

# JTEKT JTEKT CORPORATION

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**e300G**  
CNC Cylindrical Grinders

e300GP  
e300GA



<http://www.jtekt.co.jp>

Information presented in this brochure is subject to change without prior notice.

Available machines or machines shown may vary depending on optional equipment or periodic design changes.

The export of products defined as restricted commodities (or technologies) under Japan's "Foreign Exchange and Foreign Trade Act" requires an export license issued by the Japanese Government. Furthermore, similar licenses may be required for re-transfer, re-sale or re-export of such products, therefore please do not fail to contact JTEKT in advance.

In order to observe laws and regulations and prevent inappropriate export, re-sale and relocation, JTEKT has equipped all of our NC machine tools with devices that detect relocation. If this device is activated, the machine will cease operation and will not restart until it has been checked by JTEKT. JTEKT may refuse to restart the machine should it be deemed that such an action would amount to the inappropriate export of a commodity or technology, or violate export regulations. In such a case, JTEKT will not be liable for any damages arising from the refusal to restart machine operation and do not bear any liability to perform services pertaining to product warranty. Please contact your JTEKT representative for details. Always read manuals carefully before using any machinery to ensure safe and proper use.

# Best grinder for the mass production of small parts

CNC Cylindrical Grinders

## e300GP e300GA

3 elements for safe production

### High Productivity

- Standard adoption of the dual-center-drive
- CBN wheel specifications

### High Accuracy

- TOYODA STAT BEARING
- High rigidity bed
- Heat symmetry structure reducing the effect of heat

### Easy Operation

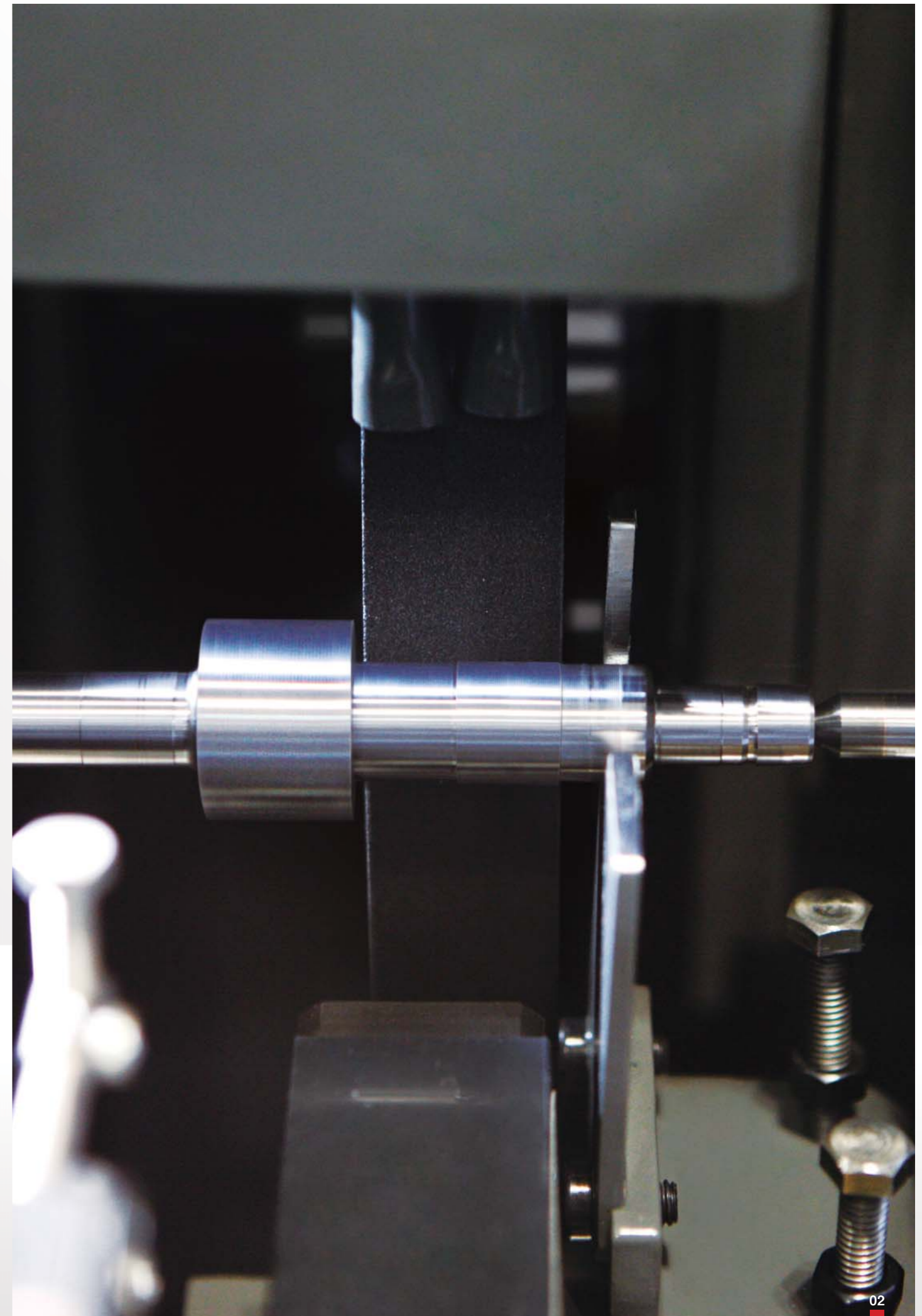
- Setup change made easy with spindle NC shift mechanism
- Abundant grinding cycles

### Easy Loader

- Easy installation without the need for loader aligning
- Easy positional memory storage after setup change
- High-speed loader with simple structure



This photo shows a machine with a loader

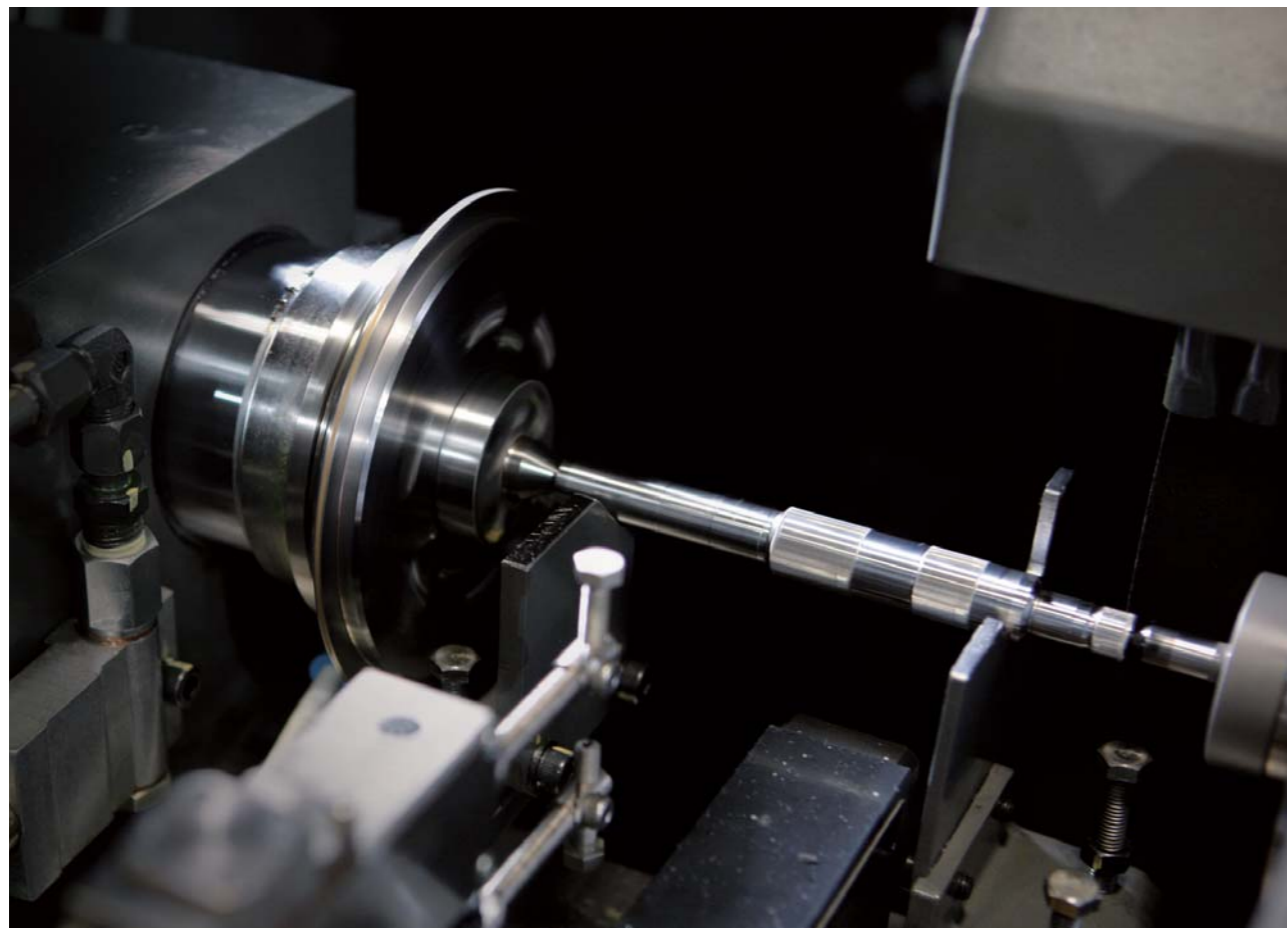
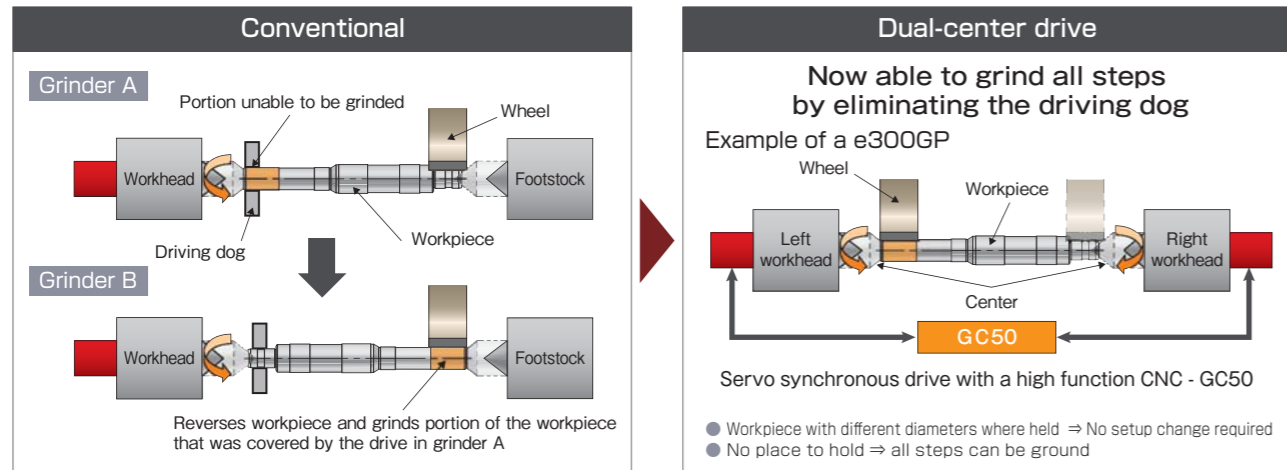


