

3-Axis Machining Centers

Successful in 3-Axis Machining with MATEC

Dimension and performance in detail

Version as 30HV | 40HV | 50HV

- **CNC-Controls**
Heidenhain | Siemens
- **Performance Classes**
SK40|HSK-A 63 and SK50|HSK-A 100
- **Traverse Paths**
X-Axis 1,300 - 12,000 mm
Y-Axis 600 - 1,330 mm
Z-Axis 700 - 1,350 mm
- **Speed Range**
9,000 - 42,000 rpm
- **Drive Power Motor Spindle**
16|30|68 kW
- **Torque**
100|191|460 Nm
- **Tool Change Systems**
Moving tool magazine | Additional external round tool storage with robot changer | Shuttle changer | Pick-up-magazine for angular heads, multi-spindle heads and oversized tools | Up to 250 tool places



Tradition and innovation

We improve well-established technology and realize new ideas. Peak values are not what we are aiming for, it's the perfect harmony among all components. Only optimal interaction guarantees a secure machining process at any point.

3-Axis Machining Centers with up to 6 Additional Axes

When designing our 3-axis machining centers, we did not compromise in terms of quality and precision. This is why we decided to take the proven design of our 5-axis machines as a basis for the HV series. Only the swivel head of the HV series has been replaced by a rigid spindle head.

The Alternative 5-Axis Version

Of course, with the 3-axis version and corresponding extensions also 5-sided machining can easily be realized. If it is the workpiece which is moving, we are generating a 5-axis simultaneous machining process by turning and/or swiveling.

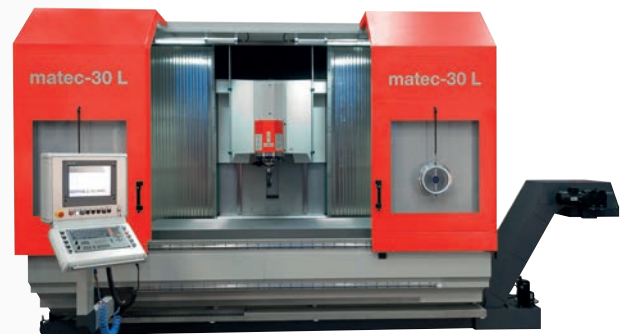
Series Production on „Standard Machines“

The rigid head has more advantages. For example, additional machining units resp. gripper modules for automation can be mounted on the headstock.

In the course of these equipments, the optimal manufacturing process goes far beyond traditional methods and generates huge profits. Important: The standard function of the machines is retained for other tasks without restrictions. **Advantage:** Quick process changeover.

Double Production

The 3-axis long bed version as double spindle machine with a spindle distance of 550 mm allows to simultaneously machine large workpieces. This applies to multiple clamping as well as to pendulum machining. The second spindle can automatically be corrected in the Z axis. This compensates for different tool lengths or height differences in the devices. **Advantage:** Doubled production at 30% additional costs.



It is your Choice!

MATEC 30L Turn/Mill Center

- Motor spindle 15,000 rpm with clamping for fine turning operations
- Rigid turning steel tool holder with automatic tool change for roughing tools. Version for rough mill-turning with interrupted cut
- Turning spindle A11 with tailstock
- Horizontal rotary table Ø 800/700 rpm

MATEC 30L Swiveling Table Version for Long Parts

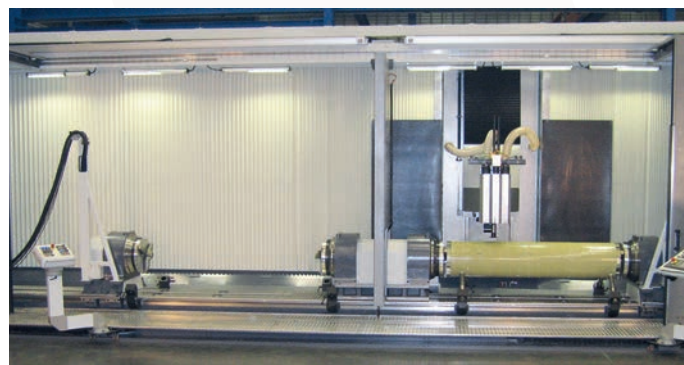
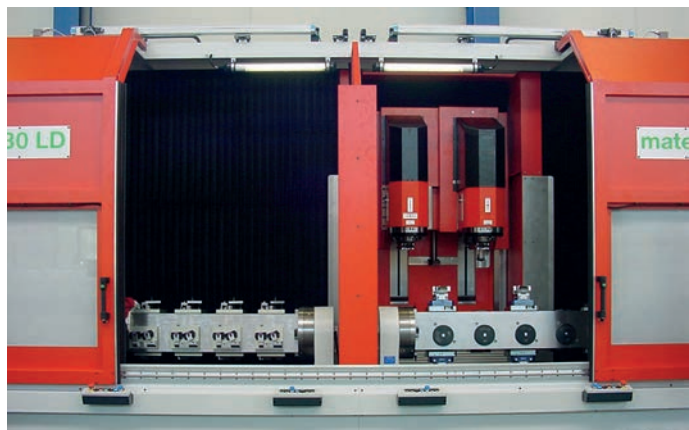
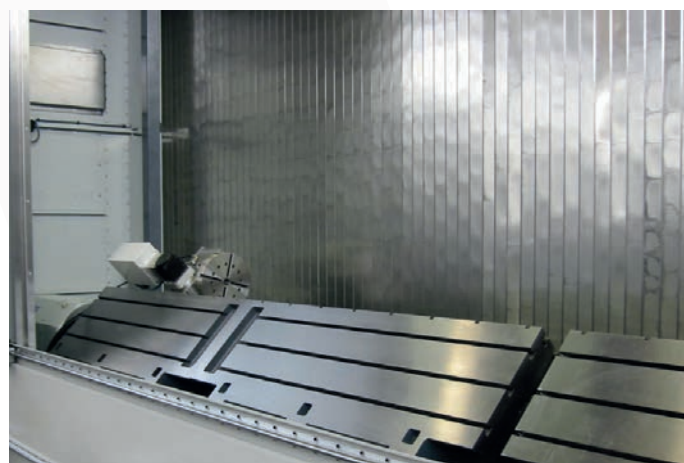
- 3-sided swiveling table for fast conversion. Also for pendulum machining
- Machine table from 2,000 to 8,000 mm
- Mounted CNC-rotary table Ø 320 mm

