

The screenshot shows the Vectric website interface. At the top left is the Vectric logo with the tagline "PASSIONATE ABOUT CNC". Below the logo are navigation links for "PRODUCTS", "FREE TRIAL", and "PURCHASE". A "welcome to V&CO" message is displayed above a "customer login" section. The login form includes fields for "email address" (with "joe.bloggs@vectric.com" entered) and "password", each with a "Click here if you have forgotten your..." link. A "Sign In" button is located below the password field. A small photo of a man with his arms crossed is positioned to the right of the login form. A dropdown menu is open, showing options: "Import to Level", "Open Containing Folder", and "Download".

**Vectric**  
PASSIONATE ABOUT CNC








# What's New In VCarve Desktop V9.5

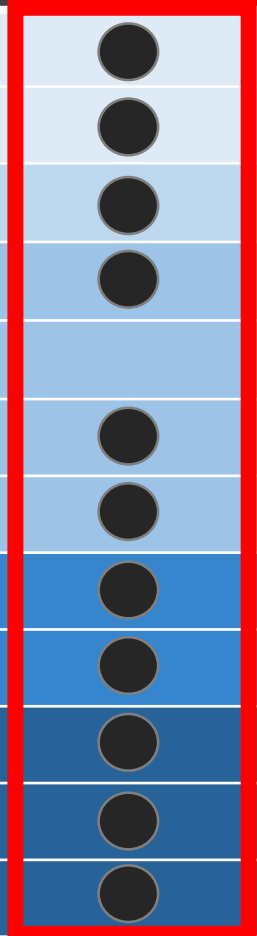


*Vectric CNC Software V9.5*

# What's New - V9.5



Group	Feature					
<b>Infrastructure</b>	On-line download of licence	●	●	●	●	●
	On-line download of clipart	●	●	●		
<b>Job Type</b>	Core product support for Rotary	●	●	●		
<b>Drawing</b>	Improved Text Editing	●	●	●	●	●
	Vector Unwrapper (Rotary)	●				
	Picture Editor	●	●	●	●	●
	Crop Bitmap	●	●	●	●	●
<b>Modelling</b>	Easier Model Import (Rotary)	●	●	●		
	Wrapped model export	●	●	●		
<b>Machining</b>	Support for Helical Ramps	●	●	●	●	●
	Support for G93 (Rotary)	●	●	●		
	Easier post-processing (Rotary)	●	●	●		



# Licencing



V9

V9.5

➤ Manual typed entry only

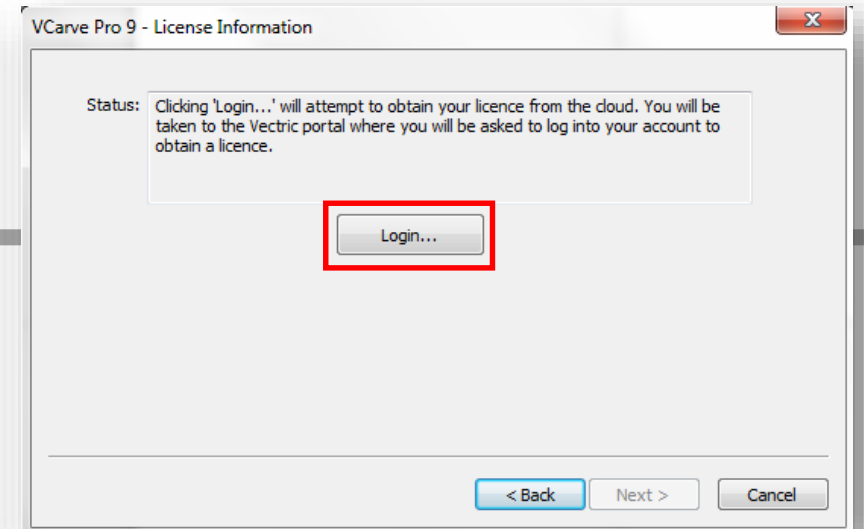
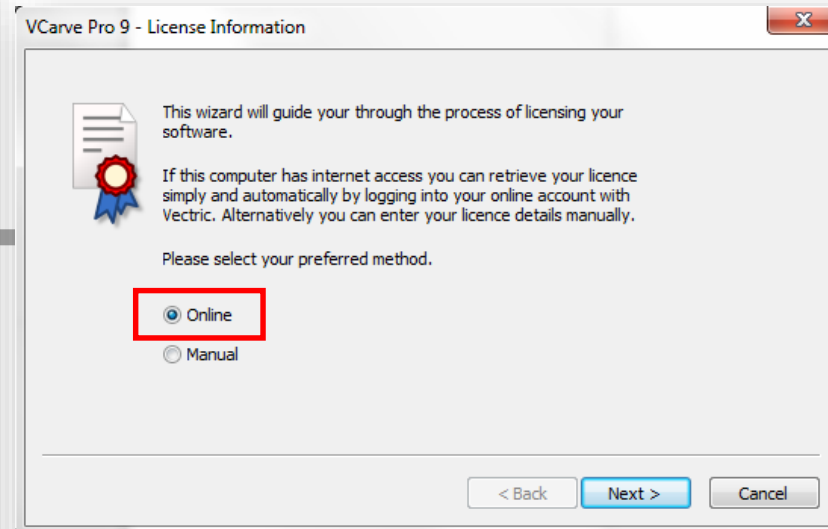
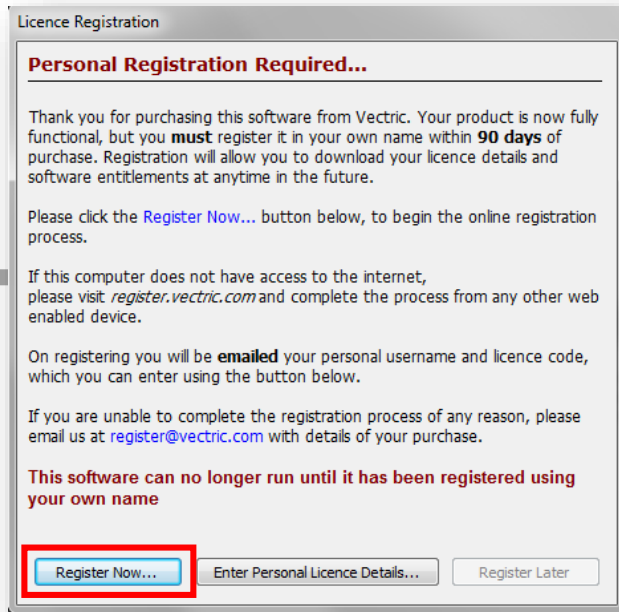
➤ Online extraction of license details

- No need for manual typing
  - Manual typing till an option

# Auto-Licencing



➤ On-line extraction and entry – via V&Co.





# Auto-Licencing



**Vectric**  
PASSIONATE ABOUT CNC

PRODUCTS FREE TRIAL PURCHASE SUPPORT INSPIRATION ABOUT US

V&CO / Account / Login


welcome to V&CO

customer login

email address  
  
Click here if you have forgotten your username.

password  
  
Click here if you have forgotten your password.


Don't have an account but own Vectric Software? [Click here to sign up now!](#)




**Vectric**  
PASSIONATE ABOUT CNC

PRODUCTS FREE TRIAL PURCHASE SUPPORT INSPIRATION ABOUT US

V&CO / Account / LinkingSuccess

 Access Request Success

**Congratulations. You have successfully linked Aspire with your V&Co Account**



VCave Pro 9 - License Information

Licensed to:  
**Joe Bloggs - Vectric**

Modules:

# Clipart

V9

V9.5



- Have to install required libraries
- Requires considerable disk space

- Download clipart when required
- Available clipart displayed as images
- Future scope to link to additional clipart purchases

# Clipart



## V9

## V9.5

### Installed from USB Media

Aspire V9.0

Install Software  
(May take a moment to start)

Install Clipart  
(May take a moment to start)

