

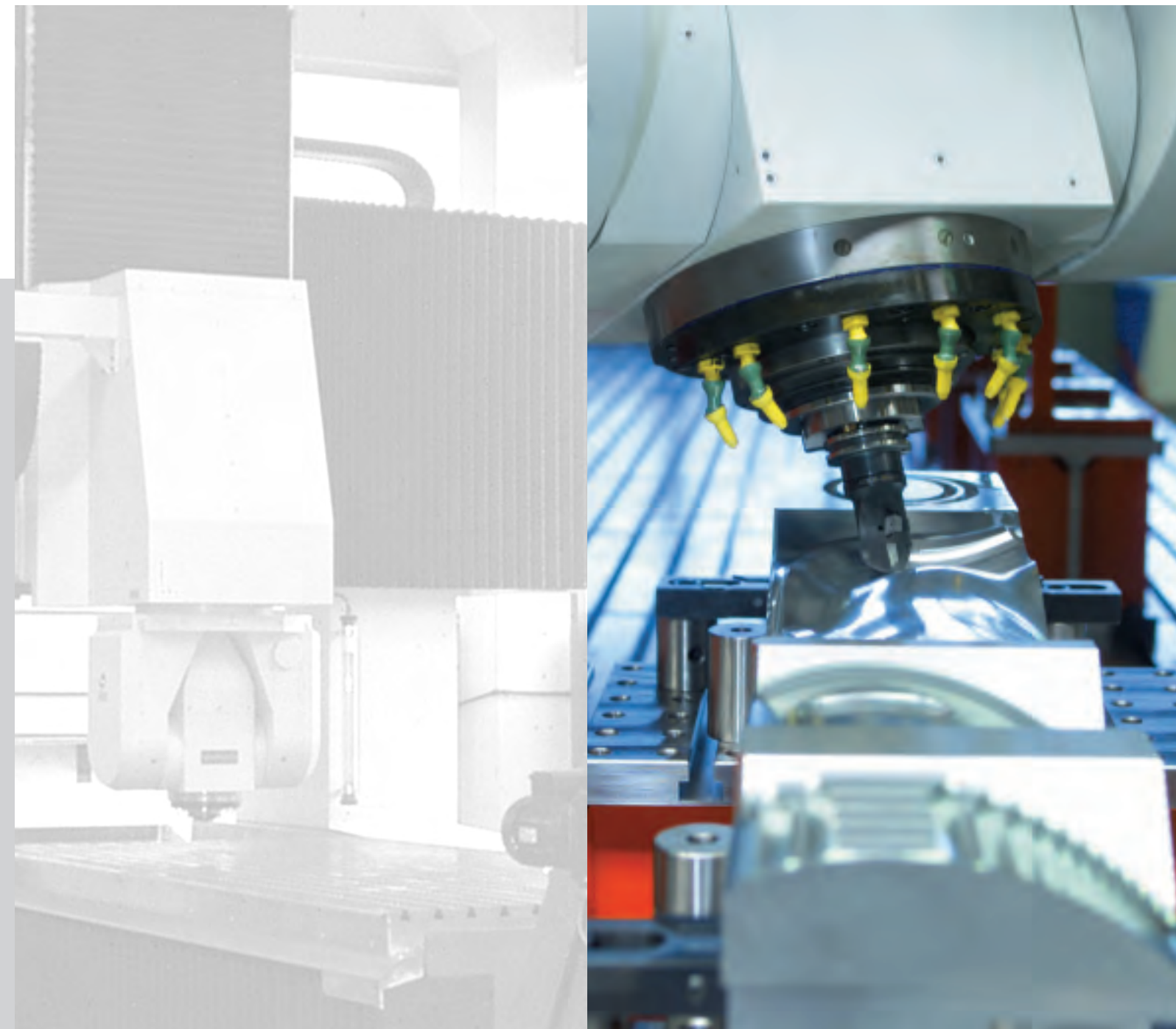
We are in the center



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Please see www.matec.de for
our complete manufacturing
program. On request we gladly
send you our machine brochures.

