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**China-Germany  
Investment**

# Contents

01 Company Brief	02
02 Products <small>High Speed Series Vertical Series</small> <small>5-axis Series Double Column Series</small>	04
03 Workshop & Equipment	34
04 R&D,Inspection	36
05 Service	38
06 Automation&Turn-key Project	40
07 Customer Application	41

# 01 Company Brief



## Pursue excellent solution always

SKY MASTER is a China-Germany investment company specialized in designing and manufacturing high quality CNC machine tools under the supervision of Germany partner KRAFT. Our first-rate environment and well development foreground attracts a lot of experts and senior engineers to join in our technical team, both Taiwan research office and Germany R&D team supply the technical supporting, western engineering combined with Asian manufacturing leads us into an advanced synergy effect. We adopt modern management systems to run each process of designing, machining ,assembling and quality checking for an efficient performance .The company get the ISO9001 quality certificate and all machine get the CE certificate from TUV SUD company.

Our professional service team in all over the world keeps close contact with clients and supply technical support at any time. Take "Upright integrity, Excellent operation and High quality "as our management concept to produce each machine with our full heart, we are looking forward in achieving progress with you in the field of CNC machine tool.



# 01.1 Our Partner-KRAFT

GK Werkzeugmaschinen GmbH in Stockstadt am Rhein - Everything you need in one place, Everyone finds what they are looking for at KRAFT

In 1990 Gerhard Kraft founded GK Werkzeugmaschinen GmbH in Stockstadt am Rhein. Company founder Gerhard Kraft brought 25 years of knowledge and experience to the company. Since then, the company has grown into a flourishing enterprise with 10 professional designer who are focusing on CNC machine tool in different area, with 10 additional sales representatives in Germany, Austria and Switzerland for selling and serving KRAFT machine.

KRAFT has the factory with 3000sqm which is near to Rhein river ,it is very close to the Frankfurt airport.



# 02 Products



## High Speed Series

Use our know-how to work out the solutions for your most difficult issues



Temperature & humidity constant workshop

From 2011, Sky Master stepped into the new high-speed series. Based on advanced design concepts and outstanding technological support, Sky Master high-speed machines fill up various gaps in the field of domestic high-speed machines, and can reach up to 1.2 G acceleration and 0.005 mm repeated positioning accuracy.



# High Speed Series

- VF high speed vertical machine center is the new design for high precision mould cutting and nonferrous metal workpiece which need high speed machining.
- 15000RPM direct driven spindle with chiller and HSK A63 tool shank(BBT40 is option)which make the machine has excellent rotation precision ,low vibration and high speed response.
- All three axis are driven by large motors to achieve synergy ability.
- The surrounding coolant and workpiece side flushing can put down the temperature of tool, workpiece and machine.
- Standard controller is FANUC absolute type(package 1) including high quality machining package(AICC2,smooth tolerance control, jerk control, machining quality level adjustment function )
- Equipped with water-oil separation machine, separates the lubricating oil from the cutting fluid. Increase the surface quality of mould machining.

## VF108

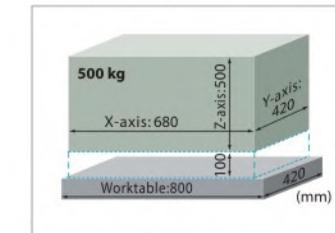


## Technical Parameter

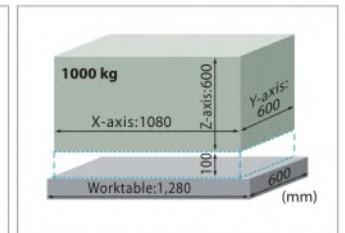
Item	Unit	VF68	VF108		
Standard controller		FANUC 0i MF			
Travel	X axis travel(work-table)	mm	680	1080	
	Y axis travel(saddle)	mm	420	600	
	Z axis travel(spindle head)	mm	500	600	
	Distance from spindle nose to table	mm	100 ~ 600	100 ~ 700	
	Distance from spindle center to column cover	mm	480	630	
Work table	Table size(length × width)	mm	800 × 420	1280 × 600	
	Max. table load	kg	500	1000	
	T slot size(width × distance × quantity)	mm	14 × 80 × 5	18 × 100 × 5	
Spindle	Spindle taper		HSK-A63		
	Max. spindle speed	rpm	15000(Direct driven)		
	Spindle motor power (continual working/Max.)	kW	9/15		
	Spindle torque	N.m	57.3/120		
X/Y/Z	Rapid traverse X/Y	mm/min	40000	36000	
	Rapid traverse Z	mm/min	32000	24000	
	Cutting feed rate on X/Y/Z	mm/min	1 ~ 10000		
ATC (Option)	ATC type		Arm type		
	Tool capacity	pcs	24		
	Max. tool diameter	mm	Ø80/Ø130		
	Max. tool length	mm	350		
Accuracy	Max. tool weight	kg	8		
	VDI/DGQ3441	Full travel positioning accuracy	mm	P0.010	
		Repeatability accuracy	mm	Ps0.008	
Air pressure	MPa	0.6 ~ 0.8			
Supply Voltage & Frequency		3/PE, AC380V, 50Hz			
Power requirement	kVA	30			
Machine size (L/W/H)	mm	3300 × 2700 × 2700	3730 × 3510 × 2970		
Machine weight	kg	4500	7250		

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

### Moveable Area:



VF68



VF108



# High Speed Series

- VF double column high speed high accuracy series is designed for precise mold base and nonferrous metal machining. Standard machine equips with high speed spindle.
- One piece cast iron machine bed and one piece cast iron bridge, the whole structure is analyzed by FEM which optimize the rigidity and accuracy.
- The HEIDENHAIN TNC system comes as standard with 15 inch colored LCD screen, LAC(Load Adaptive Control), Handwheel Superimposing, touch probe cycles, extended programming function, program-verification graphics(Model VF1290 are not included)
- All three axis use European high quality linear guide way and Heidenhain absolute type linear encoder, providing precise accuracy and stable performance.
- Full enclosed splash guard with European operation box in safe and elegant outlook ,every design is for convenience operation.
- The coolant tank is equipped with oil/water separator which can protect the working environment and prolong the life time of coolant.

## VF1615A



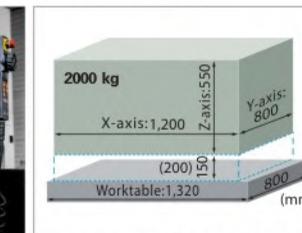
## Technical Parameter

Item	Unit	VF1290	VF1290A	VF1290B	VF1615	VF1615A	VF1615B				
Standard controller		FANUC Oi MF		HEIDENHAIN TNC620							
Travel	X axis travel(work-table)	mm			1200		1600				
	Y axis travel(saddle)	mm			800		1300				
	Z axis travel(spindle head)	mm			550		700				
	Distance from spindle nose to table	mm	150 ~ 700		200 ~ 750	200 ~ 900	225 ~ 925	250 ~ 950			
	Distance between columns/work piece access height	mm	920/715			1500/715					
Work table	Table size(length x width)	mm			1320 x 800		1800 x 1300				
	Max. table load	kg			2000		4000				
	T slot size(width x distance x quantity)	mm			14 x 120 x 7		22 x 160 x 8				
Spindle	Spindle taper	HSK-A63		HSK-E50	HSK-A63		HSK-E50				
	Max. spindle speed	rpm	15000(Direct driven)	24000(Build-in)	36000(Build-in)	15000(Direct driven)	24000(Build-in)	36000(Build-in)			
	Spindle motor power (continual working/Max.)	kW	9/15	30/39	20/26	10/17	25/33	20/26			
	Spindle torque	N.m	57.3/120	29.1/37.8	10.4/13.5	63.7/108.6	72.6/95.8	10.4/13.5			
XYZ	Rapid traverse (X/Y/Z)	mm/min		30000		40000		30000			
	Cutting feed rate (X/Y/Z)	mm/min		1 ~ 10000		1 ~ 20000					
ATC (Option)	Tool capacity	pcs		20		24		20		24	
	Max. tool diameter	mm		Ø100/Ø130		Ø80/Ø120		Ø100/Ø130		Ø80/Ø120	
	Max. tool length	mm		300		220		300		200	
	Max. tool weight	kg		8		4		8		4	
Accuracy	VDI/DGQ3441 Full travel positioning accuracy	mm		P0.014							
	Repeatability accuracy	mm		Ps0.008							
Air pressure	MPa	0.6 ~ 0.8									
Supply voltage & frequency		3 /PE, AC380V, 50Hz									
Power requirement	kVA	30		80							
Machine size (L/W/H)	mm	4476 x 4790 x 3215			5657 x 5403 x 3954						
Machine weight	kg	12000			22000						

