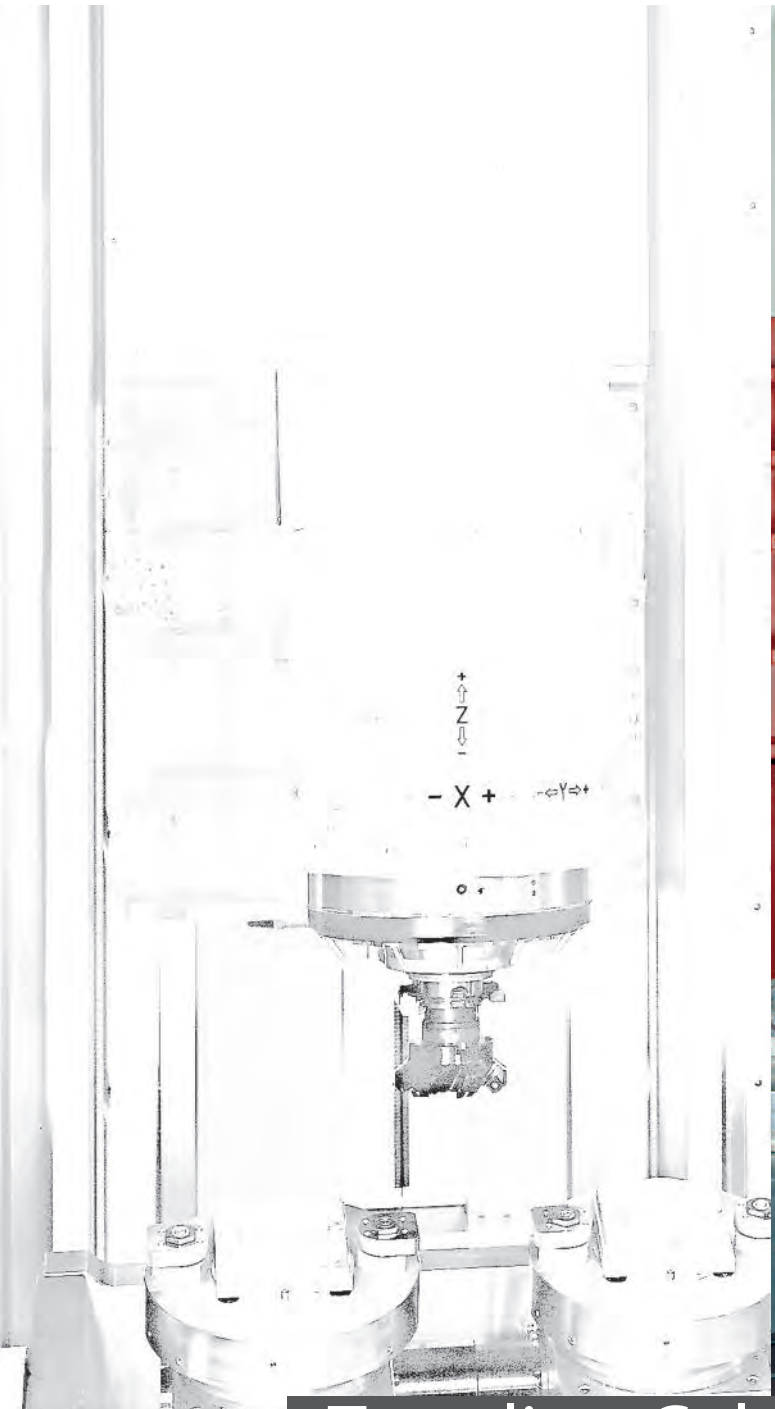
MATEC GmbH



Traveling Column Series L-Machines

Traveling Column Series L-Machines

Flexibility in single-part and series production

Standard specifications

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

Digital main spindle drive, motor spindle, oriented spindle stop

Spindle bearing Ø 80 mm, tool clamping 12,000 N

Linear guides in all axes

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

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

Tool position coding variable

Automatic lag compensation for high speed milling of contours

Chip conveyor

Controls
Heidenhain TNC 640
Siemens 840D Solution Line

Options

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

Micro lubrication system

Coolant cleaning units with different filter system

Coolant temperature control

Coolant tank with volume capacity 450/900/2,000 l

Oil suction units

Automatic doors

1-axis rotary table with conventional or direct drives

2-axis tilting rotary table

Lathe spindle vertical/horizontal, size A8 and A11

High-speed rotary table with direct drive, up to 4,000 rpm (turning/positioning)

Additional tool magazine only for lathe tools with separate tool changer

Separate fixed tool holder on the headstock for lathe tools (option: with interrupted cut especially for heavy turning operations)

CNC carriage unit for tail-stock, steady rest and opposed spindle

Integrated quick change pallet systems

Clamping hydraulics or pneumatics

Rotary distributor for hydraulics and pneumatics

3-D probe

Tool measuring or tool breaking control

Loading automation / NC-gripper

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Traveling Column Series L-Machines

The traveling column series has been conceived for single-part and series production. Whether used for twin table machining with rotary table or tail stock, multiple clamping or single-part manufacturing of voluminous parts, this machine group covers nearly all fields of application. Stability, precision and high speed are characteristics of these machines.

