

Maximart®

Rapido

High Speed VMC

CE / EMC ISO 9001



PRECISELY PRESENTS

MAXIMART Constant Growth and Innovation

With the company's policy of constant research and innovation, MAXIMART has dedicated itself to pursue a higher technological level. From the knee type milling machines at the beginning stage to current high speed machining centers, each machine from MAXIMART will fully present its extraordinary performance. Furthermore, each one will reflect MAXIMART's insistence on pursuing technological innovation.





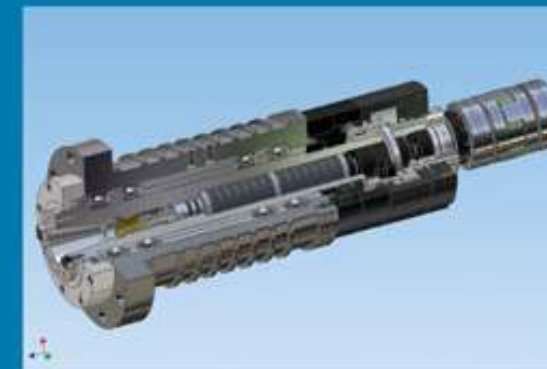
Extra Fine Cut As Hairline Heavy Cut With Irresistible Force

The Rapido High Speed VMC features greater range of application, that meets those who require heavy and fine machining in one machine. Rapido, combining two functions in one, will save investment costs significantly.

HIGH-SPEED, HIGH-PERFORMANCE CATRIDGE SPINDLE



Unique spindle design with 4 extra coolant flushing injectors around spindle nose, chips can be removed quickly also reduce heat built-up from cutting tool & workpiece at the same time.



Large size ceramic ball bearings, enhance rigidity of spindle structure.

High pressure air-curtain protection from spindle nose, to keep moisture away from getting into spindle bearings and extend spindle servicing lifetime.

MODEL IDENTIFICATION

V-8H

CODE	MACHINE SIZE
6	600x420x450 mm
8	850x520x610 mm
11	1100x610x610 mm

CODE	SPINDLE SPEED	SPINDLE DRIVE	SPINDLE COOLING	3 AXES DRIVE
B	10,000 RPM	BELT-DRIVE	STANDARD	DIRECT-DRIVE
C	10,000 RPM	DIRECT-DRIVE	STANDARD	DIRECT-DRIVE
D	12,000 RPM	DIRECT-DRIVE	STANDARD	DIRECT-DRIVE
H	15,000 RPM	DIRECT-DRIVE	STANDARD	DIRECT-DRIVE

Rapido 32 3 AXES RAPID 32 METERS/Min.
 "THK" LM GUIDEWAYS "OZ" LUBE-FREE TYPE 45mm WIDTH & OVER-SIZED GUIDE-BLOCKS.
 "HIWIN" C3 (OR BETTER) GRADE HIGH Dm-N VALUE, PRE-LOADED AND HIGH PRECISION BALLSCREWS, ø40mm/PI2mm

Rapido 48 3 AXES RAPID 48 METERS/Min.
 "THK" LM GUIDEWAYS "OZ" LUBE-FREE TYPE 45mm WIDTH & OVER-SIZED GUIDE-BLOCKS.
 "HIWIN" INTERNAL COOLED AND NUT COOLED, HIGH Dm-N VALUE SUPER PRECISION BALLSCREWS, ø40mm/PI6mm. BALLSCREWS' BEARING HOUSING & ASSEMBLY SAME PRECISION STANDARD AS MACHINE SPINDLE.

**SUPERIOR ENGINEERING VALUE
IN PERFECT PACKAGE**

V-6D RAPIDO 32



V-6D

- HEIDENHAIN iTNC-530/620 smarT.NC DIGITAL CNC/AC SERVO PACKAGE.
- DIN#40 TAPER, DIRECT-DRIVE 12000rpm SPINDLE WITH COOLING SYSTEM.
- 600 x 420 x 450mm WORKING RANGE.
- 3 AXES RAPID 32 METERS/Min.
- 750 x 420mm WORK TABLE.
- 300kgs TABLE LOAD.
- ARM TYPE 20 TOOLS ATC.
- AUTO CHIP CONVEYOR.
- 3 AXES ABSOLUTE OPTICAL LINEAR SCALES. (OPTIONAL)