Update: September 2008 - Subject to technical changes



Gantry Series

Gantry series

Specialists for voluminous and heavy work parts



Standard specifications

Gantry design with fixed machine table

Traverse path in X-axis from 3000 to 15000 mm

Traverse path in Y-axis from 1600 to 5000 mm

Traverse path in Z-axis from 800 to 2300 mm

Prestressed roller guides in all axes

Drive system in X-axis with prestressed gear drive

Rapid feed rate with digital AC servo motor

Digital main spindle drive

Motor spindle, speed 9000 rpm

Orientated spindle stop

Tool magazine travelling in X-axis

Tool position coding variable

Tool life control

Sister tool managing

Automatic lag compensation in order to provide high speed milling of contours

Chip conveyor on both sides along the X-axis

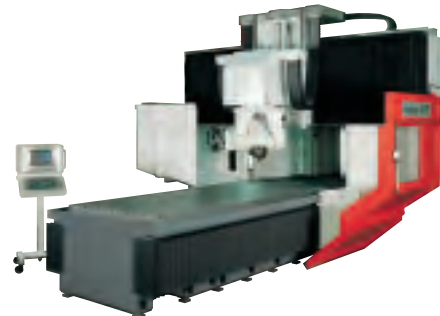
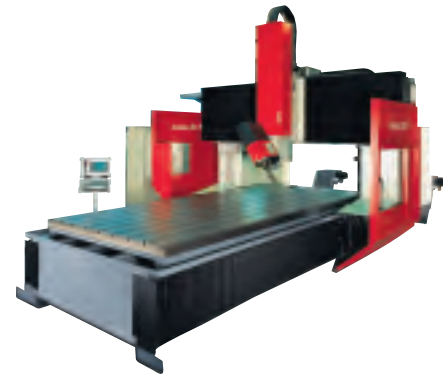
Coolant system (CTS)

Machine cladding (without roof) according to CE norm

Control panel with all necessary operating devices

Controls:

