

**Nidec**  
All for dreams

SUPER DRY GEAR HOBBING MACHINE

**GE** SERIES



**NIDEC MACHINE TOOL CORPORATION**

[www.nidec.com/en/nidec-machinetool/](http://www.nidec.com/en/nidec-machinetool/)



# An Evolutionary Perfect Dry Cut Hobbing Machine

We now deliver to you a perfect, dry cut hobbing machine, first of its kind in the world. This new evolutionary vertical type model reflects the needs of the customer.

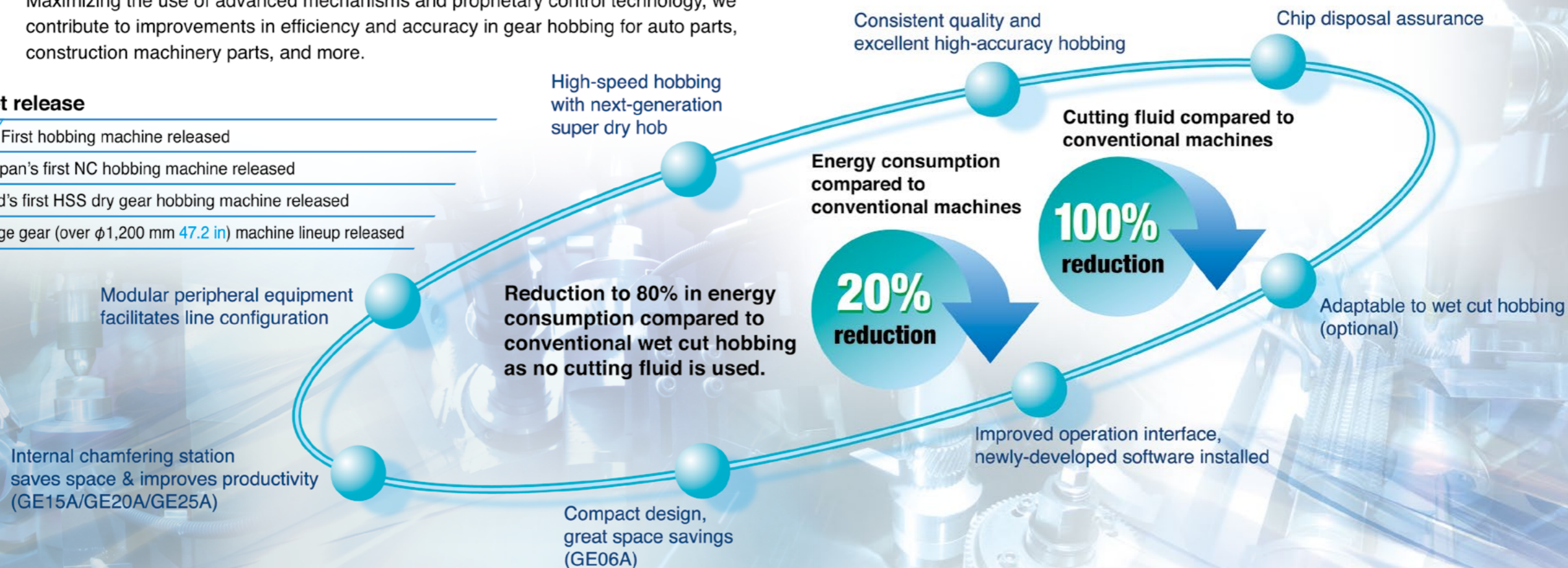
**GE** SUPER DRY GEAR HOBBING MACHINE SERIES

As a pioneer in manufacturing dry cut hobbing machines, NIDEC MACHINE TOOL CORPORATION has led the gear cutting industry in both technology and results for many years now.

Maximizing the use of advanced mechanisms and proprietary control technology, we contribute to improvements in efficiency and accuracy in gear hobbing for auto parts, construction machinery parts, and more.

