OKUMA

OPEN POSSIBILITIES

2-Saddle CNC Lathes

SIMUL TURN LU EX series

LU3000EX/LU4000EX

2-Saddle CNC Lathes

SIMUL TURN LU EX series

LU3000EX/LU4000EX

Intelligent Technology | Thermo-Friendly Concept | Collision Avoidance System | Machining Navi | ServoNavi

Max power 2-saddle turning centers 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

SIMUL TURN LU3000EX

SIMUL TURN LU4000EX (MY specifications)

Photos include optional specifications.

Max power 2-saddle turning centers for even higher productivity

Shaft shapes are machined with high efficiency

- Part name : Spindle
- Size : ø145 × 465 mm

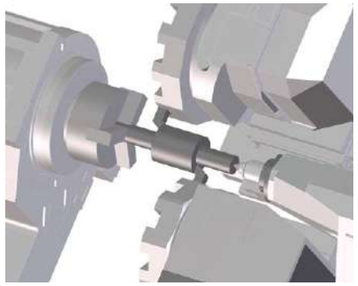
- Part name : Drive shaft
- Size : ø100 × 500 mm

- Part name : Worm screw
- Size : ø85 × 500 mm

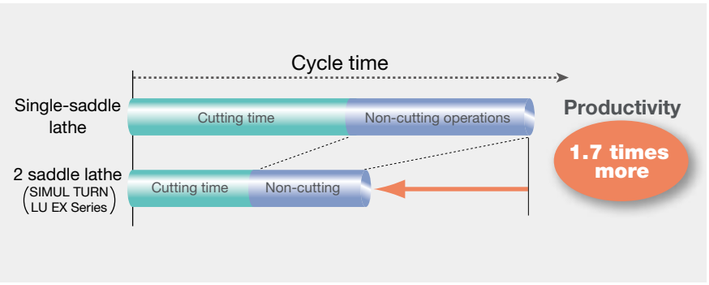
Many types of machining with the flexibility of 4 axes

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

In other words, simultaneous OD/OD or ID/OD operations drastically reduce cycle times. In addition with optional turnaround stand and/or a steadyrest attached to the lower turret—the possibilities are endless.

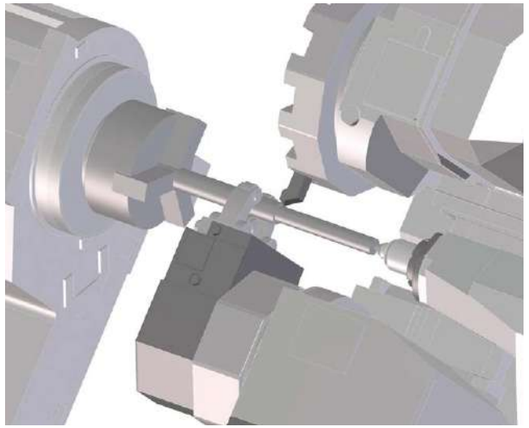


High-efficiency machining from simultaneous 4-axis turning



Turning long shafts with a steadyrest—without chatter

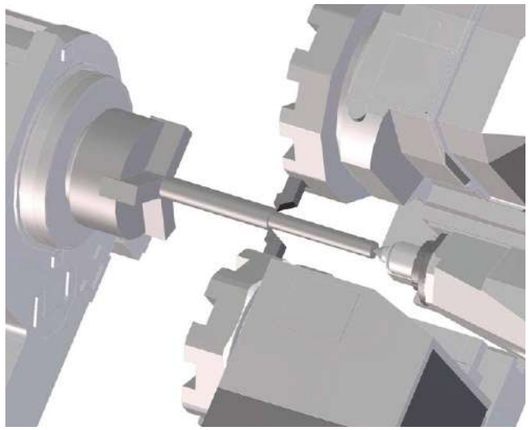
A steadyrest (optional) mounted on the lower turret does provide steady workpiece support. With an NC programmed upper turret and simultaneous control, long shafts will always be supported near the cutting point.



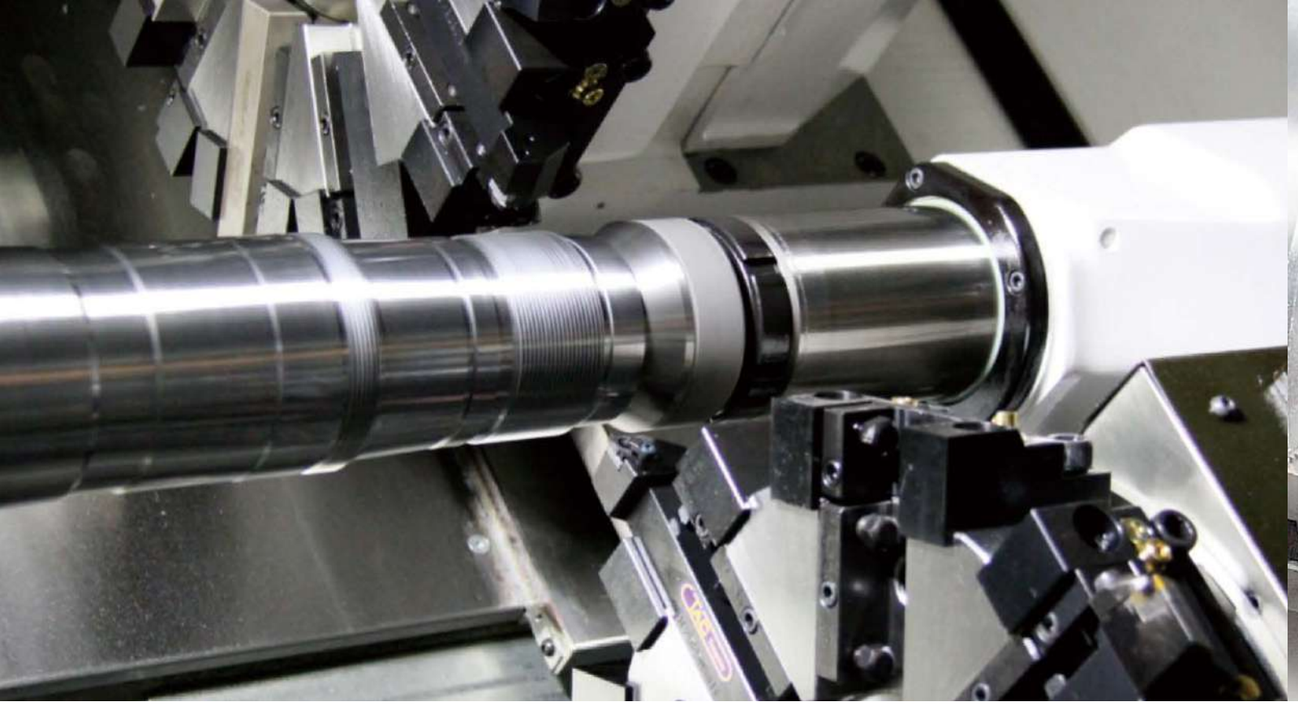
Prevents chatter with steadyrest support

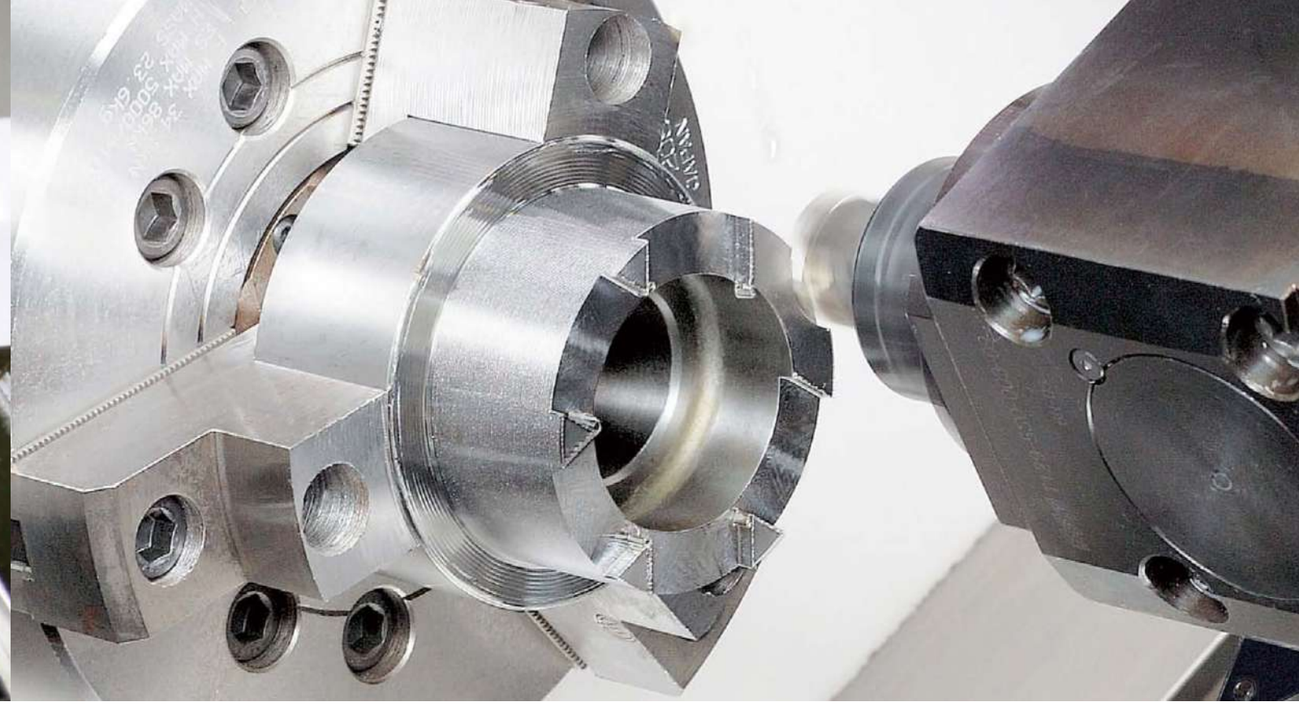
Balanced cutting for highly efficient turning of long workpieces

With balanced turning, tool passes can be reduced by a half. Cycle times are also reduced considerably, and chatter-free.

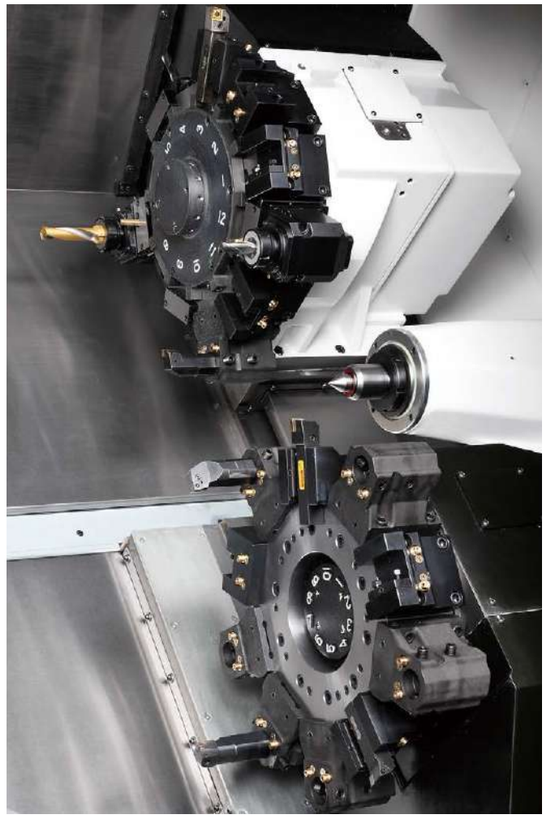


Balanced cutting prevents chatter during machining of long workpieces





Highly accurate machining of shafts



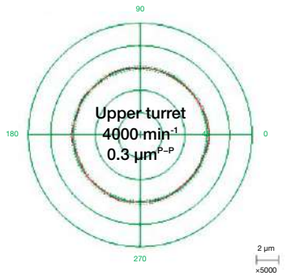
Wide working ranges for upper and lower turrets

X-axis travel	LU3000 EX	LU4000 EX
Upper turret	260 mm	300 mm
Lower turret	160 mm	195 mm

Example of high accuracy machining (LU3000 EX actual data)

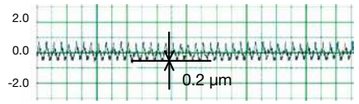
Roundness

● 0.3 µm (upper turret)/0.4 µm (lower turret)



Surface roughness (tool edge uniformity)

● 0.2 µm (upper turret)/0.5 µm (lower turret)



Powerful machining and rapid movements mean shorter cycle times

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

Turning

	<LU3000 EX>	<LU4000 EX>
	Heavy-duty: 4.4 mm² (379 cm³/min)	Heavy-duty: 6.0 mm² (648 cm³/min)
● OD (S45C)		
Cutting speed	150 m/min	96 m/min
Cutting depth	8 mm	10 mm
Feed rate	0.55 mm/rev	0.6 mm/rev
● ø63 carbide insert drill (S45C)		ø63 carbide insert drill
Cutting speed	180 m/min	150 m/min
Feed rate	0.23 mm/rev	0.23 mm/rev

Milling

	<LU3000 EX>	<LU4000 EX>
	Chip volume: 240 cm³/min	Chip volume: 240 cm³/min
● 7-Flute, carbide, ø20-mm end mill (S45C)		7-Flute, carbide, ø20-mm end mill
Cutting speed	200 m/min	200 m/min
Cutting depth	18 mm	18 mm
Feed rate	1.4 mm/rev	1.4 mm/rev
Chip volume	240 cm³/min	240 cm³/min
● ø20 carbide drill (S45C)		ø28 carbide drill
Cutting speed	135 m/min	90 m/min
Feed rate	0.25 mm/rev	0.20 mm/rev
● Tapping (S45C)	M20 P2.5	M24 P3

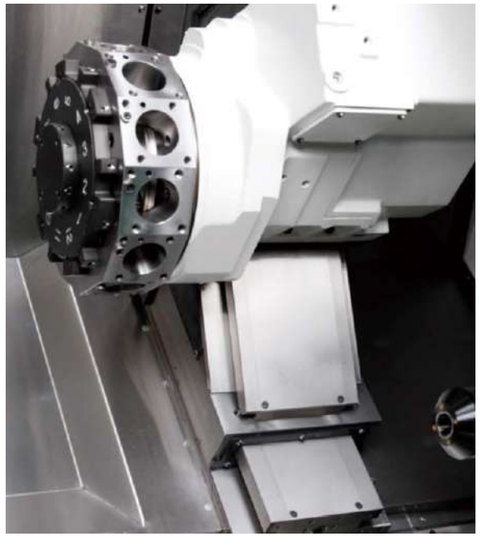
Note: The “actual data” referred to above for this brochure represent examples, and may not be obtained due to differences in specifications, environmental conditions during measurement, tooling, cutting, and other conditions.

Quick moving components shorten non-cutting times

Rapid feedrates X axis 25 m/min, Z axis 30 m/min

Turret indexing time 0.1 sec/index (LU3000 EX), 0.2 sec/index (LU4000 EX)

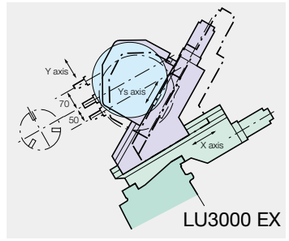
Achieve the best production system with our wide-ranging lineup



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

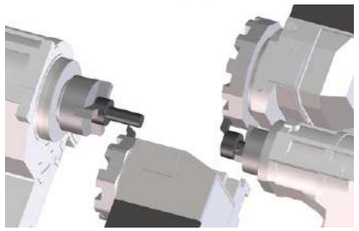
A variety of milling operations can be accommodated with high-accuracy, wide-range Y-axis travel using a double slide system. Achieves complete multitasking with a single chucking (MY specifications).

