SMOOTH TECHNOLOGY

VERSATECH SERIES

V-100N

V-140N

Mazak

Advanced features of the MAZATROL SmoothX CNC

- Touch screen operation similar to your smartphone/tablet
- PC with Windows® 8 embedded OS
- Fastest CNC in the world with latest hardware and software for unprecedented speed and precision
- High-precision machining of complex contours at high-speed feedrates
- Easy conversational programming of multiple-surface machining
- Smooth graphical user interface and support functions for unsurpassed ease of operations
- MTConnect® ready for convenient networking
- Easily configure machine parameters for different workpiece materials and application requirements

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

MTConnect is a registered trademark of AMT in the United States and other countries.

MAZATROL SMOOTHX

Machine very large workpieces with unsurpassed versatility

VERSATECH SERIES
V-100N/V-140N

- Machine multiple surfaces in just one workpiece setup
- High-speed feedrate for X and Y axis
- Specifications available to meet a wide range of production requirements

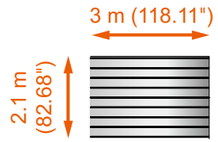
VERSATECH V-140N 280 shown with optional cover and cameras

Higher Productivity

Large workpiece capacity thanks to a machine table length up to 10 m (393.7")

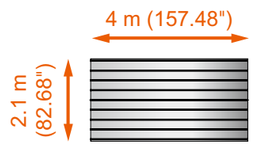
VERSATECH V-100N 160

Table size: 2100 mm x 3000 mm (82.68" x 118.11")
Table load capacity: 43000 kg (94797 lbs)



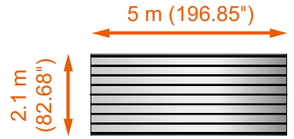
VERSATECH V-100N 200

Table size: 2100 mm x 4000 mm (82.68" x 157.48")
Table load capacity: 43000 kg (94797 lbs)



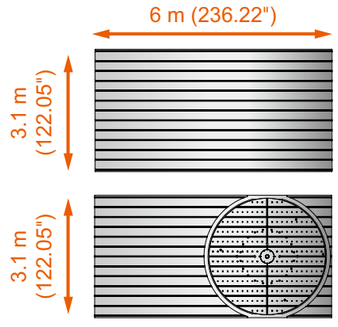
VERSATECH V-100N 240

Table size: 2100 mm x 5000 mm (82.68" x 196.85")
Table load capacity: 43000 kg (94797 lbs)



VERSATECH V-140N 280

Table size: 3100 mm x 6000 mm (122.05" x 236.22")
Table load capacity: 43000 kg (94797 lbs)

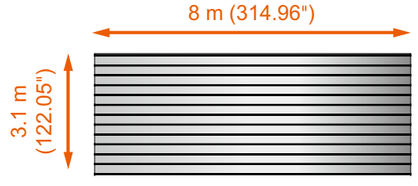


Turning table specifications OPTION

Table size: ø2950 mm (116.14")
Maximum workpiece size: ø3500 mm x 1750 mm (137.80" x 68.90")

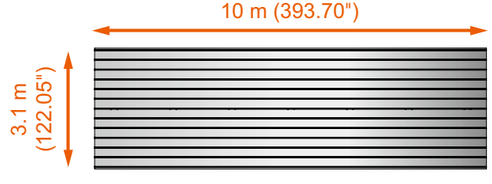
VERSATECH V-140N 360

Table size: 3100 mm x 8000 mm (122.05" x 314.96")
Table load capacity: 43000 kg (94797 lbs)



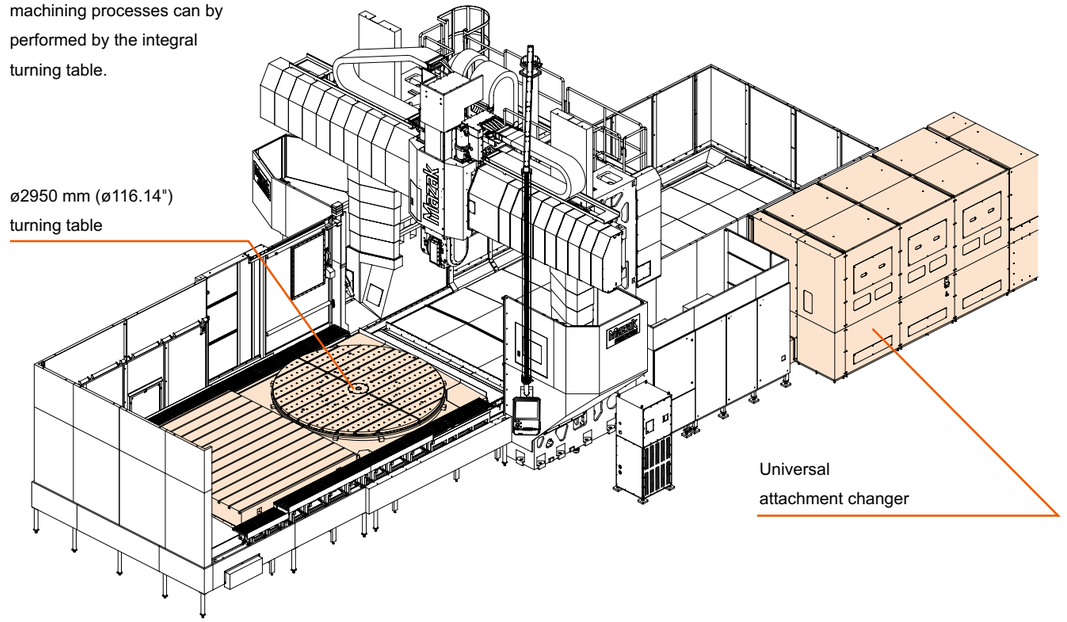
VERSATECH V-140N 440

Table size: 3100 mm x 10000 mm (122.05" x 393.70")
Table load capacity: 43000 kg (94797 lbs)



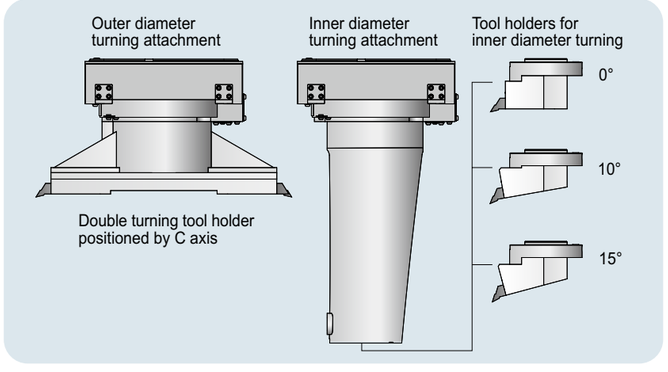
V-140N with turning table OPTION

A wide variety of large workpiece machining processes can by performed by the integral turning table.



Turning attachment OPTION

Optional inner-diameter and outer-diameter turning attachments are available for increased versatility. The attachments have a coolant-through-spindle system for the machining of difficult-to-cut material. The attachments can be changed automatically by the universal attachment changer.



