OKUMA

OPEN POSSIBILITIES

GP/GA-FII Series

GP/GA-34, 44FII
GP/GA-36, 47FII

CNC Cylindrical Grinders

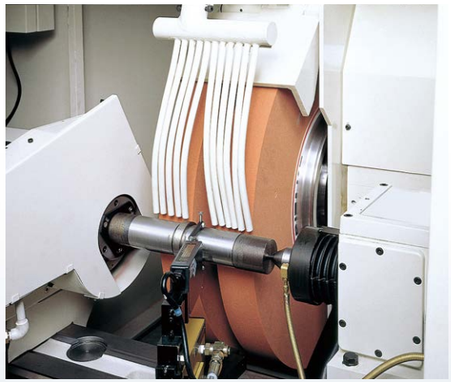
GP/GA-FII Series

CNC Cylindrical Grinders

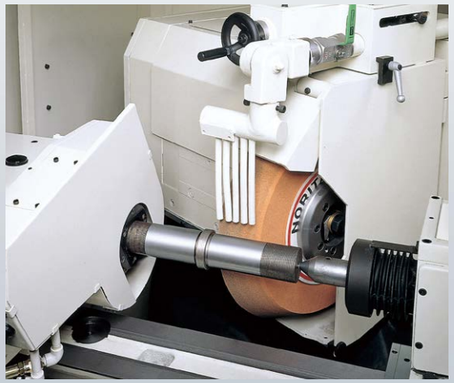
Simultaneous 2-axis high-precision 0.1 µm (4 µin) digital servo control

GP-FII Plain Series /GA-FII Angle Series

GP-FII Plain Grinder



GA-FII Angle Grinder



Non-round plain bearing wheel spindle

- Rotational accuracy: 0.01 µm (0.4 µin)
- Rigidity: Improved by 30%

Various setup-free functions

- Auto DBC-change tailstock (Distance Between Centers)
- Bigger chuck range
- Wide range sizer
- Tailstock with auto taper correction
- Bed-mounted tooling

Space-saving design—fits nicely into your line

Labor-saving, high-accuracy CNC cylindrical grinders bring together various Okuma mechatronics technologies.

Non-round plain bearing wheel spindle delivers huge improvements in finishing accuracy

GP-44FII

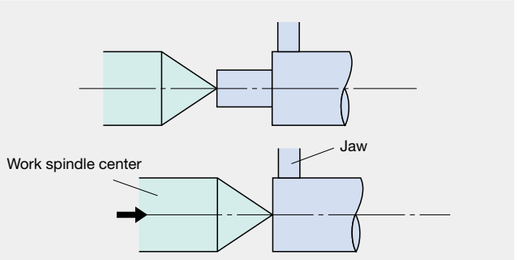
Photographs used in this brochure may show optional equipment.

Fewer hands and less skill needed with Okuma's setup-free functions

Auto hold-position change

2-location positioning headstock (shaft workpiece) (option)

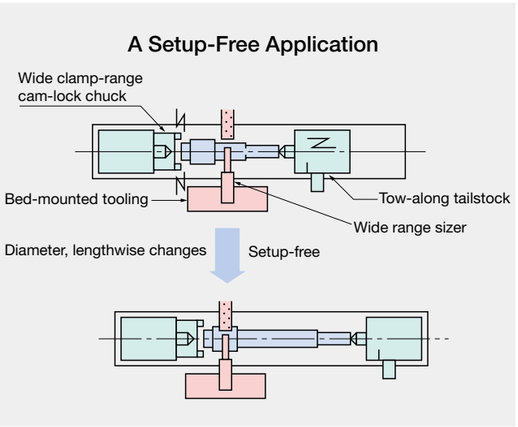
The headstock center automatically positions in 2 locations (within 20 mm) when different shaft ends don't require a chuck clamp position change.



Auto sizing position/diameter change

Wide range sizer—bed mounted (option)

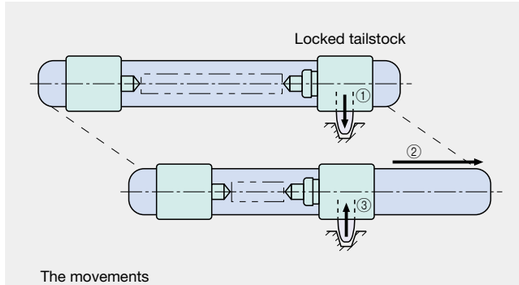
The sizer always stays directly opposite the grinding wheel, and requires no repositioning or diameter setup changes. (Consultations required angle grinder applications.)



Auto change to workpiece-length

Tow-along tailstock (option)

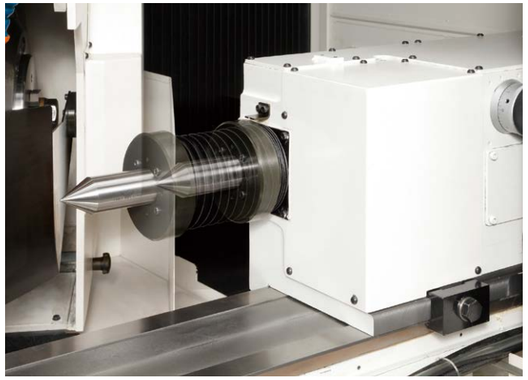
The tailstock automatically slides on the table to adjust for different distances between centers; with more rigidity than a long, protruding center.



