

Göckel

Präzisions-Schleifmaschinen

Founded in 1883



Precision-Grinding machines for your production

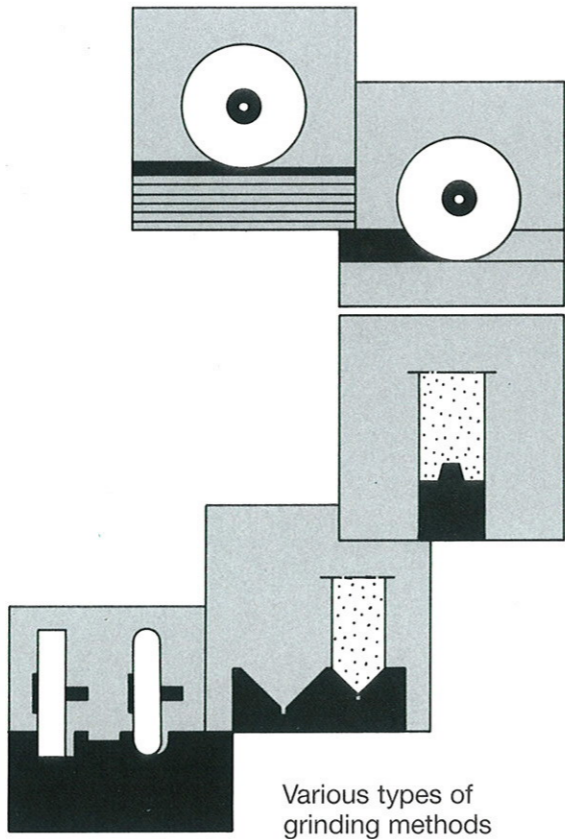
Modern and cost-effective grinding with the Göckel system

Our company has one hundred years' tradition in mechanical engineering and has specialized in precision grinding machines for decades.

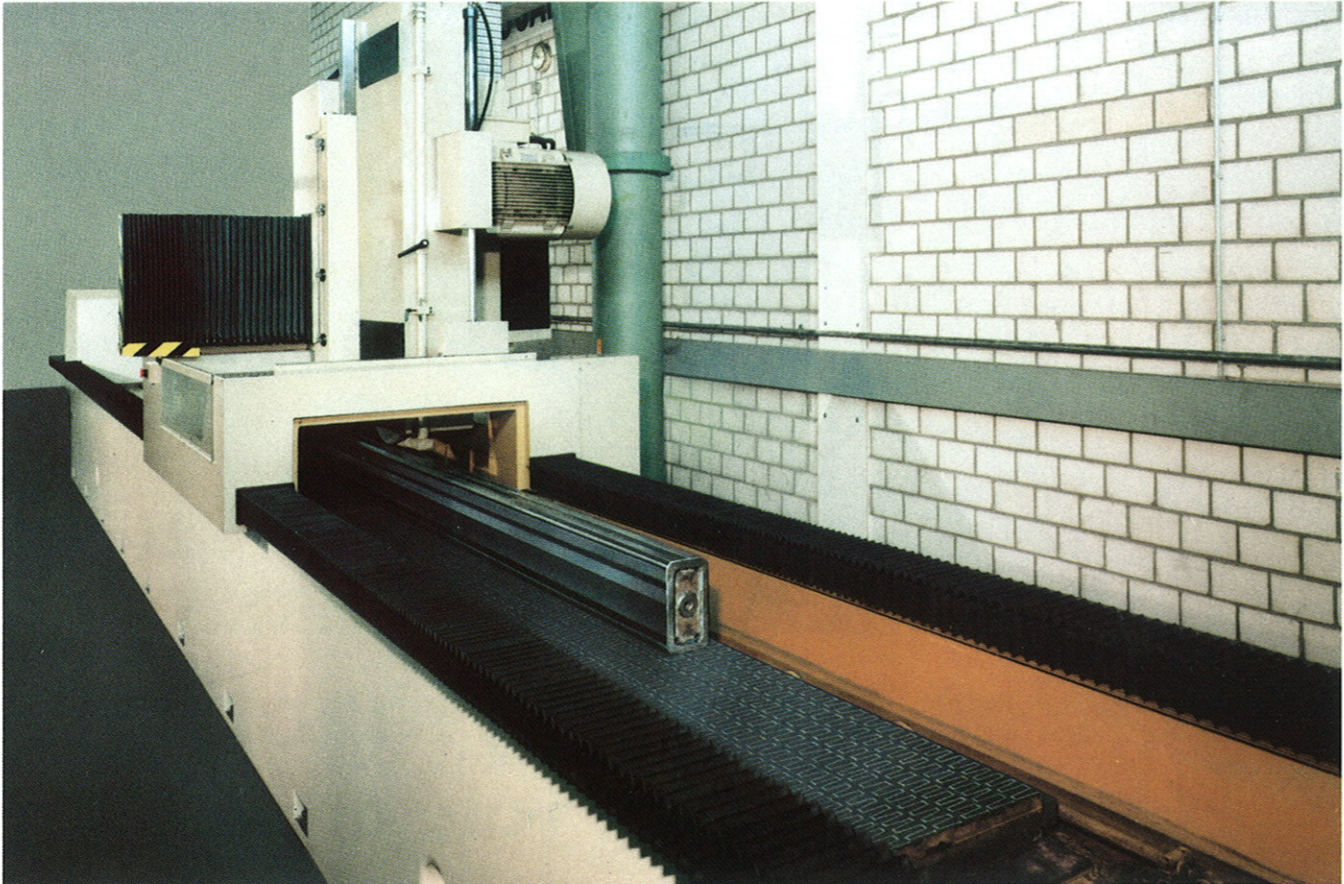
We offer you innovation for your production with our proven GÖCKEL system. Our modern machines incorporate the following features:

