TKE 938

Machining Centres



CNC machining centre with 4 controlled axes and automatic tool rotation enabling machining on 3 sides of the workpiece. Designed for machining bars or workpieces made of aluminium, PVC, light wood in general and steel up to 2 mm thick. It is provided with a manual tool storage magazine with 9 places to wich one or two additional automatic storage magazines with 4 places can be added at the sides of the machine. The profile is positioned by a pneumatic stop on the left side. It is blocked by 4 sturdy clamps which are positioned automatically with axis X. The installation of a second pneumatic stop (optional) on the right side allows oversize machining of bars whose length is double compared to the work field. All CNC axes are absolute and do not require resetting upon machine restart. It also has a mobile work surface that facilitates the piece loading/unloading operation and significantly increases the workable section.

Emmegi S.p.A.
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ITALY

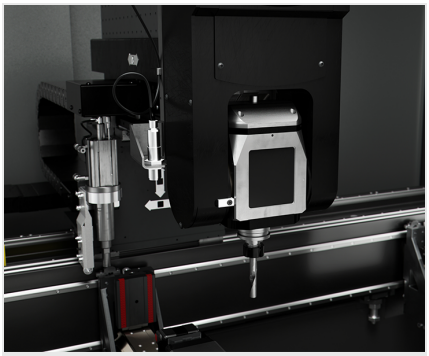
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P.IVA 01978870366
info@tekna.it
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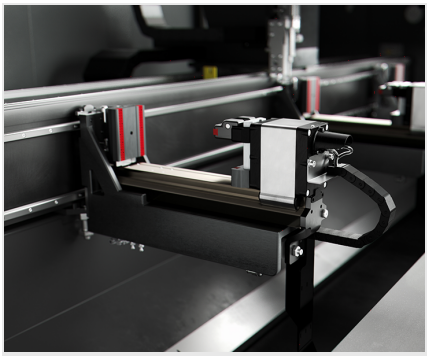
Operator interface

The new control version with suspended interface allows the operator to look at the monitor from any position, as it can be rotated around the vertical axis. The operator interface has a 15" touch screen display with all USB connections necessary to interface with a remote PC and NC. It has a push-button panel, mouse and keyboard. It is also set up for the connection of a barcode reader and remote push-button panel. It is equipped with a front USB socket for data transfer.



Electrospindle - M -

The 4 kW electrospindle in S1 can reach 20,000 rpm. The electrospindle movement along A axis performs -90° to +90° rotation, allowing to work on 3 sides of the profile with no need to reposition it. It can be used on profiles made of aluminium, PVC and light wood and can process extruded steel that is 2 mm thick.



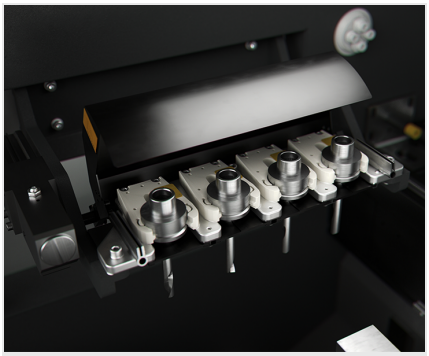
Vices

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.



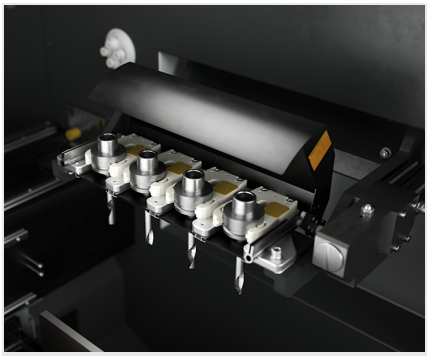
Manual tool changer

The standard, retractable toolholder magazine can house 9 toolholder cones that can be manually taken and installed on the spindle. the position numbering allows identifying the requested tool from the hmi for each machining. the magazine is located on board the machine, in a position suitable for easy access by the operator.



Automatic left tool changer (Optional)

The machine can be optionally equipped with an additional automatic tool changer, located on the left side of the cab. It can house 4 toolholders with respective tools and adjusted as desired by the operator. the tool change is managed by the cnc according to the programmed machining.



