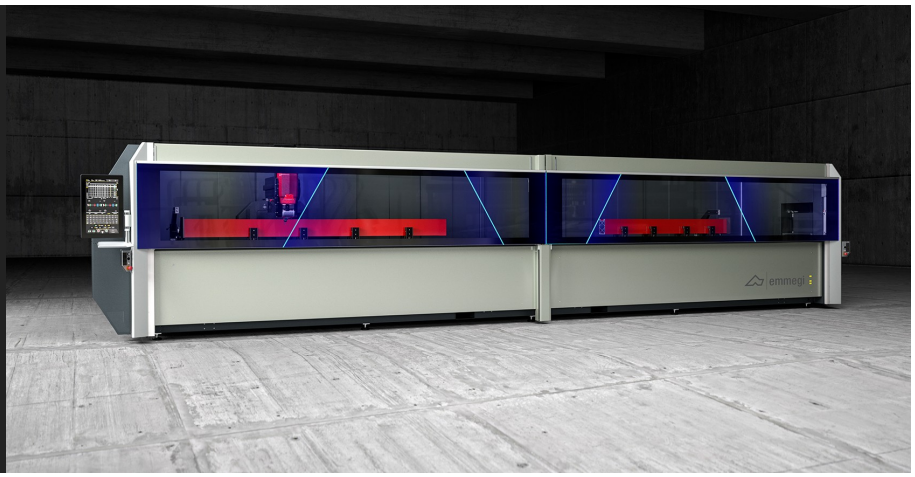
Comet X6 HP

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 2 mm. The machine can operate in single-piece and multi-piece mode, with a single work area for bars up to 7,7 m in length. The COMET X6 HP version allows working in pendular mode, with two independent work areas and 2 supplementary axes to position the vices and the reference stops; it allows operation in dynamic pendular mode, carrying out vice positioning in concurrent operation time. Each model has a 10-place tool magazine, on the X axis gantry, with the possibility of hosting an angle machining head and a milling disc, to perform machining on the 5 sides of the workpiece. The 4th NC axis allows the electrospindle to rotate from 0° to 180° and position itself at any intermediate angle. The machine can therefore perform machining operations on the top and side faces of the profile at any angle within the range. It also has a mobile work table that facilitates the workpiece loading/unloading operation and significantly increases the workable section.

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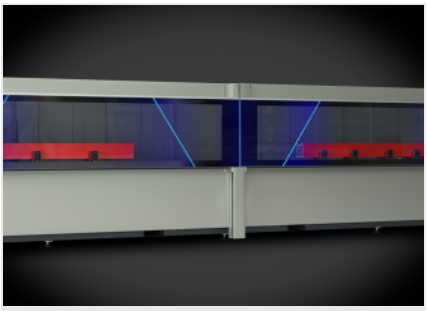
Power and flexibility of the electrospindle

7 kW S1 high torque electrospindle allows heavy duty machining. It moves along the A-axis allowing rotations from 0° to 180°, so the profile can be machined on 3 faces without being repositioned.

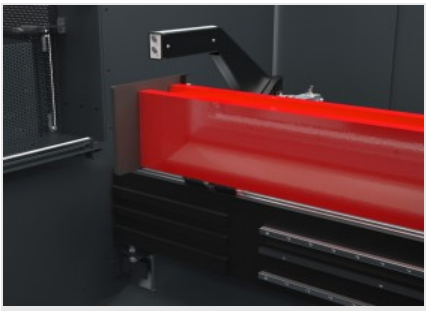


Dynamic double operation

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.

HP version

Comet has two operation modes: a single work area for bars up to 7 m long, or two independent work areas in double operation mode. The machine in HP version is equipped with 2 additional axes for positioning of vices and reference stops, that allow positioning the vices while the machine is working in double mode.

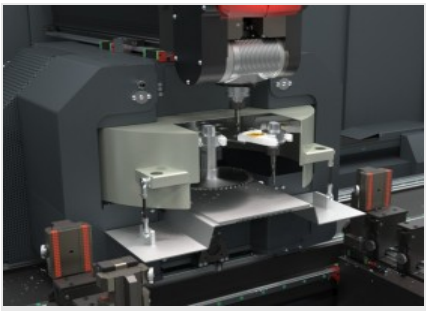


Vice positioner

Vice unit positioning is performed by two numerically controlled axes, H and P, parallel to the X-axis, with on-board reference stop. This solution allows positioning stops all along the machine to work in multi-workpiece mode with one profile for every pair of vices. Furthermore, the positioning of the vices takes place independently of the operational condition of the spindle (X-axis).

