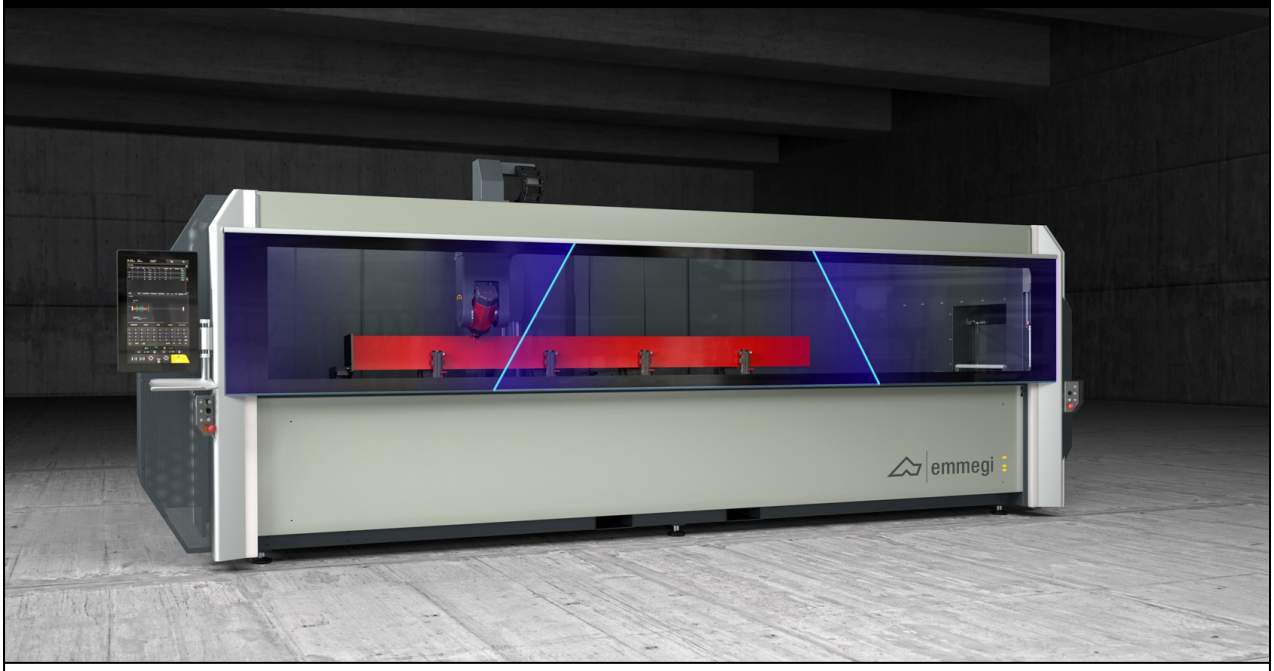
# COMET S4

CABINET MACHINING CENTERS




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 4th NC axis allows the electrospindle to rotate from –120° to +120° 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 has a 12-place tool magazine, on the X axis gantry, that can host an angle machining head and a milling disc, to perform machining on the 5 sides of the workpiece. It also has a mobile work table that facilitates the workpiece loading/unloading operation and significantly increases the workable section.

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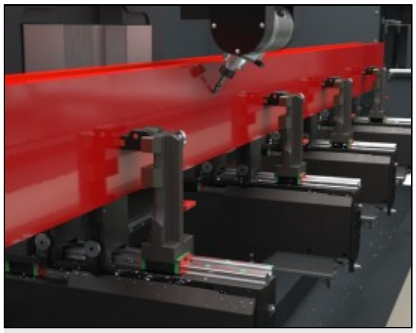
## 4 axes electric head -S-

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.



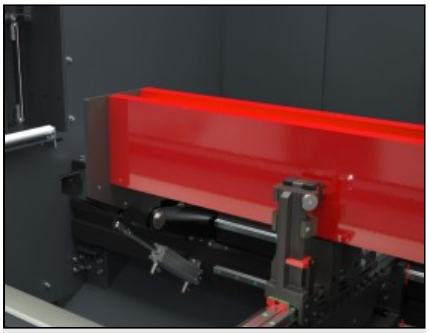
## Operator interface

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.



## Vices

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.



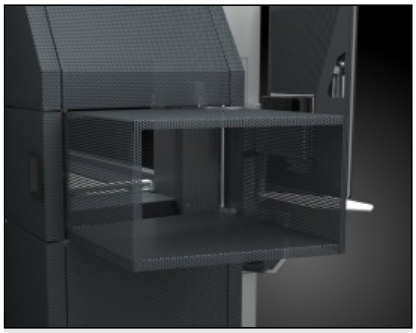
## Pneumatic stops

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.

