

UNIVERTOR AE

Horizontal finishing machine





As flexible as your manufacturing tasks -
360° turning solutions from WEISSER

Just as chameleons can adapt to their environment, WEISSER's precision turning machines and multifunctional turning centers adapt to the customer's workpieces in the best possible way. In addition, WEISSER keeps an eye on the complete manufacturing process and offers the most economical solution for all requirements with its TURNKEY solutions.

UNIVERTOR AE

UNIVERTOR AE

Modular designed finishing machine with WEISSER Pick-up system for parallel machining of one workpiece. The movable base carrier is equipped with robust centric clamps for the pick-up of shaft-shaped workpieces. No additional robots or gantry solutions are necessary, because the machine loads itself. Economical cutting to length and centering on the UNIVERTOR AE ensures precise workpiece pick-up for subsequent process steps within the complete machining operation. The design with robust disc or crown turrets enables spindling, milling, drilling and deep boring of the shaft ends using driven tools.



Conceptual advantages UNIVERTOR AE

- Left and right machine versions available
- End machining of shaft-shaped components (milling, sawing, centering, drilling)
- Easy automation, only pallet belt required
- Patented pick-up principle adapted to use for end machining of shafts
- Machine column with very good stiffness behavior and optimized damping properties due to remaining sand in the model
- Linear guides designed in high accuracy and preload classes in all machine axes
- Direct path measuring systems possible in all machining axes (glass scales)
- High dynamics of all machining axes
- Optimal chip fall downwards

Options

- Two HSK 63/80 machining spindles per machining side
- 6-station crown turret HSK 63 per machining side
- 8-station HSK 63/80 disc turret per machining side
- 12-station HSK 63 disc turret per machining side
- Center drive spindle possible instead of rigid centric clamping

UNIVERTOR AE-T

UNIVERTOR AE-T

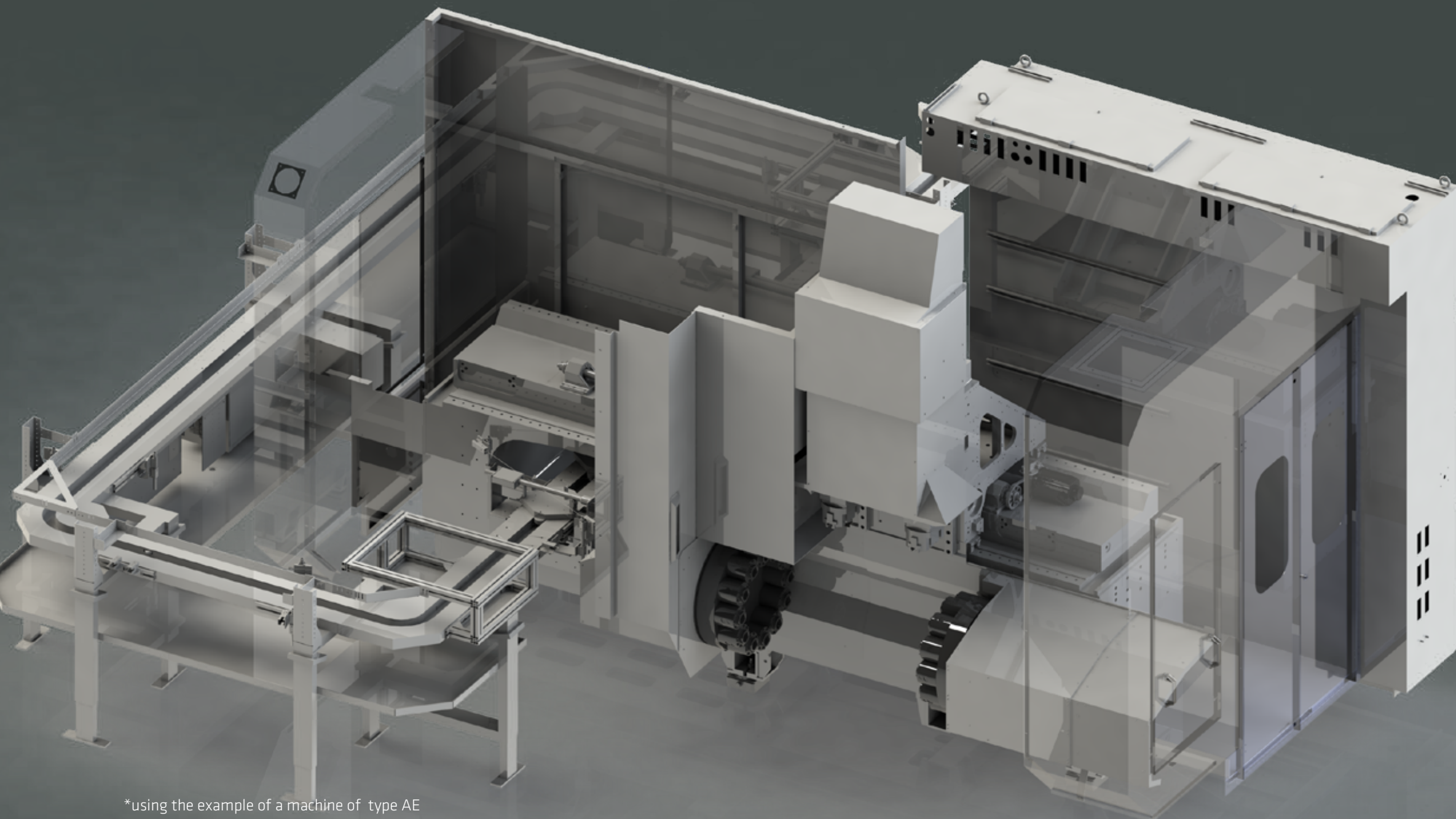
Modular designed finishing machine with WEISSER Pick-Up System for parallel machining of two workpieces as twin version. The concept of a fixed and a movable disc or crown turret, in combination with the movable mounting slide of the centric clamping device, enables simultaneous machining on both shaft ends. No additional robots or gantry solutions are necessary, because the machine loads itself.



