

## High Precision Form Grinding Machine HPG500 Series

## Precision Form Grinding Machine PFG500 Series



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# HPG500

Measure for heat transformation by No hydraulic system

## Developed New model for Highly accurate positioning and stable grinding work.

### High Accuracy

- Minimum increment 0.1μm
- Adopted roller guide for vertical movement and improve infeed accuracy.
- V-V slideway for Longitudinal and Crossfeed axis

### High Rigidity

- Spindle rigidity up 145% than previous model
- Increase frame size for crossfeed stability.

### Vertical & Crossfeed scale feedback system as standard

- Equipped with scale feedback as standard. Highly accurate positioning is possible.

### Complete heat expansion measurement

- Eliminate hydraulic device
- Adopted Special material for motor flange prevent heat transfer from spindle motor to spindle unit.

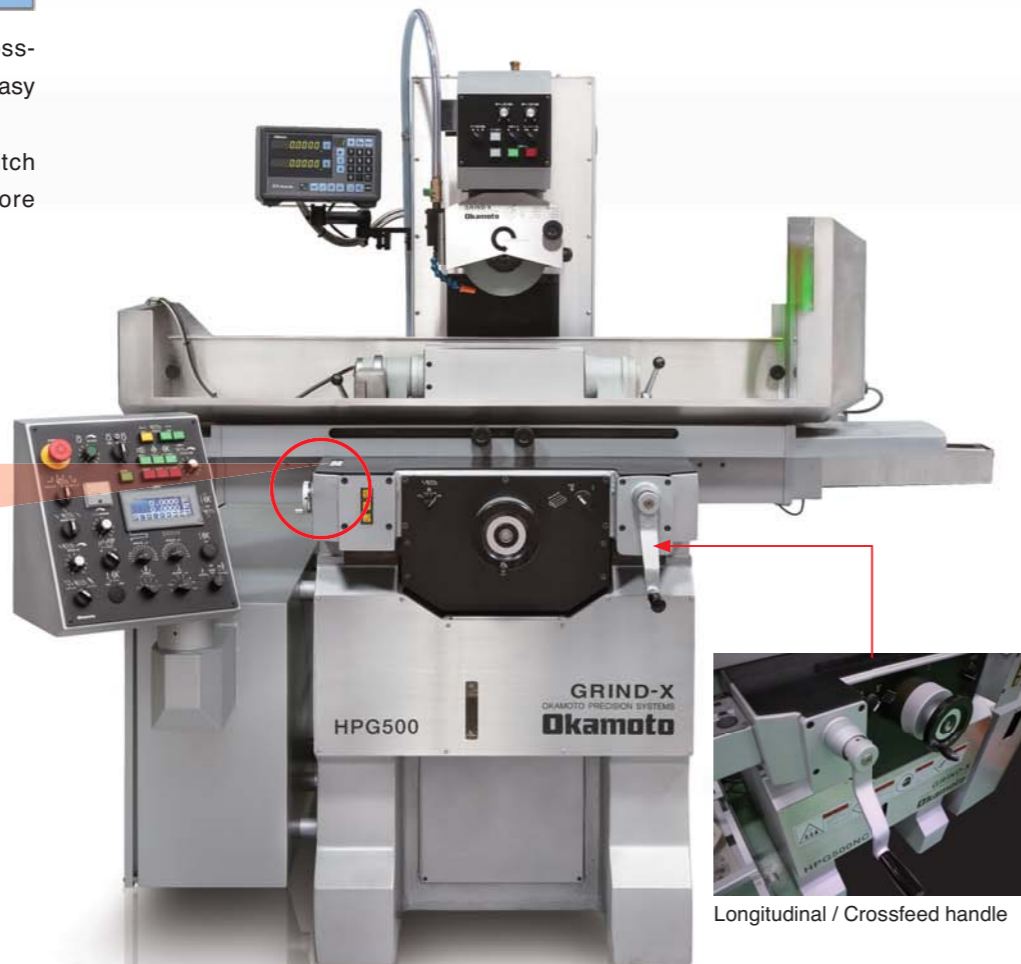
### Easy to Operate

- Adopted AC Servo motor for Crossfeed, set up stroke by teaching, Easy to grind for even the wall parts.
- M.P.G. handle and feed rate switch re-located on saddle side for more easy operation.

Selector switch for Vertical infeed rate



M.P.G. handle for Vertical infeed



HPG500  
Picture including options



Longitudinal / Crossfeed handle

### Operation panel



Operation panel for HPG500 model



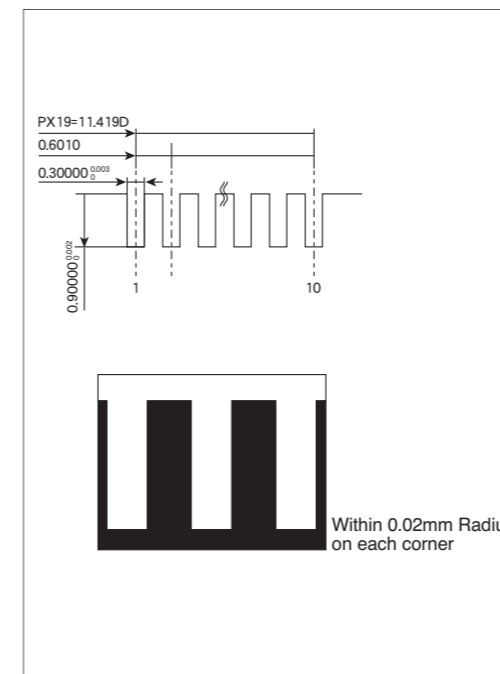
[Standard]  
Overhead dresser



[Option]  
Motor drive type  
Overhead dresser

Reduce cycle time by grinding cycle with overhead dress work

### Achieved Single & Accumulate Pitch +/- 0.3μm



### Date for Automatic regular pitch grinding cycle (Option)

Condition	Cycle time	32 minutes and 40 seconds
■ Room Temperature	23 +/- 0.5 deg.C	① Total Slot Grind No. 10 slot
■ Grinding Mode	Plunge grinding	② Total Stock removal 0.9000mm
■ Material	ASP 23 (HRc 56 - 65)	③ Fine grinding amount 0.0200mm
■ Grinding wheel	HW500J10V29U	④ Air cut amount 0.0100mm

