OKUMA

OPEN POSSIBILITIES

Vertical Turning Lathes

V series

Vertical CNC Lathes

V40R / V100R

Vertical Twin-Spindle CNC Lathes

2SP-V40

Vertical Turning Lathes

V series

Vertical CNC Lathes **V40R / V100R**

Vertical Twin-Spindle CNC Lathes **2SP-V40**

Intelligent Technology

Collision Avoidance System

Machining Navi

Improve productivity with mid/big flanges

Stable machining of thin and odd-shaped workpieces

V40R

V100R

2SP-V40

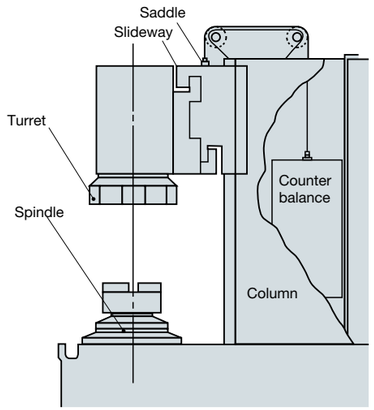
Photos includes some optional specifications

Stable accuracy

- Powerful machining of medium and large box and odd-shaped workpieces
- Use of box-type base and column for highly dependable, highly rigid structure
- Stable machining in which the workpiece adheres closely to the chucking surface by its own weight

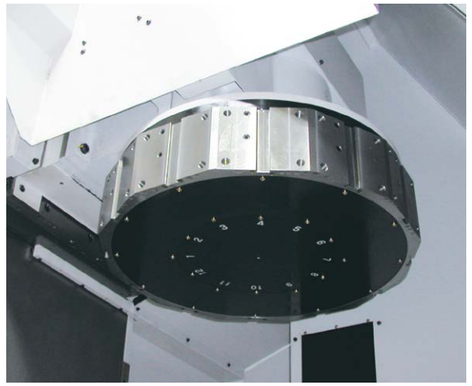
Highly rigid structure

- A strong, square column is positioned on a large, rigid base with good damping properties, and a highly rigid, reliable structure with wide box ways on both the X and Z axes is used.
- Smooth, stable feed is achieved from low to high speeds with the use of a weight-type counterbalance that is not affected by the feedrate.



Turret

- Use of a large-diameter, 12 angle turret with margin space makes tooling easy–even for permanent sets.
- The large-diameter coupling enables high accuracy indexing and powerful heavy cutting with strong hydraulic clamps.

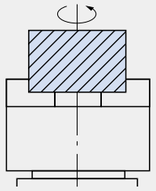


V100R

Stable, accurate workpiece mounting

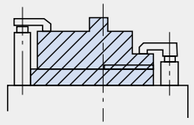
- The workpiece adheres closely to the chucking reference surface by its own weight, enabling stable mounting less affected by gravity than with a horizontal lathe.
  High accuracy, stable machining—from thin workpieces to large-diameter or heavy workpieces.

Vertical NC lathe
load is vertical



- Easy and stable chucking is possible even with odd-shaped workpieces that make chucking difficult. Fixture setups can be simplified and fixture costs reduced.

Simple to mount/dismount
odd-shaped work



Wide constant-power ranges

- Using main motors with wide constant-power ranges
- Headstock with flange construction to minimize effects of thermal deformation and vibration

Main spindle

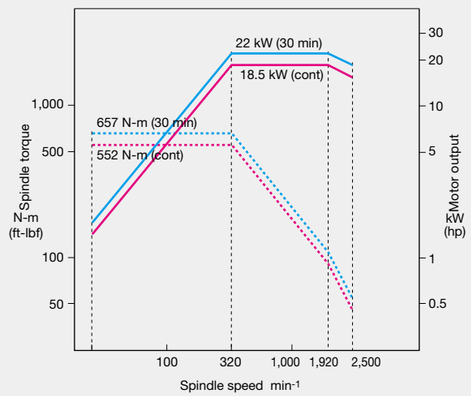
- The headstock is given a flange construction and is solidly fixed to a box-type base. This minimizes the effects of thermal deformation and vibration.
- A powerful motor with a wide constant-power range is used for the spindle. Combining this with a big bore spindle enables powerful heavy-duty cutting.

	V40	V100R
Spindle type	A2-8	Flat ø380 (14.96)
Outside diameter (OD)	ø120 mm (4.72)	ø200 mm (7.87)
Inside diameter (ID)	ø77 mm (3.03)	ø110 mm (4.33)

V40R/2SP-V40

OSP-P300LA

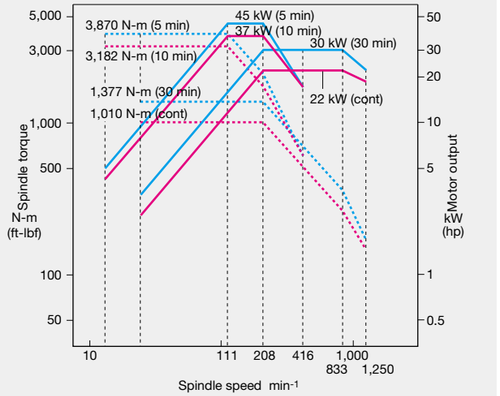
- Spindle speed 2,500 min^{-1}
- Maximum output 22/18.5 kW (30/25 hp) (30 min/cont)
- Maximum torque 657/552 N-m (483/407 ft-lbf) (30 min/cont)