The movements
① Tailstock unclamp (catch pin out, locks into stationary groove)
② Table moves
③ Tailstock clamp (catch pin unlocks)

NC Tailstock (sleeve) (option)

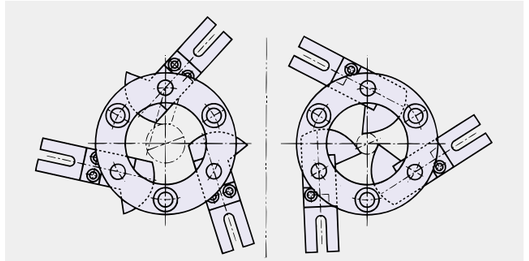
With an NC Tailstock, the tailstock sleeve can be advanced and retracted, and the workpiece support length and thrust can be adjusted, with the NC. The tailstock itself does not need to be moved to match the workpiece length even when there are multiple workpiece lengths. This improves workability. (Maximum workpiece length: 100 mm, tailstock thrust: 150 to 500 N)



Auto clamp-diameter change

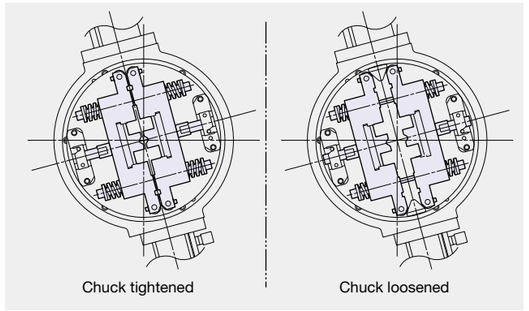
Wide clamp-range cam-lock chuck (shaft workpiece) (option)

This allows clamping workpieces with diameters ranging up to ø9 mm (compared to previous ø1 mm range).



Nipper chuck (cartridge) (option)

V-blocks are spring clamped, enabling flexible holding of varying workpiece diameters.



Easier taper change adjustments

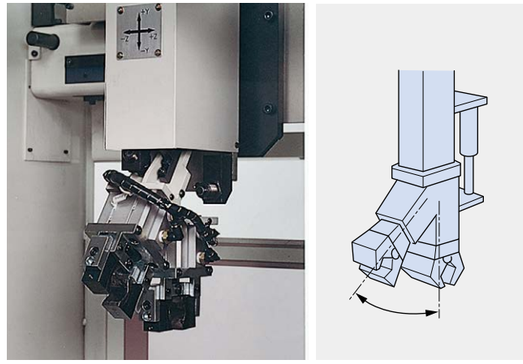
Tailstock with manual taper offset knob

Making adjustments to taper changes during tailstock travel is easy. By using a tow-along tailstock with a gauge, the optional Auto Taper Offset Mechanism is also available to automatically perform taper adjustments required when workpiece lengths change.

Automated specifications (Gantry NC loaders) (option)

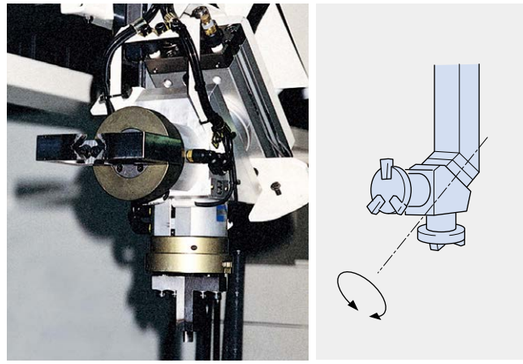
Loader grippers Swing type double-hand

Used on shaft workpieces



Loader grippers Swivel-rotary type double-hand

Used on chuck workpieces



Improved basic performance with the FⅡ series

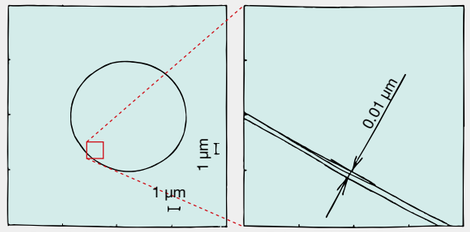
Okuma's accuracy fundamentals make possible highly accurate grinding — for high quality CNC grinding applications

Non-round plain bearing wheel spindle

Rotational accuracy within 0.01 µm

6,000 field-proven installations with these outstanding bearings, and now Okuma has added even more rigidity while reducing thermal growth. Just what you need to grind ceramic and carbide mirror surfaces without cracks to less than 0.2 S.

<Spindle rotational accuracy (radial direction)>



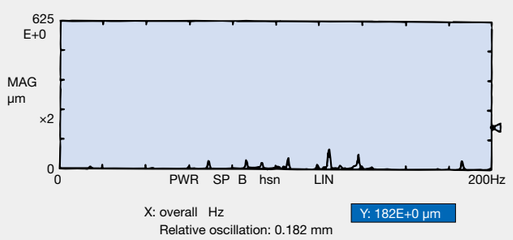
Spindle Lissajous figure wave pattern

Enlarged Lissajous figure wave pattern (for 3 revolutions)

Less than 0.2 µm oscillation between wheelhead and workpiece

Special minimal-oscillation design of wheelhead eliminates factors causing chatter.

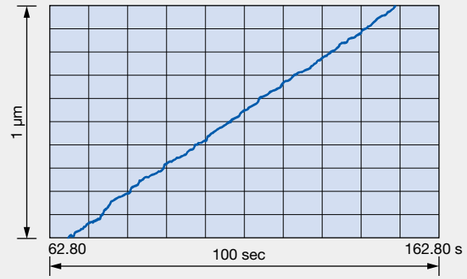
<Oscillation analysis by FFT>



Excellent compliance

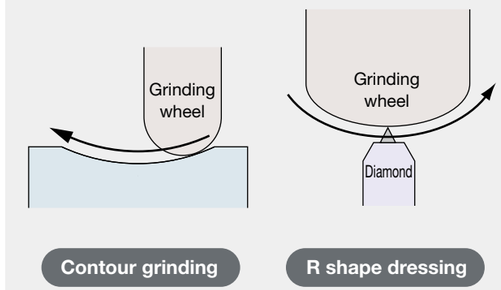
Even at extremely low speeds of 0.01 µm/sec, the low-friction design of the table wheelhead ways makes for complete compliance with commands.

