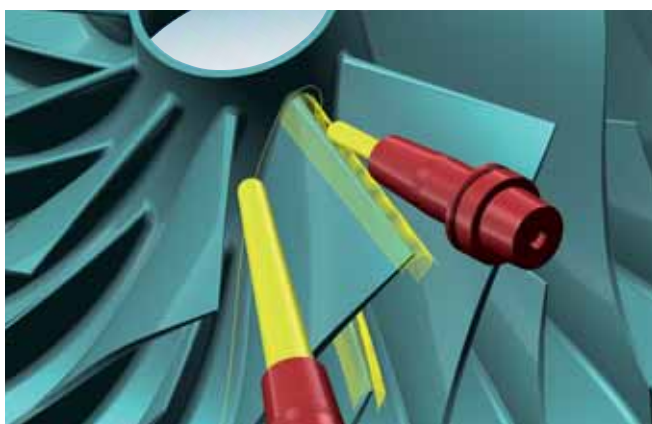
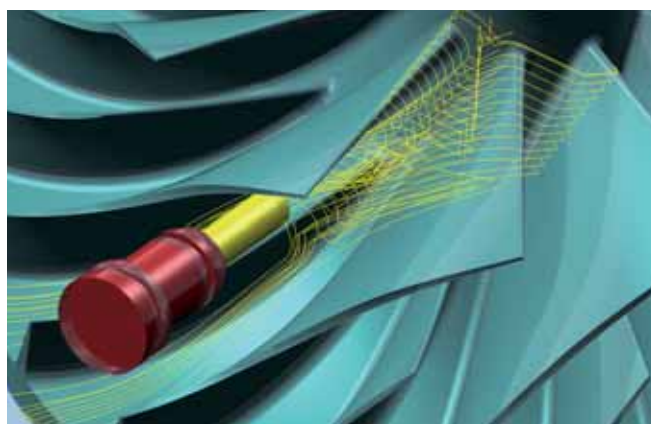


Impeller: Milled on an MIKRON HPM 800U

The complex geometries of impellers place special demands on milling technology. Despite this, the multiblade package from *hyperMILL*® makes programming very straightforward. Furthermore, this application is seamlessly integrated into *hyperMILL*®, allowing pre-machining tasks like turning as well as all other milling strategies that are necessary for complete machining to be used.



Multiblade package: From roughing, plunge roughing and the various strategies for blade finishing and hub machining right through to edge and hub radius machining, this special application enables automatic programming.



3D roughing and 5axis reworking: The tool paths that are optimised using 3D arbitrary stock roughing can be converted to collision-free 5axis paths in a further step using 5axis reworking. This allows shorter, stiff tools to be used.

Machine: MIKRON HPM 800U



Main drive (motor spindle)	RPM up to	20.000 min ⁻¹
Workspace	Max. feed rate and rapid movement Workspace X/Y/Z	60 m/min 800 / 800 / 550 mm
NC table	Clamping area Max. workpiece weight	Ø 630 mm 500 kg
Tool changer	Number of tools	30–210
Controller	HEIDENHAIN	iTNC 530
Workpiece	Size	Ø 635 mm / Height 263 mm / Height of blade 165 mm
	Material	3.1924 (AlCu ₂ Mg _{1,5} Ni/430 N/mm ²)
Process parameters	Max. RPM	20.000 min ⁻¹
	Max. feed rate	14.000 mm/min
	Machining time	381 min (6 h 21 min)
	Tools	5
	Automation	7 pallets (44 h unmanned running time)