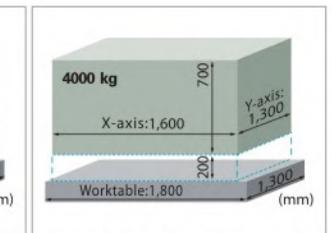
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### Moveable Area:



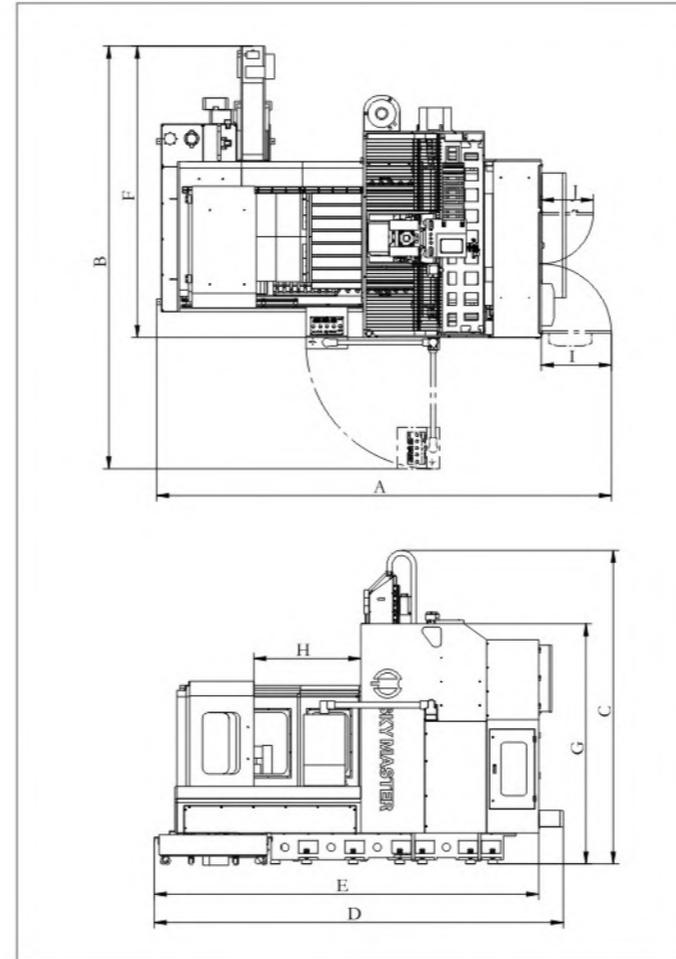
VF1290/1290A/1290B



VF1615/1615A/1615B

Standard&Option	VF68	VF108	VF1290	VF1290A	VF1290B	VF1615	VF1615A	VF1615B
FANUC 0i MF absolute type	●	●	●	×	×	○	×	×
HEIDENHAIN TNC620	×	×	×	●	●	●	●	●
MITSUBISHI M730VM	×	×	×	○	○	○	○	○
Rigid tapping	●	●	●	●	●	●	●	●
Full-enclosed splash guard	●	●	●	●	●	●	●	●
Direct driven spindle 15000rpm HSKA63	●	●	●	×	×	●	×	×
Direct driven spindle 15000rpm BBT40	○	○	○	×	×	○	×	×
Electric spindle 15000rpm HSKA63 INNA	○	○	○	×	×	○	×	×
Electric spindle 24000rpm HSKA63 IBAG	○	○	×	●	×	×	●	×
Electric spindle 36000rpm HSKE50 IBAG	×	×	×	×	●	×	×	●
Spindle air sealing	●	●	●	●	●	●	●	●
Spindle chiller	●	●	●	●	●	●	●	●
Spindle cooling by external pipe	●	●	●	●	●	●	●	●
Air blowing device	●	●	●	●	●	●	●	●
Working area light	●	●	●	●	●	●	●	●
3 colors warning light	●	●	●	●	●	●	●	●
A/C for electric cabinet	●	●	●	●	●	●	●	●
Portable MPG	●	●	●	●	●	●	●	●
Tool coolant system	●	●	●	●	●	●	●	●
Lubrication system/pneumatic system	●	●	●	●	●	●	●	●
Adjustable level bolts and foundation blocks	●	●	●	●	●	●	●	●
Chain chip conveyor	●	●	●	●	●	●	●	●
Coil chip conveyor	×	×	●	●	●	●	●	●
Tool box	●	●	●	●	●	●	●	●
Air gun/water gun with flushing function	●	●	●	●	●	●	●	●
Oil and water separator machine	●	●	●	●	●	●	●	●
Automatically power off	●	●	●	●	●	●	●	●
Operation manual	●	●	●	●	●	●	●	●
Safety door interlock	●	●	●	●	●	●	●	●
Transformer	●	●	●	×	×	×	×	×
Arm type ATC BT40 24T (pneumatic)	○	○	×	×	×	×	×	×
Arm type ATC HSKA63 24T (pneumatic)	○	○	×	×	×	×	×	×
Chain type ATC HSKA63 32T (pneumatic)	×	○	×	×	×	○	○	×
Chain type ATC HSKA63 40T (pneumatic)	×	×	×	×	×	○	○	×
Drum type ATC HSKA63 20T (pneumatic)	×	×	○	○	×	○	○	×
Drum type ATC HSKE50 24T (pneumatic)	×	×	×	×	○	×	×	○
Roof spraying system	○	○	○	○	○	○	○	○
Large flow chip flushing function	○	○	×	×	×	×	×	×
Machining observation window	○	○	○	○	○	○	○	○
Drawer type water tank	○	○	○	○	○	×	×	×
Coolant through spindle center	○	○	○	○	○	○	○	○
3 axes hollow screw cooling	×	×	×	×	×	○	○	○
Grease lubrication device	○	○	○	○	○	○	○	○
Voltage stabilizer	○	○	○	○	○	○	○	○
Heidenhain absolute linear scale	○	○	○	●	●	●	●	●
Measuring system (tool, workpiece)	○	○	○	○	○	○	○	○
Air dryer	○	○	○	●	●	○	●	●
Oil mist recycle machine (LOSMA)	○	○	○	○	○	○	○	○
Spindle displacement sensor of temperature compensation (IBAG)	×	×	×	○	○	×	○	○
Full enclosed iron box packaging	○	○	○	○	○	○	○	○
Warranty prolong 1 year	○	○	○	○	○	○	○	○

