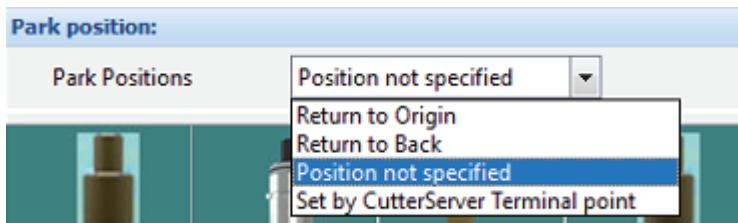
**Sheet automatic feed** - Workflow option to load sheets from the by hand.

**Roll automatic feed** - Workflow option to process roll media.

**Sheet feeder** - Workflow option when using automated feeder.

**Static AB Zone** - Workflow for using tandem front/back operation.

### 1.4.6 Park Position



**Not specified** - At the end of a job the machine head will park in last location.

**Return to Origin** - At the end of job the machine will return to the absolute origin.

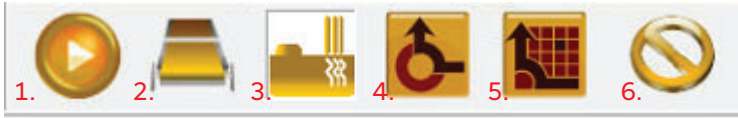
**Return to Back** - At the end of the job the machine will return to the far-left corner.

**Set by Cut Control Software**- At the end of job the machine head will park where marked.

### 1.4.7 Active tools and Integrated Controls



**Active tool display:** Active tools in the machine based by Cut Control Software able to be selected.



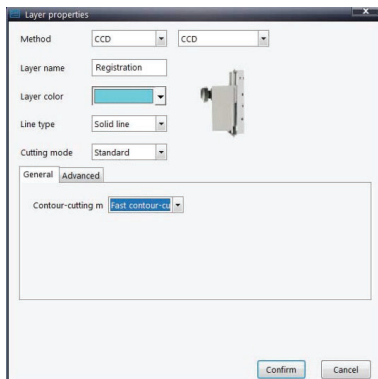
**Integrated controls:** Design Manager shares integrated control with Cut Control Software.

1. Play/Output to start and then to Pause when running.
2. Using the feed function to grab materials from loading device.
3. Vacuum on/off.
4. Return to Absolute Origin.
5. Return to Temporary/Relative Origin.
6. Cancel run.

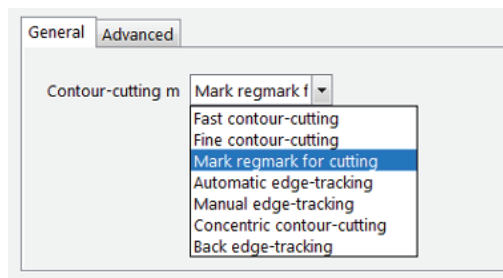
## 1.5 Expanded Layer Settings

### 1.5.1 Layer Setting Functions

#### 1.5.1.1 CCD Camera



**Contour Cutting Mode:** Several advanced functions including cut from back process. Fast contour cutting is the standard mode for everyday use.



**Fast Contour Cutting** - Focuses on the efficiency of finding points, requires positions points or registrations marks.

**Fine Contour Cutting** - Focuses on the accuracy of position points or registration marks.

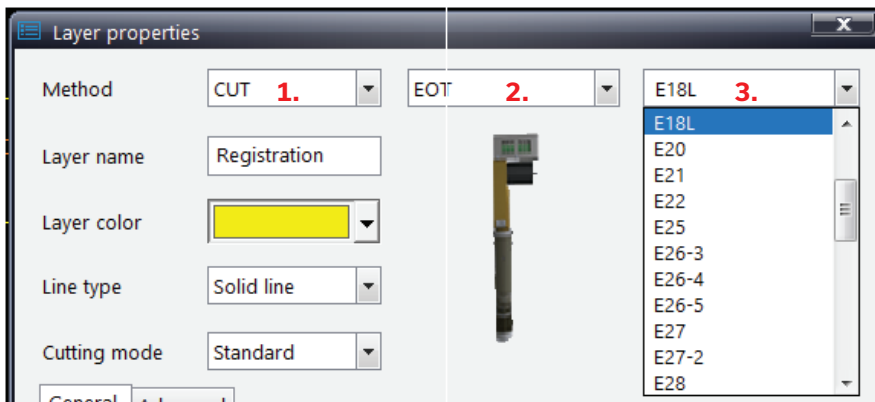
**Mark Regmark for Cutting** - After the camera recongnizes the position points, it will automatically cut the poisioning points. This function is used for reverse cutting or backside processing.

**Automatic Edge-Tracking**- Determine the position by locating two points on the edge of the material. Automatic edge-finding and sleeve cutting are suitable for materials with regular edges and fixed printing positions and no positioning points are required.

**Manual Edge-Tracking**- Similar to automatic-edge tracking, but the positioning needs to be manually determined.

**Concentric Cutting**- This operation method is similar to that of fast contour-cutting except the software does not process the cutting data size, but only adjust the data position.

### 1.5.1.2 Method




**Method:** First option of layer setup.

Method is which tool or function is intended to be used on the selected layer.

**(1) Method:** Which tool holder will be selected and applied.

**(2) Tool:** Of the active tools in Cut Control Software, which tool will be used.

**(3) Blade:** Of the selected tool, which blade will be used.

Method	CUT
Layer name	Holder
Layer color	
Line type	Solid line
Cutting mode	<div> Solid line  Perforation line </div>

**Layer Name:** Editable field to aid in organization.

**Layer Color:** Color to display in the working area to aid in feature identification.

**Line Type:** Cut path

definition.

**Solid Line:** Leave vector path solid for normal operations.

**Perforation Line:** Convert vector paths with gap and spacing options. Can also be used to produce bridges.

Cutting mode	Standard
General	Advanced
Stepped size of	<div> High-speed  Standard  Common  Fine </div>

**Cutting Mode:** 4 levels of compensation factors.

**High-Speed-** Loosest constraints of compensation to accommodate skew.

**Standard-** Balanced setting of constraints.

**Common-** Favors actual size when registration mark amount is low.

**Fine-** Tightest constraint to maintain actual file size vs skew.

General Advanced

Stepped size of cut 30 mm 1 times

Cutting depth 30 mm

Path offset 0 mm

☐ Overcut compe

**Cutting Depth-** Overall thickness of the material.

**Stepped Size of Cut-** Depth the knife tool will cut per pass.

**Times-** Number of times the knife will process the cut path.

**Overcut Compensation-** Overcut compensation for the EOT/UCT. Helps reduce overcut lines when processing cut paths.

## 1.6 Design Manager Settings

### 1.6.1 Design Manager Options

Design Manager Settings tab has many import options. Files should be set up using all the same units of measure. Do not import files that had some features in pixels, some in inches, and some in metric.

Options

Parameters Configuration

Unit value

☐ mm

☐ cm

☐ m

☐ Inch

☐ Foot

☒ Default unit

Scale factor: 1

☒ PLT pretreatment

☒ Arc Optimize

View background Black

View Scale 1

Trajectory simulation speed

Slow Fast

☒ Hardware circle

The original line around circle

CCD Max page length 2500 mm

MergeLine Threshold 0.1 mm

Match rule Layer name

Visual Mode CCD

Save Exit

**Unit Value:** Import measurement of file. Leaving as default will allow for appropriate scale conversion.

**CCD Max Page Length:** This is an editable field, typically is set for the style of machine, but will be changed during roll feed operation. The sets the length of the working area for the CCD camera to read.

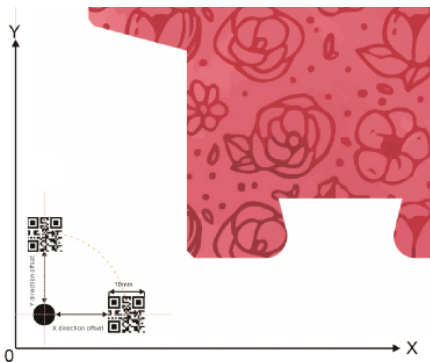




In the **red**, file directory that will contain the cut files. QR code will require both cut file and QR code ID be the same naming convention.

**Contains Subfolders** - will the cut file directory contain subfolders, useful for folders named by job or customer.

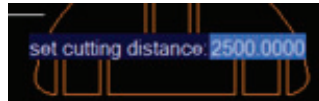
In the **green**, specify the QR code position in relation to the first registration mark. If after reading the QR code, the machine will need to move towards (0,0), the value would be negative input to X or Y. If moving away from (0,0), the value is positive.



## 1.7 Design Manager Command Settings

### 1.7.1 Simulation Settings

Design Manager has several options for cut path simulation.



**Cutting Direction:** This will add a directional arrow to show direction of the tool path.

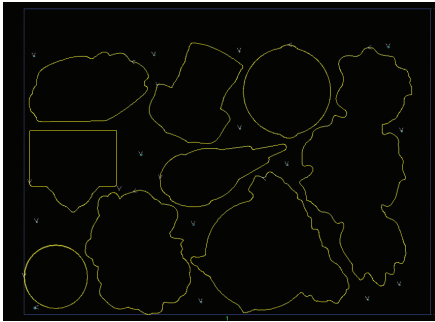
**Static Simulation:** This adds a graphic enhancement to the directional arrow to show the direction of the tool path. It is best used to show the tool path of the router (Apex Series) to check for any conflicts like shapes running into each other.

**Dynamic Simulation:** This combines the previous tools and adds actual movement to the simulation to see if the file will process.

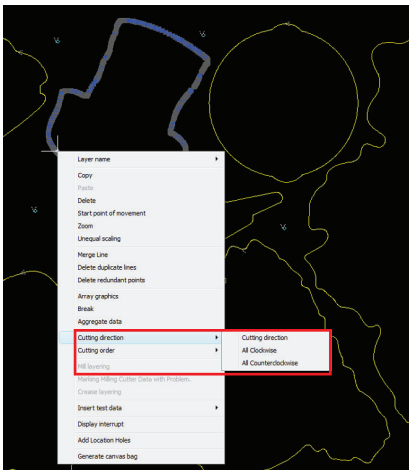
**Manual Paging:** With this option, set up conveyor feeding distance. For manual paging instead of allowing the computer to make calculations, set the panel lengths manually.

### 1.7.1.1 Changing Blade Cut Direction

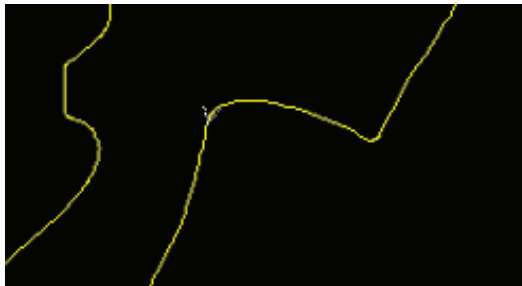
Design Manager enables the ability to change blade cutting direction. This is most useful when using asymmetrical blades.



Start by selecting the entire file and clicking the 1 icon in the top toolbar. This will show the cutting direction on each vector die line.

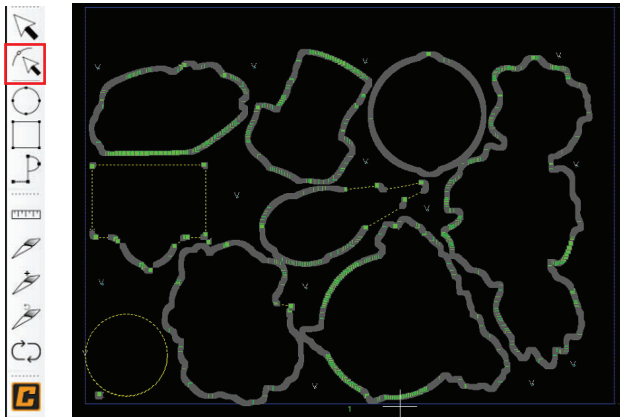


Select a piece of the file that requires the cutting direction to be changed. Right click on the piece, then navigate to the Cutting Direction option. Three options will appear, select the direction and the changes will be applied.

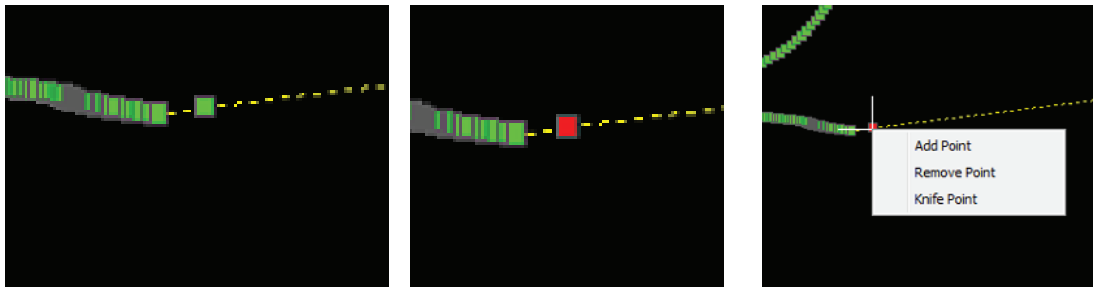


### 1.7.1.2 Changing Blade Start Point

Design Manager enables the ability to change starting points.



Start by selecting the edit nodes icon. This will display all anchor points on the current file.



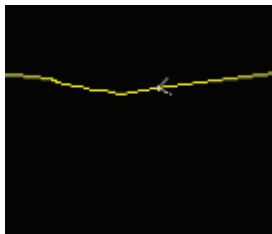
Select an anchor point by left clicking a green square. The square will turn red indicating it has been selected. Then right click on the red square to show three options.

**Add Point** - Adds a node to the output path.

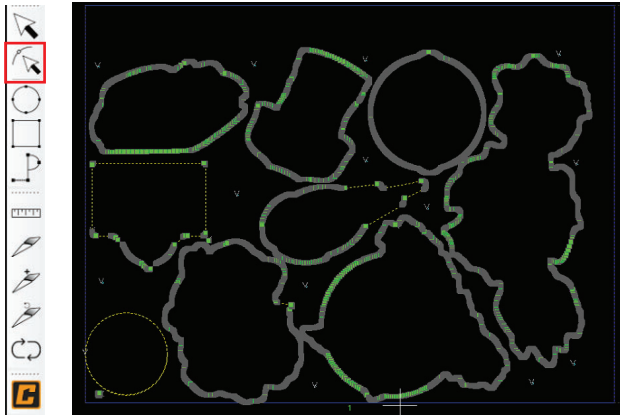
**Remove Point** - Removes a node from the output path.

**Knife Point** - Changes the current knife starting point to this selection.

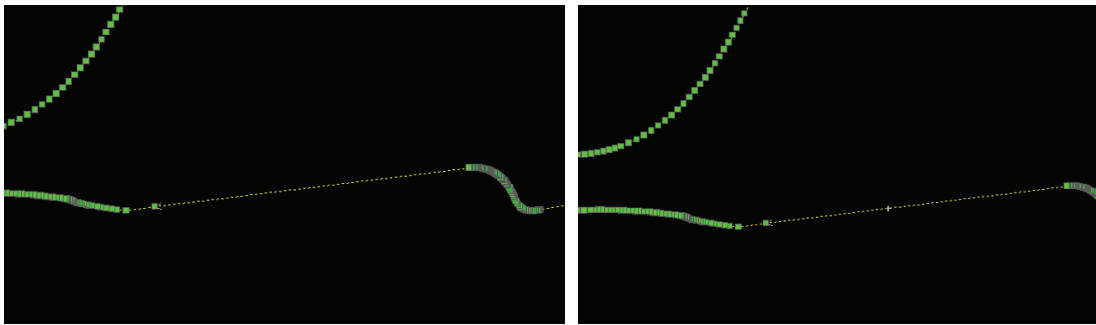
Select Knife Point and the current starting point for knife entry will change to the selected node.



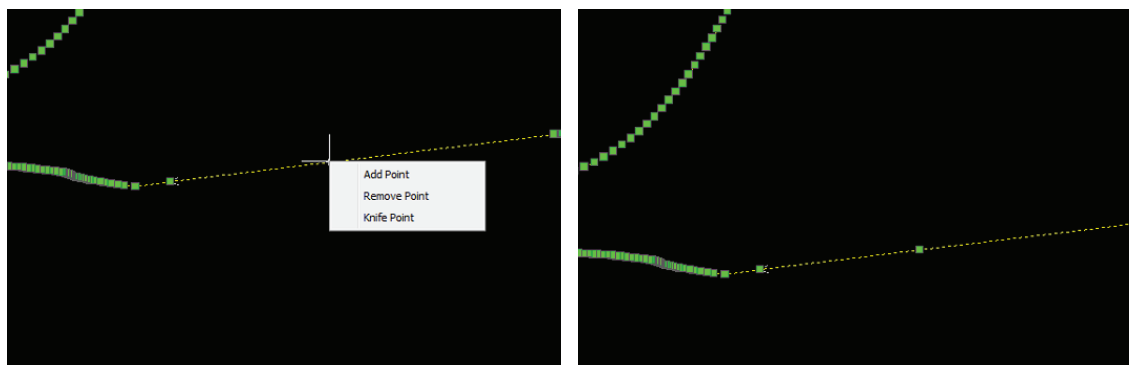
To manually select a starting points by creating a node, follow these steps:



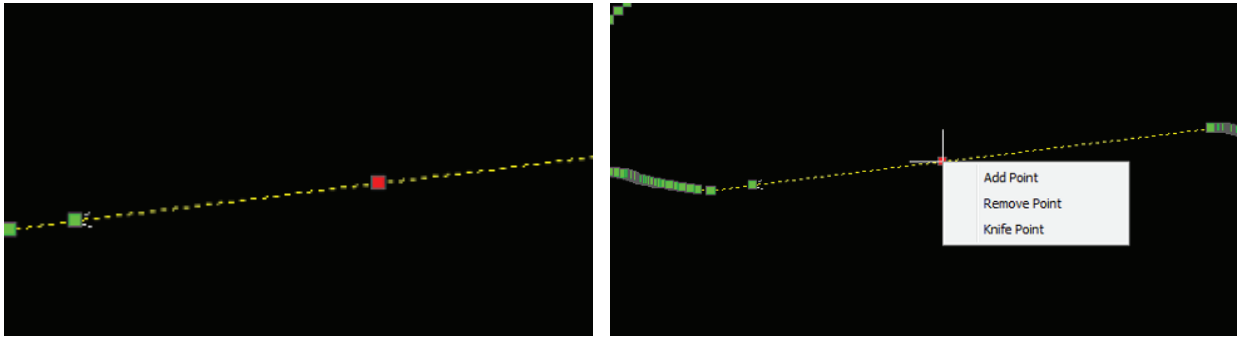
Start by selecting the edit nodes icon. This will display all anchor points on the current file.



