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	Shop Floor	Essential	Standard	Advanced	Ultimate
General					
NC File Output	•	•	•	•	•
List NC Code	•	•	•	•	•
Post Processor Selection	•	•	•	•	•
Printer/Plotter Output	•	•	•	•	•
Insert Existing Drawing File		•	•	•	•
Input NC Code as Geometry or Tool Paths		•	•	•	•
Input Raster Image Files		•	•	•	•
Report Creator and Designer (* Designer requires a valid Alphacam maintenance contract)		*•	*•	*•	*•
Convert Raster to Vector		•	•	•	•
Open/Save Drawing Template				•	•
User Definable Alphacam Text Fonts				•	•
File Inserter Project Manager Tab			•	•	•
Automation Manager - Part Processing (* Creating Setups requires a valid Alphacam maintenance contract)			•	•	•
CAD File Input Translators					
DXF, DWG		•	•	•	•
IGES as Surfaces		•	•	•	•
IGES Healing		OPT	OPT	OPT	OPT
Rhino			•	•	•
STL			•	•	•
STEP			•	•	•
Google SketchUp			•	•	•
Postscript			•	•	•
Illustrator			•	•	•
PDF			•	•	•
IGES as Solids				•	•
ACIS, CADL, VDA, ANVIL				•	•
3D XYZ Points				•	•
Part Modeler				•	•
SolidWorks				•	•
Solid Edge				•	•
Autodesk Inventor				•	•
Parasolid				•	•
VISI				•	•
Spaceclaim				•	•
NX				OPT	OPT
Catia 4				OPT	OPT
Catia 5				OPT	OPT
Creo Parametrics				OPT	OPT
CAD File Output Translators					
DXF, IGES		•	•	•	•
WMF, EMF				•	•
STL, VDA, Parasolid, Rhino, ACIS				•	•
Views					
Dockable Project Manager	•	•	•	•	•
Dynamic 3D View	•	•	•	•	•
Reverse View	•	•	•	•	•
Shading/Wireframe Mode	•	•	•	•	•
Zooming (All, In/Out, Window, etc)	•	•	•	•	•
Zoom In/Out with Scroll Wheel	•	•	•	•	•
Panning	•	•	•	•	•
Panning with Middle Mouse Button	•	•	•	•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Set Limits	•	•	•	•	•
Change Background Color	•	•	•	•	•
Savable View Perspectives	•	•	•	•	•
Selectable View Perspectives	•	•	•	•	•
New View Window	•		•	•	•
Multiple/Dockable View Windows	•		•	•	•
Display Options					
Show Material Cut	•	•	•	•	•
Show Breaks	•	•	•	•	•
Single Step Mode	•	•	•	•	•
Draw Rapid Moves	•	•	•	•	•
Draw Tool Holder		•	•	•	•
Draw Material/Fixtures as Solids			•	•	•
Draw Surfaces in Layer Color			•	•	•
Draw Solid Bodies as Wireframe				•	•
Show Tool Angles					•
Render Feature Extracted Geometries	•		•	•	•
Render Geometry With Z level	•		•	•	•
CAD Geometry					
Fast Geometry		•	•	•	•
Edit/List Geometry		•	•	•	•
Construction Mode		•	•	•	•
Text Creation and Editing		•	•	•	•
Digitizing (On Screen and Tablet)		•	•	•	•
Line, Rectangle		•	•	•	•
Arcs, Circles		•	•	•	•
Polygon, Ellipse		•	•	•	•
Bolt Hole Circle		•	•	•	•
Involute Curve		•	•	•	•
Slot		•	•	•	•
Equal Spaced Holes		•	•	•	•
Enclosing Rectangle		•	•	•	•
Spline Creation and Editing		•	•	•	•
Convert Spline to Lines/Arcs		•	•	•	•
Assign Image to Geometry		•	•	•	•
3D Polyline			•	•	•
Geometry Macro Recorder				•	•
Parametric Sketcher (* Creation and Editing requires a valid Alphacam maintenance contract)			•	•	•
Run Parametric Sketch			•	•	•
Surface Creation/Edition					
Surface from Sections			•	•	•
Swept Surface from 2 Curves			•	•	•
Swept Surface from 3 Curves			•	•	•
Coons Patch from 3 Curves			•	•	•
Coons Patch from 4 Curves			•	•	•
Ruled Surface			•	•	•