MATEC 30L Composite

- Special version for composite materials
- Long or pendulum machining up to 8,000 mm
- CNC rotary tables with counter bearing
- Machine tables which can be changed
- High-performance suction with automatic tracking of the suction nozzle directly on the milling tool

MATEC 30LD - Double Spindle - Long Bed

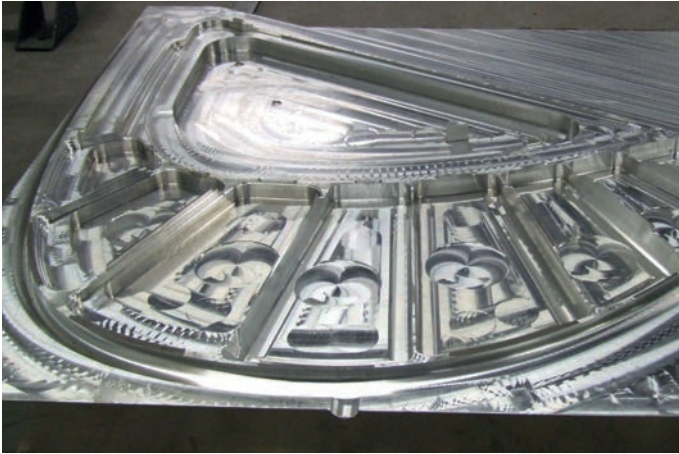
- X 2,600 mm, Y 600 mm, Z 600 mm
- 2 x 48 tool slots
- Spindle distance 400 or 550 mm
- 9,000 up to 42,000 rpm
- 30 kW / 191 Nm
- Z-axis correction, right spindle ± 5 mm



