

Accessories

Standard : ● Optional : ★

Description	Modle	MVP-8/10	MVP-11 (#40)	MVP-11 (#50)	MVP-13	MVP-16
1.Full-Enclosed Splash Guard		●	●	●	●	●
2.Full-Enclosed Splash Guard & top cover		★	★	★	★	★
3.Coolant Jets Around Spindle		●	●	●	●	●
4.lubrication system		●	●	●	●	●
5.Spindle Air Curtain		●	●	●	●	●
6.Coolant Tank(with chip bucket)		●	●	●	●	●
7.Fluorescent Lamp		●	●	●	●	●
8.RS-232 Interface		●	●	●	●	●
9.Table Side Air Blast M50 Control		●	●	●	●	●
10.X/Y/Z-axis Ball Screw Enforce Pressure		●	●	●	●	●
11.Automatic Power OFF		●	●	●	●	●
12.leveling bolts & blocks		●	●	●	●	●
13.Remote Manual Pulse Generator		●	●	●	●	●
14.Operation Finish Lamp		●	●	●	●	●
15.Operator Panel, Rotary type		●	●	●	-	-
16.Suspension Operator Box		-	-	-	●	●
17.Absolute pulse coder		●	●	●	●	●
18.Operation Manual & Electric Drawing Equipment		●	●	●	●	●
19.Tool Package		●	●	●	●	●
20.Coolant Through Spindle(20BAR)		★	★	★	★	★
21.Coolant Through Spindle(25BAR)		★	★	★	★	★
22.Coolant Through Spindle		★	★	★	★	★
23.Closed Loop Linear Scale Positioning System		★	★	★	★	★
24.Auto Tool Length and Diameter Measurement		★	★	★	★	★
25.Oil Mist Collector System		★	★	★	★	★
26.Fluorescent Lampx2		★	★	★	★	★
27.NC Rotary Table		★	★	★	★	★
28.Link type chip conveyor & portable chip bucket		★	★	★	★	★
29.Spindle Oil Cooler		★	★	★	★	★
30.Auto Workpiece Measurement		★	★	★	★	★
31.Coolant Flushing Device		★	★	★	★	★
32.Hydraulic Hose Coolant gun		★	★	★	★	★
33.Air gun		★	★	★	★	★
34.Oil Fluid Separator		★	★	★	★	★

Standard & Optional Electrical Functions

Hartrol / Standard

- Workpiece Calibration by MPG Directly
- Tool Magazine Display
- Parameter Package
- Threading Cutting (Only for 0i & 31i)
- Monitoring of Tool Status(Only for 0i & 31i)
- Special engraving

Hartnet/Optional

- Management system of Utilizaion
- Machining Time Countdown
- Convenient File Transfer

Electrical Function /Optional

- Lifting Function against gravity
- Retraction for Rigid Tapping
- Intelligent MPG

Hartford

Hartrol · Smartcenter · Robocell

We manufacture intelligent machines only

Hartford
EXCLUSIV
HartrolPlus APP

Intelligent Machining Center

MVP Series

- Hartrol Premium controller
- 5-Year warranty on guideways
- Tool change time: 1.38 sec
- Oversized column design



Hartrol Premium[®]
From tradition to intelligent

Facebook



Website



Automation/ Intelligent
Application program
Intelligentization
Key technology
Specification parameter

A.I. Applications inside, Hartrol Premium is the control which provides machining status with advanced features.

Imagine what future machines ought to be outlined.

AiSmartcontrol



Hartford redefine the future



AI 1

- + Hartrol Plus Sync & Update
- + User Connect

Thermal stability solution 2

- + Spindle Thermal Compensation
- + Casting Thermal Compensation
- + Thermal Symmetry / Thermal Balancing

ZDT 3

- + Diagnosis Report on Spindle Operation
- + Alarm Report System

IoT 4

- + Facial Recognition System
- + AI Efficient Lubrication Management
- + Smart Efficient Chip Collection

Major functions of Hartford AI controller

- Facial Recognition system-Face ID
- AI Environment Thermal Displacement Compensation
- AI Efficient Lubrication Management
- Highlight on Intelligent Auger
- AI Navi

How to quickly implement automation

Hartford Robot Production Cell

Easy to get started

Hartford Robocell provides you a professional robot training and rich automation experience, to let you quickly learn and easily operate your automation systems

Quality control monitoring

Automation systems have to pass all the strict Quality Control tests at every stage like design, assembly, testing, final inspection and shipment, complete quality control processes for all the products.

Professional analysis

Robocell Machining optimization service, to let you be on the top by using professional machining methods

What definition of Automation interface only :



- 1. Automatic Door
- 2. Automatic Interface
- 3. Pneumatic/ Hydraulic Interface
- 4. Other options

1. Automatic Door

- Pneumatic/Automatic Door System_Operating Door
- Pneumatic/ Servo Automatic Door System_Right Side Door

2. Automatic Interface

- I/O Preparation
- Profibus Link Preparation
- CC-Link Preparation
- EtherNet/IP Link Preparation

3. Pneumatic/ Hydraulic Interface

- 1/2/3 Cell Automatic Pneumatic/ Hydraulic Interface in the machine

4. Other options

- High Pressure Spray Nozzle with Automatic Preparation
- HStainless Base
- High-volume chip-removal system comprising dual side augers (MVP-11/13/16)

Detailed specifications please contact our sales staff

Superior Value in Mould Making

A perfect demonstration for machining accuracy and ability.

Hartford Plug & Play is designed for die & mold industry. It can not only boost your machining efficiency but also be your best partner.



1. Shoe mold



2. 3D Ear

Actual Cutting Test

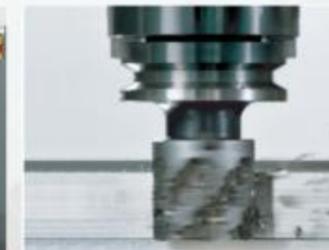
Model: MVP-16

■ Spindle: 15,000 rpm DDS type, 11kW ■ Cutting material : S45C



Face milling

Tool diameter Ø80 mm
Feed rate 1800 mm/min
Cutting depth 3mm
Cutting width 65mm
Cutting volume 351cc/min



End milling

Tool diameter Ø 63 mm
Feed rate 4200 mm/min
Depth 30 mm
Cutting width 3 mm
Cutting volume 378cc/min



Tapping

Tool diameter M24 x 3 mm
Feed rate 540 mm/min
Cutting depth 30 mm



Drilling

Tool diameter Ø40 mm
Feed rate 140mm/min
Cutting depth 40 mm

All the results featured in this catalogue were produced under strict testing condition in a special zed testing environment. Under different testing conditions and in less than ideal testing environments. That the test results may vary from those shown in this catalogue.

Automation/ Intelligent
Application program
Intelligentization
Key technology
Specification parameter

The very first step for fully intelligent machining.

Hartford APP Store

What is Hartrol Premium?

Hartrol premium is a brand new intelligent controller Hartrol , Hartnet and Hartford electrical function together which developed and made by Hartford.

HMI and operation is user friendly, it can achieve :

1. Internet connection, collect and analyze data, monitoring by portable device
2. Intelligent control: Auto revise human error and operating basis
3. Real time update new APPs

The difference between Hartrol plus and others

Function	Hartrol Premium	Others
Screen Size	19" Multi-touch Panel	10.4" (OPT:15")
Look Ahead Block	2700(G5P20000)	400(1000 Max.)
Hard Drive	32GB SSD	NO
Smoothing Interpolation	SSS 4G	Option
Industry 4.0	Hartford UserConnect	NO



The main technologies of Hartford smartcenter include intelligent managing system, status monitoring, alarm predicting, machine status diagnosis, crash preventing, 3D program simulation, machining efficiency improving...etc. All the intelligent functions help you control the machine status and assure the job quality.



The Intelligent Controller You Should Have

With three major solutions, Hartrol Plus takes you machining to the next level.

Highly optimized and intelligent controls bring even more capabilities and productivity to your metal cutting processes.

With ease use, advanced automation, and smart data collection, Hartrol plus is essential tool for enhancing performance on your production floor.

Cost down to 20%

- Multi Touch Screen
- CCD remote management
- E-book
- Remote Management
- Cutting Condition Calculator
- Stand-by Mode

Productivity increased 23%

- HartCAM
- AFC= Automatic Feedrate Control.
- SSS-4G
- Machining Time Countdown for Single Block
- Optimized Machining Program
- Automatic measurement

Efficiency increased 20%

- MES(Manufacturing Execution System)
- Machine Utilization Management
- Operator Performance Management
- 24 Hours a Day Management
- Remote Management
- Hartford Userconnect

Hartford UserConnect

- Alert Notification
- Remote Diagnoses
- Remote Value Enhancement
- Remote Monitoring & Management

Hartford smartcenter APP



The fuctions mentioned above will need to option the Hartrol plus controller or Dual screen with Fanuc controller.

What Hartford APP can do for you?

The integrated intelligent functions of Hartrol plus could achieve your machining requirements.
For more Hartrol Plus functions, please contact our sales person.

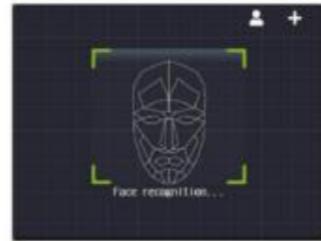
AI Environment Thermal Displacement Compensation(opt.)

Vertical machining center : **0.03mm**
Thermal displacement problem is improved up to **60%**
It can achieve good accuracy as in constant temperature room.



AI Facial recognition system(opt.)