Sample measurement of GA-34FⅡ wheelhead



PFCⅡ (Projection Flat Control*)

Effectively smoothens spikes (positive or negative) at the point of an R surface quadrant shift.



* Axis travel reverse motion error compensation

Machine structure for highly efficient machining

Table guideways

Now with a 15% longer V–flat span, improved workpiece support rigidity also enables full-power grinding; 15 kW (22 kW optional).

Bed

More and thicker ribs give the bed greater rigidity.

Non-round plain bearing wheel spindle

By rotating the grinding wheel with a hydrodynamic bearing structure, retention is done with the wedge-shaped oil film pressure that occurs within the bearing. Heavy-duty grinding is possible because of the retention force of 1 ton, a strength not seen elsewhere. Grinding wheel rotation accuracy gives high-accuracy grinding of 0.01 µm or less. The grinding wheel spindle has no metal contact so that performance can be maintained semi-permanently.

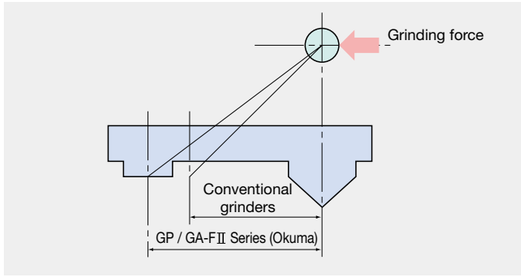
Ready for wide grinding wheels

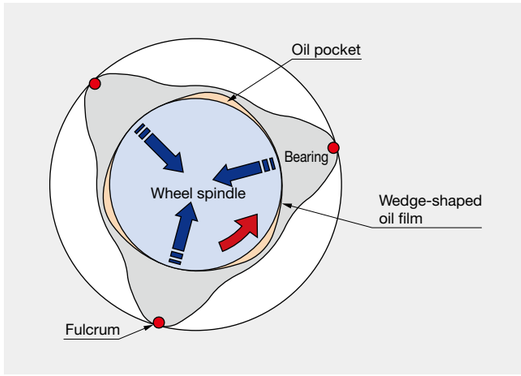
GP/GA-47FⅡ machines accept various grinding wheel shapes up to ø760 x 200 mm wide, and optional wheel spindle up to 22 kW are available.

Grinder model	Motor Output
GP/GA-34, 44FⅡ	7.5 kW
GP/GA-36, 47FⅡ	15 kW

Variable speed control

Inverter motors are standard for the complete FⅡ series, with constant surface speed control or application required speed settings available.

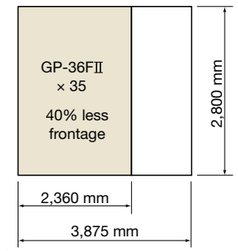




Space saving

Machine installation with smaller footprint

To trim dimensions, the coolant tank and hydraulic tank have been snugly tucked underneath the machine, making it easier to fit the compact unit in to your line.



Same distance between centers as previous machine

Other features

Fully enclosed

Eliminate coolant spatter, cut down on noise, and make your shop a cleaner environment to work in.

Easier maintenance

Virtually everything to be maintained is grouped together in the back of the machine.

Machine Specifications

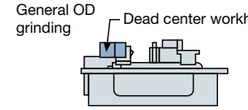
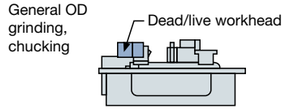
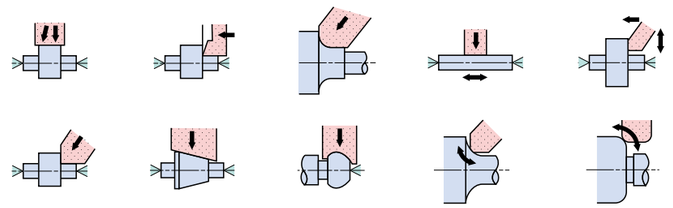
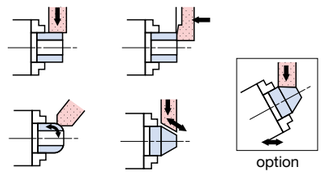
Item		Unit	GP/GA-34FⅡ	GP/GA-44FⅡ	GP/GA-36FⅡ	GP/GA-47FⅡ
Capacity	Swing over table	mm (in)	ø330 (ø12.99)	ø430 (ø16.93)	ø330 (ø12.99)	ø430 (ø16.93)
	Max grinding dia	mm (in)	ø300 (ø11.81)	ø400 (ø15.75)	ø300 (ø11.81)	ø400 (ø15.75)
	Max mass Between centers	kg (lb)	150 (330)		300 (660)	
	Chucking	kg × mm (lb × in)	40 × 200 (88 × 7.87)			
	Between centers*1, *2 NL*3 × 35	mm (in)	350 (13.78)			
	× 65	mm (in)	650 (25.59)			
	× 100	mm (in)	1,000 (39.37)			
	× 150	mm (in)	1,500 (59.06)			
Wheel spindle	Wheel size OD × width	mm (in)	ø455 × 75 (ø17.91 × 2.95)		GP: ø610 × 150 (ø24.02 × 5.91) GA: ø610 ×135 (ø24.02 × 5.31)	ø760 × 150 (ø29.92 × 5.91) [Paired: 200 (7.87)]
	Max grinding speed	m/sec	45			
	Motor	kW (hp)	7.5 (10)		15 (20) (22 (30): option)	
Wheelhead (X-axis)	Min command units	mm (in)	ø0.0001 (ø0.0000039)			
	Travel	mm (in)	420 (16.54)		480 (18.90)	
	Rapid traverse	m/min (fpm)	ø24 (78.7)			
	Motor	kW (hp)	3.0 (4.0)			
Table (Z-axis)	Min command units	mm (in)	0.0001 (0.0000039)			
	Swivel adjusting angle	° (Angle)	±0.1			
	Travel NL*3 × 35	mm (in)	550 (21.65)			
	× 65	mm (in)	850 (33.46)			
	× 100	mm (in)	1,200 (47.24)			
	× 150	mm (in)	1,850 (72.83)			
	Rapid traverse	m/min (fpm)	16 (52.5) (36FⅡ, 47FⅡ is 12 (39.4))			
	Motor	kW (hp)	2.9 (3.9)			
Headstock (C-axis)	Tapered bore		MT No. 5			
	Maximum spindle speed	mm^{-1}	600			
	Motor	kW (hp)	3.5 (4.7)		3.6 (4.8)	
Tailstock	Taper bore		MT No. 5			
	Auto travel	mm (in)	70 (2.76)			
	Manual taper offset	mm (in)	±ø0.08 (ø0.003)			
Coolant tank	Pump motor	kW (hp)	0.4 (1/2)			
	Separator (magnetic)	L/min (gpm)	120 (31.7)			
	Tank capacity	L (gal)	300 (79.3)			
Machine mass	NL*3 × 35	kg (lb)	6,300 (13,860)	6,600 (14,520)	6,700 (14,740)	7,200 (15,840)
	× 65	kg (lb)	7,000 (15,400)	7,300 (16,060)	7,400 (16,280)	7,900 (17,380)
	× 100	kg (lb)	7,700 (16,940)	8,000 (17,600)	8,100 (17,820)	8,600 (18,920)
	× 150	kg (lb)	8,700 (19,140)	9,000 (19,800)	9,100 (20,020)	9,600 (21,120)
CNC			OSP-P300GA			

