

LU EX Series

LU3000EX/ LU4000EX

2-Saddle CNC Lathes



LU EX series

2-Saddle CNC Lathes

LU3000EX / LU4000EX



Max power 2-saddle CNC Lathe for even higher productivity

Huge productivity gains at higher performance levels
Achieve the best production system with our wide-ranging lineup
Wide array of intelligent technologies are powerful support for operator



LU3000EX

[Spec extensions]

LU3000 EX	
L	UT and LT: turning
M	UT: milling, LT: turning
MY	UT: milling with Y-axis functions, LT: turning
2M	UT and LT: milling
2MY	UT: milling with Y-axis functions, LT: milling
W	UT and LT: turning, sub-spindle
MW	UT: milling, LT: turning, sub-spindle

LU4000 EX	
L	UT and LT: turning
M	UT: milling, LT: turning
MY	UT: milling with Y-axis functions, LT: turning

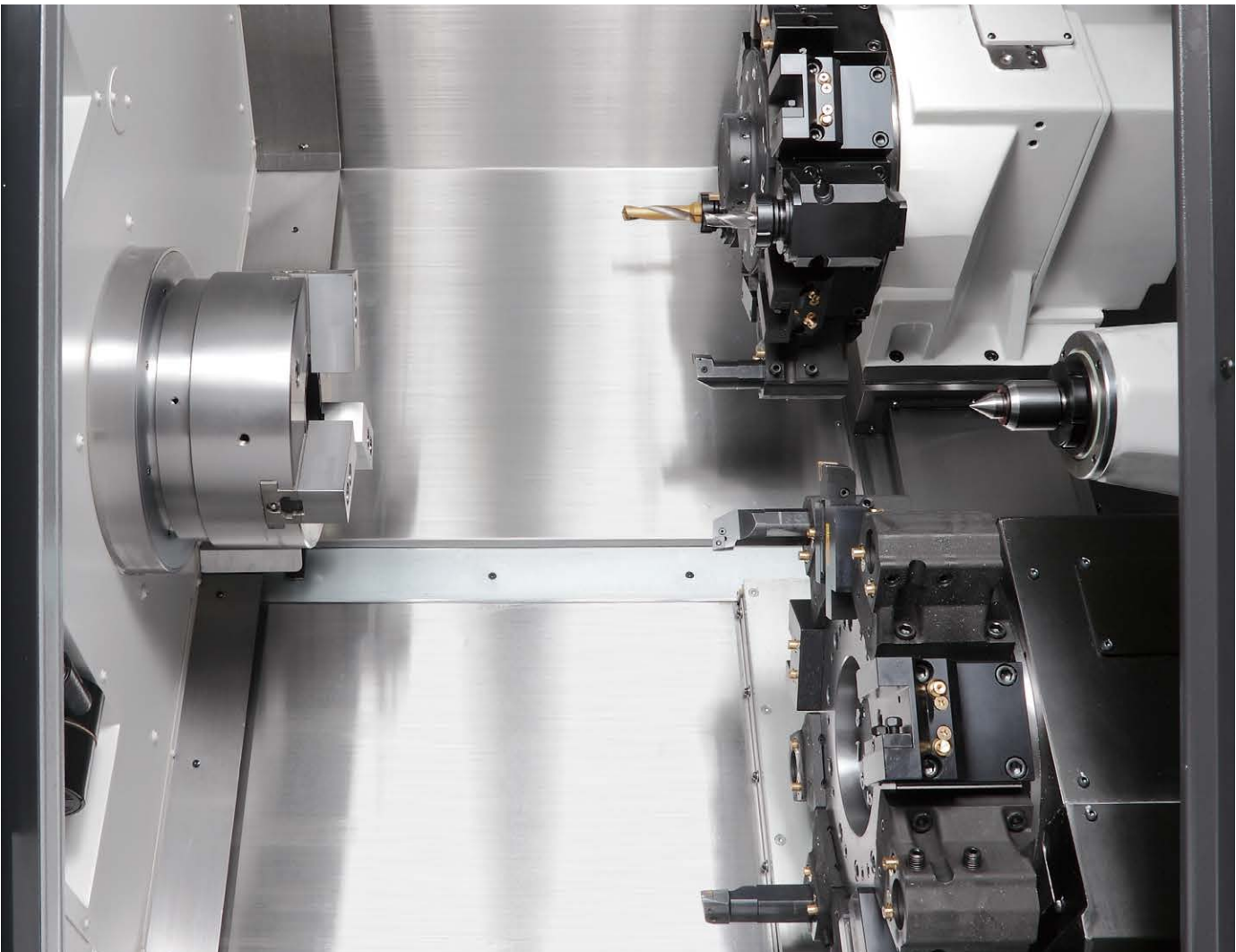
* UT: Upper turret, LT: Lower turret



LU4000EX

Photographs and images used in this brochure may include optional equipment.

Max power 2-saddle CNC Lathe for even higher productivity



Shaft shapes are machined with high efficiency

Part name: Spindle
Size: $\varnothing 145 \times 465$ mm



Part name: Drive shaft
Size: $\varnothing 100 \times 500$ mm



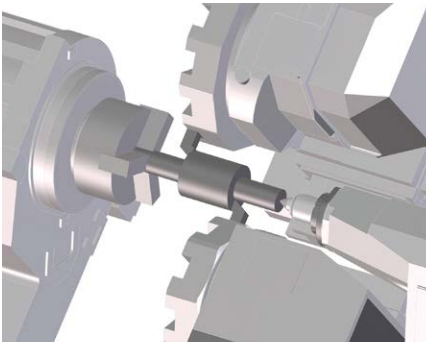
Part name: Worm screw
Size: $\varnothing 85 \times 500$ mm



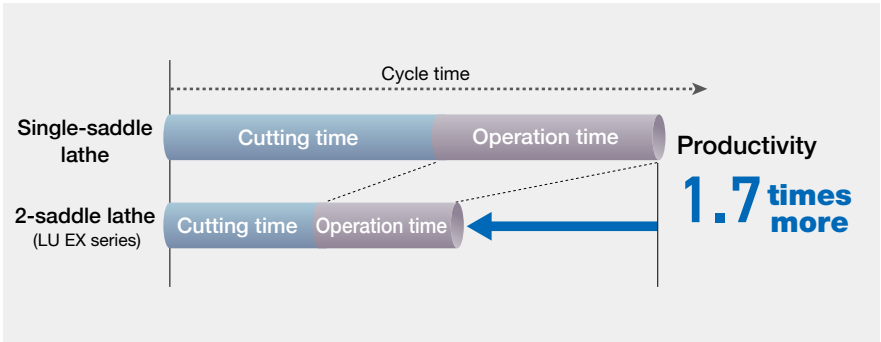
Many types of machining with the flexibility of 4 axes

Huge reduction in machining time with simultaneous 4-axis machining on upper and lower turrets

In other words, simultaneous OD/OD or OD/ID operations drastically reduce cycle times. In addition with optional shaft cradle or a steadyrest—the possibilities are endless.

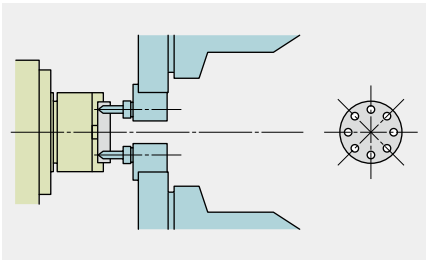
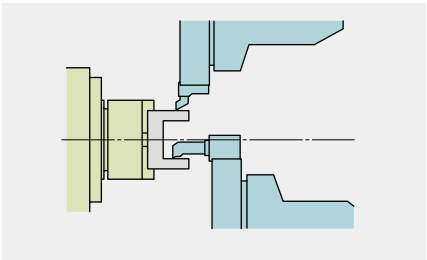
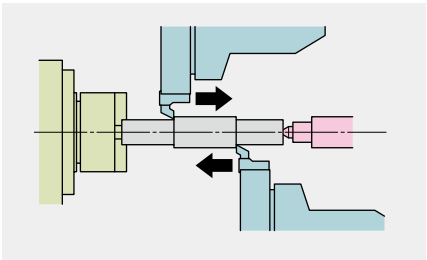


High-efficiency machining from simultaneous 4-axis turning



Reduced machining time due to simultaneous machining with the upper and lower turrets

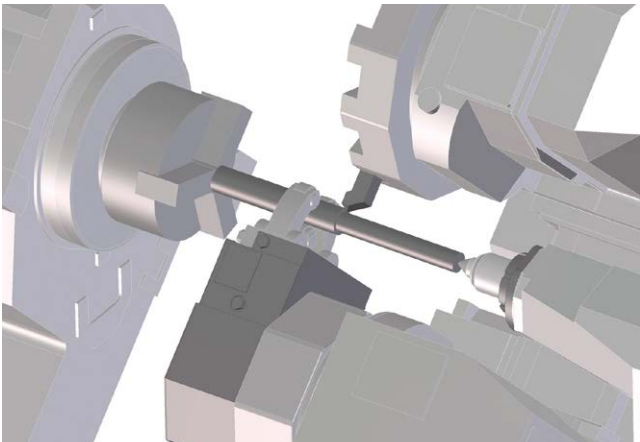
- Simultaneous OD machining
- Simultaneous OD/ID machining
- Simultaneous milling with the upper and lower turrets



LU3000 EX 2M/2MY specs only

Turning long shafts with a steadyrest—without chatter

A steadyrest (option) mounted on the lower turret does provide steady workpiece support. With an NC programmed upper turret and simultaneous control, long shafts will always be supported near the cutting point.



Prevents chatter with synchronized control of the upper turret and a steadyrest

Reducing operator burden by auto part load/unload

A shaft cradle (option) is attached to the lower turret to automate part load/unload and reduce the workload of the operator.

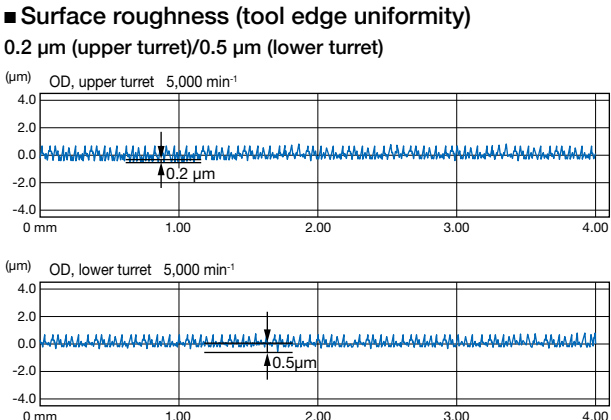
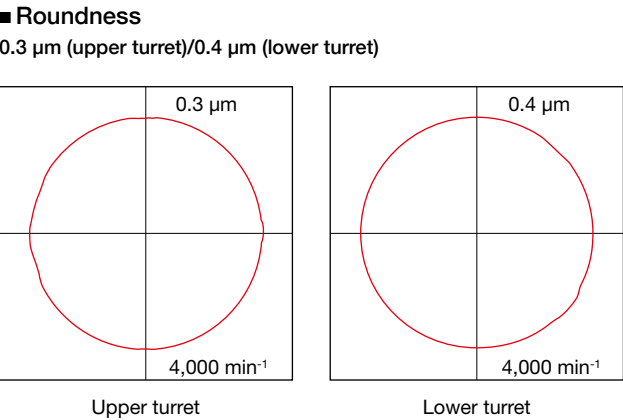


Shaft cradle reduces operator burden

Highly accurate machining of shafts



Example of high accuracy machining (LU3000 EX actual data)



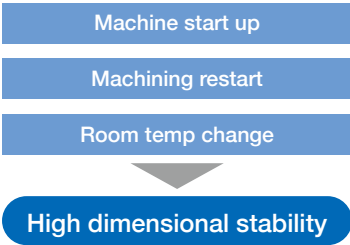
Note: The “actual data” referred to above for this brochure represent examples, and may not be obtained due to differences in specifications, tooling, cutting conditions, and others.

Thermo-Friendly Concept
Manageable Deformation—Accurately Controlled

The Thermo-Friendly Concept is an Okuma Intelligent Technology intended to achieve amazing machining accuracy with unique structural design and thermal deformation control technology. It eliminates the need for cumbersome dimensional compensation and warm-up and demonstrates outstanding dimensional stability, even when operation continues over many hours or when the room temperature changes.

■ Fewer tool compensation checks

Compensation due to ambient temperature changes and temporary midday or evening machine stops is performed fewer times thanks to outstanding dimensional stability. This leads to better machine utilization, improving efficiency especially for mass-production machining.



Simple machine construction

Machine designs that equalize ambient temperatures

■ Slanted-box bed

With the main units of the headstock and turret located on the box bed, the groundbreaking configuration of the equipment combines both thermal stability and high rigidity.

Powerful machining and rapid movements mean shorter cycle times

High-performance simultaneous (heavy) turning with power to spare (actual data)

LU3000 EX		LU4000 EX	
■ Turning	■ Milling	■ Turning	■ Milling
Heavy-duty 4.4 mm ²	Chip volume 240 cm ³ /min	Heavy-duty 6.0 mm ²	Chip volume 240 cm ³ /min
OD (S45C)	7-Flute, carbide, ø20 mm end mill (S45C)	OD (S45C)	7-Flute, carbide, ø20 mm end mill (S45C)
Cutting speed: 150 m/min	Cutting speed: 200 m/min	Cutting speed: 96 m/min	Cutting speed: 200 m/min
Cutting depth: 8 mm	Cutting width: 3.0 mm	Cutting depth: 10 mm	Cutting width: 3.0 mm
Cutting feed: 0.55 mm/rev	Cutting depth: 18 mm	Cutting feed: 0.6 mm/rev	Cutting depth: 18 mm
ø63 carbide insert drill (S45C)	Feed rate: 1.4 mm/rev	ø63 carbide insert drill (S45C)	Feed rate: 1.4 mm/rev
Cutting speed: 150 m/min	ø20 carbide drill (S45C)	Cutting speed: 150 m/min	ø28 carbide drill (S45C)
Cutting feed: 0.23 mm/rev	Cutting speed: 135 m/min	Cutting feed: 0.23 mm/rev	Cutting speed: 90 m/min
	Feed rate: 0.25 mm/rev		Feed rate: 0.20 mm/rev
	Tapping (S45C)		Tapping (S45C)
	M20 P2.5		M24 P3

Note: The “actual data” referred to above for this brochure represent examples, and may not be obtained due to differences in specifications, tooling, cutting conditions, and others.

Quick moving components shorten non-cutting times

LU3000 EX		LU4000 EX	
■ Rapid feedrates	■ Turret indexing time	■ Rapid feedrates	■ Turret indexing time
X-axis 25 m/min	0.1 sec/index	X-axis 25 m/min	0.2 sec/index
Z-axis 30 m/min		Z-axis 30 m/min	

High-rigidity hydraulic quill tailstock

Smooth, easy tailstock positioning by using upper saddle. (clamping/unclamping, coupling of tailstock itself is done manually)

LU3000 EX		LU4000 EX	
Dead sleeve	MT No. 5	Dead sleeve	MT No. 5
(option: Built-in)	MT No. 4)	(option: Built-in)	MT No. 5)
Quill dia:	ø90 mm	Quill dia:	ø120 mm
Quill travel:	120 mm	Quill travel:	150 mm
Maximum tailstock thrust:	4,900 N	Maximum tailstock thrust:	6,860 N



Achieve the best production system with our wide-ranging lineup

Complete multitasking with Y-axis functions
One chuck machining even with irregularly shaped workpieces

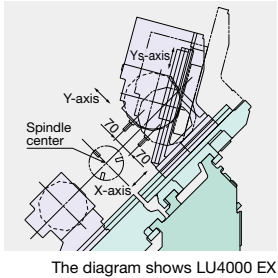
A variety of milling operations can be accommodated with high-accuracy, wide-range Y-axis control using a double slide system. Achieves complete multitasking with a single chucking. (Y-axis control is applied to the upper turret only.)

LU3000 EX (MY/2MY specs)	
Y-axis travel	120 mm (+70 to -50)
Y-axis rapid traverse	12.5 m/min

LU4000 EX (MY specs)	
Y-axis travel	140 mm (+70 to -70)
Y-axis rapid traverse	12.5 m/min

M function and Y-axis functions
enable process-intensive machining

Part name:	Shaft
Size:	ø50 × 300 mm
Material:	S45C
(Keyway width is controlled via Y-axis)	

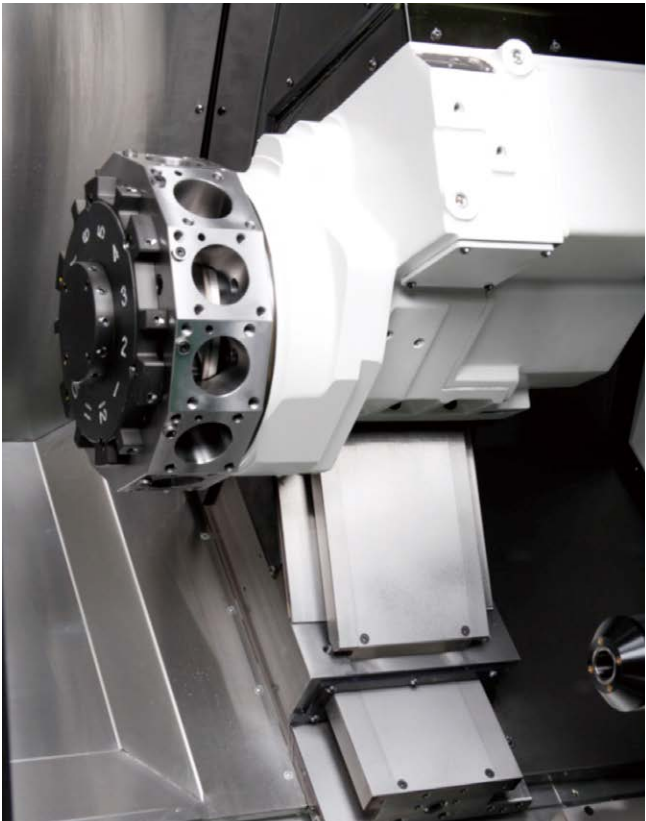
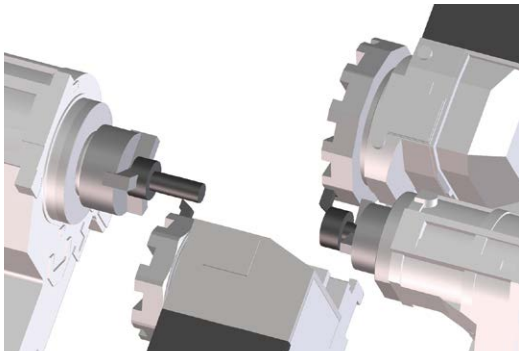


The diagram shows LU4000 EX



Sub-spindle for integrated front/back
(1 machine) operations
(LU3000 EX W/MW specs)

With a sub-spindle, front and back machining can be done on a single machine. Since machining of both ends can be completed on one machine, storage space for in-process inventory and post-process machines are unnecessary.



Lower turret multitasking specifications eliminate milling tool shortages
(LU3000 EX 2M/2MY specs)

A multitasking turret (V8) is used for the lower turret, enabling integrated machining of complex-shaped parts that require many milling tools. The lineup also includes 2MY specifications with Y-axis functions.

Automated system that meets various needs

Labor shortages can be solved with a wide variety of automated systems

Stand-alone articulated robots option

This stand-alone articulated robot meets the needs of customers who want to automate work, even high-mix, low-volume production, or want to automate measurement, cleaning, and other tasks in addition to workpiece loading and unloading. With high versatility, the robot is widely applicable to odd-shaped or high-mix workpieces. The layout of peripheral devices can be set freely, and it is possible to transfer workpieces between different types of machines such as a lathe and a machining center. An automated cell with a high degree of freedom can be configured according to the customer's production operation.

Loader option

This workpiece transport and load/unload system is suitable for medium-scale to mass production of workpieces with similar shapes. The loader options include a stand-alone gantry loader with stand-alone legs that support the beam, or an on-machine loader mounted on the upper section of the machine. Because the space above the machine can be used effectively, the need for a large space is eliminated, and the workflow in front of the machine is also secured. The most suitable line configurations are proposed, ranging from a cell system with one machine and one loader to a multi-process line connecting multiple devices, as well as combinations of workpiece conveyors and measuring, flip, cleaning, and other peripheral devices. The system realizes long periods of reliable and stable automatic operation.

LU3000 EX

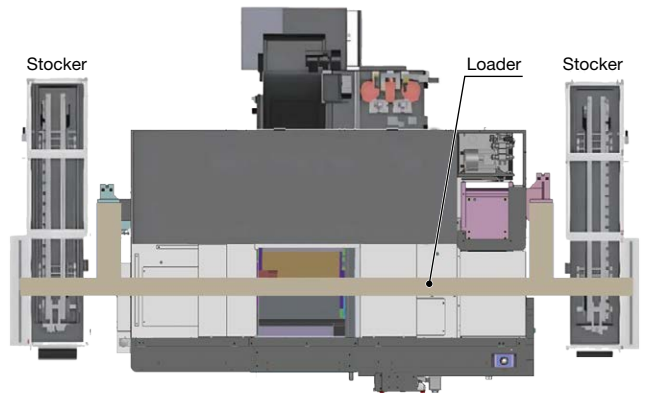
Main loader specifications		
OGL5-O II on-machine loader		
Maximum workpiece size	Shaft	ø80 × 150 mm
	Flange	ø150 × 100 mm
Portable mass	3 kg × 2	
OGL10-P stand-alone gantry loader		
Maximum workpiece size	Shaft	ø80 × 400 mm
	Flange	ø250 × 150 mm
Portable mass	5 kg × 2	

Bar feeder option

An automated system for bar materials, covering operations from supply to process completion, can be constructed using a bar feeder, parts catcher, and output conveyor.



The image shows LU4000 EX



The diagram shows LU4000 EX

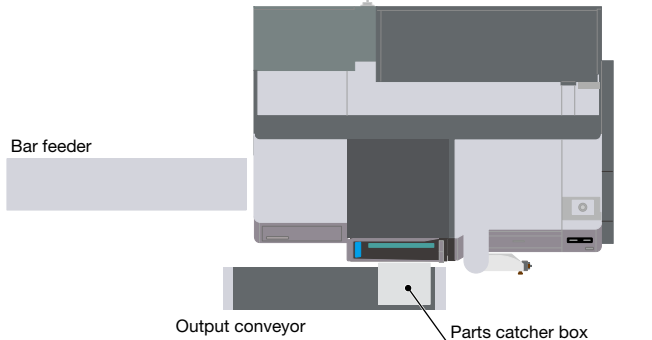
LU4000 EX

■ Main loader specifications

OGL10-O on-machine loader		
Maximum workpiece size	Shaft	ø80 × 250 mm
	Flange	ø250 × 150 mm
Portable mass	5 kg × 2	

OGL30-P stand-alone gantry loader		
Maximum workpiece size	Shaft	ø80 × 400 mm
	Flange	ø170 × 150 mm
Portable mass	15 kg × 2	

Note: There may be limitations for the workpiece size or portable mass. Please use the data as a guide. Many other specifications are available. Please consult your Okuma representative.



