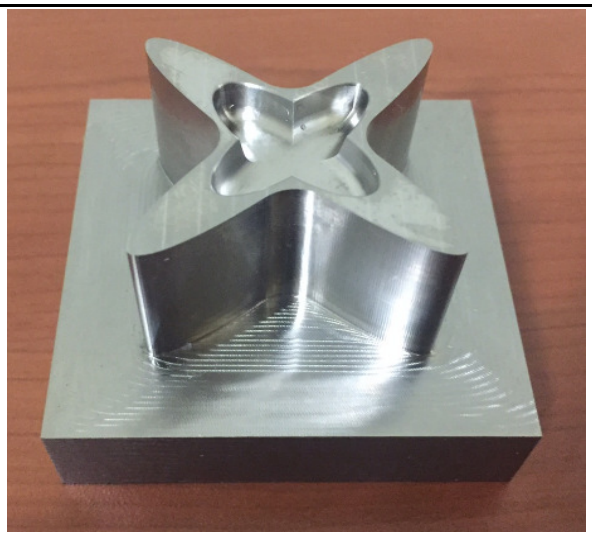
Test report no: 005-16

VAN HOORN CARBIDE

Machine	Mikron VCP 600
Spindle type	Step-Tec
Max RPM	20.000
Power Kw	18 KW
Cutter holder	Collet & Shrink
Workpiece material	Titanium grade 5
Hardness	

Application			
Side milling	x	Conventional	
Slotting		Climb - Milling	x
Profiling	x	Ramping	
Plunging		Circular	x

Sketch



		Test 1	Test 2
Cutter supplier		**van Hoorn Carbide**	**van Hoorn Carbide**
Cutter description		VHTR 5 080 063 08 033	VHMSR 4 020 064 06 03 L030
Cutter diameter eff.	Ød mm	8	2
Number of teeth	z	5	4
Carbide grade			
Cutting conditions			
Cutting speed	V_c m/min	100	80
Revolution	n rpm	4.000	12.750
Feed per tooth	f_z mm	0,080	0,020
Table feed	V_f mm/min	1.600	1.000
Depth of cut	a_p mm	24	2
Width of cut	a_e mm	0,8	0,1
Length of cut	L mm		
Chip removal rate	Q cm^3/min	30,72	0,20
Chip thickness	Hm mm	0,02530	0,00438
Coolant type		dry / air / minimum lub. / emulsion	dry / air / minimum lub. / emulsion
Coolant pressure	Bar	Internal External	Internal External
Cutting time / comp	$T_{comp.}$ min		
Toollife	T_{total} min		
Power consumption	P Kw		
Edge wear	V_b mm		
Successful		Yes / Average / No	Yes / Average / No

Remarks

Roughing with the new VHTR with the trochoidal strategy!

Roughing and finishing with the VHMSR
Smooth surface finish.