Universal attachment changer OPTION

The attachments are stored in the stocker outside of the machining area. The number of attachments that can be stored ranges from 1, 2, 4 and 6. This number can be increased after the initial installation.

Higher Productivity

B axis

C axis

Simultaneous 5 axis machining specification

OPTION

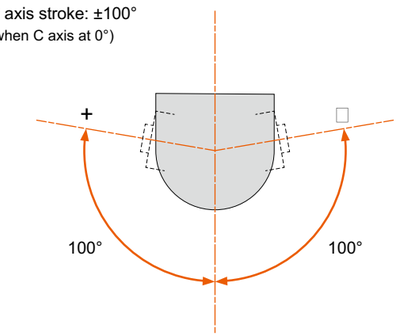
Because the VERSATECH does not require a head changer thanks to its B and C axes, non-cutting time is greatly reduced. The simultaneous 5-axis machining specification is available optionally for the machining of complex surfaces such as those found in components for the die and mold and aerospace industries.

B, C axis specification (Optional simultaneous 5 axis)

B axis	Stroke	±100°
	Rapid traverse rate	21600°/min
	Max. torque	1500 N • m (1106 ft • lbs)
	Continuous torque	630 N • m (465 ft • lbs)
	Stall torque	520 N • m (384 ft • lbs)
C axis	Stroke	Unlimited
	Rapid traverse rate	21600°/min
	Max. torque	3000 N • m (2213 ft • lbs)
	Continuous torque	800 N • m (590 ft • lbs)
	Stall torque	660 N • m (487 ft • lbs)

*Rapid traverse rate is 5400°/min when attachment is mounted

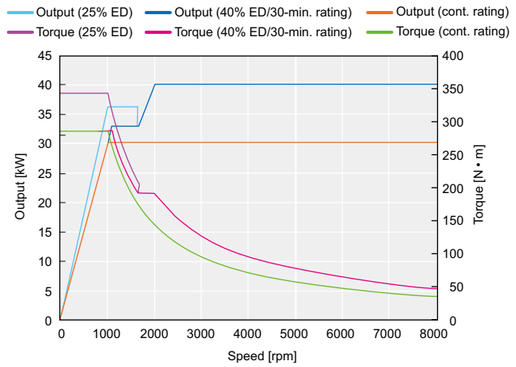
B axis stroke: ±100°
(when C axis at 0°)



Selectable 8000 rpm and 12000 rpm spindle specification

8000 rpm spindle

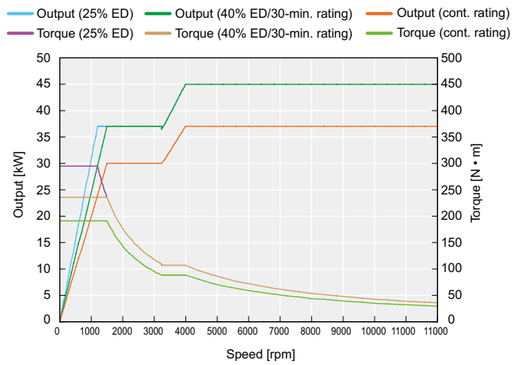
No. 50 taper 8000 rpm, 40 kW (54 HP) (40% ED/30-min. rating) spindle, maximum torque 334 NĐm (254 ft • lbs) for the machining of steel workpieces.



12000 rpm high-speed spindle

A 12000 rpm spindle with output of 45 kW (60 HP) (40% ED) is available for aluminum machining.

12000 rpm spindle output and torque diagram



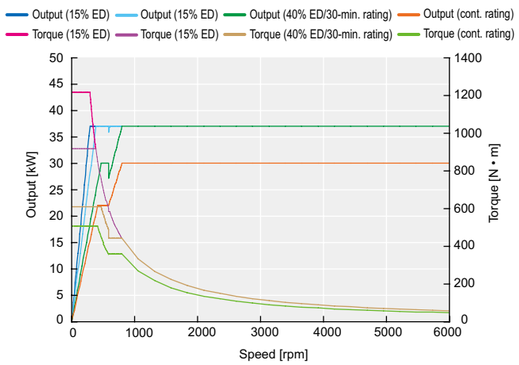
Note: Spindle is 155 mm longer than 8000 rpm spindle, which limits stroke. Universal attachment is not available.

6000 rpm high-torque spindle

OPTION

A 6000 rpm spindle with maximum torque of 1218 N • m (898 ft • lbs) is optionally available for heavy-duty machining.

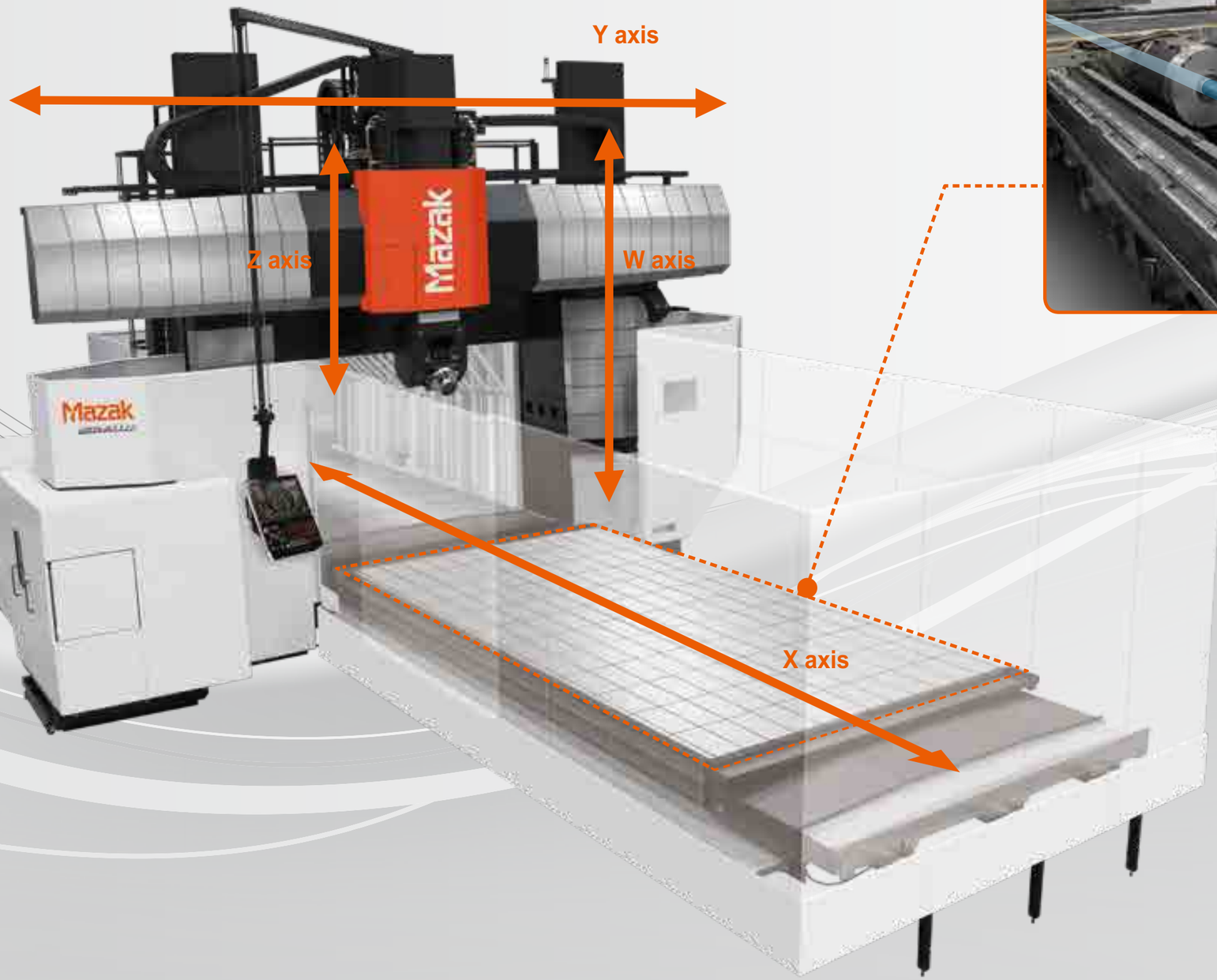
6000 rpm spindle output and torque diagram