MATEC
GmbH

Anderson Group

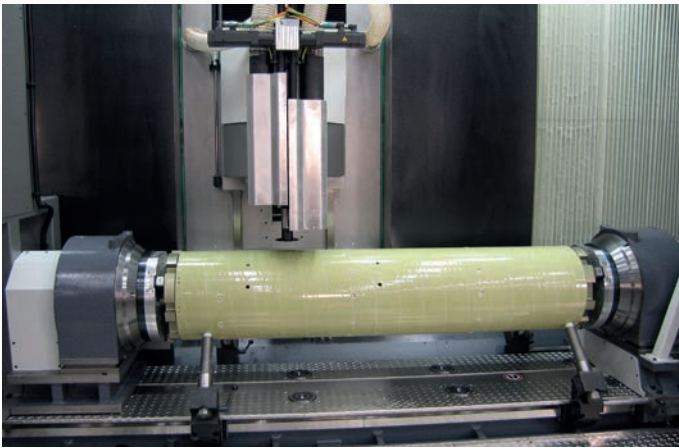
MATEC - at Home in all Industries



Aircraft Industry



Machining of Profiles | Engineering



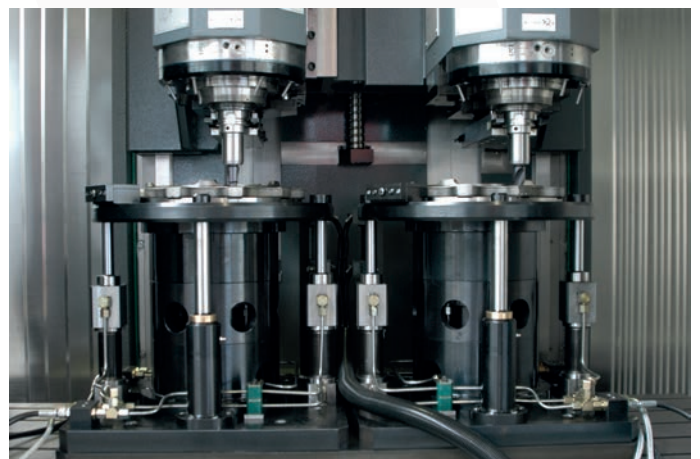
Chemical Industry



Supply Industry



Double spindle: manufacturing of truck wheel hubs



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5-Axis Machining Centers

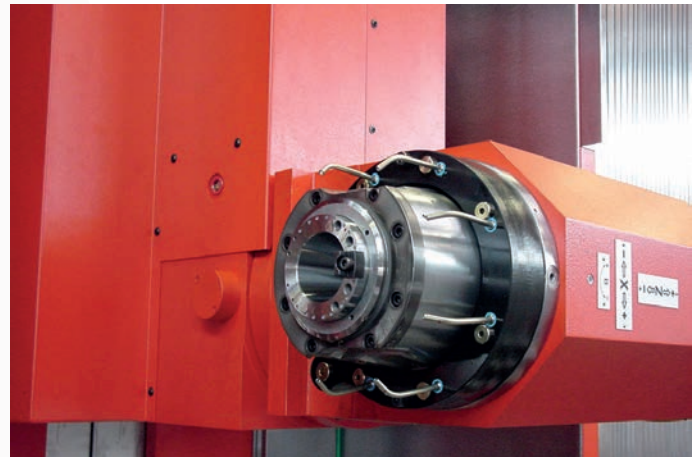
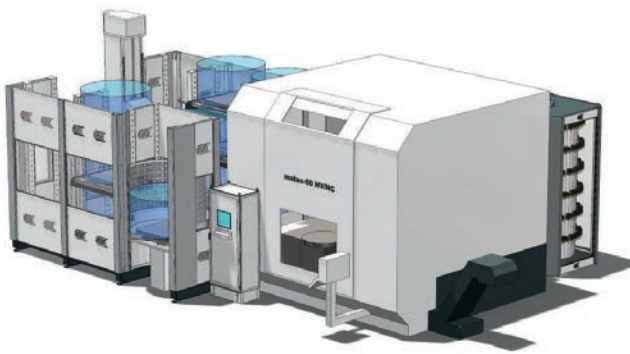
Unique in Versatility



Dimension and Performance in Detail

Version as 30HV | 40HV | 50HV

- **CNC-Controls**
Heidenhain | Siemens
- **Performance Classes**
SK40|HSK-A 63 and SK50|HSK-A 100
- **Traverse Paths**
X-Axis 1,300 - 12,000 mm
Y-Axis 600 - 1,400 mm
Z-Axis 800 - 1,300 mm
- **Rotary Head**
Swivel angle $\pm 105^\circ$ continuously
Torque
unclamped/clamped: 2,400|4,200 Nm
Option: Cyclo gear unclamped 5,000 Nm
- **Speed Range**
8,000 - 42,000rpm
- **Power Motor Spindle**
16|30|68 kW
- **Torque**
100|191|530 Nm
- **Tool Change Systems**
Double gripper | Shuttle | Shuttle with side magazine |
Side pick-up | Magazine according to customer
requirements up to 500 tool places



Tradition and innovation

We improve well-established technology and realize new ideas. Peak values are not what we are aiming for, it's the perfect harmony among all components. Only optimal interaction guarantees a secure machining process at any point.

MATEC
GmbH

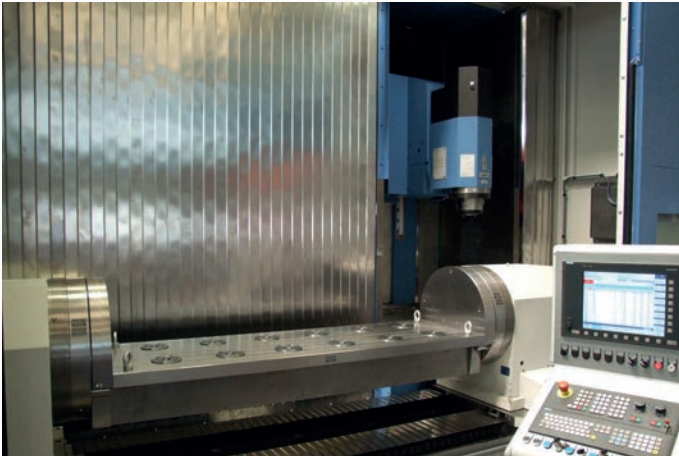
It is your Choice!



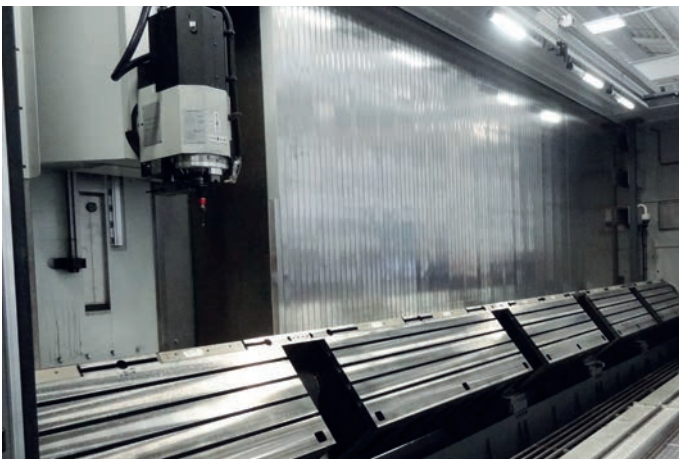
Multi-functional clamping devices on CNC rotary table and counter bearing. Multi-side machining in one clamping position.



Rotary table | Counter bearing slidable on CNC-axis | Bridge with zero point clamping system



3-sided swivel table | Length up to 8,000 mm

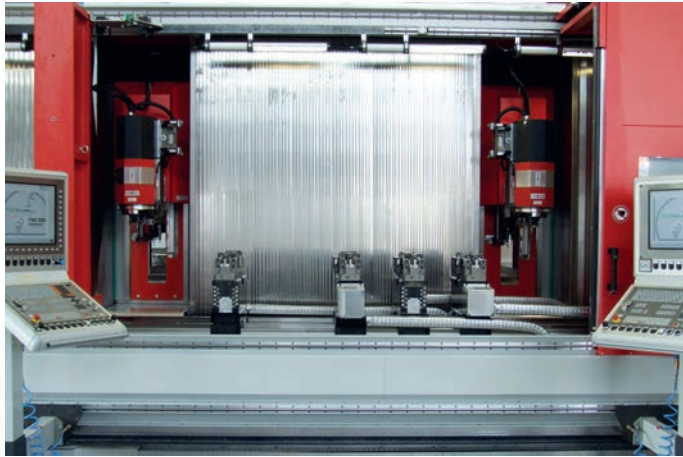


Swivel tables as modular system in innovative design

A changeover process in seconds, even with completely different workpieces, is the result of design features combined in a perfect way. Our ideas, your profit!

