

WORLD-WIDE PARTNER IN FORWARD
LOOKING PRODUCTION TECHNIQUES



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BA W06
BA W04



Horizontal machining.

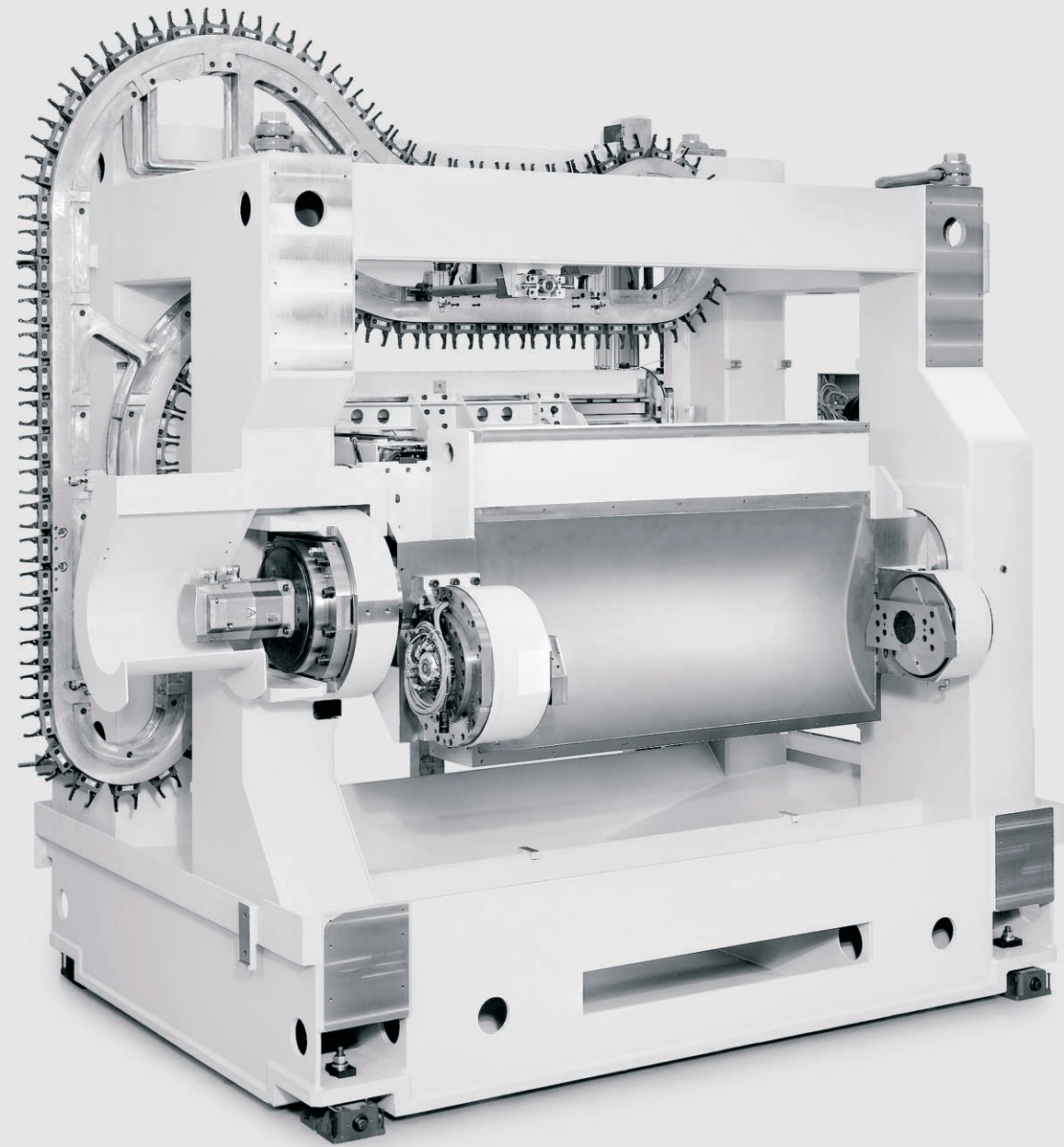
- Two machine sizes.
- One or two horizontal spindles.
- Tailored for 4- and 5-axes machining of non-ferrous work pieces and processes with a high content of non-cutting time.
- Linear motors in X, Y and Z-axis; highly dynamic for optimum chip removal.
- Double swivel trunnion with two direct-drive rotary axes holding the fixture bridges. Simultaneous loading/unloading while machining.