Conceptional advantages UNIVERTOR AE-T

- End machining of shaft-shaped components (milling, sawing, centering, drilling)
- Synchronous machining of two workpieces, for optimization of piece costs
- Simple automation, only pallet belt required
- Patented pick-up principle adapted for end machining of shafts
- Machine column with very good stiffness behavior and optimized damping properties due to remaining sand in the model
- Linear guides designed in high accuracy and preload classes in all machine axes
- Direct path measuring systems possible in all machining axes (glass scales)
- High dynamics of all machine axes
- Optimal chip fall downwards
- Tool turret with 2x 6-station HSK 63 per machining side

Design AE*



Basic machine

Monobloc machine structure made of high quality cast iron. Heavily ribbed machine base.

Centric clamp

Tool turret

- 12-position with electric drive
- Standard interface VDI

Loading

- Various conveyor belts or NC shuttle

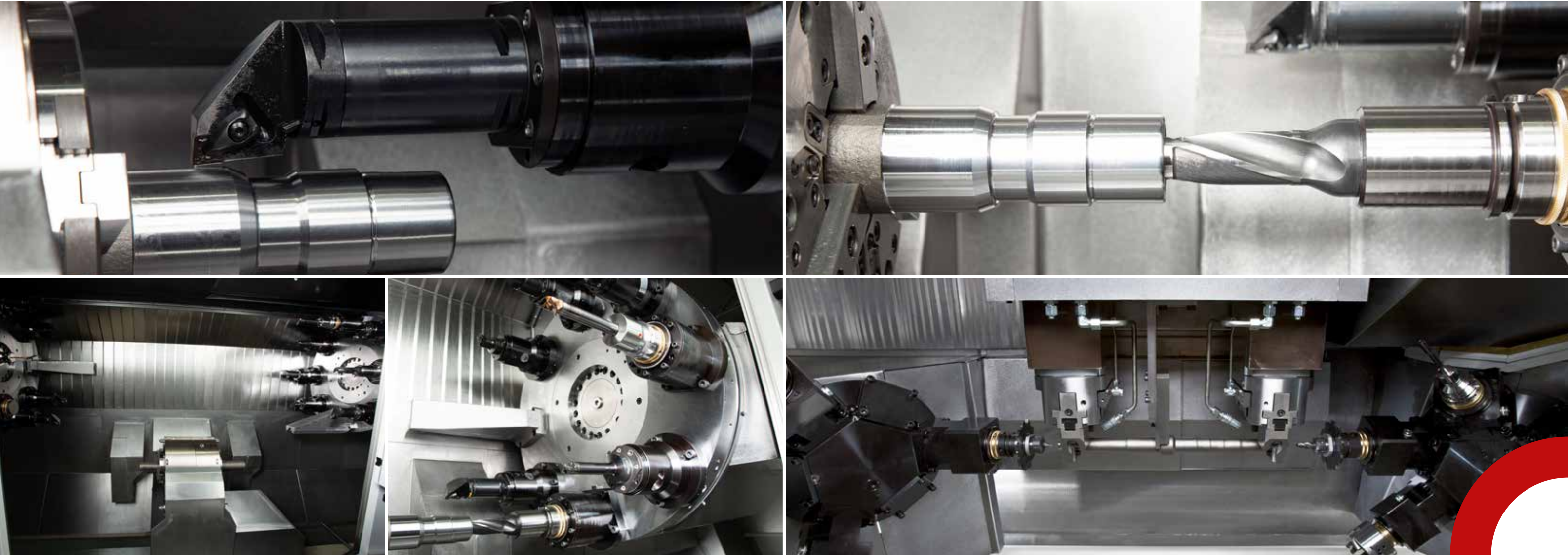
*using the example of a machine of type AE