### Accuracy

Slot width 0.3015mm, Pitch 0.6010mm, Depth 0.9010mm (unit : mm)

	Tolerance +/-	Slot width accuracy	Single Pitch accuracy	Accumulate Pitch accuracy	Depth accuracy
1	0.0010	0.0012	—	—	0.0003
2	0.0010	0.0013	0.0000	—	0.0006
3	0.0010	0.0009	0.0002	0.0002	0.0004
4	0.0010	0.0008	-0.0002	0.0000	0.0000
5	0.0010	0.0004	0.0003	0.0003	0.0003
6	0.0010	0.0013	-0.0002	0.0001	0.0005
7	0.0010	0.0004	0.0003	-0.0002	0.0007
8	0.0010	0.0010	0.0001	-0.0001	0.0004
9	0.0010	0.0006	0.0002	0.0001	0.0003
10	0.0010	0.0007	-0.0003	-0.0002	0.0002

# HPG500NC

For Form grinding job Automation by Conversational software

**CNC Form Grinding Machine is easy operation like conventional type of Machine**  
**Precise Wheel Form can make easy by CNC functions.**

*CNC control realize precise wheel form like a skilled worker in conventional system*

## Easy to Operate

- All handle like conventional machine and wheel form making, complete grinding cycle are easy to carry out by CNC controller.

## CNC Conversation type Software

- Improve productivity by full automatic including wheel dress, grinding cycle by complete CNC cycle.
- Recipe can be store in memory
- Contouring by conversational software and G-cord program as option

## High Level Accuracy & Super Rigidity

- Minimum increment 0.1μm for Vertical & Cross feed
- Position repeatability is 0.1 μm
- Increase Frame width 25% and 35% for the weight
- 54% increase spindle rigidity from PFG500 Series

## Vertical & Cross infeed is scale feedback system as standard

- Accurate positioning by scale feedback system

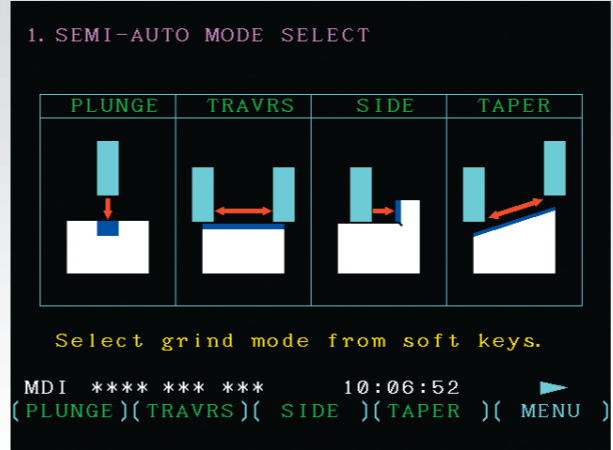
## No hydraulic system environment friendly

- Power saving effect  
-1,313kg·kWh
- CO2 discharge effect  
-199.2kg-CO2/L

## On-machine measuring device "Quick Touch" can be installed as an option

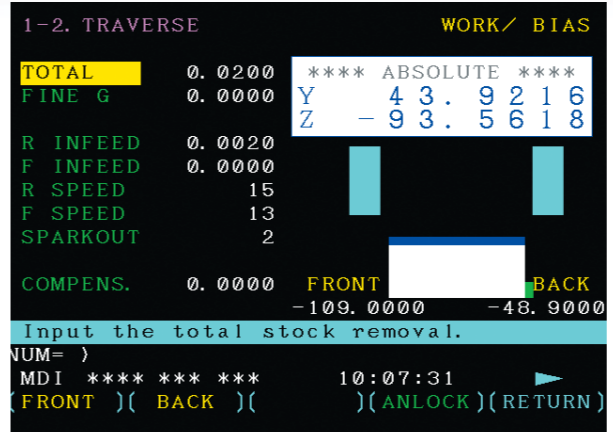


## Grinding Cycle Menu



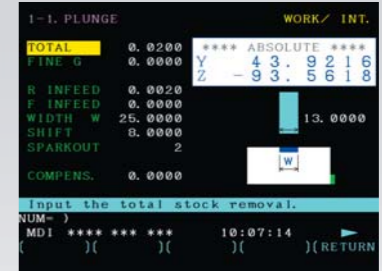
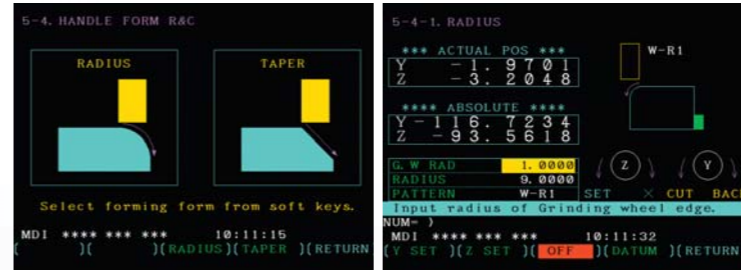
### Standard Grinding Mode

Plunge, traverse, and side grinding are programmed interactively. (Taper grinding is optional) There is also a stroke limiting function where the table does not operate outside the specified coordinates.



