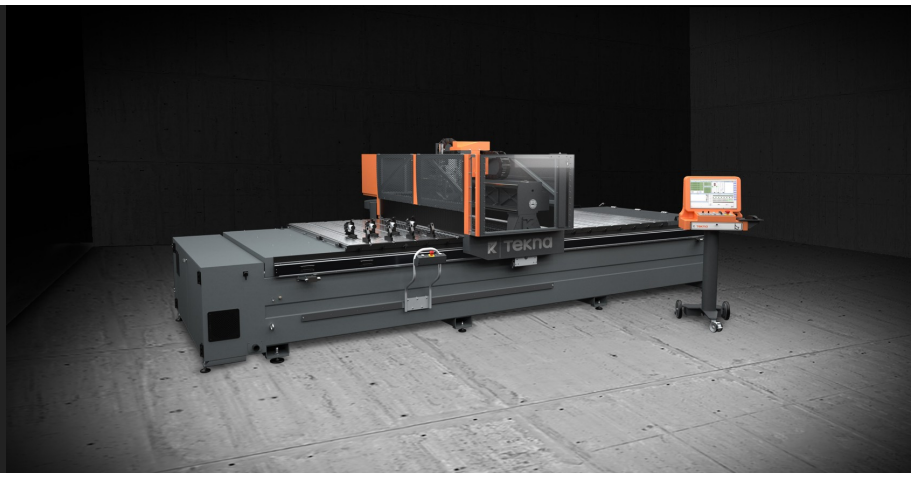
TKE 783

Machining Centres



3-axis CNC machining center with superior machining capability in Y (2000 mm). It features a clamping system made up of vacuum tables that allow panels and plates to be held by vacuum; this solution is useful to obtain an extremely efficient machining of thin components that could hardly be fixed by means of a traditional clamping system. The machining center is equipped with a series of valves that turn on/off different areas of the machining table, thus concentrating the suction on one area and optimizing the clamping of components with limited dimensions. It is designed for drilling and interpolated milling operations on composite panels, panels and plates in aluminum, stainless steel and on aluminum profiles. Standard versions are available in two machining lengths: 4.140 and 6.440 mm. To create programs that control the machines, Tekna provides user-friendly software tools that can be used both by professional CNC programmers, who can implement the most complex solutions, and by completely inexperienced users; after a few training hours the customer will be able to operate the machining center using a graphical programming. Software solutions offered by Tekna result from an accurate design and from the actual customer needs analysis. The simplicity of usage of these solutions reduces the management time and costs.

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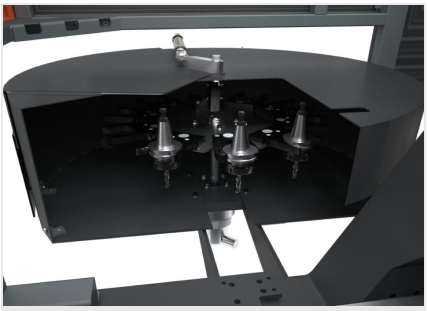
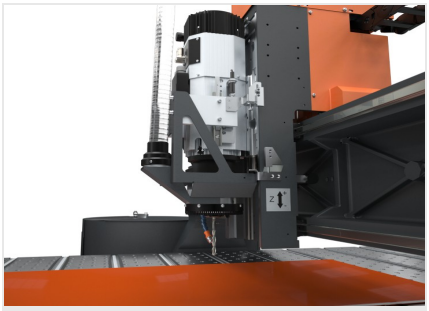


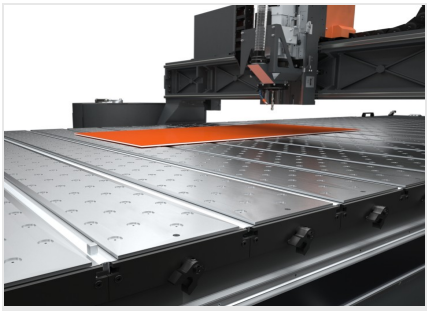
Tool magazine

The revolver type tool magazine, integrated on the X axis, drastically reduces the time required for tool changeover. This function is particularly useful when working in double operation mode and allows avoiding the stroke to reach the magazine, as the magazine moves with the electrospindle to the relevant positions. The 10-place magazine can contain up to 10 toolholders with their respective tools, including 2 angle machining heads, that can be configured at the discretion of the operator.