## Market release

1960	First hobbing machine released
1980	Japan's first NC hobbing machine released
1998	World's first HSS dry gear hobbing machine released
2010	New large gear (over $\phi 1,200$ mm 47.2 in) machine lineup released



## Dry cut hobbing series realize clean work environment



GE06A



GE15A

(with or without chamfering station)



GE20A

(with or without chamfering station)

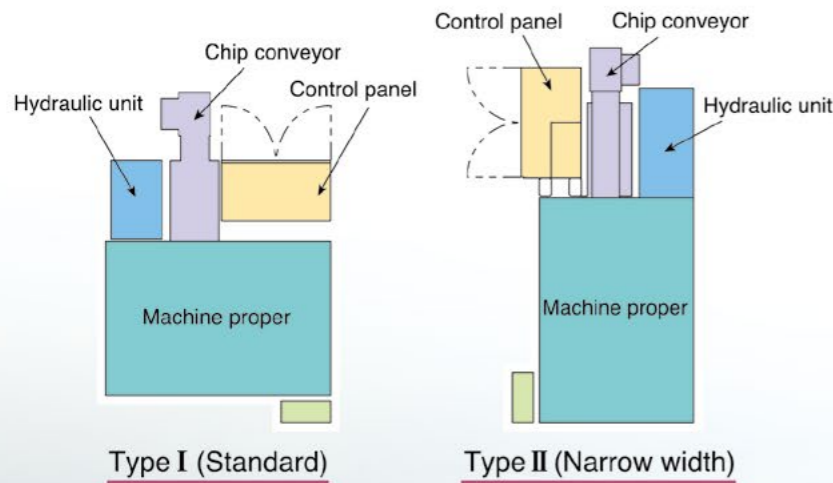


GE25A

(with or without chamfering station)

## Modular peripheral equipment facilitates line configuration

The modular peripheral equipment and transfer system facilitates the building and remodeling of line configurations. As a result, set-up time has been reduced. Select from either the Type I or, the narrow-width Type II for easy line integration.



## High-speed hobbing with next-generation super dry hob

A further enhanced high speed, high feed hobbing process made possible with next generation "SuperDry" hob cutter.

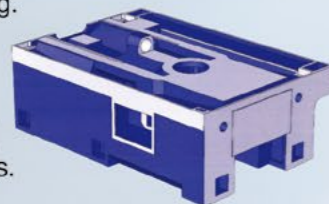
	Hob speed	Table rotational speed	Main motor
<b>Standard specification</b>	Max. 2000 min <sup>-1</sup>	Max. 300 min <sup>-1</sup>	7.5 kW 10 HP (GE15A) 11 kW 15 HP (GE20A)
<b>High-speed specification (option)</b>	Max. 3000 min <sup>-1</sup>	Max. 500 min <sup>-1</sup>	11 kW 15 HP (GE15A) 15 kW 20 HP (GE20A)



## Consistent quality and excellent high-accuracy hobbing

Machine components designed through 3D CAD and structural analysis results in consistent product quality and high-accuracy hobbing.

**High rigidity bed**  
The bed is equipped with three rugged ribs.



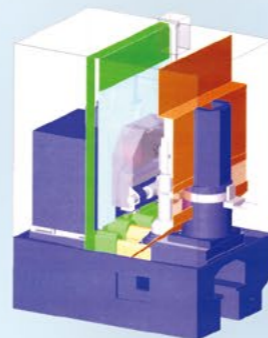
## Adaptable to wet cut hobbing (optional)

Select either the dry cut version for dry cut hobbing or the wet cut version for conventional wet cut hobbing.

## Chip disposal assurance

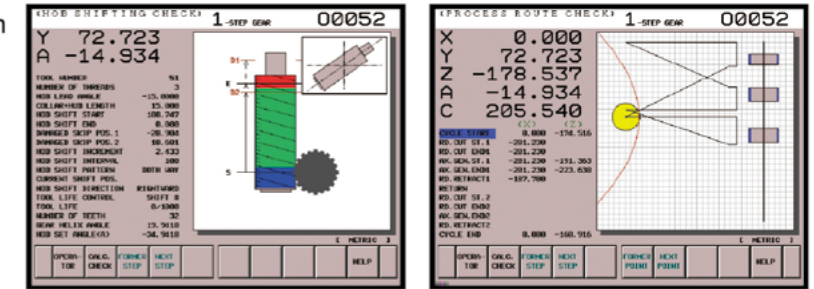
Full assurance provided based on our abundant experience in dry cut hobbing technology.