Reducing operator burden with comfortable machine operation

User-friendly operation panel and machine design



Swivel operation panel

The 15-inch operation panel can be swiveled to match the work position, ensuring comfortable setup in the machining chamber.

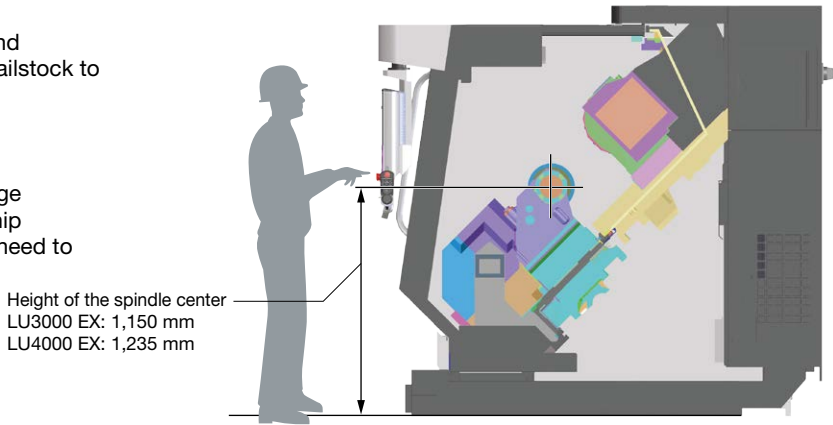


45° slanted bed

The 45° slanted bed structure has good workability and visibility of the upper and lower turrets, spindle, and tailstock to eliminate the burden on the operator.

Excellent chip discharge

A chip conveyor (option) is placed at the chip discharge immediately beneath the chuck to achieve efficient chip discharge and maintain high productivity without the need to stop the machine.



The diagram shows LU4000 EX

Reducing operator burden with advanced technology



AI Machine Diagnosis Function

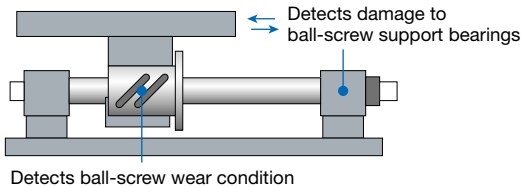
Machine tool diagnostics technology with artificial intelligence (AI)

option

Machine tool self-diagnosis technology “AI machine diagnosis function” can detect signs of failure. Machine downtime can be reduced by preventing machine shutdown. The OSP-AI installed in the CNC identifies the presence or absence of any abnormality in the feed axis and the location of the abnormality and detects damage to the ball-screw support bearing and wear of the ball-screw*.

* With AbsoScale detection specs, ball-screw wear detection is possible.
Notes: AI diagnostic models are already installed, and diagnoses can be performed by the machine itself.
AI diagnostic models can be updated to the newest version through a computer connected to the internet.

Execute diagnostic tests from the screen guidelines



Sludgeless Tank

Reducing waste liquid by suppressing coolant deterioration

option

Coolant maintenance work is significantly reduced
The environmental impact of coolant disposal is also minimized

The Sludgeless Tank continuously circulates cutting fluid within the tank, efficiently collecting sludge to prevent accumulation and significantly reducing issues and maintenance work.
This significantly reduces the frequency of tank cleaning, enabling stable operation over long periods and improving productivity.
It also extends the cutting fluid’s lifespan, helps prevent spoilage and odors, and creates a better working environment.
Furthermore, reducing the frequency of cutting fluid changes decreases industrial waste and lessens the environmental impact.

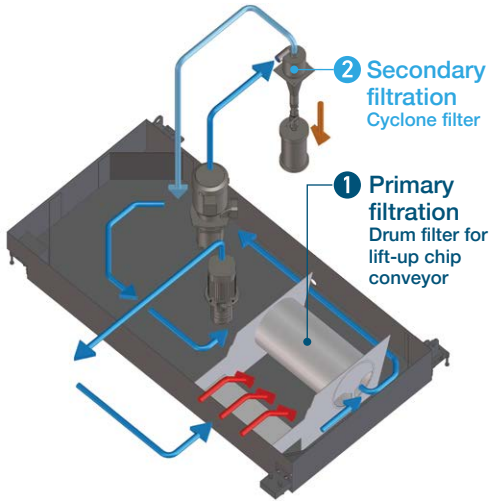
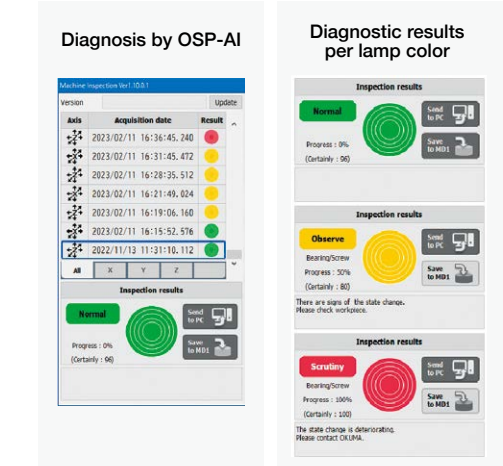
Sludge removal rate

99% (when the material is casting and aluminum)
Notes: After secondary filtration (cyclone filter) permeation
Okuma evaluated removal rate

No tank cleaning for 3 years (okuma equipment actual data)

No coolant replacement for 3 years (okuma equipment actual data)

Note: If the Sludgeless Tank is chosen, it is necessary to select a hinge + scraper chip conveyor with a drum filter.



Tank structures vary by model or specification.





Allowing operators to focus on making parts

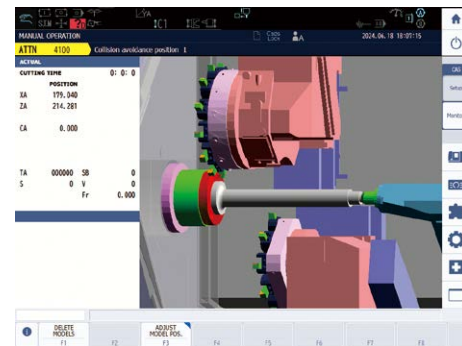
NC controller (OSP) with 3D model data of machine components—workpiece, tool, chuck, fixture, headstock, turret, tailstock—performs real time simulation just ahead of actual machine movements. It checks for interference or collisions and stops the machine movement immediately before collision. Machinists (novice or pro) will benefit from reduced setup and trial cycle times, and the confidence to focus on making parts.

Collision prevention during automatic operation

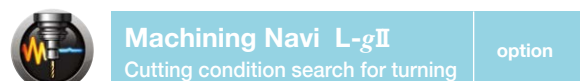
NC program is read in advance and axial travel commands are checked for interference with consideration of zero point and tool compensation values set in NC. Axial travel movement is stopped temporarily before collision occurs.

Collision avoidance in manual operation

Especially useful for machine operators setting up a job, collision avoidance in manual mode provides collision-free confidence and faster machining preparations.

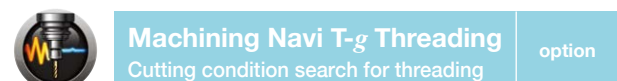
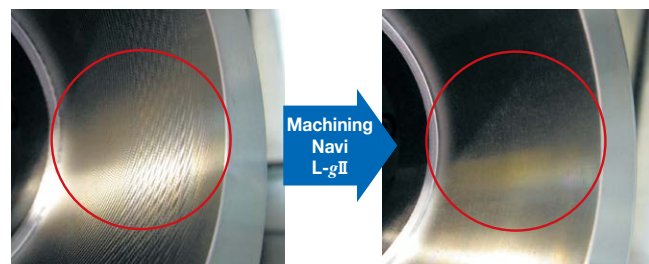
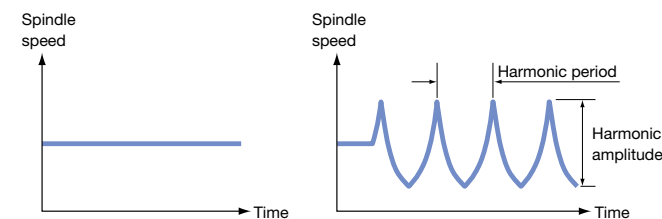


Virtual machine (interference check)

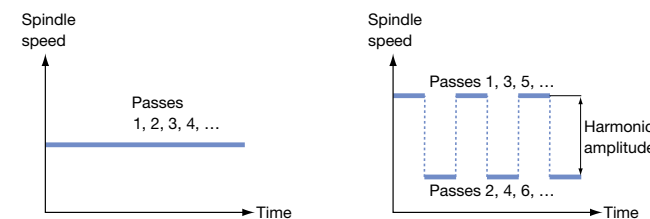


(Harmonic Spindle Speed Control)

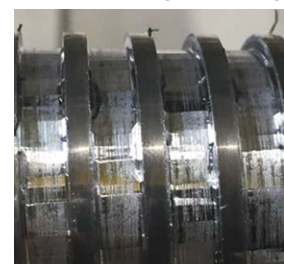
Varying the spindle speed in accordance with the best amplitude and period makes it possible to suppress chatter during turning operations. Tool life can be extended and cycle times reduced by using the optimum cutting conditions, producing significant effects in deep-hole boring bar and grooving applications.



When chattering occurred during threading, it was common to lower the cutting conditions or use special tools that resist chattering. Okuma's Machining Navi T-g (threading) breaks the vibration periodicity with a different spindle speed for each threading pass and suppresses chatter growth. The machining capacity of commonly used tools can be maximized for stable machining.

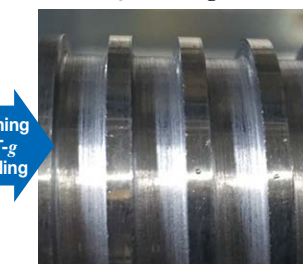


Chatter during threading



Chatter marks

Machining Navi T-g Threading



Smooth surface

It contributes to providing both high precision and high productivity while being eco-friendly

Achieving high accuracy and high productivity while achieving decarbonization and energy saving



Okuma has worked to reduce energy consumption in order to achieve carbon neutrality at the three factories in Japan which are our main production bases.

We have realized high productivity through automation and process-intensive machining, in addition to high-accuracy machining, and we then introduced the use of green energy to transform the three domestic factories into carbon-neutral factories.

“Green-Smart Machines” is our definition of Okuma's intelligent machine tools, which autonomously achieve stable dimensional accuracy and reduced energy consumption, to support environmentally friendly production. Our policy is to deploy “Green-Smart Machines” fully, to help achieve a carbon-free society.

Starting with products manufactured at those carbon-neutral factories and distributing them globally, we will partner with our customers to address the social challenges faced by the manufacturing industry.

Green-Smart Machines are **environmentally friendly**

products that autonomously achieve stable dimensional accuracies and reduced energy consumption.



Thermo-Friendly Concept

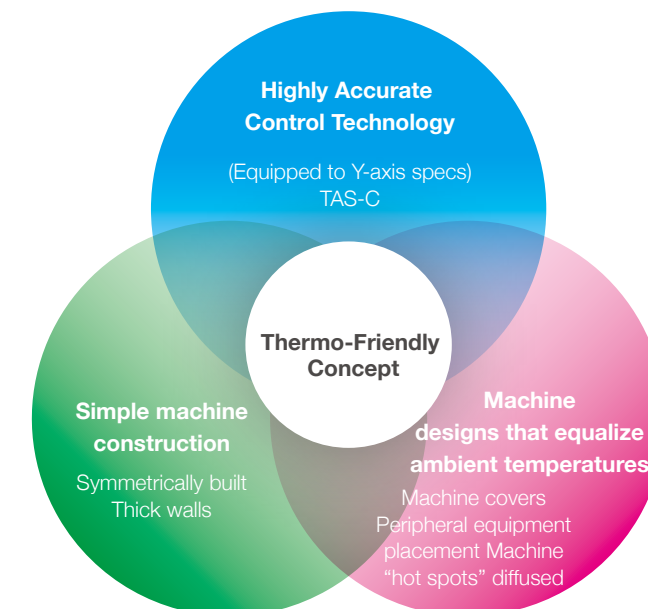
The Okuma Intelligent Technology that enables machines to autonomously maintain high accuracy stability

Reduction of warm-ups and dimensional compensation

Reduce the time needed for daily warm-ups and dimensional compensation to adjust to ambient temperature changes.

Reduction of power used for air conditioning

Maintain high stability of dimensional accuracy even if the air conditioning temperature range is expanded.



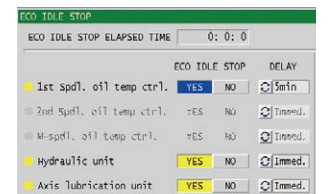
The unique concept of accepting temperature changes achieves consistent high accuracy without special coolers or excessive air conditioning.



A system for an energy-saving society

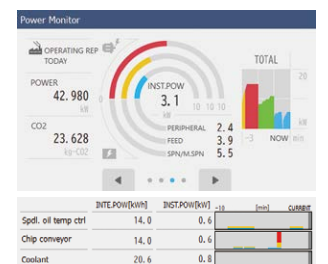
ECO Idling Stop

Auxiliary equipment consume a substantial portion of the power used in a factory. This function enables each of them to be turned off when not needed to reduce power consumption. In addition to when automatic operation is suspended, it is now possible to stop idling during manual operation. Power consumption and carbon dioxide emissions are reduced without conscious effort by the operator.



ECO Power Monitor

Power is shown individually for spindle, feed axes, and auxiliaries on the OSP operation screen. In addition to regenerative power, the energy-saving benefits from auxiliary equipment stopped with ECO Idling Stop can be confirmed on the spot.



ECO Operation

By using only the required peripherals (chip conveyor, mist collector), energy-saving operations are possible.

ECO PARAMETER	ECO IDLE STOP (1/4)	ECO OPERATION
ECO IDLE STOP ELAPSED TIME	000:00:00	REMAINING TIME UNTIL ECO IDLE STOP READY 12:46
Chip conveyor interval control	OFF	UNIT
Chip conveyor interval:active time	100	[min]
Chip conveyor interval:suspended time	200	[min]

Machine Specifications

Machine Specifications			LU3000 EX (L)			LU3000 EX (M) <2M>		
			2ST	2SC × 600	2SC × 1000	2ST	2SC × 600	2SC × 1000
Capacity	Swing over bed	mm (in)	ø580 (ø22.83)					
	Max turning dia, upper/lower	mm (in)	U: ø410/L: ø250 (U: ø16.14/L: ø9.84)			U: ø340/L: ø220 <ø180> (U: ø13.39/L: ø8.66 <ø7.09>)		
	DBC (DBN)*1	mm (in)	–	816 (32.13)	1,216 (47.87)	–	816 (32.13)	1,216 (47.87)
	Max work length	mm (in)	350 (13.78)	600 (23.62)	1,000 (39.37)	350 (13.78)	600 (23.62)	1,000 (39.37)
Travels	X-axis	mm (in)	U: 260/L: 160 (U: 10.24/L: 6.30)					
	Z-axis	mm (in)	U: 685/L: 615 (U: 26.97/L: 24.21)		U: 1,085/L: 1,015 (U: 42.72/L: 39.96)	U: 685/L: 615 <L: 600> (U: 26.97/L: 24.21 <L: 23.62>)		U: 1,085/ L: 1,015 <L: 1,000> (U: 42.72/ L: 39.96 <L: 39.37>)
	Y-axis	mm (in)	–					
	W-axis	mm (in)	–					
	C-axis	deg	–			360 (0.001)		
	Spindle	Speed	min ⁻¹	50 to 5,000 [50 to 4,200] [30 to 3,000]				
Speed ranges			2 auto ranges (2 range motor coil switching)					
Spindle nose			JIS A2-6 {JIS A2-8} [JIS A2-11]					
Bore dia		mm (in)	ø80 {ø91} [ø112] (ø3.15 {ø3.58} [ø4.41])					
Front bearing dia		mm (in)	ø120 {ø140} [ø160] (ø4.72 [ø5.51] [ø6.30])					
Turret	Type, upper/lower		U: V12/L: V8			U: Multitasking V12/L: V8 <L: Multitasking V8>		
	No. of tools, upper/lower		U: 12/L: 8			U: 12 (L/M)/L: 8 <L: 8 (L/M)>		
	OD tool shank height	mm (in)	□25 (1 × 1)					
	ID tool shank dia	mm (in)	ø40 (ø1-1/2)					
	Turret index time	sec/1 index	0.1					
Milling tool spindle	Spindle speed	min ⁻¹	–			45 to 6,000		
Feed rate	Rapid traverse	m/min (ipm)	X: 25, Z: 30 (X: 984, Z: 1,181)			X: 25, Z: 30 (X: 984, Z: 1,181), C: 200min ⁻¹		
Tailstock	Quill dia	mm (in)	–	ø90 (ø3.54)		–	ø90 (ø3.54)	
	Quill bore taper		–	MT No. 5 (revolving center)		–	MT No. 5 (revolving center)	
	Quill travel	mm (in)	–	120 (4.72)		–	120 (4.72)	
Motor	Spindle	kW (hp)	22/15 (30/20) (30 min/cont) {22/15 (30/20) (30 min/cont)} [22/15 (30/20) (30 min/cont)]					
	Milling tool	kW (hp)	–			7.1/4.1 (9.5/5.5) (25 min/cont) <L: 5.5/3.7 (7.5/5) (2 min/cont)>		
	Axis drive	kW (hp)	XA: 2.8 (3.7), XB: 2.2 (3), ZA: 3.5 (4.7), ZB: 3.5 (4.7)					
	Coolant pump (50 Hz/60 Hz)	kW (hp)	0.55/0.75 (3/4 /1)					
Machine size	Height	mm (in)	2,080*2 (81.89*2)		2,226 (87.64)	2,080*2 (81.89*2)		2,226 (87.64)
	Floor space Width × depth (including tank)	mm (in)	2,950 × 2,257 {2,995 × 2,257} (116.14 × 88.86 {117.91 × 88.86})		3,980 × 2,769 (156.69 × 109.02)	2,950 × 2,257 {2,995 × 2,257} (116.14 × 88.86 {117.91 × 88.86})		3,980 × 2,769 (156.69 × 109.02)
	Rear discharge	mm (in)	2,850 × 2,558 {2,895 × 2,558} (112.20 × 100.71 {113.98 × 100.71})		–	2,850 × 2,558 {2,895 × 2,558} (112.20 × 100.71 {113.98 × 100.71})		–
	Mass (w/ CNC)	kg (lb)	6,400 (14,080)	6,700 (14,740)	8,200 (18,040)	6,500 (14,300)	6,800 (14,960)	8,300 (18,260)
CNC			OSP-P500L					

LU3000 EX (MY) <2MY>			LU3000 EX (W)		LU3000 EX (MW)	
2ST	2SC × 550	2SC × 950	2SW × 600	2SW × 1000	2SW × 600	2SW × 1000
ø580 (ø22.83)						
U: ø340/L: ø220 <ø180> (U: ø13.39/L: ø8.66 <ø7.09>)			U: ø410/L: ø250 (U: ø16.14/L: ø9.84)		U: ø340/L: ø220 (U: ø13.39/L: ø8.66)	
–	816 (32.13)	1,216 (47.87)	895 (35.24)	1,295 (50.98)	895 (35.24)	1,295 (50.98)
350 (13.78)	550 (21.65)	950 (37.40)	–			
U: 260/L: 160 (U: 10.24/L: 6.30)						
U: 630/L: 615 <L: 600> (U: 24.80/L: 24.21 <L: 23.62>)		U: 1,030/ L: 1,015 <L: 1,000> (U: 40.55/ L: 39.96 <L: 39.37>)	U: 685/L: 610 (U: 26.97/L: 24.02)	U: 1,085/L: 1,010 (U: 42.72/L: 39.76)	U: 576/L: 610 (U: 22.68/L: 24.02)	U: 976/L: 1,010 (U: 38.43/L: 39.76)
U: 120 (+70 to -50) (U: 4.72 (+2.76 to -1.97))			–			
–			610 (24.02)	1,010 (39.76)	610 (24.02)	1,010 (39.76)
360 (0.001)			–		360 (0.001)	
50 to 5,000 {50 to 4,200} [30 to 3,000]			Main: 50 to 5,000 {50 to 4,200} [30 to 3,000], Sub: 50 to 6,000			
2 auto ranges (2 range motor coil switching)						
JIS A2-6 {JIS A2-8} [JIS A2-11]			Main: JIS A2-6 {JIS A2-8} [JIS A2-11], Sub: ø140 flat			
ø80 {ø91} [ø112] (ø3.15 {ø3.58} [ø4.41])			Main: ø80 {ø91} [ø112], (ø3.15 {ø3.58} [ø4.41]), Sub: ø43 (1.69)			
ø120 {ø140} [ø160] (ø4.72 {ø5.51} [ø6.30])			Main: ø120 {ø140} [ø160] (ø4.72 {ø5.51} [ø6.30]), Sub: ø80 (3.15)			
U: Multitasking V12/L: V8 <L: Multitasking V8>			U: V12/L: V8		U: Multitasking V12/L: V8	
U: 12 (L/M)/L: 8 <L: 8 (L/M)>			U: 12/L: 8		U: 12 (L/M)/L: 8	
□25 (1 × 1)						
ø40 (ø1-1/2)						
0.1						
45 to 6,000			–		45 to 6,000	
X: 25, Z: 30, Y: 12.5 (X: 984, Z: 1,181, Y: 492), C: 200min ⁻¹			X: 25, Z: 30, W: 15 (X: 984, Z: 1,181, W: 591)		X: 25, Z: 30, W: 15 (X: 984, Z: 1,181, W: 591), C: 200min ⁻¹	
–	ø90 (ø3.54)		–			
–	MT No. 5 (revolving center)		–			
–	120 (4.72)		–			
22/15 (30/20) (30 min/cont) {22/15 (30/20) (30 min/cont)} [22/15 (30/20) (30 min/cont)]			Main: 22/15 (30/20) (30 min/cont) {22/15 (30/20) (30 min/cont)} [22/15 (30/20) (30 min/cont)], Sub: 7.5/5.5 (10/7.5) (20 min/cont)			
7.1/4.1 (9.5/5.5) (25 min/cont) <L: 5.5/3.7 (7.5/5) (2 min/cont)>			–		7.1/4.1 (9.5/5.5) (25 min/cont)	
XA: 2.8 (3.7), XB: 2.2 (3), ZA: 4.6 (6.1) , ZB: 3.5 (4.7), Ys: 3.5 (4.7)			XA: 2.8 (3.7), XB: 2.2 (3), ZA: 3.5 (4.7), ZB: 3.5 (4.7), W: 3.5 (4.7)			
0.55/0.75 (3/4 /1)						
2,509*2 (98.78*2)		2,673 (105.24)	2,080*2 (81.89*2)	2,226 (87.64)	2,080*2 (81.89*2)	2,226 (87.64)
2,950 × 2,257 {2,995 × 2,257} (116.14 × 88.86 {117.91 × 88.86})		3,980 × 2,729 (156.69 × 107.44)	3,750 × 2,257 (147.64 × 88.86)	4,040 × 2,769 (159.06 × 109.02)	3,750 × 2,257 (147.64 × 88.86)	4,040 × 2,769 (159.06 × 109.02)
2,850 × 2,558 {2,895 × 2,558} (112.20 × 100.71 {113.98 × 100.71})		–	3,650 × 2,558 (143.70 × 100.71)	–	3,650 × 2,558 (143.70 × 100.71)	–
7,000 (15,400)	7,300 (16,060)	8,800 (19,360)	7,100 (15,620)	8,600 (18,920)	7,200 (15,840)	8,700 (19,140)
OSP-P500L						

{ } : Big-Bore spindle [] : Super Big-Bore spindle
*1. DBC: Distance between centers, DBN: Distance between noses *2. Raised machine height of 45 mm is standard for rear chip discharge.