Rexroth IndraMotion MTX
Heidenhain iTNC 530
Siemens 840D



Optionen

Motor spindle speed 9000 up to 42000 rpm

Motor spindle power 16 kW up to 34/60 kW

Additional tool magazine with up to 200 pcs

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

CTS with pressure 20/40/70 bar

Minimal quantity lubrication

Coolant cleaning units with different filter systems

Coolant temperature control

Coolant tank with volume capacity 450/900/2000 l

Oil suction unit

Automatic doors

Integrated quick change pallet system

Clamping hydraulics or pneumatics

3-D probe

Tool measuring or tool breaking control

Tool identification system

Tool control system

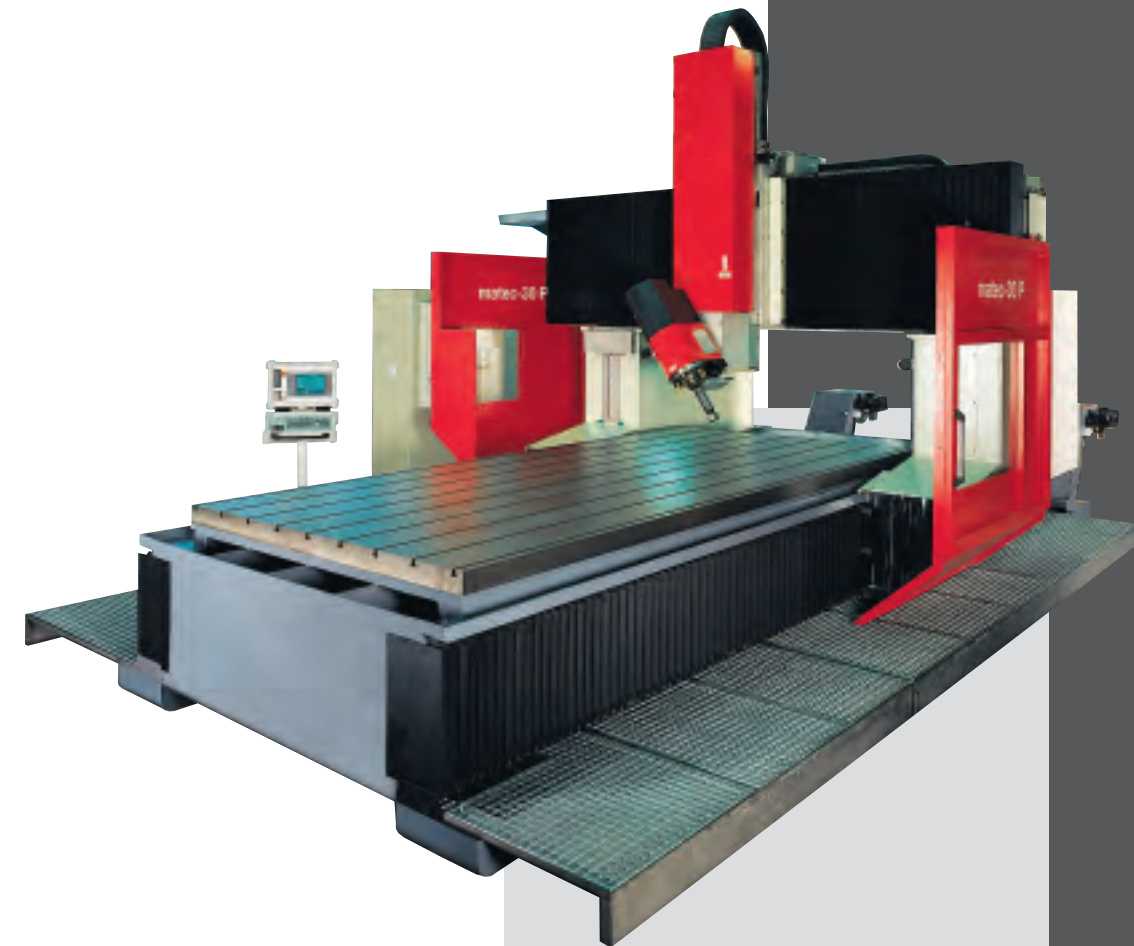
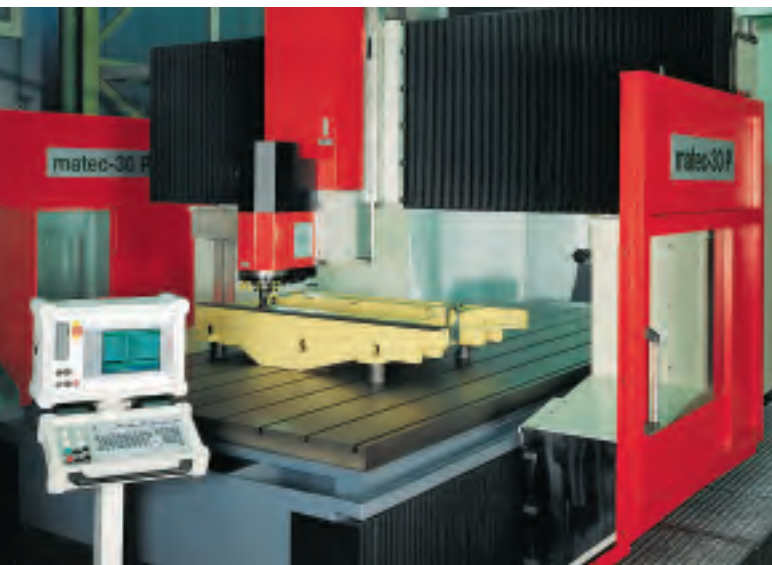
Control panel portable or with radio signal



Gantry series

The gantry machines 30 P (Taper SK40/HSK 63A) and 50 P (Taper SK50/HSK 100 A) were designed for single-part and series production of large and heavy work parts for tool and mould making, mechanical engineering, and structural-steel engineering. Main range of application is the machining of 3D-shapes in steel and aluminium, plates, welding and steel construction.

The gantry construction guarantees good accessibility from all sides in constrained space. The application of either a swivel head ($\pm 90^\circ$) or a 2-axis CNC motor spindle milling head permits multilateral machining. A rich variety of spindle speed and spindle power possibilities for all materials is available.



