

# Spinning Tool

New 16 mm  
insert design  
with coolant  
through

## A Revolution In Turning Operations.



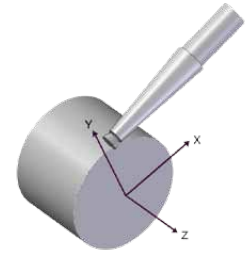
### A ROTARY TURNING TOOL THAT INCREASES PRODUCTIVITY AND TOOL LIFE

The Spinning Tool is a product of DMG Mori Seiki's Machining Technology Laboratory (MTL).

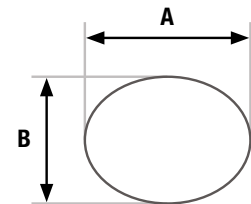
Launched in mid-2006, MTL harnesses the expertise of a world-class machine tool builder to develop ancillary technologies that boost machine performance. The Spinning Tool has revolutionized operations. Jointly developed with Kennametal, this axially-loaded and patented cutting tool eliminates vibration and chatter, while providing dramatic increases in productivity and tool life. Compared to single-point tools, the Spinning Tool significantly decreases tool temperature and wear, achieving new standards in both roughing and finishing applications. The recent design uses a 16 mm insert & coolant through design to make sure the coolant reaches the very cutting edge.

## FEATURES

- Productivity increases of up to 500%
- Tool life increases of up to 2000%
- DOC notching eliminated
- 16 mm insert
- Efficient cutting of hard-to-machine materials, such as Ni alloys and high temperature alloys
- Turning of lobed surfaces by synchronously rotating with the main spindle
- Coolant through capability



Axially loaded tool



$A - B = \text{max eccentricity tested} = 0.4 \text{ in}@4000 \text{ rpm}$

Lobed turning (ellipse)

## APPLICATIONS



NT machines



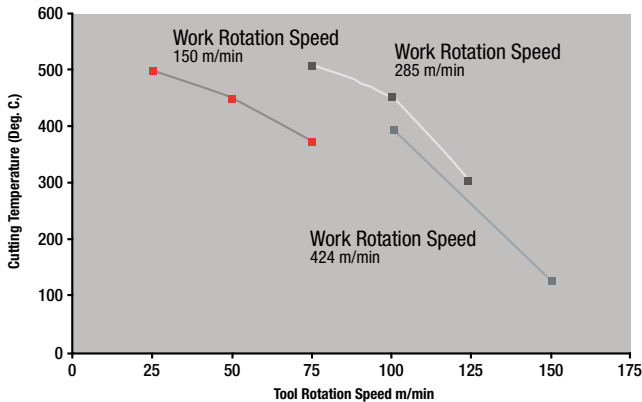
NL Y-axis machines



CTX machines

## SPINNING TOOL PERFORMANCE EVALUATION

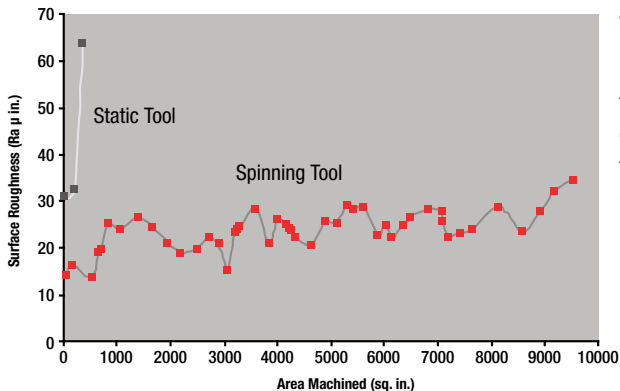
Effect of Rotating Speed on Tool Temperature



### Temperature Reduction Due to Tool Rotation

Significant temperature reductions are achieved due to rotational motion and angle of inclination.

Tool Life Comparison (3000 sfm)



### Tool Life Comparison

Even at cutting conditions three times more demanding than average, the spinning tool maintains remarkable tool life.

