

CamGrind

Cylindrical and noncircular grinding



Key data

Camshaft grinding to perfection!
The CamGrind series offers modular precision machines for cylindrical and noncircular grinding of shaft-type components up to 2,000 mm in length. You get cutting-edge technological solutions, which are precisely tailored to your requirements. Each of our machines is unique!

Schautd Mikrosa GmbH

Schautd Mikrosa GmbH is synonymous worldwide for premium technology in cylindrical, noncircular, and universal grinding between centers, as well as in centerless external cylindrical grinding. Since 2009, the company combines the two long-established brands SCHAUDT and MIKROSA in a modern factory in Leipzig.

Our special strength lies in the high customer-individuality of our machines and the connection of units, automation components and process engineering to a highly productive grinding system.

Here, SCHAUDT is the brand for the automotive industry and its suppliers. It offers sophisticated technological solutions for cylindrical, noncircular and eccentric grinding. Our highly experienced experts also have unparalleled expertise in the high-precision grinding of long and heavy workpieces like rollers and turbine shafts. Within this broad application range, you obtain everything from a single source – application development, technology, assembly, and sales.

MIKROSA sets the standards in centerless external cylindrical grinding of rotationally symmetrical parts. The modular machine design means that you obtain a solution with handling and automation individually tailored to your grinding task. The technology spectrum extends from precision infeed grinding in many different variations to super productive throughfeed grinding. This allows you to machine a very large variety of workpieces, from small jet needles through to large shafts.

Schautd Mikrosa GmbH is part of the UNITED GRINDING group, one of the leading suppliers of machines, applications, and services for hard-fine machining worldwide. The group comprises eight strong brands with own subsidiaries and sales partners around the world to be a strong partner for our customers.

CamGrind

Modular machine system · Patented swivel-in technology · Superproductive multiwheel technology · Robot automation · User-friendly WOP-G programming system · Individual and batch production

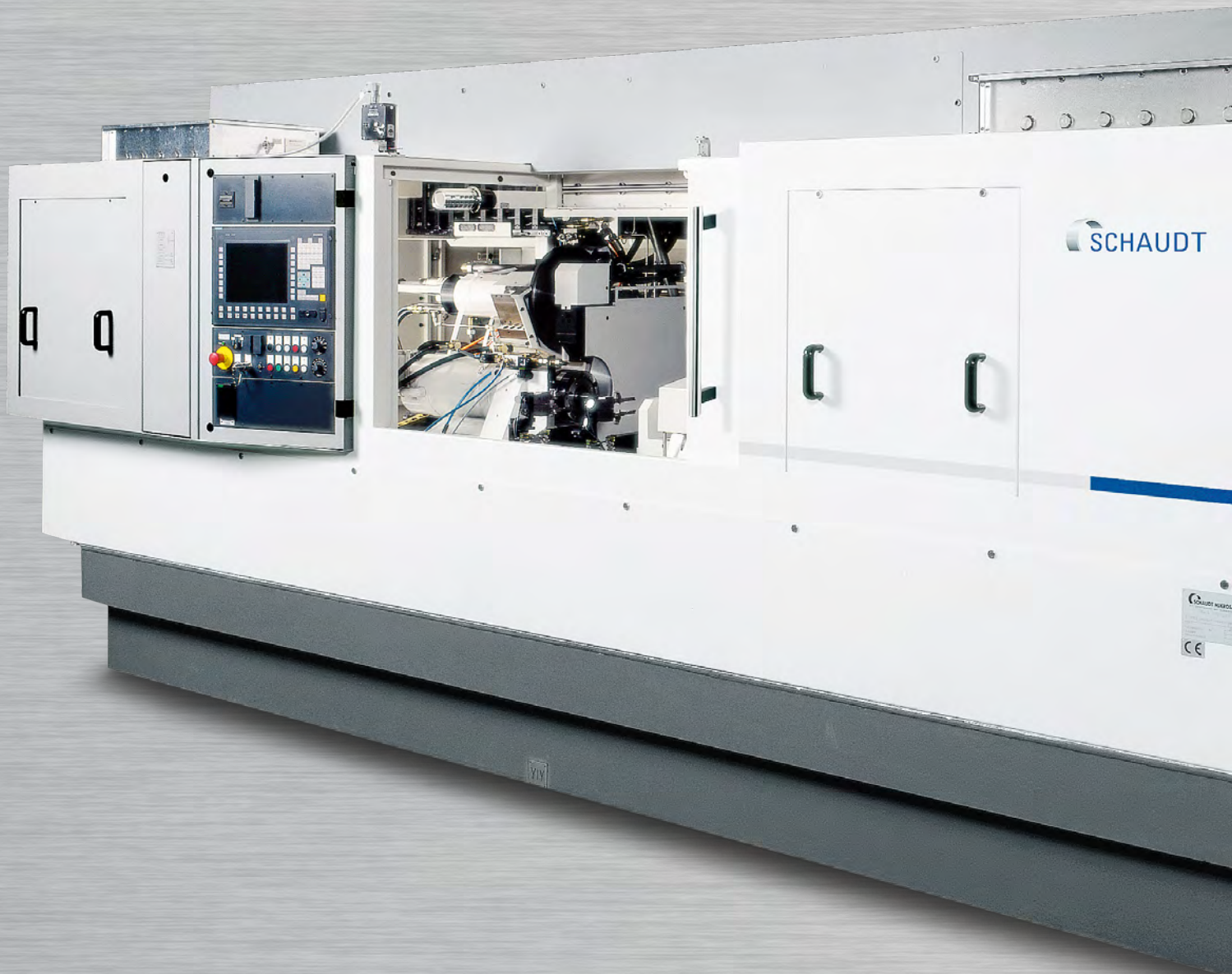
Specialist in cylindrical and noncircular machining

