







Continental Factory: No.12 Longxiang Road, Qujiang District, Quzhou City, Zhejiang Province.



### HQCSW

### **About Us**

Zhejiang Heke Intelligent Equipment Co., Ltd. is a high - tech enterprise which integrates R & D, manufacturing and sales of high - quality, high precision and high - intelligence CNC machinery and equipment and industrial automation.

The company has a machine tool R & Dstudio in Taiwan, and employs a professional R & D team mainly composed of German engineers to develop and design. The vertical precision machining center produced by the company realizes the perfect integration of European advanced technology and concepts with mainl and manufacturing technology. The company has advanced testing equipment imported from Germany, Japan and other countries to ensure the accuracy and quality of each machine tool. The company operates strictly in accordance with the modern enterprise management mode, realizing the whole process information tracking of each machine tool from design - production - product inspection - sale - service . All series of products have obtained So9001 quality system certificate and CE certificate. The company upholds the business philosophy of "integrity, quality, cooperation, service, win - win ", perfect sales service team and sales service team, guided by the concept of " customer first ", keep close contact with customers and provide technical support at any time. All Heko people make every machine tool with their heart and meet every challenge with a full spirit. We sincerely look forward to cooperating withevery customer in good faith, achieving win - win situation with first - class quality and first - class







### **Vertical Machining Center Machine**



XYZ-axis travel

**VCN-11** 

**VCN-12** XYZ-axis travel 1300\*700(二轨)\*700mm

**VCN-13** XYZ-axis travel 1300\*700(四轨)\*700mm





### Perfect Structural Design

Steady body structure is the concrete guarantee of rigidity and stability

- Spindle air blast
  - Tool box with tools Coolant system
- Rigid tapping
- Mpg handwheel

Heat exchanger

Working air blast

 Leveling screws and blocks

Working lamp

- Operation manual and Telescopic guards programming manual
- RS -232 interface

- (Spindle nose) Fully enclosed splash guard
- Operation status indication lamp
- Automatic lubrication system
- on 3 axes
  - Air gun and coolant gun

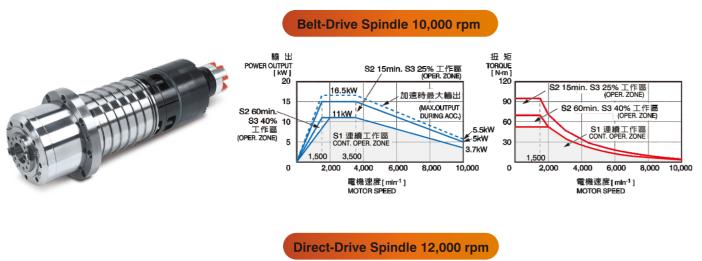




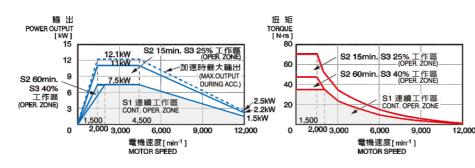
## HIGH RIGIDITY SPINDLE

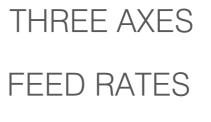
### **Specific Guarantee for Machining Quality**

- The spindle runs in class P4 extra high precision bearings, making the machine ideal for various precision machining and high speed cutting
- •The spindle body and the spindle motor are subjected to rigorous dynamic test in house so as to achieve the maximum stability and extreme cutting capabilities

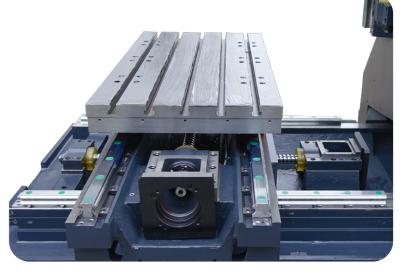








48 M/min



## **High Precision Axis Feed System**

- •High precision linear guide ways on three axes provide the best control and moving efficiency.
- •Three axes are transmitted through class C3 high precision ball screws which have been pretensioned and preloaded
- •Three axes are mounted with precision P class, heavy duty ball type or roller type linear guide ways with extra wide blocks that upgrade the loading capacity of the table
- •The use of high precision nut that rotates ball screw that provides outstanding rigidity in heavy cutting, thereby ensuring high machining accuracy and long service life of ball screw.



#### **High Speed Automatic Tool Changer**

- Available to equip with a 24 tools arm type tool changer. The sufficient tool numbers will meet various machining requirements.
- Standard random tool selection function will lead to shortened tool change time while increasing machining efficiency.