Talent for Combination

Standard modules and revolutionary combinations of machine and clamping systems reduce the unit costs considerably.



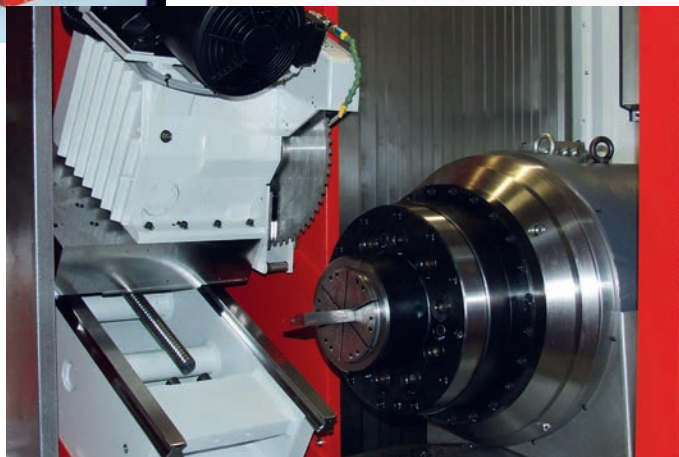
Simultaneous machining

Simultaneous machining with two separately operating swivel head units on the same workpiece. Automatic conversion with infinitely positionable clamping systems.

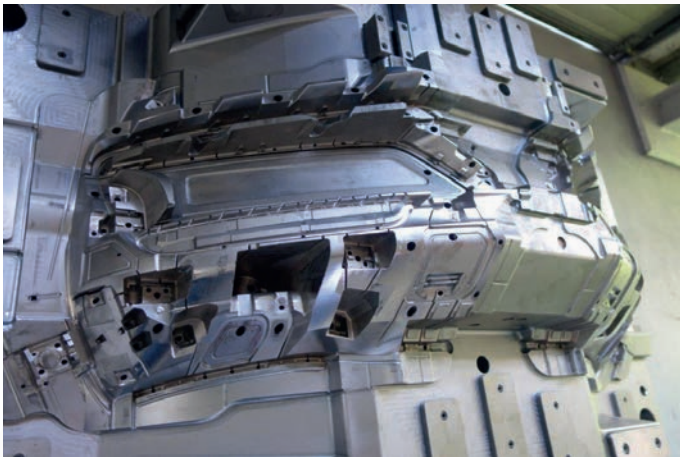


6-sided machining from the bar

- 9-axis swivel head machine
- Bar passage up to Ø 120 mm
- HSC saw unit, saw Ø 480 mm
- CNC rotary table with U-axis
- Tailstock
- Automatic unloading



