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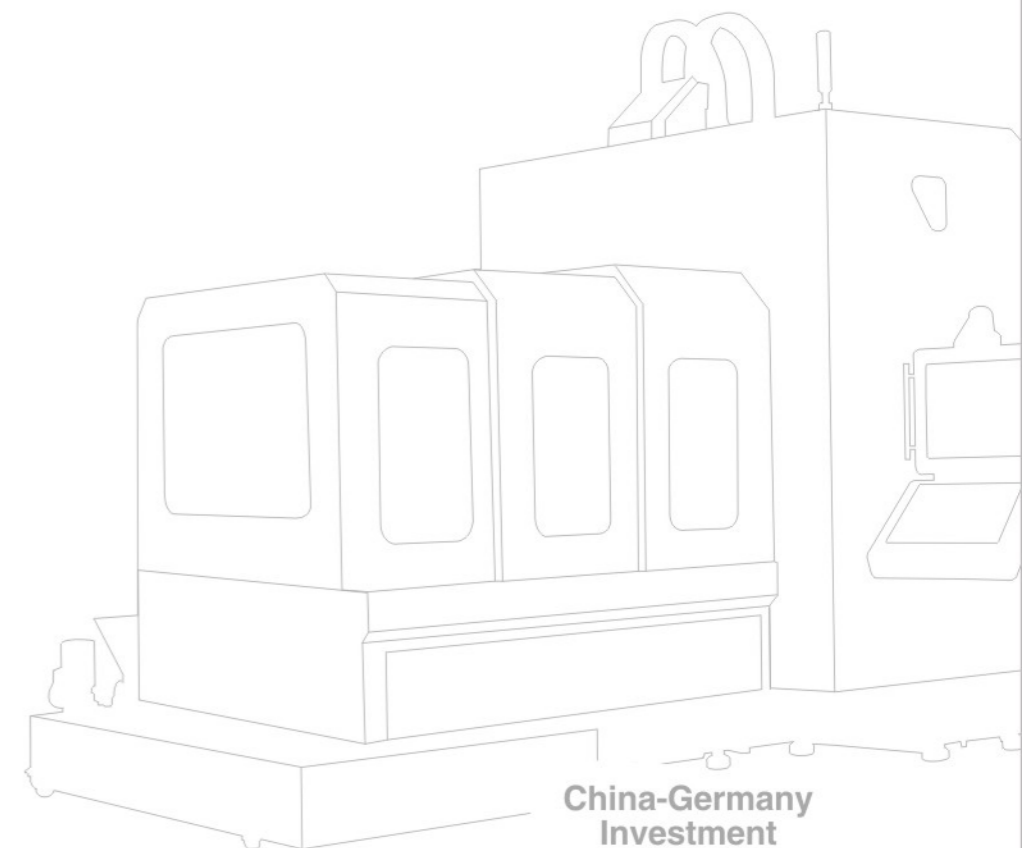


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China-Germany
Investment
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01 Company Brief



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 R&D team 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.



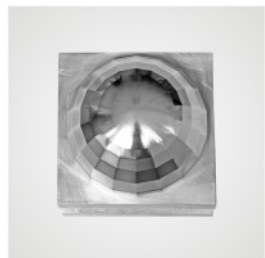


02 Industry Application

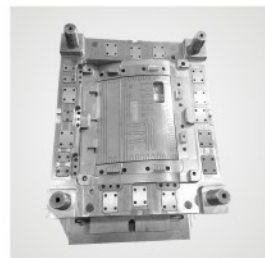
Because of Germany technical supporting, Sky Master-Kraft machines are widely used in top mould machining such as the industry field in aerospace, medical equipment, auto, high-speed rail, ship and so on. It is the powerful equipment supporting to complicated mould and die.



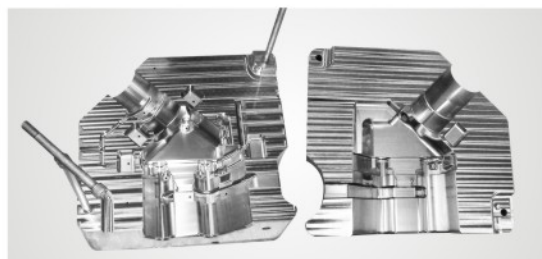
Benz testing sample



Round testing sample



Auto interior decoration mould



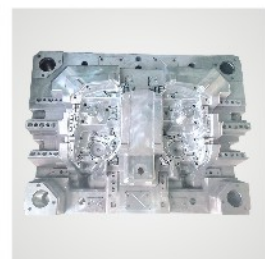
Aluminum die casting mould



Auto interior decoration mould



Auto lamp mould



Auto lamp mould



03 Products



High Speed Series

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



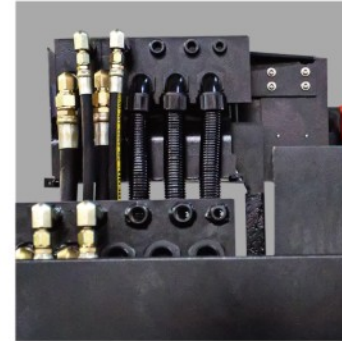
From 2012, Sky Master stepped into the new high-speed series. Based on advanced design concepts and outstanding technological support, Sky Master high-speed machines fill up various gaps in the field of domestic high-speed machines, and can reach up to 1.2 G acceleration and 0.005 mm repeated positioning 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.
- The standard machine is equipped with Fanuc absolute controller with high quality machining package(including AI contour control II, smooth tolerance control, Jerk control, machining quality level adjustment function).

VF108

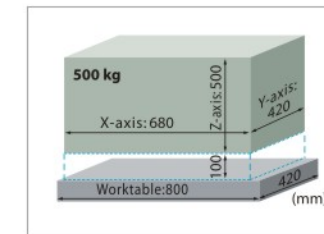


Technical Parameter

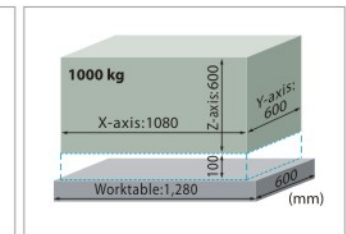
Item	Unit	VF68	VF108
Standard Controller		FANUC 0i MF	
Travel	X axis travel(work-table)	680	1080
	Y axis travel(saddle)	420	600
	Z axis travel(spindle head)	500	600
	Distance from spindle nose to table	100 ~ 600	100 ~ 700
	Distance from spindle center to column cover	460	630
Work table	Table size(length × width)	800 × 420	1280 × 600
	Max. table load	500	1000
	T slot size(width × distance × quantity)	14 × 80 × 5	18 × 100 × 5
Spindle	Spindle taper	HSK-A63	
	Max. spindle speed	15000(Direct driven)	
	Spindle motor power (continual working/ 30mins)	7.5/11	
	Spindle torque	47.7/70	
X/Y/Z	Rapid traverse X/Y	40000	36000
	Rapid traverse Z	32000	24000
	Cutting feed rate on X/Y/Z	1-10000	
ATC (Option)	Tool capacity	20(Arm type)	24(Arm type)
	Max. tool diameter	φ95/φ125	φ80/φ130
	Max. tool length	350	
	Max. tool weight	8	
Accuracy	VDI/DGQ3441 Full travel positioning accuracy	P0.010	P0.010
	Repeatability accuracy	Ps0.008	Ps0.008
Air pressure	MPa	0.6 ~ 0.8	
Supply Voltage & Frequency		3/PE,AC380V,50Hz	
Power requirement	kVA	30	
Machine size (length/width/height)	mm	3135 × 2955 × 2490	4400 × 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 high speed double column series with European design is special for high precision mould, die-set and nonferrous metal component machining.
- 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 standard controller Mitsubishi M730VW(except model VF1290) is absolute type with Nano grade which has function of high speed high accuracy II,SSScontrol(super smooth surface),Windows operation interface with 10G hard disk,OMR-II control, automatic center setting and machining condition selecting.
- VF1290 is equipped with Fanuc absolute controller with precise machining package.
- All three axis use European high-end linear guide way and high brand ball screw ,providing precise accuracy and stable rapid traverse
- The working area is completely enclosed with a protective housing provides operator with easy operation .
- The coolant tank is equipped with oil/water separator which can protect the working environment and prolong the life time of coolant.