V100R

OSP-P300LA

- Spindle speed 1,250 min^{-1}
- Maximum output 45/37/30/22 kW (60/50/40/30 hp) (5/10/30 min/cont)
- Maximum torque 3,870/3,182/1,377/1,010 N-m (2,846/2,340/1,013/743 ft-lbf) (5/10/30 min/cont)



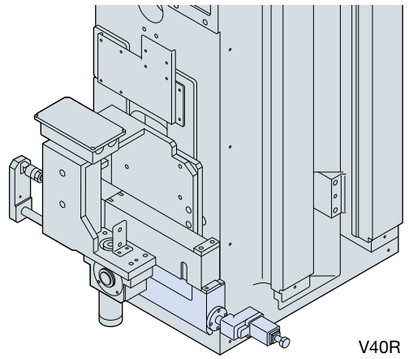
Maintenance and operability

- Freely configurable chip discharge to match plant layout
- Base construction for excellent chip disposal
- Outstanding access to chuck
- All operations can be done from front of machine

Huge reduction in setup time with touch setter (auto tool compensation) (optional)

- Reduced tool compensation setting time
- Even inexperienced operators can quickly and accurately set tool compensation.
- Use of all direction, highly accurate touch sensor gives flexibility in handling all types of tools.

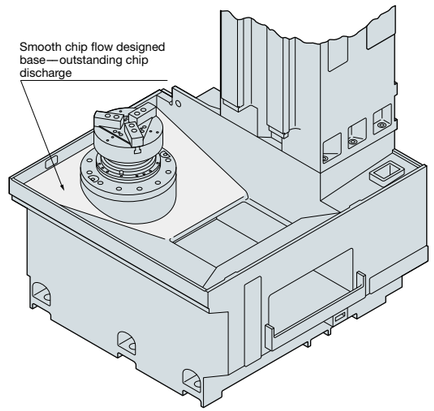
Note: Arm extension and retraction is done automatically.



V40R

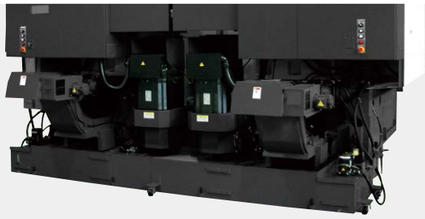
Outstanding chip disposal

- Smooth chip flow designed base—outstanding chip discharge
- Thorough chip disposal measures with chip flow coolant as standard equipment.

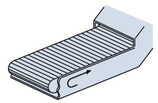
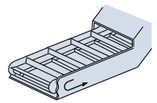
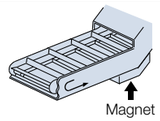
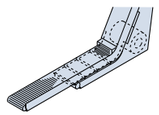


Chip conveyor (optional)

- Chip discharge in any direction to match plant layout—side or rear disposal.
- Variety of chip conveyors to match type of workpiece material.



Chip conveyor types and applications

Name	Hinge type	Scraper type	Magnet scraper type	Hinge scraper type*
Application	● For steel	● For casting	● For castings	● For steel, castings, nonferrous metal
Features	● General use	● Magnet scraper more effective for sludge disposal ● Easy maintenance ● Blade scraper	● Effective with sludge ● Not suited for nonferrous metals	● Filtration of long and short chips and coolant
Shape			 Magnet	

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

* With drum filter

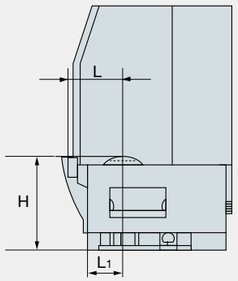
Operations done from machine front

- Outstanding spindle accessibility, simple two-handed mounting/dismounting even of large-diameter workpieces.
- Front-skirt operation panel convenient for up-close jobs.
- Easy changeover with swiveling pendant operation panel.
- Chuck pressure adjustments can also be easily done from front of machine.
- Completely independent operation on two spindles (2SP-V models).

Convenient front-apron operation panel

Outstanding accessibility

Type	L	L1	H
V40R	548 mm (21.57)	340 mm (13.39)	960 mm (37.80)
V100R	860 mm (33.86)	440 mm (17.32)	1,170 mm (46.06)



Machine side view

Manual workpiece mount/dismount device (optional)

- Chain hoist type device for manual mounting/dismounting of workpiece installed on machine for simpler mounting/dismounting of heavy workpieces.

Maximum lifting weight	100 kg (220 lb), 200 kg (440 lb) (V40R, 2SP-V40 are 100 kg (220 lb) only)

- Workpiece can easily be attached to chuck reference surface with double switchover between low- and high-speed feed.

Note: Please prepare workpiece lifting hook separately.

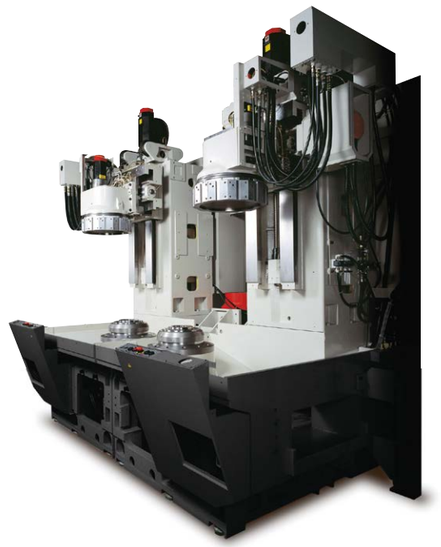
Note: For stable surface quality, refrain from operating a jib crane during machine operation.