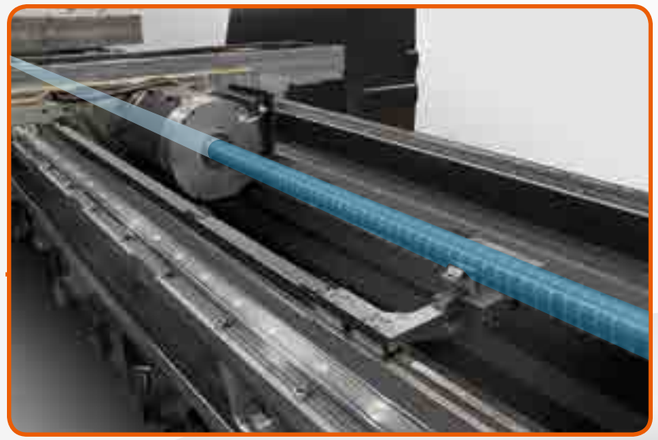


Note: Spindle is 135 mm longer than 8000 rpm spindle, which limits stroke.

Higher Productivity

High-speed, high-accuracy X, Y, Z axis feed system





High-speed

The maximum feedrate of the X and Y axes is 30 m/min (1181 IPM) thanks to the stationary ballscrew.

*Rapid traverse rate (X axis) for V-140N 360, V-140N 440 is 15 m/min (591 IPM).

High-accuracy

Temperature-controlled cooling oil circulates through the ballscrew cores to ensure stable machining accuracy over extended periods of high-speed operation.

Machine		VERSATECH V-100N			VERSATECH V-140N		
		160	200	240	280	360	440
Stroke	X axis	4000 mm (157.48")	5000 mm (196.85")	6000 mm (236.22")	7000 mm (275.59")	9000 mm (354.33")	11000 mm (433.07")
	Y axis	3600 mm (141.73")			4600 mm (181.1")		
	Z axis	710 mm (27.95")			710 mm (27.95")		
	W axis	1250 mm (49.21")			1250 mm (49.21")		
Table size		2.1 m x 3 m (82.68" x 118.11")	2.1 m x 4 m (82.68" x 157.48")	2.1 m x 5 m (82.68" x 196.85")	3.1 m x 6 m (122.05" x 236.22")	3.1 m x 8 m (122.05" x 314.96")	3.1 m x 10 m (122.05" x 393.7")
Max. table loading capacity		43000 kg (94797 lbs)*			43000 kg (94797 lbs)*		

*2 table changer: 28000 kg (61728 lbs)

Volumetric compensation OPTION

This function uses a laser tracer to obtain measurement position errors (linear, pitch, yaw, roll, etc.) and input them into the CNC to compensate error in the entire machining envelope.

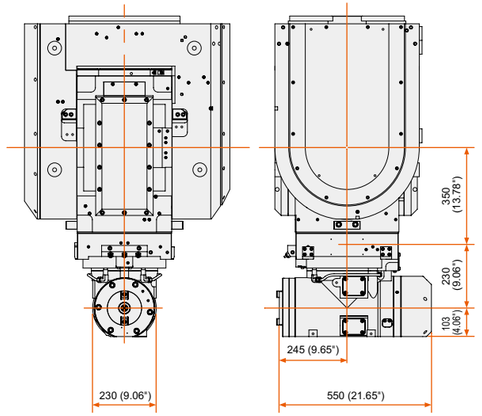
Factory Automation

Attachments designed for increased versatility and less interference

Angle attachment OPTION

- Machines areas that the standard spingle cannot reach.
- Tools from the magazine are changed automatically like the tools for the standard spindle.
- In addition to flood coolant, the coolant through spindle system is an available option.

Dimensions Unit: mm (inch)



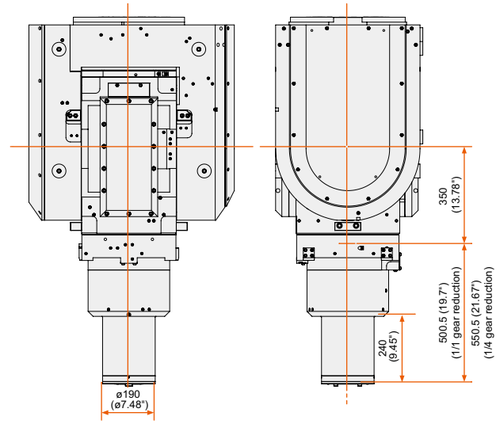
Dimensions

Spindle taper	No. 50
Spindle speed	50 ~ 1500 rpm
Gear reduction	1/2
Spindle bearing ID	100 mm (3.94")
Max. tool diameter	ø125 mm (ø4.92")
Max. tool diameter (adjacent pockets empty)	ø210 mm (ø8.27")
Max. tool diameter (from gauge line)	500 mm (19.69")
Max. tool weight	15 kg (33 lbs)

Snout attachment OPTION

- Can perform deep boring that the standard spindle cannot do.
- Tools from the magazine are changed automatically like the tools for the standard spindle.
- In addition to flood coolant, the coolant through spindle system is an available option.

Dimensions Unit: mm (inch)



Dimensions

Spindle taper	No. 50
Spindle speed	50 ~ 1500 rpm (1/4) 50 ~ 5000 rpm (1/1)
Gear reduction	1/4, 1/1
Spindle bearing ID	100 mm (3.94")
Max. tool diameter	ø125 mm (ø4.92")
Max. tool diameter (adjacent pockets empty)	ø210 mm (ø8.27")
Max. tool diameter (from gauge line)	500 mm (19.69")
Max. tool weight	15 kg (33 lbs)

Angle/snout attachment is available only for the 8000 rpm spindle.

PALLETECH MANUFACTURING CELL

The VERSATECH can be integrated into a PALLETECH SYSTEM designed with the flexibility required for shorter product life cycles, reduced in-process inventory, just-in-time production and other demands of today's manufacturing environment. Additionally, the production schedule can be set or edited easily by inputting the pallet work flow into the scheduler software of the FMS computer.