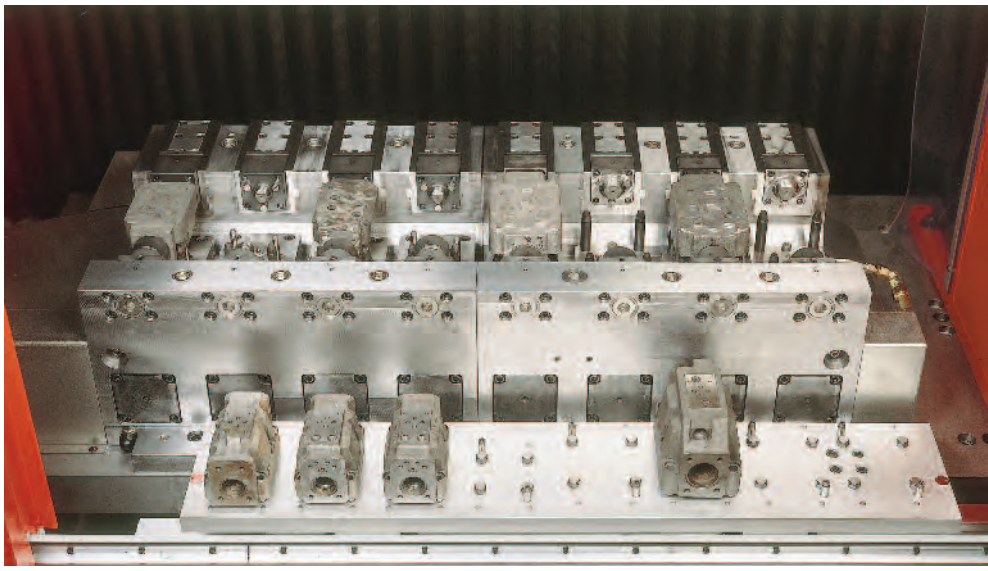
Outstanding features of the L-machines are long traverse paths, easy mounting of clamping units as well as automatic loading by means of external loading systems.

The basic machine of this series is the long-bed machine matec-30 L. This milling center is available in various configurations, e.g. with two traveling columns or double motor spindle, and in taper SK 40/HSK-A 63 and SK 50/HSK-A 100.

The matec “tailor-made” system with its extensive service package allows a multitude of machine concepts which provide an optimal manufacturing solution for every customer, securing a competitive advantage.

Basic machine for single-part and series production

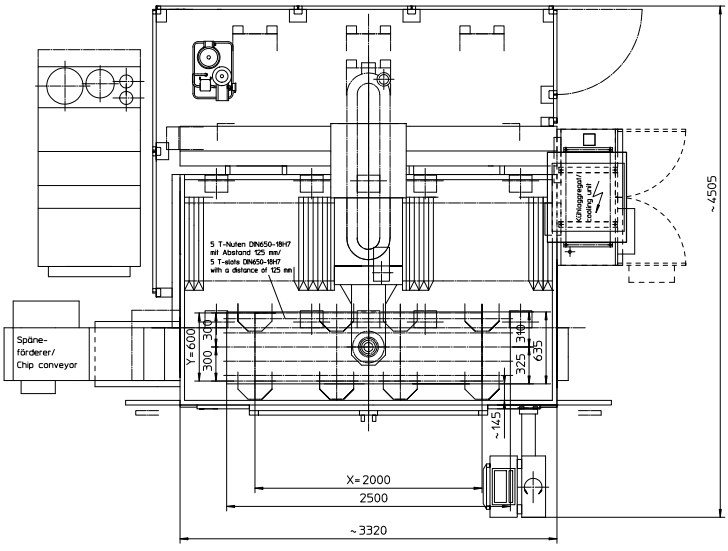
matec-30 L special clamping devices
for aluminium profiles

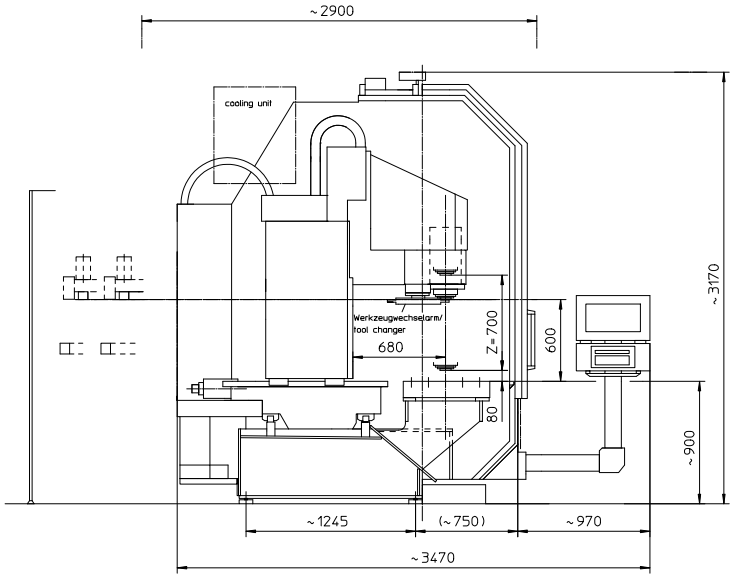


Multiple clamping by means of hydraulics and linear transporting unit for machining of castings

The machining center matec-30 L has been developed for single-part and series production. Whether used for twin table machining with a rotary table or tail stock, multiple clamping or single-part machining of voluminous parts, this machine group covers nearly all fields of application.

