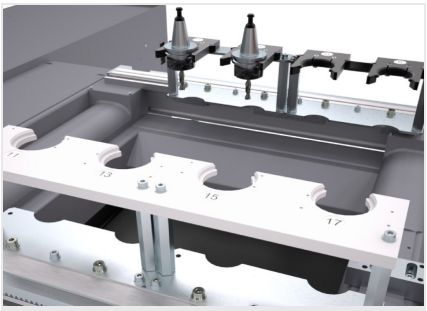
TKE 944

Machining Centres

4-axis CNC machining centre with moving gantry structure, designed for drilling, milling, threading at any angle from -90° to +90° on bars or workpieces of aluminium, PVC, light alloys in general and steel. The 8,5 kW electrically-driven spindle with ISO 30 tool holder allows machining operations, including heavy-duty work, with optimum results in terms of speed and accuracy. The machine can be used in double mode (7000 model) so as to minimize machine downtime, as it is possible to change the workpiece (load/unload) in “cancealed” time. It is also possible to load and consequently machine different workpieces between the two working areas. The automatic tool magazine is available in a fixed solution on board the machine with 4/8 places, recommended for multi piece machining. Also available a 12-place automatic magazine on board the carriage, ideal to allow a faster tool change and useful for the double mode machining. The gantry is provided with a guard which, besides protecting the operator, also reduces the noise impact on the environment.

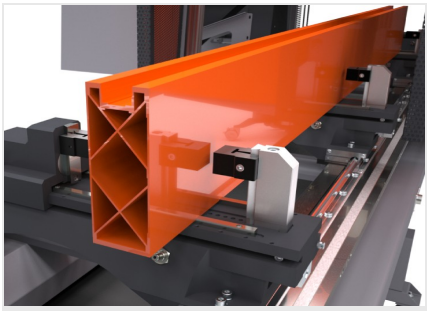
Emmegi S.p.A.
Via delle Industrie, 2
20044 - Arese (MI)
ITALY

Tel 39 02356961
P.IVA 01978870366
info@tekna.it
www.tekna.it



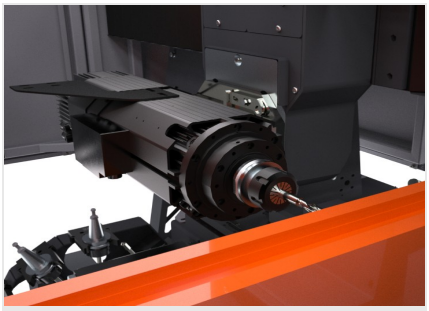
Tool magazine

The automatic tool magazine comes in two different configurations. The first has one or two fixed 4-place magazines installed on the left-hand side of the machine and is specific for operation on a single work area in single or multi-piece mode. The second configuration excludes or integrates the fixed magazines, with an automatic 12-place magazine installed on the carriage moving on the X axis.



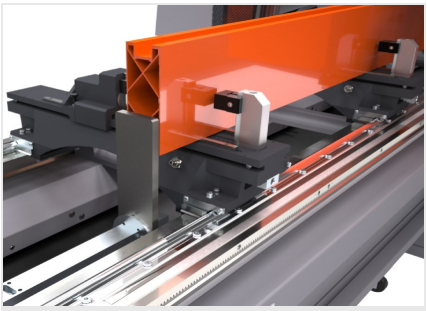
Vices

The vice unit can ensure the correct and safe clamping of large aluminium, steel and light alloy profiles. The vice size and the long Y stroke of the electrospindle allow machining large profiles for all kinds of civil and industrial applications. Each unit slides on special linear guides on machine surface. The positioning is managed by the X axis.



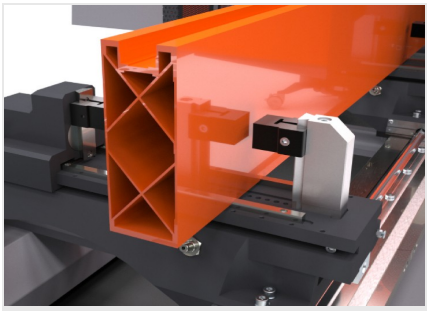
Electric head

8.5 kW S1 high torque electrospindle allows heavy duty machining. The electrospindle movement along C axis allows performing rotations s from -90° to + 90°and working on 3 sides of the profile with no need to reposition it. It can be used both with some types of extruded steel and with aluminium profiles, thanks to the lubrication system with oil emulsion spray mist or, as an option, with minimal diffusion oil.



Profile positioning

The machine is equipped with two sturdy and precise retractable manual reference stops, used to machine one or two profiles in multi-piece or double operation mode (model 7,000 only). A laser system is available for accurately positioning the workpieces on the work surface; it reads each profile and sets the reference without the need for mechanical stops.