*1. The GA-36FⅡ, GA-47FⅡ values are for wheel widths less than 75 mm (2.95 in). The values decrease as the wheel width increases.
*2. The value decreases by 50 mm when a specically designed tow-along tailstock is attached.
*3. NL: Nominal lengths

Standard Specifications

Specification	Description	Qty
Grinding methods	Plunge, multiplunge, end plunge, profile, simultaneous OD/end plunge, parallel traverse, taper traverse	1
Sizing method	Indirect sizing (from programmed data)	1
Bed	Bed related: 1 set (jack bolts, foundations washers included)	1
Wheelhead	GP-FⅡ plain: wheel left side mount GA-34, 44Ⅱ angle-head: wheel right side mount GA-36, 47Ⅱ angle-slide: wheel right side mount V—flat guideways, variable speed inverter motor	1
Wheel guard	GP/GA-34, 44FⅡ: ø455 × 75 mm Coolant nozzle: flexible 75 mm wide Open/close & easy mount/dismount, wheel lifter GP-36FⅡ: ø610 × 150 mm Coolant nozzle: flexible 150 mm wide GA-36FⅡ: ø610 × 135 mm Coolant nozzle: flexible 135 mm wide GP/GA-47FⅡ: ø760 × 150 mm Coolant nozzle: flexible 150 mm wide	1
Table	V—flat guideways, forced-feed lube, lube pressure, lube-level check Swivel indicator (0.01 mm dial indicator)	1
Tailstock	Spring center; advance/retract hydraulic drive (70 mm) Manual taper offset knob (±ø0.08 mm) Proper support check, with over-advance detect limit switch and check lamp Control methods (pushbutton, cycle interlock, advance jog pushbutton)	1
Wheel spindle lube tank	Separated, 20 L, with flow check interlock	1
Hydraulic oil tank	Separated, 20 L	1
Full enclosure shielding	Manual open/close, limit swith open/close interlock, interlock ON / OFF switch	1
Work lamp	Waterproof LED light	1
Wheel overload protector	Digital setting	1
Wheel independent start/stop switches		1
Wheel overspeed protector	Possible to set the maximum grinding speed	1
OD wheel dresser	Wheelhead mounted, wheel OD/face dressing	1
Center remover	Workhead, tailstock	1
Air controller		1
Hand tools	Wrenches, with toolbox	1
Electricals	50/60 Hz, 200 V, Okuma standard electrics, main motor and standard eletricals	1
Dead center workhead (C-specs)	Plain dead center: MT No. 5 GP/GA34, 44FⅡ: BL 3.5 kW Spindle speed: 25 to 600 min^{-1} (infinitely variable, S4, direct command) 36, 47FⅡ: BL 3.6 kW	1
Dead/live workhead (CT-specs)	Dead/live: MT No. 5 GP/GA34, 44FⅡ: BL 3.5 kW Spindle speed: 25 to 600 min^{-1} (infinitely variable, S4, direct command) 36, 47FⅡ: BL 3.6 kW	1

Spec Arrangements and Applications

Specification		C	CT
Mode	GP/GA-34, 44FⅡ	○	○
	GP/GA-36, 47FⅡ	○	○
Arrangement			
External grinding			
Between centers			
Plunge			
Traverse			
Profile			
Chucking			
Plunge			
Traverse			
Profile			