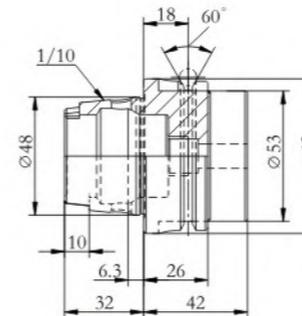
● Standard ○ Optional × Not available



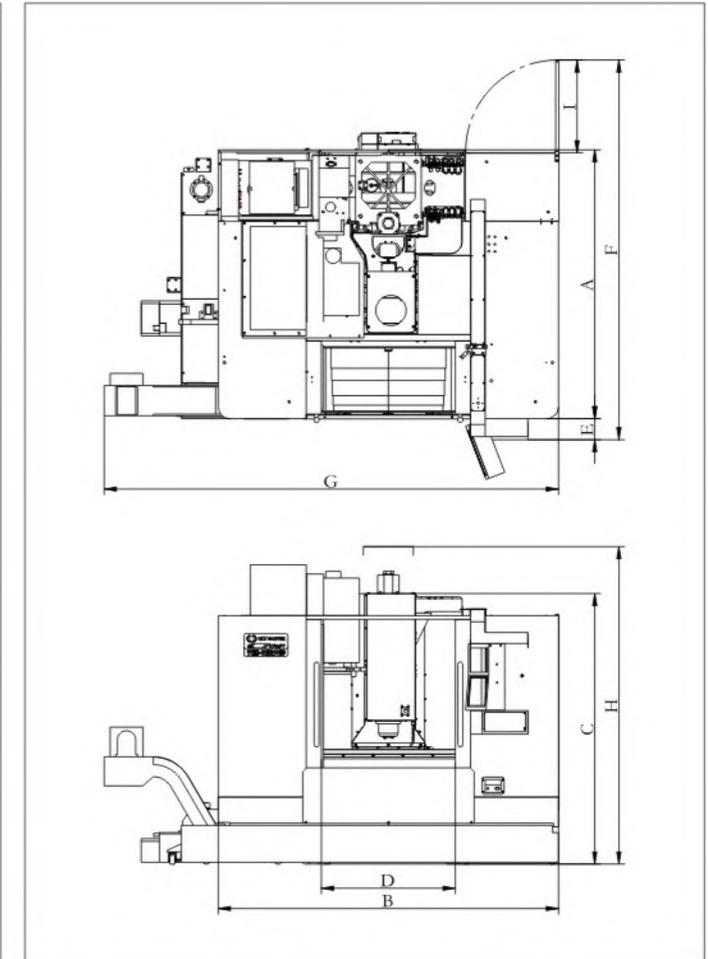
#### Dimensions

	A	B	C	D	E	F	G	H	I	J
VF1290/1290A/1290B	4776	4790	3215	4066	3906	3567	2270	1260	870	740
VF1615/1615A/1615B	5657	5403	3954	5052	4785	3650	3010	1430	870	650

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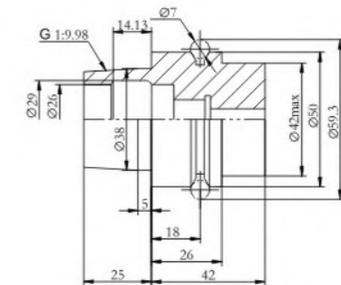
■ HSK-A63 Tool Shank



#### Dimensions

	A	B	C	D	E	F	G	H	I
VF68	1915	2180	2090	650	175	2955	3155	2590	865
VF108	2223	2794	2370	1100	180	3138	3730	2970	765

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■ HSK E50 Tool Shank

# VU 5 Axis Series

- VU vertical 5 axis machining center is widely used in 5 axis type products components and complicated mold cutting.
- Designed with outstanding structure and high rigidity ,the world famous brand of linear guide way are used on all three axis to achieve high accuracy machining ability.
- The major parts are manufactured from high grade cast iron and released the stress by heat treatment , ensuring the best structural stability and positioning accuracy.
- Double support design on the A axis, compact structure, great rigidity, optimized loading capacity and precise positioning accuracy.
- Cradle type structure, higher machining efficiency, tool length has no effect on the machining accuracy; make sure the 3D space shape accurate.



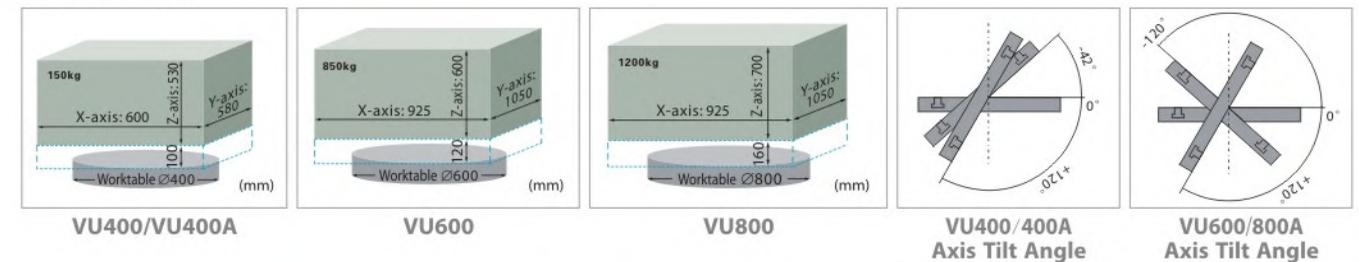
## Technical Parameter



Item	Unit	VU400	VU400A	VU600	VU800
Standard controller		FANUC Oi MF <small>(any 4 axis in synchronization)</small>	HEIDENHAIN TNC620	HEIDENHAIN TNC640	
Travel	X axis travel(work-table)	mm	600	925	
	Y axis travel(saddle)	mm	580	1050	
	Z axis travel(spindle head)	mm	530	600	700
	Distance from spindle nose to table	mm	100 ~ 630	120 ~ 720	160 ~ 860
Work table	Table diameter	mm	∅400	∅600	∅800
	T slot size (quantity x width)	mm	8X12	7X14	
	Workpiece max. diameter	mm	∅600	∅960	∅1000
	Max. table load	kg	150	850	1200
	Rotation angle		+120° ~ -42°		+120° ~ -120°
Max. speed	A axis	rpm	13.3	50	
	C axis	rpm	22.2	100	
				360°	
Spindle	Spindle taper		BT40	HSK-A63	
	Max. spindle speed	rpm	10000 (Direct driven)	15000 (Direct driven)	
	Spindle motor power (continual working/Max.)	kW	11/15	5.5/9.5	10/17
	Spindle torque	N.m	52.5/95.5	35/60.7	63.7/108.6
X/Y/Z	Rapid traverse X/Y	mm/min	36000		40000
	Rapid traverse Z	mm/min	24000		40000
	Cutting feed rate on X/Y/Z	mm/min	1 ~ 10000		1 ~ 20000
ATC	ATC type		Arm type		
	Tool capacity	pcs	24	32	
	Max. tool diameter	mm	∅80/∅130	∅75/∅130	
	Max. tool length	mm	350	300	
Accuracy	Max. tool weight	kg	8		
	VDI/DGQ3441 Full travel positioning accuracy	mm	P0.012		
	Repeatability accuracy	mm	Ps0.008		
Air pressure	MPa	0.6 ~ 0.8			
Supply voltage & frequency		3/PE, AC380V, 50Hz			
Power requirement	kVA	30	80		
Machine size (L/W/H)	mm	3730 × 3510 × 3170		5090X3250X3510	
Machine weight	kg	7650	22000		

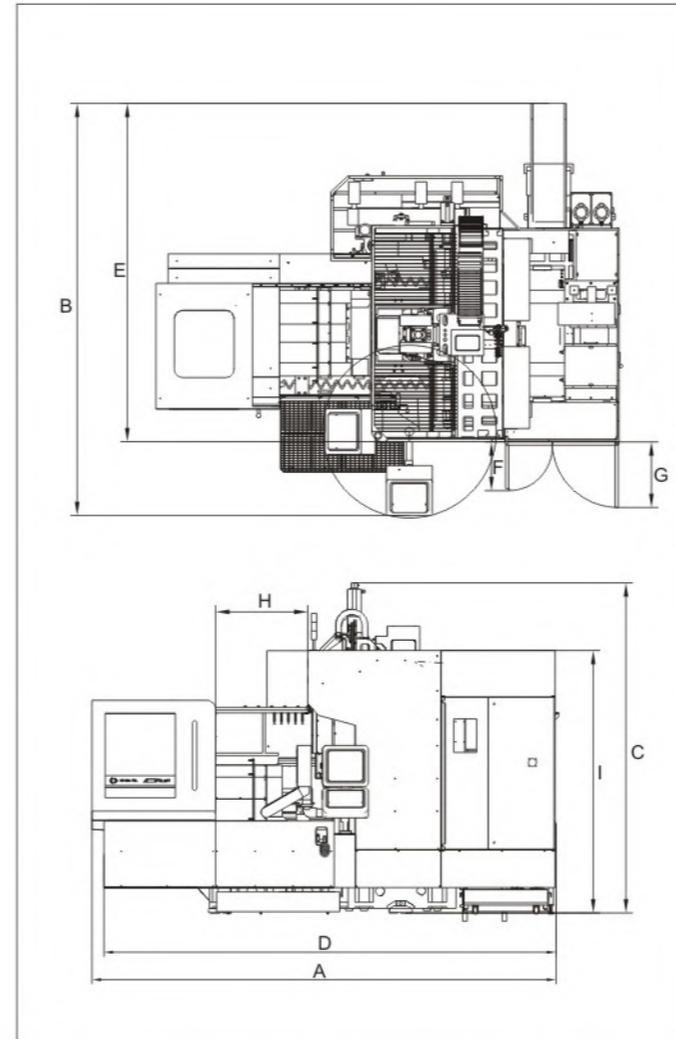
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### Moveable Area:



