TKE 954

PORTAL MACHINING CENTERS



Mobile gantry 4-axis CNC machining centre for drilling, milling and tapping, at any angle from -90° to +90°, on profiles and plates with a thickness up to 10 mm if made of aluminium, lightweight alloys and PVC and up to 2 mm if made of steel. The mobile part of the machine is composed of a dual drive gantry on a high precision rack. The local guarding cabin, made of technopolymer, has been designed to offer optimal functionality, accessibility, soundproofing and lighting while fulfilling safety and ergonomics requirements. Large glass windows allow the operator to monitor the machining operations being executed, as well as an easy access during cleaning and maintenance phases. The inside of the cabin ensures the conveying of swarf into the collection system available at the base. The 8,5 kW electrospindle allows performing machining operations, even heavy-duty ones, with optimal results in terms of speed and precision. The 13-place tool magazine, integrated into the mobile gantry, features two special positions, one for a blade with a maximum diameter of 250 mm and the other for the angle machining head. It features two different operating modes: the first, in single-area mode, allows machining entire bars having a maximum length of 7 or 9 m in a single work area; the second one, in double machining mode, allows machining several workpieces in the two different work areas. In the version with system for moving vices on H and P axes, it is possible to use the machine in dynamic tandem machining mode; this operating mode allows reducing machine downtimes to a minimum, since it allows the vices to be automatically set, in concurrent operation time, to the operation processes of the spindle in the opposite work area. TKE 954 is equipped with a laser scanner allowing the most precise and advanced control of the machine front access, raising safety and operator/machine interface standards. In double machining mode, the laser scanner allows programming asymmetrical work areas on X axis so that workpieces having different sizes can be machined by making use of 4 different set-ups, in order to increase the machine operation flexibility.

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Tool magazine

A spacious toolholder magazine with 13 places is installed on board the mobile gantry. The housing includes a tilting system that ensures maximum protection of the toolholder cones from both swarfs and accidental impacts. The magazine has two specific positions to accommodate angle machining head or disc cutter without reducing the total capacity.



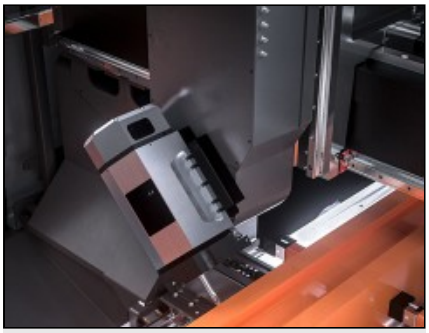
Vices and dynamic tandem

The vice unit can ensure the correct and safe clamping of large aluminium, steel and light alloy profiles. The vice structure, in particular the wide Y stroke, allows the machining of large profiles, thus meeting the typical requirements of industrial and door applications.



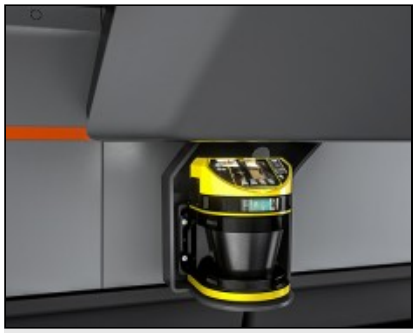
Full protection cabin

The local guarding cabin has been designed to offer optimal functionality, accessibility and lighting while fulfilling safety and ergonomics requirements. The innovative and refined design makes the machine unique and unmistakeable. Large glass windows allow the operator to monitor the machining operations being executed and a large access to internal areas is provided for cleaning and maintenance operations.



Electric head (high-power and high-torque spindle)

The electrospindle - 8.5 kW in S1 - with HSK-63F toolholder and water cooling with chiller unit, can also perform the heavy-duty machining typical of the industrial sector. Moreover, the high torque ensures easy drilling, milling and cutting operations. The electrospindle movement along B axis performs -90° to +90° rotation, allowing to work on 3 sides of the profile with no need to reposition it. A 11 kW electrospindle with encoder for heavy-duty machining is available as optional.