Optional Specifications & Accessories

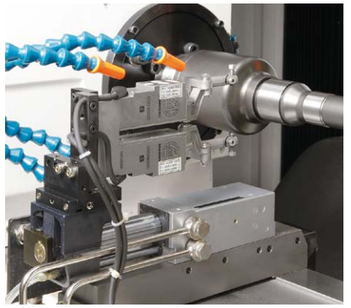
Specification		Description	GP/GA 34FII	44FII	36FII	47FII
Wheel WA60kmv	ø455 × 75 × ø127 mm	Max grinding speed 2,700 m/min				
	ø610 × 75 × ø254 mm	Max grinding speed 2,700 m/min				
	ø760 × 75 × ø304.8 mm	Max grinding speed 2,700 m/min				
Spare belts		☐ Headstock ☐ Wheel spindle				
Hydraulic oil, lube oil						
Special wheel dimensions / materials		Please consult				
Wide wheel guards		☐ ø610 × 200 mm				
		☐ ø760 × 200 mm				
Wheel flanges	ø455 mm	☐ 20 to 30 mm ☐ 30 to 75 mm				
	ø610 mm	☐ 25 to 35 mm ☐ 35 to 85 mm ☐ 85 to 150 mm ☐150 to 200 mm				
	ø760 mm	☐ 25 to 35 mm ☐ 35 to 85 mm ☐ 85 to 150 mm ☐150 to 200 mm				
Balancing arbors	ø50 mm	Required for static balancing of wheels				
	ø70 mm					
Wheel balancing stand	Wheel dia: ø510 mm max	Fixed type				
	ø760 mm max	Rail				
Diamond tools	D5 (1 pc, 2 ct)	Tip: 70, cone				
	Other					
Carbide center	MT No. 5 (2 pcs)	Carbide tip diameter: ø18 mm				
	MT No. 5	☐ Standard ☐ Long ☐ Half ☐ Crown ☐ Other				
Dogs	ø20 to ø200 mm 10 types	☐ ø20 to 25 mm ☐ ø25 to 30 mm ☐ ø30 to 35 mm ☐ ø35 to 50 mm ☐ ø50 to 70 mm ☐ ø70 to 90 mm ☐ ø90 to 110 mm ☐ ø110 to 130 mm ☐ ø130 to 150 mm ☐ ø150 to 200 mm				
Automatic dogs	ø6 to ø100 mm 8 types	☐ ø6 to 14 mm ☐ ø13 to 24 mm ☐ ø20 to 34 mm ☐ ø31 to 42 mm ☐ ø36 to 50 mm ☐ ø47 to 62 mm ☐ ø60 to 80 mm ☐ ø80 to 100 mm				
Workholders	Adjustable	ø10 to 150 mm (left/right, 1 set)				
		ø100 to 250 mm (left/right, 1 set)				
	Fixed	Changeable V-block				
Manual steadyrests	2-shoe	ø10 to 150 mm, shoe material: BC3 (brass)				
	2-shoe w/ sizer stopper	ø10 to 150 mm, shoe material: BC3 (brass)				
	3-shoe	ø10 to 150 mm, shoe material: BC3 (brass)				
Auto steadyrests (hydraulic)	2-shoe, type 1	Auto follow, shoe material: carbide				
	2-shoe, type 0	Fixed type, shoe material: carbide				
Stationary spring center		MT No. 5 × No. 3, spring pressure: 2 to 3.2 kg, with normal support interlock				
Revolving center	MT No. 5	Please consult				
Wheel change jib crane		Max lift weght: 350 kg				
3-jaw scroll chuck		☐ JN-07 (ø190 mm) ☐ JN-10 (ø273 mm)				
4-jaw independent chuck		☐ LI-8 ☐ LI-10				
Power chuck		Please consult				
Chuck shield		☐ ø200 mm ☐ ø300 mm				
Auto direct sizer	Table mounted (notchless)	Marposs Micromer-3 1-head P3up ø8 to 106 mm				
		Tokyo Seimitsu Palcom Σ 1-head Amp V4 ø8 to 107 mm				
	Table mounted (spline)	Consultations required				
Wide range sizer	Bed mounted	Tokyo Seimitsu Palcom Σ20 1-head, sizing range: ø8 to 140 mm Amp V10, measuring deviation: ø20 mm				
NC locator		Marposs T25G probe, length compensation E32R interface Wheelhead mount, hydraulic rotary drive				
Tow-along tailstock		Distance-between-centers adjustable over full range				
Tailstock with auto taper correction		Pushbutton, MDI abjustable Please consult for application requirements.				
2-location positioning headstock		Settings up to 20 mm from spindle center				
Auto transporters		Please consult for robots, gantry loaders, on-board loaders, etc.				
Center hole, auto oil supply		☐ Spindle, oil-hole center ☐ Tailstock, oil-hole center				
Pneumatic workpiece suppor checker		☐ Spindle, air-hole center ☐ Tailstock, air-hole center				
Workpiece drivers	Cam lock chuck	Chucking dia ø10 to 60 mm				
	Wide clap-range cam-lock chuck	Deviation ø9 Chucking dia ø9 to 70 mm				
	Nipper chuck	Deviation ø15 Chucking dia GP/GA-34/44FII ø10 to 85 mm GP/GA-36/47FII ø10 to 120 mm				
Spindle orientation		Proximity switch				
Auto front door open/close		Pneumatic drive (manual pushbutton, cycle linked)				
Hydraulic oil temperature regulator		Kanto Seiki, MLHA-05B-H-N (recommended for cold climates)				
Auto-follow auxiliary wheel guard		Dressing interlocked, maintains constant clearance between wheel and cover				
Rotary dresser		Please consult				
Coolant tank		Separately placed, 200 L, with pump motor				
Larger coolant tank		300 L				
Coolant separator	Magnetic	F-8*				
		F-12*				
		F-18*				
	Magnetic/paper	☐ FP-12* ☐ FP-18*				
	Other	Please consult				
Coolant temperature regulator		Coolant temperature control				
Mist collector		KURACO ☐ EUN-10 ☐ ASV-20				
Coolant nozzles		Copper tube ☐ 25 mm ☐ 50 mm ☐ 75 mm ☐ 100 mm ☐ Special sizes				
Lower nozzles		Prevents wide-face seizing; cycle linked				
High powered wheel spindle motor		22 kW				
Auto wheel shutter						

*Sumitomo Heavy Industries Finetech.