Application examples

Bringing the application to the road...

Differential housings, brake discs, pistons: components manufactured on WEISSER machines can be found in countless vehicles. Intelligent production processes require innovative technologies and reliable, highly accurate machining centers designed for high-performance use. Therefore, WEISSER's precision turning machines and multifunctional turning centers are built with the highest level of technical maturity and high accuracy. This gives customers the assurance that nothing stands in the way of their production of safety-relevant components.



Automation

Transport systems

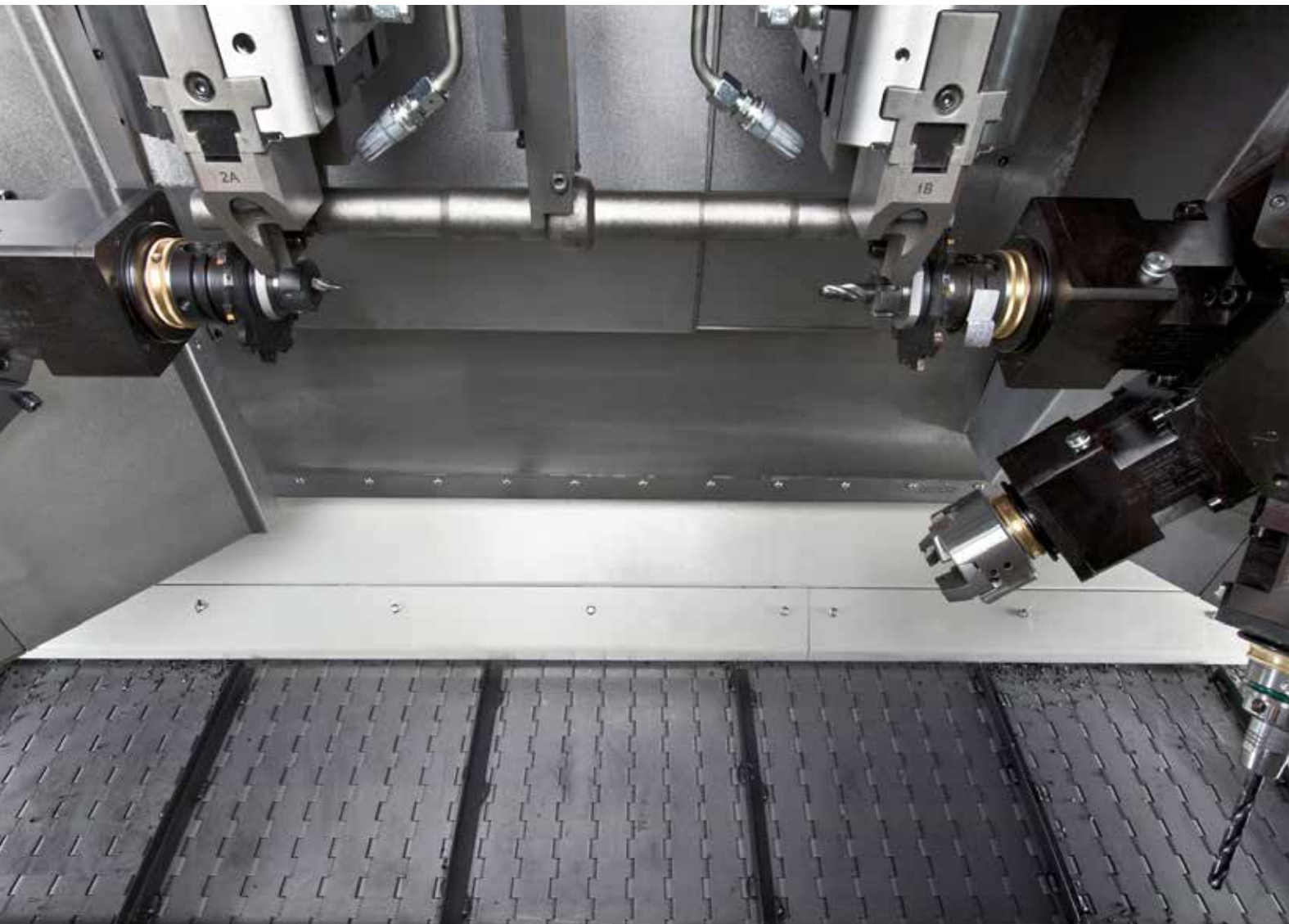
The automation options with different conveyors (such as pallet conveyor, drag frame, friction roller conveyor, etc.) offer highly variable application possibilities. Depending on the design, they can be adapted to the shape and weight of the workpieces to be transported. A variety of linking tasks, maximum flexibility and easy maintenance are just some of the countless advantages offered by these individually adaptable automation solutions.



