



## Comet S4 I

CNC machining centres



4-axis CNC machining centre designed for working bars or parts in aluminium, PVC, light alloys in general and steel up to 4 m. The machine is equipped with independent motorized vices that allow positioning the vices in concurrent operation time. The 4th NC axis allows the electrospindle to rotate from  $-120^{\circ}$  to  $+120^{\circ}$  on the horizontal axis and position itself at any intermediate angle. The machine can therefore perform machining operations on the top and on all side faces of the profile at any angle within the range. 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.



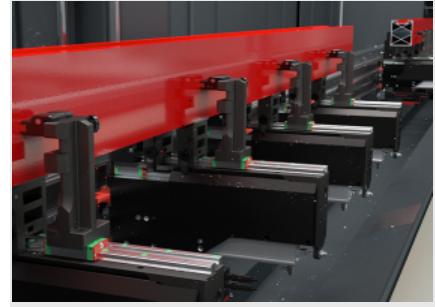
**4 axes electric head -S-**

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 A axis allows working on 3 sides of the profile, with no need of repositioning.



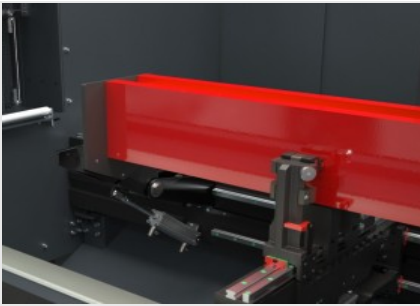
**Operator interface**

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.



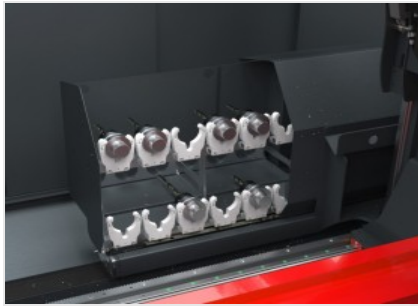
**Motorized vices**

The motorized vices, each equipped with its own motor, can be positioned independently in the work area. The CNC manages the movement of vices and that of electrospindle head simultaneously, in the two different work areas in double operation mode. This enables significant productivity gains. Using absolute reference axes allows reducing the initialisation time required every time the machine is restarted.



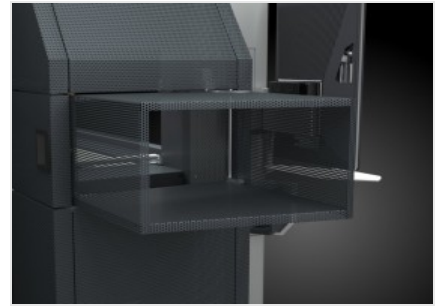
**Pneumatic stops**

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.



**Tool magazine**

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 stroke to get to the magazine, as it moves simultaneously with the electrospindle and its positions.



**Foldaway tunnel**

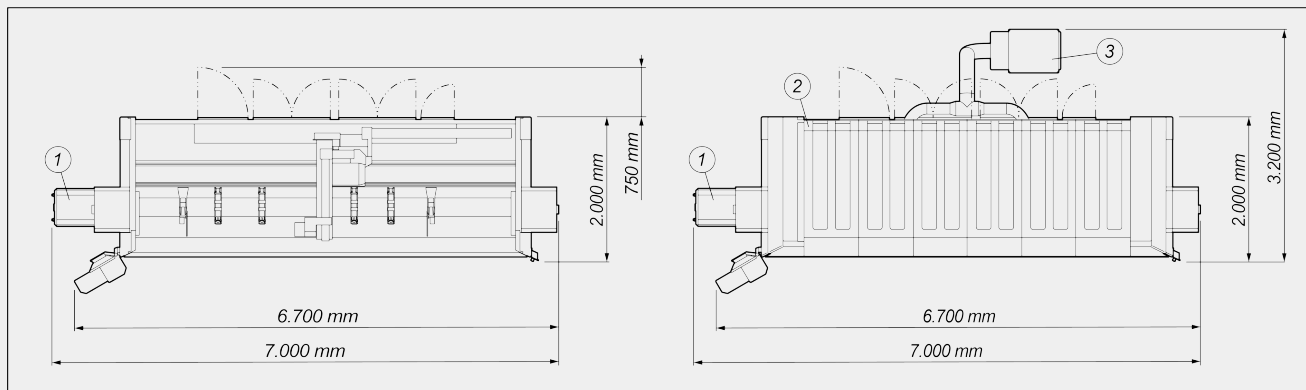
Integrated with the machine's aesthetics and design, thanks to the perforated sheet metal for transparency and lightness, the tunnel opens and closes as needed. As its length can be reduced when not in use, it helps save space at the workshop. The outlet for the chip conveyor belt and its engine are built into the lower section, in view of an aesthetic and functional design.