	BA W04 -12	BA W05 -12
One-spindle		
Travel path X, Y, Z	750 x 500 x 425 mm	1150 x 600 x 500 mm
Rapid speed	100 m/min	100 m/min
Acceleration	14 – 22 m/s ²	10 – 20 m/s ²
Work spindle	35 kW	35 kW
Chip-to-chip time	< 2,5 s	< 2,75 s

	BA W04 -22	BA W05 -22
Two-spindle		
Travel path X, Y, Z	400 x 500 x 425 mm	600 x 600 x 500 mm
Spindle distance	400 mm	600 mm
Rapid speed	100 m/min	100 m/min
Acceleration	14 – 22 m/s ²	10 – 20 m/s ²
Work spindle	2 x 35 kW	2 x 35 kW
Chip-to-chip time	< 2,5 s	< 2,75 s

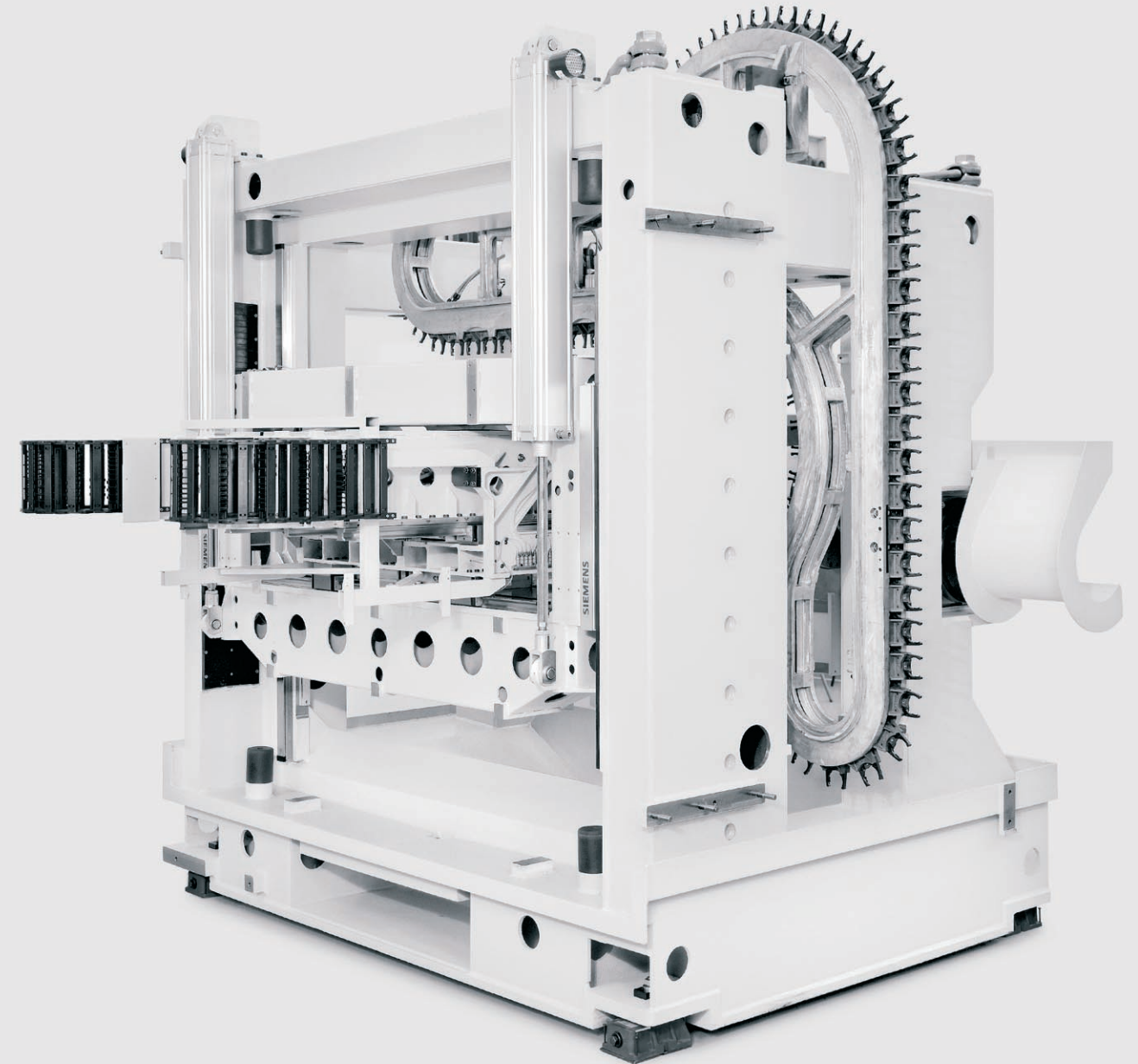


Optimum flow of force: The Monoblock.



- Easy to align with four levelling wedges.
- Easy to move by four accessible lift points.
- Machine ships as one piece.
