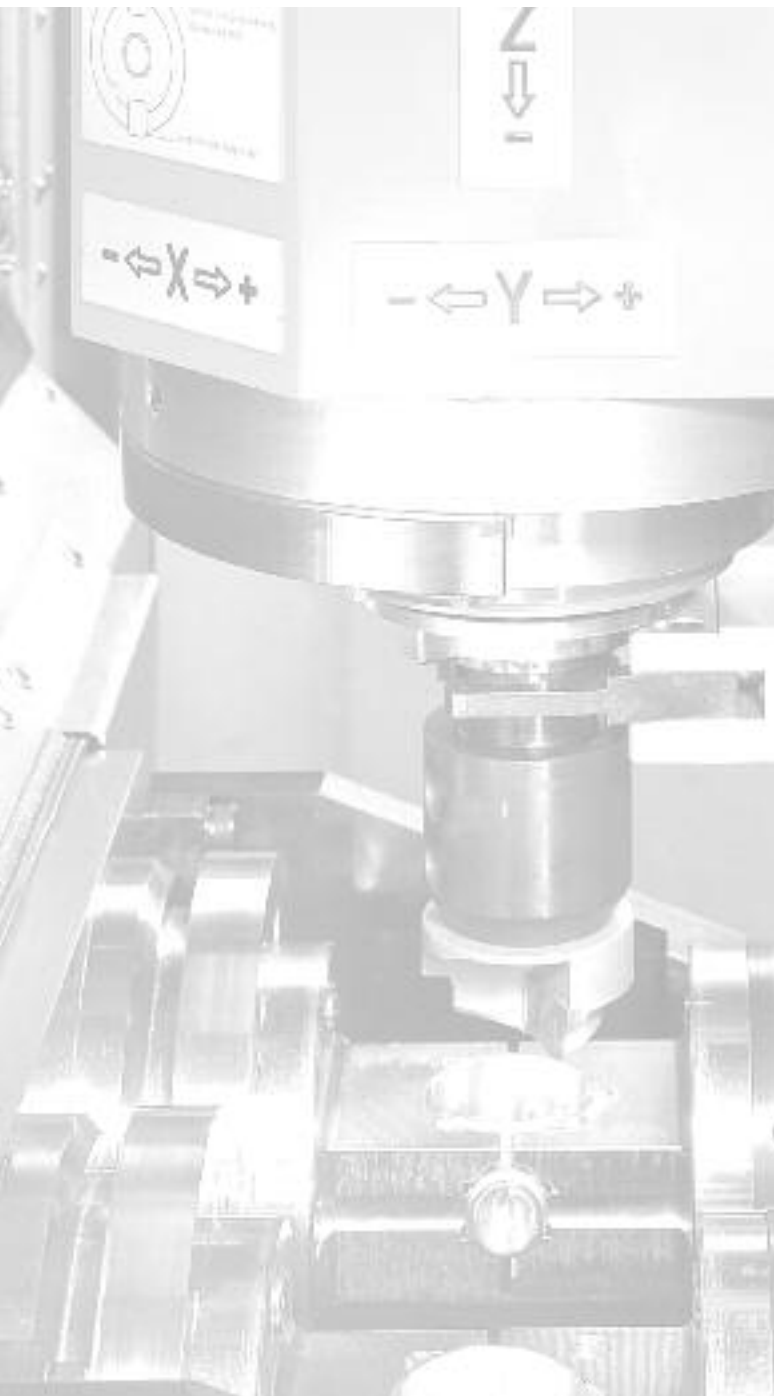


matec
MASCHINENBAU



Swivel Table Series

Swivel Table Series

Highly productive machines for series production

Standard specifications

Swivel table 180°

Table load capacity max.
300 kg per working area

Full cladding of the machining area
incl. electrically protected sliding doors

Digital main spindle drive,
motor spindle, oriented spindle stop

Spindle bearing \varnothing 80 mm,
tool clamping 12.000 N

Linear guides in all axes

Feed rate/rapid traverse speed with
digital AC servo motors in all axes

Tool changer SK 40
for tools DIN 69871

Tool magazine traveling in
X-axis (protectively installed
in the traveling column)

Working area coding variable

Automatic lag compensation for
high speed milling of contours

Chip conveyor

Controls:

Rexroth INDRA Motion MTX

Heidenhain iTNC 530

Siemens 840D



Options

Motor spindle 9000 up to 42000 rpm

Motor spindle power 16 kW / 30 kW

Motor spindle for heavy chipping
8000 rpm, 216 Nm, 34 kW

Additional tool magazine with
up to 160 tools

Tool taper HSK-A 63 DIN 69893

Pick-up stations for oversized tools
or angle drilling and milling heads

CTS with pressure 20/40/70 bar

Micro lubrication system

Coolant cleaning units with
different filter systems

Coolant temperature control

Coolant tank with volume
capacity 450/900/2000 l

Oil suction units

Automatic doors

1-axis rotary table with
conventional or direct drives

2-axes rotary/swivel table in various sizes

Integrated quick change pallet systems

Clamping hydraulics or pneumatics

Rotary distributor hydraulics
and pneumatics

3-D probe

Tool measuring or tool breaking control

Loading automation / NC-gripper



The matec swivel table series has been developed for series production if high stock-removing capacity is required. Stability, precision and high speed are characteristics of these machines. A 180° swivel table is a part of every basic machine. It facilitates a quick tool change and renders high productivity.

matec "tailor made" system with its comprehensive range of products implies a multitude of machine concepts which provide optimal solutions for every customer and secure a considerable competitive advantage.

The basic machine matec-30 S is available in two sizes covering the whole spectrum of parts' dimensions for series production. The SH type is an especially compact and flexible machine with little place requirement, the SD machine with double spindle is particularly suitable for machining of most challenging and voluminous work parts and the SHV design with angle head fits best for horizontal and vertical machining of 5 sides and three-dimensional machining also in the large-scale production.

Handling systems, devices and automation solutions make it possible to use the swivel table series flexibly for every application.

Swivel Table Series

Small in dimensions - great in performance



Working area



Working area with perfect chip flow

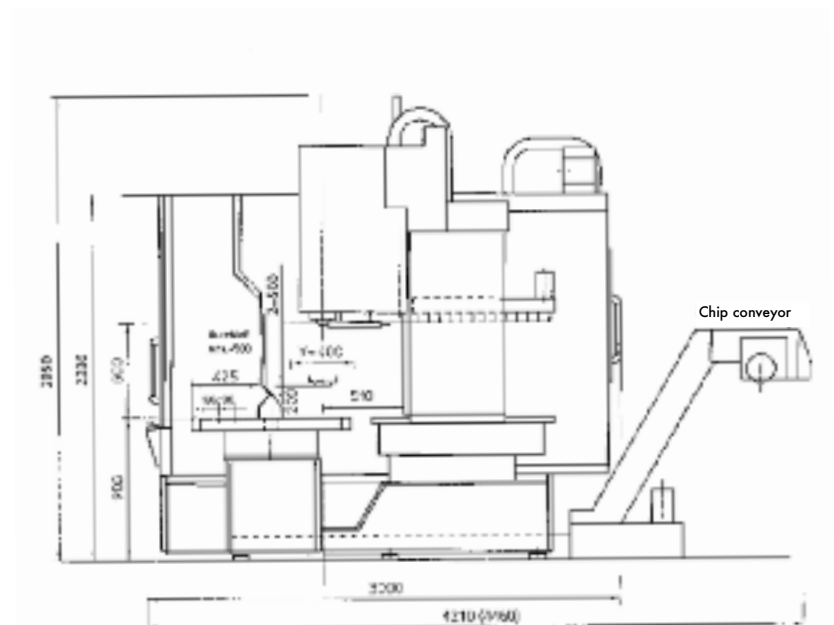
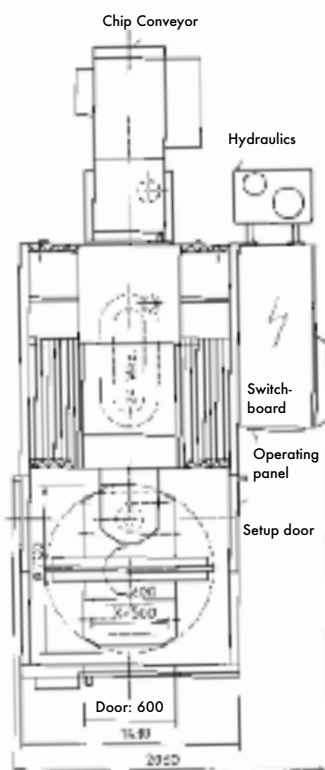