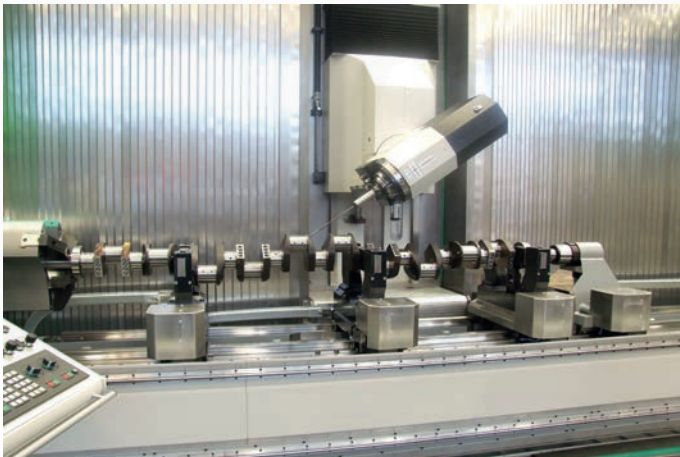
MATEC - at Home in all Industries



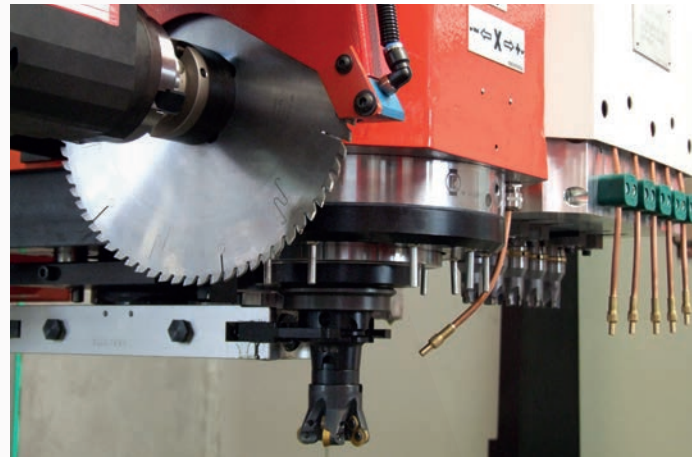
Mold and Die



Construction Machinery



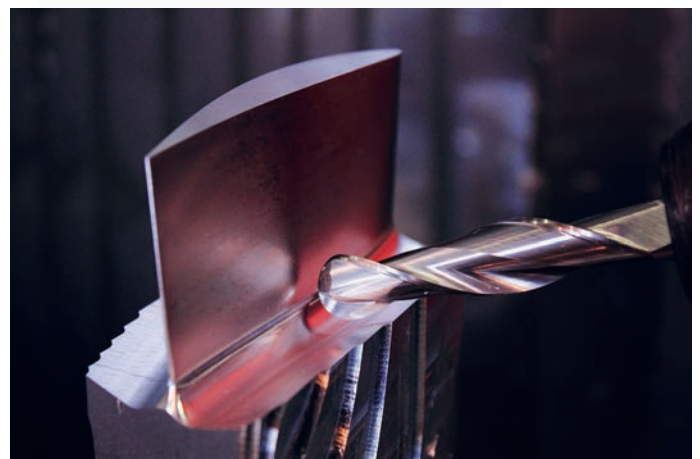
Automobile Industry



Machining of Profiles



Wind Energy



Aerospace

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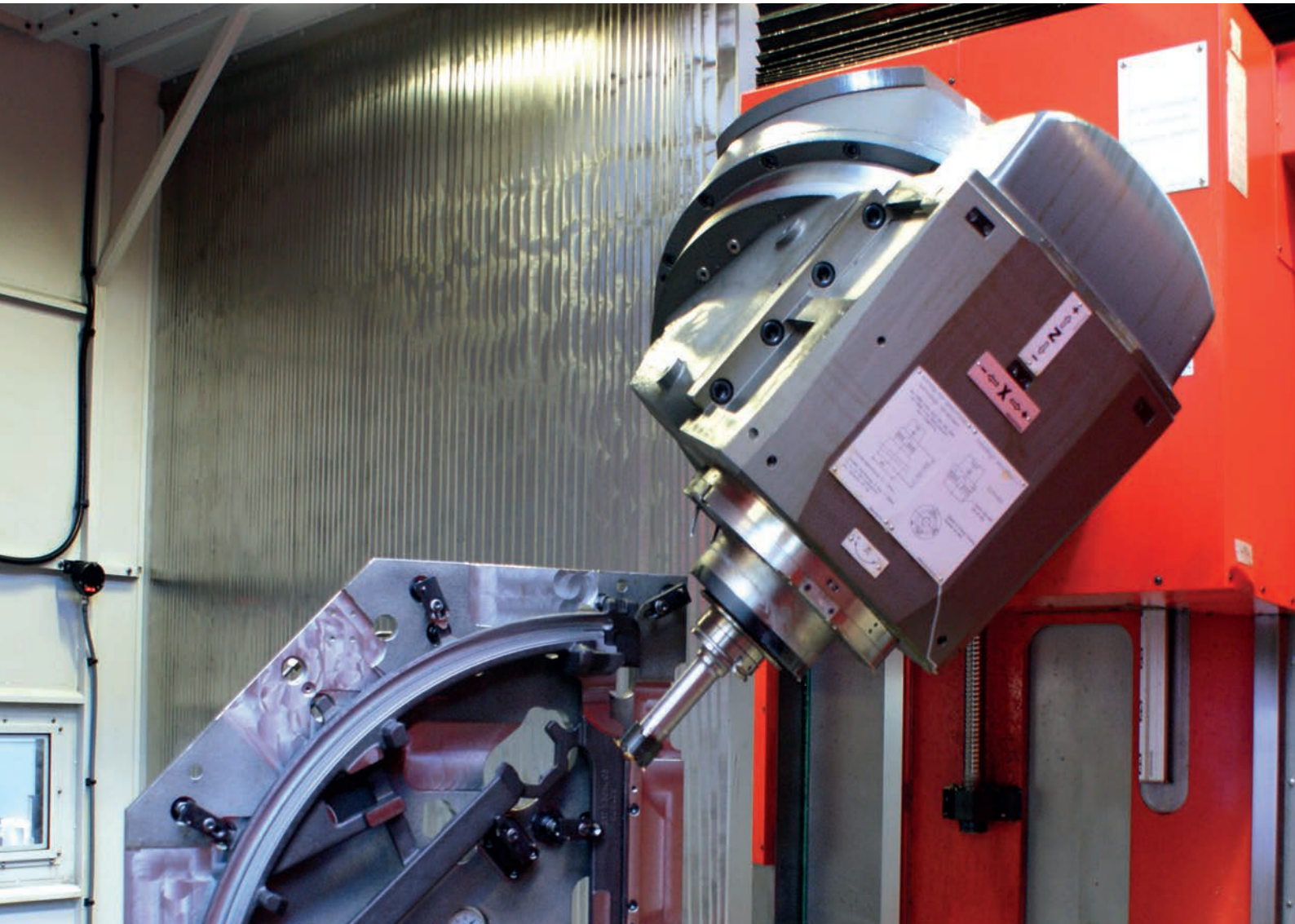
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6-Axis Machining Centers