## High productivity

### Improved productivity with a dual-center drive

#### Able to grind all steps by eliminating the driving dog

A dual-center drive has been adopted, driving the workpiece with the frictional force of the centers on either side. This makes it possible to perform all steps of OD grinding without a driving dog.



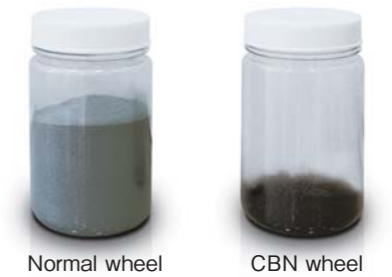
### Productivity improved with the adoption of a CBN wheel

#### Merits of CBN wheel usage

By adopting a CBN wheel, productivity is increased and workability is improved.

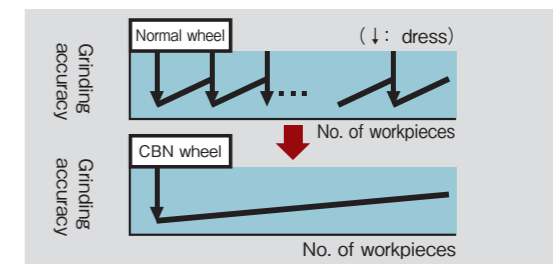
- Reduction of wheel dressing wait time
- Reduction of wheel change frequency
- Small wheel diameter makes wheel change easy
- Less quality check processes associated with wheel diameter change
- Less coolant maintenance processes caused by grain infiltration

Comparison of abrasive amount (amount generated in 1 day)



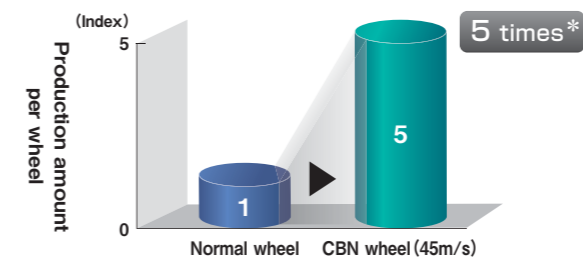
#### Accuracy improved with the adoption of a CBN wheel

No variation between immediately before and immediately after wheel dressings. Dimensional accuracy and surface roughness are stable.



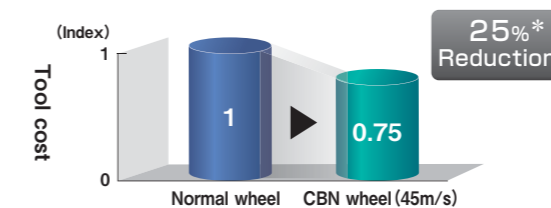
#### Development of a long life CBN wheel

Running costs have been reduced compared with a normal wheel by using a newly developed CBN wheel with a surface speed of 45m/s.



#### Adoption of a CBN wheel with a 45 m/s wheel surface speed

With a CBN wheel surface speed of 45m/s, customers can continue to apply the machining know-how cultivated on normal wheels. Moreover, a speed of 45m/s allows for optimal dressing unit and wheel spindle motor size and reduces initial cost.



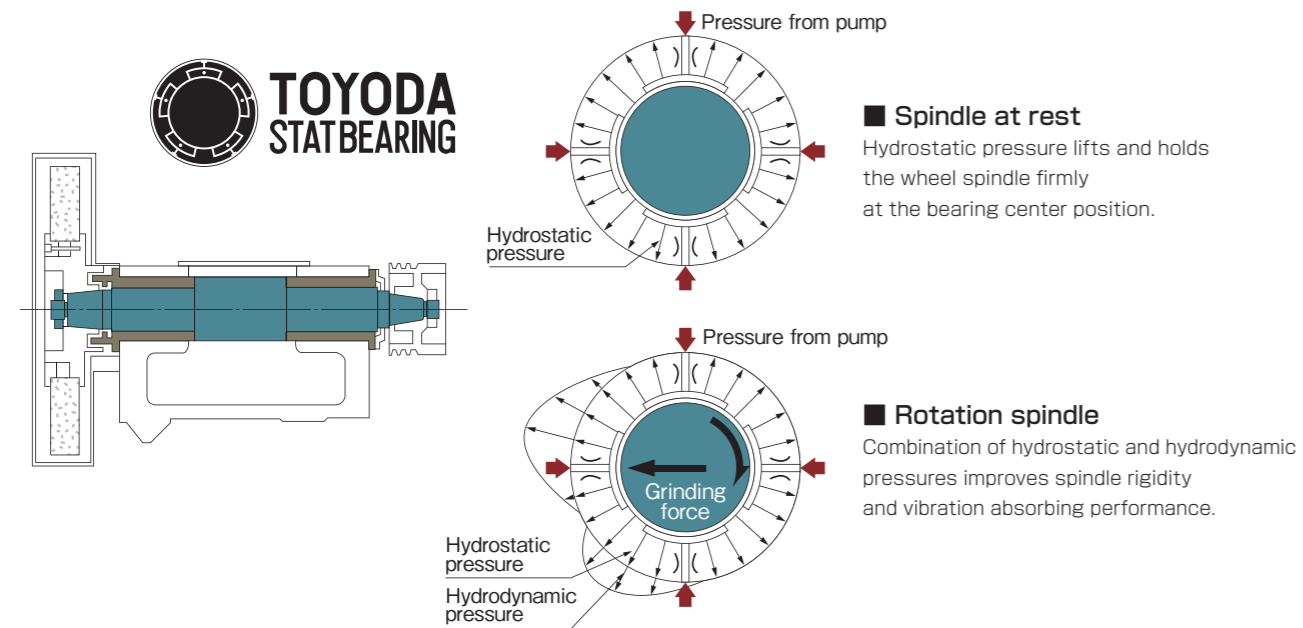
The data listed does not show guaranteed figures.