- CNC grinding process control variable in hardware and software
- Measuring control systems for automatic grinding to finished size with digital sensor adjustment
- Incremental measuring systems with microprocessor counter systems
- Automatic start grinding process with adaptive control
- Permanently excited direct current servo-drives with roller circulating spindle systems

These features make our machines stand out.



Various types of grinding methods



9 Coolant device

11 Machine control

6 Grinding motor

5 Infeed device for grinding tool

4 Grinding head carriage

2 Guideways

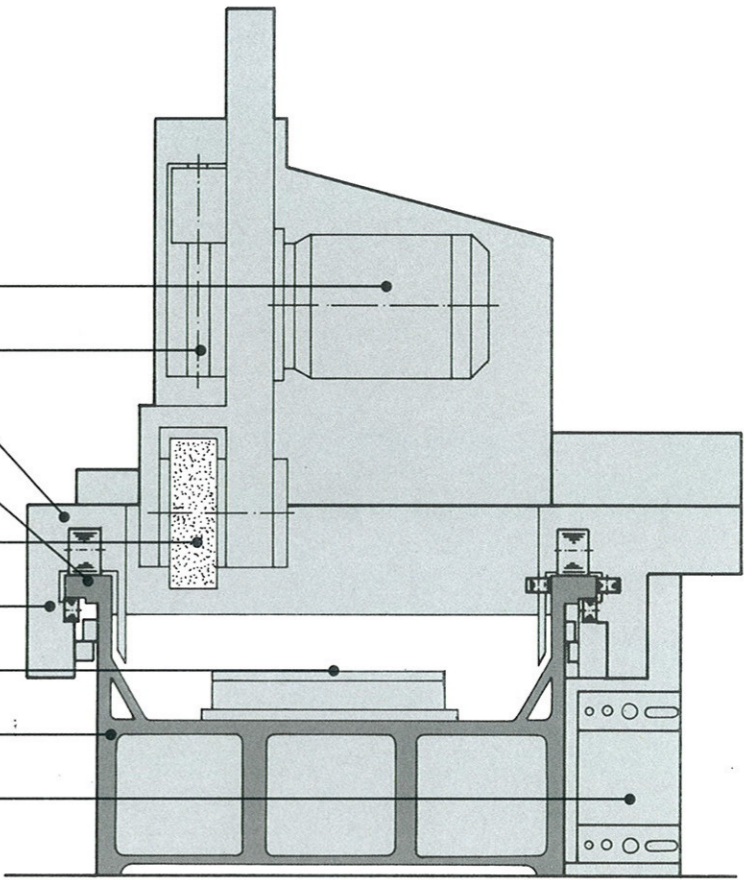
7 Grinding tool

8 Traverse drive

3 Machine table

1 Machine bed

10 Electrical system



Technical data

Machine type			U 65/	U 80/				U 100/			U 130/			U 150/		
			350	350	500	600	350	500	600	350	500	600	350	500	600	
Grinding head sizes	Grinding wheels	∅	350	350	500	600	350	500	600	350	500	600	350	500	600	