Partner to the automotive and supply industry

The name SCHAUDT is synonymous with made in Germany grinding machine expertise in the high-end range. What began in 1906 with the legendary Unger machine factory in Stuttgart is still setting global standards in technology, precision and quality in cylindrical and noncircular grinding between centers today. Only with optimal machine concepts tailored to individual requirements and a flexible, efficient partner can new standards be repeatedly set in the automotive industry. Whether individual or batch production, the modular design of the CamGrind series offers the ideal solution.

Applications

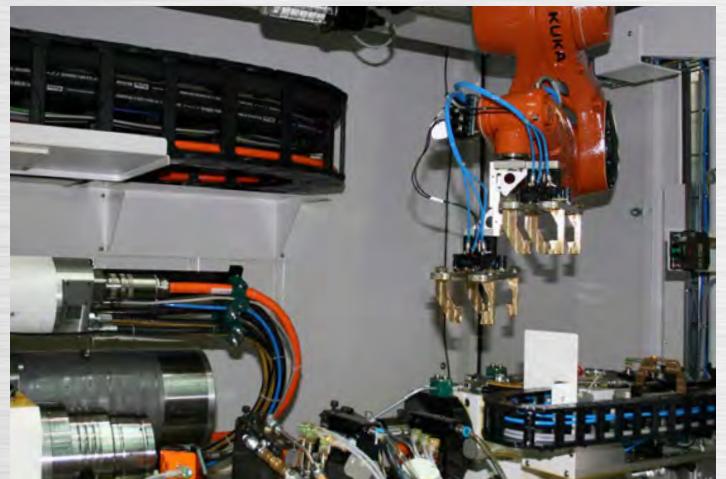
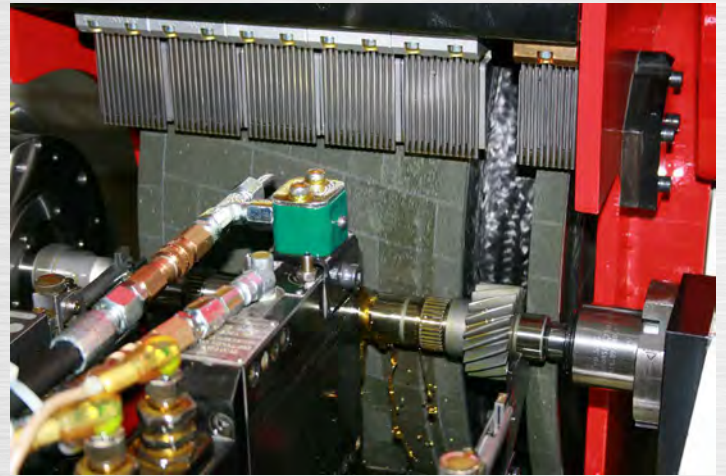
The machines in the CamGrind series are the innovative system response to the increased market requirements in the area of cylindrical, noncircular and eccentric grinding. Diameters, flat shoulders, tapers, chamfers, keyways, polygons, polyhedral edges, cams, eccentrics etc. can be machined with the SCHAUDT CamGrind series – in cyclical production, in conjunction with other grinding machines or in a single clamping.