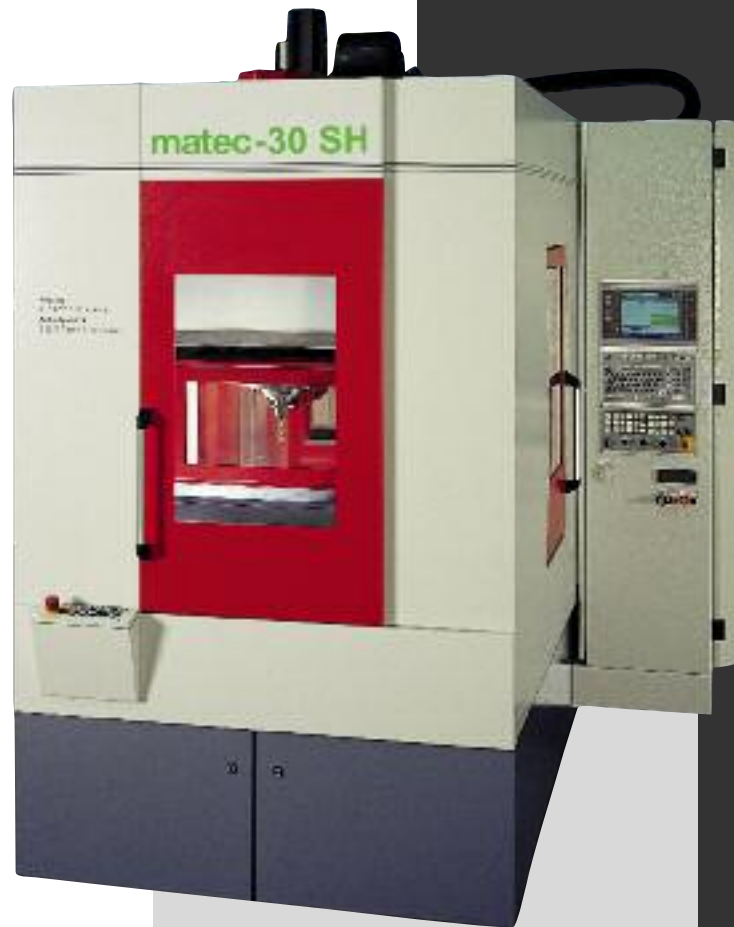
Working area with 2 CNC rotary tables, clamping device and machining tool

The machining center matec-30 SH is the smallest machine in the swivel table series, however as efficient as the big machines. The machine's compactness sets benchmarks in its class. High speed combined with the entire range of options from the matec tailor-made system yield absolute top performance in the production.

Special features

- Compact construction - minimal space requirement
- Stable basis construction for heavy chipping
- Compactness resulting in high speed





Specifications

Working area X/Y/Z	500 / 400 / 400 mm
Distance spindle nose/table	min. 200 / max. 600 mm
Machine table size per side	600 x 400 mm
T-slots per side	2 x 14 H 8 / D=100 mm
Swivel time of table	1.9 sec. depending on table load
Speed	9,000 (12,000/15,000/18,000/24,000/42,000) rpm
Power	16 (30) kW - 40% DC
Torque, max.	100 (190) Nm - 40% DC
Rapid feed	60 m/min
Drilling performance in steel	40 (54) mm
Tapping in steel	M22 (M30)
Milling capacity in steel	400 (500) cm ³ /min
Tool magazine	24 (36/48) pcs
Tool diameter, max.	70 (130) mm
Tool length, max.	340 mm
Tool change time	approx. 2 sec
Chip-to-chip time	approx. 3.5 sec
Machine weight	approx. 5.2 t

