



**MAC**20  
4-AXES CNC  
TOOL GRINDING MACHINE

**MAC**26  
4-AXES CNC  
TOOL GRINDING MACHINE

# **MAG20**

**4-AXES CNC**  
**TOOL GRINDING MACHINE**

## **4-AXIS CNC TOOL GRINDING MACHINE MOD. MAC 20**

For regrinding twist drills, end mills,  
taps, reamers, countersinks, both in  
HSS and carbide.



CNC regrinding of the cutting tools has always been a prerogative of specialised companies or of users with a large number of tools justifying the huge investment required to carry out these operations.

MAC 20 – MAC 26 4-axis CNC tool grinding machines have been designed for all the companies willing to sharpen their cutting tools by themselves, in an easy and accurate way, and at a quite low cost.

## TECHNICAL DATA

Tool Ø 2 to 20 mm

Maximum and minimum tool length 35 - 250 mm

Grinding cycle with coolant grinding oil

Grinding wheel motor power 1 HP

Grinding wheel motor speed from 3000 to 4500 rpm.

Stepper motors with screws and precision guides

X-axis travel 300 mm

Y-axis travel 130 mm

C-axis travel  $-5^{\circ}$  -  $180^{\circ}$

A-axis travel  $\infty$

Electronic probe for tool detection and automatic positioning, with run out checking

PC with 15" colour display unit

Oil-tight casing with Lexan glass and sliding door for tool loading/unloading operations, with door lock

Internal light

3-colour signalling lamp

Weight 300 kg

Dimensions 900x900x1560 mm

MAC 20 – MAC 26 do not require skilled manpower or special knowledge in the sharpening field.

Through a precision electronic probe, MAC 20-MAC 26 automatically position the tool to be sharpened according to the programming software indications: each single tool program can be stored inside a special library to be then recalled for another sharpening cycle.



# **MAC** 26

4-AXES CNC  
TOOL GRINDING MACHINE

## **4-AXIS CNC TOOL GRINDING MACHINE MOD. MAC 26**

For regrinding twist drills, end mills, taps, reamers,  
countersinks, both in HSS and carbide.



## TECHNICAL DATA

Tool  $\varnothing$  2 to 26 mm

Maximum and minimum tool length 35 - 250 mm

Grinding cycle with oil cooling

Grinding wheel motor power 1 HP

Grinding wheel motor speed  
from 3000 to 4500 rpm.

Stepper motors with screws and precision guides

X-axis travel 300 mm

Y-axis travel 130 mm

C-axis travel  $-5^{\circ}$  -  $180^{\circ}$

A-axis travel  $\infty$

Electronic probe for tool detection and automatic positioning, with run out checking

PC with 15" colour display unit

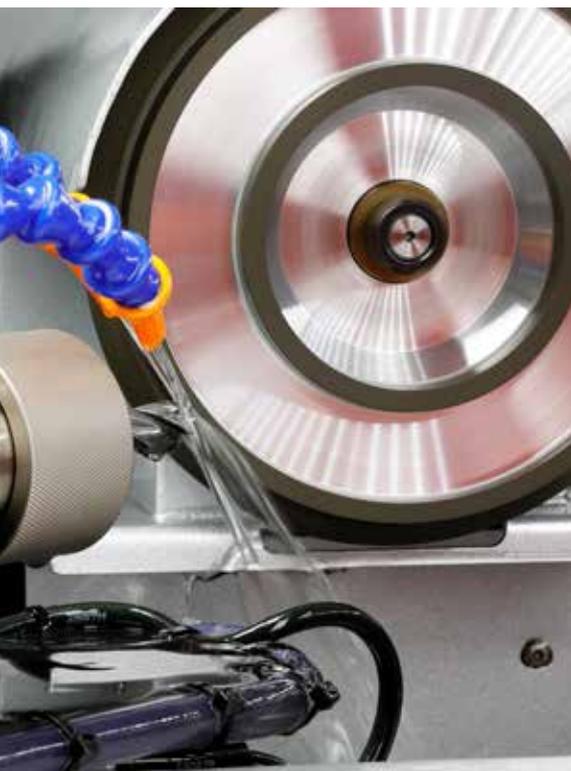
Oil-tight casing with Lexan glass and sliding door for tool loading/unloading operations, with door lock