Highest productivity

The CamGrind series sets standards in productivity and precision. Two different profiles can be machined simultaneously in minimal space with the two-slide system. Up to 5 different grinding wheels are available. The simultaneous machining of two different noncircular contours is also possible without problem.

The SCHAUDT multiwheel technology enables highly productive grinding. All cylindrical features of a workpiece can be completely machined in a single plunge. In addition, a sophisticated automation system enables workpiece change times of less than 0.1 min.



The optimal solution for every application

CamGrind S



Compact grinding machine for cylindrical and noncircular grinding of shaft-type workpieces up to 650 mm in length | Highly productive dual station variant

Typical grinding processes Cylindrical and noncircular grinding
Peel grinding with CBN

Technical data

Grinding length	650 mm
Height of centers	175 mm
Grinding wheel diameter, max.*	480 mm
Grinding wheel width, max.*	80 mm
Grinding wheel drive power, max.	40 kW
Workpiece weight, max.	50 kg
SIEMENS SINUMERIK 840D sl control system	

Variants Swivel-in grinding spindle (2S**)
Portal loading system
Robot
Dual station variant

* Standard, size dependent on machine configuration

** Number of grinding spindles

CamGrind L1



Modular single-slide machine, which can be equipped with a second swiveling spindle | In its optimum configuration with B-axis and up to 3 grinding spindles

Typical grinding processes Cylindrical and noncircular grinding
Plunge grinding of grooves with CBN

Technical data

Grinding length	650/1,100/2,000 mm
Height of centers	220 mm
Grinding wheel diameter, max.*	340-480 mm
Grinding wheel width, max.*	80 mm
Grinding wheel drive power, max.	40 kW
Workpiece weight, max.	50 kg
SIEMENS SINUMERIK 840D sl control system	

Variants B-axis variant (1-3S**)
Swivel-in grinding spindle (2S**)
Portal loading system
Multiwheel technology

* Standard, size dependent on machine configuration

** Number of grinding spindles

CamGrind L2



Superproductive two-slide machine for high-volume production | Simultaneous complete machining in a single clamping | In the optimum configuration with up to 4 grinding spindles and dual station

Typical grinding processes Cylindrical and noncircular grinding
Plunge grinding of grooves with CBN

Technical data

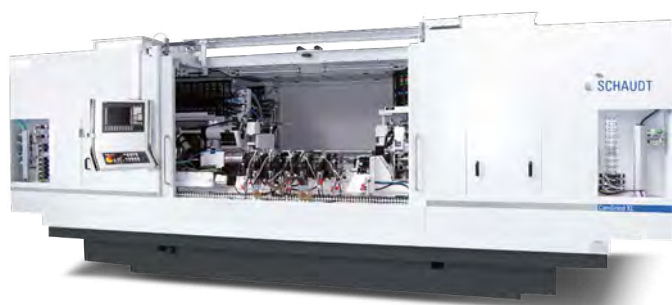
Grinding length	650 mm
Height of centers	220 mm
Grinding wheel diameter, max.*	400-480 mm
Grinding wheel width, max.*	250 mm
Grinding wheel drive power, max.	40 kW
Workpiece weight, max.	50 kg
Steuerung SIEMENS SINUMERIK 840D sl	

Variants 1-2 swivel-in grinding spindles (2S or 4S**)
Dual station variant
Portal loading system
Robot
Multiwheel technology

* Standard, size dependent on machine configuration

** Number of grinding spindles

CamGrind XL



Superproductive two-slide machine for the high-volume production of long, shaft-type components up to 1,600 mm | Complete machining in a single clamping | In the optimum configuration with up to 5 grinding spindles

Typical grinding processes Cylindrical and noncircular grinding
Peel grinding with CBN