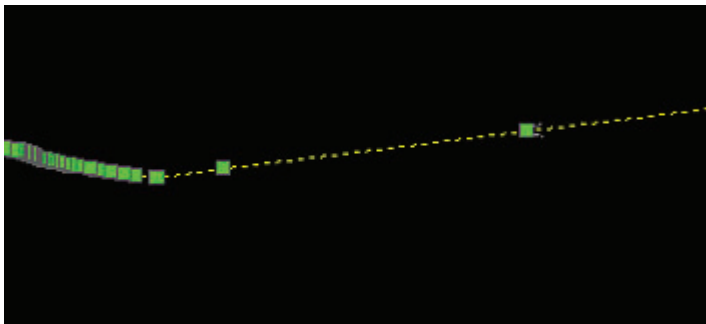
Find a location on the output path. Left click on the path and a cross will appear.



Right click on the cross, from the options select Add Point. A new node will be created.



Left click on the new node and right click to populate the options. From the options, select Knife Point.



A new knife startin point has been created.

## 2. CUTWORX Cut Control Software Overview

### 2.1 Cut Control Overview

Cut Control Software is the machine control half of CUTWORX Software Suite. This program is optimized to allow for full control access of the machine. With live linked programs and integrated pause functions, adjustments can be made and applied on the fly. The GUI features many icons which include path preview and tool settings. A red-light laser pointer is integrated with the CCD camera for manual and automated processing.

### 2.2 Cut Control Icons

All icons in Design Manager are enabled with a hint dialogue box, when the mouse cursor hovers over a icon.

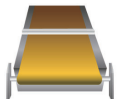
#### 2.2.1 Cut Control Command Icons



**Start Cutting Icon:** Click this icon after the cutting task is determined. Click this icon when you need to pause; Click again to continue the cutting.



**Cutting Cancel Icon:** Click this icon when you need to cancel the current cutting task, the cutting task can not continue if you click this icon.



**Conveyor Icon:** Click this icon and the cutting machine will automatically feed material according to the set feeding length.



**Vacuum Pump Icon:** Click this icon to turn the vacuum pump on and off.



**Machine Zero Point Icon:** Click this icon to return the cutting head to the zero point.



**Relative Origin Point Icon:** Click this icon and the head will return to the cutting start point of the last cut.



**Preview Icon:** Click this icon and the Eclipse will show the cutting range by the red light according to the size of the cutting task.



Collecting Icon: Click this icon in the standby mode to feed material on the conveyor into the collection table.



PK One Button Tool Change Icon: Click this icon in the standby mode to enter the interface of the EOT tool changer.

## 2.2.2 Indicator Icons



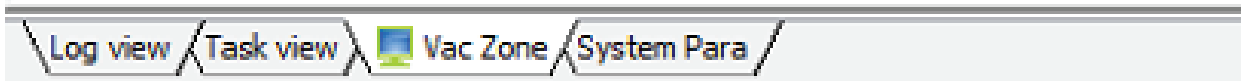
In Cut Control Software, on the bottom of the software screen below the work area are the indicator icons.

Serial Port **green** means the machine is connected to the computer and drivers without error.

Vac **green** means the vacuum pump is on while **red** means it is off.

## 2.3 Cut Control View Tabs

### 2.3.1 Tab Settings



**Log View** - This is a running log of all the processes including task that have been output.

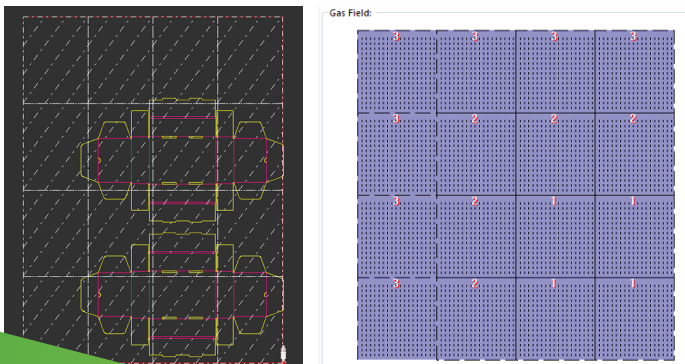
**Task View** - Enhanced workflow list of tasks/jobs (only for textile and leather processing models).

**Vac Zone** - Control of suction zones and variable power output control (Eclipse 3547/Apex models only).

**System Parameters** - List current active parameters for feed, speed, etc (view only)

#### 2.3.1.1 Vacuum Zone Control

When operating the Eclipse 3547, use the vacuum zone control system to activate needed zones that highlight working area for better suction optimization. Simply click one of the three zones or click and drag the zones to activate.



## 2.4 Eclipse Tools Overview

### 2.4.1 Tool Position Functions



Socket 1  
(DK1)



Socket 2  
(CREASE)



Socket 3  
(EOT)



Socket 4  
(DK2)



Red light

#### 2.4.1.1 Tool Position Activation

To select a tool to be the active tool you need to left-click on the desired tool.

1st left-click selects the tool.

2nd left-click drops the tool to an engagement position.

3rd left-click engages the tool to the measured zero position.

**Note:** unmeasured tools are capable of over traveling in the Down/U direction. If you are unsure about your selection, always click back to the red-light laser pointer tool.

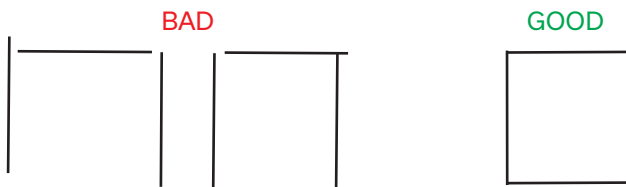
#### 2.4.2 Tool Parameter Settings

Right-click on any tool icon opens the available parameter adjustment options. While the list is large, it is so that a wide variety of applications can be accommodated.

Parameter Set			
Knife holder/knife tool modification			
Parameter item	Value	Unit	Range Of Value
SOCKET1	DK1		
Positive angle of knife and X axis	0.000	limit	-360.000 ~ 360.000
Knife-up compensation	-0.100	mm	-30.000 ~ 30.000
Knife-down compensation	0.300	mm	-30.000 ~ 30.000
Knife lifting angle	180.000	limit	0.000 ~ 360.000
X,Y movement speed	1.000	m/s	0.010 ~ 1.500

**Red:** Allows for zero position adjustments on tools (used if drive belt is replaced to recenter).

**Green:** Allows for adjustments of cut path to be square.



**Blue:** Knife Lifting Angle- Sets the threshold for when the tool will lift before turning.

**Orange:** XY Movement Speed- Sets the main speed factor for the tool movement.



High Time	80.000	ms	5.000 ~ 128.000
Pressure keep	1	level	

To adjust cutting pressure of DK1/DK2 modify:

**High Time** - the electromagnet's full working power time at the beginning of the knife drop.

**Pressure Keep** - the pressure after the knife is down. This is divided into 5 levels, 1 is the smallest and 5 the largest.

**Note:** For Eclipse 3547 models, the pressure keep will be a percentage.

X eccentric distance	0.000	mm	-100.000 ~ 100.000
Y eccentric distance	0.000	mm	-1.270 ~ 1.270

X & Y eccentric distance is the travel path of the blade. The most optimal path for blade travel is to cut on the same path forwards and backwards, see figure below:

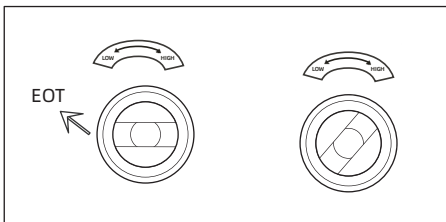


### 2.4.2.1 Configuring Positive Blade Angle

Right click on EOT Tool in Cut Control Software. This will prompt the EOT tool parameters. Ensure direction to rotate is enabled.

Parameter Set			
Knife holder/knife tool modification			
Parameter item	Value	Unit	Range Of Value
SOCKET1	DK1		
Positive angle of knife and X axis	0.000	limit	-360.000 ~ 360.000
Knife-up compensation	-0.100	mm	-30.000 ~ 30.000
Knife-down compensation	0.300	mm	-30.000 ~ 30.000
Knife lifting angle	180.000	limit	0.000 ~ 360.000
X,Y movement speed	1.000	m/s	0.010 ~ 1.500

### Eclipse 1523/2029



Manually press the EOT knob on the Eclipse head module and rotate till the knife is showing but not touching the belt.

Next, engage the EOT tool by selecting the EOT tool in Cut Control Software then right click the EOT tool to bring up the EOT tool parameters screen.

Adjust the Postive angle until the blade angle cutting direction is facing the loading device where paper sits till it is fed onto the conveyor belt.

The blade should not favor a direction, but at a zero point facing back straight towards the loading device.

### Eclipse 3547

Apply the changes each time a new angle is set and the blade should automatically adjust. Once set, click apply and sure to save.

**Note: these steps will need to be repeated for the EOTCUT1 tool.**

Adjust the depth of the EOT Tool on the Eclipse head module until the knife is showing but not touching the belt.

Next, engage the EOT tool by selecting the EOT tool in Cut Control Software then right click the EOT tool to bring up the EOT tool parameters screen.

Adjust the Postive angle until the blade angle cutting direction is facing the loading device where paper sits till it is fed onto the conveyor belt.

The blade should not favor a direction, but at a zero point facing back straight towards the loading device.

Apply the changes each time a new angle is set and the blade should automatically adjust. Once set, click apply and sure to save.

**Note: these steps will need to be repeated for the CUT tool.**

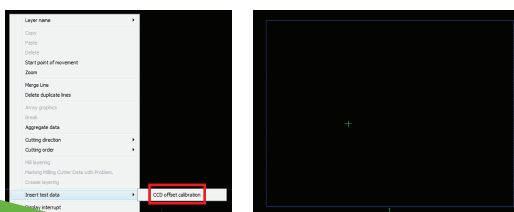
### 2.4.2.1 Configuring X & Y Eccentricity

Step 1: Start by right clicking on EOT tool in Cut Control Software, locate X and Y eccentric values. Input 0 for each. Apply and select sure to save.

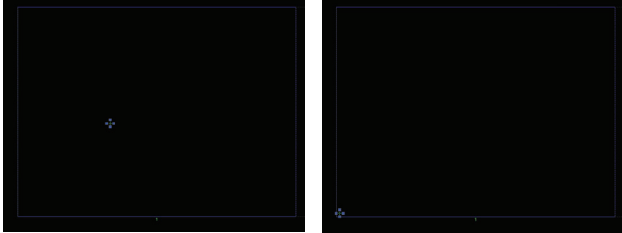


X eccentric distance	0.000	mm	-100.000 ~ 100.000
Y eccentric distance	0.000	mm	-1.270 ~ 1.270

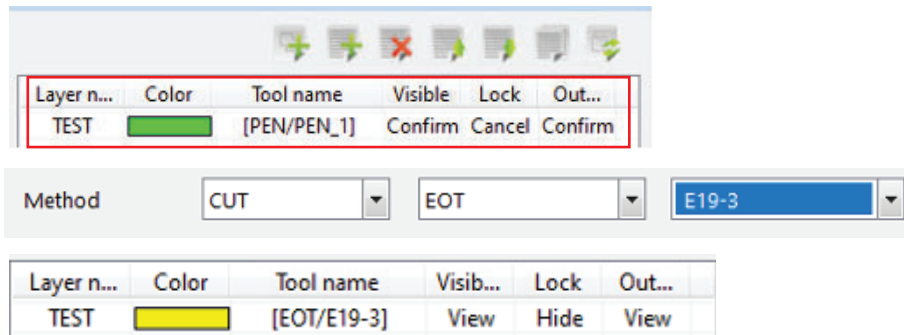
Step 2: Open Design Manager Software and right click in the working area layout. Locate the insert test data drop down and select the CCD test calibration. This will place a cross mark onto the layout preview.



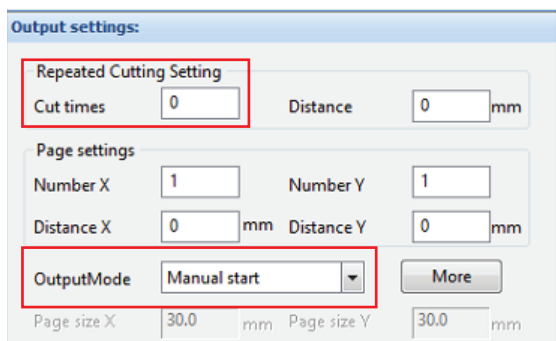
Step 3: Select the cross mark that is generated and press the "1" keybinding on the keyboard. This will move the cross mark into the origin point corner.



Step 4: In the generated layer for output, double click the test layer to open the layer properties. Assign CUT for the holder, EOT for the tool, and E19-3/E19-2 depending on blade choice for the blade.



Step 5: Under Output settings, change to manual production mode and input 0 for cut time.

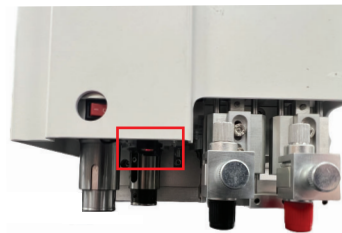


Step 6: Manually place a white sheet of cardstock onto the conveyor belt, ensure the gantry will not collide with the paper, square the sheet to the belt.

Step 7: Power the vacuum system on by selecting the vacuum icon, then select the start icon to send the cut file to Cut Control Software.



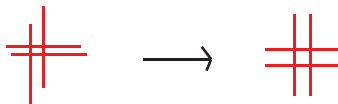
Step 8: In Cut Control Software, select the red light tool. The red light is shown on the conveyor belt under the Eclipse head module. The red light illuminating is now the start point for where the cut will begin. Navigate the red light over a spot on the sheet of material placed earlier.



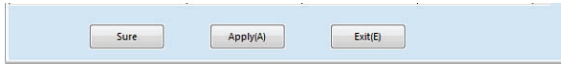
Step 9: When setup is complete, select the start icon in Cut Control Software and the Eclipse will process the cut file. When finished executing the cutting task, manually move the machine by double clicking in the layout preview in Cut Control Software or use the arrow keys to direct the gantry away to view the cut.



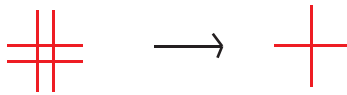
Step 10: The goal is to adjust the X eccentric value until the cut matches the below figure on the right side. The cut path should start and stop at the same end points evenly.



Adjust the X eccentric value in the EOT tool parameters until the ideal cut is achieved. Each time a value is changed, simply select the apply and sure buttons to save. Then select the relative origin button to bring the machine back to its last cut start point. move the machine over with the arrow keys and select the start icon again to repeat the cut file.



Step 11: Repeat the same steps for the Y eccentric value until the below figure on the right is achieved. The cross mark should cut start and stop and the same end points while cutting on the same path each direction.

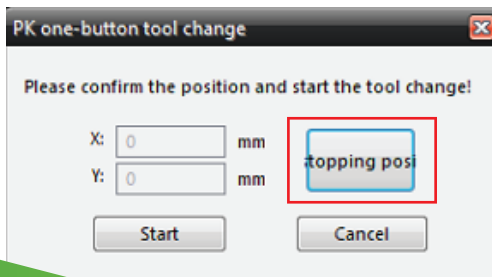


**Note:** these steps will need to be repeated for the EOTCUT1 & CUT tool (Eclipse 3547 Model).

## 2.5 Eclipse Tool & Blade Adjustments

### 2.5.1 PK-One Button-Tool Change

In Cut Control Software, select the EOT or CUT tool holder depending on which model Eclipse and then select the PK one button tool change icon. The following window will be prompted:

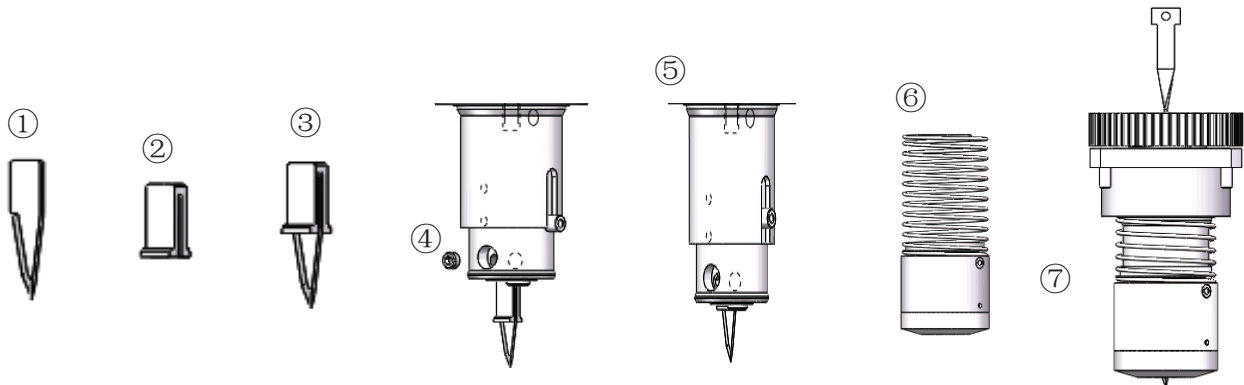


When using for the first time, it is required to set the stop position. Start by selecting the Stopping position option and move the gantry head to a suitable position. It is ideal to move the Eclipse head module over the side barrier so the EOT is exposed as the tool will need to drop.

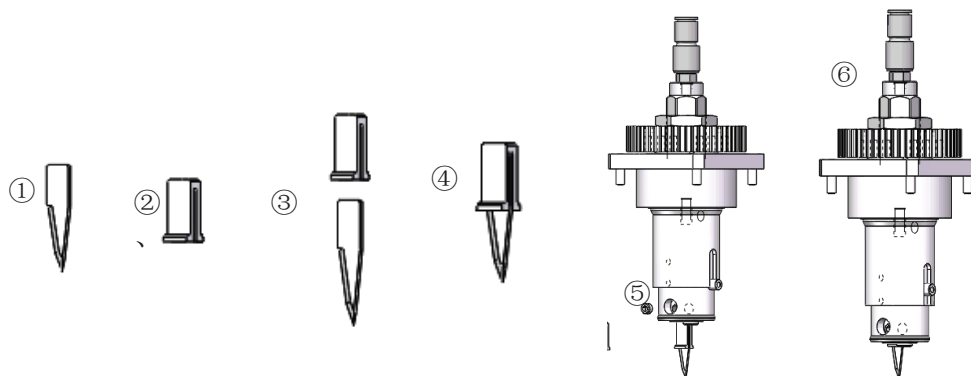
Press Enter to save the location of the position. At this point you will only to select start and the EOT will automatically move into position.

The EOT will move into position when clicking Start and drop the tool holder down. In this state, operator can remove the pressure plate and replace the blade. If the tool angle needs to be adjusted, adjustments can be made to the Angle and saved by selecting Enter. Select Cutter lifting to save the changes and raise the EOT tool holder back up. Click complete to finish EOT blade change.

### 2.5.1.1 EOT/UCT Blade Change (Eclipse 3547)



As shown in the figure above, the installation sequence of the oscillating knife is the following: insert ① into ②, combine ①② in the order of ③, then insert ③ upwards into the vibrating knife sleeve, insert ④ tightly to the end. The thin side of ② faces the nut hole, ② .Top to the bottom end of the knife sleeve, the buckle of ⑥ is connected with the cylinder rod, and the assembled state is completed ⑦ .



