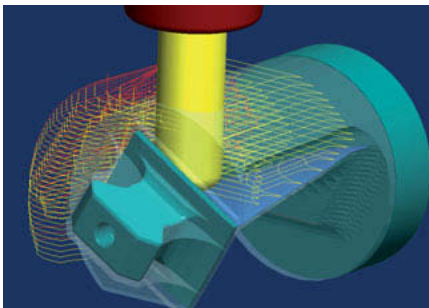
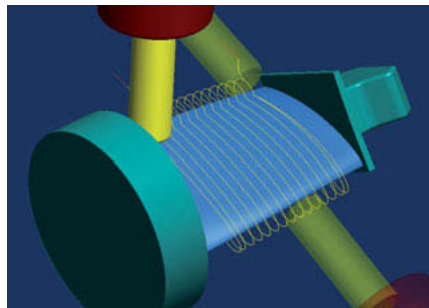


Single Blade: milling on a DZ 12K S MAGNUM five axis high speed

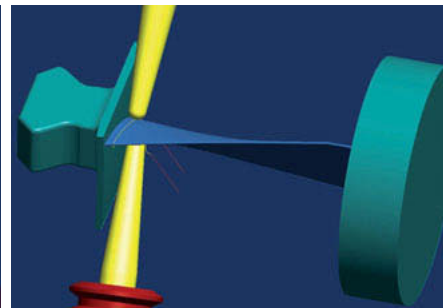
The single blade package of *hyperMILL*® offers optimised machining strategies for turbine blade machining. For efficient programming, special requirements on geometry and technology are considered. Beside the optimised machining strategies, general 2.5D, 3D and 5-axis features are available in *hyperMILL*®. This offers the user a whole set of machining strategies and the freedom of choice to find the best and efficient way to machine the part.



2.5D and 3D strategies: For efficient roughing and finishing of turbine blades with any hub and shroud geometry, different strategies are available – like arbitrary stock roughing, profile and Z-level finishing and contouring.



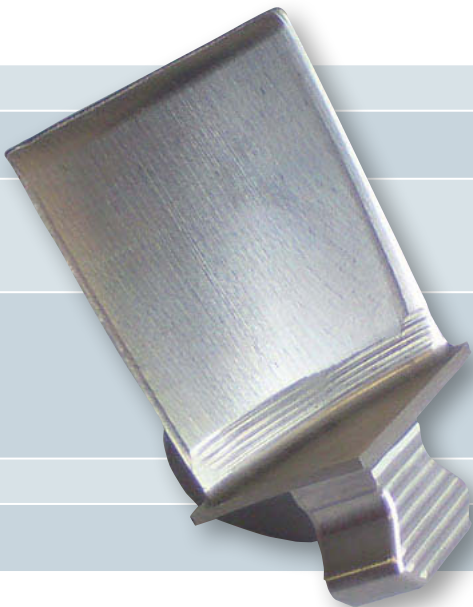
5-axis blade top milling: Blade surfaces will be finished in a continuous spiral. With endmills and bullnose endmills, the lead angle is automatically adjusted to avoid tool contact (machining) with the rear side.



5-axis blade swarf cutting: Through the rolling ball radius, the tool holds contact with the blade and with the limit of the lateral surface at the same time. A perfect transition to the next blade will be created.

Machine: DZ 12K S MAGNUM five axis high speed

Main Spindle	RPM range	up to 24.000 RPM
Workspace	Rapid traverse/feed rate	75 m/min
	Traverse path X/Y/Z	550/400/360 mm
NC table	Clamping surface	C-axis 2 x Ø 245 mm
	Swivel range (A/B-axis)	A-axis +/- 120°
	Rotative range C-axis	C-axis 2 x 0 up to 360°
	Max. workpiece weight	2 x 200 kg
Tool	Tool magazine	2 x 16 (optional: 2 x 42/70)
	Milling performance	2 x 150 cm ³ /min
	Tool change time	0,9 sec
	Chp-to-chip time	2,4 sec
	Max tool length /-Ø	240 mm/Ø 85 mm
	Tool adapter	HSK-A 63 DIN 69893
Automation	Controller	SINUMERIK 840D
Workpiece	Dimensions	23/26/53 mm
	Material	1.4305



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