High productivity

- Zero parts in progress with integrated processing.
- Raise production efficiency with multitasking specifications.

Two-spindle series (2SP-V40): High productivity with double the performance on one machine

- Because of the separate L/R structures, machining vibration does not affect the other spindle.



Multitasking specifications provide powerful process-intensive machining to deal with a wide range of production configurations (optional)

Turning + drilling & end milling all done completely on one machine

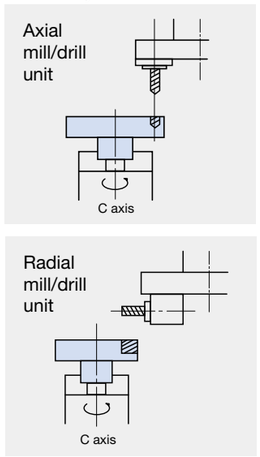
- Improved machining accuracy
- Improved productivity with process-intensive machining

Multitasking

	Items	Unit	2SP-V40 V40R	V100R
Milling tool spindle	Controlled axes		X, Z, C axes	
	Turret configuration		For V12 multitasking machine specifications	
	No. of tools		6 (Turret station no. 1, 3, 5, 7, 9, 11)	
	Spindle speed	min^{-1}	2,000	3,000
	Attached bore collet	mm (in.)	ø32 (1.26)	
	Motor; OSP	kW (hp)	3.5 (4.8) [4(4.8)]	3.5 (4.8) [5.5(7.5)]
C axis	Minimum input increment	deg	0.001	

- [ ]: FANUC specifications
- Multitasking specs available for one or both spindles.

Rotary tool unit mounts



Maximum 6 tools/turret

Automation, labor-savings

Workpiece push-up/ejector (optional)

Semi-auto loader handles relatively large workpieces safely and reduces operator fatigue

- Manual input, automatic chucking of blanks
- Automatic finished work ejector
- Accommodates thin workpieces (chucked wall less than 40 mm)
- Workpiece weight: 20 kg

Features

1. **Workpiece conveyor does not require lifting**
   Simply push along on roller conveyor
2. **Safety ensured in machining of large workpieces**
   Also outstanding in reducing operator fatigue
3. **Ensure machining accuracy**
   The machinist simply mounts the workpiece and checks the setup

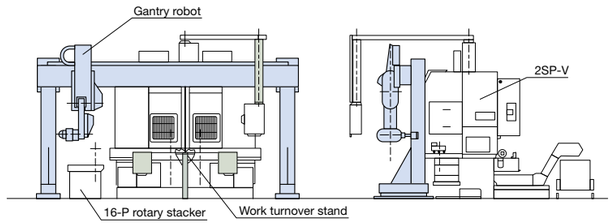
Note: Optional for V40R

Robot system (optional)

Fully automatic workpiece handling with robot traveling on gantry beam

- Longer robot travels—ideal for linking multi-operation runs.
- Use of gantry robot means spindle access is good and setup changes are simple.