	max. width	mm	75	75	125	150	75	125	150	75	125	150	75	125	150	
	Grinding motor	kW	15	15	30	45	15	30	45	15	30	45	15	30	45	
	Clearance	height mm	260	260	300	350	260	300	350	260	300	350	260	300	350	
		width mm	530		660			850			1150			1350		
	Grinding width mm	300														
		400														
		450														
		500														
		600														
		800														
		900														
		1000														
		1100														
Grinding length		mm	1700 – 15000													
Carriage speed			(0,02) 0,5 – 40 m/min													

U 65/80

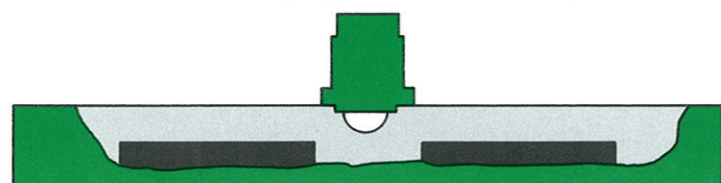
Grinding width 300 up to 450 mm
with different motor capacities



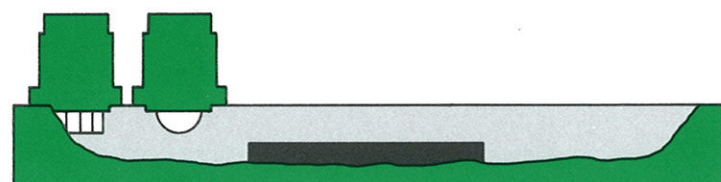
Control desk with screen
CNC-multifunction key-
board integrated machine
control board and electro-
nic handwheel



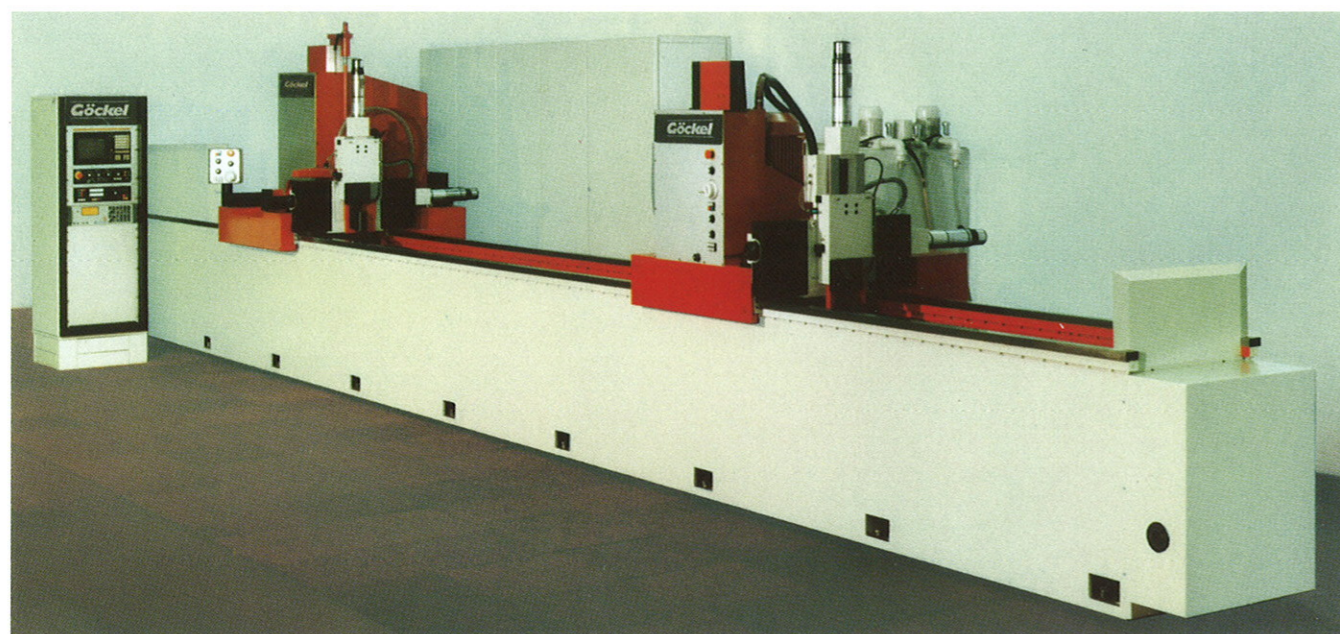
One grinding head carriage
Rotatable or fixed clamping table