## High accuracy

### Adoption of the TOYODA STAT BEARING

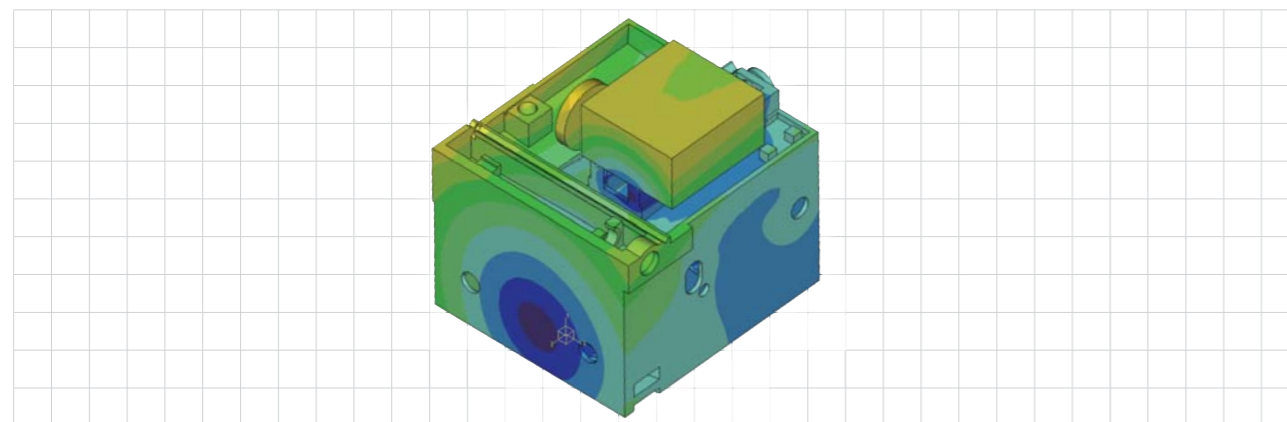
Equipped with the extremely rigid hybrid-type TOYODA STAT BEARING which provides no metal-to-metal contact and has a high vibration damping capacity, this grinder assures high accuracy and a long service life.

High accuracy grinding and longevity of the machine is achieved by using proven JTEKT spindle technology.



### High rigidity bed

Through analysis, the bed, which acts as a support for moving bodies, has been made highly rigid with improved natural frequency. By improving natural frequency, joint oscillation with the vibrating source of the machine is prevented and accuracy is stabilized.



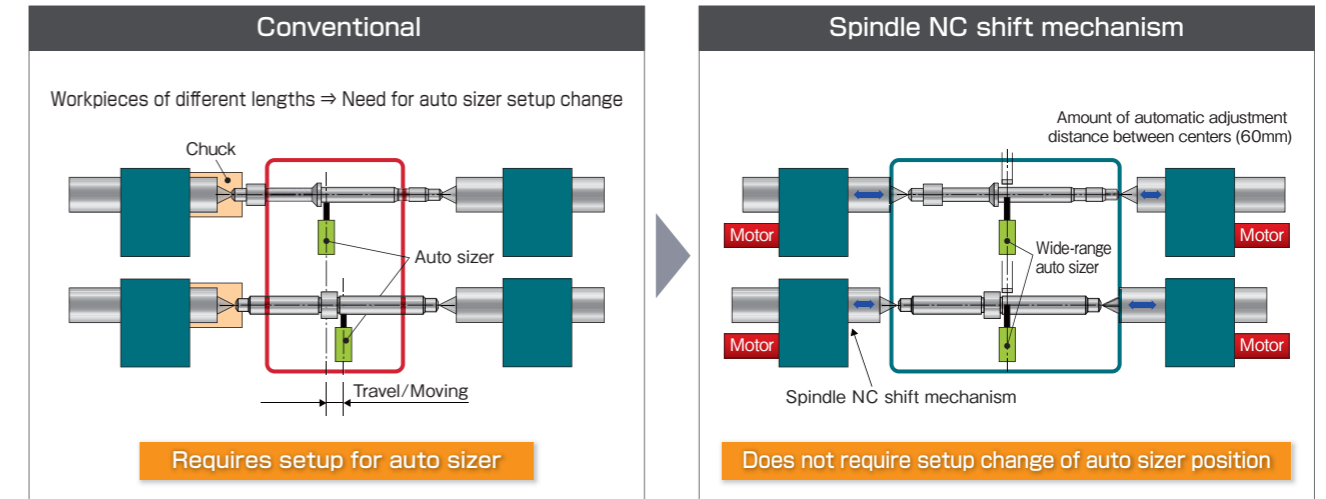
### Heat symmetry structure reducing the effect of heat

JTEKT's original high accuracy technology cultivated over several years is used to create a machine structure that reduces the effect of heat. By avoiding the twisting of the table, the spindlehead and tailstock are held in a single position, resulting in a structure where accuracy is stabilized.

## Easy operation

### Spindle NC shift mechanism with easy setup change

Does not require changing the auto sizer position or setup change since spindles automatically adjust centers according to workpiece lengths.



### Abundant grinding cycles

Abundant grinding cycles incorporating JTEKT's exhaustive knowledge of grinding have been prepared.

	Plunge grinding	Multi-step plunge grinding	Multi-plunge/traverse grinding	Contouring grinding <small>Option</small>
Straight type				
Angular type				

Many more grinding cycles other than the above have been prepared. We offer the best grinding cycle solution for each customer. Please contact our sales staff.

## CNC unit [GC50] with simple operations

JTEKT, with our expertise in equipment control, contribute to improving the operability of our customers' production equipment.

- Daily tasks made easy with a carefully-selected simple screen.
- Abundant visualization features available for maintenance work through connection with a PC.
- Adopting PLC TOYOPUC which allows for visualization.

Item	Specifications	4-inch operation panel	12-inch operation panel
Operation	64 workpiece selection	○	○
	Wheel change operation button (wheel change return, wheel rough dressing start)	○	○
	Position memory operation	×	○
	Jog button	○	○
	Handle operation	○	○
	Single block button	○	○
	MDI on / off switch	×	○
Display and edit	Visualization of maintenance work (Alarm lamp → Fault details → Circuit monitor)	×	○
	Sequence circuit monitor	×	○
	Sequence circuit edit	×	○
	Operation procedure	×	○

Item	Specifications	4-inch operation panel	12-inch operation panel
Display and edit	Inspection, maintenance item	×	○
	Wheel replacement prediction / Wheel min. wheel dia. display	○	○
	Self-diagnostic function	×	○
	Alarm history display	×	○
	Travel amount display (absolute coordinates, machine coordinates, remaining travel amount)	○	○
	CNC maintenance setup data creation, correction	×	○
Compensation	CNC machining data creation, correction	×	○
	Dimension compensation (diameter compensation, lateral position compensation)	○	○
Maintenance	Sizing compensation	○	○
	Data backup USB memory	×	○

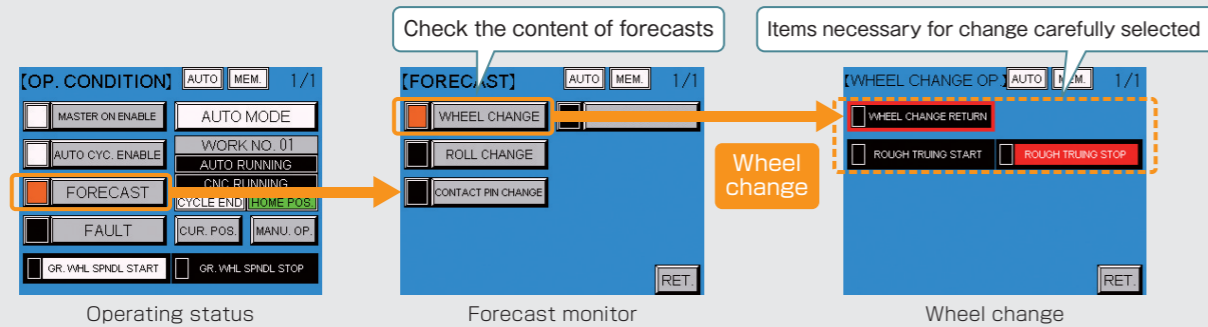
Select the right HMI\* for your application ※ HMI: Human Machine Interface - Used to inform the operator of the machine's status

### Operations easily understood even the first time

No need to worry about getting operations wrong thanks to a 4-inch operation panel designed for mass production featuring only daily task functions such as manual operation, dimension offset, etc.

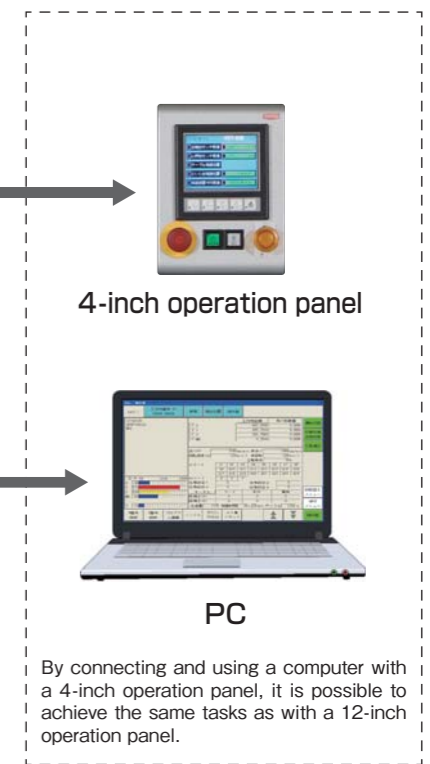
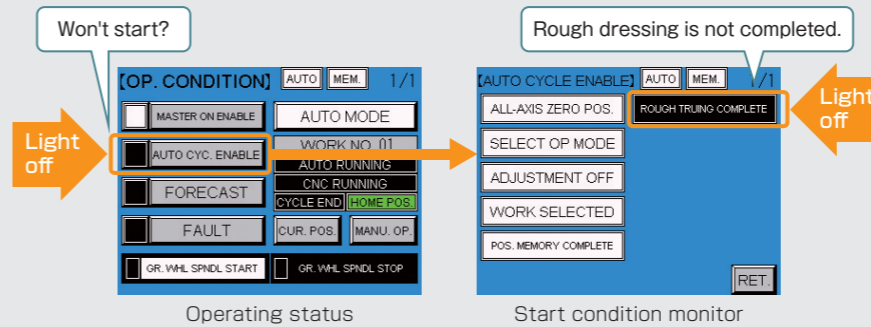
#### Operation procedures are clear