Note: Optional for V40R, 2SP-V40



Machine Specifications

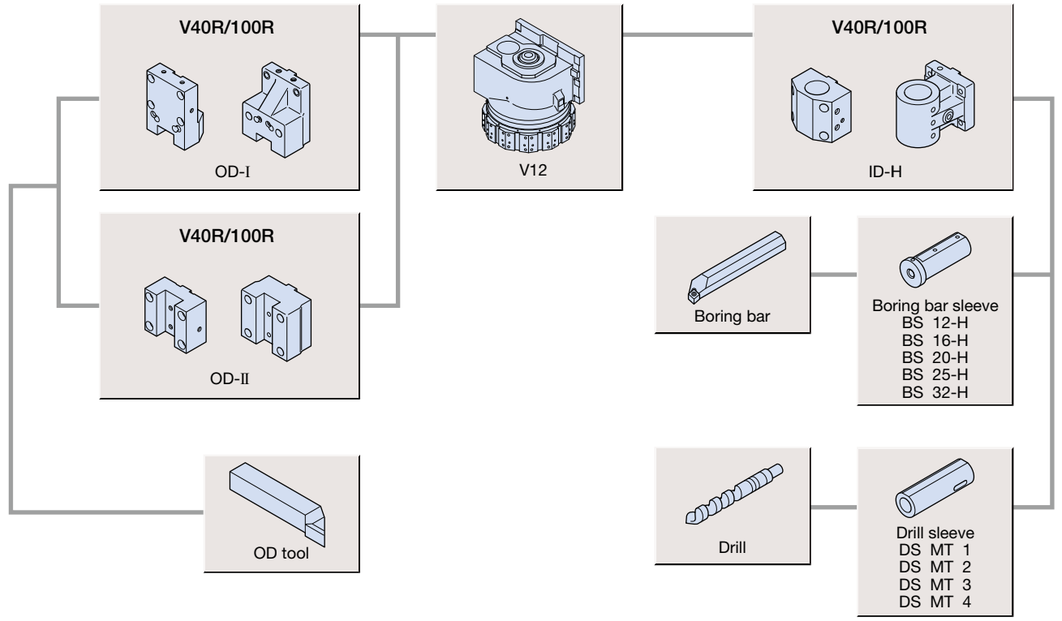
	item		unit	V40R	V100R
Capacity	Max turning diameter		mm (in.)	ø400 (15.75)	ø1,000 (39.37)
	Max swing diameter		mm (in.)	ø500(19.69)	ø1,250 (49.21)
	Max turning length		mm (in.)	450 (17.72)	890 (35.04)
	Max chuck size		mm (in.)	ø450 (17.72)	ø1,010 (39.76)
	Max workpiece weight*1		kg (lb)	300 (660)	1,200 (2640)
				400 kg/800 min^{-1}*2	2,000 kg/200 min^{-1}*2
Travel	X-axis travel		mm (in.)	265 (10.43)	565 (22.24)
	Z-axis travel		mm (in.)	450 (17.72)	890 (35.04)
Spindle	Spindle speed		min^{-1}	25 to 2,500	13 to 1,250
	Spindle speed ranges			Infinitely variable	2 auto ranges (2 range motor coil switching)
	Type of spindle nose			A2-8	Flat ø380 (ø14.96)
	Spindle front bearing dia		mm (in.)	ø120 (4.72)	ø200 (7.87)
	Spindle bore dia		mm (in.)	ø77 (3.03)	ø110 (4.33)
	Floor to spindle nose		mm (in.)	960 (37.80)	1,170 (46.06)
	Spindle support			2-point roller bearing	
Turret	Turret type			V12	
	OD tool shank dimensions		mm (in.)	□25 (1)	□32 (1-1/4)
	ID tool shank diameter		mm (in.)	ø40, ø50 (1.57, 1.97)	ø40, ø50, ø63 (1.57, 1.97, 2.48)
Feed Axis	Cutting feedrate	X, Z	mm/rev (ipr)	0.001 to 240.000 (0.00004 to 9.45)	0.001 to500.0 (0.00004 to 19.69)
	Rapid traverse	X-axis	m/min (fpm)	24 (78.74)	
		Z-axis	m/min (fpm)	24 (78.74)	
Motor	Spindle drive	OSP	kW (hp)	22/18.5 (30/25) (30 min/cont)	45/37 (60/50) (5 min/10 min)
		FANUC	kW (hp)	22/18.5 (30/25) (30 min/cont)	45/37 (60/50) (10 min/15 min)
Machine Size	Required floor space		mm (in.)	1,705 × 2,788 (67 × 110)	2,735 × 3,445 (107 × 135)
	(width × depth)	(2SP-V)	mm (in.)	2,970 × 2,738 (116 × 108)	—
	Machine height		mm (in.)	3,040 (119)	OSP : 3,510 (138) FANUC : 3,565 (140)
	Machine weight		kg (lb)	7,200 (15,840)	14,000 (30,800)
		(2SP-V)	kg (lb)	14,000 (30,800)	—
CNC				OSP-P300LA, FANUC 31i-B	

*1 With chuck *2 Max. workpiece load capacity/spindle speed restriction when spindle speed is restricted

Standard Specifications/Accessories

		V40R	V100R
Spindle		A2-8, 25 to 2500 min^{-1}	Flat ø380, 13 to1250 min^{-1}
	OSP	22/18.5 kW (30/25) (30 min/cont)	45/37 kW (60/55) (5 min/10 min)
	FANUC	22/18.5 kW (30/25) (30 min/cont)	45/37 kW (60/55) (10 min/15 min)
Turret		V12	
● Standard Accessories			
Coolant system	Coolant tank	290 L (76.6 gal)	450 L (118.9 gal)
	(2SP-V)	450 L (118.9 gal)	–
	Pump motor (2SP-V with 2 sets)	0.25 kW	
	Shower/chip flusher (2SP-V with 2 sets)	0.55/0.37 kW (60/50 Hz)	
Full enclosure shielding		○	
Jack screws, foundation pads		○	
Work lamp		○	
Tool kit		○	
● Standard Specifications			
Front door interlock		○	
Lubrication monitor		A-1	
Chuck open/close push button switch		○	

Tooling System



Tooling Kit

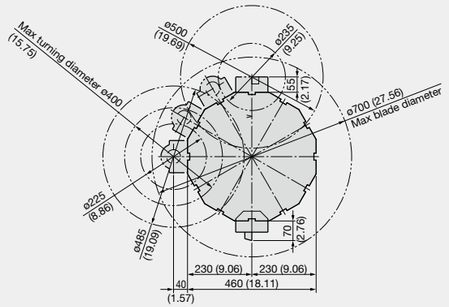
	V40R		2SP-V40		
	Turning turret	Multitasking turret	Turning + Turning	Turning + Multitasking	Multitasking + Multitasking
OD-I 25	6	—	12	6	—
OD-I 25 M-t*1	—	3	—	3	6
OD-II 25	3	—	6	3	—
OD-II 25 M-t*1	—	3	—	3	6
ID-H40	6	—	12	6	—
ID-H40 M-t*1	—	3	—	3	6
BS12-H40	2	2	4	4	4
BS16-H40	2	2	4	4	4
BS20-H40	2	2	4	4	4
BS25-H40	2	2	4	4	4
DS MT 1–H40	1	1	2	2	2
DS MT 2–H40	1	1	2	2	2
DS MT 3–H40	1	1	2	2	2
DS MT 4–H40	1	1	2	2	2
Axial mill/drill unit	—	2	—	2	4
Radial mill/drill unit	—	2	—	2	4