	Minimum	Maximum
Machine(s)	1	16
Number of pallets	6	240
Loading station(s)	1	8
Loading robot	1	1

Higher Productivity & Higher Accuracy

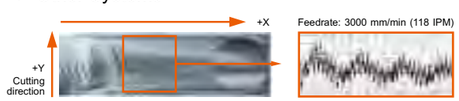
SMOOTH MACHINING CONFIGURATION

Machining features including cycle time, finished surface and machining shape can be adjusted by slider switches on the display according to material requirements and machining methods. This is especially effective for complex workpiece contours defined in small program increments. Once the desired results are obtained, the settings can be stored in memory so they can be used again easily in the future.

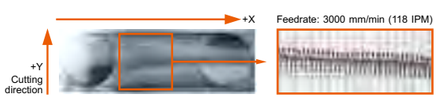
ACTIVE VIBRATION CONTROL

Minimized vibration function for high-speed, high-accuracy machining and longer tool life

▶ Other Systems



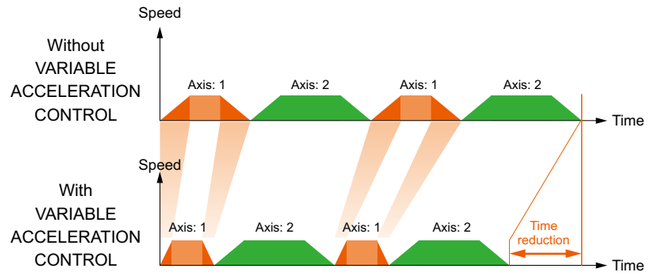
▶ ACTIVE VIBRATION CONTROL



Machining time for an aluminum impeller was reduced approximately 10-20% by using thie function
(test results for reference only)

VARIABLE ACCELERATION CONTROL

VARIABLE ACCELERATION CONTROL is a new function that permits the faster acceleration capability of linear axes to be used whenever possible. The slower acceleration of the rotary axes is not used for all program commands, resulting in faster machining cycle times.



SMOOTH CORNER CONTROL

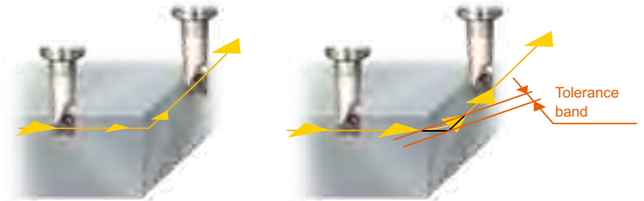
Improved finished surfaces and reduced cycle times by optimized acceleration/deceleration when machining corners.

▶ Other Systems

Move to the next command position after reaching current command position.

▶ SMOOTH CORNER CONTROL

Move to next command position within tolerance band



THERMAL SHIELD

The THERMAL SHIELD is an automatic compensation for room temperature changes, which realizes enhanced continuous machining accuracy. MAZAK has performed extensive testing in a variety of temperature-controlled environments and has used the results to develop a control system that compensates automatically for temperature changes in the machining area. Changes in the room temperature and compensation data are shown visually.

Temperature and compensation are displayed on screen.
Operator can adjust compensation by looking at the data.

Ease of operation

Ease of setup

Tool magazine operation panel

The tool magazine operation panel is designed for increased ease of operation.
Instead of incorporating just a forward/reverse button for indexing the tool magazine and manually positioning the desired tool pocket, the pocket number or tool number can be input into the operation panel numeric keyboard and the desired pocket will be brought into position automatically.

SAFETY SHIELD

When an operator manually moves the machine axes for setup, tool measurement or changing inserts, the CNC shows a synchronized 3D model on the display for checking machine interference. If any machine interference occurs, the machine motion automatically stops. This function also is active during automatic operation.

MAZAK VOICE ADVISOR

Verbal support for the machine setup and safe conditions confirmation

Ease of operation

SAFETY SHIELD

Position misalignment and incline of the rotary axes can be measured and compensated automatically to realize high-accuracy 5-axis machining.The centers of rotation of both the C and B axes can be measured and compensated automatically.

▼ Measurement item selection

▼ Measurement information setting

▼ Automatic measurement program generation

Convenient screen display assists measurement operation.

PERFORMANCE SPINDLE

The INTELLIGENT PERFORMANCE SPINDLE uses sensors housed in the spindle to monitor a variety of properties, including temperature, and provide useful information to the operator. This monitoring minimizes production loss caused by machine down time.

▲ Condition check

Temperature as well as the motor load can be displayed

▲ Running recorder

Operation status of milling spindle (rpm, % motor load and temperature) can be recorded for up to one year

MAINTENANCE SUPPORT

Useful information for improved preventive maintenance to eliminate unexpected machine downtime

MAZATROL Smooth CNC

The seventh generation MAZATROL CNC system – the core of SMOOTH TECHNOLOGY

MAZATROL SMOOTH X

From setup to machining – designed for unsurpassed ease of operation

Three-color status indicator

Machining status is indicated by three colors.
Green: Automatic operation mode
Yellow: Machining completion
Red: Alarm

19" touch panel

Touch panel operation –
similar to your smartphone or tablet

USB port

Interface for peripheal equipment
USB-1.0+2.0 standard.

SD card slot

Transfer program and tool data.

Operation switches

Large switches change color from
orange to green when activated.

Dials

For selection of frequently used axes and
feedrate changes.

New interface with touch operation ensures convenient data processing – programming, confirmation, editing and tool data registration

Process home screens

Five different home process screens – each home screen displays the appropriate data in an easy-to-understand manner. Touch icons in each process display for additional screen displays.

Programming

Tool data

Setup

Machining

Maintenance

Process home screens

Values and items can be input/selected easily on pop-up windows.

Side menu

List menu

Screen keyboard

Ease of Programming

Visible programming screen

QUICK EIA

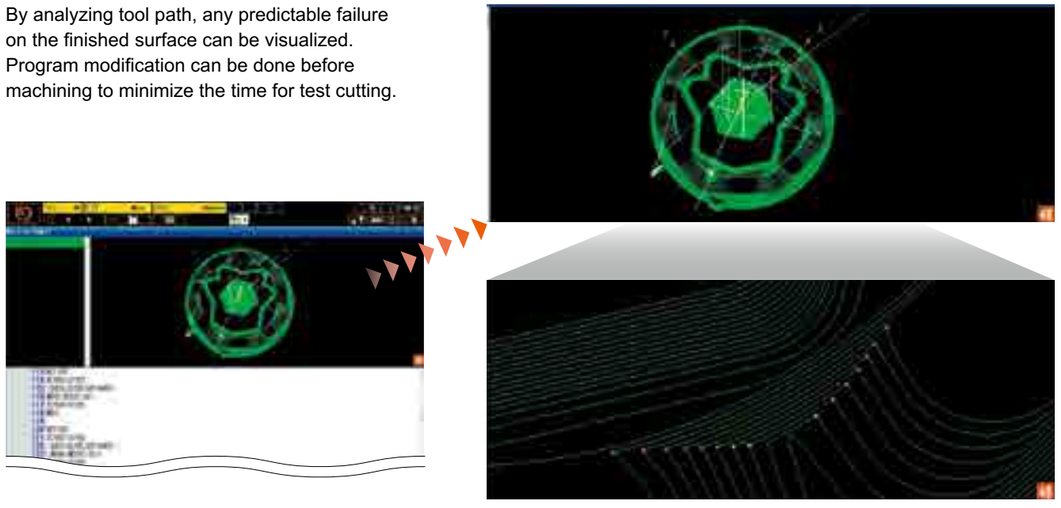
Program, process list and 3D tool path display are linked to each other. Visible search on touch screen can reduce the time for program checking.