Face ID log-in authority
Recognition time: **2 seconds**
Recognition accuracy: **100%**



Highlight on Intelligent Auger(opt.)

50% efficacy increases

- Intelligent auger automatically proceeds cleaning iron chips based on electrical current of spindle.
- Intelligent auger automatically performing reversal mode in case amount of iron chips outnumber, preventing from machine stop. Auger is overly shielded



AI Efficient Lubrication Management(opt.)

50% lubrication saved.

- Auto-adjustment oil supply base on machining condition.
- 50% oil consumption saved



On line update

With online updating system similar to smart phone will make sure your operating system stays the latest version with Hartford.

- 24hr ➡ Live updating , no boundary no time zone difference.
- NEW ➡ Synchronize with Hartford for the latest information and functions.
- Easy ➡ One key updating, easy and fast !



The Hartrol plus NC version must be A6 or above



Graphical user interfaces for part setting, inspection, tool setting

- Ease of use
- Increasing usability
- Eliminating manual set-up tasks
- Increasing efficiency



Hartford ZDT

Eliminate machine down time and increase efficiency. ZDT –

- Ease of use
- Check parts status clearly
- Eliminating unexpected down time
- Instant notification to your machine and your portable device

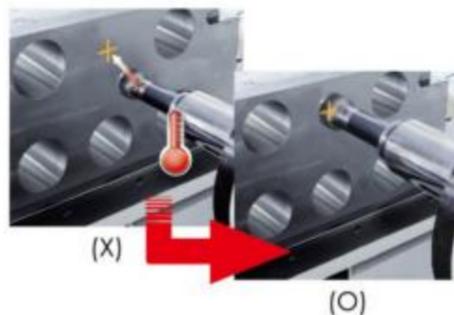


AFC(opt.)

Machining efficiency is increased by **21%**↑

Controls the feed rate depending on the machining situation

- Adjusting feed rate automatically
- Lengthen your tool life
- Reduce machining time



Thermal compensation on spindle(opt.)

No worries about HEAT!!

- Machine with compensation
 - #40 spindle thermal extension is within 0.03mm
 - #50 spindle thermal extension is within 0.02mm
 - Machine without compensation
 - Spindle thermal extension is around 0.10mm
- Notes: Above test is under room temperature



Tough, rugged and durable for MVP

Optimal rigid design construction assures stability, deformation-free precision year after year.



The picture shows MVP-10



Full range of linear guideway five-year warranty:

- Warranty coverage will not apply under following conditions
1. Improper operation (collision)
 2. Lack of regular cleaning of accumulated debris causing damage to the linear rails & carriages.

1. 3-axis with $\phi 50$ ballscrew

- MVP-13 & MVP-16 assemble with $\phi 50$ ballscrew on 3-axis.
- Supported by high precision angular contact thrust bearings.
- All servo motors with absolute encoders.
- Increase efficiency and dependability. (Mitsubishi & Fanuc only).

2. 4 linear guideways on base

- 4 linear guideways on base
- Increased machine stability.
- Available with MVP-13& MVP-16



Z-axis servo motor coupled directly to ballscrew

- No more timer belt, the motor is connect directly to the ballscrew.
- No risk of backlash or servo drag.
- Increase your machining efficiency and dependability.



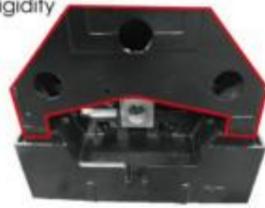
High sped tool change time (Opt.)

- Minimum tool change time is **1.38 sec.**(#40 opt.)
- Boost your machining efficiency.



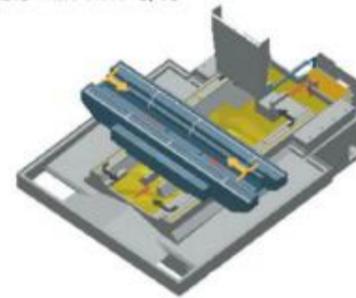
Oversized column & widest base design

- Column width is **1100mm** and base is **1600mm** for MVP-8 & MVP-10.
- Increased width of interface between the column and base.
- Enhances machine stability.
- Increases machine rigidity and efficiency.



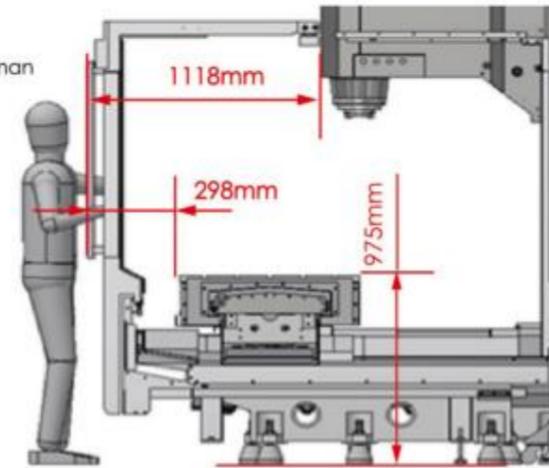
One-piece bed design

- Separates oil and coolant on the machine effectively.
- Prevents coolant contamination problems.
- Available with MVP-8/10



Easy for operation

- MVP-16 design meets the human engineering principle.
- Allows the operator to load and unload workpiece with ease.



Spindles Manufactured by Hartford Offer Quality Assurance

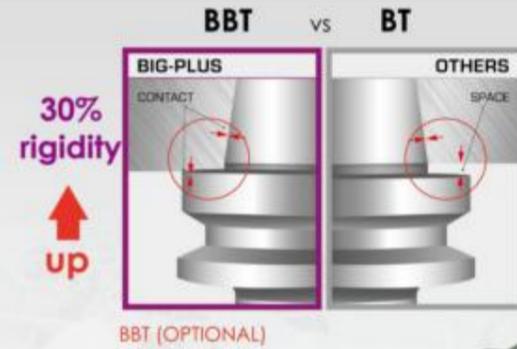
Machine Dimensions

Spindle type

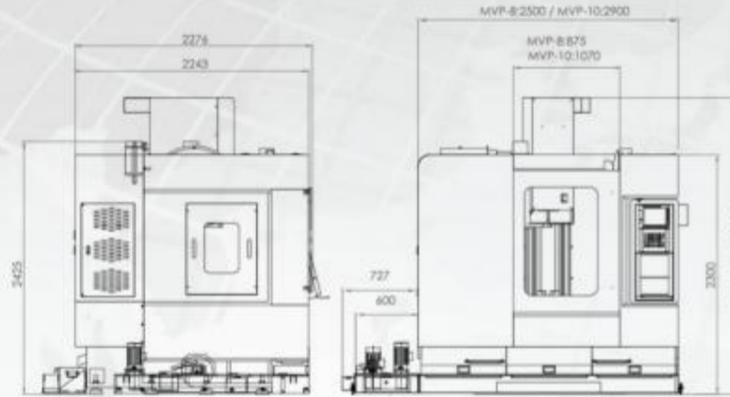
- #40 Pulley 12000rpm (MVP-16)
- #40 DDS opt.15000/20000rpm
- #50 DDSopt.10000rpm (MVP-16)
- #50 Gear opt.6000/8000rpm(MVP-16)

BBT option

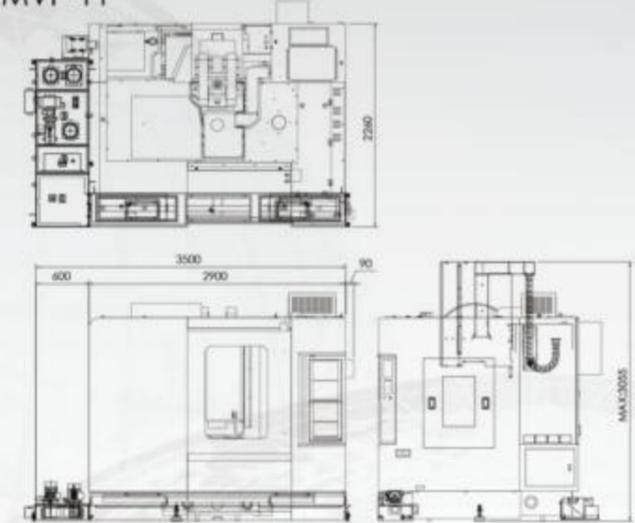
- Dual contact between the contact and the flanges.
- Improves the rigidity, accuracy, speed and performance.
- Radial deflection, vibration and deviation are significantly reduced.
- Unavailable with DDS 20,000 rpm spindle.