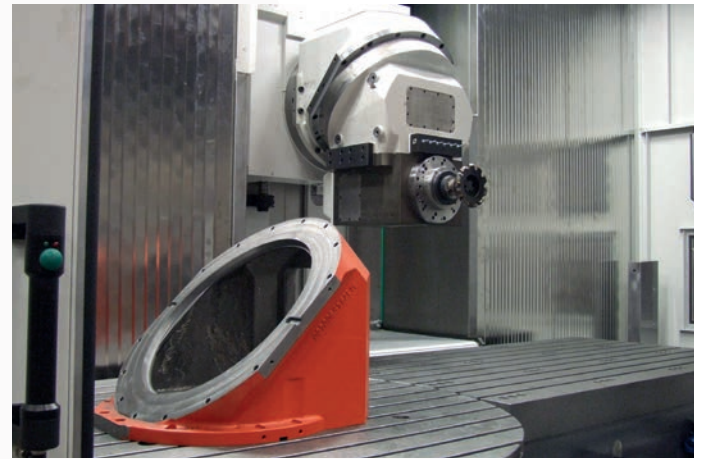
Versatility in Perfection



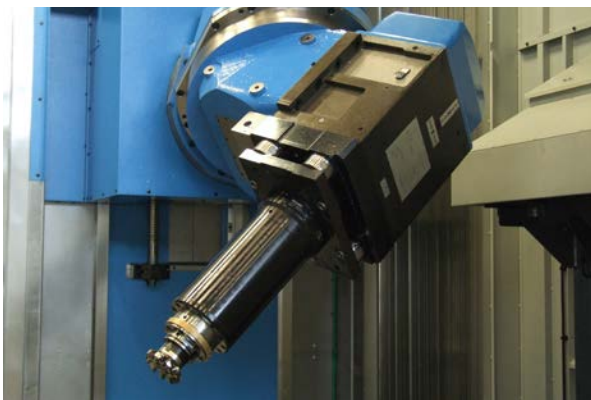
Dimension and Performance in Detail

Version as 30HVU | 50HVU

- **CNC-Controls**
Heidenhain | Siemens
- **Performance Classes**
SK40|HSK-A 63 and SK50|HSK-A 100
- **Traverse Paths**
X-Axis 2,000 - 8,300 mm
Y-Axis 1,070|1,400 mm
Z-Axis 1,100|1,300|1,500|1,800 mm
- **2-Axis Universal Head**
Swivel angle $\pm 180^\circ$ continuously
Direct measuring system in all axes
- **Speed Range**
8,000 - 42,000 rpm
- **Power Range Motor Spindle**
16|30|50 kW
- **Torque**
100|191|530 Nm
- **Tool Change Systems**
Double gripper | Shuttle | Shuttle with additional magazine | Side Pick-up | Customized magazines up to 500 tool slots
- **Rotary Tables**
Integrated in the machine table up to $\varnothing 2,200$ mm



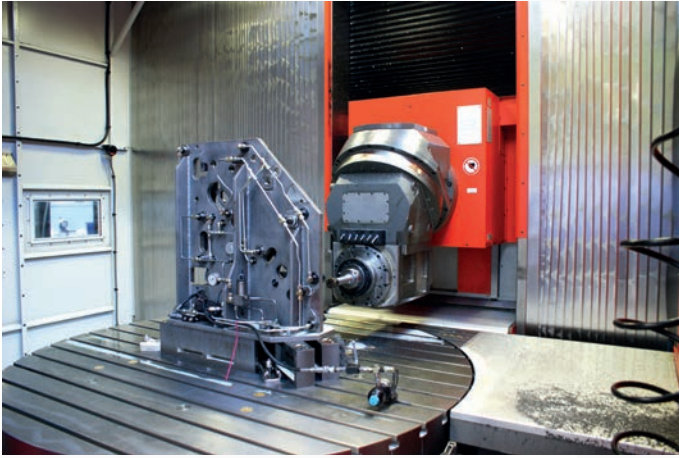
2-axis Universal Head
Pick-Up Milling Spindle



New ways of industrial production

There are unlimited possibilities to set your own accents in production. Convenient means of production are a condition. You, as the user, are the driving force for us. We contribute ideas and experience to assist you on your way to profitable manufacturing processes. And the HVU series is the perfect match.

Future-Oriented Production Solutions from a Single Source



6-axis simultaneous milling
of Complex Cams



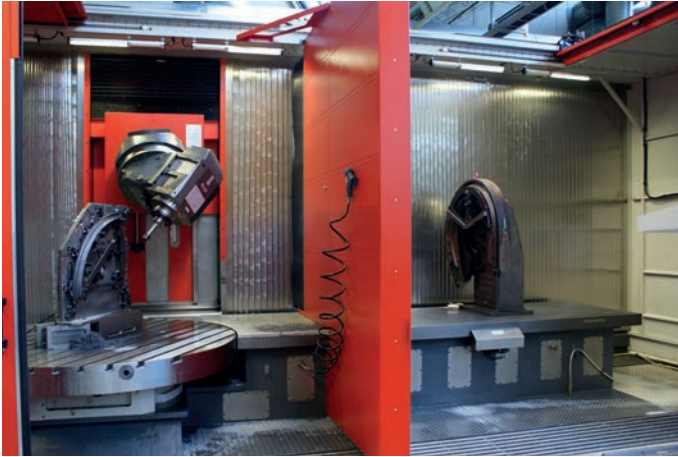
5-sided machining on the rotary table with workpieces
up to 2,300 mm length by pendulum machining



Variant with large rotary table and pick-up milling spindle
to dive into large housings

A Vision Becoming Reality

Core Competencies in Production Solutions



Version with two working areas
6th axis rotary table Ø 2,200 mm

Vertical rotary table with turning
function in the right working area.



