台正机床
装备联盟体

TAIZHENG MACHINE TOOL UNION

鉦臻機械

SMARTECH
MACHINERY & EQUIPMENT

HEAD OFFICE

Smartech Machinery & Eqipment Co.,Ltd

Add: Room2832,Changping Commerical Mansion, Shihua Road,
Futian FreeTrade Zone,Shenzhen, China Post code:518038
Tel: (86)755-83472093 82542345 Fax: (86)755-83472096
E-mail:smartech@smartechcnc.cn http://www.zzsmartech.com

KUNMING OFFICE

Smartech Science and Technology Co.,Ltd

Add: IT Industry Park, National Economic & Technology
Development Zone, Kunming City, Yunnan
http://www.zzsmartech.com
http://zzsmartech.en.alibaba.com

MANUFACTURING BASE

Add 1: IT Industry Base, National Economic & Technology Development Zone, Kunming City, Yunnan
Add 2: CNC Machine Industry Park, Yanhe Town, Tuxi City, Yunnan
Add 3: Fenghuang Lake Industrial Park, Yongchuan District, Chongqing
Add 4: Wulong base, Kunyang street, Jinning District, Kunming City, Yunnan

Machining Center
— series

High Accuracy.
High Performance.

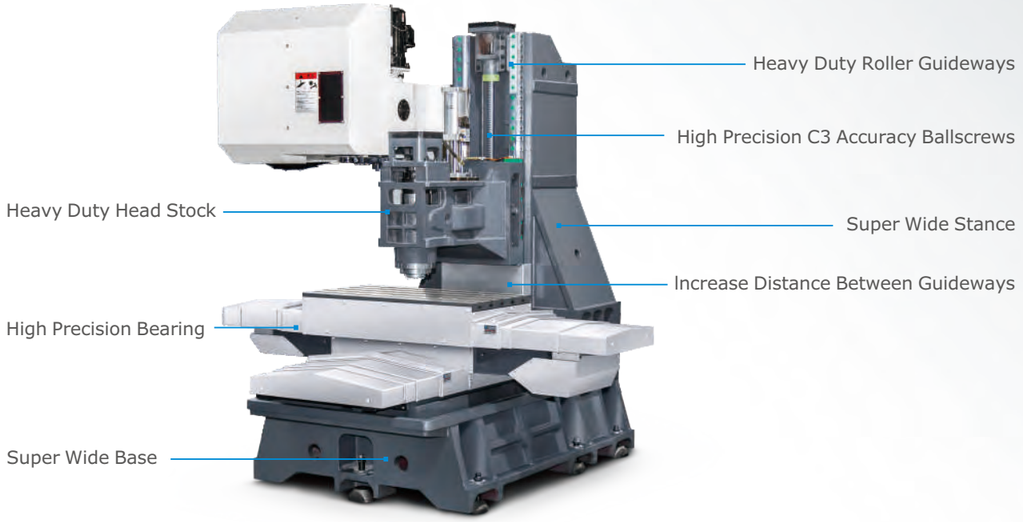
Introducing the most powerful
machining centers we ever designed.

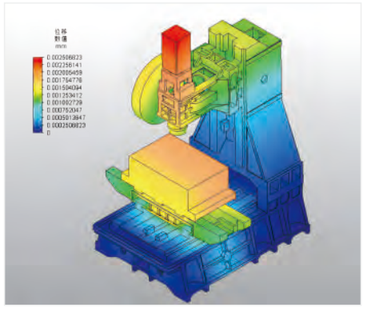
Heavy-duty & High-precision Machining Champion

The demands placed on your business become tougher every day, as modern manufacturers are tasked with meeting ever-tightening tolerances, and problem-solving to deliver the desired result by strict deadlines. Our VMC-series, was designed to enhance machine cutting performance, machining accuracy and efficiency, no matter how complicated the part's shape or surface is.

While our vertical machining centers range in machining capacity, we design each one with quality, reliability, ease of operation and safety in mind.

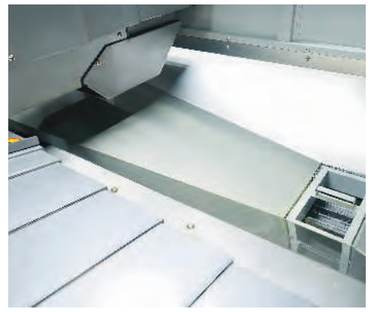
We offer the widest range of vertical machining centers in the industry to ensure you have the most suitable solution for your needs with the lowest cost of ownership. Thanks to our Production-On-Demand manufacturing philosophy, our C-type vertical machining centers have covered the X-axis travel range from 500 to 2300 mm.