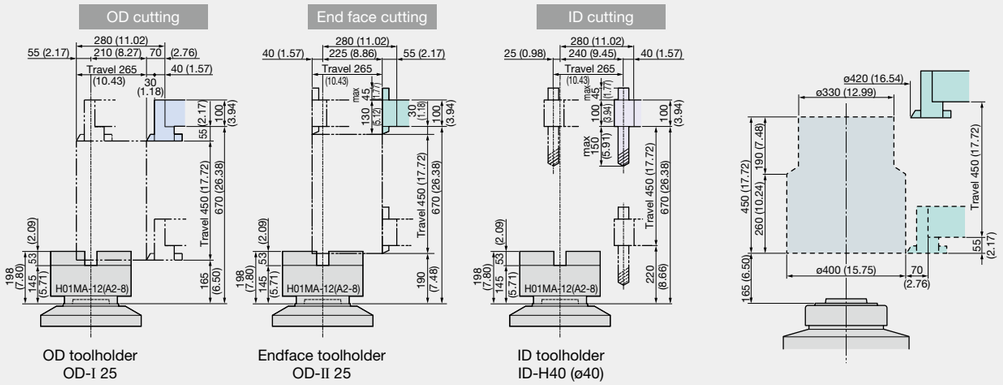
	V100R	
	Turning turret	Multitasking turret
OD-I 32	6	3
OD-II 32	3	3
ID-H50	6	3
BS32-H50	2	2
Axial mill/drill unit	—	2
Radial mill/drill unit	—	2

Note: The types are different for the turning turret tool holder and combination turret tool holder for V40R and 2SP-V40.
The turning turret tool holder and combination turret tool holder are the same type for V100R, and can be used interchangeably.
*1 M-t: Multitasking turret

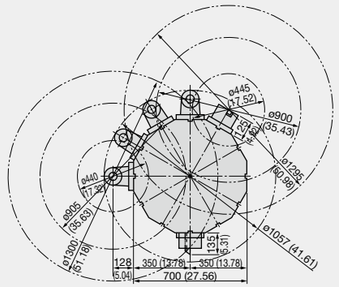
Working Ranges (largest workpiece shape)

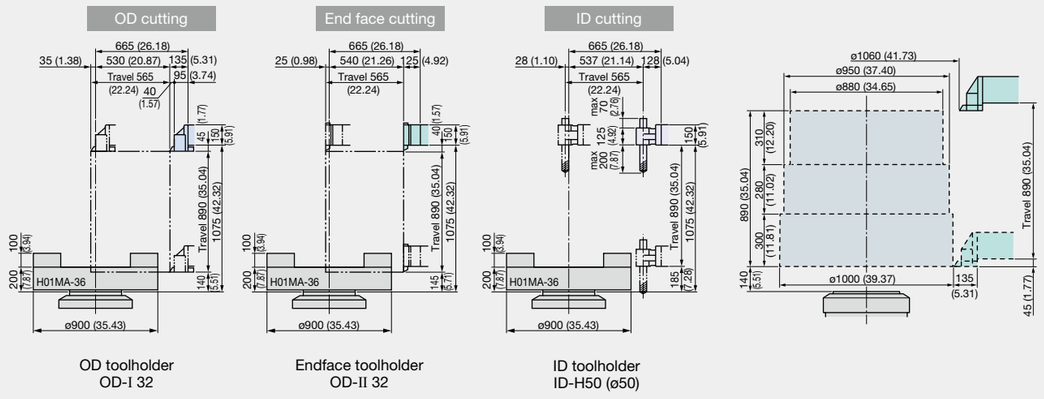
V40R





V100R





Optional Specifications and Accessories

Low-speed spindle	V100R (OSP): 750 min^{-1} 55/45 kW (30 min/cont) With transmission	
Multitasking turret specifications	V12M, turning tool 6 locations, milling tool 6 locations, spindle brake	
	V40R:	Milling tool spindle: 2,000 min^{-1}
		(FANUC: 4.0 kW, OSP: 3.5 kW)
	V100R:	Milling tool spindle: 3,000 min^{-1}
		(FANUC: 5.5 kW, OSP: 3.5 kW)
Hydraulic power chuck (solid)	V40R:	H01MA-12, H01MA-15, H01MA-18
	V100R:	H01MA-36, H01MA-40
High pressure coolant	(4.0 MPa)	
Chucking miss detection		
Chuck auto open/close confirm		
Chuck high/low pressure switch		
Chuck open/close pedal		
Raised machine height	100 mm (3.94 in.)	
	150 mm (5.91 in.)	
Manual chuck	Three-jaw scroll chuck	
	Four-jaw independent chuck	
	Boring mill jaw chuck (V100R only)	
Tooling kit	Turning	
	Multitasking	
Chip conveyor	Rear Hinge type, scraper type, magnet scraper type	
	Side Hinge type	
Chip bucket		
Auto front cover open/close		