Machine Specifications

Machine Specifications				LU4000 EX (L)				
				2ST	2SC × 650	2SC × 1250	2SC × 2000	2SC × 3000
Capacity	Swing over bed	mm (in)	ø695 (ø27.36)					
	Max turning dia, upper/lower	mm (in)	U: ø480/L: ø310 (U: ø18.90/L: ø12.20)					
	DBC*1	mm (in)	–	909 (35.79)	1,509 (59.41)	2,309 (90.91)	3,309 (130.28)	
	Max work length	mm (in)	400 (15.75)	650 (25.59)	1,250 (49.21)	2,080 (81.89)	3,080 (121.26)	
Travels	X-axis	mm (in)	U: 300/L: 195 (U: 11.81/L: 7.68)					
	Z-axis	mm (in)	U: 740/L: 700 (U: 29.13/L: 27.56)		U: 1,340/ L: 1,300 (U: 52.76/ L: 51.18)	U: 2,140/L: 2,100 (U: 84.25/L: 82.68)	U: 3,140/L: 3,100 (U: 123.62/L: 122.05)	
	Y-axis	mm (in)	–					
	C-axis	deg	–					
Spindle	Speed	min ⁻¹	42 to 4,200 {30 to 3,000}					
	Speed ranges		2 auto ranges (2 range motor coil switching)					
	Spindle nose		JIS A2-8 {JIS A2-11}					
	Bore dia	mm (in)	ø91 {ø112} (ø3.58 {ø4.41})					
	Front bearing dia	mm (in)	ø140 {ø160} (ø5.51 {ø6.30})					
Turret	Type, upper/lower		U: V12/L: V10					
	No. of tools, upper/lower		U: 12/L: 10					
	OD tool shank height	mm (in)	□25 (1 × 1)					
	ID tool shank dia	mm (in)	ø40 (ø1-1/2)					
	Turret index time	sec/1 index	0.2					
Milling tool spindle	Spindle speed	min ⁻¹	–					
Feed rate	Rapid traverse	m/min (ipm)	X: 25, Z: 30 (X: 984, Z: 1,181)					X: 25, Z: 20 (X: 984, Z: 787)
Tailstock	Quill dia	mm (in)	–	ø120 (4.72)				
	Quill bore taper		–	MT No. 5 (revolving center)				
	Quill travel	mm (in)	–	150 (5.91)				
Motor	Spindle	kW (hp)	22/15 (30/20) (30 min/cont) {22/15 (30/20) (30 min/cont)} <32/22 (43/30) (20 min/cont)>					
	Milling tool	kW (hp)	–					
	Axis drive	kW (hp)	XA: 3.5, XB: 3.0, ZA: 4.6, ZB: 4.6 (XA: 4.7, XB: 4.0, ZA: 6.1, ZB: 6.1)					XA: 3.5, XB: 3.0, ZA: 5.2, ZB: 5.2 (XA: 4.7, XB: 4.0, ZA: 6.9, ZB: 6.9)
	Coolant pump (50 Hz/60 Hz)	kW (hp)	0.55/0.75 (3/4 /1)			0.55/0.75 (3/4 /1) × 2		
Machine size	Height	mm (in)	2,200*2 (86.61*2)		2,440 (96.06)		2,309 (90.91)	
	Floor space Width × depth (including tank)	Side discharge	mm (in)	3,570 × 2,420 {3,720 × 2,420} (140.55 × 95.28 {146.46 × 95.28})		4,780 × 2,840 (188.19 × 111.81)	6,480 × 3,032 (255.12 × 119.37)	8,405 × 2,609 (330.91 × 102.72)
		Rear discharge	mm (in)	3,500 × 2,913 {3,650 × 2,913} (137.80 × 114.69 {143.70 × 114.69})		–	–	–
	Mass (w/ CNC)	kg (lb)	9,000 (19,800)	9,600 (21,120)	11,400 (25,080)	14,500 (31,900)	17,500 (38,500)	
CNC			OSP-P500L					

LU4000 EX (M)					LU4000 EX (MY)				
2ST	2SC × 650	2SC × 1250	2SC × 2000	2SC × 3000	2ST	2SC × 650	2SC × 1250	2SC × 2000	2SC × 3000
ø695 (ø27.36)									
U: ø430/L: ø280 (U: ø16.93/L: ø11.02)									
–	909 (35.79)	1,509 (59.41)	2,309 (90.91)	3,309 (130.28)	–	909 (35.79)	1,509 (59.41)	2,309 (90.91)	3,309 (130.28)
400 (15.75)	650 (25.59)	1,250 (49.21)	2,080 (81.89)	3,080 (121.26)	400 (15.75)	650 (25.59)	1,250 (49.21)	2,080 (81.89)	3,080 (121.26)
U: 300/L: 195 (U: 11.81/L: 7.68)									
U: 740/L: 700 (U: 29.13/L: 27.56)		U: 1,340/ L: 1,300 (U: 52.76/ L: 51.18)	U: 2,140/L: 2,100 (U: 84.25/L: 82.68)	U: 3,140/L: 3,100 (U: 123.62/L: 122.05)	U: 740/L: 700 (U: 29.13/L: 27.56)		U: 1,340/ L: 1,300 (U: 52.76/ L: 51.18)	U: 2,140/L: 2,100 (U: 84.25/L: 82.68)	U: 3,140/L: 3,100 (U: 123.62/L: 122.05)
–					140 <+70 to -70> (5.51<+2.76 to -2.76>)				
360 (0.001)									
42 to 4,200 {30 to 3,000}									
2 auto ranges (2 range motor coil switching)									
JIS A2-8 {JIS A2-11}									
ø91 {ø112} (ø3.58 {ø4.41})									
ø140 {ø160} (ø5.51 {ø6.30})									
U: Multitasking V12/L: V10 (L radial)									
U: 12 (L/M)/L: 10									
□25 (1 × 1)									
ø40 (ø1-1/2)									
0.2									
45 to 6,000									
X: 25, Z: 30 (X: 984, Z: 1,181), C: 200 min ⁻¹				X: 25, Z: 20 (X: 984, Z: 787), C: 200min ⁻¹	X: 25, Z: 30, Y: 12.5 (X: 984, Z: 1,181, Y: 492), C: 200 min ⁻¹			X: 25, Z: 20, Y: 12.5 (X: 984, Z: 787, Y: 492), C:200 min ⁻¹	
–	ø120 (4.72)				–	ø120 (4.72)			
–	MT No. 5 (revolving center)				–	MT No. 5 (revolving center)			
–	150 (5.91)				–	150 (5.91)			
22/15 (30/20) (30 min/cont) {22/15 (30/20) (30 min/cont)} <32/22 (43/30) (20 min/cont)>									
7.5/4.3 (10/5.7) (25 min/cont)									
XA: 3.5, XB: 3.0, ZA: 4.6, ZB: 4.6 (XA: 4.7, XB: 4.0, ZA: 6.1, ZB: 6.1)				XA: 3.5, XB: 3.0, ZA: 5.2, ZB: 5.2 (XA: 4.7, XB: 4.0, ZA: 6.9, ZB: 6.9)	XA: 3.5, XB: 3.0, ZA: 4.6, ZB: 4.6, Ys: 3.5 (XA: 4.7, XB: 4.0, ZA: 6.1, ZB: 6.1, Ys: 4.7)			XA: 3.5, XB: 3.0, ZA: 5.2, ZB: 5.2, Ys: 3.5 (XA: 4.7, XB: 4.0, ZA: 6.9, ZB: 6.9, Ys: 4.7)	
0.55/0.75 (3/4 /1)			0.55/0.75 (3/4 /1) × 2		0.55/0.75 (3/4 /1)			0.55/0.75 (3/4 /1) × 2	
2,200*2 (86.61*2)		2,440 (96.06)		2,309 (90.91)	2,530*2 (99.61*2)		2,770 (109.06)		2,639 (103.90)
3,570 × 2,420 {3,720 × 2,420} (140.55 × 95.28 {146.46 × 95.28})		4,780 × 2,840 (188.19 × 111.81)	6,480 × 3,032 (255.12 × 119.37)	8,405 × 2,609 (330.91 × 102.72)	3,570 × 2,420 {3,720 × 2,420} (140.55 × 95.28 {146.46 × 95.28})		4,880 × 2,810 (192.13 × 110.63)	6,480 × 3,087 (255.12 × 121.54)	8,405 × 2,609 (330.91 × 102.72)
3,500 × 2,913 {3,650 × 2,913} (137.80 × 114.69 {143.70 × 114.69})		–	–	–	3,500 × 2,913 {3,650 × 2,913} (137.80 × 114.69 {143.70 × 114.69})		–	–	–
9,100 (20,020)	9,700 (21,340)	11,500 (25,300)	14,500 (31,900)	17,500 (38,500)	9,600 (21,120)	10,200 (22,440)	12,000 (26,400)	15,000 (33,000)	18,000 (39,600)
OSP-P500L									

{ } : Big-Bore spindle < > : High-Power spindle
*1. DBC: Distance between centers, *2. Raised machine height of 70 mm is standard for rear chip discharge.

Standard Specifications

	LU3000 EX							
	L		M/MY		2M/2MY		W	MW
	2ST	2SC	2ST	2SC	2ST	2SC	2SW	
Headstock	JIS A2-6 50 to 5,000 min ⁻¹ Integral 22/15 kW (30 min/cont)							
Sub-spindle							ø140 flat 50 to 6,000 min ⁻¹ Integral 7.5/5.5 kW (20 min/cont)	
Turret	Upper V12 + lower V8		Upper multitasking V12 + lower V8		Upper multitasking V12 + lower multitasking V8		Upper V12 + lower V8	Upper multitasking V12 + lower V8
Milling tool spindle			Upper 45 to 6,000 min ⁻¹ 7.1/4.1 kW (25 min/cont)				—	Upper 45 to 6,000 min ⁻¹ 7.1/4.1 kW (25 min/cont)
			—		Lower 45 to 6,000 min ⁻¹ 5.5/3.7 kW (2 min/cont)			—
Tailstock	—	MT No. 5 Dead hydraulic Manual tow-along	—	MT No. 5 Dead hydraulic Manual tow-along	—	MT No. 5 Dead hydraulic Manual tow-along	—	
Accessories	Hydraulic unit							
	Coolant system							
	Full-enclosure shielding							
	Work lamp (LED)							
	Chuck foot switch							
	Chuck auto open/close confirmation							
	Lubrication monitor							
	Door interlock							
	Foundation washers, leveling bolts							
	Hand tools							
CNC	OSP-P500L							
	15-inch swivel operation panel							
	Pulse handle							

Chucking Kit

	LU3000 EX (L/M)			
	Chuck	Standard soft jaw A	Standard soft jaw B	Hard jaw
A kit	N-08 solid 8-in	—	—	—
B kit	N-08 solid 8-in	5 sets	3 sets	3-step hard jaw 1 set
C kit	B-208 hollow 8-in, hole dia ø52 mm	5 sets	3 sets	3-step hard jaw 1 set
D kit	B-210 hollow 10-in, hole dia ø70 mm	5 sets	3 sets	2-step hard jaw 1 set
E kit	BR08* hollow 8-in, hole dia ø66 mm	5 sets	3 sets	Convex hard jaw 1 set

* For BR chucks, it is possible to select Tnut-Plus, a special T nut that can improve the mounting accuracy at the time of attaching and detaching the jaw in comparison with the standard T nut.(option)
(Tnut-Plus does not improve workpiece gripping accuracy.)

Standard Specifications

	LU4000 EX			
	L		M/MY	
	2ST	2SC	2ST	2SC
Headstock	JIS A2-8 42 to 4,200 min ⁻¹ Integral 22/15 kW (30 min/cont)			
Turret	Upper V12 + lower V10		Upper multitasking V12 + lower V10	
Milling tool spindle	—		Upper 45 to 6,000 min ⁻¹ 7.5/4.3 kW (25 min/cont)	
Tailstock	—	MT No. 5 Dead hydraulic Manual tow-along	—	MT No. 5 Dead hydraulic Manual tow-along
Accessories	Hydraulic unit			
	Coolant system			
	Full-enclosure shielding			
	Work lamp (LED)			
	Chuck foot switch			
	Chuck auto open/close confirmation			
	Lubrication monitor			
	Door interlock			
	Foundation washers, leveling bolts			
	Hand tools			
CNC	OSP-P500L			
	15-inch swivel operation panel			
	Pulse handle			

Chucking Kit

		LU4000 EX (L/M/MY)		
Chuck		Standard soft jaw A	Standard soft jaw B	Hard jaw
A kit	N-10 solid 10-in	—	—	—
B kit	N-10 solid 10-in	5 sets	3 sets	2-step hard jaw 1 set
C kit	B-210 hollow 10-in, hole dia ø70 mm	5 sets	3 sets	2-step hard jaw 1 set
D kit	B-212 hollow 12-in, hole dia ø80 mm	5 sets	3 sets	2-step hard jaw 1 set
E kit	BR10* hollow 10-in, hole dia ø81 mm	5 sets	3 sets	3-step hard jaw 1 set

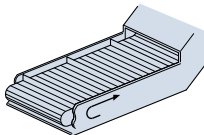
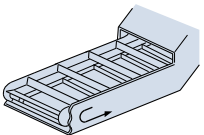
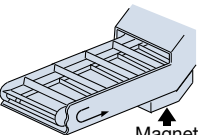
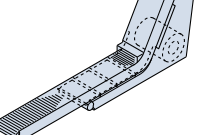
* For BR chucks, it is possible to select Tnut-Plus, a special T nut that can improve the mounting accuracy at the time of attaching and detaching the jaw in comparison with the standard T nut.(option)
(Tnut-Plus does not improve workpiece gripping accuracy.)

Optional Specifications & Accessories

Big-Bore spindle	LU3000 EX
	JIS A2-8 42 to 4,200 min ⁻¹
	Front bearing dia ø140/Spindle bore dia ø91
Super Big-Bore spindle	LU4000 EX
	JIS A2-11 30 to 3,000 min ⁻¹
	Front bearing dia ø160/Spindle bore dia ø112
High-Power spindle	LU4000 EX
32/22 kW (20 min/cont)	
L-VDI turret	
Live quill hydraulic tailstock	LU3000 EX
	MT No. 4 (built-in)
	LU4000 EX
	MT No. 5 (built-in)
Tailstock	Auto tow-along hydraulic tailstock
	Self-traveling hydraulic tailstock (LU3000 EX only)
Chucking kit	Solid/hollow hydraulic power chuck, soft jaws
See details on page 17, 18.	
Tooling kit	Various toolholders
	See details on page 23, 25.
Raised machine height	50 mm, 100 mm, 150 mm
Chip discharge	Chip pan
	Chip conveyor (side discharge/rear discharge)
	Chip bucket
Touch Setter	M (manual), A (auto)
Hydraulic steadyrest	Lower turret mounted, lower cross-slide mounted
Automation	On-machine loader, gantry loader
	Robot, bar feeder
Front cover	Front cover auto open/close (safety tape SW, area sensor)
	Two-hand cycle start button
For chucking	Chuck auto open/close confirm
	Chucking miss detection (LU3000 EX: main, sub)
	Chuck high/low pressure switch with re-clamping (LU3000 EX: main, sub)
For tailstock	LU3000 EX
	Tailstock travel 230 mm
	LU4000 EX
	Tailstock travel 260 mm
	Tailstock quill auto advance/retract with confirm
	Tailstock thrust high/low switch
	Low tailstock thrust
	Tailstock quill position detection
	2-speed tailstock quill
	High tailstock thrust (LU4000 EX only)
	Door open/close tailstock quill advance speed switch

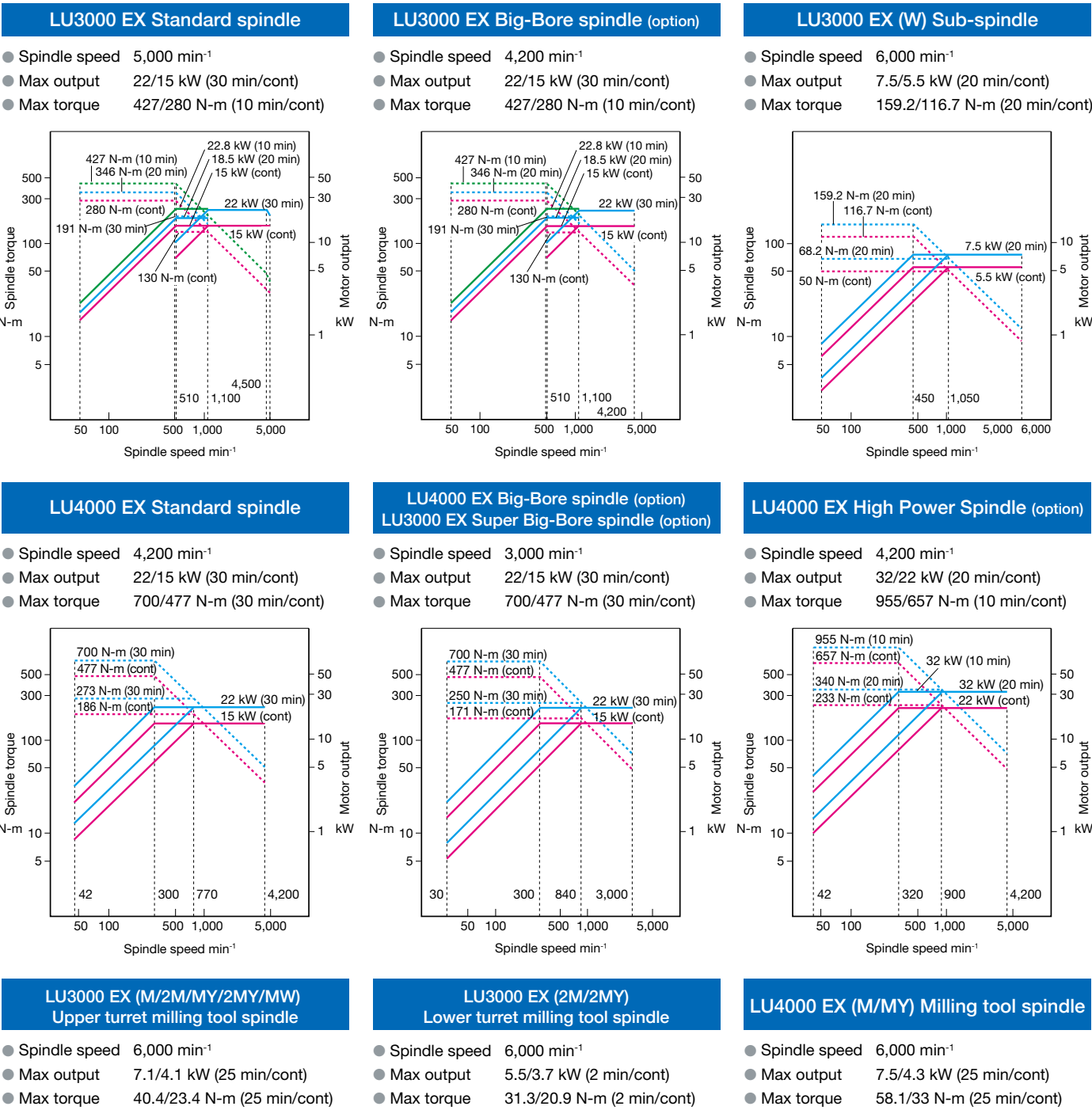
Front door with large window	
For air blower	Air blow gun
	Chuck
	Tailstock center
	Spindle ID
	Upper turret (internal piping, common coolant nozzle)
For coolant blower	Lower turret (common coolant nozzle)
	Upper and lower turret air blower discharge control (simultaneous, independent)
Dust proofing	Coolant gun
	Shower coolant (Control system A/B) (LU3000 EX: main, sub)
	Spindle Internal Coolant (Control system A/B) (LU3000 EX: main, sub)
For gauging	Spindle air purging
	X-axis double wiper (XA) (standard for XB)
Workpiece cradle	Z-axis double wiper (ZA + ZB)
	In-process workpiece gauging (upper turret mounted)
Workpiece stopper in spindle	Renishaw RLP40, System-D
Chuck internal sizing stopper	
Coolant	Lower turret mounted, headstock mounted, tailstock mounted
	Adjustment stroke 100 mm
Mist collector	Upper and lower turret coolant blower discharge control (independent)
	Coolant high/low switch (upper, lower turret)
	Coolant detection (level, flow rate, level + flow rate detectors)
Sludgeless Tank	With/without machine link
Sludge prevention	Oil skimmer, Magnetic separator
Automatic extinguisher	For oil-based coolant, fire damper
Parts catcher	LU3000 EX
	Main (ø80 × L150 mm, 5.8 kg)
	Sub (ø65 × L150 mm, 4 kg)
	LU4000 EX
	ø100 × L200 mm, 7 kg
High-accuracy specifications	Output conveyor
	Turcite® lining (XA-axis, ZA-axis, ZB-axis)
	AbsoScale (XA-axis, ZA-axis, XB-axis)
	0.1 µm control
	Pitch error compensation
Hydraulic unit	Coolant temperature regulator
	Spindle temperature regulator
Specs for easy maintenance	Hydraulic oil temperature regulator
	Inverter (energy-saving)
	Normal kit, economy kit

Chip conveyor types and applications

Type	Hinge	Scraper	Magnet scraper	Hinge + scraper with drum filter
Application	For steel	For castings	For castings	For steel, castings, nonferrous metal
Features	General use	Magnet scraper for sludge processing Easy for maintenance Blade scraper	Suitable with sludge Not suitable for nonferrous metals	Filtration of long and short chips and coolant
Shape				

Notes: It is necessary to select a chip conveyor with hinges + scraper (with drum filter) if the Sludgeless Tank is chosen.
Raised machine arrangements may be necessary depending on the type of conveyor.