Install Tutorials and Files

### Installed from V&Co.

PRODUCTS FREE TRIAL PURCHASE SUPPORT INSPIRATION ABOUT US

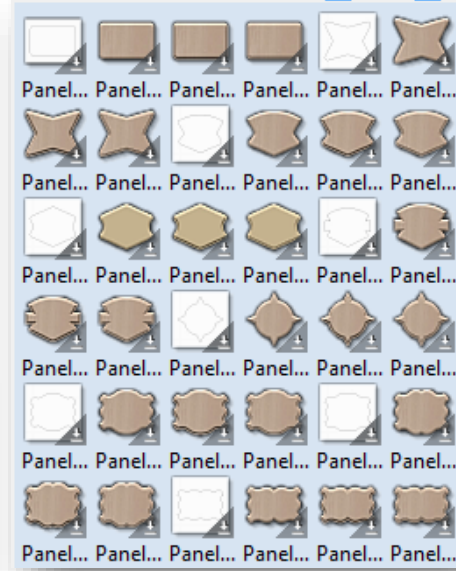
V&CO / Account / Download Aspire 9.015

your licence details and downloads for Aspire 9.015 can be found below

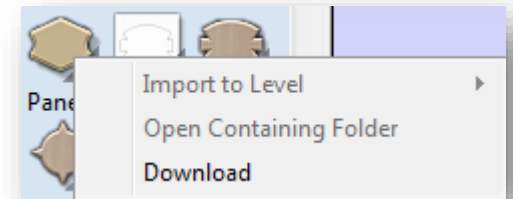
registered username  
joe blogger - vectric

v9.015 licence code (Full Licence)  
KJLRFY-86C89-MK483D-4K3Z77-8KKNEI-JUP6EK-8BK2D-F2MAY-SG4TMZ-GV9RAJ

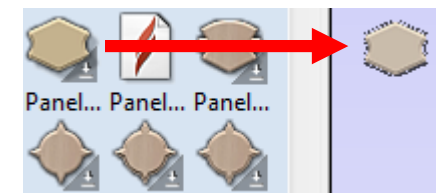
downloads	product installers	
installer	143.07mb	download
<b>clipart installers</b>		
Weaves Clipart Pack	609mb	download
V9 Additional Clipart	48.24mb	download
V9 3D Tabs Clipart for Aspire	0.379mb	download
Texture Area Text Clipart Pack	182mb	download
Ribbons & Banners Clipart Pack	405mb	download
Plants & Fruit Clipart Pack	139mb	download
Panels & Shields Clipart Pack	319mb	download
Objects & People Clipart Pack	448mb	download
Non-Table Textures Clipart Pack	606mb	download
Domes & Dishes Clipart Pack	22mb	download
Decorative Clipart Pack	646mb	download
Borders Clipart Pack	42mb	download
Animals Clipart Pack	472mb	download
2D Vectors Clipart Pack	0.8mb	download



### Download to clipart library



### Drag directly into product



# Rotary - Job Setup



V9

V9.5

- Rotary functionality **NOT INCLUDED**
- **GADGET ONLY**
- **DIFFICULT** to make job modifications
- **CANNOT** combine 'Spiral' and 'Cylindrical' wrapped layouts in one job

- Rotary functionality **INCLUDED**
- No longer require gadget for job setup
- **NEW** dedicated workflow
- **EASY** editing of job parameters
- **CAN** combine 'Spiral' and 'Cylindrical' layouts within the same job
- Can still open jobs created with the gadget



# Rotary - Job Setup



**Job Setup**

**Job Type**

1  Single Sided  
 Double Sided

**Job Size**

Width (X): 20.0 mm  
Height (Y): 12.566 mm  
Thickness (Z): 2.0 mm

**Units**  inches  mm

**Z Zero Position**

Material Surface  
 Machine Bed

**XY Datum Position**

Use Offset

**Modeling Resolution**

Very High (7 x Slower)  
4 million points

**Appearance**

Canadian Maple  
Solid Color: [ ]

OK

V9

Wrapped Job Setup  
Version 1.12

This gadget creates a new blank file laid out for wrapped machining

**Cylinder Dimensions**

Cylinder Length (L) 10 units  
Cylinder Diameter (D) 4 units

Units  inches  mm

**Cylinder Orientation Along ...**

X Axis (wrap Y values)  Y Axis (wrap X values)

**XY Drawing Origin**

**Z Origin On ..**

Cylinder Surface (Top)  Cylinder Axis (Bottom)

**Wrapping Layout**

As well as working with a simple unwrap of a cylinder into a flat sheet, this gadget can create a layout for wrapping a 'spiral' around the cylinder. This can be extremely useful if you have a design which wraps multiple times around your cylinder, as you can lay out the design as a continuous strip which will be wrapped in a spiral fashion when the toolpaths are created. To use this feature you must ensure that all of the design AND toolpaths remains within the area bounded by the vector created on the "Spiral Wrapped Area" layer.

Simple Cylindrical Wrap  Spiral Wrap

Number of revolutions 1

OK Cancel

File **Gadgets** Help

- Install New Gadget...
- Gadget Shortcuts
- Regular Grid Importer
- About Gadgets
- DXF Batch Processor
- Celtic Weave Creator
- Dragknife Toolpath
- Explode Vectors
- Global Gadget Settings
- Keyhole Toolpath
- Setup Sheet Editor

- Wrapping
  - Fluting Layout
  - Spiral Layout
  - Wrapped Job Setup**
  - Create Rounding Toolpath
  - Vector Unwrapper

V9.5

**Job Setup**

**Job Type**

Single Sided  
 Double Sided  
 Rotary

**Job Size**

Length (L): 20.0 mm  
Diameter (D): 4.0 mm

**Units**  inches  mm

**Z Zero Position**

Cylinder surface  
 Cylinder axis

**XY Datum Position**

Use Offset  
X: 0.0  
Y: 0.0

**Orientation**

Along X Axis  
 Along Y Axis  
 Flip design

**Modeling Resolution**

Very High (7 x Slower)  
4 million points

**Appearance**

Canadian Maple  
Solid Color: [ ]

OK Cancel

No rotary Job Type – Gadget Only

Dedicated Rotary Job Type

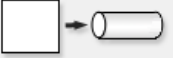
# Rotary - Job Setup

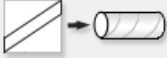
V9

V9.5



**Wrapping Layout**  
As well as working with a simple unwrap of a cylinder into a flat sheet, this gadget can create a layout for wrapping a 'spiral' around the cylinder. This can be extremely useful if you have a design which wraps multiple times around your cylinder, as you can lay out the design as a continuous strip which will be wrapped in a spiral fashion when the toolpaths are created. To use this feature you must ensure that all of the design AND toolpaths remains within the area bounded by the vector created on the "Spiral Wrapped Area" layer.

**Simple Cylindrical Wrap**  


**Spiral Wrap**  
  
Number of revolutions:

OK Cancel

File Edit Model Toolpaths View Gadgets

Modeling

3D Model Tools

Components

- Detail
- Weave
- Base
  - Upper Circular Border
  - Lower Circular Border
  - Zero Plane

Combine Mode

Mirror Mode

Wrapping

Show

Hide

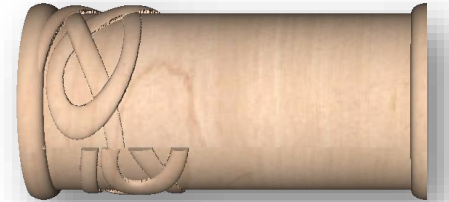
Select Components

Insert New Level

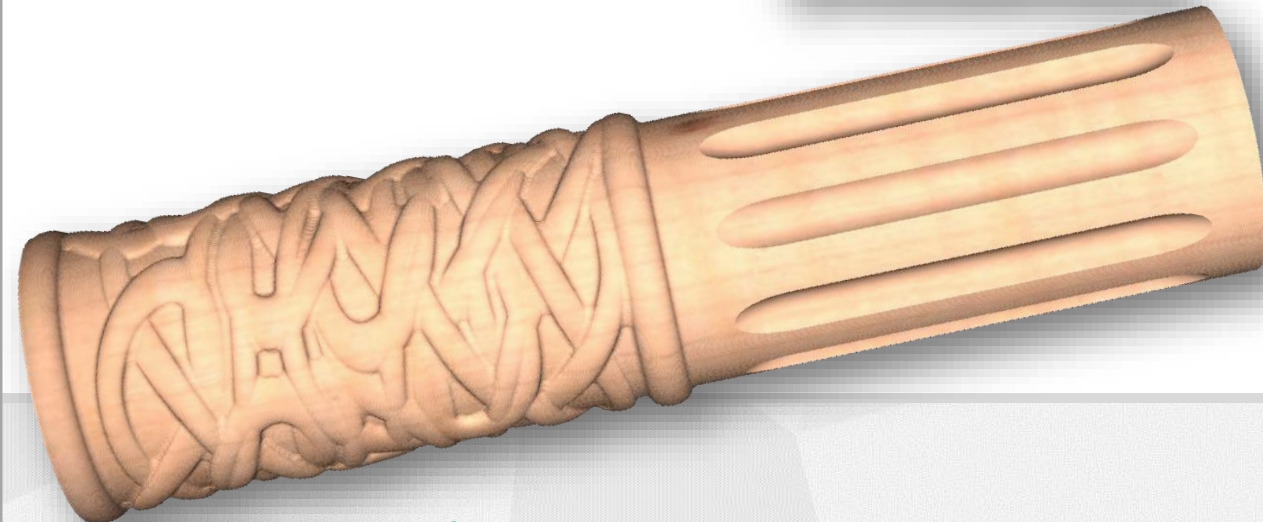
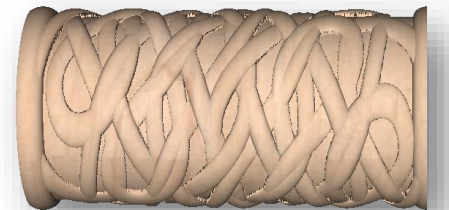
Delete Level