Main optional accessories

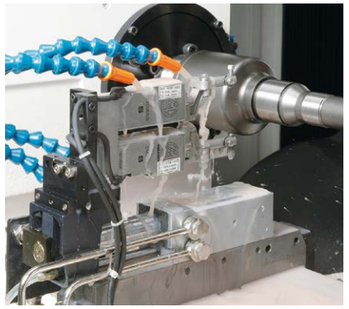
Auto direct sizer

Workpiece OD dimensions are managed with in-process gauges during machining.



Coolant supply to sizer

With this specification, thermal deformation is minimized by constantly supplying the sizer with coolant.



Rotary dresser

Select for mass-production machining or when using CBN grinding wheel.

Auto-follow auxiliary wheel guard

Triangular cover and coolant nozzle position are automatically adjusted to match decrease in wheel diameter with dressing.

Wheel balancing stand/balancing arbor

Grinding wheel, wheel flange, and balancing arbor are mounted and static balance of grinding wheel on rail is maintained.

Automatic dock

This dock enables mounting/removal with a single touch.

Coolant separator

Sludge is discharged to outside. With standard specifications there is only a magnetic separator (Ferrite magnet), but in SKD and SCM materials with weak magnetic properties combined use of a paper filter or a powerful (rare earths) magnetic separator are effective.

Magnetic separator

Combination magnetic separator, paper filter type

OSP suite OSP-P300GA

The Next-Generation Intelligent CNC

With revamped operation and responsiveness— ease of use for machine shops first!

Smart factories implement advanced digitization and networking (IIoT) in "Monozukuri," (manufacturing) achieving enhanced productivity and added value.
The OSP has evolved tremendously as CNC control suited to advanced intelligent technology. Okuma's new control uses the latest CPUs for a tremendous boost in operability, rendering performance, and processing speed.
The OSP suite also features a full range of useful apps that could only come from a machine-tool manufacturer, making smart manufacturing a reality.

Smooth, comfortable operation with the feeling of using a smart phone

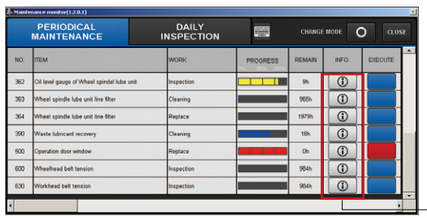
Improved rendering performance and use of a multi-touch panel achieve intuitive graphical operation. Enlarged instruction manual display and displays of tool data, programs and other lists can be done smoothly and easily with smart phone-like operations.
The screen display layout on the operation screen can also be changed to suit operator tastes, and customized for needs from beginning to veteran operator.

Features you wanted – loaded with OSP suite apps!

We made these real through the addition of Okuma's machining expertise based on requests we heard from customers in the machine shop. These are filled with intelligence that enhances the "strength in the field" that CNC control can accomplish because it's created by a machine-tool manufacturer.

Maintenance Monitor
Routine inspection support

The Maintenance Monitor displays items for inspections before starting daily operation and regular inspections and the rough estimate of inspection timing. Touching the [INFO] button displays the PDF instruction manual file of relevant maintenance items.



[INFO] button

Wheel Spindle Monitor
Increased productivity through visualization of motor power reserve

E-mail Notification
Monitoring utilization status even when away from the machine

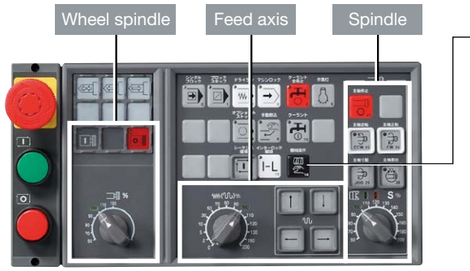
Common Variable Monitor
Comment display for greater ease of use and faster work

Screen Capture
Automatic saving of recorded alarms

Scheduled Program Editor
Easy programing without keying in code

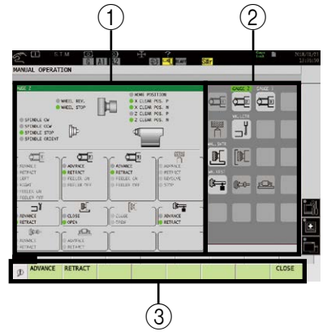
Easy Operation . . .
Do and see the things you want quickly and without difficulty

■ Setup operations
■ Trial/continuous cuts
■ Programming
■ Wheel preparations



Operation screen

Machine opeation switches are brought together on a single screen. Work can be done with a single touch.
① Target operation selection
② Machine status indication
③ Operations (function keys)

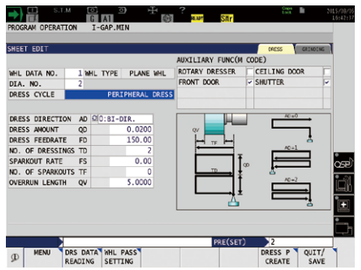


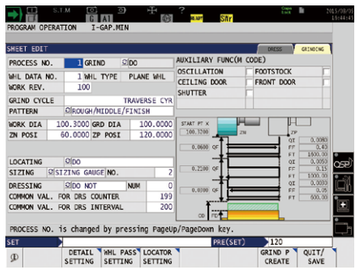
I-GAP+ (option)

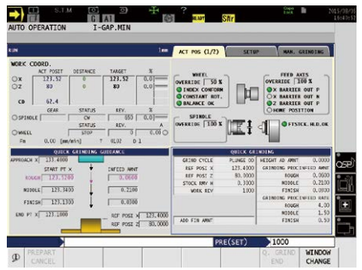
Intuitive machining operations are made possible with advances in interactive program creation and efficient creation of part programs.