**ROUGH CLEAN CUT & FINE FINISH
AT SUPERB EFFICIENCY**



V-8C RAPIDO 32

V-8C

- FANUC Oi / Ibi DIGITAL CNC/AC SERVO PACKAGE.
- BT-40 TAPER, DIRECT-DRIVE 10000rpm SPINDLE WITH COOLING SYSTEM.
- 850 x 520 x 610mm WORKING RANGE.
- 3 AXES RAPID 32 METERS/ Min.
- 1000 x 520mm WORK TABLE.
- 700kgs. TABLE LOAD.
- ARMLESS 20 TOOLS ATC.
- AUTO CHIP CONVEYOR.

THE ULTIMATE VMC FOR HIGH SPEED MACHINING

V-11H RAPIDO 48

V-11H

- FANUC 3ii-MA DIGITAL CNC/AC SERVO PACKAGE.
- BT#40 TAPER, DIRECT-DRIVE 15000rpm SPINDLE WITH COOLING SYSTEM.
- HIGH PRESSURE COOLANT THRU SPINDLE, 8 BARS. (OPTIONAL)
- 1100 x 610 x 610mm WORKING RANGE.
- 3 AXES RAPID 48 METERS/ Min.(OPTIONAL)
- 3 AXES ABSOLUTE OPTICAL LINEAR SCALES.(OPTIONAL)
- 1250 x 610mm WORK TABLE.
- 900kgs. TABLE LOAD.
- ARM TYPE 30 TOOLS ATC WITH 1.5 SECONDS QUICK TOOL CHANGE DEVICE.(OPTIONAL)
- AUTO CHIP CONVEYOR.





RIGID AND MASSIVE CONSTRUCTION OPTIMIZE MACHINING STABILITY

Spindle motor power/torque delivers to cutting tool via direct positive drive.

High-speed high-performance cartridge spindle. Ceramic bearings are standard.



Inverter motor drive
20 tools armless
ATC system side-
opening for
loading tools, auto-
closed magazine
cover during
machining.



Optional arm type 24
or 30 tools ATC +
quick tool-change
mechanism, tool to
tool 1.5 seconds.



"THK" LM guideways heavy
duty type 45mm width, plus
over-sized guide-blocks
fitted on all 3 axes.
Standard rapid traverse
32M/min. 48M/min rapid
traverse is optional.

Symmetrical and well Balanced Machine Structure

Provides Dynamic Stability and Performance.



All jigs and dials used for calibration are inspected and approved by the industrial metal development center to ensure accuracy.

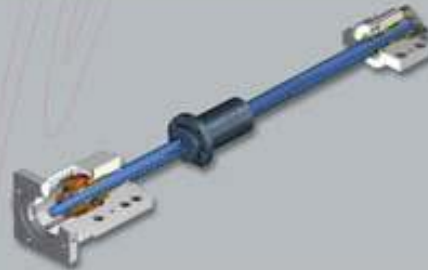


No counter balance of any kind required, over-capacity Z axis brake motor enhance Z axis feeding speed & precise positioning.



6 Blocks Design

The X,Y,Z-axis slideways on V-II series are mounted with 45mm linear guideways. Each linear guideway is fitted with 3 blocks, total 6 blocks on both sides. This results in increased stability for faster cutting feedrate.



Axial ballscrew holder & motor holder are precisely internal ground which guarantee ballscrew rotating at high precision due to much less heat deformation.



Z Axis Automatic Ascending When Power Failure.
(Fanuc & Siemens 840D only)



All 3 axes are directly coupled, this direct positive drive provides backlash-free, noise-free and vibration-free machining performance.

19.8

現在溫度 °C

61.5

現在濕度 %RH

Each MAXIMART machine is assembled in a full air-conditioning plant. This assures the machine accuracy is never affected by the environmental temperature variation. In addition, it provides a comfortable working environment to upgrade working efficiency.

Fully Air-Conditioned Working Environment.