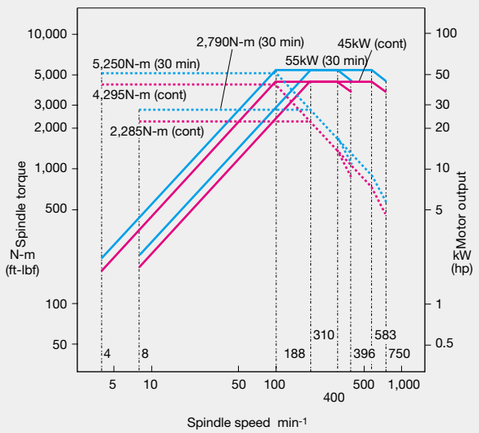
Special coolant pump	0.55 kW (0.75)
	1.5 kW (2)
Shower/chip flusher coolant	Increased → 0.88 kW (1.2) capacity 1.21 kW (1.6)
Coolant gun	0.8 kW (1.1) (both L/R)
Oil skimmer	Belt system
Coolant level detection	Lowest level
Chuck air blower	
Turret air blower	
Air gun	
Mist collector	
Jib crane	100 kg, 200 kg*
In-process work gauging	
Touch setter	Manual axis
	Auto/manual
AbsoScale	X axis
Scale feedback	X axis
Coolant temperature regulator	For cooling
Automation specs	Robot
	Workpiece pusher (V40)
	Workpiece butting confirmation

*Note: V40R, 2SP-V40 100 kg only

V100R

OSP-P300LA low-speed spindle (high torque)

- Spindle speed 750 min^{-1}
- Maximum output 55/45 kW (73/60 hp) (30 min/cont)
- Maximum torque 5,250/4,295 N-m (3,860/3,158 ft-lbf) (30 min/cont)



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 "Monozukuri," (manufacturing) achieving enhanced productivity and added value.
The OSP has evolved tremendously as CNC control 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 tastes, and customized for needs from beginning to veteran operator.

Features you wanted – loaded with new OSP suite apps!

We made these real through the addition of Okuma's machining expertise based on requests we heard from customers in the machine shop. These are filled with intelligence that enhances the "strength in the field" that CNC control can accomplish because it's created by a machine-tool manufacturer.

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 utilization status even when away from the machine

E-mail Notification

Ensuring smooth machining preparations

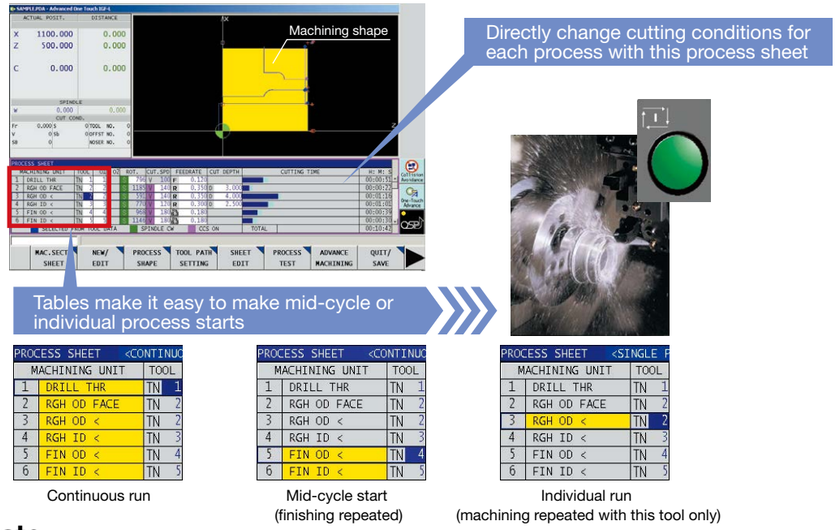
Interactive operations Advanced One-Touch IGF-L (Optional)

Part program create

After simple cutting data inputs (interactively), the required machining processes are determined and a part program is created (automatically).

Advanced run

To run the machine directly from the interactive part program screen.
When a problem is detected it can be quickly corrected and checked, speeding up first part machining.



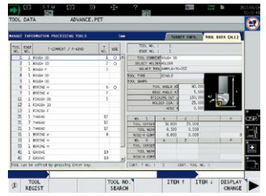
Easy to Operate

Operation screen split into four displays

Simultaneous display includes setup work, current position needed in confirming movement in trial machining, NC program, and graphic simulation.

Tool registration

Register data for all of your tools.
Since the registered tool data is also used by Okuma auto programming (Advanced One-Touch IGF) and a collision check function (Collision Avoidance System), this screen will complete the entire registering process.
When loading a tool in the machine, simply select it from among the registered tools.
ATC manual operation does not require inputting the tool number. Just select the tool from the list and press the function key.



Forming soft jaws

Templates like this make it easy to set required jaw shape, tool, and cutting conditions.
Part programming not required to do this.

Zero offsets

A simple function key operation is all it takes to shift a zero offset to either the left or right end of a workpiece.
The required zero offset will be calculated automatically based on jaw and workpiece lengths. (when the tool offset is set with reference to the turret tool mounting surface)