Selecting tool path by touching the screen

Moving to the corresponding EIA program line

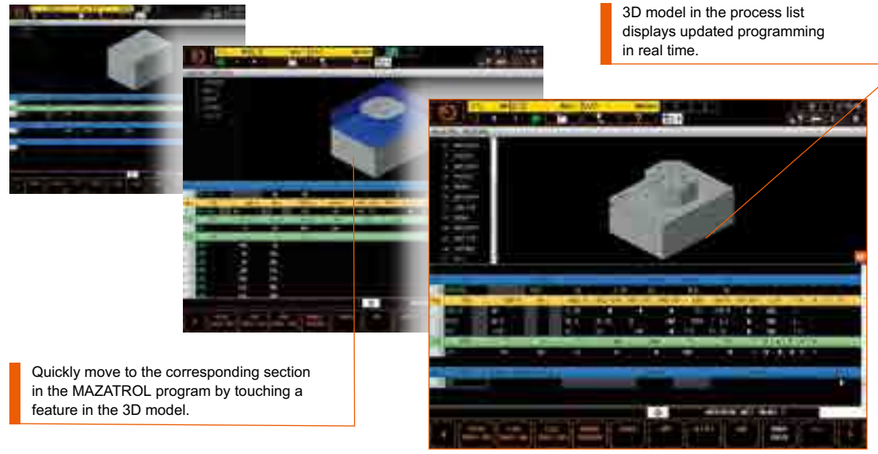
VIEW SURF

By analyzing tool path, any predictable failure on the finished surface can be visualized. Program modification can be done before machining to minimize the time for test cutting.



QUICK MAZATROL

MAZATROL program, unit list and 3D workpiece shape are linked to each other. After defining a machining unit in a MAZATROL program, the 3D shape is displayed immediately to check for any programming error easily and quickly.



3D model in the process list displays updated programming in real time.

Quickly move to the corresponding section in the MAZATROL program by touching a feature in the 3D model.

3D ASSIST

Workpiece and coordinate data can be imported from 3D CAD data to a MAZATROL program. No coordinate value inputs are required. This can reduce input errors and time for program checking.

CAD model importing

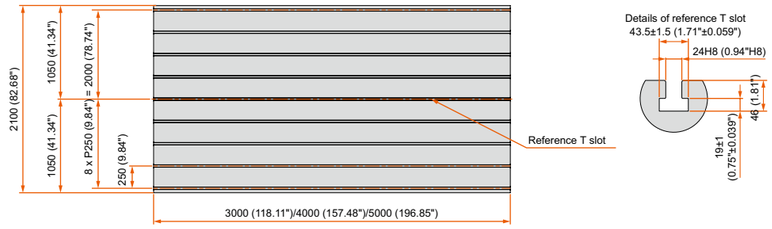
Shape selection

Automatic input to MAZATROL program

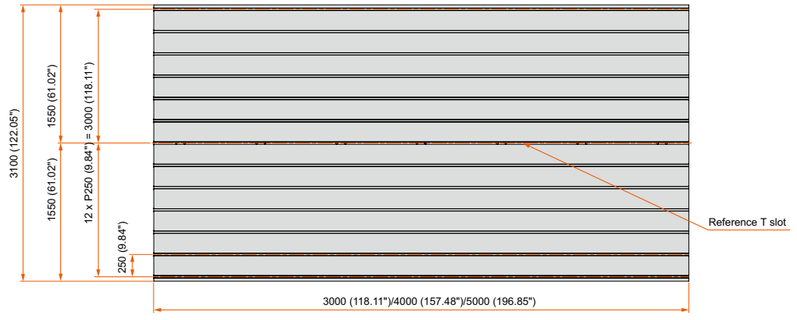
Table Dimensions

Unit: mm (inch)

VERSATECH V-100N



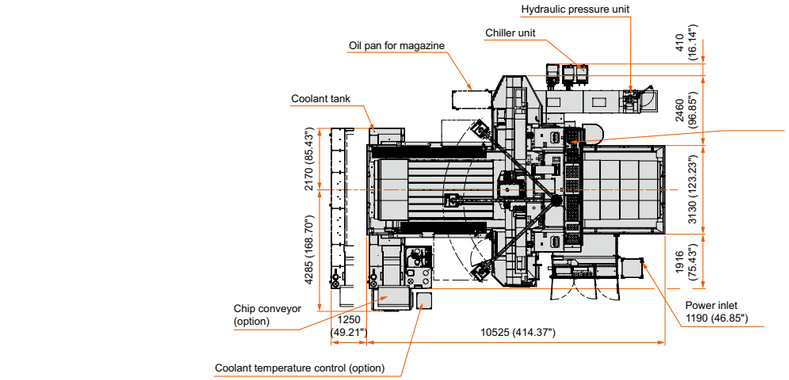
VERSATECH V-140N

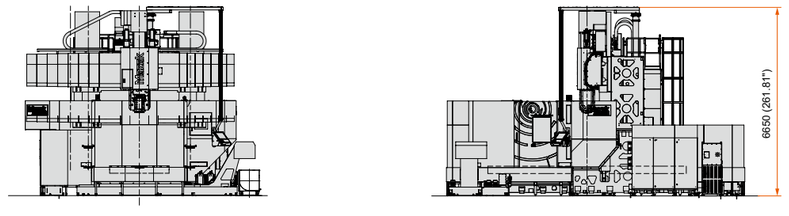


Machine Dimensions

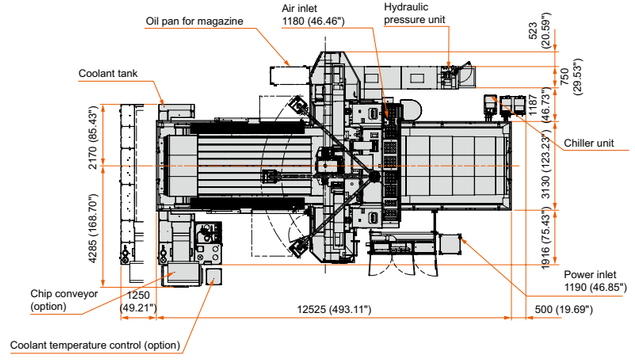
Unit: mm (inch)

