

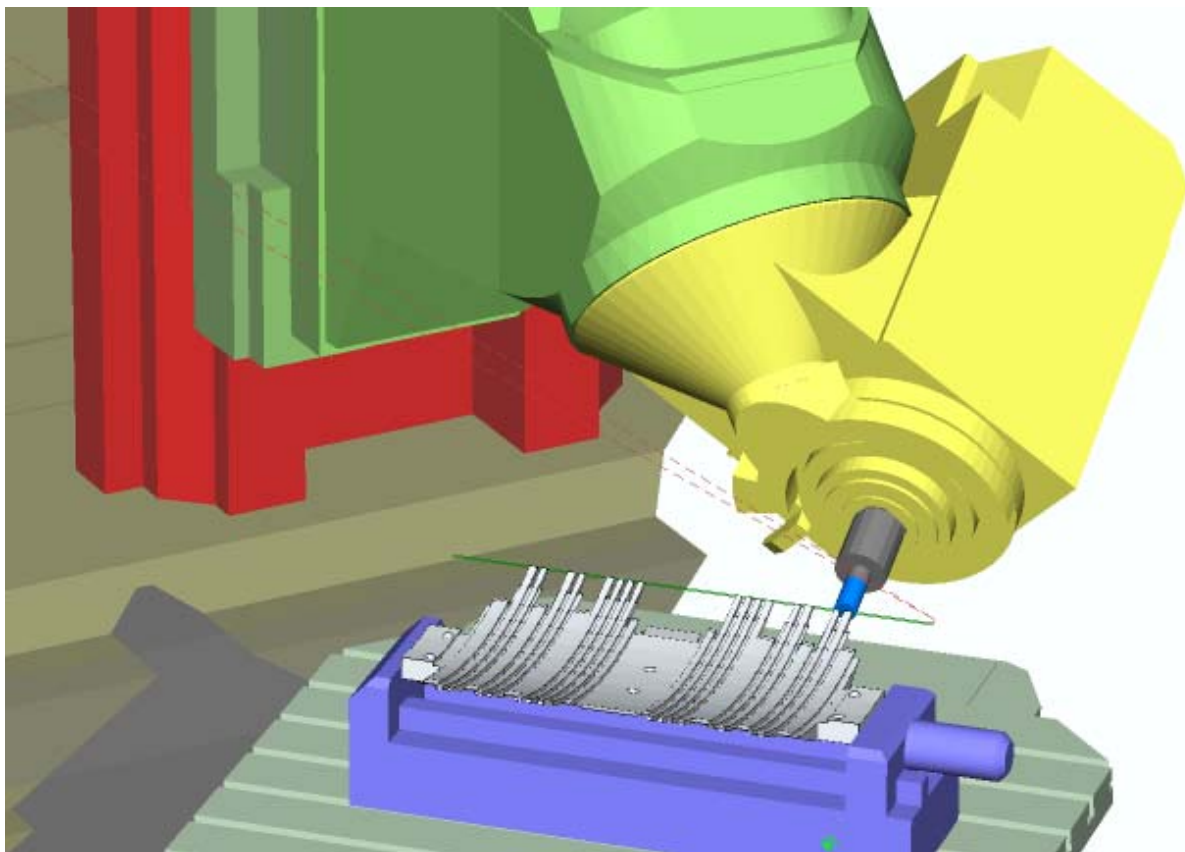
## EXAPT Milling 3-5-axes simultaneously

This system extension brings benefits to an improved workflow from 3D workpiece model up to complex simultaneous 5-axes milling. Varied machining strategies are available for collision-controlled finishing with support of all common tool types for milling. The machining can be effected cross-surface also by considering user-defined border zones. Especially the optimum design for 5-axes machining offers the advantages of shorter machining times, improved surface quality and tool life improvement. The system is integrated with the

powerful standard EXAPT modules like e. g. for drilling, turning, 2.5D milling. A machine-oriented simulation of the machining sequence is also available.