Improving workability through simple stratification in line with operations



#### Cause of start failure is clear

Shortening downtime by finding the cause quickly using a condition monitor function



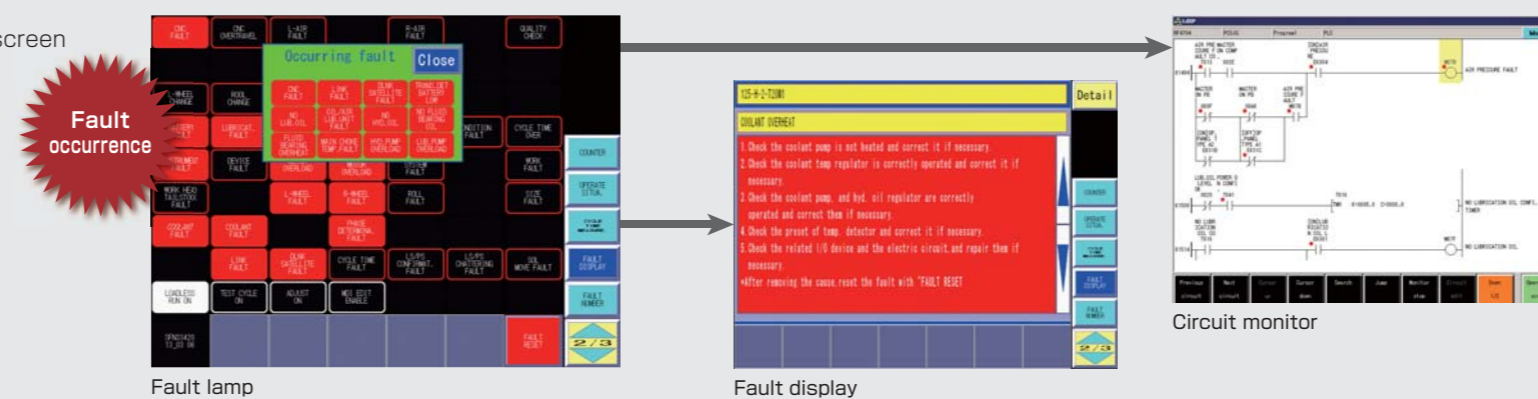
### Abundant visualization features and easy operation for maintenance work

In addition to a memory function for the various set-up changeover positions, through visualization of maintenance work, self-diagnosis functions and so on, it is possible to better understand the state of the machine.

#### Easy to understand the equipment state

Directly diagnoses where abnormality is occurring on the screen

- If a fault is generated, its precise location can be diagnosed on the NC screen through fault display, circuit monitor, etc.



※ For a 4-inch operation panel, a PC (with Windows XP or Windows 7) and a LAN cable for connection are required for maintenance-related operations, etc. Please prepare these independently.

\* Windows is a registered trade mark of Microsoft Corporation in the USA and other countries.

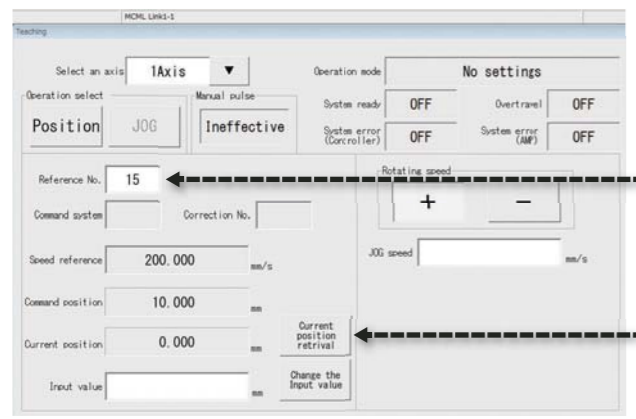
## Sense operation loader integrated into machinery

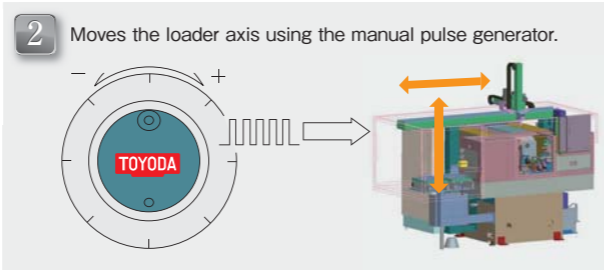
High-speed loader with easy operation by centralized control merging operation panels of loader and machine.

- Easy installation without the need for loader alignment
- Easy position memory storage after setup change
- High-speed loader with simple structure

### Easy position memory improves first workpiece grinding efficiency

Uses only the operation panel and manual pulse generator. Movements set to workpieces can be saved with the touch of a button. Automatic input erases the possibility of input errors. Eliminates the need for the writing down and numerical entry of position coordinates.



- 1 Reads out instruction numbers for storing positional memory.  
Reference No. 15
- 2 Moves the loader axis using the manual pulse generator.  

- 3 Press the "Current position retrieval" button to finish entering position data.  
Current position retrieval

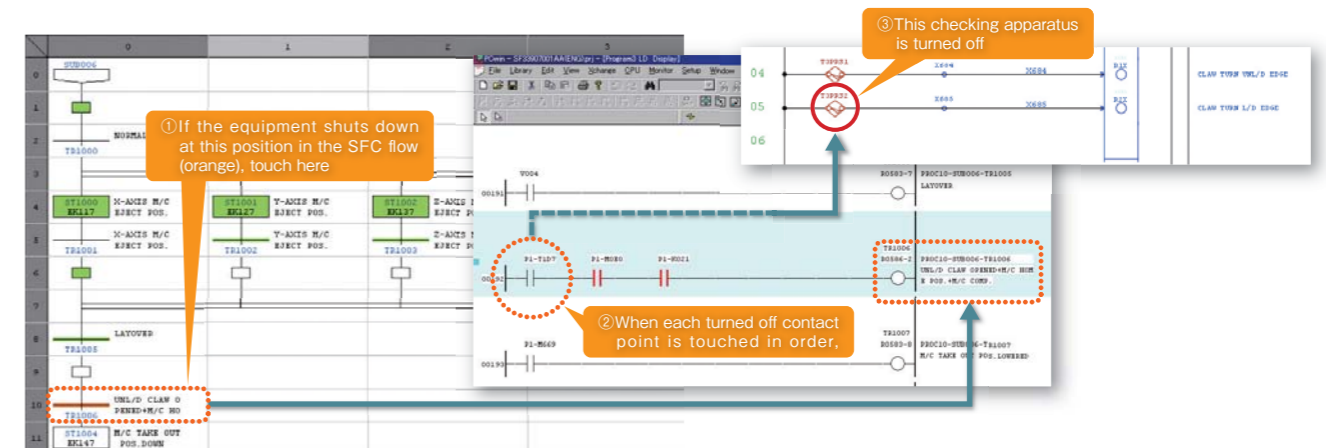
### Easy position memory storage close at hand **Option**

We have attached a position memory button to the manual pulse generator for convenient position memory close-at-hand.

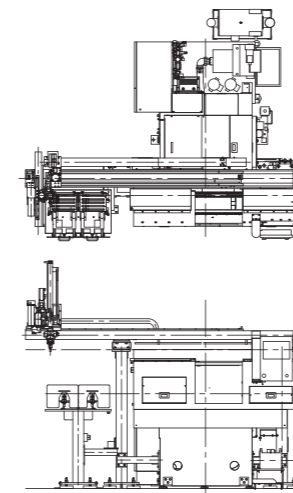


### Equipment status is easy to read

Machine and loader conditions can be known through the machine-loader integrated centralized control, which easily identifies the sources of errors.