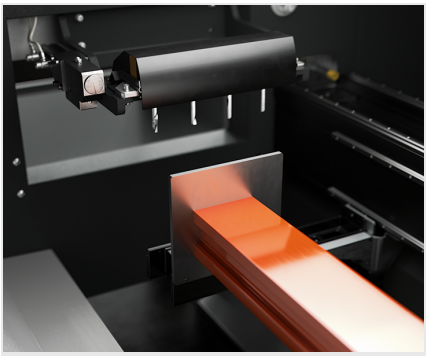
Automatic right tool changer (Optional)

The machine can be optionally equipped with an additional automatic tool changer, located on the right side of the cab. it can house 4 toolholders with respective tools and adjusted as desired by the operator. the tool change is managed by the cnc according to the programmed machining.

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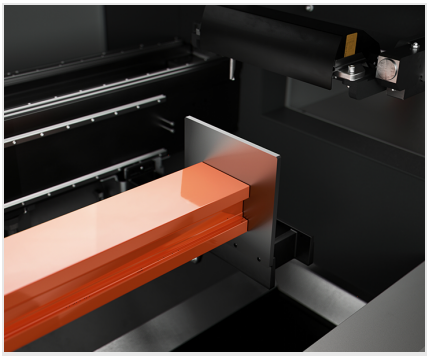
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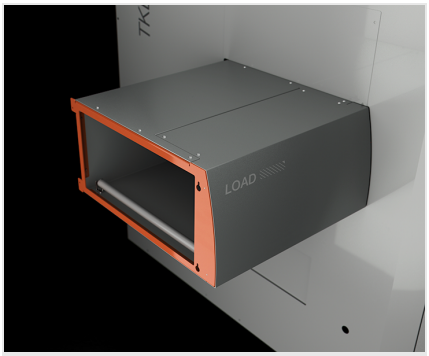
Left pneumatic stop

The machine features a robust stop device for bar reference, located on the left side. The stop is activated by a pneumatic cylinder, it is of retractable type and is automatically selected by the machine software according to the machining to be performed.



Right pneumatic stop (Optional)

A stop can also be optionally fitted on the right side of the machine. the stop is activated by a pneumatic cylinder, it is of retractable type and is automatically selected by the machine software according to the machining to be performed. the advantage of the dual stop system is that allows repositioning of the bar or short cut when machining particularly long profiles.



Tunnel (Optional)

The machine can perform oversize machining of bars with length up to twice the relevant nominal work area. for this type of machining, the machine must be equipped with side protection tunnel to ensure the operator safety also near the side openings of the cab.

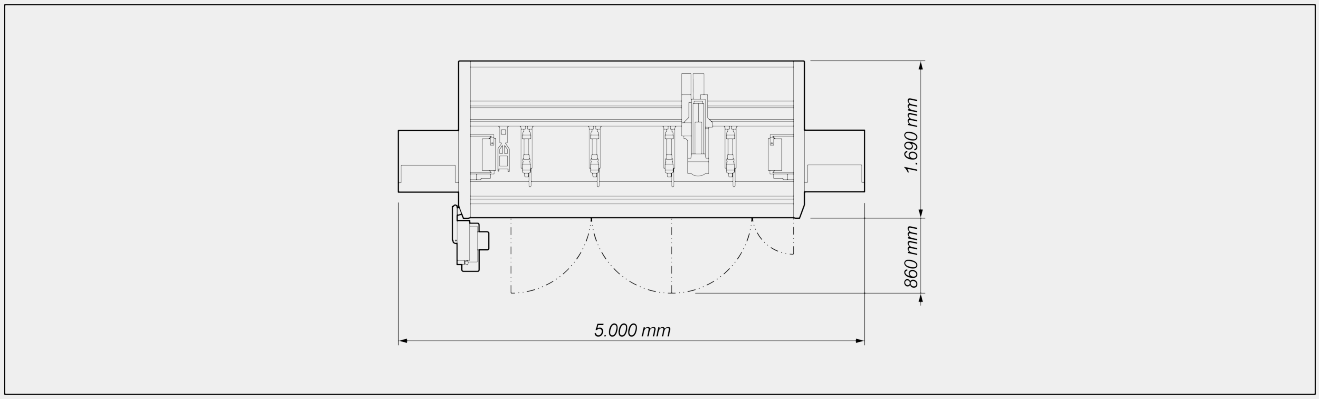
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TKE 938 / MACHINING CENTRES

LAYOUT



The overall dimensions may vary depending on the product configuration.