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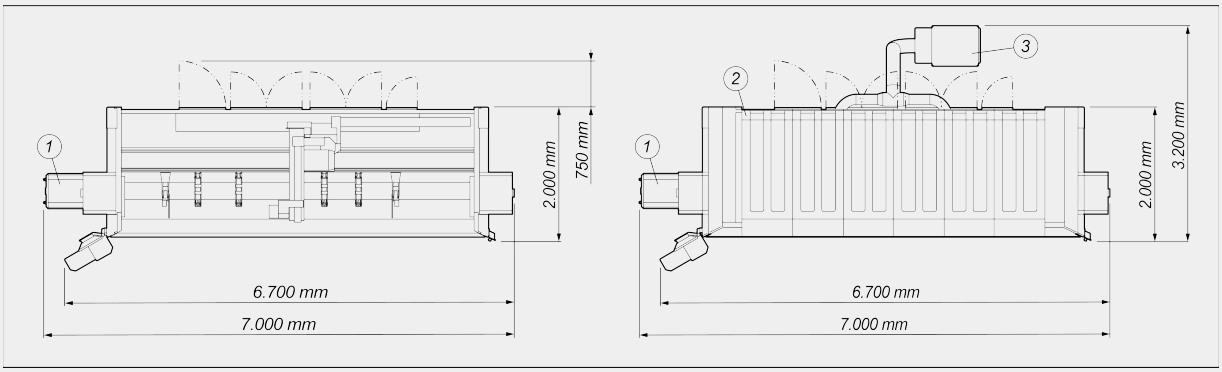
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## **COMET S4** / CABINET MACHINING CENTERS

### LAYOUT

The overall dimensions may vary depending on the product configuration.

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




| | |
|---|---|
| Machine height (maximum Z-axis extension) (mm) | 2.590 |
| Machine height with top cover (mm) | 2.710 |

### 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 | ● |

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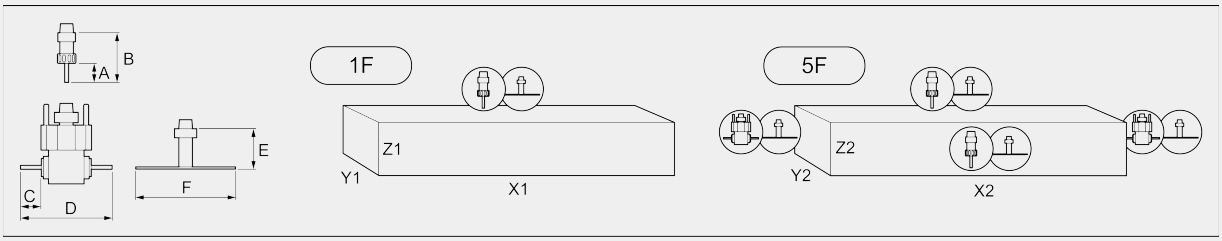
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## WORKABLE SIDES

| | |
|---|---|
| With angle machining head (side faces and heads) | 2 + 2 |
| With blade tool (upper face, side faces and heads) | 1 + 2 + 2 |
| With direct tool (upper face and side faces) | 3 |

## WORK AREA

**1F = 1 face machining** **5F = 5 faces machining**




| | A | B | C | D | E | F | X1 | Y1 | Z1 | X2 | Y2 | Z2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMET S4** | 60 | 130 | 50 | 245 | 100 | 250 | 3.285 | 300 | 210 | 3.285 | 250 | 215 |

Dimensions in mm
The application of an angular unit reduces the working capacity in Z to 190 mm

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

| | |
|---|---|
| With compensator | M8 |
| Stiff (optional) | M10 |

## WORKPIECE LOCKING

| | |
|---|---|
| Maximum number of pneumatic vices | 6 |
| Standard number of pneumatic vices | 4 |
| Automatic vice positioning through X axis | ● |

## AUTOMATIC TOOL MAGAZINE ON BOARD THE GANTRY

| | |
|---|---|
| Maximum number of magazine tools | 12 |
| Maximum length of the tool that can be loaded into the magazine (mm) | 190 |

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## SAFETY DEVICES AND PROTECTIONS

| | |
|---|---|
| Machine integral protection booth | ● |
| Laminated protection glass | ● |
| Retractable side protection tunnels | ● |

## FUNCTIONS

| | |
|---|---|
| Multi-piece operation | ○ |
| Basic multi-step machining - up to 5 steps | ● |
| Extended machining, up to twice the maximum nominal length in X | ○ |
| Multi-piece mode machining in Y | ○ |
| Workpiece rotation for machining on 4 sides | ○ |

Included ● Available ○

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