MVP-8/10

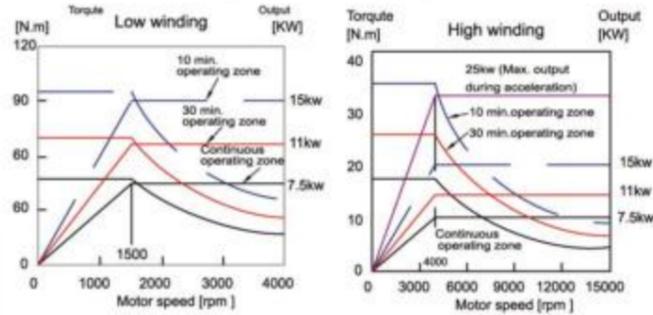


MVP-11

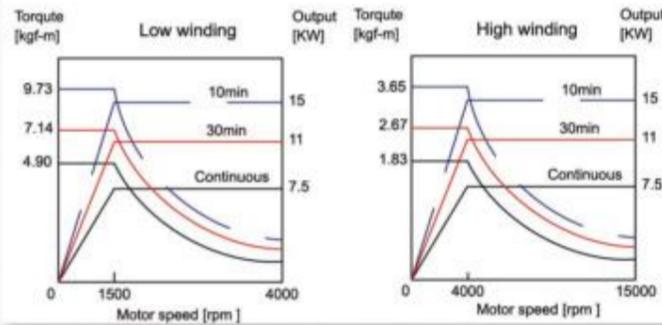


Spindle torque diagram

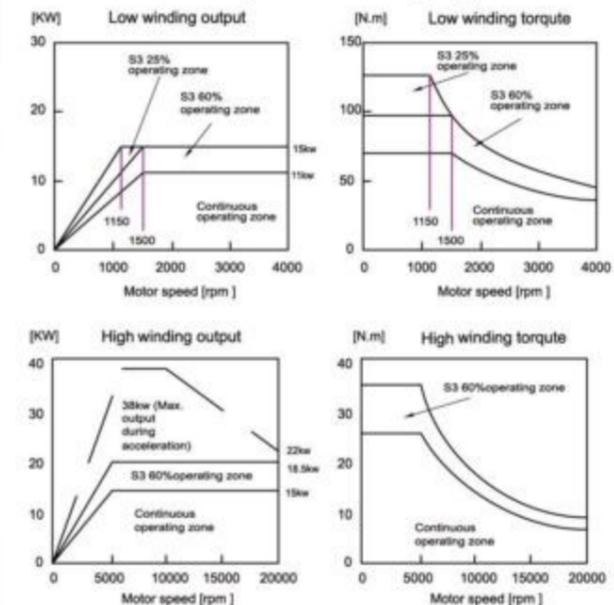
Fanuc a8/15000 it(DDS 15000 rpm)



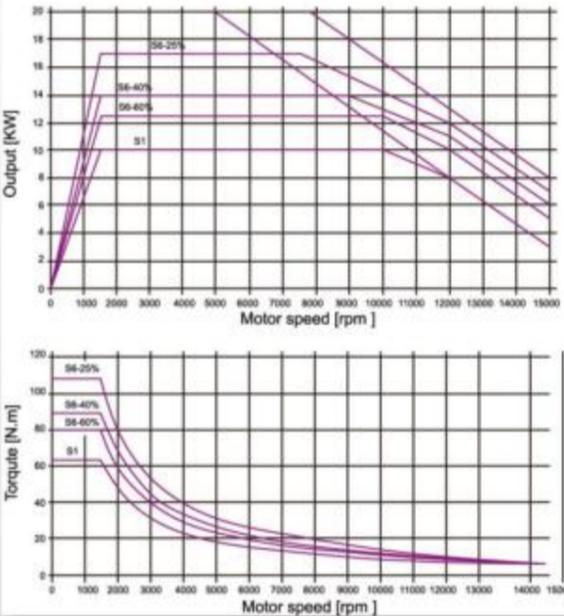
Mitsubishi SJ-VKS26-90ZT-S01x 15000



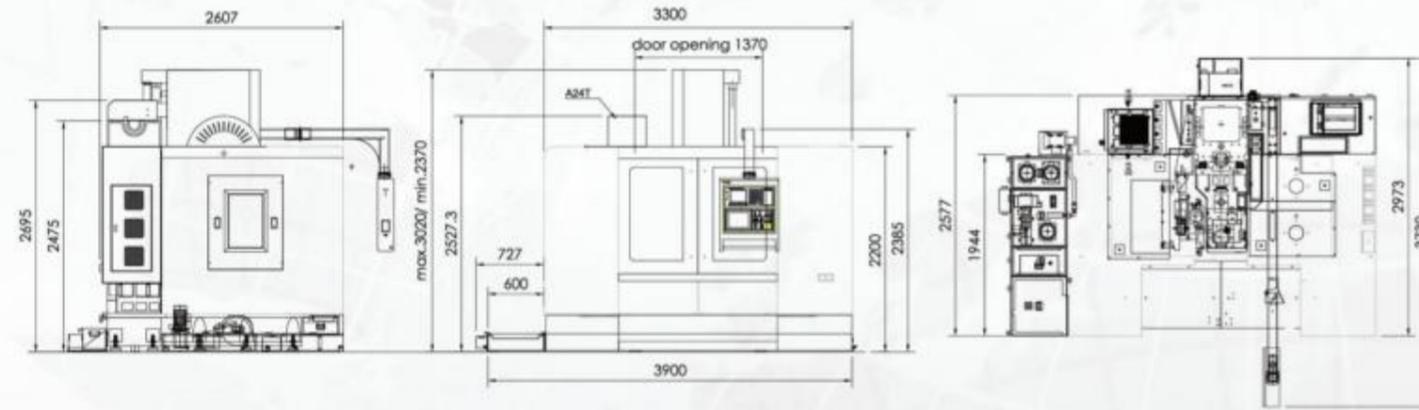
Fanuc a8/2000 it(DDS 20000 rpm)



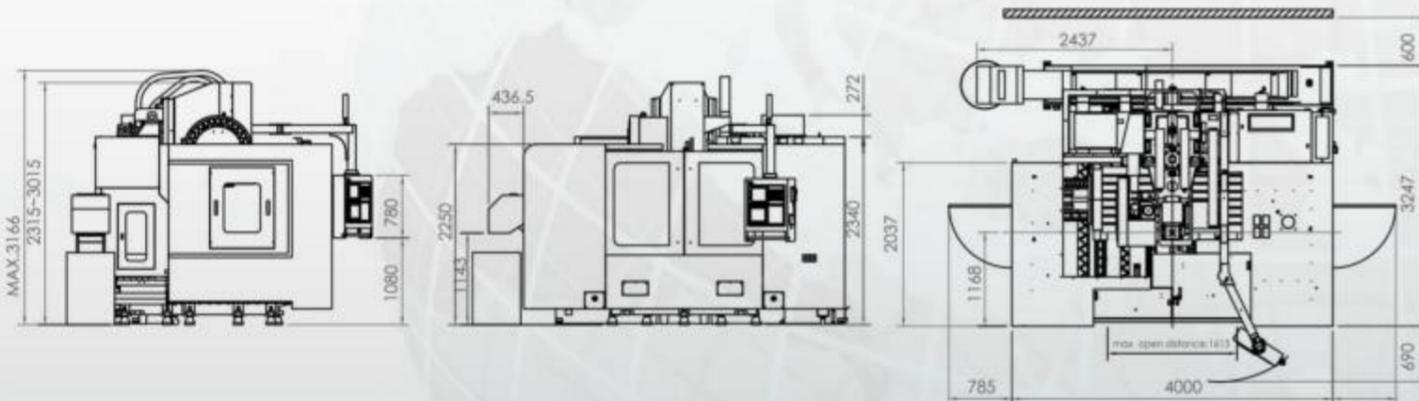
HEIDENHAINL: QAN200UH x 15000



MVP-13



MVP-16



Automation/ Intelligent
 Application program
 Intelligentization
 Key technology
 Specification parameter