Stability, precision and high speed are characteristics of these machines. On the basis of a great variety of traverse paths in X-axis up to 12,000 mm, Y-axis up to 1,400 mm and Z-axis up to 900 mm we provide the best solution for the customer's machining task.





matec-30 L

Specifications

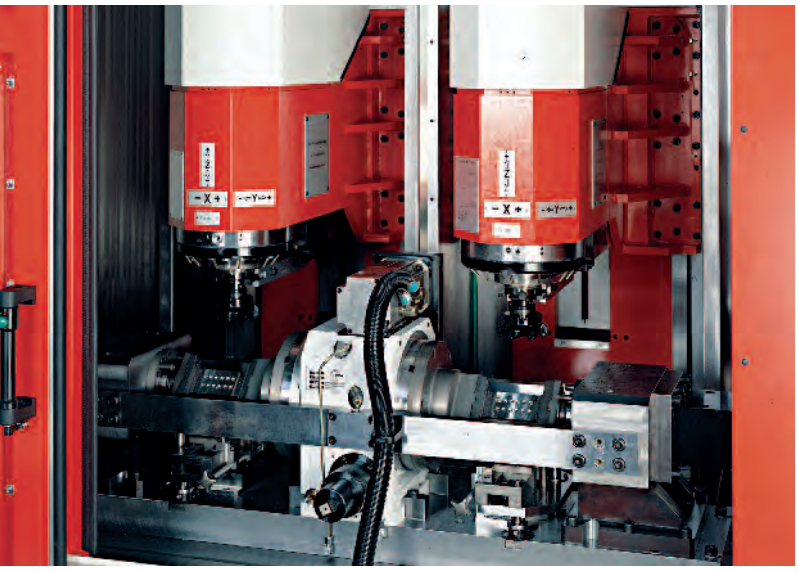
Working area X-axis	1,300 - 12,000 mm
Working area Y-axis	600 (800/1,000/1,200/1,400) mm
Working area Z-axis	700 (900) mm
Distance spindle nose/table	80 - 780 (80 - 980) mm
Machine table width	635 (835/1,035/1,235) mm
T-slots	18 H8
Spindle	SK 40 (HSK-A 63)
Speed	9,000 (12,000/15,000/18,000/24,000/42,000) 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 (60) mm
Tapping in steel	M22 (M30)
Milling capacity in steel	400 (500) cm^3/min
Tool magazine	36 (48 up to 200) pcs
Tool diameter, max.	70 (130) mm
Tool length, max.	340 (450) mm
Tool change time	approx. 2.5 sec
Chip-to-chip time	approx. 4.5 sec

Specifications valid for Y-axis=600 mm

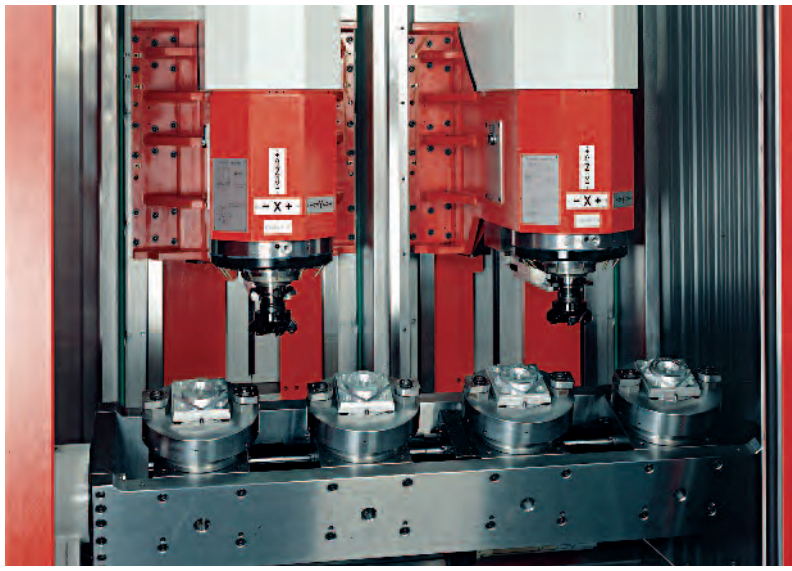
Traverse paths X-axis	**mm**	**1,300**	**2,000**	**3,000**	**4,000**	**5,000**	**up to 12,000**
Machine table length	mm	1,800	2,500	3,500	4,500	5,500	12,500
Twin table mach. max. vert.	mm	-	2x720	2x1,220	2x1,720	2x2,220	2x5,720
Machine length approx.	mm	4,910	5,870	7,150	8,460	9,740	18,700
Weight, approx.	t	7	8.7	9.9	11.1	12.3	24.5