**COMET S4 I / CNC MACHINING CENTRES**

**LAYOUT**



Machine height (maximum Z-axis extension) (mm) 2.590

Machine height with top cover (mm) 2.710

- 1. Chip conveyor and swarf drawer (optional)
- 2. Cabin enclosure (optional)
- 3. Fume extraction system (optional)

The overall dimensions may vary depending on the product configuration.

**AXIS STROKES**

X AXIS (longitudinal) (mm) 3.950

Y AXIS (transversal) (mm) 1.000

Z AXIS (vertical) (mm) 450

A AXIS (rotation on electrospindle horizontal axis) -120° ÷ +120°

**ELECTROSPINDLE**

Maximum power in S1 (kW) 8,5

Maximum power in S6 (60%) (kW) 10

Maximum speed (rpm) 24.000

Toolholder cone HSK - 63F

Automatic tool holder coupling ●

Cooling with heat exchanger ●

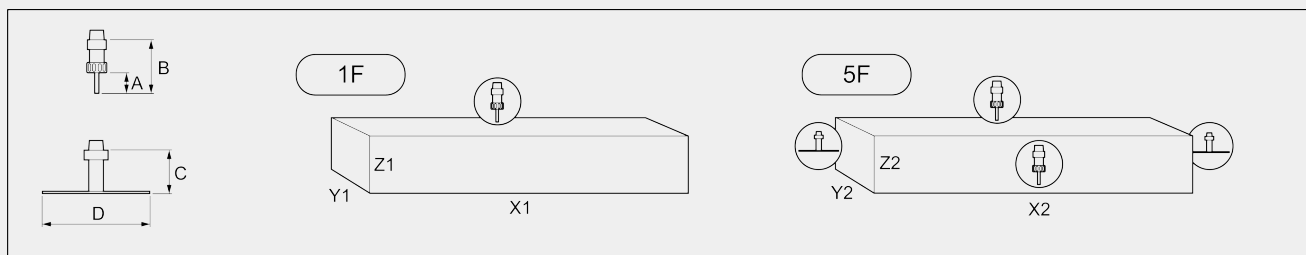
Electrospindle controlled on 4 axes with the possibility of simultaneous interpolation ●



**WORK AREA**

**1F = 1 face machining**

**5F = 5 faces machining**



	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>X1</b>	<b>Y1</b>	<b>Z1</b>	<b>X2</b>	<b>Y2</b>	<b>Z2</b>
<b>COMET S4 I</b>	60	130	95	250	3.285	300	210	3.285	250	215
Dimensions in mm										

**TAPPING CAPACITY (with Tap On Aluminium And Through Hole)**

With compensator	M8
Stiff (optional)	M10

**WORKPIECE LOCKING**

Standard number of pneumatic vices	4
Maximum number of pneumatic vices	6
Independent motorised vices	●

**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

**SAFETY DEVICES AND PROTECTIONS**

Machine integral protection booth	<input checked="" type="checkbox"/>
Laminated protection glass	<input checked="" type="checkbox"/>
Retractable side protection tunnels	<input checked="" type="checkbox"/>

**FUNCTIONS**

Multi-piece operation	<input type="checkbox"/>
Extended machining, up to twice the maximum nominal length in X	<input type="checkbox"/>
Basic multi-step machining - up to 5 steps	<input checked="" type="checkbox"/>
Workpiece rotation for machining on 4 sides	<input type="checkbox"/>
Multi-piece mode machining in Y	<input type="checkbox"/>

Included ● Available ○