Internal light

3-colour signalling lamp

Weight 300 kg

Dimensions 900x900x1560 mm



# MAG20

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TOOL GRINDING MACHINE

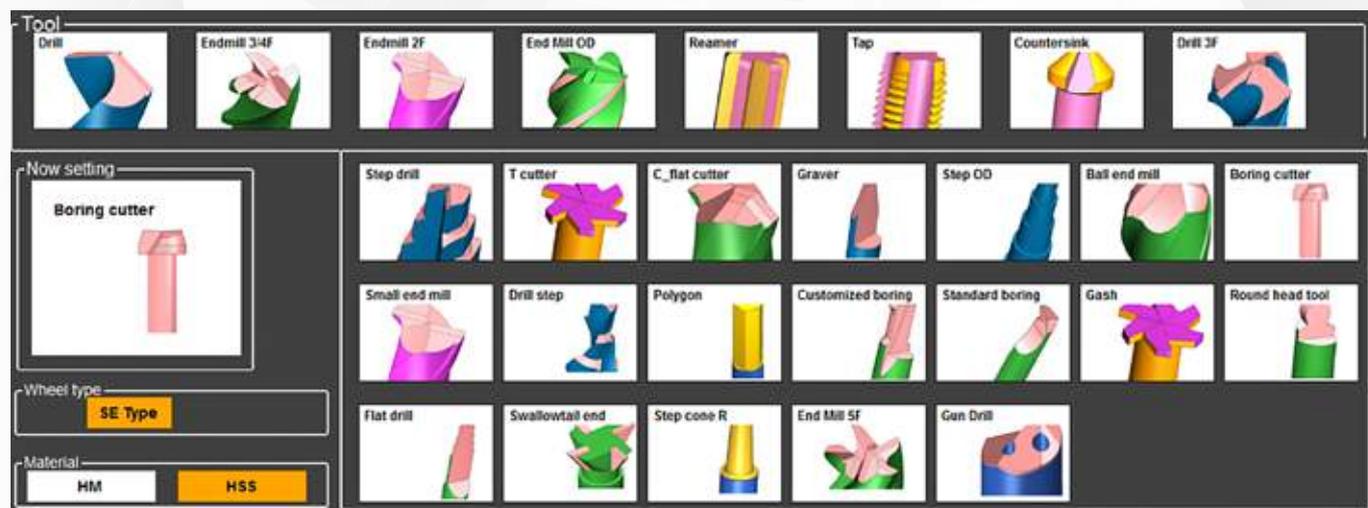
# MAG26

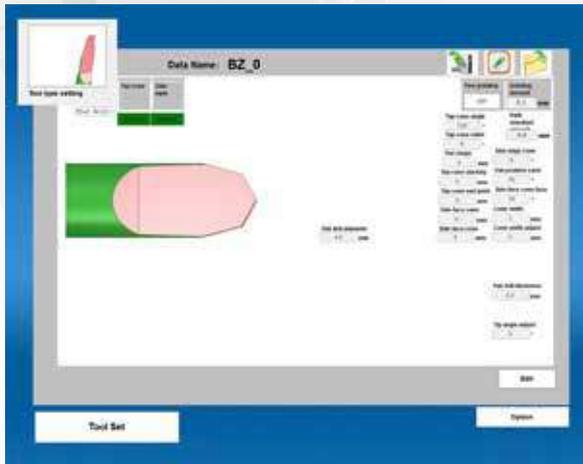
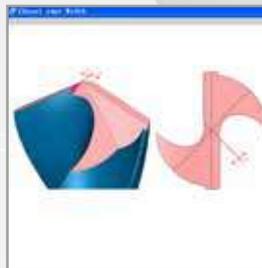
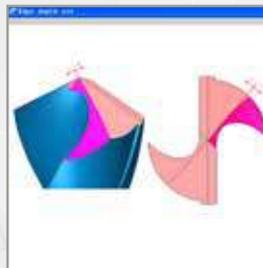
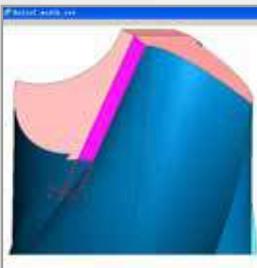
4-AXES CNC  
TOOL GRINDING MACHINE

## PARAMETRIC TOOL PROGRAMMING SOFTWARE WITH 3D GRAPHIC INTERFACE

Sharpening parameters can be easily edited based on tool geometry.

All software packages, showing in the main menu of MAC 20 and MAC 26, are included in the standard equipment.