Machine Specifications

Model		unit	MVP-8	MVP-10	MVP-11			MVP-13		MVP-16		
Table	Working surface	mm	1000 x 560	1150 x 560	1270 x 600			1400 x 700		1750 x 820		
	T-slot Width x pitch(number)	mm	18 x 100(5)	18 x 100(5)	18 x 100(5)			18 x 100(7)		18 x 100(7)		
	Max. load (Average)	kg	500	700	1000			1500		2000		
Travel	X -axis travel	mm	860	1050	1100			1300		1600		
	Y -axis travel	mm	530	530	600			700		820		
	Z -axis travel	mm	630	630	630			650		700	660 opt.820	
	Guide way (X / Y / Z)	type	Linear Guide Way	Linear Guide Way	Linear Guide Way	X/Y:Linear Guide Way Z: Box Way		Linear Guide Way		Linear Guide Way	X/Y:Linear Guide Way Z: Box Way	
	Distance from spindle to table	mm	85~715	85~715	100~730			120~770	180~830	120~820 opt.320~1020		
	Distance from spindle center to column	mm	600	600	641	645		780		900	865	
Spindle	Spindle nose taper	rpm	#40	#40	#40	#40	#50	#40	#50	#40	#50	
	Spindle speed(Gear)	rpm	-	-	-	6000 / 8000		-	6000	-	6000 / 8000	6000 / 8000
	Spindle speed(Pulley)	rpm	8000/10000 /12000	8000/10000/12000	8000/10000 /12000	8000/10000 /12000	-	8000/10000 /12000	-	8000/10000 /12000	-	-
	Spindle speed(DDS)	rpm	10000/12000 /15000/20000	10000/12000 /15000/20000	10000/12000/ 15000/20000	10000/12000 /15000	10000 /12000	10000/12000/ 15000/20000	10000/12000	10000/12000 /15000/20000	10000/12000	10000/12000
Feed	Cutting feedrate (X / Y / Z)	m/min	20/20/20	20/20/20	20/20/20	20/20/12		20/20/20		20/20/20	20/20/20	20/20/12
	Rapid traverse rate (X / Y / Z)	m/min	36/36/36 opt.48/48/36	36/36/36 opt.48/48/36	36/36/36	36/36/20		36/36/30		32/32/24	32/32/24	32/32/18
ATC	Capacity	pcs	A:24(30)	A:24(30)	A:24(30/40)		A:24(32)	A:24(30)	A:24	A:24(30/40)	A:24(32/40)	
	Max. tool weight	kg	7	7	7			7	20	7	20	
	Max. tool size(dia.x length)	mm	A: Ø 75x300L	A: Ø 75x300L	A: Ø 75x300L		A: Ø105 x300L	A: Ø 75 x 300L	A: Ø 125 x 350L	A: Ø 75x300L	A: Ø125x350L	
	Tool shank		BT40 (BBT / CAT / DIN / HSK A63)	BT40 (BBT / CAT / DIN / HSK A63)	BT40(BBT / CAT / DIN / HSK A63)		BT50(BBT/ CAT/DIN)	BT40 (BBT / CAT /DIN)	BT50(BBT/ CAT / DIN)	BT40(BBT/CAT /DIN/HSK A63)	BT50 (BBT/ CAT / DIN)	
	Pull stub bolt		P40T - 1 (CAT - 40 / DIN 69872)	P40T-1(CAT-40 / DIN 69872)	P40T-1(CAT-40 / DIN 69872)		P50T-1(CAT50 /DIN69872)	P40T-1(CAT-40 /DIN 69872)	P50T-1 (CAT-50 / DIN69872)	P40T-1(CAT-40 / DIN 69872)	P50T-1 (CAT-50 / DIN69872)	
Motor	Spindle drive motor (cont./30 min)	kw	5.5 / 7.5 opt. 7.5/11 ,11/15,15/18.5	5.5 / 7.5 opt. 7.5 / 11, 11 / 15 , 15 / 18.5	5.5 / 7.5 opt. 7.5 / 11, 11 / 15 , 15 / 18.5		11/15 opt. 15/18.5	7.5/11 opt. 11/15 ,15/18.5	11 / 15 opt. 15/18.5	7.5/11 opt. 11/15, 15/18.5	11/15 opt. 15/18.5, 18.5/22, 22/26	
Positioning Accuracy	Positioning accuracy (JIS B6330) , without linear scale	mm	±0.008	±0.008	±0.008			±0.008		±0.008		
	Repeatability (JIS B6330) , without linear scale	mm	±0.002	±0.002	±0.003			±0.003		±0.003		
	Positioning accuracy (JIS B6330) , with linear scale	mm	±0.006	±0.006	±0.006			±0.006		±0.006		
	Repeatability (JIS B6330) , with linear scale	mm	±0.002	±0.002	±0.002			±0.002		±0.002		
	Positioning accuracy (VDI 3441)	mm	0.010 / MGPS:0.008	0.010 / MGPS:0.008	0.010 / MGPS:0.008			0.014		0.018		
	Repeatability(VDI 3441)	mm	0.006 / MGPS:0.005	0.006 / MGPS:0.005	0.006 /MGPS:0.005			0.008		0.010		
Other	Required air pressure	kg/cm ²	6.5	6.5	6.5			6.5		6.5		
	Electric power requirement	KVA	20~45	20~45	20~45			20~45		25~45	30~50	
	Machine weight	kg	6400	6700	6300	7500	8000	9000		10650	11500	
	Coolant tank(standard)	L	283	303	306			363		440		
	Machine dimension(LxWxH)	mm	2500 x 2276x 2850	2900 x 2276x 2850	2240 x 2900x 3055			3300 x 2607x 2370		4000 x 2947 x 3015		
	Floor space (standard tank)	mm	3100 x 2556	3500 x 2556	2714 x 3500			4000 x 3730		4437 x 3940		

VDI 3441 accuracy available upon order request. For Other Specs Please Ask Sales

Specifications & dimensions are subject to change without notice (for actual weight, shipped product shall prevail.)

Accessories	LG-500	LG-800	LG-1000	LG-1370 NEO	LG-1570 NEO
Item					
1.Full-Enclosed Splash Guard for cts	○	○	○	○	○
2.Coolant Flushing Device	○	○	○	○	○
3.Spindle Oil Cooler	○	○	○	○	○
4.Centralized automatic lubrication system	●	●	●	○	○
5.Oil Fluid Separator	●	●	●	-	-
6Automatic grease lubrication system	-	-	-	●	●
7.Link type chip conveyer	○	○	○	○	○
8.Front Mounted Screw Type Chip Conveyer	○	○	○	○	○
9.Fluorescent Lampx1	●	●	●	●	●
10.Spindle Air Curtain	●	●	●	●	●
11.Cooling Tube Coolant gun	○	○	○	○	○
12.Air gun	○	○	○	○	○
13.Foundation bolt. Concrete	○	○	○	○	○
14.Remote Manual Pulse Generator	●	●	●	●	●
15.Convection Heat Exchanger in Control	●	●	●	●	●
16.Air conditioning for electrical cabinet	-	-	-	○	○
17.Operation Finish Lamp	●	●	●	●	●
18.RS-232 Interface	●	●	●	●	●
19.#40 8000rpm Pulley spindle	●	●	●	●	●
20.#40 10000/12000rpmPulley spindle	○	○	○	○	○
21.#40 10000/12000/15000rpmDDS spindle	○	○	○	○	○
22.#40 Drum Type Tool Magazine	-	○	○	-	-
23.#40 Disk Type Tool Magazine	●	●	●	●	●
24.20BAR Coolant Through Spindle	○	○	○	○	○
25.20BAR Coolant Through Spindle	○	○	○	○	○
26.NC Rotary Table	○	○	○	○	○
27.DNC Software	○	○	○	○	○
28.Auto Tool Length and Diameter Measurement	○	○	○	○	○
29.Auto Work Piece Measurement	○	○	○	○	○
30.Closed Loop Linear Scale Positioning System	○	○	○	○	○
31.Mist coolant system	○	○	○	○	○
32.Oil Mist Collector System	○	○	○	○	○

Standard ● Optional ○

Advanced Vertical Machining Center with Smart Technology

LG Series

LG-500

LG-1370 NEO

LG-800

LG-1570 NEO

LG-1000



► Applications and Parts

Machinery and Technology

Automation / Intelligent

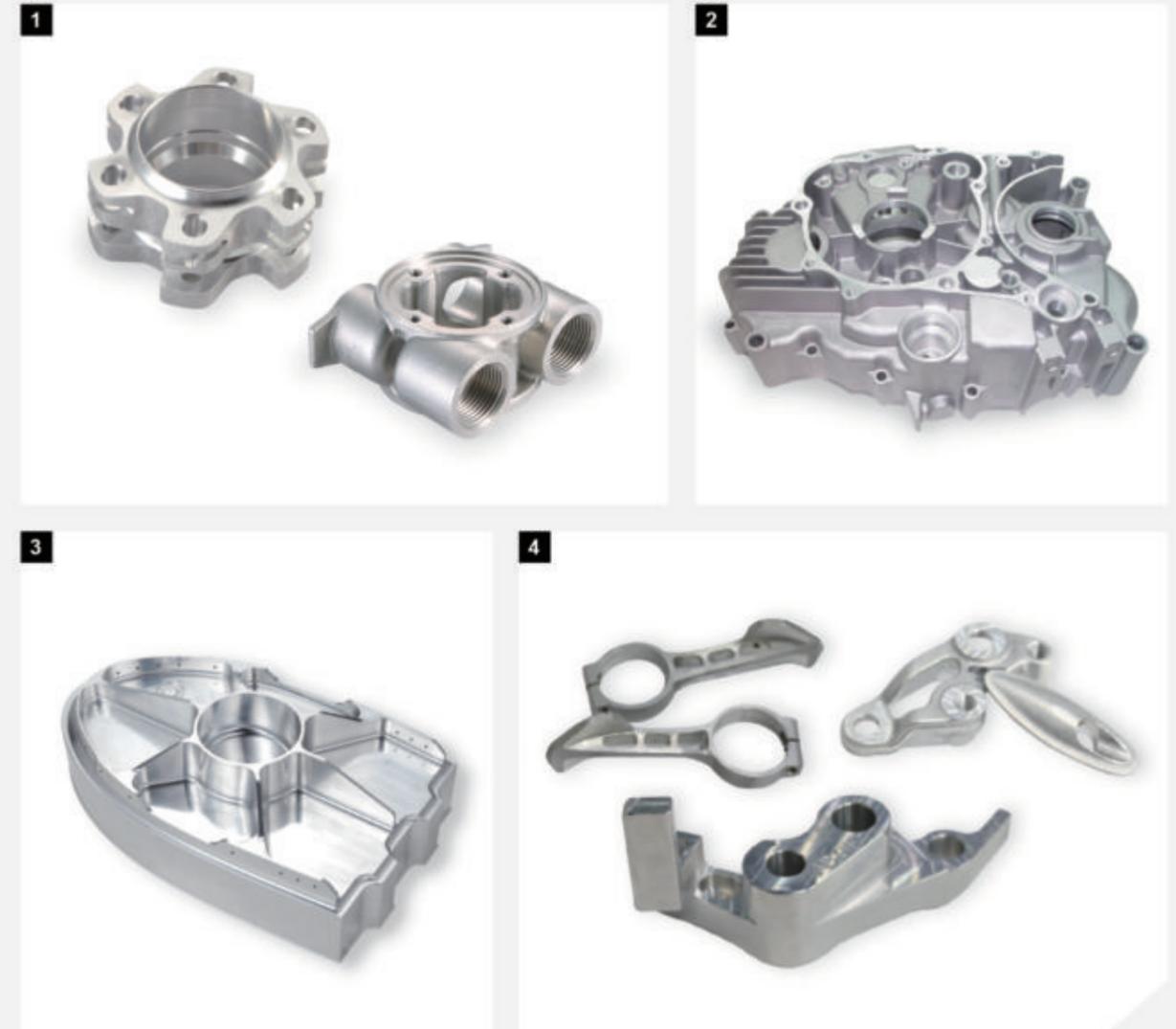
Specification parameter

Vertical Machining Center for Maximum Economic Benefits

Specifically tailored for the electric vehicle, aluminum, and steel processing industries, it pursues ultimate machining precision and innovative design, making it your ideal partner for producing high-quality workpieces.