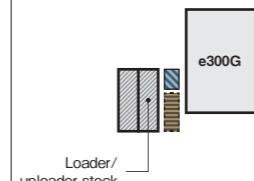
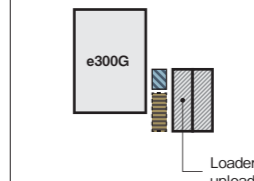
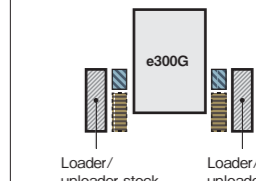


### Loader attached to machinery Package pattern



#### Loader Specifications

Weight capacity		kg	1.5
Travel range	X axis	mm	2,000
	Y axis	mm	250
	Z axis		500
Speed	X axis	m/s	100
	Y axis	m/s	60
	Z axis		90
Electric device		v	Supply voltage: 200V, control voltage: DC24V
Electric motor	X axis		0.75
	Y axis	kW	0.4
	Z axis		0.4
Electrical capacity		KVA	10
Repeatability		mm	±0.05
Net mass		kg	42.5 (Loader) +65.5 (Support rod)

Posture of workpiece while loading and unloading		Vertical orientation		
Loadin/unloading unit		Left side	Right side	Left side → Right side
Layout				
Pallet number		Each one piece for loading/unloading, total 2 pieces		
Pallet size	Y axis: 250mm	Length 200 mm × depth 200 mm [Length 300 mm × depth 200 mm]		
	Y axis: 450mm	Length 200 mm × depth 400 mm [Length 300 mm × depth 400 mm]		
Number of workpieces	Y axis: 250mm	Length 5 × depth 5 = 25 workpieces/1 pallet ※1※2 [5 workpieces/ 1 pallet ※2]		
	Y axis: 450mm	Length 5 × depth 10 = 50 workpieces/1 pallet ※1※2 [10 workpieces/ 1 pallet ※2]		
Loader longitudinal axis (Y axis) travel distance		250mm, 450mm		450mm
Loader traveling axis (X axis) travel distance		2,000mm		

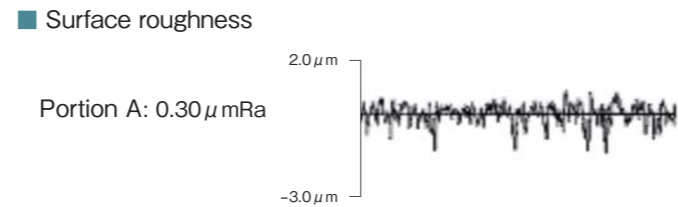
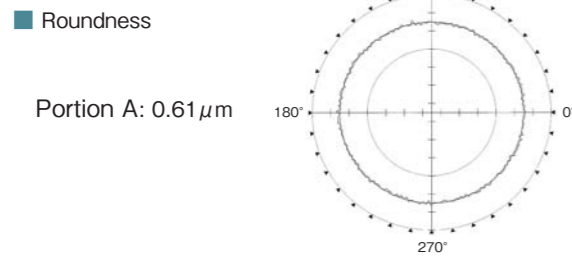
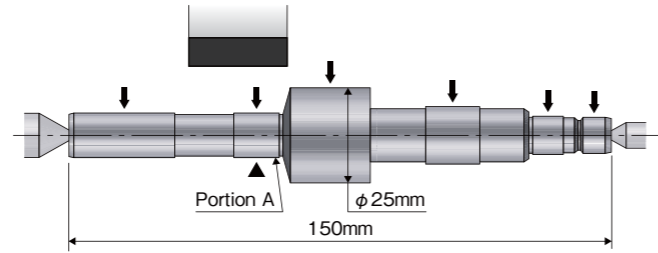
[ ] contain the values for horizontal stock pattern  
 ※1 Example of workpiece with max. diameter of φ22.5mm  
 ※2 Handles workpieces with total lengths up to 200 mm  
 \*1 Side stock pattern is available as a workpiece posture while loading and unloading.  
 \*2 Right → Left pattern is available in the loading/unloading unit.  
 \*3 Layout may vary depending on specifications.

Perpendicular posture conversion equipment  
 Quality check device, faulty workpiece unloading device **Option**

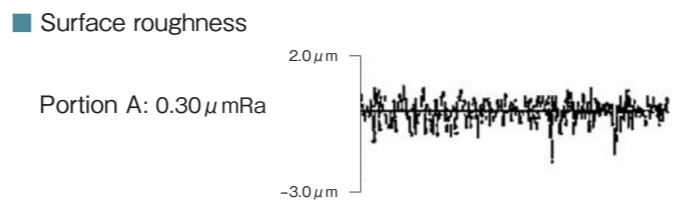
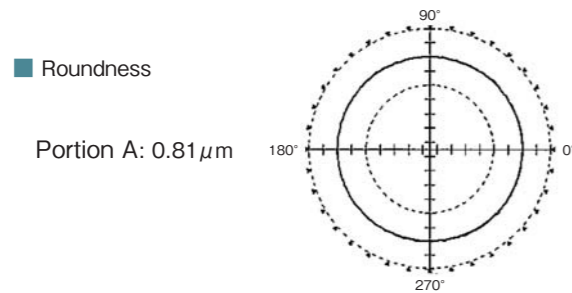
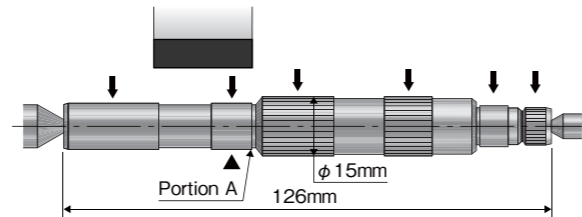
# Grinding Examples

## Example of external grinding using dual-center drives

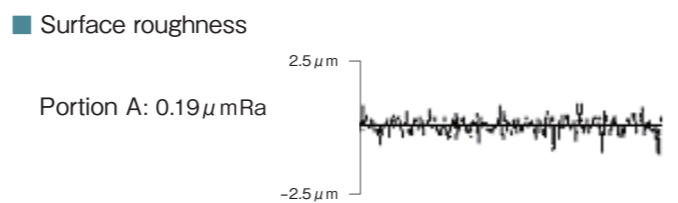
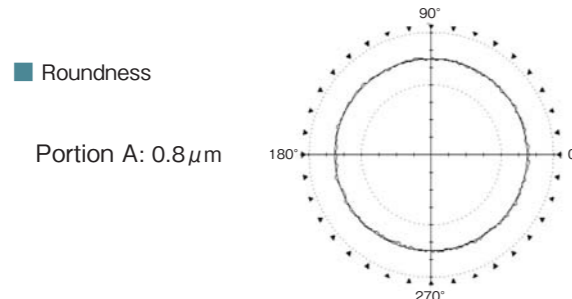
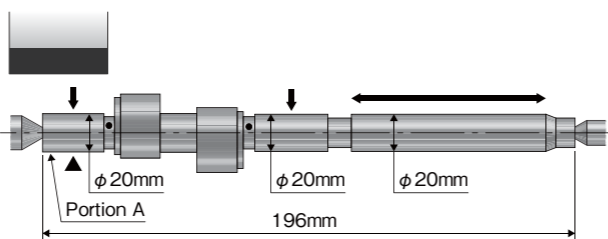
[Model] e300GP  
 ■ Requirements  
 [Grinding wheel] CBN wheel  
 (OD × width:  $\phi 300\text{mm} \times 25\text{mm}$ )  
 [Grinding wheel surface speed] 45m/s  
 ■ Workpiece  
 [Name] Shaft  
 [Material] SCM435H Raw material



[Model] e300GP  
 ■ Requirements  
 [Grinding wheel] CBN wheel  
 (OD × width:  $\phi 300\text{mm} \times 25\text{mm}$ )  
 [Grinding wheel surface speed] 45m/s  
 ■ Workpiece  
 [Name] Motor shaft  
 [Material] SCM435H Raw material

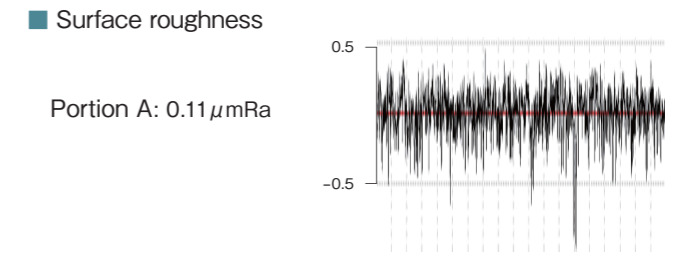
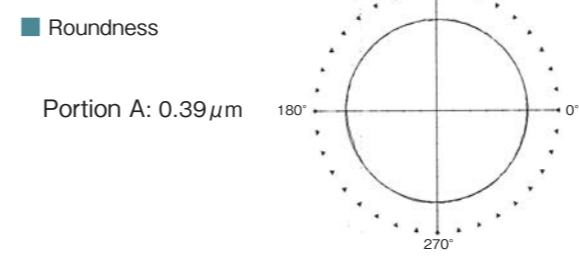
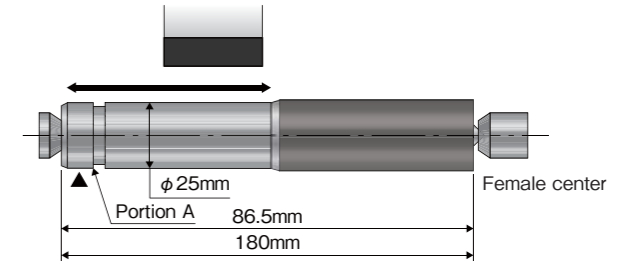


[Model] e300GP  
 ■ Requirements  
 [Grinding wheel] CBN wheel  
 (OD × width:  $\phi 300\text{mm} \times 25\text{mm}$ )  
 [Grinding wheel surface speed] 45m/s  
 ■ Workpiece  
 [Name] Compressor shaft  
 [Material] FCD55 Raw material

