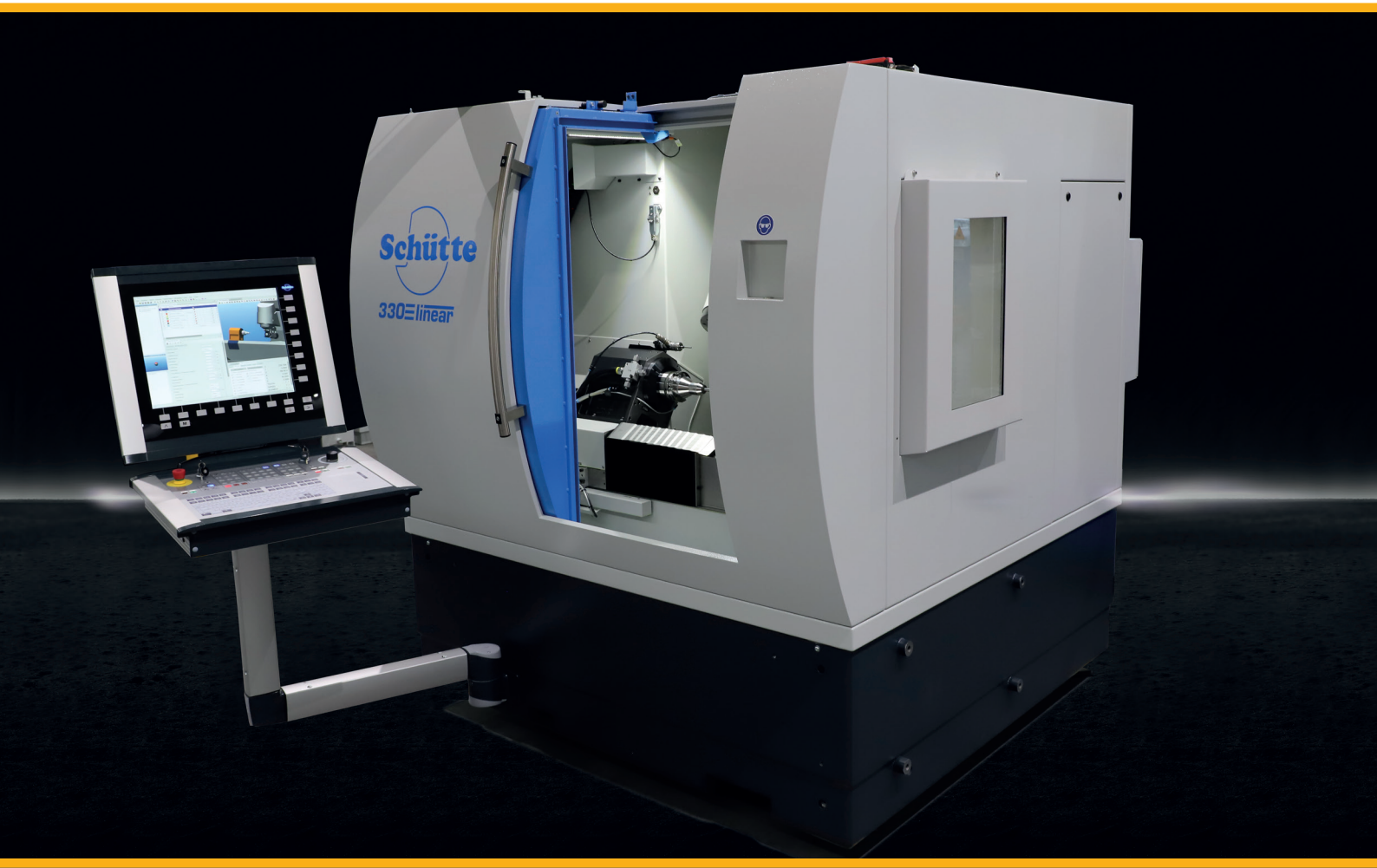
Schütte



Superior precision

FOR CUTTING TOOLS

330*linear*

THE SPECIALIST FOR CUTTING TOOLS **MADE IN GERMANY**

With its stable and compact design, the 330linear stands for reliability and precision. Direct drives on all axes, the rigid axis design and thermal stability ensure process reliability. The machine is equipped with five CNC axes and state-of-the-art digital control technology. Simple programming and intuitive operation are guaranteed by the future-proof software. The integrated 4-fold grinding wheel changer achieves a high degree of automation. The large and easily accessible machining area offers excellent accessibility and the best view of the grinding process.

