www.hartford.com.tw

Website

FaceBook

Hartford has sold more than 46,000 machines to all over the world, accumulated more than 37,000 customers, who absolutely affirm Hartford's manufacturing experience and ingenious machine manufacture technology. We insist on providing customers with the best quality machining centers. We will devote more carefully, in order to continuously enhance the technical level of manufacture and applications.

Hartford innovation

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CAT. No.: 20160701-E01

Hartford innovation

THE NEXT 50 YEARS

PLUG & PLAY

MVP series

High efficiency machining center

- Hartrol plus controller
- 5-Year warranty on guideways
- Spindle run-out: 5 micro
- Tool change time: 1.38 sec
- Oversized column design

Superior Value in Mould Making

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

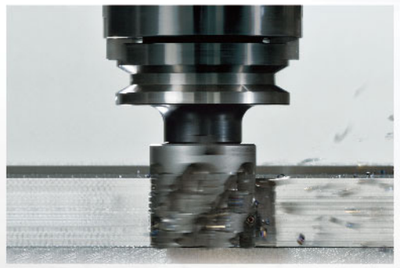
1. Shoe mold

2. 3D spider

Actual Cutting Test

Model: MVP-16
Spindle: 15,000 rpm DDS type 15 kW
Cutting material: S45C

Face milling
Tool diameter : ϕ 80 mm
Feed rate: 3,900 mm/min
Depth: 2 mm
Cutting volume: 507 cc



End milling
Tool diameter : ϕ 63 mm
Feed rate: 4,800 mm/min
Depth: 30 mm
Width: 3 mm
Cutting volume: 432 cc

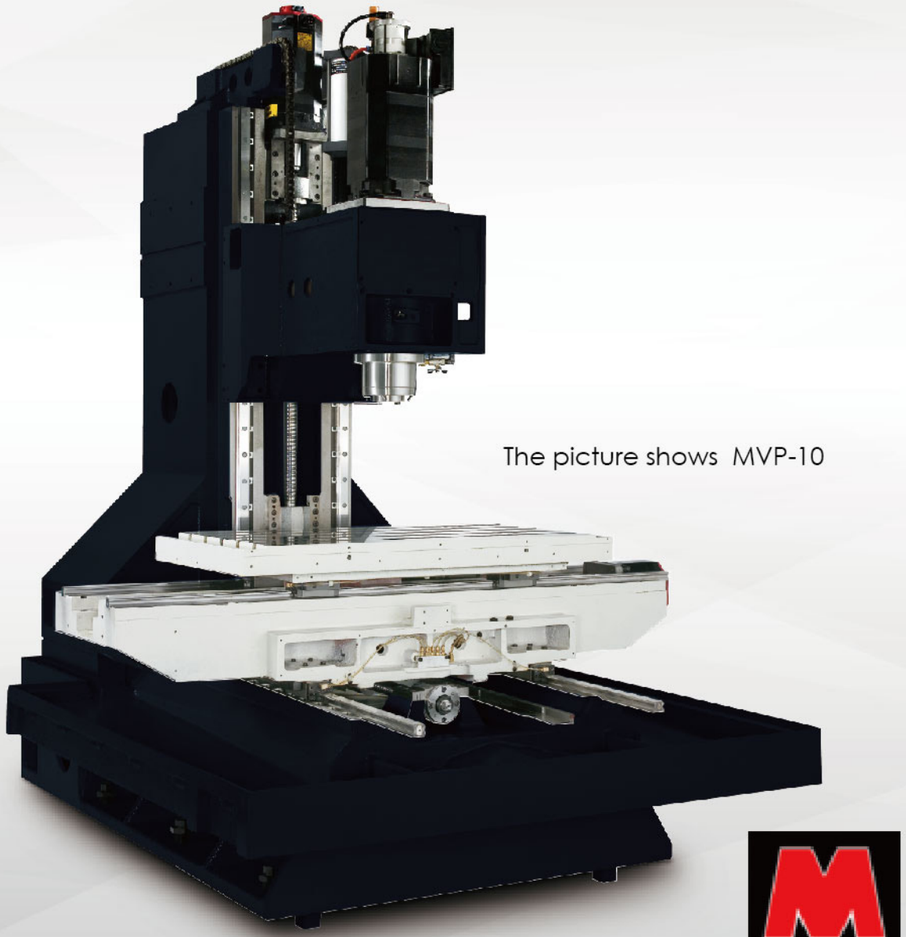
Tapping
Tool diameter : M24x3 mm
Feed rate: 540 mm/min
Depth: 30 mm

Drilling
Tool diameter : ϕ 40 mm
Feed rate: 140 mm/min
Depth: 40 mm

All the test 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.