■ Designed with latest FEM technology

All UNO CNC machine are designed with the latest technology of FEM analysis, which gives a mathematical method for solving the problem of deformation during various kinds of machining and stressed conditions.



■ Stainless Steel Plate for Easier Chip Flushing

Stainless steel plates are mounted on the buttom side of enclosure, to make the chip flushing easier. Less chip left in the guarding, reducing the job of operator, and make machine and workshop looks cleaner and neater.

■ Oil cooler for spindle

A standard oil cooling machine is used to prevent temperature increasing of spindle, improve working precision of machine. Circulating cooling oil carries away heat and prevents deviation of spindle center line and heat deformation. The lifetime of the spindle will be greatly extended.

■ High-capacity Precision Spindle

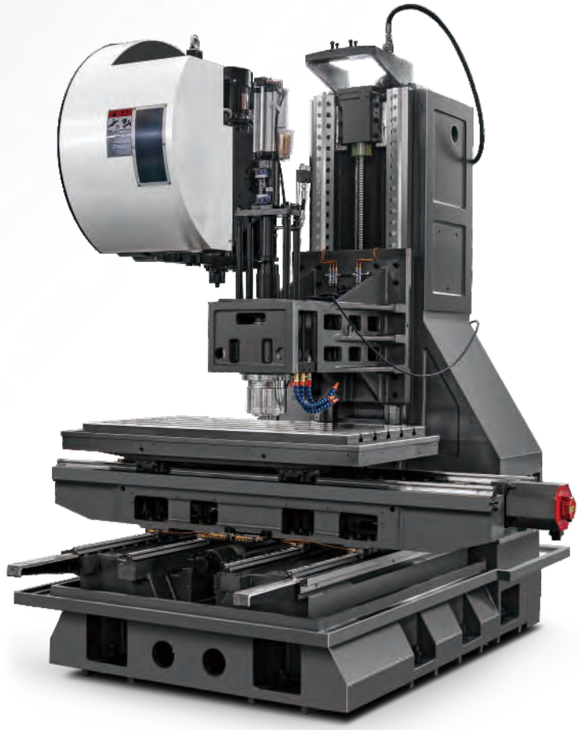
With our strict quality inspection standard, every single spindle is inspected thoroughly for precision standard check of um grade. The advanced design of our spindles provides high axial-thrust capability, yet generates minimal heat. Front and rear pre-load angular bearing with large spacer was used to enhance radial stability of spindle, enabling heavy cuts on steel.

■ High-speed Tool Changer

A standard 24-tool arm-type tool changer is used to improve the production efficiency and tool carrying capacity of the machine. ATC arm helps to change tools rapidly, reducing non-productive time. Full-closed enclosure is optional for protecting the ATC from chip, dust, coolant and oil.
30-tool and 48-tool (2*24 arm-type) optional.

■ Air Conditioner for Electrical Cabinet

Air conditioner provides greater operating efficiency, lower power consumption and longer life for heat sensitive electrical components. The cooling unit helps to cool, dehumidify, and recirculate clean air within the electrical cabinet and through the heat producing components, providing protection from high temperatures, humidity and airborne contaminants.



No matter how complicated the part shapes and the part surfaces are, UNO VMC series will help to ensure speed, accuracy, and efficiency when you face your next manufacturing challenge.

■ Strength in the right places

Our standard VMC series is designed with larger guideways and more slide blocks compared to other machines in the market. Our principle is to design the structure with way higher rigidity than just enough, so that the machine is able to cut faster, harder, and have more durability.

■ Powerful Control System

Our machines are equipped with the most powerful controllers on the market. Motors of XYZ and spindle we used are one size bigger than what are commenly used in the market. This gives the machine more cutting torque, higher machining speed and better accuracy, consequently increase the efficiency and productivity.

■ Telescopic Waycovers made by Keyarrow

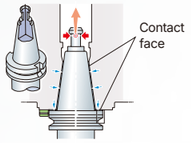
Telescopic stainless steel protection of guideway produced by top suppliers in the market, taking advantage of the expertise of professional producer, improving the serving life of not just waycover itself, but also ball screws, linear guideways and bearings.

Options

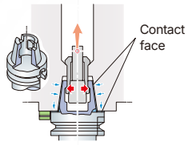
Two-face contact specifications OPTION

Tool rigidity has been improved by contact of both the spindle taper and the spindle nose. This extends the useful life of a tool, raises cutting power and improves the machining precision.

BBT40*, BBT50*



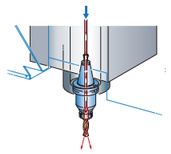
HSK-A63, HSK-A100



* When the two-face contact specication is selected, a two-face contact tool and other tools cannot be used together.

