Test report no: 009-16

VAN HOORN CARBIDE

Machine	Mikron VCP 600
Spindle type	Step-Tec
Max RPM	20.000
Power Kw	18 KW
Cutter holder	Collet
Workpiece material	1.2550 (2% wolfraam)
Hardness	230Hb (21HRc)

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

Sketch

		Test 1	Test 2
Cutter supplier		**Competitor**	**van Hoorn Carbide**
Cutter description			HAMFL 6 120 102 12 03 050
Cutter diameter eff.	Ød mm	12	12
Number of teeth	z	4	6
Carbide grade			
Cutting conditions			
Cutting speed	V_c m/min	75	62
Revolution	n rpm	2.000	1.650
Feed per tooth	f_z mm	0,125	0,083
Table feed	V_f mm/min	1.000	1.200
Depth of cut	a_p mm	35,5	35,5
Width of cut	a_e mm	0,5	0,5
Length of cut	L mm		
Chip removal rate	Q cm^3/min	17,75	21,30
Chip thickness	Hm mm	0,02552	0,01694
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

With competitor tool much vibrations

the VHC tool runs very smooth, and 5 minutes p/pc faster
same toollife