● **Sheet programming**
With screen input of grinding conditions, the wheel runout, wheel dressing, and grinding programs needed for grinding can be created without regard to GM codes.

● **Quick grinding**
Grinding can be done while checking the cycle being executed and position on the drawings. This is Easy Operation that feels like manual operation, from roughing to finishing, by simply setting the infeed amount.

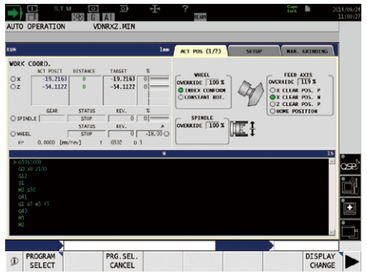

Wheel dressing program create sheet


Grinding program create sheet


Quick grinding

Running screen indications

Automatic operations and setup work are done from the running screen. Press the “Running screen” key on the operation panel or the Auto/MDI mode key to display the running screen. You can switch to the actual position sheet, setup settings sheet, or manual grinding sheet as needed.



Actual position sheet (program selection)

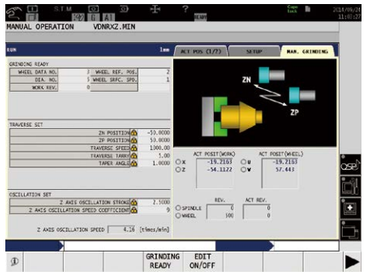
On the actual position sheet of the running screen, in addition to actual position display, workpiece selection/program selection/schedule selection are possible with use of the function keys.

Setup settings sheet

On the setup settings sheet on the running screen, guideways, various coordinate values, and other settings for different purposes are displayed. To minimize switching between screens, settings for running conditions selection/diagram zero point/zero point shift/workpiece locator offset can be made.

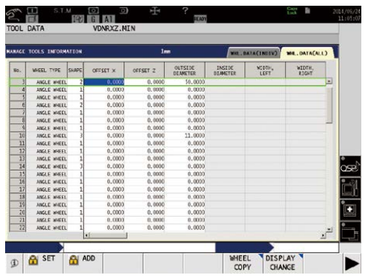
Manual grinding sheet

On the manual grinding sheet on the running screen, setting parameters for the grinding wheel and spindle speed used, traverse running, and oscillation operation are displayed. To minimize switching between screens, operation and setting items related to manual operation are brought together on a single screen.

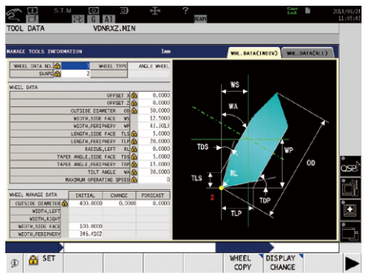


Tool data setting

Grinding wheel data are managed in the tool data settings. Grinding wheel data are displayed by pressing the “tool data setting” button on the operation panel. The setting screen shows a list of registered grinding wheel data and individual screens related to each grinding wheel.



Sheet switch



Standard Specifications

Basic Specs	Control	Simultaneous X-, Z-axis: 2 axes, 2 linear axes
	Spindle control	BL motor spindle, S command 4-digit, constant speed, override 50 to 200%
	Grinding wheel spindle	Grinding wheel axis (interver control), Spindle speed (G99 mode), SW command 6-digit, peripheral speed command (G98 mode), SW command 6-digit, Grinding wheel speed function (G98), Grinding wheel axis override 50 to 120%, Maximum spindle speed setting (G50), maximum peripheral speed setting (G50)
	Position feedback	OSP full range absolute position detection
	Feed drives	Override switch 0 to 200% 15 steps
	Max/Min input	Decimal 8 digits, ±9999.9999 mm (±393.70078 in), 0.0001 mm (0.1 µm)
Display / operating functions	Display	15-inch color LCD + multi touch panel operations
	“suite apps”	Applications to visualize and digitize information needed on the shop floor
	“suite operation”	Highly reliable touch panel suited to shop floors. One-touch access to suite apps.
	Easy Operation	Single screen operations
	Data setting function	Zero point offset, wheel, wheel management, diamond tool, software limits, chuck barriers, etc
	Program editing	Program one-touch editing, workpiece selection, sequence number arrange, WIN app editing
	Operations	Workpiece selection (index program), sequence restart, Manual interrupt, PLC monitor, parameter input/output
	Programming	Linear/circular interpolation, Workpiece coordinates (G11 X-axis, Z-axis) / Grinding wheel coordinates (G12 U-axis, W-axis), Grinding wheel data 80 sets, Diamond data 9 sets, Diamond data calculation command Fixed grinding cycle, Fixed wheel dressing cycle, Programming using both mm/rev and mm/min user task 1, Zero shift, Home position function
	Program capacity	Program storage: 4 GB, operation buffer: 2 MB
	Machining management	Display of results for each machining program, display of operation results (power ON time, cutting time, etc.), input of reasons for non-operation
	Monitoring	Grinding load display, Grinding overload detection, Gap elimination function
Communications / Networking		Ethernet (1000 Mbps), USB (2 ports)
High speed/accuracy specs		Hi-G control, Droop control, Variable lost motion compensation
Online help		Programming help, Alarm help, Operation help