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### H'QCSW®

#### **Workpiece Measurement Device (Opt.)**

HQCSW®

- 1. It performs automatic measurement to reduce machine down time and reduce human error.
- 2. Automatic compensation for workpiece coordinate and workpiece.
- 3. Upgrading product quality while lowering defect percentage.
- 4. Reduce waste.



### **Coolant Through Spindle (Opt.)**

The coolant through spindle is ideal for deep hole machining that not only fast removes chips, but also reduces heat on the tool and workpiece during cutting.



### **Tool Length Measurement Device (Opt.)**

With the automatic tool length measurement device, the measured values of tool length will be automatically input into the controller for compensation.





For five-axis machining, compact structure, high dynamic response, large acceleration, high-speed continuous machining.



### **User-Friendly Operation Panel**

- The centralized operation panel is a user-friendly design with beautiful appearance.
- Various controllers to select: Mitsubishi, Heidenhain, Fanuc, Siemens and Fagor.



### 4th Axis Rotary Table (Opt.)

With the use of the 4th axis rotary table, it allows to perform multi-sides machining with only one setup. It helps to reduce non-cutting time due to workpiece loading/unloading, making it suitable for high precision parts machining requiring high efficiency and high accuracy.



20 Bar High Pressure Coolant Pump

The coolant through spindle system features



Link Chain Type (Opt.)
Chip Conveyor

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## VCN-9Z

## XYZ-axis travel 820\*550\*600mm

### Mechanical properties

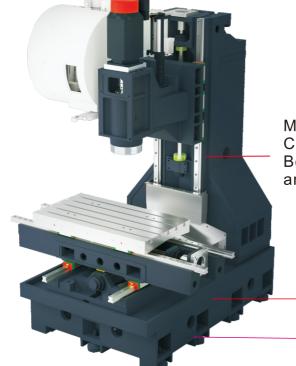
- ◆ Large span column structure ensures the best structural rigidity of the whole machine
- ◆Wide base design, heat treatment hardened and tempered
- ◆High quality cast iron construction
- ◆ The spindle adopts P4 ultra-precision bearings, suitable for precision machining and high speed cutting.
- ◆The headstock adopts six-slide high-precision line rail
- ◆The three axes adopt C3 precision ball screw, and the ball screw is pre-drawn.

The joint of each component adopts traditional spade process to ensure the accuracy and durability of the product.



### Standard:

- ◆Main shaft oil cooler
- ◆Spindle ring injection
- ◆Spindle 10000 rpm belt type



Machine Tool for Casting Machine Bed, Motor Seat and Bearing Seat

Matching: ♦Water discharge from spindle center ♦Numerical control turret ♦Spindle 12000rpm Direct coupling ♦Electrical cabinet cooling machine ♦BBT40 spindle ♦Tool measurement ♦grating ♦On-line detection

# V6C Five-axis machine



The herringbone column with wider span of the joint surface improves the rigidity of the machine.

Equipped with a 5-axis cradle turntable, it can automatically, efficiently and accurately complete the processing of complex processes including inclined plane, curved surface and so on.

Adopt HT300 high grade resin sand mould casting, anneal treatment and vibratory time effect treatment, eliminate internal stress.

### Specifications And Parameters

Parameter Name	parameter	Parameter Name	parameter
Three-axis stroke XYZ	500*510*450mm	A axis maximum speed	60rpm
Workbench(long*wide)	ф 260mm	A-axis rated torque	259N. m
Maximum workpiece load and size	60kg, Maximum allowable workpiece rotation diameter φ400	A-axis positioning accuracy	±10 "
Spindle Specifications	BT40-120-proboscis direct	A-axis repeat positioning accuracy	5 ″
Distance from spindle end face to table	37-487mm (Column heightening200)	C-axis stroke (rotation)	360 °
Triaxial screw	ХҮ: ф28 Z: ф32	C axis maximum speed	386rpm
Triaxial rail	XY Ball 30#,Zaxis35#Ball	C Shaft Rated Torque	122N. m
Knife storehouse	BT40-24T	C-axis positioning accuracy	±10 "
Five Axis Cradle Specifications	DRT260-400	C axis repeat positioning accuracy	5 "
A axis stroke (tilt axis)	±120 °	Brake mode	Air brake

