



## **SURFACE GRINDERS**

*Deliver Uncompromising Fine Results.*

*Since 1988*

[www.perfectmachine.com.tw](http://www.perfectmachine.com.tw)



**PFG-1545M** 150x450mm Table surface

- + Digital readout (Option)
- + 3 axes manual



**PFG-1545H** 150x450mm Table surface

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



**PFG-2550AH** 250x500mm Table surface

- + Max. distance from center of spindle to table: 600 (Option)
- + Hydraulic longitudinal feed
- Auto cross feed
- Manual vertical feed



**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 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



**PFG-160300AHD** 1600x3000mm Table surface

- Stepless variable proportional valve hydraulic system
- Cross & Vertical feed is driven by AC servo motor
- NC Auto down feed system



**PFG-CL3060AH** 300x600mm Table surface

- Hydraulic longitudinal feed
- Auto cross feed
- Manual vertical feed



**PFG-D4080AH** 400x800mm Table surface

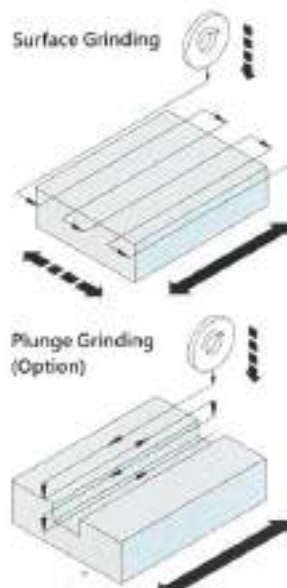
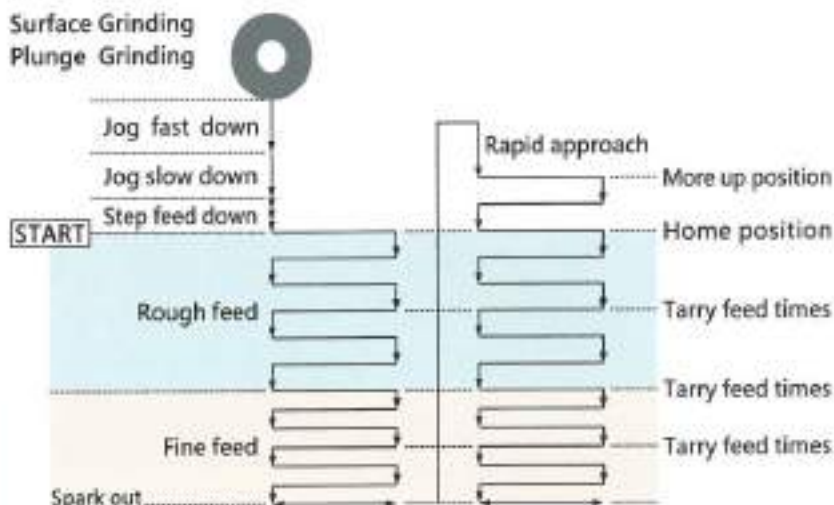
- Hydraulic longitudinal feed
- Auto cross feed
- Manual vertical feed
- Table longitudinal travel is controlled by sensor and solenoid valve
- Continuous lubrication

## FEATURE

- 1. 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.
- 2. Precision Spindle Design** - The spindle runs in a class P4 high precision angular contact bearing, assuring run-out accuracy in 2  $\mu$ m. The cartridge-type spindle is completely sealed and lubricated for long working lifetime, providing high accuracy grinding and a long service life.
- 3. Ball bearing slideway** - The saddle type M series employs "AA" grade steel balls on longitudinal guide ways for easier operation and saving labor.
- 4. Turcite-B on Slideways** - The X, Z axes slideways are coated with Turcite-B for stable movement and long term accuracy.
- 5. 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 rigidity.
- 6. 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.
- 7. M.P.G. handwheel** - Except for the saddle type, the vertical feed are 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.
- 8. 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. (M & H series can't be installed)(This function is a standard function of the cantilever and double column series)
- 9. NC auto down feed system (AD5 type) (option)** - Except for the M & 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)
- 10. 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.
- 11. 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.
- 12. 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 slideways.

