

Compact, User Friendly Models

Vertical Machining Center

V.Plus-550

• Latest, State-of-Art Technology with Proven High Performance.

Travel (X/Y/Z)	: 550 / 410 / 460 mm : (21.65 / 16.14 / 18.11 in.)
Table Size	: 860 x 400 mm : (33.85 x 15.74 in.)
Loading Capacity	: 400 kg (880 lb.)
Spindle Speed	: 15,000 min ⁻¹
Rapid Traverse (X/Y/Z)	: 36 / 36 / 30 m/min : (1,417.3 / 1,417.3 / 1,181.1ipm)
NC System	: Matsuo G-Tech 30i Matsuo G-Tech 840Di



Twin Pallet, Vertical Machining Center

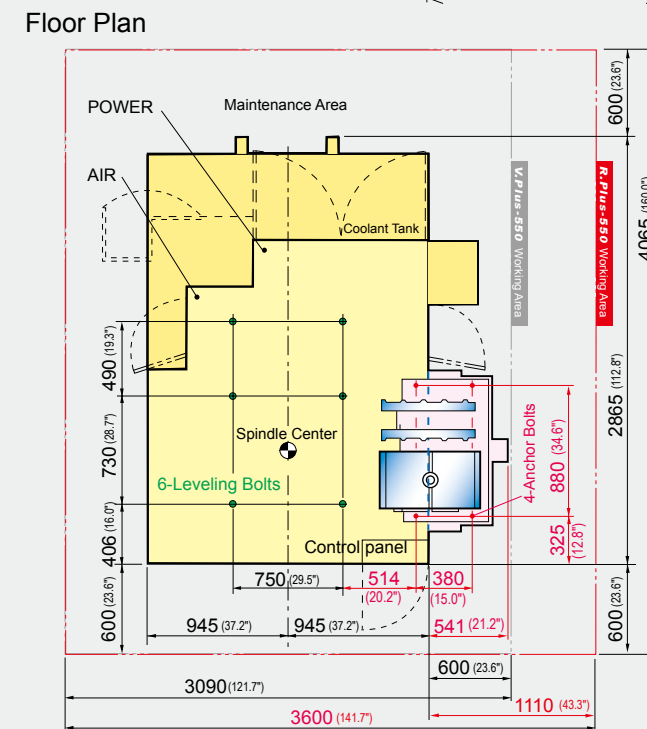
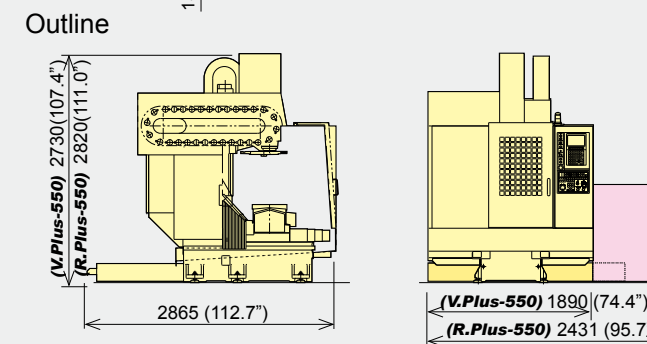
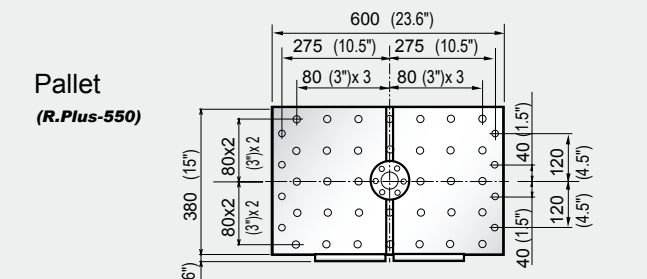
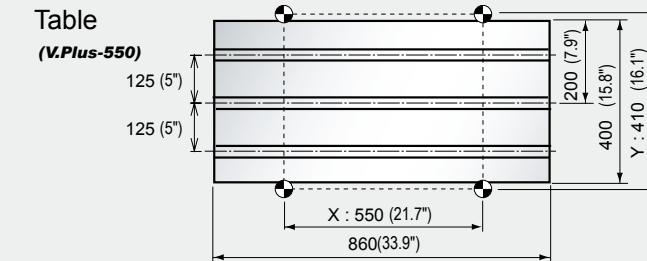
R.Plus-550

• Offering twin pallets for enhanced productivity, the **R.Plus-550** is Matsuo's new entry level multi pallet.