Subject to technical changes

Highly productive series manufacturing



Working area

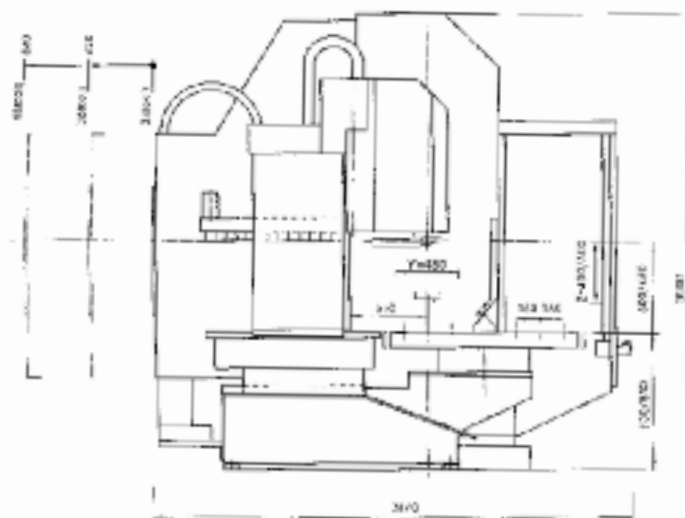
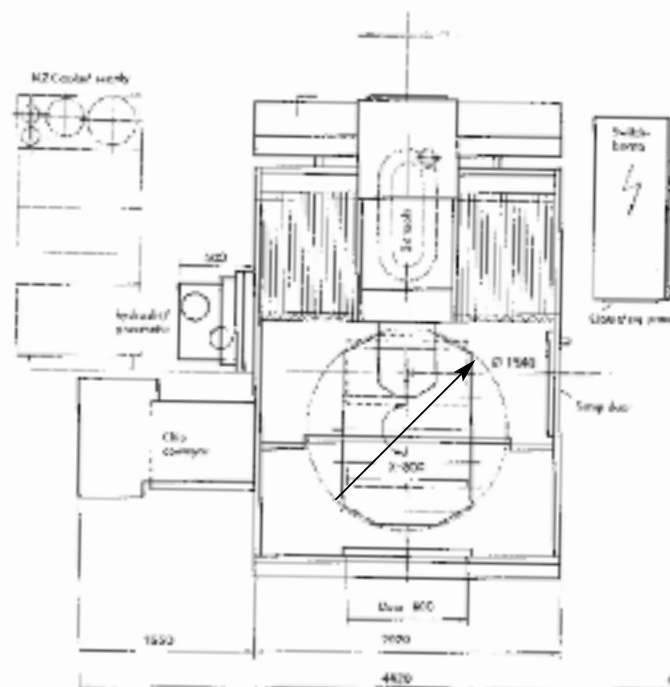


Working area with mounted CNC rotary table and tail stock



Loading station with 2 CNC rotary tables and clamping device

The machining center matec-30 S is a production machine for series manufacturing of small and medium-sized work parts. The 180° swivel table allows parallel loading and unloading in the main time and thus ensures high productivity.





Specifications

Working area X/Y/Z	800 / 480 / 500 mm
Distance spindle nose/table	min. 150 / max. 650 mm
Machine table size per side	850 x 500 mm
T-slots per side	3 x 14 H 8 / D=160 mm
Swivel time of table	2-4 sec. depending on table load
Speed	9,000/12,000/15,000/18,000/24,000/42,000 rpm
Power	16 (30) kW - 40% DC
Torque, max.	100 (191) Nm - 40% DC
Rapid feed	60 m/min
Drilling performance in steel	40 (54) mm
Tapping in steel	M 22 (M 30)
Milling capacity in steel	400 (500) cm ³ /min
Tool magazine	24 (36/48) pcs
Tool diameter, max.	70 (130) mm
Tool length, max.	340 mm
Tool change time	approx. 2 sec
Chip-to-chip time	approx. 3.5 sec
Machine weight	approx. 6 t

Subject to technical changes

Ideal for large work parts in series



Good accessibility to loading and unloading station

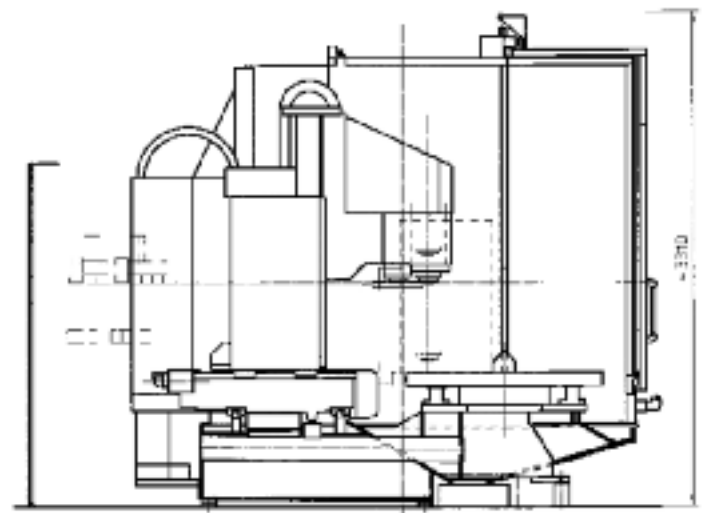
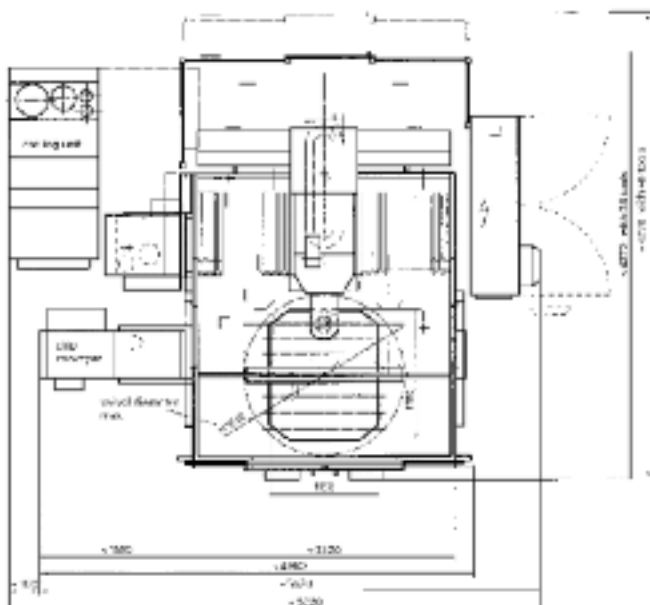


