



Precision Cylindrical Grinding Machine



CYLINDRICAL
GRINDING
MACHINE

Precision Cylindrical Grinding Machine



RS 1500 CM



CONTROL

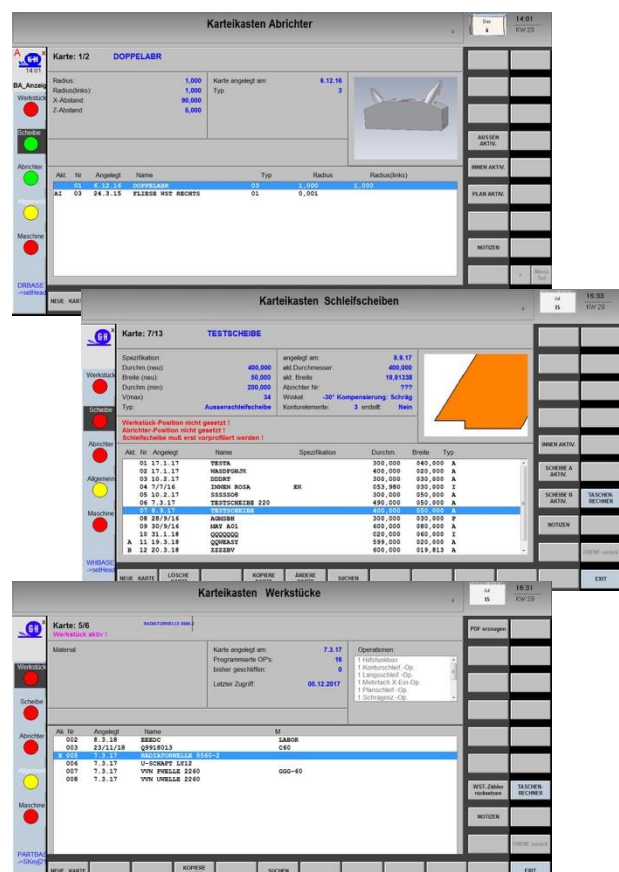
The control is based on the well-proven SINUMERIK 840 D SL. The proprietary developed, highly intuitive user interface allows easy dialogue-based input of all geometrical- and process data. Geometrical data can be entered as absolute values or using the Teach-In process.

For single production or matching all axes can be controlled with the electric hand wheel.



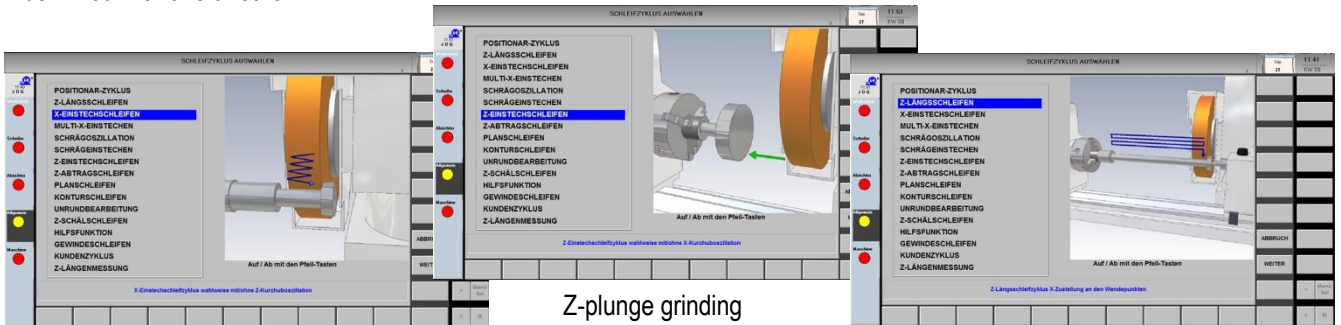
Virtual file cabinets

The data of any number of workpieces, up to 100 grinding wheels and 40 dressers are stored in virtual file cabinets.