Subject to technical changes

Double-spindle machining of identical work parts



Left-sided working area with clamping device

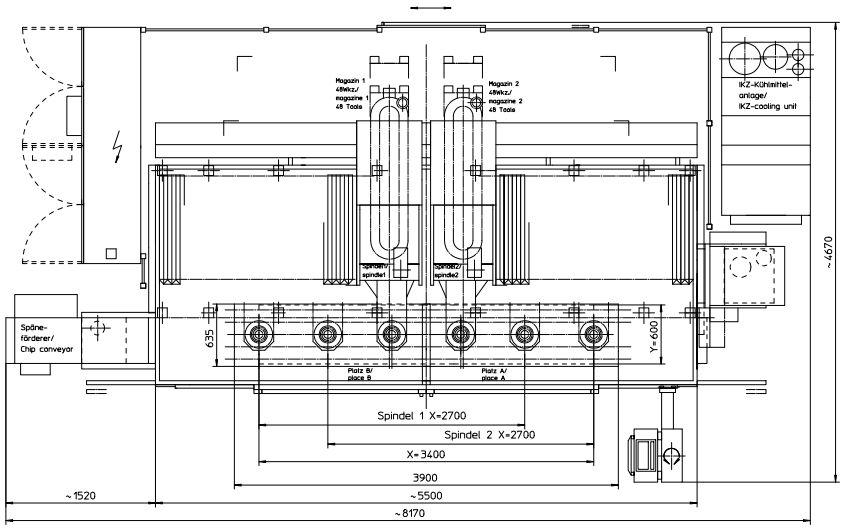


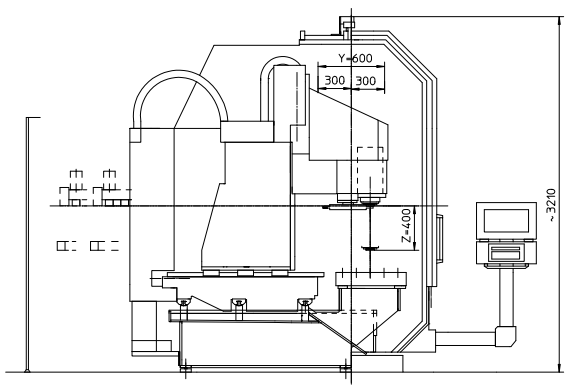
Right-sided working area with tilting table and clamping device

The machining center matec-30 L duo is a long-bed machine with two traveling columns. This concept allows various machining strategies: on one hand the double spindle machining of identical parts with tooling correction in 2 x 3 axes; on the other the independent simultaneous machining of one work part by means of both spindles. Integrated turning spindles, vertical or horizontal, transform matec-30 L duo into a double spindle mill/turn center.

Special features

- Two separate traveling columns for the adjustment of tool length, tool radius and clamping





matec-30 L duo

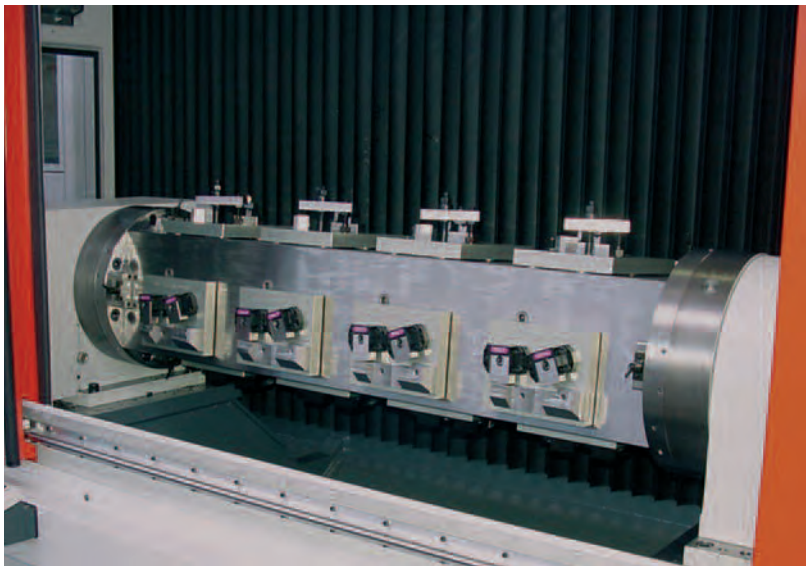
Specifications

Working area X-axis	3,550 mm
Working area Y-axis	600 mm
Working area Z-axis	700 mm
2 spindles, spindle distance	800 mm
Distance spindle nose/table	80 - 780 mm
Machine table size	3,500 x 635 mm
T-slots	5 x 18 H8 / D=125 mm
Spindle	SK 40 (HSK-A 63)
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 (48/100 with linear drive) 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) mm
Tool length, max.	340 mm
Tool change time	approx. 3.5 sec
Chip-to-chip time	approx. 6.5 sec
Machine weight	18 t