### Traverse Grinding Mode

At Traverse Surface Grinding mode, having crossfeed reciprocating position lock function. even manual feed operation reverse within teaching stroke.



### Plunge Grinding Mode

Order total stock removal and Fine grinding amount for each grinding mode after selected infeed amount per time, cycle should be start. Automatic dress can order as intermediately.



### Confirmed Coordinate position

Achieved higher level of positioning and grinding accuracy by scale feedback system for Vertical and Cross feed.



### Form Grinding Mode

Regular Pitch & Irregular Pitch, also step grinding by conversation type software



### Typical Wheel Forming Data Screen

Grinding wheel forming data setting screen. Select your favorable wheel form, then come out More details dimension for the form.

### Circular Arc·Taper synchronize feed function

When manual feed handle, crossfeed infeed synchronize with Vertical feed handle.



Longitudinal  
Cross feed handle  
\*Standard Longitudinal handle is Round handle



Vertical feed M.P.G. handle & jog feed switch's

HPG500NCL  
Picture including options

## HPG500NC High Speed Stroke

Performed for High Speed · High Precision · High Efficiency Grinding

**Best performance for Punch, small formed workpiece. Table high speed stroke model.**

### Table stopping accuracy and User friendly Operation system

#### Easy to Operate

- Add high speed table reciprocate function onto HPG500NC
- Grinding wheel minimum increment is 0.1μm, easy to fine infeed



#### High Speed Table Reciprocation

- Achieved table stopping position error is less than 15μm. Easy make high level of shoulder grinding.
- High-speed stroke specification HPG500NC has multi-position grinding software as an option.

#### Other Actuarial Software

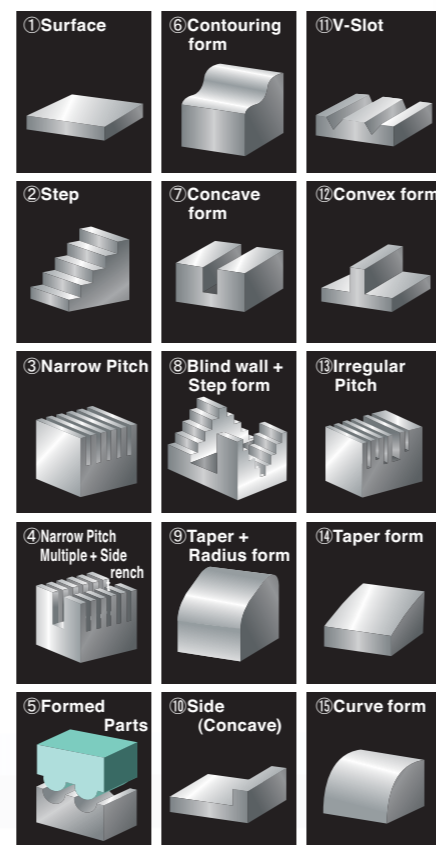
- Small Diameter Spindle
- CCD camera
- Wheel diameter detection by air sensor

#### Teaching screen for table stroke

- 2 ways for table stroke teaching
- Table position teaching button
- By CNC screen set up



#### Typical Grinding Form



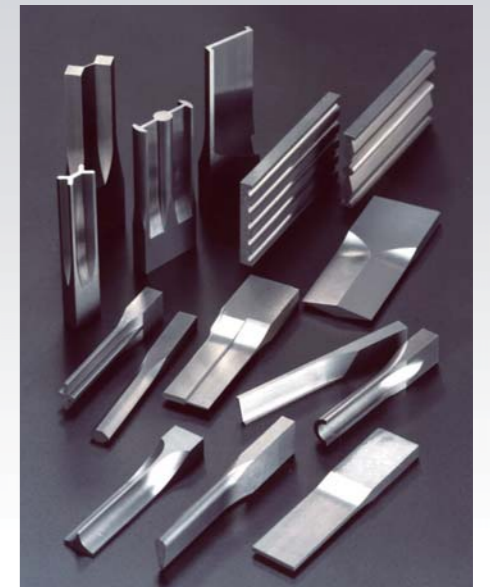
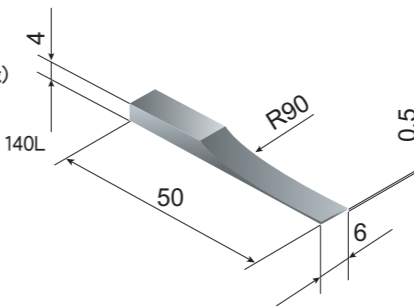
### Mold punch grinding with High speed table reciprocation

High-speed table reverse grinding is used to process die punches. Cycle time is greatly reduced by performing high-speed reverse grinding.

#### Grinding sample

##### Tungsten Carbide Punch

- Grinding method: Plunge Cut (Shoulder Grinding)
- Material: Tungsten Carbide V-40 (G5)
- Grinding wheel: GRIND-X Diamond wheel SDC 140L
- Cutting Fluid: GRIND-X 10Co
- Table Stroke: 20mm
- No. Reciprocation: 240 reciprocation / Min.
- Vertical downfeed: 1mm/min.
- Surface finish: 3μm/Rmax.



