# *Comet R6 I*

CNC machining centres

5-axis CNC machining centre designed for working bars or 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. COMET R6, version “I”, features independent servocontrolled clamps that, in dynamic double operation, position themselves in concurrent operation time with respect to the spindle machining processes in the opposite working field. The 4th and 5th axis allow the electrospindle to rotate to CNC from –15° to 90° on horizontal axis, and from 0° to 720° on continuous vertical axis, to machine the top and all the side faces of the profile. Features a 12-place tool magazine, on the gantry (X-axis), that can hold a blade with a maximum diameter of 250 mm. The mobile worktable facilitates the workpiece loading/unloading operation fully ergonomically, and significantly increases the machinable section on the Y-axis.

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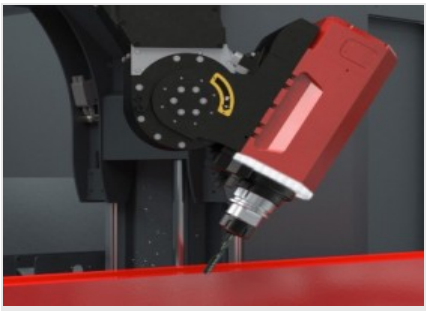
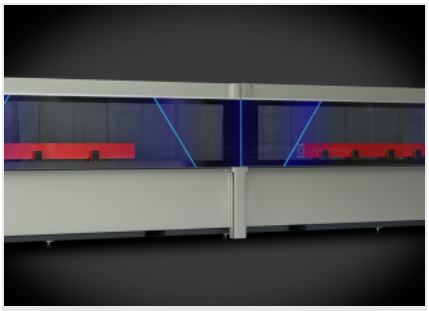


## 5 axes electric head -R-

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.

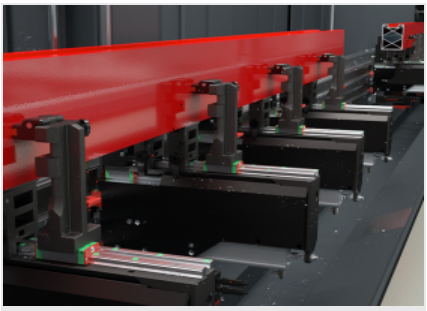


## Dynamic double operation

The innovative machining mode allows minimising downtimes when loading and unloading the workpieces to be machined. The system allows, in the two distinct and independent work 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.

## 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.

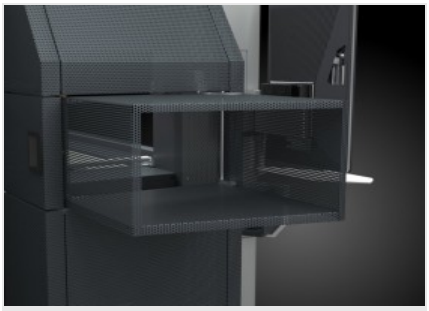


## Motorized vices

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.

## 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 (Optional)

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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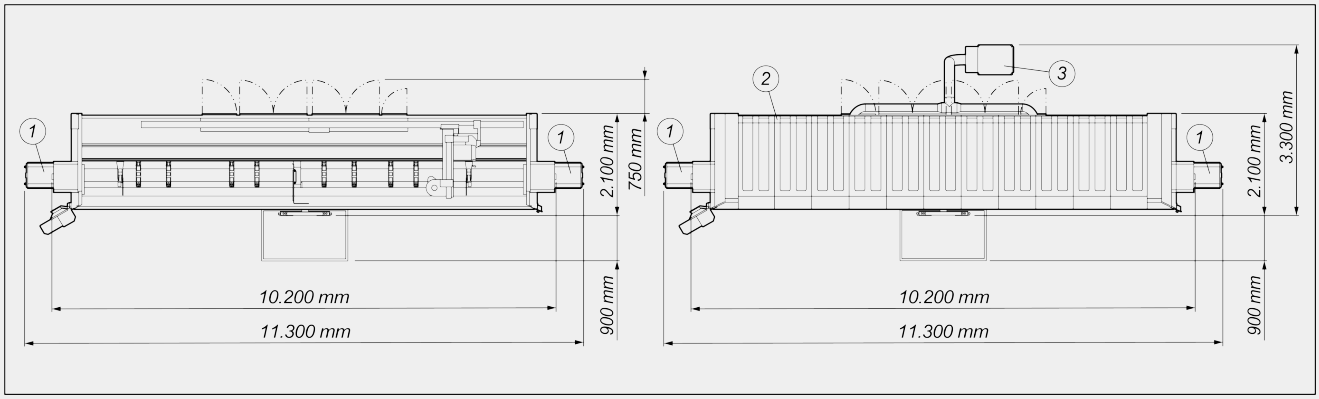
**COMET R6 I** / CNC MACHINING CENTRES

## 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) | 7.340 |
| 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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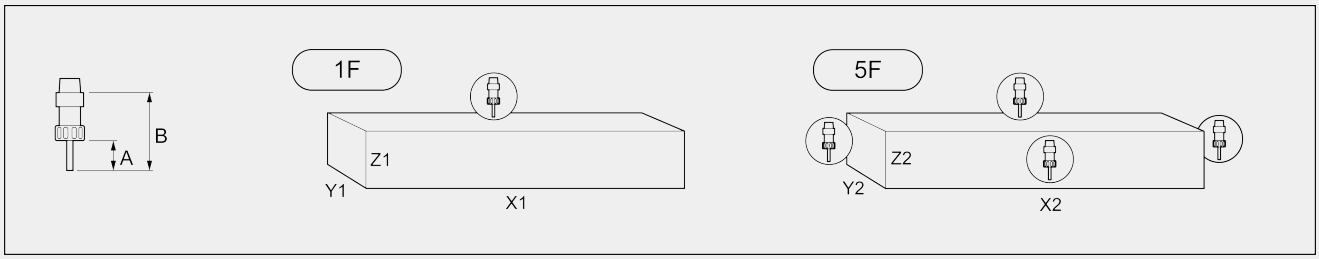
## WORK AREA

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




| COMET R6 I | | A | B | X1 | Y1 | Z1 | X2 | Y2 | Z2 |
|---|---|---|---|---|---|---|---|---|---|
| single mode | | 60 | 130 | 7.070 | 300 | 250 | 6.785 | 250 | 250 |
| asymmetrical double mode | lh | 60 | 130 | 3.315 | 300 | 250 | 3.030 | 250 | 250 |
| asymmetrical double mode | rh | 60 | 130 | 2.660 | 300 | 250 | 2.470 | 250 | 250 |
| symmetrical double mode | lh | 60 | 130 | 3.035 | 300 | 250 | 2.750 | 250 | 250 |
| symmetrical double mode | rh | 60 | 130 | 2.940 | 300 | 250 | 2.750 | 250 | 250 |

Dimensions in mm

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

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

## WORKPIECE LOCKING

| | |
|---|---|
| Maximum number of pneumatic vices | 12 |
| Standard number of pneumatic vices | 8 |
| Maximum number of vices per area | 6 |

## AUTOMATIC TOOL MAGAZINE ON BOARD THE GANTRY

| | |
|---|---|
| Maximum number of magazine tools | 12 |

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## FUNCTIONS

| | |
|---|---|
| Dynamic double operation | ● |
| Multi-piece operation | ● |
| Basic multi-step machining - up to 5 steps | ● |
| Automatic management of multi-step mode machining | ○ |
| 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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