Subject to technical changes

Simultaneous machining of two voluminous and challenging work parts

Double spindle with tilting table

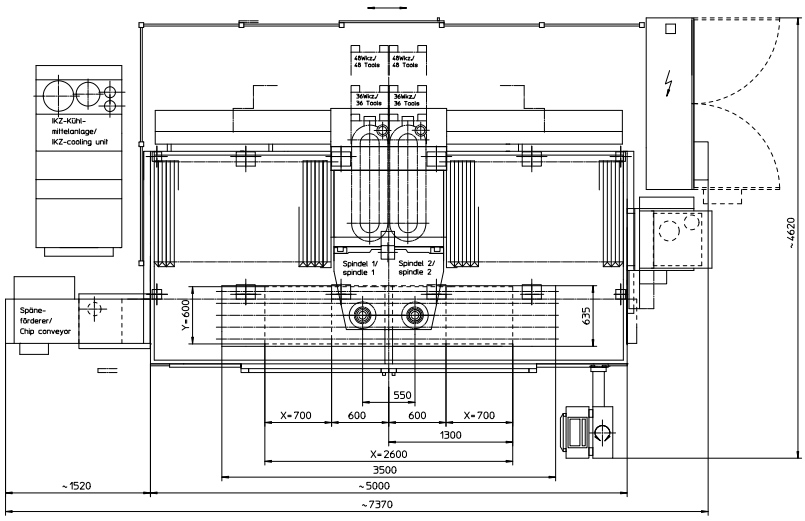


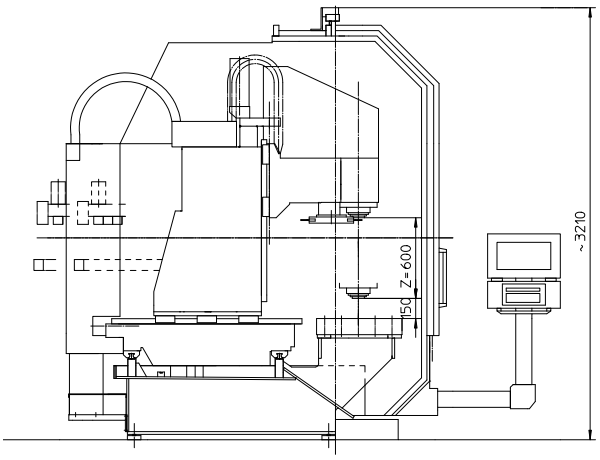
Tilting table with clamping device

matec-30 LD is a double spindle machining center, designed as a long-bed machine for twin table machining. It has been developed for the manufacturing of voluminous and challenging work parts and demanding materials. Its strength lies in the robust basic construction that possesses necessary power reserves to solve most difficult chipping tasks.

Special features

- 2 motor spindles, spindle distance 400 (550) mm. Right spindle adjustable ± 5 mm in Z-axis (opt.)
- Double production with only 30% extra costs





matec-30 LD

Specifications

Working area X-axis	2,600 mm
Working area Y-axis	600 mm
Working area Z-axis	600 mm
2 spindles, spindle distance	400 (550) mm
Distance spindle nose/table	150 - 750 mm
Machine table size	3,500 x 635 mm
T-slots	5 x 18 H8 / D=125 mm
Spindle	SK 40 (HSK-A 63)
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 with linear drive) 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) mm
Tool length, max.	340 mm
Tool change time	approx. 3.5 sec
Chip-to-chip time	approx. 6.5 sec
Machine weight	16 t

Subject to technical changes

Taper SK 50 - low-priced and suitable for difficult machining tasks

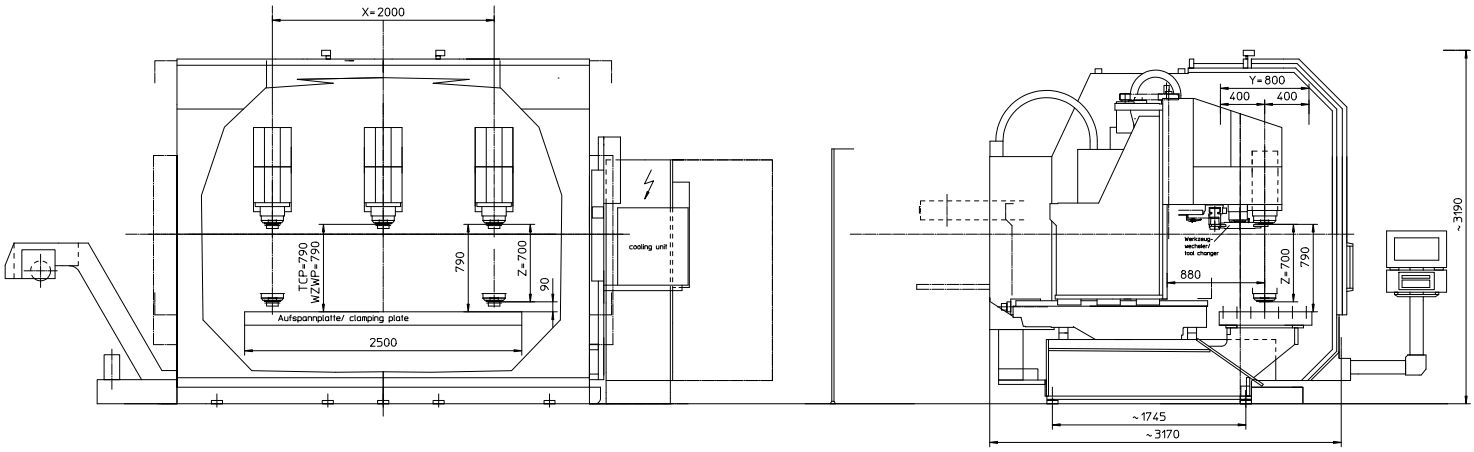
Working area with integrated rotary table
and mounted jaw chuck

Machine table with integrated rotary table
and mounted quick change pallet system