Rename Level

Level – Not Wrapped



Level – Wrapped



# Rotary - Display



V9

V9.5

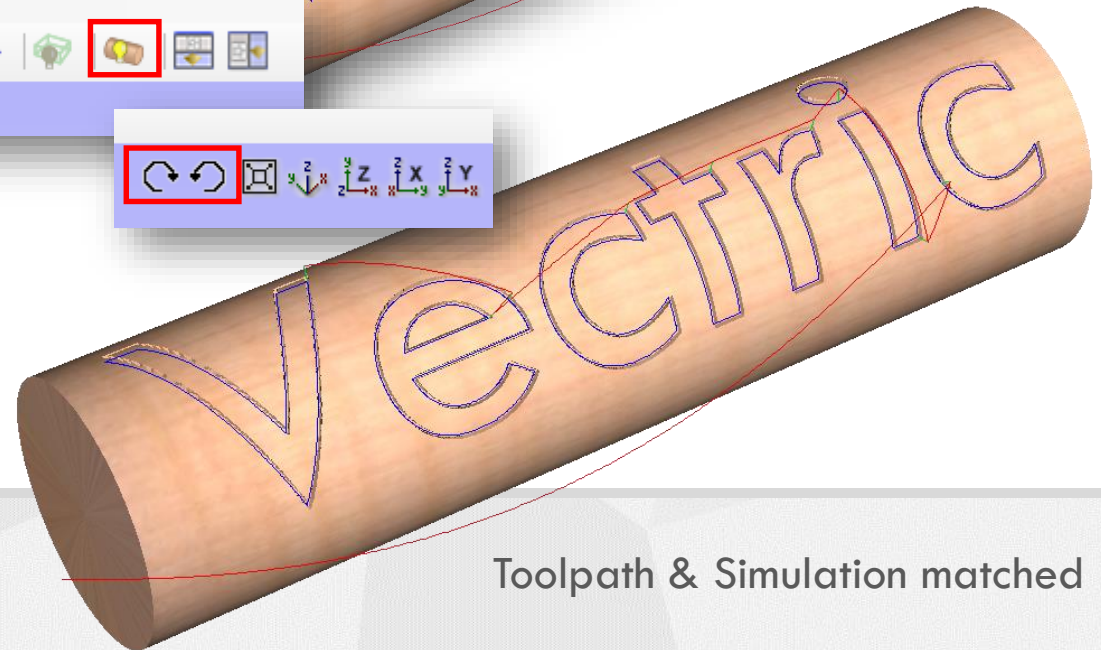
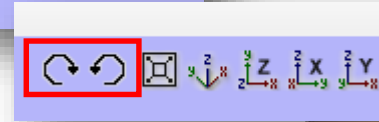
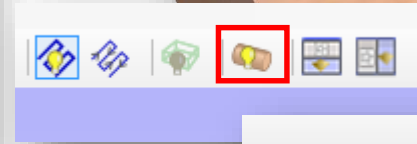
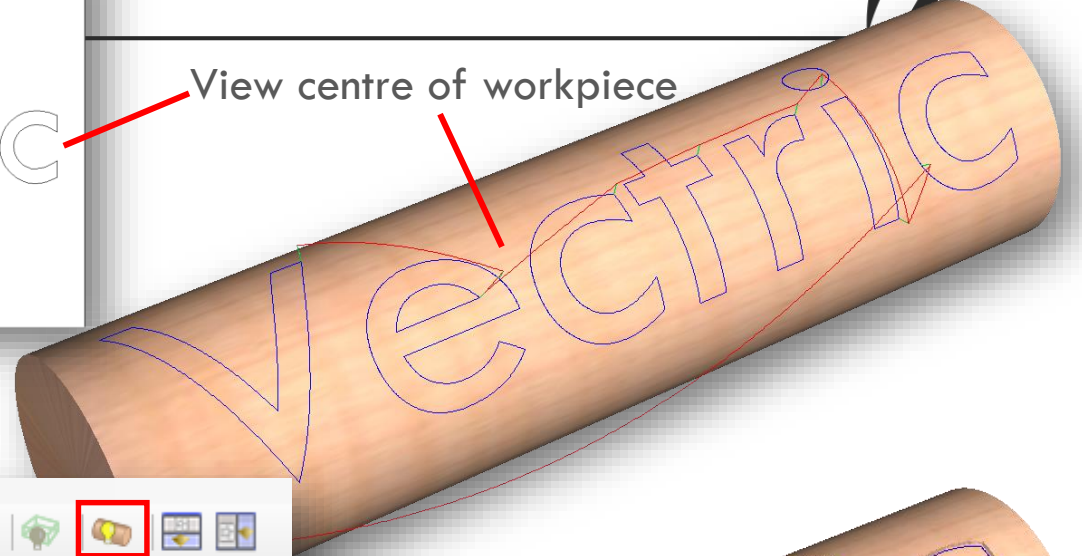
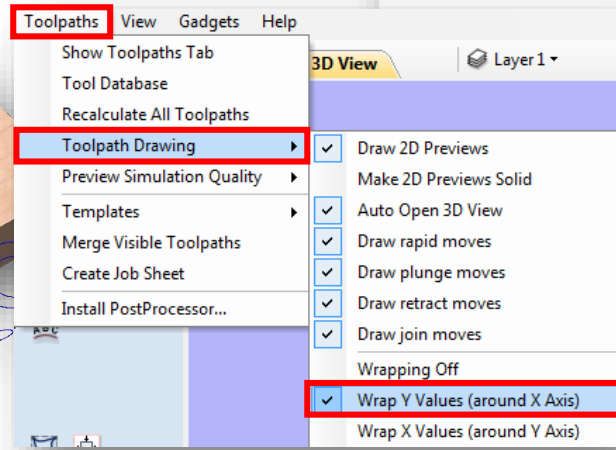
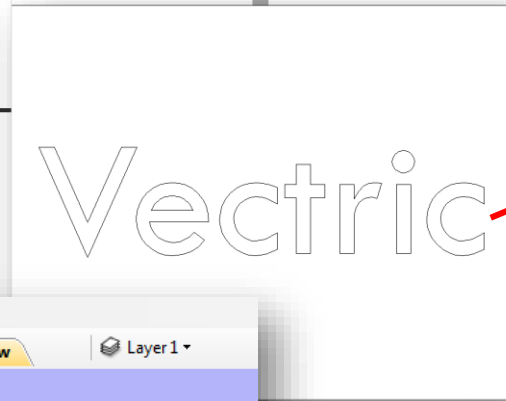
- **CANNOT VIEW wrapped relief for 2D jobs**
- **CANNOT VIEW wrapped toolpath simulation for 2D jobs**
  - Only calculated toolpaths
- **Wrapping only available as a 'Toolpath Drawing' option**
- **Wrapped seam faces screen**
  - Requires rotation to see full design
- **Cannot visualize model in cylindrical stock**

- **CAN view wrapped relief for 2D jobs**
- **CAN view wrapped toolpath simulation for 2D jobs**
- **AUTOMATIC wrapping of rotary jobs**
- **NEW Icons on top toolbar**
- **Can open jobs created with the gadget**
- **Model centre faces screen rather than seam**
- **Easy to visualize cylindrical stock in relation to model**