Tough, rugged and durable for MVP

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



The picture shows MVP-10

MEEHANITE

Full range of box guideway five-year warranty

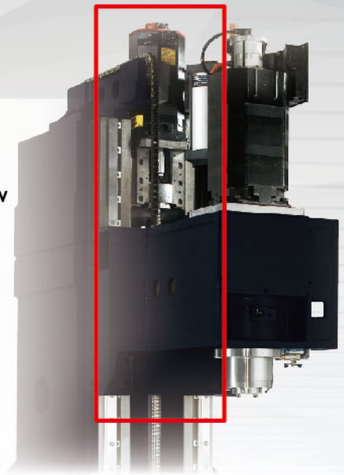
Warranty coverage will not apply under the following conditions,

1.Improper operation (collision)

2.Lack of regular cleaning of accumulated debris causing damaged to the linear rails & carriages.

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.

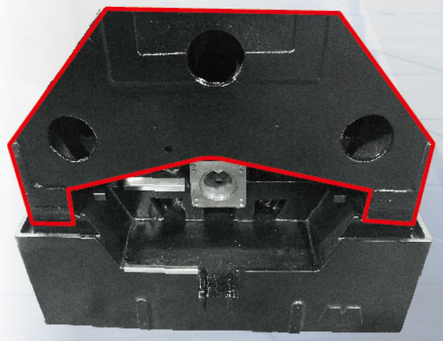


High speed tool change time

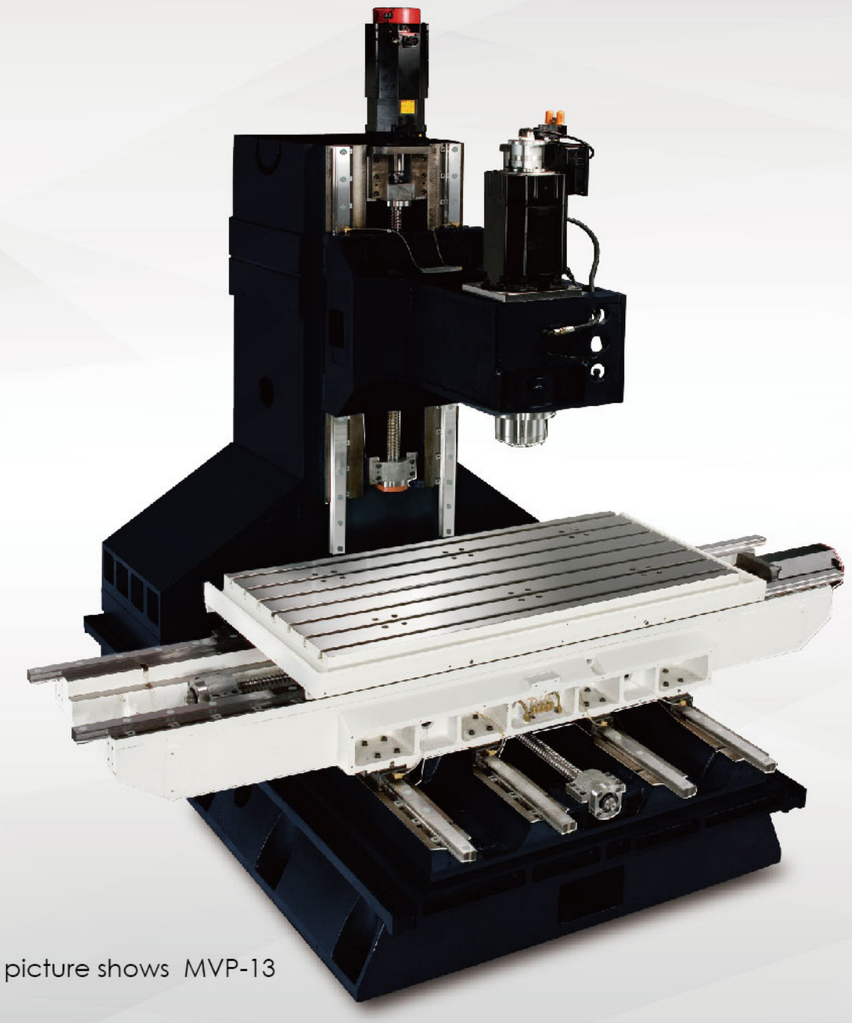
- Minimum tool change time is **1.38 sec.**
- Boost your machining efficiency.