Working area with perfect chip flow

The machining center matec-30 SG contains a swivel table, 1300 x 1100 mm. Thus, it is perfect for machining of voluminous parts – the traverse path in the Z-axis of up to 700 mm allows the machining of very tall parts.

Special features

- Long traverse paths in all axes
- Large table clamping area
- Multiple clamping is possible
- Good accessibility to loading/unloading station



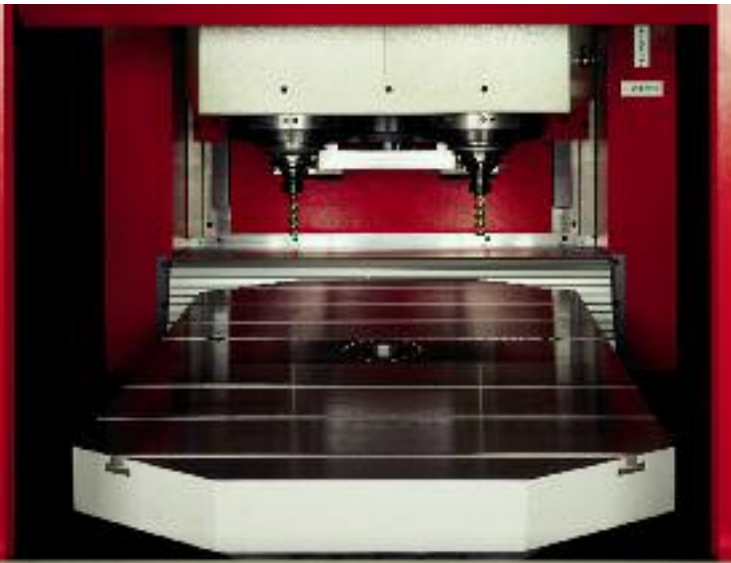


Specifications

Working area X/Y/Z	1,300 / 600 / 700 mm
Distance spindle nose/table	min. 80 / max. 780 mm
Machine table size per side	1100 x 570 mm
T-slots per side	3 x 14 H 8 / D=160
Swivel time of table	3-5 sec. depending on table load
Speed	9,000 (12,000/15,000/18,000/24,000/42,000) rpm
Power	16 (30) kW - 40% DC
Torque, max.	100 (191) Nm - 40% DC
Rapid feed	30 (100) m/min
Drilling performance in steel	40 (54) mm
Tapping in steel	M22 (M30)
Milling capacity in steel	400 (500) cm ³ /min
Tool magazine	24 (36/48) pcs
Tool diameter, max.	70 (130)
Tool length, max.	340 mm
Tool change time	approx. 2 sec
Chip-to-chip time	approx. 4.5 sec
Machine weight	approx. 12.5 t

