

OPTIONAL ACCESSORIES

- Wheel Flange
- Electro Magnetic Chuck
- Automatic Demagnetizer for Magnetic Chuck
- NC Auto Parallel Dressing & Compensating Device
- Magnetic Separator with Coolant System
- Automatic Paper Strip Filter with Coolant System
- Automatic Paper Strip Filter and Magnetic Separator with Coolant System
- Spindle Motor Inverter
- Auto. Balancing Device



PRECISE, PERFECT AND EXCELLENT

HOTLINE: +49-6158-84772
info@gk-werkzeugmaschinen.de

P,CD-Ed.2
PD-07.10

HIGH PRECISION SURFACE GRINDERS DOUBLE COLUMN TYPE CANTILEVER TYPE



Deliver Uncompromising,
Fine Results. *Since 1988*

GK
WERKZEUGMASCHINEN GMBH

**Optimal Structure!
Ruggedly Designed Throughout for
Stability and Lifetime Accuracy**

MODEL :

800 x 1500 mm	1000 x 1500 mm
800 x 2000 mm	1000 x 2000 mm
800 x 3000 mm	1000 x 3000 mm



MODEL :

1200 x 2000 mm	1600 x 2000 mm
1200 x 3000 mm	1600 x 3000 mm
1200 x 4000 mm	1600 x 4000 mm
1200 x 5000 mm	1600 x 5000 mm
1200 x 6000 mm	1600 x 6000 mm



PERFECT Quality Features Guarantee Efficient, Precise Grinding!



► The box type column is ruggedly constructed and combined scientifically with rib reinforcement for maximum rigidity. The cantilever beam is also of a box type construction and radiation-type rib reinforced, providing structural rigidity, minimum vibration and deformation-free performance.

- The vertical feed is controlled by an M.P.G. handwheel instead of a conventional handwheel. Feed is driven by an AC servomotor for effortless operation and high accuracy.
- The table feed speed is controlled by a 6-step change hydraulic system, which permits speed adjustment according to the workpiece for increased convenience of operation.
- The entire machine is lubricated by an automatic circulated lubrication system. It provides lubrication to all slideways and transmission parts, ensuring high accuracy and long service life.

► The vertical feed axis is equipped with high precision, preload linear guideways combined with high precision ball screw transmission, providing superior grinding accuracy.



Maximum Rigidity of Structure

The structural parts such as base and table are of a double wall construction, combined and scientifically rib reinforced for the best possible rigidity and stability.



Precision Ball Screw and Linear Guide Ways

The vertical feed is transmitted by high precision pre-tensioned ball screw combined with the use of linear guide ways, assuring high accuracy grinding and smooth feed.



Vertical Wheel Head (option)

An optional vertical wheel head is available which is suitable for grinding box slideways and dovetailed slideways.

Guaranteed Performance to Meet Your Requirements for Accuracy and Productivity



Rigid Slant Beam

The PERFECT double column surface grinder is designed with slant beam construction. This provides outstanding load distribution on the entire beam surface, assuring maximum stability during heavy duty grinding.

Heavy Duty Linear Guide Ways

The beam surface is equipped with two heavy duty linear guide ways with great span for extra smooth movement and high rigidity.



Precision Feed on Vertical-axis

The vertical axis is equipped with high precision linear guide ways combined with high precision ball screw transmission, assuring outstanding feed accuracy and maximum stability.



Variable Table Speed

The variable feed speed of the table is controlled by a proportional hydraulic valve, allowing for feed speed adjustment according to the workpiece type for increased convenience of operation.



- ▶ All major parts are manufactured from high tensile cast iron, tempered and stress relieved for best rigidity and stability.
- ▶ Structural parts are rib reinforced for outstanding rigidity.
- ▶ Slant beam construction for outstanding load distribution.