Spindle torque/output diagram



Improved productivity and stable production

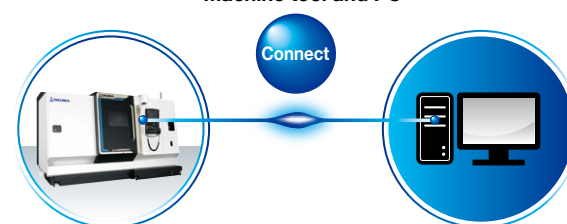
Simulation using the latest machine information can be achieved with an office PC and OSP-P500 installed on the physical machine. This enables preparation for machining in advance in the office environment (front loading). Preparing machining for the next part while continuing machining can reduce the preparation time for the physical machine. When a problem occurs on the shop floor, it can be solved quickly on site without going back to the office.

* The PC software is to be used with one package for one machine.

Super-fast and super-accurate machining simulations are performed with the CNC of a real machine on-site to minimize machining preparation work. Actual machining can be started immediately, greatly improving the operating rate of the machine.



Okuma's Connect Plan is a system that provides analytics for improved utilization by connecting machine tools and visual control of factory operation results and machining records. Simply connect the OSP and a PC and install Connect Plan on the PC to see the machine operation status from the shop floor, from an office, from anywhere. The Connect Plan is an ideal solution for customers trying to raise their machine utilization.



Standard specifications

Basic specs	Control	Turning: X, Z simultaneous 2-axis + 2-axis. Multitasking: X, Z, C simultaneous 3-axis
	Position feedback	OSP full range absolute position feedback (zero-point return not required)
	Min/max command	±99999.999 mm, ±99999.999° 8-digit decimal, command unit: 0.001 mm, 0.01 mm, 1 mm, 0.001°, 0.01°, 1°
	Feed	Override: 0 to 200%
	Spindle control	Direct spindle speed commands override 50 to 200%, Constant cutting speed, Optimum turning speed designate
	Tool compensation	Tool selection: 32 sets, tool offset: 32 sets
	Display	15-inch color LCD + multi-touch panel operations
Programming	Security	Operator authentication, lock screen, OSP-VPSII-STD (Virus Protection System)
	Program capacity	Program storage: 4 GB, operation buffer: 2 MB
	Programming	Program management, edit, scheduled programs, user task (G-/M-code macros, arithmetic, logic statements, math functions, variables, Branch commands), fixed threading cycle, groove cutting spindle cycle, auto programming (LAP4), programming help, block skip; 1 sets, Oriented spindle stop
Operations	OSP suite	Various “suite apps” support the series of machining operations, and “suite operation” enables one-touch access to those apps
	Easy Operation	“Single-mode operation” for a series of operations from a single screen. Easy-to-use operation panel supports complete machine control.
	Machine operations	MDI, manual (rapid traverse, pulse handle), load meter, operations help, alarm help, sequence return, manual interrupt & auto return, Parameter I/O
	MacMan plus	Machining management: machining results, machine utilization, fault data compile & report, visualization of power consumption, External output
Communications / Networking		USB ports, Ethernet, DNC-T1, Smart I/F
High speed/accuracy		Hi-G control, SERVOnavi AP, Cycle time reduction (machining time shortening, easy parameter setting)
Energy-saving functions	ECO suite plus	ECO Idling Stop, ECO Operation, ECO Power Monitor (on machine watt meter is optional)
	Power Regeneration System	Regenerative power is used when the spindle and feed axes decelerate to reduce energy waste.

		E	D	E	D	E	D	E
Digital Twin								
Virtual Machining						● (VE)	● (VD)	● (VE)
Quick Modeling						● (VE)	● (VD)	● (VE)
OPC UA for Machine Tools						●	●	●
OSP API KIT						●	●	●
Interactive Programming								
Advanced One-Touch IGF-L (w/Real 3D)*1				●	●		●	●
Smart OSP Operation				●	●	●	●	●
Programming								
Circular threading			●		●		●	●
Program notes			●		●			●
User task I/O variables, 8 each								
Common variables 1,000 sets (Std: 200 sets)								
Work coordinate 10 sets			▲		▲		▲	▲
system select 100 sets								
Thread matching								
Pause for threading during non-fixed cycle		●		●	●	●	●	●
Variable Spindle Speed Threading (VSST)								
Inverse time feed								
Mid-block sequence return			●		●		●	●
Milling machine Synchronized C-axis control								
specs (M) Coordinate convert		▲	▲	▲	▲	▲	▲	▲
Profile generate		▲	▲	▲	▲	▲	▲	▲
Flat turning								
Coordinate calculation (with NCYL commands)								
Helical cutting								
Slope machining (TypeI, TypeII)								
Hobbing								
Harmonic Spindle Speed Control		●		●	●		●	●
Tool life management (include prior notice)			●		●			●
Block skip; 9 sets								
Home position								
Monitoring								
Real 3-D Simulation				●	●	●	●	●
Cycle time over check		●	●	●	●	●	●	●
Load monitor (spindle, feed axis)								
No-load detection, part number expansion,				●	●	●	●	●
Workpiece ejection detection								
AI machine diagnostics (feed axes)*2								
Machine Status Logger								
Operation end buzzer								
Workpiece counters Count only								
Cycle stop								
Start disabled								
Hour meters Power ON								
Spindle rotation								
NC operating								
NC operation monitor (counter, totaling)		●	●	●	●	●	●	●
Status indicator (3-color C type) [B type]		●	●	●	●	●	●	●

		NML		AOT-M		DT		DT AUT-M	
		E	D	E	D	E	D	E	D
External Input/Output and Communication Functions									
RS-232C interface									
Ethernet/IP									
Networking	DNC-DT, DNC-T3 DNC-C/Ethernet								
Measuring									
In-process workpiece gauging									
Z-axis automatic zero offset									
C-axis automatic zero offset									
Y-axis zero offset and tool offset									
Y-axis slope gauging									
3-point gauging									
Gauge data output	File output								
Post-process workpiece gauging	Quantitative compensation (five level, seven level)								
	BCD								
	RS-232C (w/dedicated channel)								
Energy-saving ECO suite plus									
Spindle power peak cutting									
ECO Power Monitor On-machine wattmeter									
Automation/Unattended Operation									
Auto power shutoff M02, alarm		●	●	●	●	●	●	●	●
Warm-up function (by calendar timer)									
Tool retract cycle									
External program	Pushbutton, rotary switch Digital switch, BCD								
Connection with automated devices	Robot, loader I/F*3 Bar feeder I/F*3								
High-Speed/High-Accuracy									
Cycle time reduction*3	Operation time reduction Chuck and tailstock movement during spindle rotation	●	●	●	●	●	●	●	●
0.1 μm control*3									
Pitch error compensation									
AbsoScale detection*3									
Hi-Cut Pro		▲	▲	▲	▲	▲	▲	▲	▲
Other									
One-Touch Spreadsheet									
Machining Navi [L-gII, T-g threading]									
Spindle dead-slow cutting									
Y-axis center height offset									
Feed axis retraction, tapping retraction									
Short circuit breaker									
External M codes [2 sets, 4 sets, 8 sets, 16 sets]									
OSP-VPSII-EX (Virus Protection System)									

Note: NML: Normal kit, AOT-M: Advanced One-Touch IGF-L kit, DT: Digital Twin kit, DT AOT-M: Digital Twin Advanced One-Touch IGF-L, E: Economy, D: Deluxe
VE and VD kits are also equipped with the Digital Twin on PC function, allowing running from a PC.

*2. With AbsoScale detection specs, ball-screw wear detection is possible.

*3. Engineering discussions required.

▲: Supplied to the milling specs of each kit.

Specifications, etc. are subject to change without notice.

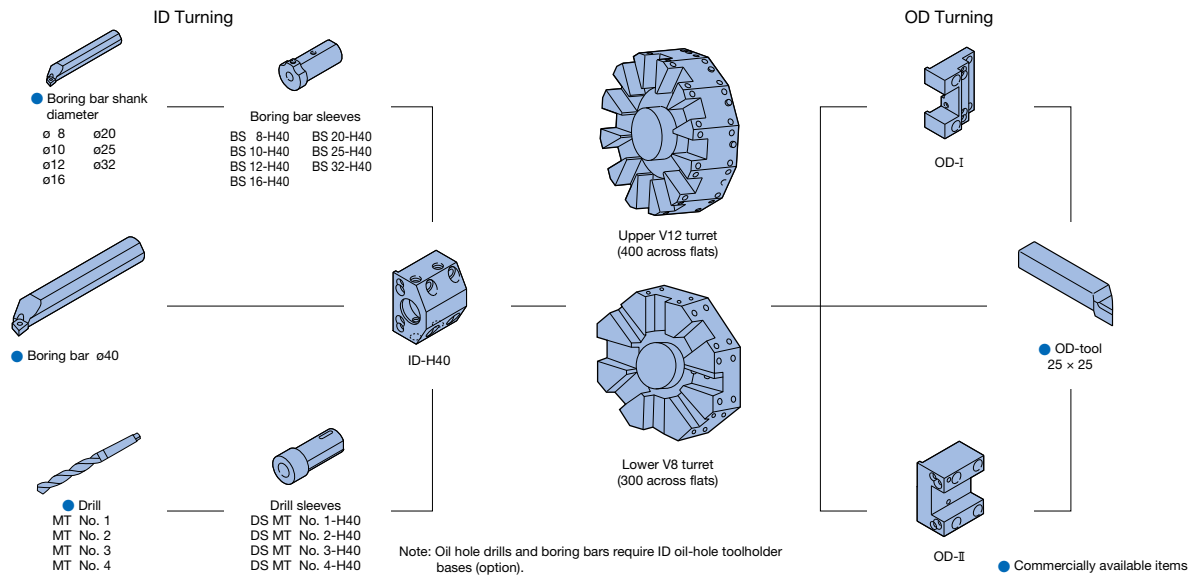
Tooling Kit

	LU3000 EX (L)				LU3000 EX (M)			
	2ST		2SC		2ST		2SC	
	E	D	E	D	E	D	E	D
OD-I	6	8	8	10	6	8	6	8
OD-II	4	6	2	4	2	4	2	4
ID-H40	8	10	8	10	8	10	8	10
BS 10-H40	—	2	—	2	—	2	—	2
BS 12-H40	—	2	—	2	—	2	—	2
BS 16-H40	—	2	—	2	—	2	—	2
BS 20-H40	4	4	4	4	4	4	4	4
BS 25-H40	4	4	4	4	4	4	4	4
BS 32-H40	—	2	—	2	—	2	—	2
DS MT No. 1-H40	—	1	—	1	—	1	—	1
DS MT No. 2-H40	—	1	—	1	—	1	—	1
DS MT No. 3-H40	1	1	1	1	1	1	1	1
Axial drill/mill unit					2	4	2	3
Radial drill/mill unit					2	3	2	4
Dummy holder					3	3	3	3
Revolving center MT No. 5					1	1	1	1

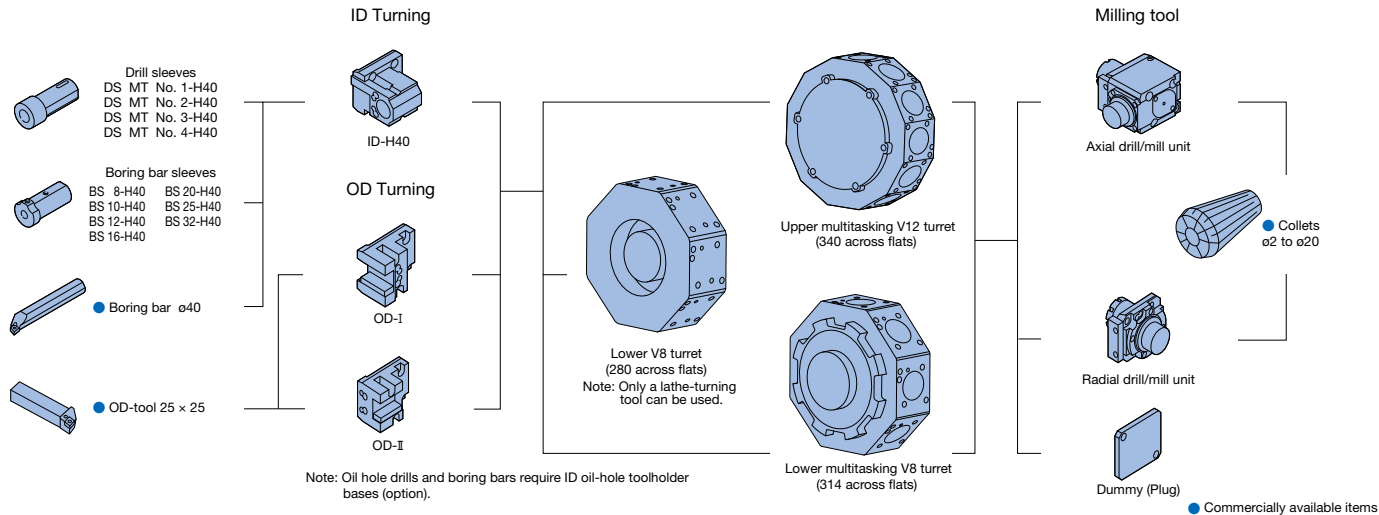
E kit: Economy
D kit: Deluxe

Tooling System

LU3000 EX (L)

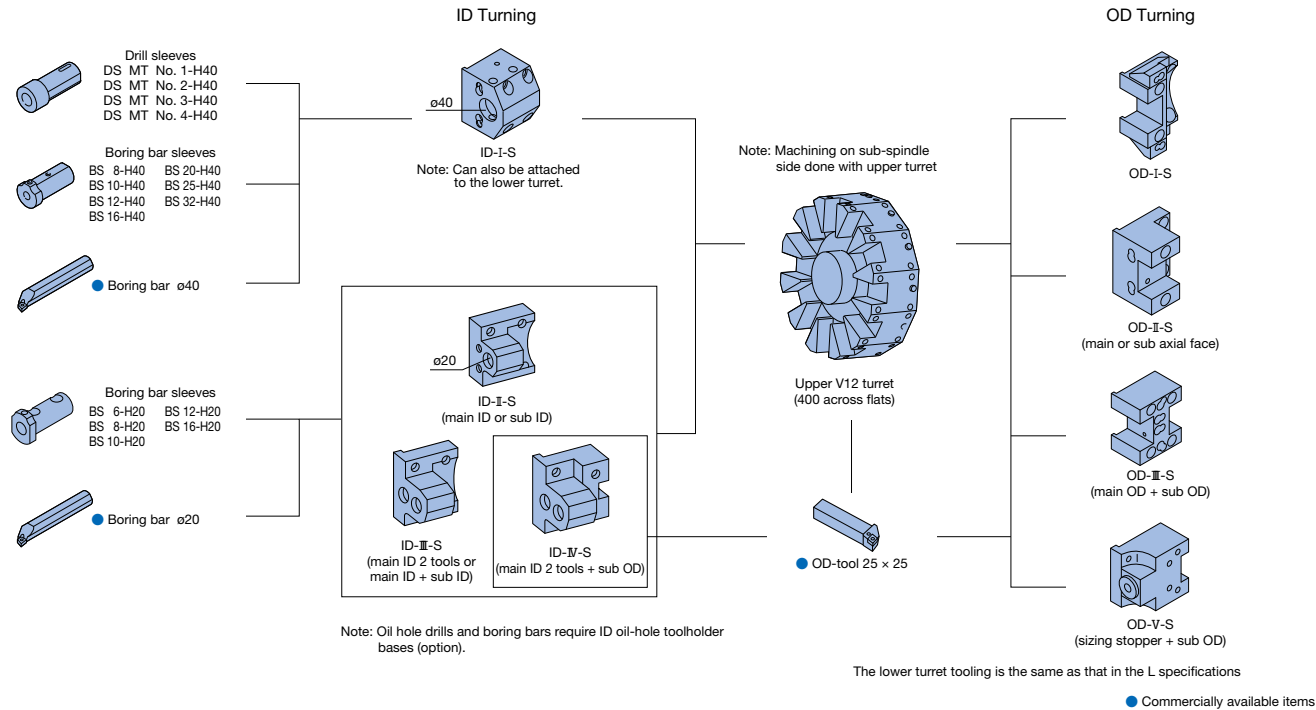


LU3000 EX (M/MY/2M/2MY)

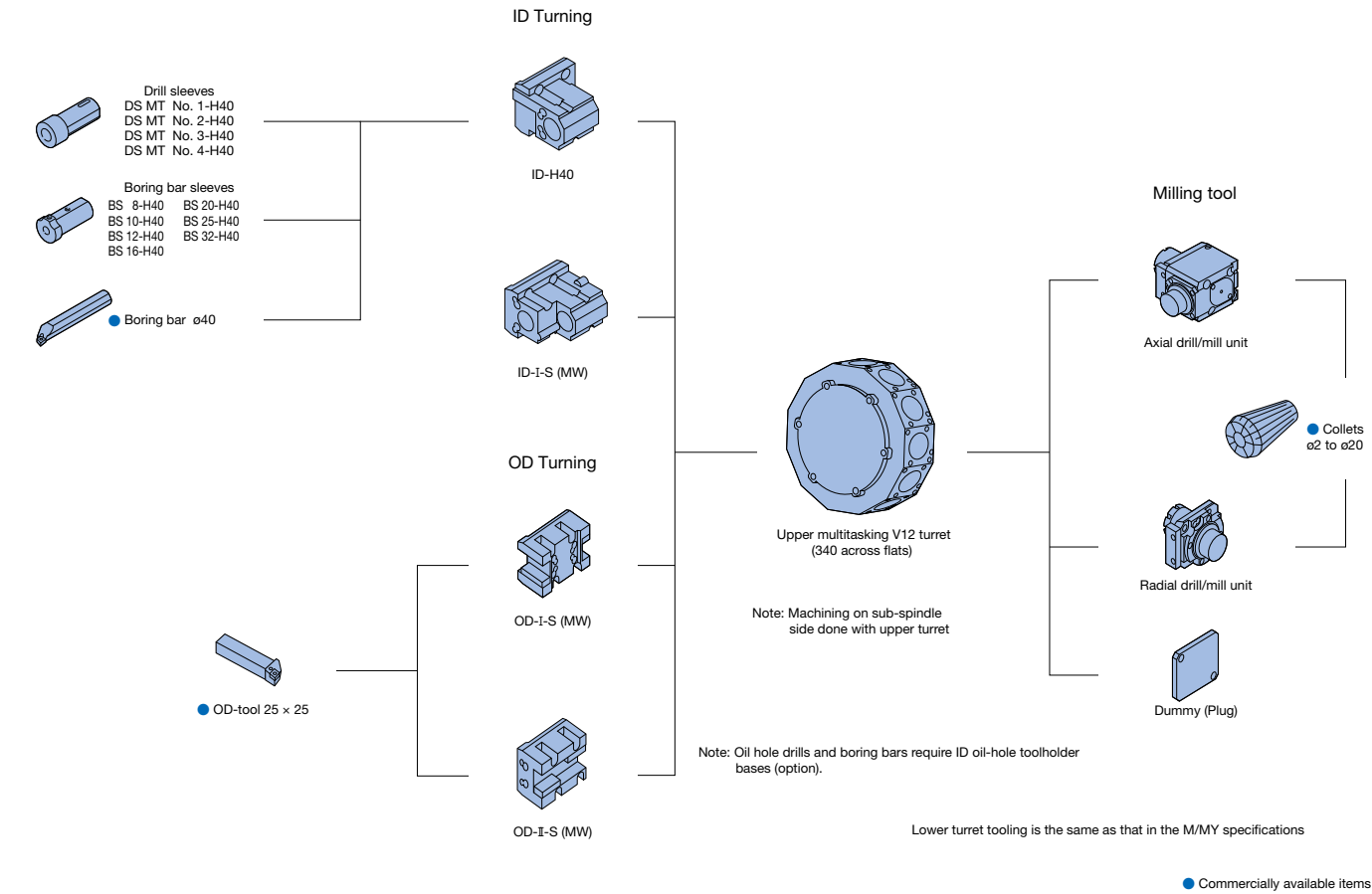


Tooling System

LU3000 EX (W)



LU3000 EX (MW)