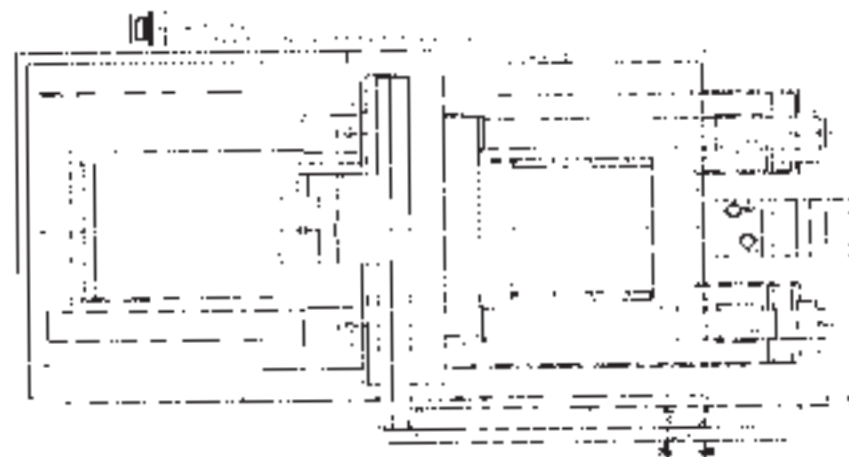
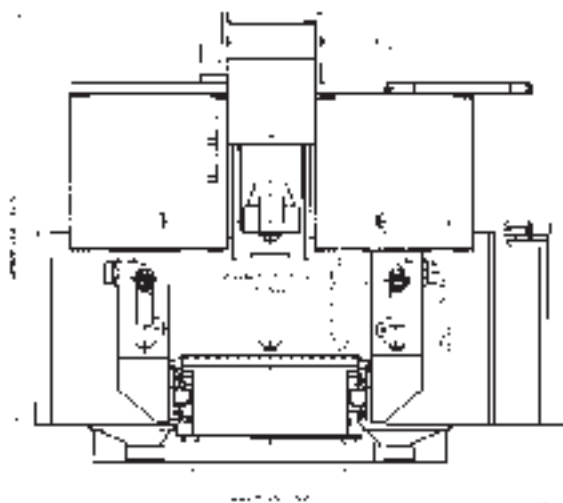
matec-30 P with swivel head vertical ..

... and horizontal

matec-30 P was conceived for single-part and series production of voluminous parts for machine and steel industries. The machine is ideally suited for 3-side machining for highest quality demands as far as parallelism and evenness of work part are concerned.

Special features

- Swivel head $\pm 90^\circ$ with serration 1° (Option: continuous)
- Long Z-axis up to 1300 mm
- Stable gantry bridge



Specifications

Working area X-axis	3000-12000 mm
Working area Y-axis	2500 (3000/3500) mm
Working area Z-axis	vertical 1200 / horizontal 1300 mm
Distance spindle nose/table	vertical 0-1200 / horizontal 150-1450 mm
Gantry clearance in Z-direction	1150 mm
Machine table width	1600 (2100/2600) mm
T-slots	18 H8
Spindle	SK40 - DIN 69871 (HSK 63 A)
Speed	9000 (12000/15000/18000/24000/42000) rpm
Power	16 (30) kW - 40% DC
Torque, max.	100 (190) Nm - 40 % DC
Rapid feed	30 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 (48/72/96) pcs
Tool diameter, max.	70 (130) mm
Tool length, max.	340 mm
Tool weight	3 (10) kg
Tool change time	approx. 4,5 sec.
Chip-to-chip time	(depending on Y-axis) approx. 9,8 sec

