



## TKE 954 Machining centre

Tool magazine

01

Clamps

02



4-axis CNC mobile gantry machining centre, designed for drilling, milling and threading at any angle from  $-90^{\circ}$  to  $+90^{\circ}$  on bars or pieces in aluminium, PVC, light alloys and steel up to 2 mm thickness. The mobile part of the machine is composed of a gantry with double gantry motorisation on a high precision rack

The local safety cab, made in technopolymer, was designed to combine top functionality, accessibility, soundproofing and light with safety and ergonomic requirements. The operator has broad glazed surfaces to check machining execution and easy access during cleaning and maintenance. Cab interior ensures chip conveying to the collection system available in the base.

The 8.5 kW electrospindle is able to perform even heavy-duty machining with excellent, rapid and accurate results. The 12-place tool magazine, integrated into the mobile gantry, features two dedicated positions for holding a blade with a maximum diameter of 250 mm and an angular machining head. It includes two different operating modes: the first one, in single-zone mode, for machining whole bars in a single working area, up to 7 m long; the second one, in double operation, for working on multiple workpieces in the two separate working areas. In version with clamp handling system on H and P axes, the machine can be used in dynamic double operation, a work method that enables reducing machine stop times to a minimum, as it enables automatic arranging of the clamps in concurrent operation time with respect to the spindle machining processes in the opposite working field.

TKE 954 features a laser scanner for more precise and advanced access control to the machine, raising safety and operator/machine interface standards. In double operation, the laser scanner, unlike the light curtains, allows, from time to time, the appropriate programming of the two separate working areas on the X-axis, increasing the flexibility of use of the machine.

Full safety cab

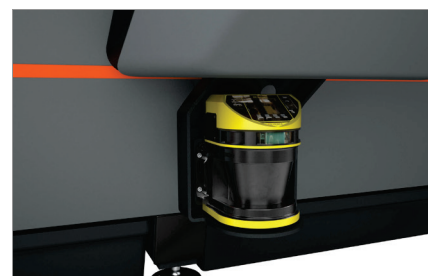
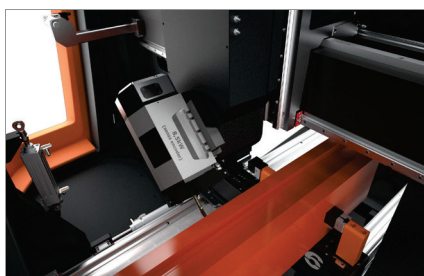
03

Electric head

04

Laser scanner

05



# TKE 954

## Machining centre

### 04

#### Tool magazine

The tool magazine features 12 places, two of which are sized to hold angular machining heads and side milling cutters with a maximum diameter of 250 mm.

The position of the magazine, installed on the gantry, enables reducing tool change times to a minimum and optimise working cycles.

A solution was designed to keep the tool holder cone housing separate from the working area for improved cleaning of the magazine.

### 02

#### Clamps and dynamic double operation

The clamp unit ensures the correct and safe locking of aluminium, PVC, steel and light alloy profiles. The structure of the clamps, particularly the wide travel in Y, allows for machining large profiles for all kinds of industrial and window/door applications.

Each clamp unit can be configured with a double presser, to machine two profiles in parallel.

In the HP version, the positioning of the clamps is handled by the additional CNC axes.

In dynamic double operation, the CNC manages the handling of the clamps and mobile gantry in the two distinct working fields at the same time; this allows significant increases in productivity.

### 01

#### Full safety cab

The local safety cab was designed to combine top functionality, accessibility and light with safety and ergonomic requirements. The polished and innovative design makes the machine unique and inimitable.

The operator has broad glazed surfaces to check machining execution and wide access to the internal parts for cleaning and maintenance. The internal structure optimises chip and swarf conveying to the lower part, simplifying maintenance and cleaning of all sensitive parts.

### 05

#### Electric head

The electrospindle - 8.5 kW in S1 - with HSK-63F tool connection and water cooling with chiller unit, can also perform the heavy-duty machining typical of the industrial sector.

The electrospindle moves along the B axis allowing rotations from -90° to +90°, so the profile can be machined on 3 faces without having to be repositioned.

A 10 kW electrospindle with encoder for heavy-duty machining and rigid tapping is available as optional.

### 03

#### Laser scanner

Operator protection is entrusted to a monitoring system in the working area through laser scanner. This smart control system, along with the absence of fixed references at the centre of the machine, is particularly useful in double operation, as it enables managing the two working areas in variable structure, even asymmetric, and can be programmed from time to time.

The machine is safe, yet flexible and suited to the variety of working needs.

#### AXIS TRAVEL

X AXIS (longitudinal) (mm)	7,000
Y AXIS (transversal) (mm)	1,230
Z AXIS (vertical) (mm)	620
B AXIS (vertical axis rotation of the head)	-90° ÷ +90°
B axis positioning increments	0.01°

#### ELECTROSPINDLE

Maximum power in S1 (kW)	8.5
Maximum speed (rpm)	24,000
Maximum torque (Nm)	13.5
Tool connector cone	HSK - 63F
Water cooled with chiller unit	•

#### AUTOMATIC TOOL MAGAZINE

Maximum number of tools in tool magazine	12
Number of angular machining heads that can be loaded in the automatic magazine	2
Maximum length of tools that can be loaded into the revolver magazine (mm)	200
Maximum size blade that can be inserted in magazine (mm)	250

#### OPERATION

Multi-piece operation	•
Double operation	•
Extra-length machining, up to twice the nominal maximum length in X	○
Electronic touch probe system	○
Machining of two profiles in parallel (excluding internal machining, on the opposite faces of the profiles)	•
Multi-piece double operation machining	○
Automatic management of multistep machining	○

#### MACHINABLE FACES

With direct tool (upper face, side faces)	3
With angular machining head (top face, side faces, heads)	1 + 2 + 2

#### PROFILE POSITIONING

Pneumatically moved workpiece reference stop	2
Additional pneumatically moved workpiece reference stop (up to max. 4 stops)	○
Laser system for reading profile position for multi-piece machining	○

#### WORKPIECE CLAMPING

Clamps, standard number	8
Clamps, maximum number	12
Maximum workpiece Y-axis clamping dimension with standard 40 mm terminals for three-face machining (mm)	460
Automatic clamp positioning through X axis	•
Automatic clamp positioning through independent H and P axes	○
Double horizontal presser on pneumatic clamps for machining two profiles in parallel	•

• included

○ available