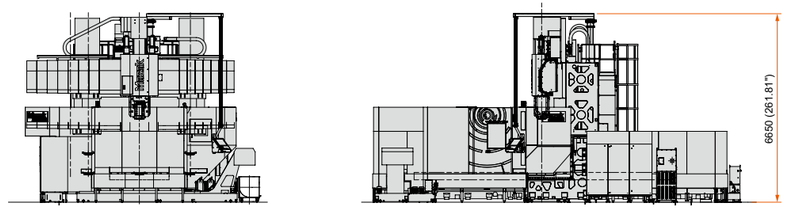
VERSATECH V-100N 160





VERSATECH V-100N 200

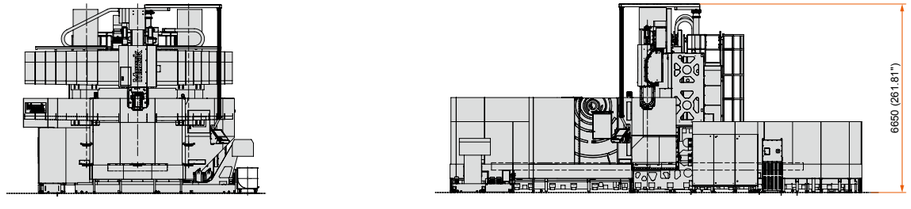


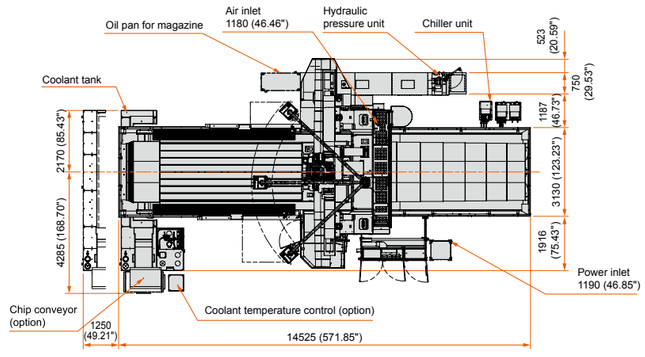


Machine Dimensions

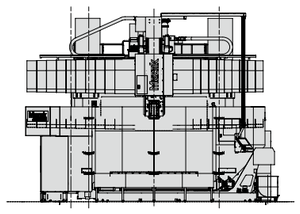
Unit: mm (inch)