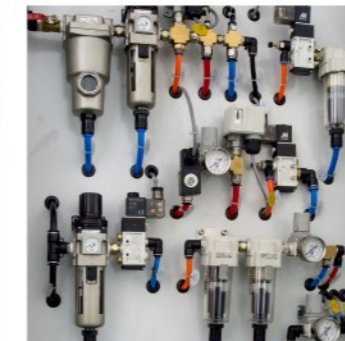
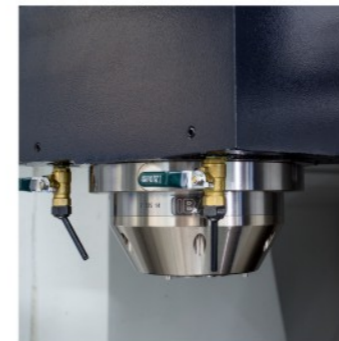
VF1290A



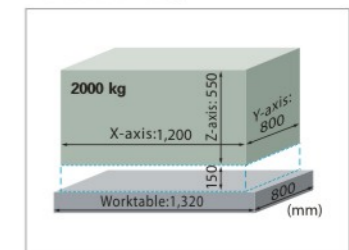
Technical Parameter

Item	Unit	VF1290	VF1290A	VF1290B	
Standard Controller		FANUC 0i MF		Mitsubishi M730VW	
Travel	X axis travel(work-table)	mm	1200		
	Y axis travel(saddle)	mm	800		
	Z axis travel(spindle head)	mm	550		
	Distance from spindle nose to table	mm	150 ~ 700		
	Distance between columns	mm	920		
Work table	Table size(length × width)	mm	1320 × 800		
	Max. table load	kg	2000		
	T slot size(width × distance × quantity)	mm	14 × 120 × 7		
Spindle	Spindle taper		HSK-A63		
	Max. spindle speed	rpm	15000 (Direct driven)	24000 (Build-in)	36000(Build-in)
	Spindle motor power (continual working/ 30mins)	kW	7.5/11	30/39	20/26
	Spindle torque	N.m	47.7/70	29.1/37.8	10.4/13.5
X/Y/Z	Rapid traverse (X/Y/Z)	mm/min	30000	40000	
	Cutting feed rate (X/Y/Z)	mm/min	1 ~ 10000	1 ~ 20000	
ATC (Option)	Tool capacity	pcs	20(Drum type ATC)	20(Drum type ATC)	24(Drum type ATC)
	Max. tool diameter	mm	φ100/φ130		
	Max. tool length	mm	300		
	Max. tool weight	kg	8		
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(length/width/height)	mm	5026x4276x3210			
Machine weight	kg	12000			

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



Moveable Area :



VF1290/1290A/1290B



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 standard controller Mitsubishi M730VW is absolute type with Nano grade which has function of high speed high accuracy II, SSScontrol(super smooth surface), Windows operation interface with 10G hard disk, OMR-II control, automatic center setting and machining condition selecting.
- 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



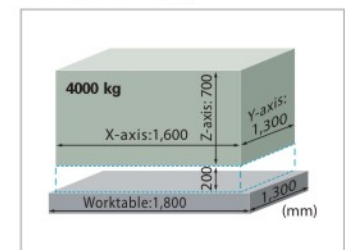
Technical Parameter

Item	Unit	VF1615	VF1615A	VF1615B	
Standard Controller		Mitsubishi M730VW			
Travel	X axis travel(work-table)	mm	1600		
	Y axis travel(saddle)	mm	1300		
	Z axis travel(spindle head)	mm	700		
	Distance from spindle nose to table	mm	200 ~ 900	225 ~ 925	250 ~ 950
	Distance between columns	mm	1500		
Work table	Table size(length × width)	mm	1800 × 1300		
	Max. table load	kg	4000		
	T slot size(width × distance × quantity)	mm	22 × 160 × 8		
Spindle	Spindle taper		HSK-A63	HSK-E50	
	Max. spindle speed	rpm	15000 (Direct driven)	24000 (Build-in)	36000 (Build-in)
	Spindle motor power (continual working/ 30mins)	kW	15/18.5	25/33	20/26
	Spindle torque	N.m	95/118	72.6/95.8	10.4/13.5
X/Y/Z	Rapid traverse (X/Y/Z)	mm/min	30000		
	Cutting feed rate (X/Y/Z)	mm/min	1 ~ 20000		
ATC (Option)	Tool capacity	pcs	20 (Drum type ATC)		24 (Drum type ATC)
	Max. tool diameter	mm	φ100/φ130		φ80/φ130
	Max. tool length	mm	300		220
	Max. tool weight	kg	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	60	80		
Machine Size(length/width/height)	mm	5660x5295x3930			
Machine weight	kg	22000			

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Moveable Area:

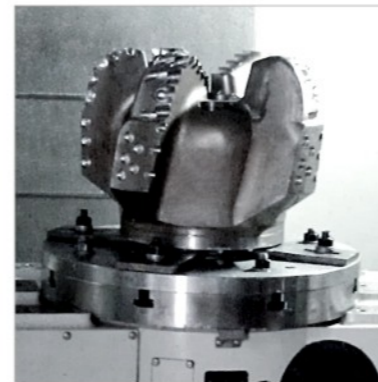
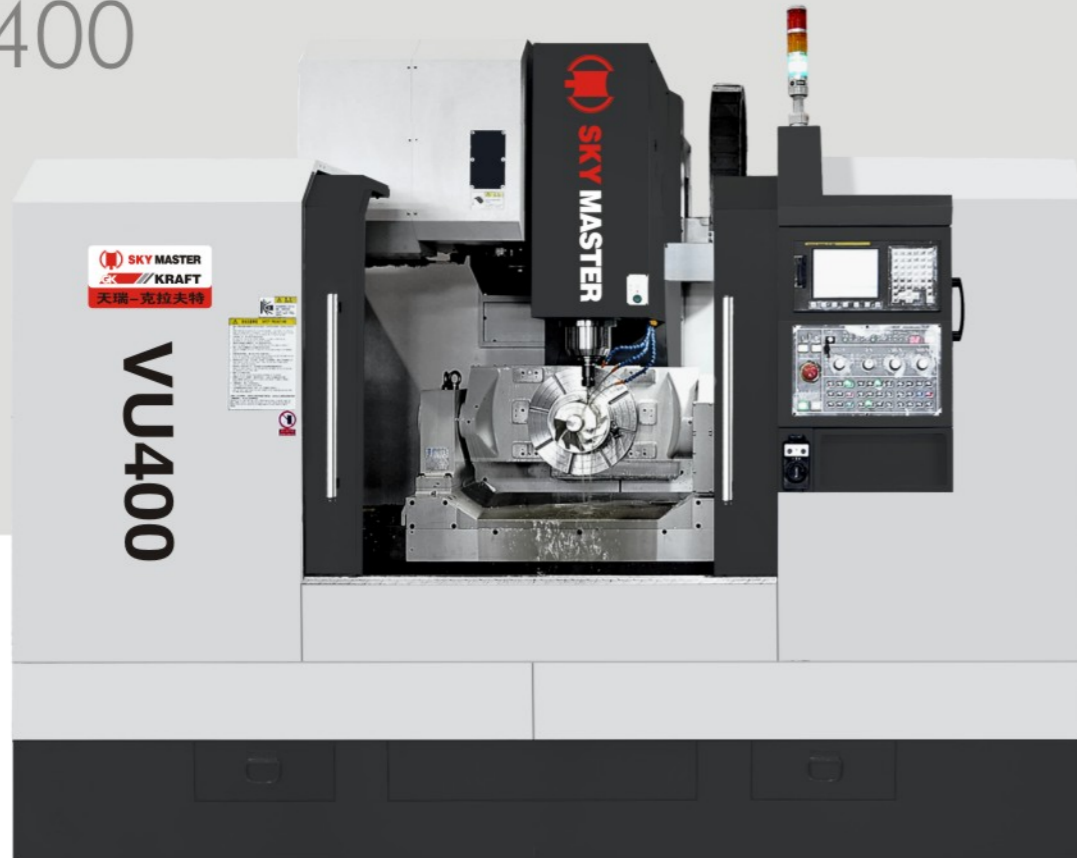


VF1615/1615A/1615B

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.
- A axis with double supporting, the rotation center of A axis is coincident with C axis',the machine has the advantage of compact structure ,high rigidity ,Max table loading and accurate positioning.
- The angle of inclination for A axis is $-42^{\circ} \sim +120^{\circ}$ with Y axis traveling 580mm to achieve large machining scope .
- The standard machine is equipped with chain chip conveyor,5 axis in synchronization is available .