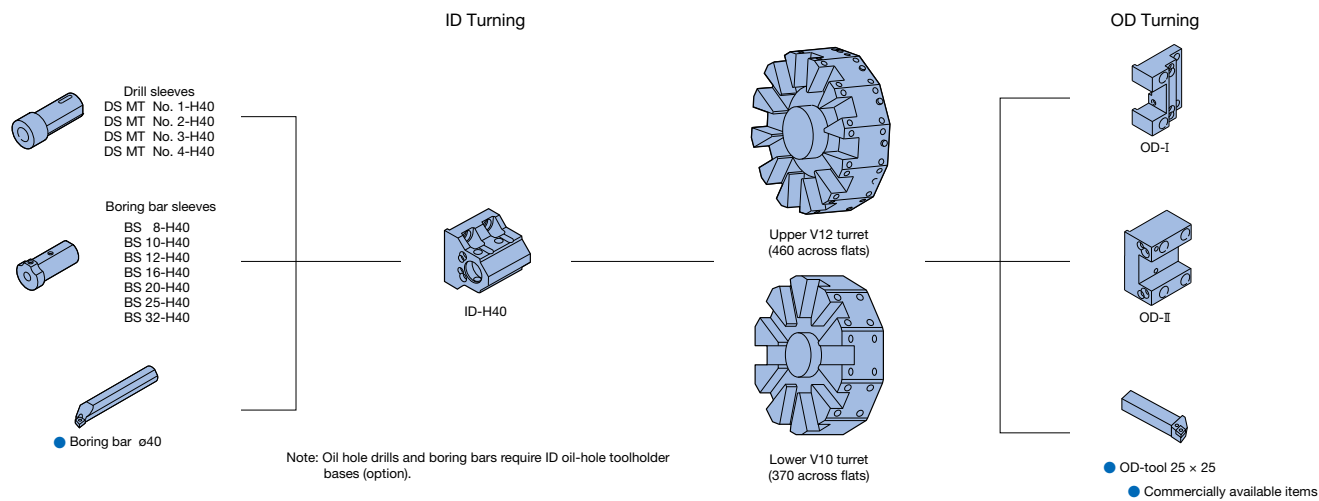
Tooling Kit

	LU4000 EX (L)				LU4000 EX (M/MY)			
	2ST		2SC		2ST		2SC	
	E	D	E	D	E	D	E	D
OD-I	6	8	8	10	6	8	6	8
OD-II	4	6	2	4	2	4	2	4
ID-H40	8	10	8	10	8	10	8	10
BS 10-H40	—	2	—	2	—	2	—	2
BS 12-H40	—	2	—	2	—	2	—	2
BS 16-H40	—	2	—	2	—	2	—	2
BS 20-H40	4	4	4	4	4	4	4	4
BS 25-H40	4	4	4	4	4	4	4	4
BS 32-H40	—	2	—	2	—	2	—	2
DS MT No. 1-H40	—	1	—	1	—	1	—	1
DS MT No. 2-H40	—	1	—	1	—	1	—	1
DS MT No. 3-H40	1	1	1	1	1	1	1	1
Axial drill/mill unit					2	4	2	3
Radial drill/mill unit					2	3	2	4
Dummy holder					3	3	3	3
Revolving center MT No. 5	—	—	1	1	—	—	1	1

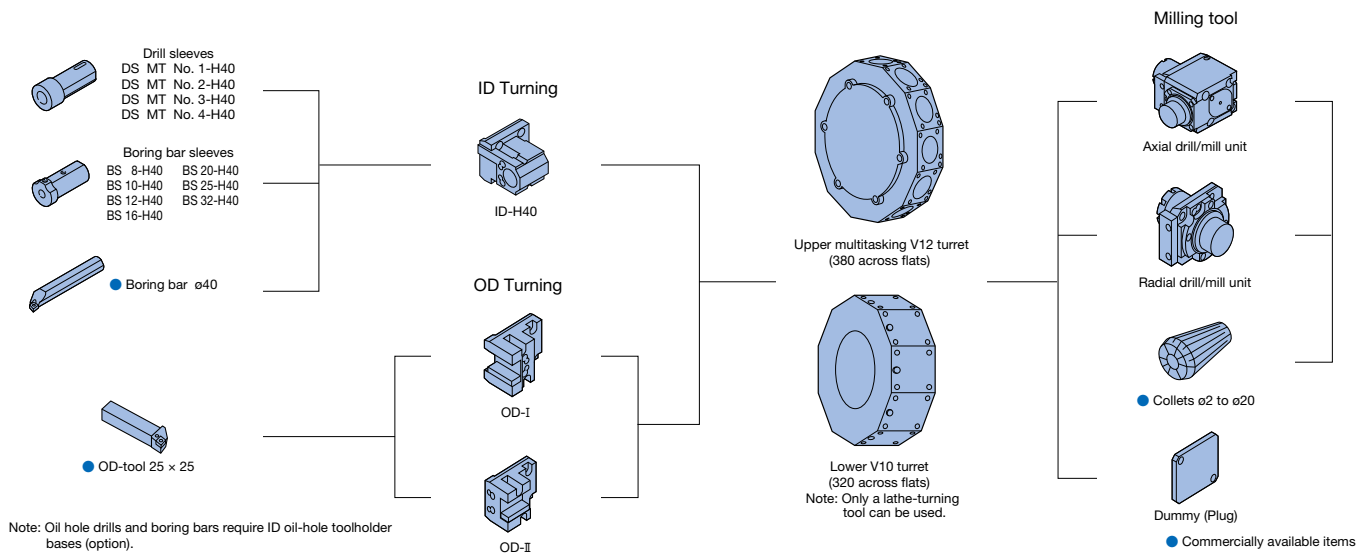
E kit: Economy
D kit: Deluxe

Tooling System

■ LU4000 EX (L)

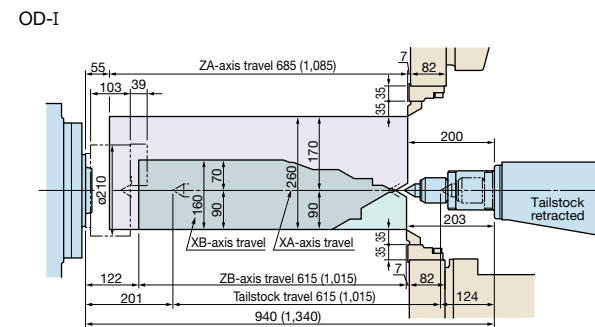


■ LU4000 EX (M/MY)

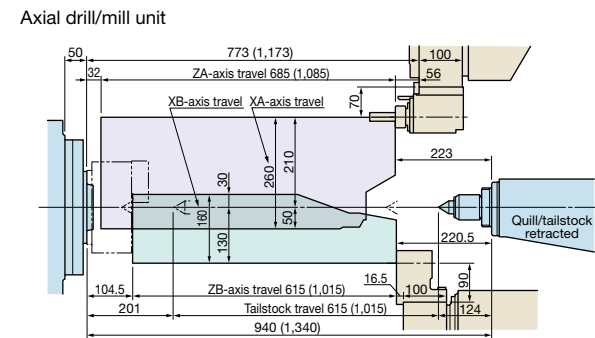


Working Ranges

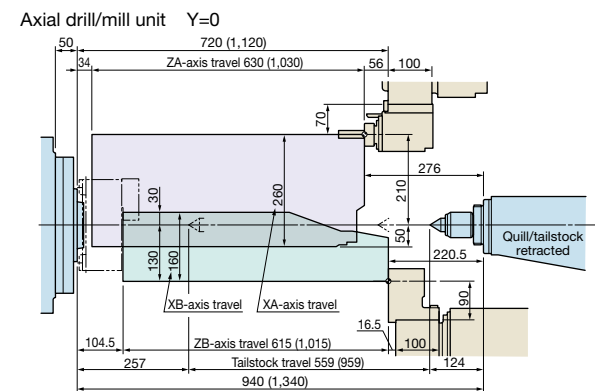
■ LU3000 EX (L)



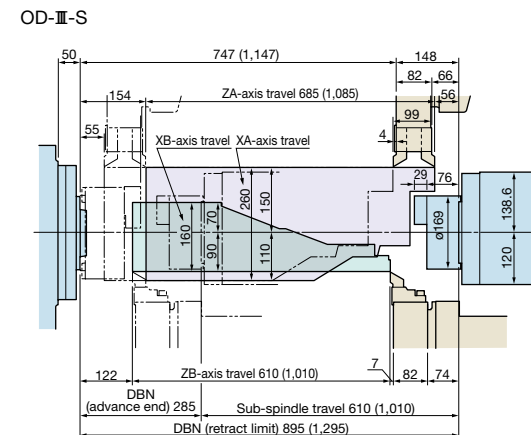
■ LU3000 EX (M)



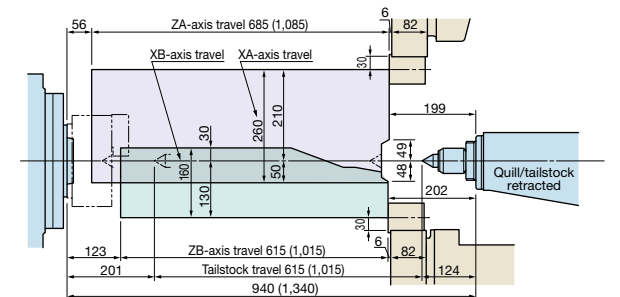
■ LU3000 EX (MY)



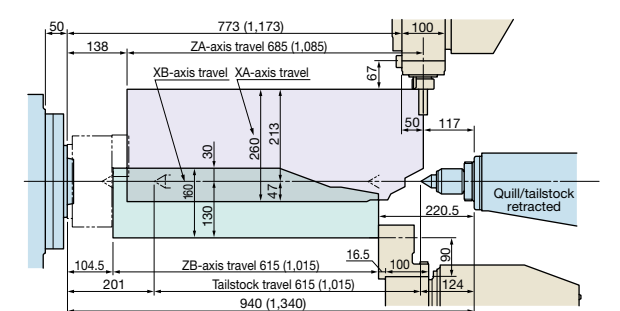
■ LU3000 EX (W)



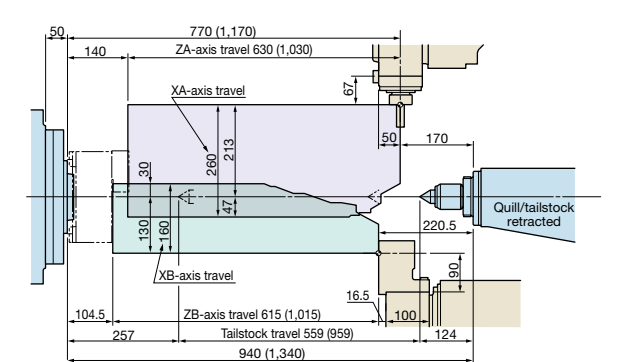
ID



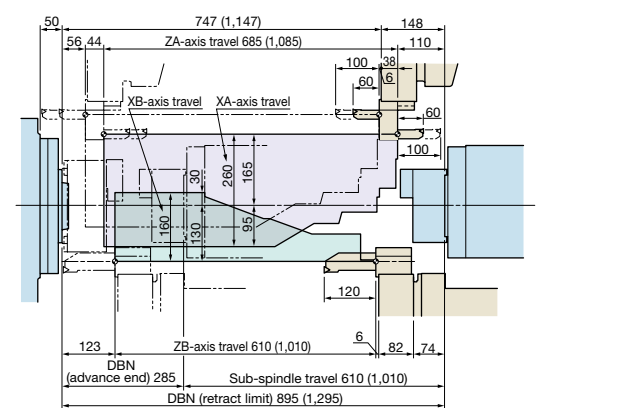
Radial drill/mill unit



Radial drill/mill unit Y=0



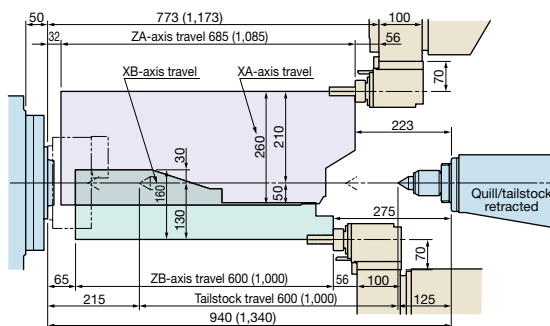
ID-III-S



Unit: mm

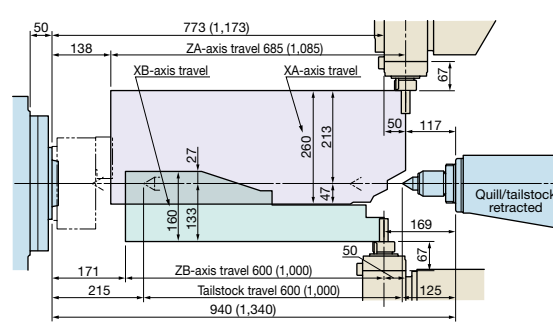
■ LU3000 EX (2M)

Axial drill/mill unit



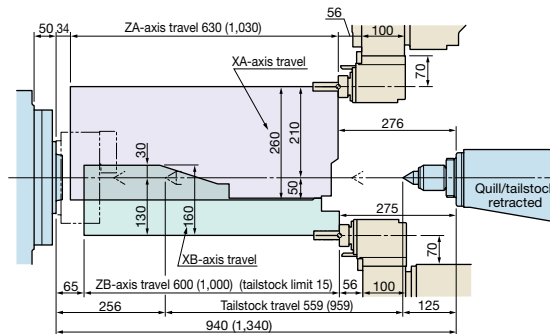
Radial drill/mill unit

This drawing refers to the 600 DBC machine specification. (): DBC 1000.



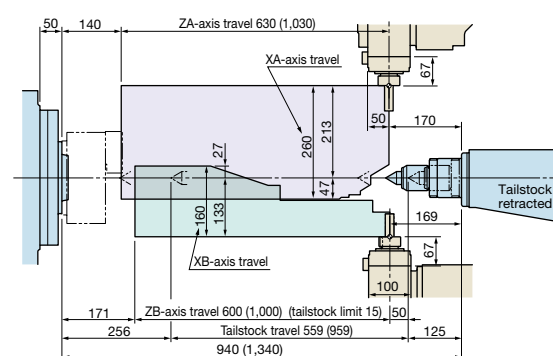
■ LU3000 EX (2MY)

Axial drill/mill unit Y=0



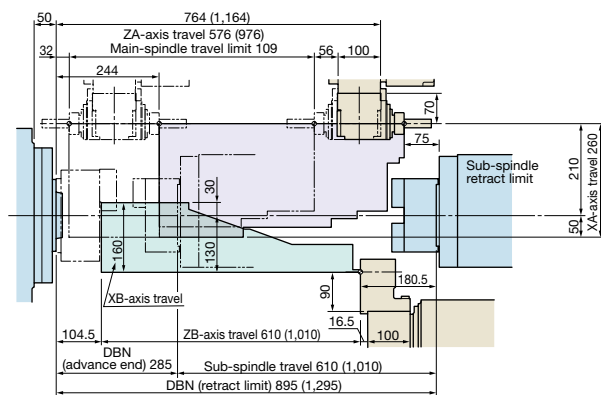
Radial drill/mill unit Y=0

This drawing refers to the 550 DBC machine specification. (): DBC 950.



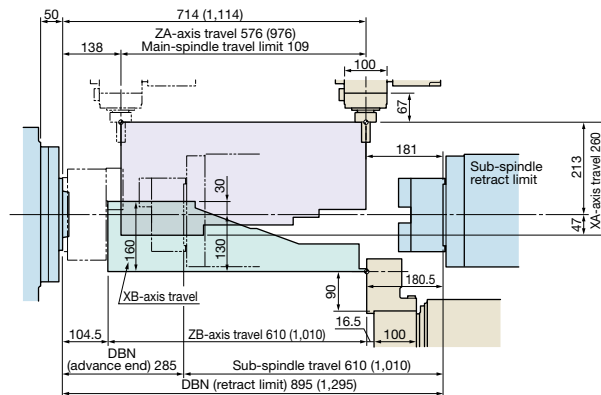
■ LU3000 EX (MW)

Axial drill/mill unit



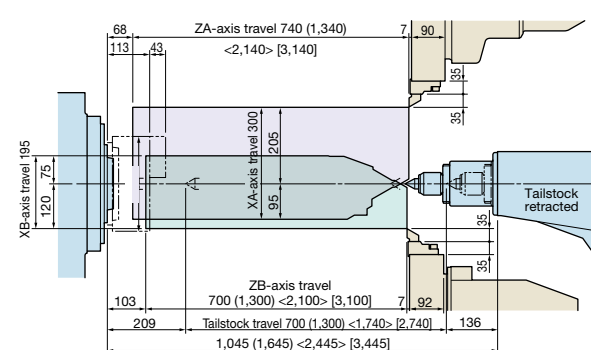
Radial drill/mill unit

This drawing refers to the 600 DBC machine specification. () : DBC 1000.



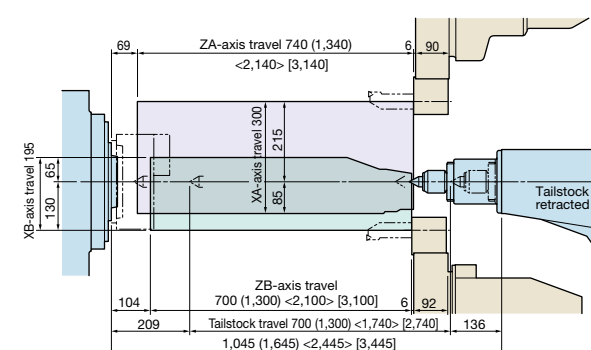
■ LU4000 EX (L)

OD-I



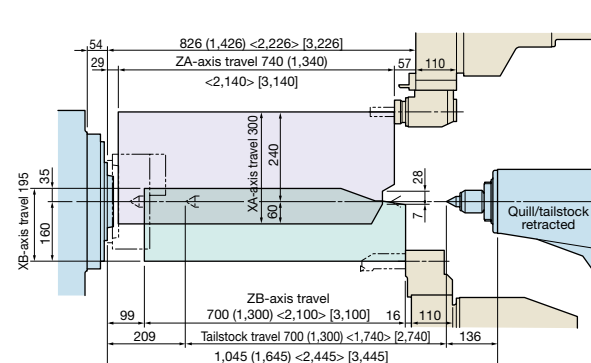
ID

This drawing refers to the 650 DBC machine specification.
(): DBC 1250.
< >: DBC 2000.
[]: DBC 3000.



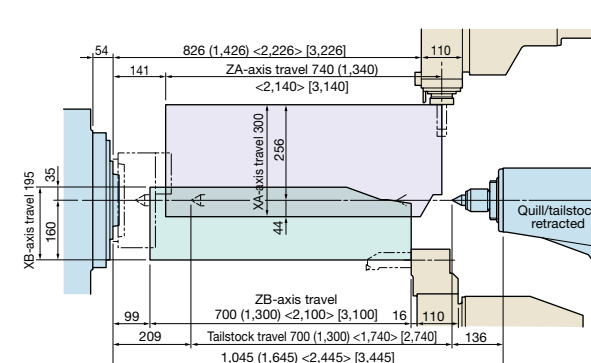
■ LU4000 EX (M)

Axial drill/mill unit



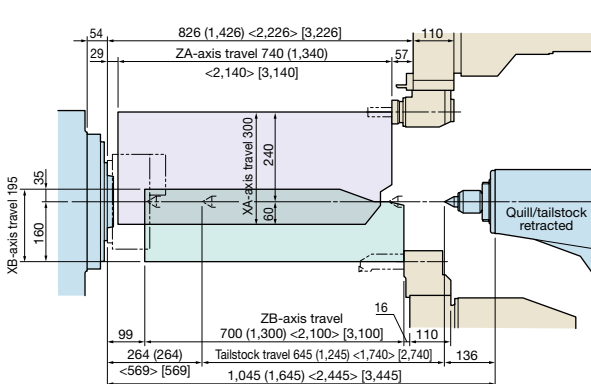
Radial drill/mill unit

This drawing refers to the 650 DBC machine specification.
(): DBC 1250.
< >: DBC 2000.
[]: DBC 3000.



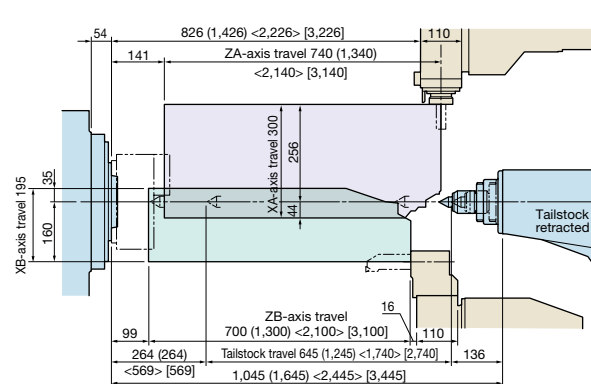
■ LU4000 EX (MY)

Axial drill/mill unit Y=0

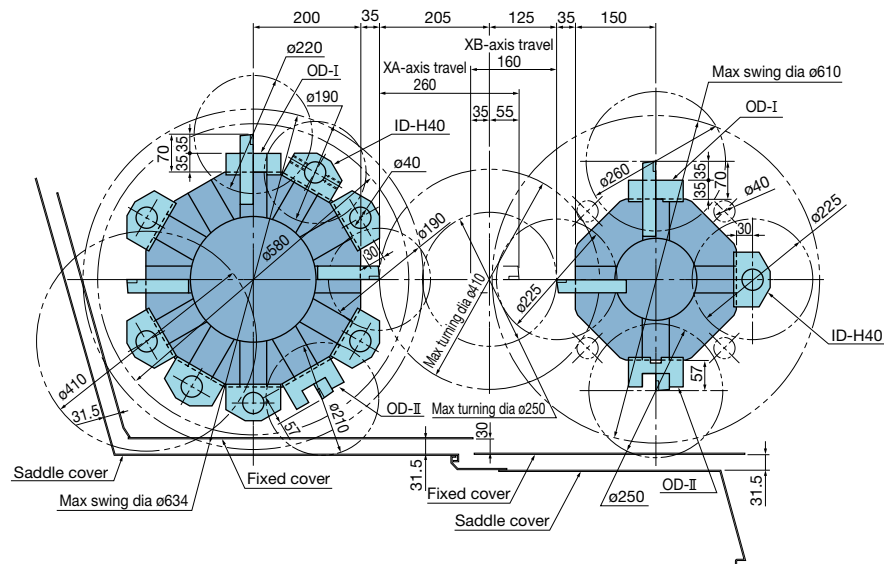


Radial drill/mill unit Y=0

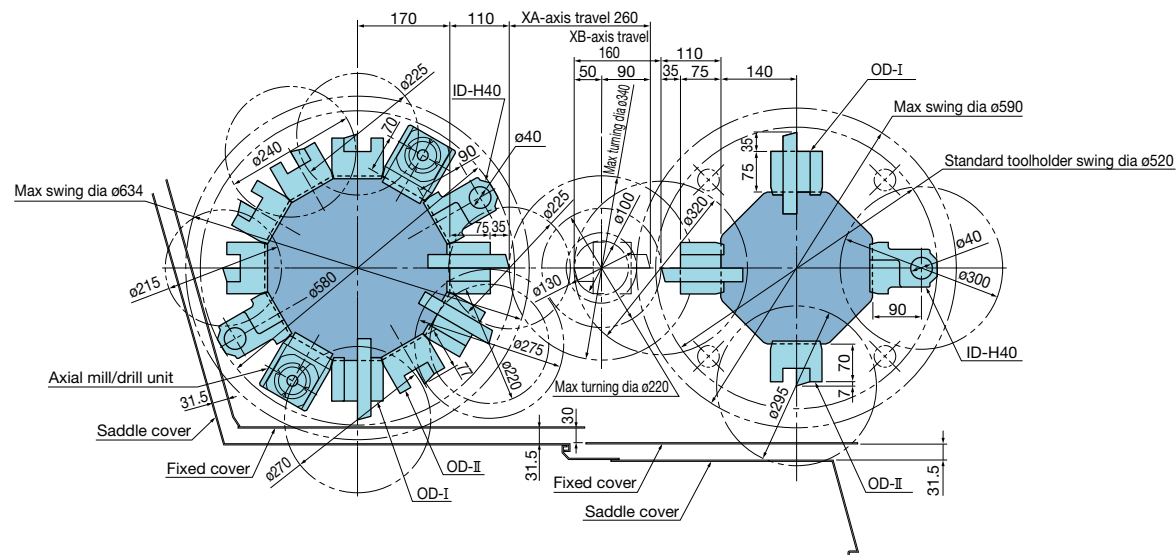
This drawing refers to the 650 DBC machine specification.
(): DBC 1250.
< >: DBC 2000.
[]: DBC 3000.