## HPG500NC High Speed Stroke

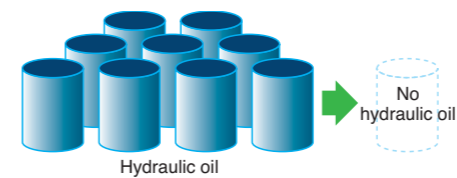
Picture including options

### Advantage Point for No-hydraulic force

HPG series adopt motor and belt drive system for table reciprocation improve heat expansion measure, maintainability as well as environment measure than ordinary hydraulic drive system.

#### 1 Cost Saving for Oil

No need replace hydraulic oil for regular base as well as no cost for waste oil disposal



#### 2 Reduce for Carbon Emission CO2

Reduce for Carbon Emission 656 Kg/KWH for waste oil disposal



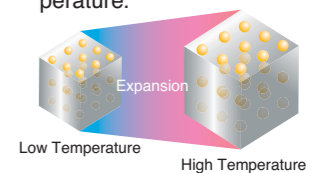
#### 3 Saving electricity 60% annual base

Compare with Hydraulic table movement machine, new HPG series saving 60% electricity.

	Hydraulic type Table	HPG Series
Power consumption per hour	1.0 kWh	0.4 kWh
Annual (8H/Day x 20 day/Month x 12 month)	1920 kWh	768 kWh
Charge by JPY20/KWH	JPY38,400	JPY15,360

#### 4 Eliminate Heat Source

Eliminate hydraulic source which difficult to control temperature.



## PFG500DXII Series

Vertical feed by AC servo motor and M.P.G. handle

**Set up automatic downfeed by 0.1 μm unit by own developed controller. Easy set up Automatic sizing cycle**

## PFG500II Series

Traditional type Conventional Machine

**Up date machine from PFG500 Series  
Increase Column rigidity and Dust protection**

### Vertical infeed by M.P.G.

Adopt AC servo motor for vertical feed, select 0.1μm, 1μm or 10μm by graduation and have fine infeed easily.

### Automatic grinding Cycle

Coarse Grinding → Fine Grinding → Sparkout (0 - 5 times) → Table stop Right side Stroke end

### Automatic Lubrication System

- Automatic Lubrication System for Slideway, infeed screw after spindle switch ON.
- Lubrication system separate for Vertical slide and Crossfeed slide.

### Increase Spindle Rigidity for Stable Grinding

- High power cartridge type of cylindrical shape incorporating super precision angular contact bearing with thick spindle, and maintenance -free thanks to permanent grease seal.
- Consider for vibration too, top level of accuracy if compare with simpler machine in the market.

## Operation Panel

### Vertical infeed

Infeed amount set up switch for Automatic downfeed amount, Inching amount. Both infeed amount is 0.001 - 0.03mm by 15 steps

### Total infeed amount

Easy set up total infeed amount using digital display as minimum 0.1μm. Deep slot grinding also setup easily.

### Inching Button

Even during automatic cycle, available this inching button

### Vertical feed Select Switch

Select Switch for Auto cycle/Stock removal setup/Manual feed/Rapid feed no mix up each mode.



Operation Panel PFG500P II  
\*Standard operation panel is Silver color



Operation panel for PFG500DXAL II  
\*Standard operation panel is Silver color



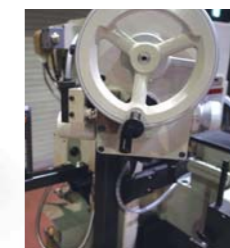
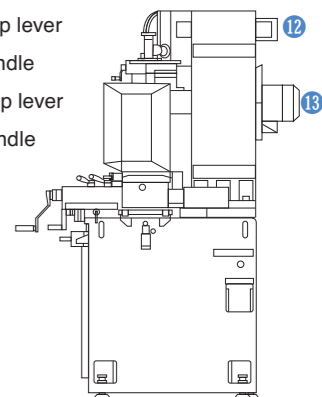
PFG500DXAL II  
Picture including options



PFG500P II  
Picture including options

## Unit Name

- 1 Vertical feed handle
- 2 Grinding wheel guard
- 3 Overhead dresser unit
- 4 Saddle unit
- 5 Frame unit
- 6 Table unit
- 7 Column unit
- 8 Operation panel
- 9 Table speed adjust lever
- 10 Table reciprocating dog
- 11 Microfeeder unit for crossfeed
- 12 Motor for Vertical rapid feed
- 13 Spindle motor
- 14 Crossfeed stop lever
- 15 Crossfeed handle
- 16 Table feed stop lever
- 17 Table feed handle



1 Vertical feed handle

## Standard Accessories

Items	HPG500NC High Speed Stroke	HPG500	PFG500DX II Series	PFG500 II Series
Grinding Wheel	○	○	○	○
Wheel adaptor (6 - 16mm width)	○	○	○	○
Automatic demagnetizing controller (Chuck power adjustable type)	○	○	○	—
Manual type demagnetizing controller (Knife switch)	—	—	—	○
Table mount type dresser block (with a Diamond tool)	—	○	○	○
Table mount type 3-direction dresser unit	○	—	—	—
Manual type overhead dresser	—	○	○	○
Rapid feeder for vertical axis	○	○	○	○
Wheel guard	—	○	○	○
Wheel guard with Dust food	○	—	—	—
Microfeeder for Vertical axis	○	○	○Minimum input 0.1μm	○Only A & P- type
Microfeeder for Cross axis	○	○	○	○
Table right stroke end stop function	○	○	○Only A & P- type	—
Spark-out device	○	○	○Only A & P- type	—
Coarse & Fine feed switchover function	○	○	○Only A & P- type	—
Deep grinding function	○	○	○Only A & P- type	—
Plunge cut function for both side infeed	○	○	○Only A & P- type	—
SUS Splash cover & Nozzle	—	○	—	—
SUS Slide door (saddle fixed) & Nozzle	○	—	—	—
Transformer (100/200V)	○	○	○	○
Necessary tool with Tool box	○	○	○	○
Leveling bolt & Plate	○	○	○	○
Scale feedback for Vertical & Crossfeed	○	○	—	—
Spindle inverter	○	○	—	—
Circulation type Publication	○	○	—	—
Short circuit breaker	○	—	—	—
CNC controller	○	—	—	—
Crank handle for table longitudinal	—	○	○	○
Round handle for table longitudinal	○	—	—	—