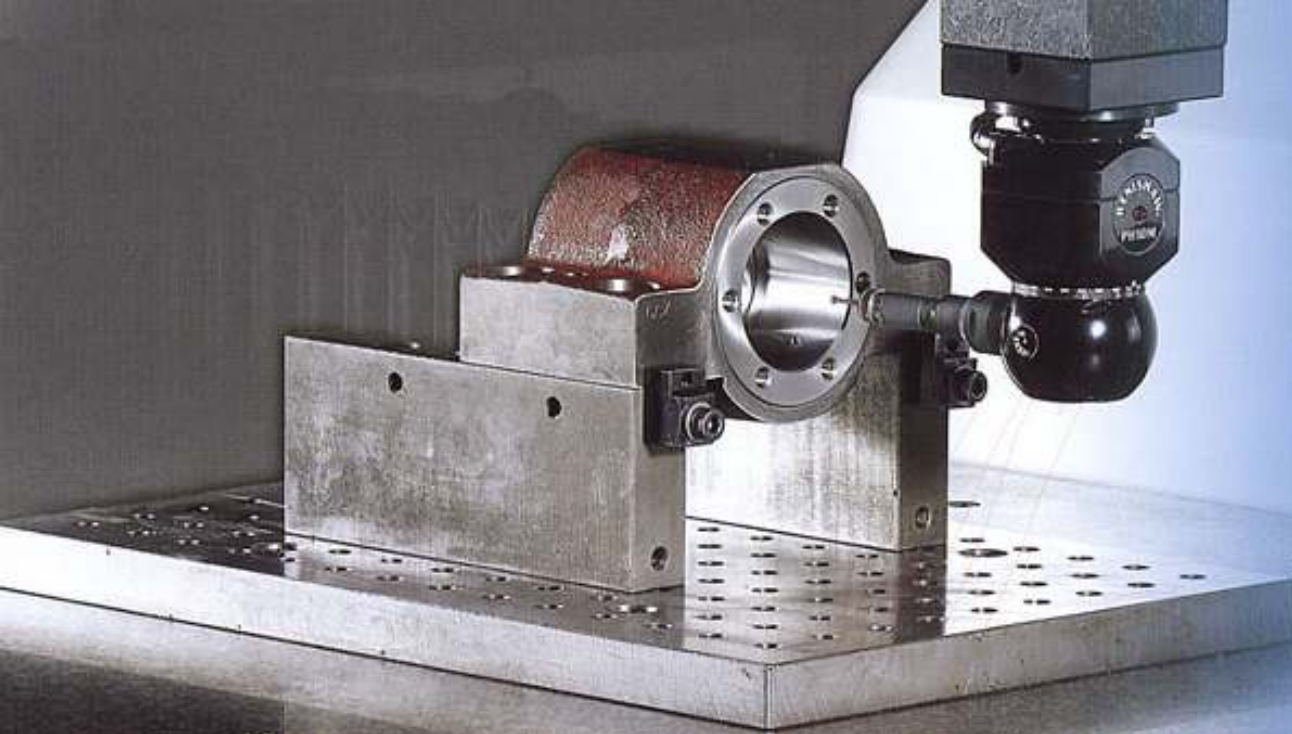
**HIGH PRECISION
HIGH ACCURACY GUARANTEED**

All machines manufactured under constant temperature & humidity controlled factory.



All These Were Precisely Hand-scraped For Accuracy.

The endface of spindle stock, screw support faces and block contact faces are fully scraped to increase machining accuracy and feeding smoothness.



The outstanding machine performance relies on precision parts. To ensure each parts achieves the highest accuracy and dependability, MAXIMART Q.C. department conducts 100% parts inspection. This combines with the use of a full series of sophisticated inspection instrument to ensure only best quality parts fitted on all machines.

SELF-CONFIDENT QUALITY

WENZEL®
The company of μ

3-D measuring equipments assure all parts are within accuracy.



Quality Assurance Department

Dependability Through Rigorous Inspection

Maximart quality control department is fully-equipped with a comprehensive range of world-famous inspection instrument. These sophisticated inspection instrument enable our Q.C. staffs to implement rigorous quality control from beginning to the end.