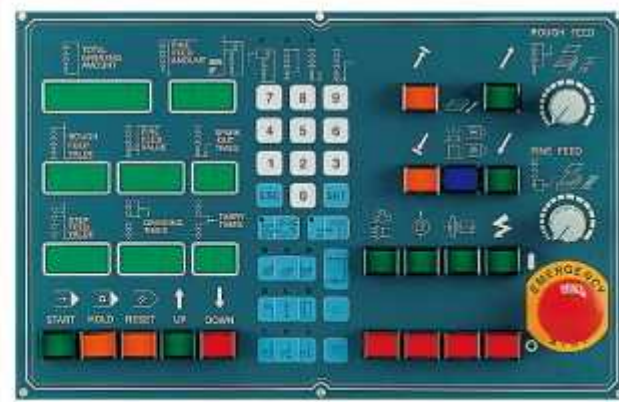
- ▶ Short distance from the wheel spindle to beam surface ensures high stability for heavy duty grinding.
- ▶ Linear guide ways on Y, Z-axis.
- ▶ High precision, pre-tensioned ball screws reduce thermal strain while ensuring high positioning accuracy.
- ▶ Automatic lubrication
- ▶ Vertical and cross feed are controlled by AC servo motors and M.P.G. handwheel.
- ▶ Extra wide span between columns for outstanding rigidity.

Vertical Wheel Head (optional)

Upon request, the machine is available to equip with a vertical wheel head. It is suitable for grinding box slideways and dovetailed slideways.



Quality-proven Surface Grinders Designed with Accuracy and Productivity in Mind.



▶ **COMPUTERIZED AUTOMATIC DOWNFEED CONTROL PANEL**

Type AD5 Automatic Downfeed System



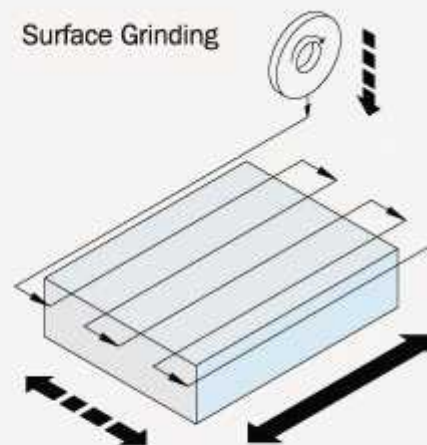
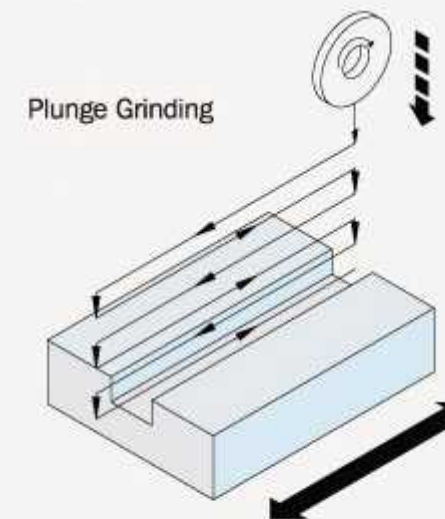
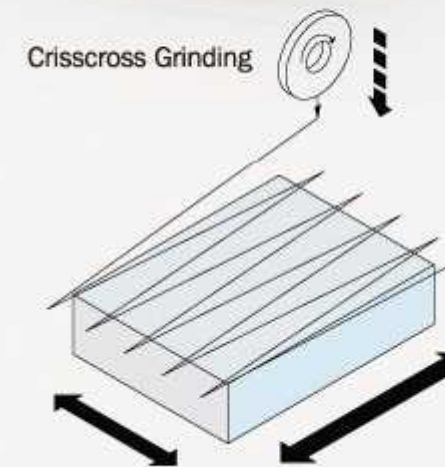
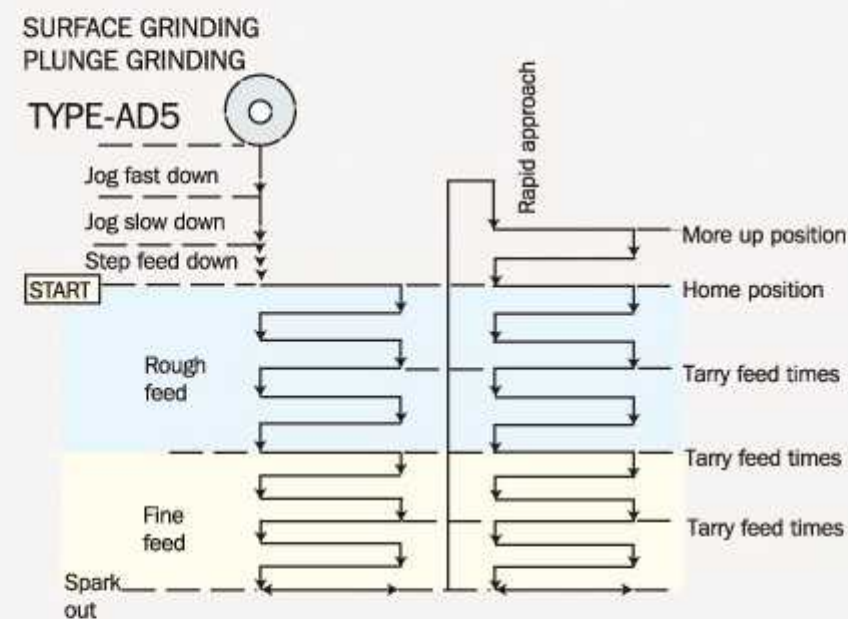
▶ **NC DRESSING & COMPENSATING CONTROL PANEL (Option)**