Laser scanner

The protection of the operator is entrusted to a monitoring system of the work area with laser scanner. This intelligent control system, together with the absence of fixed references at the centre of the machine, is specially useful in double operation mode, since it allows managing the two work areas with a variable set-up, even asymmetrical. The laser scanner will adapt the controlled surface to the size of each zone, allowing workpieces of different lengths to be machined and taking advantage of the available work area without special structural limitations.

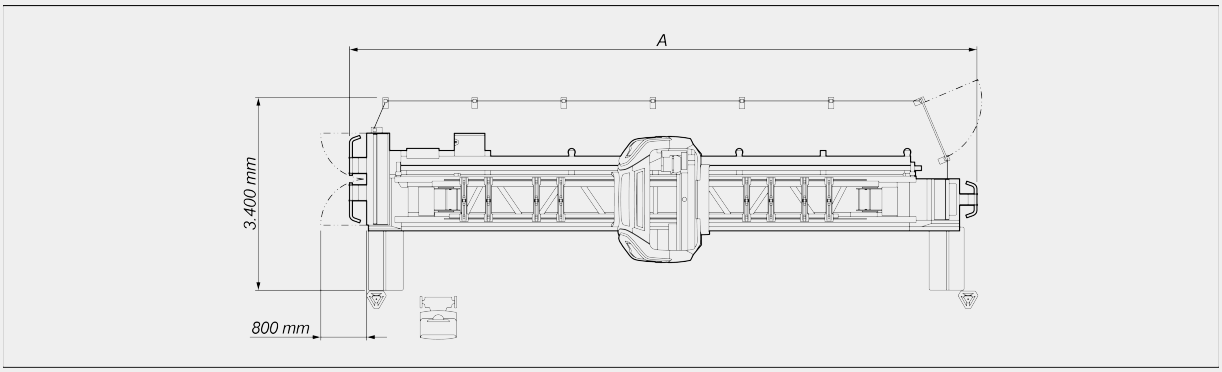
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TKE 954 / PORTAL MACHINING CENTERS

LAYOUT



	A
TKE 954 - 7m (mm)	11.000
TKE 954 - 9m (mm)	13.200

The overall dimensions may vary depending on the product configuration.

AXIS STROKES

X AXIS (longitudinal) (mm)	7.500 ; 9.700
Y AXIS (transversal) (mm)	1.230
Z AXIS (vertical) (mm)	620
A AXIS (head vertical-horizontal rotation)	-90° ÷ +90°

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 MAGAZINE

13-place automatic tool magazine on board the gantry	●
Number of angle units that can be loaded in the tool magazine	2
Presetting tool device: automatic on-machine tool length measurement	●
Maximum size of tools which can be loaded onto the magazine with – 2 side positions (mm)	Ø = 250 - L = 200

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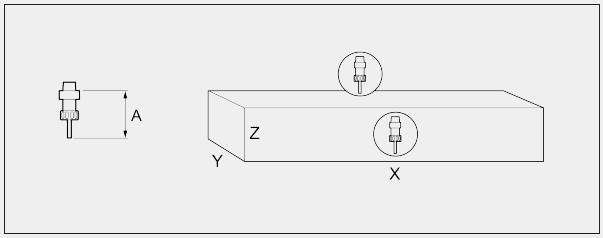
TAPPING CAPACITY (with Tap On Aluminium And Through Hole)

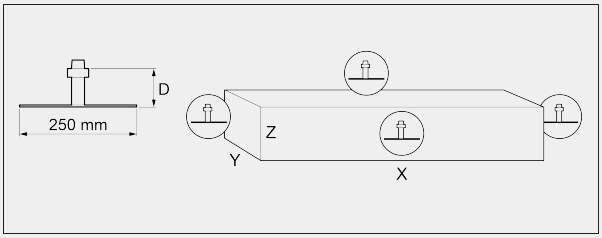
Stiff (optional)	M10
With compensator	M8
With optional axial tapping head	M14

