

Test report no: 017-14



Machine	Hermle
Spindle type	Step-Tec
Max RPM	20.000
Power Kw	18 KW
Cutter holder	Collut Chuck
Workpiece material	51ST
Hardness	/
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"/>

Sketch

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

Test 1	Test 2
Competitor	Van Hoorn
	VHKE10600510610L120
6	6
1	1

Cutting conditions	
Cutting speed	V _c m/min
Revolution	n rpm
Feed per tooth	f _z mm
Table feed	V _f mm/min
Depth of cut	a _p mm
Width of cut	a _e mm
Length of cut	L mm
Chip removal rate	Q cm ³ /min
Chip thickness	Hm mm
Coolant type	
Coolant pressure	Bar
Cutting time / comp	T _{comp} min
Toollife	T _{total} min
Power consumption	P Kw
Edge wear	V _b mm
Successful	

377	377
20.000	20.000
0,090	0,160
1.800	3.200
4	8
2	2
14,40	51,20
0,05196	0,09238
dry / air / <u>minimum lub</u> / emulsion	dry / air / <u>minimum lub</u> / emulsion
Internal / <u>External</u>	Internal / <u>External</u>
360 min	480min
Yes / Average / No	<u>Yes</u> / Average / No

Remarks
 VHKE has 77% higher productivity
 And 25% more lifetime