Oversized column & widest base design

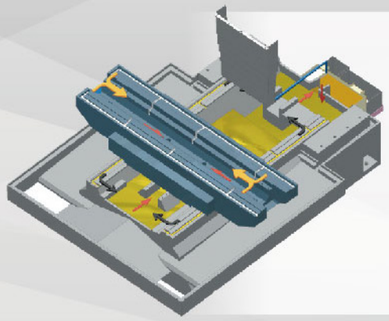
- Column width is **1100mm** and base is **1600mm** for MVP-8 & MVP-10.
- Increased width of interface between the column and base.
- Enhances machine stability
- Increases machine rigidity and efficiency.



Optimized structure enhances stability



The picture shows MVP-13



One-piece bed design

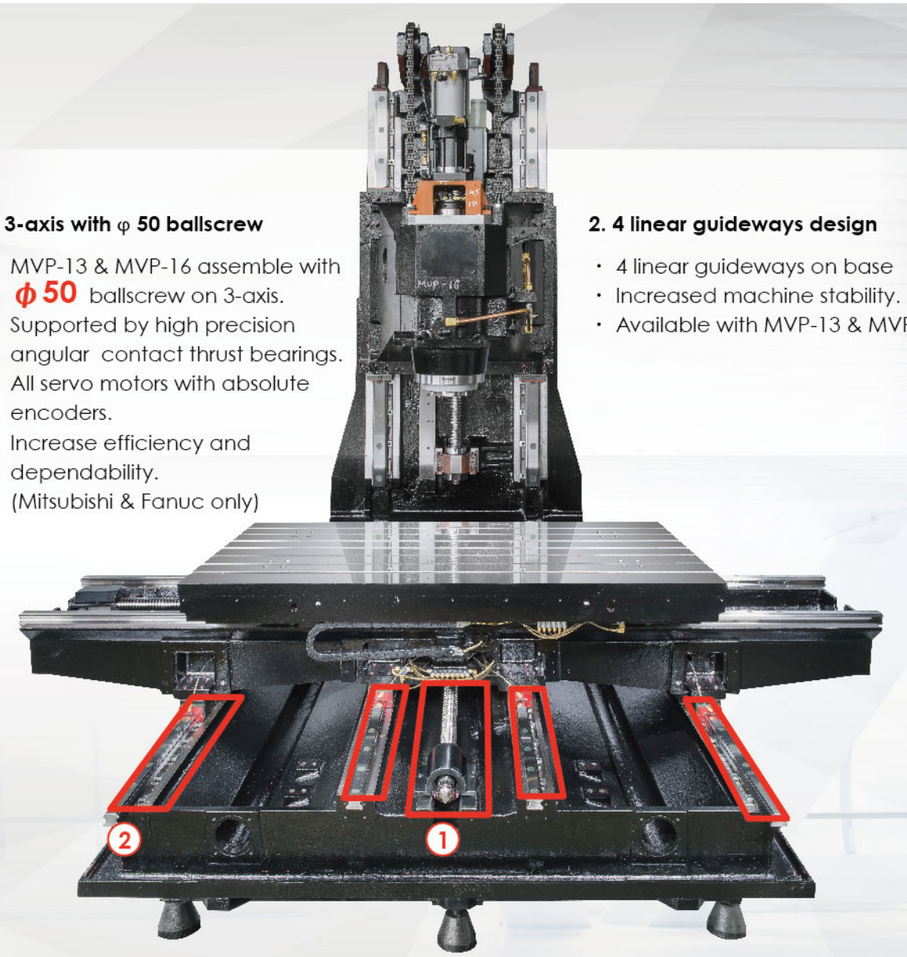
- Separates oil and coolant on the machine effectively.
- Prevents coolant contamination problems.
- Available with all MVP series.