lacksquare





## Specifications And Parameters

Model parameter	VCN-6	V C N – 9	VCN-9Z	
Workbench(long*wide)	$800 \times 400$ mm	$1000\!\times\!550\text{mm}$	$1000 \times 550$ mm	
T-groove(number*width)	$3 \times 14 \times 80$ mm	$5 \times 18 \times 100$ mm	$5 \times 18 \times 100$ mm	
Maximum load of worktable	400kg	600kg	700kg	
X-axis travel	600mm	800mm	820mm	
Y-axis travel	400mm	550mm	550mm	
Z-axis travel	450mm	550mm	600mm	
Spindle nose end to w orking table	150-600mm	140-690mm	130-730mm	
Spindle center to column guide surface	450mm	590mm	590mm	
Spindle type	BT40	BT40	BT40	
Spindle motor	5.5/7.5kw	7.5/11kw	11/15kw	
Belt spindle speed	8000rpm	10000rpm	10000rpm	
Direct-junction spindle roation(optional)	12000rpm	12000rpm	12000rpm/15000rpm	
Cutter storage capacity	16T/20T(Knife Arm)	24T(Knife Arm)	24T(Knife Arm)	
Maximum tool diameter	Ф80	Ф80	Ф80	
Airborne knife diameter	Ф120	Ф150	Ф150	
X/Y/Z Fast moving speed	48M/min	48M/min	48M/min	
Positioning accuracy	$\pm 0.005/300$ mm	$\pm 0.005/300$ mm	$\pm 0.005/300$ mm	
Repeated positioning accuracy	±0.002/300mm	$\pm 0.002/300$ mm	$\pm 0.002/300$ mm	
Source of barometric pressure	6-8kg/cm <sup>2</sup>	6-8kg/cm <sup>2</sup>	6-8kg/cm <sup>2</sup>	
Electricity capacity	15KVA	20KVA	25KVA	
Mechanical weight	3500kg	5500kg	6000kg	
Coverage (W*D*H)	2100×1900×2300	$2600 \times 2250 \times 2450$	$2600 \times 2350 \times 2450$	

V C N - 1 0	VCN-11	VCN-12	VCN-13
1200×600mm	1200×600mm	$1500 \times 700$ mm	1500×700mm
5×18×100mm	5×18×100mm	5×18×145mm	$5 \times 18 \times 145$ mm
700kg	800kg	900kg	1000kg
1000mm	1100mm	1300mm	1300mm
600mm	600mm	700mm(Second track)	700mm(Four Tracks)
600mm	600mm	700mm	700mm
150-750mm	120-720mm	140-840mm	150-850mm
672mm	650mm	752mm	762mm
ВТ40 (Ф160)	BT40 (Opt BT50)	ВТ40 (Ф150)	ВТ50 (Ф155)
11/15kw	11/15kw	11/15kw	15/18.5kw
10000rpm	10000rpm	8000rpm	6000rpm
12000rpm	12000rpm	12000rpm	8000rpm(belt)
24T(Knife Arm)	24T(Knife Arm)	24T(Knife Arm)	24T(Knife Arm)
Ф80	Φ80	Φ80	/
Ф150	Ф 150	Ф150	/
48M/min	36M/min	36M/min	36M/min
±0.005/300mm	$\pm 0.005/300$ mm	±0.005/300mm	$\pm 0.005/300$ mm
±0.002/300mm	±0.002/300mm	±0.002/300mm	$\pm 0.002/300$ mm
6-8kg/cm <sup>2</sup>	6-8kg/cm <sup>2</sup>	6-8kg/cm <sup>2</sup>	6-8kg/cm <sup>2</sup>
25KVA	25KVA	30KVA	35KVA
6000kg	7000kg	8500kg	8800kg
$2800 \times 2350 \times 2450$	2950×2350×2450	$3600 \times 2600 \times 2665$ $3600 \times 2600 \times 266$	

### HQCSW

## High Speed Drilling Center VTC Series

### Mechanical properties

- ◆ HT300 Advanced Resin Sand Moulding Castings
- ♦ Wide base design, after annealing treatment and vibration aging to eliminate internal stress
- ◆ The spindle adopts P4 ultra-precision bearings, suitable for precision machining and high speed cutting.
- ◆ Three axes adopt Japanese "THK" C3 precision ball screw



### Direct connection, high precision, high rigidity spindle head

Spindle speed up to 20000 rpm, with low power loss, low vibration, low noise, low temperature rise, etc. to ensure high precision processing and high quality rigid tapping

The spindle can realize stepless speed regulation within the range of its rotation speed to ensure the safety and reliability of the spindle clamping tool. The spindle is equipped with non-contact switch feedback, which can realize the automatic detection of the clamping and loosening of the tool.



### gh output spindle motor



### No pause ATC

High speed action and optimal exchange with BT30 spindle and efficient servo tool library

The traditional cam motor is replaced by servo motor drive, which can achieve no interval stop and quickly exchange the farthest distance tool. Through the optimization of the tool magazine to improve the perfect match with the Z axis movement, the cutting to cutting tool change time is greatly shortened.