### TYPE - AD5

Surface Grinding  
Plunge Grinding



SPECIFICATIONS		SADDLE TYPE				
		PFG-1545M PFG-2045M	PFG-1545H/AH PFG-2045H/AH	PFG-2550H PFG-2550AH	PFG-CS3060AH PFG-DS3060AH	PFG-CL3060AH PFG-DL3060AH
Grinding surface of table	mm	150 X 450 200 X 450		250 X 500	300 X 600	
Max. grinding surface	mm	150 X 450 200 X 450		250 X 500	300 X 600	
Max. distance center of spindle to table	mm	450		500 [Option: 600]	500 [Option: 600]	
Total Max. safety table load	kgs	114 120	144 150	250	300	
Table speed approx.	M/min	manual		5-25		5-25
Table guideway		Ball bearing slide-way		V & Flat way		V & Flat way
Auto. Cross feed increment approx.	mm	manual		manual (for H), 0.1-12 (for AH)		0.5-20
Rapid power cross feed	mm/min	manual		manual (for H) ; 1100 [60HZ] / 900 [50HZ] (for AH)		1100 [60HZ] / 900 [50HZ]
Cross feed on hand wheel	mm	5/rev. ; 0.02/gra.				5/rev. ; 0.02/gra.
Rapid power hand elevation	mm/min	550 [60HZ] ; 450 [50HZ] (Power rapid up/down system) [Option] 350 (NC Auto down feed system) [Option]			550 [60HZ] ; 450 [50HZ] (Power rapid up/down system) [Option] 350 (NC Auto down feed system) [Option]	
Vertical feed on hand wheel	mm	5/rev. ; 0.02/gra.				5/rev. ; 0.02/gra.
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]	
Wheel speed	R.P.M	3500 [60HZ] 2900 [50HZ]		3500 [60HZ] 2900 [50HZ]	1750 1450	
Wheel dimension	mm	180 X 15 X 31.75 [Max. 200 X 20 X 31.75]			180 X 13 X 31.75	305 X 38 X 127
Spindle motor	HP	2				5
Hydraulic pump motor	HP	None		1		
Auto Cross feed motor	HP	None		60W (for AH)	1/5	
Rapid head elevation motor	HP	1/5				1/5
Coolant pump [Option]	HP	1/8				1/8
Machine net weight	Kgs	870 920	900 950	1350	1700	
Packing gross weight	Kgs	970 1020	1100 1150	1550	1950	
Machine dimensions (L X W X H)	mm	1900 X 1200 X 1700 2100 X 1300 X 1700	1900 X 1300 X 1700 2250 X 1400 X 1800	2100 X 1200 X 1700		2650 X 1550 X 1800
Packing dimension (L X W X H)	cm	182 X 125 X 195	212 X 146 X 195	212 X 146 X 200		228 X 179 X 210

\* The manufacturer reserves the right to modify the mechanism specifications, etc. without prior notice.

**M:** M series are 3 axes by **Manual**.

**H:** H series are longitudinal by **Hydraulic** and cross feed/vertical axes are manual.

**AH:** AH series are **Auto Cross feed**, longitudinal by **Hydraulic** and vertical axis is manual.

**AHR:** AHR series are **Auto Cross feed**, longitudinal by **Hydraulic**,

vertical axis travel is by AC servo motor, power **Rapid up/down**.

**AHD:** AHD series are **Auto Cross feed**, longitudinal by **Hydraulic**, auto **Down feed**.

**PFG-D4080AH (16")**



1. Table longitudinal travel by Sensor & solenoid valve.
2. Continuous Lubrication is standard accessory.

**PFG-DS3060AH (7")**



1. Table longitudinal travel by Sensor & solenoid valve.
2. Continuous Lubrication is standard accessory.

**PFG-DL3060AH (14")**

3. Automatic crossing stroke adjustment.
4. Back water splash shield.

## OPTIONAL ACCESSORIES

1. Electro/Permanent magnetic chuck
2. Automatic demagnetizer for Electro magnetic chuck
3. Micro feed for Cross/vertical feed (0.001mm/gra.)
4. Power Rapid up/down system
5. NC Auto down feed system (AD5 type)
6. Parallel dresser (Manual)
7. NC auto parallel dressing & compensating system
8. Coolant system
9. (Dust) suction system (1/2HP)
10. (Dust) suction with coolant system