- Most compact machine layout.

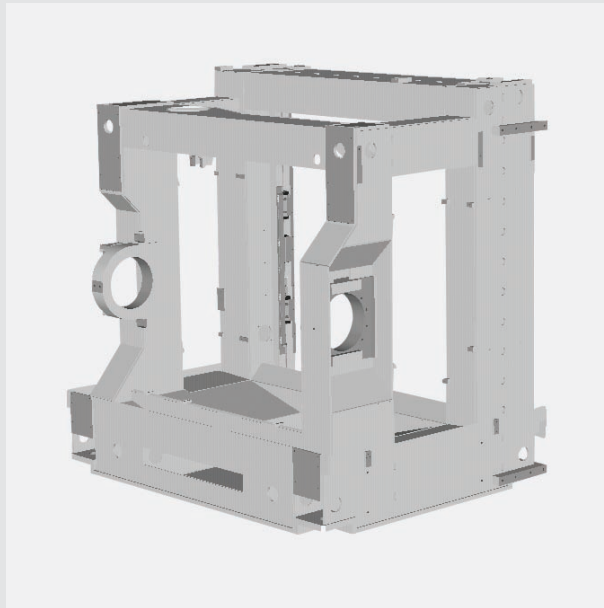
Always in balance.



- Gantry drive on Y-axis to compensate off-centre loads; two separate feed drives with direct, absolute measuring scales.
- Self sustained buffering of pneumatic power for Y-axis counter balance.
- Safety feature: with power-off two brakes will stop the Y-axis move.
- Easy access to 3-axes unit from the rear.



The Monoblock.



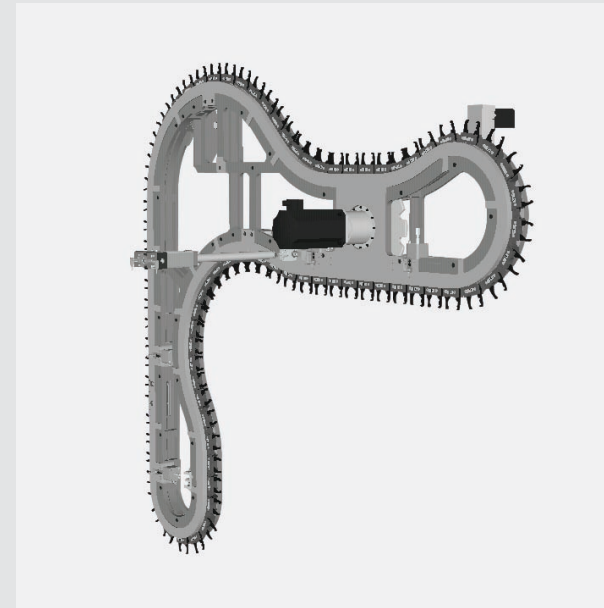
- Optimal flow of force between 3-axes machining unit and work piece.
- SW patent.
- Maximum integration: machine bed, 3-axis machining unit, fixtures, tool chain, auxiliary power supply units and interface for overhead gantry loader within minimum envelope.

