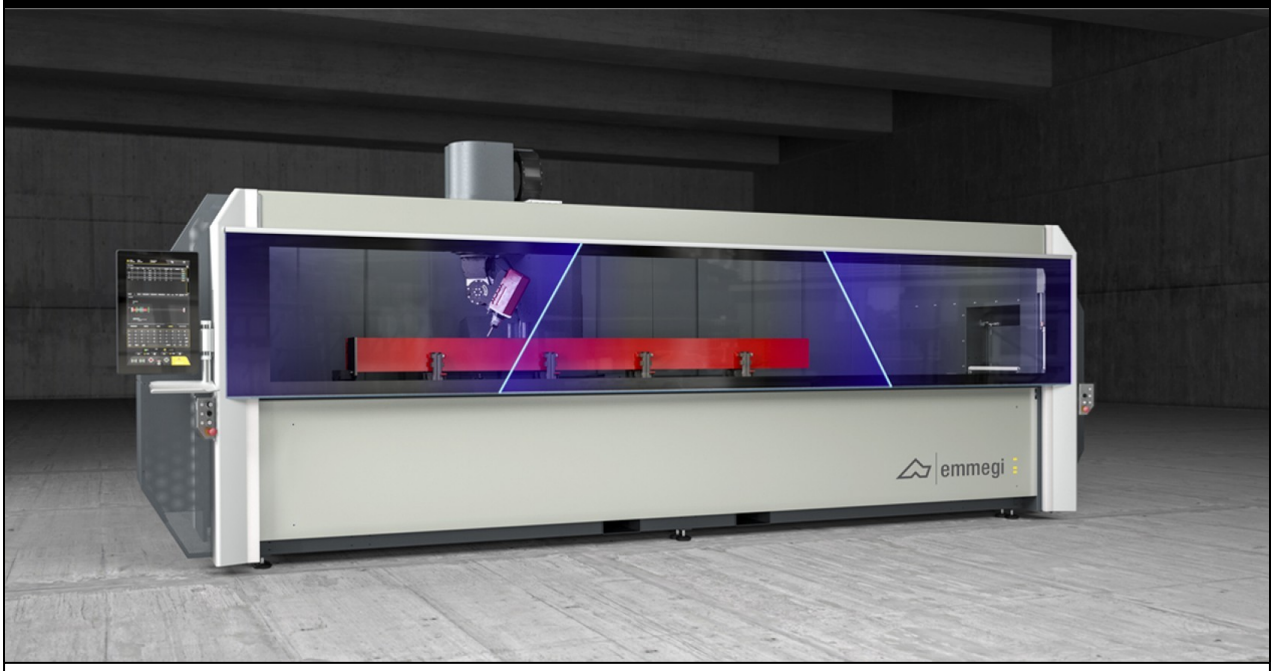
COMET R4 I

CABINET MACHINING CENTERS



5-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 and 5th axis allow the electrospindle to continuously rotate to NC from -15° to +90° on horizontal axis and from -360° to +360° 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.