## DRILLS

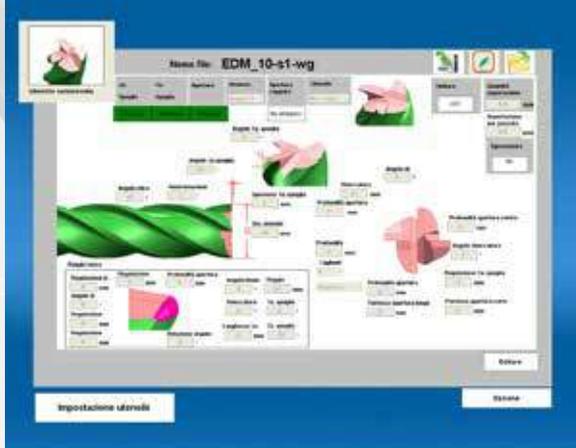
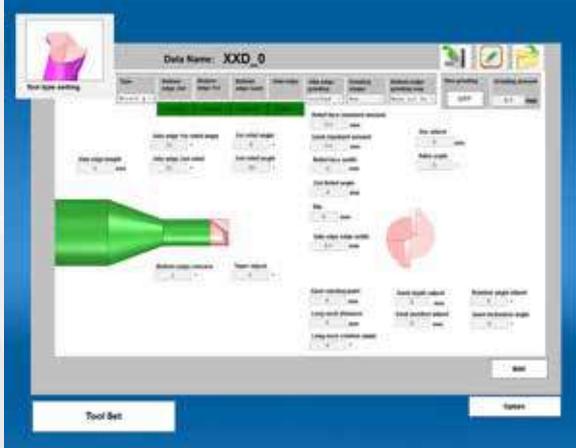
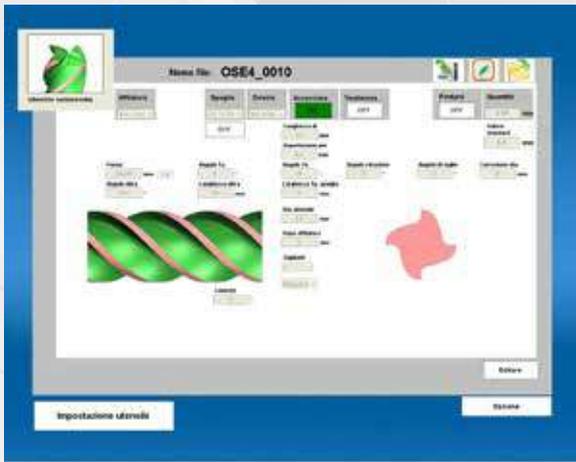
Plane or conical relief sharpening with straight or radius-type core thinning, positive or negative.

Step drills sharpening.



## GUN DRILLS

Gun drills sharpening.



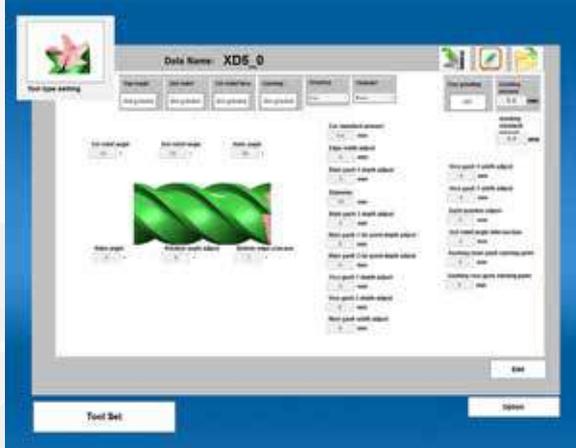
## END MILLS

End mill sharpening with 2-3-4 cutting edges with regular or uneven division, with the possibility of square or corner chamfer. Ball nose with 2 flutes.

Outer diameter sharpening with first and second rake.

Shank grinding.

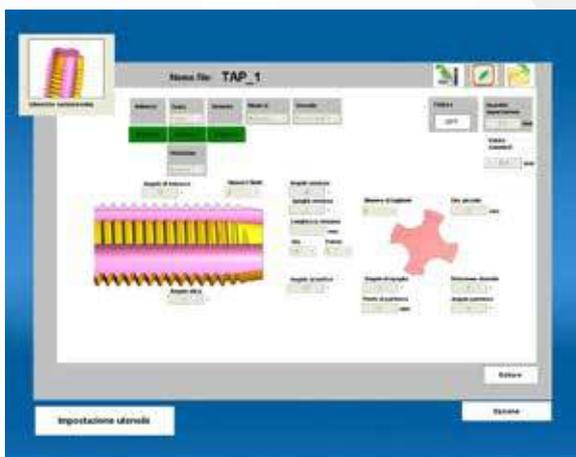
End shortening.