Technical data

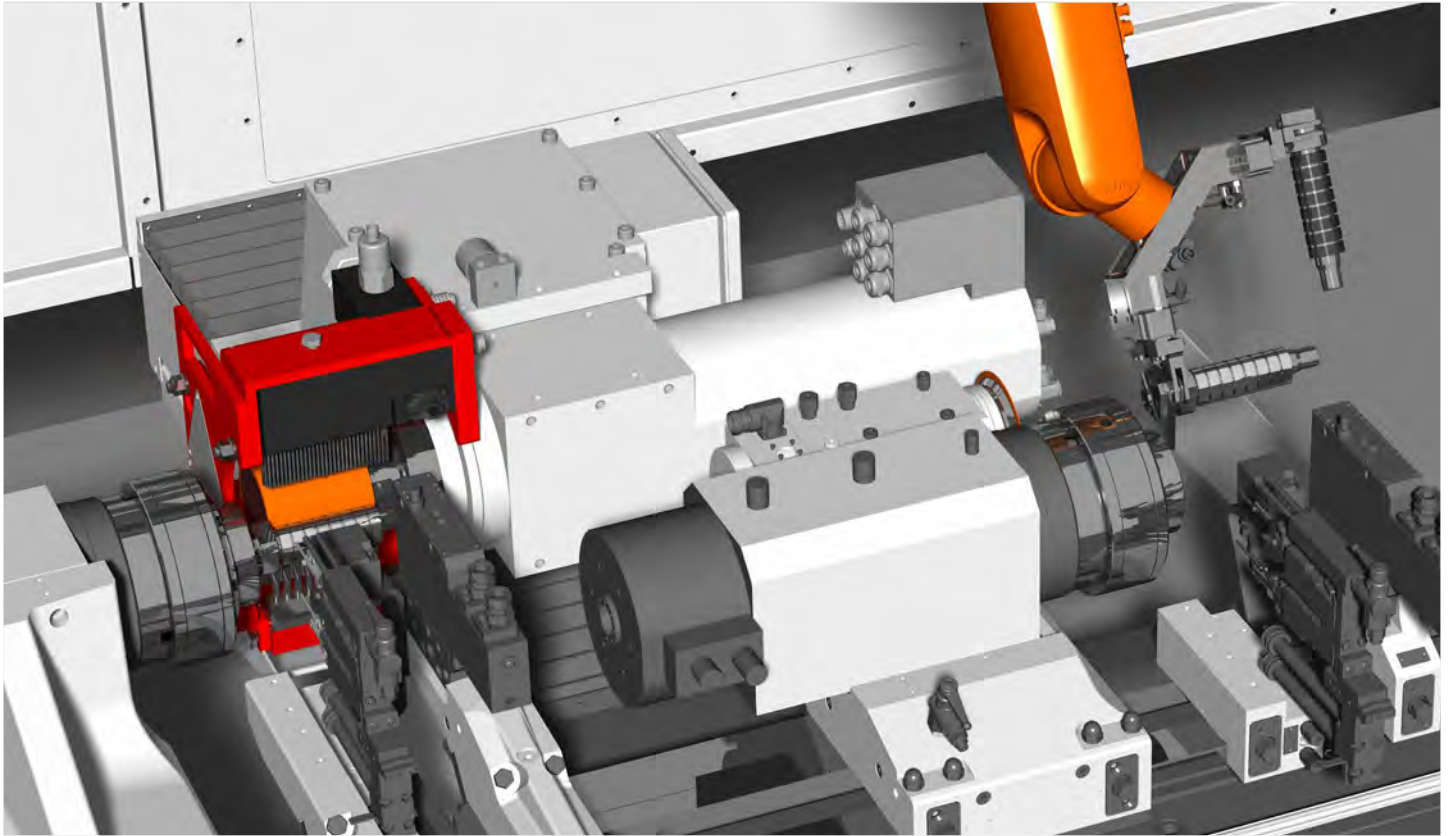
Grinding length	1,050-1,600 mm
Height of centers	220 mm
Grinding wheel diameter, max.*	400-480 mm
Grinding wheel width, max.*	80 mm
Grinding wheel drive power, max.	40 kW
Workpiece weight, max.	130 kg
SIEMENS SINUMERIK 840D sl control system	

Variants B-axis variant (1-3S**)
1-2 swivel-in grinding spindles (2S or 4S**)
B-axis and 1 swivel-in grinding spindle (1-5S**)
Portal loading system

* Standard, size dependent on machine configuration

** Number of grinding spindles

Highly productive machining solutions



Your advantages

- Very short cycle times
- Two workheads for highly productive output
- Integrated KUKA loading robot
- Integrated interface for machine control

For especially high-performance applications such as the grinding of cam units, the CamGrind can be equipped with two grinding stations. These are supplied with workpieces in staggered cycles by a compact KUKA robot, which is protected against oil and water in accordance with IP 67. Particularly advantageous is the fact that the robot can be directly controlled with the Sinumerik 840D sl via the Run MyRobot software interface. Machine and robot can be simply integrated into the machine process via a central control unit with a convenient operator interface.