VU400

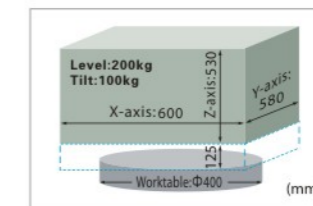


Technical Parameter

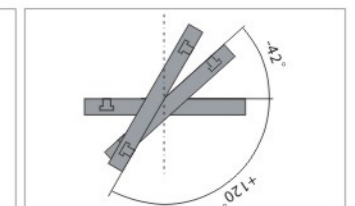
Item	Unit	VU400	VU400A	
Standard Controller		FANUC 0i MF (any 4 axis in synchronization)	HEIDENHAIN TNC 620 (5 axis in synchronization)	
Travel	X axis travel(work-table)	mm	600	
	Y axis travel(saddle)	mm	580	
	Z axis travel(spindle head)	mm	530	
	Distance from spindle nose to table	mm	100~630	
	Distance from spindle center to column cover	mm	630	
Work table	Table diameter	mm	φ400	
	T slot size (quantity × width)	mm	8X12	
	Max. table load	Level	kg	200
		Tilt	kg	100
	Rotation angle	A axis		$+120^{\circ} \sim -42^{\circ}$
C axis			360°	
Max.speed	A axis	rpm	13.3	
	C axis	rpm	22.2	
Spindle	Spindle taper		BT40	
	Max. spindle speed	rpm	8000	
	Spindle motor power (continual working/ 30mins)	kW	7.5/11	
	Spindle torque	N.m	47.7/70	
X/Y/Z	Rapid traverse X/Y	mm/min	30000	
	Rapid traverse Z	mm/min	24000	
	Cutting feed rate on X/Y/Z	mm/min	1-10000	
ATC	Tool capacity	pcs	24(Arm type)	
	Max. tool diameter	mm	φ80/φ130	
	Max. tool length	mm	350	
	Max. tool weight	kg	8	
Accuracy	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 (length/width/height)	mm	4500 × 3253 × 2950	4400 × 3510 × 2837	
Machine weight	kg	7400	7650	

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Moveable Area:



VU400



A axis tilt angle

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 machine 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 strengthness.
- 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.

VL700

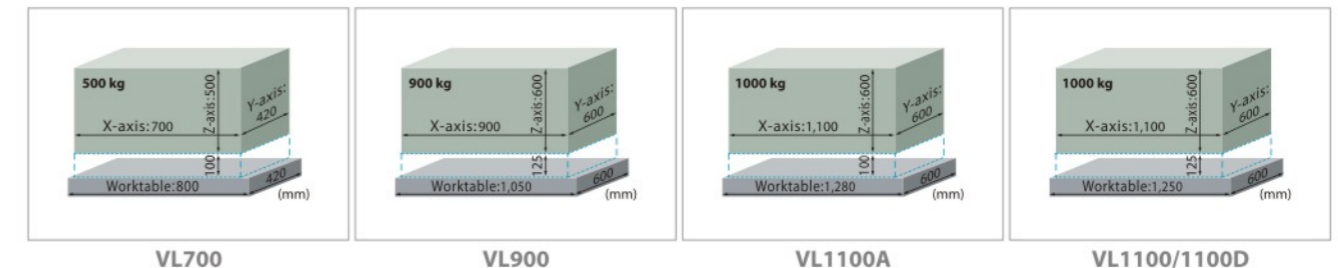


Technical Parameter

Item	Unit	VL700	VL900	VL1100	VL1100A	VL1100D		
Standard Controller		FANUC 0i MF						
Travel	X axis travel(work-table)	mm	700	900	1100			
	Y axis travel(saddle)	mm	420	600				
	Z axis travel(spindle head)	mm	500	600				
	Distance from spindle nose to table	mm	100~600	125~725		100~700	125~725	
	Distance from spindle center to column cover	mm	460	630				
Work table	Table size(length × width)	mm	800 × 420	1050 × 600	1250 × 600	1280 × 600	1250 × 600	
	Max. table load	kg	500	900	1000			
	T slot size(width × distance × quantity)	mm	14 × 80 × 5	18 × 100 × 5				
Spindle	Spindle taper		BT40			BT50		
	Max. spindle speed	rpm	8000			10000(Direct driven)		6000
	Spindle motor power (continual working/ 30mins)	kW	11/15					
	Spindle torque	N.m	52.5/95.5					
X/Y/Z	Rapid traverse X/Y	mm/min	36000	30000		36000	30000	
	Rapid traverse Z	mm/min	30000	24000				
	Cutting feed rate on X/Y/Z	mm/min	1~10000					
ATC	Tool capacity	pcs	20 (Arm type)	24 (Arm type)		16 (Arm type)		
	Max. tool diameter	mm	φ95/φ125	φ80/φ130			φ125/φ250	
	Max. tool length	mm	350					
	Max. tool weight	kg	8			15		
Accuracy	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	20						
Machine size(length/width/height)	mm	3135 × 2955 × 2490	4500 × 3253 × 2750		4400 × 3510 × 2837	4500 × 3253 × 2750		
Machine weight	kg	4500	6500	6800	7250	7300		

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

Moveable Area:





Linear Guide Way

- VL1300/1500 with 10000rpm BT40 standard spindle is designed for auto, textile machine and other industry parts which need high efficiency machining.
- VL1300D/1500D with 6000RPM ,BT50 spindle and two stage gear box widely used for mould-base, mould and all kinds of steel and die-cast workpiece.
- All three axis use roller linear guide way, machine bed with 4 guide ways give the best supporting to the worktable while move in full travels.
- Large span column frame ensure the good vibration absorpction while continue machining.
- 24pcs Arm type ATC with one-time clamping and rapid tool exchange to execute the component machining.
- The one piece design of enclosure splash guard equip with 2 coil chip conveyor supply large machining space

VL1500

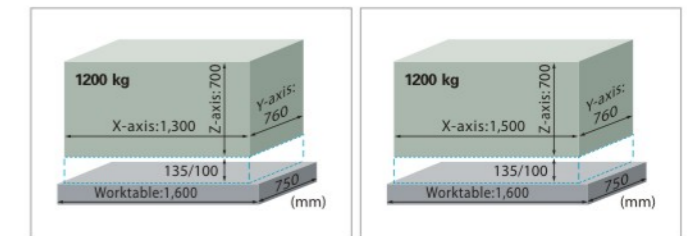


Technical Parameter

Item	Unit	VL1300	VL1300D	VL1500	VL1500D
Standard Controller		FANUC Oi MF			
Travel	X axis travel(work-table)	1300		1500	
	Y axis travel(saddle)	760			
	Z axis travel(spindle head)	700			
	Distance from spindle nose to table	135 ~ 835	100 ~ 800	135 ~ 835	100 ~ 800
	Distance from spindle center to column cover	790			
Work table	Table size(length × width)	1600 × 750			
	Max. table load	1200			
	T slot size(width × distance × quantity)	18 × 125 × 5			
Spindle	Spindle taper	BT40	BT50	BT40	BT50
	Max. spindle speed	10000	6000	10000	6000
	Spindle motor power (continual working/ 30mins)	15/18.5			
	Spindle torque	95/118	382/460	95/118	382/460
X/Y/Z	Rapid traverse X,Y,Z	24000			
	Max. cutting feed rate X,Y,Z	1 ~ 10000			
ATC	Tool capacity	24(Arm type)			
	Max. tool diameter	φ81/φ162	φ110/φ200	φ81/φ162	φ110/φ200
	Max. tool length	350			
	Max. tool weight	8	15	8	15
Accuracy	VDI/DGQ3441 Full travel positioning accuracy	P0.012			
	Repeatability accuracy	Ps0.010			
Air pressure	MPa	0.6 ~ 0.8			
Supply voltage & frequency		3 /PE, AC380V, 50Hz			
Power requirement	kVA	40			
machine size(length/width/height)	mm	4015 × 3605 × 3410			
Machine weight	kg	12000		12300	

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Moveable Area:



VL1300/D

VL1500/D



Box Way Series

- The VB series has an outstanding ability for mould machining and powerful cutting.
- A high efficient spindle cooling system dissipates heating in order to achieve high spindle accuracy and extends spindle life-time.
- The machine base has 4 hardened box ways, achieving great stability, combined with imported wear resisting slices, which is resulting in low friction and long life.
- A 'convex' style machine bed provides maximum rigidity. The saddle is without overhanging phenomenon and combines with large span machine bed which can support heavy duty cutting with rigidity and precision .
- The 3 axis motor direct drive the precise ball screw to achieve high accuracy.
- An advanced counter weight is guided by a lead bar to achieve smooth Z axis movement(VB1000,VB1200 use nitrogen cylinder).

