OKUMA

OPEN POSSIBILITIES

2-Saddle CNC Lathe

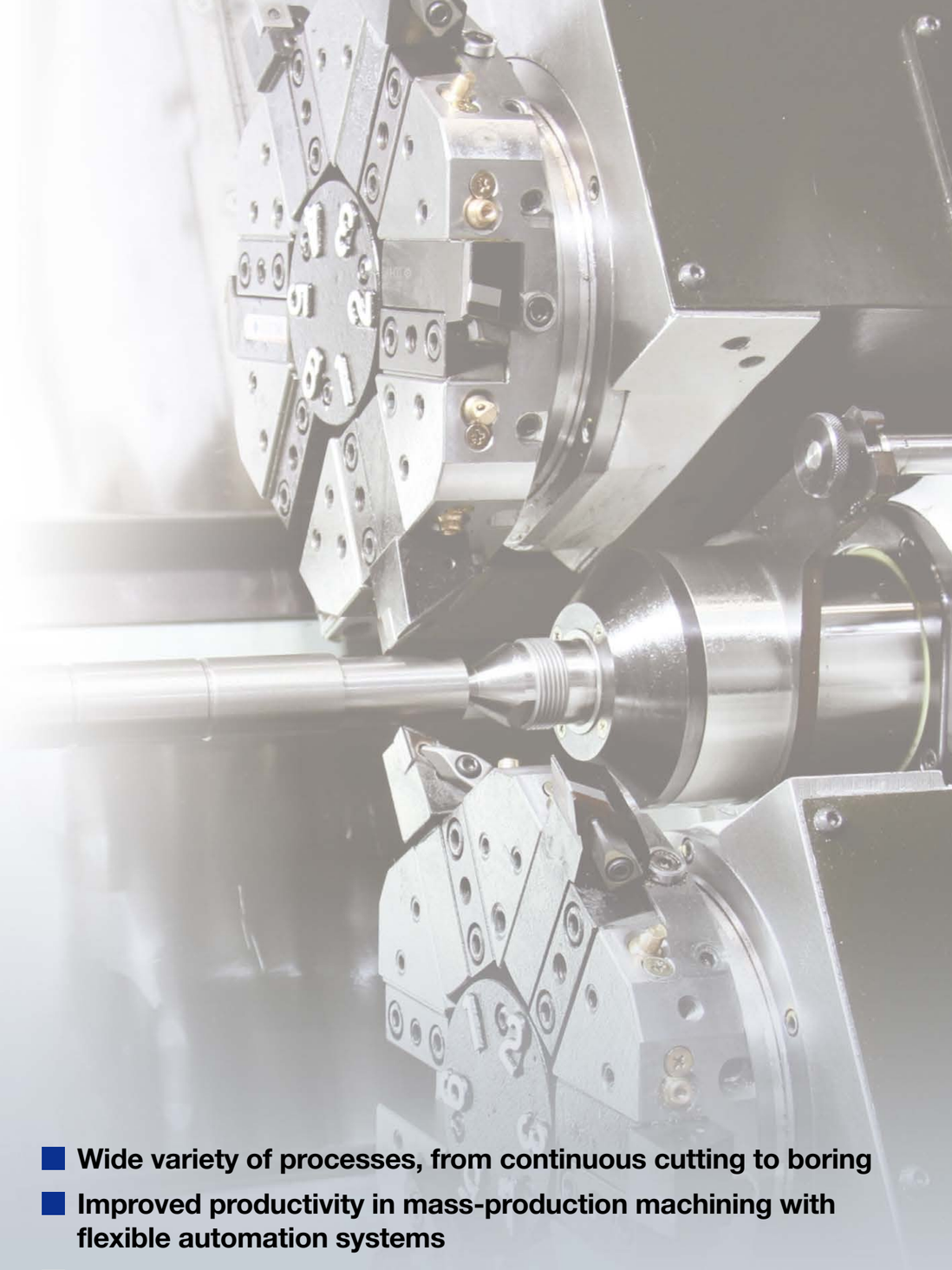
LU-S1600

2-Saddle CNC Lathe

LU-S1600

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

The standard for compact 2-saddle turning centers



- **Wide variety of processes, from continuous cutting to boring**
- **Improved productivity in mass-production machining with flexible automation systems**
- **High-accuracy machining achieved even in long-run, continuous operations**

Photos shown in this brochure include optional equipment.

Huge productivity improvements in mass-production machining

Much shorter lead time for shaft workpieces

Shorter cycle times with simultaneous machining on upper and lower turrets. Faster parts machining contributes greatly to improved shop floor QCD (quality, cost, delivery).

Machining Example

■ OD turning including continuous cutting

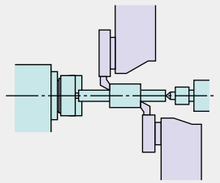
Cycle time: **1 min 28 sec**

Size: ø35 mm × L350 mm
Material: FCD600

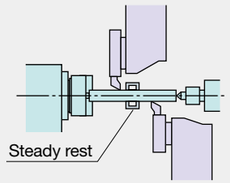
Diverse machining range with simultaneous 4-axis machining

Effective use of simultaneous 4-axis control enables machining suited to the user's workpiece.

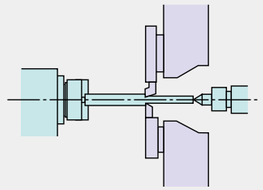
High-efficiency machining from simultaneous 4-axis turning



Prevents chatter during steady rest work



Balanced cutting prevents chatter during machining of long workpieces



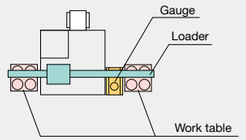
1-machine 1-loader applications to full-scale production lines

Okuma proposes the best automation systems for customers' machining needs, including all peripheral devices, from work tables to gauges. The highest productivity with stable quality is achieved through all-out pursuit of speed, cost, and quality in mass-production parts machining.

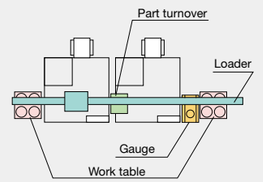
- Get outstanding flexibility from 1-machine/1-loader to multi-machine lines, with optimum cycle times, operation mix, work flow, floor space and the like.
- Selection of work tables, part turnover stands, post-process gauges and other peripherals, can provide an ideal system arrangement to meet your needs.