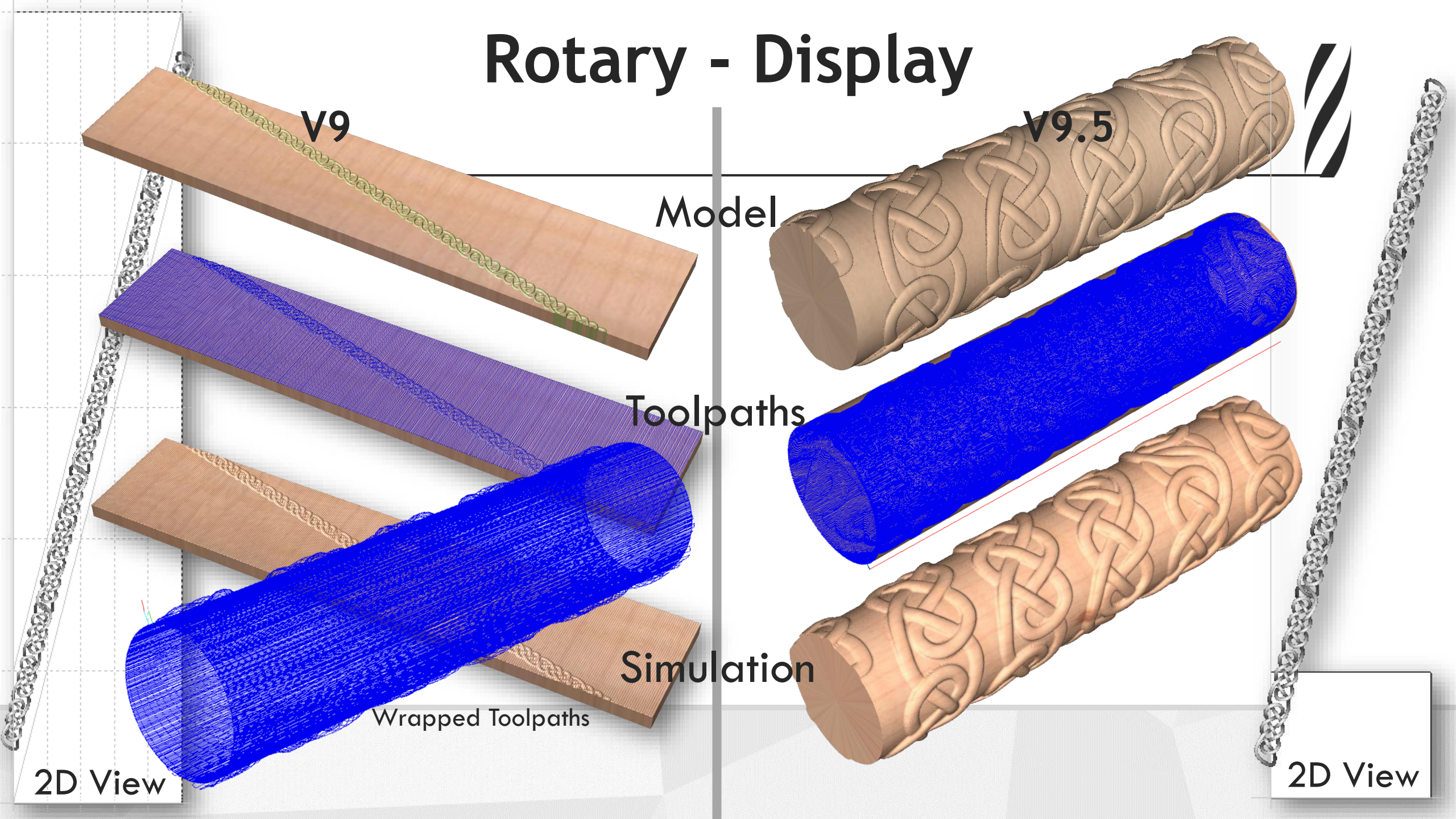
# Rotary - Display

V9.5





# Rotary - Display



v9

Model

v9.5

Toolpaths

Simulation

Wrapped Toolpaths

2D View

2D View



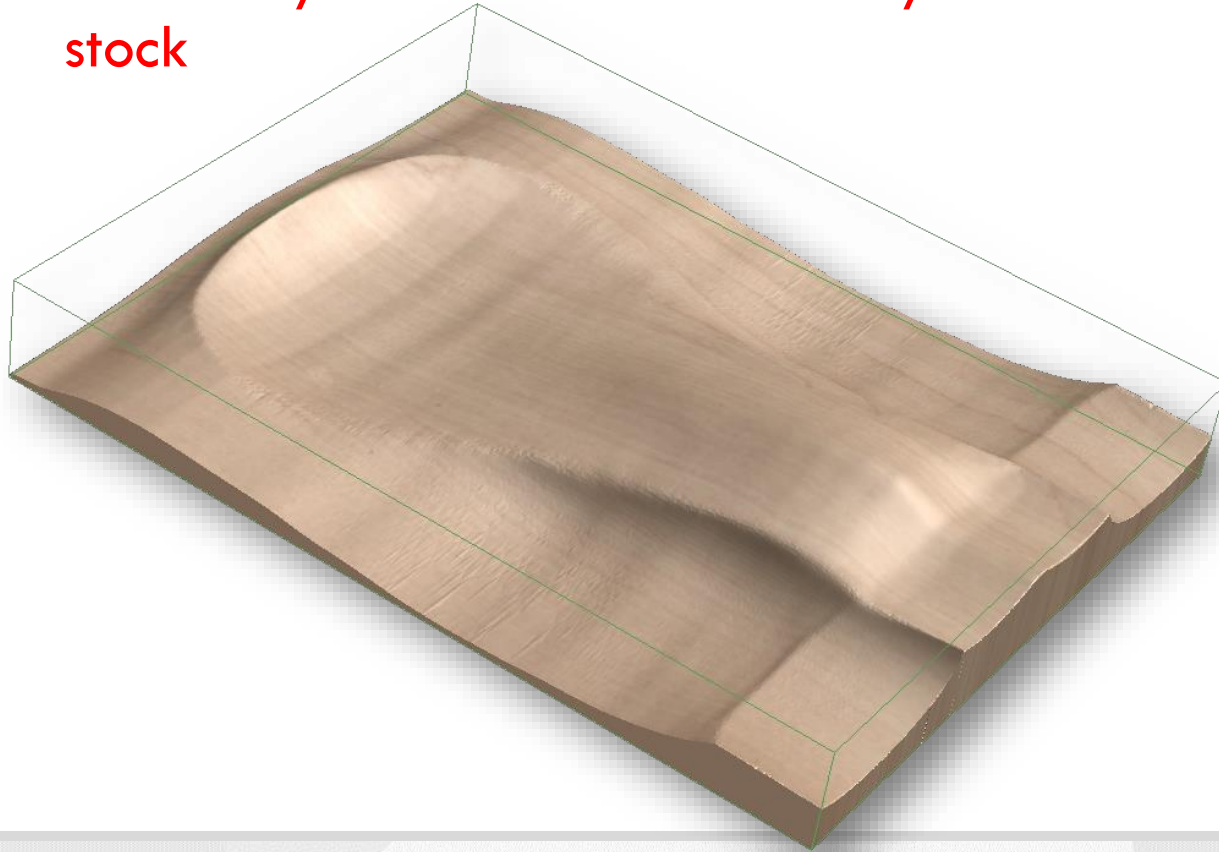
# Rotary - Display



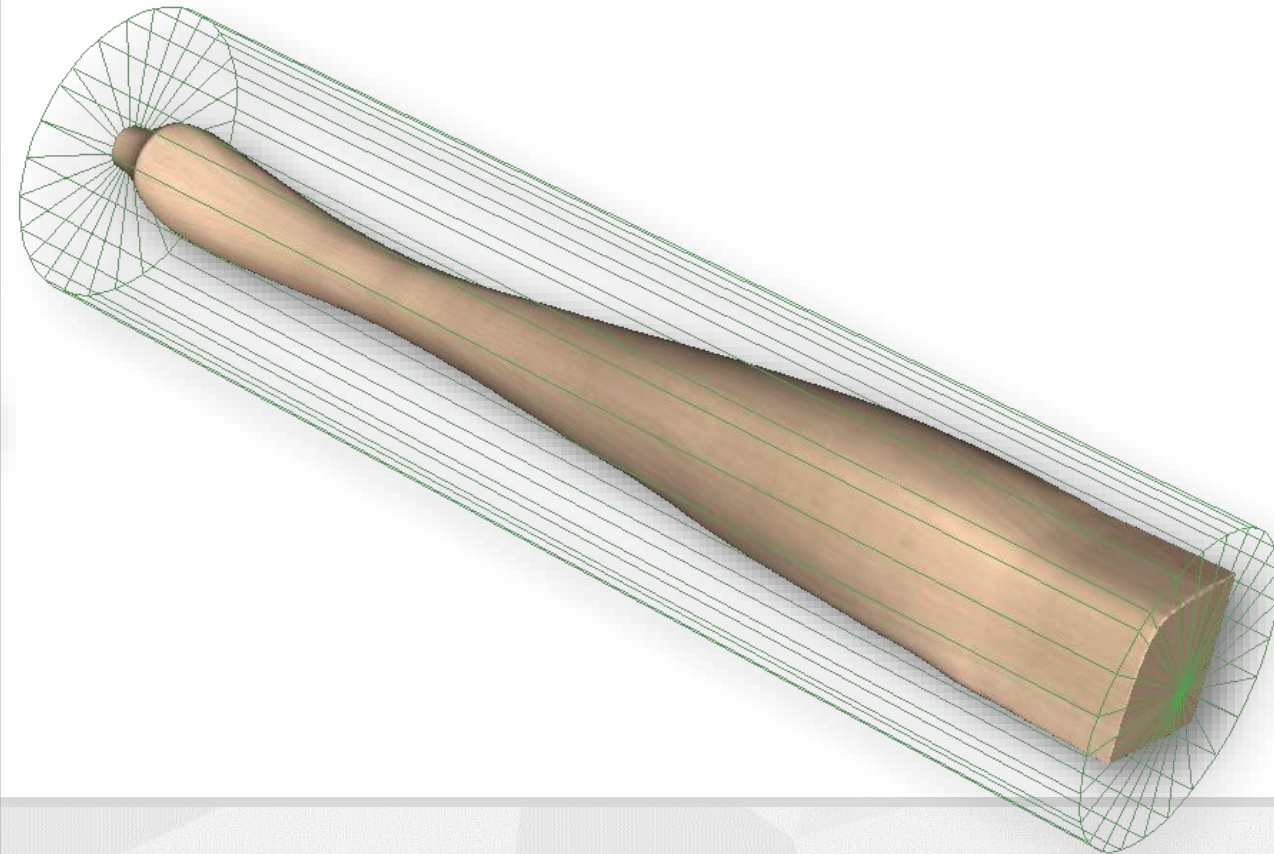
V9

V9.5

➤ No ability to visualize model in cylindrical stock



➤ Model visualized in cylindrical stock



# Text Editing



V9

V9.5

- Text placed after completion
- No dynamic modification – change parameters and then ‘Apply’
- Transformations to text are reset when editing text content

- Text box shows start, height and alignment
- Text displayed as soon as first letter entered
- Dynamic modification – no need to ‘Apply’ to see change
- Transformation to text maintained when editing text content:
  - Rotation
  - Wrapping along a curve
  - Kerning
  - Non proportional scaling
  - Mirroring



# Text Editing



V9

V9.5

Original Text + Curve

Vetric Software V9.0

Vetric Software V9.5

Wrapped Text + Kerning

Vetric Software V9.0

Vetric Software V9.5

Text Edited

Vetric CNC Software V9.0

Vetric CNC Software V9.5

Wrapping + Kerning LOST

Wrapping + Kerning KEPT



# Image Editing



V9

V9.5

- No ability to crop an image
- No ability to edit image colour properties

- Ability to crop an image to a vector
- Ability to change:
  - Brightness/Contrast/Gamma
  - Greyscale
- Add border
  - Rectangular/Oval
- Ideal for
  - Lithophanes
  - Laser picture