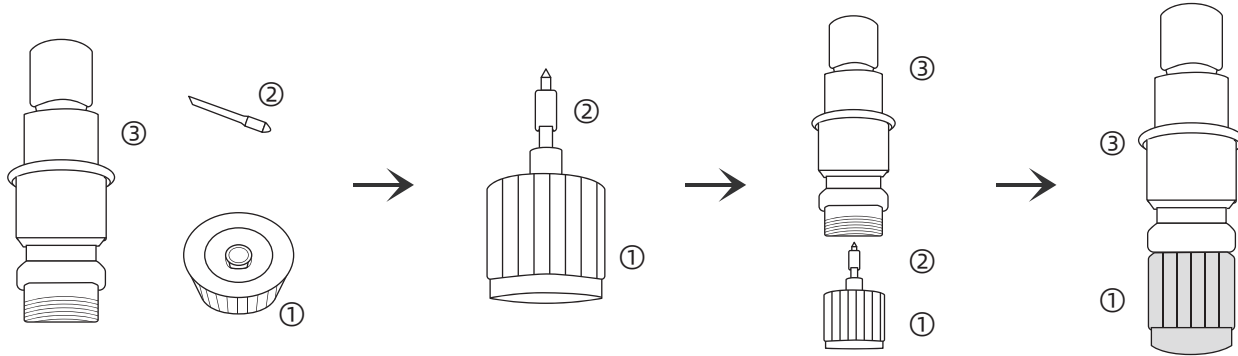
As shown in the figure above, the installation sequence of the CUT knife is: insert ① into ②, combine ①② in the order of ③, and then insert ④ upwards into the sharp knife sleeve. The thin side of ② face the M5 nut hole, ② top to bottom to the end of the sleeve, tighten the M5\*3 nail to the end. Installation sequence ⑥ is completed.

### 2.5.1.2 DK Tool Blade Change

E15-01 - Insert to Black Tip Holder

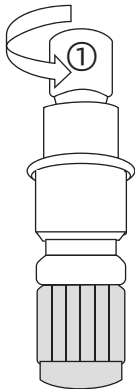
E15-02 - Insert to Red Tip Holder

Unscrew the blade cap, insert the blade into the blade holder, then install the blade cap and tighten.



### 2.5.1.3 Blade Exposure Test

After installation of blade into holder, manually adjust the length of the tool tip by turning the knob on the top of the DK tool. When cutting materials of different thickness, different tip lengths need to be adjusted. A test of exposure can be done by manually dragging tool across material and check if fully cutting through or half cut.



#### Half Cut

Adjust the length of the blade tip and try cutting on the material, as long as the material has been half cut to form a sticker, label etc.

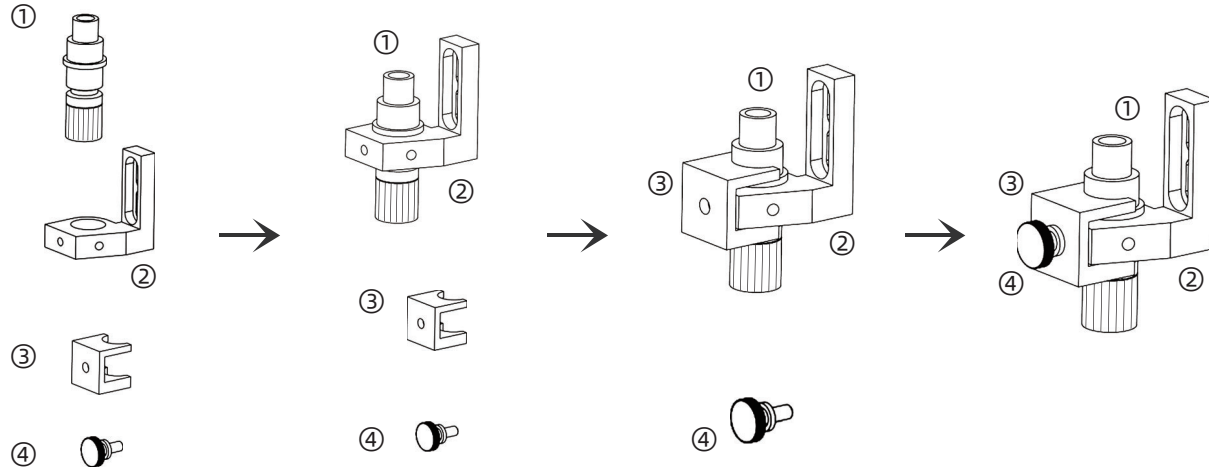
#### Full Cut

Adjust the length of the blade tip and try cutting on the material, as long as the material has been cut through.



### 2.5.1.4 DK Tool Installation

Install DK tool into the insert in the frame of the Eclipse head module. Once inserted, install the clamps to hold in place and then tighten the screw to lock in place.



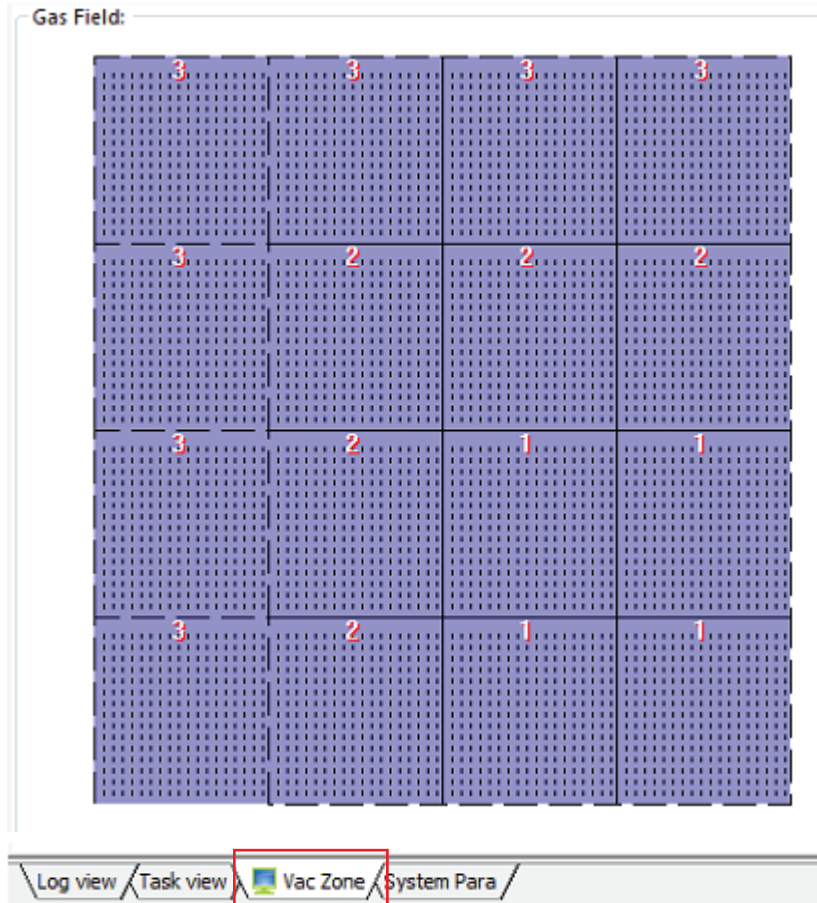
### 2.5.2 Manual Adjustment Configuration (Eclipse 3547)



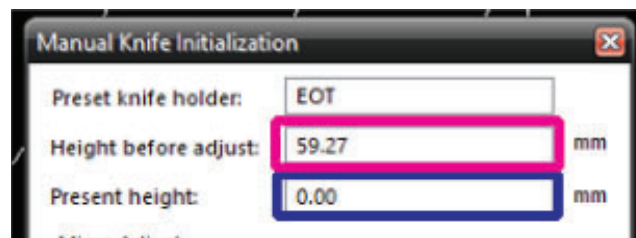
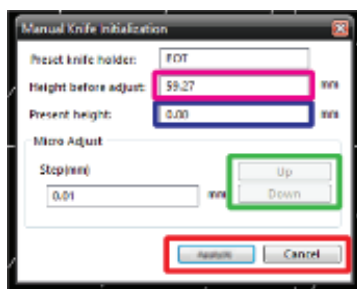
First, select the tool that needs to be adjusted for depth. In this case, DK1 will need to be the tool selected. Once the icon is selected, the tool will now be the starting position (active tool). Move the head module to a safe position on the belt and ensure no debris or obstacles are in the way. You move the machine by either using the arrow keys or double clicking in a spot in working area shown in Cut Control Software.

Once a position has been selected, turn on the vacuum and select manual measure icon. If the vacuum does not activate, refer to the next step.





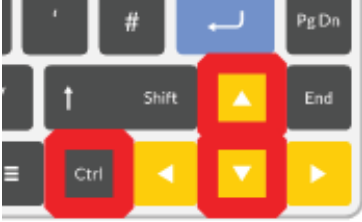
Manually select or click and drag the zones to turn purple. Purple indicates the zones are active. This menu can be reached by selecting the Vac Zone tab located in the bottom right corner of Cut Control Software.



The following dialogue options will appear.

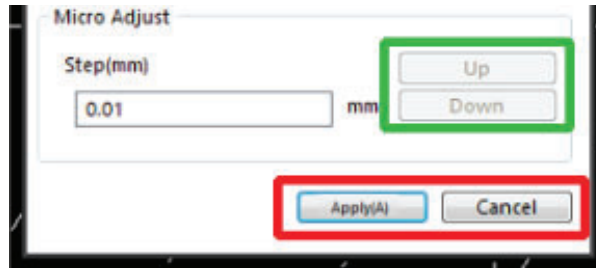
The Magenta height before adjust section is the last known position for that tool.

The Dark Blue present height section is where the tool is currently measured at.



First, select and hold CTRL and then the down arrow key will lower the tool at a quicker rate of speed.

When the desired measurement is close to the surface, release the CTRL button and use the down arrow key to continue lowering at a slower rate of speed.



The arrow buttons on the keyboard are used primarily for direction of intent.

The Green up/down section are used for micro adjustments to calibration depth.

If a mistake or unsure adjustment is made, press the cancel button and attempt again.

Once the tool is in an acceptable position, press the apply/confirm button to accept and store the position.

Once measured, verify depth by engaging the tool to the new zero position.

Select the tool icon one time.

Second click will engage the tool.

Use the up/down arrow keys to make a manual cut on a blank material.

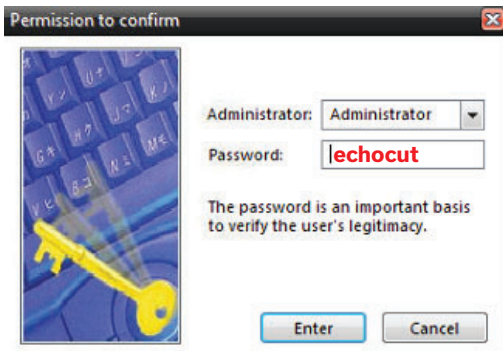
Third click will zero the tool position.

## 2.6 Cut Control Parameter Settings

### 2.6.1 Password for Cut Control Software

Cut Control Software has menu items locked behind a password protected window. To access these features, input the following password:

echocut



### 2.6.2 Modification (P) Parameters

To enter the Modification(P) page, press Ctrl + Alt + Shift + P or from the Configuration(T) drop down menu select Parameters(P) and click Modification(P).

Adjustment	Measured length	1000.000	mm	0.000 ~ 120000.000
	Scheduled length	1000.000	mm	0.000 ~ 120000.000
Cutting scope	Length	1200.000	mm	0.000 ~ 1200.000
	Width	900.000	mm	0.000 ~ 900.000
Origin coordinat...	X-axis offset	302.000	mm	-500.000 ~ 1200.000
	Y-axis offset	166.000	mm	-500.000 ~ 900.000
Pen offset	X offset	0.000	mm	-200.000 ~ 1000.000
	Y offset	0.000	mm	-200.000 ~ 1000.000
Red-light position	X offset	38.910	mm	-200.000 ~ 1000.000
	Y offset	74.910	mm	-200.000 ~ 1000.000
Camera	X offset	39.600	mm	-200.000 ~ 1000.000
	Y offset	74.830	mm	-200.000 ~ 1000.000
	Height	0.000	mm	0.000 ~ 300.000
Feeding	Feeding length	1.400	m	-50.000 ~ 50.000
	Feeding speed.	0.500	m/s	0.050 ~ 0.600
	Material press time	3.000	s	0.000 ~ 100.000

In the red:

**Cutting Scope** - the measured length and width of the cutting area. If using a roll feed attachment device, the measured area will sized accrodngly to compensate for the attachment device on the belt.

In the **blue**:

**Red-Light Position** - the position of the red-light laser in relevance to the DK1 tool. Adjust this parameter to accurately coordinate the start position for red-light manual start positioning processing.

In the **green**:

**Camera** - the measured length and width of the cutting area. If using a roll feed attachment device, the measured area will sized accordingly to compensate for the attachment device on the belt.

In the **magenta**: Control settings for feeding.

**Feeding Length** - measured distance the Eclipse will feed material forward on the conveyor belt.

**Feeding Speed** - conveyor belt speed when feeding.

**Material Press Time** - time of suction cups pressing down on material when feeding.

Socket1 ▾		DK1 ▾		
Socket	X-axis offset	0.000	mm	-200.000 ~ 1000.000
	Y-axis offset	0.000	mm	-200.000 ~ 1000.000
	A knife and X forward	0.000	limit	-360.000 ~ 360.000
	Control mode	0 ▾		

Modify socket offsets. This is useful when one tool is not cutting or creasing in correct position. Adjust the X and Y axis offset.

### 2.6.3 Expanded (E) Parameters

To enter the Expand(E) page, press Ctrl + Alt + Shift + E or from the Configuration(T) drop down menu select Parameters(P) and click Expand(E).

PK press waiting time	1.250	s	0.000 ~ 12.800
PK press lift time	1.250	s	0.000 ~ 12.800
PK receiving time	0.500	s	0.000 ~ 12.800
PK feeding docking point	1480.000	mm	0.000 ~ 6553.500
PK back distance	0.000	mm	0.000 ~ 25.500
PK feeding mode	PK2 sheet		
PK2 collection length	2.000	m	0.000 ~ 2.560
PK2 prohibits the tilting action	<input type="checkbox"/>		
PK2 distribution waiting time	1000.000	ms	0.000 ~ 5100.000

**PK Press Waiting Time** - the waiting time after the suction cup is down.

**PK Press Lift Time** - the stopping time of the beam after the suction cup is lifted.

**PK Receiving Time** - the working time of the motor during the receiving action.

**PK Feeding Stop Point** - when feeding, the position where the beam stops when moving backward over feed table.

**PK Back Distance** - the distance material pushes backward after suction cup is lifted. This function is to separate the materials from each other. Set to 0 to turn off this feature.

**PK Prohibits Tilting Action** - (Eclipse 3547) will disable or enable the tilt action when suction cups pick up material.

In the red:

**PK2 Sheet** - Set to this setting when doing sheet feeding production.

**Roll Material** - Set to this setting when doing roll material processing. This setting will disable the loading device automatic height detection. It will also modify the current cutting scope area to compensate for roll feeding device.

## 2.7 Other Cut Control Software Settings

### 2.7.1 Cut Control Shortcuts

The following are Cut Control Software keyboard shortcuts to access a variety of useful functions.

KeyMap	
Key	Description
Ctrl+Alt+Shift+C	Sys Config Dialog
Ctrl+Alt+Shift+M	Config Special Param Dialog
Ctrl+Alt+Shift+L	Save As Factory Parameter
Ctrl+P	Pump Switch
Ctrl+Alt+Shift+D	Diagnosis
Ctrl+Alt+Shift+P	Parameter Dialog
Ctrl+Alt+Shift+E	Expand Param Dialog
Space	Start Or Pause Cut
Esc	Cancel
Ctrl+Backspace	Power cut
Shift+S	Tool holder index sorting
Ctrl+Alt+S	Switch to single beam mode
Ctrl+Alt+D	Switch to normal double beam mode
Ctrl+Alt+Shift+T	Switch to double beam double stand-alone mo...
Ctrl+C	Stop automatic detection of material thickness
Ctrl+V	EVA information setting test window
Ctrl+D	Double beam setup
Ctrl+L	Loading and unloading mode
Ctrl+Alt+Shift+U	Remote upgrade
Ctrl+Alt+Shift+T	External Param
Ctrl+T	LaserTest

### 2.7.2 Eclipse Machine Information

The diagnosis setting will display current machine information.

Diagnosis	
Parameter item	Value
Serial No	PK12092111159
DSP version NO	PK_3.6_L_210909
Fpga version number	1.3.9
PLC version	PKSI2-2.02109098
GPRS version number	
Handle version NO	
C Board Information	No C Board
FPGA state	FpgaErr: 81,
	Moton: 4605,8100,707E,
	EmgOlsPaus: FB,
	EndoeConfigX2U: B,
	Fpga IO Status: F,
Encoder value	X: 0
	Y: 0
	Z: 0
	U: 0
	V: FFD9F75C
	W: FFD46C0A

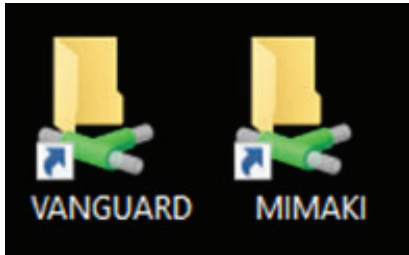


## 3. Operational Procedures

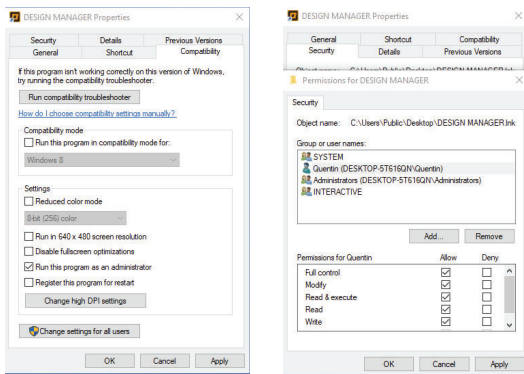
### 3.1 Network/Hotfolder

#### 3.1.1 Configuring Network

With a configured RIP station, sending separate cut files to a shared folder on the network for the machine to import from is ideal.



Manual files can be sent in a similar fashion. Depending on network administrators, some adjustments to PC permissions may be required. USB sticks and other forms of manual file transmission are also options.



Manual files can be sent in a similar fashion. Depending on network administrators, some adjustments to PC permissions may be required. USB sticks and other forms of manual file transmission are also options.