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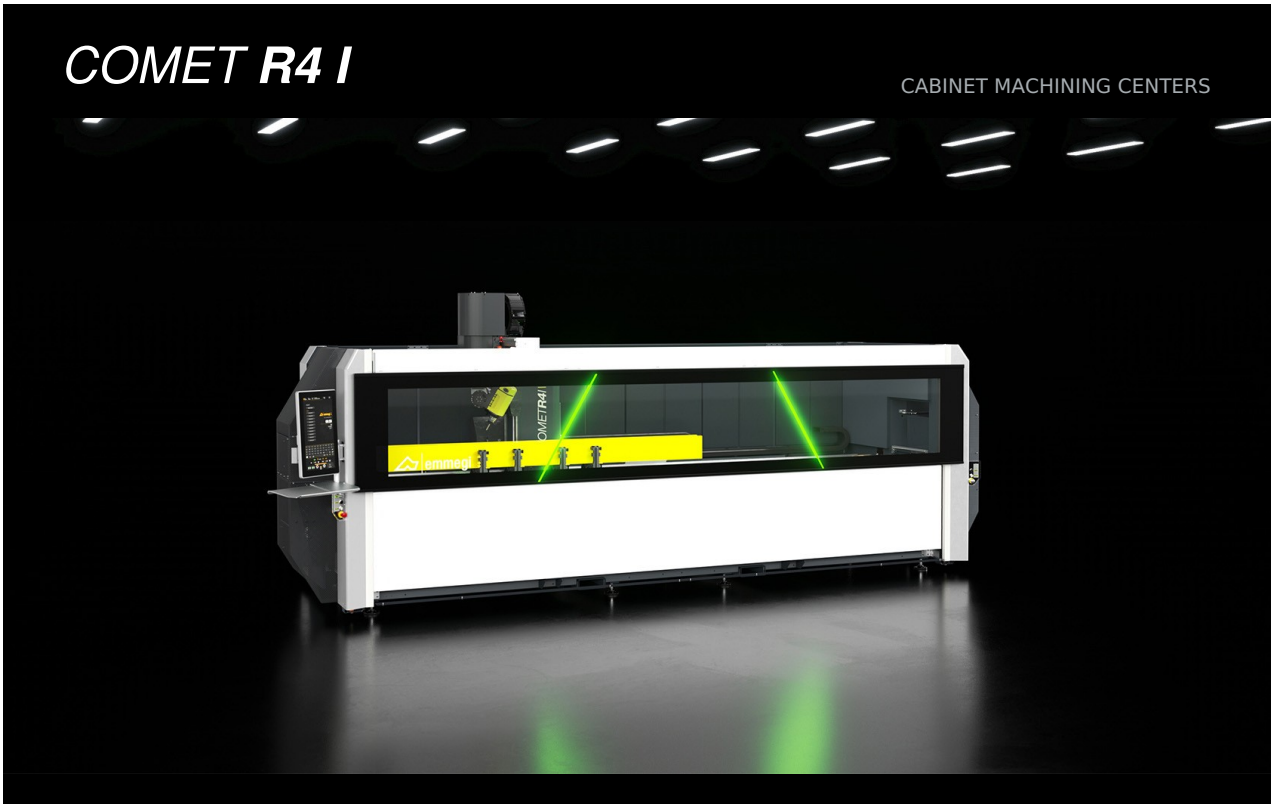

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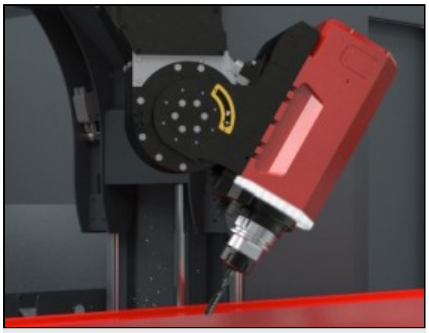
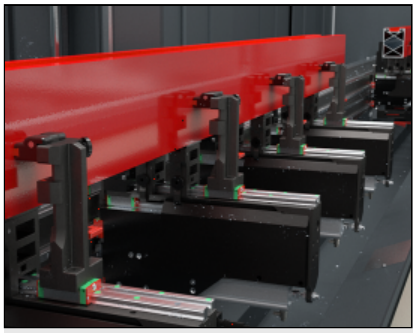


5 axes electric head -R-

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 11 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.

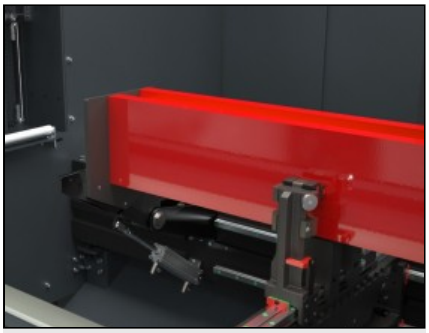
Operator interface

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.