Travel (X/Y/Z)	: 550 / 410 / 460 mm : (21.65 / 16.14 / 18.11 in.)
Pallet Size	: 600 x 380 mm : (23.62 x 14.96 in.)
Loading Capacity	: 250 kg (550 lb.)
Spindle Speed	: 15,000 min ⁻¹
Rapid Traverse (X/Y/Z)	: 36 / 36 / 30 m/min : (1,417.3 / 1,417.3 / 1,181.1ipm)
NC System	: Matsuo G-Tech 30i Matsuo G-Tech 840Di



V.Plus-550 / R.Plus-550 Table, Pallet, Outline, Floor Plan



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Product specifications and dimensions are subject to change without prior notice.

V.Plus-550 / R.Plus-550 Standard Machine Specification

■ Movement and Ranges		
X-axis Travel	mm (in.)	550 (21.65)
Y-axis Travel	mm (in.)	410 (16.14)
Z-axis Travel	mm (in.)	460 (18.11)
■ Table (V.Plus-550)		
Table Size	mm (in.)	860 x 400 (33.85 x 15.74)
Loading Capacity	kg (lb.)	400 (880)
■ Spindle (BT40) * In case of Matsuo G-Tech 30i. Please contact Matsuo in case of Matsuo G-Tech 840Di.		
Spindle Speed	min ⁻¹	50 ~ 15,000
Spindle Motor Power (cont./50%ED)	kW (HP)	* 5.5 / 7.5 (10)
Spindle Motor Torque	N·m/min ⁻¹	* 65.1 / 1,100
■ Feedrate		
Rapid Traverse/Feedrate:X/Y/Z	mm/min (ipm)	36,000 / 36,000 / 30,000 (1,417.3 / 1,417.3 / 1,181.1)
■ Automatic Tool Changer		
Type of Tool Shank		JIS B 6339 40T
Type of Tool Knob		JIS B 6339 40P
Number of Tools	pcs.	30
Max. Adjacent Tool Diameter	mm (in.)	96 (3.77)
Max. Tool Dia. (both side pockets are empty)	mm (in.)	175 (6.88)
Max. Tool Length	mm (in.)	300 (11.81)
Max. Tool Weight	kg (lb.)	6 (13.2)
Tool Changing Time : Tool to Tool	sec	0.9
Tool Changing Time : Chip to Chip	sec	3.0
■ Auto Pallet Changer (R.Plus-550)		
Pallet Size	mm (in.)	600 x 380 (23.6 x 15)
Pallet Changing Time :Pallet to Pallet	sec	9.0
■ Power Sources		
Power Requirement	kVA	22
Volume of Compressed Air to be supplied	NL/min	350 (V.Plus-550) 500 (R.Plus-550)
■ NC System		
Control System		Matsuo G-Tech 30i Matsuo G-Tech 840Di
■ STANDARD ACCESSORIES		
01. Total Enclosure Guard	14. Machine Color Paint	
02. Workpiece Cleaning Gun (Machine Side)	15. Levelling Pads and Bolts	
03. Synchronised Tapping Function	16. Handy Man II F	
04. AD-TAP Function	17. CD-ROM for Memory Card Operation (only Matsuo G-Tech 30i)	
05. IPC Function	18. Pallet Loading Station, Safety Cover & Interlock Switch (for R.Plus-550)	
06. Coolant Unit	19. Matsuo Safety Specification	
07. Spindle Oil Cooler		
08. Lubrication Unit		
09. Spindle Overload Protection		
10. 9 Sorts of M Code Counters		
11. Work Light		
12. Cycle End Annunciation Light		
13. Std. Mechanical Tools & Tool Box		