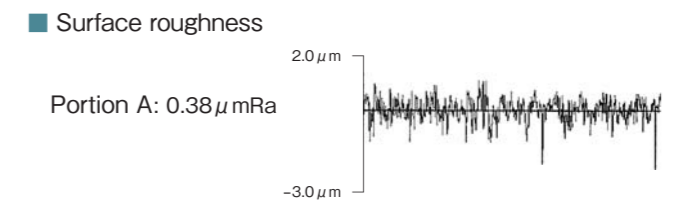
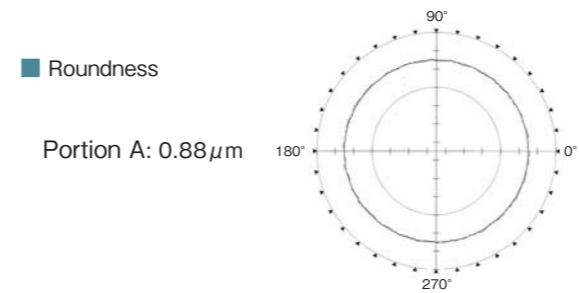
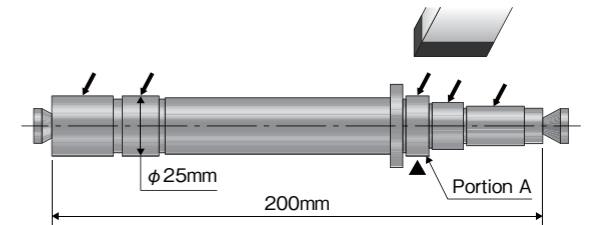


Listed data may not be obtained due to workpiece material, grinding conditions, circumference conditions, etc. Please be aware that listed values are not guaranteed.

[Model] e300GP  
 ■ Requirements  
 [Grinding wheel] CBN wheel  
 (OD × width:  $\phi 300\text{mm} \times 15\text{mm}$ )  
 [Grinding wheel surface speed] 45m/s  
 ■ Workpiece  
 [Name] High-speed steel endmill  
 [Material] Special material HRC70



[Model] e300GA  
 ■ Requirements  
 [Grinding wheel] CBN wheel  
 (OD × width:  $\phi 350\text{mm} \times 30\text{mm}$ )  
 [Grinding wheel surface speed] 45m/s  
 ■ Workpiece  
 [Name] Balancer shaft  
 [Material] S45C Raw material



## Machine specifications

[ ] shows option.

Item	Unit	e300GP		e300GA	
		CBN wheel specifications	Normal wheel specifications	CBN wheel specifications	Normal wheel specifications
Distance between centers	mm	280	320	280	320
Swing over table	mm	φ200		φ200	
Height from floor to center middle	mm	1,080		1,080	
Grinding diameter	mm	0 ~ φ80		0 ~ φ80	
Load between centers	kg	5		5	
Wheel	Bearing	TOYODA STAT BEARING		TOYODA STAT BEARING	
	OD × width (max.) × ID	φ300×30×φ100	φ355×38 [50] × φ127	φ350×30×φ100	φ355×38 [50] × φ127
	Surface speed	45		45	
Wheelhead	Feed method	V-slideway, Ball screw drive		V-slideway, Ball screw drive	
	Rapid feedrate	φ30		φ30	
	Minimum input increment	φ0.0001		φ0.0001	
Table traverse	Feed method	V-slideway, Ball screw drive		V-slideway, Ball screw drive	
	Rapid feedrate	20		20	
	Minimum input increment	0.0001		0.0001	
Left workhead	Type	Rotating spindle infinite variable spindlehead		Rotating spindle infinite variable spindlehead	
	Center	Special center		Special center	
	Max. RPM	1,000		1,000	
	Shift process (hydraulic pressure)	20		20	
	Minimum input increment	0.001		0.001	
Right workhead	Type	Rotating spindle infinite variable spindlehead		Rotating spindle infinite variable spindlehead	
	Center	Special center		Special center	
	Max. RPM	1,000		1,000	
	Shift process (hydraulic pressure)	20 (incl. push-in amount 5mm)		20 (incl. push-in amount 5mm)	
	Minimum input increment	0.001		0.001	
Electric unit	V	Power supply voltage 200, Control voltage DC24		Power supply voltage 200, Control voltage DC24	
Drive motor	Wheelspindle	3.7 (4P)		3.7 (4P)	
	Wheelhead feed	1.3 (servo motor)		1.3 (servo motor)	
	Table traverse feed	1.3 (servo motor)		1.3 (servo motor)	
	Left work spindle	0.4 (servo motor)		0.4 (servo motor)	
	Right work spindle	0.4 (servo motor)		0.4 (servo motor)	
	Left work spindle position	0.4 (servo motor)		0.4 (servo motor)	
	Right work spindle position	0.4 (servo motor)		0.4 (servo motor)	
	Hydraulic oil pump	0.75 (4P)		0.75 (4P)	
	Wheel spindle bearing oil pump	0.25 (2P)		0.25 (2P)	
	Lubrication pump	0.04 (2P)		0.04 (2P)	
	Coolant pump	0.25 (2P)		0.25 (2P)	
	Bed washing pump	0.25 (2P)		0.25 (2P)	
	Magnetic separator	0.025 (4P)		0.025 (4P)	
	Tank capacity	Hydraulic oil	10		10
Wheelspindle bearing oil		5		5	
Lubrication oil		6		6	
Coolant		150		150	
Machine weight	kg	3,500		3,500	

※ Specifications may be limited depending on customer's tooling.

## CNC unit JTEKT GC50

●: Standard / □: Optional

Item	No.	Specifications	Included	
Control axis	1	X-axis (wheelhead infeed)	●	
	2	Z-axis (table traverse)	●	
	3	C axis (Left work spindle)	●	
	4	CS axis (Right work spindle)	●	
	5	WW axis (Left work spindle position)	□	
	6	WF axis (Right work spindle position)	□	
Display unit	7	Color LCD (Japanese)	●	
	8	Color LCD (English)	□	
	9	Color LCD (Chinese)	□	
File control	10	Hierarchization of data control (production, operation, maintenance)	●	
	11	Grinding data Max.64 process data / each workpiece : 30, Max. 1920 processes	●	
Coordinate setting	12	Position memory (various)	●	
Compensation function	13	Dimension compensation	●	
	14	Operation monitor	●	
Display	15	Sequence circuit monitor	●	
	16	Sequence circuit edit	●	
	17	Operation procedure	●	
	18	Inspection, maintenance item	●	
	19	Metric display	●	
Item	No.	Specifications	Included	
	Display	20	Imperial display	□
		21	Canned cycle	●
		22	Test cycle	●
	Operation	23	Dressing cycle	●
		24	Return cycle	●
		25	Single block	●
		26	Grinding step skip	●
	Sizing	27	Sizer control portion	●
		28	Wheel replacement prediction / Wheel min. wheel dia. display	●
	Maintenance	29	Self-diagnostic function	●
		30	Alarm history display	●
	Counter (on display screen)	31	Production volume counter	●
		32	Quality check counter	●
	Cycle time display (on display screen)	33	Machine operating time	●
		34	Machining cycle time	●
		35	Grinding cycle time	●
		36	Wheel dressing time	●
Others	37	MDI on / off switch	●	
	38	USB memory I/F	●	

## e300G List of accessories

●: Standard accessory ○: Optional A accessory —: No specifications  
\* When an optional A accessory is chosen, the corresponding standard one is not supplied.

### Standard accessories

Item	Unit name	e300GP		e300GA	
		Normal wheel specifications ※1	CBN wheel specifications ※1	Normal wheel specifications ※1	CBN wheel specifications ※1
Left side workhead	Live center infinitely variable speed workhead (center drive workhead with hydraulic shift)	●	●	●	●
Right side workhead	Live center infinitely variable speed workhead (center drive workhead with hydraulic shift and taper adjustment)	●	●	●	●
Center	Centers for dual-center drive (for our standard Test piece, one each for right and left)	●	●	●	●
Wheel surface speed	Wheel surface speed 45m/s motor speed 1-speed specification (including wheel spindle cooler)	●	●	●	●
Wheel dressing unit	Wheel dressing unit (mounted on left workhead rear)	●	—	●	—
	Formed diamond (Shank dia.: φ8mm)	●	—	●	—
	Truing device (mounted on left workhead face plate)	—	●	—	—
	Truing device (mounting on left workhead rear)	—	—	—	●
Tool	Contact detection unit	—	●	—	●
	Normal wheel tools	●	—	●	—
Hydraulic/pneumatic devices	CBN wheel tools	—	●	—	●
	Lubrication pump unit (6L tank capacity)	●	●	●	●
	Hydraulic pump unit (10L tank capacity)	●	●	●	●
Coolant supply unit	Air device	●	●	●	●
	Coolant supply unit (tank capacity 150L) (Accessory: magnetic separator [processing capacity 80L/min], with washing pump, without coolant confirmation device)	●	●	●	●
	Bed washing	●	●	●	●
Work holder	Center washing	●	●	●	●
	Workpiece temporary holder (for our standard Test piece, one each for right and left)	●	●	●	●
Auto sizer	Auto sizer for cylinder (8 to φ50mm, 1 set)	●	●	●	●
Auto sizer cooling	Auto sizer cooling for one auto sizer	●	●	●	●
Lateral locator	Automatic lateral locator (mounted on wheelhead)	●	●	●	●
Cover	Coolant splash prevention cover (fully enclosed cover with ceiling, manual open/close type front door)	●	●	●	●
CNC unit	GC50 (JTEKT-made)	●	●	●	●
	4-inch operation panel for line ※2	●	●	●	●
Control unit	12-inch operation panel for stand-alone machine	○	○	○	○
	1 GC50 special-purpose USB drive (already containing backup data)	●	●	●	●
Specifications for destination	Power voltage 200V specifications	●	●	●	●
	Supporting Japanese (NC screen, etc.)	●	●	●	●
Machine color	Standard paint color (silver metallic, dark gray metallic)	●	●	●	●
Customer's run off test	Our standard Test piece grinding	●	●	●	●
Documents to be submitted	Machine specification sheets, operation manual, maintenance manual (CD)	●	●	●	●
Relocation detection unit	Relocation detection unit	●	●	●	●