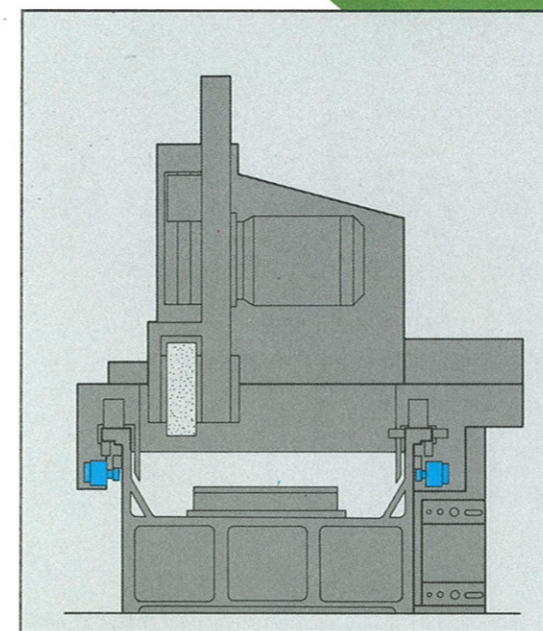
One grinding head carriage two-stationary grinding
e.g. clamping to the left, grinding to the right



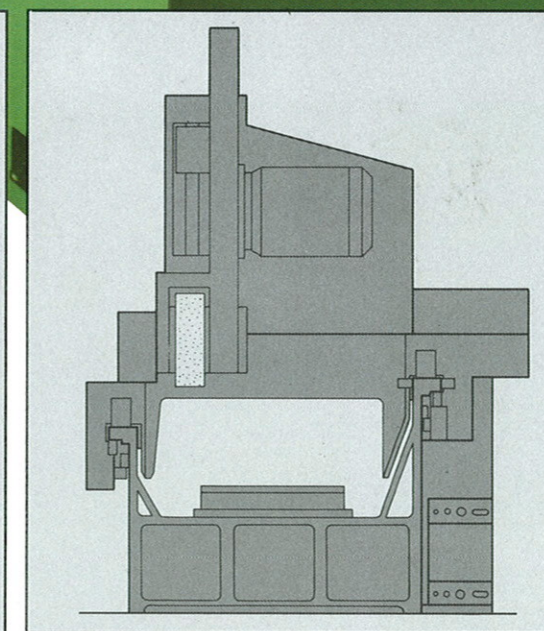
Two grinding head carriages for increased output
Segmental- and peripheral grinding