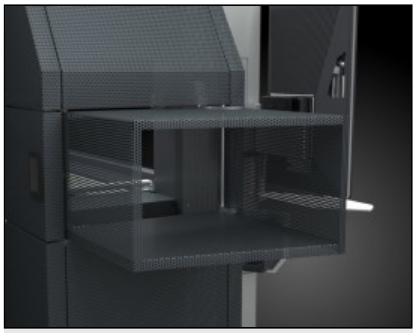


Pneumatic stops

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.

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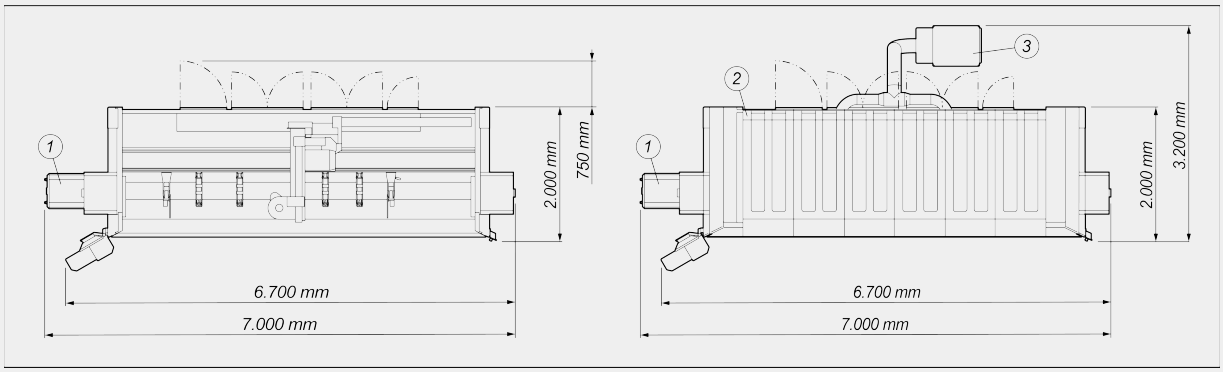
COMET R4 I / CABINET MACHINING CENTERS

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
B AXIS (rotation on electrospindle horizontal axis)	-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
Toolholder cone	HSK - 63F
Automatic tool holder coupling	●
Cooling with heat exchanger	●
Electrospindle controlled on 5 axes with the possibility of simultaneous interpolation	●

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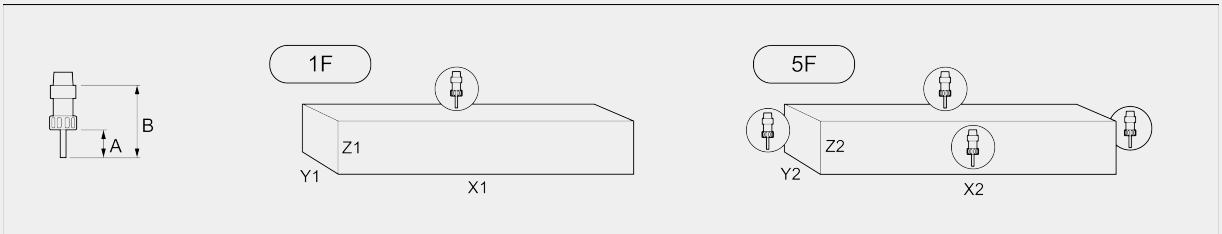
WORK AREA

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



	A	B	X1	Y1	Z1	X2	Y2	Z2
COMET R4 I	60	130	3.475	300	250	3.190	250	250

Dimensions in mm

TAPPING CAPACITY (with Tap On Aluminium And Through Hole)

With compensator	M8
Stiff (optional)	M10

WORKPIECE LOCKING

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

AUTOMATIC TOOL MAGAZINE ON BOARD THE GANTRY

Maximum number of magazine tools	12

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SAFETY DEVICES AND PROTECTIONS

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

FUNCTIONS

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

Included ● Available ○

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