## Optional Accessories

Items	HPG500NC High Speed Stroke	HPG500	PFG500DX II Series	PFG500 II Series
<b>1) Coolant &amp; Dust suction System</b>				
1. Dust suction unit	○	○	○	○
2. Coolant tank	○	○	○	○
3. Coolant tank with magnetic dust separator	○	○	○	○
4. Coolant & Dust suction system with magnetic dust separator	○	○	○	○
5. Coolant & Dust suction system with manual or automatic Paper filter unit	○	○	○	○
6. Temperature control unit	○	○	○	○
<b>2) Splash cover</b>				
1. Table splash cover	—	Standard	○	○
2. Dust suction hood	—	○	○	○
3. Wheel guard with dust suction hood	Standard	○	○	○
4. Splash cover table back side	Standard	○	○	○
<b>3) Magnetic Chuck</b>				
1. Plane type electro-magnetic chuck	○	○	○	○
2. Inclining type electro-magnetic chuck	—	○	○	○
3. Permanent magnetic chuck	○	○	○	○
4. Electro-Permanente magnetic chuck	○	○	○	○
5. Rotary table unit with permanent chuck	○	○	○	○
6. Various type demagnetizing controller	○	○	○	○
<b>4) Digital scale</b>				
1. Crossfeed digital scale system, display onto operation panel	—	—	○	—
2. Vertical digital scale (independent display unit)	—	—	○	○
3. Crossfeed digital scale (independent display unit)	—	—	○	○
4. Vertical & Crossfeed digital scale (independent display unit)	—	—	○	○
<b>5) Grinding Wheel Balancer</b>				
1. Grinding Wheel Balancer unit Rolling type with an arbor BW-260R	○	○	○	○
2. Grinding Wheel Balancer unit Swing type with an arbor BW-260	○	○	○	○
3. Micro Balancer unit	○	○	○	○
4. Balance arbor for Rolling type L=190mm	○	○	○	○
5. Balance arbor for Swing type L=190mm	○	○	○	○

Items	HPG500NC High Speed Stroke	HPG500	PFG500DX II Series	PFG500 II Series
<b>6) Wheel Adaptor</b>				
1. Spare wheel adaptor for 6 - 16mm wheel width	○	○	○	○
2. Spare wheel adaptor for 16 - 32mm wheel width	○	○	○	○
3. Spare wheel adaptor for Micro Balancer	○	○	○	○
4. Spare grinding wheel from GRIND-X item (refer GRIND-X catalogues)	○	○	○	○
<b>7) Work Light</b>				
1. LED type light	○	○	○	○
2. Halogen type light	○	○	○	○
<b>8) Hydraulic Oil/Lubrication Oil/Cutting fluid</b>				
1. GRIND-X Hydraulic oil 20 L x 2 can	—	—	○	○
2. GRIND-X Hydraulic oil 20 L x 1 can	○	○	—	—
3. Cutting fluid for tungsten carbide	○	○	○	○
4. Circulate type Lubrication system	Standard	Standard	○	○
<b>9) Specific painting color for the machine (Need color sample)</b>				
<b>10) Grinding Spindle Unit</b>				
1. Spindle inverter for 1.5 kW or 2.2 kW	Standard	Standard	○	○
2. Spindle motor power up to 2.2 kW	Standard	Standard	○	○
3. Baby Spindle unit Max : 7,000rpm Wheel size φ80x8xφ25mm	○	○	○	○
4. Spindle taper nose modification	○	○	○	○
<b>11) Table Feed / Vertical Feed</b>				
1. Microfeeder for Vertical 2μm/Graduation	—	—	—	○
2. Vertical feed C.W. downfeed	○	○	○	—
3. Table longitudinal feed handle for Round type	Standard	○	○	○
<b>12) Oil Temperature control</b>				
1. Hydraulic oil temperature regulator	—	—	Except 500DX II	Except 500 II
2. Oil cooling type spindle head	○	○	○	○
<b>13) Dresser</b>				
1. Hydraulic type Overhead dresser	—	—	Except 500DX II	Except 500 II
2. Motor drive type Overhead dresser with dress compensation function	○	○	—	—
3. Both side dresser, DRT-1	○	○	○	○
4. Side dresser SD 【GRIND-X Products】	○	○	○	○
5. Angle dresser sing-bar system, DRA-3	○	○	○	○
6. Angle dresser sing-bar system, DRA-5	○	○	○	○
7. 25 Radius dresser, DRR-25B	○	○	○	○
8. 40 Radius dresser, DRR-40	○	○	○	○
9. Twin Rotary Dresser unit 【GRIND-X Products】	○	○	○	○
10. Vertical type Rotary Dresser unit OH-125P 【GRIND-X Products】	○	○	○	○
<b>14) Precision vise</b>				
1. Plane Vise	○	○	○	○
2. Precision Right Angle Block UB-80/100 【GRIND-X Products】	○	○	○	○
3. SUS type Sign Vise DV-100-1 【GRIND-X Products】	○	○	○	○
<b>15) Tooling Items</b>				
1. Precision Cylindrical Grinding Device 【GRIND-X Products】	○	○	○	○
2. Index Device 【GRIND-X Products】	○	—	—	—
3. Special Jigs for warpage remover, SG Master 【GRIND-X Products】	○	○	○	○
<b>16) Measuring Device</b>				
1. CCD camera unit	○	—	—	—
2. Quick Touch (On-machine measuring device)	○	—	—	—
3. Quick Touch (On-machine measuring device) In-cycle measurement mode	○	—	—	—
<b>17) Others</b>				
1. Demagnetizing device	○	○	○	○
2. Precision square I-type : 500mm, Knife type : 100mm 2pcs/set	○	○	○	○
3. Knife type straight edge 100mm & 200mm 1 pc each	○	○	○	○
4. Centerless grinding attachment, GRIND-SMART	○	○	○	○