4 Combined machine with two grinding carriages for segmental- and peripheral grinding. CNC controlled, 11 axes



Dual-side drive synchronized

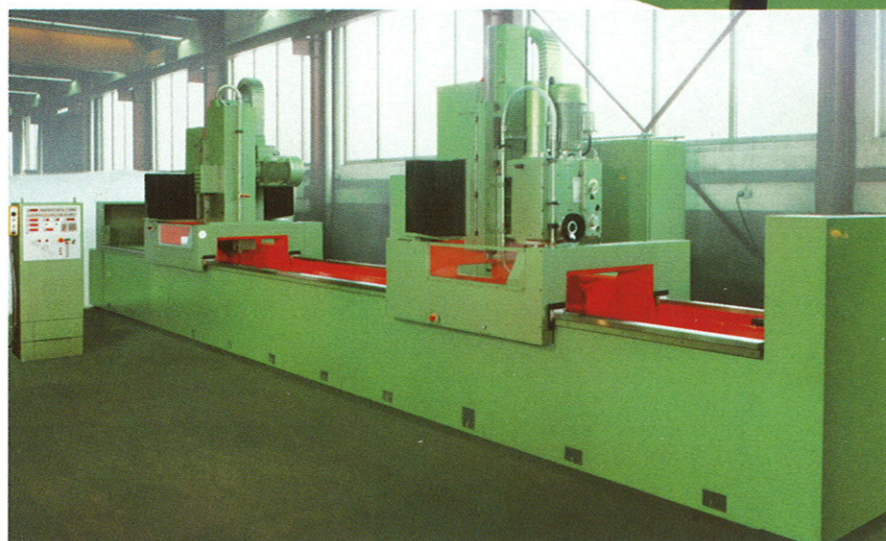
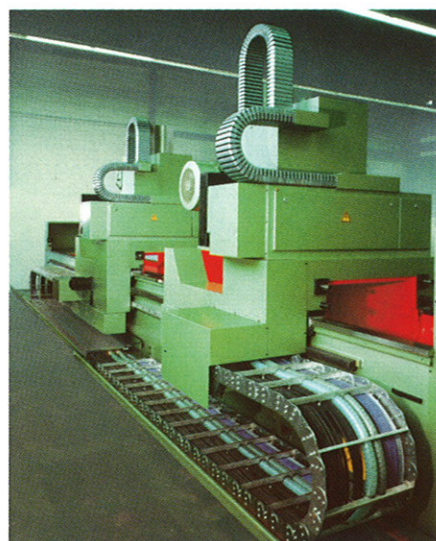
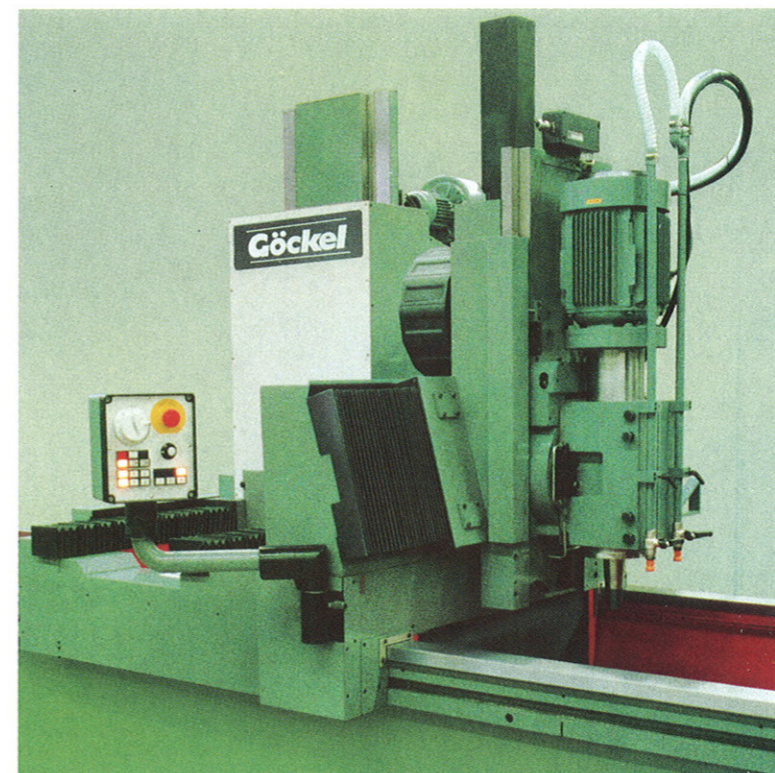


Version for increased clearance

U 100/130/150

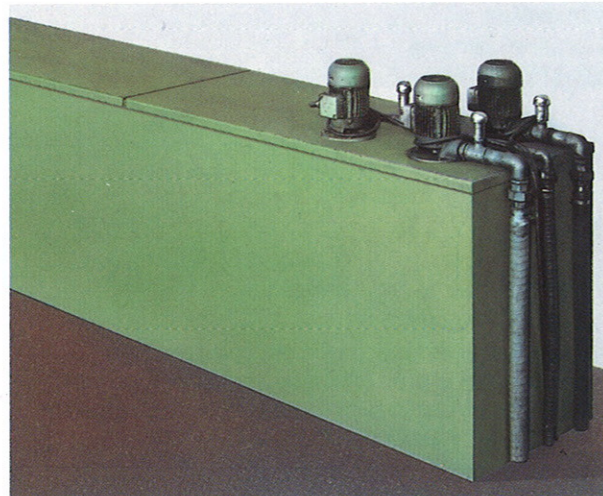
Grinding width 500 up to 1100 mm
with different motor capacities

Combination with universal
grinding attachment up to
7,5 kW, rotatable $\pm 60^\circ$ for
guideways
bores
slots