Standard&Option	VU400	VU400A	VU600	VU800
FANUC 0i MF absolute type	● (any 4 axis in synchronization)	x	x	x
HEIDENHAIN TNC620	○	●	● TNC640	● TNC640
Rigid tapping	●	●	●	●
Full-enclosed splash guard	●	●	●	●
Direct driven spindle 10000rpm BT40	●	x	x	x
Direct driven spindle 15000rpm HSKA63	○	●	●	●
Direct driven spindle 15000rpm BBT40	○	○	○	○
Electric spindle 15000rpm HSKA63 INNA	○	x	x	x
Electric spindle 24000rpm HSKA63 IBAG	x	○	○	○
Electric spindle 36000rpm HSKE50 IBAG	x	x	○	○
Spindle air sealing	●	●	●	●
Air blowing device	●	●	●	●
Working area light	●	●	●	●
3 colors warning light	●	●	●	●
A/C for electric cabinet	●	●	●	●
Portable MPG	●	●	●	●
Tool coolant system	●	●	●	●
Lubrication system/pneumatic system	●	●	●	●
Adjustable level bolts and foundation blocks	●	●	●	●
Chain chip conveyor	●	●	●	●
Coil chip conveyor	x	x	●	●
Tool box	●	●	●	●
Air gun/water gun with flushing function	●	●	●	●
Oil and water separator machine	●	●	●	●
Automatically power off	●	●	●	●
Spindle chiller	●	●	●	●
Spindle cooling by external pipe	●	●	●	●
Operation manual	●	●	●	●
Safety door interlock	●	●	●	●
Transformer	●	x	x	x
Arm type ATC BT40 24T (pneumatic)	●	x	x	x
Arm type ATC HSKA63 24T (pneumatic)	x	●	x	x
Chain type ATC HSKA63 32T (pneumatic)	x	x	●	●
Chain type ATC HSKA63 40T (pneumatic)	x	x	○	○
Roof spraying system	○	○	○	○
Large flow chip flushing function	○	○	○	○
Machining observation window	○	○	○	○
Drawer type water tank	○	○	x	x
Coolant through spindle center	○	○	○	○
3 axes hollow screw cooling	x	x	●	●
Grease lubrication device	○	○	●	●
Voltage stabilizer	○	○	○	○
Heidenhain absolute linear scale	○	●	●	●
Measuring system (tool, workpiece)	○	○	○	○
Air dryer	○	○	○	○
Oil mist recycle machine (LOSMA)	○	○	○	○
Full enclosed iron box packaging	○	○	○	○
Warranty prolong 1 year	○	○	○	○

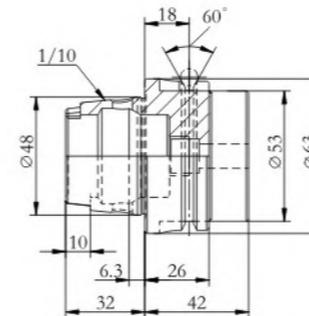
● Standard ○ Optional x Not available



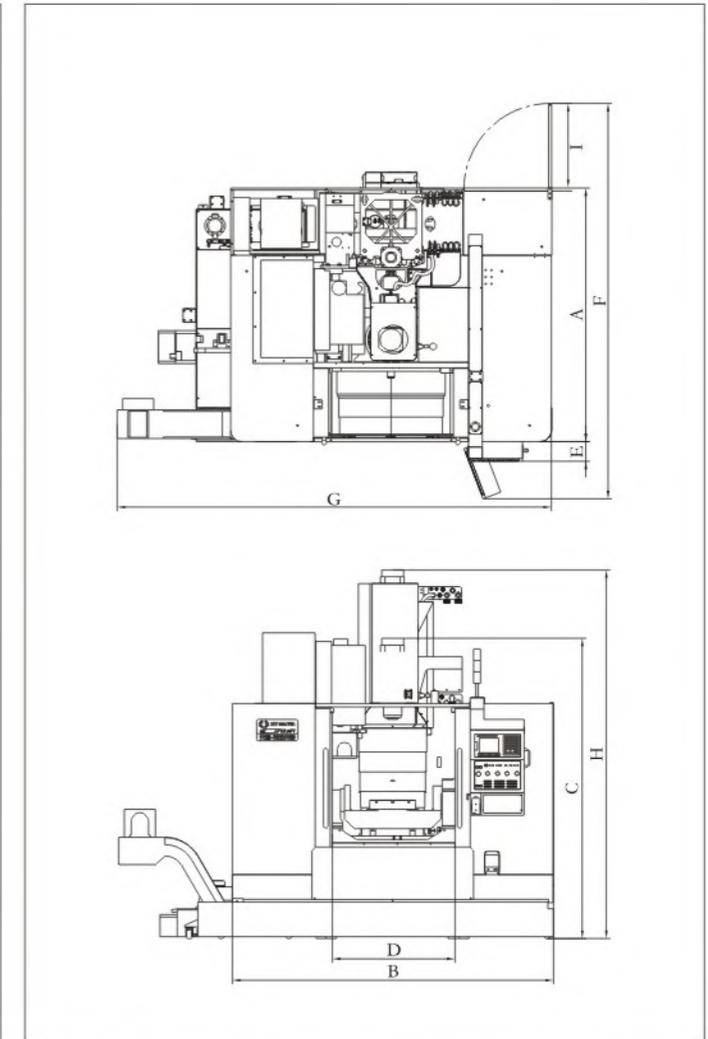
#### Dimensions

	A	B	C	D	E	F	G	H	I
VU600	5300	4730	4140	5133	3880	540	730	1050	2900
VU800	5300	4730	4250	5133	3880	540	730	1050	3010

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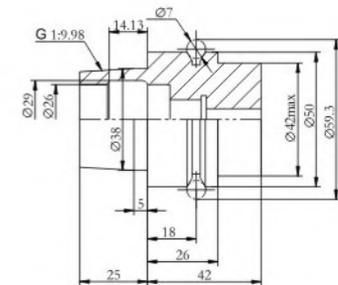
■ HSK-A63 Tool Shank



#### Dimensions

	A	B	C	D	E	F	G	H	I
VU400	2223	2794	2570	1100	180	3138	3730	3170	765
VU400A	2223	2794	2570	1100	180	3138	3730	3170	765

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■ HSK E50 Tool Shank

# Vertical Series

Smart, compact ,more utility



Sky Master constantly improves and renovates the structures and designs of the Vertical Series, updating the standard configurations to keep up with market standards while maintaining the highest quality.



# Linear Guide Way Series

- The VL-series vertical CNC machines is designed for effective and productive machining. Widely used for high precision plastic moulds, forging dies, auto, aerospace industry, electric and home appliance.
- The structure of this series is carefully developed and with high rigidity. Linear guide ways from REXROTH or THK guarantee excellent machining ability. The work table is strong supported to get the optimized dynamic precision and long life lasting.
- The major machine parts are made of top-grade cast iron to achieve high rigidity and stable quality.
- The high quality spindle of the machine provides outstanding rotation precision at every speed and equip with coolant by external pipe.
- Pre-stressed precision double nut ball-screws C3 grade in all axis, directly driven by the servo motors in order to eliminate backlash and improve transmission efficiency as well as accurate position control. Inverted "Y" style column with large contact surface result in excellent strength.
- Z axis is driven by big power motor which can eliminate the defect of large current and mechanical balance run-out if with counter weight. It improves the response speed too.