#### 3.1.2 Configuring Hotfolder

File directory  
C:\Users\Eclipse 2029\Documents\Cut Files

☒ Contains subfolders

☒ Specify code position

X direction offset 0 mm

Y direction offset 0 mm

☒ Automatic continuous scanning

mm

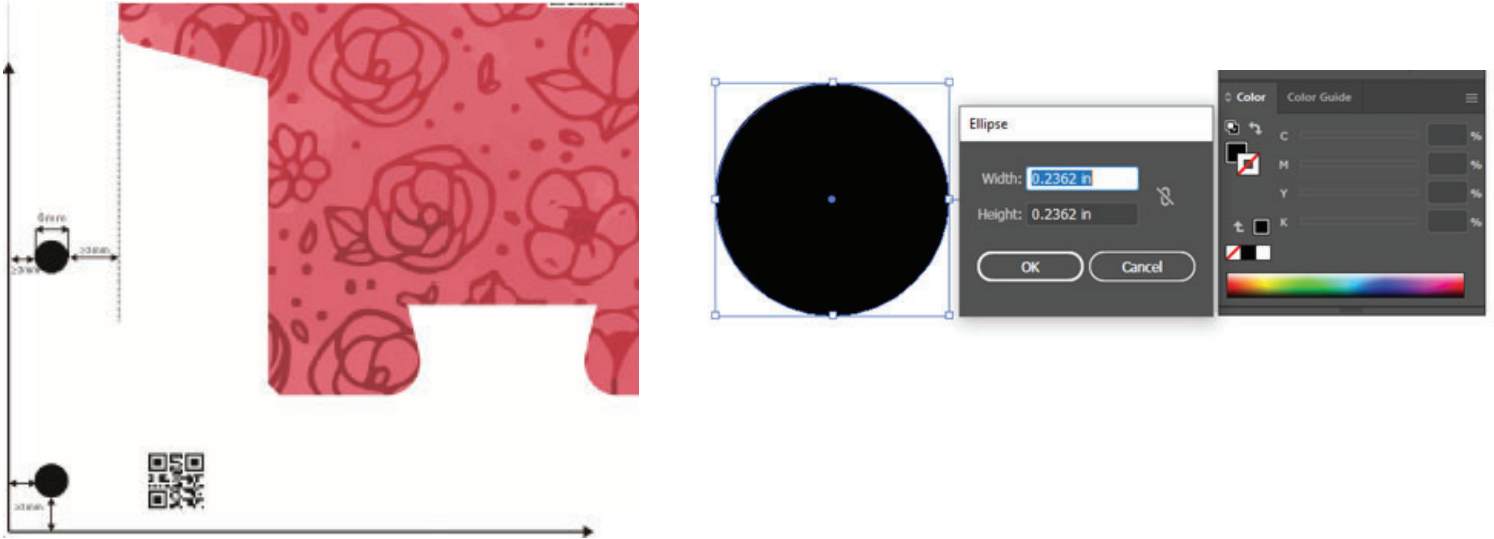
0° 90° 180° 270°

Hotfolder can be assigned in Design Manager under settings.

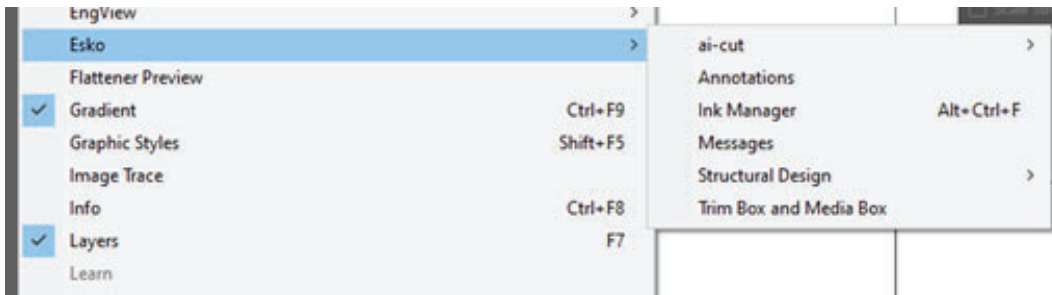


## 3.2 File Preparation

### 3.2.1 Registration Mark Requirements



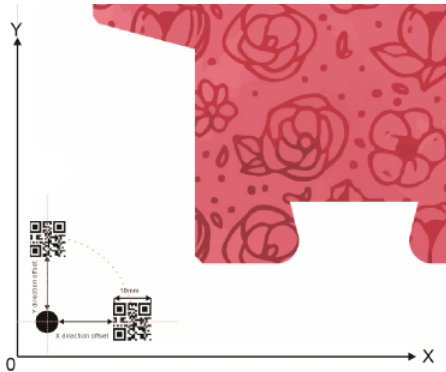
Registration marks can be made manually as a 6mm diameter circle with black fill without a stroke. It is best to keep registration marks 3mm to 6mm away from the edge of prints to avoid contrast.



There are also plug-ins that are compatible with this universal form of registration in Adobe. Each object needs a minimum of (4) registration marks. It is best practice to not have symmetrical registration marks to avoid confusion and accidentally cutting something backwards.

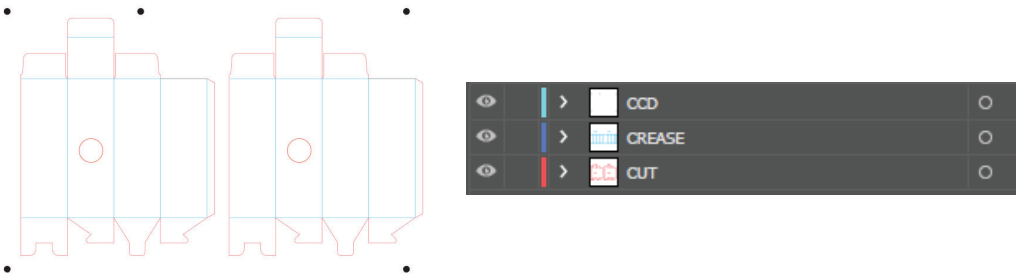
**Tip: for best results on complex designs/process for skew, distortion and scaling factors, increase the amount of registration points. It is never a bad idea to have too many marks and marks can always be deleted in the program and thru adaptive registration settings.**

### 3.2.2 QR Code Placement



Generated QR codes are required to be 10mm x 10mm in length and width. Place QR codes on either X or Y axis in symmetry to the first registration mark position nearest home origin. It is best to place all QR Codes in the same position as it will be defined in Design Manager. It is important to have the cut ready file name be the same as the ID of the QR code.

### 3.2.3 Cut Ready File Preparation



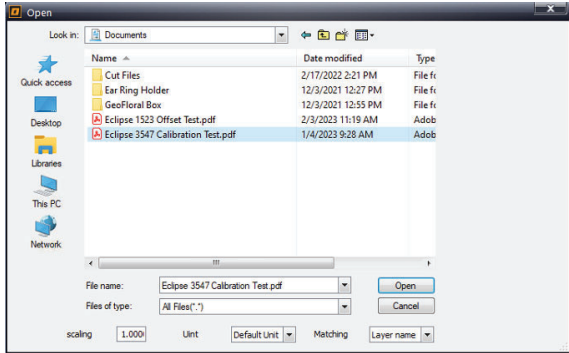
When designing a cut ready file, it is important to assign vector die lines to layers dependent upon required tool for output. For example, each die line needing to be creased should be placed within the same layer, same for registration marks and die lines that need to be cut. See above figure.

Export cut ready files as PDF, DXF, PLT, EPS, or HP-GL. Cut ready file does not include art, pictures, text, graphics etc. (can not have layer hidden), only vector die lines for tool output and registration marks.

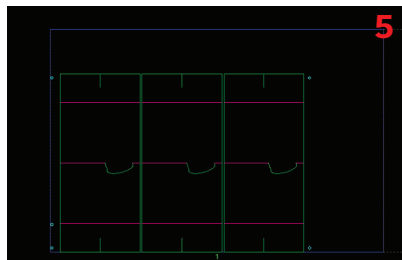
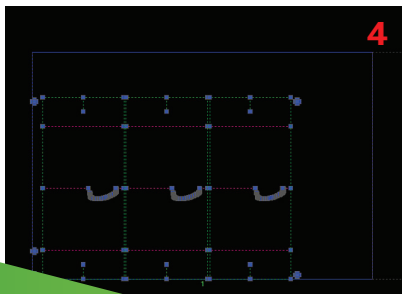
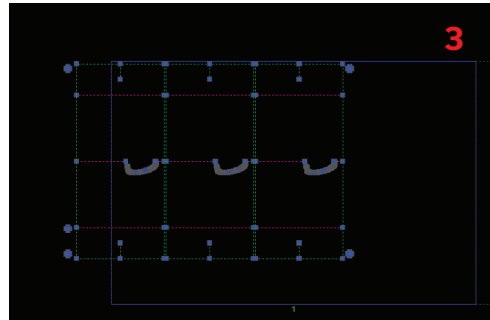
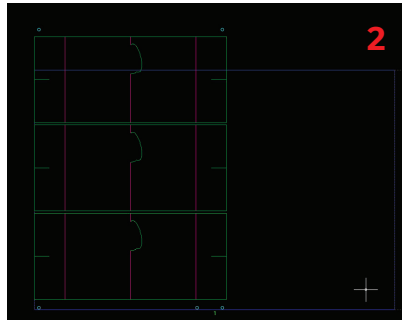
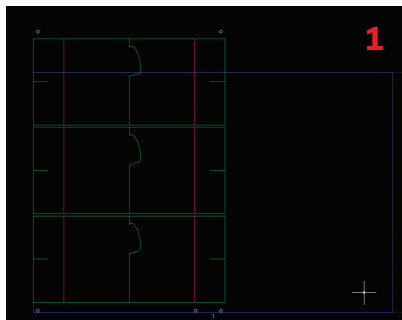
## 3.3 Conventional Cutting Operation

### 3.3.1 Importing Cutting File Data

To import a cut ready file, select the import file icon or use the drop down menu to select file import.



When first importing a cut ready file, click the CTRL + A (in red) keys on the operating keyboard. Then select either the rotate icon in the top toolbar or click the number 2 (in blue) on the operating keyboard. Last, click the number 1 (in green) on the operating keyboard to origin the file in the lower left corner.

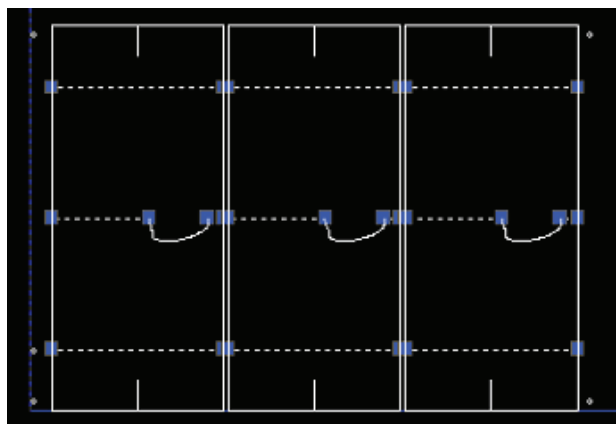


### 3.3.2 Material Thickness Configuration

Input the material thickness and click the save option. This will configure the raise level for tool when processing. If this is set lower than the actual material, the tools will not raise entirely out of material when cutting.

### 3.3.3 Layer & Tool Configuration

#### 3.3.3.1 Tool Assignment



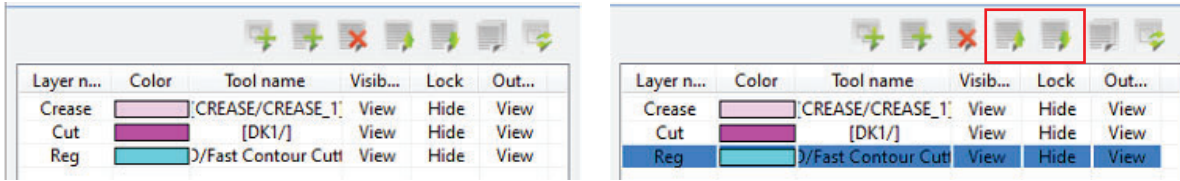
Layer n...	Color	Tool name	Visib...	Lock	Out...
Crease		[UNKNOWN/]	View	Hide	View
Cut		[UNKNOWN/]	View	Hide	View
Reg		[UNKNOWN/]	View	Hide	View

Selecting a layer in the layer panel will highlight the vector die lines associated in the layer. Double click the layer in the layer panel to reveal the layer properties.

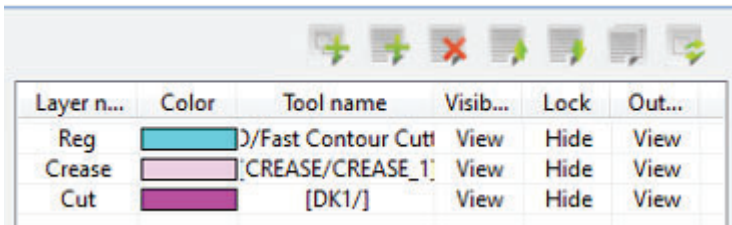
Layer n...	Color	Tool name	Visib...	Lock	Out...
Crease		[CREASE/CREASE_1]	View	Hide	View
Cut		[DK1/]	View	Hide	View
Reg		[D]/Fast Contour Cut	View	Hide	View

Assign the tool position by method, tool by second options and blade by third option if available.

### 3.3.3.2 Layer Ordering



Select a layer in the layer panel and use the move up or move down icon in the layer toolbar to move layers in order of desired output. The Eclipse will process the tools from the top layer to bottom layer. If using registration marks, CCD camera layer should always be the first layer.



**Tip: for best results, creasing should be processed before cutting.**

### 3.3.4 Output Setting Configuration

**Output settings:**

**Repeated Cutting Setting**

Cut times:  Distance:  mm

**Page settings**

Number X:  Number Y:

Distance X:  mm Distance Y:  mm

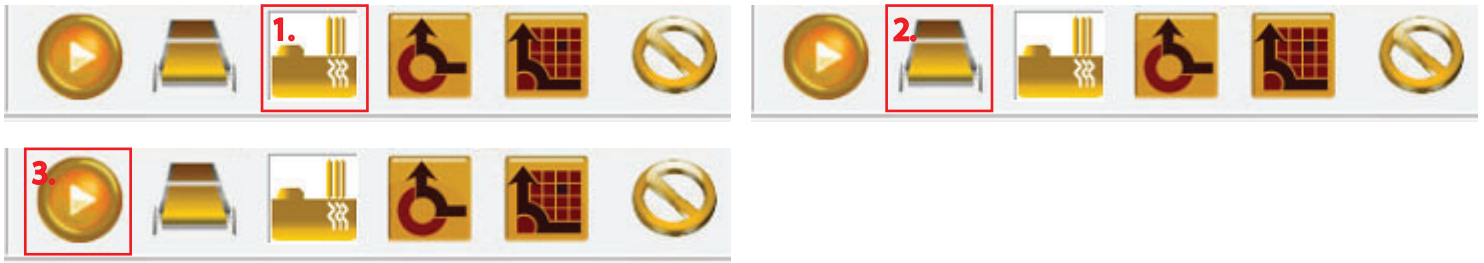
OutputMode:

Page size X:  mm Page size Y:  mm

In Output Settings, set the number of desired sheets to be run during production.

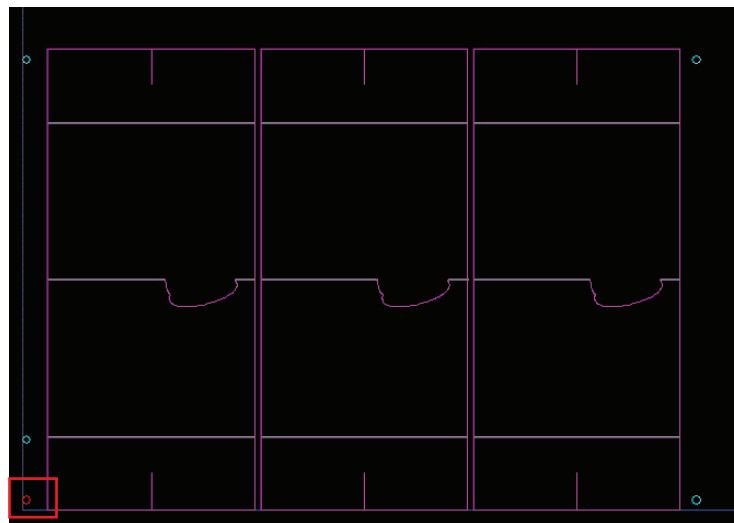
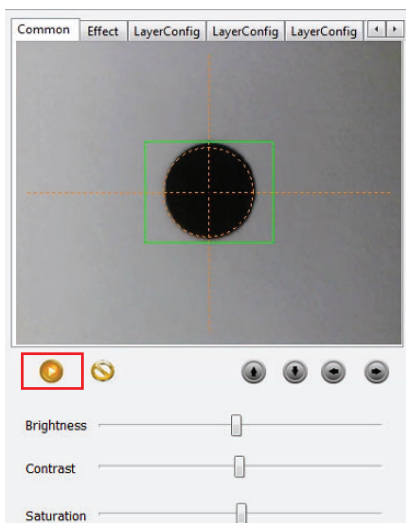
Note: 0 = 1 sheet and 1 = 2 sheets. How many times to repeat the cut.

### 3.3.5 Starting Production



When ready to begin production, place materials ready for processing on the loading device. Wait until the loading device has stopped at optimal height and is in the ready position.

1. Select the Vacuum icon to power the pump on.
2. Select the Manual Feed icon to pull one sheet onto the conveyor.
3. Select the Start icon to initialize the camera feed.

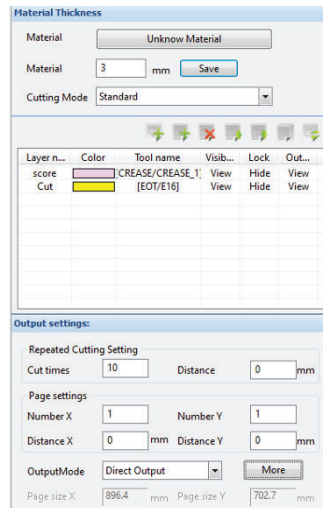
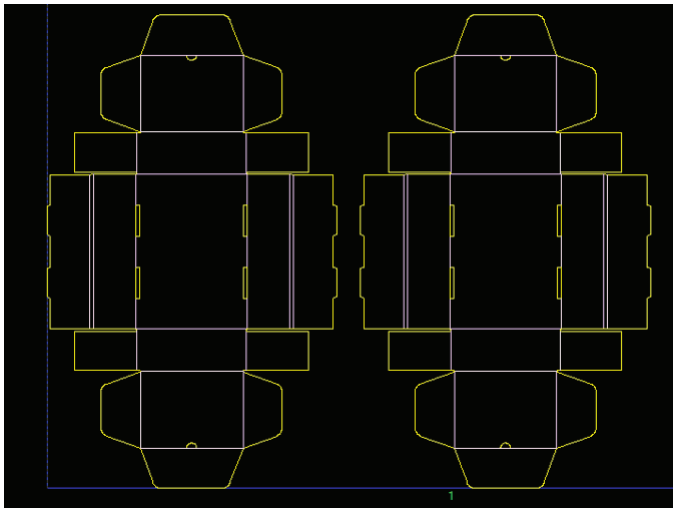


Locate the first registration mark. Design Manager will indicate which mark to locate first by highlighting the registration mark red. Once the camera has located the mark, select the start icon to begin reading each mark. Once completed, the Eclipse will begin processing after the file is sent to Cut Control Software.