Loader Specs

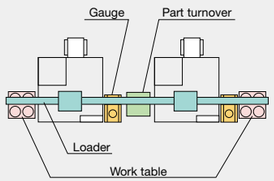
1-machine/1-loader cell



2-machine/1-loader cell



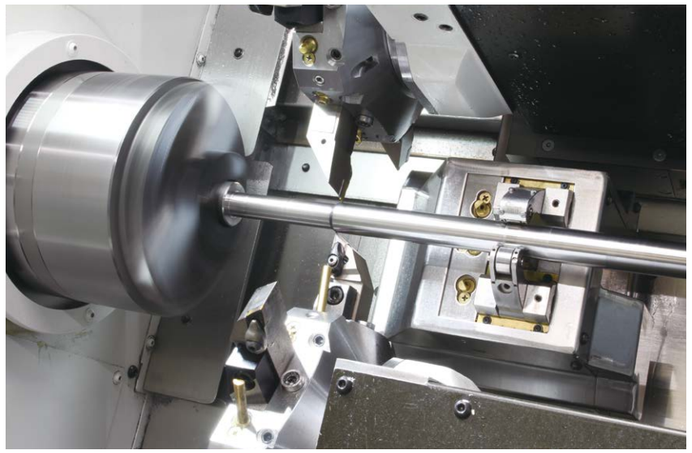
2-machine/2-loader cell



- Blanks and finished parts can be stacked on one work table. (Not possible with 2-machine/2-loader specs.)
- 2-machine/2-loader cell machines can be laid out in parallel.

High precision machining of long workpieces with a movable steady rest (Optional)

A movable steady rest can be attached to the tailstock or lower turret rails. High accuracy machining can be done even with long workpieces which are susceptible to chatter and runout.



The steady rest in this photo has tailstock slideway install specs

Smooth, powerful machining

Powerful turning

■ Machining capacity

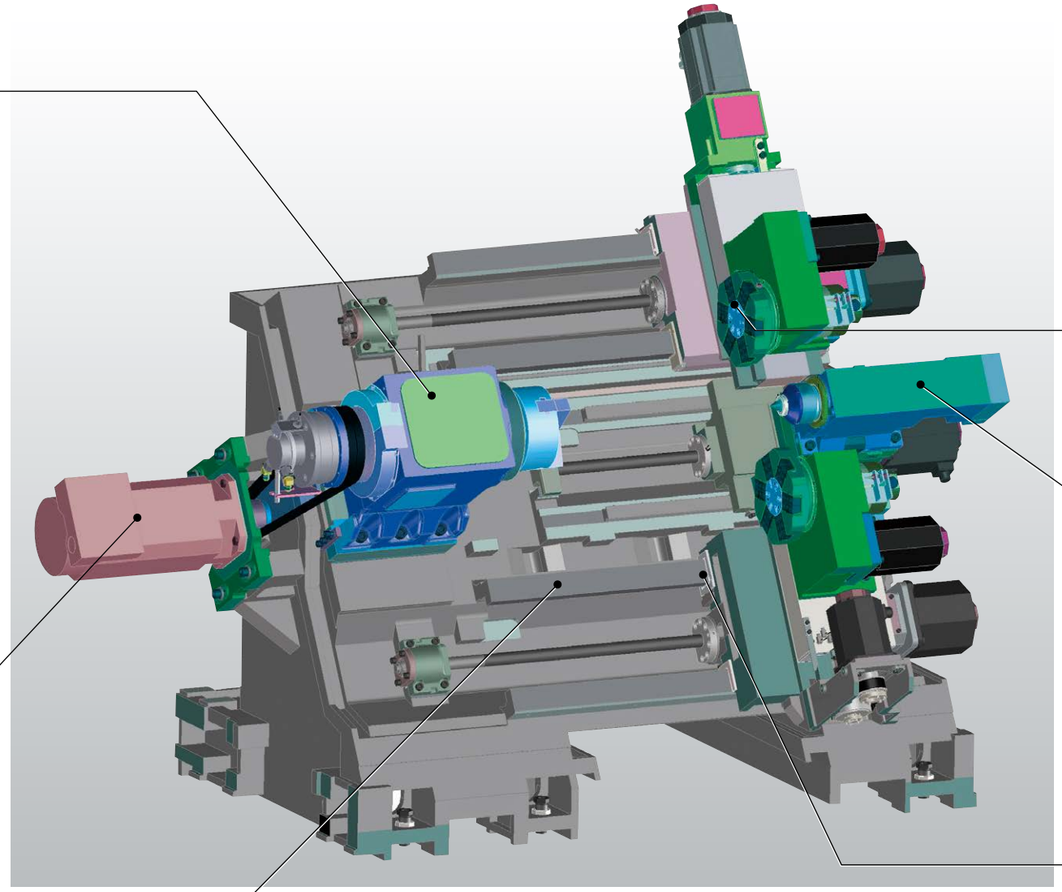
(15/11 kW spindle [Opt] actual data)

● Turning: **2 mm²** (S45C)

Cutting speed: 150 m/min
Infeed: 4 mm
Feed: 0.5 mm/rev

Motor placed in minimal thermal deformation location

Mounting the spindle motor outside the bed minimizes the effect of thermal deformation on machining accuracy. Outside motor mount also makes maintenance work easier.

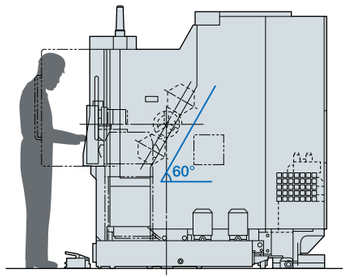


Tough structure stands up easily to continuous cutting

The upper and lower turret feed axes use slide guideways for easy handling of continuous cutting, which places a large burden on the machine.
Rugged structure from placement of multiple ribs within the bed gives substantial construction while maintaining a compact size.

