

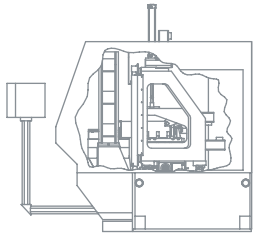
KEM 502 DEBURRING MACHINE **FINAT**



Compact 5-axis Deburring Machine
for gear chamfering.

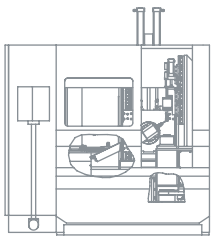
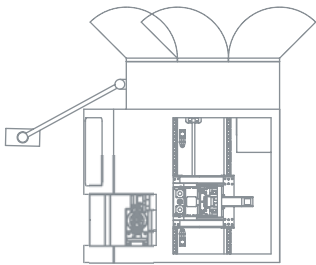


KEM 502 DEBURRING MACHINE **FIMAT**

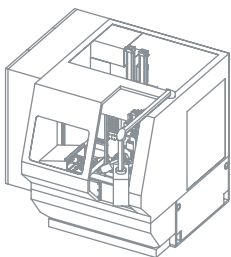


The **KEM** Deburring Machine has been developed in **WERA** technical center. It has been designed for deburring and chamfering special and bevel gears.

The machine concept is optimized for short serials and a wide variety of work parts. The tool features 5 degrees of liberty and is able to perform any work part profile with extreme precision and speed. It also suits other complex work part shapes requiring precise and sharp chamfering.



KEM 502 deburring machine ©FIMAT



DESIGN FEATURES

- Compact machine.
- Working area completely guarded.
- Bedplate allowing quick & easy shaving discharge.
- Loading area suitable for access with tackle.
- High milling speed leaves out any secondary burrs.
- Continuous speed adjustment.
- No axis with manual adjustment.
- Use of standard and special tools.

MACHINING VERSATILITY

- The KEM 502 machine will perform chamfers with any shape and dimension on countless types of work parts and gears.
- The profile to deburr is usually acquired through a manual touch cycle (teach-in method) by using the tool for deburring, or as an alternative, by a touch probe with same shape and dimensions.
The profile acquired is then saved on a NC program.
The software allows the operator a quick & easy optimization of the acquired profile.
- For the complete deburring of one piece of gear, you only have to define one single tooth with the teach-in method.
- Thanks to a specific software, it is also possible to use chamfering programs processed by the CAD-CAM system.



MACHINE FLEXIBILITY

- The KEM 502 Deburring machine features a sensor for precise angular positioning of the tooth to chamfer. [pic.1].
- An electronic radio-operated touch probe defines the horizontal and vertical position of the work part. [pic.2].
- A tool crib allows the control in automatic cycle [pic.3]:
 - Work part touch cycle.
 - Tool change for different machining.
 - Chamfer brushing if required.

SPECIAL FITTINGS

- KEM 502 Deburring Machine is arranged for automation with loading/unloading gantries or robots.
- Working cells and special fittings are possible thanks to our designers' versatility.





KEM 502 TECHNICAL DATA

MACHINE DATA

Overall dimensions	mm 1800 x 2780
Machine height	mm 2550
Weight	kg 4500
Standard quill	DIN 5 - hole 65 mm
Oversized quill	Ø 235 mm - hole 105 mm
Work part clamping	pneumatic - mechanical.
Work part indexing	laser touch probe.

WORK PART DATA

Work part diameter max/standard	mm 500
Work part diameter max/increased	mm 640
Work part max height	mm 300
Max module	No limits.

ELECTRIC DATA

Power supply	400 V - 50 Hz
Total power	KW 21
Axis "C" Work part rotation	6,3 Nm - rotation 360°
Axis "X" Transversal tool slide	6,3 Nm - stroke 215 mm
Axis "Y" Horizontal tool slide	6,3 Nm - stroke 700 mm
Axis "Z" Vertical tool slide	6,3 Nm - stroke 420 mm
Axis "A" Tool inclination	6,3 Nm - 0° ÷ 145°
Axis "F" High frequency spindle cutter	6,3 KW - 33000 V/min
Control panel	SIEMENS 840 D

MACHINE UNITS

Pneumatic supply	6 bar
Lubrication	automatic

TOOLS

Milling cutters	standard/specials
Tool holder connection	HSK 32
Tool clamping	automatic

OPTIONAL

Pneumatic tailstock	
Tool crib	
MARPOSS touch probe	
Chip conveyor	

HANDLING

Work part loading/unloading	manual
Automation (optional)	gantry/robot

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