NC Control with 3 Speed: Fast, Slow, Jog



M.P.G. Handwheel

Eliminating the conventional feed control by a mechanical handwheel, the machine employs an M.P.G. handwheel for controlling vertical and cross feed (only vertical feed in cantilever type). This combines with an AC servomotor drive for effortless and accurate feed operation.



Automatic Lubrication System

The machine is equipped with an automatic circulated lubrication system for lubrication to the entire machine. The lubrication system ensures high accuracy and long service life for all sideways and transmission parts.

CANTILEVER TYPE SURFACE GRINDERS

SPECIFICATIONS	FSC- 80150AHR 100150AHR	FSC- 80200AHR 100200AHR	FSC- 80300AHR 100300AHR	FSC- 80400AHR 100400AHR
Table Size (mm)	800 x 1500 mm 1000 x 1500 mm	800 x 2000 mm 1000 x 2000 mm	800 x 3000 mm 1000 x 3000 mm	800 x 4000 mm 1000 x 4000 mm
Max. surface ground (mm)	800 x 1500 mm 1000 x 1500 mm	800 x 2000 mm 1000 x 2000 mm	800 x 3000 mm 1000 x 3000 mm	800 x 4000 mm 1000 x 4000 mm
Max. distance from center of spindle to table (mm)	800 mm (Option-1000 mm)			700 mm (Option-900 mm)
Table speed (M/min)	3~25 M/min			
Table guideway	V and V way			
Auto. cross feed increment (mm)	0.5~20 mm			
Power cross feed (mm/min)	1050 mm/min [60Hz] / 900 mm/min [50Hz]			
Cross feed width on hand wheel 1 rev/1 gra (mm)	5 mm 0.02 mm			
Rapid power head elevation	240 mm/min			
Auto. down feed	0.001 mm ~ 0.1 mm			
Vertical down feed with M.P.G. 1 rev/1 gra (mm)	(X1) 0.01 mm (X1) 0.001 mm	(X5) 0.5 mm (X5) 0.005 mm	(X10) 1 mm (X10) 0.01 mm	
Wheel speed (R.P.M.)	1740 R.P.M. [60Hz] / 1450 R.P.M. [50Hz]			
Wheel dimension (mm)	406 x 50.8 x 127 mm (max. 406 x 75 x 127 mm)			
Spindle motor	10 HP (Option-15 HP)			
Hydraulic pump motor	7.5 HP	10 HP	15 HP	
Auto. cross feed motor	1/5HP			
Rapid head elevation motor	AC SERVO MOTOR 1Kw			
Machine net weight Kgs	12800 kgs 13800 kgs	14300 kgs 15300 kgs	17300 kgs 18300 kgs	20300 kgs 21300 kgs
Gross weight Kgs	13800 kgs 14800 kgs	15500 kgs 16500 kgs	18800 kgs 19800 kgs	21800 kgs 22800 kgs
Machine dimension (LxWxH)	516 x 240 x 256 cm 516 x 266 x 256 cm	626 x 240 x 256 cm 626 x 266 x 256 cm	846 x 240 x 256 cm 846 x 266 x 256 cm	1066 x 240 x 256 cm 1066 x 266 x 256 cm
Packing dimensions (LxWxH) cm C/NO.1	546 x 258 x 297 cm 546 x 276 x 297 cm	650 x 258 x 297 cm 650 x 276 x 297 cm	750 x 258 x 297 cm 750 x 276 x 297 cm	850 x 258 x 297 cm 850 x 276 x 297 cm
cm C/NO.2	165 x 165 x 206 cm			

★ The working lengths can be ordered by the customer. Please contact PERFECT MACHINE CO., LTD.