Machine configuration for outstanding workability

60° slant bed construction ensures superior visibility of the tool edge and machining status, plus a working chamber sufficient for loader handling. Operator burden is also decreased with workability considerations including workpiece loading/unloading position and tool change position for working ease.



Select the control you are familiar with

The availability of both OSP and FANUC systems lets you choose the controller you are familiar with. Smooth startup of production lines after machine installation can be achieved by sharing part programs from other machines.

OSP-P300LA

FANUC 0i-TF

Broad range of workpieces, wide variety of operations

The large working range allows for machining of up to a maximum of ø160 mm. The LU-S1600 can also handle boring bars up to ø32 mm, for powerful machining of inner diameters of CVJ outer rings and other workpieces. Various other applications are also possible, including balanced simultaneous 4-axis cuts on upper and lower turrets, inner and outer diameters.

Fast turret movement

● Turret indexing time:
0.15 sec per station
(both upper and lower)

Achieves stable machining

Stable machining of long workpieces with highly rigid tailstock that uses a MT No. 5 revolving center.
An optional built-in tailstock for MT No. 4 centers is also available.

Smooth, continuous operation with complete chip handling

XB double wipers are used on the lower turret where chips accumulate, while a chip flusher is used on the saddle top. Chip discharge is greatly improved with the use of a single stainles steel sheet for the guideway cover on the spindle side, enabling continuous mass-production operations.

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

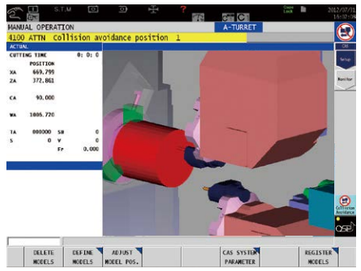
Okuma's Intelligent Technology reduces operator burden

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.

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.

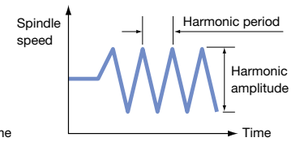
Collision avoidance in manual operation
Especially useful for machine operators setting up a job, collision avoidance in manual mode provides collision-free confidence and faster machining preparations.

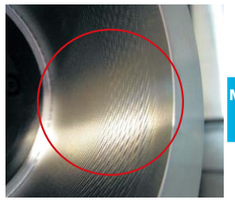


Virtual machine (interference check)

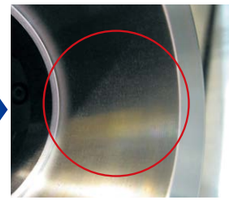
Cutting condition search for turning
Machining Navi L-*g* (Harmonic Speed Control) [Optional]

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.



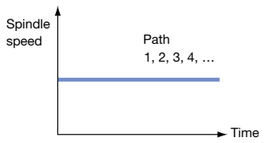


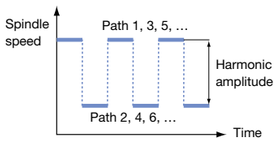
Machining Navi L-*g*



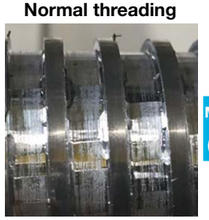
Cutting condition search in threading
Machining Navi T-*g* (threading) [Optional]

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.



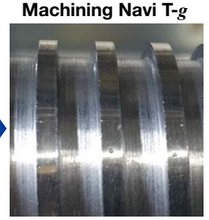


Normal threading


Chatter marks

Machining Navi T-*g* (threading)

Machining Navi T-*g*

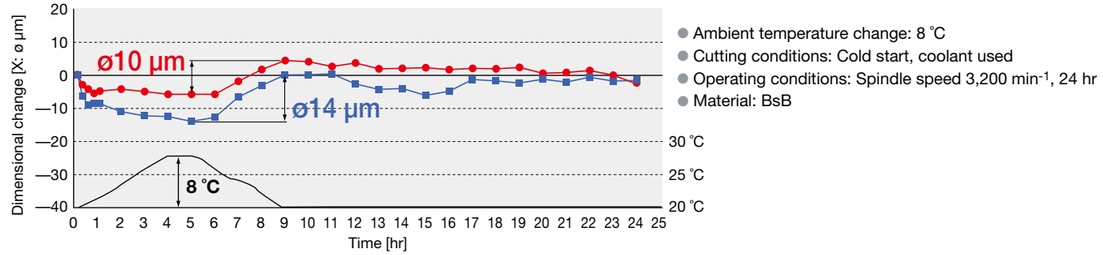

Smooth surface, clean finished threads

Manageable Deformation—Accurately Controlled
Thermo-Friendly Concept (OSP only)

The unique approach of "accepting temperature changes."
Machine deformation is straightforward thanks to a simplified thermal deformation structure and design technology to distribute heat evenly. This controls complex twisting and slanting while also making it possible to predict the deformation.
Okuma's original, highly accurate control technology also precisely controls for thermal deformation that changes as a result of room temperature changes, whether or not there is coolant, or other reasons.

Minimizes dimensional changes from thermal deformation
Accurate control in a wide range of usage situations, including use of coolant and travel stop during noon break.

Machining dimensional change over time (actual)
ø10 µm (Upper turret) **ø14 µm** (Lower turret)



- Ambient temperature change: 8 ℃
- Cutting conditions: Cold start, coolant used
- Operating conditions: Spindle speed 3,200 min^{-1}, 24 hr
- Material: BsB

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.

Next-Generation Energy-Saving System
ECO suite

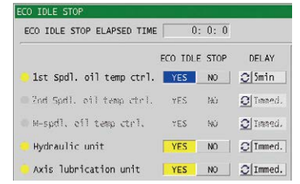
A suite of energy saving applications for machine tools

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.

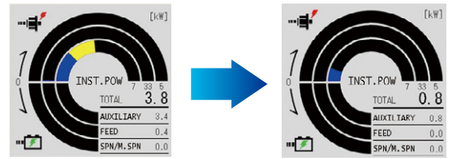
On-the-spot check of energy savings
ECO Power Monitor
Power is shown individually for spindle, feed axis, and peripheral equipment on OSP operation screen. The energy-saving effect from peripheral equipment stopped with ECO Idling Stop can be confirmed on the spot.