AXIS STROKES

X AXIS (longitudinal) (mm)	3.000
Y AXIS (transversal) (mm)	274

POSITIONING SPEED

X AXIS (longitudinal) (m/mm)	56
Y AXIS (transversal) (m/mm)	22
Z AXIS (vertical) (m/mm)	22
A AXIS (electrospindle rotation) (°/min)	6.600

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ELECTROSPINDLE

Maximum power in S1 (kW)	4,0
Maximum speed (rpm)	20.000
Toolholder cone	HSK - 50F
Automatic tool holder coupling	●
Liquid cooling	●
Automatic tool rotation	-90° ÷ +90°

TOOL MAGAZINE

Maximum number of tools in manual magazine	9
Automatic tool magazine with 4 places (left)	○
Secondary automatic tool magazine with 4 places (right)	○
Max. tool length loadable in the tool magazines (mm)	150 (*)
Max. tool diameter in standard version (mm)	80
Max. tool diameter in special version (mm)	120 (**)

(**) tools over 80 mm diameter limit the work capacity

(*) utensili di lunghezza superiore a 100 mm limitano il campo di lavoro

WORKABLE SIDES

With direct tool (upper face, side faces)	3

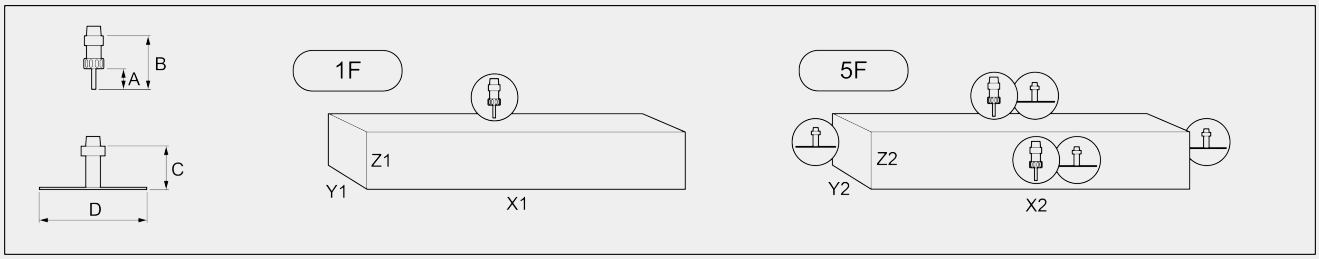
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WORK AREA

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



	Automatic tool magazines	A	B	C	D	X1	Y1	Z1	X2	Y2	Z2
Max. tool diameter: 80 mm											
Machining within the work capacity	-	45	102	113	80	3.000	230	210	2.815	160	210
Machining within the work capacity	left	45	102	113	80	2.815	230	210	2.815	160	210
Machining within the work capacity	left + right	45	102	113	80	2.630	230	210	2.630	160	210
Extended machining	-	45	102	113	80	6.000	230	210	5.630	160	210
Extended machining	left	45	102	113	80	5.630	230	165(*)	5.630	160	165(*)
Extended machining	left + right	45	102	113	80	5.260	230	165(*)	5.260	160	165(*)
Max. tool diameter: 120 mm											
Machining within the work capacity	-	45	102	105	120	3.000	230	180	2.815	160	180
Machining within the work capacity	left	45	102	105	120	2.815	230	180	2.815	160	180
Machining within the work capacity	left + right	45	102	105	120	2.630	230	180	2.630	160	180
Extended machining	-	45	102	105	120	6.000	230	180	5.630	160	180
Extended machining	left	45	102	105	120	5.630	230	135(**)	5.630	160	135(**)
Extended machining	left + right	45	102	105	120	5.260	230	135(**)	5.260	160	135(**)

Dimensions in mm
(*) with max. admissible length tools (B = 150 mm) charged into the automatic magazine the Z value decreases to 130 mm
(**) with max. admissible length tools (B = 150 mm) charged into the automatic magazine the Z value decreases to 100 mm

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TAPPING CAPACITY (with Tap On Aluminium And Through Hole)

With compensator	M5
With helical interpolation	●

PROFILE POSITIONING

Workpiece reference LEFT stop with pneumatic movement	●
Workpiece reference RIGHT stop with pneumatic movement for extended machining	○

WORKPIECE LOCKING

Automatic vice positioning through X axis	●

SAFETY DEVICES AND PROTECTIONS

Machine integral protection booth	●

MACHINING UNIT

Carriage structure	●

Included ● Available ○

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