Surface of Revolution			•	•	•
Fillet Between 2 Surfaces			•	•	•
Tri-Corner Fillet			•	•	•
Extruded Surface			•	•	•
Flat Surface			•	•	•
Break Intersecting Surfaces			•	•	•

OPT=Extra Cost Option +=Free Add-In

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Edit Surface Control Points			•	•	•
Un-Trim Surfaces			•	•	•
Extend Surface			•	•	•
Surface Finder			•	•	•
Extract Edge from Surfaces			•	•	•
Convert to STL Facets			•	•	•
Geometry/Tool Path Editing					
Undo		•	•	•	•
Redo		•	•	•	•
Alphacam Clipboard (Cut, Copy Paste between diferent sessions)		•	•	•	•
Fabricate (Cut, Crop, Delete Area, Subtract, Unite, Overlapping, Intersecting, Loop, Paneling)		•	•	•	•
Break, Join		•	•	•	•
Break at Distance		•	•	•	•
Trim, Extend		•	•	•	•
Extend by Distance		•	•	•	•
Fillet, Chamfer		•	•	•	•
Offset (Element and/or Path)		•	•	•	•
Grouping/Ungrouping		•	•	•	•
Definable Cutting Start Point		•	•	•	•
Manual/Automatic Cut Ordering		•	•	•	•
Geometry Query Manager		•	•	•	•
Change Object Types		•	•	•	•
2D Array, Scale, Stretch, Skew		•	•	•	•
2D Move, Copy, Mirror, Rotate		•	•	•	•
2D Transform - Dynamic combined command		•	•	•	•
3D Move, Copy, Mirror, Rotate			•	•	•
Auto 2D/3D Mode			•	•	•
AutoQueries				•	•
3D					
Set Materials		•	•	•	•
Set Work Volume			•	•	•
Make Local Axis Horizontal			•	•	•
Specify Panel			•	•	•
Show Panel Edges			•	•	•
Select Panel Edge			•	•	•
Set Geometry Z Levels			•	•	•
Create Sections			•	•	•
3D Part Rotation			•	•	•
Project 3D to 2D			•	•	•
Reverse Tool Side (On Surfaces)			•	•	•
Edit 3D Polyline			•	•	•
3D Project to Suface, STL or Plane - 3 Axis			•	•	•
Wrap on Surface - 3 Axis			•	•	•
Wrap Around Geometry - 3 Axis (Around Cardinal Planes)			•	•	•
Edit Geometry Z Point by Point				•	•
3D Project to Solid - 3 Axis				•	•
Wrap on Solid - 3 Axis				•	•
3D Project to Surface, Solid, STL or Plane - 4/5 Axis					•
Wrap on Surface/Solid - 4/5 Axis					•
Wrap Around Geometry - 4/5 Axis					•
Work Planes					
Browse/Select Work Planes	•		•	•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Slice Through Work Volume			•	•	•
2 Lines for X and Y Axes			•	•	•
Exiting Geometry			•	•	•
Parallel to Current Work Plane			•	•	•
Perpendicular to Current Work Plane			•	•	•
Reverse Current Plane			•	•	•
As Current Plane, Different Origin			•	•	•
By Name			•	•	•
Best Fit Plane Through Points			•	•	•
By Line Element Vector			•	•	•
Normal to View			•	•	•
Set Work Plane Origin			•	•	•
Work Plane Properties			•	•	•
Order Work Planes			•	•	•
Cancel Work Plane			•	•	•
From Solid Model Face				•	•
Utilities					
Distance/Angle between Points	•	•	•	•	•
Report Coordinates of a Point	•	•	•	•	•
Radius of a Arc/Circle	•	•	•	•	•
Snap to Same X, Y or Z as…		•	•	•	•
Snap Points		•	•	•	•
Auto Snap Points		•	•	•	•
Points to Lines/Arcs		•	•	•	•
Auto-Close Contours		•	•	•	•
Common Line Removal		•	•	•	•
Fold/Unfold				•	•
Develop to Flat				•	•
Join Parts with Bridge				•	•
Link Adjacent Circles				•	•
Undo	•				
Redo	•				
CAD Utilities					
User Layers	•	•	•	•	•
Alphacam Layers	•	•	•	•	•
Dimensions	•	•	•	•	•
Hatch		•	•	•	•
Set Line Type		•	•	•	•
Edit Line Type		•	•	•	•
Line Properties		•	•	•	•