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

- Example of equipment that can use Idling Stop



- Example of Power Monitor check



Before ECO Idling Stop — After ECO Idlling Stop

The Next-Generation Intelligent CNC

OSP suite OSP-P300LA

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."— Equipped with many suite applications!

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.

S11

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.

S10

Easy programing without keying in code

Scheduled Program Editor

S15

Monitoring operating status even when away from the machine

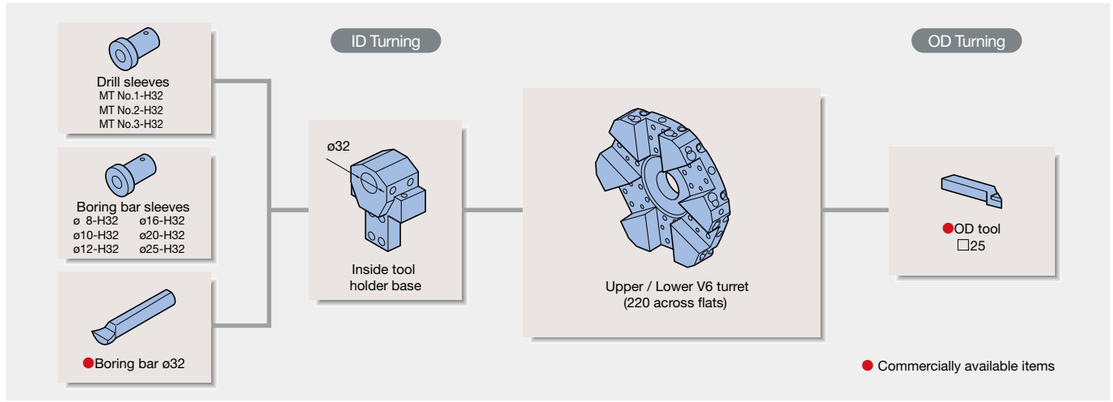
E-mail Notification

Machine Specifications

Item		Unit	LU-S1600		
			480 DBC	550 DBC	1000 DBC
Capacity	Standard chucks		8 inch		
	Swing over bed	mm (in.)	ø500 (19.69)		
	Max. turning diameter	mm (in.)	ø160 (6.30)		
	Max. turning length	mm (in.)	480 (18.90)	550 (21.65)	1,000 (39.37)
Travel	XA, XB axis	mm (in.)	100 (3.94)		
	ZA, ZB axis	mm (in.)	500 (19.69)	570 (22.44)	1,100 (43.31)
Spindle	Speed	min^{-1}	40 to 4,000: OSP/FANUC [50 to 6,000: OSP only]		
	Nose type		JIS A2-6 [ø140 flat]		
	Front bearing dia.	mm (in.)	ø100 (3.94)		
	Bore dia	mm (in.)	ø62 (2.44)		
Turret	Type (both upper/lower)		V6		
	No. of tools (both upper/lower)	tool	6		
	OD tool shank dimensions	mm (in.)	□25 (0.98)		
	ID tool shank diameter	mm (in.)	ø32 (1.26)		
	Indexing time	sec/1 index	0.15		
Feedrate	Rapid feedrate	m/min (fpm)	X: 20 Z: 30 (X: 65.62 Z: 98.43)		
Tailstock	Movable tailstock		Handle [NC]		
	Tapered bore type		MT No. 5 (revolving center) [MT No. 4 (built-in center)]		
	Travel	mm (in.)	340 (13.39)	300 (11.81)	700 (27.56)
	Quill diameter	mm (in.)	ø90 (3.54)		
	Quill travel	mm (in.)	120 (4.72)		
Motor	Spindle drive [OSP]	kW (hp)	4,000 min^{-1}: 11/7.5 (15/10) (30 min/cont) [15/11 (20/15) (30 min/cont)] [Integral motor 6,000 min^{-1}: 11/7.5 (20 min/cont) 15/11 (15 min/cont)]		
	Spindle drive [FANUC]	kW (hp)	4,000 min^{-1}: 11/7.5/7.5 (15 min/60 min/cont) [4,000 min^{-1}: 15/11/11 (15 min/60 min/cont)]		
Machine size	Machine height	mm (in.)	2,054 (80.51)		2,247 (88.46)
	Floor space (machine only)	mm (in.)	2,440 × 1,980 (96.06 × 77.95)		3,235 × 2,282 (127.36 × 89.84)
	Spindle center height	mm (in.)	Side discharge : 1,145 (45.08)		
	Machine weight	kg (lb)	5,000 (11,000)		6,200 (13.640)
CNC			OSP-P300LA , FANUC 0i-TF		

[ ]: Optional

Tooling System



Standard Specifications & Accessories

Spindle	JIS A2-6 40 to 4000 min^{-1}
	OSP: 11/7.5 kW (30 min/cont)
	FANUC: 11/7.5 kW (15 min/cont)
Turret (both upper and lower)	V6 turret bolt clamp
Tailstock	MT No. 5 (revolving center)
Accessory equipment	Hydraulic unit
	Coolant system
	Full-enclosure shielding
	Work lamp (LED)
	Foot switch for chucks
	Foot switch for tailstock quill
	Lubrication monitor
	XB axis double wiper

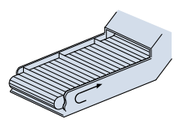
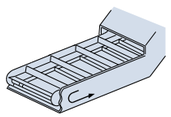
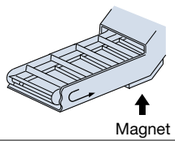
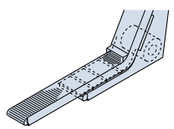
Standard chuck size

	Solid/hollow chuck	
OD chuck	8-inch	10-inch
Standard spindle A2-6	●	●
High-power spindle A2-6	●	●
High-speed spindle ø140	●	
High-speed high-power spindle ø140	●	