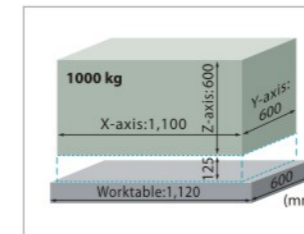
VB1600



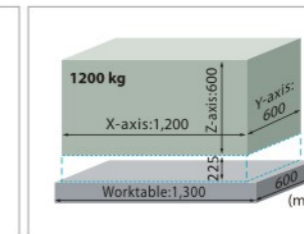
Technical Parameter

Item	Unit	VB1000	VB1200	VB1600
Standard controller		FANUC 0i MF		
Travel	X axis travel(work-table)	1000	1200	1600
	Y axis travel(saddle)	600		800
	Z axis travel(spindle head)	600		800
	Distance from spindle nose to table	125 ~ 725	225 ~ 825	200 ~ 1000
	Distance from spindle center to column cover	630		840
Work table	Table size(length x width)	1120 x 600	1300 x 600	1800 x 800
	Max. table load	1000	1200	1500
	T slot size(width x distance x quantity)	18 x 125 x 5		18 x 115 x 7
Spindle	Spindle taper	BT40	BT50	
	Max. spindle speed	8000	6000	
	Spindle motor power (continual working/ 30mins)	11/15		
	Spindle torque	52.5/95.5	70/95.5	95.5/118
X/Y/Z	Rapid traverse X/Y	20000	18000	15000
	Rapid traverse Z	18000	15000	12000
	Cutting feed rate on X/Y/Z	1-10000 1-8000		
ATC (Option)	Tool capacity	24(Arm type)	16(Arm type)	24(Arm type)
	Max. tool diameter	φ80/φ130	φ125/φ250	
	Max. tool length	350		
	Max. tool weight	8	15	
Accuracy	VDI/DGQ3441 Full travel positioning accuracy	P0.015		
	Repeatability accuracy	Ps0.010		
Air pressure	MPa	0.6 ~ 0.8		
Supply voltage & frequency		3/PE, AC380V, 50Hz		
Power requirement	kVA	30	40	
machine size(length/width/height)	mm	4500 x 3253 x 2750	4500 x 3253 x 2850	6600 x 3300 x 3300
Machine weight	kg	6800	7200	16000

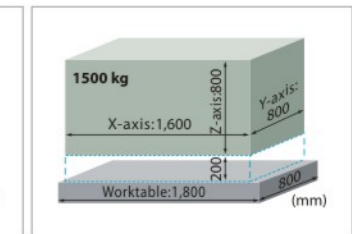
Moveable Area:



VB1000



VB1200

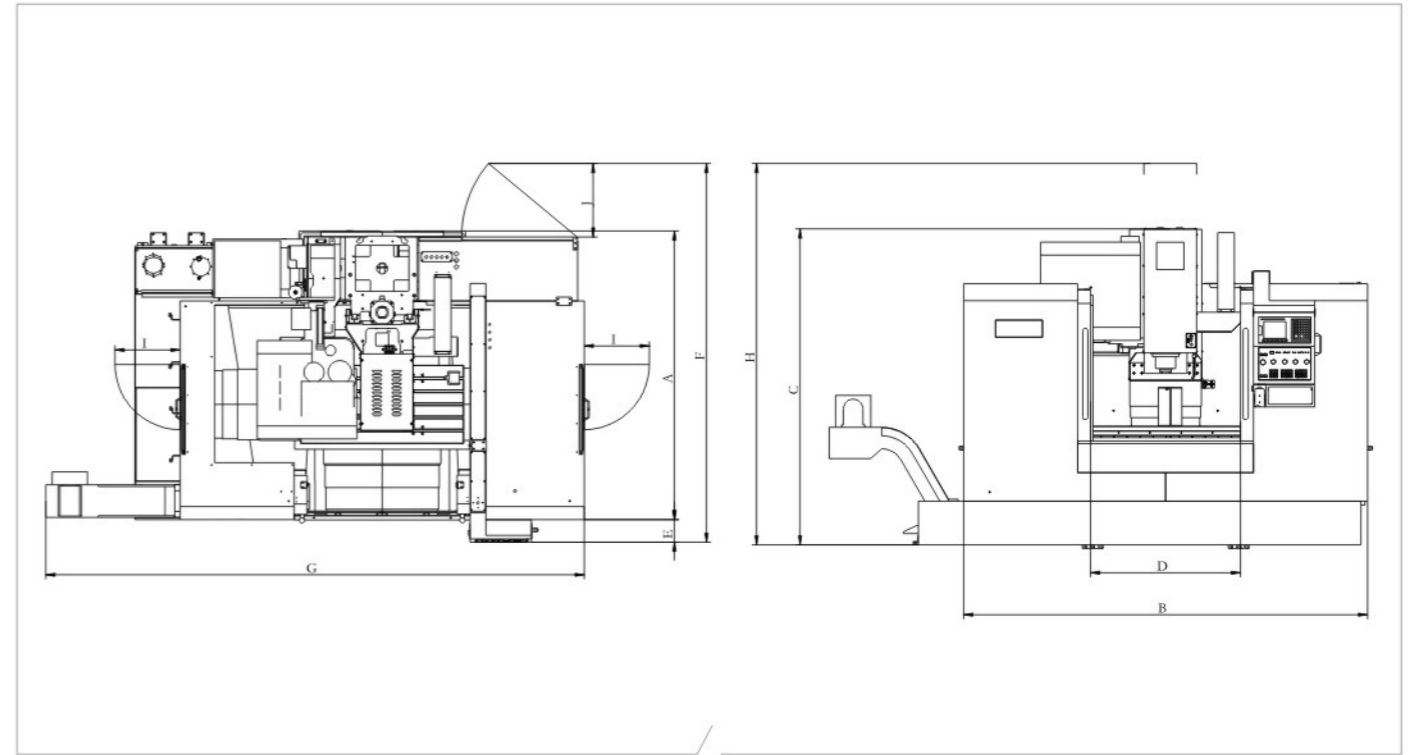


VB1600

VL700 900 1100 1300 1500 VB1000 1200 1600

Standard&Option	VL700	VL900	VL1100	VL1100A	VL1100D	VL1300	VL1300D	VL1500	VL1500D	VB1000	VB1200	VB1600
FANUC 0i MF absolute type	●	●	●	●	●	●	●	●	●	●	●	●
SIEMENS 828D	○	○	○	○	○	x	x	x	x	x	x	x
Ethernet DNC Machining	●	●	●	●	●	●	●	●	●	●	●	●
Fine Quality Machining Package	●	●	●	●	●	●	●	●	●	●	●	●
Rigid Tapping	●	●	●	●	●	●	●	●	●	●	●	●
Full-enclosed Splash Guard	●	●	●	●	●	●	●	●	●	●	●	●
Spindle 8000rpm BT40	●	●	●	●10000	x	●10000	x	●10000	x	●	○	x
Spindle 6000rpm BT50	x	x	x	x	●	x	●	x	●	x	●	●
Spindle Air Sealing	●	●	●	●	●	●	●	●	●	●	●	●
Air Blowing Device	●	●	●	●	●	●	●	●	●	●	●	●
Working Area Light	●	●	●	●	●	●	●	●	●	●	●	●
3 Colors Warning Light	●	●	●	●	●	●	●	●	●	●	●	●
Heat Exchanger in Electrical Cabinet	●	●	●	●	●	●	●	●	●	●	●	●
Portable MPG	●	●	●	●	●	●	●	●	●	●	●	●
Coolant System	●	●	●	●	●	●	●	●	●	●	●	●
Lubrication System/Pneumatic System	●	●	●	●	●	●	●	●	●	●	●	●
Adjustable Level Bolts and Foundation Blocks	●	●	●	●	●	●	●	●	●	●	●	●
Coil Chip Conveyor	x	x	x	x	x	●	●	●	●	x	x	●
Chain Chip Conveyor	●	●	●	●	●	x	x	x	x	●	●	●
Tool Box	●	●	●	●	●	●	●	●	●	●	●	●
Air Gun/Water Gun with Flushing Function	●	●	●	●	●	●	●	●	●	●	●	●
Oil and Water Separate Box	●	●	●	●	●	●	●	●	●	●	●	●
Automatically Power Off	●	●	●	●	●	●	●	●	●	●	●	●
Transformer	●	●	●	●	●	●	●	●	●	●	●	●
Arm Type ATC(24PCS)	●20Pcs	●	●	●	●16Pcs	●	●	●	●	○	○16Pcs	○
Arm Type ATC(30PCS)	x	○	○	○	x	○	x	○	x	x	x	x
Spindle Chiller	○	○	○	●	○	●	●	●	●	●	●	●
Spindle Coding by External Pipe	○	○	○	●	x	○	○	○	○	○	x	○
Coolant Through Spindle Center	○	○	○	○	x	○	○	○	○	○	x	○
ZF/BF Gear Box	x	x	x	x	x	x	●	x	●	○	○	○
4 th Axis/5 th Axis	○	○	○	○	○	○	○	○	○	○	○	○
Linear Scale	○	○	○	○	○	○	○	○	○	○	○	○
Measuring System(Tool,Workpiece)	○	○	○	○	○	○	○	○	○	○	○	○
Drawer Type Water Tank	○	○	○	x	○	x	x	x	x	○	○	x
DATA SERVER	○	○	○	○	○	○	○	○	○	○	○	○
A/C for Electric Cabinet	○	○	○	○	○	○	○	○	○	○	○	○
Voltage Stabilizer	○	○	○	○	○	○	○	○	○	○	○	○

