AUTODESK® POWERSHAPE® 2018

Prepare complex models for manufacture

2018 Feature Comparison

CAD Imports	PowerShape Standard	PowerShape Premium	PowerShape Ultimate
Neutral CAD import *Import neutral CAD files, including IGES, STEP, VDA-FS, STL, and AutoCAD files.*	✓	✓	✓
Third-party CAD import *Load model files from third-party CAD software, including Siemens NX and Catia.*	-	✓	✓

Surface & solid modeling	PowerShape Standard	PowerShape Premium	PowerShape Ultimate
Wireframe modeling *Create lines, arcs, and curves using intelligent cursor sketching or precision coordinate entry.*	✓	✓	✓
Surface modeling *Create and manipulate surface geometry. Define planes, cones, cylinders, spheres, and doubly-curved forms with ease.*	✓	✓	✓
Smart Surface creator *Use this intelligent wizard to automatically produce surfaces based on selected wireframe geometry.*	✓	✓	✓
Solid modeling *Create complex solid models and combine with associative model history.*	✓	✓	✓
Direct modeling *Make history-free changes to your solid model. Move individual faces or features and ehnance your poor quality, imported data.*	✓	✓	✓
Solid/surface booleans *Use boolean commands to combine open surfaces and solid models.*	✓	✓	✓
Solid doctor *Quickly analyse and repair faults in imported solid model files.*	✓	✓	✓
Visual analysis *Analytical shading modes including; undercut, smoothness, minimum radius, wall thickness, accessibility.*	✓	✓	✓
Model comparison analysis *Visualize the differences between two CAD models. Simplify customer design changes and modifications.*	-	✓	✓

Modeling for tool and die	PowerShape Standard	PowerShape Premium	PowerShape Ultimate
2D drawing creation *Create 2D drawings of your part. Include elevation, isometric, and sectional views and detail with text and dimensions.*	✓	✓	✓
Draft surface/curve creation *Create draft curves and surfaces on your model. Use for improved part ejection from your molds and dies.*	✓	✓	✓

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Die wzard *Convert models into die blocks. Apply shrinkage, create split curves and surfaces and simulate tool functioning.*	✓	✓	✓
Core/Cavity separation *Split your CAD model into core and cavity halves. Visualize undercutting features and automatically design sliding cores.*	✓	✓	✓
Model morphing *Accurately distort the shape of your 3D models using whole model morphing.*	✓	✓	✓
Nesting *Nest groups of wireframe geometry into pre-defined outer boundaries.*	✓	✓	✓
Rib capping *Rapidly create surfaces to cap off long, thin rib features on molds and dies.*	✓	✓	✓
Assembly modeling *Define libraries of components and form complex assemblies using drag-and-drop attachment points.*	✓	✓	✓
Morph to point cloud/meshes *Distort your 3D model to match the shape of a point cloud or STL mesh. Counter the effects of gravity or stress relief on pressed parts.*	-	✓	✓
Power features *Add intelligent clearance information to your assembly components. Use to automatically add holes and pockets.*	-	✓	✓
Curve wrapping/unwrapping *Wrap curves onto 3D surface and solid models. Unwrap 3D curves to form 2D profiles for trimming applications.*	-	✓	✓
Specialist press-die surfaces *Create addendum and other parting surfaces used in the design of press-tools.*	-	-	✓
Mold base design wizard *Build complete mold-bases using standard plates and components from Hasco, DME, DMS, Strack, and others.*	-	-	✓
Standard component catalogs *Use catalogs of components to create assemblies of parts.*	-	-	✓

Electrode design	PowerShape Standard	PowerShape Premium	PowerShape Ultimate
Electrode wizard *Automatic creation of electrodes. Detect burn regions, define libraries of blanks and holders, and collision checking.*	-	✓	✓
Electrode setup sheets *Create electronic setup sheets to assist with electrode manufacture and subsequent EDM burning.*	-	✓	✓
Electrode integration with PowerMill *Export .trode file to PowerMill. Transfer spark gap and manufacturing data for automatic CAM programming.*	-	✓	✓
Electrode integration with PowerInspect *Define critical measurements and integrate with PowerInspect for electrode inspection prior to EDM.*	-	✓	✓
Export data to EDM hardware *Export burn position, rotation, and spark gap data to your EDM hardware for automated burning of electrodes.*	-	✓	✓

Reverse engineering	PowerShape Standard	PowerShape Premium	PowerShape Ultimate
Import/export STL meshes *Import large, unorganized STL mesh files. Export STL meshes in binary or ascii format.*	✓	✓	✓
Import point clouds *Import point cloud data files in various formats including ASCII.*	-	✓	✓
Connect with scanning hardware *Connect with scanning hardware including Artec, Creaform, Faro, and Kreon.*	-	✓	✓
Point cloud editing *Manipulate imported point clouds. Limit, delete, smooth, refine. Remove undesirable faults to predefined tolerances.*	-	✓	✓
Mesh editing *Modify imported meshes. Tangential hole-filling, refine and tolerance, and auto-fixing of faulty meshes.*	-	✓	✓

Model alignment *Automatically align meshes and other models using best-fitting.*	-	✓	✓
Texturing and logos *Wrap 3D reliefs onto your surface and solid models to add high-value logos and textures.*	-	✓	✓
Mesh segmentation *Automatically fit prismatic planes, cones, and cylinders to STL meshes.*	-	✓	✓
Reverse engineered surfaces *Sketch doubly curved surfaces onto your imported STL meshes. Create complex shrink wrap surfaces in one command.*	-	✓	✓
Tribrid modeling *Combine surfaces, solids, and meshes with boolean commands to create tribrid CAD models.*	-	✓	✓
Interactive mesh sculpting *Dynamically add and subtract material from your meshes. Interactively blend regions with ease.*	-	✓	✓

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