The machine operator can program and configure the integrated robot entirely from the operating panel of the CamGrind. The axis movements are represented in the X, Y and Z directions typical for machine tools. The operator is guided accurately through the input mask on the basis of the programming interface developed by Schaudt Mikrosa.

Customer Care

SCHAUDT grinding machines should fulfill the customer's requirements for as long as possible, work cost-effectively, function reliably and be available at all times. From "start up" through to "retrofit" – our Customer Care is there for you throughout the working life of your machine. 12 professional helplines and more than 60 service technicians are available in your area, wherever you are in the world.

- We will provide you with fast, uncomplicated support.
- We will help to increase your productivity.
- We work professionally, reliably and transparently.
- We will provide a professional solution to your problems.



Start up
Commissioning
Warranty extension



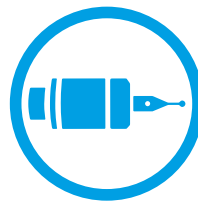
Qualification
Training
Production support



Prevention
Maintenance
Inspection



Service
Customer service
Customer consultation
HelpLine
Remote service



Material
Spare parts
Replacement parts
Accessories



Rebuild
Machine overhaul
Assembly overhaul



Retrofit
Modifications
Retrofits

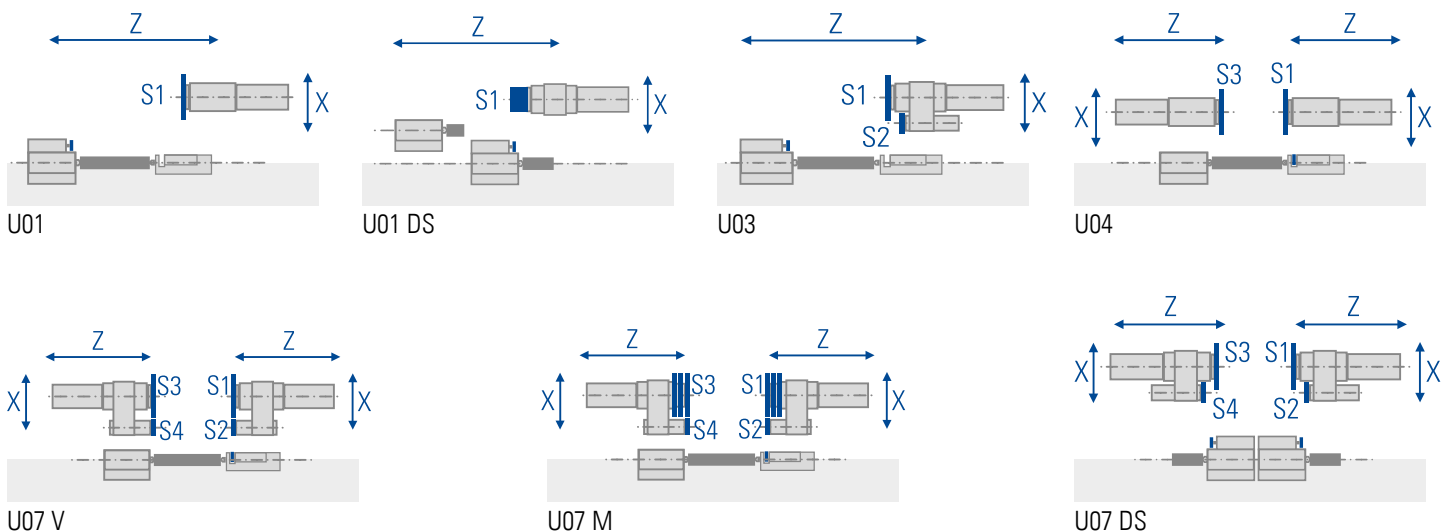
Technical data

Parameter

CamGrind S

CamGrind L

	Unit	Single-slide	Single-slide	Two-slide
Working ranges				
Grinding length between centers, max.	mm	650	650/1,100/2,000	650
Height of centers	mm	175	220	220
Workpiece weight between centers, max.	kg	50	50	50
Wheelhead				
X-axis guide		Anti-friction guideway	hydrostatic	hydrostatic
Z-axis guide		Vee-flat guideway	hydrostatic	hydrostatic
Swivel-in spindle: grinding wheel diameter*	mm	70-205	70-370	70-370
B-axis		no	yes	no
Main spindle: grinding wheel diameter CBN*	mm	480	340-480	400-480