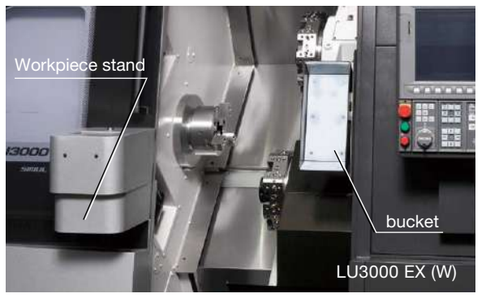
	LU3000 EX	LU4000 EX
Y-axis-travel	120 mm (+70 to –50)	140 mm (+70 to –70)
Y-axis rapid traverse	12.5 m/min	12.5 m/min



Sub-spindle for integrated front/back (1 machine) operations

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, workpiece storage space and post-process machines are unnecessary. (LU3000 EX only)





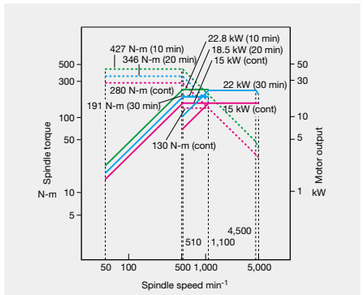
Simple automation with parts catcher (optional)

Automation can be achieved easily with a simple mechanism in which the bucket swings and discharges workpieces outside the machine.

Spindle torque/output diagram

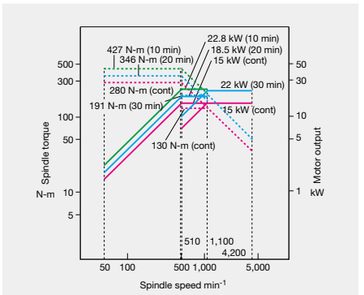
LU3000 EX Turning spindle

Spindle speed 5,000 min^{-1}
Output 22/15 kW (30 min/cont)
Torque 427/280 N-m (10 min/cont)



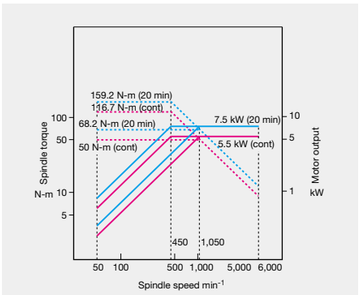
LU3000 EX Big-Bore spindle (Optional)

Spindle speed 4,200 min^{-1}
Output 22/15 kW (30 min/cont)
Torque 427/280 N-m (10 min/cont)



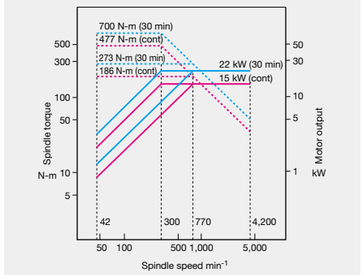
LU3000 EX (W) Sub-spindle

Spindle speed 6,000 min^{-1}
Output 7.5/5.5 kW (20 min/cont)
Torque 159.2/116.7 N-m (20 min/cont)



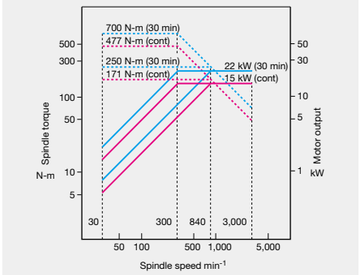
LU4000 EX Turning spindle

Spindle speed 4,200 min^{-1}
Output 22/15 kW (30 min/cont)
Torque 700/477 N-m (30 min/cont)



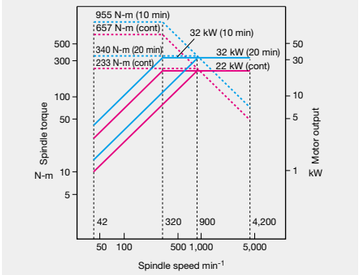
LU4000 EX Big-Bore spindle (Optional)
LU3000 EX Super Big-Bore spindle (Optional)

Spindle speed 3,000 min^{-1}
Output 22/15 kW (30 min/cont)
Torque 700/477 N-m (30 min/cont)



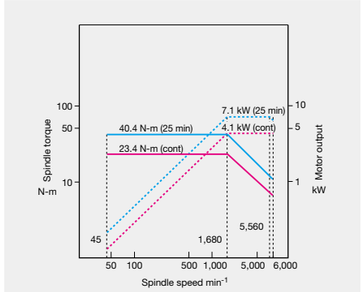
LU4000 EX High Power Spindle (Optional)

Spindle speed 4,200 min^{-1}
Output 32/22 kW (20 min/cont)
Torque 955/657 N-m (10 min/cont)



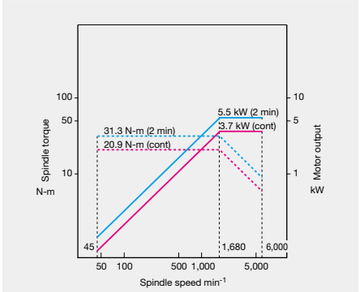
LU3000 EX (M/2M/MY)
Upper turret milling tool spindle

Spindle speed 6,000 min^{-1}
Output 7.1/4.1 kW (25 min/cont)
Torque 40.4/23.4 N-m (25 min/cont)



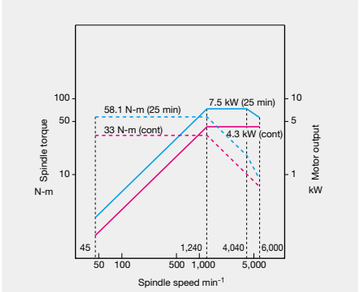
LU3000 EX (2M/2MY)
Lower turret milling tool spindle

Spindle speed 6,000 min^{-1}
Output 5.5/3.7 kW (2 min/cont)
Torque 31.3/20.9 N-m (2 min/cont)



LU4000 EX (M/MY) Milling tool spindle

Spindle speed 6,000 min^{-1}
Output 7.5/4.3 kW (25 min/cont)
Torque 58.1/33 N-m (25 min/cont)



The unique approach of "accepting temperature "changes."

Manageable Deformation—Accurately Controlled
Thermo-Friendly Concept

Okuma's Thermo-Friendly is a structurally designed system that provides astonishing machining accuracy.
It frees the machinist from troublesome offsets and machine warm-ups—is superb for long runs, multitasking, front/backend work, plus Y-axis applications.

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.

Machine start up
Machining restart
Room temp change

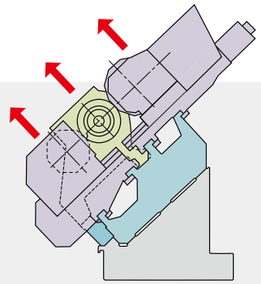
High dimensional stability

Simple machine construction

Machine designs that equalize ambient temperatures

Box slant bed

The innovative box slant bed gives you far more consistently higher accuracies than conventional lathes.



ECO suite

Only the necessary unit operates

Operation only for the time required for each unit
ECO Idling Stop

Idling time can be set by individual unit for the spindle, feed shaft, and peripheral equipment. By reducing the idling time, power consumption can also be reduced.

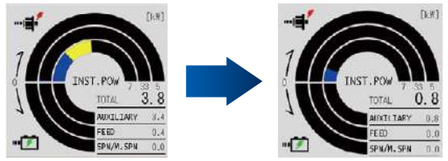
● Example of equipment that can use Idling Stop

On-the-spot check of energy savings
ECO Power Monitor

Power is shown individually for spindle, feed axis, and peripheral equipment on OSP operation screen. The energy-saving effect from peripheral equipment stopped with ECO Idling Stop can be confirmed on the spot.

● Intermittent/linked operation of chip conveyor, or mist collector during machining
"ECO Operation" (Optional)

● Example of Power Monitor check



Before ECO Idling Stop　　After ECO Idlling Stop

The displayed values are one example.

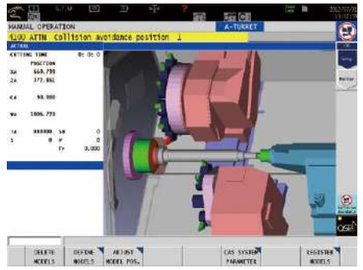
World's first "Collision-Free Machine"

Collision prevention
Collision Avoidance System

(Optional)

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.



Virtual machine (interference check)

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

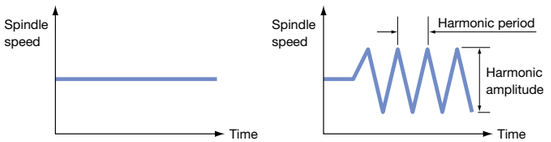
Especially useful for machine operators setting up a job, collision avoidance in manual mode provides collision-free confidence and faster machining preparations.

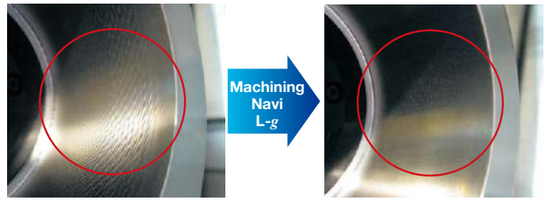
Find the best cutting condition for your application

Cutting condition search for turning
Machining Navi L-*g* (Harmonic Spindle Speed Control)

(Optional)

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 cycles times reduced with use of the optimum cutting conditions, producing significant effects in deep-hole boring bar, threading, and grooving applications.

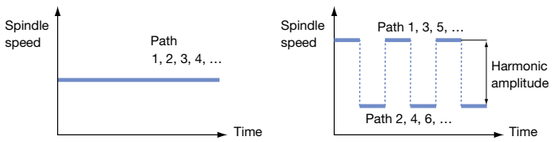


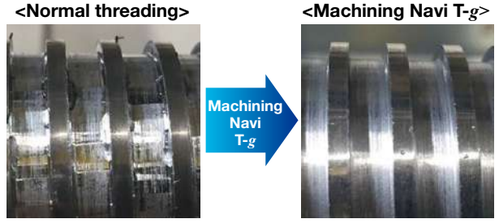


Cutting condition search in threading
Machining Navi T-*g*

(Optional)

When chatter occurs in threading, general methods to resolve the problem have been to either lower cutting conditions at the expense of productivity, or to use special chatter-resistant tools at some cost. Machining Navi T-*g* (threading) provides optimum control, increasing or decreasing spindle speed on each path to inhibit the periodic vibrations that are a cause of chatter.





Chatter marks　　Smooth surface, clean finished threads

〈LU3000 EX〉

Machine Specifications

Item		unit	LU3000 EX (L)			LU3000 EX (M)		
			2ST	2SC × 600	2SC × 1000	2ST	2SC × 600	2SC × 1000
Capacity	Swing over bed	mm (in.)	ø580 (ø22.84)					
	Max turning diameter	mm (in.)	U: ø410/L: ø250 (U: ø16.14/L: ø9.84)			U: ø340/L: ø220 (U: ø13.39/L: ø8.66)		
	Max work length	mm (in.)	350 (13.78)	600 (23.63)	1,000 (39.37)	350 (13.78)	600 (23.63)	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: 24.22)		U: 1,085/L: 1,015 (U: 42.72/L: 39.96)	U: 685/L: 615 (U: 26.97/L: 24.22)		U: 1,085/L: 1,015 U: 42.72/L: 39.96)
	Y-axis	mm (in.)	–					
	C-axis	deg	–			360 (0.001 unit)		
Spindle	Speed	min^{-1}	50 to 5,000 [42 to 4,200, 30 to 3,000]					
	Speed ranges		Two auto ranges (motor coil switching ranges)					
	Spindle noze		JIS A2-6 [JIS A2-8, JIS A2-11]					
	Bore dia	mm (in.)	ø80 [ø91, ø112] (ø3.15 [ø3.59, ø4.73])					
	Front bearing dia	mm (in.)	ø120 [ø140, ø160] (ø4.73 [ø5.52, 6.30])					
Turret	Type		U: V12/L: V8			U: Multitasking V12 /L: V8 (L radial)		
	No. of tools		U: 12/L: 8			U: 12 (L/M) / L: 8		
	OD tool shank height	mm (in.)	□25 (0.98)					
	ID tool shank dia	mm (in.)	ø40 (ø1.57)					
	Turret index time	sec/1 index	0.1					
Milling tool spindle	Spindle speed	min^{-1}	–			45 to 6,000		
Feedrates	Rapid traverse	m/min (fpm)	X: 25, Z: 30 (X: 82/Z: 98)			X: 25, Z: 30 (X: 82/Z: 98), C: 200 min^{-1}		
Tailstock	Quill dia	mm (in.)	–	ø90 (ø3.54)		–	ø90 (ø3.54)	
	Quill bore taper		–	MT.No.5		–	MT.No.5	
	Quill travel	mm (in.)	–	120 (4.72)		–	120 (4.72)	
Motors	Spindle	kW (hp)	22/15 (30/20) (30 min/cont)					
	Milling tool	kW (hp)	–			7.1/4.1 (25 min/cont)		
	Axis drive	kW (hp)	XA: 2.8 (3.7), XB: 2.2 (2.9), ZA: 3.5 (4.7) , ZB: 3.5 (4.7)					
	Coolant pump (50 Hz/60 Hz)	kW (hp)	0.55/0.75 (0.7/1)					
Machine size	Height*	mm (in.)	2,080 (82.89) *		2,230 (87.80)	2,080 (82.89) *		2,230 (87.80)
	Floor space	mm (in.)	2,950 × 2,176 (116.14 × 85.67)		3,980 × 2,478 (156.70 × 97.56)	2,950 × 2,176 (116.14 × 85.67)		3,980 × 2,478 (156.70 × 97.56)
	Weight (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-P300LA					

Item		unit	LU3000 EX (2M)			LU3000 EX (MY)			LU3000 EX (2MY)		
			2ST	2SC × 600	2SC × 1000	2ST	2SC × 550	2SC × 950	2ST	2SC × 550	2SC × 950
Capacity	Swing over bed	mm (in.)	ø580 (ø22.84)								
	Max turning diameter	mm (in.)	U: ø340/L: ø180 (U: ø13.39/L: ø7.09)			U: ø340/L: ø220 (U: ø13.39/L: ø8.66)			U: ø340/L: ø180 (U: ø13.39/L: ø7.09)		
	Max work length	mm (in.)	350 (13.78)	600 (23.63)	1,000 (39.37)	350 (13.78)	550 (21.65)	950 (37.40)	350 (13.78)	550 (21.65)	950 (37.40)
Travels	X-axis	mm (in.)	U: 260/L: 160 (U: 10.24 / L: 6.30)								
	Z-axis	mm (in.)	U: 685/L: 600 (U: 26.97/L: 24.22)		U: 1,085/L: 1,000 (U: 42.72/L: 39.37)	U: 630/L: 615 (U: 26.97/L: 24.22)		U: 1,030/L: 1,015 (U: 40.55/L: 39.96)	U: 630/L: 600 (U: 26.97/L: 23.63)		U: 1,030/L: 1,000 (U: 40.55/L: 39.37)
	Y-axis	mm (in.)	–			120 (4.72)					
	C-axis	deg	360 (0.001 unit)								
Spindle	Speed	min^{-1}	50 to 5,000 [42 to 4,200, 30 to 3,000]								
	Speed ranges		Two auto ranges (motor coil switching ranges)								
	Spindle noze		JIS A2-6 [JIS A2-8, JIS A2-11]								
	Bore dia	mm (in.)	ø80 [ø91, ø112] (ø3.15 [ø3.59, ø4.73])								
	Front bearing dia	mm (in.)	ø120 [ø140, ø160] (ø4.73 [ø5.52, 6.30])								
Turret	Type		U: Multitasking V12 / L: Multitasking V8			U: Multitasking V12 /L: V8 (L radial)			U: Multitasking V12 / L: Multitasking V8		
	No. of tools		U: 12 (L/M) / L: 8 (L/M)			U: 12 (L/M) / L: 8			U: 12 (L/M) / L: 8 (L/M)		
	OD tool shank height	mm (in.)	□25 (0.98)								
	ID tool shank dia	mm (in.)	ø40 (ø1.57)								
	Turret index time	sec/1 index	0.1								
Milling tool spindle	Spindle speed	min^{-1}	45 to 6,000								
Feedrates	Rapid traverse	m/min (fpm)	X: 25, Z: 30 (X: 82/Z: 98), C: 200min^{-1}			X: 25, Z: 30 (X: 82/Z: 98), Y: 12.5 (Y: 41), C: 200min^{-1}					
Tailstock	Quill dia	mm (in.)	–	ø90 (ø3.54)		–	ø90 (ø3.54)		–	ø90 (ø3.54)	
	Quill bore taper		–	MT.No.5		–	MT.No.5		–	MT.No.5	
	Quill travel	mm (in.)	–	120 (4.72)		–	120 (4.72)		–	120 (4.72)	
Motors	Spindle	kW (hp)	22/15 (30/20) (30 min/cont)								
	Milling tool	kW (hp)	U: 7.1/4.1 (25 min/cont) L: 5.5/3.7 (2 min/cont)			7.1/4.1 (25 min/cont)			U: 7.1/4.1 (25 min/cont) L: 5.5/3.7 (2 min/cont)		
	Axis drive	kW (hp)	XA: 2.8 (3.7), XB: 2.2 (2.9), ZA: 3.5 (4.7) , ZB: 3.5 (4.7)			XA: 2.8 (3.7), XB: 2.2 (2.9), ZA: 3.5 (4.7) , ZB: 3.5 (4.7), Y: 3.5 (4.7)					
	Coolant pump (50 Hz/60 Hz)	kW (hp)	0.55/0.75 (0.7/1)								
Machine size	Height*	mm (in.)	2,080 (82.89) *		2,230 (87.80)	2,507 (98.70) *		2,677 (105.39)	2,507 (98.70) *		2,677 (105.39)
	Floor space	mm (in.)	2,950 × 2,176 (116.14 × 85.67)		3,980 × 2,478 (156.70 × 97.56)	2,950 × 2,176 (116.14 × 85.67)	3,980 × 2,478 (156.70 × 97.56)		2,950 × 2,176 (116.14 × 85.67)		3,980 × 2,478 (156.70 × 97.56)
	Weight (w/ CNC)	kg (lb)	6,500 (14,300)	6,800 (14,960)	8,300 (18,260)	7,000 (15,430)	7,300 (16,090)	8,800 (19,400)	7,000 (15,430)	7,300 (16,090)	8,800 (19,400)
CNC			OSP-P300LA								