01 Workpiece Machining Applications



1	2
3	4

Mechanical

1 Hardware parts

Motorcycle

2 Car engine hood

Aerospace

3 Aero components

Bicycle

4 Bicycle component

02 Machine Structure Features

Finite element analysis simulation is used to evaluate the stress distribution patterns in the machine body under load. This assessment aids in determining the thickness of the machine bed, optimizing the mechanical design, and positioning the column and beam. It ensures excellent processing speed, precision, and high stability.

Environmentally Friendly, Energy-Saving, and Carbon-Reducinggrease Lubrication Design. (LG-1370 / 1570 NEO)

Due to the low lubricant consumption, the oil replenishment intervals are extended, which not only reduces downtime for maintenance and costs but also eliminates concerns about waste oil disposal.

Z-axis Without Counterbalance Design

The Z-axis feed system adopts a large motor drive with a direct-coupled, counterbalance-free design, enhancing the Z-axis response speed and further improving workpiece quality.

Space-Efficient Machine Design

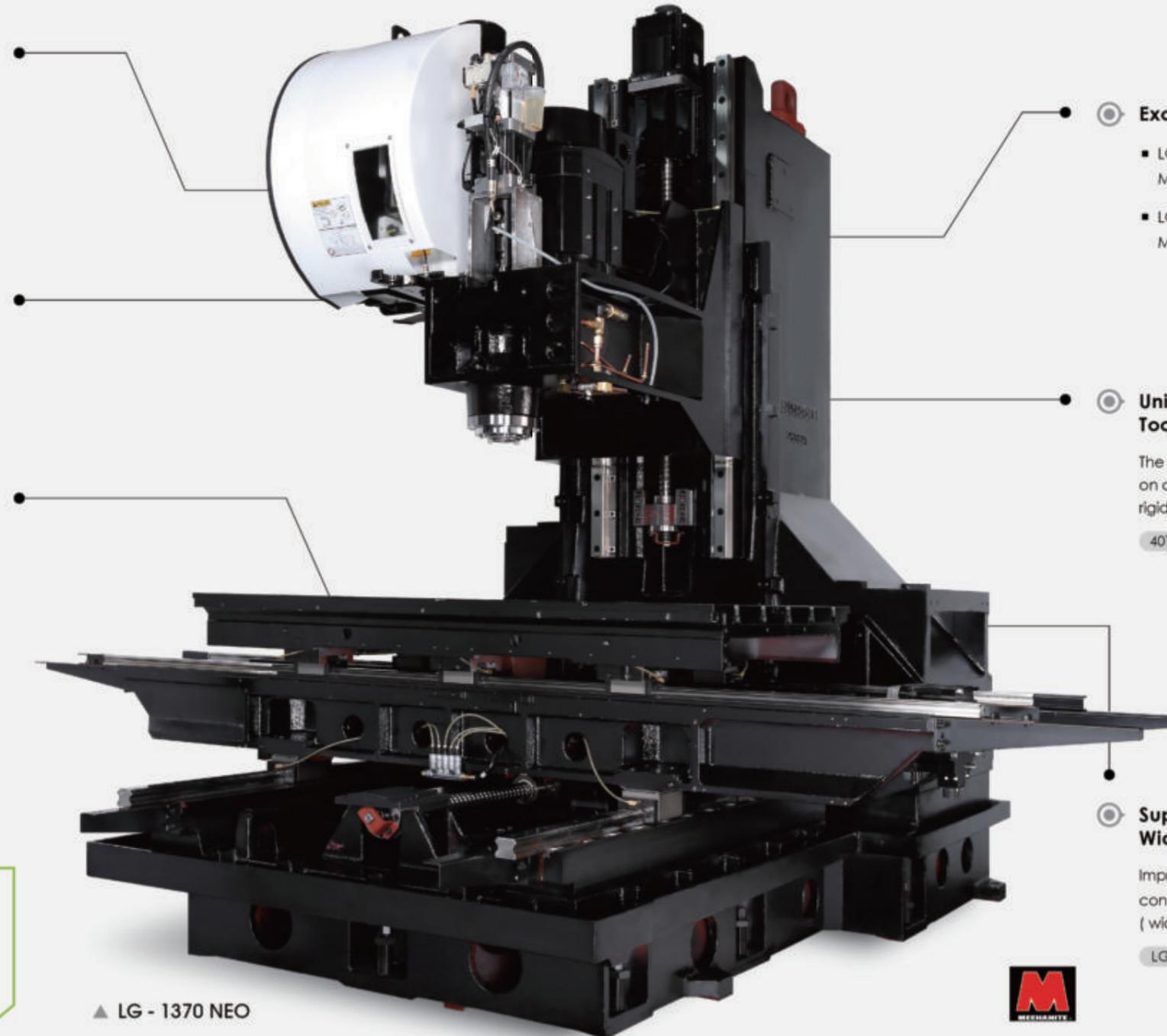
- 1.The compact full-enclosure design reduces the footprint by 20%.
- 2.The modular CTS design saves space and facilitates maintenance and servicing.



5 YEAR WARRANTY on Guideways for All Models

Warranty coverage will not apply under following conditions :

- 1.Improper operation(collison)
- 2.Lack of regular cleaningof accumulated debris causing damage to the linear rails &carriages.



▲ LG - 1370 NEO



Excellent Tool Change Time #40 opt

- LG-500 opt.
Minimum tool change time is **1.18** sec
- LG-800/1000/1370 NEO/1570 NEO
Minimum tool change time is **1.38** sec

Unique Combination Design of Tool Magazine and Column

The seated tool magazine design has no impact on column deformation, and enhance column rigidity.

40T (LG-1370 NEO/1570 NEO)



Super-Sized Column and Wide Base Design

Improved column interface of contact area by **8%**
(width increased from 600mm → 650mm)

LG-1370 NEO/1570 NEO



Personalized Smart Factory System

Smart i-Factory

Through i-Factory, all machinery and equipment in the factory can be connected, and the machine connections are no longer limited to Xiehong Machinery. Machinery from other manufacturers can also be connected for real-time visualization and management. The system is composed of five key components: real-time monitoring, production planning, alert notifications, data analysis, and remote connectivity, allowing you to move away from traditional management models and embrace a simpler and more convenient approach to factory management.



Tailored one-to-many automation planning

Intelligent Automated Production Line Unit



Customizing an automated factory just for you, effectively reducing costs and enhancing competitiveness.

Easy to get started

Hartford Robocell provides you a professional robot training and rich automation experience, to let you quickly learn and easily operate your automation systems.

Quality control monitoring

Automation systems have to pass all the strict Quality Control tests at every stage like design, assembly, testing, final inspection and shipment, complete quality control processes for all the products.

Professional analysis

Robocell Machining optimization service, to let you be on the top by using professional machining methods.



Hartrol Premium

A smart controller with independent thinking and decision-making abilities

Hartford's Hartrol, Hartnet, and electronic control functions are seamlessly integrated, designed with operators in mind.

Hartrol Premium offers smart features like data management, remote monitoring, and auto calibration, boosting efficiency and productivity.



Solve the problem of chips wrapping around your cutting tool
Drilling Chip Breaker Feature



In deep-hole machining, the lack of effective chip-breaking can lead to issues like chips wrapping around the tool, scratching the workpiece, and making chips cleaning difficult. With Hartford's exclusive chips breaking for drilling function, chips are finely broken down, preventing them from wrapping around the tool. This ensures the workpiece remains intact, chips are easily cleaned, productivity is increased.



ECO



Chips Breaking for Drilling



Thermal comp sys info

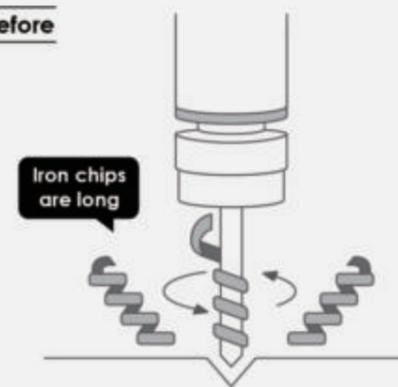


AFC



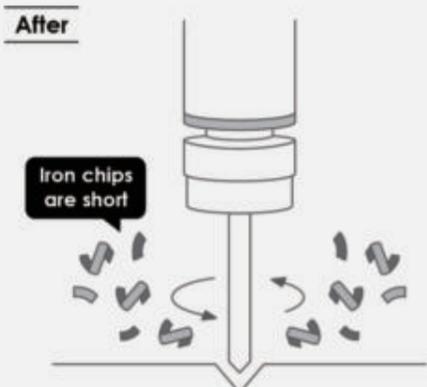
CCD Monitor

Before



▲ Function Off

After

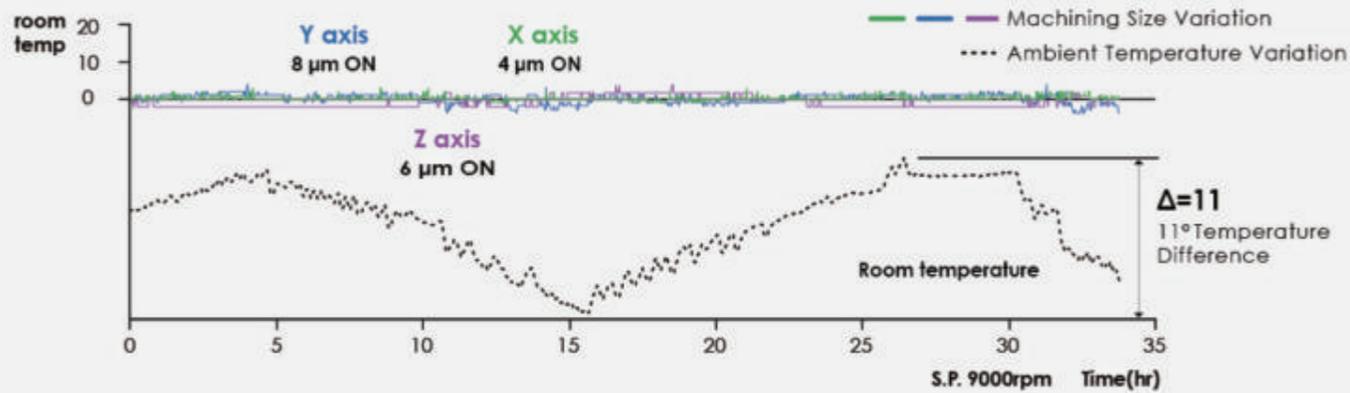


▲ Function On

Automatic Temperature Control for Precision and Quality

Thermal Compensation System Information

Exclusive whole-machine ambient temperature thermal displacement compensation function ensures that machining equipment does not cause workpiece deformation due to prolonged heat accumulation, thereby maintaining machining accuracy. Additionally, it effectively reduces the time required for temperature adaptation and thermal displacement modeling across different machine models and ambient temperature variations, significantly shortening delivery time.

