

# Comet S6 HP

## 4-axis machining centre

Clamp positioner 01

Electrospindle 02

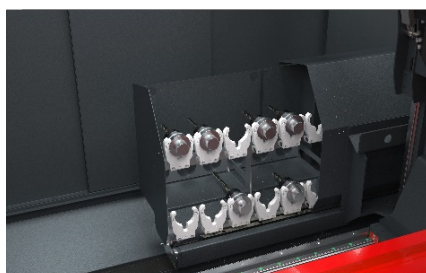


4-axis CNC machining centre designed for working bars of parts in aluminium, PVC, light alloys in general and steel. It includes two different operating modes: the first one, in single-zone mode, for machining whole bars in a single working area, up to 7 m long; the second one, in double operation, for machining multiple workpieces in the two separate working areas. All CNC axes are absolute and do not require resetting upon restarting the machine. The machine in HP version features 2 additional axes that, in double operation, allow positioning in the clamps and reference stops in concurrent operation time with respect to the spindle machining processes in the opposite working field. The 4th axis allows the electrospindle to rotate to CNC from  $-120^\circ$  to  $+120^\circ$  on horizontal axis, to machine the top and the side faces of the profile. Features a 10-place tool magazine, on the gantry (X-axis), with two suitable positions for holding a blade with a maximum diameter of 250 mm and an angular machining head. The mobile worktable facilitates the workpiece loading/unloading operation fully ergonomically, and significantly increases the machinable section on the Y-axis.

User interface 03

Tool magazine 04

Dynamic double operation 05



The pictures are provided by way of illustration only

# Comet S6 HP

## 4-axis machining centre

<h3>01</h3> <h4>Clamp positioner</h4> <p>Clamp unit positioning is performed by two numerically controlled axes, H and P, parallel to the X-axis, with on-board reference stop. This solution allows positioning stops all along the machine to work in multi-piece mode with one profile for every pair of clamps. Furthermore, the positioning of the clamps takes place independently of the operational condition of the spindle (X-axis).</p>	<h3>02</h3> <h4>Electrospindle</h4> <p>The 8.5 kW electrospindle in S1 with high torque also enables performing the heavy machining typical of the industrial sector. A 10.5 kW electrospindle with encoder for rigid tapping is available as optional. Electrospindle rotation along B axis allows working on 3 sides of the profile, with no need for repositioning. Normally used for machining extruded aluminium profiles, it also enables machining steel profiles thanks to the twin tank lubrication system: one with minimal oil diffusion, and the other with oil emulsion spray.</p>	<h3>03</h3> <h4>User interface</h4> <p>The possibility of rotating the monitor on its vertical axis allows the operator to view the screen from any position. The user interface has a 24" touchscreen display in 16:9 format, portrait mode, equipped with the necessary USB connections for PC and CNC remote interfaces. It also features an operator panel, mouse, and it is set up for connecting barcode reader and remote operator panel.</p>	<h3>04</h3> <h4>Tool magazine</h4> <p>The tool magazine is integrated into the X-axis trolley, in a recessed position with respect to the electrospindle, and it increases the machine's productivity by reducing the time for tool changing. This advantage is highly prized in machining at head and end of profiles. The magazine, with 10 places, enables loading a blade with a maximum diameter of 180 mm and a dual-head angular machining head. Each position of the tool holder is provided with a sensor detecting the correct cone position.</p>	<h3>05</h3> <h4>Dynamic double operation</h4> <p>The innovative machining mode allows reducing machine stop times during loading and unloading of the pieces to be worked. The system allows, in the two distinct and independent working areas, to simultaneously carry out the loading/unloading of extruded profiles on one side, and machining of workpieces on the other, with different lengths and/or codes. This solution makes the machine very flexible, which is highly suitable for the field of window/door frames and for small work orders, where machining is required for small lots of different pieces.</p>
--	---	--	---	--

AXIS TRAVEL	
X AXIS (longitudinal) (mm)	7,500
Y AXIS (transversal) (mm)	1000
Z AXIS (vertical) (mm)	450
B AXIS (spindle rotation)	- 120° + + 120°
H AXIS (right area clamp positioner) (mm)	3,300
P AXIS (left area clamp positioner) (mm)	3,300
ELECTROSPINDLE	
Maximum power in S1 (kW)	8.5
Maximum power in S6 (60%) (kW)	10
Maximum speed (rpm)	24,000
Tool connector cone	HSK - 63F
Automatic tool holder attachment hook	•
Cooling through heat exchanger	•
Electrospindle piloted on 4 axes with possibility of simultaneous interpolation	•
Electrospindle with encoder for rigid tapping	○
AUTOMATIC TOOL MAGAZINE ON TROLLEY	
Maximum number of tools in tool magazine	10
Maximum diameter blade that can be inserted in magazine (mm)	Ø = 250
OPERATION	
Multi-piece operation	•
Dynamic double operation	•
Extra-length machining, up to twice the nominal maximum length in X	○
Multistep machining – up to 5 steps	•
Automatic management of multistep machining	○
Multi-piece machining in Y	○
Workpiece rotation for machining on 4 faces	○
TAPPING CAPACITY	
With compensator	M8
Stiff (optional)	M10
WORKPIECE CLAMPING	
Clamps, standard number	8
Clamps, maximum number	12
Automatic clamp positioning through H and P axes	•
Maximum number of clamps per area	6

- included
- available