Item		unit	LU3000 EX (W)		LU3000 EX (MW)		LU3000 EX (2MW)	
			2SW × 600	2SW × 1000	2SW × 600	2SW × 1000	2SW × 600	2SW × 1000
Capacity	Swing over bed	mm (in.)	ø580 (ø22.84)		ø580 (ø22.84)			
	Max turning diameter	mm (in.)	U: ø410/L: ø250 (U: ø16.14/L: ø9.84)		U: ø340/L: ø220 (U: ø13.39/L: ø8.66)		U: ø340/L: ø180 (U: ø13.39/L: ø7.09)	
	Max work length	mm (in.)	600 (23.63)	1,000 (39.37)	600 (23.63)	1,000 (39.37)	600 (23.63)	1,000 (39.37)
Travels	X-axis	mm (in.)	U: 260/L: 160 (U: 10.24 / L: 6.30)		U: 260/L: 160 (U: 10.24 / L: 6.30)			
	Z-axis	mm (in.)	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: 576/L: 595 (U: 22.68 / L: 23.43)	U: 976/L: 995 (U: 38.43 / L: 39.17)
	C-axis	deg	–		360 (0.001 unit)			
Spindle	Speed	min^{-1}	Main: 50 to 5,000 [42 to 4,200, 30 to 3,000], Sub: 50 to 6,000		Main: 50 to 5,000 [42 to 4,200, 30 to 3,000], Sub: 50 to 6,000			
	Speed ranges		Two auto ranges (motor coil switching ranges)		Two auto ranges (motor coil switching ranges)			
	Spindle noze		Main: JIS A2-6 [JIS A2-8, JIS A2-11], Sub: ø140 flat		Main: JIS A2-6 [JIS A2-8, JIS A2-11], Sub: ø140 flat			
	Bore dia	mm (in.)	Main: ø80 [ø91, ø112] (ø3.15 [ø3.59, ø4.73]), Sub: ø43 (1.69)		Main: ø80 [ø91, ø112] (ø3.15 [ø3.59, ø4.73]), Sub: ø43 (1.69)			
	Front bearing dia	mm (in.)	Main: ø120 [ø140, ø160] (ø4.73 [ø5.52, 6.30]), Sub: ø80 (3.15)		Main: ø120 [ø140, ø160] (ø4.73 [ø5.52, 6.30]), Sub: ø80 (3.15)			
Turret	Type		U: V12/LV8		U: Multitasking V12 /L: V8 (L radial)		U: Multitasking V12 / L: Multitasking V8	
	No. of tools		U: 12/L: 8		U: 12 (L/M) / L: 8		U: 12 (L/M) / L: 8 (L/M)	
	OD tool shank height	mm (in.)	□25 (0.98)		□25 (0.98)			
	ID tool shank dia	mm (in.)	ø40 (ø1.57)		ø40 (ø1.57)			
	Turret index time	sec/1 index	0.1		0.1			
Milling tool spindle	Spindle speed	min^{-1}	–		45 to 6,000			
Feedrates	Rapid traverse	m/min (fpm)	X: 25, Z: 30, W: 15 (X: 82/Z: 98 W: 49)		X: 25, Z: 30 (X: 82/Z: 98), W: 15 (W: 49), C: 200 min^{-1}			
Motors	Spindle	kW (hp)	Main: 22/15 (30/20) (30 min/cont), Sub: 7.5/5.5 (10/7.3) (20 min/cont)		Main: 22/15 (30/20) (30 min/cont), Sub: 7.5/5.5 (10/7.3) (20 min/cont)			
	Milling tool	kW (hp)	–		7.1/4.1 (25 min/cont)		U: 7.1/4.1 (25 min/cont) L: 5.5/3.7 (2 min/cont)	
	Axis drive	kW (hp)	XA: 2.8 (3.7), XB: 2.2 (2.9), ZA: 3.5 (4.7) , ZB: 3.5 (4.7), W: 3.5 (4.7)		XA: 2.8 (3.7), XB: 2.2 (2.9), ZA: 3.5 (4.7) , ZB: 3.5 (4.7), W: 3.5 (4.7)			
	Coolant pump (50 Hz/60 Hz)	kW (hp)	0.55/0.75 (0.7/1)		0.55/0.75 (0.7/1)			
Machine size	Height*	mm (in.)	2,080 (82.89) *	2,230 (87.80)	2,080 (82.89) *	2,230 (87.80)	2,080 (82.89) *	2,230 (87.80)
	Floor space	mm (in.)	3,750 × 2,176 (147.64 × 85.67)	4,040 × 2,478 (159.06 × 97.56)	3,750 × 2,176 (147.64 × 85.67)	4,040 × 2,478 (159.06 × 97.56)	3,750 × 2,176 (147.64 × 85.67)	4,040 × 2,478 (159.06 × 97.56)
	Weight (w/ CNC)	kg (lb)	7,100 (15,620)	8,600 (18,920)	7,200 (15,840)	8,700 (19,140)	7,200 (15,840)	8,700 (19,140)
CNC			OSP-P300LA		OSP-P300LA			

[ ]: Optional *Raised machine height of 45 mm is standard for rear discharge.

〈LU4000 EX〉

Machine Specifications

Item		unit	LU4000 EX (L)					LU4000 EX (M)					LU4000 EX (MY)				
			2ST	2SC × 650	2SC × 1250	2SC × 2000	2SC × 3000	2ST	2SC × 650	2SC × 1250	2SC × 2000	2SC × 3000	2ST	2SC × 650	2SC × 1250	2SC × 2000	2SC × 3000
Capacity	Swing over bed	mm (in.)	ø695 (ø27.36)					ø695 (ø27.36)									
	Max turning diameter	mm (in.)	U: ø480/L: ø310 (U: ø18.90/L: ø12.20)					U: ø430/L: ø280 (U: ø16.93/L: ø11.02)									
	Max work length	mm (in.)	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)	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)					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: 57.26/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: 57.26/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: 57.26/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.)	–					–					140 (5.51)				
	C-axis	deg	–					360 (Minimum control angle 0.001°)									
Spindle	Speed	min^{-1}	42 to 4,200 [30 to 3,000]					42 to 4,200 [30 to 3,000]									
	Speed ranges		Two auto ranges (motor coil switching ranges)					Two auto ranges (motor coil switching ranges)									
	Spindle noze		JIS A2-8 [JIS A2-11]					JIS A2-8 [JIS A2-11]									
	Bore dia	mm (in.)	ø91 [ø112] (ø3.59 [ø4.73])					ø91 [ø112] (ø3.59 [ø4.73])									
	Front bearing dia	mm (in.)	ø140 [ø160] (ø5.52 [ø6.30])					ø140 [ø160] (ø5.52 [ø6.30])									
Turret	Type		U: V12/L: V10					U: Multitasking V12/L: V10 (L radial)									
	No. of tools	tools	U: 12/L: 10					U: 12 (L/M) / L: 10									
	OD tool shank height	mm (in.)	□25 (0.98)					□25 (0.98)									
	ID tool shank dia	mm (in.)	ø40 (ø1.57)					ø40 (ø1.57)									
	Turret index time	sec/1 index	0.23					0.23									
Milling tool spindle	Spindle speed	min^{-1}	–					45 to 6,000									
Feedrates	Rapid traverse	m/min (fpm)	X: 25, Z: 30 (X: 82/Z: 98)				X: 25, Z: 20 (X: 82/Z: 66)	X: 25, Z: 30 (X: 82/Z: 98), C: 200min^{-1}				X: 25, Z: 20 (X: 82/Z: 66), C: 200min^{-1}	X: 25, Z: 30 (X: 82/Z: 98), Y: 12.5 (Y: 41), C: 200min^{-1}				X: 25, Z: 20, Y: 12.5 (X: 82/Z: 66/Y:41), C: 200min^{-1}
Tailstock	Quill dia	mm (in.)	–	ø120 (ø4.72)				–	ø120 (ø4.72)				–	ø120 (ø4.72)			
	Quill bore taper		–	MT.No5 (revolving center) [MT.No5 (Built-in)]				–	MT.No5 (revolving center) [MT.No5 (Built-in)]				–	MT.No5 (revolving center) [MT.No5 (Built-in)]			
	Quill travel	mm (in.)	–	150 (5.91)				–	150 (5.91)				–	150 (5.91)			
Motors	Spindle	kW (hp)	22/15 (30/20) (30 min/cont) [32/22 (43/20) (20 min/cont)]					22/15 (30/20) (30 min/cont) [32/22 (43/20) (20 min/cont)]									
	Milling tool	kW (hp)	–					7.5/4.3 (25 min/cont)									
	Axis drive	kW (hp)	XA:3.5 (4.7), XB: 3.0 (4), ZA: 4.6 (6), ZB:4.6 (6)				XA:3.5 (4.7), XB: 3.0 (4), ZA: 5.2 (7), ZB:5.2 (7)	XA:3.5 (4.7), XB: 3.0 (4), ZA: 4.6 (6), ZB:4.6 (6)				XA:3.5 (4.7), XB: 3.0 (4), ZA: 5.2 (7), ZB:5.2 (7)	XA:3.5 (4.7), XB: 3.0 (4), Ys: 3.5 (4.7), ZA: 4.6 (6), ZB:4.6 (6)				XA:3.5 (4.7), XB: 3.0 (4), Ys:3.5 (4.7), ZA: 5.2 (7), ZB:5.2 (7)
	Coolant pump (50 Hz/60 Hz)	kW (hp)	0.55/0.75 (0.7/1)			0.55/0.75 (0.7/1) ×2		0.55/0.75 (0.7/1)			0.55/0.75 (0.7/1) ×2		0.55/0.75 (0.7/1)			0.55/0.75 (0.7/1) ×2	
Machine size	Height*	mm (in.)	2,200 (86.61) *		2,440 (96.06)		2,309 (90.91)	2,200 (86.61) *		2,440 (96.06)		2,309 (90.91)	2,587 (101.85) *		2,770 (109.06)		2,639 (103.90)
	Floor space	mm (in.)	3,570 × 2,310 (140.55 × 90.94)		4,780 × 2,620 (188.19 × 103.15)	6,480 × 2,837 (255.12 × 111.69)	8,405 × 2,471 (330.91 × 97.28)	3,570 × 2,310 (140.55 × 90.94)		4,780 × 2,620 (188.19 × 103.15)	6,480 × 2,837 (255.12 × 111.69)	8,405 × 2,471 (330.91 × 97.28)	3,570 × 2,310 (140.55 × 90.94)		4,880 × 2,645 (192.12 × 104.13)	6,480 × 2,937 (255.12 × 115.63)	8,405 × 2,471 (330.91 × 97.28)
	Weight (w/ CNC)	kg (lb)	9,000 (19,800)	9,600 (21,120)	11,400 (25,080)	14,500 (31,900)	17,500 (38,500)	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)
CNC			OSP-P300LA					OSP-P300LA									

[ ]: Optional *Raised machine height of 70 mm is standard for rear discharge.

〈LU3000 EX〉

Standard Specification

	L		M/MY		2M/2MY		W	MW	2MW
	2ST	2SC	2ST	2SC	2ST	2SC	2SW		
Spindle									
JIS A2-6 45 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	—		—		●		—	—	●
Milling tool spindle									
45 to 6,000 min^{-1} 7.1/4.1 kW (25 min/cont)	—		●		●		—	●	●
Tailstock									
Dead hydraulic MT No. 5	—	●	—	●	—	●		—	
Manual tow-along	—	●	—	●	—	●		—	
Accessories									
Hydraulic unit					●				
Coolant system					●				
Full-enclosure shielding					●				
Work lamp (LED)					●				
Chuck foot switch					●				
Tailstock sleeve foot switch	—	●	—	●	—	●		—	
Lubrication monitor					●				
CNC	OSP-P300LA								

Chucking Kit

	A	B	C	D	E
N-08 Kit A Solid 8 in.	1	—	—	—	—
N-08 Kit B Solid 8 in.	—	1	—	—	—
B-208 Kit C Solid 8 in., hole diameter ø52	—	—	1	—	—
B-210 Kit D Solid 10 in., hole diameter ø70	—	—	—	1	—
BB208 Solid 8 in., for big bore spindle, E hole diameter ø66	—	—	—	—	1
Standard soft jaws, A	—	5	5	5	5
Standard soft jaws, B	—	3	3	3	3
Standard hard jaws	—	1	1	1	1

Optional Equipment & Accessories

Big-bore spindle	JIS A2-8 42 to 4,200 min^{-1}	Front door with large window	
	Front bearing dia ø140 / spindle bore dia. ø91	For air blower	Chuck, tailstock
Super big-bore spindle	JIS A2-11 30 to 3,000 min^{-1}		Upper turret (internal piping, common coolant nozzle)
	Front bearing dia ø160 / spindle bore dia. ø112		Lower turret (common coolant nozzle)
L-VDI turret			Upper/lower turret air blower outlet control (simultaneous, independent)
Hydraulic tailstock	MT. No. 4	For coolant blower	Shower coolant (A, B), coolant gun
Programmable tailstock			Spindle ID coolant (main, A, B)
Chucking kit	Solid/hollow hydraulic power chuck, soft jaws	Dust proofing	Spindle air purging, X-axis double wiper (Xa)
Tooling kit	Various toolholders		Z-axis double wiper (Za + Zb)
Raised machine height	50 mm,100 mm, 150 mm	Gauging-related options	In-process work gauging
Chip discharge	Chip pan	Workrest	
	Chip conveyor (side discharge/rear discharge)	Stopper in spindle	
	Chip bucket	Chuck internal sizing stopper	
Touch setter	M (manual), A (auto)	Coolant	Upper/lower turret air blower outlet control (independent)
Steadyrest			Coolant high/low switch (upper, lower turret)
Automation	On-machine loader, gantry loader		Coolant sensors (level sensor, flow sensor, level + flow sensors)
	Robots, bar feeders	Mist collector	With/without machine link
Front cover	Auto open/close (safety tape SW, area sensor)	Parts catcher	Main (ø80×150L, 5.8kg) Sub (ø65×150L, 4kg)
	Two-hand cycle start button	Optional high-accuracy specifications	Turcite® lining (Xa axis, Za axis, Zb axis)
For chucking	Chuck auto open/close confirm		AbsoScale (Xa axis, Za axis, Xb axis)
	Chucking miss detection (main, sub)		Coolant temperature regulator, spindle temperature regulator
	Chuck high/low pressure switch with reclamping (main, sub)		Hydraulic oil temperature regulator
For tailstock	Tailstock travel 230 mm		
	Tailstock quill auto advance/retract confirm, tailstock thrust high/low switch		
	Low tailstock thrust, tailstock quill position detection		
	2-speed tailstock quill		

