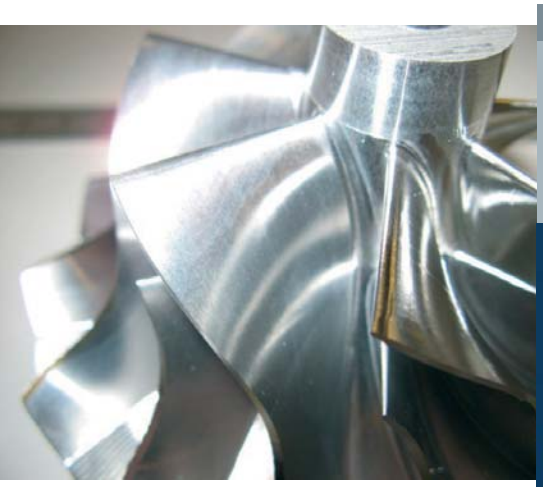
hyperMILL® 5AXIS

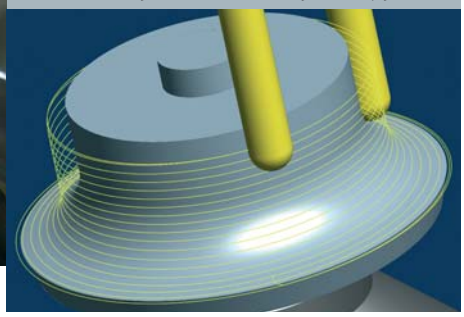
Milling an impeller on an MIKRON HSM 400U

*hyper*MILL® multiblade package simplifies the milling of impellers. In contrast to specialist systems, no particular programming skills or pre-machined stocks are required. Optimised machining programs are easily generated thanks to the numerous integrated automated functions. They ensure that the best surfaces are created with the minimum machine running time.



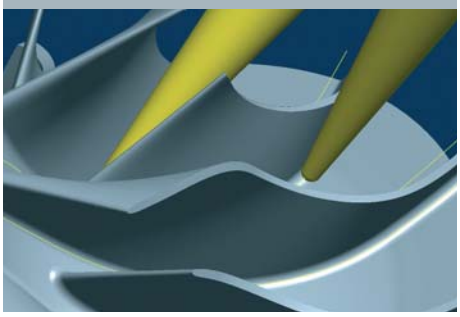
Rohling fräsen

Integrating the multiblade package into *hyper*MILL® also allows the milling or millturning of stock. Machining is more flexible, particularly during the production of prototypes.



Multiblade swarf cutting

When blade geometries permit swarf cutting, machining times can be reduced. The Flank Milling machining strategy automatically calculates the 'snuggest' fitting tool position.



Processing	Tool	Diameter [mm]	Corner Radius [mm]	Number of Teeth	Spindle Speed [min^{-1}]	Feed Rate [mm/min]	Lateral Feed [mm]	Axial Feed [mm]	Processing Time [min']
		D	R	z	n	v_f	a_e	a_p	t
Roughing outside	**Bull nose**	12	1,5	2	30.000	12.000	3,0	3,0	
Finishing outside	**End mill**	10	0	2	40.000	10.000			
Finishing outside	**Ball nose**	8	4	2	42.000	12.000	0,2	0,2	
Roughing Blades	**con. ball nose 4°**	5	2,5	3	40.000	10.000	3	7,5	3'26"
Roughing restmat. Blades	**con. ball nose 4°**	3	1,5	2	40.000	9.000	3	6	2'48"
Semi fin. Blades	**con. ball nose 4°**	3	1,5	2	40.000	4.000	-1	18	1'00"
Finishing Hub	**Ball nose**	2	1	2	42.000	7.000	1	1,6	5'43"
Finishing Blades	**con. ball nose 6°**	2	1	2	6.000	700	0,1	22	3'06"
Bearbeitungszeit (gesamt)									**16,03**

Machine MIKRON HSM 400U, 42.000 min^{-1} **Material** Aluminium **Focus** machining time, surface quality

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