### High rigidity mechanical structure

The overall layout of the machine is vertical frame structure, the base is wideand solid, the column is boxshaped structure, the saddle structure is solid and can bear the heavy load during processing, and it can maintain no vibration and deformation during high-speed displacement.

### Highly responsive servo system

The pursuit of cutting capacity of the servo motor is manifested in: the use of high-rigidity mechanical structure and high-power spindle motor, which greatly expands the cutting capacity range of highefficiency machining and heavy cutting.

Adopt HT300 high grade resin sand mold casting. anneal treatment and vibration time effect treat ment to eliminate internal stress.

The herringbone column with wider span of the joint surface improves the rigidity of the machine

Extra wide one-piece base provides stable load support

Standard: ♦Spindle ring injection ♦Spindle 20000 rpm direct coupling

Matching: ◆Water discharge from spindle center ◆Numerical control turret ◆Chain plate chip remover

◆Chain plate chip remover ◆Main shaft oil cooler

Project	Name	Unit	VTC-6	VTC-7
Workbench	Workbench size X direction	mm	700	800
	Y direction	mm	420	420
	(number of slots/slot width/spacing)	mm	3/14/125	3/14/125
	Maximum load capacity of workbench	kg	250	300
	X-axis travel	mm	600	700
	Y-axis travel	mm	400	450
	Z-axis travel	mm	330	300
Scope of work	Distance from spindle nose to work surface	mm	150-480	150-450
	Distance from spindle center to column guide surface	mm	464	464
	Spindle servo motor	kw	3.7/5.5	7.5/11
Spindle	spindle maximum speed	rpm	20000	12000
	Spindle taper hole	7:24	BT30	BT40
Feed	Rapid feed rate (X/Y/Z)	m/min	48/48/48	48/48/48
	cutting feed rate	mm/min	5-15000	5-15000
Tool magazine	Tool magazine capacity	pcs	21	20
Guide	ball screw	mm	XY:28*16/Z:32*16	XZ:32*16/Y:28*16
	Linear guide	/	XY:30/Z:30	XY:30/Z:30
Other	Floor space	mm	1800*2200*2300	2000*2200*2300
	Machine weight	kg	3500	4000
A o o umo o v	Positioning accuracy	mm	±0.005/300	±0.005/300
Accuracy	Repeat positioning accuracy	mm	±0.003/300	±0.003/300

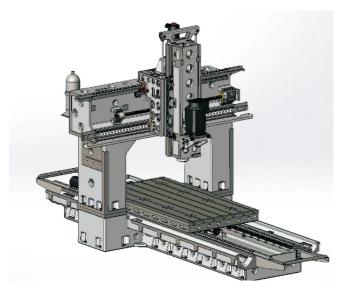
### HQCSW

## **OEM/ODM** Provide complete machining center solutions





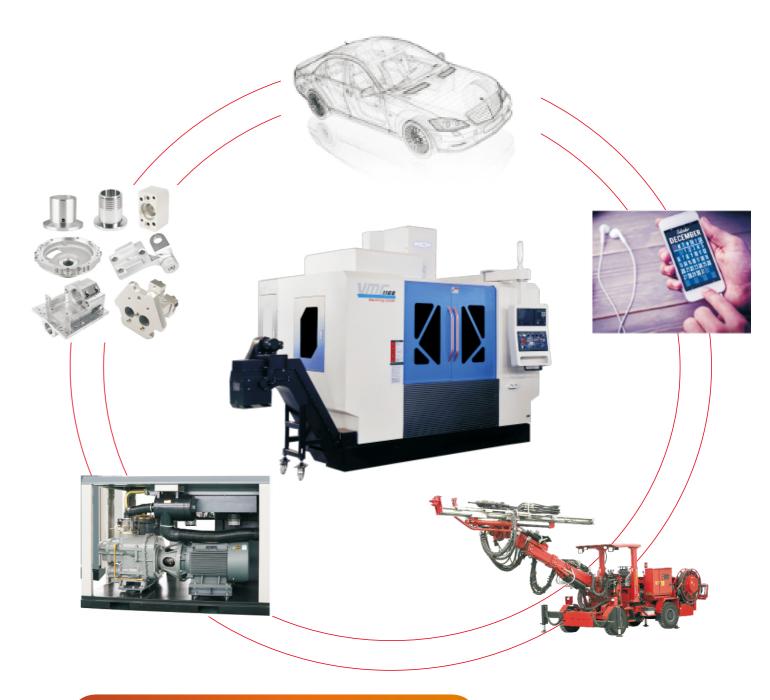








## Industry application



Automobile equipment manufacturing industry

Industrial articles for people's livelihood

Aviation equipment manufacturing industry

Advanced parts in special equipment manufacturing industry