● Standard ○ Optional x Not available



Dimensions

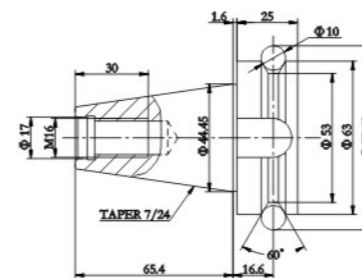
	A	B	C	D	E	F	G	H	I	J
VL700	1915	2180	1990	650	180	2955	3135	2490	0	860
VL900	2213	3000	2150	1100	180	3253	4500	2750	0	880
VL1100A	2223	2794	2237	1100	180	3138	3730	2837	0	765
VL1100/1100D	2213	3100	2150	1100	180	3253	4500	2750	0	880
VL1300/1300D	2402	3600	2882	1635	300	3529	4015	3407	0	800
VL1500/1500D	2402	3600	2882	1635	300	3529	4015	3407	0	800

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

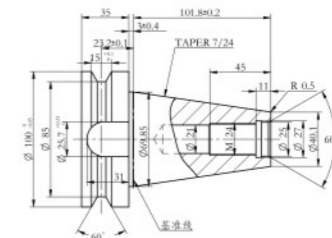
Dimensions

	A	B	C	D	E	F	G	H	I	J
VB1000	2213	3000	2150	1100	180	3253	4500	2750	0	880
VB1200	2213	3280	2250	1100	180	3253	4500	2850	0	880
VB1600	2950	4400	2530	1745	615	4165	6600	3330	900	600

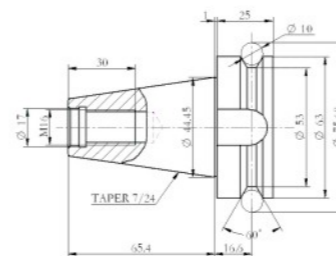
We reserve the right to change technical parameter for improvement of our products without giving notice to customers.



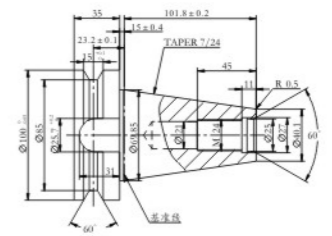
■ BT40 刀柄



■ BT50 刀柄



■ BBT40 刀柄



■ BBT-50 刀把 (标准)

Double Column Series

Convenience in processing large products



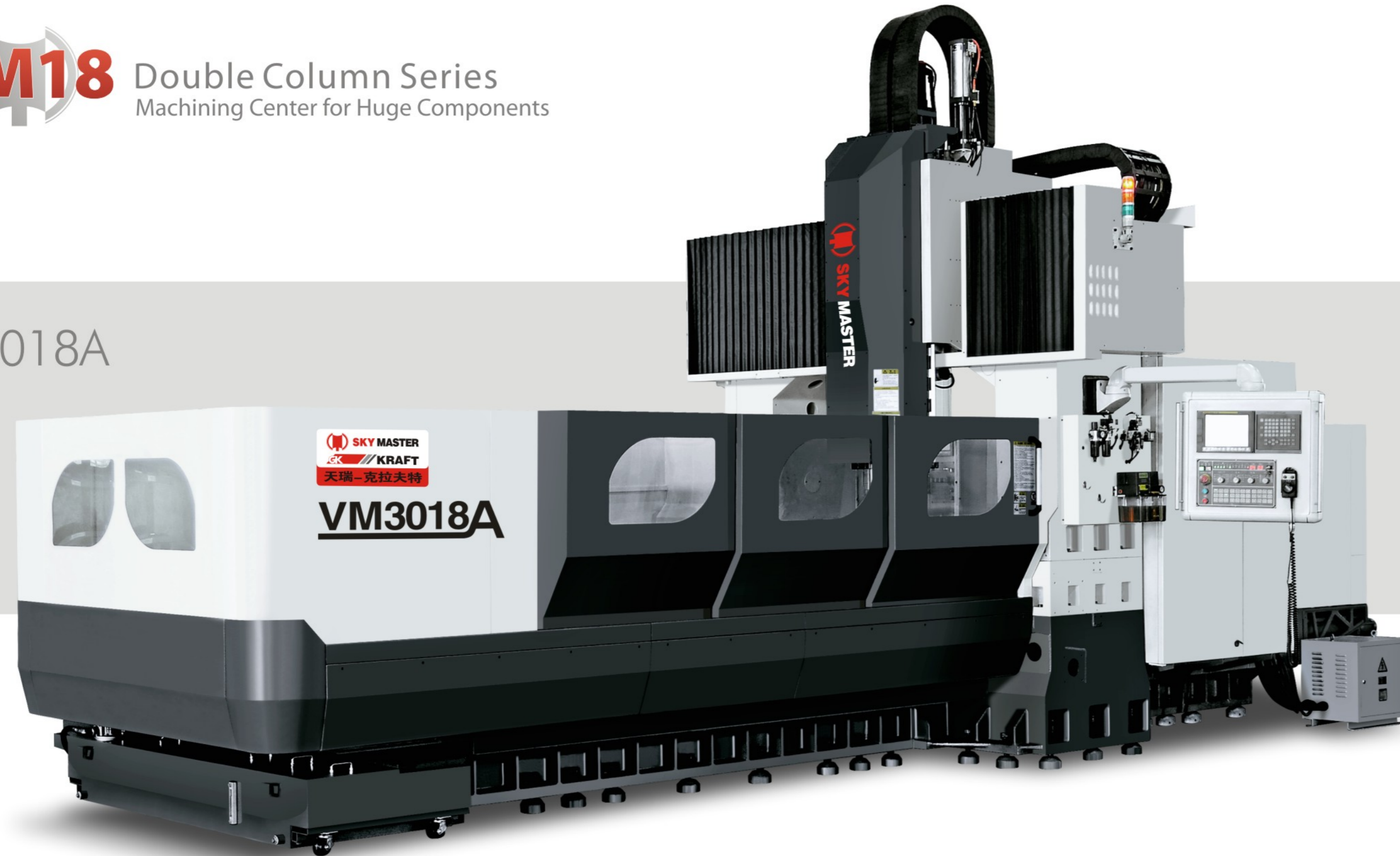
The Double Column Series of Sky Master include such features as high rigidity and modularization. The spindle and BF/ZF gearbox are designed with unique direct driven to eliminate intermediate transmission, ensuring stability during heavy cutting.