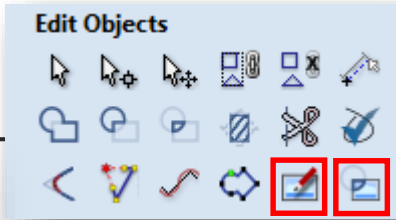


# Image Editing

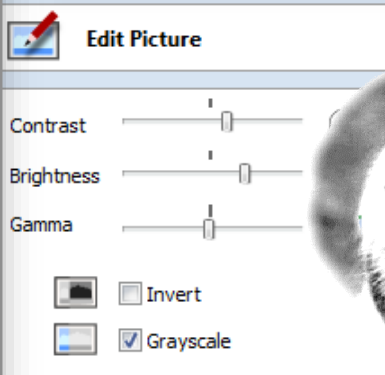
V9

V9.5

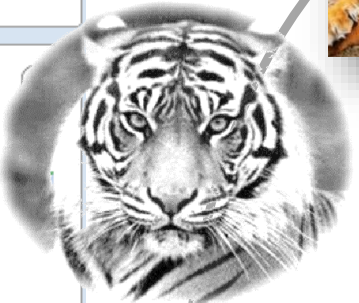
Original



Vector Border



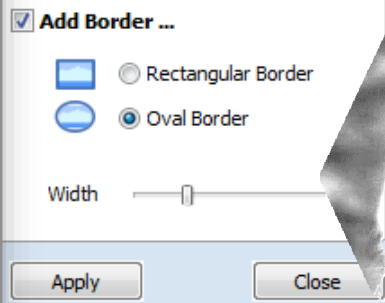
With Border



Grey Scale



Trim



Brightness



# Rotary - Model Import



V9

V9.5

- No specific workflow for rotary
- Difficult to orientate to ensure whole model fully unwrapped
- **VERY Difficult to scale to fit within block**

- New Model Import
- Only display relevant parameters
- Full 3D and Flat model options
  - Full3D – unwrap, Flat – no-unwrap
- **AUTOMATIC initial orientation**
- Bounding cylinder to help orientation
- **AUTOMATIC scaling to fit block**
- Ability to move rotation axis
- Wrapped result displayed





# Rotary - Model Import - Wrap

## V9

Import

**Oriente 3D Model**

**Initial Orientation**

Top  
Back Left Right Front Bottom

Rotation about Z Axis  
-180 -90 0 +90 +180

**Interactive Rotation**

XYZ XYZ X Y Z  
View Model

**Model Size**

Lock XYZ ratio

Z: 690.188  
Y: 113.198  
X: 123.998

Apply

Units:  mm  inches

Center Model Scale mm / inches

**Zero Plane Position in Model**

Depth Below Top: 692.418

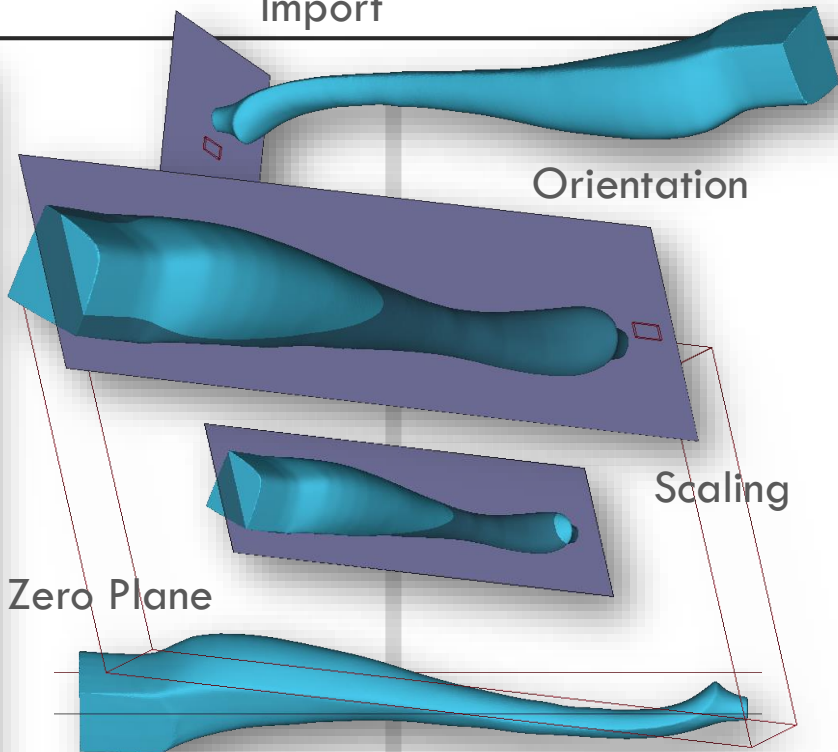
Aspire

Create both sides  
 Discard data below zero

Apply Perspective along z

Min Max 0%

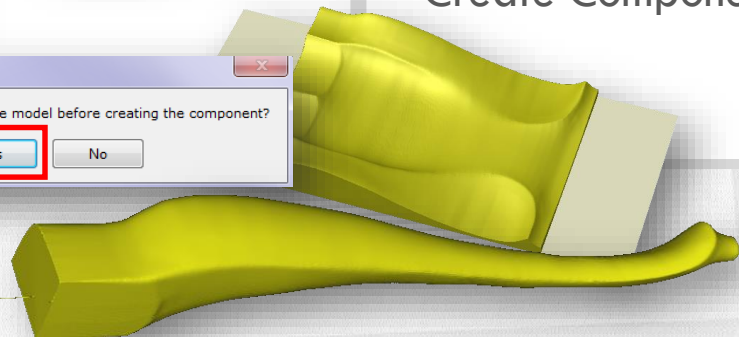
OK Cancel



Create Component

Do you want to 'unwrap' the model before creating the component?

