

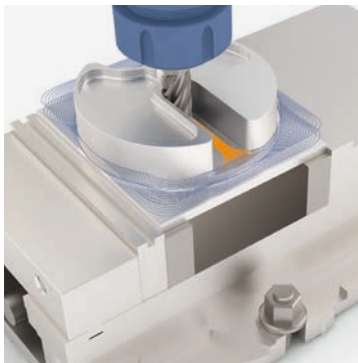


ModuleWorks

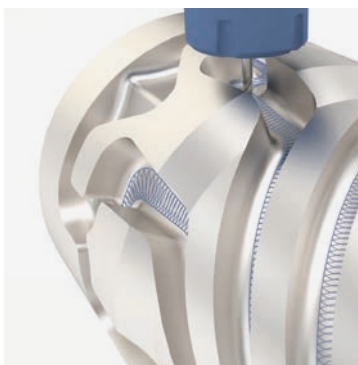
Get There Faster.

Adaptive Roughing Component

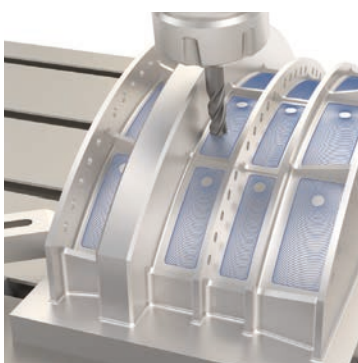
The adaptive roughing strategy utilizes the full potential of cutting and machine tools to increase the productivity and profitability of roughing processes. Consistent tool engagement delivers smooth toolpath motion to dramatically increase material removal rates, reduce cycle times and extend tool life.



3-Axis Machining



4-Axis Machining



5-axis Machining

Key Benefits

- Cost-efficient roughing processes for treated materials
- Consistent tool engagement conditions
- Longer cutting-tool life due to smooth entry into the material and by using the entire flute-length of solid carbide tools

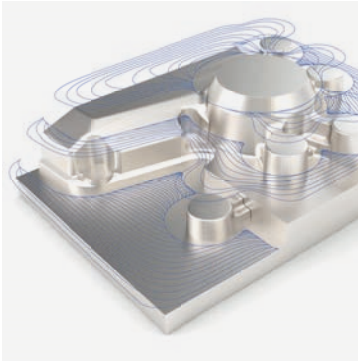
General Features

- Adaptive roughing can be applied to wireframe geometries (2D and 2½D) and all 3D geometries (solids, surfaces and STL mesh)
- Safe and collision-free toolpaths
- Multi-core CPU support for fast calculation times
- The flexible API enables a wide range of integration possibilities and scenarios

Leading Technology Facts

- ModuleWorks is in a unique position to leverage the know-how of cutting tool and machine tool suppliers to provide leading-edge technology
- Partner companies acknowledge improvements of up to 60% in comparison with already optimized conventional roughing strategies
- More than 20 partners have already integrated the adaptive roughing technology

Fact Sheet: Adaptive Roughing Component



3-Axis Machining

Adaptive Roughing for 2D and 3D Machining

ModuleWorks 2D and 3D components support adaptive roughing patterns:

- Open areas allow outside entry to cavities
- Stock awareness
- Intelligent ordering
- Pre-drill hole management

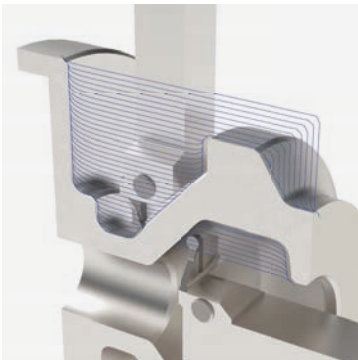


5-Axis Machining

Adaptive Roughing Patterns for Multi-axis Machining

Full 5-axis adaptive roughing strategy for flexible use in almost any machining scenario:

- Increased reach of the tool, resulting in less remaining stock in complex workpiece geometries
- The tool remains orthogonal to the floor surface



Turning

Turning

The adaptive roughing pattern in combination with the turning component brings the advantages of milling to turning processes.:

- Consistent cutting conditions
- Higher profitability in hardened, tempered or exotic material
- Better performance in deep grooves

For information on other CAD/CAM components, including 3-axis- and 5-axis toolpaths, visit: www.moduleworks.com

Our Adaptive Roughing Partners



ModuleWorks GmbH
Aachen, Germany
Tel: +49 241 99 000 40
info@moduleworks.com
www.moduleworks.com

ModuleWorks Japan
Fujisawa, Japan
Tel: +81 66 54 9144
hashimoto.h@moduleworks.com
www.moduleworks.com



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