〈LU4000 EX〉

Standard Specification

	L		M/MY	
	2ST	2SC	2ST	2SC
Spindle				
JIS A2-6 42 to 4,200 min^{-1} Integral 22/15 kW (30 min/cont)		●		
Turret				
Upper V12 + lower LV10	●		—	
Upper multitasking V12 + lower LV10	—		●	
Milling tool spindle				
45 to 6,000 min^{-1}	—		●	
7.5/4.3 kW (25 min/cont)	—		●	
Tailstock				
Dead hydraulic MT No. 5	—	●	—	●
Manual tow-along	—	●	—	●
Accessories				
Hydraulic unit		●		
Coolant system		●		
Full-enclosure shielding		●		
Work lamp (LED)		●		
Chuck foot switch		●		
Tailstock sleeve foot switch	—	●	—	●
Lubrication monitor		●		
CNC	OSP-P300LA			

Chucking Kit

	A	B	C	D	E
N-10 Kit A Solid 10 in.	1	—	—	—	—
N-10 Kit B Solid 10 in.	—	1	—	—	—
B-210 Kit C Solid 10 in., hole diameter ø70	—	—	1	—	—
B-212 Kit D Solid 12 in., hole diameter ø70	—	—	—	1	—
BB210 Solid 10 in., for big bore spindle, E hole diameter ø75	—	—	—	—	1
Standard soft jaws, A	—	5	5	5	5
Standard soft jaws, B	—	3	3	3	3
Standard hard jaws	—	1	1	1	1

Optional Equipment & Accessories

Big-bore spindle	JIS A2-11 30 to 3,000 min^{-1}	Front door with large window	
	Front bearing dia ø160 / spindle bore dia. ø112	For air blower	Chuck, tailstock, Spindle ID
High-Power spindle	32/22 kW (20 min/cont)		Upper turret (internal piping, common coolant nozzle)
L-VDI turret			Lower turret (common coolant nozzle)
Hydraulic tailstock	MT. No. 5		Upper/lower turret air blower outlet control (simultaneous, independent)
Programmable tailstock		For coolant blower	Shower coolant (A, B), coolant gun
Chucking kit	Solid/hollow hydraulic power chuck, soft jaws		Spindle ID coolant (main, A, B)
Tooling kit	Various toolholders	Dust proofing	Spindle air purging, X-axis double wiper (Xa)
Raised machine height	50 mm, 100 mm, 150 mm		Z-axis double wiper (Za + Zb)
Chip discharge	Chip pan	Gauging-related options	In-process work gauging
	Chip conveyor (side discharge/rear discharge)	Workrest	
	Chip bucket	Stopper in spindle	
Touch setter	M (manual), A (auto)	Chuck internal sizing stopper	
Steadyrest		Coolant	Upper/lower turret air blower outlet control (independent)
Automation	On-machine loader, gantry loader		Coolant high/low switch (upper, lower turret)
	Robots, bar feeders		Coolant sensors (level sensor, flow sensor, level + flow sensors)
Front cover	Auto open/close (safety tape SW, area sensor)	Mist collector	With/without machine link
	Two-hand cycle start button	Parts catcher	ø100×200L, 7kg
For chucking	Chuck auto open/close confirm	Optional high-accuracy specifications	Turcite® lining (Xa axis, Za axis, Zb axis)
	Chucking miss detection		AbsoScale (Xa axis, Za axis, Xb axis)
	Chuck high/low pressure switch with reclamping		Coolant temperature regulator, spindle temperature regulator
For tailstock	Tailstock travel 260 mm		Hydraulic oil temperature regulator
	Tailstock quill auto advance/retract confirm, tailstock thrust high/low switch		
	Low tailstock thrust, high tailstock thrust		
	Tailstock quill position detection, 2-speed tailstock quill		

〈LU3000 EX〉

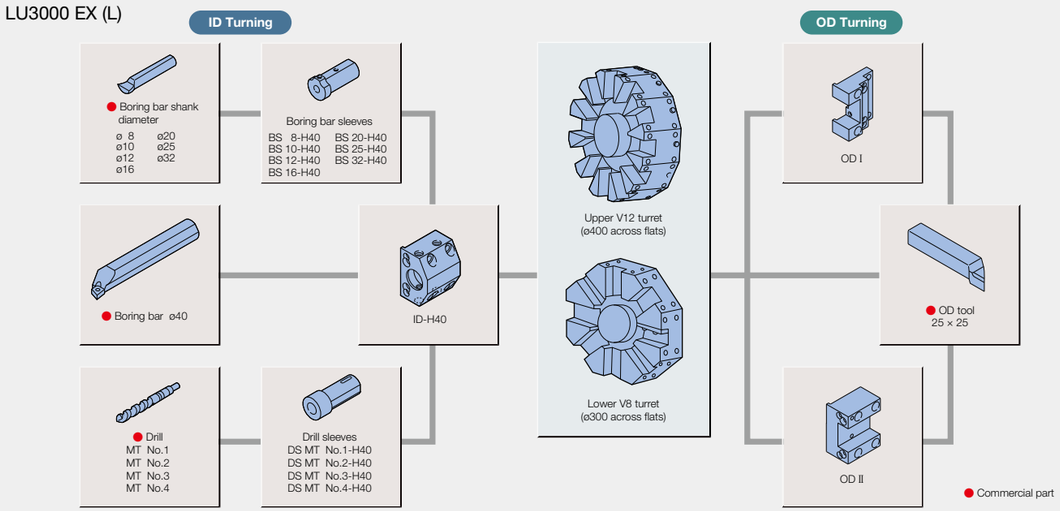
Tooling Kit

	LU3000 EX (L)				LU3000 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

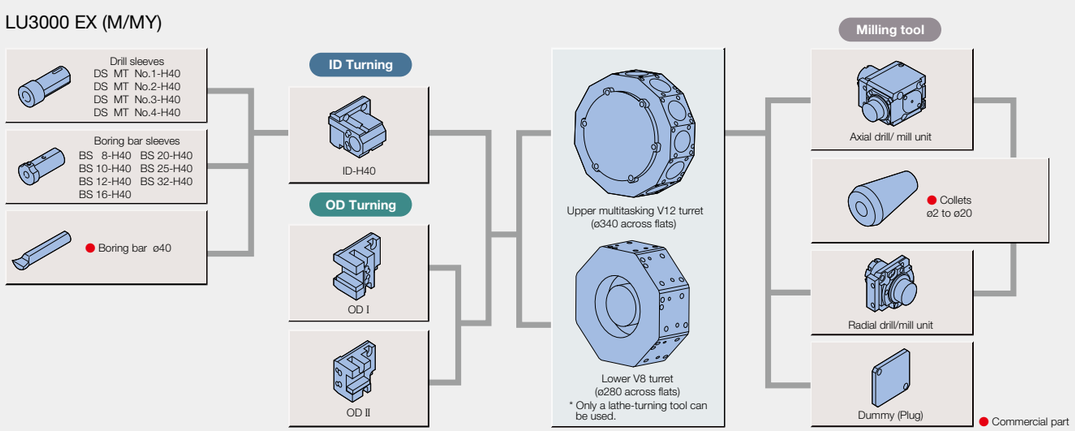
E Kit: Economy
D Kit: Deluxe

Tooling System

LU3000 EX (L)

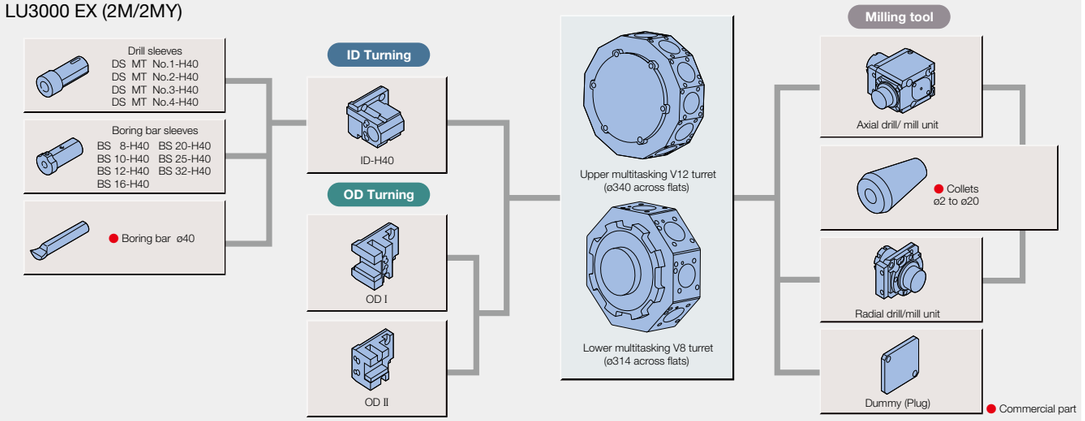


LU3000 EX (M/MY)

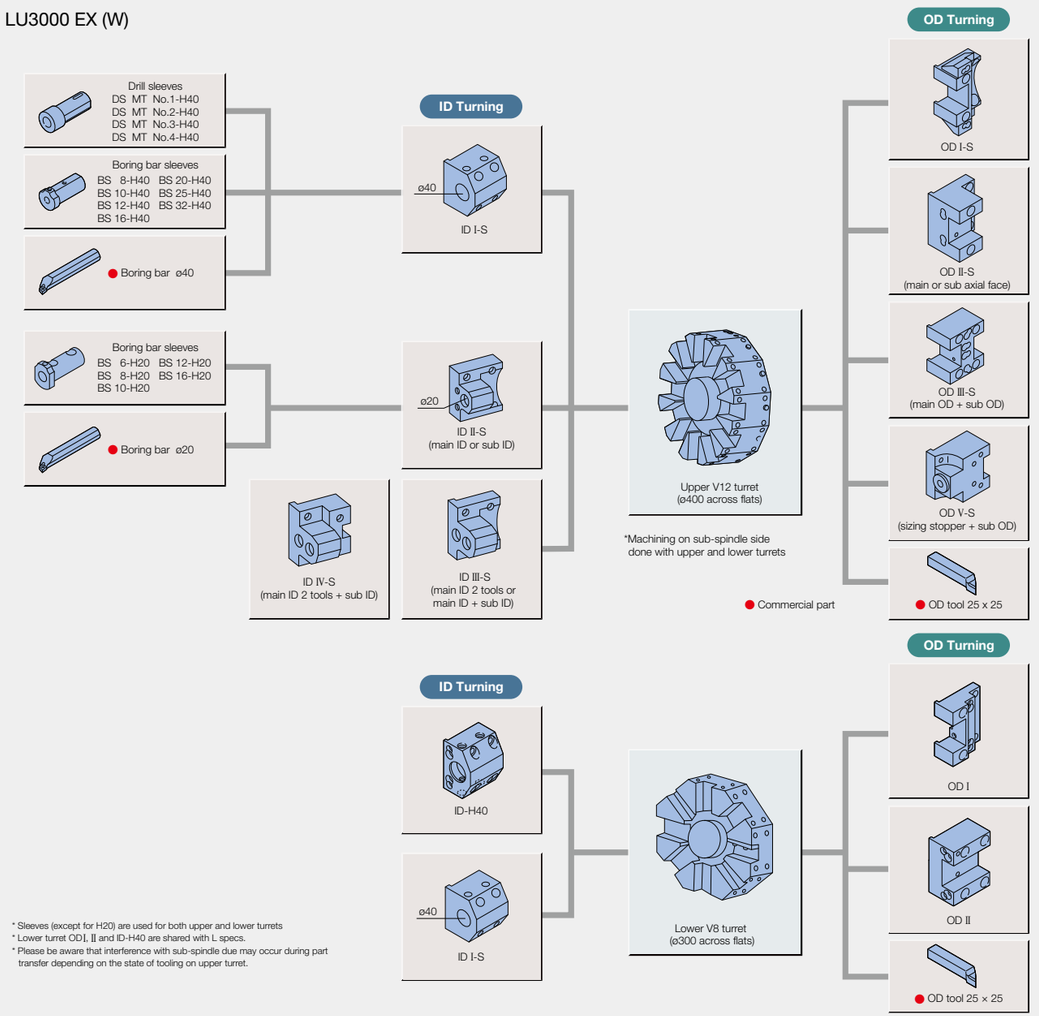


Tooling System

LU3000 EX (2M/2MY)



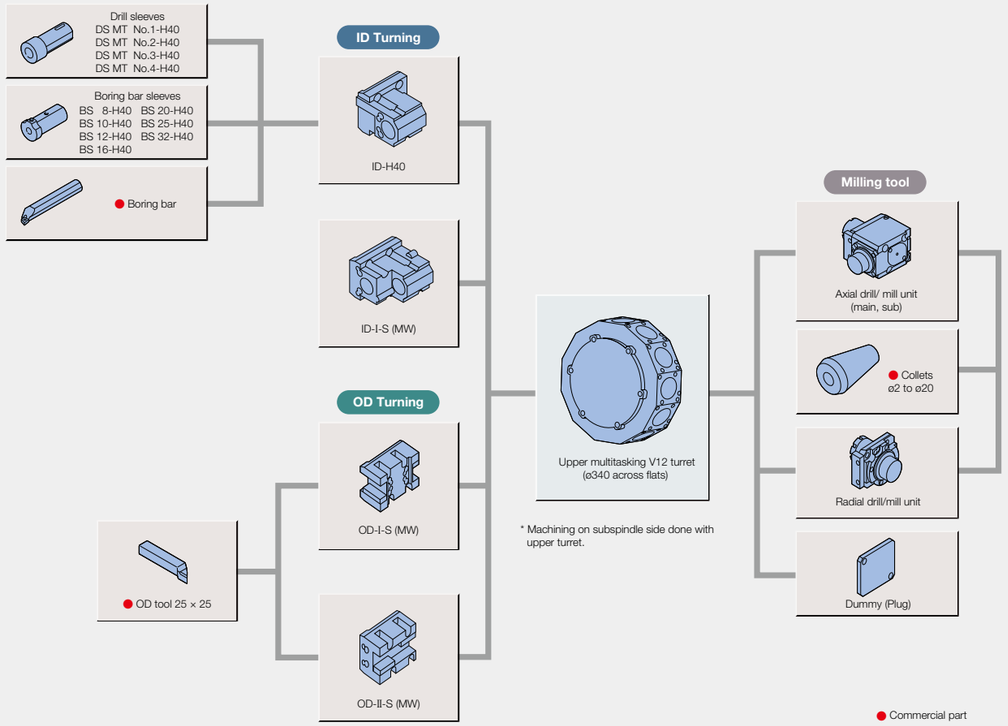
LU3000 EX (W)



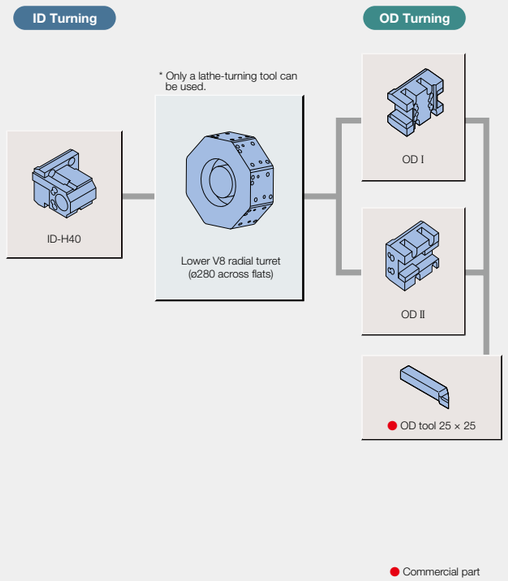
*Machining on sub-spindle side done with upper and lower turrets

* Sleeves (except for H20) are used for both upper and lower turrets
* Lower turret OD Ⅰ, Ⅱ and ID-H40 are shared with L specs.
* Please be aware that interference with sub-spindle due may occur during part transfer depending on the state of tooling on upper turret.