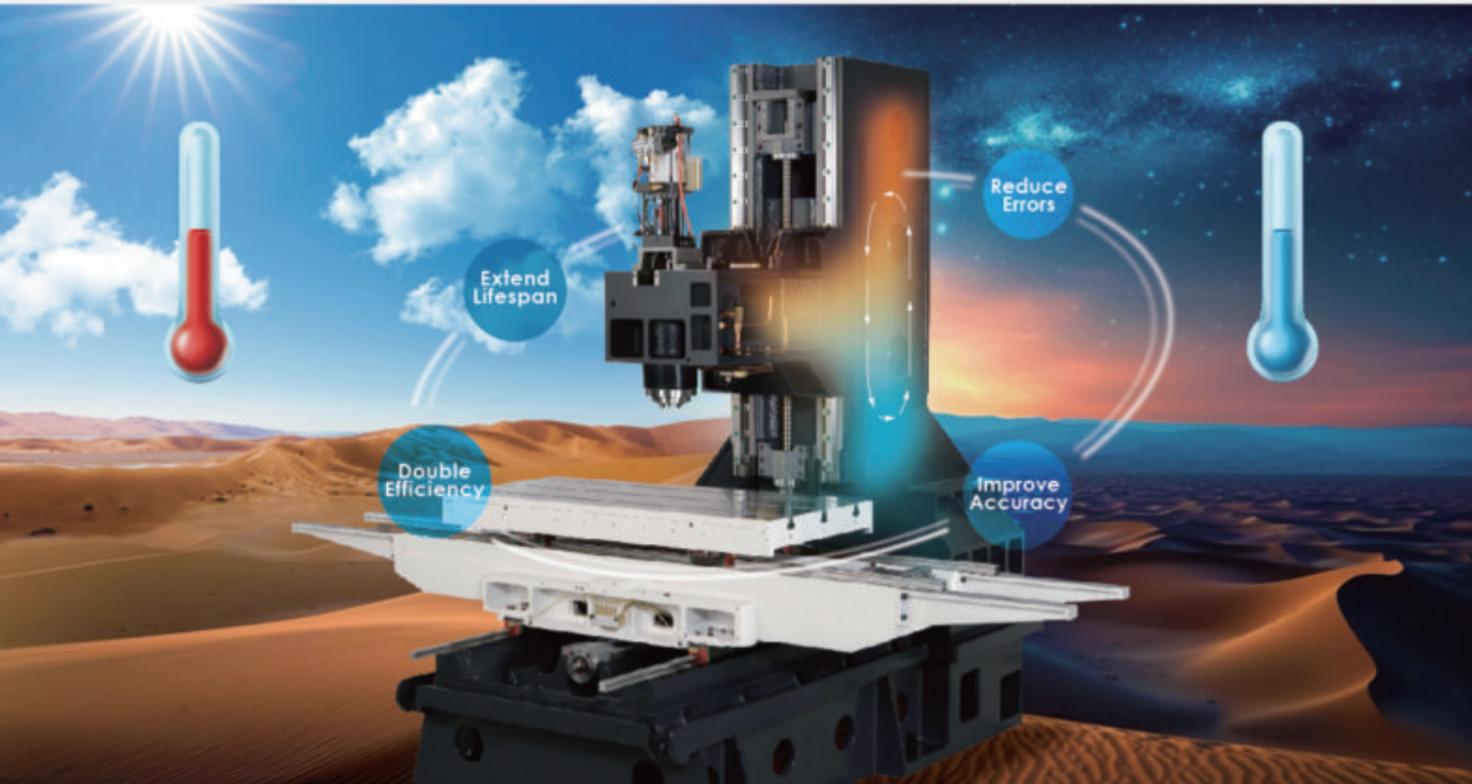


Eco-Friendly Solutions for Energy Management

ECO and Energy Monitoring Dashboard



- Gas-based weight replacement instead of hydraulic
- All lighting equipment is LED
- FEM analysis for structural lightweight design



Energy Monitoring Dashboard

Real-time monitoring of energy consumption for each electrical component of the machine, with the ability to query historical energy consumption data and generate reports.



Eco Mode

Helps you control five peripheral devices, including the hydraulic motor, oil cooler, mist collector, work lights, and chip conveyor, to prevent unnecessary energy consumption when the machine is idle.

User-Friendly Design for Easy Operation and Maintenance

Ergonomic Design

Ergonomically Designed

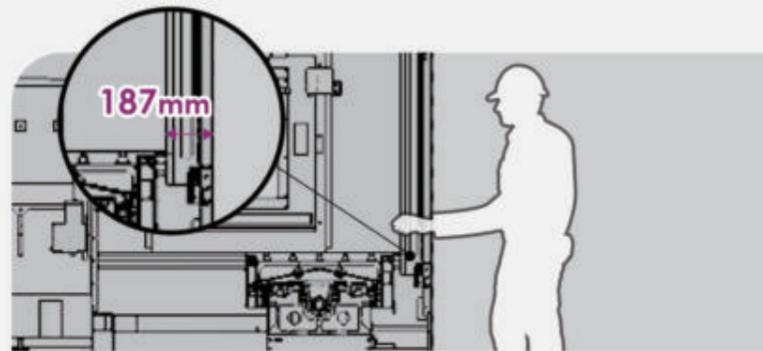
【Distance between the workbench and the outer cover sheet metal】

LG-1370/1570 NEO : 187mm

LG-500 : 299mm

LG-800 : 399.5mm

LG1000 : 399.5mm



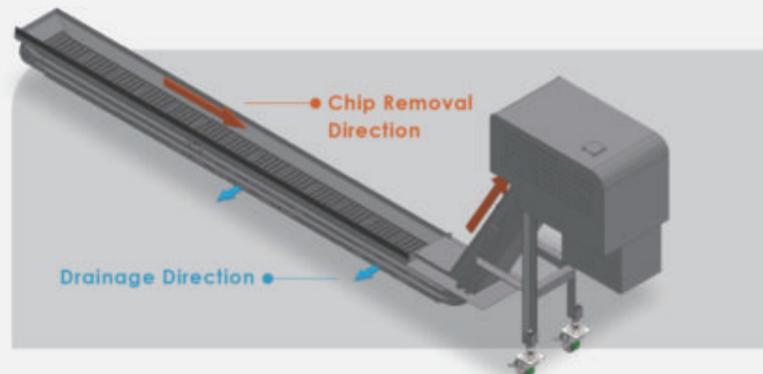
User-Friendly Control Panel Design

1. The center of the controller screen is 170 cm above the ground, allowing the operator to view it at eye level.
2. The LG-800 / 1000 inward-rotating and LG-1370 / 1570 NEO suspension-type operation boxes are rotatable for ease of use.