1. 3-axis with φ 50 ballscrew

- MVP-13 & MVP-16 assemble with **ϕ 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 design

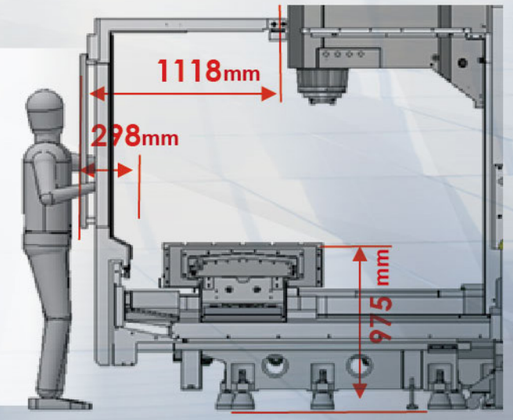
- 4 linear guideways on base
- Increased machine stability.
- Available with MVP-13 & MVP-16



The picture shows MVP-16

Easy for operation

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



Intelligent Controller-
Hartrol Plus

What is Hartrol plus?

- 19" multi-touch screen
- IPC is equipped with the Windows operating system
- The world's fastest CNC
- Automatic feed system control function

By the use of open architecture, we begin to enter a new era of intelligent processing.
In addition to basic functions, we have joined hardware and software exclusively developed by Hartford. Software can be added to and updated at any time with each new features.

An Intelligent Controller

With three major solutions, Hartrol plus takes your machining to the next level.
Highly optimized and intelligent controls bring even more capabilities and productivity to your metal cutting processes.
With ease of use, advanced automation, and smart data collection, Hartrol plus is essential tool for enhancing performance on your production floor.

The difference between Hartrol plus and others

Function	Hartrol plus 1	Others
Screen Size	19" Multi-touch Panel	10.4"(OPT:15")
Hard Drive	32GB SSD	NO
Smoothing Interpolation	SSS-4G	Option
Look Ahead Block	2700	400(1000 Max.)

Save Time & Cost
Multi Touch Screen
E-book
Remote Management
Cutting Condition Calculator
Stand-by Mode
Hartford UserConnect

Increase Productivity
AFC(Automatic Feedrate Control)
SSS-4G
Machining Time Countdown for Single Block
Optimized Machining Program

Easy Management
Machine Utilization Management
Operators Performance Management
24 Hours a Day Management
Remote Management

For more information of Hartrol plus, please check with sales person.

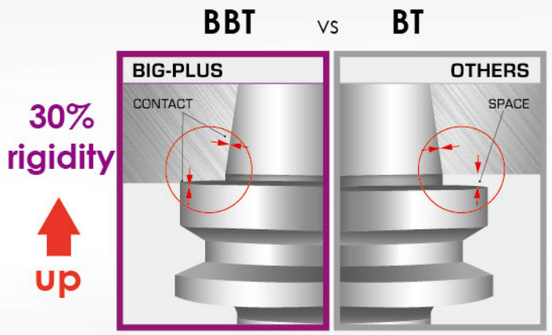
Spindles Manufactured by Hartford Offer Quality Assurance

Spindle type

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



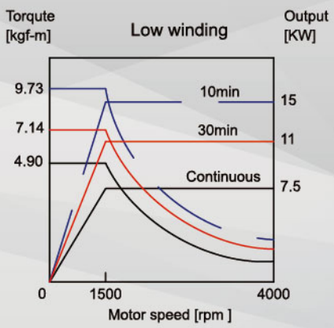
BBT (OPTIONAL)

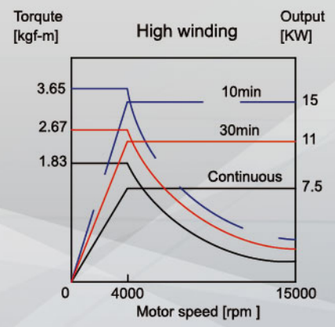
Ultra high accuracy on spindle

- Spindle run-out (single): 0.002mm/300mm
- Spindle run-out(overall): 0.005mm/300mm