Products are subject to all applicable export control laws and regulations.
EHEZ-E1.2-200911-2000S



Vertical Machining Centers

V.Plus-550 R.Plus-550



MAXIA
Innovation by Matsuo

Pioneers of the Vertical MC

Matsuo Pioneering Machine Tool Excellence Since 1935



MC-750V (1974)

Pioneers in the development and manufacture of high quality CNC vertical machining center's, Matsuo have been at the forefront of providing excellence through innovation since 1935. Matsuo's first vertical, the **MC-750V** was introduced to much global acclaim in 1974 and set the benchmark for precision, quality and productivity. To date Matsuo have supplied in excess of 15,400 vertical machines to every conceivable industry the world over, manufacturing every possible component.

Because of our prestigious heritage and established global customer base, we are recognized as a technology leader in today's world of high performance machining. Matsuo customers demand and receive high accuracy, high speed and reliability from our products, with after sales service and applications support that is second to none in the global machine tool supply industry.

35 years
at the forefront of Vertical CNC Machine Design & Manufacture

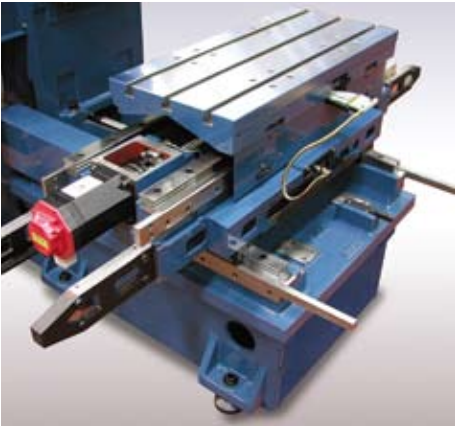
Hand Built to Exacting Quality Standards



The **V.Plus** - Matsuo's latest vertical series incorporates all of our hard won knowledge & experience gained from over 30 years of supplying high performance verticals to the worlds leading industries. Designed from "the ground up", the **V.Plus Series** has taken full advantage of the latest technology & design processes to ensure that it is ready for all applications - no matter how arduous the machining environment, nor how difficult the job. All Matsuo machines are handbuilt by Matsuo Engineers to strict & exacting quality standards - assuring our customers of years of high speed, high accuracy & highly reliable service & operation. The **V.Plus-550/R.Plus-550** - Cost effective, highly reliable, productive excellence.

Highly Rigid Construction

- Widely spaced, rectangular section column guideways on the Z axis are traditionally finished by hand scraping to minimize wear, offer life long accuracy & to accommodate the powerful headstock / spindle assembly.
- The massive bed, supported at 6 points offers total stability - despite the vast inertia forces generated by all axes during rapid acc/dec.
- The ball-screws on all axes, and the linear guides have inherent high rigidity & high accuracy. Matsuura only use the finest available components - with proven, class leading performance for our machining center's.
- To support longevity, & maintain high accuracy for the life of the machine, parallelism & straightness of the linear guides is set to within 2µm during manufacture. (Full stroke)



Matsuura Hi-Tech Spindle

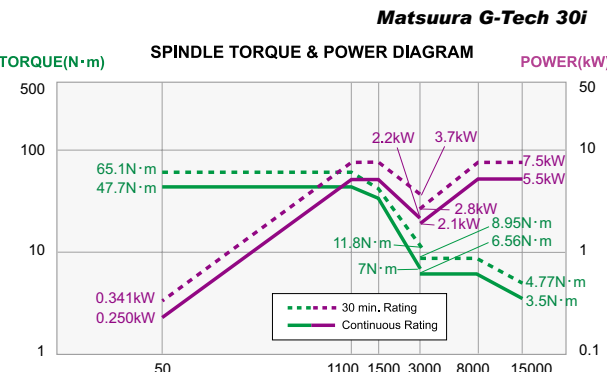
- Utilizing Matsuura's many decades of pioneering high speed machining experience, our spindles are designed & assembled "in house". Matsuura's spindle engineers work in a dedicated clean room complex to assure the highest quality & reliability, the precision spindles are assembled to guarantee a runout of less than 1µm (0.000039 in.) (actually measured value) at the nose of the spindle.
- The spindle and the motor are connected by Matsuura's unique coupling. This assembly is designed to prevent the heat from being transferred from the motor to the spindle & contributes to the high rigidity of the spindle.
- To minimize heat build-up in the spindle, cooled oil is circulated around the outer jacket of the spindle and motor as well as the motor flange, thus sustaining its high accuracy.
- Matsuura's own Hi-Tech spindles feature "face & taper" contact with the tool as standard. Unification of the spindle & tool is completed by means of drive keys, a unique mechanism securing the tool to improve repeatability and stationary/ dynamic rigidity. This results in excellent material removal rates and surface finish - everytime.