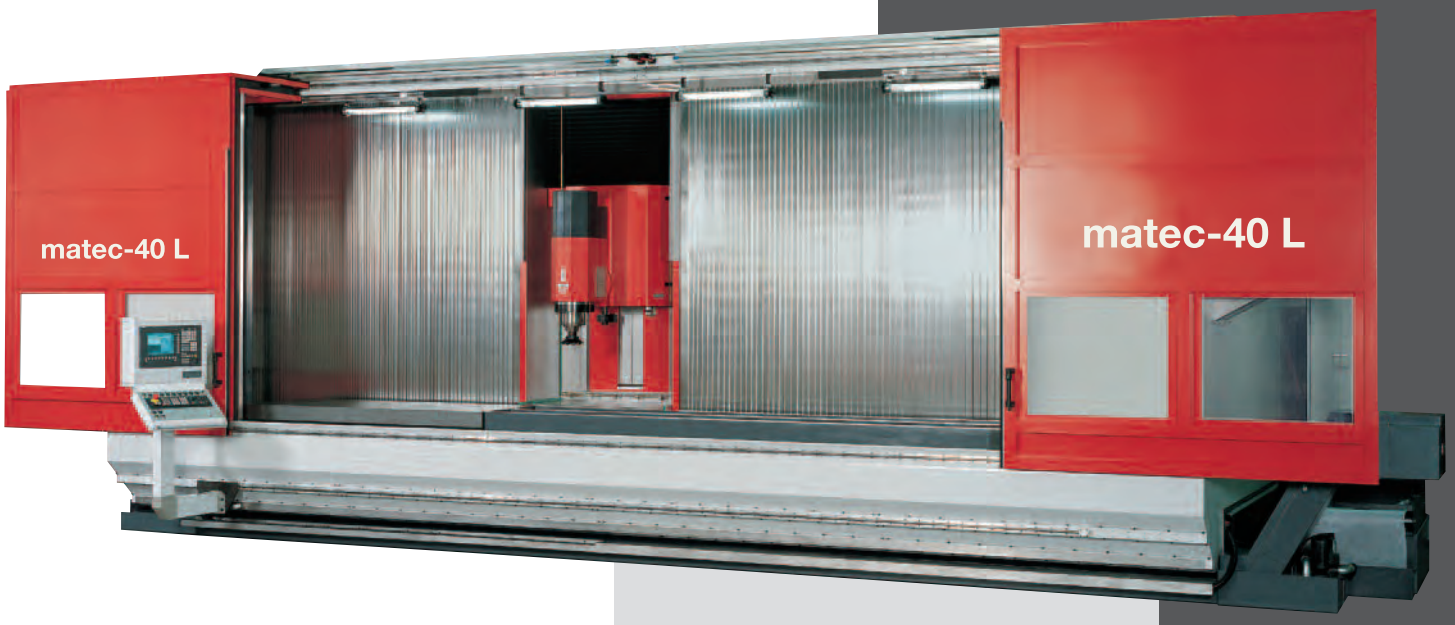
matec-40 L is based on matec-30 L principle and features the same characteristics in the range of speed, precision and flexibility. The robust basic construction, the tooling system SK 50/HSK-A 100 and a power capacity up to 68 kW convert this machine into a power package for heavy machining.

Special features

- Tool system SK 50/HSK-A 100
- Power capacity up to 68 kW



matec-40 L



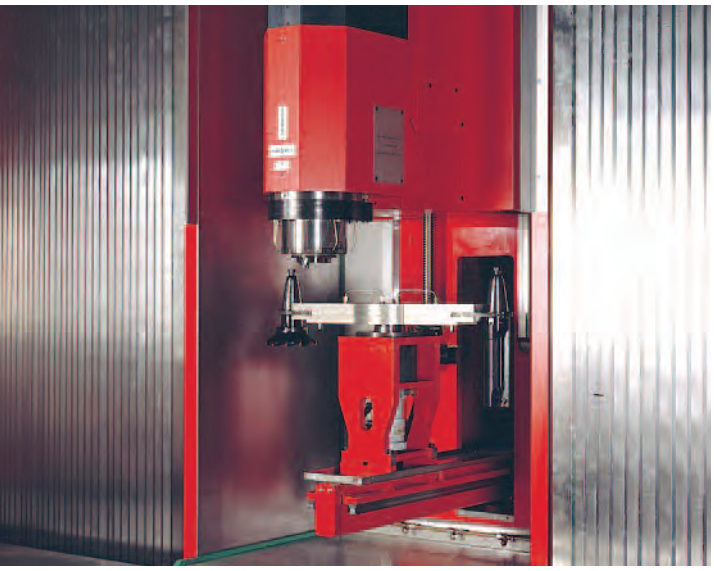
Specifications

Working area X-axis	2,000 - 12,000 mm
Working area Y-axis	800 (1,000/1,200) mm
Working area Z-axis	700 (900) mm
Distance spindle nose/table	100 - 800 (100-1,000) mm
Machine table width	835 (1,035/1,235) mm
T-slots	18 H8
Spindle	SK 50 (HSK-A 100)
Speed	8,000 (12,000) rpm
Power	44 (68) kW - 20% DC
Torque, max.	350 (460) Nm - 20 % DC
Rapid feed	30 (80 with linear drive) m/min
Drilling performance in steel	80 (100) mm
Tapping in steel	M30 (M36)
Milling capacity in steel	1,000 (1,100) cm^3/min
Tool magazine	40 (80/100) pcs
Tool diameter, max.	104 (200) mm
Tool length, max.	460 mm
Tool change time	approx. 8.5 sec
Chip-to-chip time	approx. 9.5 sec