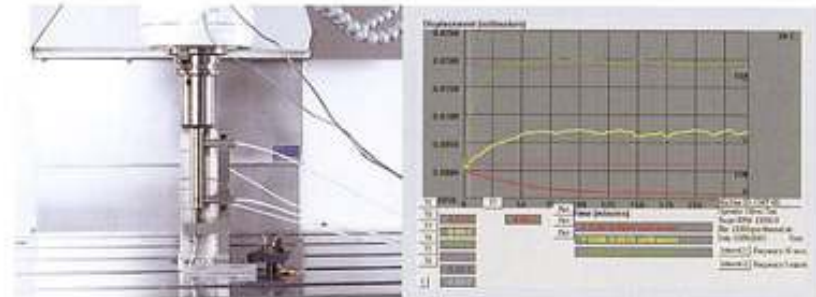
Constant inspection thru-out assemble/production floor.



"H.P." laser calibration system ensure machine accuracy & repetition.



"Heidenhain" double ball bar system, circular test ensuring machine tool geometry.



3-D spherical thermal displacement checking.



ATC, under maximum tool weight, for long-time operating test.



Circularity tester: Germany MAHR



4-channel dynamic signal analyzer. To inspect & analyze spindle vibration and make sure spindle running at perfect conditions.

ADVANCED INSPECTION INSTRUMENTS

- Three dimensional coordinate measuring machine: Germany WENZEL
- Circularity tester: Germany MAHR
- Ball bar tester: England RENISHAW
- Laser calibration system: HP, U.S.A & RENISHAW U.K.
- 3D thermal displacement tester: LOIN, U.S.A
- Spindle dynamic signal analyzer: G-TECH, TAIWAN

State-of-The-Art Sheet Metal Guard Design

Convenient Workpiece Loading and Unloading

The roomy internal space plus shortened distance from table to the machine front make workpiece loading/unloading easier.



750 mm (V-6), 970 mm (V-8)
1100 mm (V-11)

Internal Space Comparison

Maximart Machine	
V-6	750 mm
V-8	970 mm
V-11	1100 mm

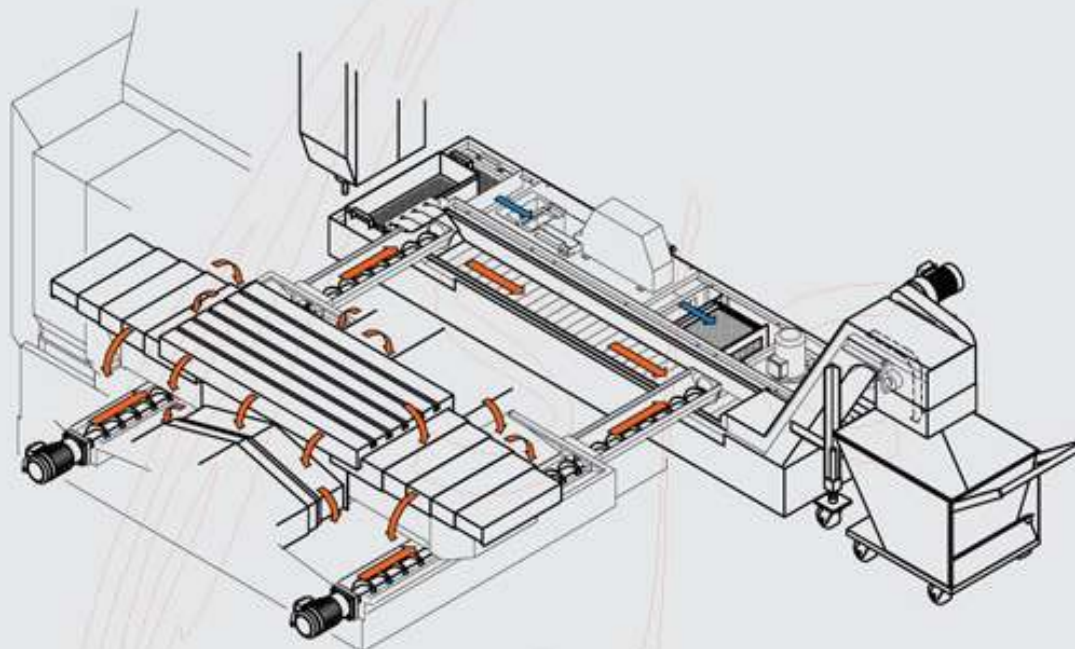


165 mm (V-6)
330 mm (V-8)
270 mm (V-11)

Comparison Table Distance From Table to Front Side

Maximart Machine	
V-6	165 mm
V-8	330 mm
V-11	270 mm

Efficient Chip Removing System



Air-gun & coolant sprayer located at most convenient places for operator. The 2 trays at machine door-side provide easy tooling-rest & paper retaining.