## 3.4 Non-Conventional Cutting Operation

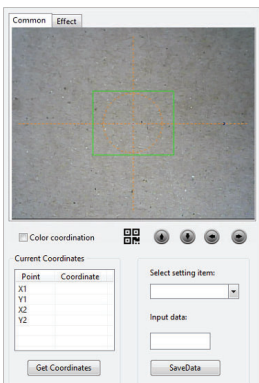
Non-conventional cutting method is used when materials do not require registration. This can be used for packaging, acoustic panels, custom contour sheeting, etc.

### 3.4.1 Initial File Import and Configuration



Import the cut ready file without registration marks. Proceed to configure the file as normal setup. Set layers, tools, blades, orientation, number of sheets to be run etc. and select direct output.

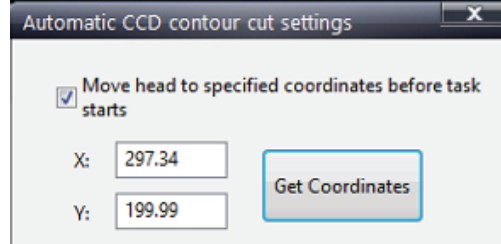
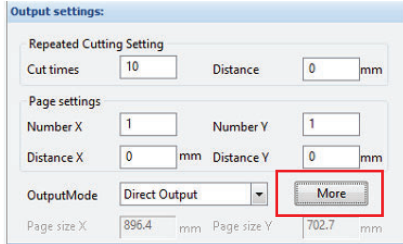
### 3.4.2 Configuring Start Point



Open the CCD Camera feed and navigate the cross hair to start point on the material.

**Tip:** to ensure the cut file will fit on the materials, change the production to manual and start production. Use the red-light as a start position and use the preview icon to draw a bounding box. If the desired area is okay proceed back to Design Manager after canceling production in both programs and switch to direct output.



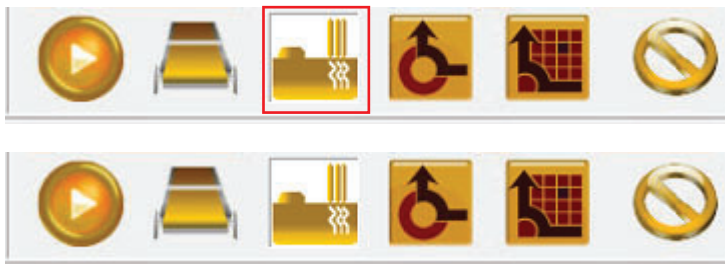


Open the More option in Output Settings.

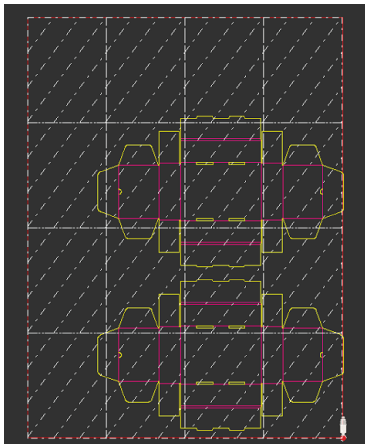
Enable the option for specified coordinates before task starts.

Select Get Coordinates. This will move the start location to these coordinates each time a sheet is pulled onto the conveyor. Click Save once desired coordinates are confirmed.

### 3.4.3 Start Production



1. Select the Vacuum icon to power the pump on.
2. Select the Start icon to begin production.

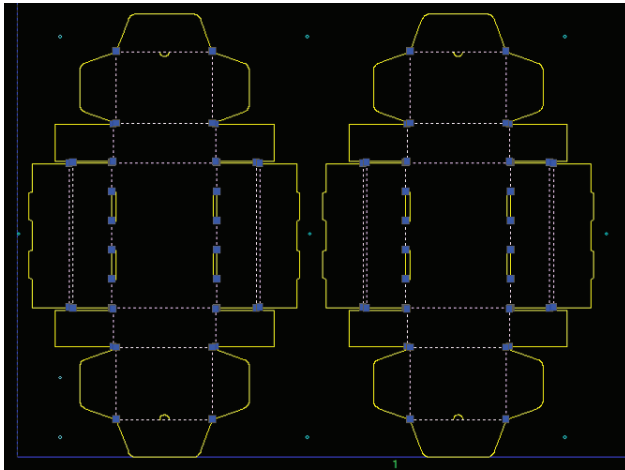




## 3.5 Advanced Operation Methods

### 3.5.1 Crease Layering Optimization

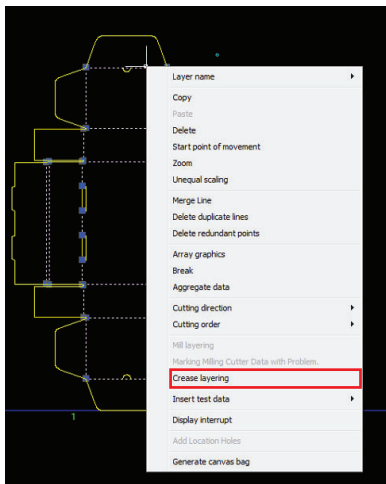
Crease layering is important when processing packaging or materials that have grain. Putting too much pressure when creasing in a specific direction could cause cracking depending on the material type. To compensate for this, Design Manager allows the use of crease layer optimization.



Layer n...	Color	Tool name	Visib...	Lock	Out...
Marks		D/Fast Contour Cut	View	Hide	View
score		CREASE/CREASE_1	View	Hide	View
Cut		[EOT/E16]	View	Hide	View

Start by selecting the crease layer after setup is complete.

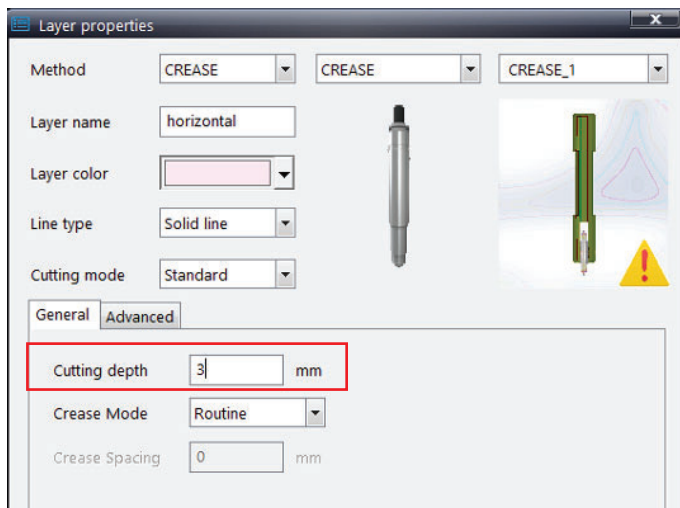
Right click in the artboard area to bring up menu options.



From the menu, select the Crease Layering option. This will automatically separate the crease layers into horizontal and vertical layers.

Layer n...	Color	Tool name	Visib...	Lock	Out...
Marks		D/Fast Contour Cut	View	Hide	View
Cut		[EOT/E16]	View	Hide	View
horizontal		CREASE/CREASE_1	View	Hide	View
vertical		CREASE/CREASE_1	View	Hide	View

Double click the crease layer that travels with the grain or the direction that causes cracking.



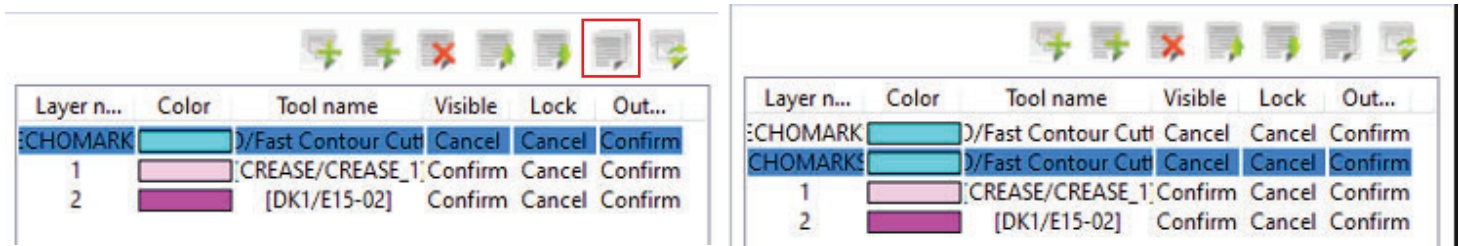
Adjust the Cutting Depth to be less or more dependent on material type and cracking. If material is cracking, lower the depth in pressure.

### 3.5.2 Cutting from the Back

There are various reasons for processing materials from the backside.

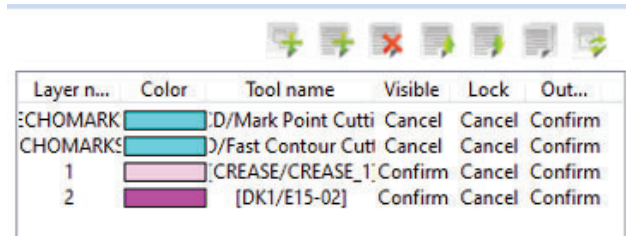
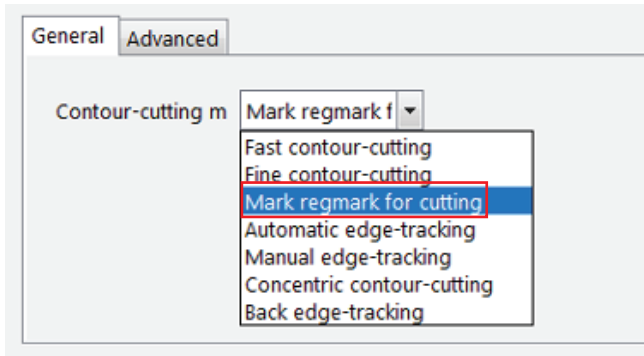
Crease Wheel use is best from the reverse side for non-laminated or coated papers.

Cutting from the backside is usually performed to minimize the overcut from the front. For knife cutting operations on thicker materials such as foamcore and cardboard, cutting from the front side can leave overcut marks in the corners of angled vector paths.

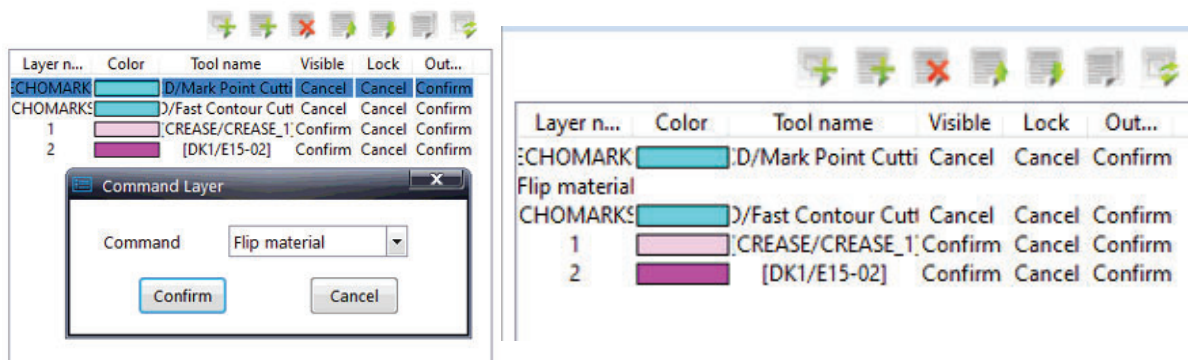


After completion of file setup, select the CCD camera layer and select the Copy icon from the layer properties toolbar.

Next, double click the first CCD Camera layer to open the layer properties. Change the Contour-cutting method to Mark regmark for cutting. This will have the Eclipse read each mark then cut each mark out, creating circles the conveyor belt can show through.



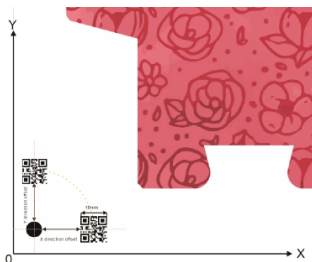
Select the first layer in the layer panel, then select the Add Command icon in the layer panel toolbar. This will prompt the Command options. From the drop down menu, select Flip Material. Position this created command in slot two on the layer panel.



Begin to process the file as normal output. After the marks are cut, a message will prompt in the software to alert a flip is needed on the material and will indicate which axis to flip on. Once completed, turn the vacuum back on and find the first registration mark as before and process as normal operation.

### 3.5.3 QR Code Operation

#### 3.5.3.1 QR Code Placement



Generated QR codes are required to be 10mm x 10mm in length and width. Place QR codes on either X or Y axis in symmetry to the first registration mark position nearest home origin. It is best to place all QR Codes in the same position as it will be defined in Design Manager. It is important to have the cut ready file name be the same as the ID of the QR code.

### 3.5.3.2 Camera Scan Code Settings

A file directory will need to be setup to place cut ready files. Design Manager can link this folder to the software to allow the QR code to read and import cutting file from the directory. Navigate to CCD QR Code Settings in Design Manager.

In the **red**, file directory that will contain the cut files. QR code will require both cut file and QR code ID be the same naming convention.

**Contains Subfolders** - will the cut file directory contain subfolders, useful for folders named by job or customer.

In the **green**, specify the QR code position in relation to the first registration mark. If after reading the QR code, the machine will need to move towards (0,0), the value would be negative input to X or Y. If moving away from (0,0), the value is positive.

### 3.5.3.3 File Interpretation Settings

Tool	Color
CCD	00.FF.FF
DK1	FF.00.FF
DK2	00.FF.00
Crease	F5.CF.FB
CUT1	FF.00.00

In the **red**, match rule settings for workflow production automation.

**Layer Color** - the file die lines match the tool property layer color.

**Layer Name** - the file layer names for each die line match the layer tool name.

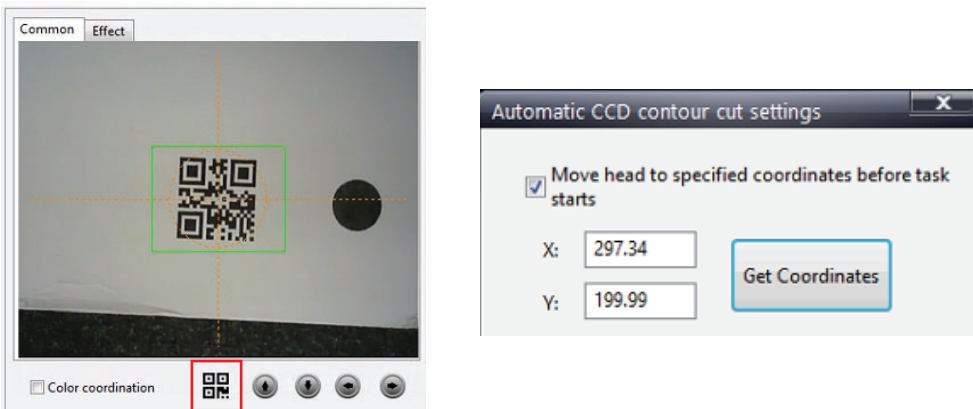
**File Color** - the tool colors will assign tools to layer output.

Select a match rule and design files to the convention to automate workflow production or QR Code workflow.

In **green**, set the automatic layer order based on tool output. If configured in desired order of operation, when setting the match rule to layer name and inputting the tool name for the layer in design software, Design Manager will automatically assign tools in specified order.

### 3.5.3.4 Starting QR Code Production

When ready to begin production, place materials ready for processing on the loading device. Wait until the loading device has stopped at optimal height and is in the ready position.



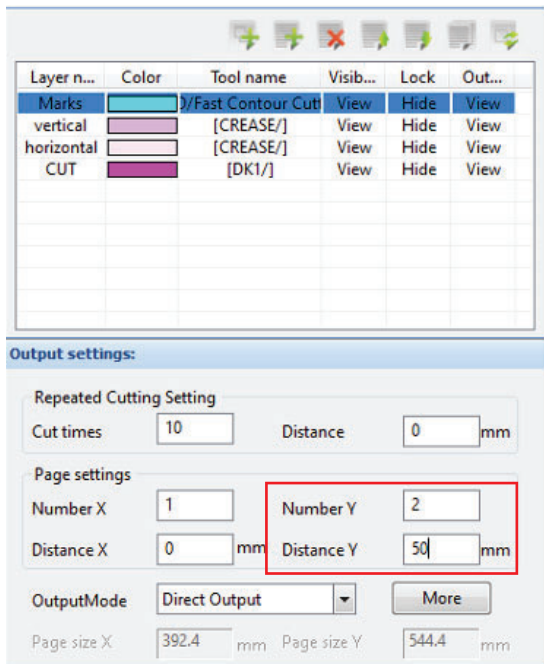
1. Select the Vacuum icon to power the pump on.
2. Select the Manual Feed icon to pull one sheet onto the conveyor.
3. Select the CCD Icon in the top toolbar to open the camera feed screen.
4. Move the camera above the QR Code.
5. Select the scan QR code icon below the camera feed to start production.

For continuous automated production:

1. Move the camera above the QR Code.
2. Open the more options under Output Settings
3. Enable move to specified coordinates and then select get coordinates. Save before exiting.
4. Navigate back to CCD feed and select the start scan icon.

## 3.6 Dual Sheet-Fed Production (Eclipse 3547)

### 3.6.1 Dual Sheet-Fed Production Configuration



Layer n...	Color	Tool name	Visib...	Lock	Out...
Marks		3/ Fast Contour Cut	View	Hide	View
vertical		[CREASE/]	View	Hide	View
horizontal		[CREASE/]	View	Hide	View
CUT		[DK1/]	View	Hide	View

**Output settings:**

Repeated Cutting Setting  
Cut times: 10 Distance: 0 mm

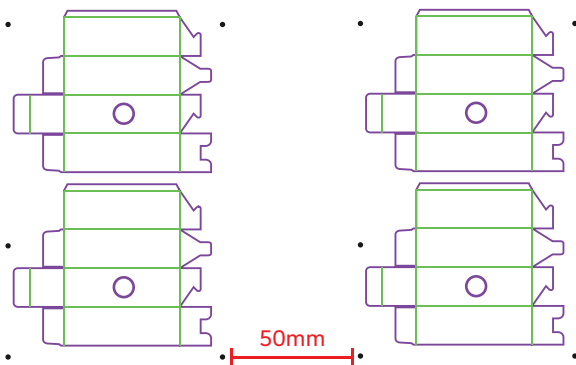
Page settings  
Number X: 1 Number Y: 2  
Distance X: 0 mm Distance Y: 50 mm

OutputMode: Direct Output [More]

Page size X: 392.4 mm Page size Y: 544.4 mm

On the Eclipse 3547, dual sheet-fed production is added bonus to the larger size machine. On the loading device, place two piles of sheets up to 13" x 19" size of the same cut file.

Input a quantity of 2 on the Y axis under Page Settings. This will communicate with Design Manager that there are two sheets along the Y axis. Next, measure the distance between the registration marks on the first sheet and second sheet. See figure below for an example.



Input the distance in mm into Distance Y.

Start production normally.