Additional vices (Optional)

If necessary, it is possible to install additional vices beyond the standard machine equipment. In this way, it is possible to ensure perfect clamping of bars or bar sections even in complex cases in terms of number, size or types of profiles to be machined. Moreover, the additional vices allow greater versatility in vice position depending on the length of the workpieces and the machining to be performed.

Dimensional profile measurer (Optional)

The machine can be optionally equipped with an electronic device that automatically corrects workpiece dimensional errors in length, width and height. In this way, the accuracy of the machine is not influenced by the differences between theoretic and actual workpiece dimensions during machining.

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TKE 944 / MACHINING CENTRES

AXIS STROKES

X AXIS (longitudinal) (mm)	4.000 ; 7.000
Y AXIS (transversal) (mm)	1.070
Z AXIS (vertical) (mm)	550
C AXIS (vertical-horizontal rotation of the head)	-90° ÷ +90°
C axis positioning increases	0,01°

ELECTROSPINDLE

Maximum power in S1 (kW)	8,5
Maximum speed (rpm)	24.000
Maximum torque (Nm)	13,5
Toolholder cone (Tekna special piece)	ISO 30
Air cooling with electric fan	●

AUTOMATIC TOOL MAGAZINES (4,000 Version)

Automatic 12-place tool magazine on board the gantry	○
Number of angle machining heads which can be loaded onto the automatic magazine	2
Maximum size of tools which can be loaded onto the revolver magazine (mm)	Ø = 180 - L = 200
Fixed left 4-place tool magazine	○
Fixed left 8-place tool magazine	○
Maximum size of tools which can be loaded onto the 4/8-place magazine (mm)	Ø = 120 - L = 180
Fixed left 7-place tool magazine	○
Number of angle machining heads which can be loaded onto the 7-place magazine	2
Maximum size of tools which can be loaded onto the 7-place magazine (mm)	Ø = 180 - L = 200

AUTOMATIC TOOL MAGAZINE (7,000 Version)

Automatic 12-place tool magazine on board the gantry	●
Number of angle machining heads which can be loaded onto the automatic magazine	2
Maximum size of tools which can be loaded onto the revolver magazine (mm)	Ø = 180 - L = 200

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TAPPING CAPACITY (with Tap On Aluminium And Through Hole)

With compensator	M8

PROFILE POSITIONING

Workpiece reference pneumatic side stops (4,000– 7,000)	1 – 2
Maximum number of reference pneumatic stops	2
Additional pneumatic side stop with separate vice control system (version 4,000)	○

WORKPIECE LOCKING

Standard number of pneumatic vices (4,000 - 7,000)	4 – 8
Maximum number of pneumatic vices (4,000 - 7,000)	12 – 16
Double horizontal hold-down devices on pneumatic vices for the machining of two parallel profiles	○
Automatic vice positioning through X axis	●

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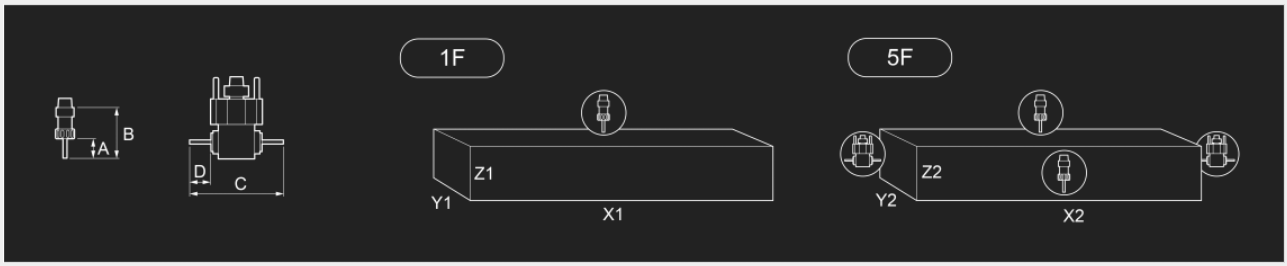
WORK AREA

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



Configurations with 12-place automatic tool magazine on board the carriage

		A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
TKE 944-4	single mode	60	107	255	55	3.940	450	250	3.800	410	250
TKE 944-7	single mode	60	107	255	55	7.000	450	250	6.850	410	250
	double mode	60	107	255	55	2.800	450	250	2.650	410	250

Configuration with one 4-place fixed tool magazine

		A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
TKE 944-4	single mode	60	107	255	55	3.850	450	250	-	-	-

Configuration with one 8-place fixed tool magazine

		A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
TKE 944-4	single mode	60	107	255	55	3.850	450	250	-	-	-

Configuration with 7-place fixed tool magazine

		A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
TKE 944-4	monopezzo	60	107	255	55	3.850	450	250	3.250	410	250

Included ● Available ○

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