The double swivel trunnion.



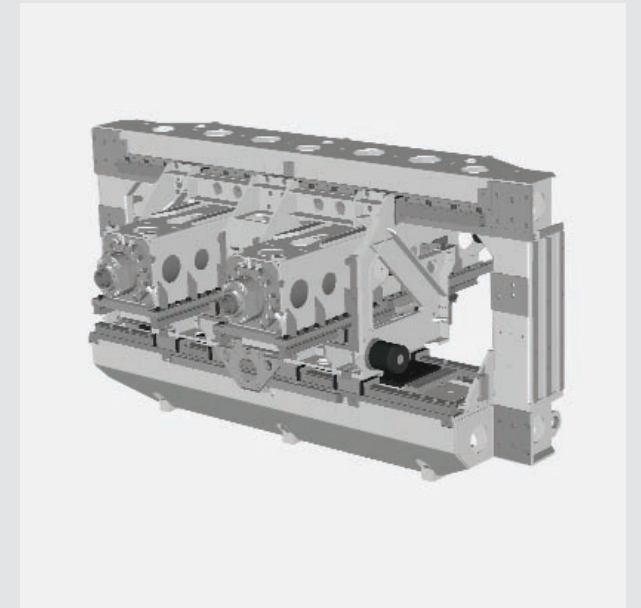
- Hydraulically locked at both ends.
- Two integrated rotary axes with direct, absolute measuring system and safety clamping.
- Hydraulic/pneumatic power through max. 2 x 10 lines for fixture actuation.

The tool storage.