Optional Specs & Accessories

High-power spindle	JIS A2-6 40 to 4,000 nin^{-1} OSP: 15/11 kW (30 min/cont) FANUC: 15/11/11kW (15 min/60 min/cont)
High-speed spindle	OSP only: ø140 flat 50 to 6,000 nin^{-1} 11/7.5 kW (20 min/cont)
High-speed high-power spindle	OSP only: ø140 flat 50 to 6,000 nin^{-1} 15/11 kW (15 min/cont)
Turret (both upper and lower)	V6 turret, wedge clamp
Front cover	Automatic full door (safe tape SW, area sensor), two-hand cycle start button
Chucking	Chuck auto open/close confirm, chuck high/low pressure switch (re-gripping), chucking miss detection
Tailstock	Auto tailstock quill advance/retract confirm, tailstock thrust high/low switch, tailstock quill position detection (multi-sizing, high accuracy sizing), 2-speed tailstock quill, low tailstock thrust.
Face driver	High thrust spindle, face plate, labyrinth protective cover
Air blower (blast)	Chuck air blower, tailstock air blower, spindle ID air blower, turret air blower (internal piping, common coolant nozzle)
Coolant blower	Shower coolant (A, B), spindle ID coolant (A, B)
Dustproofing measures	Spindle air purging, X-axis double wiper (XA:-side 10 mm travel limit), Z-axis double wiper (ZA + ZB)
Gauging	In-process work gauging
Touch setter	M (manual), A (automatic)
Automation	Workrest, parts catcher, bar feeder
Stopper in spindle	
Coolant (pressure, sensor related)	High pressure coolant unit, coolant high/low pressure switch (upper/lower turret), coolant sensors (level sensor, flow sensor)
Steady rest	Tailstock slideway SLU-A1 vertical travel 45 mm, lower slideway, lower cross-slide
Mist collector	
Optional high accuracy specifications	AbsoScale (XA, XB, XA + XB), coolant temperature regulator, hydraulic oil temperature regulator
Raised machine height	20 mm, 45 mm, 70 mm, 95 mm

Chip conveyor: typical shapes and applications

Name	Hinge type	Scraper type	Magnet scraper type	Hinge scraper type (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				

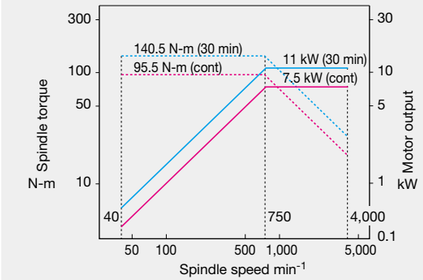
Note: Machine platform may be necessary depending on the type of conveyor.

Spindle output/torque diagrams

〈OSP-P300LA〉

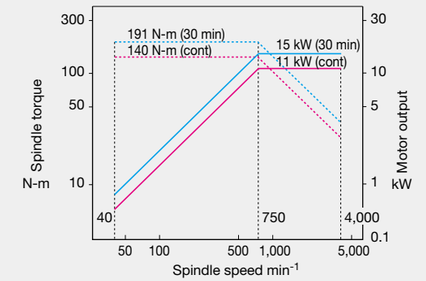
Standard spindle

- Spindle speed: 4,000 min^{-1}
- Max output: 11/7.5 kW (30 min/cont)
- Max torque: 140.5/95.5 N-m (30 min/cont)



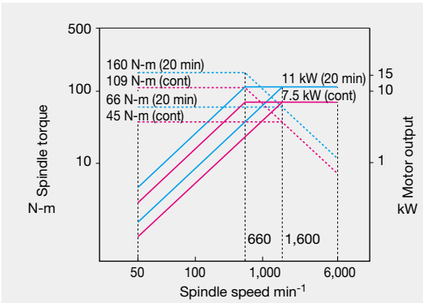
High-power spindle

- Spindle speed: 4,000 min^{-1}
- Max output: 15/11 kW (30 min/cont)
- Max torque: 191/140 N-m (30 min/cont)



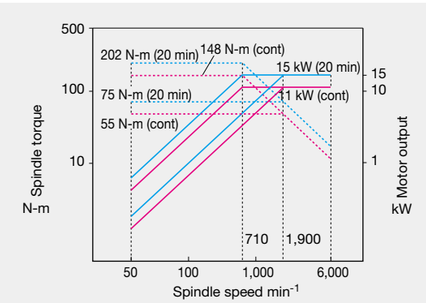
High-speed spindle

- Spindle speed: 6,000 min^{-1}
- Max output: 11/7.5 kW (20 min/cont)
- Max torque: 160/66 N-m (20 min/cont)



High-speed high-power spindle

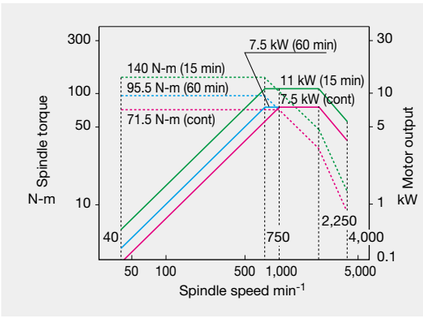
- Spindle speed: 6,000 min^{-1}
- Max output: 15/11 kW (20 min/cont)
- Max torque: 202/148 N-m (20 min/cont)



〈FANUC 0i-TF〉

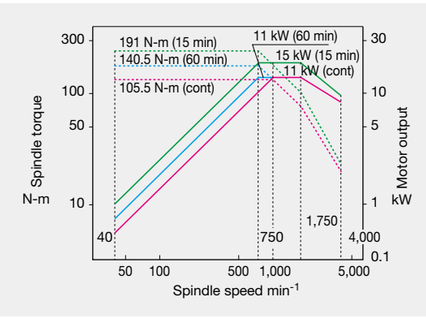
Standard spindle

- Spindle speed: 4,000 min^{-1}
- Max output: 11/7.5/7.5 kW (15 min/60 min/cont)
- Max torque: 140/95.5/71.5 N-m (15 min/60 min/cont)