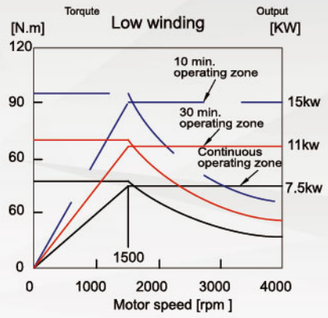
Spindle torque diagram

Mitsubishi. SJ-VKS26-09ZM-S01 x 15000 / SJ-VKS26-09ZY-S01 x 15000

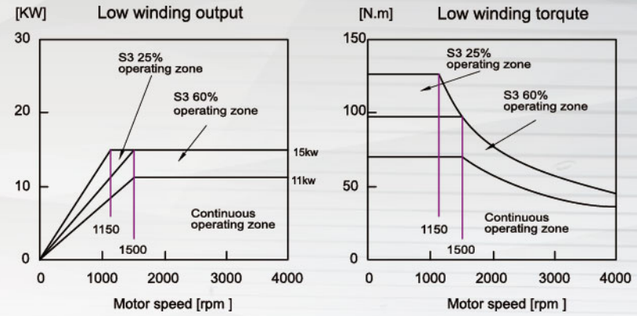


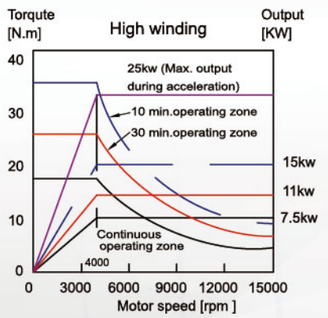


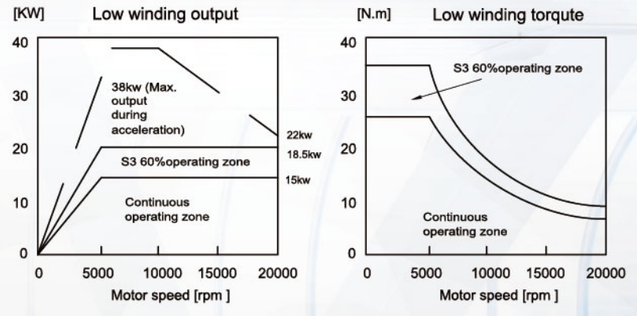
FANUC a8/15000iT (DDS 15000 rpm)



FANUC a8/2000iL (DDS 20000 rpm)



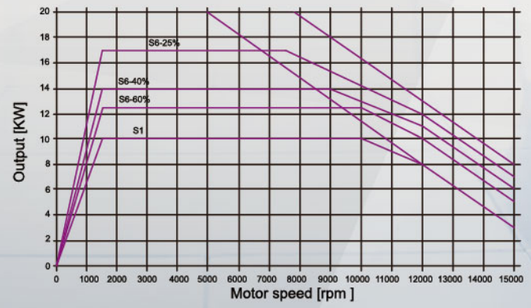


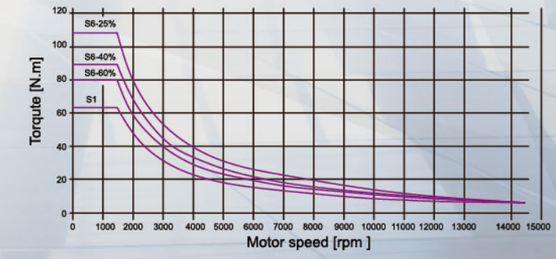


Note:

Acceleration output is used as a measure to calculate the acceleration or deceleration time.
Acceleration outout is not an assured value.