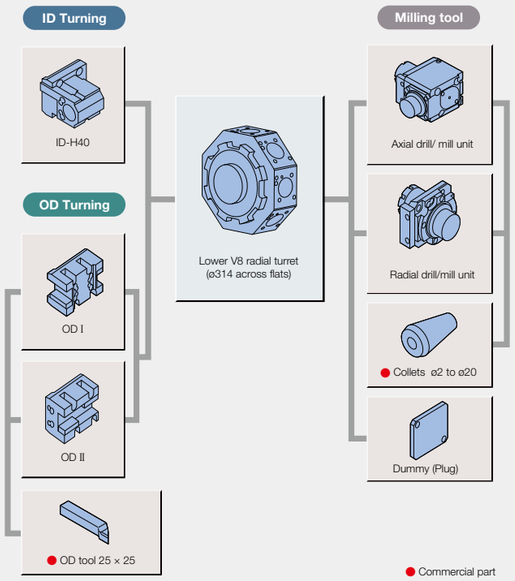
LU3000 EX (MW/2MW) Upper turret



LU3000 EX (MW) Lower turret



LU3000 EX (2MW) Lower turret



〈LU4000 EX〉

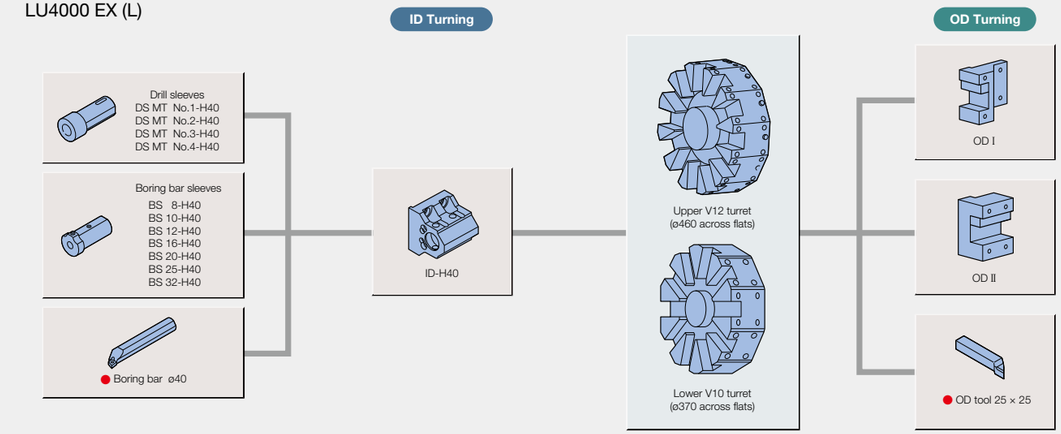
Tooling Kit

	LU4000 EX				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 MTNo.1-H40	—	1	—	1	—	1	—	1
DS MTNo.2-H40	—	1	—	1	—	1	—	1
DS MTNo.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

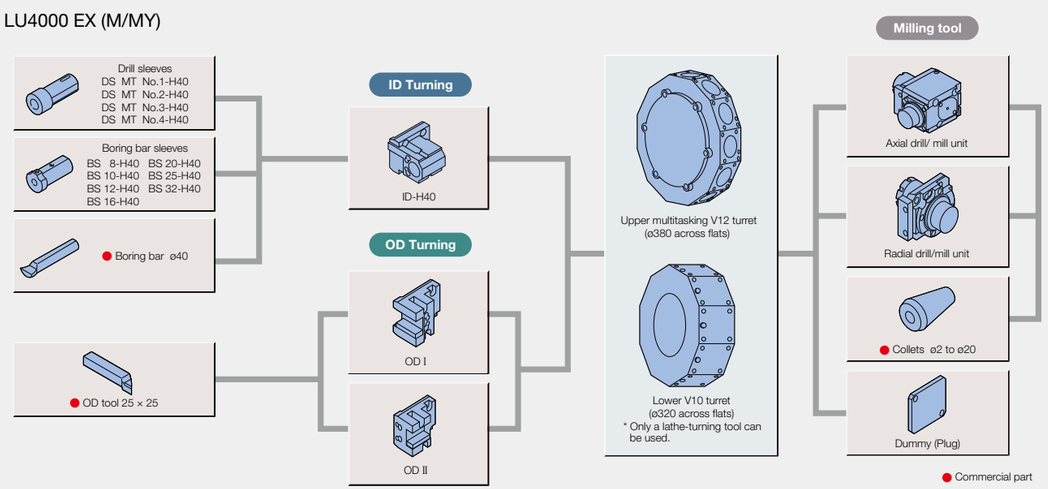
E Kit: Economy
D Kit: Deluxe

Tooling System

LU4000 EX (L)



LU4000 EX (M/MY)

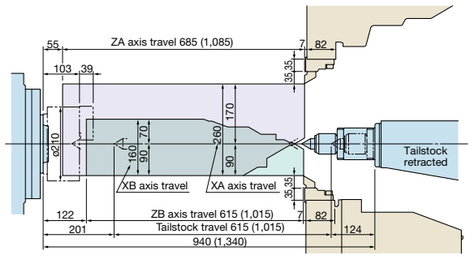


〈LU3000 EX〉

Working Ranges

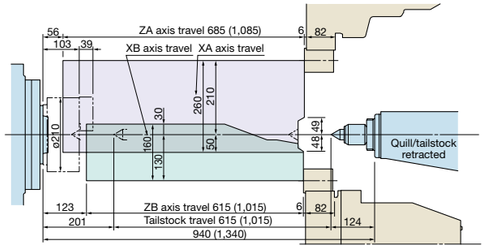
LU3000 EX (L)

OD-I



( ): Distance between centers 1,000.

ID



( ): Distance between centers 1,000.

LU3000 EX (M)

Axial drill/mill unit

( ): Distance between centers 1,000.

Radial drill/mill unit

( ): Distance between centers 1,000.

LU3000 EX (2M)

Axial drill/mill unit

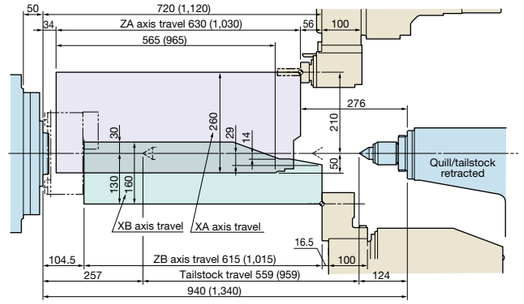
( ): Distance between centers 1,000.

Radial drill/mill unit

( ): Distance between centers 1,000.

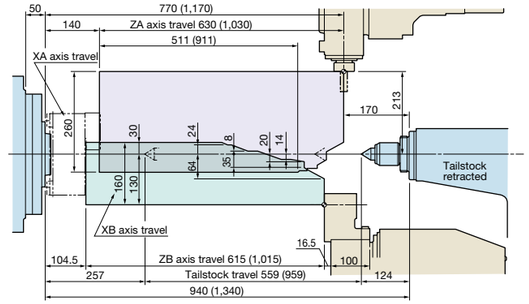
LU3000 EX (MY)

Axial drill/mill unit Y=0



( ): Distance between centers 950.

Radial drill/mill unit Y=0



( ): Distance between centers 950.

LU3000 EX (2MY)

Axial drill/mill unit Y=0

( ): Distance between centers 950.

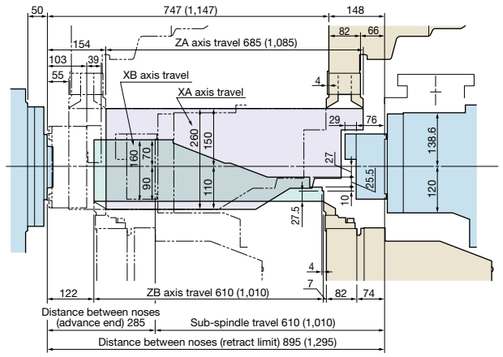
Radial drill/mill unit Y=0

( ): Distance between centers 950.

Working Ranges

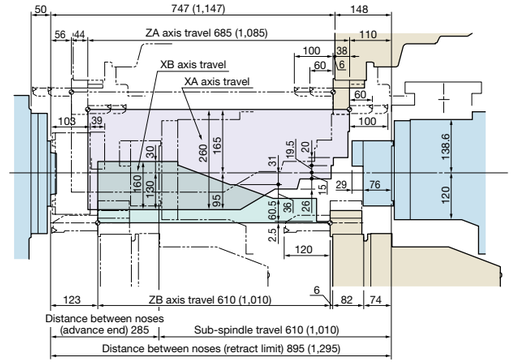
LU3000 EX (W)

OD III-S



( ): Distance between centers 1,000.

ID III-S



( ): Distance between centers 1,000.

LU3000 EX (MW)

Axial drill/mill unit

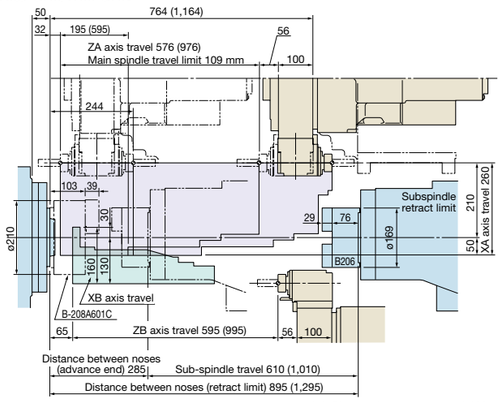
( ): Distance between centers 1,000.

Radial drill/mill unit

( ): Distance between centers 1,000.

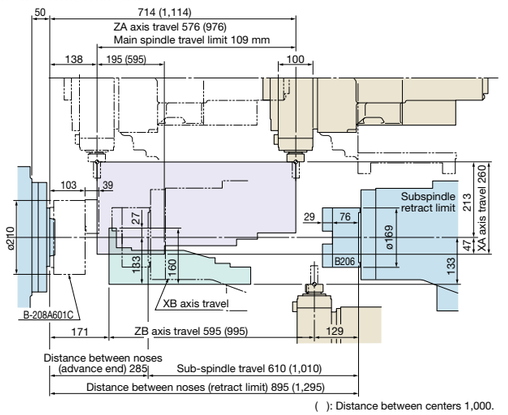
LU3000 EX (2MW)

Axial drill/mill unit



( ): Distance between centers 1,000.

Radial drill/mill unit



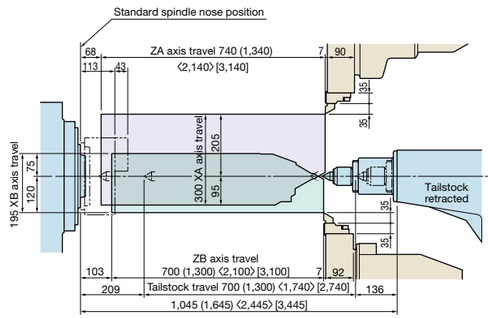
( ): Distance between centers 1,000.

〈LU4000 EX〉

Working Ranges

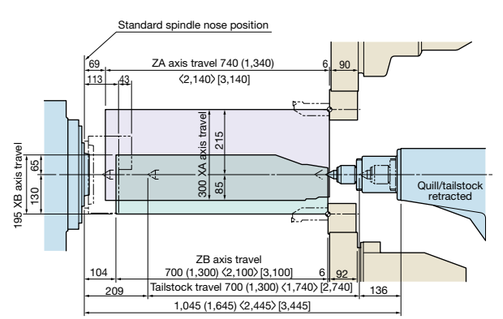
LU4000 EX (L)

OD-I



( ): Distance between centers 1,250.
〈 〉: Distance between centers 2,000.
[ ]: Distance between centers 3,000.

ID



( ): Distance between centers 1,250.
〈 〉: Distance between centers 2,000.
[ ]: Distance between centers 3,000.

LU4000 EX (M)

Axial drill/mill unit

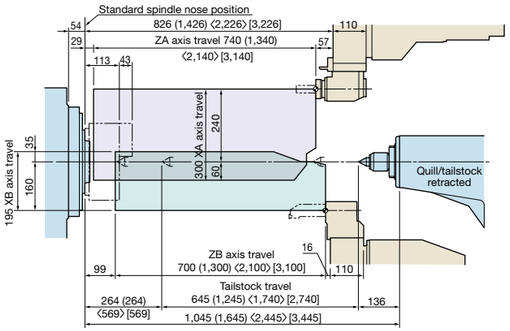
( ): Distance between centers 1,250.
〈 〉: Distance between centers 2,000.
[ ]: Distance between centers 3,000.

Radial drill/mill unit

( ): Distance between centers 1,250.
〈 〉: Distance between centers 2,000.
[ ]: Distance between centers 3,000.

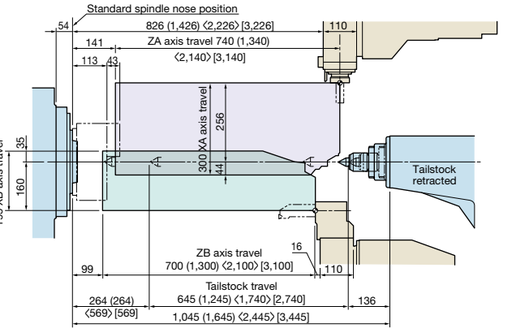
LU4000 EX (MY)

Axial drill/mill unit Y=0



( ): Distance between centers 1,250.
〈 〉: Distance between centers 2,000.
[ ]: Distance between centers 3,000.

Radial drill/mill unit Y=0

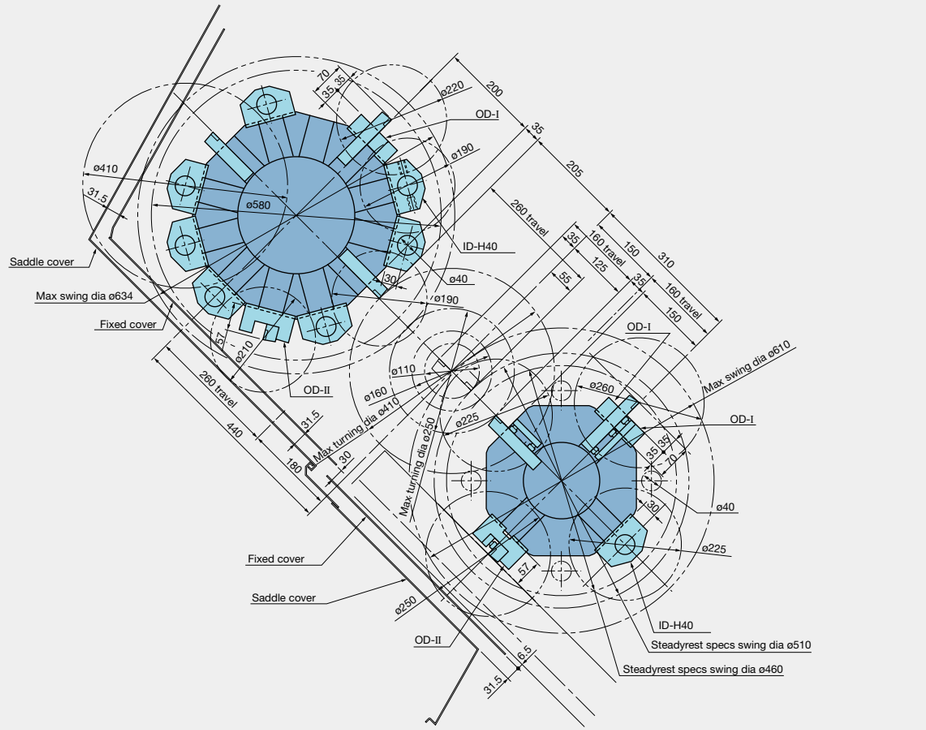


( ): Distance between centers 1,250.
〈 〉: Distance between centers 2,000.
[ ]: Distance between centers 3,000.