Double Column Series

Machining Center for Huge Components

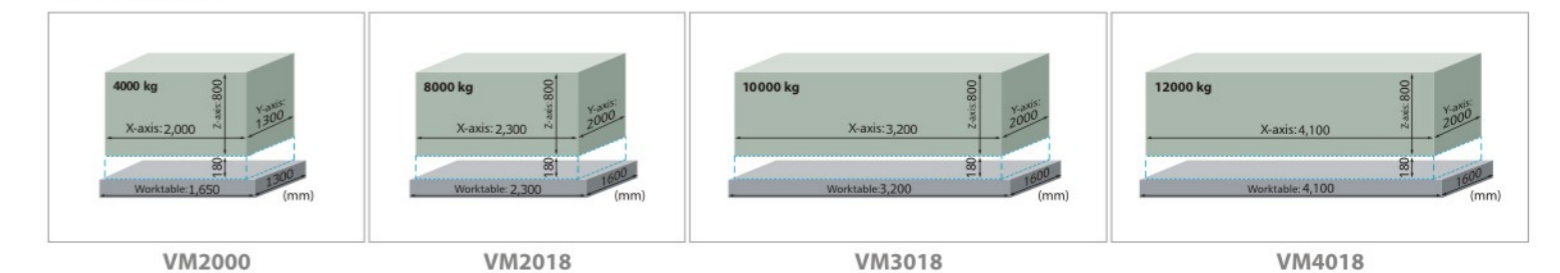
VM3018A



Technical Parameter

Item	Unit	VM2000	VM2018A	VM2018B	VM3018A	VM3018B	VM4018A	VM4018B
Standard controller		FANUC 0i MF						
X axis travel	mm	1900	2300		3200		4100	
Y axis travel	mm	1300			2000			
Z axis travel	mm	800			800			
Distance from spindle nose to table	mm	180 - 980			180 - 980			
Distance between columns	mm	1840						
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 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/ 30mins)	kW	15/18.5						
Spindle torque	N.m	427/528	560/662	140/165	560/662	140/165	560/662	140/165
Rapid traverse X	mm/min			20000				15000
Rapid traverse Y	mm/min				20000			
Rapid traverse Z	mm/min				15000			
Cutting feed rate on X/Y/Z	mm/min	1-10000						
Tool capacity	pcs	24(Arm type)		32(Chain type)				
Max. tool diameter	mm	φ110/φ220		φ110/φ225				
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	60						
Machine size (length/width/height)	mm	4900 x 4160 x 4339	7027 x 5217 x 4339		8927 x 5217 x 4339		10327 x 5217 x 4339	
Machine weight	kg	18000	22000		26000		30000	

Moveable Area:



VM2000

VM2018

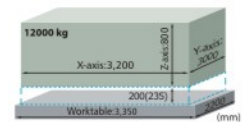
VM3018

VM4018

Technical Parameter

Item	Unit	VM3225	VM3225A	VM3225B	VM4225	VM4225A	VM4225B	VM5225	VM5225A	VM5225B	VM3230A	VM4230A	VM5230A				
Standard controller		FANUC 0i MF															
Travel	X axis travel(work-table)	3200			4200			5100			3200		4200		5100		
	Y axis travel(saddle)	3000						3400									
	Z axis travel(spindle head)	800	1000		800	1000		800	1000		1000						
	Distance from spindle nose to table	200 - 1000	235 - 1235		200 - 1000	235 - 1235		200 - 1000			235 - 1235						
	Distance between columns	2550						3050									
Work table	Table size(length x width)	3350 x 2200			4350 x 2200			5350 x 2200			3350 x 2200		4350 x 2200		5350 x 2200		
	Max. table load	15000			18000			21000			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			28 x 250 x 13		28 x 250 x 17		28 x 250 x 21		
Spindle	Spindle taper	BT50		BBT50		BT50		BBT50		BT50		BBT50		BT50			
	Max. spindle speed	6000	6000(Direct driven)		10000(Direct driven)		6000	6000(Direct driven)		10000(Direct driven)		6000(Direct driven)					
	Spindle motor power (continual working/ 30mins)	22/26															
	Spindle torque	560/662		140/165		560/662		140/165		560/662		140/165		560/662			
X/Y/Z	Rapid traverse X	15000			12000			15000			12000						
	Rapid traverse Y	18000						18000									
	Rapid traverse Z	10000	15000		10000	15000		10000	15000		15000						
	Cutting feed rate on X/Y/Z	1-8000															
ATC (Option)	Tool capacity	32(Chain type)															
	Max. tool diameter	Φ110/Φ225															
	Max. tool length	350															
	Max. tool weight	20															
Accuracy	Full travel positioning accuracy	P0.025			P0.030			P0.040			P0.030		P0.035		P0.045		
	Repeatability accuracy	Ps0.020			Ps0.025			Ps0.030			P0.025		P0.030		P0.035		
Air pressure	MPa	0.6~0.8															
Supply voltage & frequency	3/PE, AC380V, 50Hz																
Power requirement	kVA	60															
Machine size(length/width/height)	mm	10125 x 6840	10125 x 6840		12035 x 6840		12035 x 6840		14035 x 6840		14035 x 6840		10125 x 6840		12035 x 6840		14035 x 6840
		x 4515	x 4715		x 4515		x 4715		x 4515		x 4715		x 4715		x 4715		x 4715
Machine weight	kg	40000			45000			50000			40500		45500		50500		

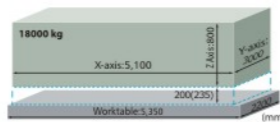
Moveable Area:



VM3225/3225A/3225B



VM4225/4225A/4225B



VM5225/5225A/5225B



Double Column Series Machine Center for Huge Components



The Y axis adopts three stepped roller linear guide ways (THK Japan or Rexroth Germany) in order to improve the rigidity and positioning accuracy.



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

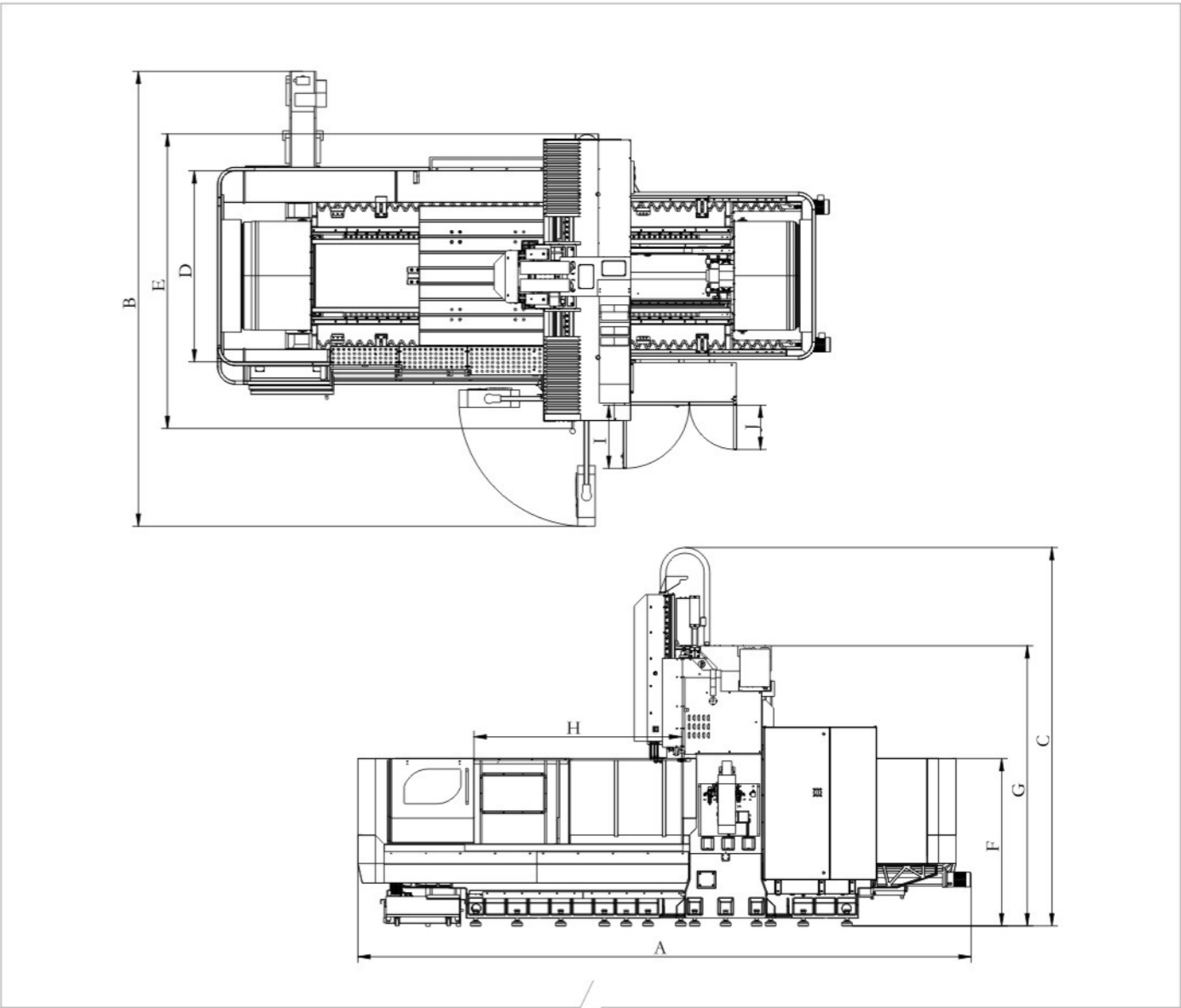


The worktable is running on 4 linear guide ways (THK Japan or Rexroth Germany) to support the stability and to improve the loading ability and reduce the cutting vibration.

