



HEIDENHAIN

Maximize Clearing Processes
Optimized Contour Milling (OCM)

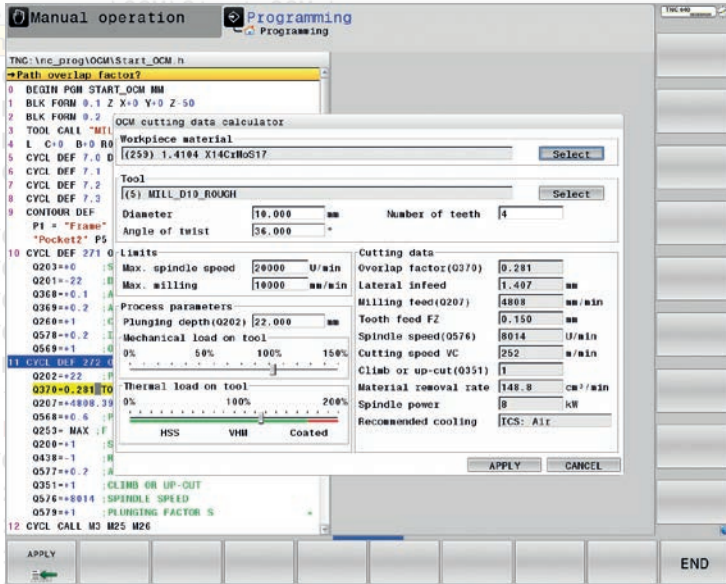
dynamic
+
efficiency

Fast and tool-friendly machining

The OCM option lets you machine any pocket and island with reduced tool wear using the highly efficient trochoidal milling technique. Complex movements for the trochoidal milling operation are automatically calculated by the control. OCM sets new standards for economical milling:

- Easy and efficient programming
- Fast and tool-friendly machining

The integrated cutting data calculator draws from an integrated materials database, enabling full use of the milling cutter's performance potential. Users can also adapt the tool's mechanical and thermal load to the respective machining situation as desired.



| | | |
|-----------------------|-------|--------|
| Lateral infeed | 1.407 | mm |
| Milling feed(Q207) | 4808 | mm/min |
| Tooth feed FZ | 0.150 | mm |
| Spindle speed(Q576) | 8014 | U/min |
| Cutting speed VC | | |
| Climb or up-cut(Q351) | | |
| Material removal rate | | |
| Spindle power | 8 | kW |

dynamic + **efficiency**



High removal rate in a practical test

In this milling experiment, OCM reduced tool wear and machining time by a factor of three.

Conventional machining

S5000, F1200, a_p : 5.5 mm

Overlap factor: 5 mm

Machining time: **21 min 35 s**

Machining with OCM

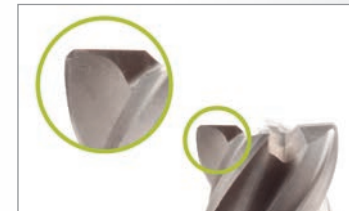
S8000, F4800, a_p : 22 mm

Overlap factor: 1.4 mm

Machining time: **6 min 59 s**



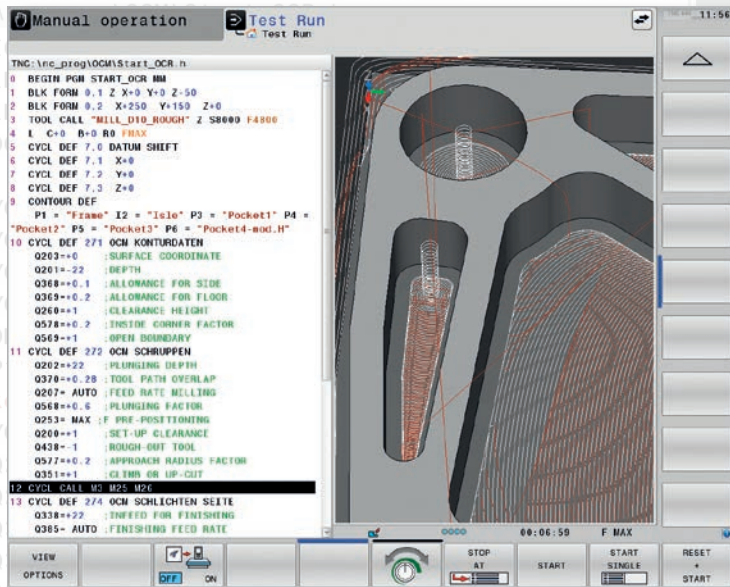
Tool after two parts



Tool after six parts

Tool: VHM end mill (\varnothing 10 mm)

Workpiece material: 1.4104



The OCM software option offers a package of functions for the efficient roughing, finishing, and deburring of pockets and islands of any shape. For all of these machining steps, contours are defined in the NC program only once. Simple contours such as circles or rectangles can be defined in cycle parameters. Complex contours are easily definable with CAD Import.

OCM is an effective, reliable, and convenient way to improve your throughput:


- Uniform tool-workpiece engagement
- Higher possible cutting parameters
- Superior chip removal
- Reduced thermal load on the tool
- Considerable reduction in tool wear
- More chips in less time

HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH

Dr.-Johannes-Heidenhain-Straße 5

83301 Traunreut, Germany

 +49 8669 31-0

 +49 8669 32-5061

E-mail: info@heidenhain.de

www.heidenhain.de