High-power spindle

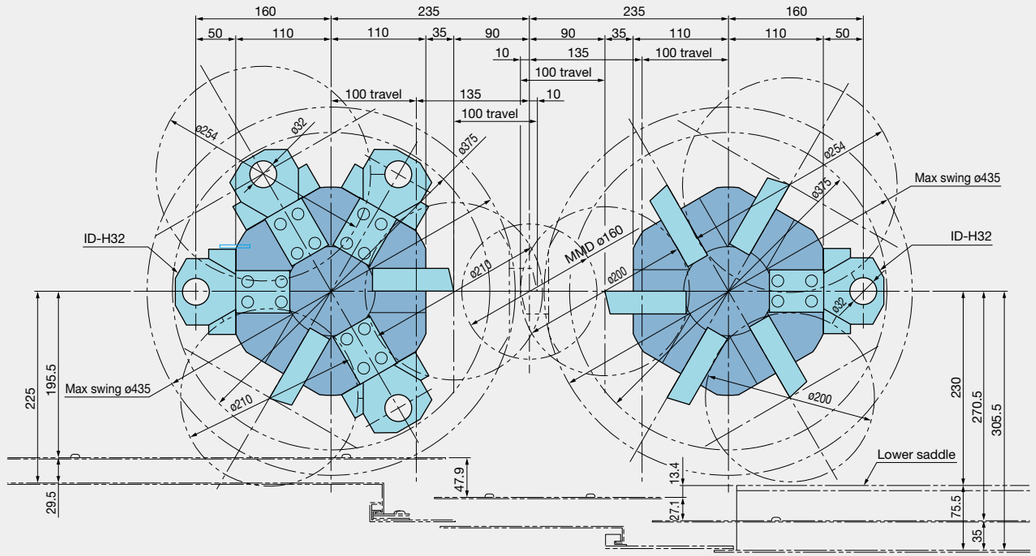
- Spindle speed: 4,000 min^{-1}
- Max output: 15/11/11 kW (15 min/60 min/cont)
- Max torque: 191/140.5/105.5 N-m (15 min/60 min/cont)



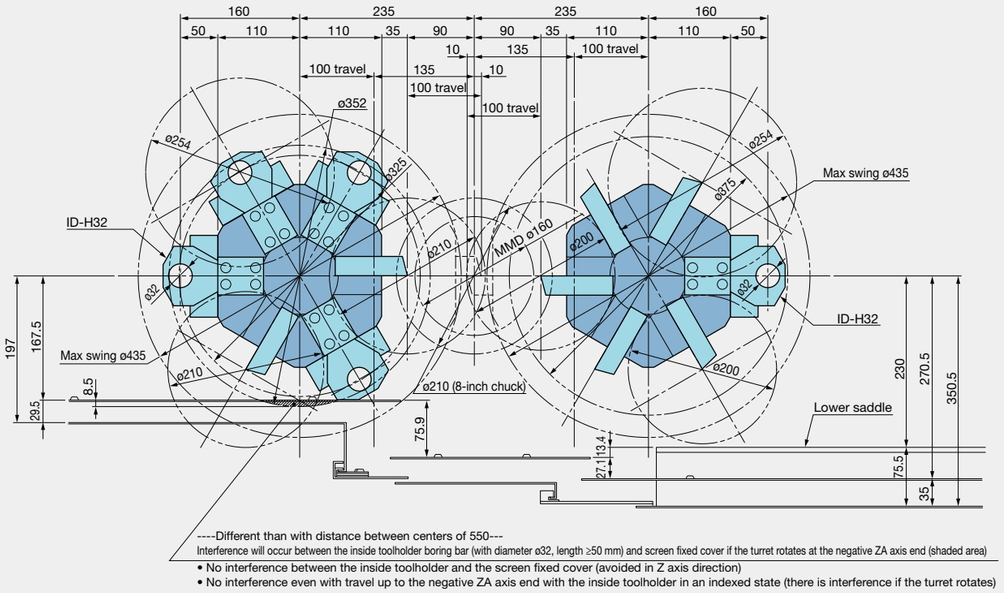
Turret interference drawings

Unit : mm

〈DBC 550〉



〈DBC 1000〉



----Different than with distance between centers of 550---

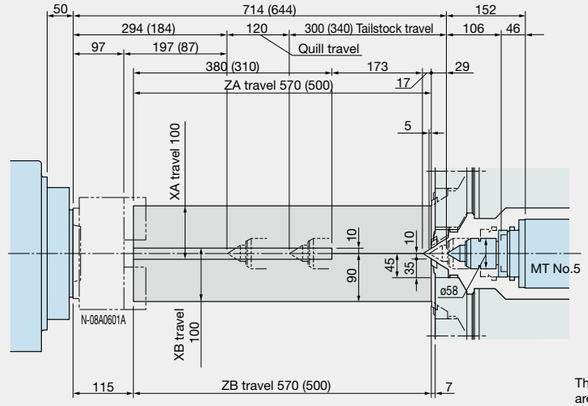
Interference will occur between the inside toolholder boring bar (with diameter ø32, length ≥50 mm) and screen fixed cover if the turret rotates at the negative ZA axis end (shaded area)

- No interference between the inside toolholder and the screen fixed cover (avoided in Z axis direction)
- No interference even with travel up to the negative ZA axis end with the inside toolholder in an indexed state (there is interference if the turret rotates)

Working Ranges

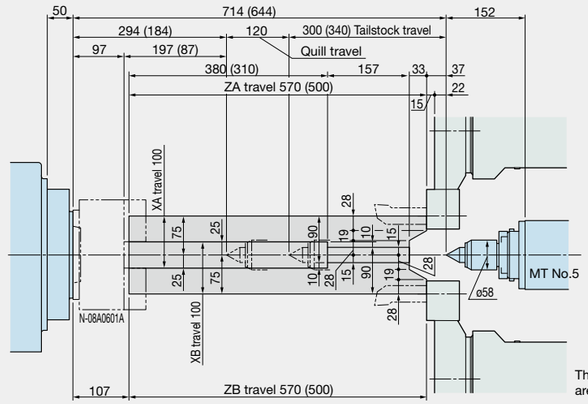
Unit : mm

〈DBC 550/480〉 Direct OD



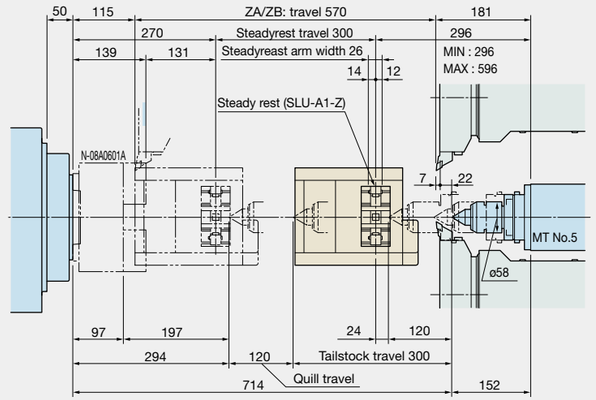
The values with DBC 480 mm specifications are given in parentheses.