VM2000 2018 3018 4018 VM3225 4225 5225 VM3230 4230 5230

Standard&Option	VM2000	VM2018A	VM3018A	VM4018A	VM2018B	VM3018B	VM4018B	VM3225	VM4225	VM5225	VM3225A VM3230A	VM4225A VM4230A	VM5225A VM5230A	VM3230	VM4230	VM5230
FANUC Oi MF absolute type	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
HEIDENHAIN TNC620	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Ethernet DNC Machining	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fine Quality Machining Package	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rigid Tapping	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Full-enclosed Splash Guard	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Spindle 6000RPM	●	●	●	●	×	×	×	●	●	●	●	●	●	×	×	×
Direct Driven Spindle 10000rpm BBT50	○	×	×	×	●	●	●	×	×	×	×	×	×	●	●	●
Spindle Air Sealing	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Machining Air Blowing Device	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Working Area Light	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3 Colors Warning Light	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Heat Exchanger in Electrical 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
BF Gear Box	●	●	●	●	×	×	×	●	●	●	●	●	●	×	×	×
Z axis travel change to 1m	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●
Full-enclosed Splash Guard with top cover	○	○	○	○	○	○	○	×	×	×	×	×	×	×	×	×
Column Rise 200mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Column Rise 300mm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chain Type ATC (32pcs/40pcs/60pcs) (24Pcs)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
3D Coordinate System Rotation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Oil-feed Tool Shank Port	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Cooling Through Spindle Center	×	×	×	×	○	○	○	○	○	○	×	×	×	○	○	○
4th Axis/5th Axis	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Linear Scale	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Measuring System(Tool,Workpiece)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Attachment Milling Head	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rotation Storage for Attachment Head	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
3 Axis Thermal Compensation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
A/C for Electric Cabinet	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Voltage Stabilizer	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● Standard ○ Optional × Not available



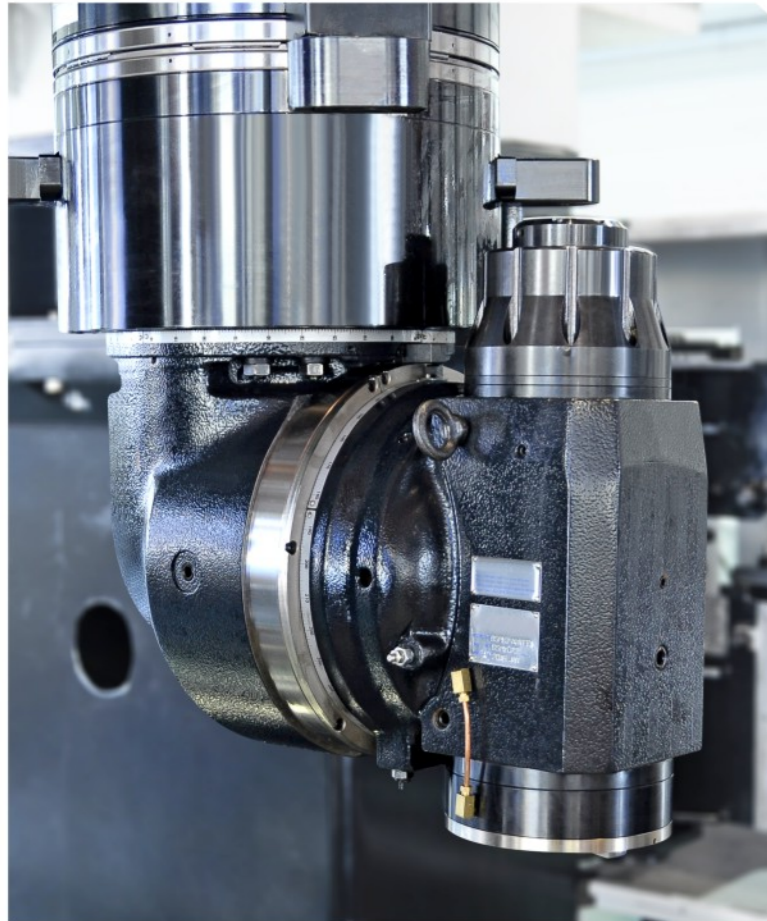
Dimensions

	A	B	C	D	E	F	G	H	I	J
VM2000	5000	5610	4339	3250	3438	2200	3213	1350	740	508
VM2018A/2018B	7027	5217	4339	2191	3438	1920	3213	2400	740	508
VM3018A/3018B	8927	5217	4339	2191	3438	1920	3213	3000	740	508
VM4018A/4018B	10327	5217	4339	2191	3438	1920	3213	3000	740	508
VM3225/3225A/3225B	10125	6840	4515	2984	4614	1940	3642	3000	740	508
VM4225/4225A/4225B	12035	6840	4515	2984	4614	1940	3642	4000	740	508
VM5225/5225A/5225B	14035	6840	4515	2984	4614	1940	3642	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

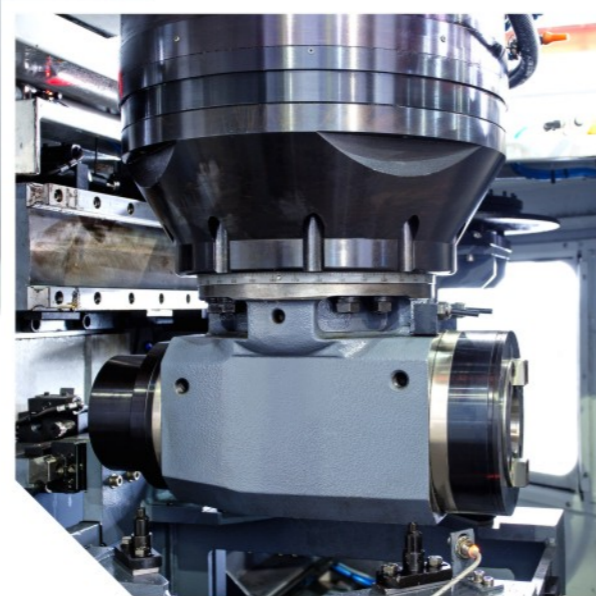
We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

04 Automatic head exchange technique

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.

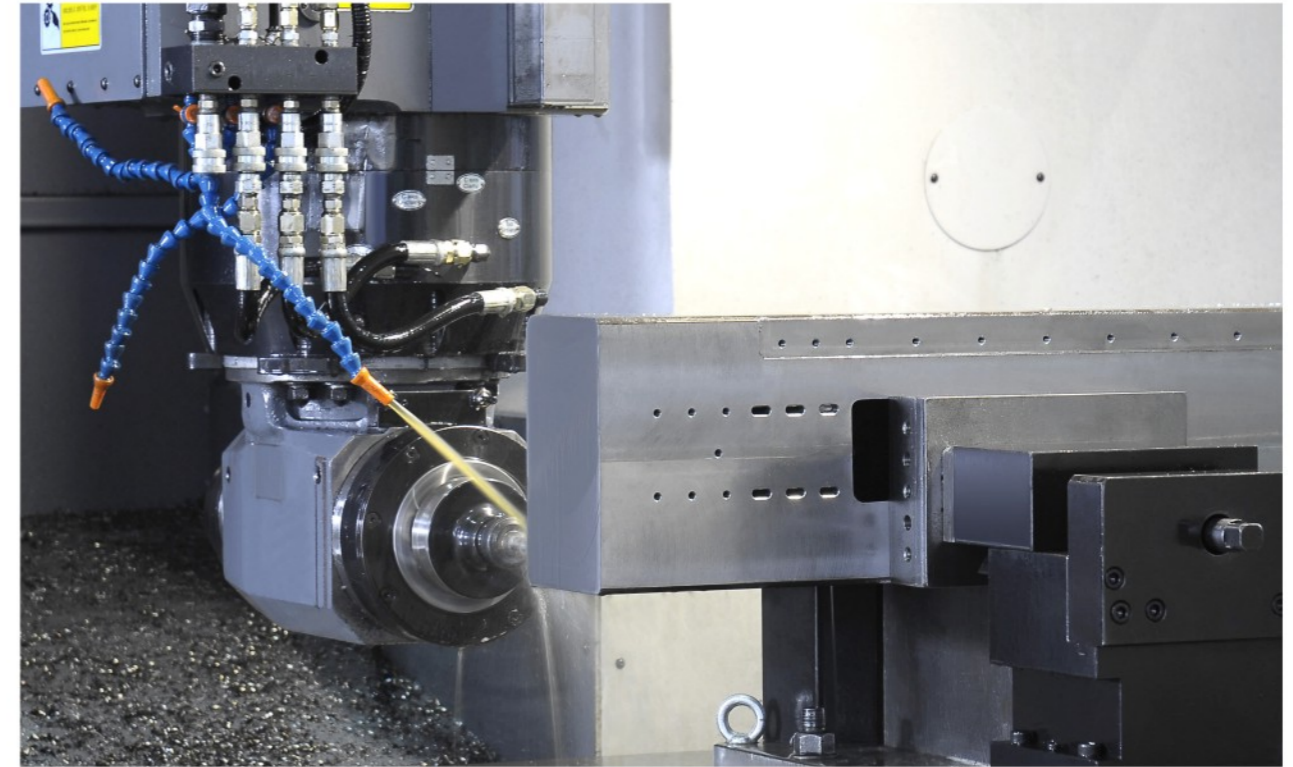


Automatic swiveling head(1° indexing)