Screw-drive type chip conveyors (2 sides) easily carry chips outside machine from the backside.



Machine front bottom concave design permits operator to access workpiece easier and facilitate loading/unloading workpiece.



Two advanced fluorescent worklamps installed inside machine, providing sufficient lighting for operator.



4th axis ac servo wiring connection box located inside the ceiling of machining guard, well prepared for easy installation with rotary table. (Optional)

Advanced Controls Competitive to Operate!

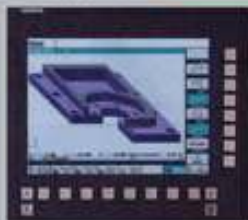
The CNC controls are designed to meet human engineering theorem that provides maximum operational convenience.

CNC CONTROLLER

A electronic handwheel unit (MPG) is provided to facilitate operation.



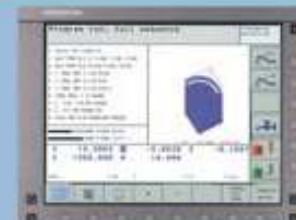
FANUC



SIEMENS

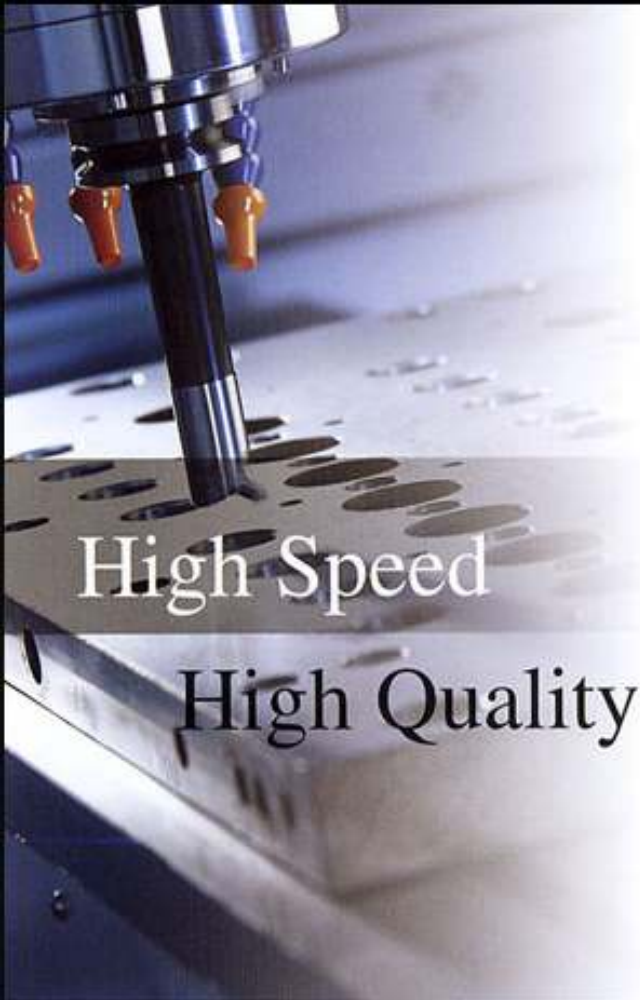


MITSUBISHI



HEIDENHAIN



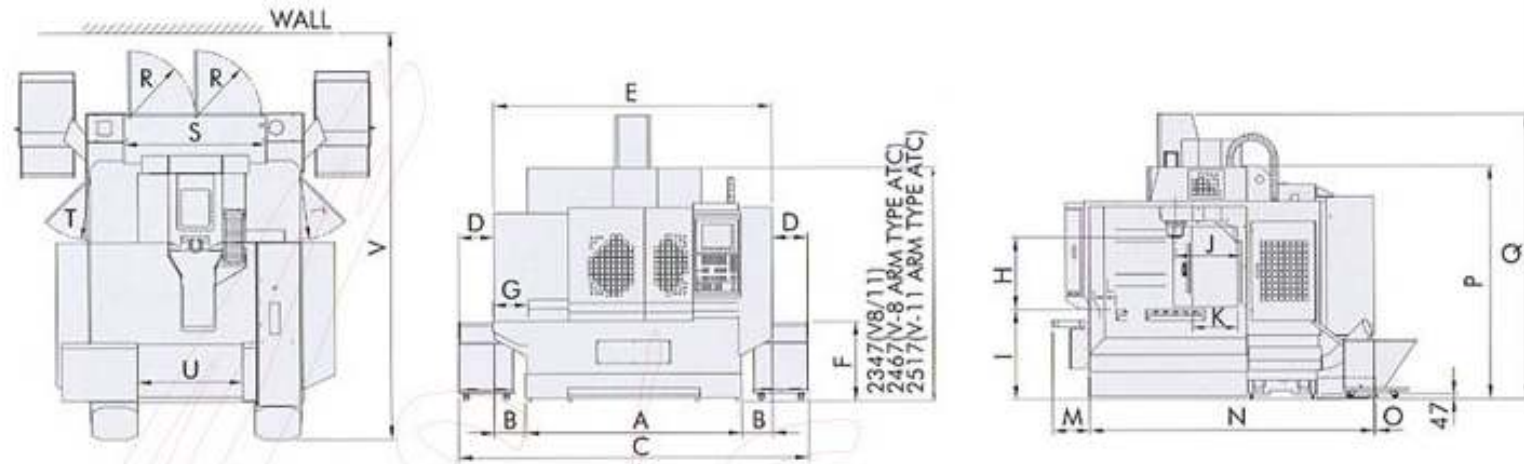


High Speed
High Quality

Machine Overall Dimensions

unit: mm

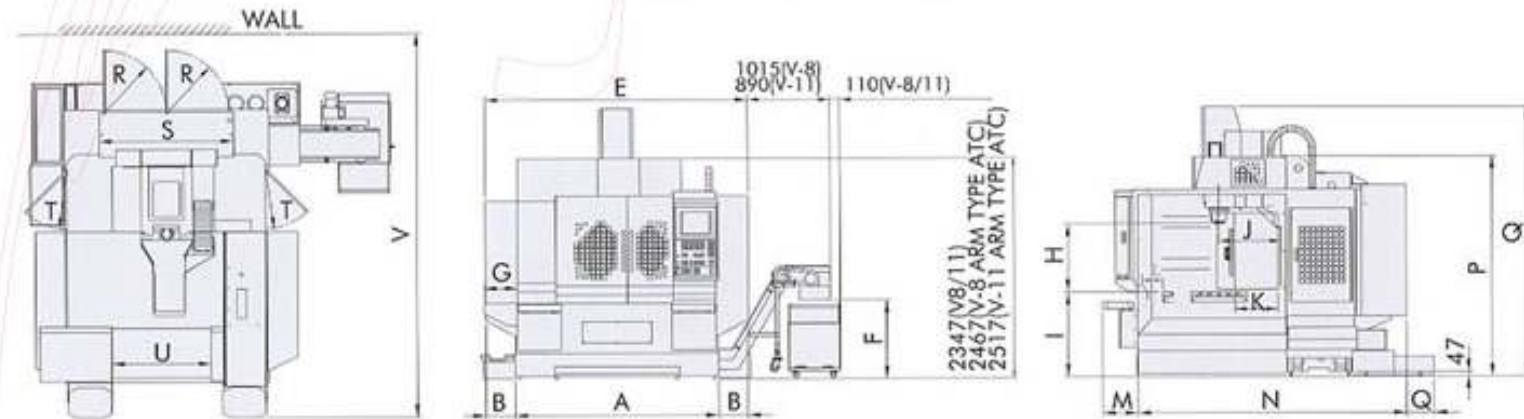
V-8, 11 Screw Drive Type Chip Conveyor



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
V-8 B/C/D/H	2055	150	3085	365	2355	805	230	150-760(B) 130-740	877	623	465	260 780	380	2820	16	2360	2274	R675	1450	R645	975	4060
V-11 B/C/D/H	2200	315	3560		2830		335	140-750(B) 120-730	907	668		200 810		2890			2884				1090	4130