Hide Parts		•	•	•	•
Show All Parts		•	•	•	•
Move Dimensions			•	•	•
Magnify			•	•	•
Constrained Parametric Sketching					
Fix				•	•
Horizontal				•	•
Vertical				•	•
Length				•	•
Radius				•	•
Coincident				•	•
Perpendicular				•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Tangent				•	•
Distance				•	•
Angle				•	•
Equal Distance				•	•
Equal Length				•	•
Parallel				•	•
Concentric				•	•
Midpoint				•	•
Drag				•	•
Constrain Z Levels				•	•
View Constraints				•	•
Constrain Work Plane				•	•
Delete All Constraints				•	•
Delete All Variables				•	•
Auto Constrain				•	•
Edit Variables				•	•
New Parameter				•	•
New Equation				•	•
Re-order Parameters/Equations				•	•
Import Variables				•	•
Insert Constrained Drawing				•	•
Parametric Rules				•	•
Solid Model Extraction					
Automatic Extraction				•	•
Drillable Hole Extraction				•	•
Hole Chamfer Extraction				•	•
Contour from Picked Edges				•	•
Contour Around Picked Edges				•	•
Contour Through Current Work Plane				•	•
Edge for Sawing				•	•
Surfaces from Faces				•	•
Projected Face Outline to Work Plane				•	•
Z-Level Section				•	•
3D Edge Extraction				•	•
Edges from Face Outlines				•	•
Profiles from Extended Edges				•	•
Extract Solid Body Outlines				•	•
Spun Outline Extraction				•	•
Solid Model Utilities					
Offset Faces				•	•
Cap Holes				•	•
Create Bounding Work Volume				•	•
Remove Contours Defined as Holes				•	•
Reset Geometry Z-Levels				•	•
Reverse View				•	•
Set View Down Normal				•	•
Auto-Align Part				•	•
Align Part				•	•
Set Face Color				•	•
Paint Faces				•	•
Face/Edge/Point Details				•	•
Check/Repair Part				•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
STL Utilities					
Convert STL Facets to Polylines			•	•	•
Delete STL Facets			•	•	•
Chop STL into Sections			•	•	•
Reverse Face Colors			•	•	•
Extract 3D Edges			•	•	•
Project Edges to Current Work Plane			•	•	•
Create Enclosing Rectangle			•	•	•
Nesting					
On Screen True Shape Nesting		•	•	•	•
On Screen Rectangular Nesting		•	•	•	•
Nesting of Geometries		•	•	•	•
Nesting of Tool Paths		•	•	•	•
Manual Nesting		•	•	•	•
Onion Skinning		•	•	•	•
Create/Edit Nest Lists			•	•	•
Nesting from Nest Lists			•	•	•
Display Nesting Information			•	•	•
Sheet Database			•	•	•
Save Off-Cut to Sheet Database			•	•	•
Area Estimate from Part or Sheet			•	•	•
Nesting Zones			•	•	•
Definable sheets with No-Nest Zones			•	•	•
Kit Nesting			•	•	•
Bridged Nesting			•	•	•
Control Nesting In Apertures			•	•	•
Roll Split Nesting Support			•	•	•
Use Part Name Identifiers on Sheet			•	•	•
General Machining					
Machining Styles		•	•	•	•
AutoStyles		•	•	•	•
User Definable Tool/Tool Library & Holders		•	•	•	•
Solid Tooling				•	•
Set Tool Directions (On Geometry)		•	•	•	•
Set Start Point Automatically on Closed Geometries		•	•	•	•
Cut Shape - All Geometries		•	•	•	•
Cut Shape - Selected Geometries		•	•	•	•
Cut Shape - Partial Geometry		•	•	•	•
Cut Shape - Using Vertical Sides		•	•	•	•
Pocket Using Z Contour Roughing Strategy, Including Waveform		•	•	•	•
Pocket All Geometries		•	•	•	•
Pocket Selected Geometries		•	•	•	•