The following advantages result therefore for the user:

- fast and application-oriented NC program generation
- shorter throughput time from the NC programming up to the finished 3D part
- low machine utilization times by optimized tool path determination
- reduced tool costs
- availability of adapted machining strategies for ruled and complex sculptured surfaces
- unproblematic transfer of 3D geometries of diverse CAD model presentations
- free combination of motion and adjusting axes
- certified result by real simulation in different presentations



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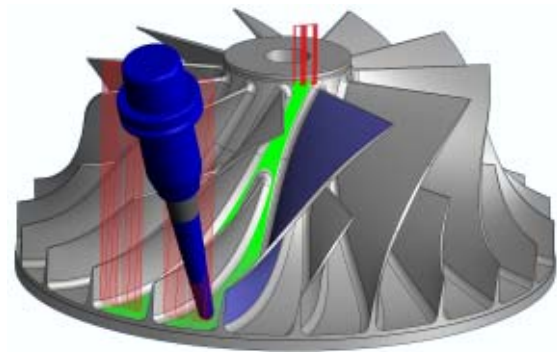
(Art.-no. 20796)

### Performance features

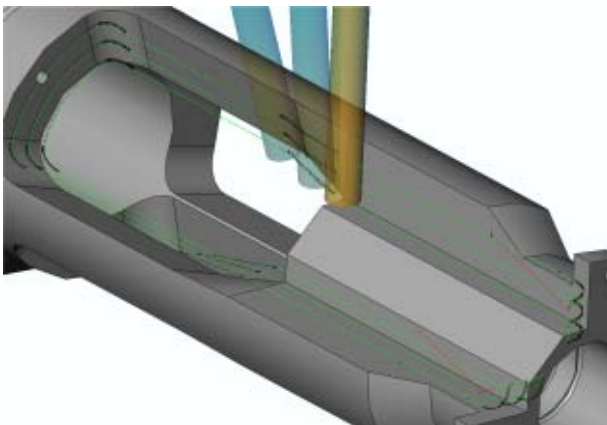
- automatic feature-based generation of tool paths for machining of
  - free form surfaces
  - 2D/3D contours and curves
  - edges
  - pockets
- different machining strategies depending on material, tool, workpiece or machine
- varying approach/travel strategies
- processing of any curved ruled, polynomial and polyhedral surface or surface bonds
- definition possibilities from transient areas to technological tool path optimization
- flexible limitation of surfaces for machining of partitions
- possible to use common milling cutters of executions like
  - cherry
  - shell end mill
  - toroidal milling cutter
  - barrel-shaped milling cutter
- collision check of rotation-symmetric tool holder geometry
- default of surface measures
- automatic undercut and collision avoidance
- transfer of 3D geometries from 3D CAD models by specialized or general interfaces
- tolerance defaults for machining quality
- result simulation with photo-realistic display of the machining
- application possibility in compound with EXAPT systems for other machining procedures for complete machining of workpieces



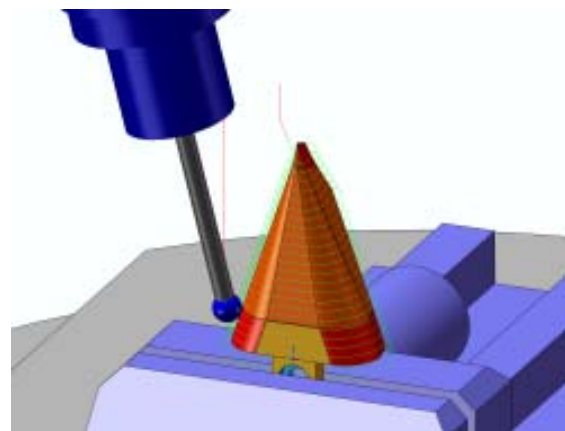
5-axes machining with material removal



5-axes machining of a compressor impeller chamber



5-axes machining at a machine component



5-axes machining with cherry