OSP-P300LA

STANDARD SPECIFICATIONS

Basic Specs	Control	Turning: X, Z simultaneous 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, multi 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, Advanced operation panel/graphics facilitate smooth machine control
	Programing	Program management, edit, multitasking, scheduled programs, fixed cycles, special fixed cycles, tool nose R compensation, 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
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 ea										
Work coordinate system select	10 sets									
	50 sets									
	100 sets									
Tool compensation (Std: 32 sets)	Tool compensation 64 sets									
Common variables 1,000 pcs (Std: 200 pcs)										
Thread matching (spindle orientation required)										
Threading slide hold (G34, G35)										
Variable spindle speed threading (VSST)										
Inverse time feed										
Milling machine specs	Coordinate convert		▲	▲	▲	▲			●	●
	Profile generate		▲	▲	▲	▲			●	●
Monitoring										
Real 3-D simulation					●	●	●	●	●	●
Cycle time over check			●	●	●	●	●	●	●	●
Load monitor (spindle, feed axis)					●	●	●	●	●	●
Load monitor no-load detection (load monitor ordered)										
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 A, 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	OTM E	OTM D
External Input/Output and Communication Functions										
RS232C interface										
DNC link	DNC-T3									
	DNC-C/Ethernet									
	DNC-DT									
USB (additional)	2 additional ports possible									
Automation/Untended Operation										
Auto power shutoff MO2, 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									
Other company robots, loaders, interfaces	Type B (machine)									
	Type C (robot and loader)									
	Type D									
	Type E									
Cycle time reduction *3	Operation time reduction		●	●	●	●	●	●	●	●
High-Speed/High-Accuracy Functions										
Pitch error compensation										
AbsoScale detection *3										
Hi-Cut Pro			▲	▲	▲	▲			●	●
Other Functions										
Collision Avoidance System (CAS)										
One-Touch Spreadsheet										
Machining Navi L-*g*										
Harmonic spindle speed control (HSSC)			●	●	●	●	●	●	●	●
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, ( )]										
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 included
*3. Engineering discussions required.
*4. Collision Avoidance System not available on 2SP-V40.
Note: ▲Triangle items for M function (milling tool) machines only.

FANUC 31i-B

STANDARD SPECIFICATIONS

No. of controlled axes	X, Z axes simultaneously (2SP: X, Z axes simultaneously × 2)
Interpolation system	Positioning, straight line, taper, arc, threading
Command system	Parallel absolute incremental command
Min/max inputs	Both X, Z axes 0.001, ±99999.999 mm, decimal point input
Operating panel	10.4 in color TFT, display language: English / Japanese
Spindle control	Spindle control 4-digit direct command, constant peripheral speed control, spindle orientation (1 point M19), spindle override 50 to 150%
Feed	Feed rate override 0 to 200%, pulse handle
Program input	Program memory capacity 64 KB (160 m) 2SP-V R/L total is 64KB (160 m), no. of registered programs: 63 (2SP-V R/L total is 125), expansion program editing, programmable data input, program protection key switch
Compensation	Nose-radius comp, no of tool compensations: 32 (2SP-V R/L total is 32), tool dimensions/wear compensation, tool offset, counter input, direct input of measured tool compensation
Monitoring	Operating time, no. of parts display, electronic buzzer
Machine operations	AI contouring control I

OPTIONAL SPECIFICATIONS

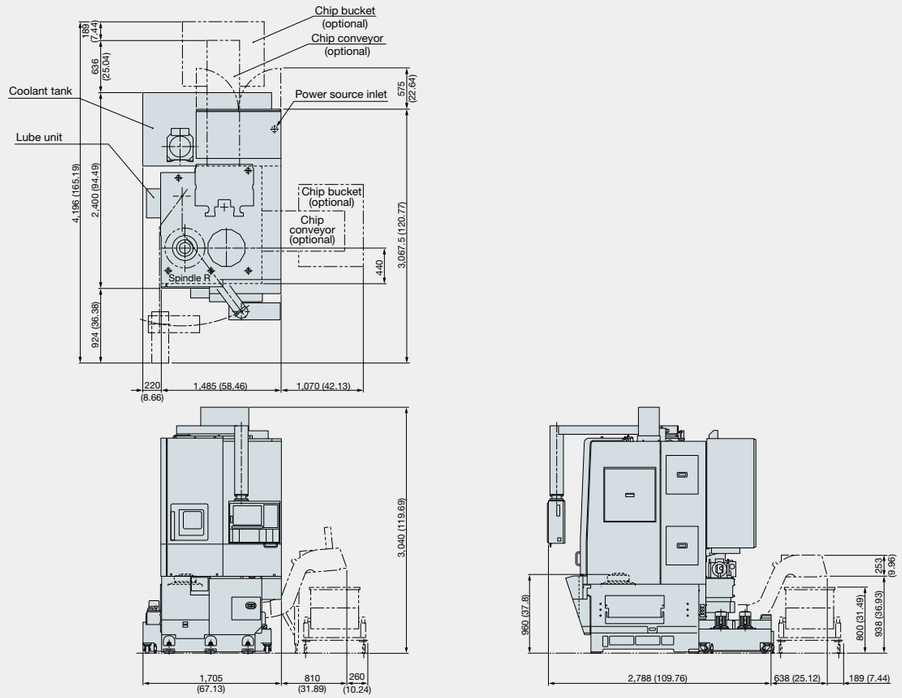
No. of controlled axes	More simultaneously controlled axes (X-Z-C axes)*
Interpolation system	Fine coordinate interpolation*
	Cylindrical interpolation*
	Cs contouring*
Monitoring	Graphic display
	Tool counter
	Work counter
	Multi-counter
	Hour meters
	Status indicator
	Tool life management
	Abnormal load detection (spindle + feed axes)
	Electronic buzzer
Machine operations	Continuous threading
	Spindle orientation (1 point, 4 point)
	Portable pulse handle
	Automatic power shutoff
	Circuit breaker
Other functions	Illumination in control panel
	Air conditioning within control panel