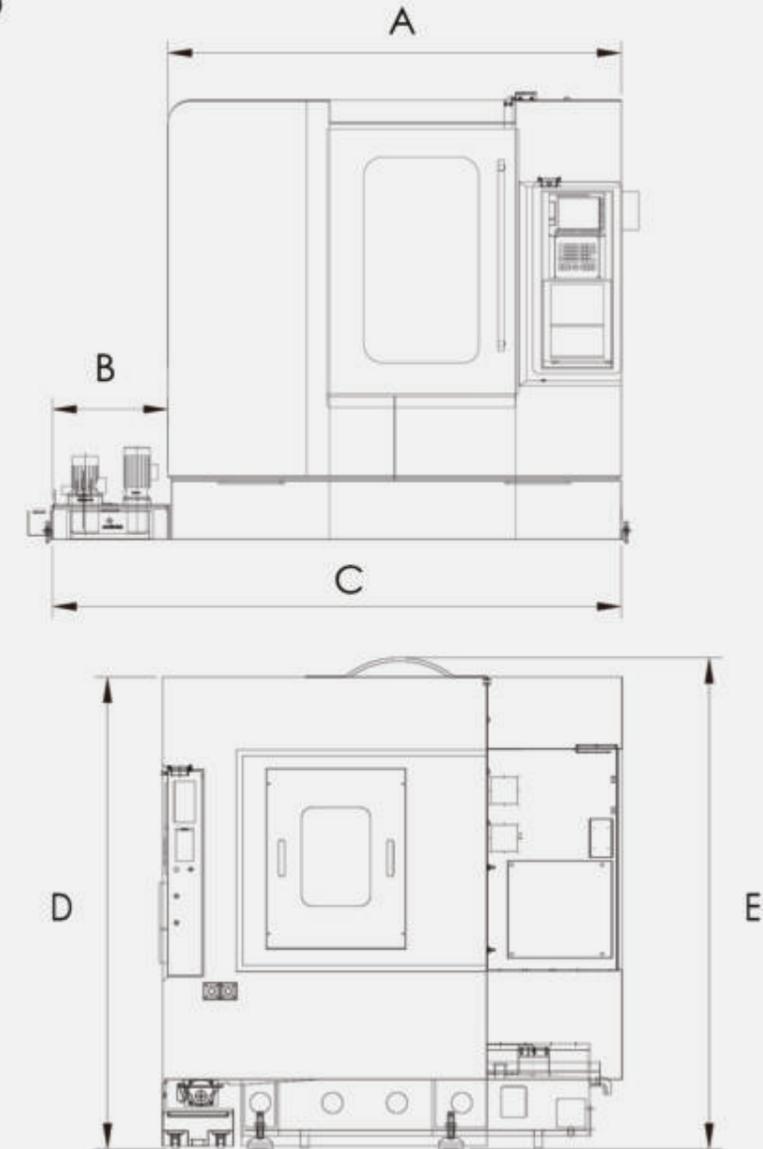


Chain Plate Conveyor

1. The machine features a streamlined design for smoother chip removal.
2. The chain is made of high-tensile copper for greater strength.

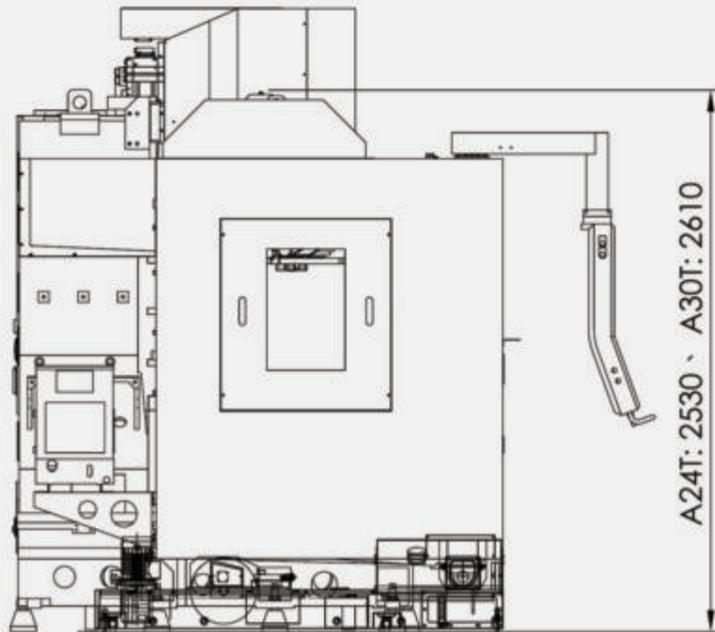
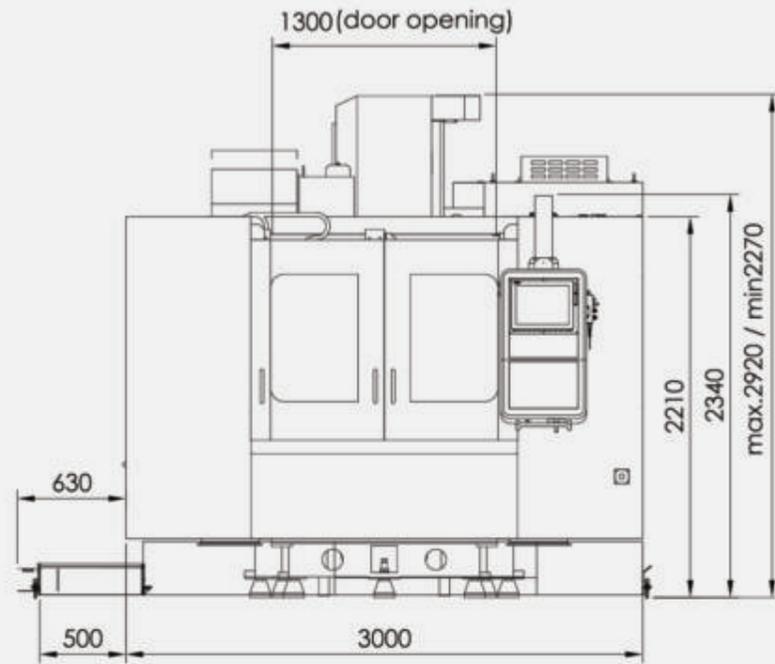


■ LG-500 / 800 / 1000

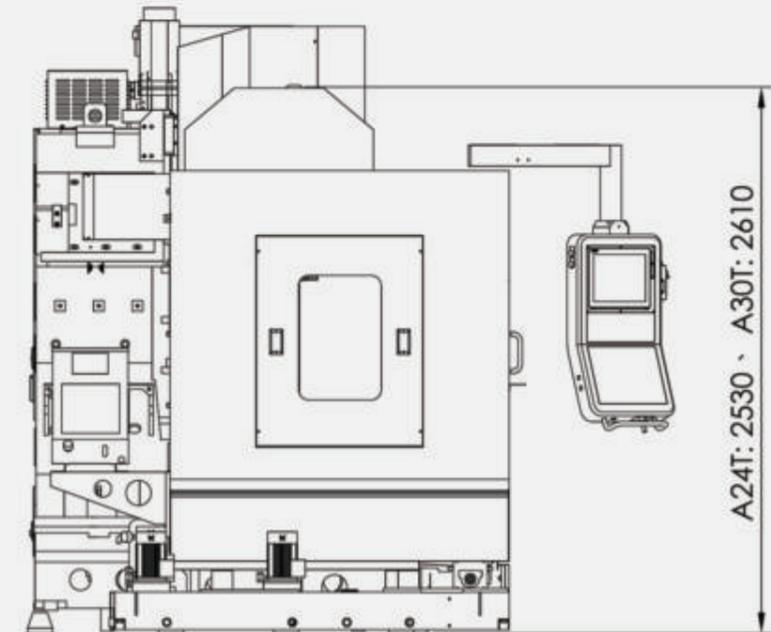
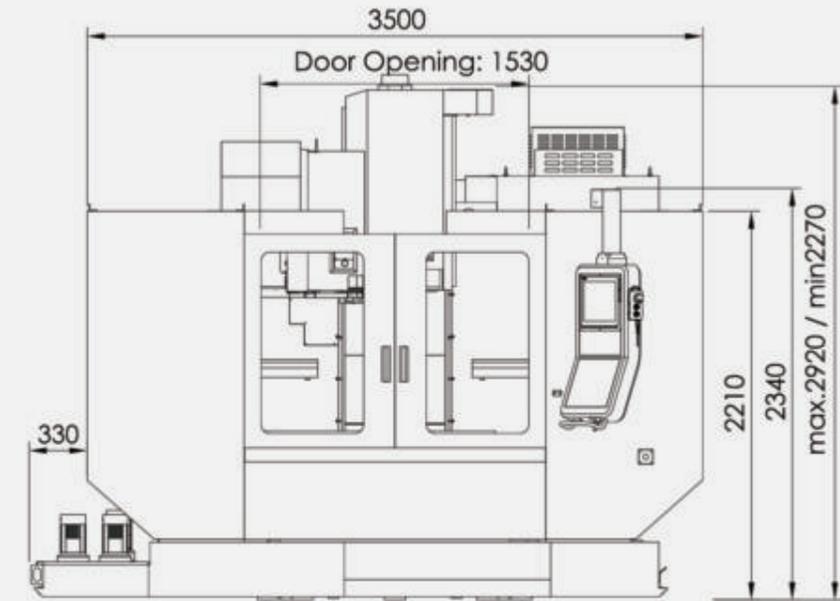


	A	B	C	D	E
LG-500	1850	300	2150	2140	-
LG-800	2360	600	2960	2300	2415
LG-1000	2900	600	3500	2300	2415

■ LG-1370 NEO



■ LG-1570 NEO





Spindle type

- #40 Pulley 12000 rpm (8000/10000 rpm)
- #40 DDS 15000 rpm (1000/12000 rpm)

BBT for optional

- Dual contact between the taper and the flange
- Improves the rigidity, accuracy, speed and performance. Radial deflection, vibration and deviation are significantly reduced