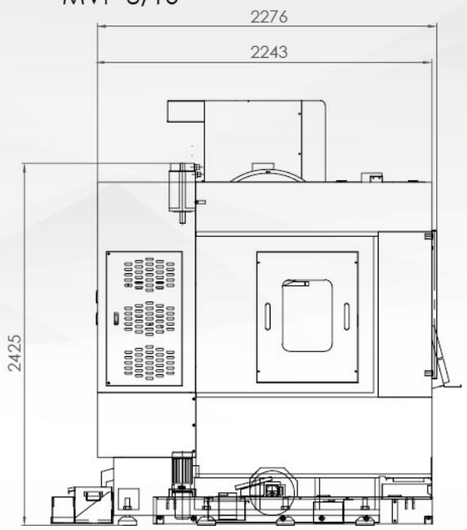
HEIDENHAINL:QAN200UH x 15000

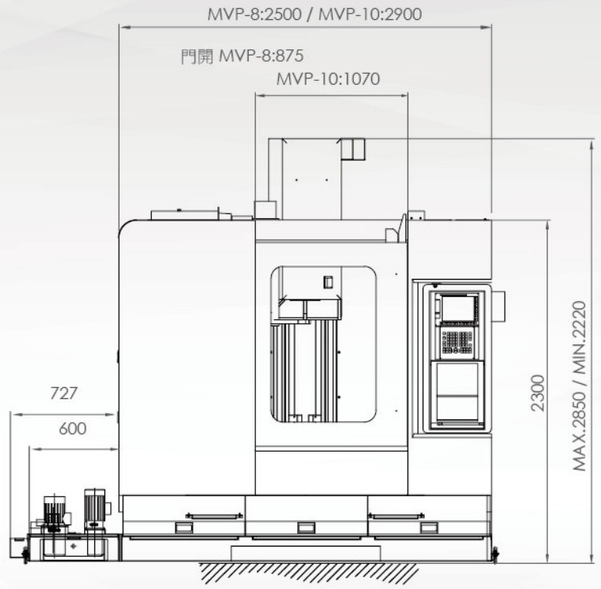




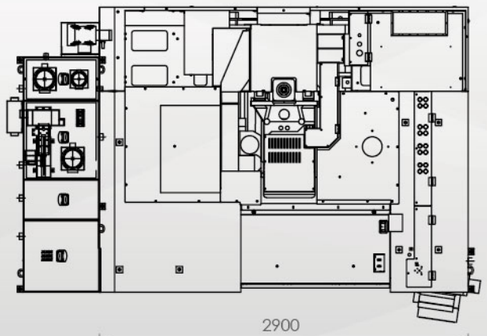
Machine Dimensions

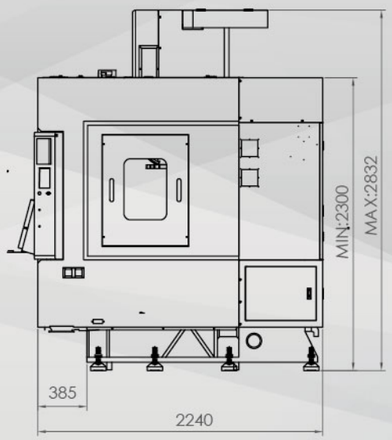
MVP-8/10

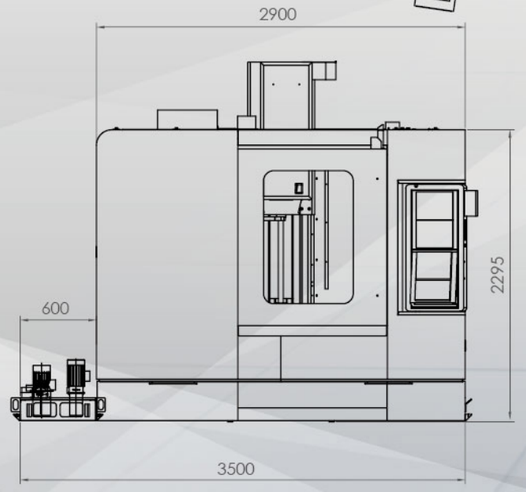




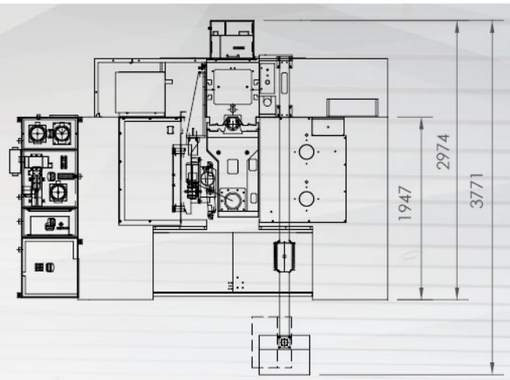
MVP-11

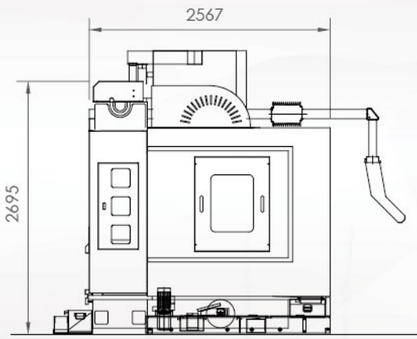