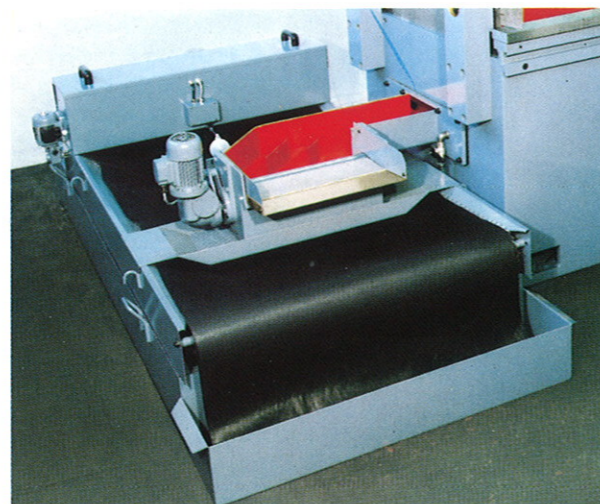




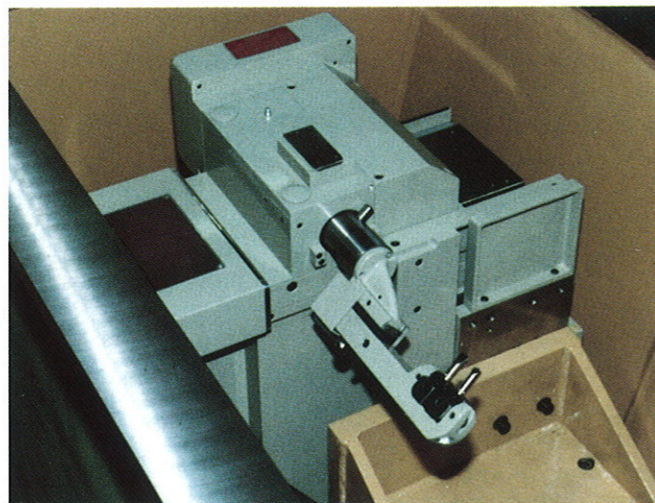
1	Machine bed	<ul style="list-style-type: none"> ● Welded construction, celle design ● Thermally relieved and vibration damped ● Smooth formation of internal space for good cooling water drainage and cleaning
2	Guideways	<ul style="list-style-type: none"> ● Bolted on, hardened and ground ● Precision ways made from special steel with oblique joint ● Guideway covers on request
3	Machine table	<ul style="list-style-type: none"> ● Stationary for surface grinding and large table capacity in electromagnetic design and as cast table with slots ● Electromagnetic swivelling table for surface, chamfered and multiple surface grinding in one clamping operation, rotatable by 360°, supported on multiple bearings, sturdy bearing points with overdimensioned journals for maximum torsional strength. Additional clamping sides with slots ● Double and multiple tables in magnetic and cast design ● Automatic table holding device with high-pressure hydraulics ● Table adjustment with large scale and vernier, optional optical reading system. Sensitively adjustable with manual operation or motor-driven
4	Grinding head carriage	<ul style="list-style-type: none"> ● Heavy cast construction with top side guidance and anti-lift rollers ● Grinding carriage length for optimum roller spacing, in this way best load distribution and smooth run ● Support with long vertical guide and triple wedge bar support ● Good view of the illuminated grinding area
5	Infeed device for grinding tool	<ul style="list-style-type: none"> ● Lead screw system with weight counterbalance ● Ball-race lead screw on request ● Pulsed infeed with continuous preselection ● Continuous infeed infinitely adjustable ● Digital display with decade switch preselection for sequential program ● Measuring control system with wheelwear compensation ● Fast speed with automatic start grinding
6	Grinding motor	<ul style="list-style-type: none"> ● Special construction with high precise bearings as sliding or rolling bearing ● Compact set up with still standing spindle ● Spindle drive fixed or steplessly variable ● All rotation parts are dynamically balanced ● Precision belts for max. power transmission
7	Grinding tool	<ul style="list-style-type: none"> ● Straight wheels with big bores on hardened and ground cone with balancing slot. ● Dressing devices for straight and profile-dressing in various systems
8	Traverse drive	<ul style="list-style-type: none"> ● Continuously adjustable servo-drive with gear transmission ● Synchronous drive on both sides from Type U 130 onwards ● Contactless, smooth reverse
9	Coolant device	<ul style="list-style-type: none"> ● Intensive cooling ● Various tank systems ● Coolant pump ● Automatic cleaning systems
10	Electrical system	<ul style="list-style-type: none"> ● All equipment in separate control cabinet ● Cable lead-in by cable carrying chains
11	Machine control	<ul style="list-style-type: none"> ● PC control is standard ● CNC control for all axes on request