STANDARD ACCESSORIES

- Grinding Wheel
- Wheel Flange
- Flange Extractor
- Wheel Balancing Arbor
- Wheel Balancing Base
- Wheel Dresser with Diamond
- Leveling Screw and Plates
- Tool Box and Tools
- Parallel Dresser Device
- Coolant System
- Automatic Down Feed System

DOUBLE COLUMN TYPE SURFACE GRINDERS

SPECIFICATIONS	FSC-120200AHR 160200AHR	FSC-120300AHR 160300AHR	FSC-120400AHR 160400AHR	FSC-120500AHR 160500AHR	FSC-120600AHR 160600AHR
Table Size (mm)	1200 x 2000 mm 1600 x 2000 mm	1200 x 3000 mm 1600 x 3000 mm	1200 x 4000 mm 1600 x 4000 mm	1200 x 5000 mm 1600 x 5000 mm	1200 x 6000 mm 1600 x 6000 mm
Max. surface ground (mm)	1200 x 2000 mm 1600 x 2000 mm	1200 x 3000 mm 1600 x 3000 mm	1200 x 4000 mm 1600 x 4000 mm	1200 x 5000 mm 1600 x 5000 mm	1200 x 6000 mm 1600 x 6000 mm
Max. distance from center of spindle to table (mm)	1000 mm (Option-1200 mm)		900 mm (Option-1100 mm)		
Table speed (M/min)	1-25 M/min				
Table guideway	V and V way				
Auto. cross feed increment (mm)	0.1 - 40 mm				
Power cross feed (mm/min)	900 mm/min				
Cross feed with M.P.G. 1 rev/1 gra (mm)	(x1) 0.1 mm (x1) 0.001 mm	(x5) 0.5 mm (x5) 0.005 mm	(x10) 0.1 mm (x10) 0.01 mm		
Rapid power head elevation (mm/min)	300 mm/min				
Auto. down feed	0.001-0.1 mm				
Vertical down feed with M.P.G. 1 rev/1 gra (mm)	(x1) 0.1 mm (x1) 0.001 mm	(x5) 0.5 mm (x5) 0.005 mm	(x10) 0.1 mm (x10) 0.01 mm		
Wheel speed (R.P.M.)	1100 R.P.M.				
Wheel dimension (mm)	508 x 50 x 203 mm (max. 508x76x203 mm)				
Spindle motor	20 HP (Option 30 HP)				
Hydraulic pump motor	15 HP	20 HP	25 HP		
Auto. cross feed motor	AC SERVO MOTOR 1 Kw				
Rapid head elevation motor	AC SERVO MOTOR 1 Kw				
Coolant pump	1/2 HP				
Machine net weight	20000 kgs 23000 kgs	24000 kgs 28000 kgs	28500 kgs 33000 kgs	33000 kgs 38000 kgs	37500 kgs 43000 kgs
Machine dimensions (LxWxH)	610 x 370 x 400 cm 610 x 410 x 400 cm	880 x 370 x 400 cm 880 x 410 x 400 cm	1100 x 370 x 400 cm 1100 x 410 x 400 cm	1320 x 370 x 400 cm 1320 x 410 x 400 cm	1540 x 370 x 400 cm 1540 x 410 x 400 cm
Packing (Container)	40'x1	40'x1+20'x1	40'x1+20'x1	40'x2	40'x1+40'FRx 1

★ The working lengths can be ordered by the customer. Please contact PERFECT MACHINE CO., LTD.

STANDARD ACCESSORIES

- Grinding Wheel
- Wheel Flange
- Flange Extractor
- Wheel Balancing Arbor
- Wheel Balancing Base
- Wheel Dresser with Diamond
- Leveling Screw and Plates
- Tool Box and Tools
- Parallel Dresser Device
- Coolant System
- Automatic Down Feed System
- Hydraulic Oil Air Chiller