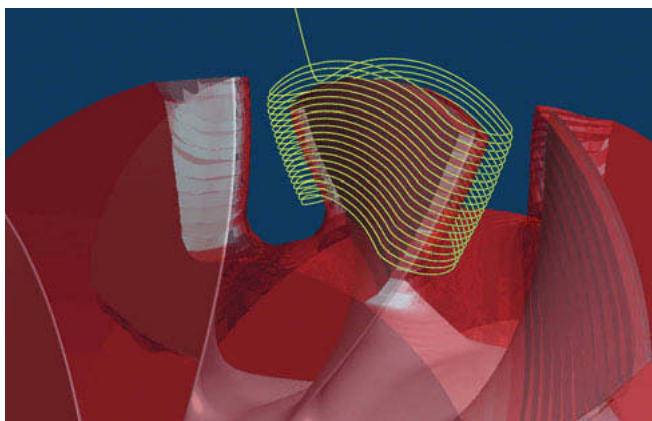
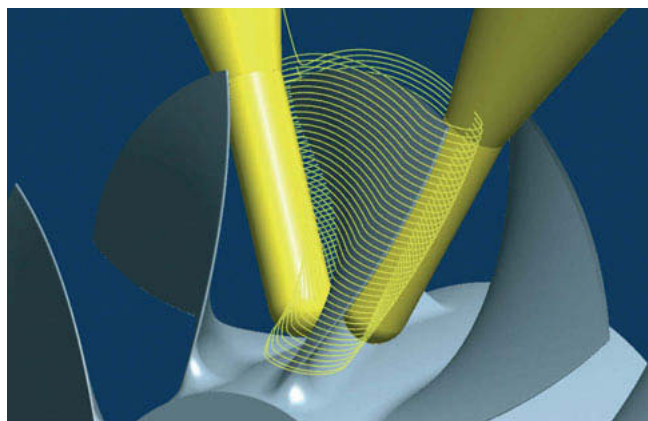


Blisk: Milled on a Mikron HSM 400U

Very twisted and thin blades with narrow clearances place great demands on process reliability. *hyperMILL*® multiblade package makes the programming and milling of these geometries very easy and reliable thanks to, amongst other things, the numerous integrated automated functions and fully automated collision avoidance.



Multiblade roughing: Due to stability problems, thin blades are often alternately roughed and finished during machining. The special roughing function for blisks makes it easy to define a pre-machining cycle for a succession of roughing and finishing jobs.



Point finishing: This strategy machines the blades in point contact mode following a continuous spiral path. Point finishing mills a perfect transition between contiguous areas.

Machine: Mikron HSM 400U



Processing	Tool	Diameter [mm]			Spindle Speed [min ⁻¹]	Feed Rate [mm/min]	Lateral Feed [mm]	Axial Feed [mm]	Processing Time [min ¹]
		D	R	z					
Drilling	Drill tool	3	-	2	6.500	350	-	-	0'15"
Outside roughing	End mill	4	0	3	7.500	1.000	-3	0,5	2'25"
Blade roughing	Ball mill	1	0,5	2	40.000	1.000	0,3	0,2	38'00"
Blade finishing	Ball mill	1	0,5	2	42.000	2.500	0,1	0,02	33'35"
Hub finishing	Ball mill	1	0,6	2	42.000	2.500	0,1	0,1	2'55"
Cutting	End mill	2	0	2	20.000	600	2	0,2	2'00"
Processing time (Total)									79'10"

Spindle: 42.000 min⁻¹ **Material** Titanium 5 (3.7165) **Specifications** small blisk with 11 blades, sophisticated machine dynamics, machining using small tools



OPEN MIND Technologies AG
 Argelsrieder Feld 5 • 82234 Wessling • Germany
 Phone: +49 8153 933-500 • Fax: +49 8153 933-501
 E-mail: Info.Europe@openmind-tech.com
 Internet: www.openmind-tech.com



Mikron Agie Charmilles AG
 HSM Competence
 Ipsachstrasse 16 • 2560 Nidau • Switzerland
 Phone: +41-32-366 11 11 • Fax: +41-32-366 11 66
 E-mail: info@mikron-ac.com
 Internet: www.gfac.com

AgieCharmilles