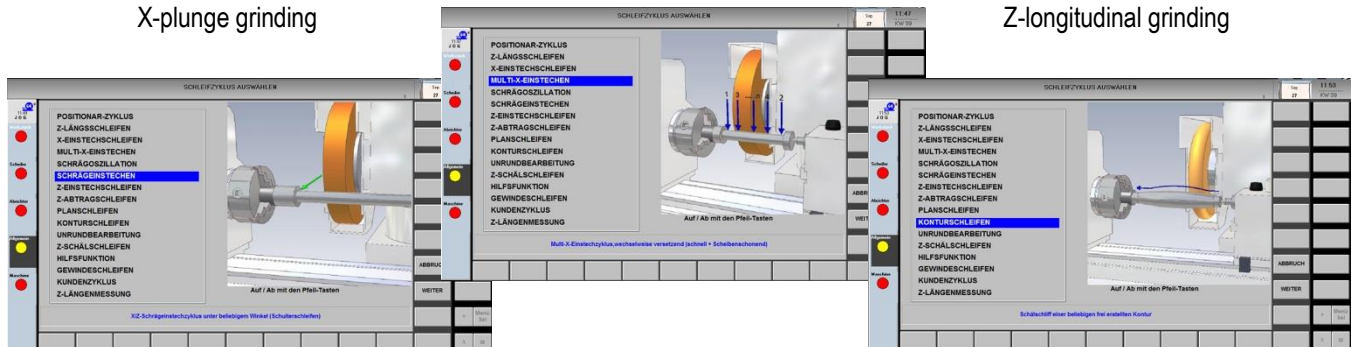
Grinding processes

A multitude of grinding processes is available. For the machining of a certain workpiece, up to 26 processes can be linked with one another.



