

Test report no: 012-16

| | | | |
|--------------------|-------------------------------------|--------------|-------------------------------------|
| Machine | Mikron HSM 600U | | |
| Spindle type | Step-tec | | |
| Max RPM | | | |
| Power Kw | | | |
| Cutter holder | Weldon | | |
| Workpiece material | 42CrMo4 | | |
| Hardness | | | |
| Application | | | |
| Side milling | <input checked="" type="checkbox"/> | Up-milling | <input type="checkbox"/> |
| Slotting | <input type="checkbox"/> | Down-milling | <input checked="" 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 | |
|--------------------------|--|--------------------------|--|
| van Hoorn Carbide | | van Hoorn Carbide | |
| VHRS 4 080 064 08 03 030 | | VHRS 5 080 064 08 03 030 | |
| 8 | | 8 | |
| 4 | | 5 | |

| 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 | H _m 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 | |

| | |
|-------------------------------------|-------------------------------------|
| 160 | 160 |
| 6.366 | 6.366 |
| 0,120 | 0,110 |
| 3.055 | 3.501 |
| 8 | 8 |
| 8 | 8 |
| 100 | 100 |
| 195,52 | 224,06 |
| 0,12000 | 0,11000 |
| dry / air / minimum lub. / emulsion | dry / air / minimum lub. / emulsion |
| Internal External | Internal External |
| | |
| | |
| | |
| | |
| Yes / Average / No | Yes / Average / No |

Remarks
 Test Slotting with a 5 tooth endmill compared to a 4 tooth endmill.
 With this 5 flute endmill you can do a slotting operation.