At a glance

- Production and grinding of cutting tools
- Precision and process reliability in all components

Proven Schütte technology

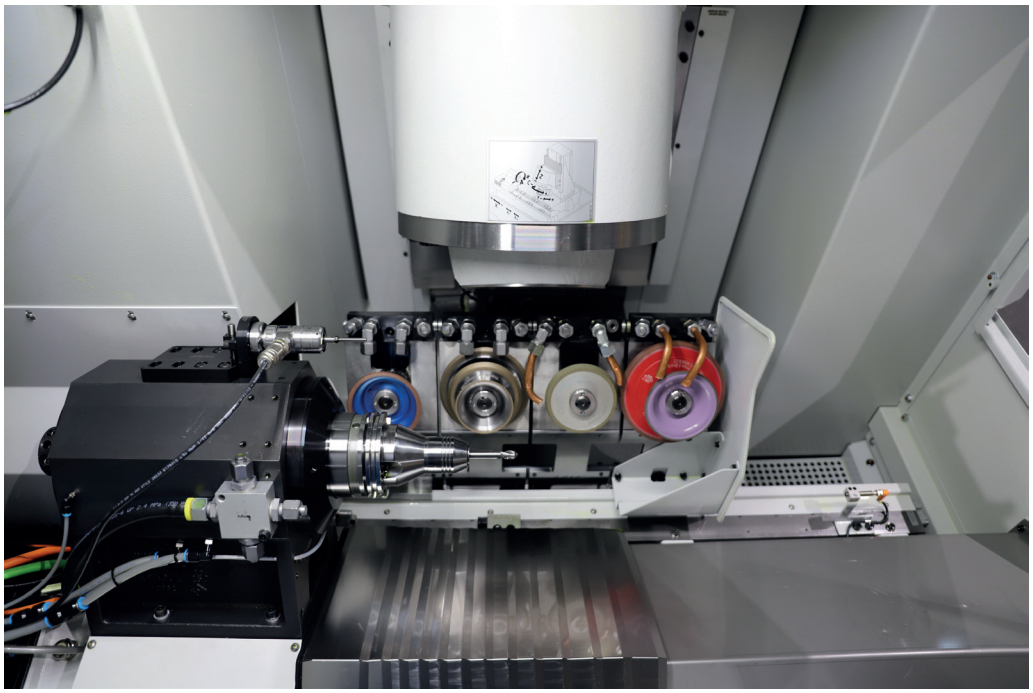
- Stable core configuration
- Direct drives on all axes
- Compact design with high-quality components
- Optimised hooding - excellent accessibility and easy set-up
- Rigid axis structure and optimized power input – inclined swivelling axis
- Minimal compensating movements - optimised swivel point of the grinding spindle
- Thermostability - cooled drives and thermostable machine base
- Integrated 4-fold grinding wheel changer
- Quality made in Germany: high quality and precision

Compact and precise with optimised user design

High-quality components for maximum precision

Powerful, precise, fast

Powerful direct drives ensure high material removal volumes. In the interaction of direct drives and high-precision scales, the machine achieves a positioning accuracy of less than 1 µ. Software and control technology are precisely matched to this. The HSK holder for the grinding wheels guarantees high accuracy of repeatability and fast changing of the grinding wheel packages.



Interior of the machine with open grinding wheel magazine

HIGHLIGHT: **RELIABILITY**

2 in 1
cylindrical grinding and contour grinding

Universal workpiece axis

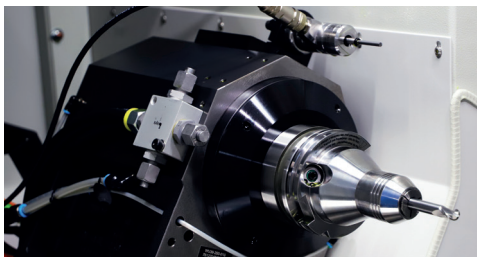
High torques as well as excellent concentricity and indexing precision ensure an efficient and very precise process management for challenging operations such as grinding tool contours and angles.