Subject to technical changes

Double spindle - double productivity



Working area

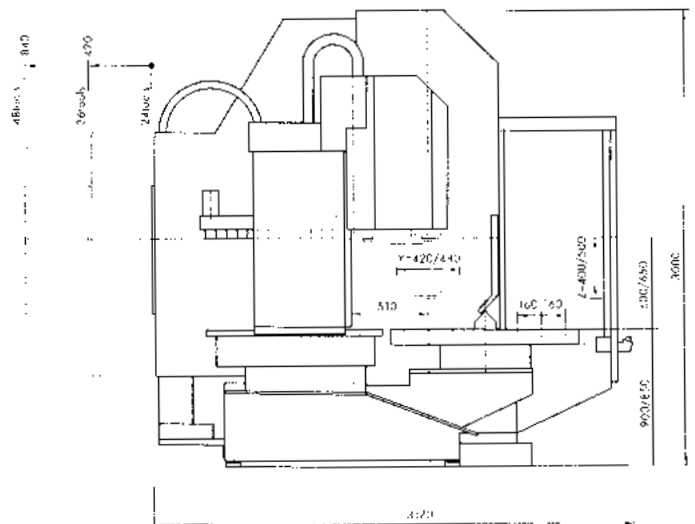
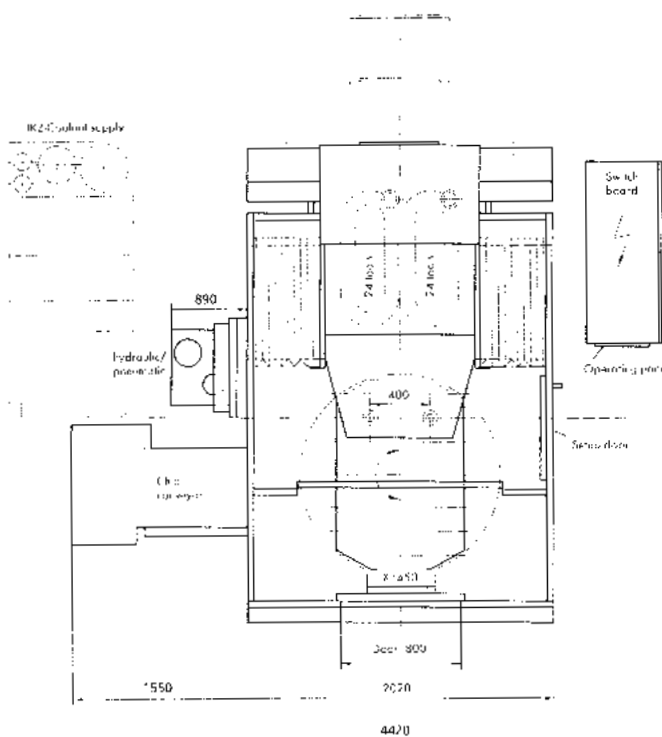


Swivel table with device

matec-30 SD is a double spindle machining center conceived for manufacturing of comprehensive work parts and demanding materials. Its strength lies in the robust basis construction which possesses enough power reserves for even the most difficult chipping tasks.

Special features

- 2 motor spindles, spindle distance 400 mm
- Double production with only 30% extra cost





Specifications

Working area X/Y/Z	450 / 480 / 500 mm
Distance spindle nose/table	min. 100 / max. 600 mm
Machine table size per side	850 x 500 mm
T-slots per side	3 x 14 H 8 / D=160
Swivel time of table	2-4 sec. depending on table load
Speed	9,000 (12,000/15,000/18,000/24,000/42,000) rpm
Power	2 x 16 (30) kW - 40% DC
Torque, max.	2 x 100 (191) Nm - 40% DC
Rapid feed	30 (48) m/min
Drilling performance in steel	2 x 40 (54) mm
Tapping in steel	2 x M22 (M30)
Milling capacity in steel	2 x 180 (360) cm ³ /min
Tool magazine	2 x 24 (36/48) pcs
Tool diameter, max.	70 (130)
Tool length, max.	340 mm
Tool change time	approx. 3.5 sec
Chip-to-chip time	approx. 5.5 sec
Machine weight	approx. 6.5 t

Subject to technical changes

Horizontal and vertical machining



Working area matec-30 SHV
 Station 1: CNC rotary table with EROWA pallet system
 Station 2: stationary EROWA pallet system