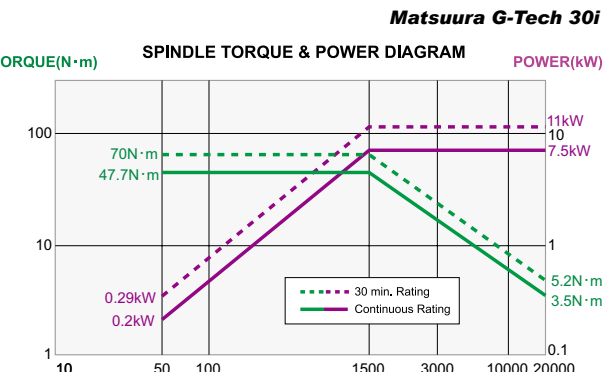
CUTTING PERFORMANCE 1 - SPINDLE SPEED 2 - FEED RATE 3 - REMOVAL RATE				
15,000 min ⁻¹ S45C	A5052	ø80 FACE MILL W 70mm D 3mm	ø25 END MILL W 22mm D 6mm	M30xP3.5 TAP
		1 6,000 min ⁻¹ 2 3,500 mm/min 3 735 cc/min	1 15,000 min ⁻¹ 2 4,500 mm/min 3 594 cc/min	1 120 min ⁻¹ 2 420 mm/min 3 286 cc/min
		ø80 FACE MILL W 70mm D 2mm	ø20 END MILL W 2 mm D 30mm	M20xP2.5 TAP
		1 1,100 min ⁻¹ 2 1,400 mm/min 3 196 cc/min	1 5,500 min ⁻¹ 2 3,200 mm/min 3 192 cc/min	1 100 min ⁻¹ 2 250 mm/min 3 137 cc/min

In case of **Matsuura G-Tech 30i**.

Spindle Specification (BT40)	Standard
Speed	: 15,000 min ⁻¹
Motor Power	: 5.5 / 7.5 kW
Motor Torque	: 65.1 Nm / 1,100 min ⁻¹



Spindle Specification (BT40)	Option
Speed	: 20,000 min ⁻¹
Motor Power	: 7.5 / 11 kW
Motor Torque	: 70 Nm / 1,500 min ⁻¹



Matsuura G-Tech Controls

Powerful, High Performance Matsuura G-Tech Controls

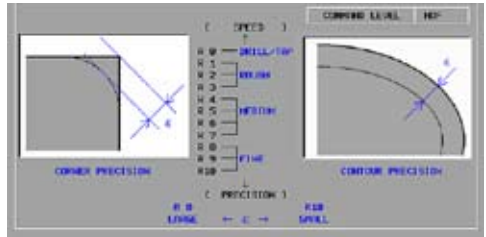


Compensating for any Geometric Error Between the Machining Program & Actual Machined Profile