- High torques, high indexing precision
- Suitable for cylindrical grinding and contour grinding
- Speed up to 2.500 min^{-1}

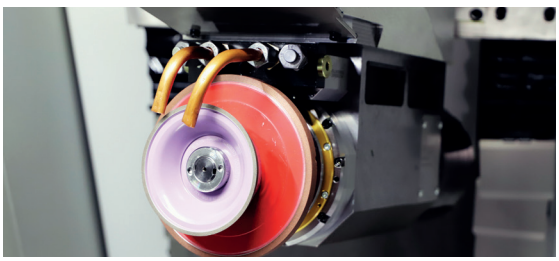
Power-optimised grinding spindle

The compact and powerful grinding spindle allows large material removal volumes. High accuracy of repeatability and quick changes are guaranteed by the HKS holder.

- Optimized cooling and lubrication through joint change of grinding wheel package and cooling lubricant distributors
- High changing accuracy due to HSK holder
- Speed up to 15.000 min^{-1}
- Large swivel range for all grinding wheel positions in relation to the workpiece



Workpiece axis



The grinding spindle: Robust and reliable

Well equipped for challenging cutting tools

The 330*linear* offers all functions for convenient production and resharpening of a wide range of cutting tools.

HIGHLIGHT: **PRECISION**

4-fold grinding wheel changer

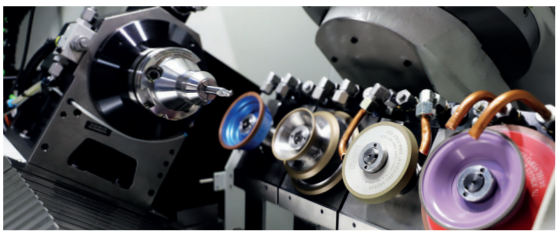
The automatic grinding wheel changer enables unmanned production and thus ensures productivity advantages. An integrated grinding wheel magazine for the automatic change of four grinding wheel packages with the corresponding cooling lubricant distributors is already included in the basic equipment.

- 4-fold grinding wheel magazine for up to 12 grinding wheels
- Grinding wheel change with associated cooling lubricant distributors

Precise measurement

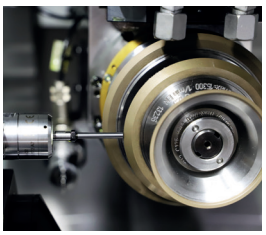
The basic equipment includes two measuring probes. For the workpieces, the exact position and orientation as well as optional features such as diameter and helix lead are measured. In freely selectable cycles, the diameter and/or setting length of the grinding wheels can be determined.

- Automatic detection of the workpiece position
- Measurement of the grinding wheels in the machine

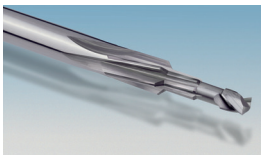


4-fold changer

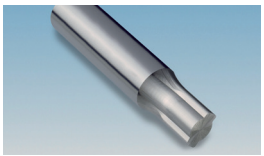
Determination of the workpiece position



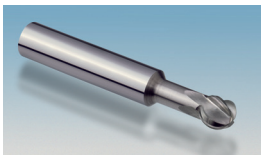
Measurement of the grinding wheel



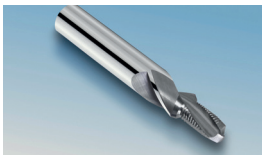
Multifunctional tool



Profile punch



Ball head cutter

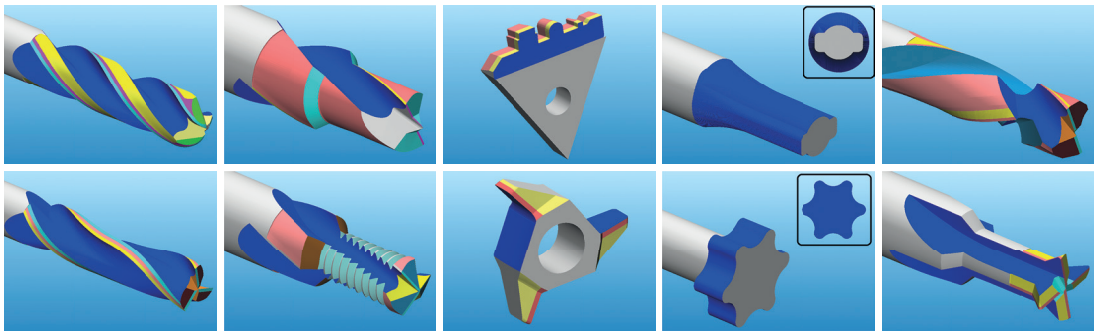


Drill thread milling cutter

POSSIBILITIES AND OPTIONS: **MAKE MORE OF IT!**

A maximum of cutting tools

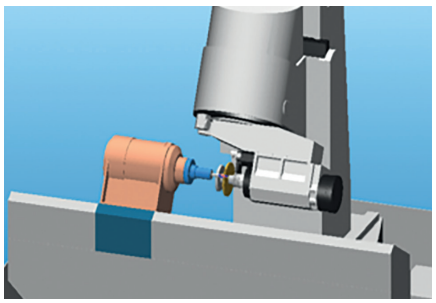
Milling cutters | Drilling tools | Profile inserts | Profile punches | Woodworking tools