Pocket Using Vertical Sides		•	•	•	•
Residual Pocketing		•	•	•	•
Pocket with Additional Rough/Finish Pass		•	•	•	•
3D Engraving		•	•	•	•
Manual Tool Path		•	•	•	•
Lead-In/Out Moves		•	•	•	•
Cut Holes		•	•	•	•
Multidrilling (Multiple Spindle Drill Block)		+	+	+	+
Insert User Defined Code			•	•	•
Cuit Shape Using Sloping Sides			•	•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Cut Shape with Auto Z			•	•	•
Pocket with Auto Z			•	•	•
Residual Routing			•	•	•
Helical Interpolation			•	•	•
Spiral XY Stock Removal			•	•	•
Cut with Disk Horizontally or Vertically			•	•	•
Cut with Disk Normal to Profile			•	•	•
Sawing Vertically			•	•	•
Sawing Around Arcs Vertically			•	•	•
Sawing Internal Arcs with Tilted Saw			•	•	•
Sawing Area Clear Internal Shapes			•	•	•
Sawing Including Scratch Cut			•	•	•
Cut Holes with Auto Z			•	•	•
Pocket Using Sloping Sides			•	•	•
3-Axis Spline/Polyline Machining			•	•	•
Polishing Elliptical			•	•	•
Polishing Circular			•	•	•
Cut Shape Using Definable Profiled Sides			•	•	•
Pocket Using Definable Profiled Sides			•	•	•
Set/Unset Open Elements			•	•	•
Set Overlap on Open Elements			•	•	•
Machine Holes				•	•
Machine Holes with Auto Z				•	•
Pocket Holes				•	•
Pocket Holes with Auto Z				•	•
Sawing at Definable Tilt Angle				•	•
Set Saw Angle on Geometry Element				•	•
3D Lead-In/Out Moves				•	•
3D Approach Moves				•	•
4/5-Axis Spline/Polyline Machining					•
Cut Between Two Geometries					•
Cur Shape Using Automatic Previous Tool Profile Recognition			•	•	•
Surface/Solid Cutting with Disk					
Roughing/Finishing				•	•
Side Cut Finishing				•	•
Guide Curve Finishing					•
3D Surface Machining					
Z Contour Roughing, Including Waveform			•	•	•
3-Axis			•	•	•
4-Axis (XY/XZ/YZ rot with Fixed Vertical Tool Angle)			•	•	•
Along Intersection				•	•
4-Axis (XY/XZ/YZ rot with Tilted Tool Angle Support)					•
5-Axis					•
Machine Surface with Tool Side					•
3D Surface Machining Strategies					
Parallel			•	•	•
Cylindrical Parallel			•	•	•
Parameter Lines				•	•
Horizontal Z Contours				•	•
Projected Contour				•	•
Radial				•	•
Spiral				•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Rest Machining				•	•
Drive Curves				•	•
Flat Area Offset				•	•
Helical Z				•	•
Constant Cusp				•	•
Z Contours + Flat Area Offset					•
Z Contours - Steep Slopes					•
Parallel - Shallow Slopes					•
Parallel - Steep Slopes					•
Cylindrical Profiling					•
3D STL Machining					
Z Contour Roughing, Including Waveform			•	•	•
3-Axis (* Aspire for Alphacam required for this feature within Essential)		*•	•	•	•
4-Axis (XY/XZ/YZ rot with Fixed Vertical Tool Angle)			•	•	•
3D STL Machining Strategies					
Parallel (* Aspire for Alphacam required for this feature within Essential)		*•	•	•	•
Cylindrical Parallel			•	•	•
3D Solid/STL Machining					
Z Contour Roughing, Including Waveform				•	•
3-Axis				•	•
4-Axis (XY/XZ/YZ rot with Fixed Vertical Tool Angle)				•	•
4-Axis (XY/XZ/YZ rot with Tilted Tool Angle Support)					•
5-Axis					•
3D Solid/STL Machining Strategies					
Horizontal Z Contours				•	•
Parallel				•	•
Projected Contour				•	•