Subject to technical changes



Free-surface machining

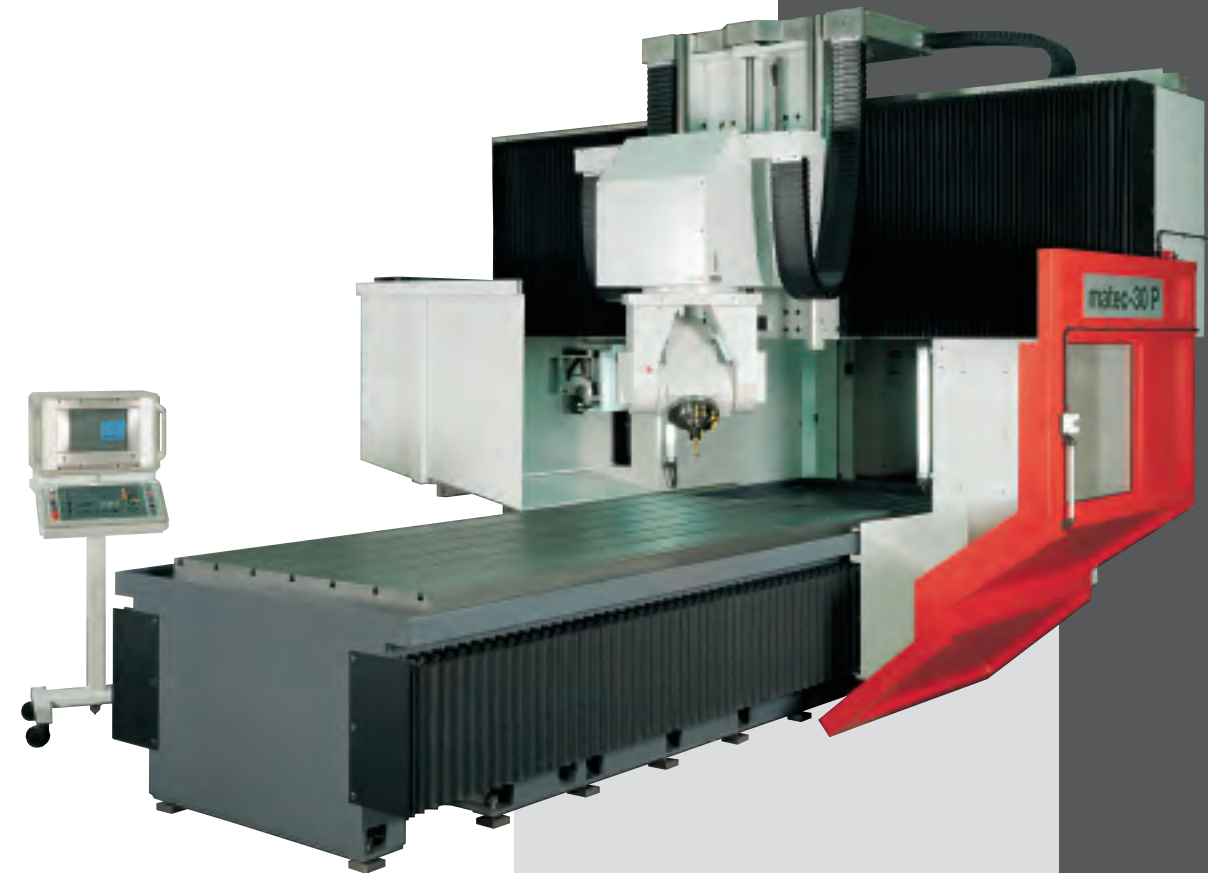
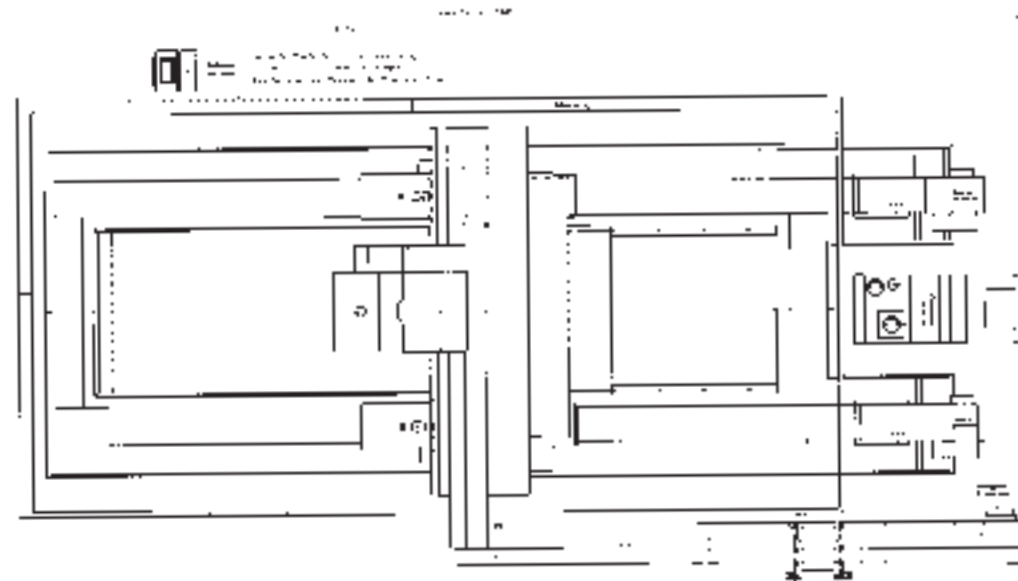