Machining of 3D-Shapes

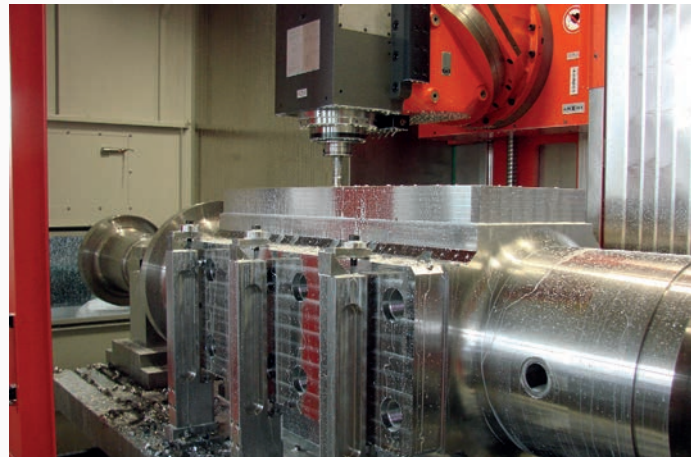


Turn/Mill Center with two rotary tables in pendulum
process

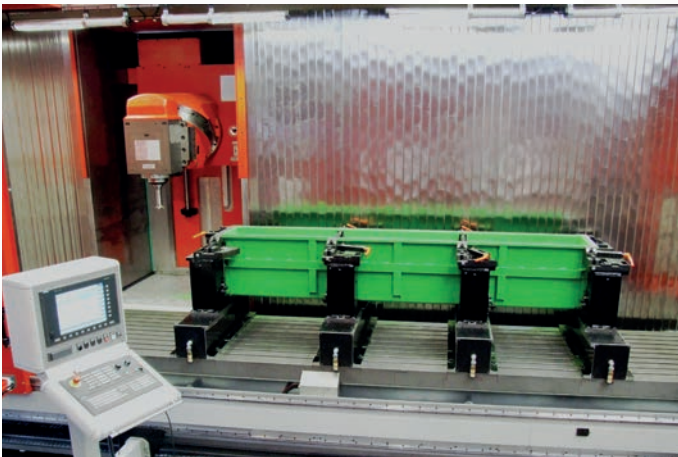
MATEC - at Home in all Industries



Packaging Machines: 90 % machining of stainless steel | MATEC 50HVV



Manufacturing of Heavy-Duty Machines: Crushing rolls | Workpiece weight 4,000 kg



Manufacturing of Big Engines: Oil pans of motors



Automobile Industry: Axis machining



Tool and Mould Making: Machine table with additional vertical clamping surface

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Gantry Machines

Excellent production of Large Parts

Dimension and Performance in Detail

Version as 30P/30PB | 40P/40PB | 50P | 30PP

- **CNC-Controls**

Heidenhain | Siemens

- **Performance Classes**

SK40|HSK-A 63 and SK50|HSK-A 100

- **Traverse Paths**

X-Axis 3,000 - 12,000 mm

Y-Axis 2,500 - 5,800 mm

Z-Axis 1,100 - 1,800 mm

- **2-Axis Fork Head**

continuously in both axes

simultaneously swiveling

Clamping of both axes by programme

- **Speed Range**

8,000 - 42,000 rpm

- **Power Range Motor Spindle**

16|30|50|68|90 kW

- **Torque**

100|191|530|575 Nm

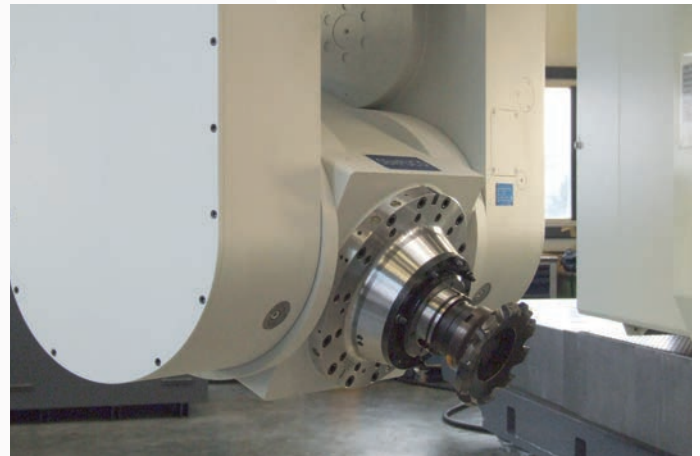
- **Tool Change Systems**

Tool magazines moving in X-axis | External

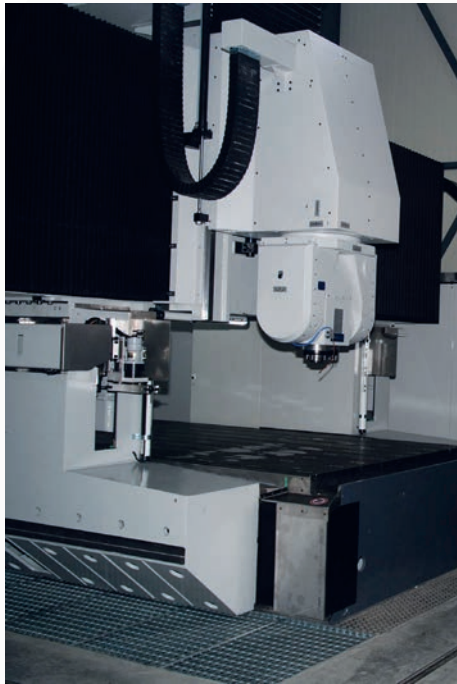
round storage for tools with change robot |

Pick-up magazine for angle heads | Multi spindle

heads and oversized tools.

