AUTODESK® POWERMILL®

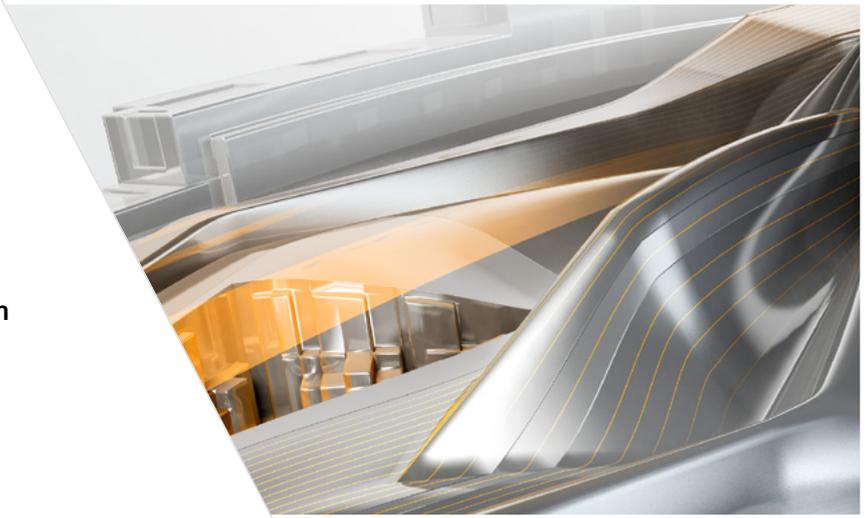**The expert high-speed and multi-axis solution**

Visit **www.powermill.com** to find out more.

Autodesk® PowerMill® software offers expert levels of NC programming for 3-axis, high-speed and multi-axis applications.

Expert performance

PowerMill excels in the machining of large or complex parts, where quality, accuracy and efficiency are of critical importance. Import surfaces, solids or triangles from all mainstream CAD systems and create high-quality NC code - fast. PowerMill combines ultra-efficient algorithms with exceptional levels of control to create, manipulate and optimize toolpaths to manufacture the most complex of parts.

Facing these challenges?

- Part size or complexity is beyond the capabilities of your existing CAM software.

- Existing machining strategies are inefficient, containing excessive amounts of air-cutting.

- You need to produce parts that require no manual polishing.

- Your customers demand greater levels of precision and surface finish, and you're struggling to deliver.

- You invested in a new 5-axis CNC machine and need software capable of capitalizing on its true capabilities.

- You regularly machine large, unorganized STL meshes.

- You know how you want to cut your parts and need CAM software that provides the level of control and flexibility to match.
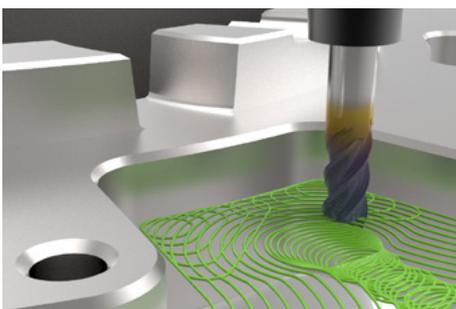
High-speed machining

Manufacture your complex parts faster, with PowerMill high-speed machining. Use the full flute length of your cutting tool to achieve exceptional material removal rates, cycle times and tool life. Machine larger molds and dies with indexable tools and ultra-smooth toolpath motion to avoid hazardous full width cuts that could result in premature tool breakage. Use intelligent stock models to automatically identify and remove material left un-machined. Create efficient roughing and rest-roughing programs to remove stock with minimal air-cutting.
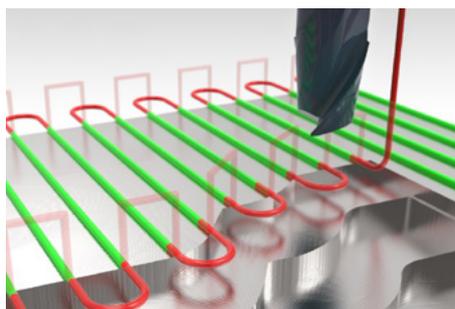
Comprehensive finishing

PowerMill offers a vast library of finishing strategies to support the machining of complex models. Optimized toolpaths allow parts to be machined to exceptional levels of accuracy and surface finish. Take greater control by making global or localized edits to your toolpaths and machine your parts the way you want - all without the need for time consuming recalculation. Trim, reverse, divide and reorder your toolpaths. Control your cutting and non-cutting tool movements to minimize dwell marks, reduce the need for manual polishing, and produce higher quality parts.

5-axis machining

Use the rotary axes of your CNC machine to access undercuts and other challenging features. Combine 3+2 machining with shorter tool assemblies, for more aggressive milling, and fewer setups. Get more out of your multi-axis machine with simultaneous 5-axis motion and improve the accuracy and surface finish of your machined parts.

PowerMill offers expert levels of 5-axis programming, combining a vast library of toolpath types with a range of toolaxis control modes. Make global or localized edits to your toolaxis motion, and output high-quality NC code to your 5-axis CNC machine.
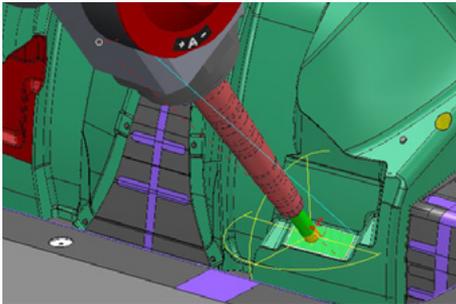
Verification and Simulation

Embed your virtual machine tool into PowerMill and use it to simulate your high-speed and multi-axis toolpaths. Build confidence in the quality of your programs by detecting problems early. Identify axis reversals, machine over-travel, collisions and near-misses. Use dynamic machine control to find the optimum orientation of your 5-axis machine to allow the safe and efficient machining of your complex parts.
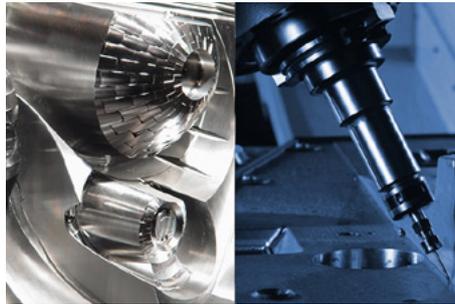
Industry solutions

PowerMill provides dedicated tools to simplify the programming of parts found in the most challenging of industries. Embed your machining expertise into user-defined macros and templates for high-efficiency electrode manufacture. Create off-line programs for use with industrial robotics and benefit from analytical tools to help avoid axis singularities and other, robot specific problems. Produce highly efficient, 5-axis toolpaths to support the manufacture of blades, blisks and impellers for aerospace. Intelligently combine 3- and 5-axis strategies to safely machine engine ports and manifolds for automotive and motorsport.

10 reasons to choose PowerMill

1. Rapidly create high quality toolpaths on large, complex parts.
2. Works with surfaces, solids and large STL meshes.
3. Gouge and collision free toolpaths.
4. Highly efficient roughing strategies.
5. Comprehensive range of finishing toolpaths.
6. User-defined macros and templates for automated CAM.
7. Extensive library of tool types for use with 3- and 5-axis milling.
8. Flexible toolpath editing and optimization.
9. Powerful 5-axis programming with automatic collision avoidance.
10. Specialist tools for demanding industries and applications.

"We recently purchased 5-axis machinery. PowerMill helps us do the impossible. It's the bible in the industry now."

— Andrew Gruening, Programmer | Superior Tool & Mold

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