※1 : Separate meeting and quotation required for changing between normal wheel specifications and CBN wheel specifications.

※2 : A PC (with either Windows XP or Windows 7) and a LAN cable for connection are necessary for performing maintenance-related operations.

\* Windows is a registered trade mark of Microsoft Corporation in USA and other countries.

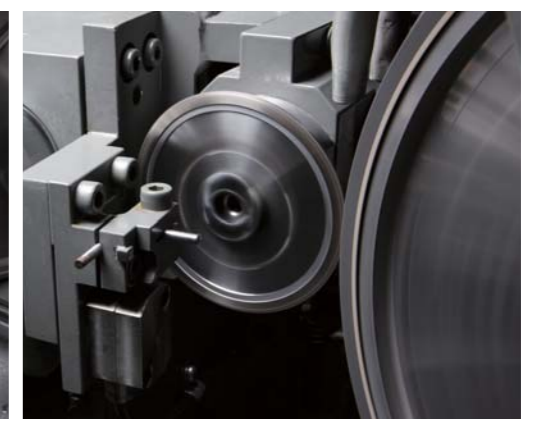
### Truing device



Straight wheel



Angular wheel





# e300G List of accessories

## Optional accessories

●: Standard accessory ○: Optional A accessory □: Optional B accessory  
 \* When an optional A accessory is chosen, the corresponding standard one is not supplied.

Item	No.	Unit name	Included	
Common options	1	Right-side live-spindle variable speed workhead (with center drive workhead, hydraulic shift, taper adjustment)	●	
	2	Right-side live-spindle variable speed workhead (with center drive workhead, hydraulic shift, easy taper adjustment)	○	
	3	Right-side live-spindle variable speed workhead with manual center distance adjustment (with center drive workhead, hydraulic shift, easy taper adjustment, center distance adjustment of 80mm)	○	
	4	Special cover when equipping right-side live-spindle variable speed workhead with manual center distance adjustment	○	
	Workhead	5	Right and left live-spindle variable speed workhead with NC center distance adjustment (with center drive workhead, easy taper adjustment, NC left-right travel of 60 mm)	○
		6	Special cover when equipping right and left live-spindle variable speed workheads with NC center distance adjustment	○
	Center	7	Centers for dual-center drive (for our standard Test piece, one each for right and left)	●
		8	Centers for dual-center drive (Exclusive design for customer's workpiece)	○
	Wheel surface speed	9	Wheel surface speed 45m/s motor speed 1-speed specification (including wheel spindle cooler)	●
		10	Wheel surface speed 45m/s motor speed 2-speed specification (including wheel spindle cooler)	○
	Coolant supply unit	11	Coolant supply unit (tank capacity 150L) (Accessory: magnetic separator [processing capacity 80L/min], with washing pump, without coolant confirmation device)	●
		12	Coolant supply unit (tank capacity 150L) (Accessory: Rare earth magnetic separator [processing capacity 80L/min], with washing pump, without coolant confirmation device)	○
	Work holder	13	Workpiece temporary holder (for our standard Test piece, one each for right and left)	●
		14	Workpiece temporary holder (Exclusive design for customer's workpiece)	○
	Auto sizer	15	Auto sizer for cylinder (φ8mm to φ50mm, 1 set)	●
		16	Auto sizer for cylinder (φ8mm to φ50mm, 2 set)	※1 ○
		17	Auto sizer for cylinder (φ8mm to φ80mm, 1 set)	○
		18	Auto sizer for spline shaft (φ10mm to φ50mm, 1 set) including air device	○
		19	Auto sizer for cylinder (φ8mm to φ80mm, 1 set, with shape measuring function)	※2 ○
	Auto sizer cooling	20	Wide-range measuring auto sizer for cylinder (φ10mm ~ φ50mm, supports unevenness of φ25mm, 1 machine/set) with air device	○
		21	Auto sizer cooling for one auto sizer	●
	Lateral locator	22	Auto sizer cooling for two auto sizer	○
		23	Automatic lateral locator (mounted on wheelhead)	●
	Cover	24	Coolant splash prevention cover, including air devices supporting automatic open/close of front door	□
		25	Design cover for exhibition (additional cover)	□
	Mist collector	26	Mist collector CRD-400R (Made by Showa Electric)	□
		27	Lighting unit inside cover (spot light)	□
	Control unit	28	Additional special-purpose USB drive for GC50 (JTEKT made)	□
		29	Power voltage 200V specifications	※3 ●
	Specifications for destination	30	Power voltage 380V specifications, supporting wheel spindle motor 380V, transformer for control voltage 200V (transformer placed separately)	○
		31	Power voltage 400V specifications, supporting wheel spindle motor 400V, transformer for control voltage 200V (transformer placed separately)	○
		32	Supporting Japanese (NC screen, etc.)	●
		33	Supporting Chinese (NC screen, etc.)	○
		34	Supporting English (NC screen, etc.)	○
	Machine color	35	Supporting export (shipping brackets for export, shipping arrangements for export, etc.)	□
		36	Standard color (silver metallic, dark grey metallic)	●
	Customer's run off test	37	Customer's specified color other than our specified color Please note, only dark gray available for accessories (pump unit, coolant supply unit, etc.).	○
		38	Our standard Test piece grinding	●
	Documents to be submitted	39	Customer's specified Test piece grinding (including tooling)	※4 □
		40	Machine specification sheets, operation manual, maintenance manual, additional CD	□
		41	Machine specification sheets, operation manual, maintenance manual, Bound	□

●: Standard accessory ○: Optional A accessory □: Optional B accessory  
 \* When an optional A accessory is chosen, the corresponding standard one is not supplied.

Item	No.	Unit name	Included	
Normal wheel options	1	φ355mm×38mm (Wheel width determined by tooling design)	□	
	2	φ355mm×50mm (Wheel width determined by tooling design)	□	
	Wheel flange	3	Standard wheel flange for max. width 38 mm	□
		4	Wide width wheel flange for max. width 50 mm	□
	Wheel dresser	5	Formed diamond	●
	Tool	6	Noramal wheel tools	□
		7	Wheel balancing stand	□
		8	Wheel balancing arbor	□
CBN wheel options	CBN wheel	1	Straight : OD φ300mm×max. width 30mm×ID φ100mm (Wheel width determined by tooling design.) ※5	□
		2	Angular : OD φ300mm×max. width 30mm×ID φ100mm (Wheel width determined by tooling design.) ※5	□
	Wheel flange	3	Fixed flange for CBN wheel ※5	□
	Dressing roll	4	For straight wheel	□
		5	For angular wheel	□
	Tool	6	CBN wheel tools	□

※1: When 2 sets of auto-sizers are selected, the 12-inch operation panel will apply.  
 ※2: The shape of one area can be measured in approximately 12 seconds. Time needed for measurement may vary depending on workpiece shape.  
 ※3: If the power voltage supplied to the machine is converted to 200V in one go by a transformer, please consult with us beforehand so we can decide if this is to be prepared by yourselves or by us.  
 ※4: Please notify our sales representative of your workpiece(s) shape, machining accuracy, cycle time and so forth so we can supply the best tooling to suit your production needs.  
 ※5: We will provide you with a CBN wheel with flange for which balancing has been completed. (JTEKT Group, Toyoda Van Moppes made)

