

## Summary of the functionality in Cut2D, VCarve & Aspire

Functionality Summary	Cut2D	VCarve	Aspire
<b>3D Modelling Tools</b>			
Build 3D relief from vectors – Add, Merge, Subtract			*
Import single 3D Model / Mesh files (STL, 3DM, SKP etc.)		*	*
Import unlimited number of 3D Model /Mesh files		*	*
Import unlimited number of Vectric Clipart Models (V3M)			*
Interactive Sculpting & Blending + Pressure sensitive control			*
Extrude – 2 Rail Sweep			*
Convert 2D image to 3D model			*
Interactive 3D component Tilt and Fade		*	*
3D Model Smoothing with interactive control		*	*
Mirror Mode –Duplicate models in real time using virtual mirrors		*	*
Spin & Turn – rotates a profile on an axis to create a 3D model			*
Independent 3D component colour / material properties		*	*
Export 3D model as STL mesh			*
Automatic 3D Model Slicing		*	*
Save 3D model as 2D image file – bmp, jpg, gif			*
<b>Design and Drawing Tools</b>			
True Shape Nesting with multiple sheets	Pro Only	Pro Only	*
Import Filters – DXF, EPS, AI, PDF Vector files	*	*	*
Import AutoCAD 2D DWG files	*	*	*
Export – DXF, EPS, AI & PDF	*	*	*
Vector validator – highlights problem vectors that may not cut	*	*	*
Layer Management – visibility, locked, colour	*	*	*
Rulers & Guide Lines, Snap Grid + Snap Options	*	*	*
Smart Cursor – intelligent snapping to simplify vector drawing	*	*	*
Transform keys – Allows typed values while creating geometry	*	*	*
Interactive Scissor Trimming Tool	*	*	*
Interactive Snapping options	*	*	*
Offset vectors – open / closed + sharp or rounded corners	*	*	*
Image Tracing / Vectorization – JPG, BMP, TIF, GIF	*	*	*
Draw standard shapes – Circles and Rectangles	*	*	*
Draw Stars, Polygons	*	*	*
Draw Polylines – typed input	*	*	*
Text with TTF fonts to specified height	*	*	*
Single Line Engraving Fonts	*	*	*
Interactive letter / line kerning	*	*	*
Arc Text interactively	*	*	*
Fit Text to Curve	*	*	*
Auto-Fit Text to selection	*	*	*
Convert text to curves	*	*	*
Weld, Merge, Subtract vectors	*	*	*
Scale, Mirror, Rotate & Array block copy and paste	*	*	*
Copy shapes along vectors	*	*	*
Fillet corners + T-Bone and Dog-Bone Fillets	*	*	*
Curve Smoothing / Node Reduction / Arc Fitting	**	*	*
Node Editing – Interactive move, smooth, delete	*	*	*
Auto + Manual Join open shapes	*	*	*
Auto select Duplicate / Open vectors	*	*	*
Measuring Tools – distance, angle		*	*

Functionality Summary	Cut2D	VCarve	Aspire
Import Cut3D, PhotoVCarve & VA3D Machinist files			
<b>Toolpath Functionality</b>			
2D Sided Machining     Creating & visualising two sided jobs	*	*	*
3D Rough machining     Multiple Z Level and 3D Raster		*	*
3D Finish machining     Complete model or selective regions		*	*
Raster or Offset strategy		*	*
3D VCarving with single and multiple cutters		*	*
Flat Bottom VCarving		*	*
Project onto 3D model		*	*
Engraving with 3D corner detail moves		*	*
Project onto 3D model		*	*
Automatic cutter diameter / Shape compensation	*	*	*
Raised Prism Machining Toolpaths		*	*
Profile Machining         Outside, Inside On	*	*	*
Profile Left / Right Open vectors	*	*	*
Tabs for holding job in place	*	*	*
3D Tabs for smoother cutting	*	*	*
Lead in / out	*	*	*
Advanced Ramping options	*	*	*
Sharp Internal / External Corners	*	*	*
Auto-Inlay Toolpaths with multiple option types	*	*	*
Project Profile Toolpath onto 3D model		*	*
Toolpath templates	Pro Only	Pro Only	*
Merging Toolpaths	Pro Only	Pro Only	*
Toolpath Array – Copying toolpaths using single vectors	Pro Only	Pro Only	*
Pocket Machining with simple Ramp entry	*	*	*
2 Tool Pocket Machining with advanced Ramping options	*	*	*
Fluting Toolpaths with Ramp options		*	*
Project Pocket Toolpath onto 3D model		*	*
Drilling with Peck cycle option	*	*	*
Project Drilling depth onto 3D model		*	*
Production Plate / Merge Text Layout	Pro Only	Pro Only	*
3D Moulding Toolpath from 2D Vectors		*	*
3D Texturing Toolpath		*	*
Project texture toolpath		*	*
Quick Engrave                 Diamond Drag Marking	*	*	*
Outline and Fill patterns	*	*	*
Multi-Color 3D Toolpath Preview	*	*	*
Toolpath 3D Preview with Material & Fill color	*	*	*
2D Wireframe Toolpath Preview with cutter direction	*	*	*
2D Solid Colour Toolpath Preview	*	*	*
Tool Database – User definable	*	*	*
Form Cutters – User definable cutter shapes	*	*	*
Estimate Machining Times	*	*	*
Auto-Recalculate All Toolpaths	*	*	*
Standard Postprocessors for most CNC Machines	*	*	*
Auto Tool Change Support	*	*	*
Wrapped Rotary Axis output		Pro Only	*
Configurable postprocessor	*	*	*