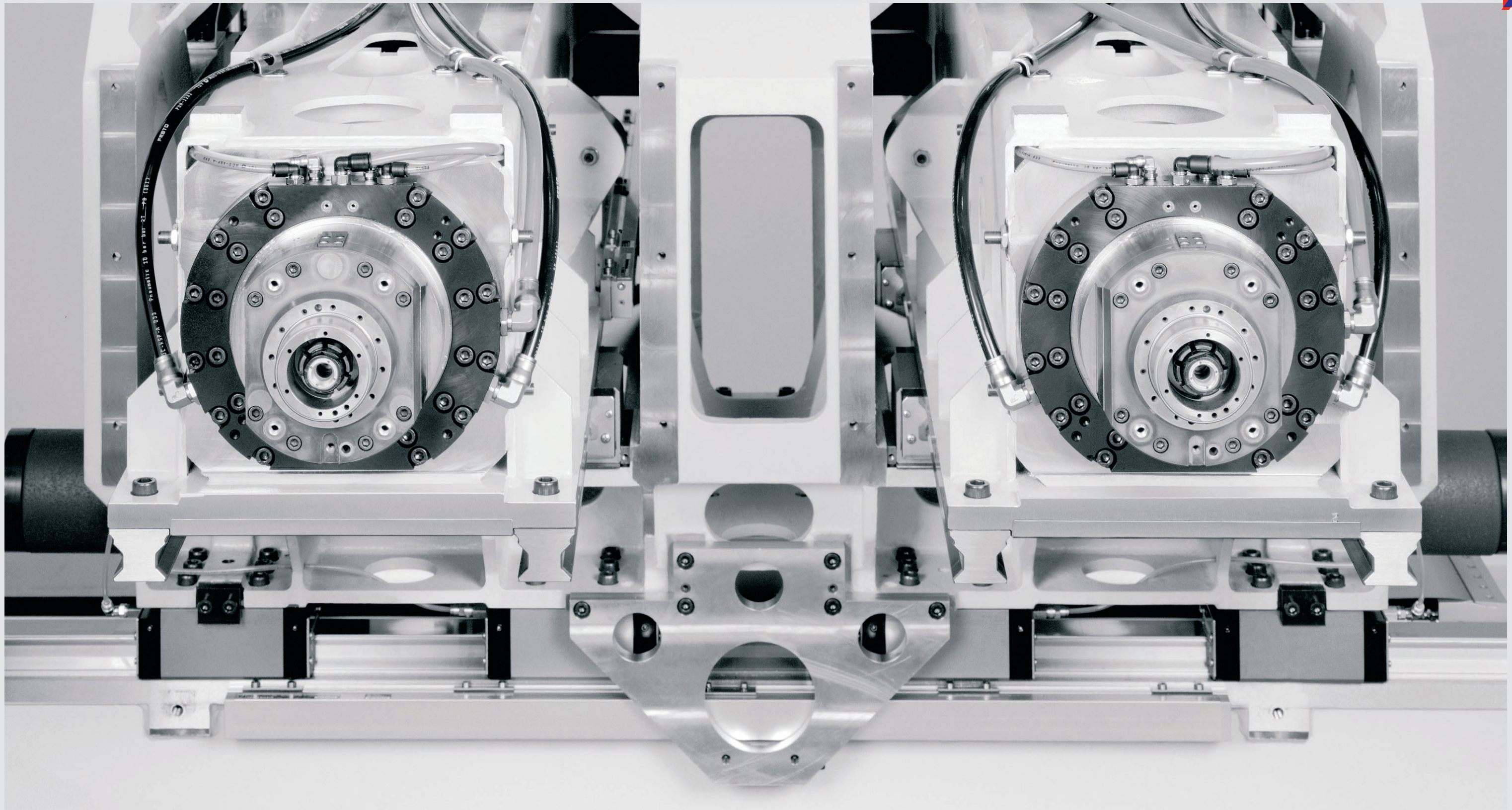


- Pick-up style tool change.
- Slotted, link-driven tool chain.
- Controlled tool grippers.
- Collision protection for Z-movement to protect spindles, chain and tools.

The 3-axes unit.



- Frame design as light weight steel construction.
- Linear motors with direct, absolute scales:
 - Wear free.
 - Highly dynamic; high acc./dec.; high gains.
 - Low noise emission.