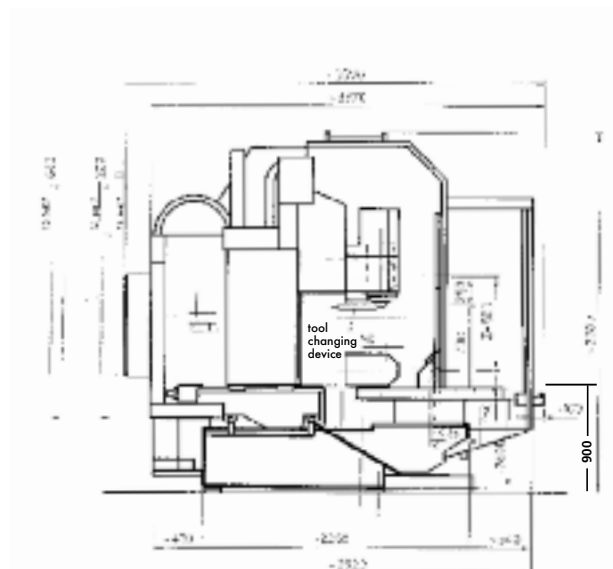
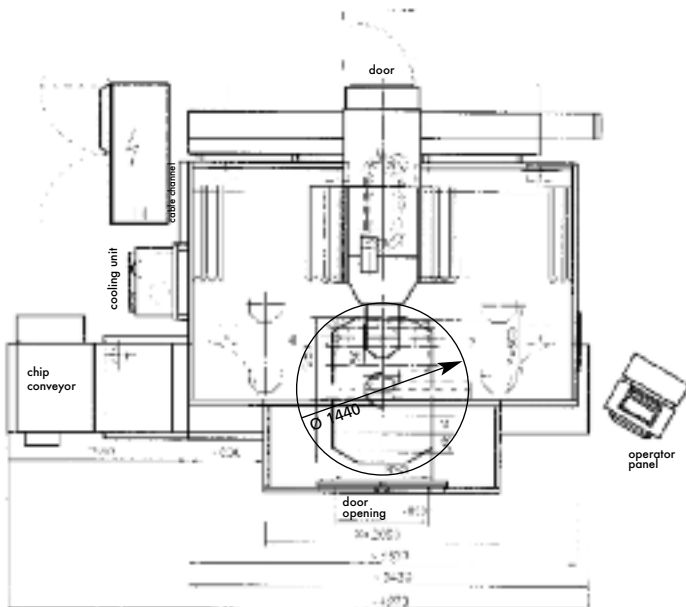


Machines can be tailored for special purpose applications, e.g. multiface machining with additional tools and pallet storage

The machining center matec-30 SHV has a swivel head as special feature. It allows the drilling of inclined bores in a work part. Equipped with a CNC rotary table the machine is ideal for 5-side or 3-dimensional machining also in large-scale production.

Special features

- Swivel head $\pm 90^\circ$ for horizontal and vertical machining with serration catching in steps of 1°
- Option: swivel head $\pm 105^\circ$ continuously variable as CNC-axis, indexing precision ± 3 angular sec.
- Linear drive in X-axis 100 m/min



matec-30 SHV

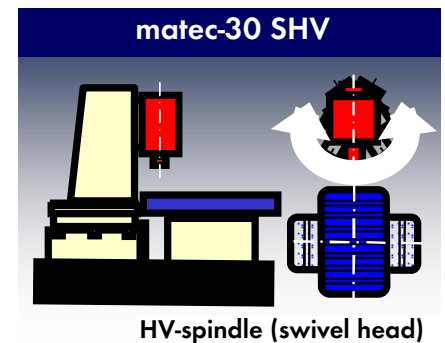
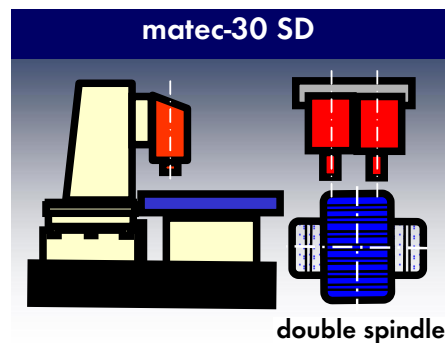
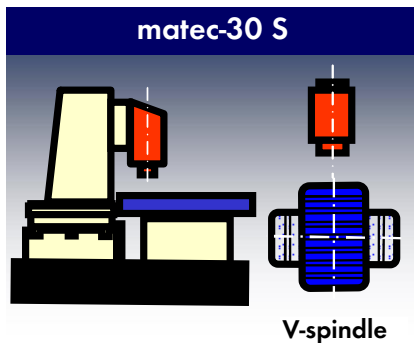


Specifications

Working area X/Y/Z		2000 / 600 / 800 mm
Distance spindle nose/table	vertical/horizontal	0 - 700 / 150 - 950 mm
Machine table size per side		850 x 500 mm
T-slots per side		3 x 14 H 8 / D=160 mm
Swivel time of table		2-4 sec. depending on table load
Speed		9,000 (12,000/15,000/18,000/24,000/42,000) rpm
Power		16 (30) kW - 40% DC
Torque, max.		100 (191) Nm - 40 % DC
Rapid feed		30 (48 / 100 with linear drive) m/min
Drilling performance in steel		40 (54) mm
Tapping in steel		M22 (M30)
Milling capacity in steel		400 (500) cm ³ /min
Tool magazine		36 (48 up to 128) pcs
Tool diameter, max.		70 (130) mm
Tool length, max.		340 mm
Tool change time		approx. 3.5 sec
Chip-to-chip time		
vertical/horizontal		approx. 5.5 sec / approx. 8.5 sec
Machine weight		approx. 10 t