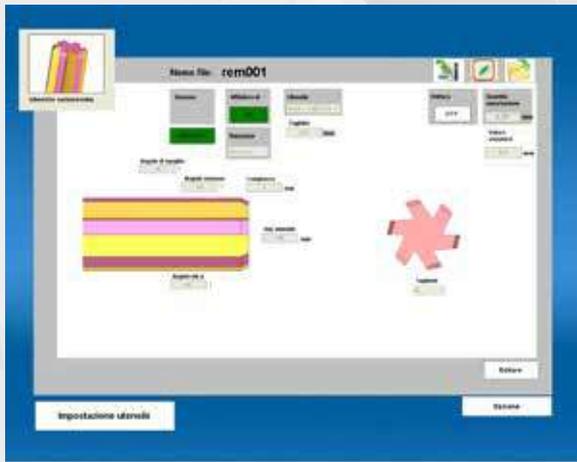


## TAPS

Chamfer sharpening with 2-3-4-5-6 cutting edges, with straight and helix flutes.

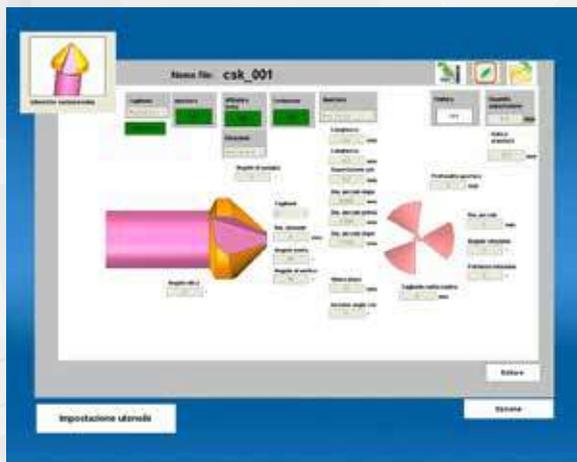
End shortening.





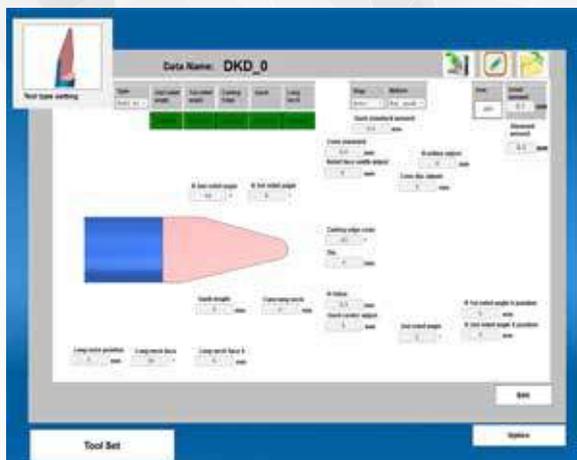
## REAMERS

Chamfer sharpening with 3-4-6-8 cutting edges.  
End shortening.



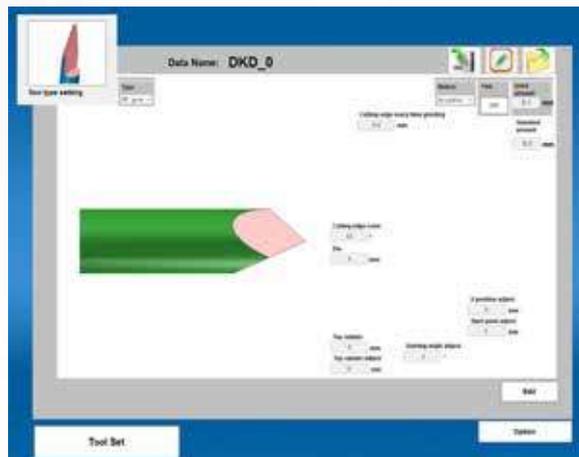
## COUNTERSINKS

Countersinks sharpening from 1 to 4 cutting edges.  
Plane or conical relief sharpening with regular or uneven division.  
End shortening.