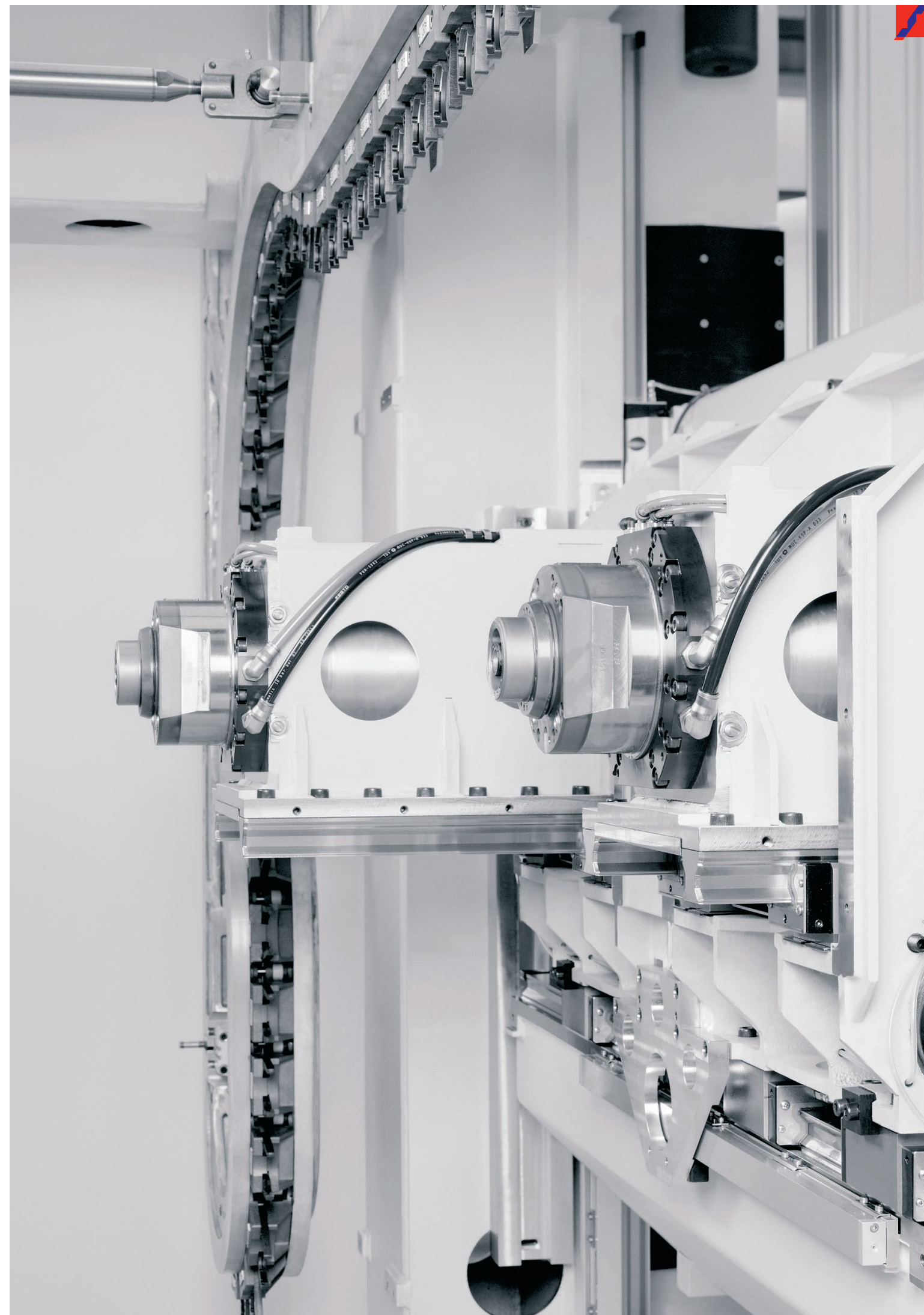


The power unit.

- Two liquid cooled synchronous motor spindles with 2 x 35 kW power
- Speed range: 1 – 17.500 rpm
- Ramp-up time to n_{max} < 0,7 sec
- Torque max. 2 x 80 Nm
- Minimum oil lubrication
- External and through-spindle coolant or oil mist for dry cutting
- Plane face contact monitoring
- Tool holder: HSK A63 (DIN 69893)

Flexible Manufacturing.

- Two independent Z-axes.
- Electronically synchronized to minimize cycle time.
- Asynchronous to maximize precision and enable offsets.