## VL700A

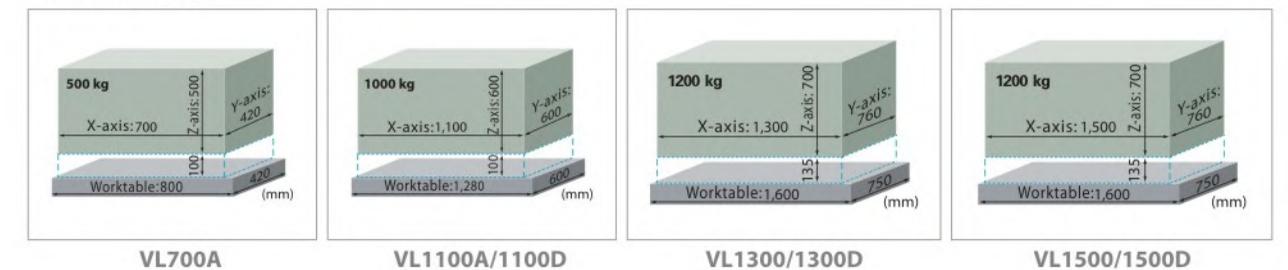


## Technical Parameter

Item	Unit	VL700A	VL1100A	VL1100D	VL1300	VL1300D	VL1500	VL1500D	
Standard controller		FANUC Oi MF							
Travel	X axis travel(work-table)	mm	700	1100	1300		1500		
	Y axis travel(saddle)	mm	420	600	760		760		
	Z axis travel(spindle head)	mm	500	600	700		700		
	Distance from spindle nose to table	mm	100 ~ 600	100 ~ 700	60 ~ 660	135 ~ 835			
	Distance from spindle center to column cover	mm	480	630		780			
Work table	Table size(length x width)	mm	800 x 420	1280 x 600	1280 x 600	1600 x 750			
	Max. table load	kg	500	1000		1200			
	T slot size(width x distance x quantity)	mm	14 x 80 x 5	18 x 100 x 5		18 x 125 x 5			
Spindle	Spindle taper		BT40		BT50	BT40	BT50	BT40	BT50
	Max. spindle speed	rpm	10000(Belt)	10000(Direct driven)	6000(Direct driven)	10000	6000	10000	6000
	Spindle motor power (continual working/Max.)	kW	7.5/11	11/15		15/18.5			
	Spindle torque	N.m	35.8/70	52.5/95.5		95/118	382/460	95/118	382/460
XYZ	Rapid traverse X/Y	mm/min	36000/36000			24000/24000			
	Rapid traverse Z	mm/min	30000			24000			
	Cutting feed rate on X/Y/Z	mm/min	1 - 10000						
ATC	ATC type		Arm type						
	Tool capacity	pcs	24						
	Max. tool diameter	mm	∅80/∅130		∅110/∅220	∅81/∅162	∅110/∅200	∅81/∅162	∅110/∅200
	Max. tool length	mm	350						
	Max. tool weight	kg	8	15	8	15	8	15	
Accuracy	VDI/DGQ3441 Full travel positioning accuracy	mm	P0.010			P0.012			
	Repeatability accuracy	mm	Ps0.008			Ps0.010			
Air pressure	MPa	0.6 ~ 0.8							
Supply voltage & frequency		3/PE, AC380V, 50Hz							
Power requirement	kVA	20	30		25				
Machine size (L/W/H)	mm	3300 x 2700 x 2700	3730 x 3510 x 2850		4015 x 3605 x 3550				
Machine weight	kg	4500	7250		12000		12300		

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

### Moveable Area:





# Double Column Series Convenience in processing large products



## Automatic Head Exchange

The automatic exchange milling head storage has the separated place for head cover and attachment milling head, the movement is designed with linear guide way or rotation cylinder, it can exchange the head rapidly. The separated door is only open during head exchanging, other time it is closed to prevent the coolant go inside as well as prolong the lifetime.



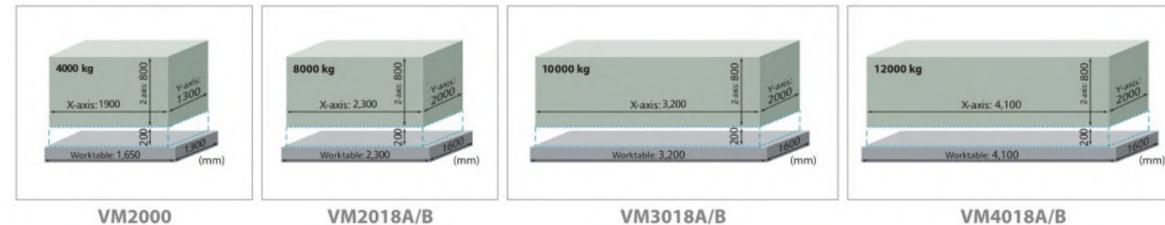
The Double Column Series of Sky Master include such features as high rigidity and modularization. The spindle and BF/ZF gearbox are designed with unique direct driven to eliminate intermediate transmission, ensuring stability during heavy cutting.

# Technical Parameter

Item	Unit	VM2000	VM2018A	VM2018B	VM3018A	VM3018B	VM4018A	VM4018B	
Standard controller		FANUC Oi MF							
Travel	X axis travel	mm	1900	2300	3200		4100		
	Y axis travel	mm	1300		2000				
	Z axis travel	mm	800						
	Distance from spindle nose to table	mm	200 ~ 1000						
	Distance between columns/work piece access height	mm	1840/1000						
Work table	Table size(length x width)	mm	1650 x 1300	2300 x 1600	3200 x 1600		4100 x 1600		
	Max. table load	kg	4000	8000	10000		12000		
	T slot size(width x distance x quantity)	mm	22 x 180 x 7						
Spindle	Spindle taper		BT50	BBT50	BT50	BBT50	BT50	BBT50	
	Max. spindle speed	rpm	6000(Direct driven)	10000(Direct driven)	6000(Direct driven)	10000(Direct driven)	6000(Direct driven)	10000(Direct driven)	
	Spindle motor power (continual working/ Max.)	kW	15/18.5		22 / 26				
	Spindle torque	N.m	427/528	560/662	140/165	560/662	140/165	560/662	140/165
XYZ	Rapid traverse XYZ	mm/min	20000/20000/15000				15000/20000/15000		
	Cutting feed rate on XYZ	mm/min	1-10000						
ATC (Option)	ATC type		Chain type						
	Tool capacity	pcs	24		32				
	Max. tool diameter	mm	∅110/∅220						
	Max. tool length	mm	350						
	Max. tool weight	kg	15		20				
Accuracy	VDI/DGQ3441 Full travel positioning accuracy	mm	P0.015	P0.020	P0.025		P0.030		
	Repeatability accuracy	mm	Ps0.010	Ps0.015	Ps0.020		Ps0.025		
Air pressure	MPa	0.6-0.8							
Supply voltage & frequency		3/PE, AC380V, 50Hz							
Power requirement	kVA	40		60					
Machine size (L/W/H)	mm	4591 x 4674 x 4480	7027 x 5217 x 4520	8927 x 5217 x 4520		10327 x 5217 x 4520			
Machine weight	kg	18000	22000	26000		30000			

如有修改技术参数恕不另行通知，天瑞保留最终解释权

Moveable Area:



## VM2000



ATC is designed with safety enclosure guard and safety switch in order to protect the operator (For example, if the door is opened during running, the machine will stop automatically)

# VM18

## Double Column Series Medium Size Component Machining Center



Use Germany IGUS cable and wire, Phoenix terminals, Schneider contactor, the whole machine's wire arrangement is according to European CE standard.