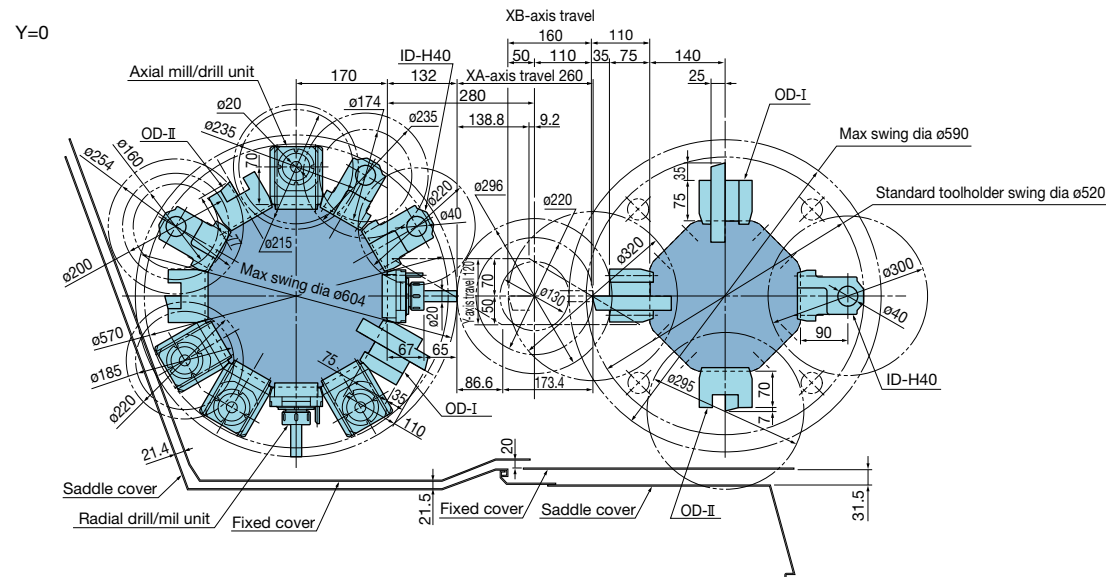
■ LU3000 EX (L)



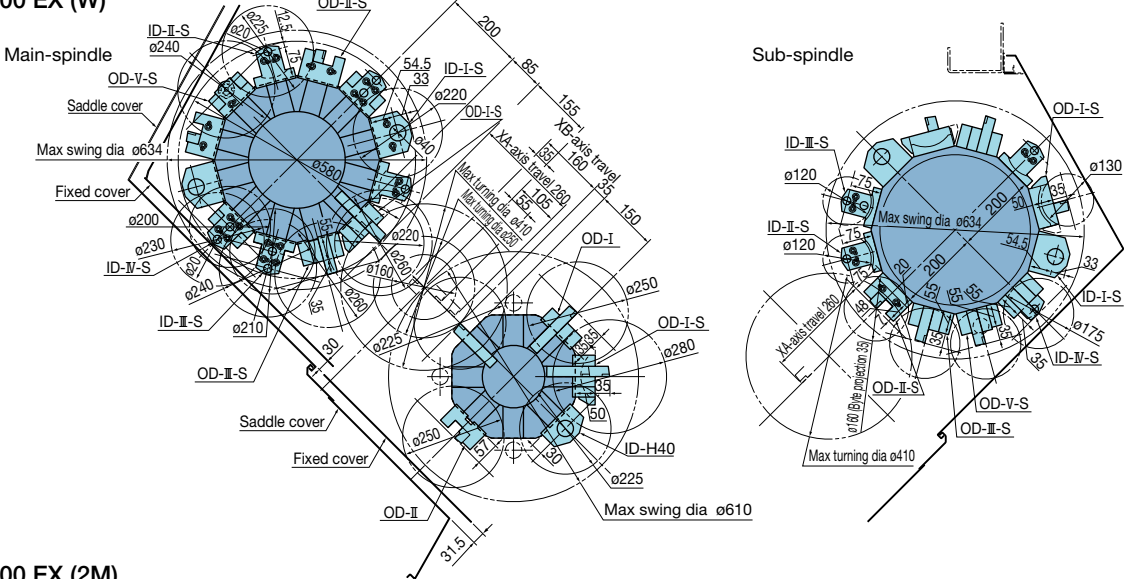
■ LU3000 EX (M)



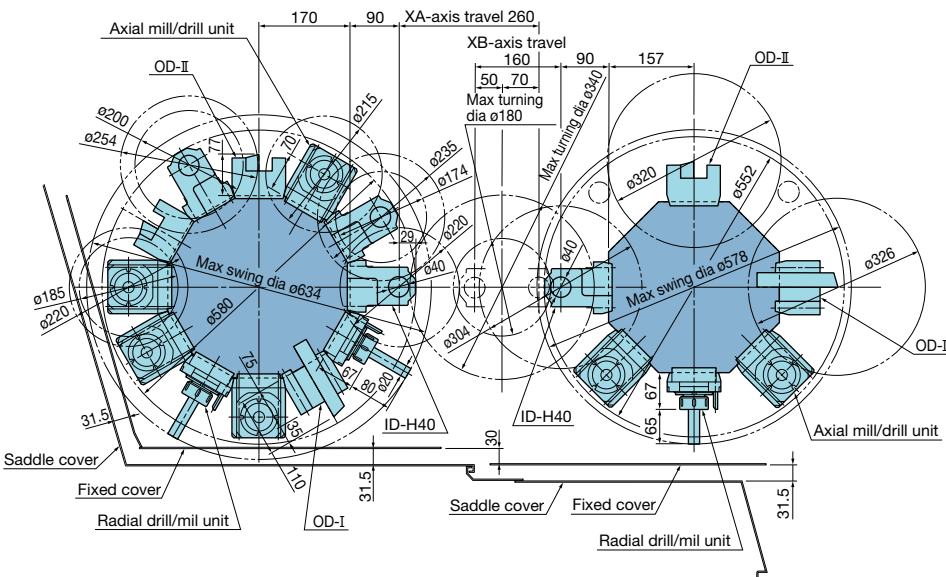
■ LU3000 EX (MY)



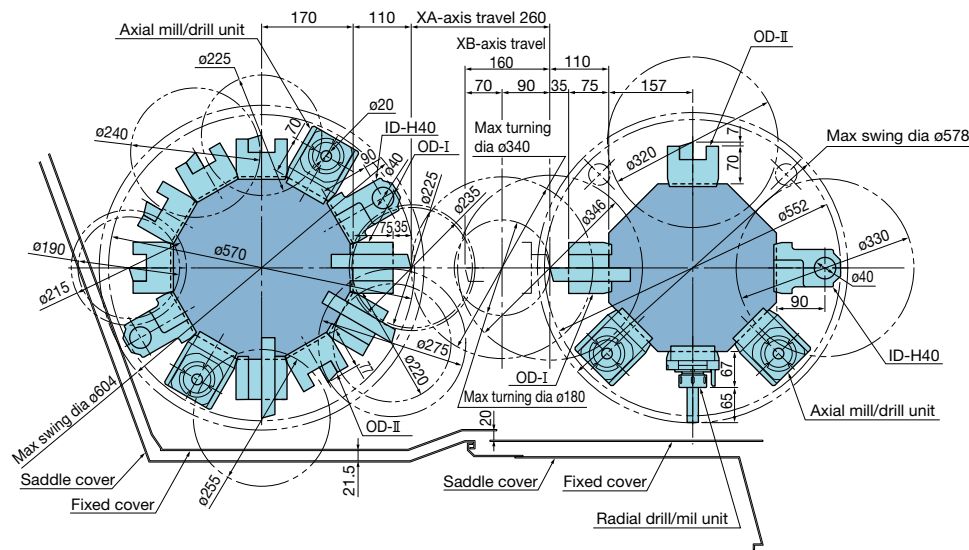
■ LU3000 EX (W)



■ LU3000 EX (2M)



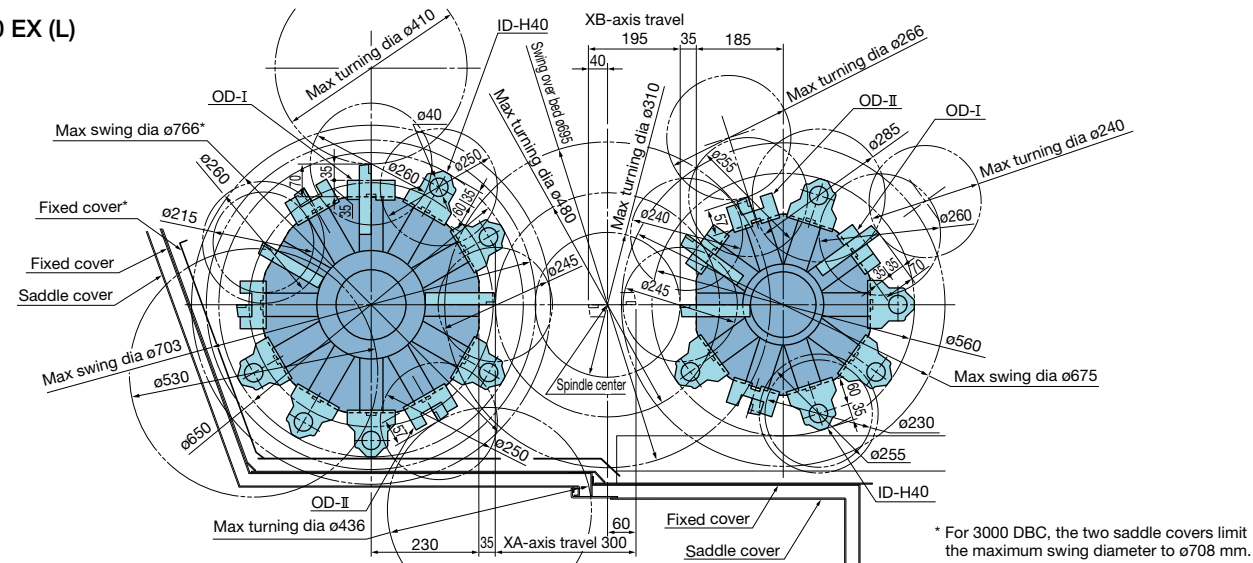
■ LU3000 EX (2MY)



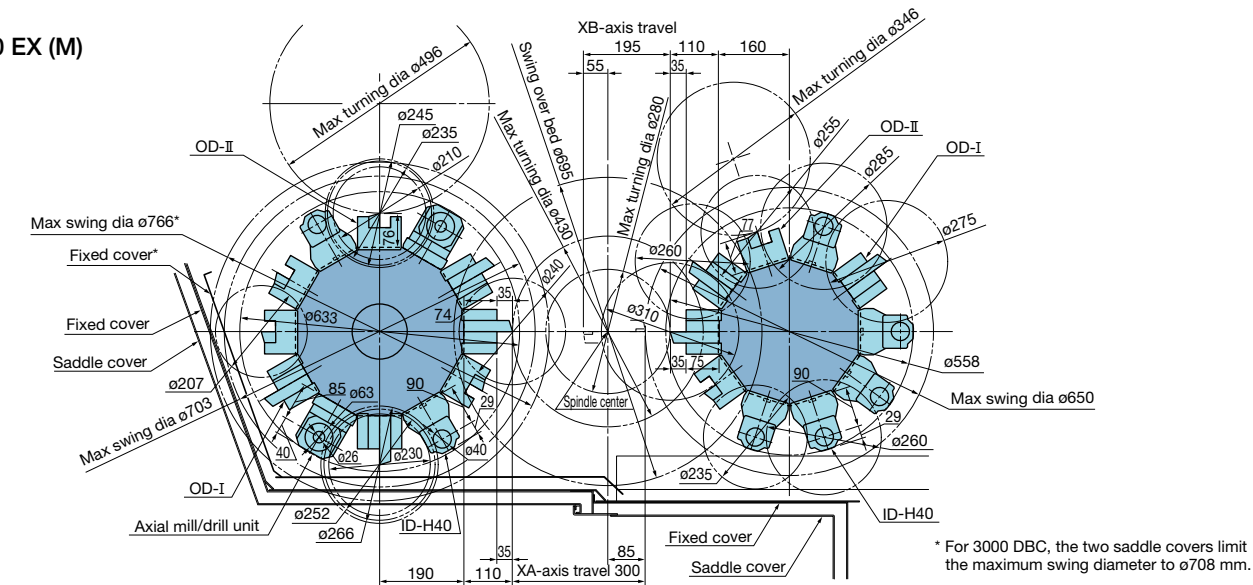
Turret Interference Diagrams

Unit: mm

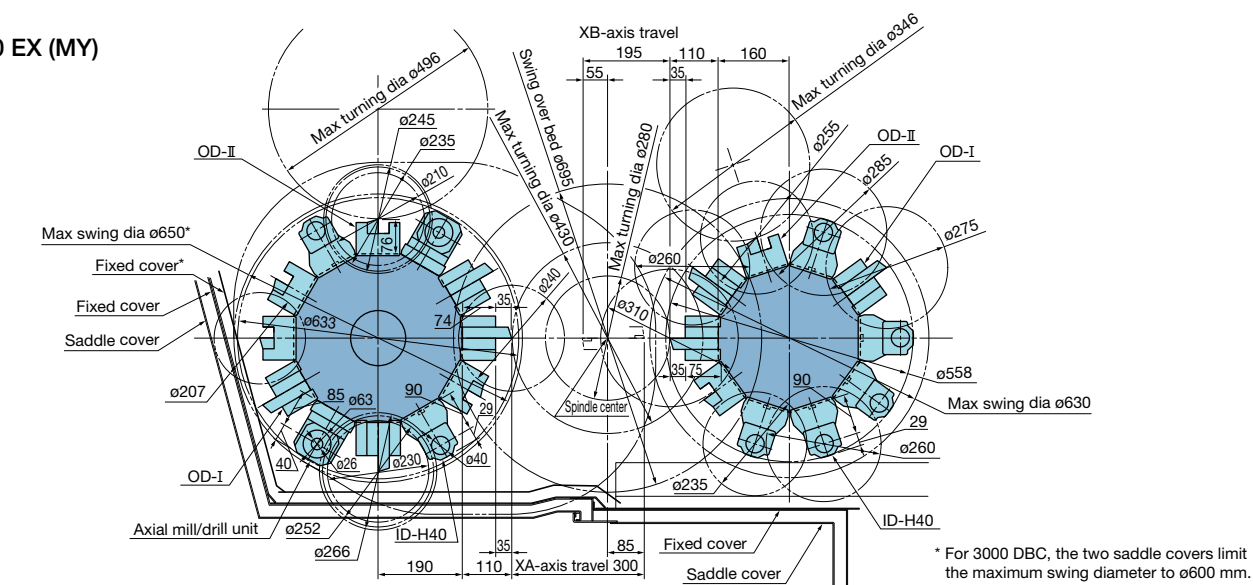
LU4000 EX (L)



LU4000 EX (M)



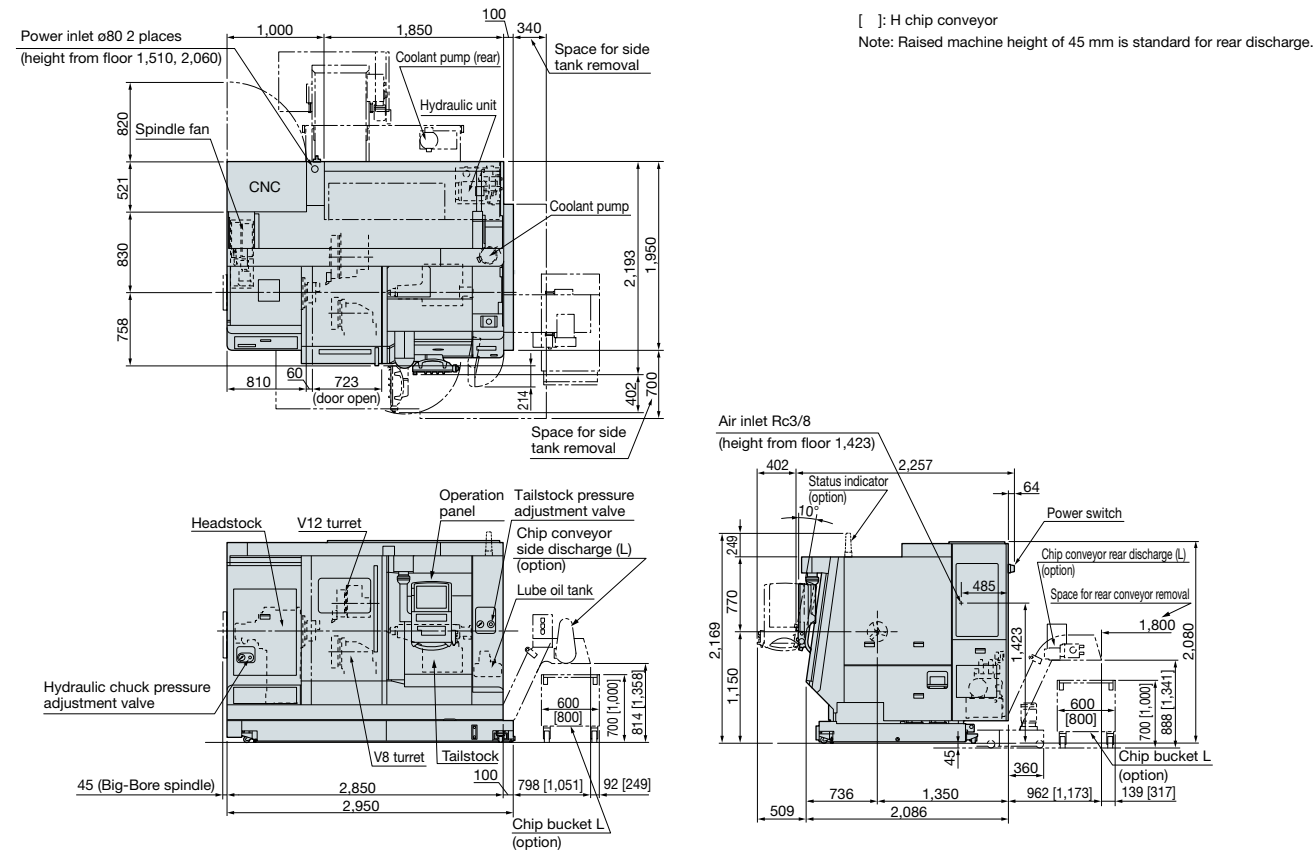
LU4000 EX (MY)