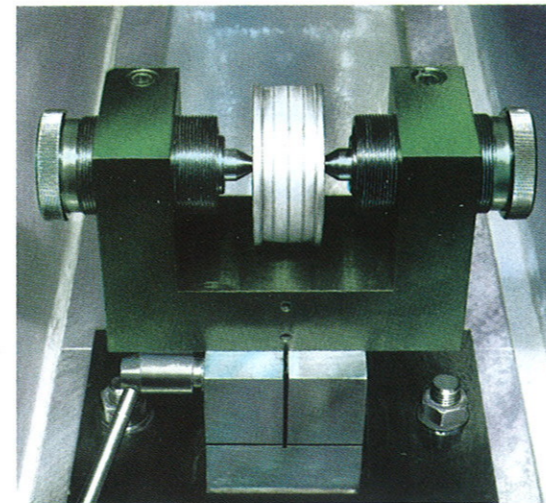
High-level tank set up separately



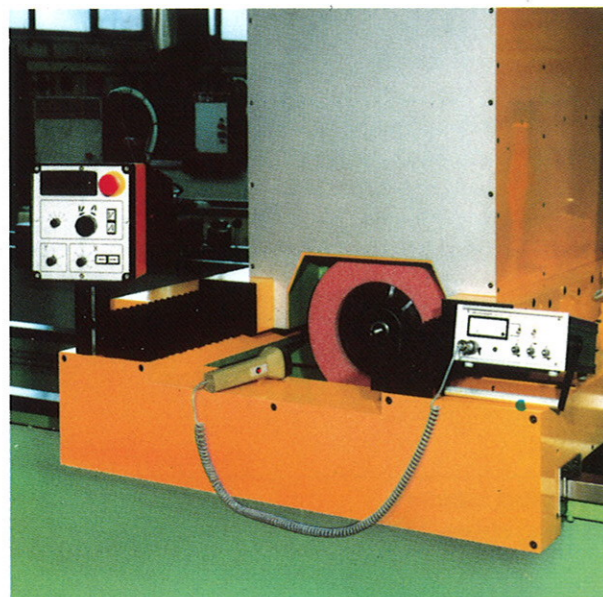
Magnetic separator with paper band filter