Optimized performance for speed and cutting efficiency

Model : LG-1570 NEO

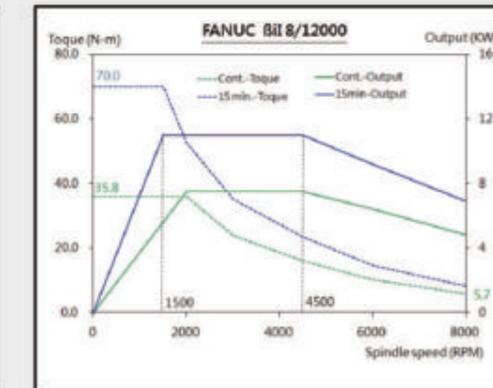
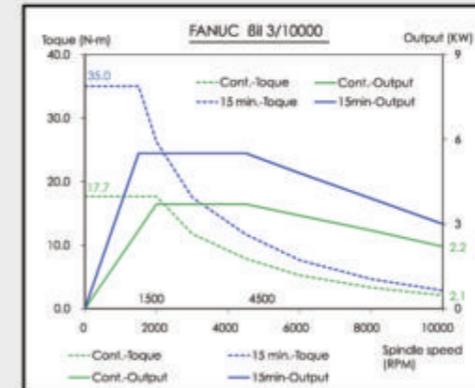
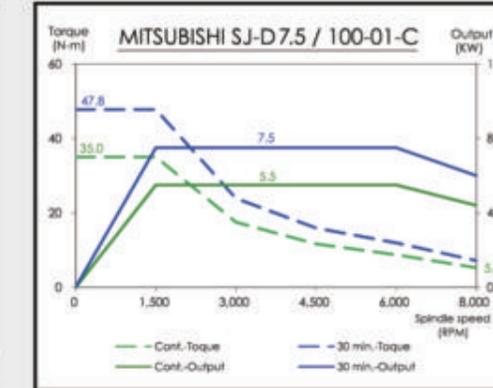
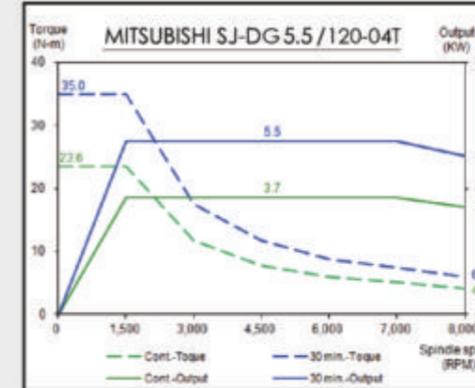
- Spindle : 1,2000 rpm #40 Pulley type 15kw
- Cutting material : S45C

Face milling	End Milling	Tapping	Drilling
Tool diameter Ø 80 mm	Tool diameter Ø 63 mm	Tool diameter M20 x P2.5	Tool diameter Ø 36 mm
Feed rate 1,850 mm/min	Feed rate 2,000 mm/min	Feed rate 750 mm/min	Feed rate 75 mm/min
Cutting depth 2 mm	Cutting depth 30 mm	Cutting depth 30 mm	Cutting depth 40 mm
Cutting width 65 mm	Cutting width 2 mm	Spindle speed 300 rpm	Spindle speed 500 rpm
Cutting volume 240 cc/min	Cutting volume 120 cc/min		

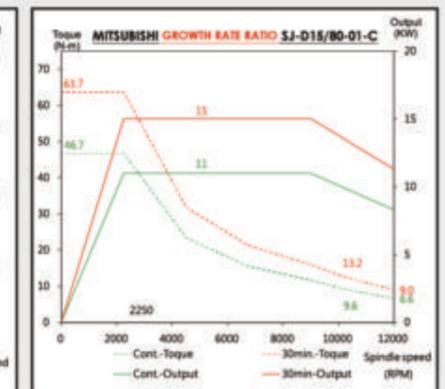
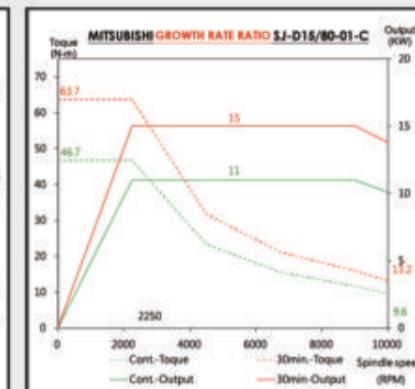
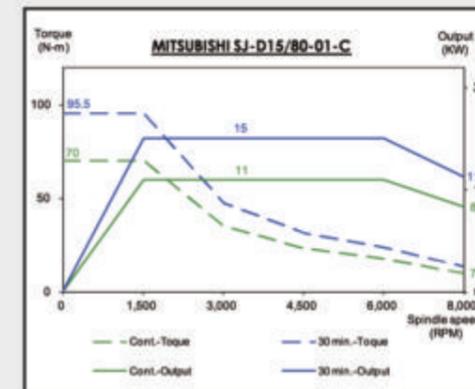
05 Actual Cutting Tests / Spindle Torque Diagrams

Spindle torque diagrams

■ LG 500 / 800 / 1000



■ LG 1370 / 1570 NEO Pulley



► Specification parameter

05 Machine Specifications

		Unit	LG - 500	LG - 800	LG - 1000	LG - 1370 NEO	LG - 1570 NEO
Table	Working surface	mm	620 X 420	950 X 510	1150 X 510	1400 X 700	1600 X 700
	T-slot Width x pitch(number)	mm	18 X 130(3)	18 X 160(3)	18 X 160(3)	18 X 125(5)	18 X 125(5)
	Max.load (Average)	kg	300	500	700	1000	1000
Travel	X-axis travel	mm	520	800	1000	1300	1500
	Y-axis travel	mm	420	510	510	700	700
	Z-axis travel	mm	450	630	630	650	650
	Distance from spindle to table	mm	100~550	100~730 opt.300~930	100~730 opt.300~930	150~800 opt.350~ 1000	150~800 opt.350~ 1000
	Distance from spindle center to column	mm	460	562.5	562.5	744	744
Spindle	Spindle nose taper	rpm	#40	#40	#40	#40	#40
	Spindle speed(Pulley)	rpm	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000
	Spindle speed(DDS)	rpm	10000/12000/15000	10000/12000/15000	10000/12000/15000	10000/12000/15000	10000/12000/15000
	Maximum Spindle Power	KW	P12K : 7.5(con)/11(S3-25%)	P12K : 7.5(con)/11(S3-25%)	P12K : 7.5(con)/11(S3-25%)	P12K : 15(con)/18.5(S3-60%)	P12K : 15(con)/18.5(S3-60%)
			D15K : 7.5(con)/11(S3-25%)	D15K : 7.5(con)/11(S3-25%)	D15K : 7.5(con)/11(S3-25%)	D15K : 15(con)/18.5(S3-40%)	D15K : 15(con)/18.5(S3-40%)
	Maximum Spindle Torque	N-m	P12K : 47.8(con)/70.0(S3-25%)	P12K : 47.8(con)/70.0(S3-25%)	P12K : 47.8(con)/70.0(S3-25%)	P12K : 95.5(con)/117.8(S3-60%)	P12K : 95.5(con)/117.8(S3-60%)
D15K : 47.8(con)/70.0(S3-25%)			D15K : 47.8(con)/70.0(S3-25%)	D15K : 47.8(con)/70.0(S3-25%)	D15K : 70.0(con)/95.5(S3-45%)	D15K : 70.0(con)/95.5(S3-45%)	
Feed	Cutting feedrate(X/Y/Z)	m/min	10/10/10	12/12/12	12/12/12	15/15/15	15/15/15
	Rapid traverse rate (X/Y/Z)	m/min	32/32/32 opt. 40/40/40	40/40/32	40/40/32	30/30/24 opt. 40/40/30	30/30/24 opt. 40/40/30
ATC	Capacity	pcs	A:24	A:24(30)	A:24(30)	A:24(30/40)	A:24(30/40)
	Max.tool weight	kg	7	7	7	7	7
	Max.tool size(dia.x length)	mm	A:Ø80x200L	A: Ø75x300L	A: Ø75x300L	A: Ø75x300L	A: Ø75x300L
	Tool shank		BT40(BBT/CAT/DIN)	BT40(BBT/CAT/DIN)	BT40(BBT/CAT/DIN)	BT40(BBT /CAT/DIN)	BT40(BBT/CAT/DIN)
	Pull stub bolt		P40T-1 (CAT-40/DIN 69872)	P40T-1 (CAT-40/DIN 69872)	P40T-1 (CAT-40/DIN 69872)	P40T-1 (CAT-40/DIN 69872)	P40T-1 (CAT-40/DIN 69872)
Motor	Spindle drive motor (cont./30 min)	kw	5.5/7.5 opt. 7.5/11	5.5/7.5 opt. 7.5/11	5.5/7.5 opt. 7.5/11	11/15 opt. 15/18.5	11/15opt. 15/18.5
Positioning Accuracy	Positioning accuracy (JIS B6330), without linear scale	mm	±0.008	±0.008	±0.008	±0.008	±0.008
	Repeatability (JIS B6330), without linear scale	mm	±0.002	±0.002	±0.002	±0.003	±0.003
	Positioning accuracy (JIS B6330), with linear scale	mm	±0.006	±0.006	±0.006	±0.006	±0.006
	Repeatability (JIS B6330),with linear scale	mm	±0.002	±0.002	±0.002	±0.002	±0.002
	Positioning accuracy (VDI 3441)	mm	0.010	0.010	0.010	0.014	0.015
	Repeatability(VDI 3441)	mm	0.006	0.006	0.006	0.008	0.010
Other	Required air pressure	kg/cm ²	6.5	6.5	6.5	6.5	6.5
	Electric power requirement	KVA	10~25	10~30	10~30	20~40	20~40
	Machine weight	kg	3330	4300	4530	7500	8500
	Coolant tank(standard)	L	237	260	285	286	286
	Machine dimension(LxWxH)	mm	2100 X 1850 X 2370	2360 X 2240 X 2790	2900 X 2240 X 2790	3000 X 2270 X 2913	3500 X 2270 X 2913
	Floor space(standard tank)	mm	2100 X 2250	2960 X 2510	3500 X 2510	3500 X 2270	3830 X 2270

Electrical Function

Standard

- Hartrol**
- Workpiece calibration by MPG directly
- Parameter package
- Thread cutting(Oi & 31i only)
- Tool magazine display (Oi &31i only)
- Tool status display (Oi &31i only)
- Special engraving marco

Optional

- Hartnet**
- Management system of utilization
- Machining time countdown
- Convenient file transfer

Electrical Function

- Lifting function against gravity
- Retraction for rigid tapping
- Intelligent MPG