

Crisscross Grinding Function (Option)

Crisscross feed speed is infinitely variable, a very wide range of cross feed can be obtained. This grinding method is invaluable for grinding thin workpiece and can increase the efficiency significantly. (H series can't be installed) (This function is a standard function of the cantilever and double



NC Auto Down Feed System (AD5 type) (Option)

Except for H series, the AH, and AHR models are available to equip with an optional NC auto down feed system (AD5 type) to become 3 axes fully automated for greatly increasing operational convenience. This function is a standard function of the cantilever and double column series)



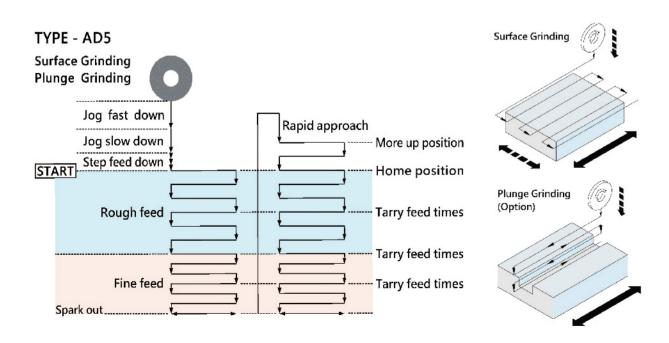
NC Auto Parallel Dressing & Compensating System (Option)

The optional NC auto parallel dressing & compensating system is available to equip with an optional NC auto down feed system (AD5 type), greatly increasing the grinding efficiency.



Vertical Wheel Head (Option)

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

















PERFECT Surface Grinders Help Customers Stay Ahead





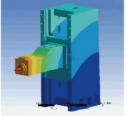


SURFACE GRINDERS

Deliver Uncompromising Fine Results.







Optimized Structure

The major parts are manufactured from high quality cast iron combined with an outstanding structural design. Major parts are stress relieved to ensure maximum rigidity, stability and machining accuracy.



Precision Spindle Design

The spindle runs in a class P4 high precision angular contact bearing, assuring run-out accuracy in 2 µm. The cartridge-type spindle is completely sealed and lubricated for long working lifetime, providing high accuracy grinding and a long service life.



Turcite-B on Slideways

The X, Z axes slideways are coated with Turcite-B for stable movement and



M.P.G. Handwheel

Except for the saddle type, the vertical feed 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.



Heavy Duty Linear Guide Ways

The beam surface of double column type is equipped with two heavy duty linear guide ways with great span for extra smooth movement and high



Precision Feed on Vertical-axis

The vertical axis of cantilever type and double column type, are 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 cantilever & double column type table is controlled by a proportional hydraulic valve, allowing for feed speed adjustment according to the workpiece type for increased convenience of operation.