Z-plunge grinding

X-plunge grinding

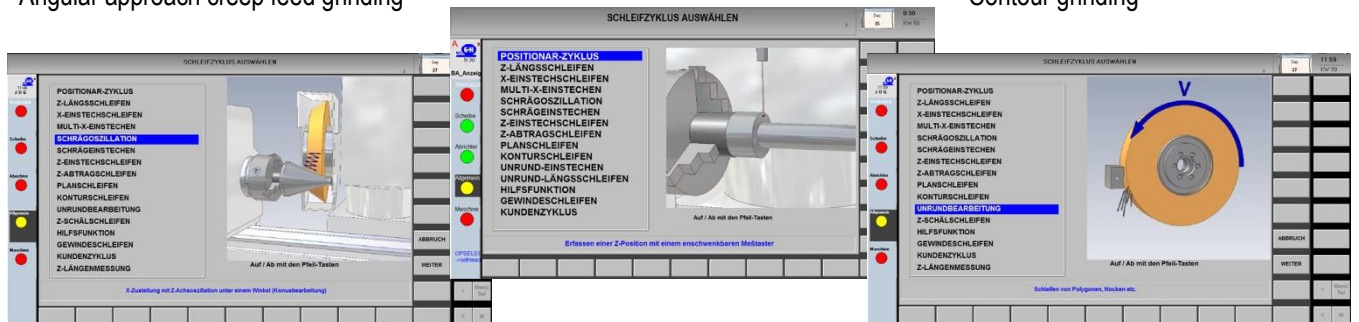


Z-longitudinal grinding

Multi-X-plunge

Angular approach creep feed grinding

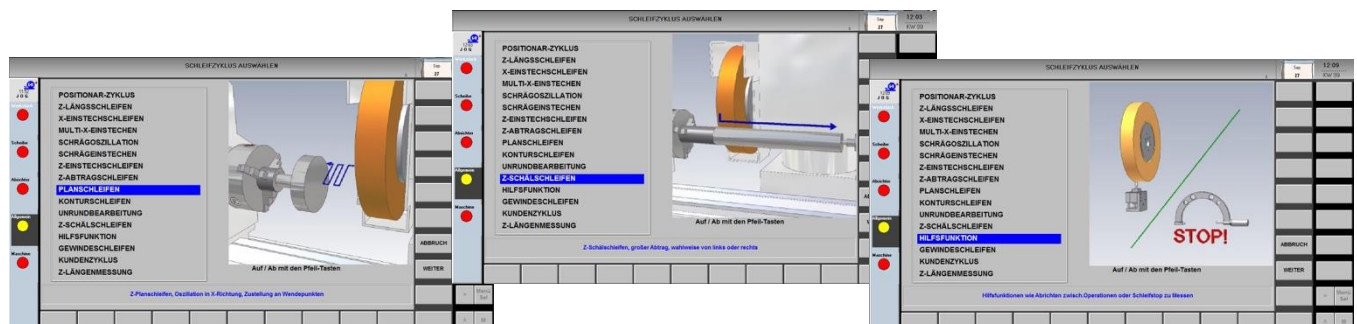
Contour grinding



Angular oscillation

Positionar-cycle

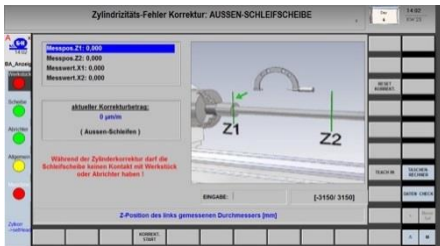
Non-cylindrical grinding



Surface grinding

Z-peel grinding

„Help“-cycle



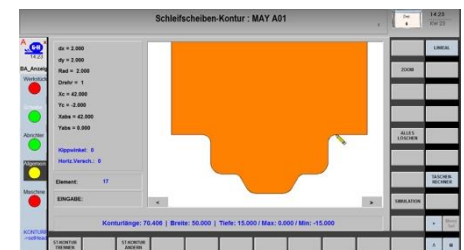
Cylindricity-error-correction

The cylindricity-error-correction for all dressable grinding wheels is effected program-controlled.

Dressing

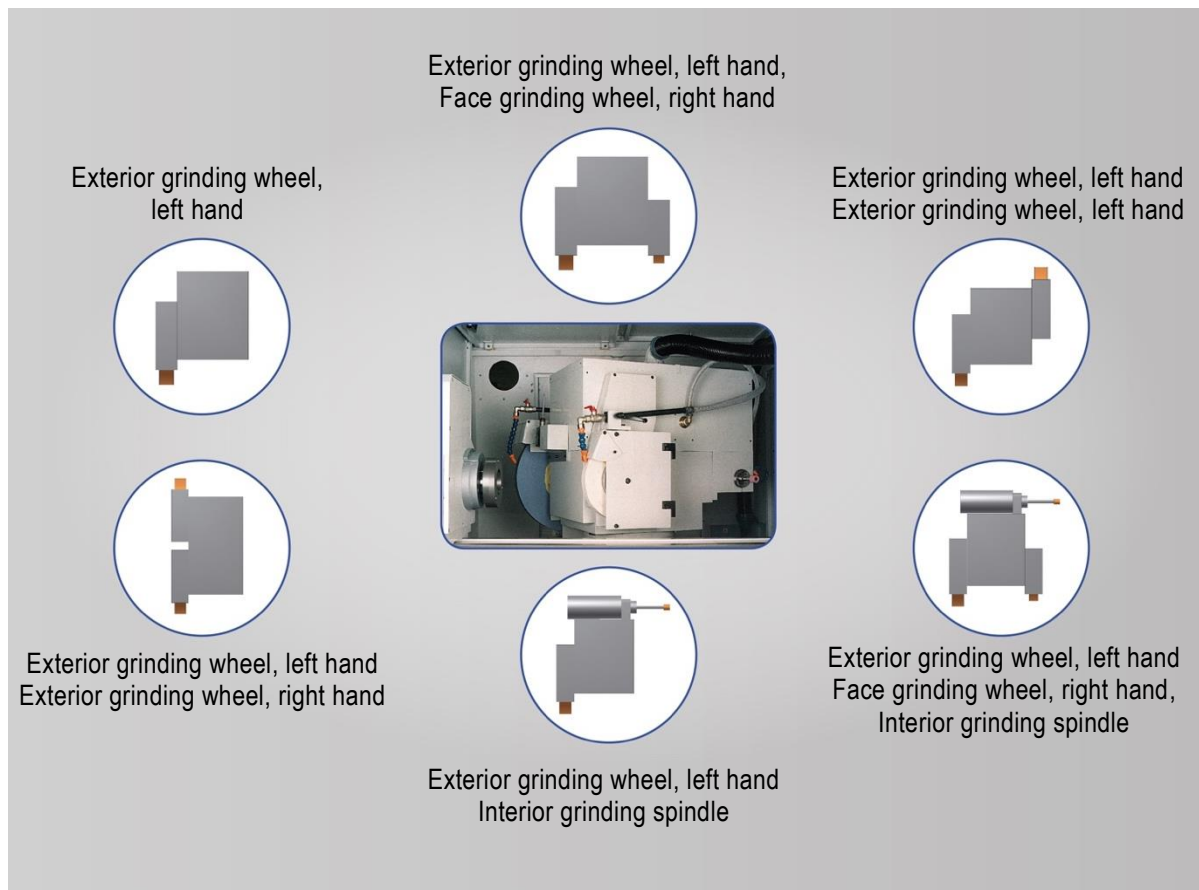
The dressing is effected from the workpiece spindle head or from the tailstock. All dressing amounts are compensated.