Traverse paths X-axis	**mm**	**2,000**	**3,000**	**4,000**	**5,000**	**6,000** up to **12,000**
Machine table length	mm	2,500	3,500	4,500	5,500	6,500	12,500
Twin table mach. max. vert.	mm	2 x 500	2 x 1,000	2 x 1,500	2 x 2,000	2 x 2,500	2 x 5,500
Machine length approx.	mm	5,870	7,150	8,460	9,740	11,020	18,700
Weight, approx.	t	14	17	22	25	30	65

Subject to technical changes

Taper SK50 - Power for heavy machining



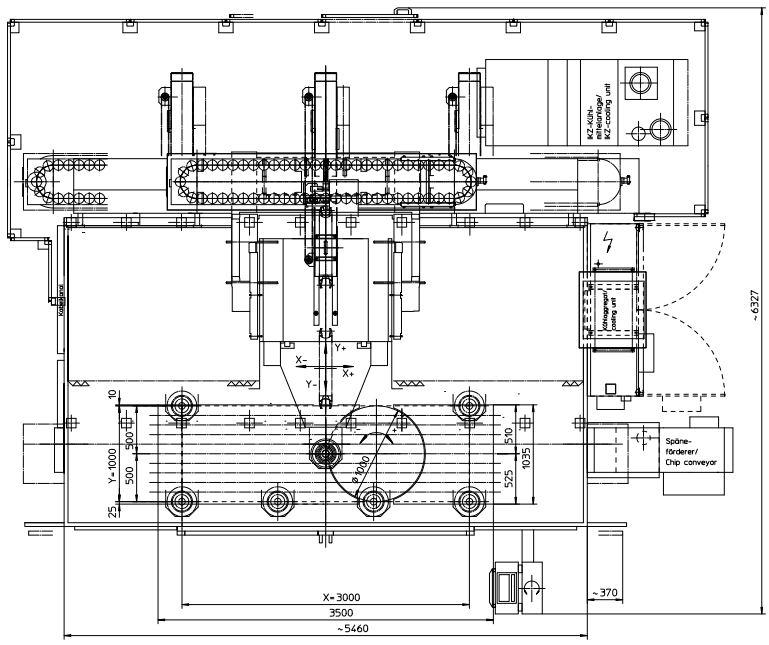
Tool changer

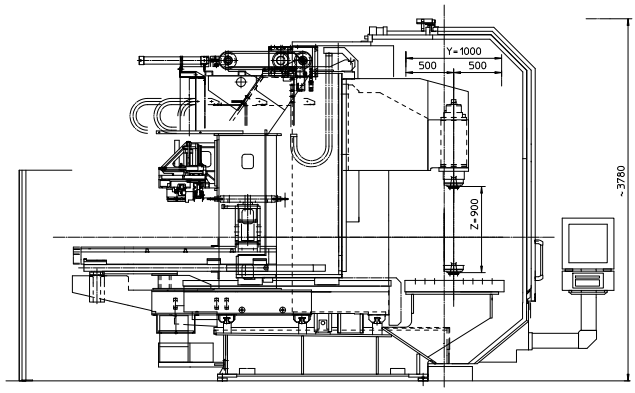
Tool magazine HSK-A 100 for 40 or 60 tools

The machining center matec-50 L is the largest and the most powerful machine of the L-series. Similar to matec-30 L and matec-40 L, matec-50 L possesses long traverse paths in all axes: X-axis up to 12,000 mm, Y-axis up to 1,400 mm and Z-axis up to 1,100 mm. A tool changer constructed especially for matec-50 L provides for quick and secure change of heavy tools.