Operation and programming from one source - with SIGS*pro*

The SIGS*pro* programming software is developed by Schütte and is optimally adapted to the machine. It contains all functions for machining even the most complex cutting tools.

- Intuitive, easy-to-learn, Windows-oriented menu navigation
- User guidance adjustable to national language
- Updateable and future-proof software



Operation and programming with integrated 3D simulation including machine room simulation and collision control

SCHÜTTE:
BENCHMARK IN GRINDING MACHINES

Tradition – Experience – Progress

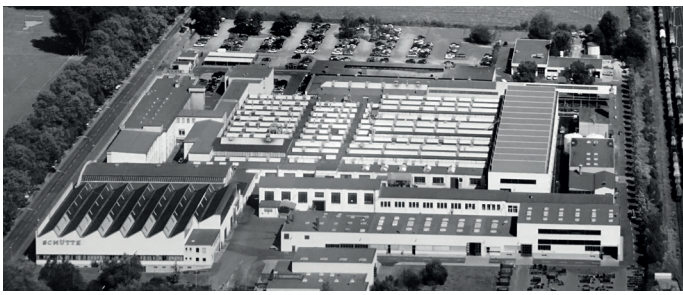
Schütte is a leading manufacturer of multi-spindle automatic lathes and 5-axis CNC grinding machines. The production and service are characterised by the highest quality awareness. Tradition and experience are the basis for progress and innovation. This way, the company ensures that every customer gets the maximum benefit from his Schütte machine.

Founded in 1880 as a trading company, Schütte has been building machine tools and grinding machines since 1915, laying the foundation for a success story in mechanical engineering.

Globally networked

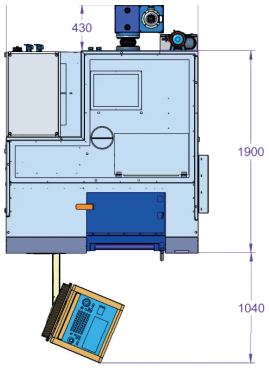
Today, the family business is owner-managed in the fourth generation and will continue to pass on the experience gained from tradition to each new generation in a practical manner.

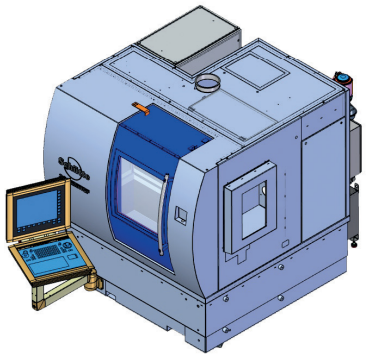
With a strong international network, Schütte is ideally positioned worldwide. The sales network includes a number of subsidiaries covering the most important markets in Europe and worldwide. This means that fast and uncomplicated local service is always guaranteed.



1915

The first Schütte grinding machine: More than 100 years of experience in tool grinding





MACHINE		330*linear*		
Linear axes		**X-axis (longitudinal movement)**	**Y-axis (transverse movement)**	**Z-axis (vertical movement)**
Stroke (MKS)	mm	480	300	330
Resolution	µm	< 0,1	< 0,1	< 0,1
Max. feed rate	m/min	48	24	24
Rotary axes - A-axis (rotation of the workpiece)				
Max. Speed as rotary axis	1/min	200		
Max. speed as universal rotary axis (optional)	1/min	2.500		
Resolution in sub-range	degrees	< 0,0001		
Max. torque Torque	Nm	88		
Pick-up taper		SK 50		
Swivel axis of the grinding head (C-axis)				
Swivel range	degrees	225		
Max. swivel speed Swivel speed	degrees/sec.	360		
Resolution degrees	degrees	< 0,0001		
Grinding spindle				
Max. Speed	1/min	15.000		
Max. Torque	Nm	15		
Support taper		HSK-E 50		
Control				
CNC	SIEMENS	SINUMERIK 840D sl		
Drive technology	SIMODRIVE	SINAMICS S 120		

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