



Comet R4

CNC machining centres



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 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.



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.



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.



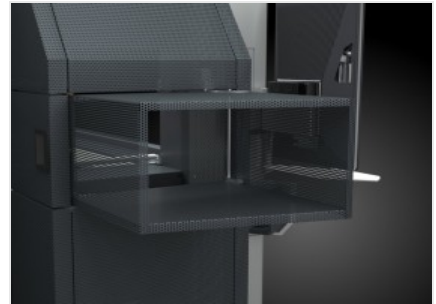
Pneumatic stops

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

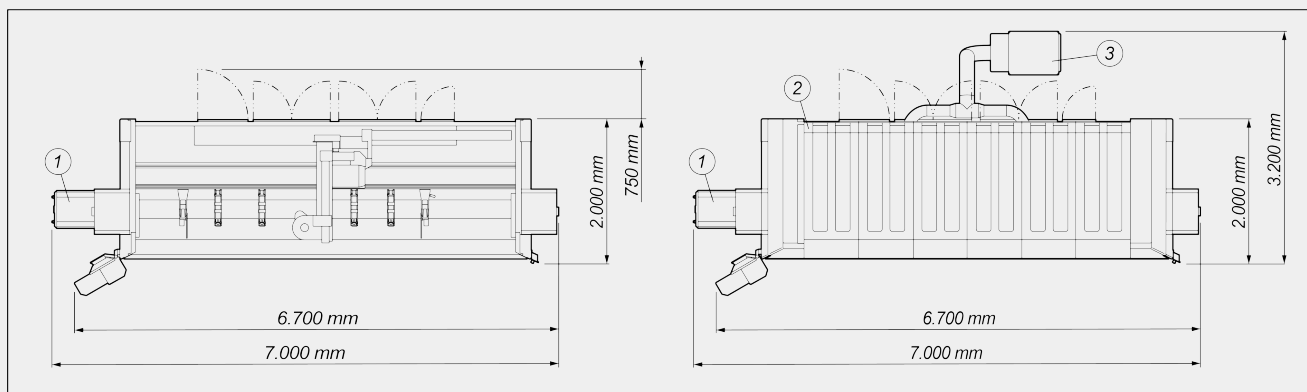
Integrated with the machine's aesthetics and design, thanks to the perforated sheet metal for transparency and lightness, the tunnel opens and closes as needed. As its length can be reduced when not in use, it helps save space at the workshop. The outlet for the chip conveyor belt and its engine are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





COMET R4 / CNC MACHINING CENTRES

LAYOUT



- 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 |
| Z AXIS (vertical) (mm) | 450 |
| Y AXIS (transversal) (mm) | 1.000 |
| B AXIS (rotation on electrospindle horizontal axis) | -15° ÷ +90° |
| C AXIS (rotation on electrospindle vertical axis) | -360° ÷ +360° |

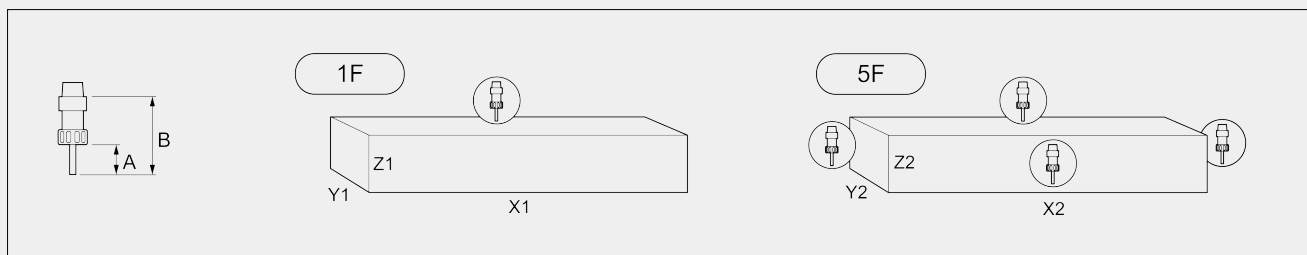
ELECTROSPINDLE

| | |
|--|-----------|
| Maximum power in S1 (kW) | 8,5 |
| Maximum speed (rpm) | 24.000 |
| Maximum power in S6 (60%) (kW) | 10 |
| Toolholder cone | HSK - 63F |
| Automatic tool holder coupling | ● |
| Cooling with heat exchanger | ● |
| Electrospindle controlled on 5 axes with the possibility of simultaneous interpolation | ● |



WORK AREA

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



| | A | B | X1 | Y1 | Z1 | X2 | Y2 | Z2 |
|------------------|----|-----|-------|-----|-----|-------|-----|-----|
| COMET R4 | 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

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

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="radio"/> |
| Laminated protection glass | <input checked="" type="radio"/> |
| Retractable side protection tunnels | <input checked="" type="radio"/> |

FUNCTIONS

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

Included ● Available ○