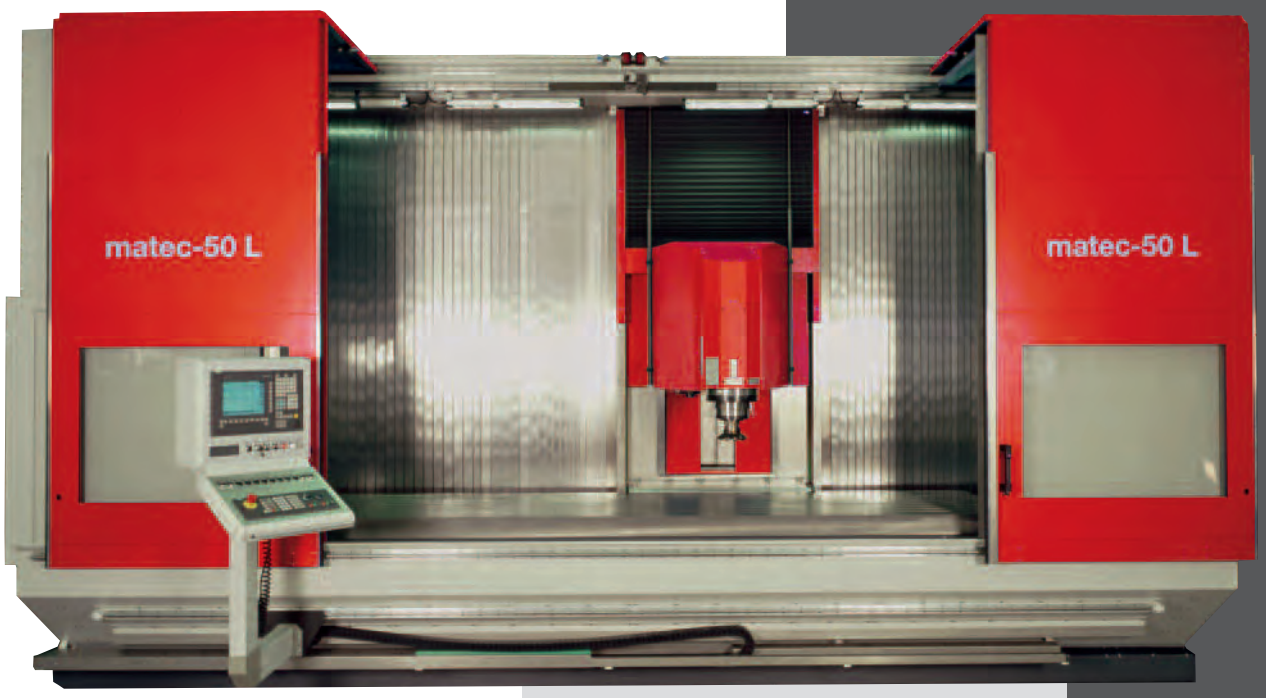
Special features

- Tool system SK 50/HSK-A 100
- Power capacity up to 68 kW





matec-50 L



Specifications

Working area X-axis	2,000 - 12,000 mm
Working area Y-axis	1,000 (1,200/1,400) mm
Working area Z-axis	900 (1,100) mm
Distance spindle nose/table	100-1,000 (100-1,200) mm
Machine table width	1,035 (1,235/1,435) mm
T-slots	18 H8
Spindle	SK 50 (HSK-A 100)
Speed	8,000 (12,000) rpm
Power	44 (68) kW - 20% DC
Torque, max.	350 (460) Nm - 20 % DC
Rapid feed	30 (40 with linear drive) m/min
Drilling performance in steel	80 (100) mm
Tapping in steel	M30 (M36)
Milling capacity in steel	1,000 (1,100) cm^3/min
Tool magazine	40 (60 up to 200) pcs
Tool diameter, max.	104 (200) mm
Tool length, max.	460 mm
Tool change time	approx. 8.5 sec
Chip-to-chip time	approx. 9.5 sec

Specifications valid for Y-axis=1,000 mm

Traverse paths X-axis	**mm**	**2,000**	**3,000**	**4,000**	**5,000**	**6,000** up to **12,000**
Machine table length	mm	2,500	3,500	4,500	5,500	6,500	12,500
Twin table mach. max. vert.	mm	2 x 500	2 x 1,000	2 x 1500	2 x 2,000	2 x 2,500	2 x 5,500
Machine length approx.	mm	5,870	7,150	8,460	9,740	11,020	18,700
Weight, approx.	t	24	32	39	46	53	95

Subject to technical changes

Traveling column series

HV-machines – Highly flexible for single and series producti

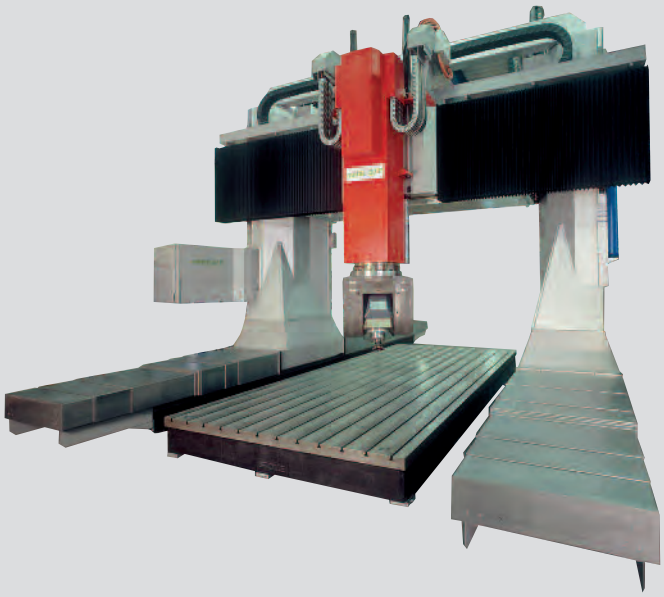
Traveling column series

L-machines – Highly flexible for single and series production

matec L 2000
matec-30 L
matec-30 L du
matec-30 LD
matec-40 L
matec-50 L

Gantry series

The specialists for the machining of voluminous and heavy w



Range of products

on

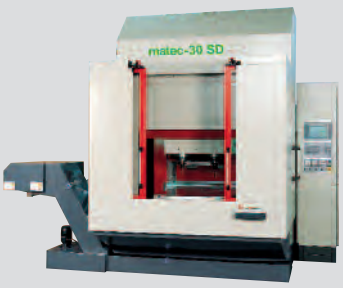
matec HV 2000
matec-30 HV
matec-30 HVK
matec-30 HVC

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

matec-40 HV
matec-50 HV
matec-50 HVU

Swivel table series

Highly productive machines for series production



matec-30 SH
matec-30 S
matec-30 SG
matec-30 SD
matec-30 SHV

ork parts

matec-30 P with motor spindle vertical
matec-30 P with 2-axis swivel head
matec-30 PB with 2-axis swivel head
matec-30 PBU with universal head
matec-40 P with 2-axis swivel head

matec-40 PB with 2-axis swivel head
matec-40 PBU with universal 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

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