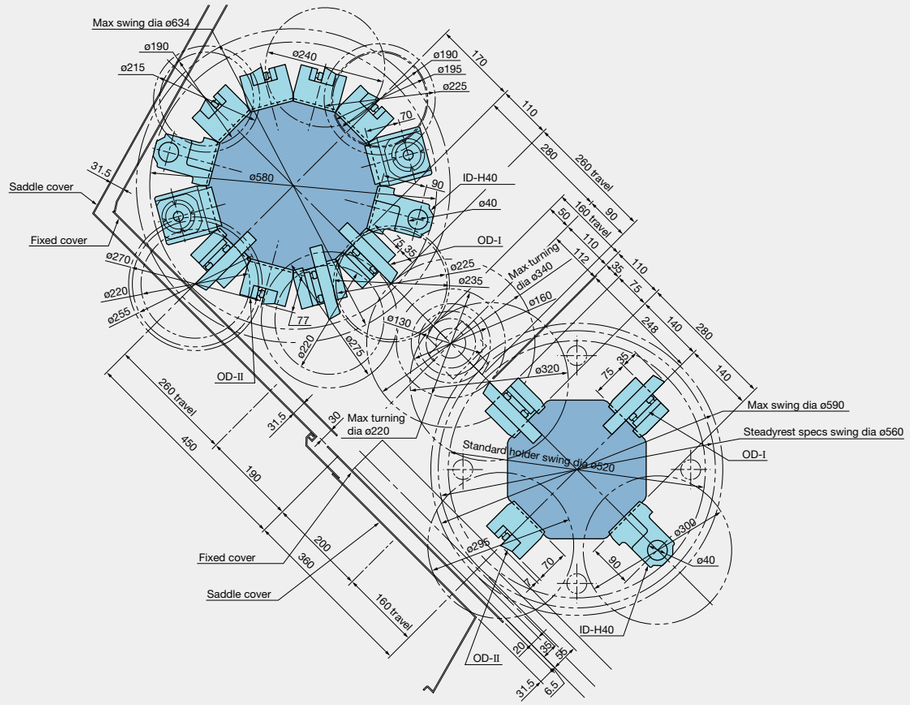
〈LU3000 EX〉

Turret interference diagrams

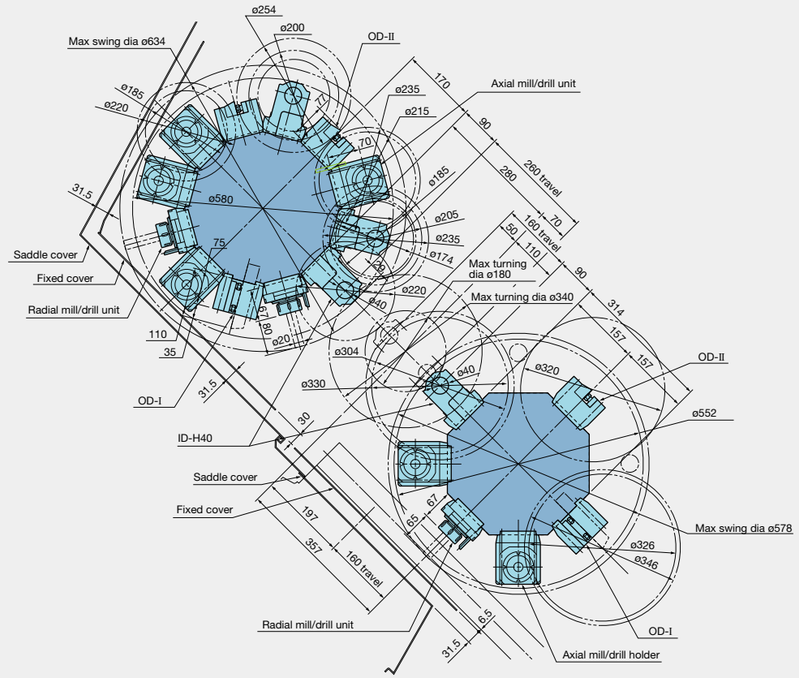
LU3000 EX (L)



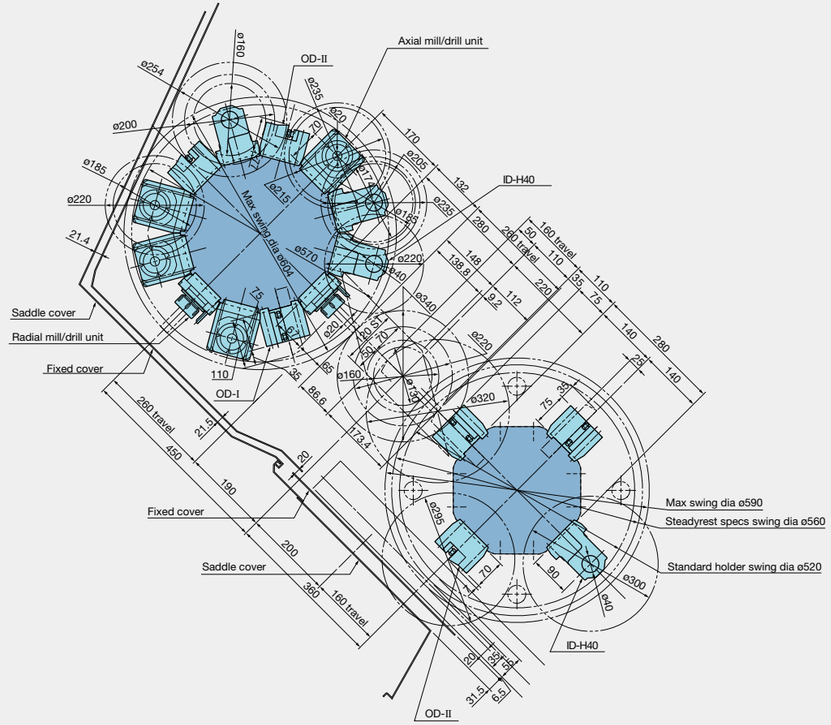
LU3000 EX (M)



LU3000 EX (2M)

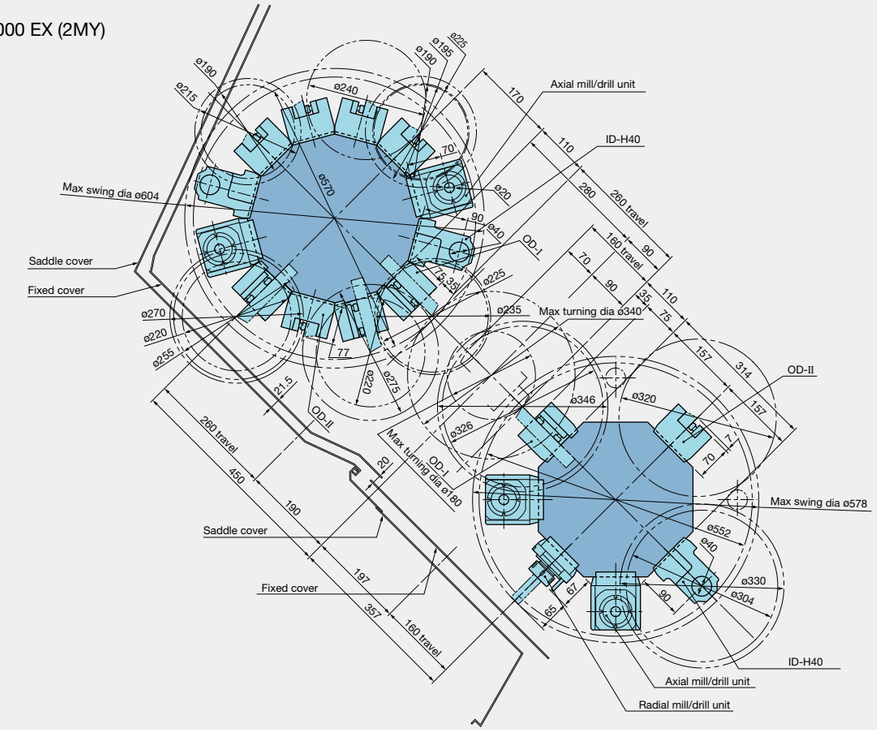


LU3000 EX (MY)

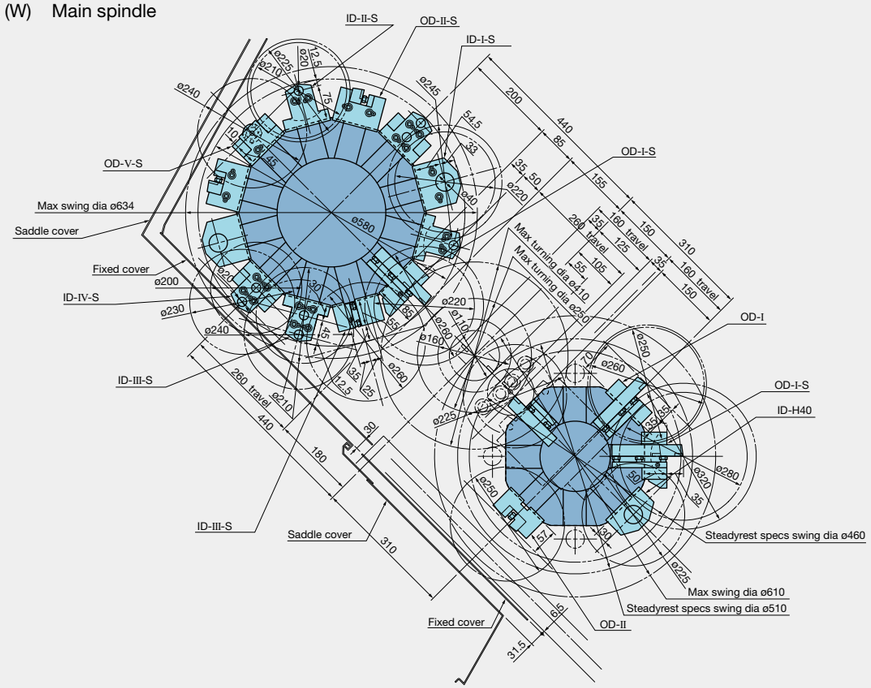


Turret interference diagrams

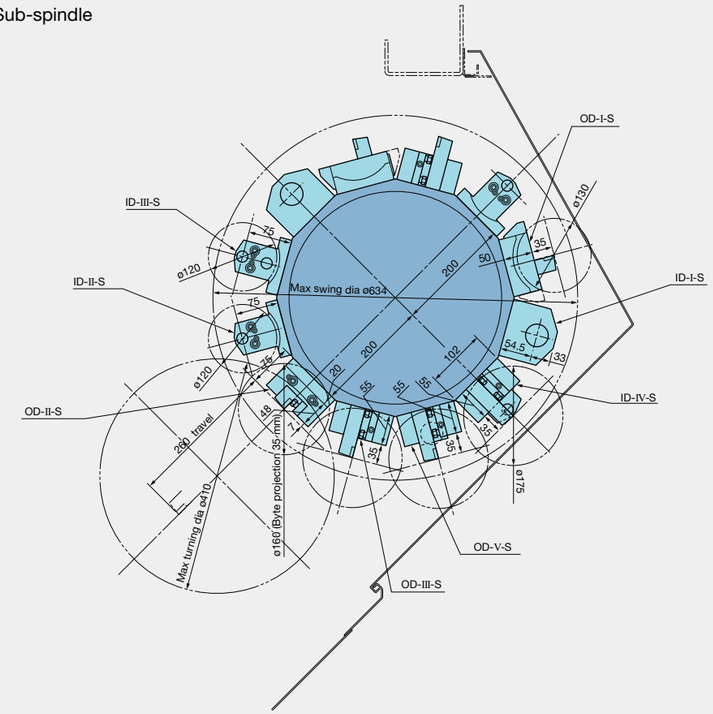
LU3000 EX (2MY)



LU3000 EX (W) Main spindle



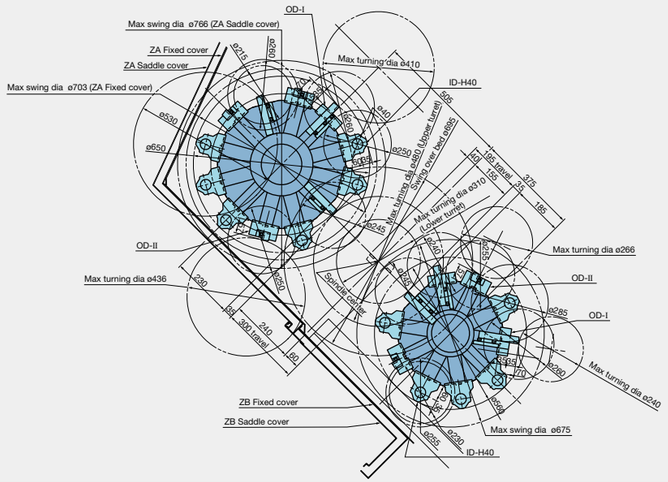
LU3000 EX (W) Sub-spindle



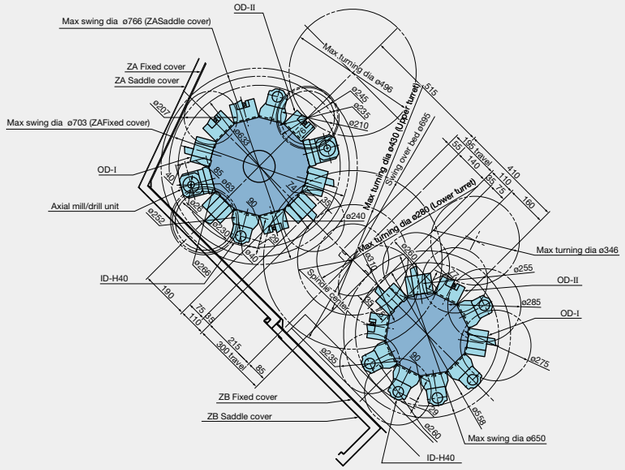
〈LU4000 EX〉

Turret interference diagrams

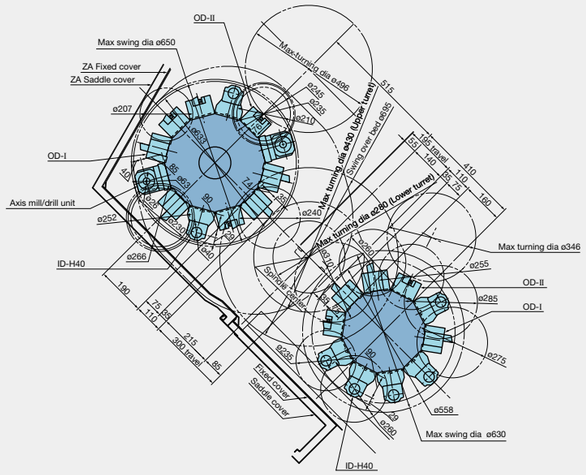
LU4000 EX (L)



LU4000 EX (M)

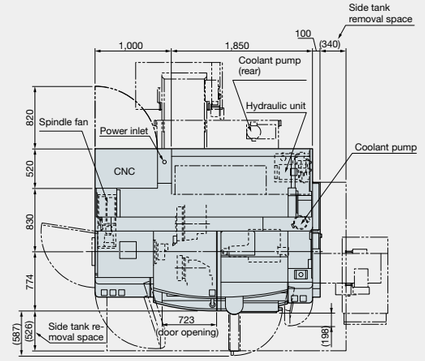


LU4000 EX (MY)

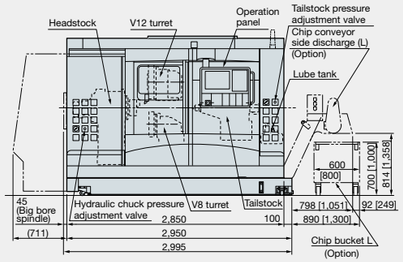


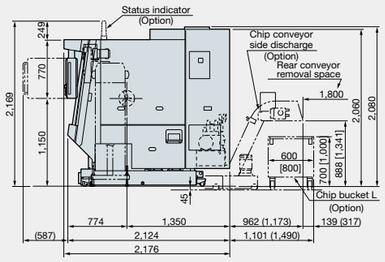
LU3000 EX
Dimensional / Installation Drawings

LU3000 EX (L/M/2M) Distance between centers 600

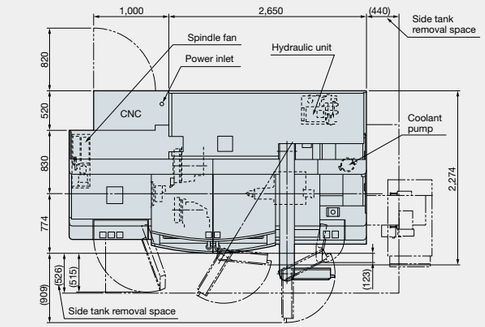


[ ]: H chip conveyor
*Raised machine height of 45 mm is standard for rear discharge.