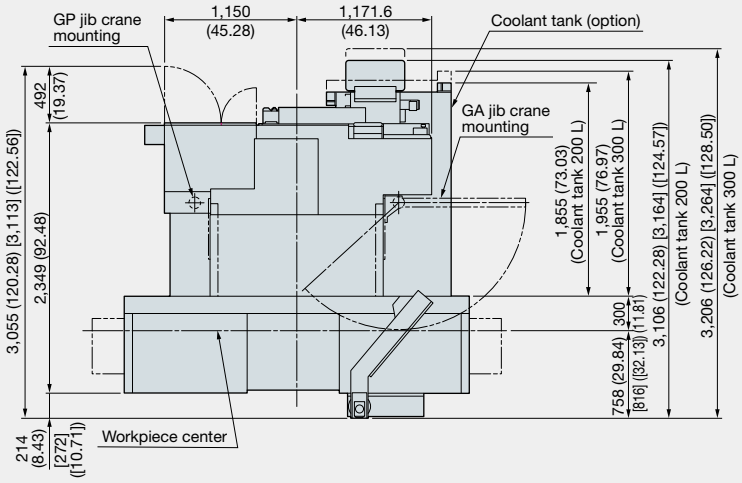
Optional Specifications

Item	Kit Specs	NML E	NML D	3D E	3D D	I-GAP E	I-GAP D
Interactive operation							
I-GAP+						●	●
Programming							
Inch/metric switchable							
User task 2	Sub programs calculation function operations	●	●	●	●	●	●
	With I/O terminals						
Common variables Standard 200 sets	1,000 sets						
Programmable notes			●		●		●
Monitoring							
Real 3D Simulation				●	●	●	●
3-step status indicator lamp	Type B						
	Type C	●	●	●	●	●	●
Operation end lamp	Yellow revolving light						
Alarm lamp	Red revolving light						
NC operation monitor		●	●	●	●	●	●
Work counter	4-digit resettable						
	6-digit resettable or not						
Hour meters	Power ON, resettable						
	Spindle ON, resettable or not						
	Auto operation ON, resettable or not						
Displays wheel change indication		●	●	●	●	●	●
Cycle time over check		●	●	●	●	●	●
Displays wheel change warning		●	●	●	●	●	●
Measuring							
Locator	Wheelhead mounted						
	Table mounted						

Note. NML: normal, 3D: 3D simulation, E: economy, D: deluxe

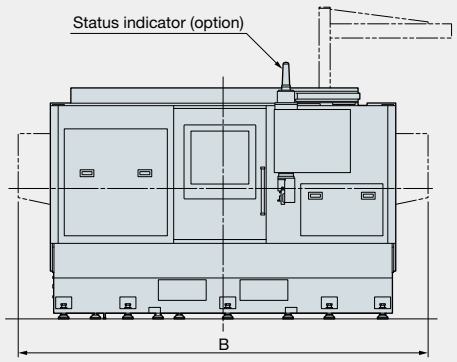
Item	Kit Specs	NML E	NML D	3D E	3D D	I-GAP E	I-GAP D
External input/output communication							
RS-232C connector							
DNC link	DNC-T1	●	●	●	●	●	●
	DNC-T3						
Additional USB	2 additional ports possible						
Automated functions							
Oriented spindle stop	Electric						
	Proximity SW						
Auto power shutoff	Machining completion, alarm						
	Above + external command						
Warm-up							
External workpiece selection	Rotary switch 8 types						
	Digital switch 99 types						
	External command BCD 2-digit						
	External command BCD 4-digit						
Okuma robot, loader I/F (built-in)							
Okuma robot, loader I/F (independent)							
Other manufacturers’ robot, loader I/F	Okuma standard; B specs						
	Okuma standard; C specs						
	User designation						
Cycle time reduction		●	●	●	●	●	●
Other functions							
Control cabinet power socket							
Control cabinet lighting							
Earth leakage circuit breaker (ELCB)							
Spare M code	2 sets						
	4 sets						
Chuck/tailstock quill can be operated during program stop							
Auto grinding wheel straightening		●	●	●	●	●	●
Emergency return		●	●	●	●	●	●
OSP-VPS (OSP Virus Protection System)							

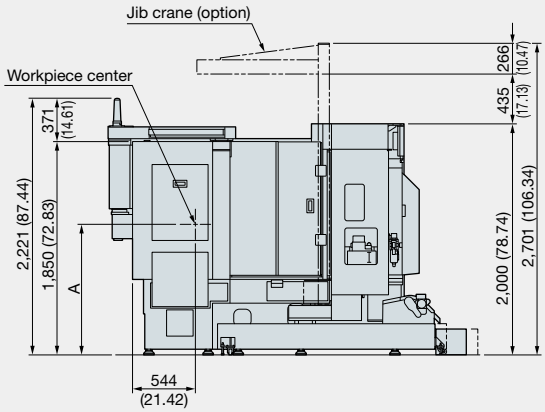
GP/GA-FⅡ series
Dimensional/Installation Drawings



Model		GP/GA			
		34FⅡ	44FⅡ	36FⅡ	47FⅡ
A		1,130.5 (44.51)	1,180.5 (46.48)	1,130.5 (44.51)	1,180.5 (46.48)
B	NL × 35	2,360 (92.91)			
	× 65	3,275 (128.94)			
	× 100	3,975 (156.50)			
	× 150	5,590 (220.08)			

NL: Nominal lengths





[ ] for 150 nominal length models Unit: mm (in)

When using Okuma products, always read the safety precautions mentioned in the instruction manual and attached to the product.

Pub.No.GP/GA-FⅡ series-E-(15b)-Non (Apr 2022)

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