WORKABLE SIDES

With direct tool (upper face, side faces)	3
With angle machining head (heads)	2
With blade tool Ø 250 mm (upper face, side faces, heads)	1 + 2 + 2
With angular head for blade, Ø 300 mm (top face, side faces)	1 + 2

WORK AREA





		A	X	Y(a)	Z
TKE 954-7	single mode	130	7.260	600	300
	symmetrical double mode	130	3.070	600	300
	asymmetrical double mode	130	1.320 ÷ 4.770	600	300
TKE 954-9	single mode	130	9.470	600	300
	symmetrical double mode	130	4.170	600	300
	asymmetrical double mode	130	1.820 ÷ 6.510	600	300

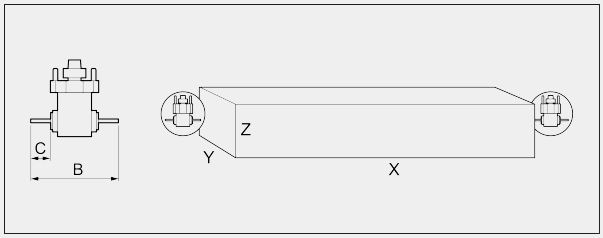
		D	X	Y(a)	Z
TKE 954-7	single mode	98	7.200	600	300
	symmetrical double mode	98	3.005	600	300
	asymmetrical double mode	98	1.255 ÷ 4.705	600	300
TKE 954-9	single mode	98	9.410	600	300
	symmetrical double mode	98	4.105	600	300
	asymmetrical double mode	98	1.755 ÷ 6.445	600	300

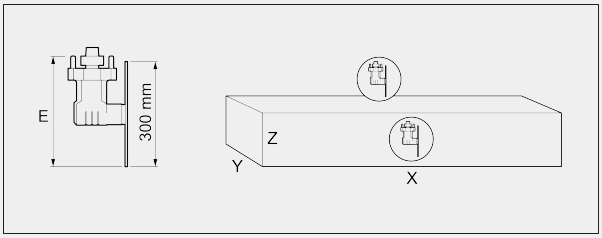
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WORK AREA





		B	C	X	Y(a)	Z
TKE 954-7	single mode	250	52,5	7.200	600	300
	symmetrical double mode	250	52,5	3.005	600	300
	asymmetrical double mode	250	52,5	1.255 ÷ 4.705	600	300
TKE 954-9	single mode	250	52,5	9.410	600	300
	symmetrical double mode	250	52,5	4.105	600	300
	asymmetrical double mode	250	52,5	1.755 ÷ 6.445	600	300

		E	X	Y(a)	Z
TKE 954-7	single mode	305	7.200	600	170
	symmetrical double mode	305	3.005	600	170
	asymmetrical double mode	305	1.255 ÷ 4.705	600	170
TKE 954-9	single mode	305	9.410	600	170
	symmetrical double mode	305	4.105	600	170
	asymmetrical double mode	305	1.755 ÷ 6.445	600	170

Dimensions in mm

a. Size clampable with vice without standard end pieces

The application of an angular unit with Ø300 blade reduces the working capacity in Z to 170 mm (partial cuts on the profile) or 110 mm (total cut of the profile)
The application of counterblocks for facade profiles reduces the working capacity in Z to 230 mm

Warning: The use of an angular unit with a Ø 300 mm blade, as well as the use of any tool that exceeds the size of 190 mm, involves the risk of collision during manual movements, even with the Z axis positioned at its maximum height.

FUNCTIONS

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	○
Multiple probe dimensioning module	○
Parallel machining of two profiles	○
Multi-piece and multi-piece swing mode machining	○
Dynamic double operation (according to model)	●
Static double operation (according to model)	●

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WORKPIECE LOCKING	
Maximum number of vices per area	6
Standard number of pneumatic vices	8
Maximum number of pneumatic vices	12
Vice automatic positioning through independent H and P axes (according to model)	●

Included ● Available ○

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