## List of workhead and distances between centers

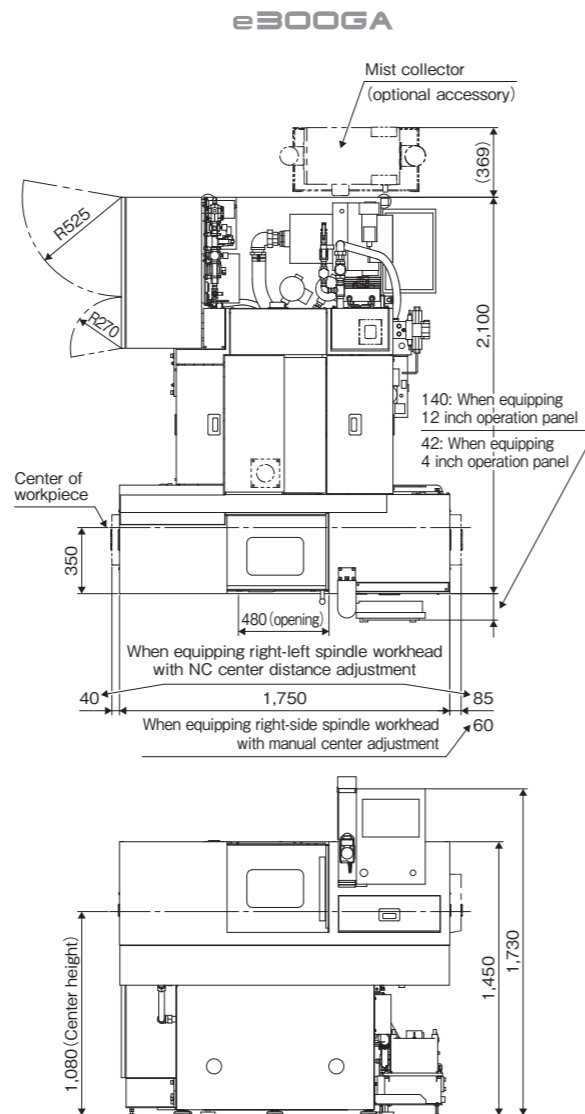
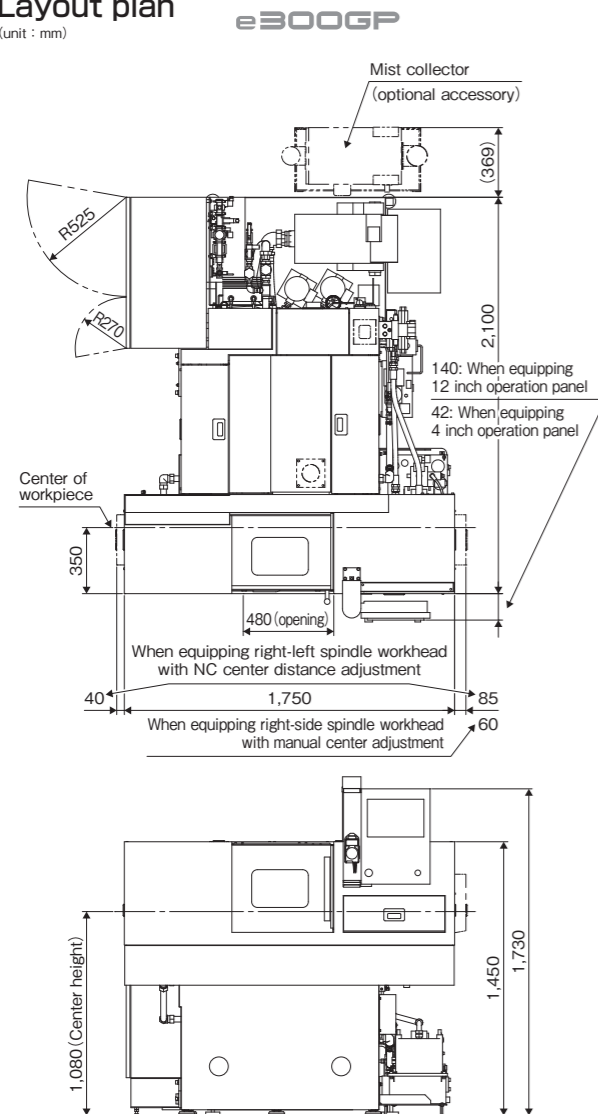
No.	Unit name	e300GP		e300GA	
		Normal wheel	CBN wheel	Normal wheel	CBN wheel
1	Right-side live-spindle variable speed workhead (with hydraulic shift and taper adjustment)	320mm	260mm	280mm	280mm
2	Right-side live-spindle variable speed workhead (with hydraulic shift, easy taper adjustment) Ram automatically moves back and forth when grinding does not change set-up frequently, due to attached hydraulic shift. Easy taper adjustment by handle rotation.	320mm	280mm	320mm	280mm
3	Right-side live-spindle variable speed workhead with manual center distance adjustment (with hydraulic shift, easy taper adjustment, center distance adjustment of 80 mm) Workhead with manual center distance adjustment for reducing setup change time during grinding workpieces of different lengths. Ram automatically moves back and forth due to attached hydraulic shift. Easy taper adjustment by handle rotation.	320mm ※1	260mm ※1	280mm ※1	280mm ※1
4	Right and left live-spindle variable speed workhead with NC center distance adjustment (with easy taper adjustment, NC left-right travel of 60 mm) NC center distance adjustment type workhead capable of center distance adjustment data transfer, for reducing setup change time during grinding workpieces of different lengths. Ram automatically moves back and forth due to attached NC shift. Easy taper adjustment by handle rotation.	260mm ※2	250mm ※2	260mm ※2	260mm ※2

※1: Right-side cover extends 60 mm. Please confirm locations on the layout as location dimensions may change.  
 ※2: Left-side cover extends 40 mm, right-side cover extends 60 mm. Please confirm locations on the layout as location dimensions may change.

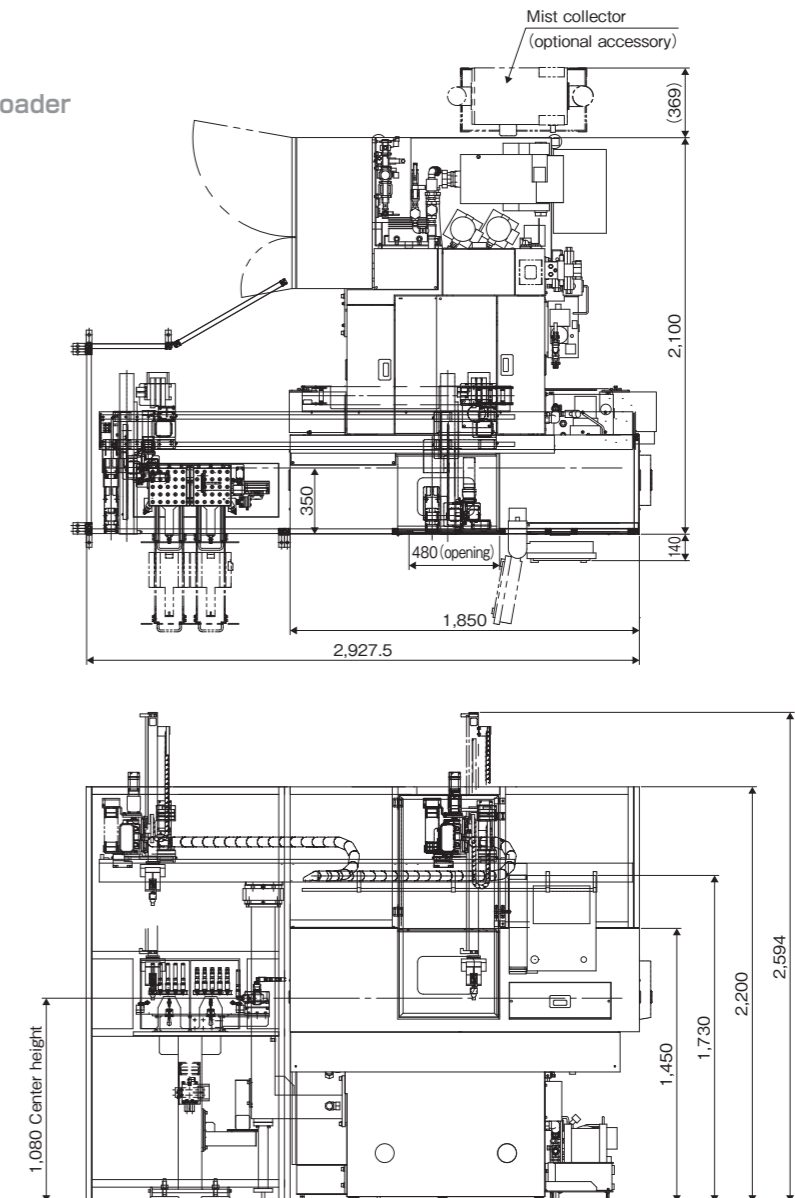
# Machine layout & dimensions

## e300G

Layout plan  
(unit : mm)



## e300G + Loader



4-inch operation panel



12-inch operation panel



The photo of this machine shows standard cover specifications.

A fully enclosed cover is standardly adopted, preventing coolant splash and mist dispersion, thereby improving the work environment. A mist collector is available as an option. The cover may change depending on customer specifications.



This is a layout plan of the left-side and vertical loading/unloading orientations. If the machine is equipped with a loader, the operation panel will be 12 inches.