



Vices 01



Electrospindle 02

Comet R4

5-axis machining centre



5-axis CNC machining centre used for the machining of bars or aluminium, PVC, light alloys in general and steel workpieces up to 4 m in length.

The 4th and 5th axis allow the electrospindle to continuously rotate to NC from -15° to 90° on horizontal axis and from -360° to $+360^{\circ}$ on continuous vertical axis, to perform the work on the upper side and on all the lateral sides of the profile.

It is equipped with a 12-place tool magazine, on the X axis gantry, able to host also one milling disc.

It also has a mobile work table that facilitates the workpiece loading/unloading operation and significantly increases the workable section.

Operator interface 03



Tool magazine 04



Pneumatic stops 05



The images are only given for illustrative purposes

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<h3>01</h3> <h4>Vices</h4> <p>The machine software can calculate the correct positioning measure for each vice unit, according to the length of the workpiece and to the type of machining to be performed. The automatic positioner allows picking all vice units and moving them by means of the gantry. This operation is performed at the highest speed and with great precision and spares longer time and collision risks, so that the machine can also be easily used by less experienced operators.</p>	<h3>02</h3> <h4>Electrospindle</h4> <p>8.5 kW S1 high torque electrospindle also allows heavy duty machining, which is typical in industrial processing. As an option and for higher performances a 10.5 kW encoder equipped electrospindle is available for rigid tapping. Electrospindle rotation along B and C axes allows working on 5 sides of the profile, with no need of repositioning. It can be used for some types of steel extrusions as well as for aluminium profiles, thanks to the software-adjusted lubricating system. With its double tank it allows either minimum oil circulation or oil emulsion spray-mist.</p>	<h3>03</h3> <h4>Operator interface</h4> <p>The new control version with suspended interface allows the operator to look at the monitor from any position, as it can be rotated around the vertical axis. The operator interface is provided with a 24", 16:9 sized, portrait mode touchscreen, equipped with all necessary USB connections for PC and NC remote interfaces. It is also provided with keyboard and mouse and with barcode and remote keyboard connections. IT IS equipped with a front USB port for exchanging data.</p>	<h3>04</h3> <h4>Tool magazine</h4> <p>The tool magazine is integrated on the X axis, in the lower part and behind the electrospindle. It allows great reduction of tool change times. This function is particularly useful in the extrusion head and tail machining, avoiding the travel to get to the magazine, as it moves simultaneously with the electrospindle and its positions. The magazine can contain up to 12 tool holders with relevant tools, which can be set at the operator's discretion. Each position of the tool holder is provided with a sensor detecting the correct cone position.</p>	<h3>05</h3> <h4>Pneumatic stops</h4> <p>The machine is equipped with strong stops allowing bar reference. One is positioned on the left side (standard) and the other on the right side (optional). Each stop is activated by a pneumatic cylinder, it is retractable type and is automatically selected by the machine software according to the machining to be performed. In short, double stop offers the advantage to load more profile pieces for multi-piece mode machining as well as the possibility to reposition the bar or the piece and perform machining on particularly long profiles.</p>
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AXES TRAVELS	
X AXIS (longitudinal) (mm)	4,000
Y AXIS (transversal) (mm)	1000
Z AXIS (vertical) (mm)	450
B AXIS (spindle rotation)	- 15° ÷ 90°
C AXIS (rotation on electrospindle vertical axis)	- 360° ÷ +360°
ELECTROSPINDLE	
Maximum power in S1 (kW)	8.5
Maximum power in S6 (60%) (kW)	10
Maximum speed (rpm)	24,000
Tool holder cone	HSK - 63F
Automatic tool holder hook	•
Cooling with heat exchanger	•
Electrospindle controlled on 5 axes with the possibility of simultaneous interpolation	•
Electrospindle with encoder for rigid tapping	○
AUTOMATIC TOOL MAGAZINE ON BOARD THE GANTRY	
Maximum number of magazine tools	12
Maximum diameter of the blade that can be inserted in the magazine (mm)	Ø = 250
FUNCTIONALITY	
Multi-piece operation	○
Extended machining, up to twice the maximum nominal length in X	•
Multi-step mode machining up to 5 steps	•
Multi-piece mode machining in Y	○
Workpiece rotation for machining on 4 sides	○
TAPPING CAPACITY	
With compensator	M8
Stiff (optional)	M10
WORKPIECE LOCKING	
Standard number of vices	4
Maximum number of vices	6
Automatic vice positioning through X axis	•
SAFETY DEVICES AND PROTECTIONS	
Machine integral protection booth	•
Laminated protection glass	•
Retractable side protection tunnels	•

- included
- available