## 4. Roll Feed Operation

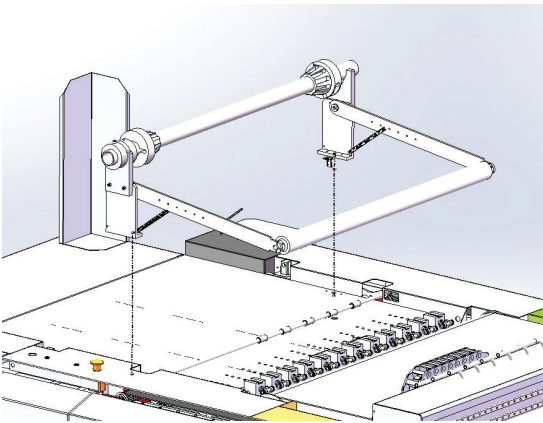
### Parameters

Model	Max Roll Width	Max Outer Diameter	Max Core Size	Max Weight	Max Cut Size
Eclipse 1523	12in	13.7in	3in	44 lbs	13in x 15in
Eclipse 2029	17in	13.7in	3in	44 lbs	19in x 20in
Eclipse 3547	31in	13.7in	3in	66 lbs	31in x 35in

### 4.1 Roll Feed Attachment

#### 4.1.1 Roll Feed Attachment Installation

1. Raise loading device to top position.
2. In Cut Control Software, enter the Expand (E) parameters.
3. Change PK Feed Mode from PK2 Sheet to Roll Material.
4. Power the Eclipse off.
5. Restart CUTWORX Software Suite.



Install the roll feed attachment on the loading device. There are a total of (4) screws to tighten the attachment in place.

Power the Eclipse on.



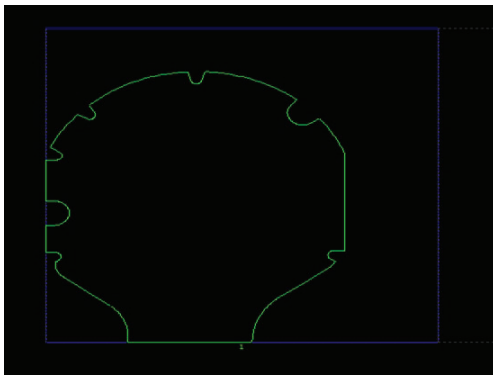
After installing the roll feed attachment, the gantry movement range will be reduced to compensate for the roll device attachment installed. This will ensure no collision between the gantry and the device happens. Be sure to restart the Eclipse and Software before operating.

In Design Manager, switch feed mode to Roll Automatic Feed.

## 4.2 Roll Feed Operation Methods

### 4.2.1 Continuous Repeated Cutting of Non-Printed File

This method is for print that does not require registration.



**Output settings:**

**Repeated Cutting Setting**  
Cut times:  Distance:  mm

**Page settings**  
Number X:  Number Y:   
Distance X:  mm Distance Y:  mm

**OutputMode:**

Page size X:  mm Page size Y:  mm

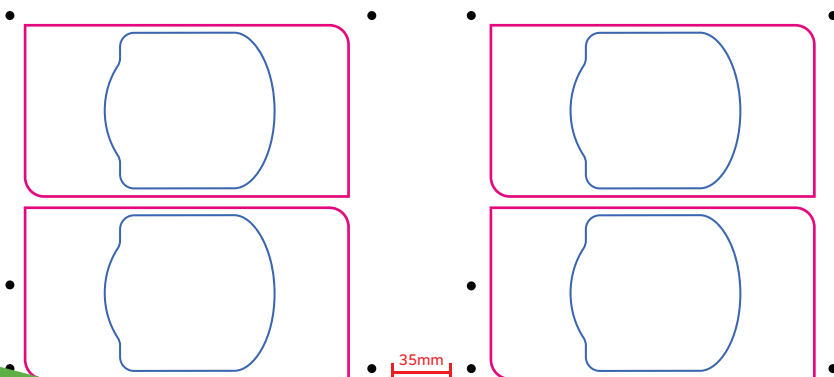
**Feed mode:**  
Feed mode:

Input cut times quantity and distance. Distance will be how far apart each cut will be placed.

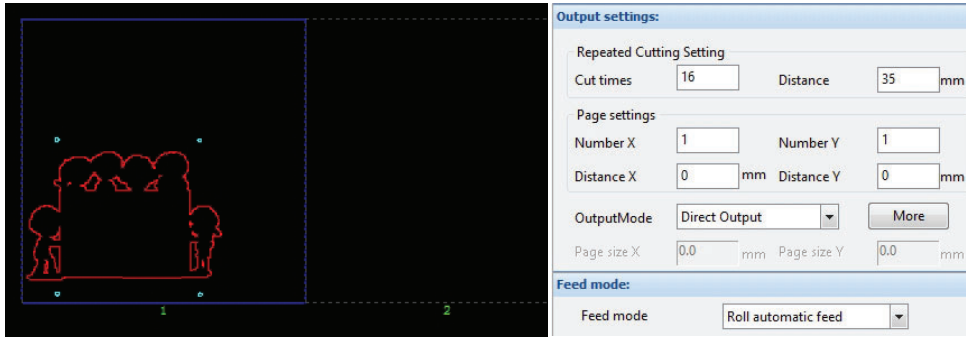
### 4.2.2 Continuous Repeated Cutting of Printed File

This method is for print that has registration marks.

Camera will registration marks each advancement of material. Page spacing should be accurate to distance of print spacing. For example, there is a 35mm gap between last registration mark printed on first segment and first mark on second segment.





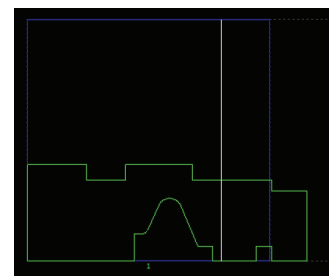
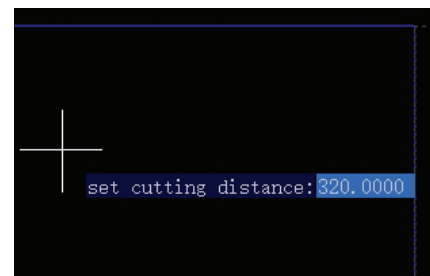
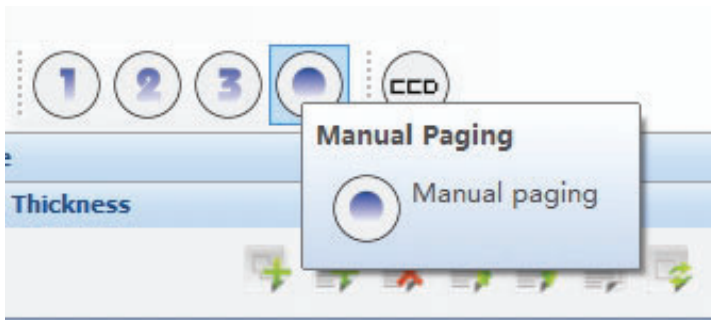


### 4.2.3 Segmenting Files Longer than Work Area

This method is for files longer than the working area that do not have registration marks.



Set the distance manually as shown below:



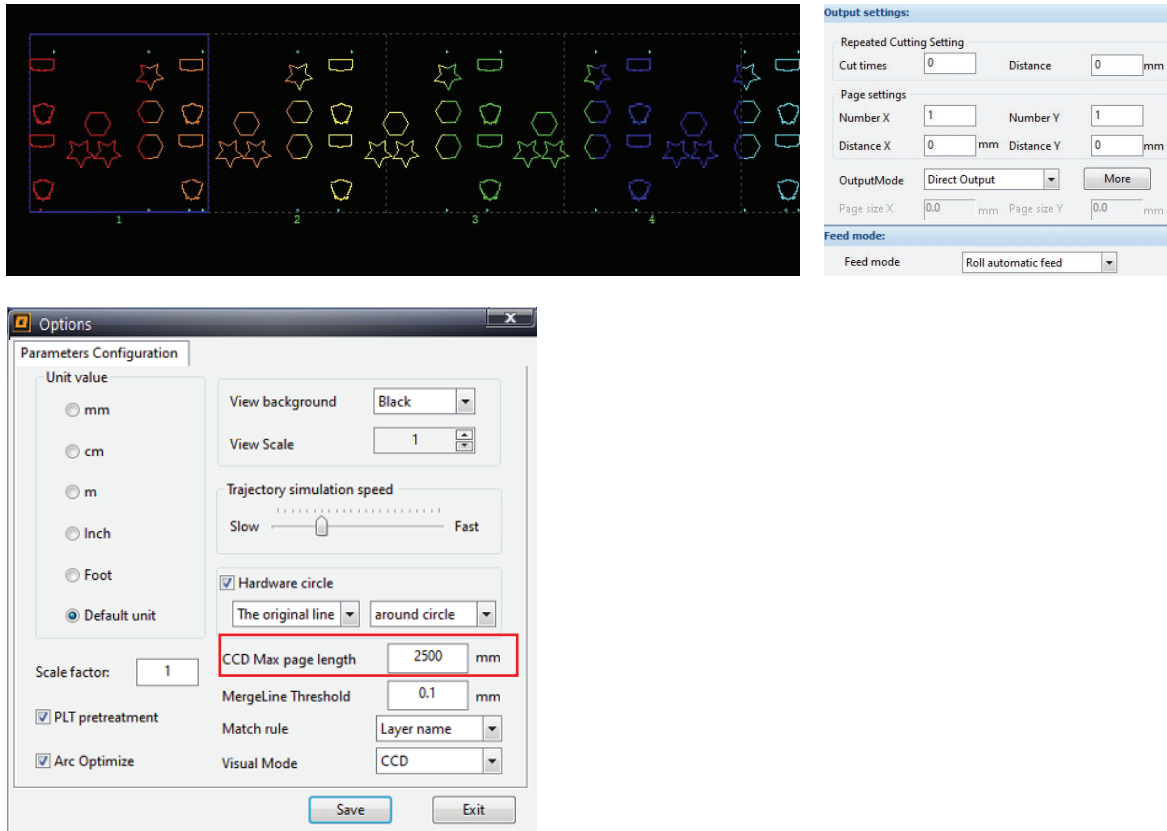
After sending to Cut Control Software, the first page to be cut will display as shown below:



will be dependent upon feeding accuracy. It is necessary to adjust the feeding condition in advance and use a lower feeding speed.

#### 4.2.4 Segmenting Files with Registration Marks

This method is for files longer than the working area that have registration marks.



Set the maximum page length for cutting in the Options tab in Design Manager Software.

A repeat pattern for registration marks along the print is suitable.

Input the repeated cut times of the printed file and distance between registration marks as in previous steps, but this will be the distance between segmented marks after setting CCD Max Length. Use Manual Paging and input CCD Max Length to check where file will be segmented. Measure the distance between marks in segment one and two.

## 5. V-Cut Tool Operation

The V-Cut tool is designed for processing complex 3D structural designs and producing beveled edges. Design Manager software allows options to remove a V-Cut notch or to select a single cut path to either inside or outside. There are two options currently on the Eclipse series for V-Cut, single-edge and double-edge.

### 5.1 Installation of V-Cut Tool

#### 5.1.1 Single-Edge V-Cut Installation

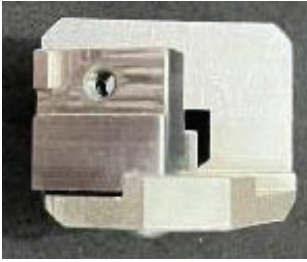


Figure 1



Figure 2



Figure 3

The above figures are the V-Cut knife seat diagram of the single-edge tool. The E19-10 blade is installed on the surface shown in figure 2. Figure 3 shows the adjustment to the blade angle.

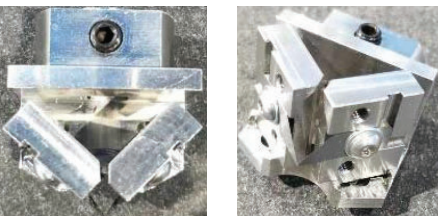
Note: the bevel of the blade should be installed downwards, with the blade facing outwards and fixed with a screw).



Figure 4

Figure 4 shows the correct blade installation. Insert the locking screw and tighten to hold blade in place. Refer to figure 3 if a new angle is needed.

#### 5.1.2 Double-Edge V-Cut Installation



The Double-Edge V-Cut Tool is divided into two small knife holders. The installation method of the two blades needs to be at 45° relative to each other as shown in above figures. Note the blade directions in the above figure.

## 5.2 Cut Control Parameter Adjustments

### 5.2.1 Eclipse 1523/2029 Parameter Adjustments

After installing the V-Cut Tool, navigate to Cut Control Software. Right click on the Crease Wheel tool icon. From the socket drop down menu, select CREASE1. This will allow the parameters of the crease wheel to be saved under CREASE and the new V-Cut parameters to be saved under CREASE1. This will be helpful when switching tools in the future.

Parameter item	Value	Unit	Range Of Value
SOCKET2	CREASE1		
Positive angle of knife and X axis	CUT1	limit	-360.000 ~ 360.000
Knife-up compensation	EOT	mm	-30.000 ~ 30.000
Knife-down compensation	CUT2	mm	-30.000 ~ 30.000
Knife lifting angle	VCUT	mm	-30.000 ~ 30.000
X,Y movement speed	CREASE	limit	0.000 ~ 360.000
Knife-lower speed	EOT1	mm/s	0.010 ~ 2.000
Knife lifting speed	EOT2	mm/s	0.010 ~ 1000.000
Movement acceleration	CREASE1	G	0.010 ~ 1.500
Setting acceleration	CREASE2	G	0.010 ~ 1.500
The maximum knife setting depth	CAMERA	mm	0.000 ~ 14.680
Waiting time before setting	DK1	ms	0.010 ~ 10000.000
Waiting time before knife lifting	DK2	ms	0.010 ~ 10000.000
Waiting time after setting	DK3	ms	0.010 ~ 10000.000
Waiting time after knife lifting	DK4	ms	0.010 ~ 10000.000
Direction to rotate	VCUT1	mm	-20.000 ~ 100.000
The distance between former knife po	EOTCUT1	mm	-20.000 ~ 100.000
The distance between later knife poin		mm	-20.000 ~ 100.000
Eccentricity enable			
X eccentric distance		mm	-100.000 ~ 100.000
Y eccentric distance		mm	-1.270 ~ 1.270
Circle + Angle		limit	-5.000 ~ 5.000
Circle - Angle		limit	-5.000 ~ 5.000

SOCKET2	CREASE1		
Positive angle of knife and X axis	0.000	limit	-360.000 ~ 360.000
Knife-up compensation	0.000	mm	-30.000 ~ 30.000
Knife-down compensation	0.000	mm	-30.000 ~ 30.000
Knife lifting angle	360.000	limit	0.000 ~ 360.000
X,Y movement speed	0.710	m/s	0.010 ~ 2.000
Knife-lower speed	3.750	mm/s	0.010 ~ 1000.000
Knife lifting speed	3.750	mm/s	0.010 ~ 1000.000
Movement acceleration	0.710	G	0.010 ~ 1.500
Setting acceleration	0.039	G	0.010 ~ 1.500
The maximum knife setting depth	10.000	mm	0.000 ~ 14.680
Waiting time before setting	10.000	ms	0.010 ~ 10000.000
Waiting time before knife lifting	10.000	ms	0.010 ~ 10000.000
Waiting time after setting	10.000	ms	0.010 ~ 10000.000
Waiting time after knife lifting	10.000	ms	0.010 ~ 10000.000
Direction to rotate	<input checked="" type="checkbox"/>		
The distance between former knife po	0.000	mm	-20.000 ~ 100.000
The distance between later knife poin	0.000	mm	-20.000 ~ 100.000
Eccentricity enable	<input checked="" type="checkbox"/>		
X eccentric distance	0.000	mm	-100.000 ~ 100.000
Y eccentric distance	0.000	mm	-1.270 ~ 1.270
Circle + Angle	0.000	limit	-5.000 ~ 5.000
Circle - Angle	0.000	limit	-5.000 ~ 5.000

First, in red, the V-Cut Tool will need to be debugged. Adjust the Positive angle of the knife. The knife should cut in a straight line and the cutting marks not squeezed. It is necessary to make a cut back and forth on the material to check whether the cut surface is smooth and flat.

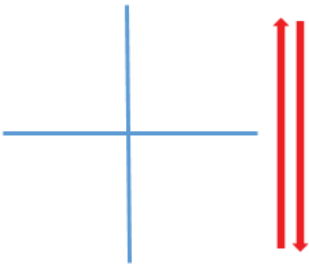
Second, in **green**, the knife lifting angle should be set to 45.000.

Third, in **cyan**, adjust the X/Y movement speeds to be slower, this will ensure a even cut and not to break blades. Recommended speed is in the range of 0.04 - 0.200.

Last, in **yellow**, adjust the eccentricity so the knife pattern cuts repeated on itself. See instructions below.

#### 5.2.1.1 Adjusting X & Y Eccentric Values

In Design Manager, create the cross mark and make the cutting direction go back and forth. Assign the CREASE method to the layer in the layer panel options.



Test the cut on a thinner material so blades are not broken. Observe the cut traces are on the same track.



If lines are uneven adjust the X eccentric value until perpendicular and the Y until the cut lines are on same track.

## 5.2.2 Eclipse 3547 Parameter Adjustments

Parameter Set			
Knife holder/knife tool modification			
Parameter item	Value	Unit	Range Of Value
SOCKET2	VCUT		
Positive angle of knife and X axis	60.000	limit	-360.000 ~ 360.000
Knife-up compensation	0.000	mm	-30.000 ~ 30.000
Knife-down compensation	0.000	mm	-30.000 ~ 30.000
Knife lifting angle	30.000	limit	0.000 ~ 30.000
X,Y movement speed	0.030	m/s	0.010 ~ 2.000
Knife-lower speed	10.000	mm/s	0.010 ~ 1000.000
Knife lifting speed	10.000	mm/s	0.010 ~ 1000.000
Movement acceleration	0.200	G	0.010 ~ 1.500
Setting acceleration	0.200	G	0.010 ~ 1.500
The maximum knife setting depth	13.678	mm	0.000 ~ 14.680
Waiting time before setting	10.000	ms	0.010 ~ 10000.000
Waiting time before knife lifting	10.000	ms	0.010 ~ 10000.000
Waiting time after setting	100.000	ms	0.010 ~ 10000.000
Waiting time after knife lifting	100.000	ms	0.010 ~ 10000.000
Direction to rotate	<input checked="" type="checkbox"/>		
The distance between former knife point	0.000	mm	-30.000 ~ 100.000
The distance between later knife point	0.000	mm	-30.000 ~ 100.000
Eccentricity enable	<input checked="" type="checkbox"/>		
X eccentric distance	-0.200	mm	-100.000 ~ 100.000
Y eccentric distance	0.000	mm	-12.700 ~ 12.700
Y eccentric distance increment	0.000	mm	-128.000 ~ 127.000
Circle + Angle	0.000	limit	-5.000 ~ 5.000
Cutting angle	45.000	limit	0.000 ~ 76.500
Slant offset	0.000	mm	-1.280 ~ 1.270
Absorption in delay time	0.500	s	0.000 ~ 5.100

Eccentricity enable	<input checked="" type="checkbox"/>		
X eccentric distance	-0.200	mm	-100.000 ~ 100.000
Y eccentric distance	0.000	mm	-12.700 ~ 12.700
Y eccentric distance increment	0.000	mm	-128.000 ~ 127.000
Circle + Angle	0.000	limit	-5.000 ~ 5.000
Cutting angle	45.000	limit	0.000 ~ 76.500
Slant offset	0.000	mm	-1.280 ~ 1.270
Absorption in delay time	0.500	s	0.000 ~ 5.100

The installation of the V-Cut tool on the Eclipse 3547 is similar to the 1523/2029 model, but instead of assigning the CREASE1, use the VCUT tool socket. The Eclipse 3547 allows the V-Cut tool to enter at an angle.