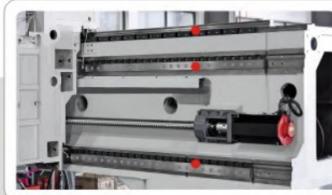
## VM2018B

Full-enclosed splash guard with roof(option)

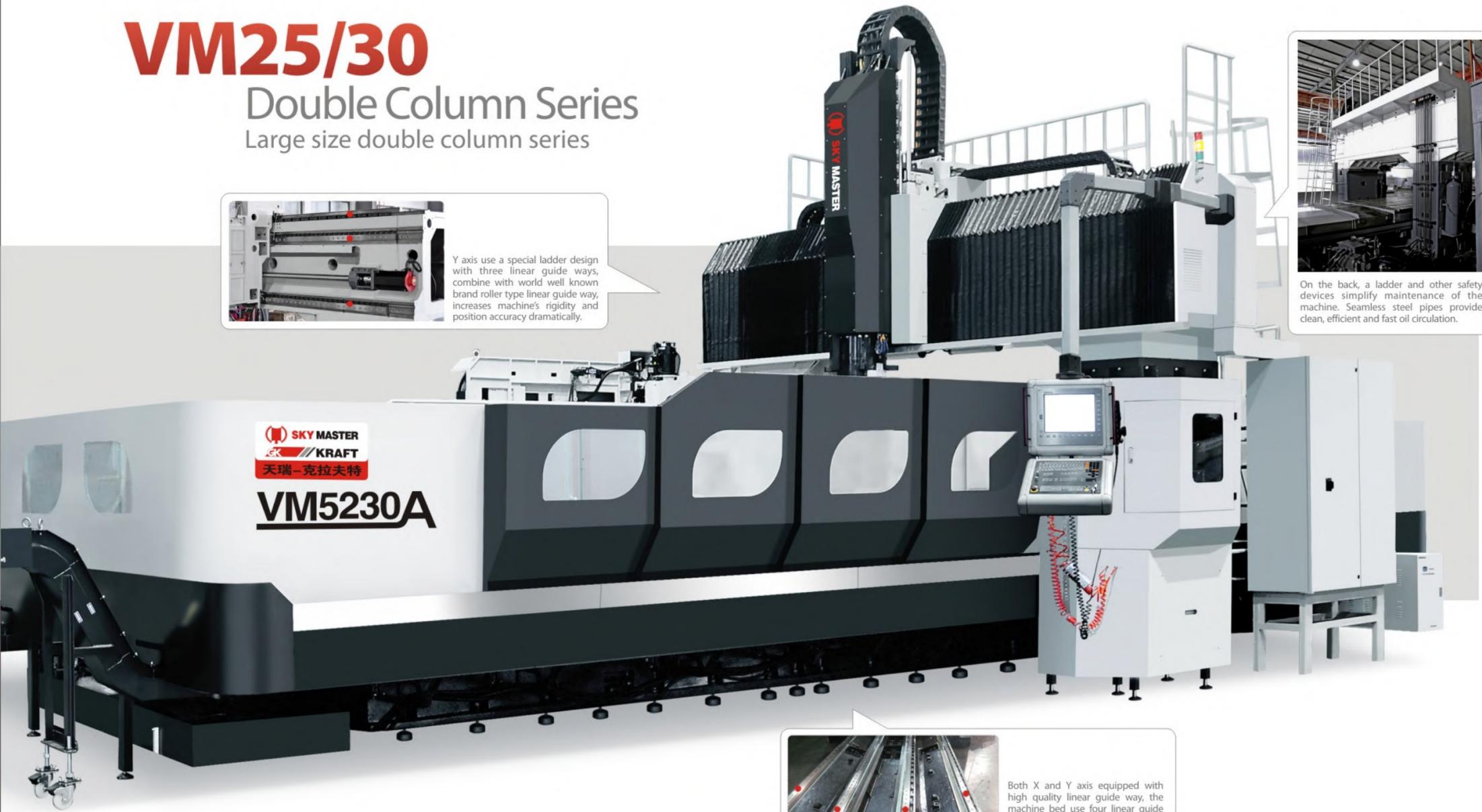


# VM25/30

## Double Column Series Large size double column series



Y axis use a special ladder design with three linear guide ways, combine with world well known brand roller type linear guide way, increases machine's rigidity and position accuracy dramatically.



**SKY MASTER**  
**KRAFT**  
天瑞-克拉夫特

**VM5230A**



On the back, a ladder and other safety devices simplify maintenance of the machine. Seamless steel pipes provide clean, efficient and fast oil circulation.



Both X and Y axis equipped with high quality linear guide way, the machine bed use four linear guide ways to provide great support for the worktable, it also increases worktable's loading ability and lower the vibration while cutting.

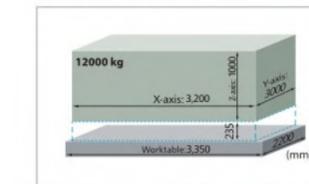
Item							
Standard controller	FANUC Oi MF						
Travel	X axis travel(work-table)	3200		4200		5100	
	Y axis travel(saddle)			3000		3400	
	Z axis travel(spindle head)	1000					
	Distance from spindle nose to table	235 - 1235					
Work table	Distance between columns/work piece access height	2550/1300				3050/1300	
	Table size(length x width)	3350 x 2200		4350 x 2200		5350 x 2200	
	Max. table load	15000		18000		21000	
	T slot size(width x distance x quantity)	28 x 250 x 13		28 x 250 x 17		28 x 250 x 21	
Spindle	Spindle taper	BT50	BBT50	BT50	BBT50	BT50	
	Max. spindle speed	6000(Direct driven) 10000(Direct driven)					
	Spindle motor power (continual working/ Max.)	22/26					
X/Y/Z	Spindle torque	560/662		140/165		560/662	
	Rapid traverse X/Y/Z	15000/18000/15000		12000/18000/15000		15000/18000/15000	
	Cutting feed rate on X/Y/Z	1 - 8000					
ATC (Option)	ATC type	Chain type					
	Tool capacity	32					
	Max. tool diameter	∅110/∅225					
	Max. tool length	350					
Accuracy	Max. tool weight	20					
	VDI/DGQ3441	Full travel positioning accuracy		P0.025		P0.030	
	Repeatability accuracy	Ps0.020		Ps0.025		Ps0.030	
Air pressure	0.6 - 0.8						
Supply voltage & frequency	3/PE, AC380V, 50Hz						
Power requirement	60						
Machine size(L/W/H)	mm	10125 x 6840 x 4715		12035 x 6840 x 4715		14035 x 6840 x 4715	
	kg	40000		45000		50000	
Machine weight	42000		47000		52000		

## Technical Parameter

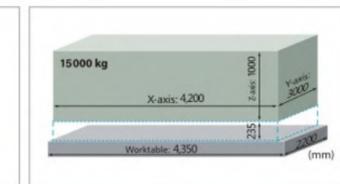
Unit	VM3225A	VM3225B	VM4225A	VM4225B	VM5225A	VM5225B	VM3230A	VM4230A	VM5230A
	FANUC Oi MF								
mm	3200		4200		5100		3200	4200	5100
mm			3000				3400		
mm	1000								
mm	235 - 1235								
mm	2550/1300						3050/1300		
mm	3350 x 2200		4350 x 2200		5350 x 2200		3350 x 2200	4350 x 2200	5350 x 2200
kg	15000		18000		21000		15000	18000	21000
mm	28 x 250 x 13		28 x 250 x 17		28 x 250 x 21		28 x 250 x 13	28 x 250 x 17	28 x 250 x 21
	BT50	BBT50	BT50	BBT50	BT50	BBT50	BT50		
rpm	6000(Direct driven) 10000(Direct driven)								
kW	22/26								
N.m	560/662	140/165	560/662	140/165	560/662	140/165	560/662		
mm/min	15000/18000/15000			12000/18000/15000			15000/18000/15000		12000/18000/15000
mm/min	1 - 8000								
	Chain type								
pcs	32								
mm	∅110/∅225								
mm	350								
kg	20								
mm	P0.025		P0.030		P0.040		P0.025	P0.030	P0.040
mm	Ps0.020		Ps0.025		Ps0.030		P0.020	P0.025	P0.030
MPa	0.6 - 0.8								
kVA	60								
mm	10125 x 6840 x 4715		12035 x 6840 x 4715		14035 x 6840 x 4715		10125 x 6840 x 4715	12035 x 6840 x 4715	14035 x 6840 x 4715
kg	40000		45000		50000		42000	47000	52000

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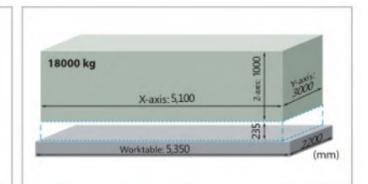
Moveable Area:



VM3225A/3225B



VM4225A/4225B



VM5225A/5225B



# Double Column Series

## Large Size Component Machining Center (Box way)

- The spindle was driven by a digital servo motor, max. speed 6000rpm. The motor transfer its power through deceleration gearbox and belt to the spindle. The maximum torque is 662N.m.
- Z axis use box way with adjustable wedges ,the die-cast guide way surface is treated with high frequency quenching and precise grinding, plastic wear-resisting plate stick on the slide guide surface and formed with scrapping in order to meet the requirement for high accuracy in high speed and no vibration in low speed.
- The Z axis equipped with nitrogen balance device for weight distribution. This device has a simple structure, also runs smoothly, make sure the best precision for Z axis.