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.



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.

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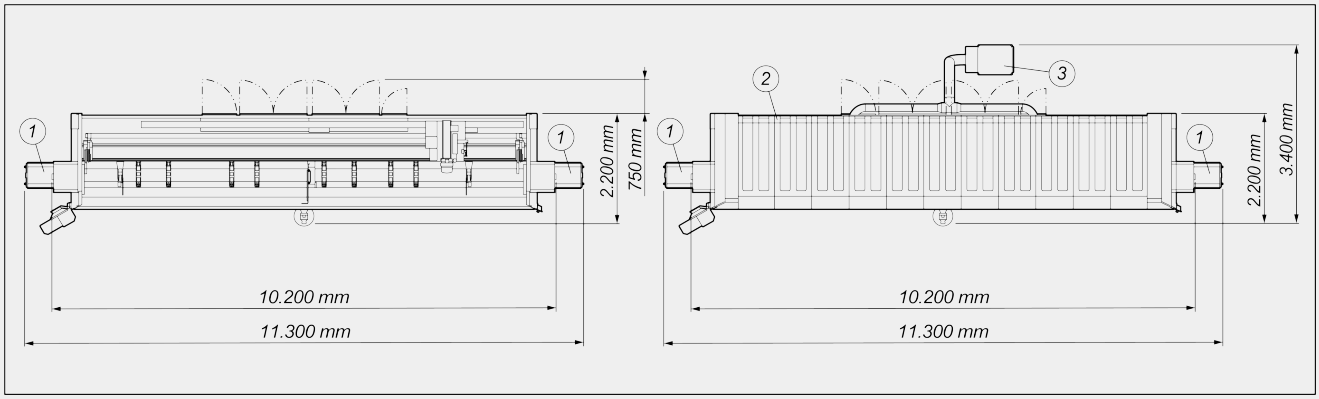
COMET X6 HP / CNC MACHINING CENTRES

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)	7.970
X AXIS (longitudinal) (dynamic double operation) (mm)	7.600
Y AXIS (transversal) (mm)	420
Z AXIS (vertical) (mm)	430
A AXIS (electrospindle rotation)	0° ÷ +180°
H AXIS (vice position.)	3.900
P AXIS (vice position.)	3.900

ELECTROSPINDLE

Maximum power in S1 (kW)	7
Maximum speed (rpm)	16.500
Toolholder cone	HSK - 50F
Automatic tool holder coupling	●
Cooling with heat exchanger	●
Electrospindle with encoder for rigid tapping	○

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FUNCTIONS

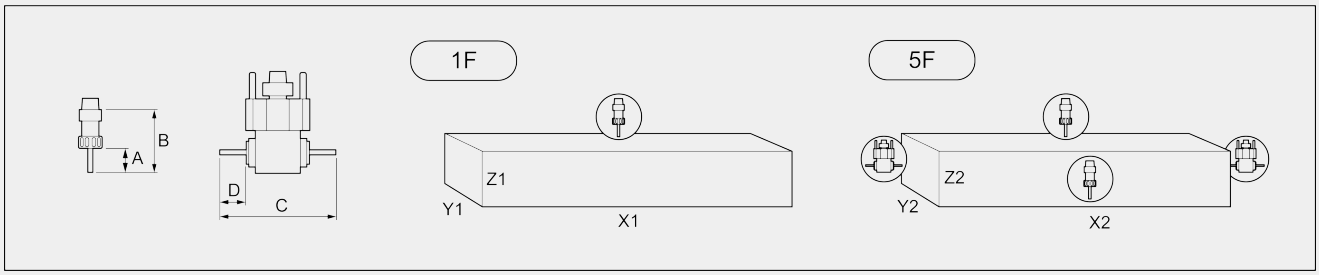
Static double operation (according to model)	●
Dynamic double operation	●
Multi-piece operation	●
Basic multi-step machining - up to 5 steps	●
Extended machining, up to twice the maximum nominal length in X	○
Workpiece rotation for machining on 4 sides	○
Automatic management of multi-step mode machining	○
Multi-piece mode machining in Y	○

WORKABLE SIDES

With angle machining head (heads)	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**



COMET X6 HP	A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
single mode	45	102	232	45,5	7.320	300	250	7.320	240	250
double mode	45	102	232	45,5	3.250	300	250	3.250	240	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
Automatic vice positioning and workpiece reference stops through independent H and P axes	●

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AUTOMATIC TOOL MAGAZINE ON BOARD THE GANTRY

Maximum number of magazine tools	10

SAFETY DEVICES AND PROTECTIONS

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

Included ● Available ○

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