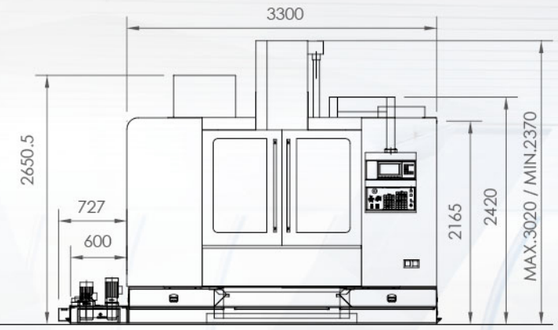




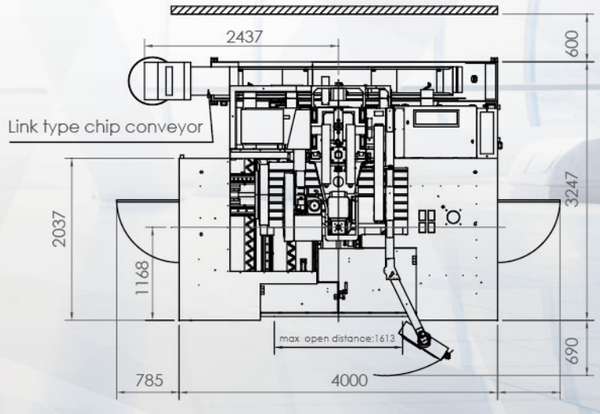
MVP-13

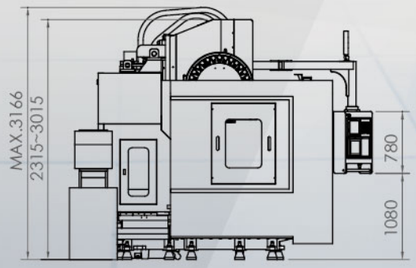


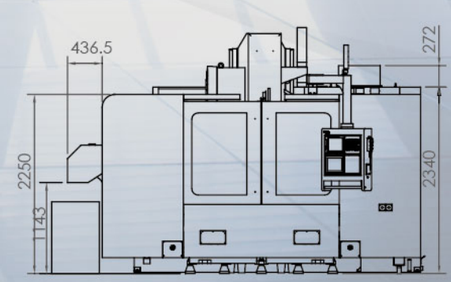




MVP-16







Specifications of the machine are subject to be modified without prior notice, please check with sales staff for detail information.