- Totally enclosed machining area
- Steep angle internal cover
- Optimum location of internal chip conveyor
- Bed structure designed for efficient chip disposal



## Improved operation interface, newly-developed software installed (only available in FANUC)

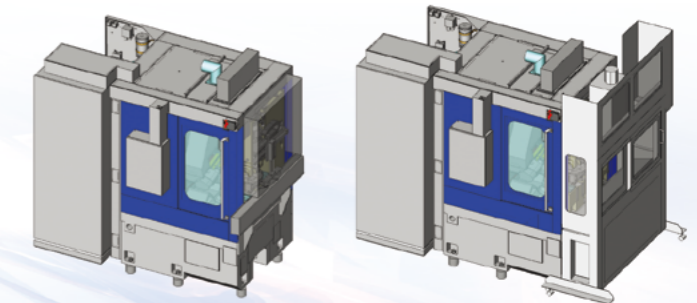
- Large 10.4-inch LCD panel
- Simple input and help function available through graphical display screen.
- Access to the main control panel from the conveyor side made possible with the double-hinged control panel located on the right hand side of the machine. (not applicable to GE06A)



## Compact design, great space savings (GE06A)

- Narrow-width design for easy line integration  
width: 1,450 mm 57.1 in, depth: 2,315 mm 91.1 in
- 30% reduction in floor space (compared to similar models)
- Reduced cycle time for small diameter gear hobbing
- 30% reduction compared with our conventional model

### Sample line configurations



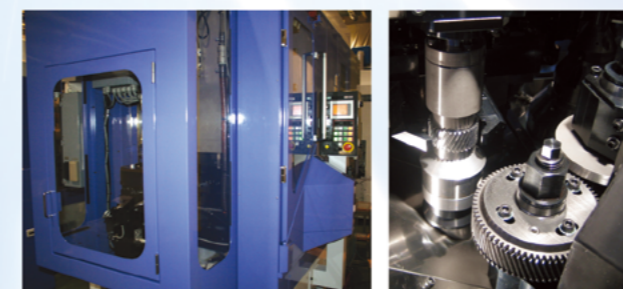
With flat conveyor

With gantry loader

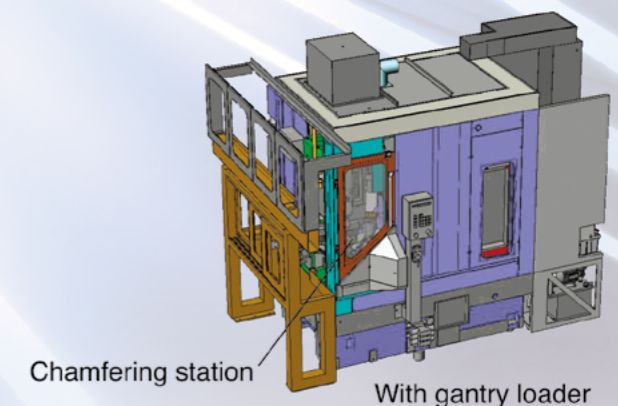
## Internal chamfering station saves space & improves productivity (GE15A/GE20A/GE25A)

- GE15A width: 1,760 mm 69.3 in, depth: 2,850 mm 112.2 in
- GE20A width: 1,820 mm 71.7 in, depth: 2,960 mm 116.5 in
- GE25A width: 2,170 mm 85.4 in, depth: 2,770 mm 109.1 in
- 4-station ring loader enables chamfering during the hobbing process (equipped with independent chamfering station operation panel)