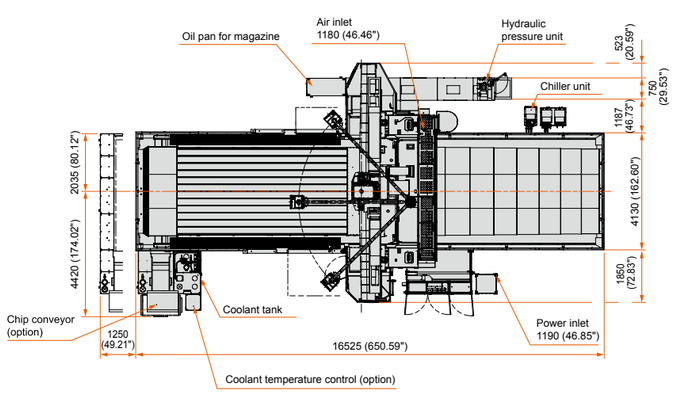
VERSATECH V-100N 240



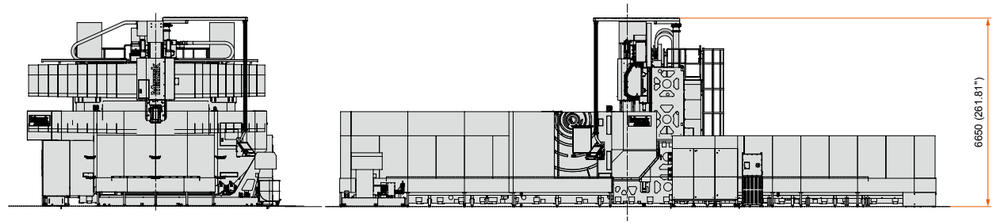


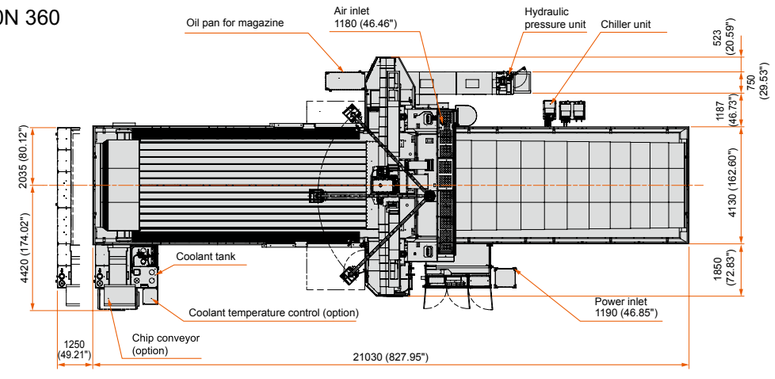
VERSATECH V-140N 280



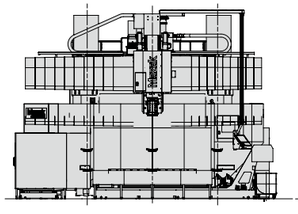


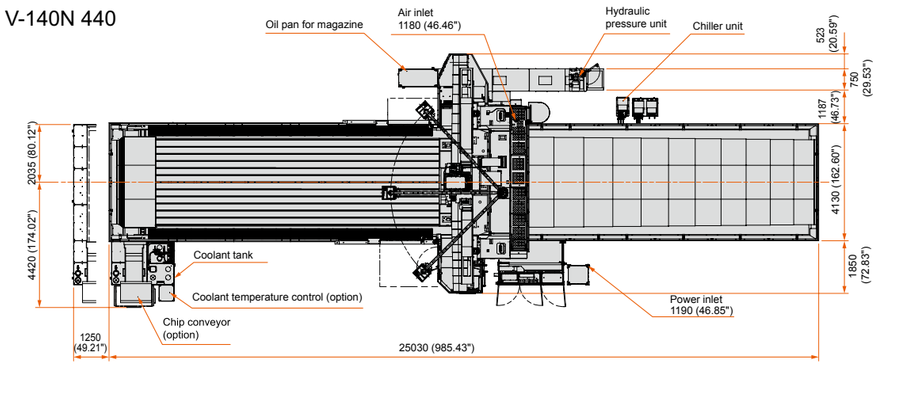
VERSATECH V-140N 360





VERSATECH V-140N 440





Standard Machine Specifications

		V-100N 160	V-100N 200	V-100N 240	V-140N 280	V-140N 360	V-140N 440
Column	Distance between columns	2750 mm (108.27")			3750 mm (147.64")		
Stroke	X axis (table forward/backward)	4000 mm (157.48")	5000 mm (196.85")	6000 mm (236.22")	7000 mm (275.59")	9000 mm (354.33")	11000 mm (433.07")
	Y axis (spindle head travel right/left)	3600 mm (141.73")			4600 mm (181.10")		
	Z axis travel (ram travel up/down)	710 mm (27.95")					
	W axis (cross rail up/down)	1250 mm (49.21")					
	B axis (positioning only)	-100° ~ 100°					
	C axis (positioning only)	±180°					
	Distance between spindle face and table top (B-axis: 0°)	1880 mm (74.02")					
Table	Table size	2100 mm x 3000 mm (82.68" x 118.11")	2100 mm x 4000 mm (82.68" x 157.48")	2100 mm x 5000 mm (82.68" x 196.85")	3100 mm x 6000 mm (122.05" x 236.22")	3100 mm x 8000 mm (122.05" x 314.96")	3100 mm x 10000 mm (122.05" x 393.70")
	Table load (evenly distributed)	43000 kg (94797 lbs)					
	Table surface configuration	24 mm (0.94") T-slot x 9 250 mm (9.84") pitch			24 mm (0.94") T-slot x 9 250 mm (9.84") pitch		
Spindle	Max. spindle speed	8000 rpm, 12000 rpm (selectable)					
	Spindle	8000 rpm No.50/12000 rpm HSK-A100					
	Ram size	ø450 mm (ø17.72")					
	Ram guide face	Roller guide					
	Min indexing increment (B axis, C axis)	0.0001°					
	Indexing time (B axis)	2.3 s (90°)					
	Indexing time (C axis)	3.0 s (180°)					
Feedrate	Rapid traverse rate (X, Y, and Z axes)	30, 30, 30 m/min (1181, 1181, 1181 IPM)			15, 30, 30 m/min (591, 1181, 1181 IPM)		
	Rapid traverse rate (W axis)	3 m/min (118 IPM)					
	Cutting feedrate (X, Y, Z axes)	8 m/min (315 IPM)					
Automatic tool changer	Tool magazine capacity	30					
	Max. tool diameter/length (from gauge line)/weight	ø125 mm/500 mm/25 kg (ø4.92"/19.69"/55 lbs)					
	Max. tool diameter when adjacent pockets empty	ø210 mm (ø8.27")					
	Tool selection method	Random selection/shortest path					
	Tool change time (chip-to-chip)	16.5 sec.					
Motors	Spindle motor (40% ED (30-min. rating)/(cont.rating)	8000 rpm (40kW (54 HP)/30 kW (40 HP)), 12000 rpm (45 kW (60 HP)/37 kW (50 HP))					
Power requirement	Electrical power supply (40% ED (30-min. rating)/(cont.rating)	105 kVA/96 kVA					
Machine size	Height	6650 mm (261.81")					
	Floor space requirement*	7916 mm x 10525 mm (311.65" x 414.3")	7506 mm x 13025 mm (295.51" x 512.80")	7506 mm x 14525 mm (295.51" x 571.85")	8440 mm x 16525 mm (332.28" x 650.59")	8440 mm x 21030 mm (332.28" x 827.95")	8440 mm x 25030 mm (332.28" x 985.43")
	Machine weight	59700 kg (131616 lbs)	65200 kg (143742 lbs)	70800 kg (156087 lbs)	86300 kg (190259 lbs)	106500 kg (234788 lbs)	113100 kg (249343 lbs)

* When ATC 60 tool magazine is equipped

V-140N turning table specifications OPTION

		V-140N 280
Column	Distance between columns	3750 mm (147.64")
Stroke	X axis (table forward/backward)	7000 mm (275.59")
	Y axis (spindle head travel right/left)	4600 mm (181.10")
	Z axis travel (ram travel up/down)	710 mm (27.95")
	W axis (cross rail up/down)	1250 mm (49.21")
	B axis (positioning only)	-100° ~ 100°
	C axis (positioning only)	±180°
	U axis (turning table-positioning only)	360°
	Distance between spindle face and table top (B-axis: 0°)	1980 mm (77.95")
Turning table	Table size	ø2950 mm (ø116.14")
	Max. workpiece size	ø3500 mm x 1750 mm (ø137.8" x 68.9")
	Table load (evenly distributed)	10000 kg (22046 lbs)
	Table surface configuration	24 mm (0.94") T-slot x 11 250 mm (9.84") pitch
Machine table	Table size	3100 mm x 6000 mm (ø122.05" x 236.22")
	Table load capacity (evenly distributed)	30000 kg (66138 lbs)
	Table surface configuration	24 mm (0.94") T-slot x 13 250 mm (9.84") pitch
Ram spindle	Max. spindle speed	8000 rpm
	Spindle	8000 rpm No. 50
	Ram size	ø450 mm (ø17.72")
	Ram guide face	Roller guide
	Min. indexing increment (B axis, C axis)	0.0001°
	Indexing time (B axis)	2.3 s (90°)
	Indexing time (C axis)	3.0 s (180°)
Turning table	Max. speed	60 rpm
	Torque (Cont. rating)	10470 N • m (7722 ft • lbs)
	Min. indexing increment (U axis)	0.0001°
	Max. positioning speed (U axis)	10.5 rpm
	Clamping torque	42500 N • m (31346 ft • lbs)
Feedrate	Rapid traverse rate (X, Y, and Z axes)	30, 30, 30m/min (1181, 1181, 1181 IPM)
	Rapid traverse rate (W axis)	3 m/min (1181 IPM)
	Cutting feedrate (X, Y, and Z axes)	8 m/min (315 IPM)
Automatic tool changer	Tool magazine capacity	30
	Max. tool diameter/length (from gauge)/weight	ø125 mm/500 mm/25 kg (ø4.92"/19.69"/55 lbs)
	Max. tool diameter when adjacent pockets empty	ø210 mm (ø8.27")
	Tool selection method	Random selection/shortest path
	Tool change time (chip-to-chip	16.5 sec
Motors	Spindle motor (40% ED (30-min. rating)/cont. rating)	8000 rpm (40 kW (54 HP)/30 kW (40 HP))
	Turning table motor (cont. rating)	45 kW (60 HP)
Power Requirement	Electrical power supply (40% ED (30-min. rating)/cont. rating)	184.41 kVA/176.02 kVA
Machine size	Height	7000 mm (275.59"
	Floor space requirement	8550 mm x 16525 mm (336.61" x 650.59")
	Machine weight	101700 kg (224206 lbs)

Only 8000 rpm standard spindle is only available.
0.0001° indexing function for turning table (No contouring)