Other dressing devices like diamond rolls can be integrated into the machine on demand. Several dressing strategies are available in the control. Using the integrated CAD program (option), virtually every grinding wheel profile can be created conveniently and fast. The transfer of existing CAD-data is also possible (option).



B-axis and grinding spindle arrangements

The slewing of the B-Axis is realised infinitely - fast and accurately. A multitude of grinding spindle arrangements is available.



THE MODULAR DESIGN



Choose your basic machine:

- Distance between centres
- Centre height
- Component weight

Choose your individual options:

- Swivable B-axis
- Number and arrangement of grinding spindles (exterior and interior grinding spindles)
- Positionar (Z-length-caliper)
- Gap-control
- In-process-dimensional control
- Controlled C-axis (non-cylindrical grinding)
- Hydrostatic guideway in X-axis (infeed axis)
- Diamond form roll, Diamond roller dressing unit
- Servo-controlled tailstock with pressing force programming
- Network connection
- Data back-up
- Remote maintenance

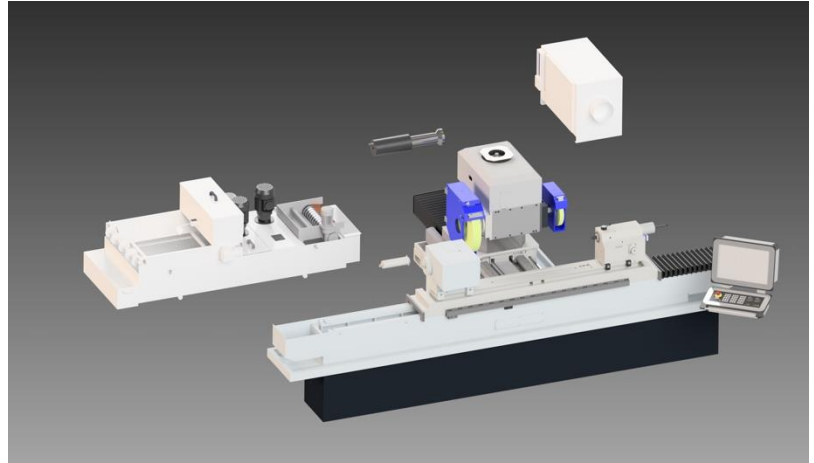
Combine your machine with appropriate aggregates like:

- Universal paper filter system
- Compact air cleaning set ...

Please note: Options and aggregates are not exhaustive.

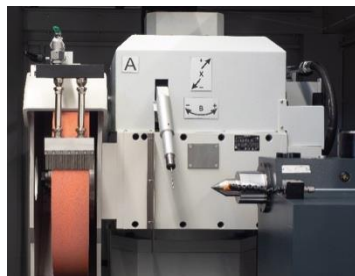
Some combinations can be mutually exclusive!!

We assemble your machine following to your desires!



Length caliper

With the length caliper, it is possible to determine the position of the workpiece in the machine.



Production machine



Machines that are conceived for serial production can be equipped with a loading portal and an in-process dimension control.