V-8, 11 Screw Drive + Chain Type Chip Conveyor

unit: mm

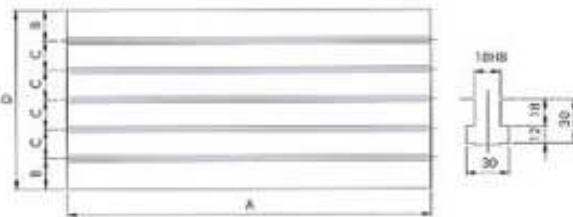


MODEL	A	B	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
V-8 B/C/D/H	2055	150	2355		230	150-760(B) 130-740	877	623	465	260 780	380	2820	295	2360	2274	R675	1450	R645	975	4060
V-11 B/C/D/H	2200	315	2830	840	335	140-750(B) 120-730	907	668		200 810		2890			2884				1090	4130

Table Size

unit: mm

V-8, 11



MODEL	A	B	C	D
V-8	1000	60	100	520
V-11	1250	105	100	610

Machine Specifications

ITEM/MODEL	V-6D	V-6H	V-8B	V-8C	V-8D	V-8H	V-11B	V-11C	V-11D	V-11H	
WORK TABLE											
Table size	750mm x 420mm		1000mm x 520mm			1250mm x 610mm					
T-slot	14mm x 5 x 65mm		18mm x 5 x 100mm			18mm x 5 x 100mm					
Table load capacity	300kgs		700kgs			900kgs					
MOVEMENT & RANGE											
X.Y.Z axis travel	600mm x 420mm x 450mm		850mm x 520mm x 610mm			1100mm x 610mm x 610mm					
Positioning accuracy	0.003mm/300mm		0.003mm/300mm			0.003mm/300mm					
Repetition X.Y.Z. Axis	±0.003mm		±0.003mm			±0.003mm					
Spindle nose to work table	120-570mm		130-740mm			120-730mm					
Spindle center to column	499mm		623mm			668mm					
3 axes ballscrew	X/Y:ø32mm/P12mm/C3, Z:ø40mm/P12mm/C3			X/Y/Z:ø40mm/P12mm/C3							
3 axes precision linear guideway	X: THK SHS30mm x 4 pcs QZ type block		X: THK SNS35mm x 6 pcs QZ type block			X: THK SNS45mm x 6 pcs QZ type block					
	Y: THK SHS35mm x 4 pcs QZ type block		Y: THK SNS45mm x 4 pcs QZ type block			Y: THK SNS45mm x 6 pcs QZ type block					
	Z: THK SHS35mm x 6 pcs QZ type block		Z: THK SNS45mm x 6 pcs QZ type block			Z: THK SNS45mm x 6 pcs QZ type block					
3 axes transmission	Direct drive										
SPINDLE											
Spindle taper	BT#40/ CAT#40/ DIN#40 (Optional HSK-63A)										
Spindle speed	60-12000rpm	60-15000rpm	60-10000rpm	60-10000rpm	60-12000rpm	60-15000rpm	60-10000rpm	60-10000rpm	60-12000rpm	60-15000rpm	
Spindle cooling unit	Standard										
Spindle transmission	Direct Drive		Belt Drive		Direct Drive		Belt Drive		Direct Drive		
Coolant thru spindle	Optional : 8 bars / 22 bars										
Spindle Dia.	ø60mm			ø70mm							
FEEDS											
Feed rate (mm/min)	1-12000mm/min										
Rapid traverse (m/min)	X/Y/Z=32M/min (optional X/Y/Z=48M/min, with internally cooled ballscrews)										
3 axes optical linear scale	optional, absolute type 0.1μ resolution										
A.T.C.											
Tool storage capacity	Arm type 20 tools (Optional Arm type 30 tools)			Armless type 20 tools (Optional Arm type 30 tools)							
Max. Tool Dia.	ø76mm			ø100mm (Armless type)/ ø76mm(Arm type)							
Tool selection	Bi-direction random shortest path										
Max. Tool weight	7kgs/pc										
Max. Tool length	250mm			300mm							
GENERAL INFORMATION											
Coolant motor	50Hz, Grundfos MTH4-30/30			0.73kw							
	60Hz, Grundfos MTH4-20/20			0.87kw							
Coolant tank capacity	160 Liters.			250 Liters.							
Coolant thru spindle	50Hz, Grundfos SPK2-23/23			0.75kw							
	60Hz, Grundfos SPK2-15/15			1.10kw							
Chip conveyor motor	0.18kw x 2										
Air pressure required	6 kg / cm ²										
Power consumption	25 KVA							30 KVA			
Machine weight	4500 kgs			7300 kgs			8000 kgs				

• Above specifications are subject to change without prior notice.