Machine Specifications

Model	Unit	MVP-8	MVP-10	MVP-11	MVP-13	MVP-16
Table						
Working Surface	mm	1000x560	1150x560	1270x600	1400x700	1750x820
T-slot (Size x Number x Pitch)	mm	18x5x100	18x5x100	18x5x100	18x7x100	18x7x100
Max Table Load	kg	500	700	1000	1500	2000
Travel						
Longitudinal Travel (X-axis)	mm	860	1050	1100	1300	1600
Gross Travel (Y-axis)	mm	530	530	600	700	820
Vertical Travel (Z-axis)	mm	630	630	630	650	700
Distance from Spindle End to Table Center	mm	85~715	85~715	100~730	120~770	120~820 (320~1020 opt.)
Distance from Spindle Center to Column	mm	600	600	641	780	900
Spindle						
Spindle Speed (Pulley)	rpm	8000(10000/12000 opt.)	8000(10000/12000 opt.)	8000(10000/12000 opt.)	8000(10000 opt.)	#40 8000(10000/12000 opt.)
Spindle Speed (DDS)	rpm	opt. 10000/12000//15000/20000	opt. 10000/12000//15000/20000	opt. 10000/12000//15000/20000	opt. 10000/12000//15000/20000	#40 opt. 10000/12000/15000/20000 , #50 opt. 10000/12000
Spindle Speed (Gear)	rpm	-	-	-	-	#50 6000(8000 opt.)
Spindle Nose Taper		#40	#40	#40	#40	#40, #50
Feed						
Cutting Feedrate(X,Y,Z)	M/min	20/20/20	20/20/20	20/20/20	20/20/20	20/20/20 (20/20/12 #50 Z-axis box guideway)
Rapid Traverse (X,Y,Z)	M/min	36/36/30(48/48/36 opt.)	36/36/30(48/48/36 opt.)	36/36/30	36/36/30	32/32/24
ATC						
Tool storage Capacity	pcs	S:20 (A: 24,30 opt.)	S:20 (A: 24,30 opt.)	A: 24(30,40 S: 16 opt.)	A: 24(30,40)	#40 S:16(A:24,30,40 opt.) / #50 A:24(32,40 opt.)
Max. Tool Weight	kg	7	7	7	7	#40: 7, #50: 20
Max. Tool Size (Diameter x Length)	mm	S: φ90x250L / A: φ75x300L	S: φ90x250L / A: φ75x300L	S: φ90x250L / A: φ75x300L	A: φ75x300L	#40 S:φ90x250L, A:φ75x300L
Tool Shank		BT40(BBT/CAT/DIN)HSK-A63 (20000rpm only)	BT40(BBT/CAT/DIN) HSK-A63 (20000rpm only)	BT40(BBT/CAT/DIN) / HSK-A63 (20000rpm only)	BT40(BBT/CAT/DIN) / HSK-A63 (20000rpm only)	#50 A: φ125x350L
Pull Stud Bolt		P40T-1/CAT-40/DIN69872	P40T-1/CAT-40/DIN69872	P40T-1/CAT-40/DIN69872	P40T-1/CAT-40/DIN69872	BT40(BBT/CAT/DIN) / BT50(BBT/CAT/DIN)
Motor						P40T-1/CAT-40/DIN69872 / P50T-1/CAT-50/DIN69872
Spindle Drive Motor (30 Min)	kw	7.5 (11,15 opt.)	7.5 (11,15 opt.)	7.5(11,15,18.5 opt.)	11(15,18.5 opt.)	15(18.5 opt.)
Positioning Accuracy						
3 Axes Laser Positioning Accuracy (JIS B6330)						
Positioning Accuracy / Full Travel	mm	±0.008	±0.008	±0.008	±0.008	±0.008
Repetitive Positioning Accuracy	mm	±0.002	±0.002	±0.002	±0.003	±0.003
3 Axes Laser Positioning Accuracy (VDI3441)/ Repeated 5 times						
Positioning Accuracy	mm	0.010	0.010	0.010	0.014	0.014
Repetitive Positioning Accuracy	mm	0.006	0.006	0.006	0.008	0.010
VDI3441 accuracy available upon order request						
Other						
Required Air pressure	kg/cm2	6.5	6.5	6.5	6.5	6.5
Electric Power Consumption	KVA	25	28	28	35	30
Machine Dimension (L x W x H)	kg	3100x2665	3500x2665	3500x2240	3900x3000	4000x3255
Machine weight	mm	S: 6400 A: 6500	S:6600 A:6700	S:6200 A:6300	A: 9000	#40: 10650, #50: 11500
Coolant tank capacity(standard)	L	283	303	306	363	440

For Other Specs Plaese Ask Sales.

Standard & Optional Electrical Functions

Hartrol / Standard

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

Standard & Optional Mechanical Accessories

Standard

- Full splash guard(CTS)
- Coolant tank
- Automatic lubrication system
- Air blast through spindle
- Operation manual & electric drawing
- Leveling bolts & blocks
- Spindle air curtain
- MPG
- Automatic power off
- Operation finish lampx1
- Fluorescent lampx1
- Coolant jets around spindle
- #40 8000rpm spindle

Optional

- Full enclosed splash guard(CTS)
- NC rotary table
- Front mounted screw type chip conveyor
- Link type chip conveyor
- Coolant flushing device
- Coolant through spindle
- Wash down hose
- Air gun
- Spindle oil cooler
- Oil seperation system
- Automatic door

Specifications of the machine are subject to be modified without prior notice, please refer to the shipping document for the precise machine weight.