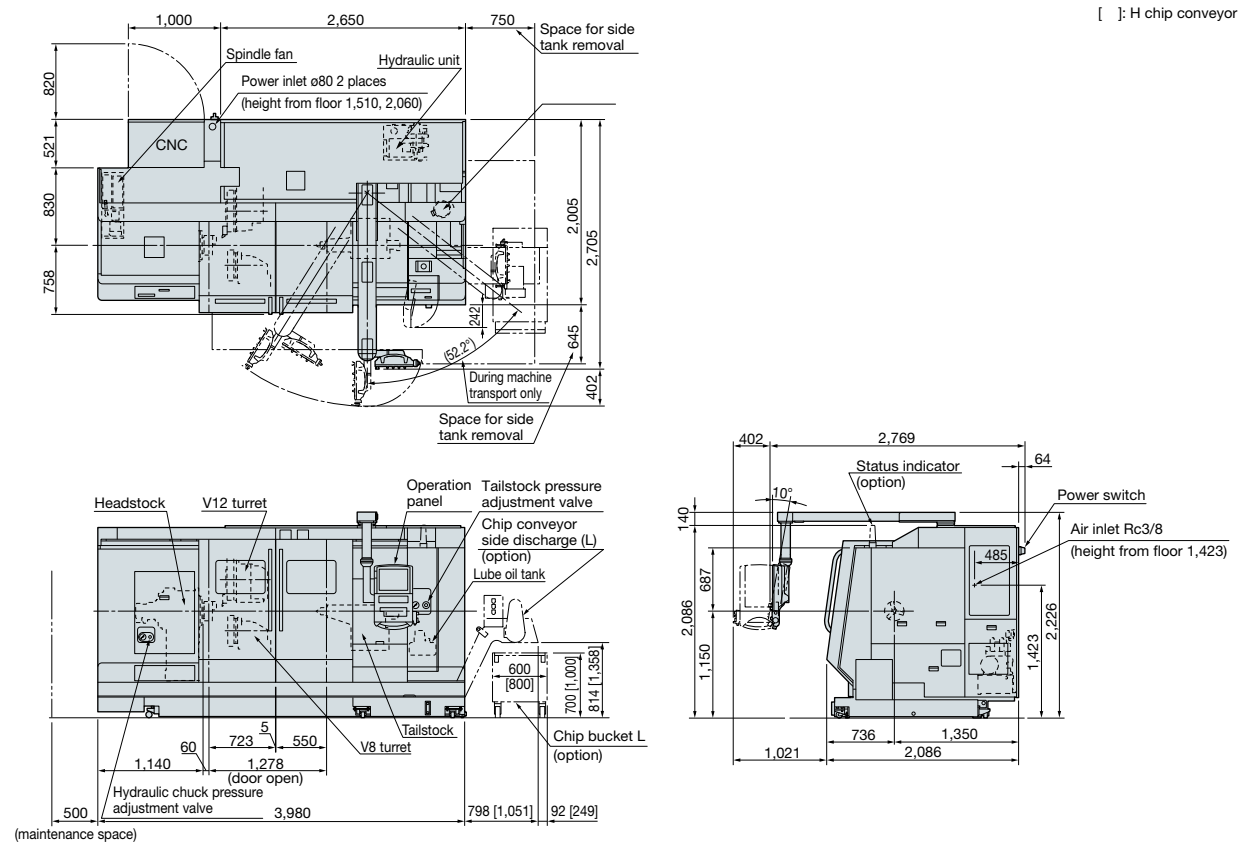
Dimensional / Installation Drawings

Unit: mm

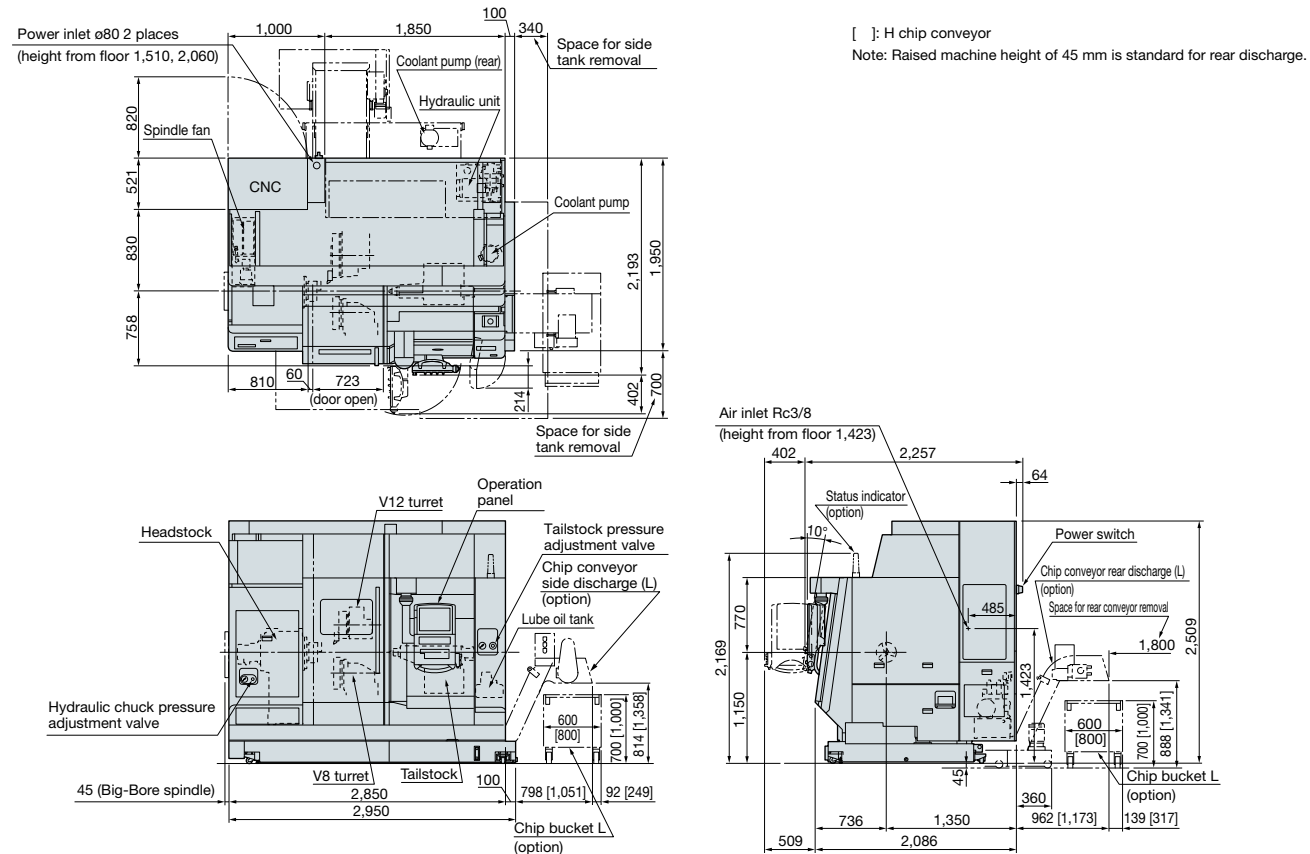
LU3000 EX (L/M/2M) DBC 600



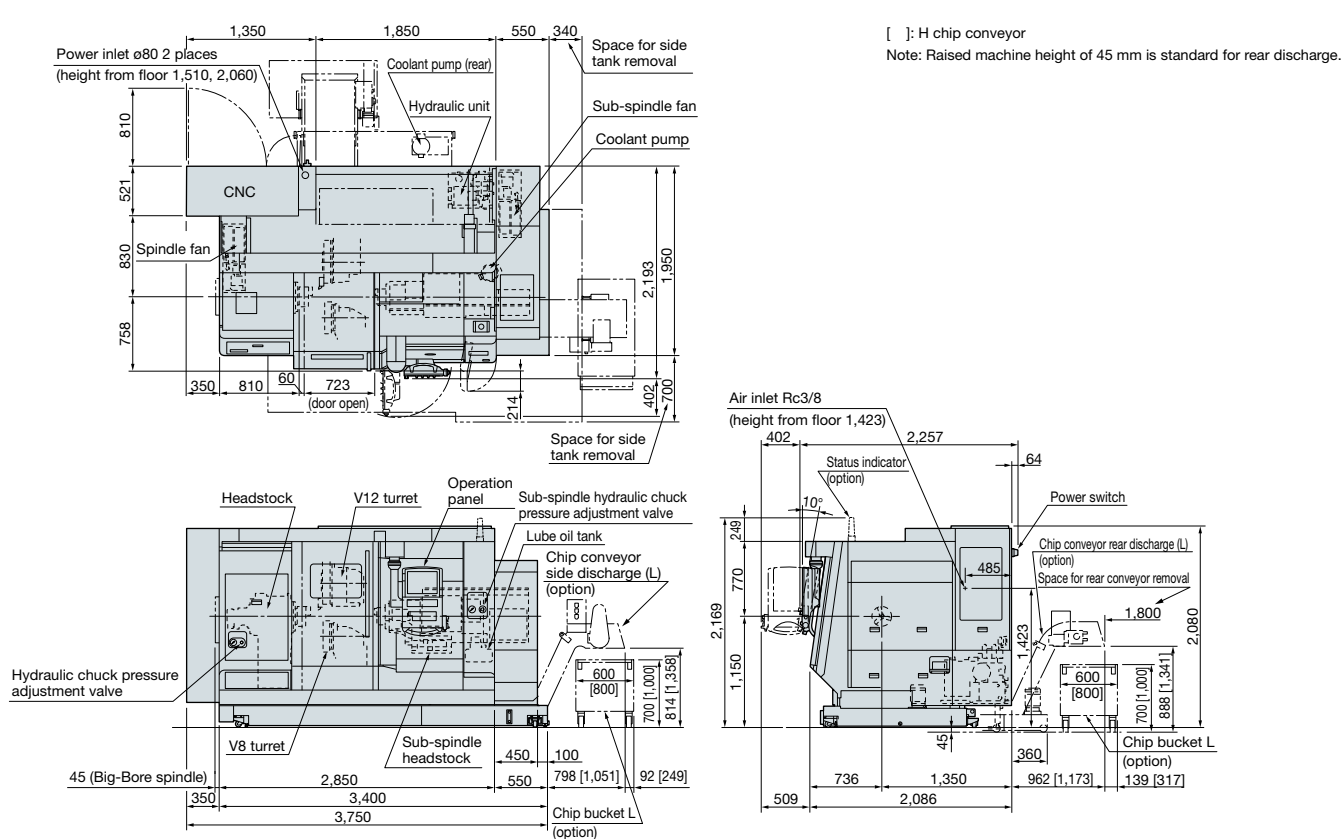
LU3000 EX (L/M/2M) DBC 1000



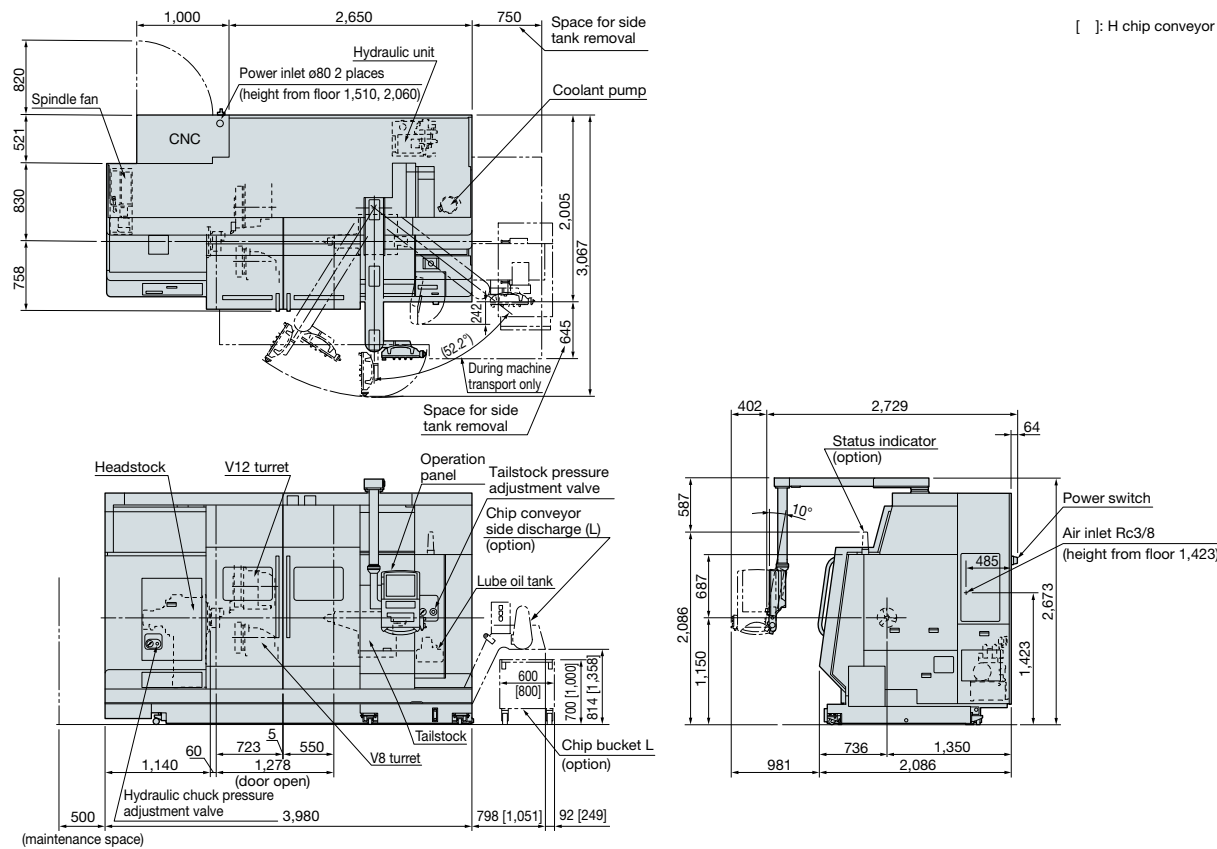
■ LU3000 EX (MY/2MY) DBC 550



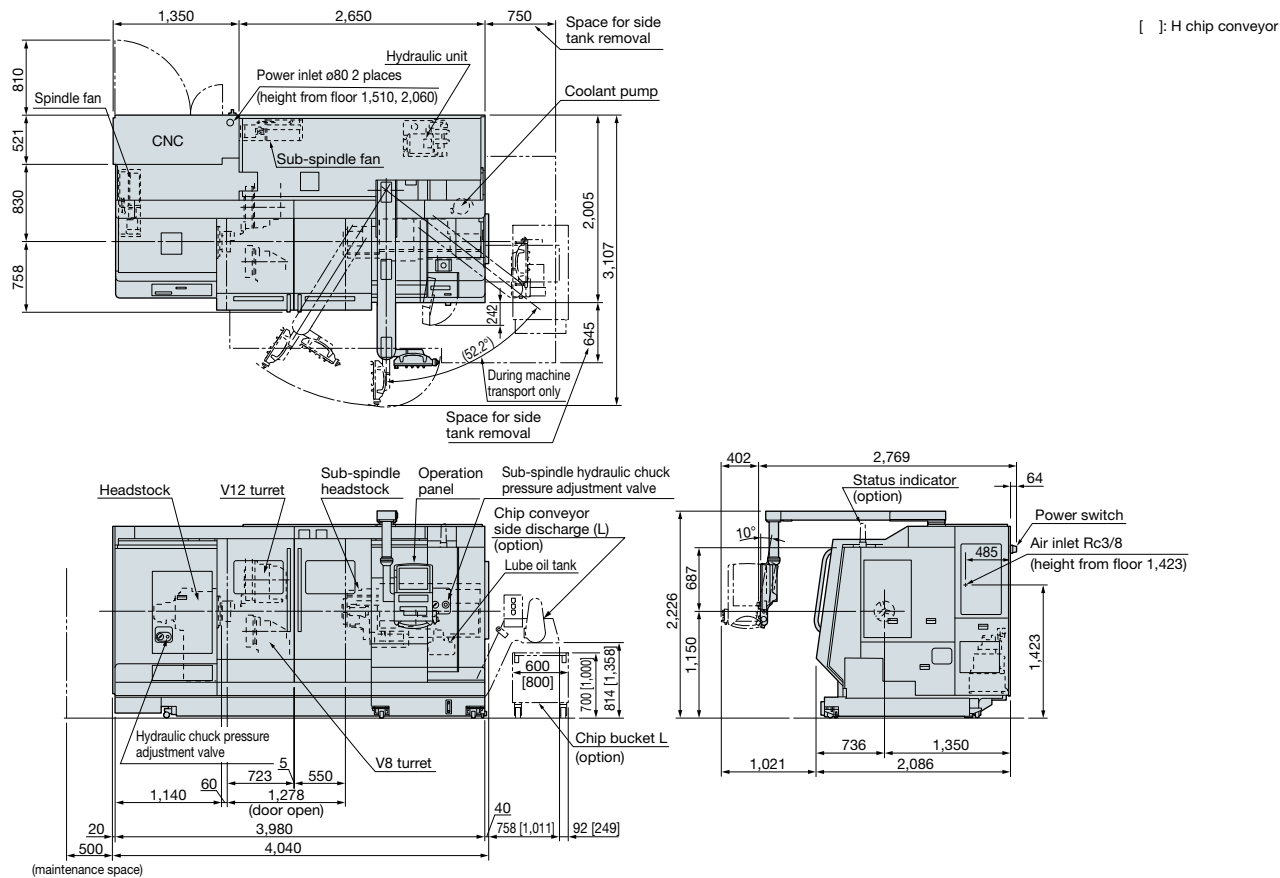
■ LU3000 EX (W/MW) DBC 600



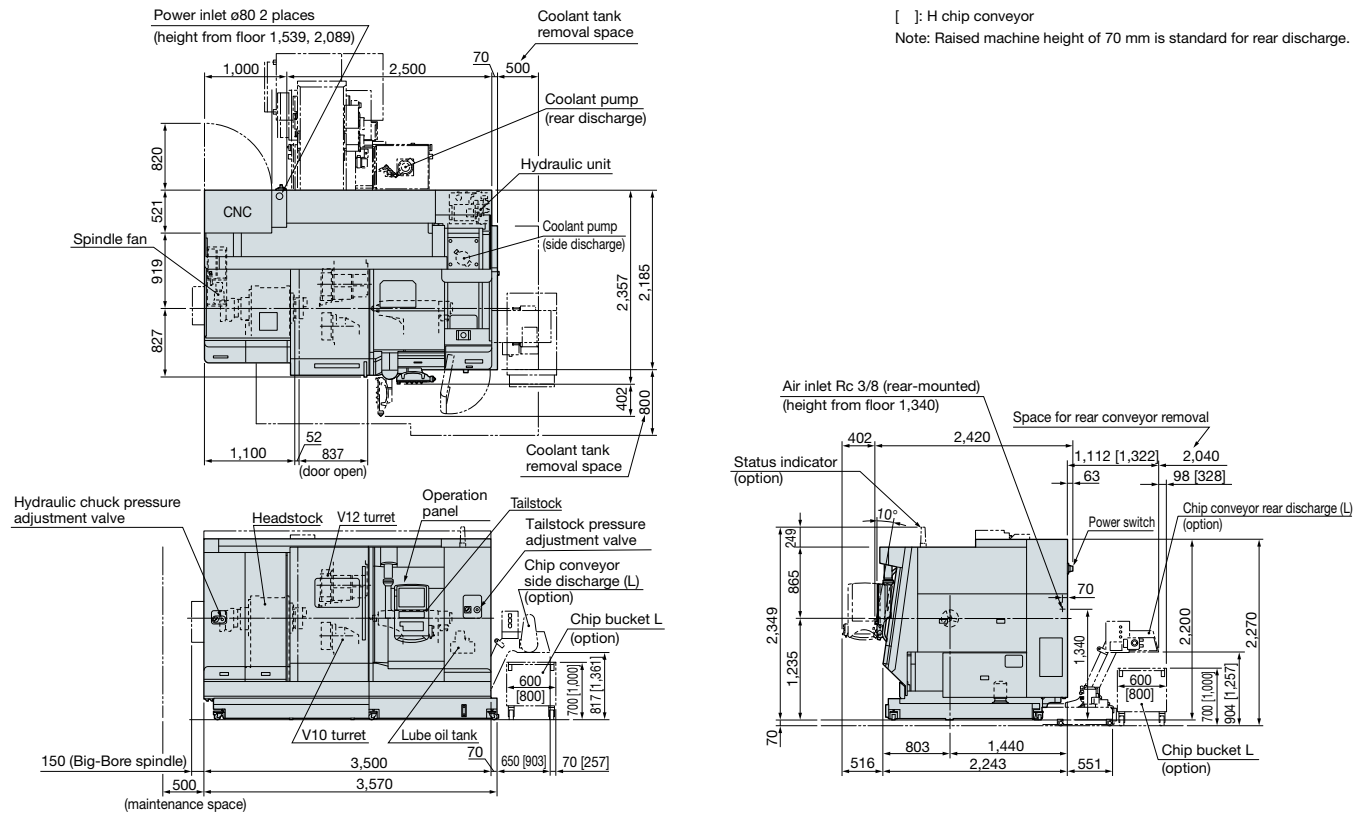
■ LU3000 EX (MY/2MY) DBC 950



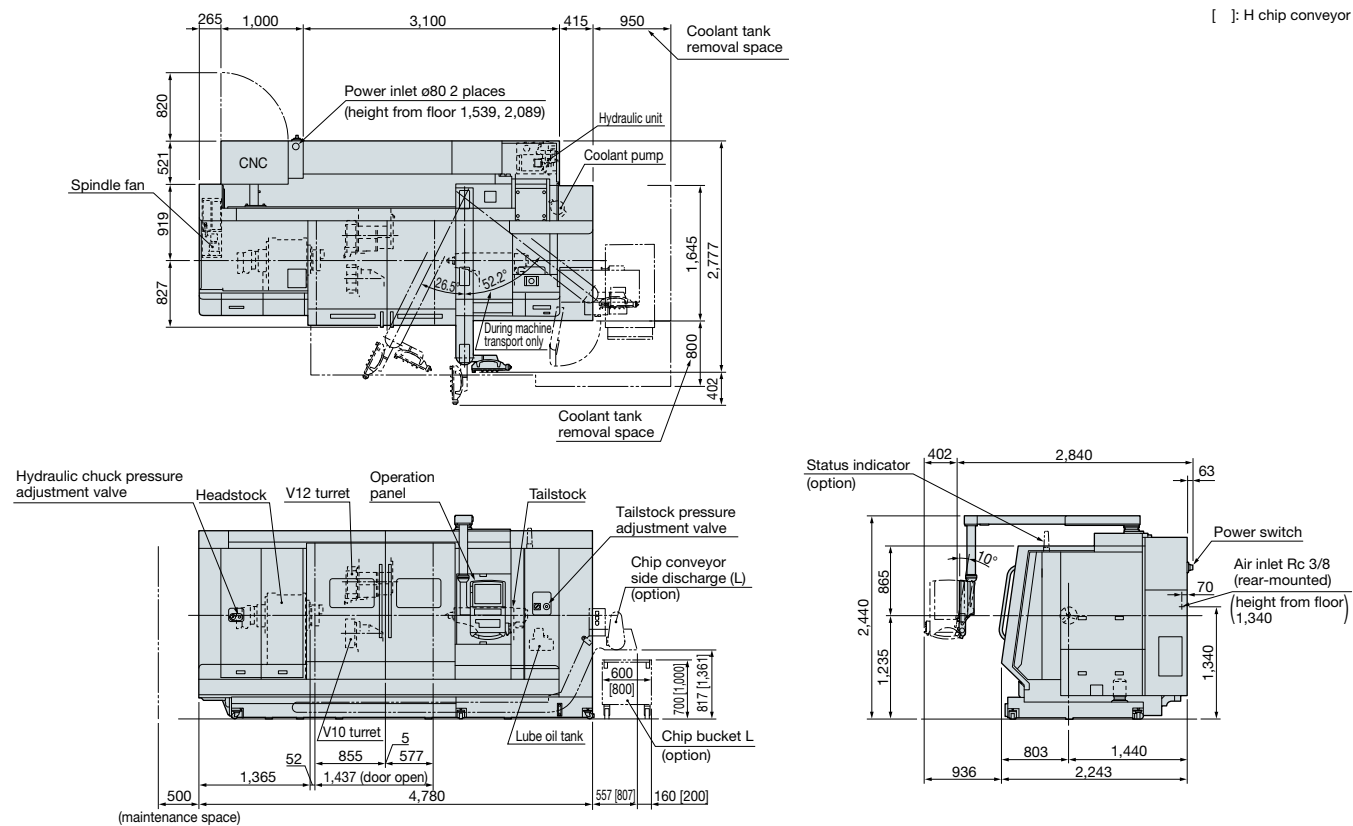
■ LU3000 EX (W/MW) DBC 1000



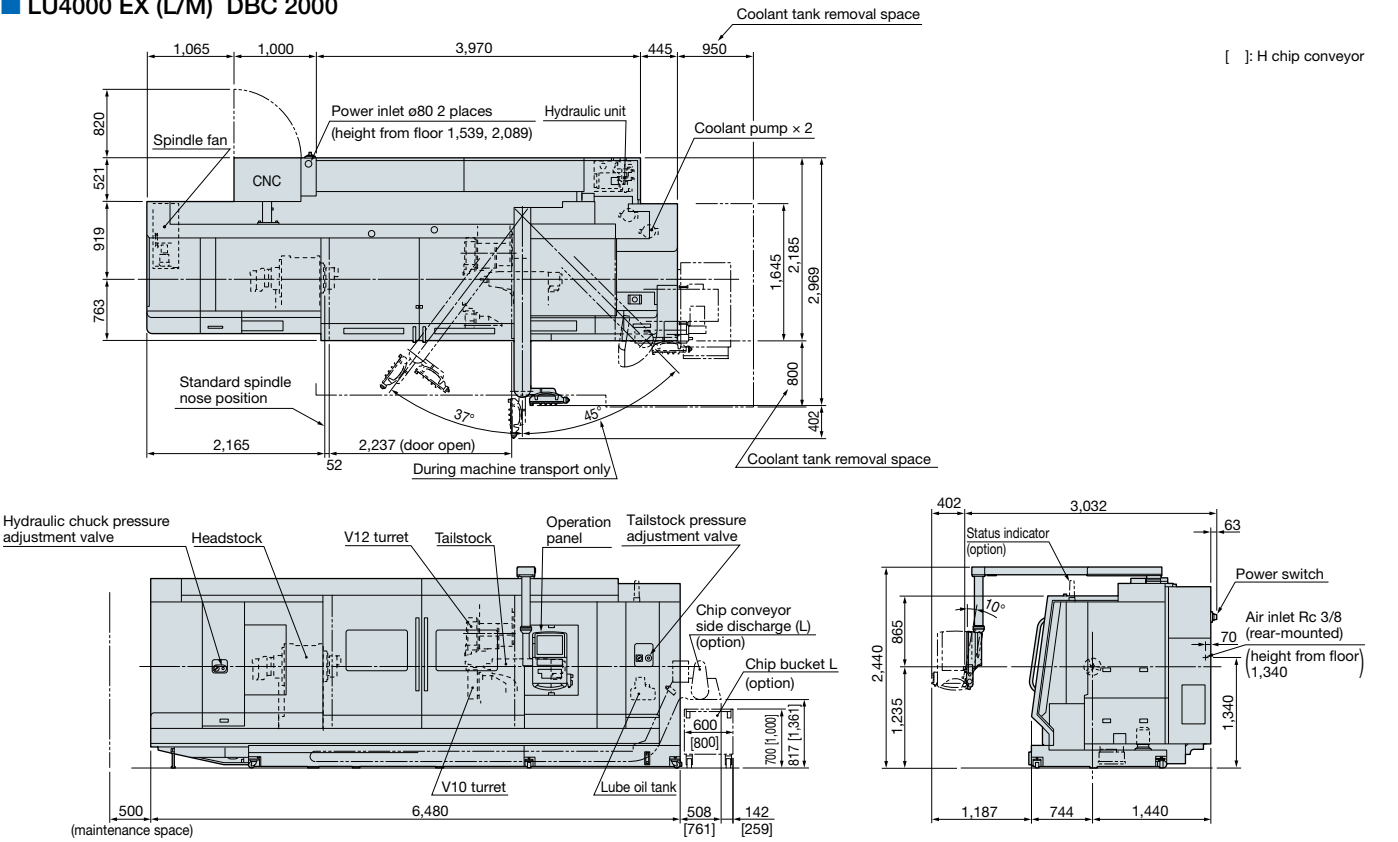
■ LU4000 EX (L/M) DBC 650



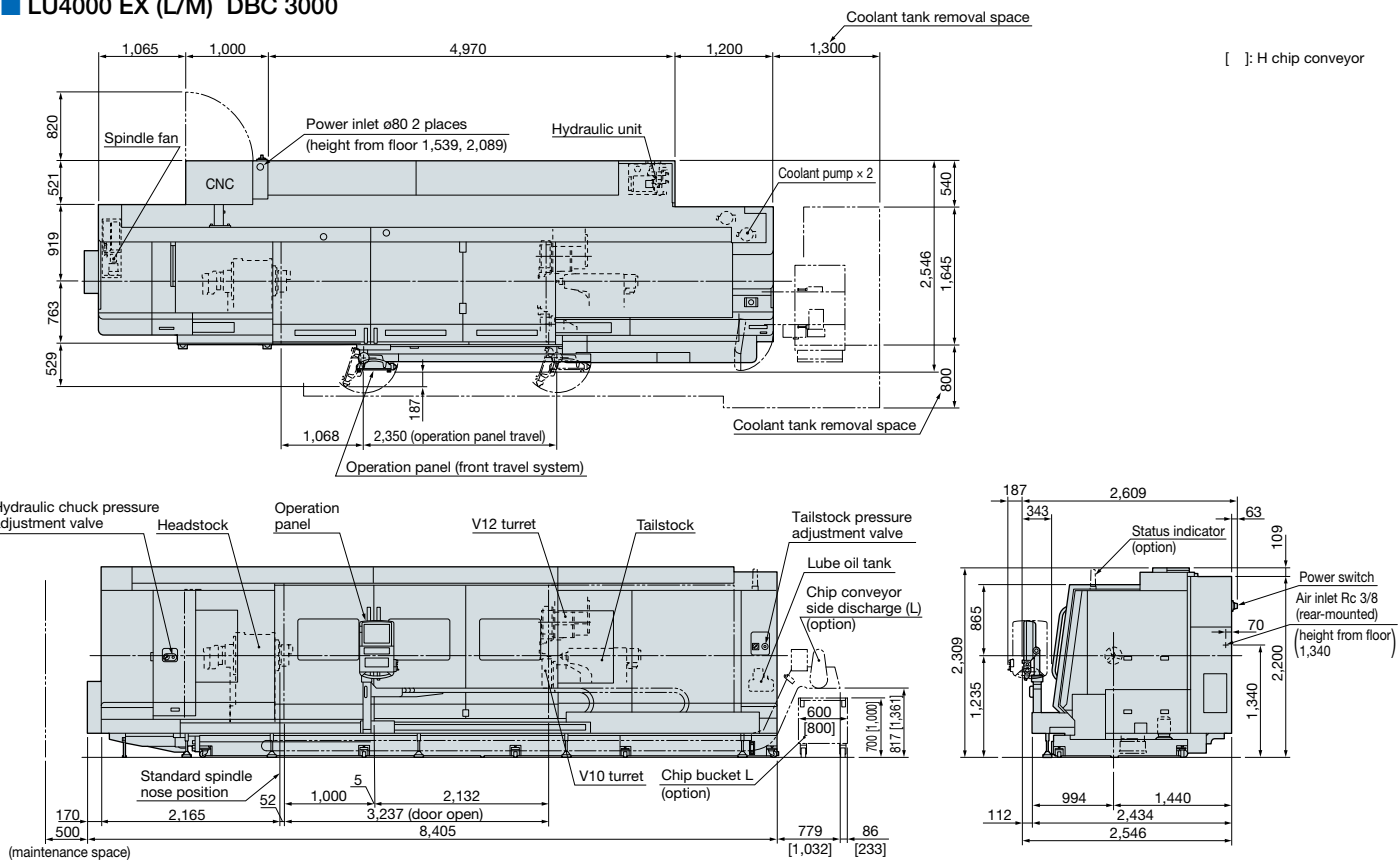