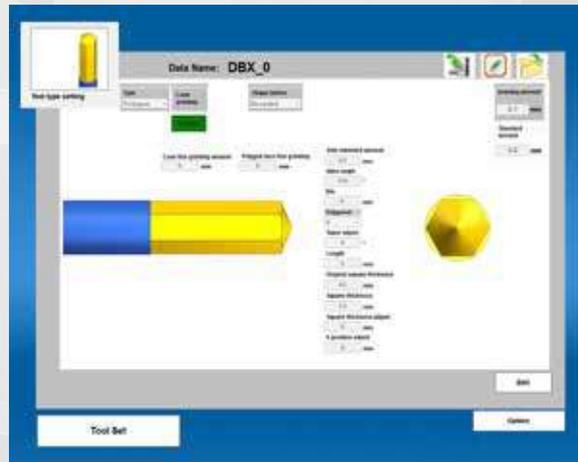
## ENGRAVING TOOLS

Tip sharpening and single-lip chisel angle.  
Flat or radius.



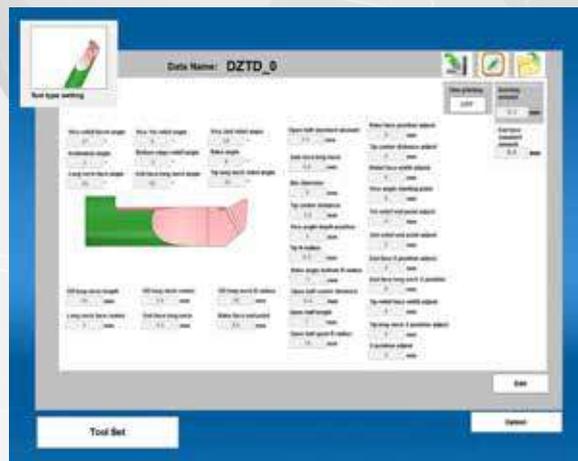
## POLYGONAL TOOLS

Polygonal tools manufacturing and sharpening.



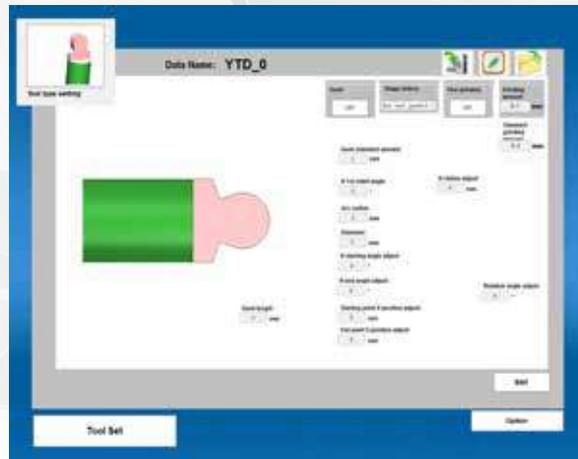
## BORING TOOLS

Boring tools manufacturing from blanks



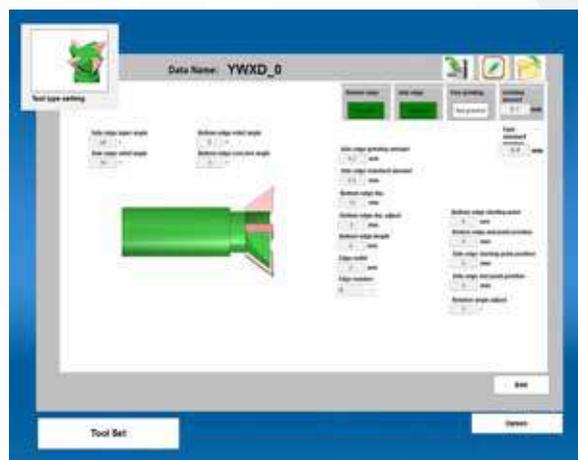
## ROUND HEAD TOOLS

Round head tools manufacturing and sharpening.



## SWALLOWTAIL MILLS

Swallowtail mills sharpening with 2-3-4-5-6-7-8 cutting edges.



# **MAC20**

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# **MAC26**

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## **STANDARD EQUIPMENT**

### **MAC 20:**

Collet holder spindle and precision collets for 2 to 20 mm sharpening.

### **MAC 26:**

Collet holder spindle and precision collets for 2 to 26 mm sharpening.