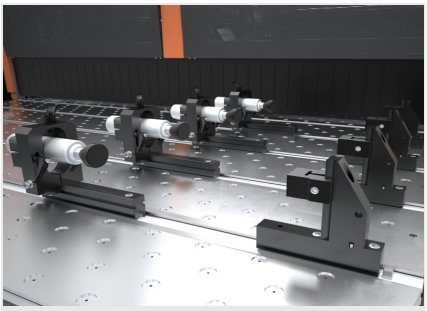
Electrospindle

10 kW S1 high torque electrospindle allows heavy duty machining. It can be used on aluminium panels and on some types of steel panel, thanks to a lubrication system with minimal dispersion of pressurized oil. The machine may also be equipped with an optional fourth axis to control the rotation of an angle machining head with blade for V grooving on panels or an angle machining head for profile milling.



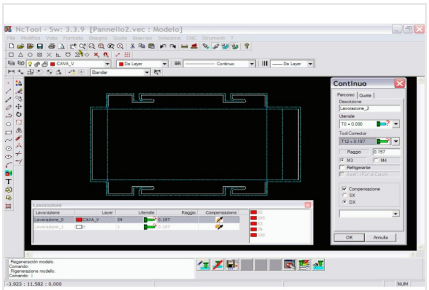
Vacuum table

The panels are clamped in position by a vacuum table. The plastic table is laid over and fixed to the aluminium cross members and provides efficient suction over the entire surface area, while providing protection against the ingress of lubricating liquid.



Pneumatic vices (Optional)

The dimensions of the work area on the Z axis allows machining of profiles and thicker materials. Up to 4 pneumatic vices per zone can be installed on the vacuum table for the mechanical clamping of aluminium profiles and extrusions; thanks to the possibility to load two angle machining heads in the tool magazine, these profiles can be machined on 5 faces without the need for repositioning.



Software

The CN6 numeric control management software monitors all the machining centre functions by means of a graphic interface. It includes an ISO language editor and allows viewing the complete workpieces of the set machining operations in 3D.

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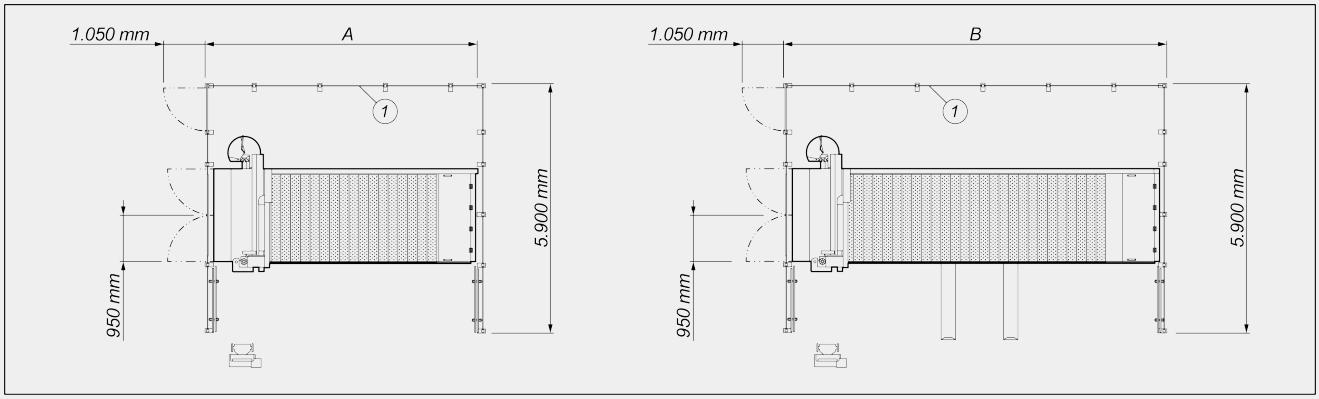
TKE 783 / MACHINING CENTRES

LAYOUT



	A	B
TKE 783 - 4020 (mm)	6.700	-
TKE 783 - 6020 (mm)	-	9.100

1. Enclosure guard of the 4th side (optional)

The overall dimensions may vary depending on the product configuration.