Machine Accessory

— not available ○ optional ● standard

ITEMS / MODELS	V-6D	V-6H	V-8B	V-8C	V-8D	V-8H	V-11B	V-11C	V-11D	V-11H
Full enclosure machine guard	●	●	●	●	●	●	●	●	●	●
Spindle cooling unit	●	●	●	●	●	●	●	●	●	●
3 axes THK linear guideway with self-lube device	●	●	●	●	●	●	●	●	●	●
Z axis brake motor	●	●	●	●	●	●	●	●	●	●
Automatic central lubrication system with alarm	●	●	●	●	●	●	●	●	●	●
Z axis auto ascend when power failure(with Fanuc CNC only)	●	●	●	●	●	●	●	●	●	●
Armless 20 tools ATC(inverter drive)	—	—	●	●	●	●	●	●	●	●
Arm-type 20 tools ATC	●	●	—	—	—	—	—	—	—	—
Screw drive chip conveyor (2 sides)	●	●	●	●	●	●	●	●	●	●
Spindle nose coolant jet flushing	●	●	●	●	●	●	●	●	●	●
Spindle side air blow nozzle & coolant nozzle	●	●	●	●	●	●	●	●	●	●
Spindle air blast before tool-changing	●	●	●	●	●	●	●	●	●	●
Spindle all-time air curtain	●	●	●	●	●	●	●	●	●	●
Air gun & coolant gun	●	●	●	●	●	●	●	●	●	●
Machine window with safety glasses	●	●	●	●	●	●	●	●	●	●
Rigid tapping	●	●	●	●	●	●	●	●	●	●
Auto power off	●	●	●	●	●	●	●	●	●	●
3-colors warning lamp	●	●	●	●	●	●	●	●	●	●
Fluorescent worklamp(2 sets)	●	●	●	●	●	●	●	●	●	●
Ethernet port	●	●	●	●	●	●	●	●	●	●
Leveling pads & bolts	●	●	●	●	●	●	●	●	●	●
Operation/Parts manuals	●	●	●	●	●	●	●	●	●	●
Tools & tool box	●	●	●	●	●	●	●	●	●	●
CE/EMC conformity machine	○	○	○	○	○	○	○	○	○	○
Transformer to suit local power	○	○	○	○	○	○	○	○	○	○
Arm-type 30 tools ATC with 1.5seconds quick tool change device	○	○	○	○	○	○	○	○	○	○
Absolute type 0.1u resolution 3 axes optical scale with air-blow protection	○	○	○	○	○	○	○	○	○	○
3 axes 48M/min rapid traverse, with internally cooled ballscrews	—	—	—	—	○	○	—	—	○	○
High pressure coolant thru spindle 8 bars / 22 bars	○	○	—	—	○	○	—	—	○	○
Backside chain type chip conveyor(single side)	○	○	○	○	○	○	○	○	○	○
Chip cart	○	○	○	○	○	○	○	○	○	○
Wiring & connectors preparation for 4 th axis(without AC motor & driver)	○	○	○	○	○	○	○	○	○	○
4 th axis AC servo package (wiring/connectors/interface/AC motor & driver)	○	○	○	○	○	○	○	○	○	○
4 th axis CNC rotary table with or without tailstock	○	○	○	○	○	○	○	○	○	○
Oil-mist coolant system	○	○	○	○	○	○	○	○	○	○
Oil-mist filtering & recycle system	○	○	○	○	○	○	○	○	○	○
Tool length measurement system	○	○	○	○	○	○	○	○	○	○
Workpiece measurement system	○	○	○	○	○	○	○	○	○	○
HSK-63A spindle taper with arm type 30 tools ATC and 1.5 seconds quick tool change device	○	○	○	○	○	○	○	○	○	○
Coolant / oil skimmer	○	○	○	○	○	○	○	○	○	○

Optional Accessories



Chain type chip conveyor



22Bar coolant through spindle device with centrifugal separator



8 Bar coolant through spindle device with filtering system



Oil mist filtering recycle system