

# Test report no: 0016-15

Machine	Mikron VCP 600
Spindle type	Step-Tec
Max RPM	20.000
Power Kw	18 KW
Cutter holder	Collet Chuck
Workpiece material	42CrMo4
Hardness	not hardened
Application	
Side milling	<input checked="" type="checkbox"/> Up-milling <input type="checkbox"/>
Slotting	<input type="checkbox"/> Down-milling <input type="checkbox"/>
Profiling	<input type="checkbox"/> Ramping <input type="checkbox"/>
Plunging	<input type="checkbox"/> Circular <input type="checkbox"/>



Cutter supplier	
Cutter description	
Cutter diameter eff.	Ød mm
Number of teeth	z
Carbide grade	

Test 1	Test 2
<b>van Hoorn Carbide</b>	<b>van Hoorn Carbide</b>
VHTS 5 100 072 10 03	VHVFF 4 100 070 10 03
10	10
5	4

Cutting conditions	
Cutting speed	V <sub>c</sub> m/min
Revolution	n rpm
Feed per tooth	f <sub>z</sub> mm
Table feed	V <sub>f</sub> mm/min
Depth of cut	a <sub>p</sub> mm
Width of cut	a <sub>e</sub> mm
Length of cut	L mm
Chip removal rate	Q cm <sup>3</sup> /min
Chip thickness	Hm mm
Coolant type	
Coolant pressure	Bar
Cutting time / comp	T <sub>comp</sub> min
Toollife	T <sub>total</sub> min
Power consumption	P Kw
Edge wear	V <sub>b</sub> mm
Successful	

212	155
6.743	4.918
0,085	0,050
2.880	993
25	10
1,5	4,5
108,00	44,69
0,03292	0,03354
dry / air <u>minimum lub.</u> emulsion	dry / air <u>minimum lub.</u> emulsion
Internal <u>External</u>	Internal <u>External</u>
<u>Yes</u> / Average / No	Yes / <u>Average</u> / No

Remarks  
 High chip removal rates with trochoidal strategy!  
 2,5 times higher than the classic strategy!  
 Excellent chipflow with minimal lubrication!