SURFACE GRINDERS

| | SPECIFICATIONS | | SADDLE TYPE | | | | COLUMN TYPE | | | CANTILEVER TYPE | | | DOUBLE COLUMN TYPE | | | | | |
|-----------|--|---------|---|-------------------------|--|--------------------|--|--|--|--|--|--|--|----------------------------------|----------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | PFG-1545H/AH PFG-2045H/AH | PFG-2550H PFG-2550AH | PFG-CL3060AH PFG-DL3060AH | PFG-D4080AH | PFG-50100AHR PFG-60100AHR PFG-70100AHR | PFG-50150AHR PFG-60150AHR PFG-70150AHR | PFG-50200AHR PFG-60200AHR PFG-70200AHR | PFG-80150AHD PFG-100150AHD | PFG-80200AHD PFG-100200AHD | PFG-80300AHD PFG-100300AHD | PFG-80400AHD PFG-100400AHD | PFG-120200AHD PFG-160200AHD | PFG-120300AHD PFG-160300AHD | PFG-120400AHD PFG-160400AHD | PFG-120500AHD PFG-160500AHD | PFG-120600AHD PFG-160600AHD |
| Travel | Grinding surface of table | mm | 150 X 450 200 X 450 | 250 X 500 | 300 X 600 | 400 X 800 | 500 X 1000 600 X 1000 700 X 1000 | 500 X 1500 600 X 1500 700 X 1500 | 500 X 2000 600 X 2000 700 X 2000 | 800 X 1500 1000 X 1500 | 800 X 2000 1000 X 2000 | 800 X 3000 1000 X 3000 | 800 X 4000 1000 X 4000 | 1200 X 2000 1600 X 2000 | 1200 X 3000 1600 X 3000 | 1200 X 4000 1600 X 4000 | 1200 X 5000 1600 X 5000 | 1200 X 6000 1600 X 6000 |
| | Max. grinding surface | mm | 150 X 450 200 X 450 | 250 X 500 | 300 X 600 | 400 X 800 | 500 X 1000 600 X 1000 700 X 1000 | 500 X 1500 600 X 1500 700 X 1500 | 500 X 2000 600 X 2000 700 X 2000 | 800 X 1500 1000 X 1500 | 800 X 2000 1000 X 2000 | 800 X 3000 1000 X 3000 | 800 X 4000 1000 X 4000 | 1200 X 2000 1600 X 2000 | 1200 X 3000 1600 X 3000 | 1200 X 4000 1600 X 4000 | 1200 X 5000 1600 X 5000 | 1200 X 6000 1600 X 6000 |
| | Max. distance center of spindle to table | mm | 450 | 500 [Option: 600] | 500 [Option: 600] | 550 [Option: 650] | | 600 [Option: 800 & 1000] |] | | 800 [Opt | tion: 1000] | | 1000 [Op | tion: 1200] | | 900 [Option: 1100] | |
| Feeding | Table speed approx. | M/min | 5~25 | | 5~25 | | 5~25 | | 3~25 | | | 3~25 | | | | | | |
| | Table guideway | | V & Flat way | | V & Flat way | | V & Flat way | | V & V way | | | V & V way | | | | | | |
| | Auto. Cross feed increment approx. | mm | manual (for H), 0.1~12 (for AH) | | 0.5~20 | | 0.5~20 | | | 0.1~15 | | | 0.1~35 | | | | | |
| | Rapid power cross feed | mm/min | manual (for H) ,1100 [60HZ] / 900 [50HZ] (for AH) | | 1100 [60HZ] / 900 [50HZ] | | 1100[60HZ]/900[50HZ] | | | 1500 | | | 3000 | | | | | |
| | Cross feed on hand wheel | mm | 5/rev. ; 0.02/gra. | | 5/rev.; 0.02/gra. | | 5/rev. ; 0.02/gra. | | 5/rev. ; 0.02/gra. | | | (x1) 0.1 (x5) 0.5 (x1) 0.001 (x5) 0.005 | | (x10) 1 (x10) 0.01 | | | | |
| | Rapid power head elevation | mm/min | 550 [60HZ] / 450 [50HZ] (Power rapid up/down system) [Option] 300 (NC Auto down feed system) [Option] | | 550 [60HZ] / 450 [50HZ] (Power rapid up/down system) [Option] 300 (NC Auto down feed system) [Option] | | 300 | | 225 | | | 300 | | | | | | |
| | Vertical feed on hand wheel | mm | 2/rev. ; 0.01/gra. | | 2/rev.; 0.01/gra. | | (x1) 0.1 (x1) 0.001 | (x5) 0.5 (x5) 0.005 | (x10) 1 (x10) 0.01 | (x1) 0.1 (x5) 0.5 (x10) 1 (x1) 0.001 (x5) 0.005 (x10) 0.01 | | (x10) 1 (x10) 0.01 | (x1) 0.001 (x5) 0.005 | | | (x10) 1 (x10) 0.01 | | |