MAZATROL SmoothG Specifications

	MAZATROL	EIA
Number of controlled axes	Simultaneous 2 ~ 4 axes	Simultaneous 2 ~ 4 axes, Simultaneous 5 axes*
Least input increment	0.0001 mm, 0.00001", 0.0001°	
High-speed, high-precision control	Shape of error designation, Smooth corner control, Rapid traverse overlap, Rotary axis shape compensation	Shape of error designation, Smooth corner control, Rapid traverse overlap, Rotary axis shape compensation, High-speed machining mode, High-speed smoothing control function, 5-axis spline*
Interpolation	Positioning (Linear interpolation), Positioning (Independent interpolation), Linear interpolation, Circular interpolation, Cylindrical coordinate interpolation, Synchronized milling spindle tapping*	Positioning (Linear interpolation), Positioning (Independent interpolation), Linear interpolation, Circular interpolation, Spiral interpolation, Helical interpolation, Cylindrical coordinate interpolation*, Fine spline interpolation*, NURBS interpolation*, Polar coordinate interpolation*, Synchronized milling spindle tapping*
Feedrate	Rapid traverse, Cutting feed, Cutting feed (per minute), Cutting feed (per revolution), Dwell (specified time, specified number of rotation), Rapid traverse override, Cutting feed override, GO speed variable control, Feedrate clamp, Variable acceleration/deceleration control, Constant control for GO tilting*	Rapid traverse, Cutting feed, Cutting feed (per minute), Cutting feed (per revolution), Inverse time feed, Dwell (specified time, specified number of rotation), Rapid traverse override, Cutting feed override, GO speed variable control, Feedrate clamp, Time constant changing for G1, Variable acceleration/deceleration control, Constant control for GO tilting*
Program registration	Max. number of programs: 960, Program storage: 2MB, Program storage expansion: 8MB*	
Control display	Display: 19" touch panel/Resolution: SXGA	
Spindle functions	S code output, Spindle speed clamp, Spindle speed override, Spindle speed reaching detection, Multiple position orient, Constant surface speed, Spindle speed command with decimal digits, Synchronized spindle control, Max. speed control for spindle	
Tool functions	Tool offset pairs: 4000, T code output for tool number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)	Tool offset pairs: 4000, T code output for tool number, Tool code output for group number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)
Miscellaneous functions	M code output, Simultaneous output of multiple M codes	
Tool offset functions	Tool position offset, Tool length offset, Tool diameter/tool nose R offset, Tool wear offset	
Coordinate system	Machine coordinate system, Work coordinate system, Local coordinate system, Additional work coordinates (300 set)	
Machine functions	-	Rotary axis pre-filter, Angled surface cutting, Shaping function*, Tool nose point control*, Tool diameter compensation for 5-axis machining*, Workpiece positioning error compensation*, Parallel shaft synthesis*, Tool axis direction/tool length compensation
Machine compensation	G0/G1 independent backlash compensation, Pitch error compensation, Geometric deviation compensation, Volumetric compensation*	
Protection functions	Emergency stop, Interlock, Stroke check before traveling, Retraction function for the vertical axis, SAFETY SHIELD (manual mode), SAFETY SHIELD (automatic mode), MAZAK VOICE ADVISOR	
Automatic operation mode	Memory operation	Memory operation, Tape operation, MDI operation, Ethernet operation*
Automatic operation mode	Optional stop, Dry run, Automatic handle control, MDI control, TPS, Restart, Machine lock	Optional block skip, Optional stop, Dry run, Automatic handle control, MDI control, TPS, Restart, Restart 2, Collation stop, Machine lock
Manual measuring functions	Tool length and tip teach, Touch sensor coordinates measurements, Workpiece offset measurement, WPC offset measurement, Measurement on machine	Tool offset teach, Tool length and tip teach, Touch sensor coordinates measurement, Workpiece offset measurement, WPC offset measurement, Measurement on machine
Automatic measuring functions	WPC coordinate measurement, Automatic tool length measurement, Sensor calibration, Tool breakage detection, External tool breakage detection*	Automatic tool length measurement, Sensor calibration, Tool breakage detection, External tool breakage detection*
MDI measurement	Partial auto tool length measurement, Auto tool length measurement, Coordinate measurement	
Interface	PROFIBUS-DP*, Ethernet I/P*, CC-Link*	
Card interface	SD card interface, USB	
Ethernet	10M/100M/1Gbps	

*: Option

Standard and Optional Equipment

● : Standard ○ : Optional – : N/A

		V-100N 160	V-100N 200	V-100N 240	V-140N 280	V-140N 360	V-140N 440
Machine	8000 rpm/12000 rpm spindle (selectable)	●	●	●	●	●	●
	High-torque 6000 rpm spindle/1218 N • m (898 ft • lbs)	○	○	○	○	○	○
	Simultaneous 5-axis	○	○	○	○	○	○
	30-tool magazine (chain)	●	●	●	●	●	●
	60-tool magazine (chain)	○	○	○	○	○	○
	120-tool magazine (chain)	○	○	○	○	○	○
	High-column specification (250 mm [9.84"] or 350 mm [13.78"]	○	○	○	○	○	○
Factory automation	2 table changer	○	○	○	○	○	○
	Universal attachment interface (8000 rpm spindle only)	○	○	○	○	○	○
	Angle attachment	○	○	○	○	○	○
	Angle attachment (coolant through spindle)	○	○	○	○	○	○
	Snout attachment (gear reduction 1/4)	○	○	○	○	○	○
	Snout attachment (gear reduction 1/1)	○	○	○	○	○	○
	Universal attachment changer (1, 2, 4, 6)	○	○	○	○	○	○
	Automatic power on/off + warm-up operation	●	●	●	●	●	●
	Operation end buzzer	○	○	○	○	○	○
	3-color machine status light	○	○	○	○	○	○
	Status light (machining completion indicator/yellow) (alarm indicator/red)	○	○	○	○	○	○
High accuracy	Ball screw core cooling (X, Y, Z axis)	●	●	●	●	○	○
	Ball screw core cooling (Y, Z axis)	○	○	○	○	●	●
	Scale feedback (X, Y, Z, W axis)	○	○	○	○	○	○
	Scale feedback (W axis)	○	○	○	○	○	○
	Coolant temperature control	○	○	○	○	○	○
Setup support	Auto tool length measurement and tool breakage detection	○	○	○	○	○	○
	Mazak monitoring system B (RMP60)	○	○	○	○	○	○
	Magazine operation panel for tool ID (touch panel)	○	○	○	○	○	○
	Pull stud with tool ID (#50 EUCHNER)	○	○	○	○	○	○
	Manual pulse generator (wireless)	○	○	○	○	○	○
	Manual pulse generator (wired)	○	○	○	○	○	○
	Work light	●	●	●	●	●	●
Coolant/ Chip disposal	Flood coolant	●	●	●	●	●	●
	Work air blast	○	○	○	○	○	○
	Coolant through spindle system (1.5 Mpa [220 PSI] or 3.5 Mpa [510 PSI])	○	○	○	○	○	○
	Side coolant cover	●	●	●	●	●	●
	Internal chip conveyor (hard type)	○	○	○	○	○	○
	Internal chip conveyor	●	●	●	●	●	●
	Chip conveyor (right side discharge or left side discharge) (ConSep)	○	○	○	○	○	○
	Chip bucket (rotary or fixed)	○	○	○	○	○	○
	Large capacity chip bucket (rotary)	○	○	○	○	○	○
	Chip conveyor (right side discharge or left side discharge) (ConSep)	○	○	○	○	○	○
Safety equipment	Operator door interlock	●	●	●	●	●	●
Others	Manuals	●	●	●	●	●	●
	Additional manuals	○	○	○	○	○	○
	Disassembly and adjustment tools	●	●	●	●	●	●

Above specifications are for North American market.
Standard and optional equipment vary by market.

VERSATECH SERIES

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- The accuracy data and other data presented in this catalogue were obtained under specific conditions. They may not be duplicated under different conditions (room temperature, workpiece materials, tool material, cutting conditions, etc.).

VERSATECH SERIES SmoothCNC 17.03.300 G 99J283617E0

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