Programming software for:

- HSS and Carbide twist drill sharpening
- HSS and Carbide square end mills with 2-3-4 flutes (head only) sharpening
- Tap sharpening (chamfer only)
- Countersink sharpening
- Reamer sharpening (chamfer only)
- Engraving tools sharpening and production
- End mills shank grinding and O.D. grinding

Diamond grinding wheel for Carbide drills sharpening

Diamond grinding wheel for Carbide end mills sharpening

Diamond grinding wheel for Carbide end mills shank grinding and O.D. grinding

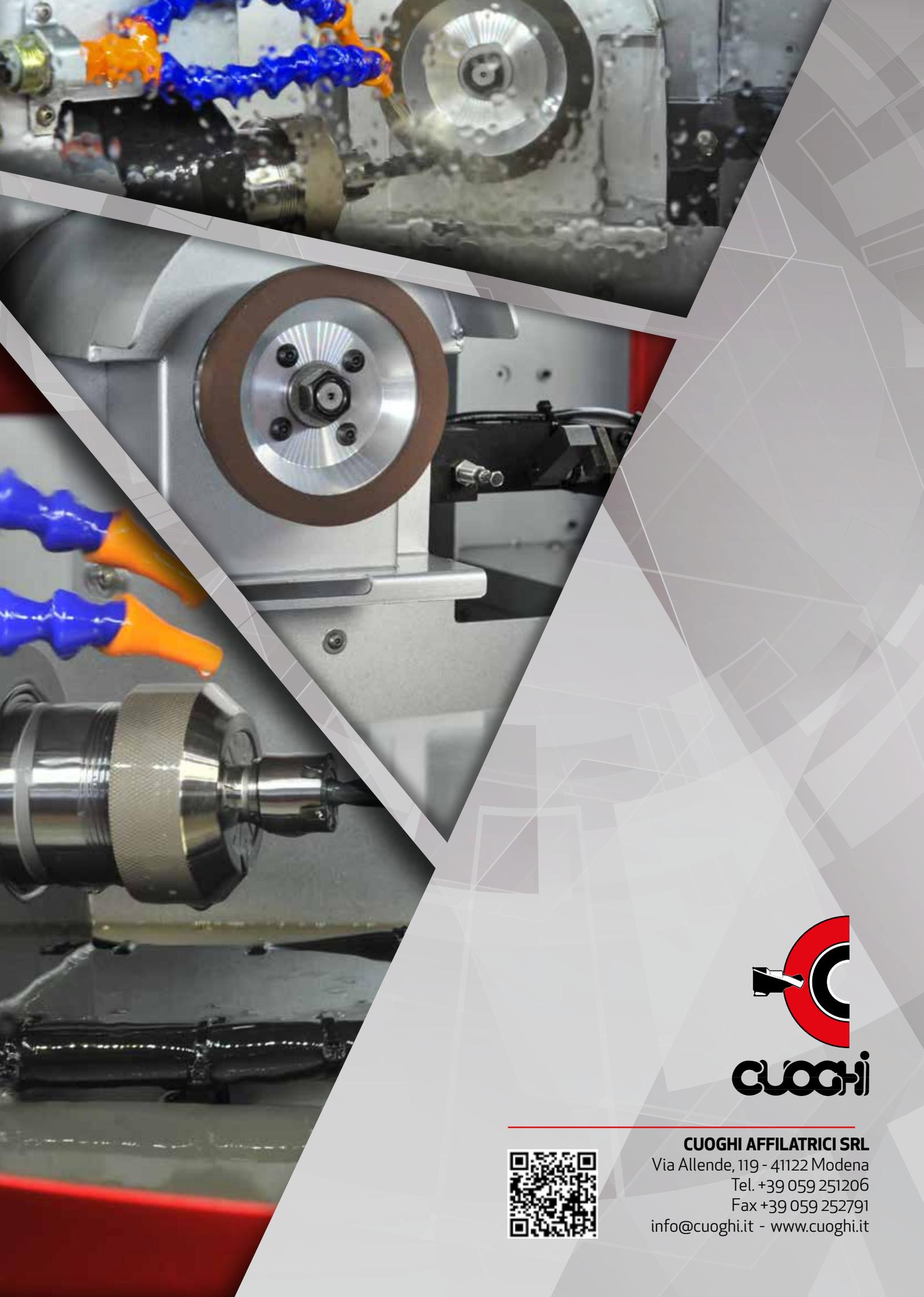
Oil tank (25 lt) with pump for coolant grinding oil

Pump for lubrication guides

## **OPTIONAL EQUIPMENT**

- CBN Grinding wheels for HSS tools
- Oil mist collector





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