Coolant through Spindle OPTION

The through-spindle coolant system effectively eliminates chips, cooling directly at the machining point, and lengthening the lives of your tools.



Coolant through Spindle

Coolant Pressure:
20 bar
30 bar
50 bar
70 bar

Linear Scale OPTION

The absolute optical linear scale (full closed-loop control) made by Fagor or Heidenhain is useful for high-precision positioning, and is available as an option.

- High accuracy, high resolution
- Greater accuracy than standard machines
- Highly resistant to condensation and oil
- Vibration and impact resistant characteristics

Workpiece measurement function OPTION

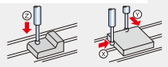
In-machine measuring system (spindle) Optical signal transmission

In-machine measuring system (spindle) Radio signal transmission

Work setter function (manual measurement application)

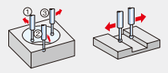
- Reference plane measurement

The machining reference point can be calculated simply by applying the sensor from the Z, X and Y-axis directions.



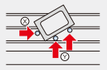
- Reference hole measurement

Centering a boss, hole, groove or width can be done at any two or three points, simply by applying the sensor.



- Coordinate rotation measurement

Machining can be done without changing the program even if the workpiece is attached crookedly, simply by performing this operation within the X-axis and Y-axis plane.



Tool measurement function OPTION

In-machine measuring system (table) Touch sensor (tool length)

Tool setter function (manual measurement application)

- Tool length measurement

The tool length value can be registered automatically to the designated tool offset number.

In-machine measuring system (table) Touch sensor (tool length / tool diameter)

Tool setter function (manual measurement application)

- Tool length measurement

The tool length value can be registered automatically to the designated tool offset number.

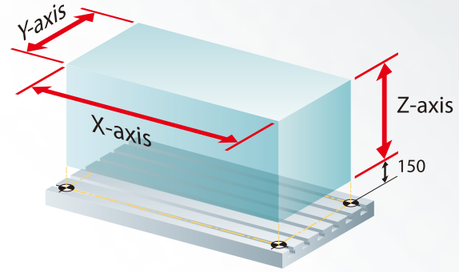
- Tool diameter measurement

The tool diameter value can be registered automatically to the designated tool offset number.

Work Piece Size VMC-Series

XYZ Box-way	Units	VMC-650	VMC-850B	VMC-1050	VMC-1060B	VMC-1167
Area of Table	mm	800×420	1050×500	1000×530	1300×600	1200×600
X-Axis	mm	650	800	1000	1000	1100
Y-Axis	mm	400	550	500	600	600
Z-Axis	mm	480	550	700	600	700

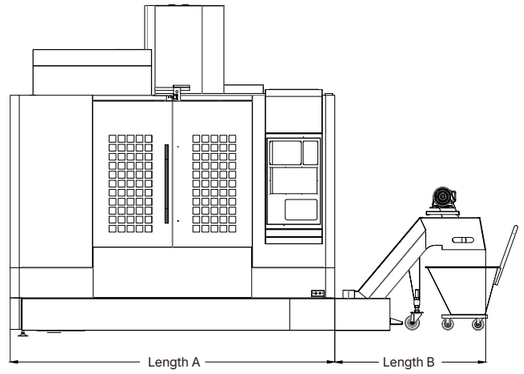
XYZ Box-way	Units	G12	VMC-1270	VMC-1380	VMC-1580	VMC-1890
Area of Table	mm	1300×700	1360×700	1400×800	1700×800	2000×900
X-Axis	mm	1200	1200	1300	1500	1800
Y-Axis	mm	700	700	800	800	900
Z-Axis	mm	700	600	700	700	680

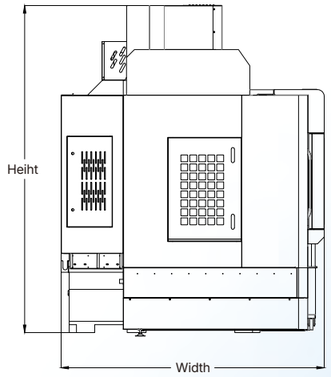


XY Linear, Z Box-way	Units	VMC-L650	VMC-L850	VMC-L1060B	VMC-L1167	G12-II	VMC- L1380	VMC- L1580	TZ-15-II	VMC- L1690	VMC- L1890	TZ-18-II	TZ-20-II	VMC-L2310
Area of Table	mm	800×500	1000×500	1300×600	1200×600	1300×700	1400×800	1700×800	1700×810	1800×900	2000×900	2000×900	2200×900	2500×1000
X-Axis	mm	600	800	1000	1100	1200	1300	1500	1500	1600	1800	1800	2000	2300
Y-Axis	mm	500	500	600	600	700	800	800	800	900	900	900	900	1000
Z-Axis	mm	500	550	600	700	700	700	700	800	600	600	720	900	800