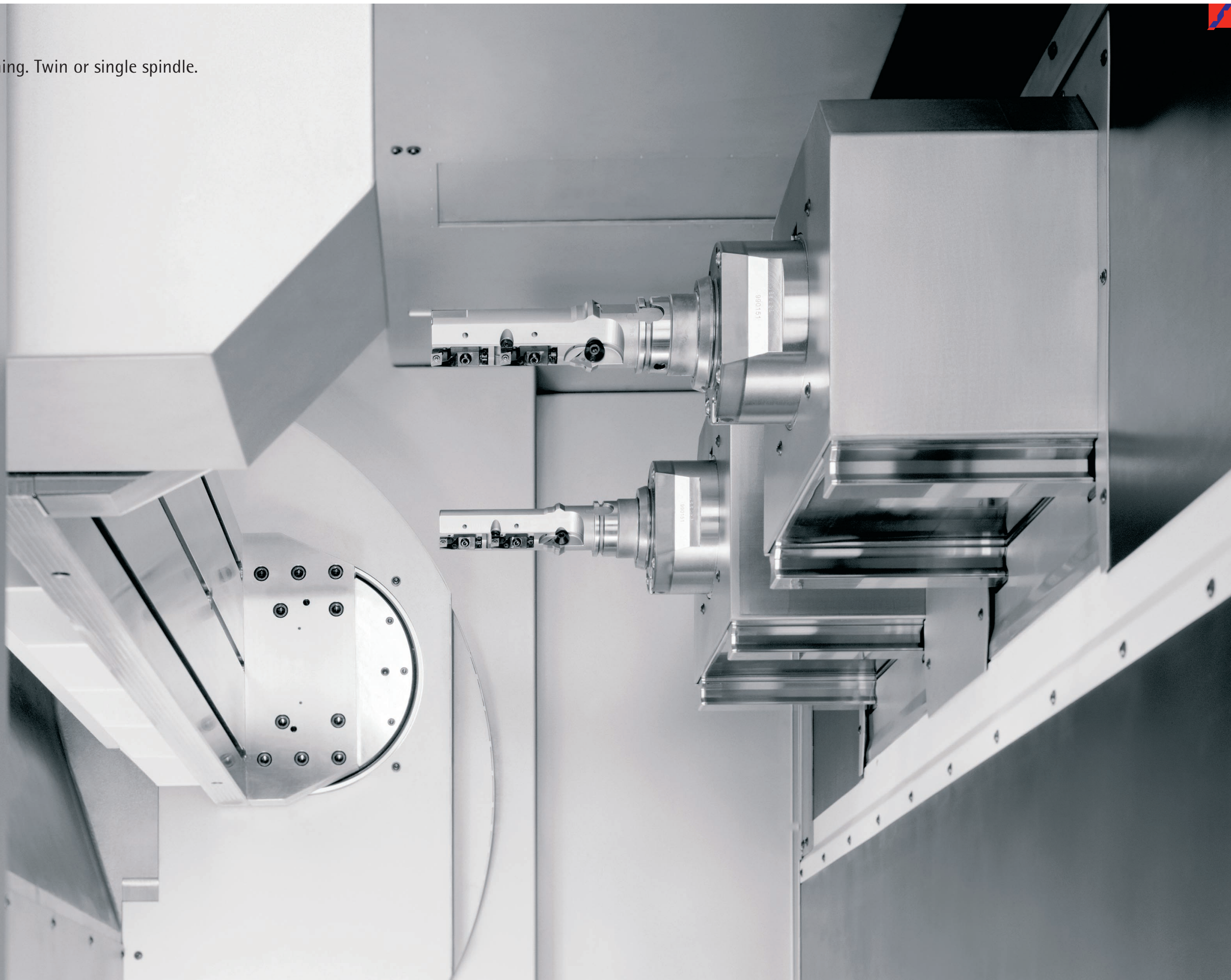




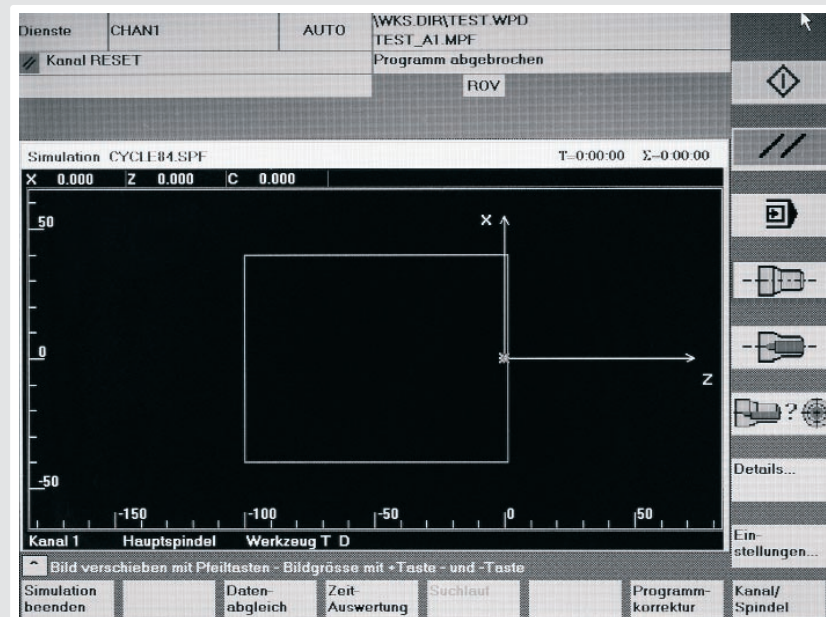
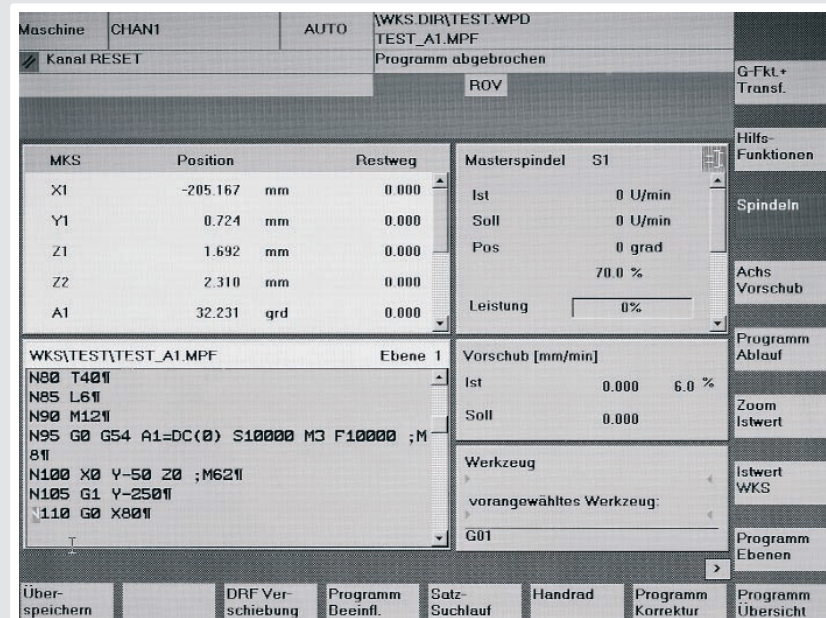
5-sided Machining.

- Each table can be fitted with a 5th-axis module.
- Synchronous or independent rotation of the two planets.
- Wear free direct-drive with direct, absolute scales.
- Up to 2 x 7 hydraulic/pneumatic lines (2 x 10 w/o 5th axis module).

Perfect machining. Twin or single spindle.



The brain.



- SINUMERIK 840 D with NCU 573.4
- For your safety: "Safety Integrated®":
 - Safe stopping of all drives.
 - Safe holding of drives under position control.
 - Safe stop by pulse deletion.
 - Reduced speeds for safe set-up mode.
 - Zoning (range detection).
- MMI with 12,1" TFT colour display
 - Safe stop of all axes.
 - AS-i/Profi-bus I/O connection.
 - Tool off-set management per tool set.



Technology in details.

- Tool loading at an ergonomically perfect height.
- Fully enclosed work zone.
- Care free inner work zone containment of stainless steel.
- "Standard" means "many features included":
 - Central cooling unit for all axes and auxiliary units.
 - Automatic lube system for linear ways and motor spindles.
 - High power hydraulic system with 250 bar; prepared to add fixture actuation.