〈DBC 550/480〉 ID



The values with DBC 480 mm specifications are given in parentheses.

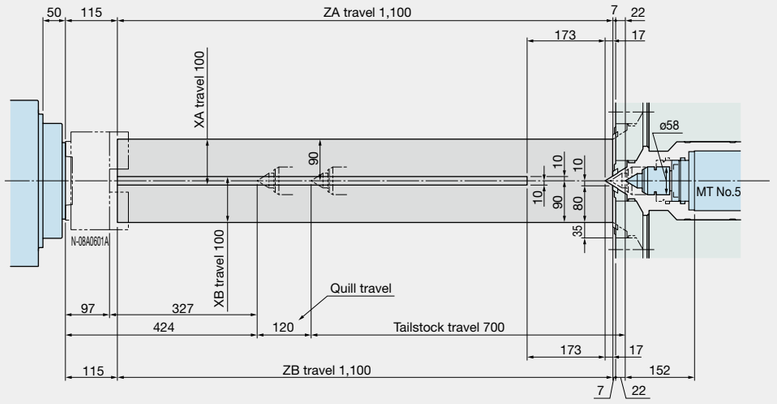
〈DBC 550〉 With steady rest tailstock guide



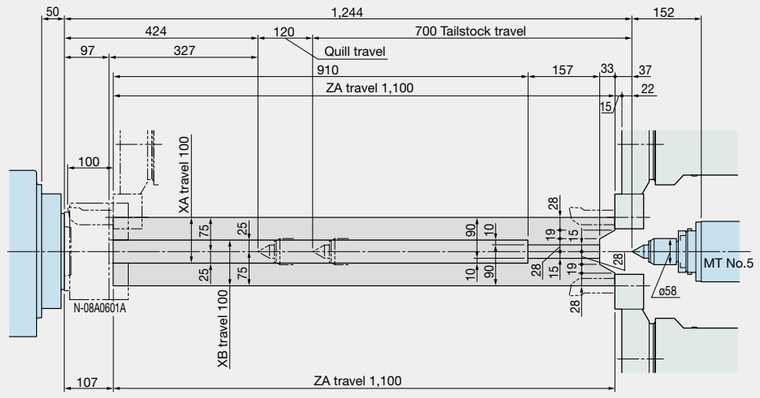
Working Ranges

Unit : mm

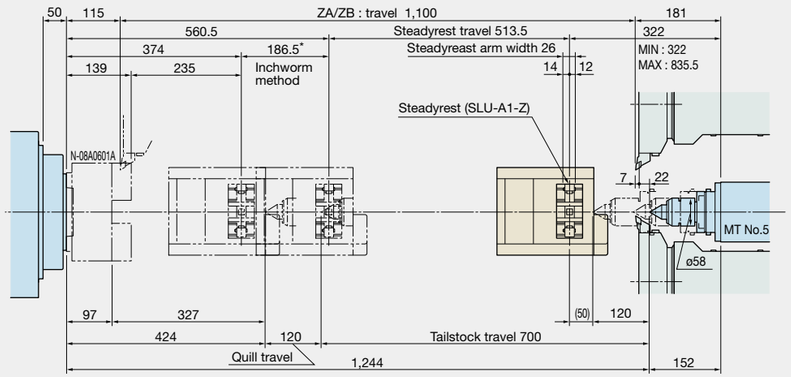
〈DBC 1000〉 Direct OD



〈DBC 1000〉 ID



〈DBC 1000〉 With steady rest tailstock guide

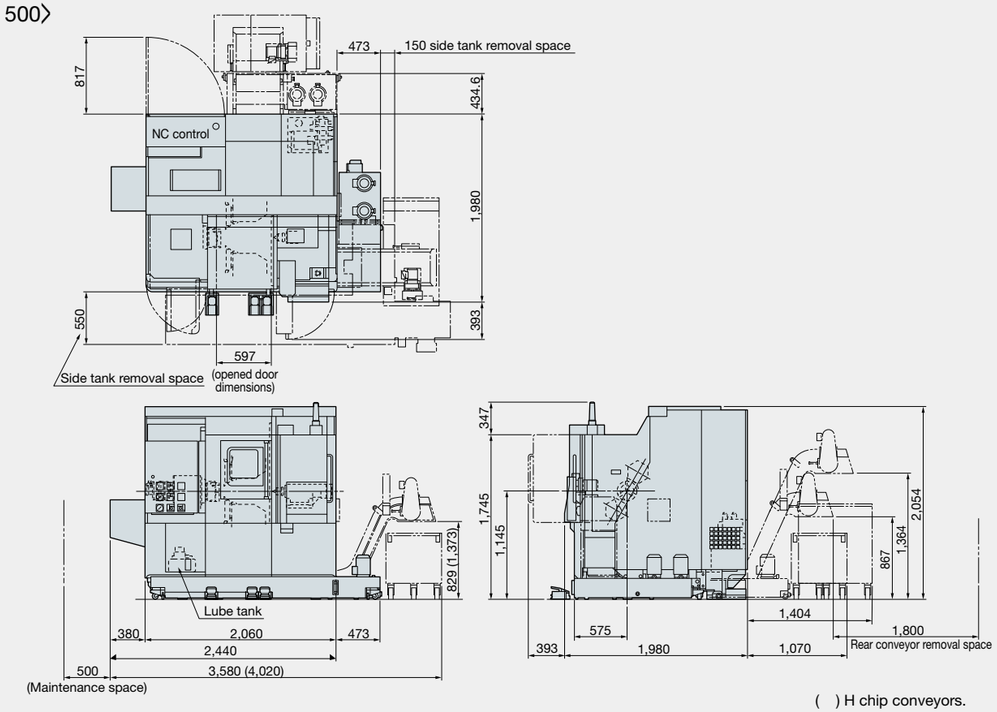


• By moving the tailstock to the spindle, the steady rest travel is shifted

Dimensional / Installation Drawings

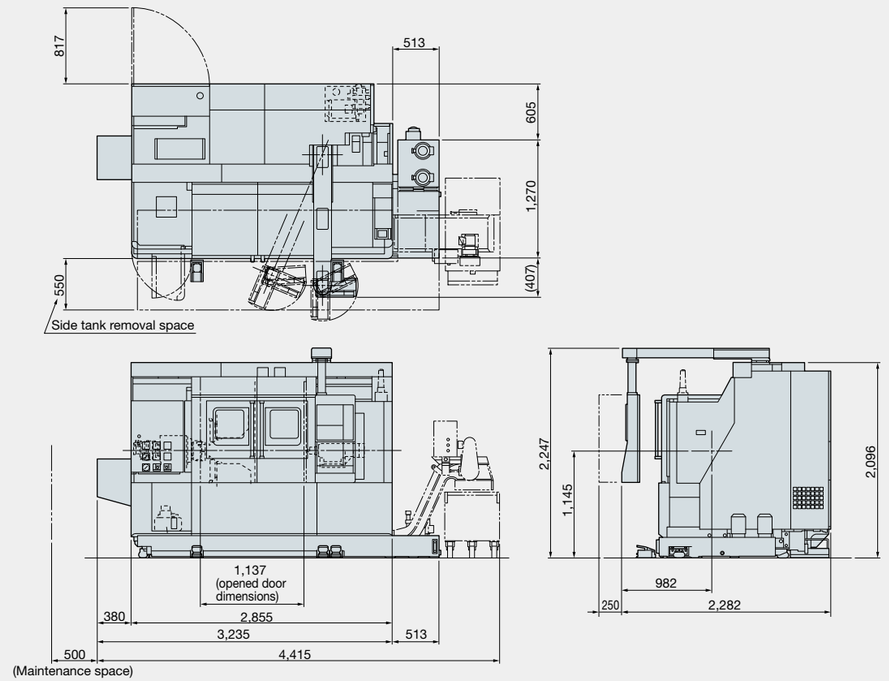
Unit : mm

〈DBC 500〉



( ) H chip conveyors.

〈DBC 1000〉



OSP-P300LA

Standard Specifications

Basic Specs	Control	Turning: X, Z simultaneous 2-axis + 2-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, 0.001° Decimal:1 µm, 10 µm, 1 mm (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, multi touch panel
	Self-diagnostics	Automatic diagnostics and display of program, operation, machine, and NC system problems
	Program capacity	Program storage: 4 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, pulse handle), load meter, operations help, alarm help, sequence, return, manual interrupt & auto return, 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)
Energy-saving functions	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
New Operations							
Advanced One-Touch IGF-L (Real 3D incl)						●	●
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)	64 sets						
	96 sets						
	200 sets						
	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)							
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							
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
External Input/Output and Communication Functions							
OSP-MTConnect *3							
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 *2	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 *2	Operation time reduction	●	●	●	●	●	●
	Chuck open/close during spindle rotation						
	Tailstock adv/ret during spdl						
High-Speed/High-Accuracy Functions							
0.1 µm control *2							
Pitch error compensation							
Energy-saving function ECO suite							
ECO Operation	Chip conveyor intermit/link op						
	Mist collector intermit/link op						
	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, E: Economy, D: Deluxe
*2. Engineering discussions required.
*3. API library (THINC-API) needed when adding OSP-MTConnect.

FANUC 0i-TF

Standard Specifications

Number of control axes	Simultaneous 2 axes (X, Z)	Program input	Program memory: 512 KB