AXIS STROKES

X AXIS (longitudinal) (mm)	4.520 ; 6.980
Y AXIS (transversal) (mm)	2.370
Z AXIS (vertical) (mm)	290
Z AXIS (vertical) with air blowing system (mm)	60
A AXIS (angle machining head rotation) (optional)	0 ÷ 360°

ELECTROSPINDLE

Maximum power in S1 (kW)	10
Maximum speed (rpm)	24.000
Maximum torque (Nm)	10,2
Air cooling with electric fan	●

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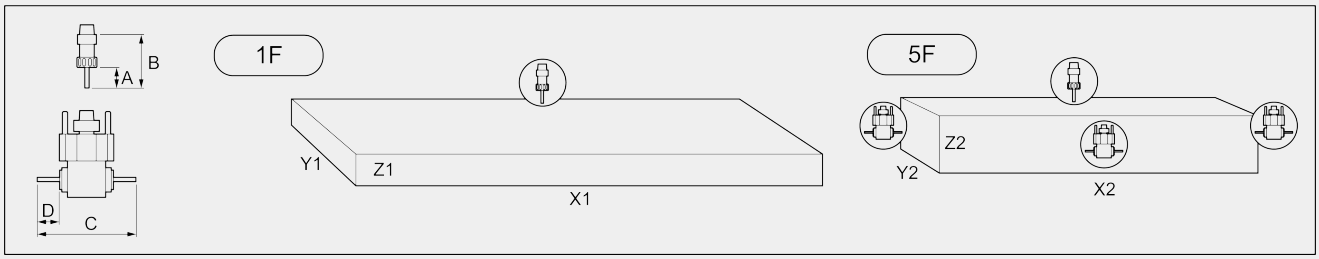
WORK AREA

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



		A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
TKE 783 - 4020	single mode	95	145	256	35	4.140	2.000	60/185 (*)	3.840	1.740	145
TKE 783 - 6020	single mode	95	145	256	35	6.440	2.000	60/185 (*)	6.140	1.740	145
	double mode	95	145	256	35	2.760	2.000	60/185 (*)	2.460	1.740	145

Dimensions in mm
(*) with/without blowing system

AUTOMATIC TOOL MAGAZINE

Number of angle units that can be loaded in the tool magazine	2
Carriage-mounted 10-place revolver type tool magazine	●
Maximum dimension of the tools that can be loaded into the magazine (mm)	Ø = 140 - L = 120

SAFETY DEVICES AND PROTECTIONS

Photoelectric barrier system to protect access to work zone	●
Metal enclosure guard on two sides	●
Tool magazine mechanically mobile covering	●
Local cabinet for machining unit protection	○

PANEL/PROFILE POSITIONING

Workpiece reference retractable pneumatic stops for panel positioning	●
Workpiece reference pneumatic stops for panel positioning along X axis	2
Workpiece reference pneumatic stops for panel positioning along Y axis (4140 – 6140)	3 - 6
Manual reference stops on vices for profile positioning	○
Manual reference stop for profile positioning for each 4-vice unit	1

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WORKPIECE LOCKING

Vacuum locking system with suction tables	●
Automatic management of on/off valves for different worktable areas	●
Vacuum beam size (mm)	230 x 2.000
Number of cross bars with double vacuum chamber	7
Pneumatic vices on work table for clamping profiles	○
Maximum number of vices per area	4

MACHINING UNIT

Gantry structure	●
Electrospindle controlled on 3 axes with the possibility of simultaneous interpolation	●
Swarf removal system	●
Swarf exhauster mod. MG2-TP	○
Tool minimal pressurized oil diffusion lubrication system	●
Additional automatic filling system of the minimal lubrication system - capacity 15 litres	○

Included ● Available ○

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