Specifications and spindle

	Specifications	Unit	VTC-530C	VTC-760C
Travel	X-axis	mm	1740	1740
	Y-axis	mm	530	760
	Z-axis	mm	510	660
Table	Table length	mm	2300	2300
	Table width	mm	530	760
	Spindle nose to table top		180	180
	(Maximum workpiece size (L x W x H)	mm	4000 x 655 x 650	4100 x 905 x 790
	Table surface	–	5 x 18mm T-slot x 100mm pitch	5 x 18mm T-slot x 125mm pitch
	Maximum workpiece weight	kg	1000	1400
Spindle	Spindle speed	rpm	12,000	12,000
	Gear ranges	–	2-step (Electric)	2-step (Electric)
	Spindle taper	ISO	40	40
	Power (Continuous/ 5 min.)	kW	7.5 / 18.5	7.5 / 18.5
	Torque (Continuous/ 10 min.)	Nm	47.7 / 95.5	47.7 / 95.5
Rapid tranverse rate	Rapid tranverse X-axis	m/min.	42	42
	Rapid tranverse Y-axis	m/min.	42	42
	Rapid tranverse Z-axis	m/min.	42	42
ATC magazine	Number of tools	–	30	30 (48)*
	Max. tool diameter	mm	ø80 (ø125)*2	ø80 (ø125)*2
	Max. tool length (from gauge line)	mm	350	350
	Tool selection method	–	Random pocket	Random pocket
	Max. tool weight	kg	8	8
	Tool change time (chip to chip)	sec.	4.4	4.5
Power requirements	Electrical power supply (cont.)	kVA	29.25	36.53 (continuous incl std options)
	Air supply - pressure	MPa	0.5 - 0.9	0.5 - 0.9
	Air supply - Volume	NL/min	325	325
Coolant	Pressure	MPa	0.5	0.5
	Tank capacity	L	500	580
Machine size	Height	mm	2682	3160
	Width	mm	4225	4225
	Depth	mm	3510*3	4100*3
	Weight	kg	9800	12000
CNC			MAZATROL SmoothG	MAZATROL SmoothG
Equivalent continuous sound pressure level at operator position (dependent on equipment options)		dB (A)	Less than 80 dB (A)	Less than 80 dB (A)

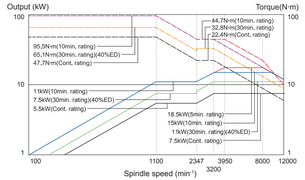
*Optional 48 tool magazine *2With adjacent pockets empty *3Including comtrol pendant

Spindle power torque
12000 min^{-1} spindle

Temperature controlled cooling liquid circulates through the spindle cartridge to ensure minimum spindle heat displacement.

Max. spindle speed 12000 min^{-1}

Output	18.5 kW	(24.6HP)	[5 min. rating]
	11 kW	(15HP)	[30 min. rating]
	7.5 kW	(10HP)	[Cont. rating]



VTC-530C, VTC-760C

Mazak

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- Specifications are subject to change without notice.
- This product is subject to all applicable export control laws and regulations.
- 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.)

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SMOOTH TECHNOLOGY

VTC-530C
VTC-760C

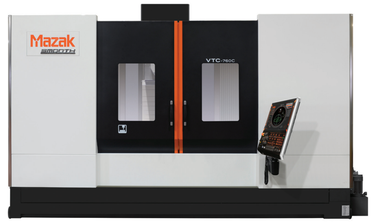
Mazak



VTC-530C
VTC-760C

High-speed, high-accuracy
travelling column
Vertical Machining Center

- The highly regarded VTC series has been installed in machine shops around the world for more than 20 years and the new VTC-530C and 760C are the latest additions to the already successful range.
- Thanks to the travelling column construction combined with a large 2,300mm fixed table, long workpieces can be machined easily and even overhung outside of the table area whilst the required floor space is minimised compared to conventional machining centers in the same class.
- The high-rigidity and high-accuracy construction combined with the powerful spindle enables high material removal rates for increased productivity and component accuracy.



VTC-760C

INTELLIGENT MACHINE
Innovation support for operations

ergonomics
Ease of operation

eco-friendly
Design with environmental considerations

Flexibility

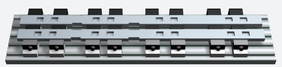
Long table provides exceptional versatility

Large, long workpieces can be machined, even those that overhang the large stationary table.