# VM3225

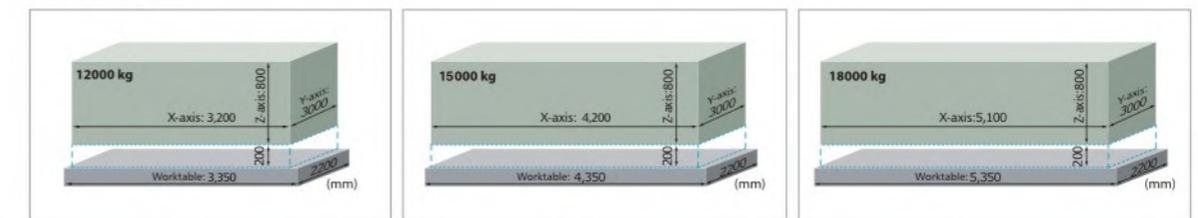


## 技术参数

Item	Unit	VM3225	VM4225	VM5225	
Standard controller		FANUC 0i MF			
Travel	X axis travel(work-table)	mm	3200	4200	5100
	Y axis travel(saddle)	mm	3000		
	Z axis travel(spindle head)	mm	800		
	Distance from spindle nose to table	mm	200 - 1000		
	Distance between columns/ work piece access height	mm	2550/1100		
Work table	Table size(length x width)	mm	3350 x 2200	4350 x 2200	5350 x 2200
	Max. table load	kg	15000	18000	21000
	T slot size(width x distance x quantity)	mm	28 x 250 x 13	28 x 250 x 17	28 x 250 x 21
Spindle	Spindle taper		BT50		
	Max. spindle speed	rpm	6000		
	Spindle motor power (continual working/ Max.)	kW	22/26		
XYZ/Z	Spindle torque	N.m	560/662		
	Rapid traverse X	mm/min	12000		
	Rapid traverse Y	mm/min	18000		
	Rapid traverse Z	mm/min	10000		
ATC (Option)	Cutting feed rate on XYZ	mm/min	1 - 8000		
	ATC type		Chain type		
	Tool capacity	pcs	32		
	Max. tool diameter	mm	Ø110/Ø225		
Accuracy	Max. tool length	mm	350		
	Max. tool weight	kg	20		
	VDI/DGQ3441	Full travel positioning accuracy Repeatability accuracy	mm	P0.025 Ps0.020	P0.030 Ps0.025
Air pressure	MPa	0.6 - 0.8			
Supply voltage & frequency		3/PE, AC380V, 50Hz			
Power requirement	kVA	60			
Machine size(L/W/H)	mm	10125 x 6840 x 4515	12035 x 6840 x 4515	14035 x 6840 x 4515	
Machine weight	kg	40000	45000	50000	