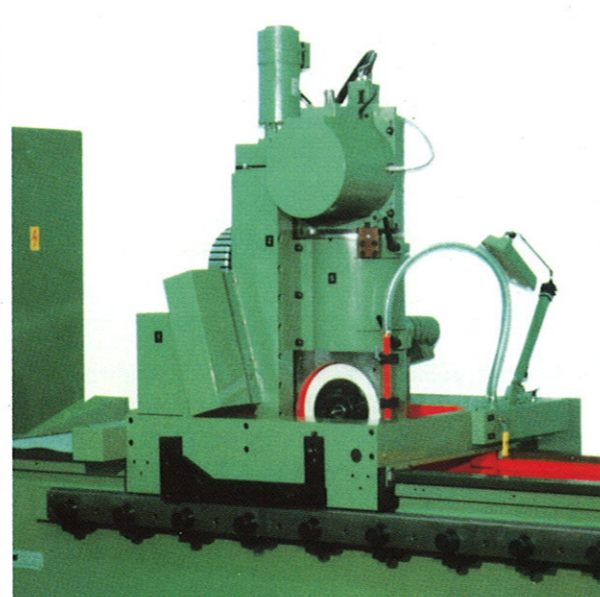
CNC-Profiling unit



Crush-profiling with roll

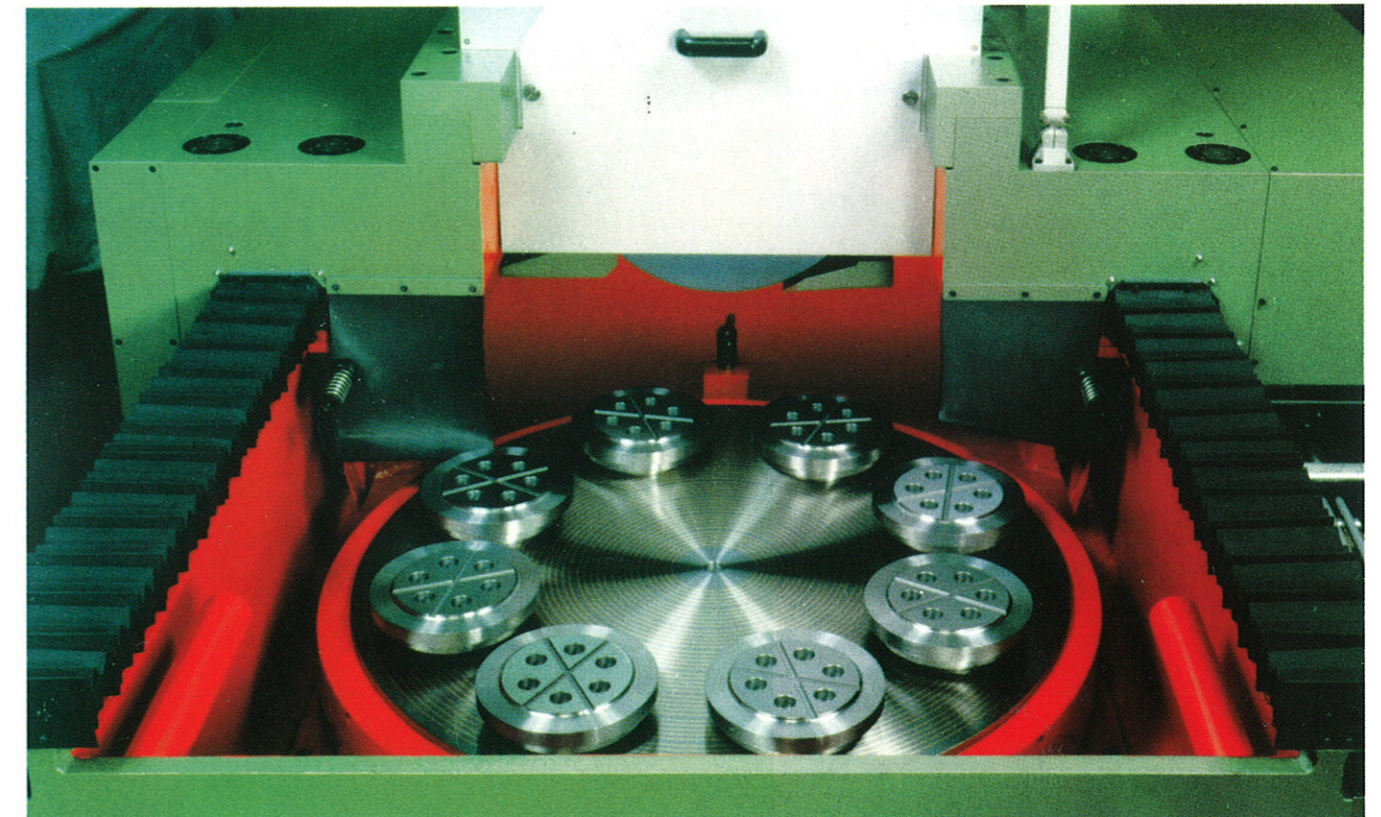


Balancing device



Special grinding head for length and cross grinding (90° rotatable)

- Vertical long-table surface grinders
grinding motor capacity of 2 to 350 kW
grinding lengths of 1200 to 15000 mm
grinding widths up to 1000 mm
- Horizontal rotary-table surface grinders and circular blade grinding machines
grinding motor capacity of 0.5 to 50 kW
grinding diameter up to 1500 mm
- Knife grinding machines for straight and circular knives. Tungsten Carbide knives
- Vertical rotary-table surface grinders
grinding motor capacity up to 250 kW
grinding diameter up to 1500 mm
- Roll grinding machines
grinding motor capacity of 3 to 50 kW
roll diameter up to 1000 mm
roll lengths up to 6000 mm
- Face (end) grinding machines
grinding motor capacity from 10 to 50 kW
angles up to 50°
- Handling systems and robots with and without CNC are steps of automation to increase output and to be more economic for all machine types.



Göckel

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