Technologies

End machining

With the end machining technology WEISSER offers a solution for the face machining of shafts. Typical processes include deburring, facing, chamfering, drilling, centering and spindle machining. In addition to contour machining at the ends, both single and double-sided machining of shafts is possible. The technology also offers advantages in terms of cycle time and availability.



Simultaneous machining with AE-T

Highly productive simultaneous machining in one machine with two powerful disk turrets (4-axes). Intelligent technology processes and the combination of different machining steps offer high savings potential. Working with two tools simultaneously shortens the machining times of the workpiece and reduces the cost per part.





Intelligent technology processes and complete Turnkey systems

WEISSER machining centers with integrated technology concepts are the solution to demands for shorter process times, productivity and process safety. Shorter cycle times and the associated lower unit costs are decisive competitive factors, especially when manufacturing high quantities. WEISSER turnkey solutions not only score at high quantities but also at small quantities with high set-up flexibility. We pass this competitive advantage on to our customers. With the

experience of more than 160 years of development, construction and realization of customized machines, our engineers develop today the most economical solution upon your requirements. The development of the complete production process provides you full cost transparency and helps you to solve complex tasks in an optimal way. With three steps to success. WEISSER Turnkey.

Highest precision and accuracy

Measuring of all components and units relevant for the accuracy - despite high basic accuracies the individual components are „finely assembled“. As a result, mechanical deviations during assembly are minimized and wear is reduced. This ensures a high long-term stability of the complete machine system.

OFFER PHASE AND PLANNING PHASE

- Process requirements
- Production boundary conditions
- Machine requirements & machine type
- Workpiece clamping / Tools
- MFU features
- Terms of acceptance
- Delivery instructions
- Processing strategy
- Inspection of critical MFU characteristics
- Number of fixings
- Number of spindles
- Design of the machine system
- Workpiece loading and automation
- Clamping device
- Tools