Main spindle: grinding wheel width CBN, max.*	mm	80	80	250
Grinding wheel drive power, max.	kW	40	40	40
Grinding wheel peripheral speed, max.	m/s	125	125	125
Workhead				
Rpm range spindle / rotational axis (C)	rpm	1,000/500	1,000/500	1,000/500
Torque at spindle / rotational axis (C)	Nm	50/25	50/25	50/25
Tailstock				
Stroke, max.	mm	150/75	60/75/100/150	60/75/100/150
SINUMERIK 840D sl control system				
		yes	yes	yes
Dimensions				
Machine weight	t	10/12	12-14	18/20
Height, max.	mm	2,408/2,630	2,253	2,253/2,791
Footprint	mm	4,459 x 3,000	4,158-4,758 x 3,632-4,554	4,758 x 4,554
Variants				
		U01, U03	U01, U03, U12	U04, U05, U06, U07

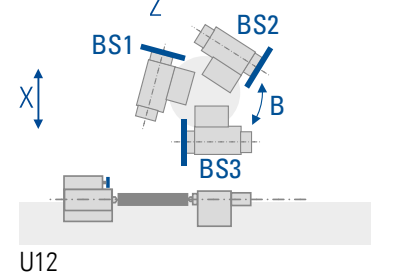
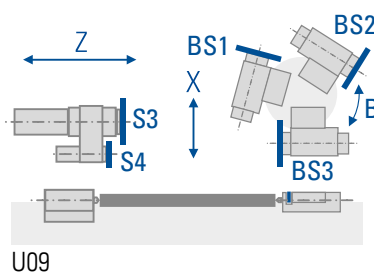
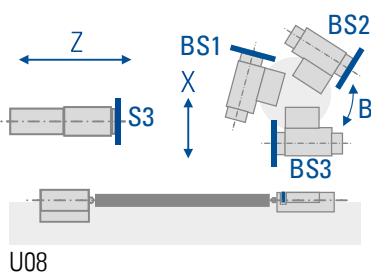
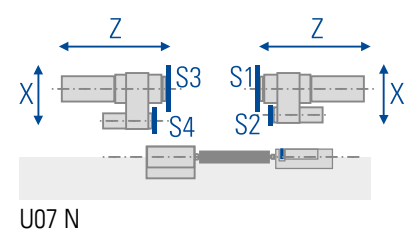
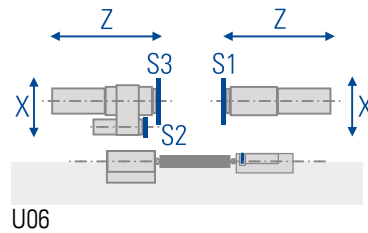
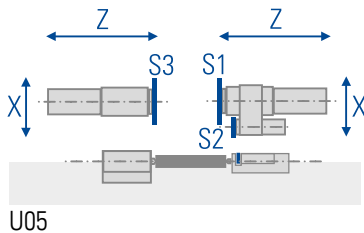


* Standard, further variants depending on machine configuration

Parameter

CamGrind XL

	Unit	Two-side
Working ranges		
Grinding length between centers, max.	mm	1,050-1,600
Height of centers	mm	220
Workpiece weight between centers, max.	kg	50
Wheelhead		
X-axis guide		hydrostatic
Z-axis guide		hydrostatic
Swivel-in spindle: grinding wheel diameter*	mm	400-480
B-axis		yes
Main spindle: grinding wheel diameter CBN*	mm	70-650
Main spindle: grinding wheel width CBN, max.*	mm	80
Grinding wheel drive power, max.	kW	40
Grinding wheel peripheral speed, max.	m/s	125
Workhead		
Rpm range spindle / rotational axis (C)	rpm	1,000
Torque at spindle / rotational axis (C)	Nm	50
Tailstock		
Stroke, max.	mm	60/75/100/150
SINUMERIK 840D sl control system		
		yes
Dimensions		
Machine weight	t	18
Height, max.	mm	2,450
Footprint	mm	4,050 x 6,908
Variants		
		U04, U05, U06, U07, U08, U09





Schaudt Mikrosa GmbH
Saarländer Straße 25
04179 Leipzig
Germany
Tel. +49 341 4971 0
Fax +49 341 4971 500
sales@schaudtmikrosa.com
www.schaudt.com