## HPG500NC SOFTWARE

Standard	
Dress Software	O.D./Both □ Radius/Single □ Radius/V/Angle/Radius + Taper/ Single □ Radius
Grinding Software	Plunge cut/ Traverse Cut/Regular Pitch/Irregular Pitch /□/□/Manual MPG Radius & Taper movement
Option	
Dress Software	Free form
Conversation type Contouring software	1-kind of Program
G-Cord Program	1-kind of Program
Specific workpiece grinding	1-kind of Workpiece
Form Grinding automatic programing software	iCAM UPCAM

1) 1. Dust suction system

- Output : 0.75 kW
- For Dry Grinding Only
- Dust shake off from Filter : Manual Shake Method



2) 1. Table splash cover and coolant nozzle

- Coolant nozzle is flexible type
- Use coolant tank



3) 5. GRIND-X Rotary Chuck

- Easy to use this Rotary Chuck
- Just mount onto table for Rotary grinding
  - Compact size, powerful by DD motor.
  - Co-use sing-bar chuck for grind Concave/Convex shape
  - Coolant applicable (Waterproof : IP63)

Rotary chuck body		Attachment	
Size	Main body $\phi$ 180x75H With Magnet $\phi$ 180x118H	Attachment magnet	$\phi$ 125x43H 4.0kg
Weight	Main body 10.0kg With Magnet 14.6kg	V-Shape Block	$\phi$ 10~ $\phi$ 35
Standard torque	0.6N · m (6 · 12kgf · cm)		
Rotation speed	400min <sup>-1</sup>		
Power supply	3-phase AC		
Amp	0.6A		



1) 2. Coolant tank CT-1

- Coolant pump motor : 0.1 kW
- Tank capacity : 36 L
- Splash cover and Coolant nozzle



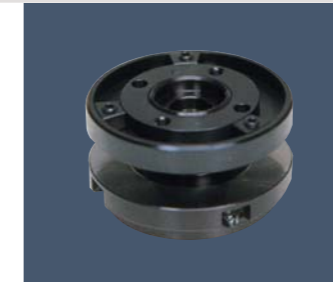
2) 2. 2 Dust suction hood

- Dust suction unit including such hood



6) 1.2. Spare wheel adaptor

- For wheel width 6 - 16mm (Standard type)
- For wheel width 16 - 32mm



13) 3. Both side dresser DRT-1

- Max. Wheel Width : Max. 36mm
- Form Length : Max. 45mm from O.D.
- One revolution : 2mm
- One graduation : 0.01mm



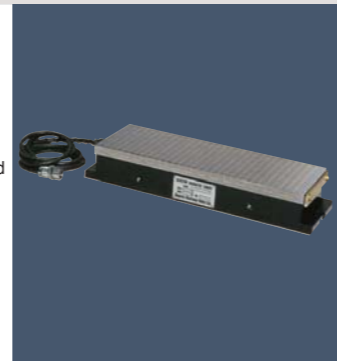
1) 4. Coolant and Dust suction system with magnetic dust separator, CT4BM

- Dust suction motor : 0.4 kW
- Coolant pump motor : 0.04 kW
- Tank capacity : 40 L
- Independent ON/OFF switch
- Splash cover and Coolant nozzle, Co-use Dust Suction hood



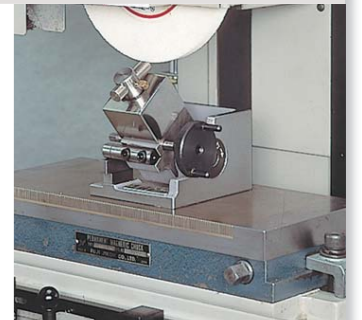
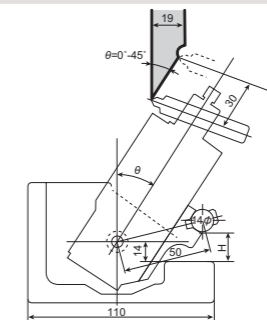
3) 1. Plane type Electro-magnetic chuck

- Size  
350 X 150mm (P=4,8,14)  
450 X 150mm (P=8,2+12)  
HPG500NC impossible to equipped  
450 x 150mm chuck
- Using automatic type chuck controller