Interpolation system	Positioning, linear, arc, threading, taper		No. of registered programs: 400
	Polar coordinate interpolation, cylindrical interpolation		Chamfering, corner R
Command system	With absolute incremental		Complex shape fixed cycle (I + II)
Minimum input increment	X, Z axes both 0.001 mm		Extension program editing
Maximum command value	±99999.999 mm decimal point input		RS-232-C input/output interface
Operating panel	10.4 inch color LCD		Custom macros
Monitor functions	Display language English/Japanese		Additional custom macros, common variables (total 600)
	Operating time, no. of parts display		Programmable data input
	Electronic buzzer		High-speed skip
	Graphic display		Program protection key switch
Machine operation	Constant cutting speed control		Background editing
	Oriented spindle stop (1 point M19)		Single fixed cycle
	Continuous threading function		Inch/metric switch
Communications/networking	USB memory input/output	Compensation functions	Thermal deformation compensation
			Tool nose radius compensation
			Tool shape and wear compensation
			No. of tool compensations Upper turret: 64, Lower turret: 64
			AI contouring control I

Optional Specifications

Monitor functions	Tool counter	
	Workpiece counter	
	Multi-counter	
	Hour meters	
	Status indicator	Yellow, red, triple lamp
	Tool life management	Okuma software, spare tool jump
	Abnormal load detection	Spindle + feed
Machine operation	Oriented spindle stop	4 points (M19, 119, 129, 139)
	Post-process work gauging interface	Quantitative compensation method (5 steps, 7 steps)
	Auto power shutoff	
	Earth leakage circuit breaker (ELCB)	
Program input	External program selection	Digital switch with 2-digit display
	Workpiece coordinate system selection	6 sets
	Additional RS-232-C channels	
	Program restart	
	Spare M code	2, 4, 8
Automation	Robot loader interface	
	Bar feeder interface	
Other	Control panel lamp	
	Control panel air conditioning	Temperature regulator, dehumidifier
	AV100V 1A socket	Operation panel, in control panel

LU-S1600

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.No. LU-S1600-E-(4a)-200 (Dec 2018)

OKUMA

OKUMA Corporation

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

This product is subject to the Japanese government Foreign Exchange and Foreign Trade Control Act with regard to security controlled items; whereby Okuma Corporation should be notified prior to its shipment to another country.