### Chamfering station



### Sample line configurations



Chamfering station

With gantry loader

# Main Specifications

## Standard type unit

Item		GE06A	GE15A	GE20A	GE25A
Max. workpiece diameter	mm in	φ 60 φ 2.4	φ 150 φ 5.9	φ 200 φ 7.9	φ 250 φ 9.8
Max. module		4		6	
Axial travel	mm in	200 7.9	250 9.8 (opt. 400 15.7)		
Radial travel	mm in	120 4.7	140 5.5 (opt. 125 4.9)	215 8.5	210 8.3
Max. hob size (dia. x length)	mm in	φ 90x150 φ 3.5x5.9	φ 110x180 φ 4.3x7.1	φ 130x230 φ 5.1x9.1	
Amount of hob shift	mm in	130 5.1	150 5.9	180 7.1	
Hob speed	min <sup>-1</sup>	335-2660 (opt. 500-4000)	200-2000 (opt. 300-3000)		150-1500
Hob head swivel angle		±45°			
No. of teeth		3-500		3-1000	
Axial	Feedrate	mm/min ipm			
	Rapid traverse	mm/min ipm			
Radial	Feedrate	mm/min ipm			
	Rapid traverse	mm/min ipm			
Max. table speed	min <sup>-1</sup>	500	300 (opt. 500)		150 5.9
Table height	mm in	950 37.4	950 37.4	1000 39.4	1000 39.4
Rated output of main motor	kW HP	5.5 7.5	7.5 10 (opt. 11 15)	11 15 (opt. 15 20)	18.5 24.8 (opt. 22 29.5)
Total power consumption	kVA	19	22 (opt. 27)	27 (opt. 30)	36 (opt. 40)
Machine weight	kg lb	6300 13900	8500 18800	9200 20300	11000 24300

opt.: In case main spindle motor output is increased.

## With chamfering station

Item		GE15A (w/ chamfering station)	GE20A (w/ chamfering station)	GE25A (w/ chamfering station)
<b>Chamfering station</b>				
Max. workpiece diameter	mm in	φ 150 φ 5.9	φ 200 φ 7.9	φ 250 φ 9.8
Max. module		4	6	6
Max. workpiece length	mm in	250 9.8		
Gear width	mm in	10-70 0.4-2.8		
Outside hobbing diameter	mm in	φ 110 φ 4.3		
Max. table speed	min <sup>-1</sup>	300		
Rapid hobbing traverse	mm/min ipm	10000 393.7		
Output of main spindle	kW HP	1.2 1.6 (Continuous rated)		
<b>Hob station</b>				
Refer to the specifications for the standard type above.				
<b>Overall unit</b>				
Total power consumption	kVA	23 (opt. 28)	28 (opt. 31)	37 (opt. 41)
Machine weight	kg lb	8900 19700	9600 21200	11400 25200

Rated output of main motor is the same as that of the standard machine.

## Standard equipment (Common to both dry and wet versions)

- Hydraulic and lubrication oil unit
- Splash cover (fully enclosed)
- Electromagnetic door interlock system
- Chip conveyor
- Dual taper-ended external mount hob arbor
- Tailstock speed reducer
- Cutter power clamp
- Part clamping device (optional on the GE06A)
- Work light/Machine status light
- Light in the control box/Lamp check circuit
- Spindle orientation
- Hob arbor fastener
- Power saving circuit/Work counter/Power outlet
- NC device (FANUC)
- NC memory card
- Conversational programming software
- Manual coolant guard door
- Two-hand operation
- Circuit breaker with ground fault
- Spindle load meter
- RS-232C interface (optional on the GE06A)
- Maintenance tool kit

## Optional equipment (Common to both dry and wet versions)

- Part fixture
- Ring loader and gripper
- Gantry type loader
- Automatic coolant guard door
- Transfer unit/Part stacker
- Part rest
- Deburring device (Fixed type, mobile type)
- Auxiliary operation panel
- Additional memory
- Additional hob arbor
- Fixtures, power clamping device (Upper and lower part)
- Retracting-type anti-power failure system
- Various programming software
- NC unit

