

Mikron

MSP (Machine and Spindle Protection)

for

MIKRON HPM 600U

MIKRON HPM 800U

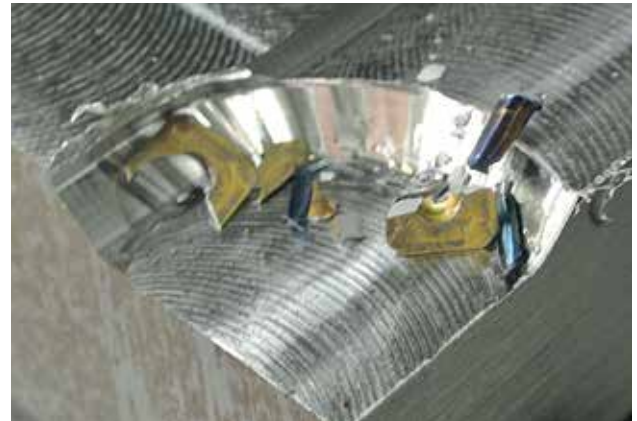


MSP

Machine and Spindle Protection



**The world's
only spindle
protection that
works in all
directions!**



Collisions usually occur when a new CNC program is first executed. MSP offers the best security for this.

How it works

The spindle is deflected when the force acting on the tool during a collision reaches a strength that would damage the spindle bearing in the event of another surge. With this deflection of the spindle, the axis drives gain the space required for the braking distance of the automatic emergency braking. The length of the braking distance depends on the speed of travel and is limited by the clearance gained. It allows travel speeds of up to 12 m/min. to be braked without damage, regardless of direction. The machining speed is not limited because this is much slower in most materials. In order to simply run the machine within the safe limits, for example when running in a machining program, the M-function M304 was developed. It restricts the rapid feed of the axes to a speed that can be braked without damage: 12 m/min. in X, Y, Z and A to 2,250°/min. or C to 3,150°/min. After it has successfully run through the process, it is disabled with M305 and the machine runs back up to the maximum speeds.



The protection is always active even if the machine runs faster than 12 m/min.

The system works without wear and is maintenance-free.

The spindle will not be damaged during a collision with a tool or toolholder with activated M304 function.

All crash events and M304/305 are recorded.

MSP



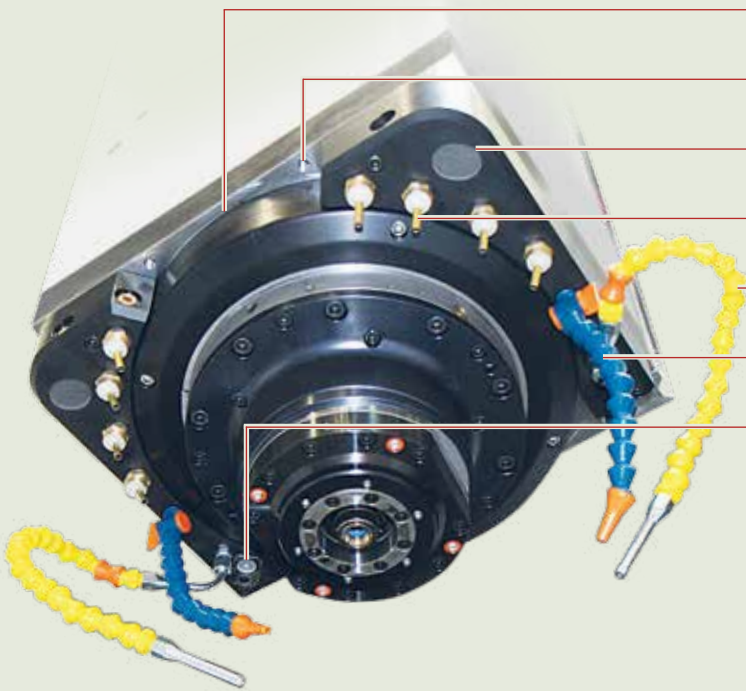
Facts

- + Unlimited roughing performance
- + The protection is always active
- + Spindle protection
 - X, Y, Z up to 12 m/min. / 472 in/min
 - C-axis up to 3,150°/min. (8.75 min⁻¹)
 - A-axis up to 2,250°/min. (6.25 min⁻¹)

MSP

Benefits

- + Protected machine geometry
- + Reduced machine downtime
- + Full cost control
- + Reduced machine-breakage insurance premium
- + Calculable machine availability



Built-in MSP protection system

Arrangement for angle heads

Two superbright LED lights

Eight cooling water nozzles 180° around the tool

Minimum-quantity cooling lubrication on both sides (option)

Blast air on both sides

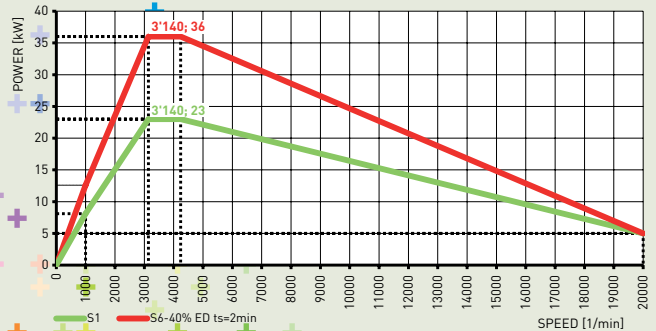
Optimally placed IR receiver for workpiece probe

MSP is available with the 20k motor spindle on MIKRON HPM 600U and MIKRON HPM 800U

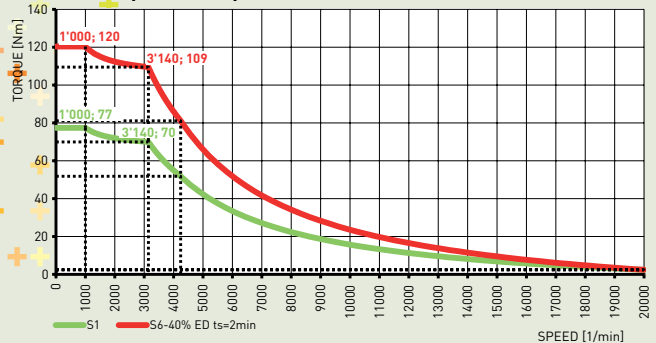


Optional nozzle ring instead of the standard nozzles

S1/S6 spindle power



S1/S6 spindle torque



At a glance

We enable our customers to run their businesses efficiently and effectively by offering innovative Milling, EDM, Laser and Automation solutions. A comprehensive package of Customer Services completes our proposition.

www.gfms.com