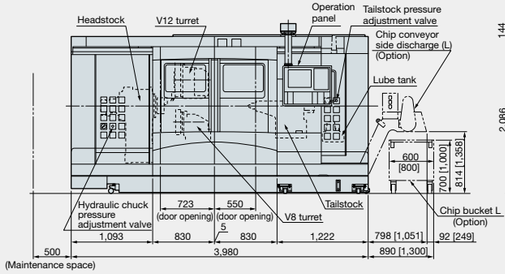


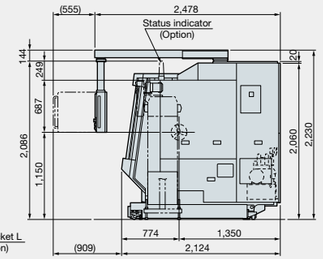


LU3000 EX (L/M/2M) Distance between centers 1,000

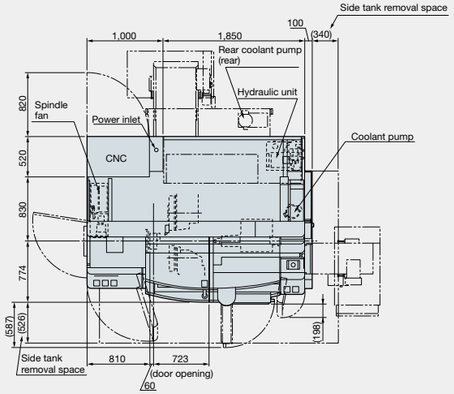


[ ]: H chip conveyor

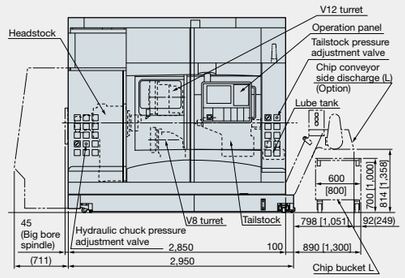


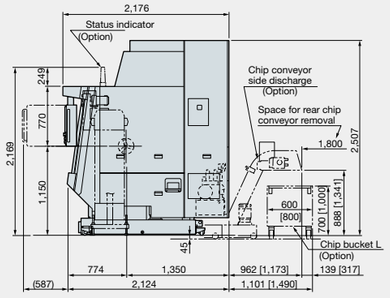


LU3000 EX (MY/2MY) Distance between centers 550

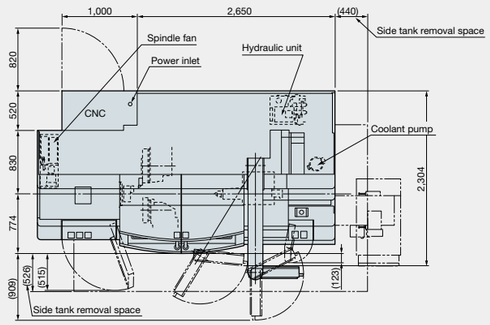


[ ]: H chip conveyor
*Raised machine height of 45 mm is standard for rear discharge.

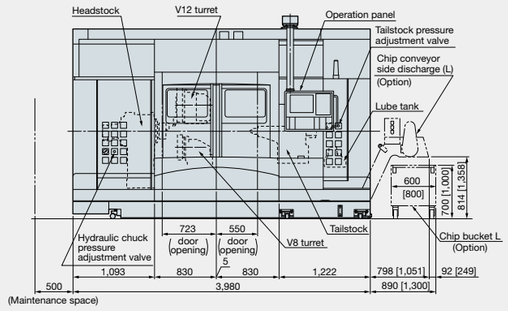


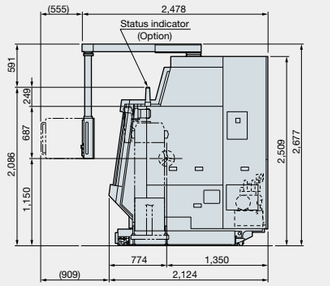


LU3000 EX (MY/2MY) Distance between centers 950

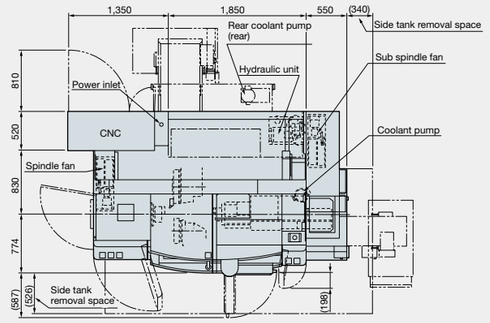


[ ]: H chip conveyor

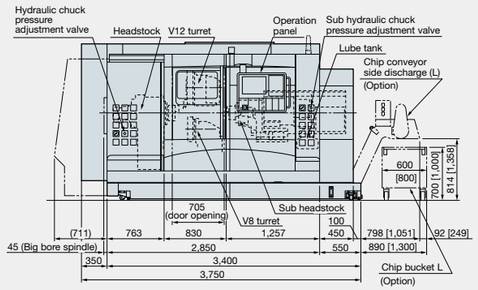


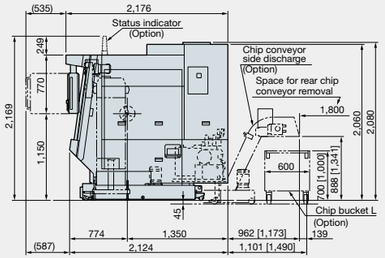


LU3000 EX (W/MW/2MW) Distance between centers 600

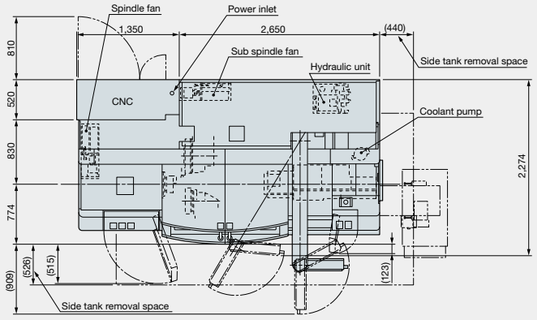


[ ]: H chip conveyor
*Raised machine height of 45 mm is standard for rear discharge.

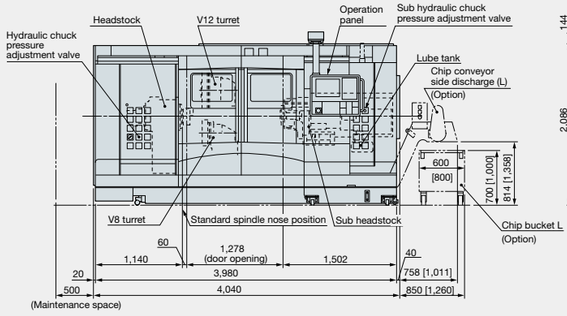


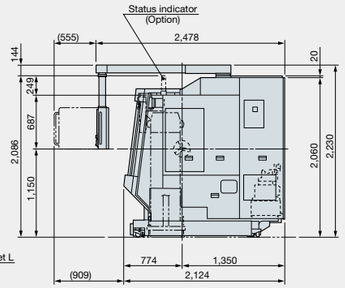


LU3000 EX (W/MW/2MW) Distance between centers 1,000



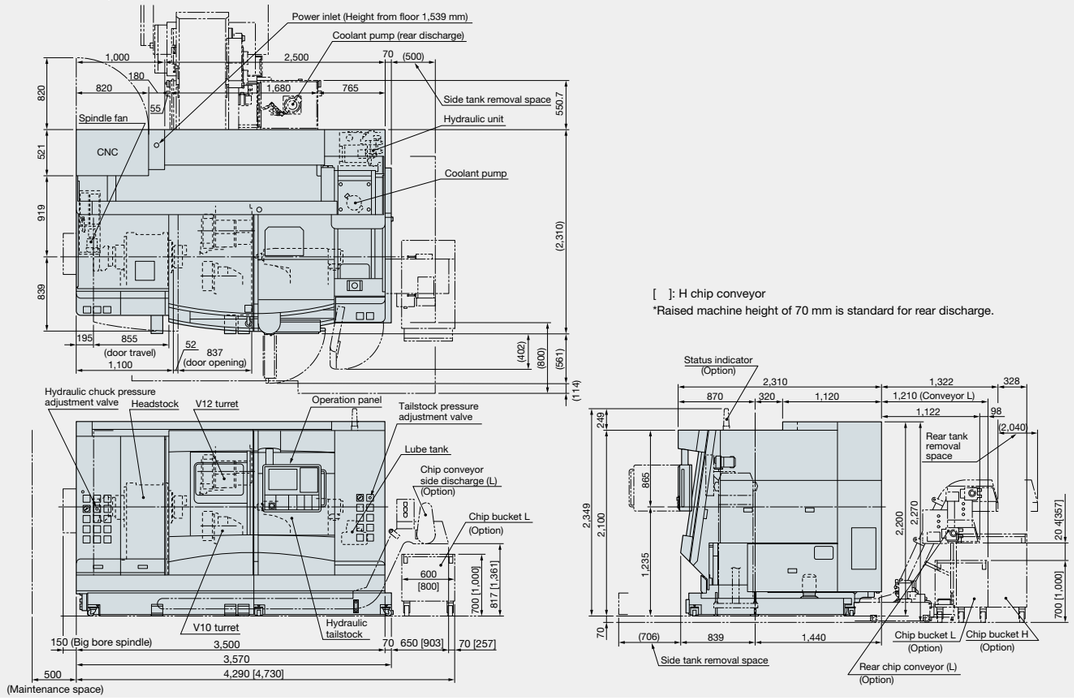
[ ]: H chip conveyor



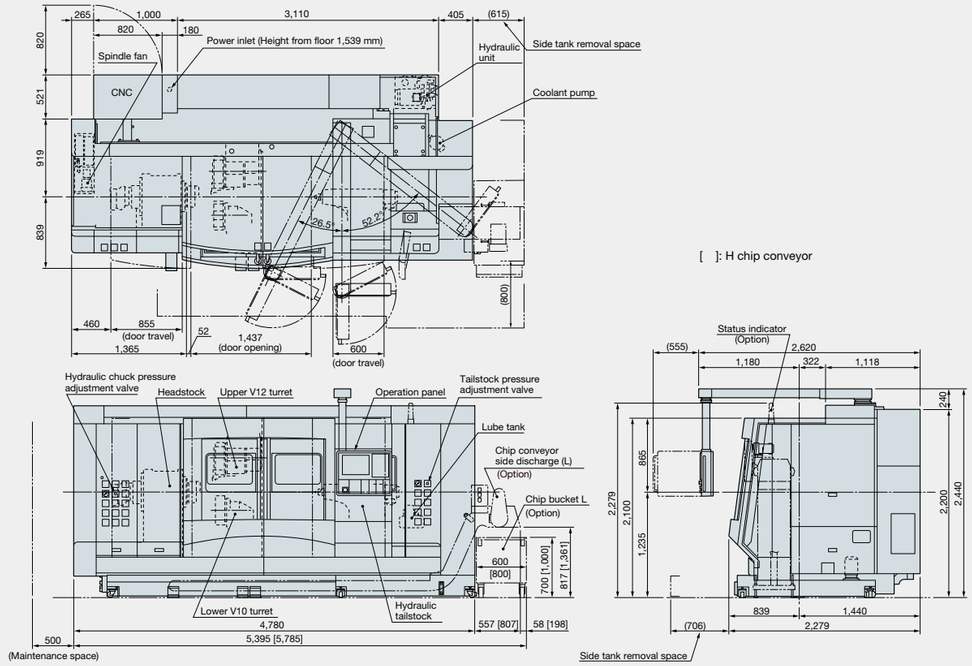


LU4000 EX
Dimensional / Installation Drawings

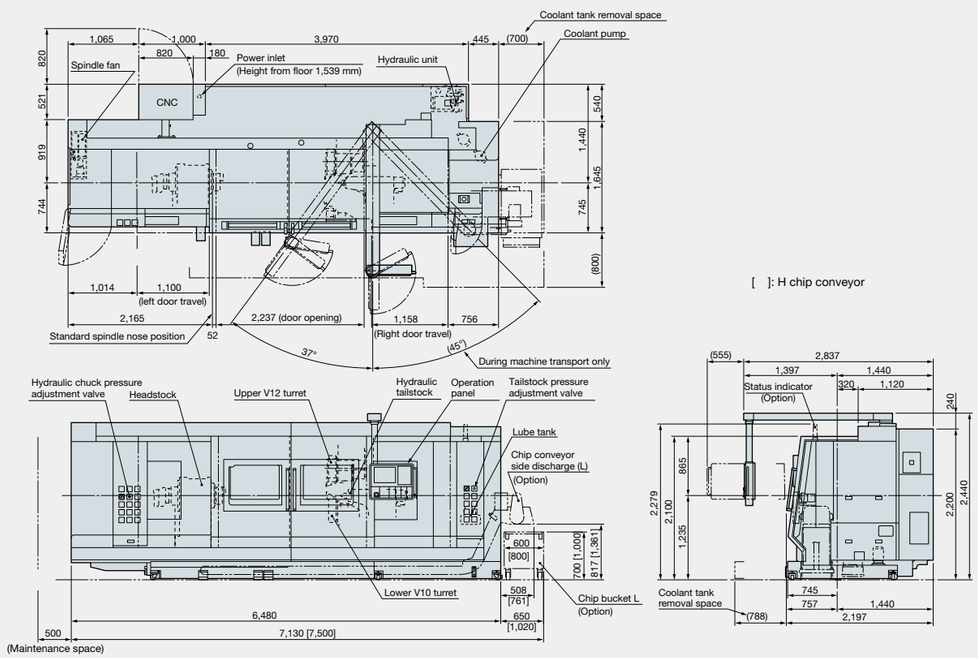
LU4000 EX (L/M) Distance between centers 650



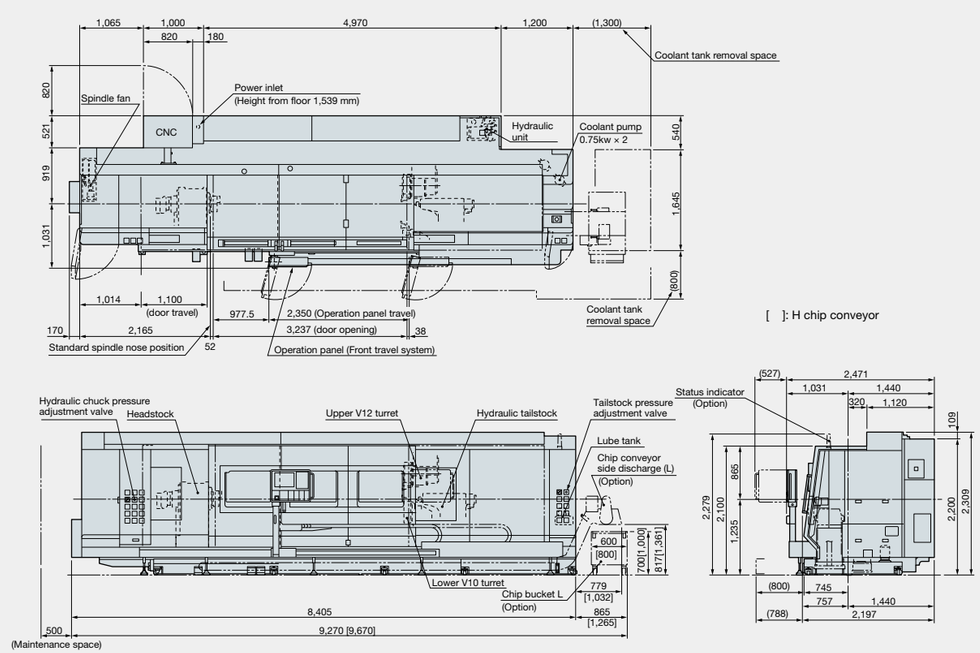
LU4000 EX (L/M) Distance between centers 1,250