First, in **red**, the V-Cut Tool will need to be debugged. Adjust the Positive angle of the knife. The knife should cut in a straight line and the cutting marks not squeezed. It is necessary to make a cut back and forth on the material to check whether the cut surface is smooth and flat.

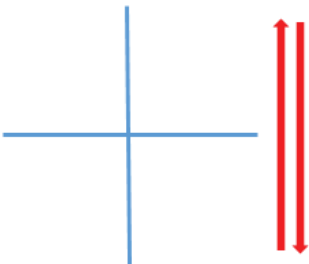
Second, in **green**, adjust the X/Y movement speeds to be slower, this will ensure a even cut and not to break blades. Recommended speed is in the range of 0.04 - 0.200. Then adjust the Knife lower and lifting speed to be 10.000.

Third, in **magenta**, set the cutting angle to be 45.000.

Last, in **cyan**, adjust the eccentric values so the cutting is on the same track perpendicular.

### 5.2.2.1 Adjusting X & Y Eccentric Values

In Design Manager, create the cross mark and make the cutting direction go back and forth. Assign the CREASE method to the layer in the layer panel options.





Test the cut on a thinner material so blades are not broken. Observe the cut traces are on the same track.

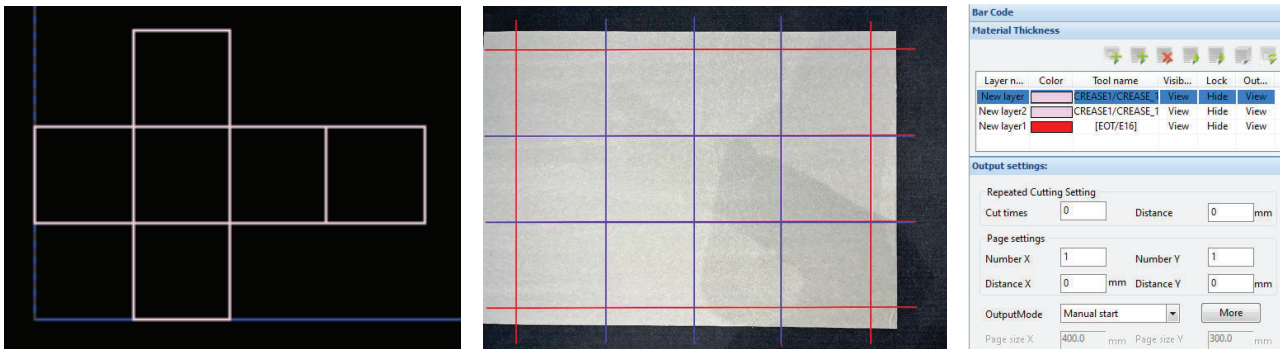


If lines are uneven adjust the X eccentric value until perpendicular and the Y until the cut lines are on same track.

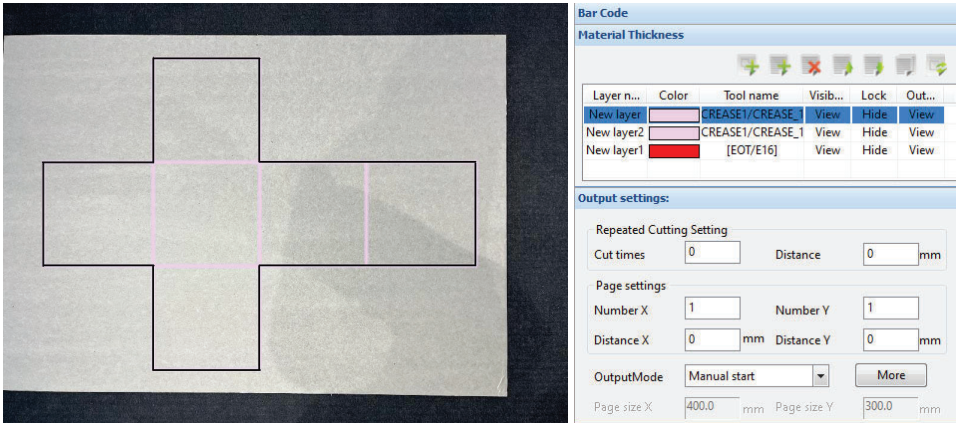
### 5.2.3 Cut Ready File Settings

#### 5.2.3.1 Eclipse 1523/2029

The Eclipse 1523/2029 V-Cut tool is controlled by an air cylinder and because of this, it can only fall vertically. When cutting, the tool will need to enter materials from the outside and not directly from the middle. As a result, the cut file made needs to exceed the length and width of the material.

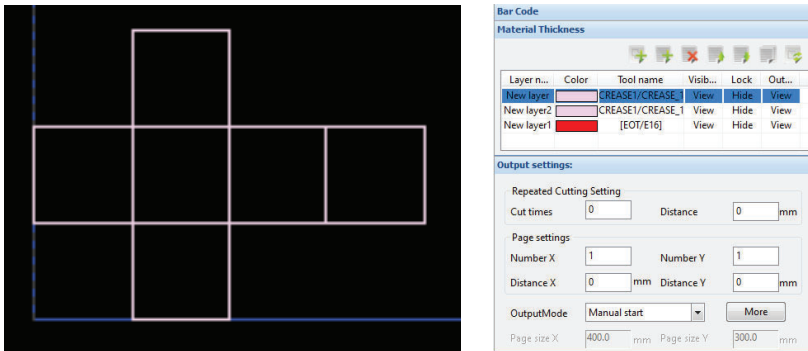


The required file must be longer than the material. In the figure above, there are overlapping lines of blue and red. The cutting direction of the lines of these two colors need to be set in opposite directions for slotting. Therefore, there is a need to set all the red lines to the first layer. Set all the blue lines to the second layer and change the cutting direction.



Finally, set a layer for cutting. Select the EOT tool. Set the black lines as the EOT tool layer.

### 5.2.3.2 Eclipse 3547



As shown in the images above, the outer line is set for the first layer, double click the layer to set forward or reverse cutting according to the cutting direction. Set the inner line as the second layer and double click to set it as bidirectional cutting. Finally, add an outer line layer as the EOT tool.

### 5.2.4 Double-Edge V-Cut Tool

The installation method for double-edge V-Cut tool is the same as the single-edge V-Cut tool for Eclipse 1523/2029. Even for the Eclipse 3547, the double-edge tool must enter materials from the outside, so its best to assign CREASE1 for the parameters and make adjustments as above steps.

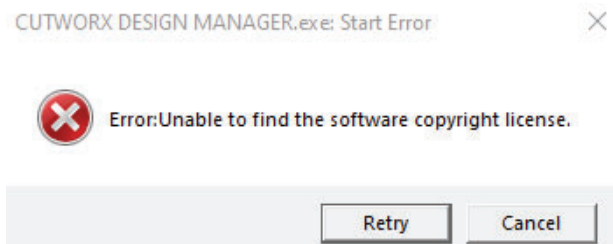


## 6. CUTWORX Software Suite License

CUTWORX USA Software Suite requires a activation key in order to access the software. This activation key is either a silver USB stick or a black sentinel USB stick. The software requires this USB stick to be plugged into a USB port of the command station at all times. During installation of an Eclipse Series Digital Die Cutter, a temporary license will be activated for 30 days. The software will prompt a message indicating 5 days remaining until expiration and follow a count down each day until fully expired. During the 5 days it is advisable to contact CUTWORX USA support team to extend the license or apply the permanent license if the machine has been paid in full.

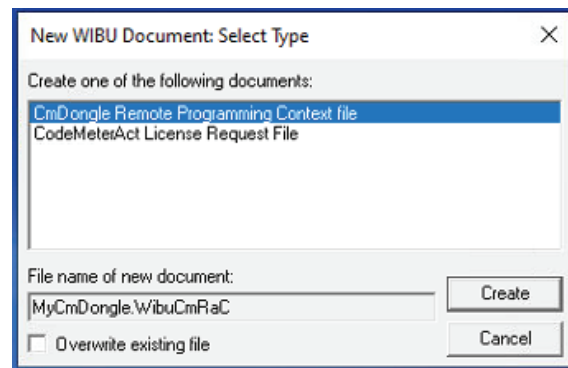
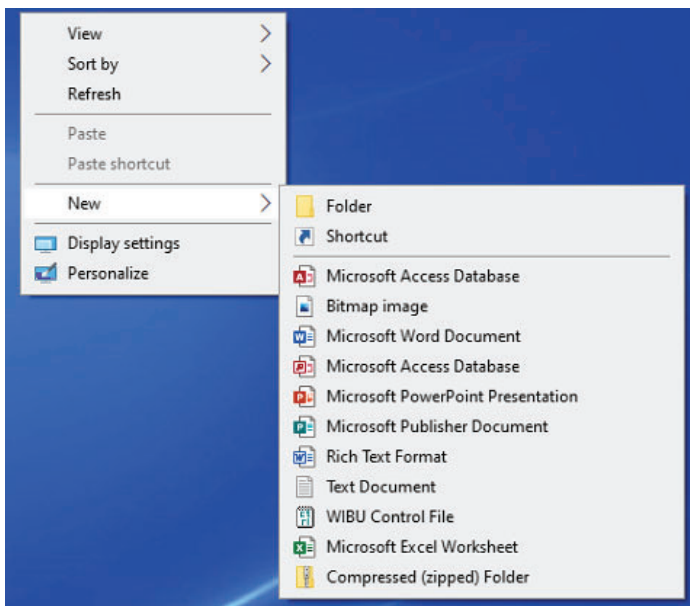
### 6.1 License Key Expired

#### 6.1.1 License Update Request



If the above message appears, the software license key has expired.

#### 6.1.2 WIBU License Key



Step 1: Right click on the desktop screen.

Step 2: Select the menu option New and reveal more options.

Step 3: Select the option WIBU Control File.

Step 4: When the WIBU Document Select Type menu appears, select the first option CmDongle Remote Programming Context File.

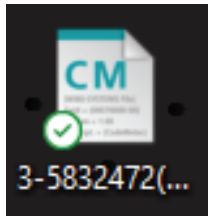
Step 5: Select Create.



A MyCmDongle file will be created on the desktop. Email this file along with the serial number of the Eclipse and USB license key number to [support@cutworxusa.com](mailto:support@cutworxusa.com) and request a license key software extension.

#### 6.1.2.1 WIBU License Key Update

A new MyCmDongle File will be created for license key update. The file received back from CUTWORX USA support should be placed onto the desktop.



Double click the new file to execute the update. There will be a feedback prompt successful update. If the update fails, contact CUTWORX USA support.

#### 6.1.3 Sentinel License Key

Sentinel keys do not require license files to update. The key can be updated remotely.

Email the serial number of the Eclipse and sentinel USB license key number to [support@cutworxusa.com](mailto:support@cutworxusa.com) and request a license key software extension.

Once CUTWORX USA support confirms the license key update, open iEcho Sentinel Update application.

Inside the application there is an update button in the lower right corner. Select this option and the update will confirm.

## 7. Support

### 7.1 TeamViewer Remote Support

#### 7.1.1 Downloading TeamViewer

Visit <https://www.teamviewer.com/en-us/download/windows/>

Download the latest version for x64 bit operating system.

## TeamViewer for Windows

- ④ Establish incoming and outgoing connections between devices
- ④ Real-time remote access and support
- ④ Collaborate online, participate in meetings, and chat with others

Download 64-bit Version

Download 32-bit Version

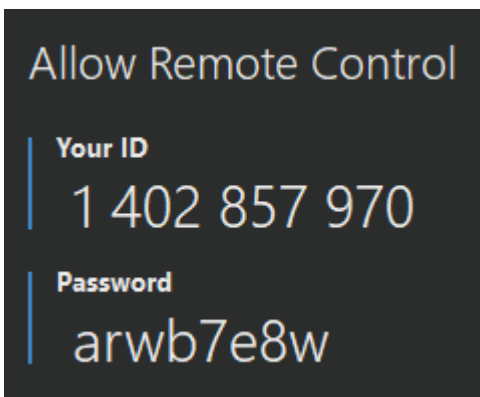
Or skip the download and connect [directly from your browser](#).

Available for Remote Access, Premium, Corporate, and Tensor license holders.

Current version: 15.38.3

#### 7.1.2 Remote Support Request

Open TeamViewer application and locate the Allow Remote Control section. Copy the Your ID and Password.



Contact CUTWORX USA support with a request for remote support with detailed information of the issue, videos, pictures, serial number of the Eclipse, and site contact information.

## 7.2 Troubleshooting

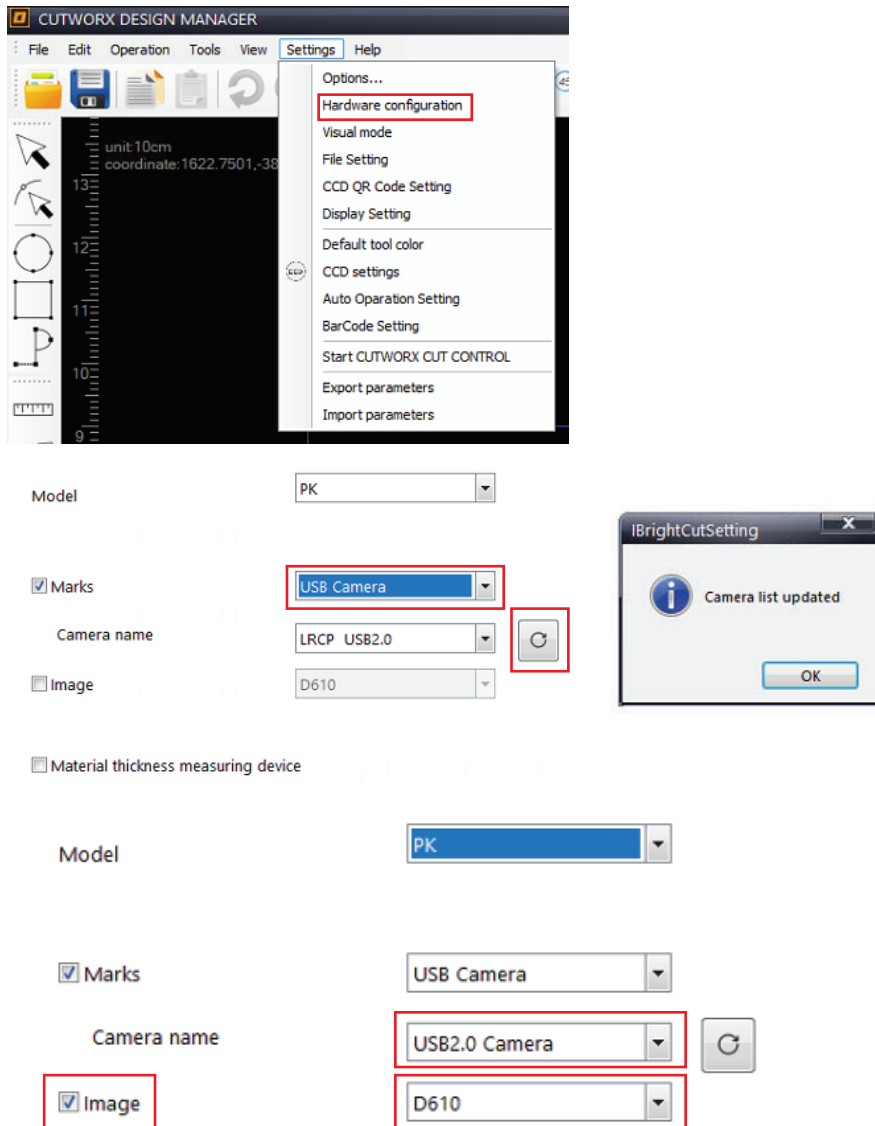
### 7.2.1 Communication Errors

#### 7.2.1.1 Camera Failed to Connect

**Issue:** Camera is failing to connect when opening the CCD camera feed.

**Resolution #1:**

Open CUTWORX Design Manager. Navigate to the Settings page and locate the Hardware Configuration tab.



Refresh the connections, then assign USB Camera. From the Camera Name menu, select USB2.0 Camera.

Enable Image and select D610 option.

**Resolution #2:**

Change the USB port connection for the USB Video Grabber.  
Once the change has been made follow steps of resolution #1.

**Resolution #3:**

Check and install all pending Windows updates.

## Windows Update



### Restart required

Your device will restart outside of active hours.

Your device is missing important security and quality fixes.

2021-08 Cumulative Update for .NET Framework 3.5 and 4.8 for Windows 10 Version 20H2 for x64 (KB5004331)

**Status:** Pending restart

2021-08 Cumulative Update for Windows 10 Version 20H2 for x64-based Systems (KB5005033)

**Status:** Pending restart

Intel Corporation - SCSIAdapter - 17.9.6.1019

**Status:** Pending restart

Restart now

[Schedule the restart](#)

[View optional updates](#)

View Optional updates and proceed to download and install all FTDI-USB Driver updates available along with other updates.  
Restart after completion and check if any additional Driver updates are available.

## Optional updates

Choose the updates you want and then select Download and install.

### Driver updates

If you have a specific problem, one of these drivers might help. Otherwise, automatic updates will keep your drivers up to date.

☐ FTDI - USB - 8/16/2017 12:00:00 AM - 2.12.28

☐ Dell, Inc. - Firmware - 0.1.4.1

☐ Intel Corporation - Display - 27.20.100.9664

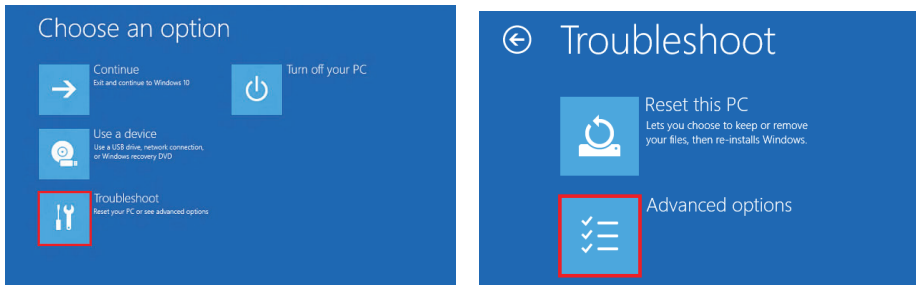
Download and install

#### Resolution #4:

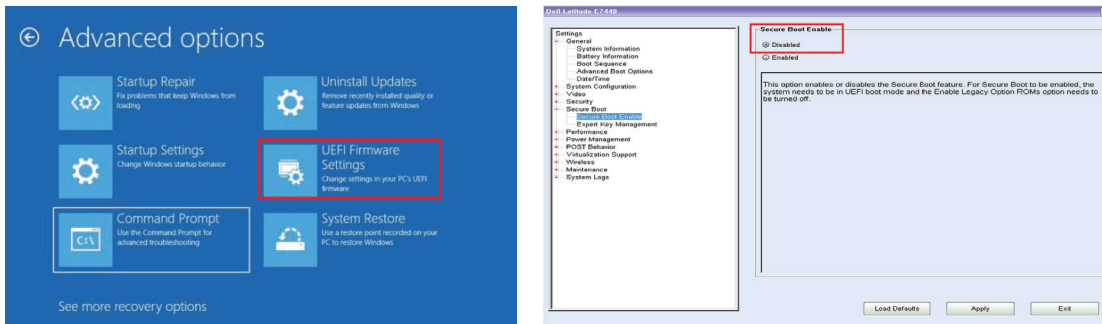
Disable secure boot and driver signature enforcement

Hold Shift and and restart the computer.