*Required with multitasking specs

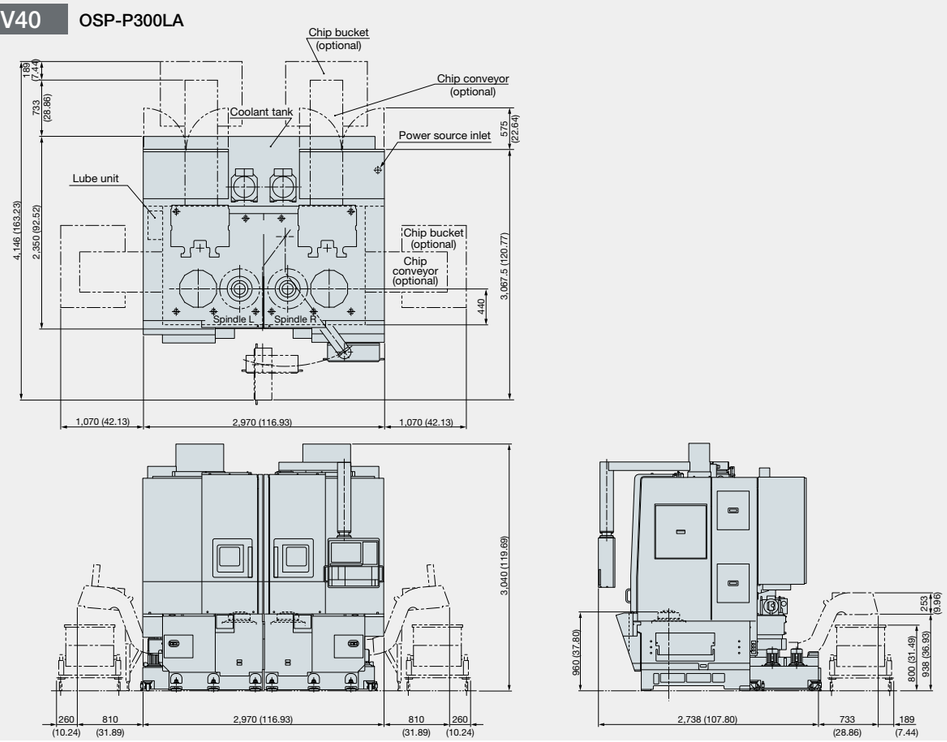
Program input	Program memory capacity	128 KB (320 m)
		256 KB (640 m)
		512 KB (1,280 m)
		1 MB (2,560 m)
		2 MB (5,120 m)
		4 MB (10,240 m)
		8 MB (20,480 m)
	More registered programs	125 sets
		250 sets
		500 sets
	External program selection	
	Additional RS-232-C interface	
	Custom macro	
	Custom macros, additional common variables	
	Coordinate selection 6 sets	
	M spindle rigid tapping	
	Fixed drilling cycle	
	Chamfering, corner	
	Combination fixed cycles I, II	
	Simultaneous editing of multiple programs	
	Program restart	
	Spare M codes (4, 8)	
Compensation	2nd shape tool offset	
	Pitch error compensation (X-axis, X/Z axes)	
	No. of tool compensations	64 sets (with 2SP-V, 64 is total for R/L)

Dimensional and Installation Drawings

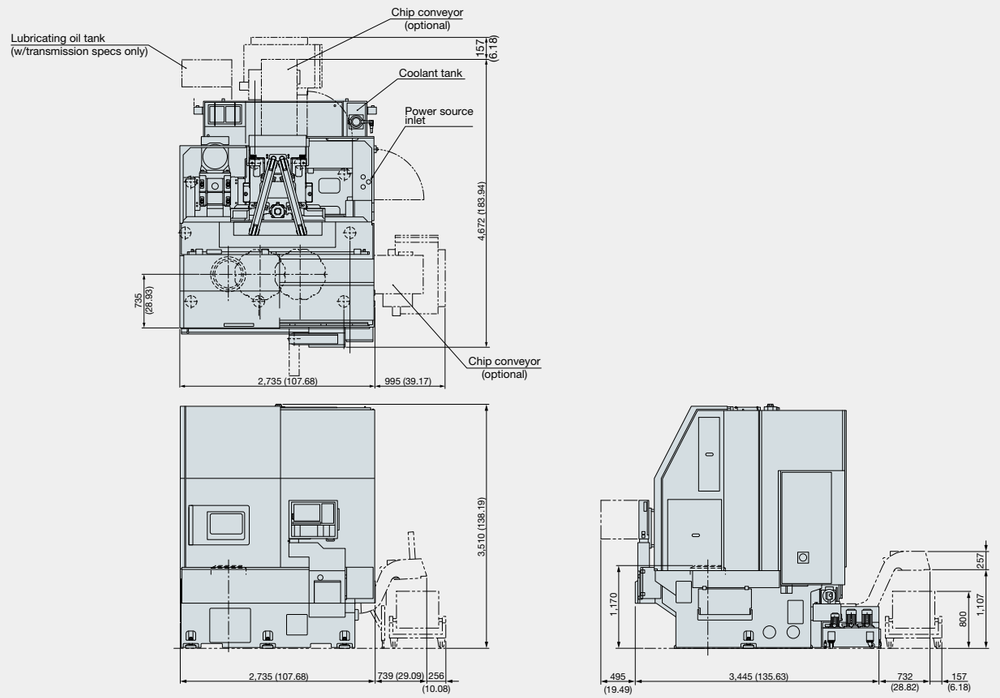
V40R OSP-P300LA



2SP-V40 OSP-P300LA



V100R OSP-P300LA



V 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.
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