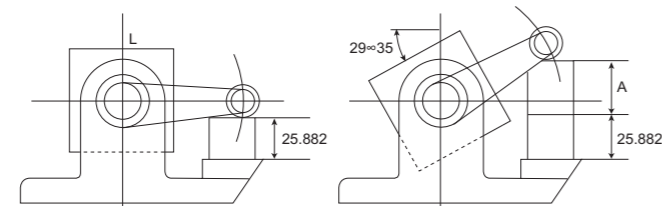
13) 5. GRIND-X Angle Dress Device DRA-3

- Sing-bar type Angle setting
- Setting Angle : +/- 45 deg.
- Dress stroke : 30mm
- Dress Form Angle : 180 deg. (In Perpendicular 90 deg. Left & Right)
- Right angle datum face can make form for 0 - 45 deg. 45 - 90 deg.
- Height for Block gauge  
 $H=50 \times \sin(45 \text{ deg} - \beta) + 7 \text{ mm}$   
H : Height of Block gauge (mm)  
 $\beta$  : Angle (deg)  
50 : Distance swivel center & Sing bar center (mm)



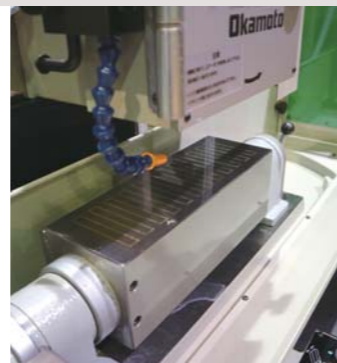
3) 2. Inclining type electro-magnetic chuck HSG-315

- 315 x 110 x 135 mm (P=11mm)
- Inclining angle:  
- 15 deg. ~ + 90 deg.
- Chuck controller
- Usage sample  
\* Sing-bar system integrated  
\* Specific angle refer the angle table.  
\* Surface grinding no need fine adjustment



1) In case 0 deg. Please use master block gauge as standard

2) +29 deg. 35' From Angle table A = 49,368mm



14) 3. Sing-bar type Precision Vise, Stainless Steel type

- Using Block gauge for Angle setting
- 【Accuracy】  
Parallelism : Within 0.002/100mm  
Perpendicular : Within 0.005/100mm  
Angle error : Within 15 sec.



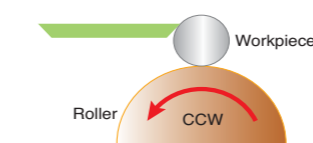
16) 1. CCD Camera Measuring System

- On machine measuring system by CCD Camera



17) 4. Centerless Grinding Attachment GRIND-SMART

- Improve many things, like a Rigidity, Sealing for Prevent dust
- Mont this unit to Surface Grinder or Form Grinder, easy to grind Precision Round Pin.



HPG500 Series / PFG500DXII Series

Items	Unit	HPG500NC	HPG500NC	HPG500	Full Automatic	Vertical & Table Auto	Table Auto only	Full Manual feed
		High Speed Stroke			PFG500DXA II	PFG500DXP II	PFG500DXC II	PFG500DX II
Capacity	Table Working Space (Length x Width)	mm	500×150		600×140			
	Table Movement (Longitudinal x Cross)	mm	540(In Auto. Feed 520)×180		520×180			
	Distance from Table top to Grinding Wheel Under	mm	390		300			
	Chuck size OP : For Surface Grinding (Longitudinal x Crossfeed)	mm	350×150		450×150			
	Load capacity (include Magnetic chuck)	kg			80			
Longitudinal Feed	T-Slot (Width x No.)	mm×No.	without T-Slot		12×1			
	Speed (Hydraulic)	m/min	0.1~20 *1		0.1~18			
	Hand feed per revolution	mm	Approx.115		Approx.100			
Cross Feed	Manual feed	Hand feed per revolution	mm	0.01/0.1/1/20		Approx.115		
		Graduation for handwheel	mm	0.0001/0.001/0.01/0.2		-		
	Automatic intermittent feed	Graduation for Microfeeder	mm	-		0.005		
		mm/min	0.008~4		0.5~4		-	
	Automatic continuous feed	mm/min	0.8~1000		0.8~800		-	
Vertical feed	Automatic Downfeed	Coarse downfeed	mm	-		0.001~0.03 (12 Step)		
		Fine downfeed	mm	-		0.0001~0.01 (11 Step)		
	Manual downfeed	Hand feed per revolution	mm	0.01/0.1/1/5		0.01×0.1×1		
		Graduation for handwheel	mm	0.0001/0.001/0.01/0.05		0.0001×0.001×0.01		
Spark-Out	time	0~5		-				
Grinding wheel	Vertical Rapid feedrate	mm/min	1000		500		400	
	Diameter (50/60Hz) x Width x Bore	mm	φ180×6~32×φ31.75					
	Speed (50/60Hz)	min <sup>-1</sup>	1000~5000		1000~3600		3000/3600	
Motor	Grinding Wheel Spindle	kW/P	2.2/2		1.5/2			
	Hydraulic Oil Pump	kW/P	-		0.75/4			
	Vertical Rapid & Downfeed (AC Servo)	kW	0.5		0.4			
	Crossfeed (AC Servo)	kW	0.5		0.4		-	
	Crossfeed (Torque Motor)	kg·cm/P	-		0.8/4		-	
Power supply	Longitudinal feed (AC Speed Control Motor)	kW	0.5		0.4		-	
	Required power Consumption (including Coolant tank with Mag.-separator)	kVA	5.8		5.5		4.0	
Air source		0.25~0.4MPa 60L/min		-				
Machine Space	Width x Depth x Height	mm	2460×1446.7×1717		2260×1470×1850		2200×1375×1727	
Weight	Net Weight	kg	1600		1200		1150	

\*1 Table speed is the NC input value.  
Reference value: 15 mm stroke = 324 flip