Navigate to Troubleshoot and then click Advanced options.

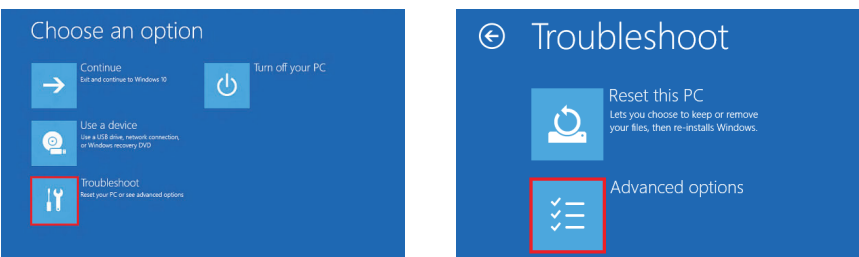


Select UEFI Firmware Settings and from the drop down click Secure boot and Secure Boot Enable. Turn Secure Boot off by unchecking the box labeled Secure Boot Enable on the left. Apply and Exit.



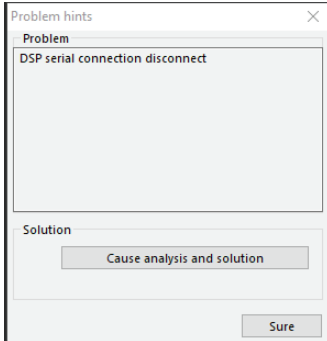
Hold Shift and and restart the computer.

Navigate to Troubleshoot and then click Advanced options.



### 7.2.1.2 DSP Serial Connection Disconnect

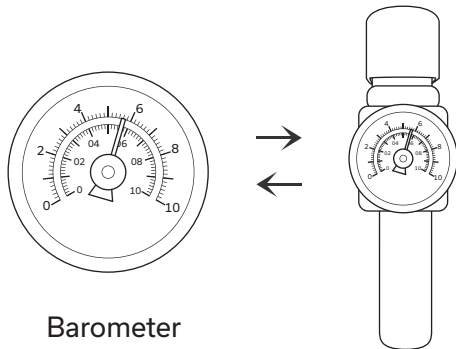
**Issue:** When booting the Eclipse, the machine and software do not link/connect.



#### Resolution #1:

Check that the air compressor is turned on and functioning.

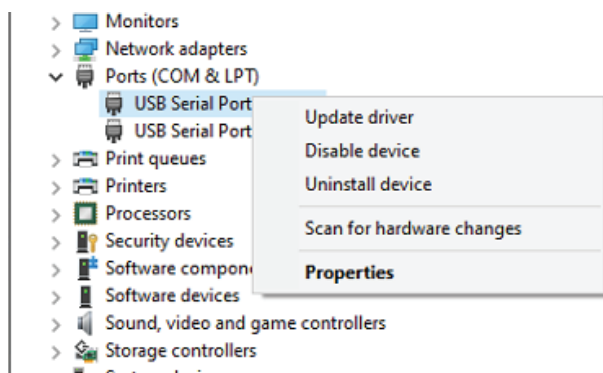
Air barometer should read 0.6MPa.



#### Resolution #2:

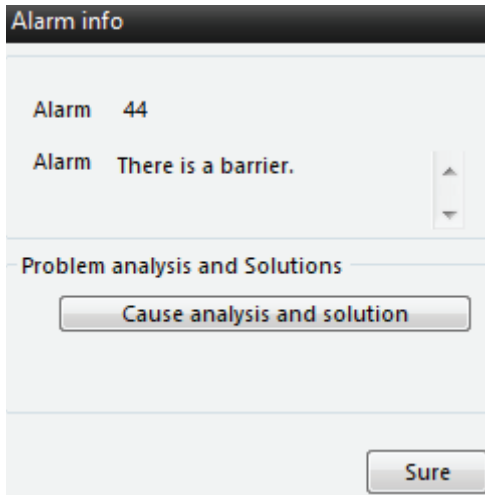
Update Windows and Device Drivers.

Navigate to device manager and check each COM & LPT port for updates. Also, check USB drivers for updates.



### 7.2.1.3 DSP Serial Connection Disconnect

**Issue:** Eclipse will not respond to movement directions in the software. An alarm code is prompted stating there is a barrier.



**Resolution #1:**

Remove any obstacles blocking side sensors of the Eclipse. Once removed, clear the error by selecting option Sure. Machine will home if during boot up procedure or will allow control again.

### 7.2.2 Loading Device Troubleshooting

#### 7.2.2.1 Error: No Material

**Issue:** Loading device is not moving and reports an error in Cut Control Software stating no material.

**Resolution #1:**

Place material onto loading device. Ensure material is covering the eagle eye material detect sensor. Loading device will initialize.

#### 7.2.2.2 Error: Waiting for PLC to be Ready

**Issue:** Loading device is not moving and reports an error waiting for PLC to be ready.

**Resolution #1:**

Loading device is in reset mode, wait for it to complete, then clear the error and try again.

**Resolution #2:**

Material has a curl causing height detection sensors laser to read under the material. Fix the curl in the material or adjust sensors to read higher on sheet.

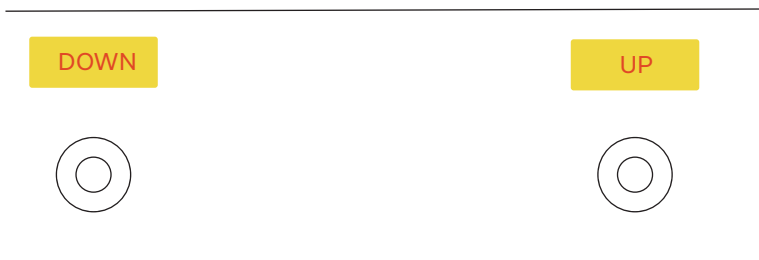


### 7.2.2.3 Cannot Feed Material

**Issue:** When attempting to feed materials, the suckers under the gantry do not make contact with the material or make contact, but do not pick material up.

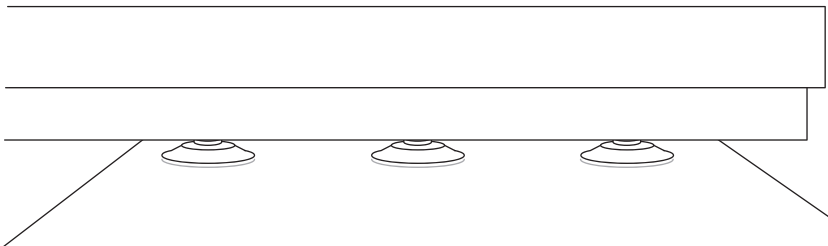
**Resolution #1:**

Depending on material types and thickness, the height of the feeding table can adjusted by pressing the "UP" or "DOWN" button on the Eclipse.



For air-impermeable materials, the loading table should be adjusted to the highest position. When the suction cup is grabbing the material, the suction cup should be in contact with the material.

For air-permeable materials, the height of the loading table should be appropriately lowered and distnaced between the suction cup and the material should be about 1-2mm.



**Resolution #2:**

Curl in the material is causing height detection sensors to position material inaccurately.

Fix the curl in the material or adjust height sensors.

**Resolution #3:**

Vacuum pump is not working.

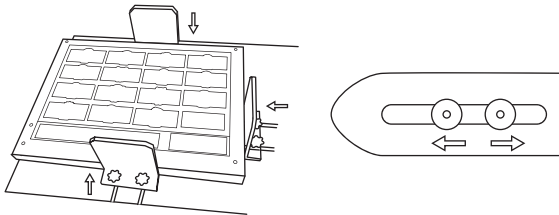
Check to ensure vacuum pump is powering on before feeding. Suction requires the vacuum pump to working in full power.

### 7.2.2.4 Material Sticks Together When Feeding

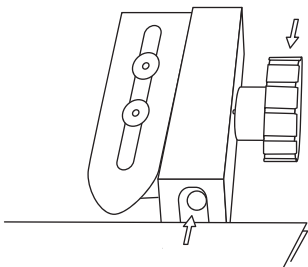
**Issue:** When attempting to feed materials, the suckers grab multiple sheets of material.

#### **Resolution #1:**

Align the material forward and fix the magnetic plates to hold material in place.

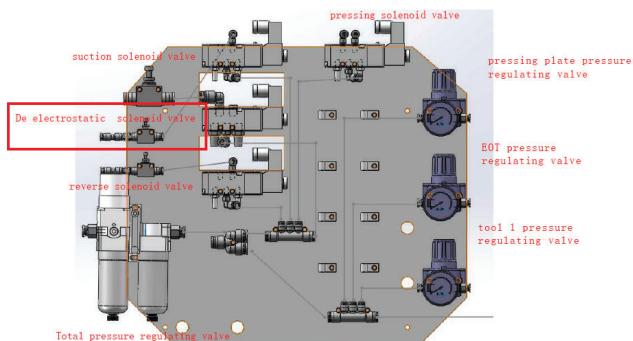


Adjust the length of the material separators to the proper position. The extension length is about 3-8mm.



#### **Resolution #2:**

Adjust separator air power from solenoid.



Open the thumb screen to increase air power.

**Resolution #3:**

Position loading device so material is beneath or in between the air separators. The ideal working height is for the air to separate materials and blow individual sheets upward to make contact with the sucker.

### 7.2.3 Cutting Issues

#### 7.2.3.1 Edges Not Smooth

**Issue:** When cutting, edges are not smooth.

**Resolution #1:**

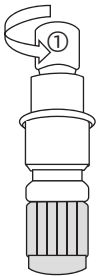
When using the DK tool, the blade will swivel in the chamber. Cut a short line before the turn, so the blade can change direction with the cut path.

#### 7.2.3.2 Burrs on Cutting Edge

**Issue:** When cutting, the path of the cut will have burrs on the edges.

**Resolution #1:**

Adjust the length of the blade exposure from the DK tool.



**Half Cut**

Adjust the length of the blade tip and try cutting on the material, as long as the material has been half cut to form a sticker, label etc.

**Full Cut**

Adjust the length of the blade tip and try cutting on the material, as long as the material has been cut through.

**Resolution #2:**

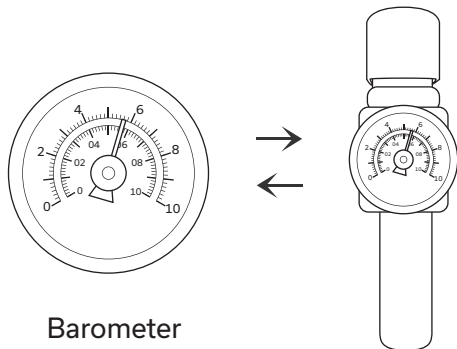
Blade could be broken, change blade out for a new one.

### 7.2.4 Conveyor Not Advancing After Cutting

**Issue:** After material is done processing, the conveyor is not moving to allow material to eject into collection device.

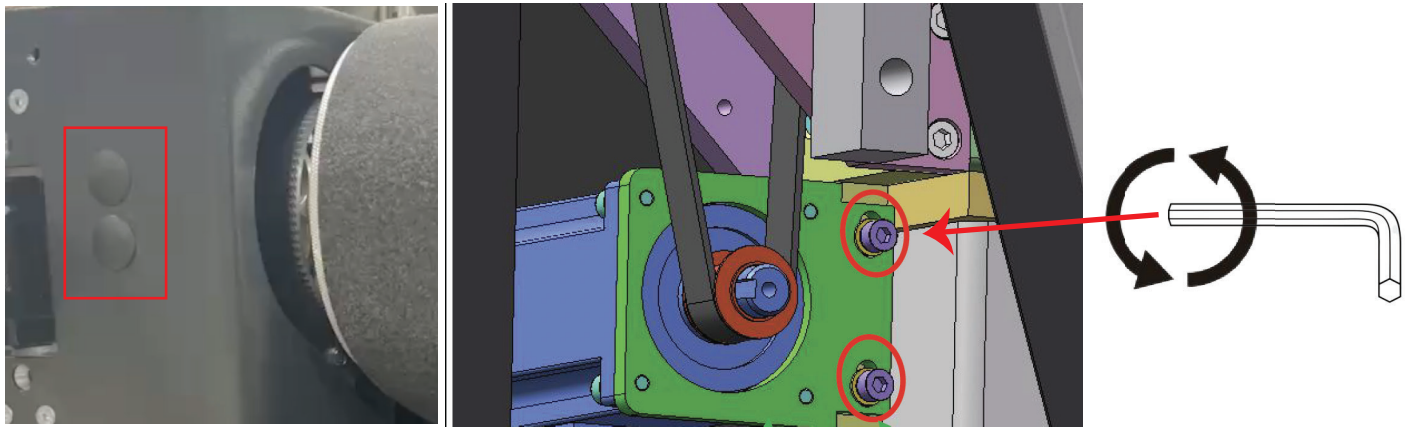
**Resolution #1:**

Check barometer and ensure it is set to at least 0.6MPa.



**Resolution #2:**

Adjust the tension of the belt by using allen keys. Depending on fixutre, will require tightening or loosening.



Remove covers to expose screw adjustments for belt tension. Insert an allen key and turn clockwise or counter clockwise dependent upon current status of belt tension.

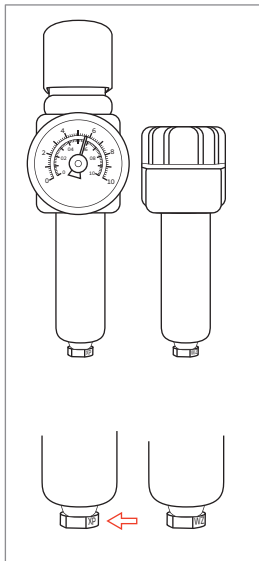
If there is a lip in the belt near the front edge, tighten the belt by turning the allen key clockwise.

Be sure to adjust both sets of screws (4 total) evenly.

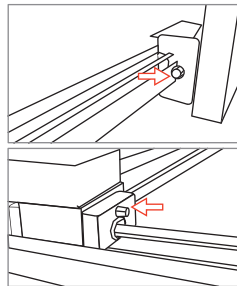
## 8. Maintenance & Warranty

### 8.1 Maintenance Schedule

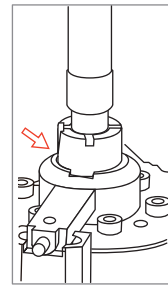
Maintenance Item	Method	Period	Related
Graphic blade holder clean	Check and clean debris inside blade holder	Every time before use	Depending by cut material
Check pressure valve and water level	Make sure pressure valve in normal condition, open tank to release water	Every day	Pic. E
Water separator	Make sure pressure is in accepted range, and check for water level	Every day	This water separator is with automatic water release (Pic. A)
Felt cleaning	Use air gun or vacuum cleaner	Every day	No sundries or bumps on surface
Lubricating oil in linear rail guide	Add lubricating oil for X,Y rail guide	Every six months	Pic.B
Lubricating oil in creasing tool axis	Add right amount of lubricant manually	Every six months	Pic.C
Lubricating oil in oscillating tool axis	Add right amount of lubricant manually, and inject grease in oil hole with oil gun	Every six months	Pic.D Pic.F



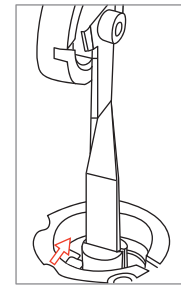
Pic.A



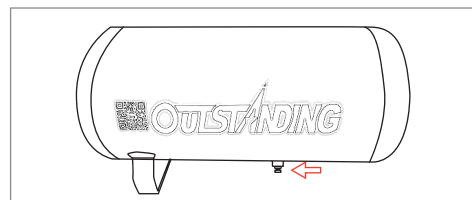
Pic.B



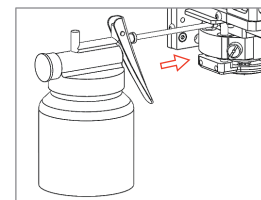
Pic.C



Pic.D



Pic.E



Pic.F

\*Note: Lubricating oil,suggest use "Mobil 1 5W-30"; Lubricating grease, suggest use "Mobil grease MP"

## **8.2 Warranty**

CUTWORX USA provides warranty replacement of parts and labor for a period of one year after completion of installation of a LST Series Digital Cutting Machine.

### **Response Times & Problem Resolutions**

Calls placed into Post Sales Service Center are returned by a service technician within a twenty-four hour time period. Majority of software and hardware calls are diagnosed via remote support. Evening support is available upon request and availability.

### **Service Programs**

CUTWORX USA offers a variety of service programs to match your requirements. Affordable support contracts are available as well as preventative maintenance. Remote support sessions are offered for new operator and follow up training. Personalized one on one sessions can be arranged in person or remotely with the Technology Center Specialist.

### **Other Services**

#### **Escalation Policy**

The CUTWORX USA support team is a well-trained and highly qualified group of individuals. There is a support escalation policy in place in our CRM system. These escalation practices are implemented on a case-by-case basis in order to best serve the customer's needs.

#### **Productivity Training and Consultancy**

CUTWORX USA basic training courses teach your operators how to use all the functions of our system and can take place in our technology center. Material documentation, videos, and other resources are available to help assist. CUTWORX USA service team is focused on maximizing productivity for your machine.

## About CUTWORX USA

CutworxUSA is a leader in finishing equipment with over 150 years combined experience in finishing solutions. We are committed to providing the best small and wide format finishing equipment, installation, service and training to increase your efficiency and productivity.

Our Workflow and Application Specialist can demonstrate our complete line of finishing equipment to validate it will meet your finishing requirements at our Technology Center in Irving, Texas.

Virtual demonstrates are now available upon request.

### Copyright notice

Copyright 2022 CUTWORX USA.

This user manual can only be reproduced with the written authorization of CUTWORX USA. This regulation also applies to the excerpts of the manual. CUTWORX USA reserves the right to interpret the contents described in this user manual.

### Trademark

The products, files, company names and logos listed in this user manual are registered trademarks of our company. December 2022



CUTWORX USA

8101 Tristar Dr STE 110  
Irving, TX 75063

Email: [sales@cutworxusa.com](mailto:sales@cutworxusa.com) / [support@cutworxusa.com](mailto:support@cutworxusa.com)  
Website: [www.cutworxusa.com](http://www.cutworxusa.com)