Yes No



## V9.5

Import

**Oriente 3D Model**

**Imported model type**

Full 3D model  
 Flat model

Best suited when it is desired to machine model as is (including optional scaling)

**Initial Orientation**

Top  
Back Left Right Front Bottom

Rotation about Z Axis  
-180 -90 0 +90 +180

**Interactive Rotation**

XYZ XYZ X Y Z  
View Model

**Rotation Axis Movement**

Off  On

**Model Scaling**

Model units:  inches  mm

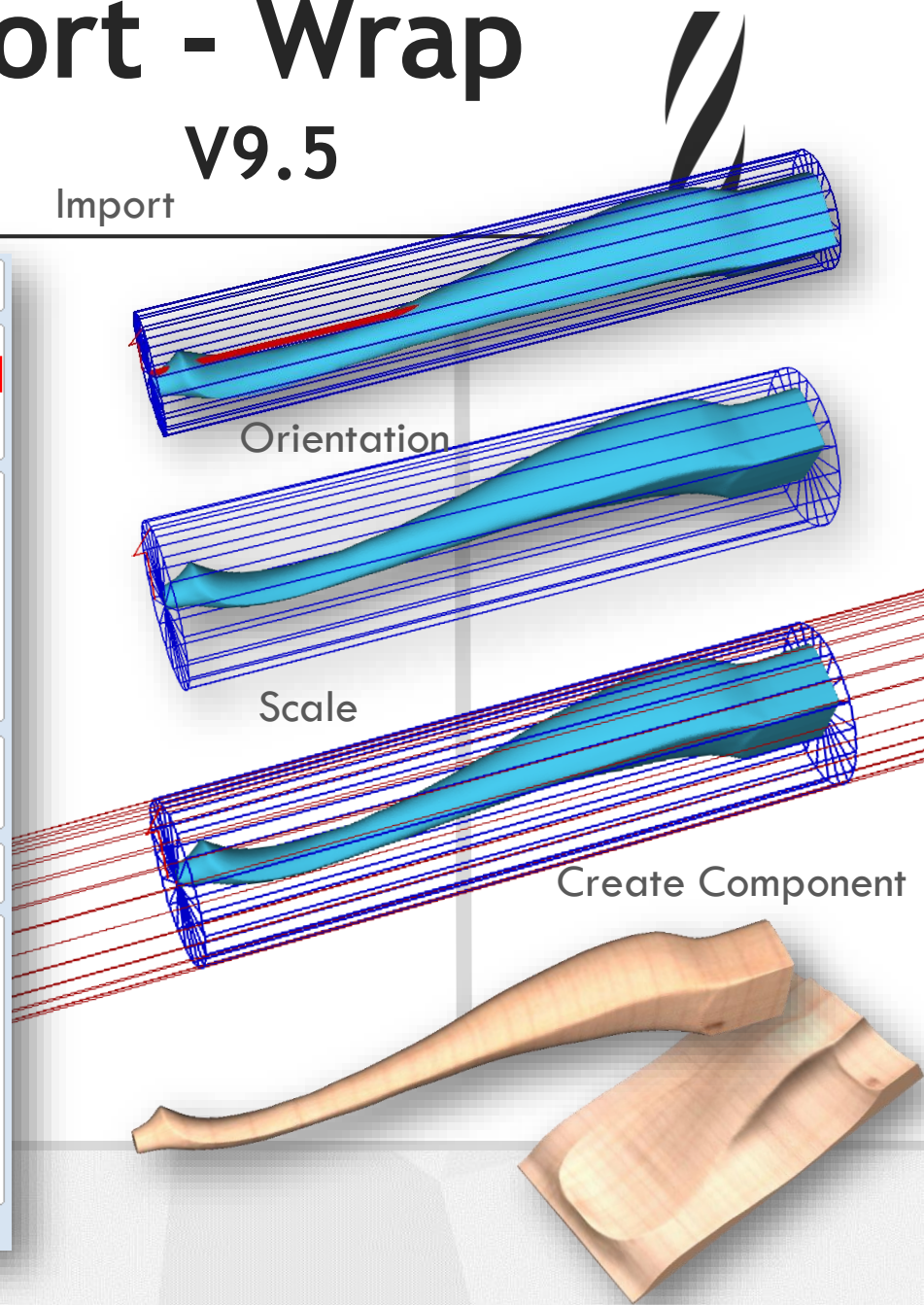
Lock ratio

Model diameter: 4.0 inches  
Model length: 22.2641 inches

Scale model to fit material  
Reset to Original Size

Resize material block

OK Cancel





# Rotary - Model Import - Flat

V9

V9.5

**Orientate 3D Model**

**Initial Orientation**

Top  
Back Right  
Left Front  
Bottom

Rotation about Z Axis  
-180 -90 0 +90 +180

**Interactive Rotation**

XYZ XYZ X Y Z  
View Model

**Model Size**

Lock XYZ ratio

Z 0.5906  
X 5.8728  
Y 6.3169

Apply

Units mm inches

**Center Model** Scale mm / inches

**Zero Plane Position in Model**

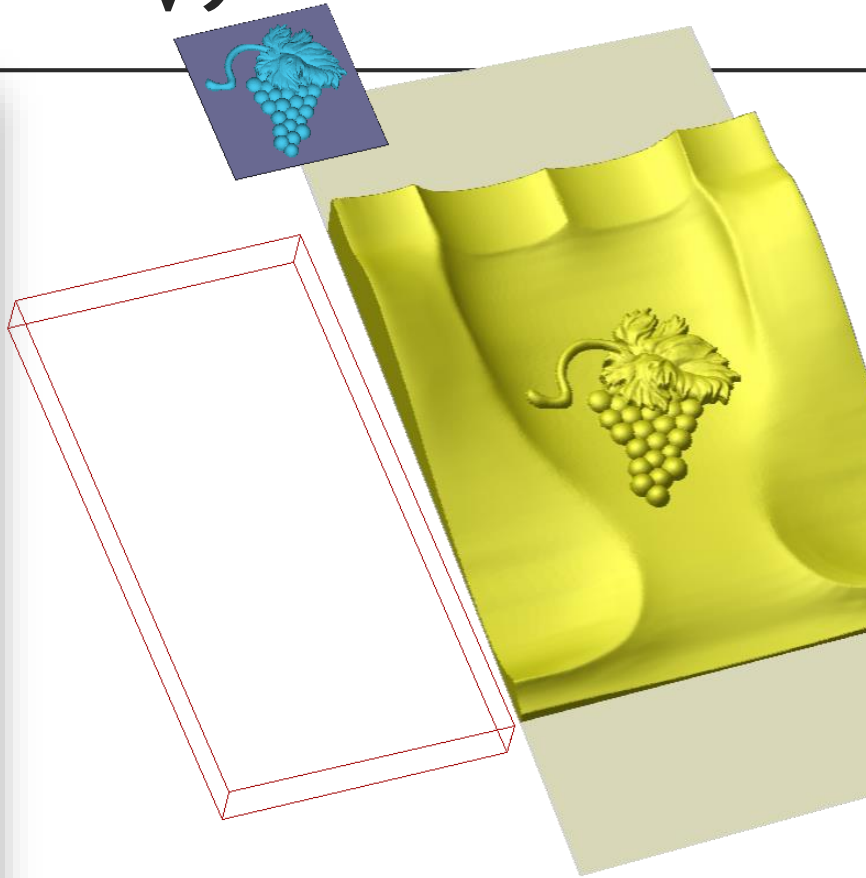
Depth Below Top 0.5906

Create both sides  
 Discard data below zero plane

**Apply Perspective along Z**

Min Max 0%

OK Cancel



Aspire

Do you want to 'unwrap' the model before creating the component?