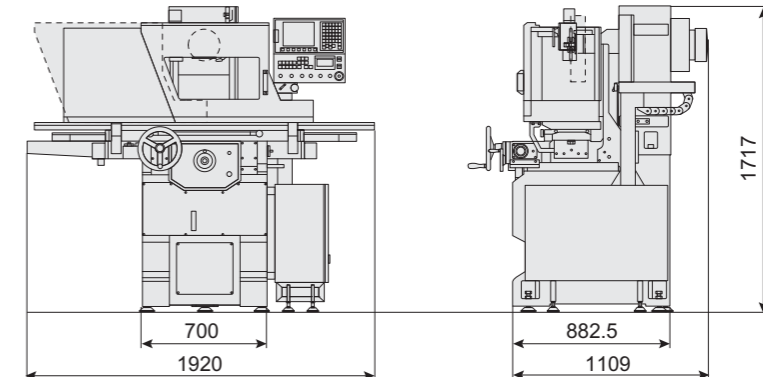
PFG500II Series

Items	Unit	Full Automatic	Vertical & Table Auto	Table Auto only	Full Manual feed
		PFG500A II	PFG500P II	PFG500C II	PFG500 II
Capacity	Table Working Space (Length x Width)	600×140			
	Table Movement (Longitudinal x Cross)	520×180		540×180	
	Distance from Table top to Grinding Wheel Under	310			
	Chuck size OP : For Surface Grinding (Longitudinal x Crossfeed)	450×150			
	Load capacity	80			
Longitudinal Feed	T-Slot (Width x No.)	12×1			
	Speed (Hydraulic)	0.1~18			
	Hand feed per revolution	100		Approx.115	
Cross Feed	Manual feed	Hand feed per revolution	5		
		Graduation for handwheel	0.02		
	Graduation for Microfeeder	0.005			
	Automatic intermittent feed	0.5~4		-	
Vertical feed	Automatic Downfeed	0.002~0.02			
	Manual downfeed	Hand feed per revolution	1		
		Graduation for handwheel	0.002		
Grinding wheel	Vertical Rapid feedrate (50/60Hz)	300/360			
	Diameter (50/60Hz) x Width x Bore	φ180×6~32×φ31.75 (Possible to fit upto φ205mm)			
	Speed (50/60Hz)	3000/3600			
Motor	Grinding Wheel Spindle	1.5/2			
	Hydraulic Oil Pump	0.75/4			
	Vertical Rapid & Downfeed	0.1/4			
	Crossfeed (Torque Motor)	78(8)/4		-	
Power supply	Required power Consumption (including Coolant tank with Mag.-separator)	3.0		2.5	
Machine Space	Width x Depth x Height	2200×1351×1720			
Weight	Net Weight	1200		1100	

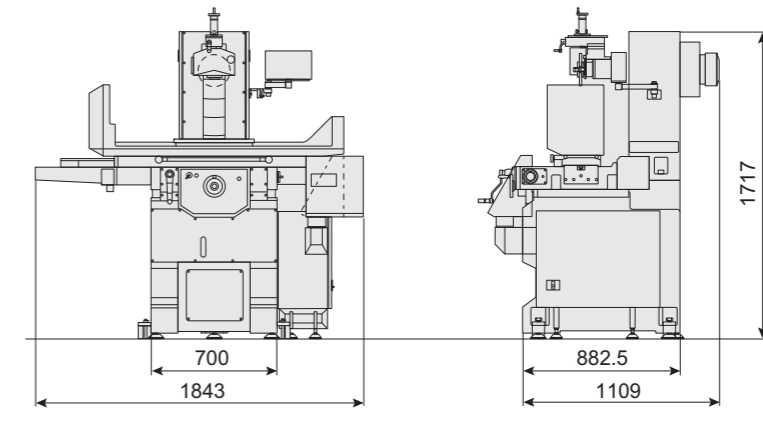
\* Power consumption and Floor space will be change by specification.  
\* Last Logo on Machine Model indicate longitudinal hand wheel Left side L-type. Without any Logo Right side table handle is Standard. Table handle, Other operation Lever, Operation panel are Symmetry.  
\* Standard painting color is Silver & Dark Blue, Specific painting color we will quote you separately. (Color sample required)

Machine External View

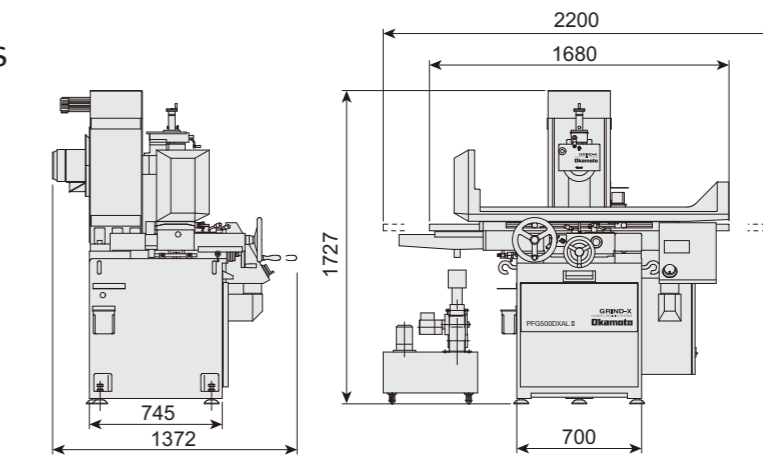
HPG500NC  
HPG500NC  
High Speed Stroke



HPG500



PFG500DX II Series



PFG500II Series