	COLUMN TYPE			CANTILEVER TYPE		
PFG-D4000AH	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
400 X 300	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
400 X 300	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
550 [Option: 650]	600 [Options: 800 & 1000]			800 [Options: 1000]		
400	800 1000 1000	1200 1400 1400	1500 1700 1700	2000 2400	2650 3200	3950 4800
	5-25			5-25		
	V & Flat way			V & V way		
	0.5-20			0.5-20		
	1100 [60HZ] / 900 [50HZ]			900		
	5rev./0.02/gra.			5rev./0.02/gra.		
in system) [Option: Option]	300			240		
	( X 1 ) 0.1 ( X 1 ) 0.001	( X 5 ) 0.5 ( X 5 ) 0.005	( X 10 ) 1 ( X 10 ) 0.01	( X 1 ) 0.1 ( X 1 ) 0.001	( X 5 ) 0.5 ( X 5 ) 0.005	
spindle)	0.001-0.999 [Option]			0.001-0.999		
30HZ]	1750 [60HZ]			1750 [60HZ]		
50HZ]	1450 [50HZ]			1450 [50HZ]		
405 X 50 X 127	405 X 50 X 127			405 X 50 X 127 [Max. 405 X 75 X 127]		
5	10 [Option: 15]			10 [Option: 15]		
2	3	5		7.5	10	
	1/5			1/5		
	1KW AC servo motor			1KW AC servo motor		
	1/4			1/2		
3250	6000 6300 6600	7200 7500 7800	8400 8700 9000	12800 13800	14300 15300	17300 18800
3500	5800 7100 7400	8100 8400 8700	9400 9700 10000	13800 14800	15500 16500	17800 19800
3450 X 2050 X 1900	4600 X 2300 X 2040 4900 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	5100 X 2400 X 2555 5100 X 2600 X 2555	6200 X 2400 X 2555 6260 X 2600 X 2555	8460 X 2400 X 255 8460 X 2660 X 255
276 X 228 X 225	376 X 230 X 228	391 X 230 X 228	477 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
	* 20' General Container; Max. distance center of spindle to table: 600mm * 40' High Container; Max. distance center of spindle to table: 900mm * 20' Flat rack; Max. distance center of spindle to table: 1000mm			167 X 167 X 206 (NW: 630kgs / GW: 730kgs) * Shipping by 40' Flat rack		

11. Magnetic separator with coolant system
12. Auto paper strip filter with coolant system
13. Auto paper strip filter and magnetic separator with coolant system
14. Automatic crossing stroke adjustment by control panel switch
15. Back water splash shield
16. Enclosed splash shield
17. Spindle motor inverter
18. Wheel flange
19. Tool makers vise
20. Auto balancing device
21. Digital readout unit
22. Crisscross grinding function



## DOUBLE COLUMN TYPE

PFG-80400AHD PFG-100400AHD	PFG-120200AHD PFG-160200AHD	PFG-120300AHD PFG-160300AHD	PFG-120400AHD PFG-160400AHD	PFG-120500AHD PFG-160500AHD	PFG-120600AHD PFG-160600AHD
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
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
700 [Options: 900]	1000 [Options: 1200]		900 [Options: 1100]		
5000 5500	5700 6000	6340 7300	7600 9000	8700 10700	9880 12400
			1-25		
			V & Y way		
			0.1-40		
			900		
			( X 1) 0.1 ( X 1) 0.001		
			( X 5) 0.5 ( X 5) 0.005		
			( X 10) 1 ( X 10) 0.01		
			300		
			0.001-0.999		
			( X 1) 0.1 ( X 1) 0.001		
			( X 5) 0.5 ( X 5) 0.005		
			( X 10) 1 ( X 10) 0.01		
			1100		
			508 X 76 X 203		
			20 [Options: 30]		
15		15		20	
				1KW AC servo motor	
				1KW AC servo motor	
			1/2		
20300 21300	26000 23000	24000 28000	28500 33000	33000 38000	37500 43000
21800 22800	22000 25500	26300 30800	31000 36000	36000 41500	41500 48000
10660 X 2400 X 2555 10660 X 2660 X 2555	660 X 370 X 400 660 X 410 X 400	880 X 370 X 400 880 X 410 X 400	1100 X 370 X 400 1100 X 410 X 400	1320 X 370 X 400 1320 X 410 X 400	1540 X 370 X 400 1540 X 410 X 400
850 X 230 X 297 850 X 276 X 297					
	40' HQ X 1	40' HQ X 1 + 20' X 1	40' HQ X 1 + 20' X 1	40' HQ X 2	40' HQ X 1 + 40' PR X 1



### STANDARD ACCESSORIES

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



捷特機械貿易私人有限公司  
J-TECH MACHINERY TRADING PTE LTD

*Specialise in all kinds of new & used machineries*

Blk 38, #03-13 Defu Lane 10 Singapore 539215

**Tel: 62839906 Fax: 62836995**

E-mail: [jtechtrd@singnet.com.sg](mailto:jtechtrd@singnet.com.sg) [www.jtech@com.sg](http://www.jtech@com.sg)

TAIWAN