Automatic orthogonal milling head(5° indexing)

04.1 Application of Attachment Milling Head



- The attachment milling head with high effective performance to improve the comprehensive cutting ability.
- The attachment milling head can be designed with automatic change, rapid location by manual or automatic way which can enlarge the machining scope and ability.
- Special solution and service is available according to customer's special machining demand.
- Rapid and effective milling head exchange with semi-automatic and automatic exchange head storage.
- Designed with compact structure and will not occupy machining space, covered by corrosion prevention and splash proof metal sheet with sealed protection.



Manual orthogonal milling head
 Prolong milling head
 Orthogonal prolong milling head
 Swing head
 Automatic swing head
 Automatic orthogonal milling head

06 Workshop & Equipment

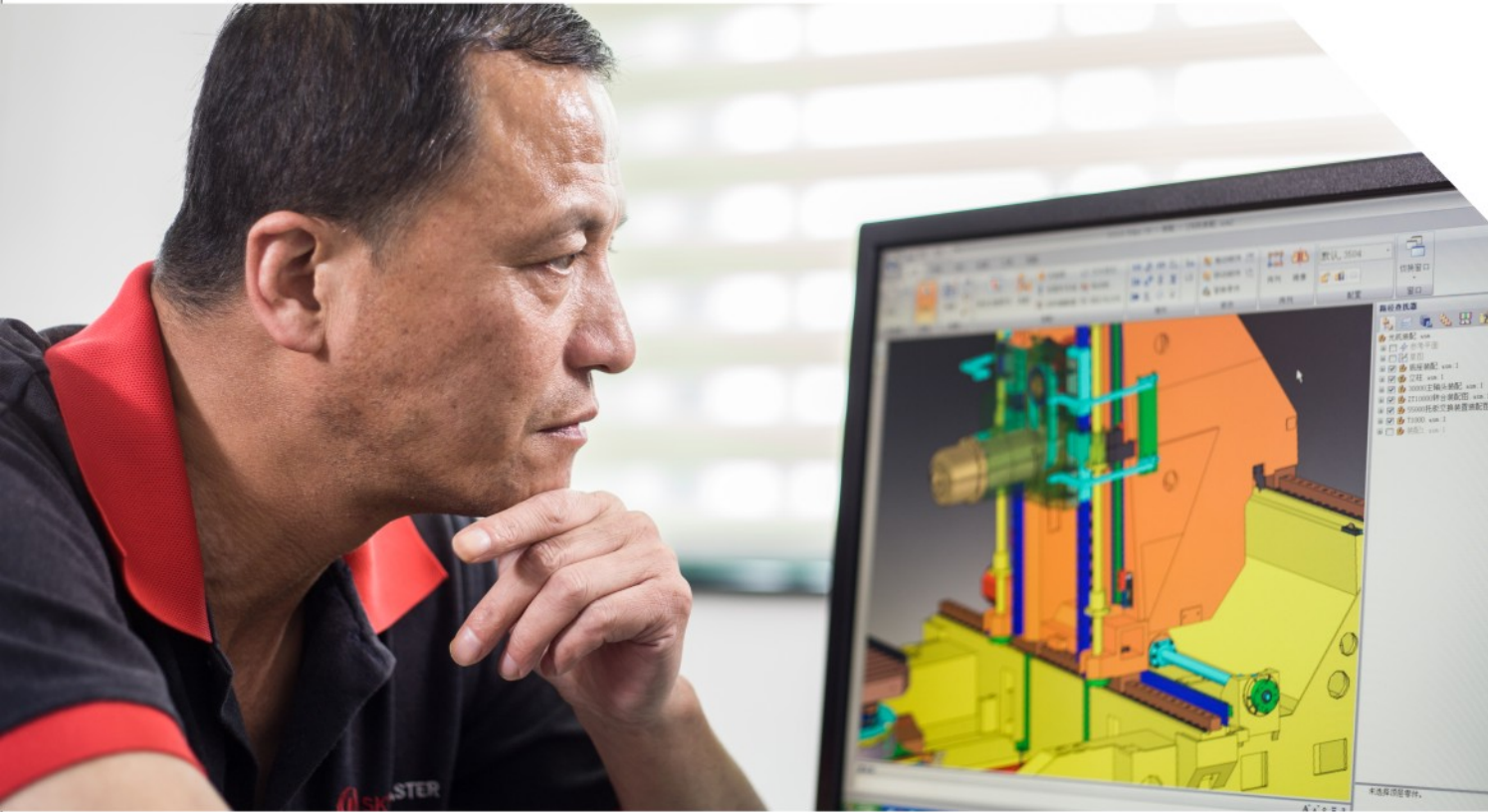
Decades experience and Germany technology keep Sky Master always supplying reliable products.



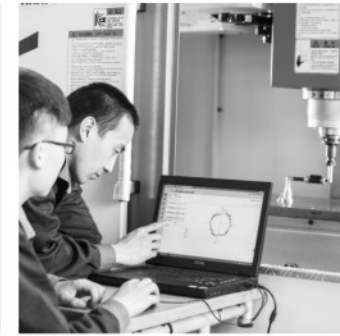
07 Manufacturing

- 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



08 Service

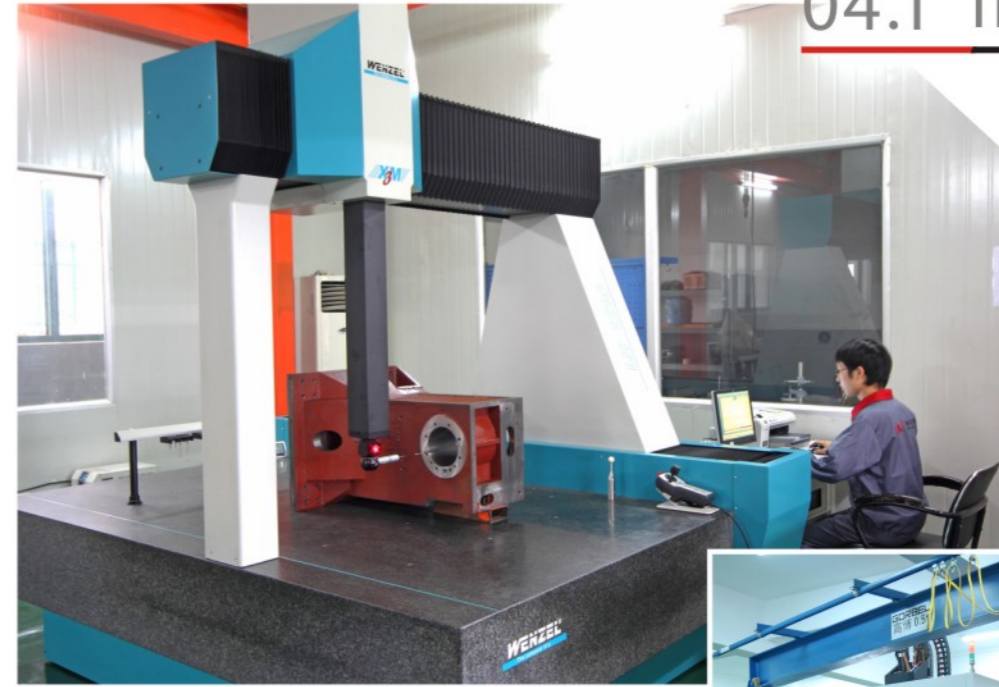
Use our wisdom to supply you the best solution



Union
Efficiency



04.1 Trial Processing



Supply the trial processing for clients



09 Automation

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 WELLIH 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.



10 Customer Application