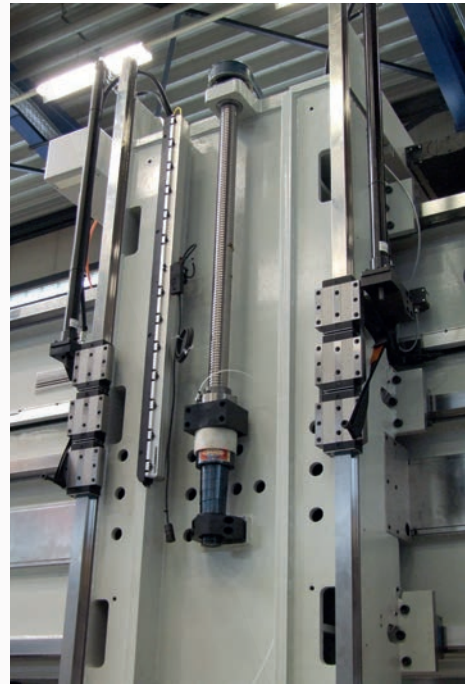


MATEC Gantry Machines, Superior Milling Solutions



In their combination four essential design features guarantee a perfect result in terms of precision and surface quality on the workpiece.

Z-axis as carriage unit: i.e. constant distance to the guide in each Z-axis position. Many conventional Z-axis systems become more unstable with every millimeter of extension stroke.

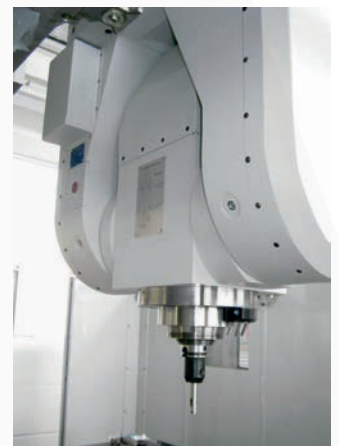


The gantry cross-section is significantly larger in the diagonal than the travel of the Z-axis. Thereby deformations due to bending and torsion are reduced to barely measurable values.

Portal beam with three Y-guides. Guide track distance is greater than the Z-axis stroke. This design transfers forces from the milling process directly into the static components of the machine. A vital effect in terms of precision.



The **2-axis fork head** has been designed for being used without compromise in its specific performance class. The fork head is the most stressed component of the machine. Stable bearings, electronically controlled movements and precise mechanical processes are guaranteed to succeed.



It is your Choice



MATEC 30P | 40 P

Ergonomic table variant
perfectly suitable for flat workpieces



MATEC 30PB | 40PB | 50P

Machine table/clamping surface on hall floor level | Fully
accessible | Profitable for high and heavy workpieces



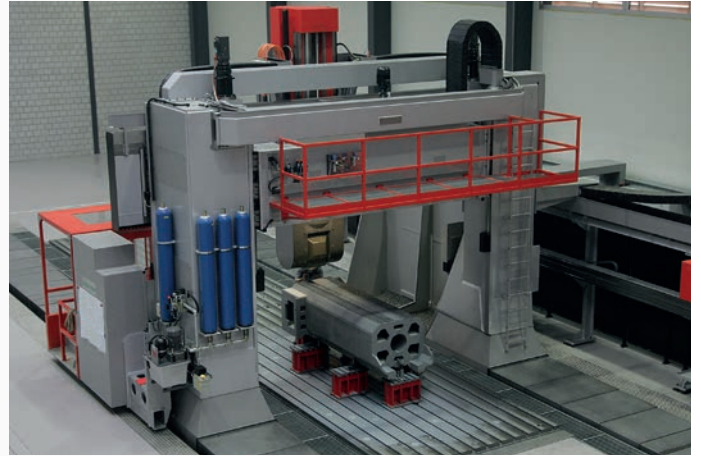
MATEC 30PP

Variant with moving table and stationary portal | Load-
dependent axis dynamics | Optional with pallet changer -
Pallett: 2,000x2,000 | 3,000x2,000

MATEC - at Home in Large Parts Machining



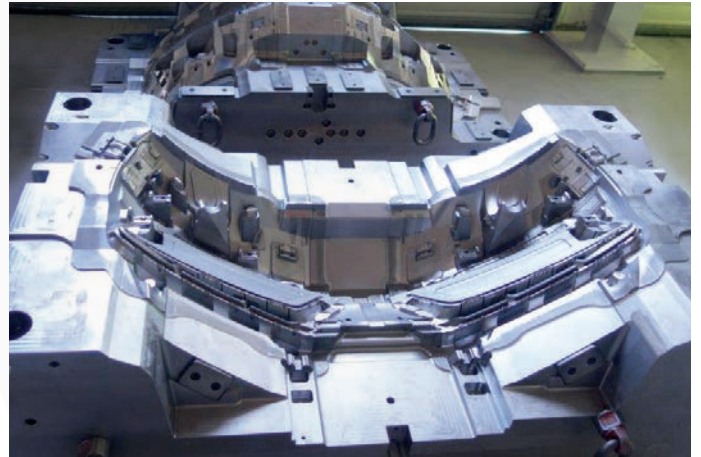
Aerospace



Engineering



Mould



Mould



Printing Industry



Medical Engineering

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