| | Auto down feed | mm/time | 0.001~0.999 [2/rev.; 0.005/gra.] [Option] | | 0.001~0.999 [2/rev. ; 0.005/gra.][Option] | | 0.001~0.999 [Option] | | 0.001~0.999 | | | 0.001~0.999 | | | | | | |
| | Spindle motor | HP | 2 | | 5 5 | | 10 [Option: 15] | | 10 [Option: 15] | | | 20 [Option: 30] | | | | | | |
| Motor | Hydraulic pump motor | HP | 1 | | 1 2 | | 3 5 | | 7.5 | | 10 | 15 | | 15 | | 20 | 25 | |
| | Auto Cross feed motor | HP | · · · | 30W (for AH) 1/5 | | 1/5 | | 1/5 | | 1/5 | | | 1KW AC servo motor | | | | | |
| | Rapid head elevation motor | HP | 1/5 [Option] | | 1/5 [Option] | | 1KW AC servo motor | | 1KW AC servo motor | | | 1KW AC servo motor | | | | | | |
| | Coolant pump [Option] | HP | 1/8 | | 1/8 | | 1/4 | | 1/2 | | | 1/2 | | | | | | |
| Wheel | Wheel speed | rpm | 3500 [60HZ] / 2900 [50HZ] | | 1750 [60HZ] / 1450 [50HZ] | | 1750 [60HZ] / 1450 [50HZ] | | 1750 [60HZ] / 1450 [50HZ] | | | 1100 | | | | | | |
| 7111001 | Wheel dimension | mm | 180 X 13 X 31.75 | | 355 X 38 X 127 405 X 50 X 127 | | 405 X 50 X 127 | | 405 X 50 X 127 [Max. 405 X 75 X 127] | | 508 X 76 X 203 | | | | | | | |
| Weight | Machine net weight | Kg | 900 950 | 1350 | 1700 | 3250 | 6300 6300 6600 | 7200 7500 7800 | 8400 8700 9000 | 12800 13800 | 14300 15300 | 17300 18800 | 20300 21300 | 20000 23000 | 24000 28000 | 28500 33000 | 33000 38000 | 37500 43000 |
| | Packing gross weight | Kg | 1100 1150 | 1550 | 1950 | 3500 | 6800 7100 7400 | 8100 8400 8700 | 9400 9700 10000 | 13800 14800 | 15500 16500 | 17800 19800 | 21800 22800 | 22000 25500 | 26300 30800 | 31000 36000 | 36000 41500 | 41500 48000 |
| | Floor space (LXWXH) | mm | 2080 x 1200 x 1700 | 2340 x 1500 x 1800 | 2630 x 1550 x 1800 | 3450 x 2050 x 1900 | 4600 X 2300 X 2040 4600 X 2450 X 2040 4600 X 2550 X 2040 | 4800 X 2300 X 2040 4800 X 2450 X 2040 4800 X 2550 X 2040 | 6000 X 2300 X 2040 6000 X 2450 X 2040 6000 X 2550 X 2040 | 5160 X 2400 X 2555 5160 X 2660 X 2555 | 6260 X 2400 X 2555 6260 X 2660 X 2555 | 8460 X 2400 X 2555 8460 X 2660 X 2555 | 10660 X 2400 X 2555 10660 X 2660 X 2555 | 6600x3700x4000 6600x4100x4000 | 8800x3700x4000 8800x4100x4000 | 11000x3700x4000 11000x4100x4000 | 13200x3700x4000 13200x4100x4000 | 15400x3700x4000 15400x4100x4000 |
| Dimension | Packing dimension (LXWXH) | cm | 230 x 146 x 196 230 x 158 x 220 | | 230 x 179 x 220 290 x 228 x 22 | | 388 X 230 X 228 | 388 X 230 X 228 | 485 X 230 X 228 | 439 X 230 X 297 439 X 276 X 297 | 546 X 230 X 297 546 X 276 X 297 | 750 X 230 X 297 750 X 276 X 297 | 850 X 230 X 297 850 X 276 X 297 | | | | | |
| | | | | 230 x 158 x 220 | | 290 x 228 x 223 | * 20' General Container: Max. distance center of spindle to table: 600mm * 40' High Container: Max. distance center of spindle to table: 800mm * 20' Flat rack: Max. distance center of spindle to table: 1000mm | | | 230 X 167 X 206 (NW: 950kgs / GW: 1100kgs) * Shipping by 40' Flat rack or 40' HQ when dismounting column | | | 40'HQ X 1 + 20' X 1 | 40'HQ X 1 + 20' X 1 | 40′HQ X 2 | 40'HQ X 2 | 40'HQ X 1 + 40'FR X 1 | |