Large, long workpiece



Multiple parts from one piece of material



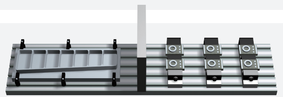
Workpiece overhanging the table



Multiple parts setup



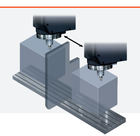
Pendulum Machining (with center partition option)



OPTION

Center partition

The optional center partition for the VTC-530C and VTC-760C enables pendulum operation to maximise productivity. Setup and workpiece loading/unloading can be performed on one side of the partition while machining is being performed on the other.



Intelligent machine

INTELLIGENT MACHINE

Yamazaki Mazak has developed a variety of functions for the improvement of productivity, high accuracy machining, and operator support. A range of unique technologies have been developed which incorporate the expertise of experienced machine operators to realise unsurpassed productivity and higher accuracy machining.

SET UP

ISS+

Machine Interference Prevention

INTELLIGENT SAFTY SHIELD

When an operator manually moves the machine axes for setup, tool measurement or changing inserts, the CNC shows a synchronised 3D model on the display for checking machine interference. If any machine interference occurs, the machine motion automatically stops.

MVA+

Verbal Message System

MAZAK VOICE ADVISER

Verbal support for machine setup and safe conditions confirmation

MACHINING

SMC+

Convenient Parameter Setting and Fine Tuning Function

SMOOTH MACHINING CONFIGURATION

Machining time, finished surface smoothness and machining shape can be adjusted for improved productivity

VAC

Variable Acceleration Control Function

VARIABLE ACCELERATION CONTROL

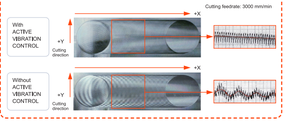
Variable Acceleration Control reduces cycle times by optimising the acceleration rate for the combination of axes within an individual program block rather than defaulting to the slowest axis acceleration rate for the overall program sequence.

AVC

Minimized Vibration

ACTIVE VIBRATION CONTROL

Machine vibration can be reduced to perform excellent machining accuracy and high-speed machining.





MAINTENANCE

IPS+

Comprehensive Spindle Monitoring

INTELLIGENT PERFORMANCE SPINDLE

The INTELLIGENT PERFORMANCE SPINDLE monitors a variety of properties such as temperature with sensors housed in the spindle and provides useful information to the operator. Thanks to this monitoring, production loss due to machine down time can be minimised.

IMS+

Comprehensive Maintenance Monitor

INTELLIGENT MAINTENANCE SUPPORT

Useful information for improved preventative maintenance to prevent unexpected machine downtime







CONDITION CHECK

Temperature as well as the motor load can be displayed

RUNNING RECORDER

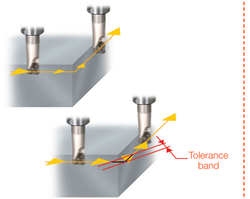
Operation status of milling spindle (rpm/motor load) can be reorded for up to one year

SCC

Seamless Corner Control

SMOOTH CORNER CONTROL

Developed to reduce cycle time and improve machined surface quality by reducing acceleration/deceleration times and machine vibration typically attributed to high speed changes of axis direction.

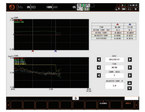


ITS+

Heat Displacement Control

INTELLIGENT THERMAL SHIELD

The INTELLIGENT THERMAL SHIELD is an automatic compensation function which realises enhanced continuous machining accuracy by adapting to temperature fluctuations in the machine environment. MAZAK has undertaken extensive testing in a temperature controlled room for a variety of environment conditions and the results have been analysed to develop an INTELLIGENT THERMAL SHIELD to automatically compensate for temperature fluctuations. Periodic data tracking the active temperature, thermal compensation amount and tool wear offset are graphically displayed and override settings can be applied easily.



MAZATROL SMOOTH G



- Touch screen operation
  - Operate similar to your smart phone / tablet
- PC with Windows® 8 embedded OS
- Fastest CNC in the world
  - Latest hardware and software for unprecedented speed and precision
- Easy conversational programming of multiple surface machinings
- Smooth user graphical interface and support functions for unsurpassed ease of operation
- Easily configure machine parameters for different workpiece materials and applications requirements
- MTConnect® ready
  - Convenient networking

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