Yes No

**Orientate 3D Model**

**Imported model type**

Full 3D model  
**Flat model**  
Best suited when model is a surface detail

**Initial Orientation**

Top  
Back Right  
Left Front  
Bottom

Rotation about Z Axis  
-180 -90 0 +90 +180

**Interactive Rotation**

XYZ XYZ X Y Z  
View Model

**Model Scaling**

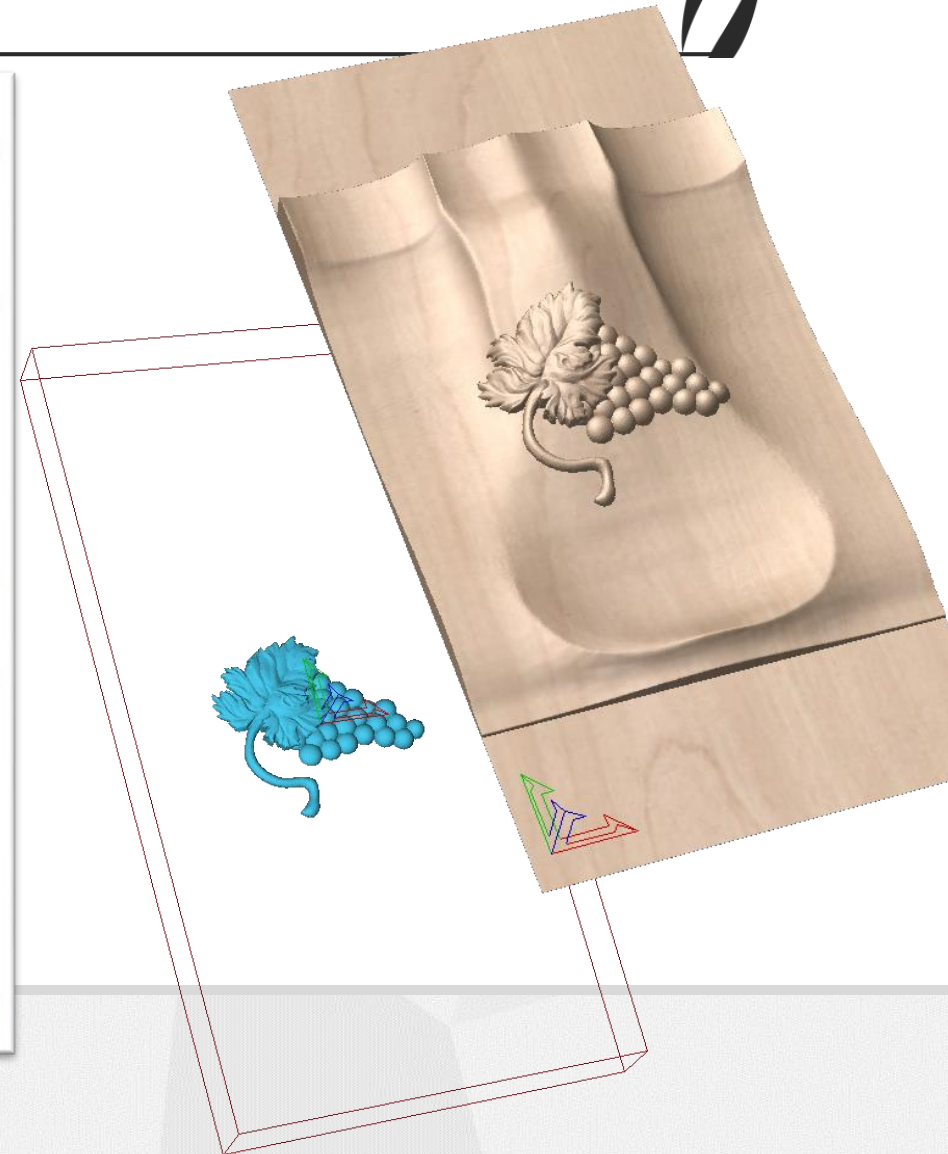
Model units: inches mm

Lock ratio

Z 0.5906 inches  
X 6.3169 inches  
Y 5.8728 inches

Scale model to fit material  
Reset to Original Size

**OK** Cancel



# Rotary - Completed Job





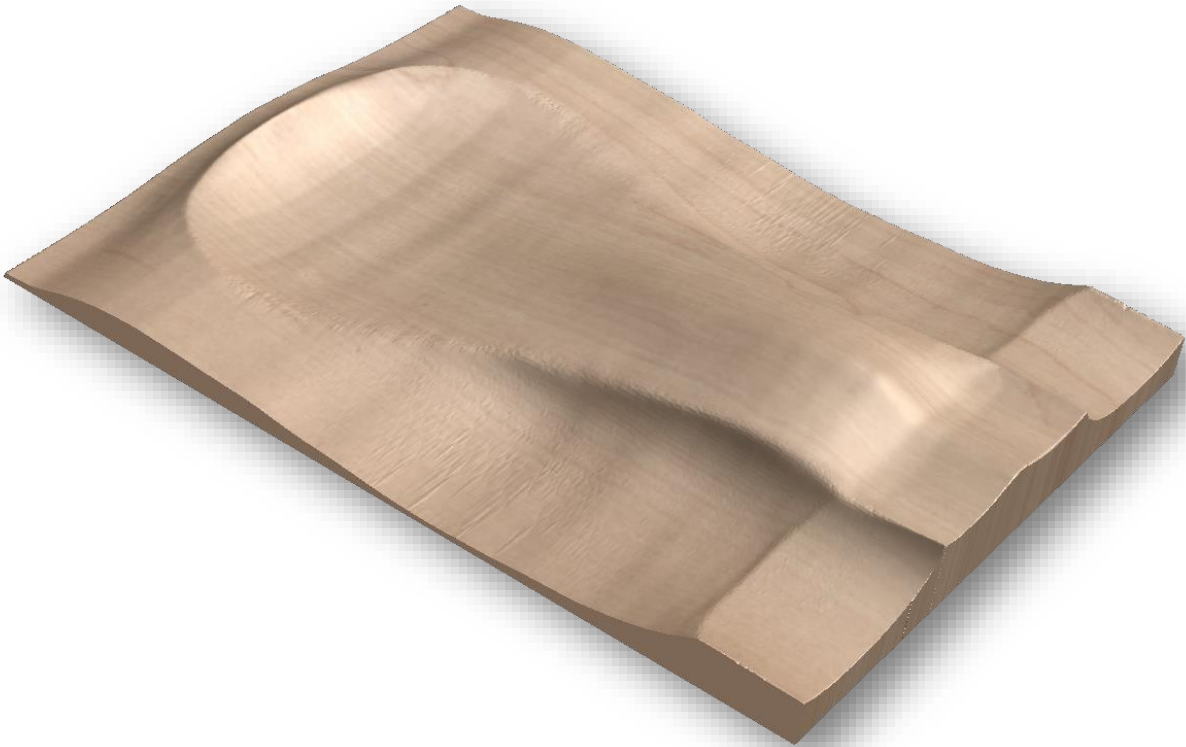
# Model Export - Rotary



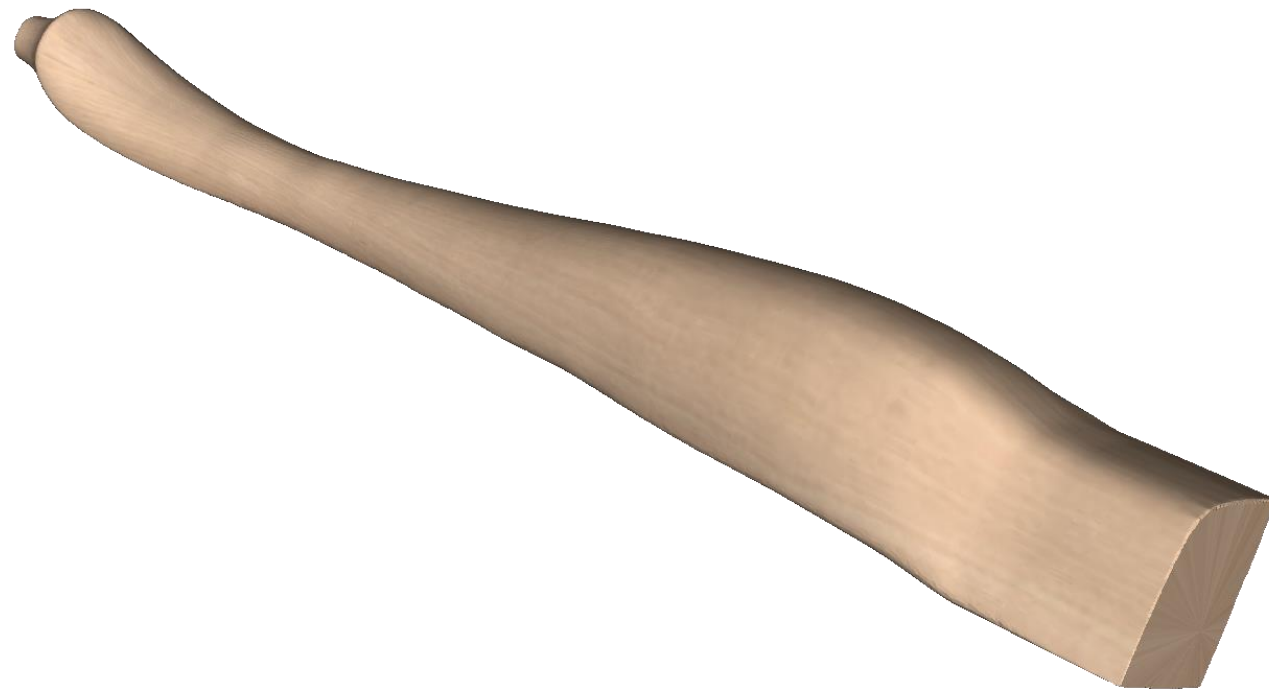
V9

V9.5

➤ No ability to export wrapped model



➤ Full3D wrapped model can be exported



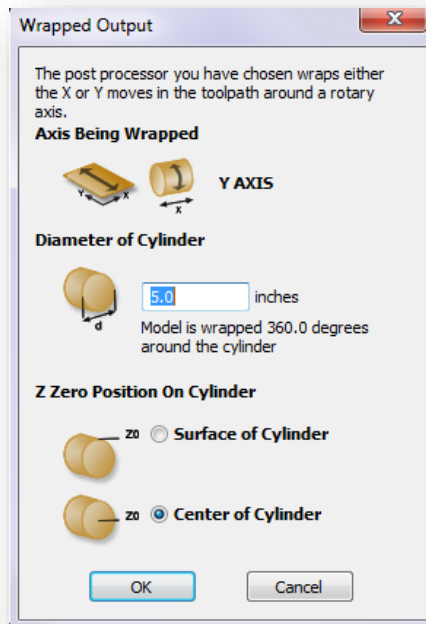
# Rotary Machining -



V9

V9.5

- **NO support for G93**
  - Indifferent finish quality
- Have to specify job parameters when post processing