Machining of a work part

matec-30 P is a gantry machining center with 2-axis CNC swivel head for 3-D machining. The machine has been developed for tool and mold production and meets highest quality requirements. The overdimensioned gantry construction warrants minor deformation of the machine and therefore contour constancy and surface quality of the work part. Exhibiting stability and surpassing chipping performance, this machine concept can be applied in machine and welding industries.

Special features

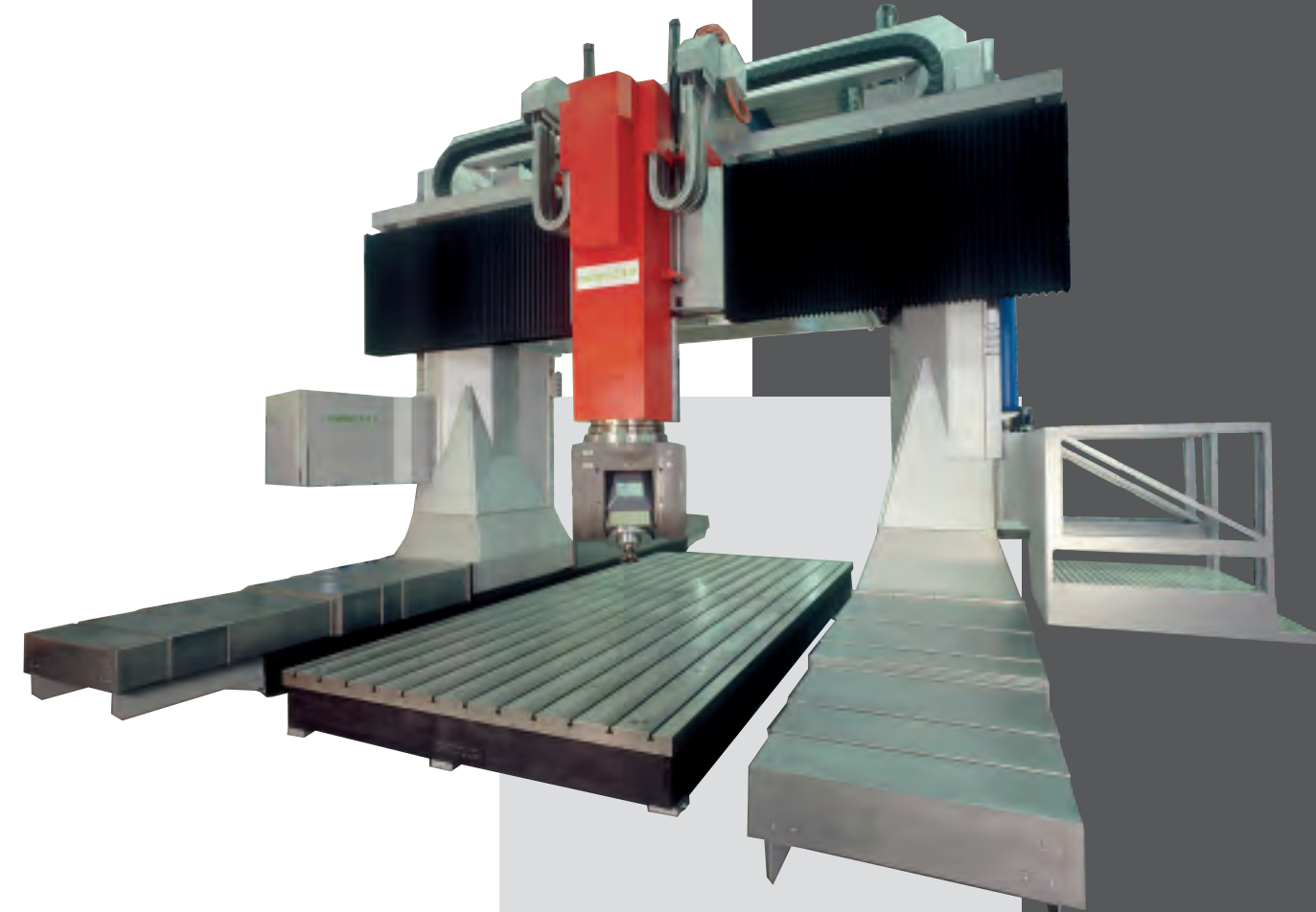
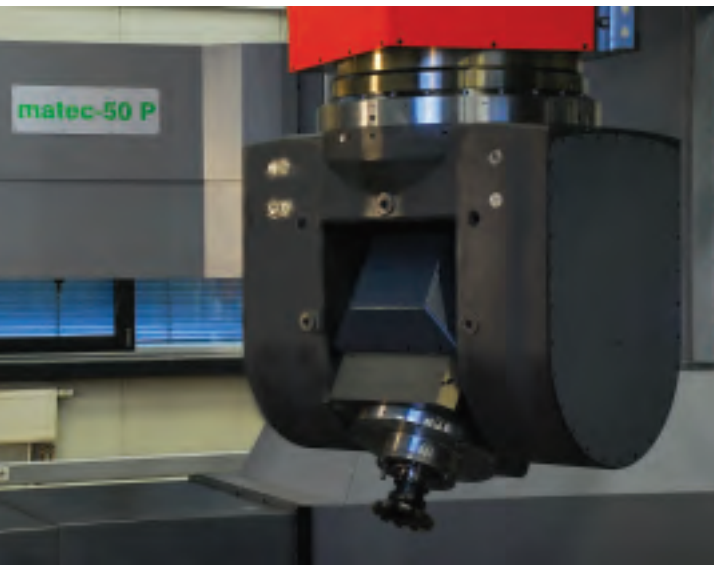
- 2-axis CNC swivel head for 5-axis simultaneous machining. C-axis (rotary axis) $\pm 180^\circ$ /B-axis (swivel axis) $\pm 95^\circ$
- Long Z-axis up to 1500 mm
- Stable gantry bridge



Specifications

Working area X-axis	3000-12000 mm
Working area Y-axis	2500 (3000/3500) mm
Working area Z-axis	vertical and horizontal 1100 (1300/1500) mm
Distance spindle nose/table	vert. 0-1100 (1300/1500)/hor. 250-1350/1550/1750 mm
Gantry clearance in Z-direction	900 (1150/1300) mm
Machine table width	1600 (2100/2600) mm
T-slots	18 H8
Spindle	SK40 - DIN 69871 (HSK 63 A)
Speed	9000 (12000/15000/18000/24000/42000) rpm
Power	16 (30) kW - 40% DC
Torque, max.	100 (190) Nm - 40 % DC
Rapid feed	30 m/min
Drilling performance in steel	40 (60) mm
Tapping in steel	M22 (M30)
Milling capacity in steel	400 (500) cm ³ /min
Tool magazine	36 (48/72/96) pcs
Tool diameter, max.	70 (130) mm
Tool length, max.	340 mm
Tool weight	3 (10) kg
Tool change time	approx. 4,5 sec
Chip-to-chip time	(depending on Y-axis) approx. 9,8 sec

Subject to technical changes



2-axis-CNC-motor spindle milling head

Tool changer

matec-50 P with 2-axis swivel head is a gantry machining center with tool system SK50 /HSK 100 A. The machine has been developed for machining of extensive and voluminous work parts in mold, steel and machine industries.