IMPLEMENTATION PHASE

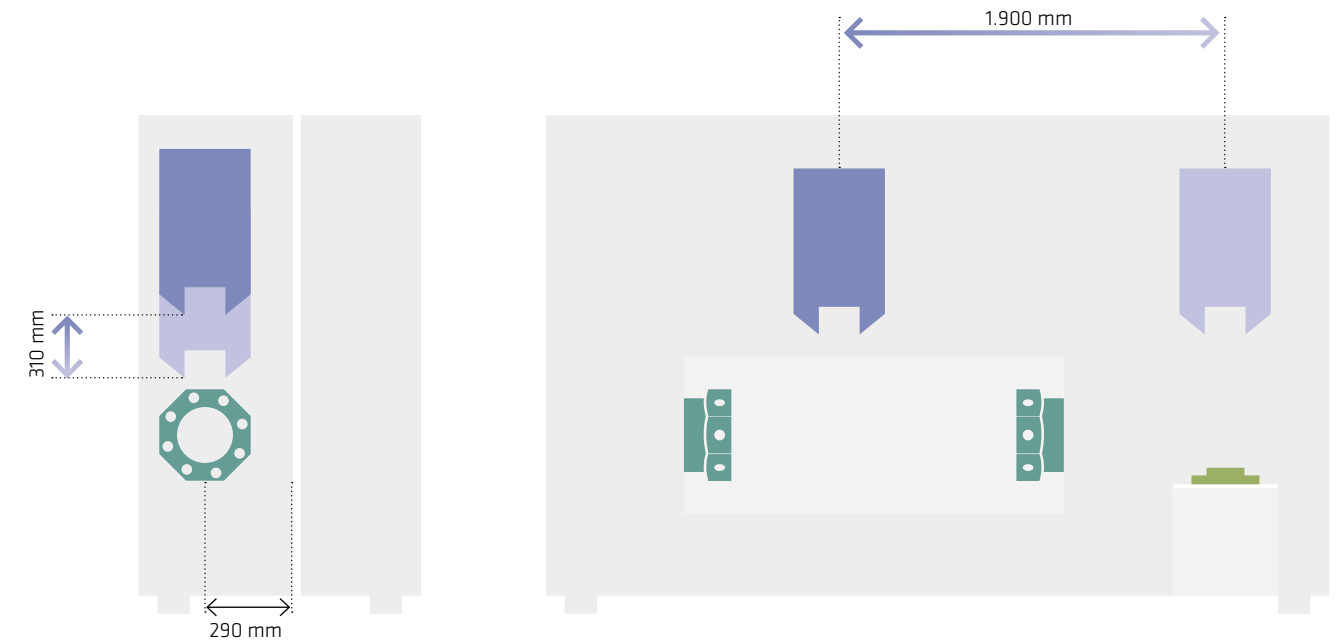
- Construction and integration of the workpiece-specific
 - Clamping fixtures
 - Tools
 - Automation
- Approval process of the tooling plan, layout plan, etc.
- The verification procedure of the process capability through
 - the preliminary acceptance at WEISSER
 - the final acceptance at the customer

TARGET PHASE

- Assistance with production startup and support
- Training in operation, programming and maintenance
- Service e.g. with preventive maintenance, spare part support, qualified service personnel, etc.



Technical data AE



Max. Workpiece diameter	mm	150	Dimensions		
Max. Workpiece length	mm	600	Dimensions basic machine (LxWxH)		
Max. Feed force X/Z (40 % CDF)	kN	5 / 5	mm	AE: 5.050 x 2.750 x 3.150	AE-T: 5.050 x 3.000 x 3.150
Max. Feed force X2 (40 % CDF)	kN	12	Weight		
Working stroke X/Z-axis	mm	350 / 1.900	kg	AE: 14.500	AE-T: 17.000
Working stroke Z2-axis	mm	457			
Max. Process speed X/Z	m/min	30 / 50			
Max. Process speed Z2	m/min	30			
Ball screw diameter X/Z	mm	40 / 40			
Ball screw diameter Z2	mm	40			
Number of tools		AE: 2 / 6 / 8 (2x)	AE-T: 2 x 6 (2x)		
Tool holder		HSK63			



J. G. WEISSER SÖHNE GmbH & Co. KG

Johann-Georg-Weisser-Straße 1
78112 St. Georgen
T +49 7724 881-0
www.weisser-web.com



WEISSER Präzisionstechnik

Johann-Georg-Weisser-Straße 1
78112 St. Georgen
T +49 7724 881-590
www.weisser-pt.com

WEISSER Maschinenzentrum Schwenningen

Albertstraße 16
78056 Villingen-Schwenningen
T +49 7720 60900-41
www.weisser-web.com/service