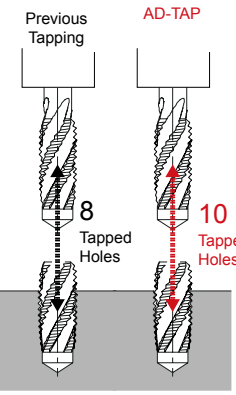
Machining for General Parts or Mold & Die	Machining for General Parts or Mold & Die
IZ-1/15F	Advanced Zee LagY
Machining for more Complex, Precision Parts	Machining for more Complex, Precision Parts
IZ-1/30NF, IZ-2/150NF Option	IZ-1/COMP Option
(Look Ahead Linear ace/dec + Nano Interpolation)	(Max.5,000 Block Look Ahead + Spline Interpolation)
• Executing the max. 200 (IZ-1/30NF)- or 600 (IZ-2/150NF) -block look ahead linear acc./dec. before interpolation achieves a smooth acc./dec. across the multiple blocks calculated by nano-order.	• After compressing a maximum of 50 blocks & engaging the 100 Block Look Ahead function, IZ-1/COMP interpolates & applies to the B-Spline to the nearest point selected.

Solution for High Speed and High Accuracy Machining

IPC (Adjustment Function for High Speed /Accuracy Marching)



- For high speed cutting applications, Matsuura's proven and pioneering software is recommended. When utilizing this software, setting the required part accuracy level is quick, simple and user friendly, allowing you to prioritize precision against speed.



AD-TAP

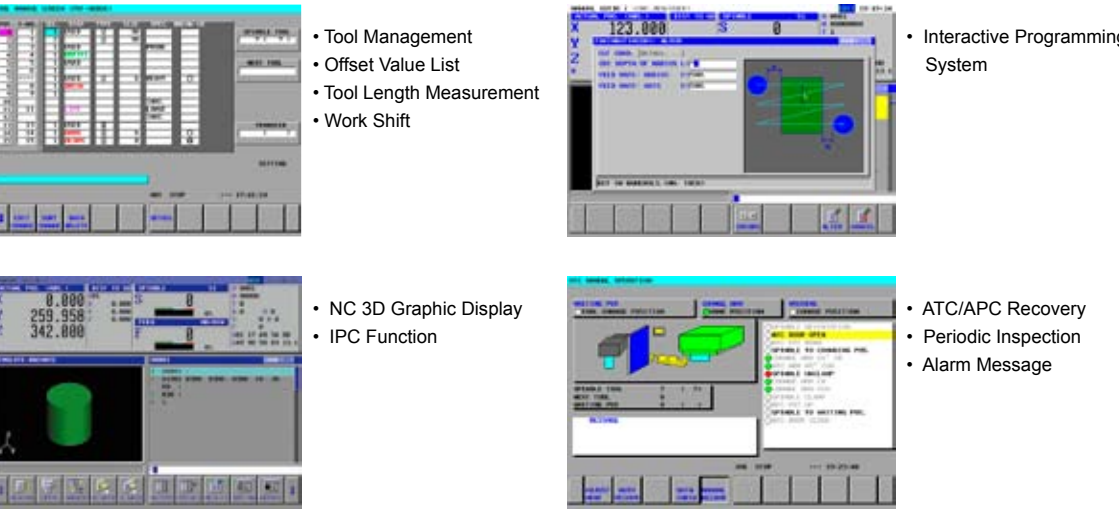
PATENTED

- Matsuura's unique spindle motor control technology- AD-TAP, intelligently optimizes the torque V speed characteristics of the spindle motor, depending on the size of the tap used. This provides average reduction of 20% in tapping time.

Intelligent Functionality

Simple, Quick, Easy to Use *Handy Man II* FIY

- Handy Man II provides major time savings by reducing setup, programming, operation and maintenance times. Please call Matsuura for in depth information.



Twin Pallet Changer

Matsuura's Unique & Patented APC

- For applications requiring increased levels of productivity, the twin pallet **R.Plus-550** offers an extremely compact, efficient & cost effective solution.
- Matsuura's acclaimed APC functionality is achieved by a simple combination of slideway traverse & rotary arm movement. This unique design is patented in Japan, the USA , Korea, Taiwan & 6 European Countries.
- For maximum rigidity & sustained clamping accuracy, pallets are located onto 4 precision taper cones.
- APC control panel is simple & easy to use.
- For absolute safety, the operator is separated from the set-up station enclosure by means of a protective cover.



The **R.Plus-550** photo above includes CE specifications.

Matsuura's machining centers are equipped with safety interlock as standard and also meet the safety regulations of various country of the world as standard.