## Standard equipment (Dry version)

- Air blower
- Dust collector
- Air gun only

## Standard equipment (Wet version)

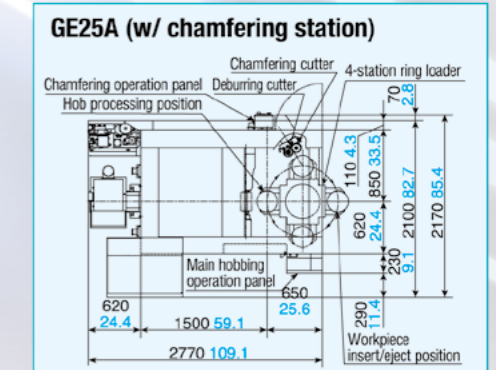
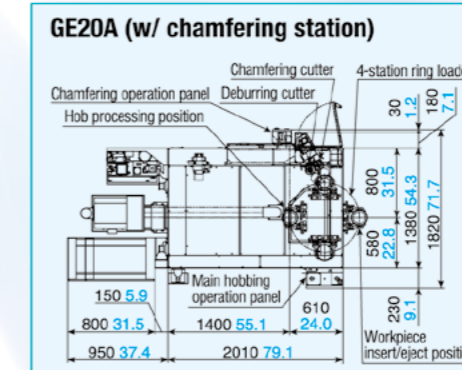
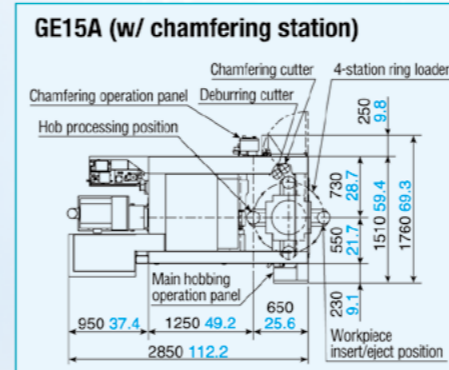
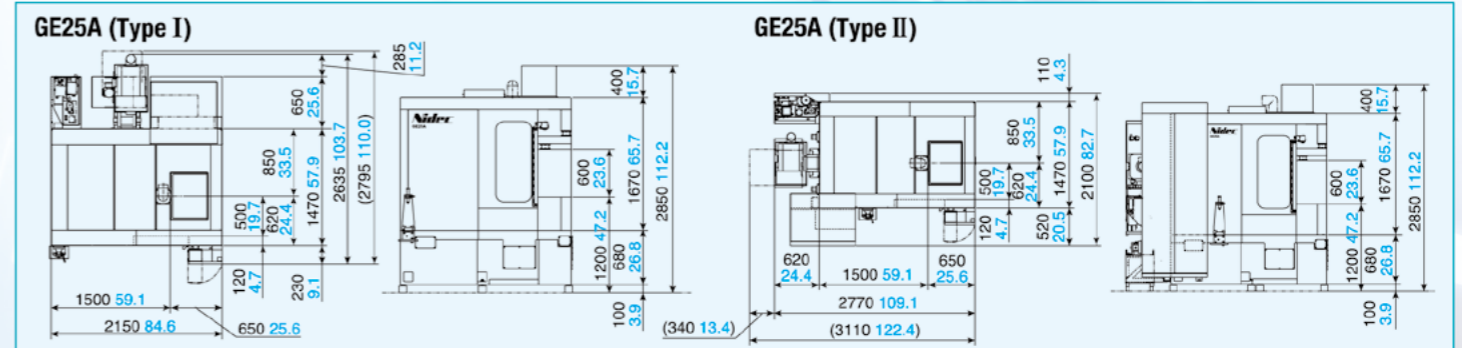
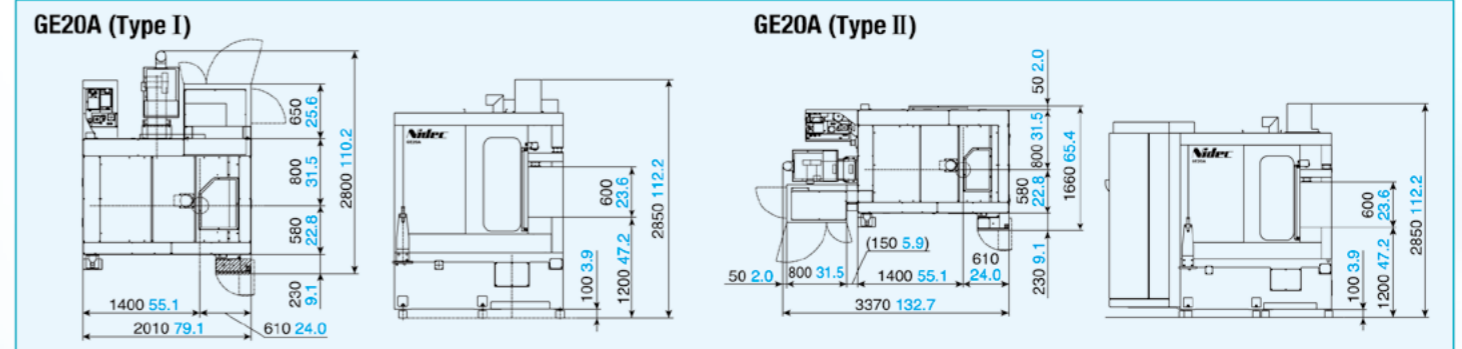
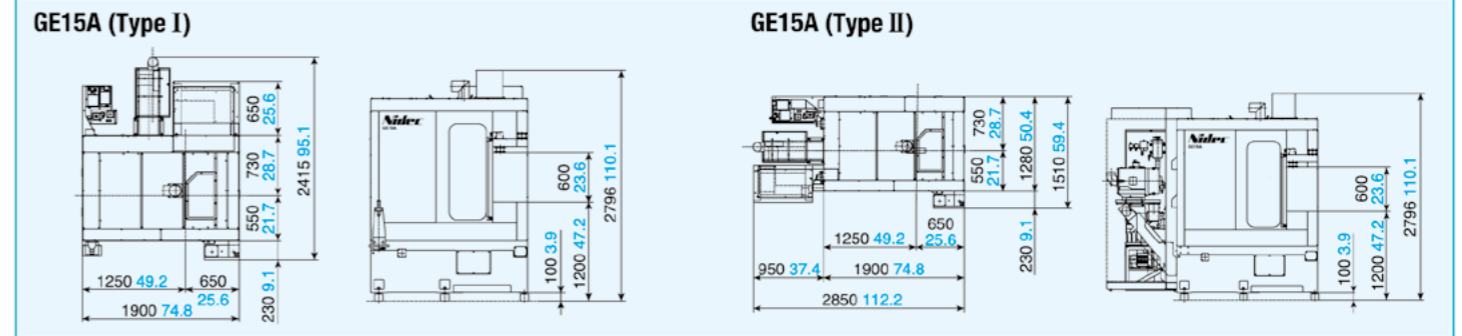
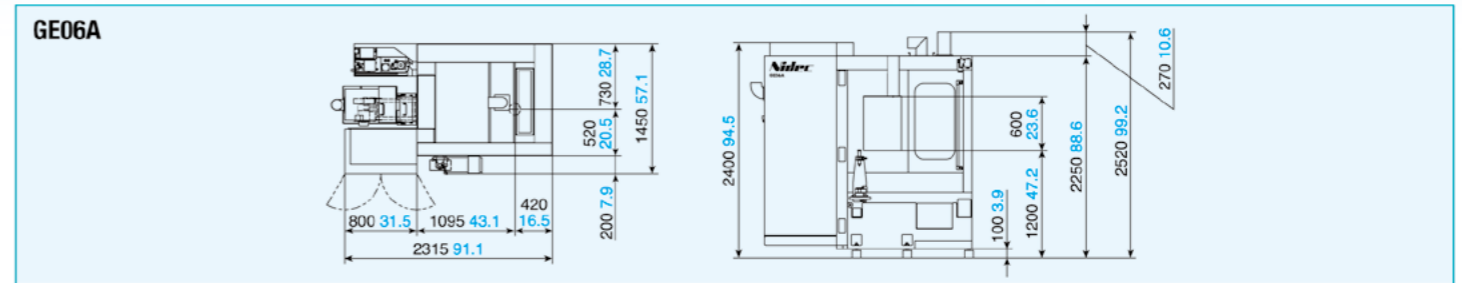
- Chip flood coolant device
- Mist collector
- Coolant gun

## Chamfering station equipment

- Chamfering station (w/ operation panel)
- 4-station ring loader
- Chamfering tools

## Unit dimensions

Unit: mm in





Inquiry

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Machine specifications such as dimensions etc., are fixed using SI units including the metric system.  
In case data are shown in other units in blue, such as inches, pounds and gallons etc they are for reference only and the formal data  
in black supersedes any equivalent data given in blue when fractions caused by conversion become an issue.  
Specifications are subject to change without prior notice.  
The export of this product is subject to Japanese Governmental approval.