| * The manufacturer reserves the right to modify the mechanism specifications, etc. without prior notice. |
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PFG-1545H / 150x450mm Table surface

- + Micro feed for cross & vertical feed (Option)
- Manual cross & vertical feed
- Hydraulic longitudinal feed



- Hydraulic longitudinal feed
- Auto cross feed Manual vertical feed
- Table longitudinal travel is controlled by sensor and solenoid valve
- Continuous lubrication
- Back water splash shield



PFG-60100AHR / 600x1000mm Table surface

+NC Auto down feed system & NC Auto parallel dressing

- and compensating system (Option) Hydraulic longitudinal feed
- Auto cross feed
- Vertical feed is driven by AC servo motor
- Table longitudinal travel is controlled by sensor and solenoid valve



PFG-60150AHR / 600x1500mm Table surface

- +NC Auto down feed system (Option)
- Hydraulic longitudinal feed
- Auto cross feed
- Vertical feed is driven by AC servo motor
- Table longitudinal travel is controlled by sensor and solenoid valve

PFG-100200AHD / 1000x2000mm Table surface

- +NC Auto parallel dressing and compensating system (Option)
- Stepless variable proportional valve hydraulic system
- Auto cross feed
- Vertical feed is driven by AC servo motor NC Auto down feed system

Auto Manual Manual AH Auto Auto Manual AHR Auto Auto Rapid

AXIS X ←→ Z ✓ Y 1

AHD Auto Auto Auto

- X: Longitudinal
- Z : Cross feed Y: Vertical feed

| MODEL | C. San | 013000 | OROSON ART |
|------------------------------------|--------|--------|------------|
| Auto crossing Stroke adjustment | 0 | • | 0 |
| X axis by Sensor & solenoid valve | 0 | • | • |
| Continuous Lubrication | 0 | • | • |
| Back water splash shield | 0 | • | • |

- Standard
- O Option

PFG-160300AHD // 1600x3000mm Table surface

• Stepless variable proportional valve hydraulic system

Cross & Vertical feed is driven by AC servo motor

+Vertical spindle head (Option)

NC Auto down feed system

OPTIONAL ACCESSORIES

- 1. Electro magnetic chuck with chuck controller
- 2. Permanent magnetic chuck (For 1545 / 2045 series) 3. Micro feed for Cross / vertical feed
- (0.001mm/gra.) (For saddle type only)
- 4. Power Rapid up & down system
- 5. NC Auto down feed system (AD5 type)
- 6. Parallel dresser (Manual)
- 7. Coolant system
- 8. (Dust) Suction system
- 9. (Dust) Suction with coolant system
- 10. Magnetic separator with coolant system
- 11. Auto paper strip filter with coolant system

- 12. Auto paper strip filter and magnetic separator with coolant system
- 13. NC auto parallel dressing & compensating system
- 14. Automatic crossing stroke adjustment by control panel switch
- 15. Back water splash shield (Excluded 1545 / 2045 series)
- 16. Enclosed splash shield (Excluded 1545 / 2045 series)
- 17. Spindle motor inverter
- 18. Wheel flange
- 19. Tool makers vise
- 20. Auto balancing device
- 21. Digital readout unit
- 22. Crisscross grinding function











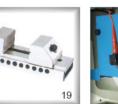


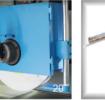


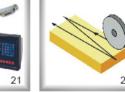












STANDARD ACCESSORIES

- 1. Grinding wheel
- 2. Wheel flange
- 3. Flange extractor
- 5. Wheel balancing base
- 6. Wheel dresser with diamond

4. Wheel balancing arbor

- 7. Leveling screw and plates
- 8. Tool box and tools 9. Working lamp (Saddle type only)
- 10. Parallel dresser (Manual)(Cantilever and Double column type only)
- 11. NC Automatic down feed system (Cantilever and Double column type only)