■ LU4000 EX (L/M) DBC 1250



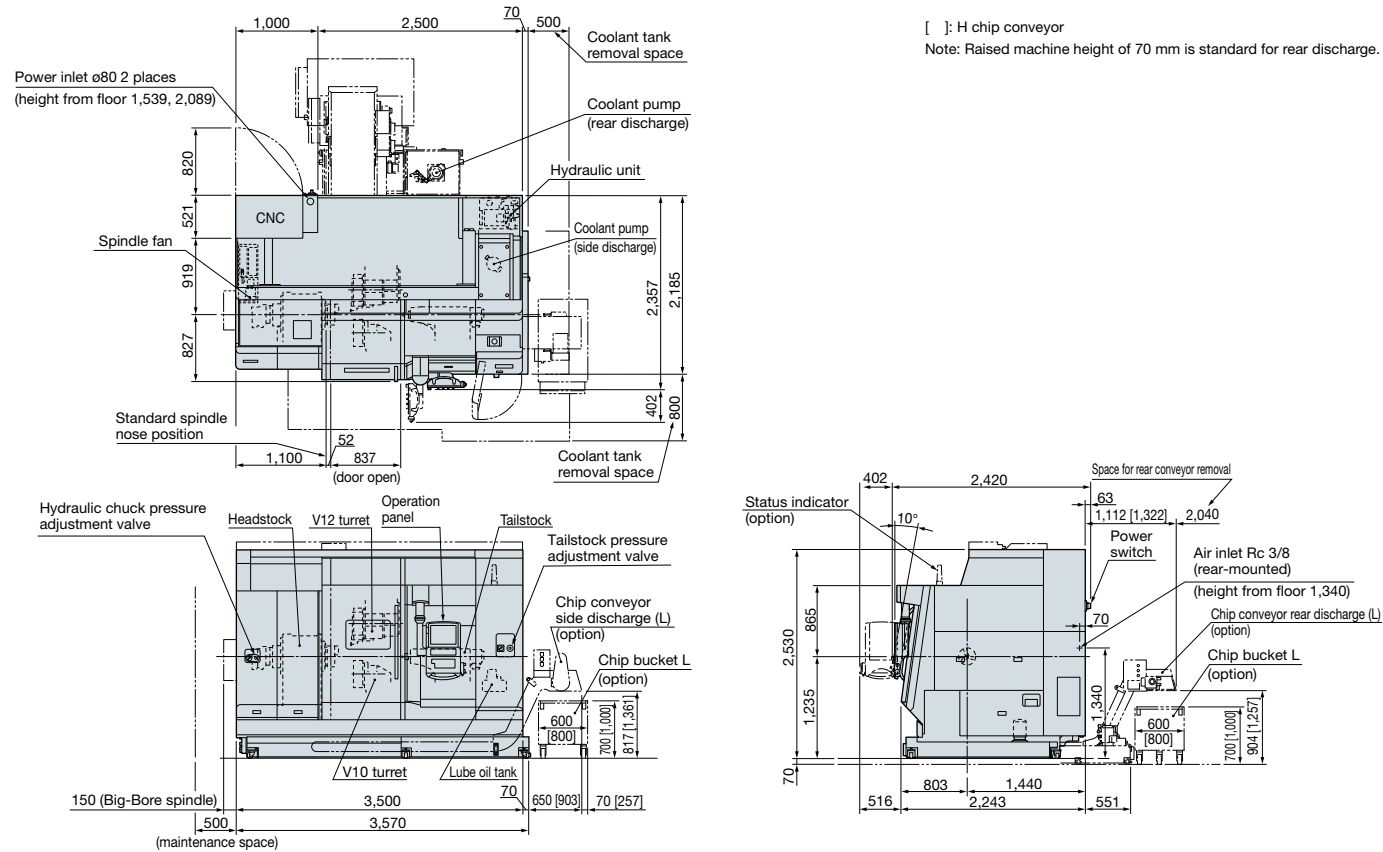
■ LU4000 EX (L/M) DBC 2000



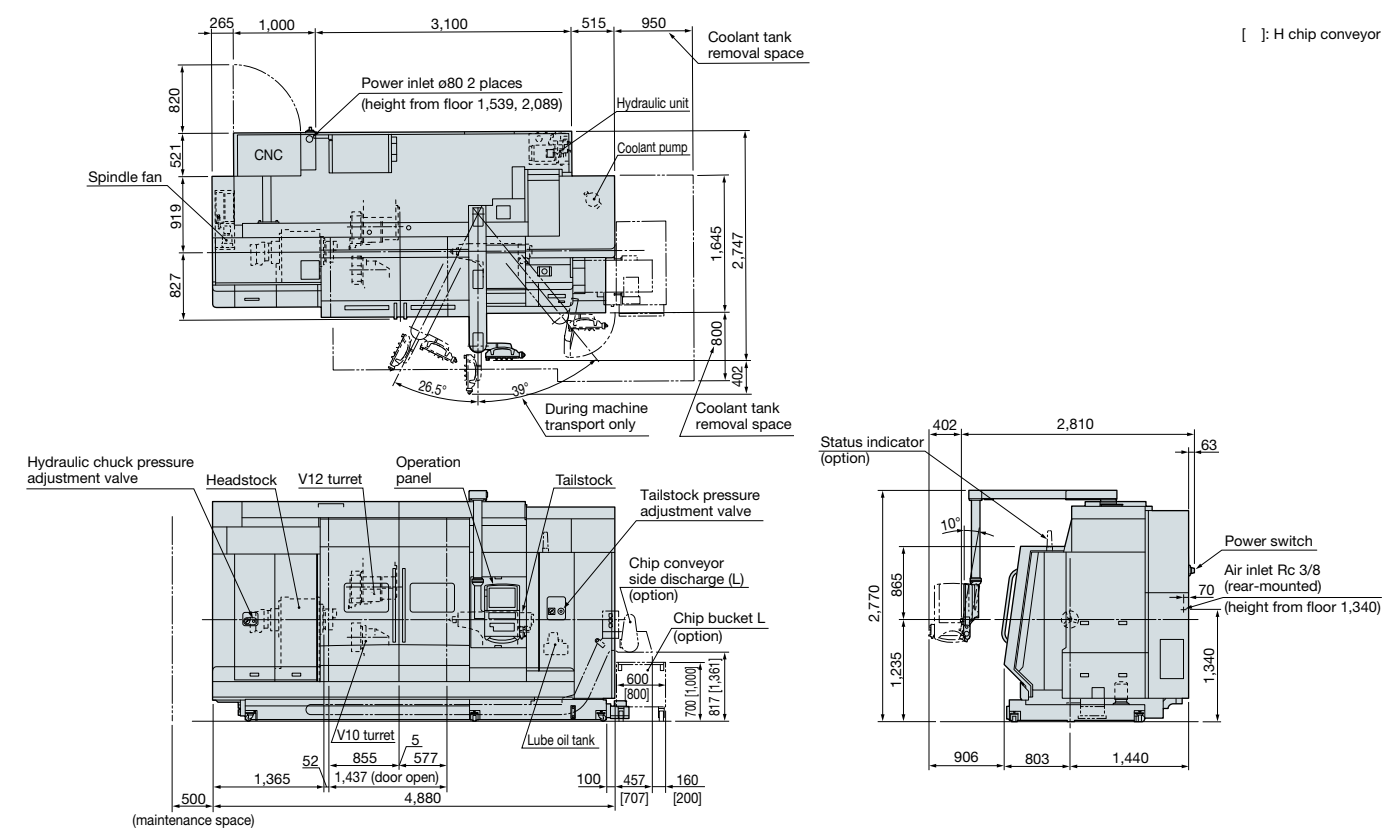
■ LU4000 EX (L/M) DBC 3000



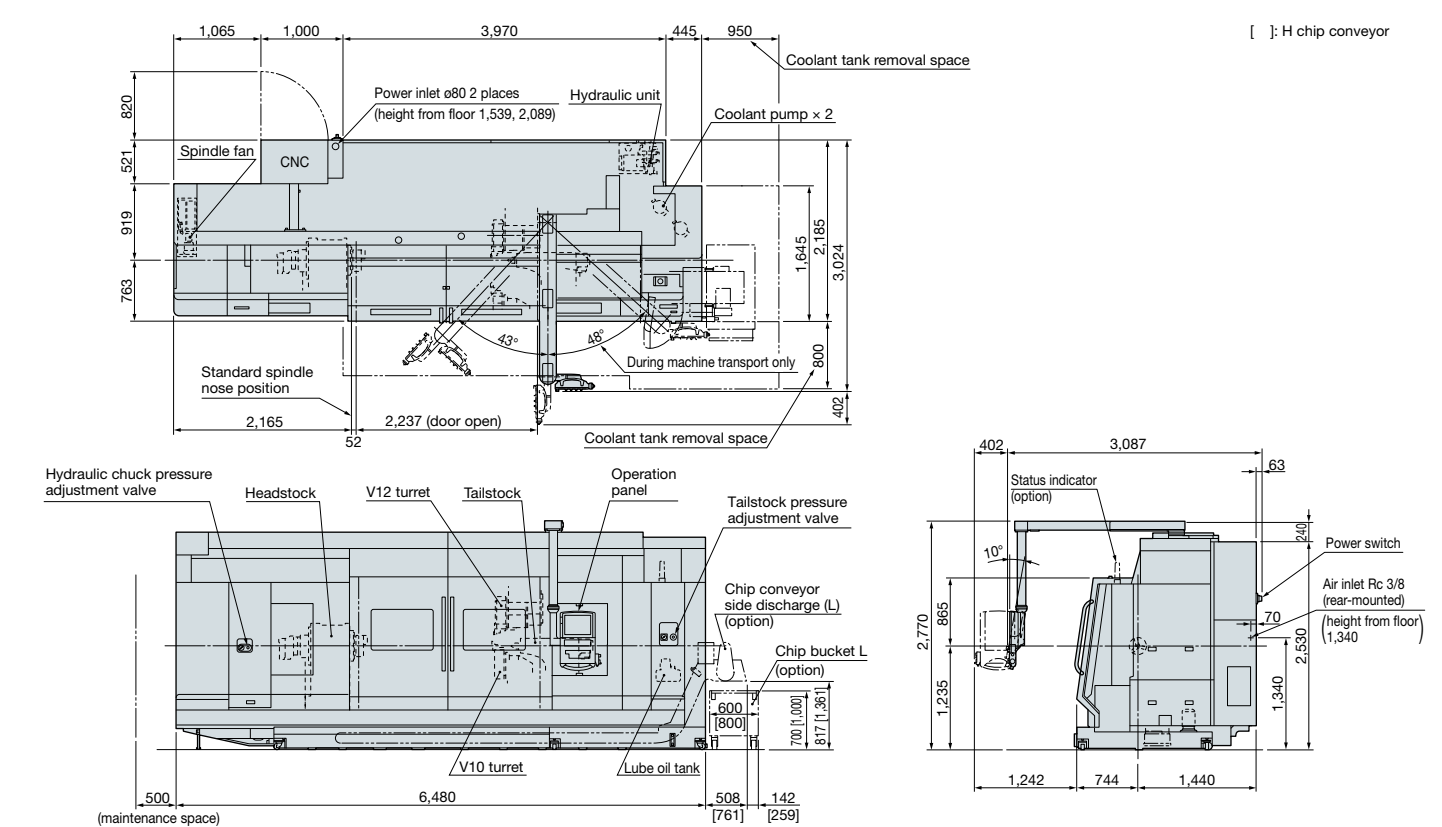
■ LU4000 EX (MY) DBC 650



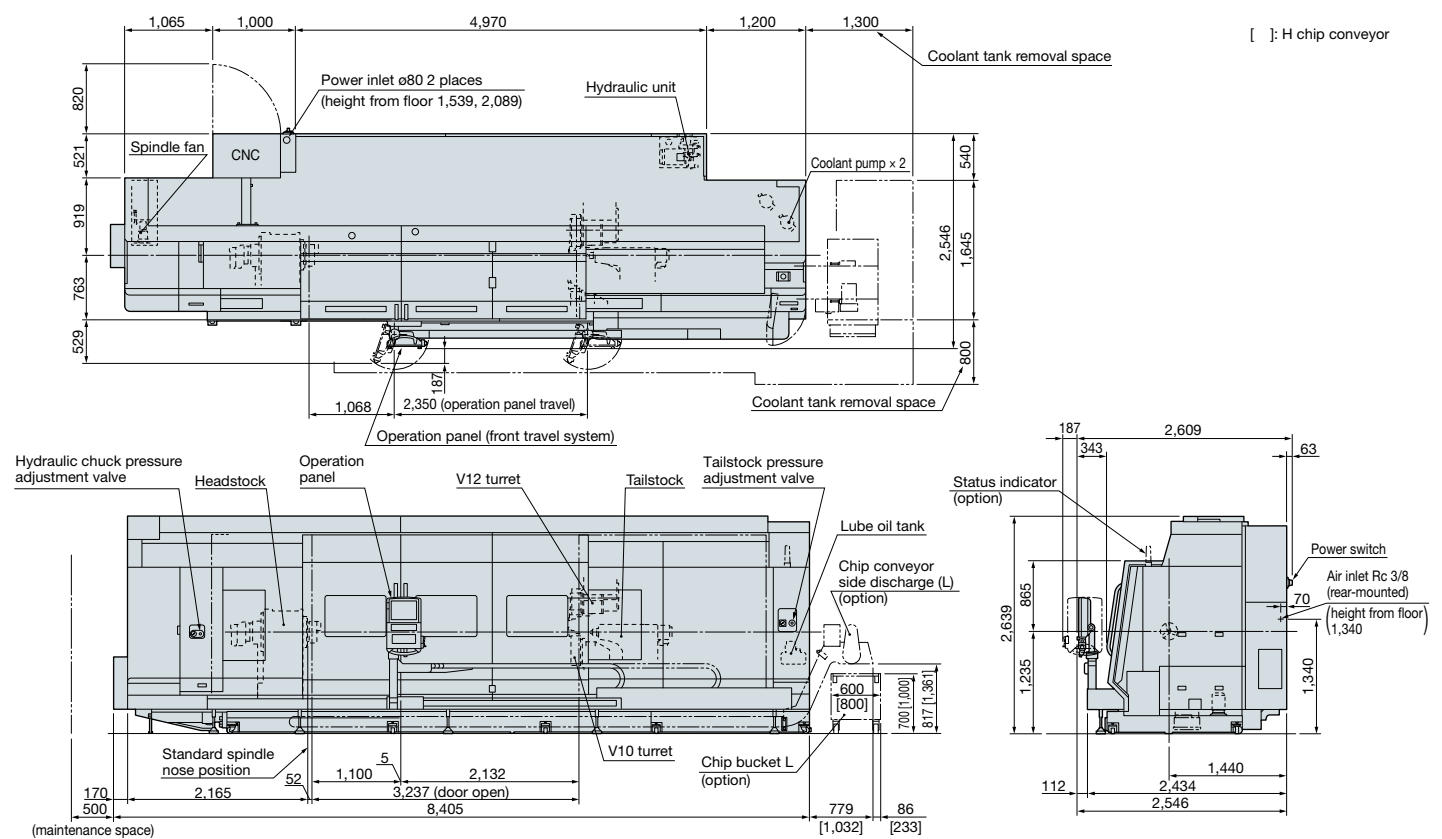
■ LU4000 EX (MY) DBC 1250



■ LU4000 EX (MY) DBC 2000



■ LU4000 EX (MY) DBC 3000



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

● The specifications, illustrations, and descriptions in this brochure vary in different markets and are subject to change without notice.
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