Type		RS 1000 C	RS 600 CU	RS 1000 CU	RS 1500 CU	RS 2000 CU
Distance between centres	mm	1.000	600	1.000	1.500	2.000
Centre height (Option)	mm	140	180 (230)	180 (230)	180 (230)	180 (230)
Grinding length	mm	1.000	600	1.000	1.500	2.000
Component weight between centres	kg	100	150	150	150	150
Component weight, cantilever	Nm	40	120	120	120	120
X-Axis – infeed movement						
Infeed speed	mm/min	0,01 – 8.000	0,01 – 8.000	0,01 – 8.000	0,01 – 8.000	0,01 – 8.000
Linear measurement system, int. resolution	mm	0,0001	0,0001	0,0001	0,0001	0,0001
Z-Axis – table movement						
Table speed	mm/min	0,01 – 12.000	0,01 – 12.000	0,01 – 12.000	0,01 – 12.000	0,01 – 10.000
C-Axis – workpiece spindle head						
Rotation speed	min ⁻¹	0 – 600	0 – 600	0 – 600	0 – 600	0 – 600
Power of the motor	kW	2,0	2,0	2,0	2,0	2,0
Chuck cone		MK 4 / KK 5	MK 5 / KK 5	MK 5 / KK 5	MK 5 / KK 5	MK 5 / KK 5
Grinding spindles						
Power of grinding spindle motor	kW	5,5	11	11	11	11
Peripheral speed of grinding wheel	m/s	35 (63)	35 (63)	35 (63)	35 (63)	35 (63)
Grinding wheel, standard	mm	400 x 50 x 127	500 x 80 x 203,2	500 x 80 x 203,2	500 x 80 x 203,2	500 x 80 x 203,2
Face grinding wheel, right hand (Option)	mm	250 x 30 x 127	300 x 40 x 127	300 x 40 x 127	300 x 40 x 127	300 x 40 x 127
Internal grinding spindle (Option)		on demand	on demand	on demand	on demand	on demand
Tailstock						
Chuck cone		MK 4	MK 4	MK 4	MK 4	MK 4
Workpiece fixture		spring tension manual withdrawal	spring tension manual (hydraulic) withdrawal	spring tension manual (hydraulic) withdrawal	spring tension manual (hydraulic) withdrawal	spring tension manual (hydraulic) withdrawal

Type	RS 1000 CM	to	RS 4000 CM	RS 2000 CP	to	RS 6000 CP	RS 2000 CPA	to	RS 6000 CPA
Distance between centres	mm	1.000	4.000	2.000		6.000	2.000		6.000
Centre height (Option)	mm	300	300	400		400	400 (500)		400 (500)
Grinding length	mm	1.000	4.000	2.000		6.000	2.000		6.000
Component weight between centres	kg	800	800	2.000		2.000	4.000		4.000
Component weight, cantilever	Nm	200	200	600		600	1.600		1.600
X-Axis – infeed movement									
Infeed speed	mm/min	0,01 – 8.000	0,01 – 8.000	0,01 – 8.000		0,01 – 8.000	0,01 – 8.000		0,01 – 8.000
Linear measurement syst., int. resolution	mm	0,0001	0,0001	0,0001		0,0001	0,0001		0,0001
Z-Axis – table movement									
Table speed	mm/min	0,01 – 8.000	0,01 – 6.000	0,01 – 8.000		0,01 – 6.000	0,01 – 8.000		0,01 – 6.000
C-Axis – workpiece spindle head									
Rotation speed	min ⁻¹	0 – 300	0 – 300	0 – 200		0 – 200	0 – 200		0 – 200
Power of the motor	kW	5,0	5,0	8,2		8,2	8,2		8,2
Chuck cone		MK 5 / KK 6	MK 5 / KK 6	MK 6 / KK 8		MK 6 / KK 8	MK 80 / KK 11		MK 80 / KK 11
Grinding spindles									
Power of grinding spindle motor	kW	15	15	18		18	23		23
Peripheral speed of grinding wheel	m/s	35 (63)	35 (63)	35 (63)		35 (63)	35 (63)		35 (63)
Grinding wheel, standard	mm	600 x 80 x 203,2	600 x 80 x 203,2	750 x 80 x 304		750 x 80 x 304	750 x 80 x 304		750 x 80 x 304
Face grinding wheel, right hand (Option)	mm	300 x 40 x 127	300 x 40 x 127	400 x 40 x 127		400 x 40 x 127	400 x 40 x 127		400 x 40 x 127
Internal grinding spindle (Option)		on demand	on demand	on demand		on demand	on demand		on demand
Tailstock									
Chuck cone		MK 5	MK 5	MK 6		MK 6	MK 80		MK 80
Workpiece fixture		Spring tension hydraulic withdrawal	Spring tension Hydraulic withdrawal	Servomotor		Servomotor	Servomotor		Servomotor



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Who we are:

On our site in Homberg (Ohm) in Hessen, precision grinding machines and their accessory equipment are being produced since 1956. Now, more than 10.000 manufactured machines are in action all over the world.

All machines that are supplied by Geibel & Hotz are assembled, put into service and subjected to an extensive quality control on our site in Homberg.

Thanks to the central situation of our company, every place in Germany can be reached by car within 8 hours. Service interventions can be arranged optimally for our customers from our location.