Subject to technical changes

Table and spindle configurations



Flexible manufacturing cell for series production



The flexible manufacturing cell has been developed for the series production. It consists of two machining centers matec-30 S vs. matec-30 SD, a CNC gantry loader and a CNC position-fixing unit.

Specifications of gantry loader
X=3,600 mm, Y=800 mm, Z=800 mm
Traverse speed: 60 m/min
Parts weight: 60 kg

Performing a certain machining task, the CNC gantry loader grips the rotationally symmetrical parts from a rolling belt and places them in the position-fixing unit to adjust. So, the parts are fixed in the machine load area by turns and swivelled into the machining area by a 180° swivel table. During the machining process in both centers the gantry loader discharges the finished parts from the machines and deposits them on the rolling belt. The whole production flow of the flexible manufacturing cell is controlled by the gantry loader.

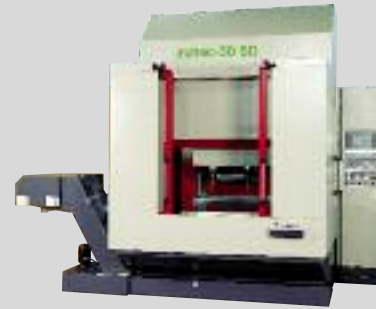
Specifications of machining centers
X=800 mm, Y=480 mm, Z=500 mm
180° swivel table, 24 tools,
Rapid feed 30 m/min, speed 9,000 rpm, power 16 kW

Swivel table series

Highly productive machines
for series production

matec-30 SH
matec-30 S
matec-30 SG

matec-30 SD
matec-30 SHV

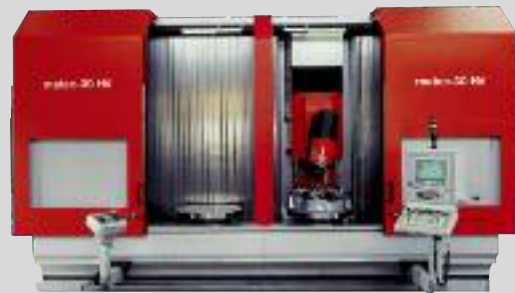


Traveling column series

Highly flexible machines for
single and series production

matec-30 L
matec-30 L duo
matec-30 LD
matec-40 L
matec-50 L
matec-30 HV
matec-30 HVE
matec-30 HVK
matec-30 HVC

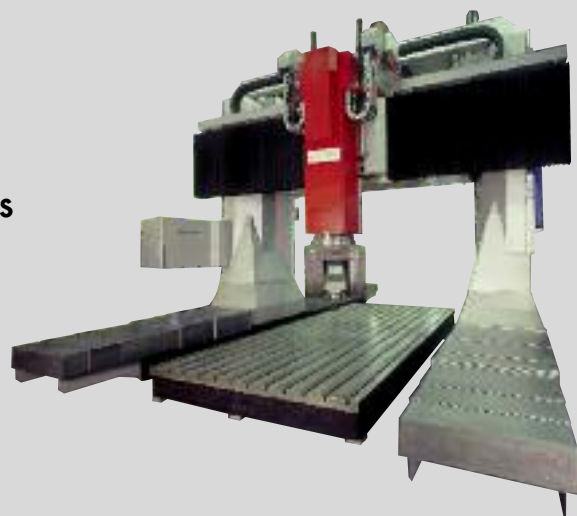
matec-30 HVT
matec-30 HVTH
matec-30 HV duo
matec-40 HV
matec-50 HV
matec-30 HVU
matec-40 HVU
matec-50 HVU



Gantry series

The specialists for the machining
of voluminous and heavy work parts

matec-30 P with motor spindle vertical
matec-30 P with 1-axis swivel head
matec-30 P with 2-axis swivel head
matec-50 P with 2-axis swivel head
matec-30 PP with pallet changer
matec-40 PP with pallet changer



Based on our standard machine series we develop
custom-made machines and complete solutions

We are in the Center



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