Radial				•	•
Spiral				•	•
Rest Machining				•	•
Drive Curves				•	•
Flat Area Offset				•	•
Helical Z				•	•
Cylindrical Parallel				•	•
Constant Cusp				•	•
Z Contours + Flat Area Offset					•
Z Contours - Steep Slopes					•
Parallel - Shallow Slopes					•
Parallel - Steep Slopes					•
Cylindrical Profiling					•
Machine Data Editing					
Order/Renumber Operations via Project Manager	•	•	•	•	•
Order Operations in Nested Sheets	•	•	•	•	•
Tool Path Data	•	•	•	•	•
Quick Edit Machine Data	•	•	•	•	•
Edit Operations via Project Manager		•	•	•	•
Special Edits Manager via Project Manager		•	•	•	•
Tool Path Updating (Associativity)		•	•	•	•
Update Individual Operations via Project Manager		•	•	•	•
Copy an Existing Operation via Project Manager		•	•	•	•
Move Machined Geometry to Own Operation via Project Manager		•	•	•	•
Adjust Rapid Positioning Moves		•	•	•	•

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	Shop Floor	Essential	Standard	Advanced	Ultimate
Add/Remove Support Tags (Manual and Automatic)		•	•	•	•
Reverse Tool Path		•	•	•	•
Adjust Feed Rate Around Corners		•	•	•	•
Edit Feed Rate at Point Along Tool Path			•	•	•
Edit Z Point by Point Along Tool Path			•	•	•
Set Pocketing Start Point(s)			•	•	•
Automatic Tool Oscillation			•	•	•
Convert 3D Tool Path to Helical Arcs				•	•
Automatic Rapid Manager	•			•	•
Automatic Support Tags on 5-Axis Tool Paths					•
Edit Tool Angle					•
Edit 5-Axis Tool Path					•
Smooth 5-Axis Tool Path					•
4/ 5-Axis Tool Path Optimiser					•
Tool Axis Conversion					
Convert to Vertical or Work Plane				•	•
3-Axis				•	•
4-Axis (XZ/YZ rotation)					•
5-Axis					•
Through Point					•
Through Axis					•
Confine with Boundary					•
Normal to Curve(s)					•
Normal to Surfaces					•
Normal to Solid Model Bodies					•
Normal to Solid Model Faces					•
Clamps/Fixtures					
Define Fixtures			•	•	•
Move Fixtures				•	•
Edit Fixtures				•	•
Set Initial Position				•	•
Record Current Positions				•	•
Pop Up/Down Clamps				•	•
Automatically Set Clamp Initial Positions			•	•	•
Associate Material to Clamp for Material movement			•	•	•
Machine Configuration					
Open/Save Machine			•	•	•
Clear Machine			•	•	•
Set/Reset Default Machine			•	•	•
Define Machine Configuration			•	•	•
Set Tool Home Position			•	•	•
Define Lines for Rotational Axes			•	•	•
Define Machine Component				•	•
Set Safe Area				•	•
Move Part on Machine				•	•
Rotate Part on Machine				•	•
Simulation					
Shaded Simulation	•	•	•	•	•
Solid Simulation	•		•	•	•
Sectioning in XY, Z	•		•	•	•
Full Machine Simulation				•	•
CAD to CAM					

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	Shop Floor	Essential	Standard	Advanced	Ultimate
CAD to CAM		•	•	•	•
Visual Basic for Applications (VBA)					
Turn Add-Ins On/Off		•	•	•	•
Run Macros		•	•	•	•
Open VBA Project for Running		•	•	•	•
Open VBA Project for Editing				•	•
Create New VBA Project				•	•
Open VBA Post for Editing				•	•
Integrated VBA Editor				•	•
Other					
Aspire for Alphacam		OPT	OPT	OPT	OPT
Automated Parametric Manufacturing (APM)		OPT	OPT	OPT	OPT

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