The application range mainly covers the manufacturing of 3-D forms made of synthetic materials, non-steel metals and steel as well as machining of welding parts and plate-formed work parts.

The high-performance motor spindle with 60 kW and constant speed 9000 rpm provides for the optimal chipping of all materials in its class.

Special features

- 2-axis CNC swivel head for 5-axis simultaneous machining. C-axis (rotary axis) $\pm 200^\circ$ /B-axis (swivel axis) $\pm 120^\circ$
- Long Z-axis up to 1500 mm
- Gantry bridge adjustment for optimal chipping process

Specifications

Working area X-axis	4000-50000 mm
Working area Y-axis	5000 mm
Working area Z-axis	1150 (1500) mm
Working area W-axis	gantry bridge adjustment 800 mm
Gantry clearance height	2270 (3070) mm
Gantry clearance width	4000 mm
Machine table width	3000 mm
T-slots DIN 650	22 H10
Spindle	SK50 - DIN 69871 (HSK 100 A)
Speed	9000 rpm
Power	60 kW - 40% DC
Torque, max.	575 Nm - 40 % DC
Rapid feed	30 m/min
Drilling performance in steel	80 mm
Tapping in steel	M36
Milling capacity in steel	1000 cm ³ /min
Tool magazine	18 (up to 200) pcs
Tool diameter, max..	150 (250) mm
Tool length, max.	520 mm
Tool weight	25 kg
Tool change time	approx. 10 sec
Chip-to-chip time	(depending on Y-axis) approx. 20 sec

Subject to technical changes



matec-30 P with vertical spindle

Specifications

Working area X-axis	3000-12000 mm
Working area Y-axis	1600 (2100/2600) mm
Working area Z-axis	800 mm
Distance spindle nose/table	100-900 mm
Gantry in Z-direction	800 mm
Machine table width	1600 (2100/1600) mm
Drilling performance in steel	40 (60) mm

For further specifications see matec-30 P with 1-axis swivel head

Subject to technical changes

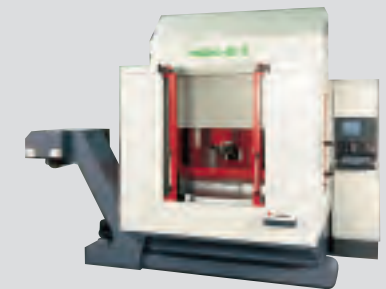
Customer-specific variant matec-30 P with 2-axis CNC motor spindle milling head, traveling operator platform, X=8 000 mm, Y=3 000 mm, Z=1 100 mm



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-part and series production

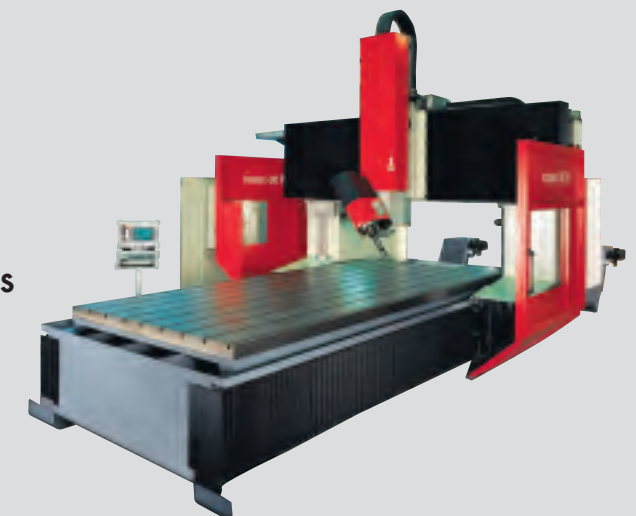
- matec-30 L
- matec-30 L duo
- matec-30 LD
- matec-40 L
- matec-50 L
- matec-30 HV
- matec-30 HVK
- matec-30 HVC
- matec-30 HVT
- matec-30 HVTH
- matec-30 HV duo
- matec-40 HV
- matec-50 HV



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



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