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

### Moveable Area:



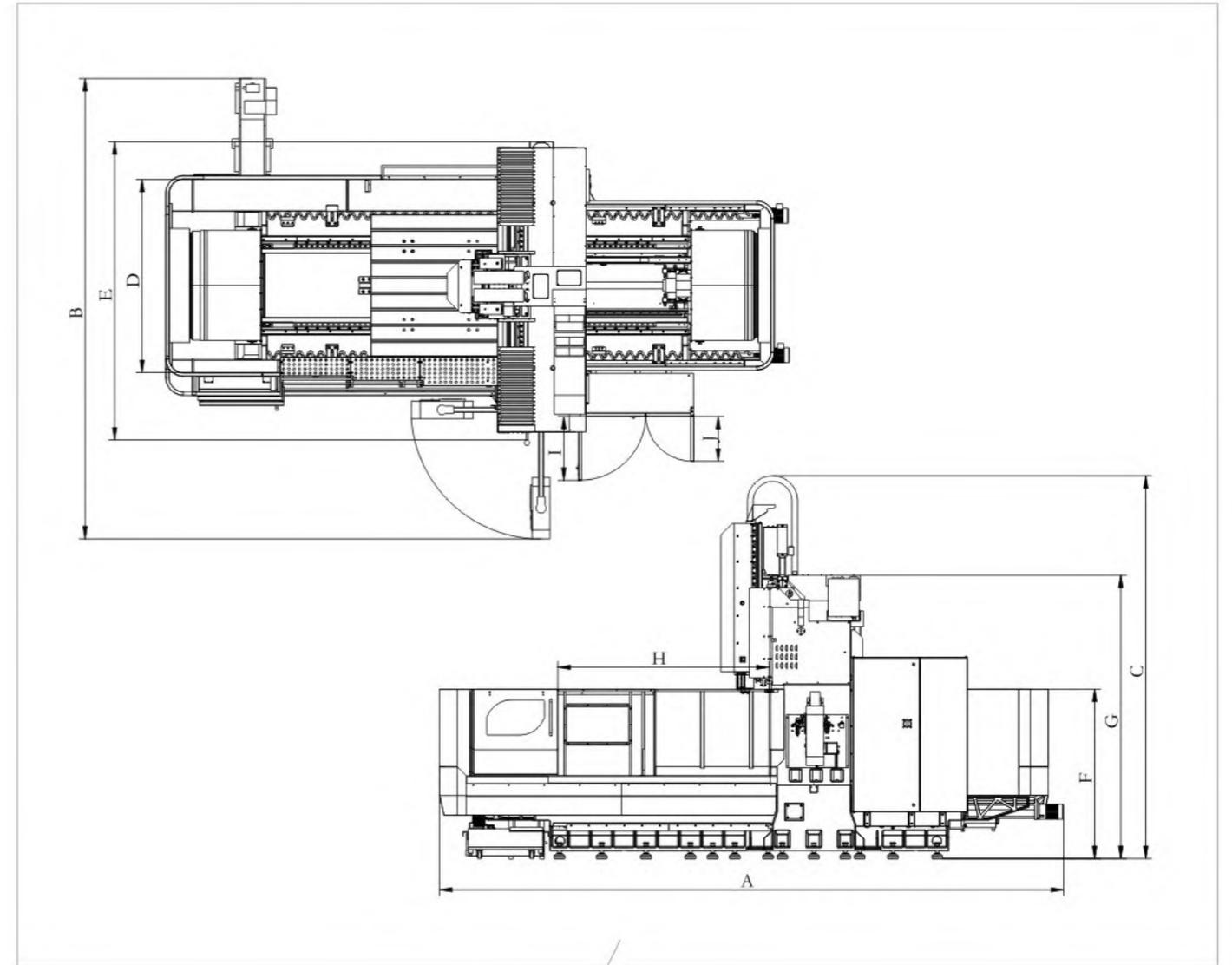
VM3225

VM4225

VM5225

Standard&Option	VM2000	VM2018A	VM3018A	VM4018A	VM2018B	VM3018B	VM4018B	VM3225A	VM4225A	VM5225A	VM3230A	VM4230A	VM5230A	VM3225B	VM4225B	VM5225B
FANUC 0i MF absolute type	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
HEIDENHAIN TNC620	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Fine quality machining package	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rigid tapping	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Full-enclosed splash guard	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Spindle with gear box 6000rpm	●	●	×	●	×	●	×	●	●	×	●	●	×	●	●	●
Direct driven spindle 8000rpm	○	×	○	×	○	×	○	×	×	○	×	×	○	○	○	○
Direct driven spindle 10000rpm	○	×	●	×	●	×	●	×	×	●	×	×	○	○	○	○
Direct driven spindle 15000rpm	○	×	○	×	○	×	○	×	×	○	×	×	○	○	○	○
Spindle air sealing	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Air blowing device	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Working area light	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3 colors warning light	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Heat exchanger in electrical cabinet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
A/C for electric cabinet	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Portable MPG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tool coolant system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Lubrication system/pneumatic system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Adjustable level bolts and foundation blocks	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Coil chip conveyor	●	●	●	●	●	●	●	×	×	×	×	×	×	×	×	×
Chain chip conveyor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tool box	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Air gun/water gun with flushing function	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Automatically power off	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Transformer	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Spindle chiller	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Operation manual	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Safety door interlock	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Z axis travel 1000mm	○	○	○	○	○	○	○	×	●	●	×	●	●	●	●	●
Z axis travel 1300mm (four linear guide)	×	×	×	×	×	×	×	○	○	×	○	○	○	○	○	○
Z axis travel 1500mm (four linear guide)	×	×	×	×	×	×	×	○	○	×	○	○	○	○	○	○
Full enclosed guard with roof	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Whole column raise 200mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Split column raise 200mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Split column raise 300mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Arm type ATC 24T (pneumatic)	○	○	○	○	○	○	○	×	×	×	×	×	×	×	×	×
Chain type ATC 32T (pneumatic)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chain type ATC 40T/60T (pneumatic)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
5 axis controller function	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Oil-feed tool shank port (15kg with water pump)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Oil and water separator machine	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Voltage stabilizer	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Coolant through spindle center	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
4th axis/5th axis	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Heidenhain absolute linear scale	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Measuring system (tool, workpiece)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Attachment milling head	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rotation storage for attachment head	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Full enclosed iron box packaging	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Warranty prolong 1 year	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● Standard ○ Optional × Not available



### Dimensions

	A	B	C	D	E	F	G	H	I	J
VM2000	4590	4674	4480	2740	3438	2300	3213	1350	740	508
VM2018A/2018B	7027	5217	4520	2190	3438	1920	3420	2400	508	740
VM3018A/3018B	8927	5217	4520	2190	3438	1920	3420	3000	508	740
VM4018A/4018B	10327	5217	4520	2190	3438	1920	3420	3000	508	740
VM3225/3225A/3225B	10125	6840	4980	2984	4614	1940	4326	3000	740	508
VM4225/4225A/4225B	12035	6840	4980	2984	4614	1940	4326	4000	740	508
VM5225/5225A/5225B	14035	6840	4980	2984	4614	1940	4326	4000	740	508
VM3230A	10125	6840	4515	2984	4614	1940	3642	3000	740	508
VM4230A	12035	6840	4515	2984	4614	1940	3642	4000	740	508
VM5230A	14035	6840	4515	2984	4614	1940	3642	4000	740	508

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# 03 Workshop & Equipment

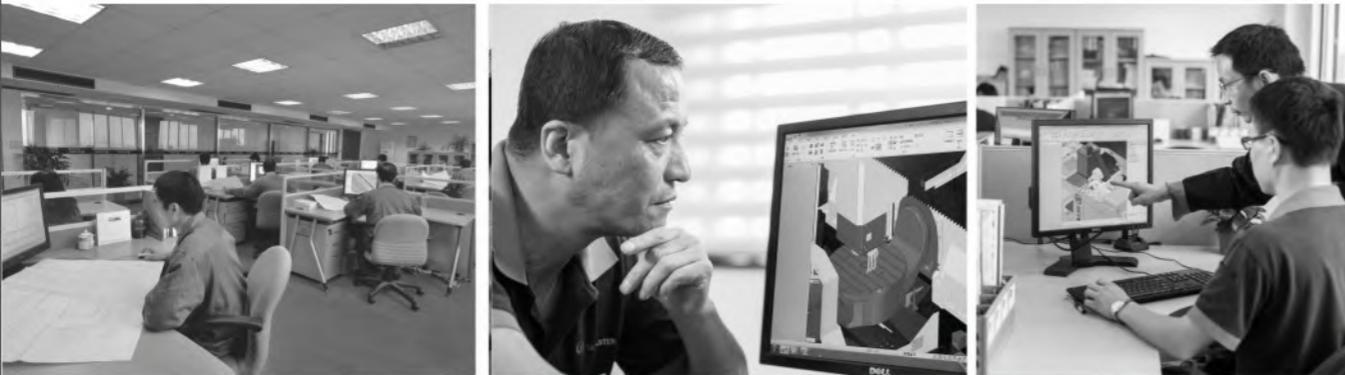
Decades experience and Germany technology keep Sky Master always supplying reliable products.



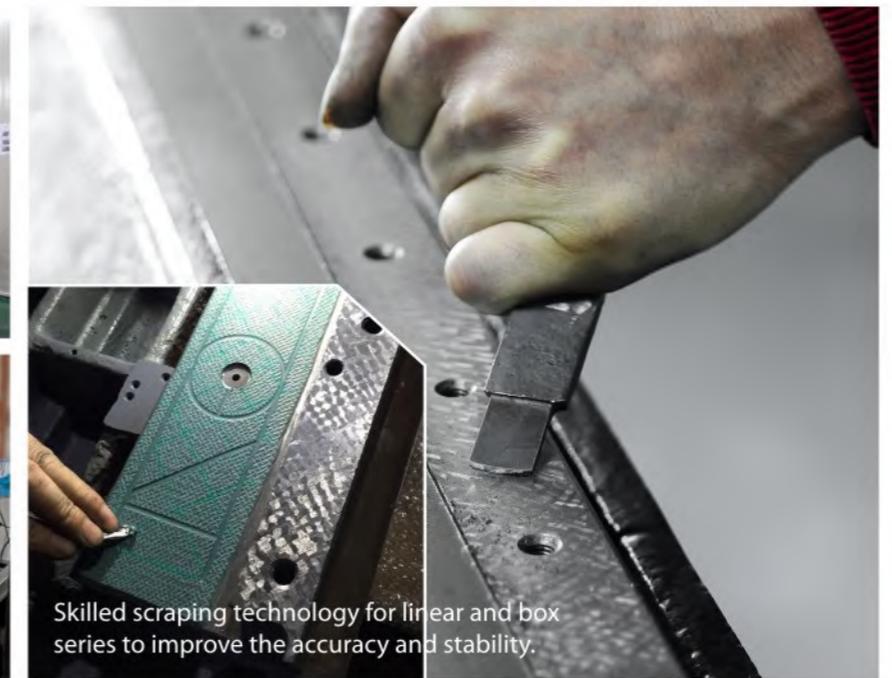
# 04 R&D, Inspection

- Sky Master work steadily in a spirit of responsibility for clients.
- Every machine is under strict quality control and inspection in order to keep the accuracy.
- We understand quality is essential to a company and more understand that product is important to the client.

Small steps make large distance



Quality! Control every detail always

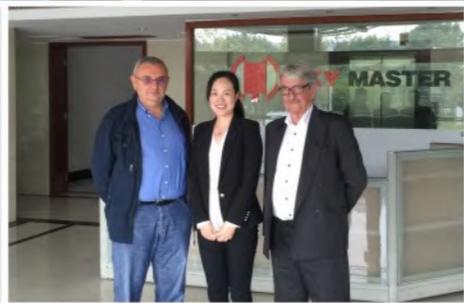


# 05 Service

Use our wisdom to supply you the best solution



Union  
Efficiency

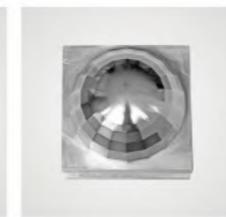


# 05.1 Trial Processing

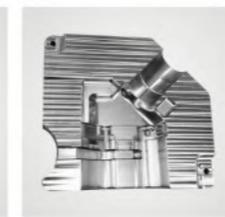
Supply the trial processing for clients



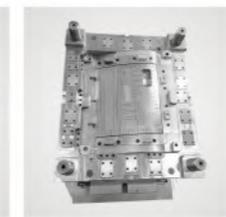
Benz testing sample



Round testing sample



Aluminum die casting mold



Auto interior decoration mold



Auto lamp mould



Auto lamp mould

## 06 Automation&Turn-key Project

According to Industry 4.0, automation is the inevitable trend, industry robot is the critical factor in Chinese industry 4.0 strategy. Following the marketing requirement, SKY MASTER and WELLLIH robot cooperate and design the VL1100 with automatic flexible machining system which can execute work-piece lift, clamping, position controlling, machining, inspection and all around function. It supply the whole solution for industry automation and upgrade the SKY MASTER machine at same time.



## 07 Customer Application

Gain the customers reliance and support by manufacturing with heart always