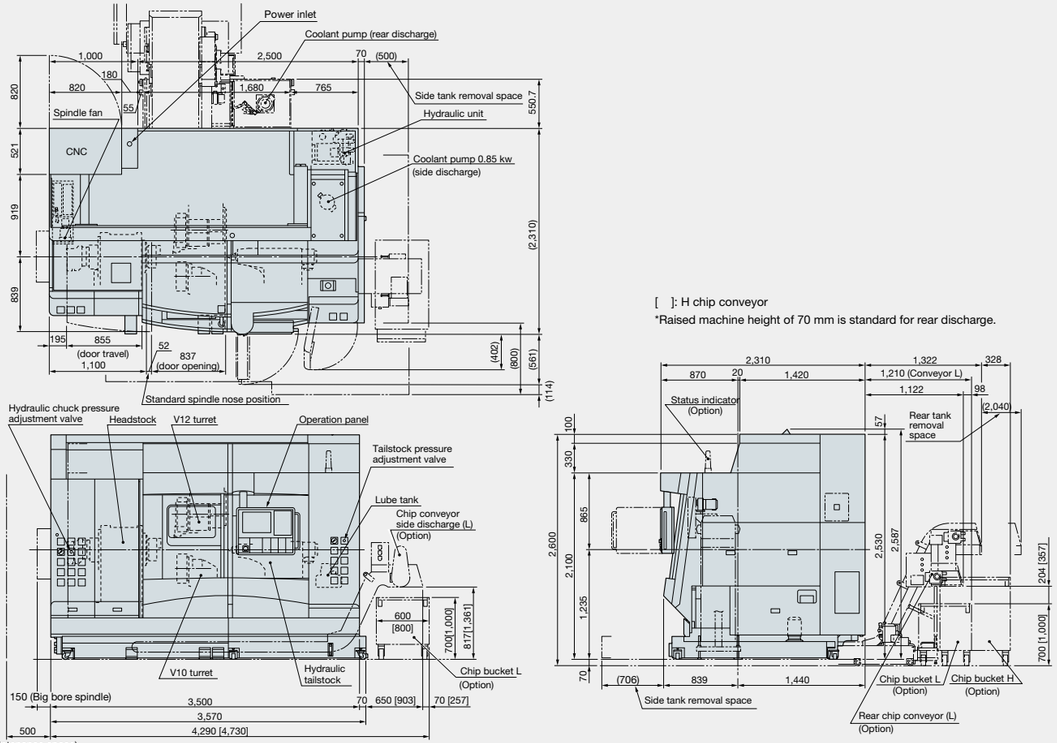
LU4000 EX (L/M) Distance between centers 2,000



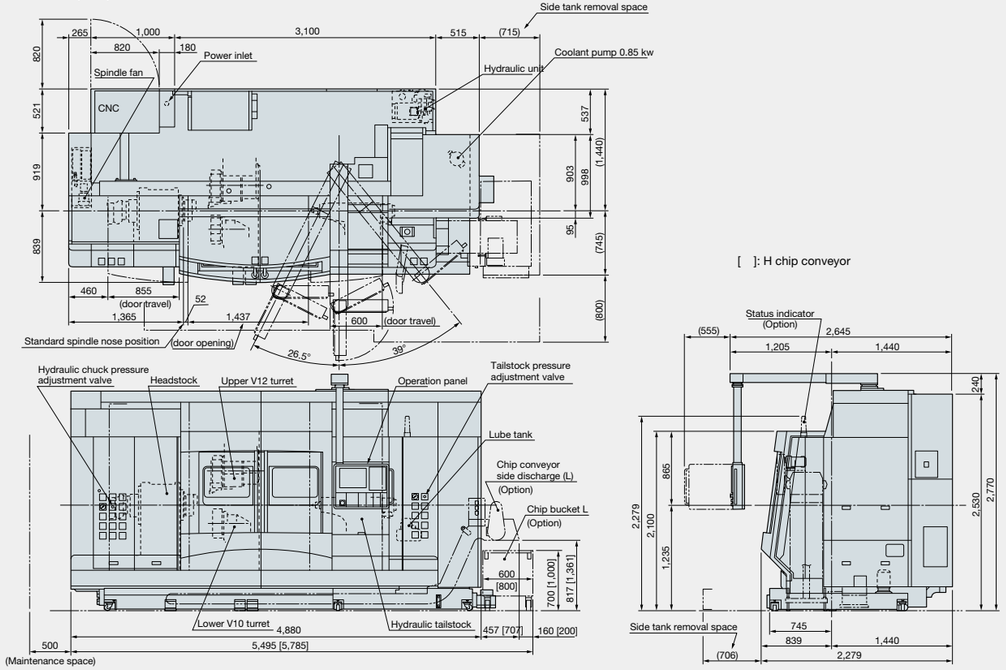
LU4000 EX (L/M) Distance between centers 3,000



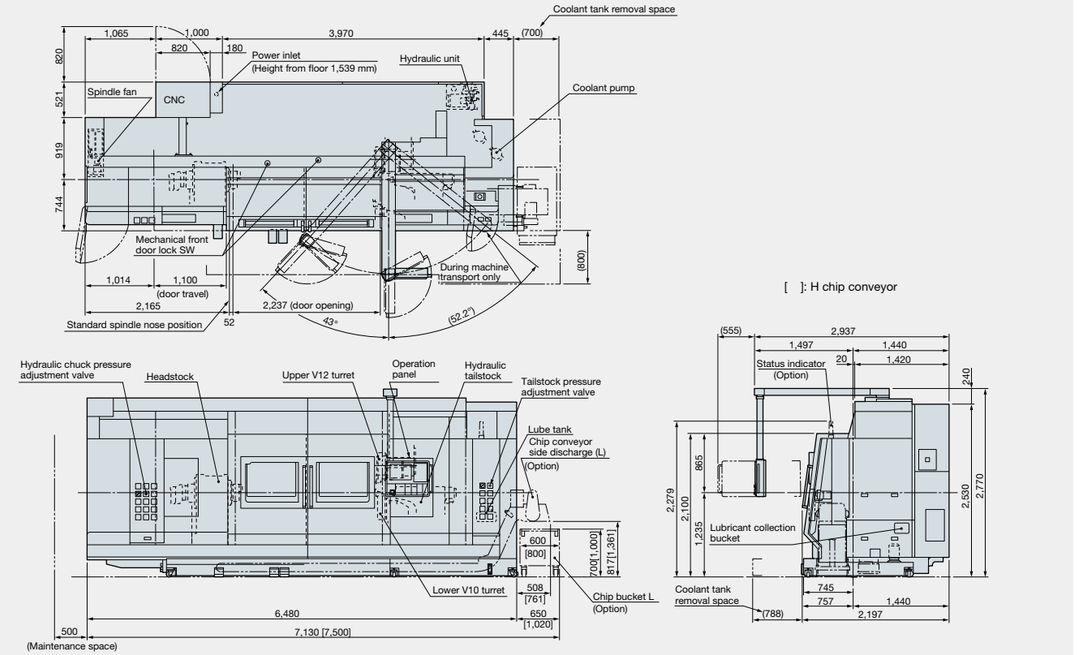
LU4000 EX (MY) Distance between centers 650



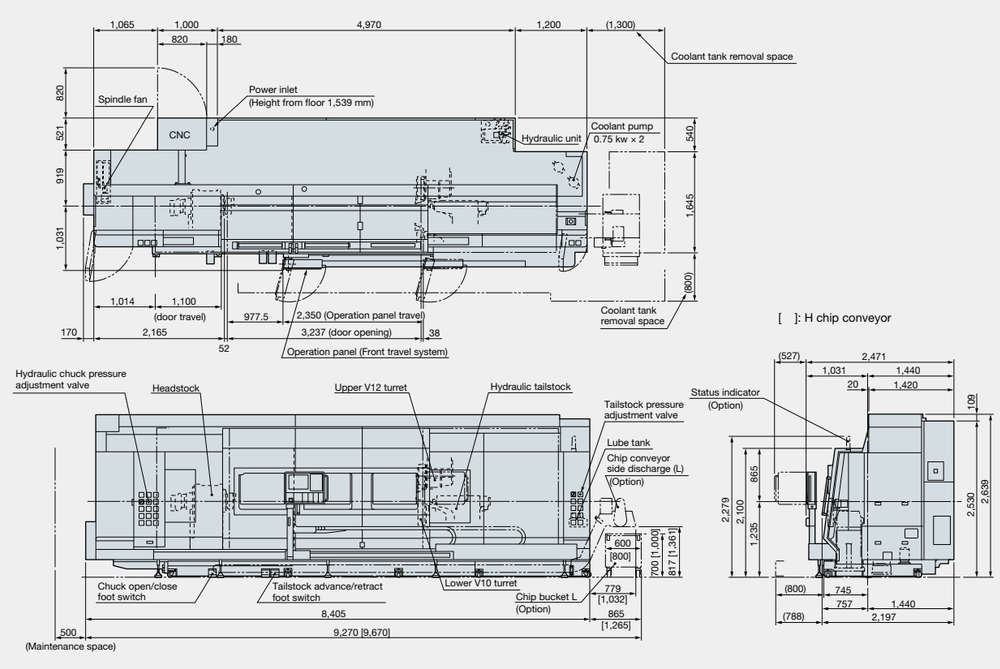
LU4000 EX (MY) Distance between centers 1,250



LU4000 EX (MY) Distance between centers 2,000



MY specifications (distance between centers 3,000)



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

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

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

Improved rendering performance and use of a multi-touch panel achieve intuitive graphical operation. Moving, enlarging, reducing, and rotating 3D models, as well as list views of tool data, programs, and other information can be accomplished through smooth, speedy operations with the same feel as using a smart phone. The screen display layout on the operation screen can also be changed to suit operator preferences and customized for the novice and/or veteran machinists.

"Just what we wanted."— Refreshed OSP suite apps

This became possible through the addition of Okuma's machining expertise based on requests we heard from real, machine-shop customers. The brainpower packed into the CNC, built by machine tool manufacturer, will "empower shop floor" management.

Increased productivity through visualization of motor power reserve

Spindle Output Monitor

The specified spindle output (red line: short time rating, green line: continuous rating) and the spindle output in current cutting (blue circle) are simultaneously displayed on the screen, for real-time view of power reserve during cutting. This allows speeding up cutting by increasing the spindle speed or feed rate while monitoring the graph to ensure that the blue circle does not cross the lines.

Easy programing without keying in code

Scheduled Program Editor

Monitoring operating status even when away from the machine

E-mail Notification

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 inputs	8-digit decimal, ±99999.999 to 0.001 mm (±3937.0078 to 0.0001 in.), 0.001° Decimal:1 µm, 10 µm, 1 mm (0.0001,1 in.) (1°, 0.01°, 0.001°)
	Feed	Override: 0 to 200%
	Spindle control	Direct spindle speed commands (S4) 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 display operational panel, touch panel
	Self-diagnostics	Automatic diagnostics and display of program, operation, machine, and NC system problems
	Program capacity	Program storage: 2 GB, operation buffer: 2 MB
Operations	Suite apps	Applications to visualize and digitize information needed on the shop floor
	Suite operation	Highly reliable touch panel suited to shop floors. One-touch access to suite apps.
	Easy Operation	"Single-mode operation" to complete a series of operations
	Programing	Program management, edit, multitasking, scheduled programs, fixed cycles, special fixed cycles, tool nose R compensation, M-spindle synchronized tapping, fixed drilling cycles, arithmetic functions, logic statements, trig functions, variables, branch statements, auto programming (LAP4), programming help
	Machine operations	MDI, manual (rapid traverse, manual cutting feed, pulse handle), load meter, operations help, alarm help, sequence, return, manual interrupt & auto return, threading slide hold, data I/O, spindle orientation (electric)
	MacMan	Machining Management: machining results, machine utilization, fault data compile & report, external output
Communications/Networks		USB ports, Ethernet
High speed/accuracy		Hi-G control, TAS-C (Thermal Active Stabilizer–Construction) (MY specifications only)
Energy-saving function	ECO suite	ECO Idling Stop, ECO Power Monitor

Optional Specifications

Item		Kit specs*1	NML E	NML D	3D E	3D D	OT-IGF E	OT-IGF D	OTM E	OTM D
New Operations										
Advanced One-Touch IGF-L *2							●	●		
Advanced One-Touch IGF-L Multitasking *2									●	●
Programming										
Circular threading				●		●		●		●
Program notes				●		●		●		●
User task 2	I/O variables, 8 each									
Work coordinate system select	10 sets									
	50 sets									
	100 sets									
Tool compensation (Std: 32 sets)	Tool compensation 64 sets									
	Tool compensation 96 sets									
	Tool compensation 200 sets									
	Tool compensation 999 sets									
Common variables 1,000 sets (Std: 200 sets)										
Thread matching (spindle orientation required)										
Threading slide hold (G34, G35)										
Variable spindle speed threading (VSST)										
Inverse time feed										
Spindle synchronized tapping (rigid tapping)										
Milling machine specs	Coordinate convert	▲	▲	▲	▲			●	●	
	Profile generate	▲	▲	▲	▲			●	●	
	Flat turning									
Helical cutting (within 360 degrees)										
Helical Contour Generation										
Monitoring										
Real 3-D simulation					●	●	●	●	●	●
Cycle time over check		●	●	●	●	●	●	●	●	●
Load monitor (spindle, feed axis)					●	●	●	●	●	●
Load monitor no-load detection (load monitor ordered)										
Status Logger										
Tool life management				●		●		●		●
Tool life warning										
Operation end buzzer										
Chucking miss detection		Included in machine specs								
Work counters	Count only									
	Cycle stop									
	Start disabled									
Hour meters	Power ON									
	Spindle rotation									
	NC operating									
NC operation monitor (counter, totaling)		●	●	●	●	●	●	●	●	●
NC work counter (stops at full count with alarm)										
Status indicator (triple lamp) Type C [Type B]		●	●	●	●	●	●	●	●	●
Measuring										
In-process work gauging		Included in machine specs								
Z-axis automatic zero offset by touch sensor										
C-axis automatic zero offset by touch sensor										
Y-axis gauging										
Gauge data output	File output									
Post-process work gauging interface	Set levels (5-level, 7-level)									
	BCD									
	RS-232-C (dedicated channel)									
Touch setter [M, A]		Included in machine specs								

Item		Kit specs*1	NML E	NML D	3D E	3D D	OT-IGF E	OT-IGF D	OTM E	OTM D
External Input/Output and Communication Functions										
OSP-MTConnect *4										
RS-232-C connector										
DNC link	DNC-T3									
	DNC-C/Ethernet									
	DNC-DT									
USB (additional)	2 additional ports possible									
Automation/Untended Operation										
Auto power shutoff M02, alarm										
Warmup function (by calendar timer)										
Tool retract cycle										
External program selections	A (pushbutton) 8 types									
	B (rotary switch) 8 types									
	C (digital switch) BCD, 2-digit									
	C2 (external input) BCD, 4-digit									
Okuma loader (OGL) interface		Including loader specs								
Third party robot and loader interface *3	Type B (machine)									
	Type C (robot and loader)									
	Type D									
	Type E									
Bar feeders	Bar feeder	Included in machine specs								
	Interface only									
Cycle time reduction *3	Operation time reduction		●	●	●	●	●	●	●	●
	Chuck open/close during spindle rotation									
	Tailstock advance/retract during spindle lotation									
High-Speed/High-Accuracy Functions										
Thermo Active Stabilizer–Construction TAS-C										
0.1 µm control *3										
Pitch error compensation										
Hi-Cut Pro			▲	▲	▲	▲			●	●
Y-axis alignment compensation										
Energy-saving function ECO suite										
ECO Operation	Chip conveyor intermittent/ linked operation									
	Mist collector intermittent/ linked operation									
	Spindle Power Peak Limiter									
Other Functions										
Collision Avoidance System (CAS)										
One-Touch Spreadsheet										
Machining Navi L-*g*, T-*g* (threading)										
Variable spindle speed control (VSSC)			●	●	●	●	●	●	●	●
Spindle dead-slow cutting										
Spindle speed setting										
Manual cutting feed										
Spindle power peak cutting										
Short circuit breaker										
External M signals [2 sets, 4 sets, 8 sets, 16 sets]										
Edit interlock										
OSP-VPS (Virus Protection System)										

*1. NML: Normal, 3D: Real 3D simulation, OT-IGF: One-Touch IGF, OTM: One-Touch M
E: Economy, D: Deluxe *2. Real 3-D simulation is included *3. Engineering discussions required.
*4. API library (THINC-API) needed in adding OSP-MTConnect.
Note. ▲Triangle items for M function (milling tool) machines only.

SIMUL TURN
LU EX series

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.

Pub.SIMUL TURN LU3000/4000 EX-E-(3a)-400 (May 2018)

OKUMA

OKUMA Corporation

Oguchi-cho, Niwa-gun,
Aichi 480-0193, Japan
TEL: +81-587-95-7825 FAX: +81-587-95-6074