- **Support for G93**
  - Rotation speed varies to maintain constant feedrate
- Automatic extraction of job parameters when post processing

```
( UG2018| )  
( File created: Thursday July 26 2018 - 03:39 PM )  
( for Mach2/3 from vectric )  
( Material Size )  
( X= 26.000, Z= 2.500 )  
( Diameter = 5.0000 Inches )  
( Y values are wrapped around the x axis )  
( Y values are output as A )
```





# Helical Ramps



V9

V9.5

- Helical ramps are output as a series of straight line moves
  - Can create a large tap file

- Helical ramps are output as arcs
- Requires an updated post-processor

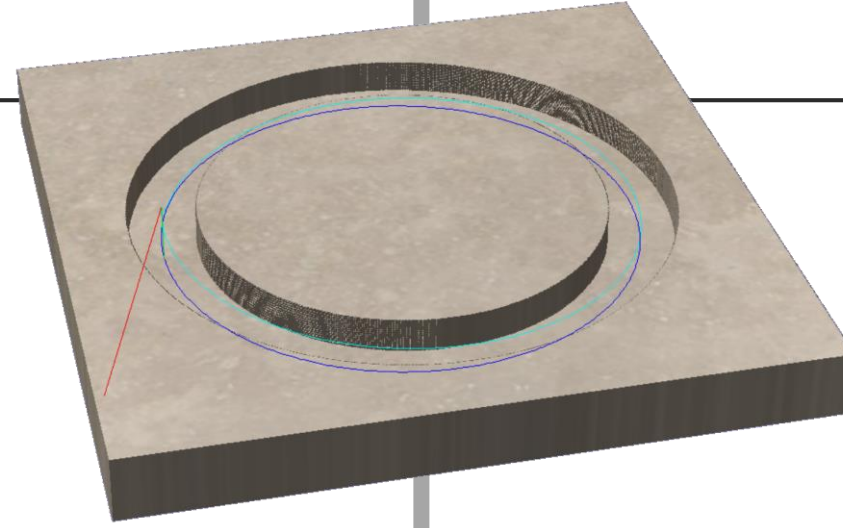
```
+-----+
+  Commands output for clockwise helical arc  move
+-----+
begin CW_HELICAL_ARC_MOVE
"G2[X][Y][Z][I][J]"
+-----+
+  Commands output for first clockwise helical arc move
+-----+
begin FIRST_CW_HELICAL_ARC_MOVE
"G2[X][Y][Z][I][J][F]"
+-----+
+  Commands output for ccw helical arc move
+-----+
begin CCW_HELICAL_ARC_MOVE
"G3[X][Y][Z][I][J]"
+-----+
+  Commands output for ccw helical arc move
+-----+
begin FIRST_CCW_HELICAL_ARC_MOVE
"G3[X][Y][Z][I][J][F]"
```

# Helical Ramps



V9

V9.5



```
T1M6
G17
G0Z0.5000
G0X0.0000Y0.0000S12000M3
G0X0.7500Y2.5000Z0.2000
G1Z0.0000F30.0
G1X0.7501Y2.4788Z-0.0005
G1X0.7505Y2.4575Z-0.0011
G1X0.7512Y2.4361Z-0.0016
G1X0.7521Y2.4146Z-0.0021
G1X0.7533Y2.3930Z-0.0027
G1X0.7547Y2.3713Z-0.0032
G1X0.7565Y2.3496Z-0.0037
G1X0.7585Y2.3277Z-0.0043
G1X0.7608Y2.3058Z-0.0048
G1X0.7634Y2.2839Z-0.0053
G1X0.7663Y2.2618Z-0.0059
G1X0.7695Y2.2398Z-0.0064
G1X0.7729Y2.2176Z-0.0069
G1X0.7767Y2.1954Z-0.0075
G1X0.7808Y2.1732Z-0.0080
G1X0.7852Y2.1510Z-0.0085
G1X0.7898Y2.1287Z-0.0091
G1X0.7948Y2.1064Z-0.0096
G1X0.8001Y2.0841Z-0.0101
G1X0.8058Y2.0617Z-0.0107
G1X0.8117Y2.0394Z-0.0112
G1X0.8180Y2.0171Z-0.0118
G1X0.8245Y1.9948Z-0.0123
G1X0.8314Y1.9724Z-0.0128
G1X0.8386Y1.9502Z-0.0134
G1X0.8462Y1.9279Z-0.0139
G1X0.8540Y1.9057Z-0.0144
G1X0.8622Y1.8835Z-0.0150
G1X0.8707Y1.8614Z-0.0155
G1X0.8795Y1.8393Z-0.0160
G1X0.8887Y1.8173Z-0.0166
G1X0.8982Y1.7953Z-0.0171
G1X0.9080Y1.7734Z-0.0176
G1X0.9181Y1.7516Z-0.0182
G1X0.9285Y1.7299Z-0.0187
G1X0.9393Y1.7083Z-0.0192
G1X0.9504Y1.6868Z-0.0198
G1X0.9618Y1.6655Z-0.0203
G1X0.9735Y1.6442Z-0.0208
```






```
T1M6
G17
G0Z0.5000
G0X0.0000Y0.0000S12000M3
G0X0.7500Y2.5000Z0.2000
G1Z0.0000F30.0
G3X2.5000Y0.7500Z-0.0625I1.7500J0.0000
G3X4.2500Y2.5000Z-0.1250I0.0000J1.7500
G3X2.5000Y4.2500Z-0.1875I-1.7500J0.0000
G3X0.7500Y2.5000Z-0.2500I0.0000J-1.7500
G3X2.5000Y0.7500I1.7500J0.0000F100.0
G3X4.2500Y2.5000I0.0000J1.7500
G3X2.5000Y4.2500I-1.7500J0.0000
G3X0.7500Y2.5000I0.0000J-1.7500
G0Z0.2000
G0Z0.5000
G0X0.0000Y0.0000
M30|
```

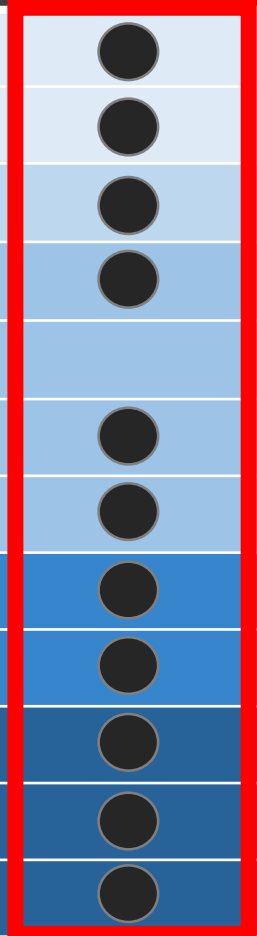
482 Lines

18 Lines

# What's New - V9.5



Group	Feature					
<b>Infrastructure</b>	On-line download of licence	●	●	●	●	●
	On-line download of clipart	●	●	●		
<b>Job Type</b>	Core product support for Rotary	●	●	●		
<b>Drawing</b>	Improved Text Editing	●	●	●	●	●
	Vector Unwrapper (Rotary)	●				
	Picture Editor	●	●	●	●	●
	Crop Bitmap	●	●	●	●	●
<b>Modelling</b>	Easier Model Import (Rotary)	●	●	●		
	Wrapped model export	●	●	●		
<b>Machining</b>	Support for Helical Ramps	●	●	●	●	●
	Support for G93 (Rotary)	●	●	●		
	Easier post-processing (Rotary)	●	●	●		







**Thank You**