XYZ Linear Way	Units	V6	VMC-L855	VMC-L866	VMC-L1166	V-1160	TZ-12-III	G12-III	VMC-L1380A	TZ-15-III	VMC-L1580A	VMC-L1890A	TZ-20-III
Area of Table	mm	720×400	1000×500	1200×550	1200×550	1200×600	1360×710	1300×700	1400×800	1700×810	1700×800	2000×900	2200×900
X-Axis	mm	600	800	800	1100	1100	1200	1200	1300	1500	1500	1800	2000
Y-Axis	mm	420	500	600	600	600	650	700	800	800	800	900	900
Z-Axis	mm	450	550	600	600	600	700	700	700	800	700	800	900

Floor Plans VMC-Series





XYZ BOX-WAY	VMC-650	VMC-850B	VMC-1060B	VMC-1167	G12	VMC-1270	VMC-1380	VMC-1580	VMC-1890
Length A	2350	2480	3085	3085	3490	3630	3636	4203	4888
Length B	1240	1270	1364	1364	1491	1322	1322.77	1364	1042.77
Width	2250	2280	2430	2434	2940	3500	3613	3484	4355
Height Min	2420	2342	2860	2865	2663	2916	2916	2950	2733
Height Max	2720	2741	3100	3137	3187	3299	3300	3236	3800

XY LINEAR, Z BOX-WAY	VMC-L650	VMC-L850	VMC-L1060B	VMC-L1167	G12-II	VMC- L1380	VMC- L1580	VMC- L1690	VMC- L1890	TZ-20-II	VMC-L2310
Length A	2320	2380	3085	3085	3490	3636	4203	4581	4888	5435.48	5604
Length B	1200	1430	1364	1364	1491	1322.77	1364	1114	1042.77	952.99	903
Width	2250	2280	2430	2434	2940	3613	3484	3360	4355	3665	3812
Height Min	2560	2472	2860	2865	2663	2916	2950	3385	2733	3720.5	3240
Height Max	2840	2820	3100	3137	3187	3299	3236	3500	3545	4500	4500

XYZ LINEAR WAY	V6	VMC-L855	VMC-L866	VMC-L1166	V-1160	G12-III	VMC-L1380A	VMC-L1580A	VMC-L1890A	TZ-20-III
Length A	2100	2400	2500	3335	3330	3490	3636	4203	4888	5435.48
Length B	1236	1270	1367	1122.7	1120	1491	1322.77	1364	1042.77	952.99
Width	2265	2270	2300	2310	2300	2940	3613	3484	4355	3665
Height Min	2210	2342	2320	2650	2700	2663	2916	2830	2733	3720.5
Height Max	2750	2741	2821	3201	3200	3187	3299	3236	3545	4500

3 Axis Box Way

Technical Data

Model	Unit	VMC-650	VMC-850B	VMC-1050	VMC-1060B	VMC-1167
Table						
Area of Table	mm	800×420	1050×500	1000×530	1300×600	1200×600
Working Area	mm	650×400	800×550	1000×500	1000×600	1100×600
T-solt (number× size ×distance)	mm	3×18×135	5 ×18×90	5 ×18×100	5 ×18×120	5 ×18×120
Max. Load	kg	600	600	600	800	800
Travel						
X/Y/Z-Axis Travel	mm	650/400/480	800/500/550	1000/500/700	1000/600/600	1100/600/700
Spindle Nose to Worktable Surface	mm	80-560	105-655	110-810	180-780	110-810
Spindle Nose to Column Slideway	mm	480	550	560	600	654
X/Y/Z-Guideway Type		Box-way	Box-way	Box-way	Box-way	Box-way
Spindle						
Taper		BT-40	BT-40	BT-40	BT-50	BT-40
Spindle rpm	rpm	10000/12000	10000/12000	10000/12000	10000/12000	10000/12000
Transmission Method						
Spindle Motor-Fanuc	kw	11/15	11/15	11/15	11/15	11/15
Spindle Motor-Mitsubishi	kw	11/15	11/15	11/15	11/15	11/15
Spindle Motor-Siemens	kw	9	9	9	9	9
3-Axis Motor						
X/Y/Z-Axis Servo Motor-Fanuc	kw	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
X/Y/Z-Axis Servo Motor-Mitsubishi	kw	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
X/Y/Z-Axis Servo Motor-Siemens	kw	3.55/3.55/3.55BS	3.55/3.55/3.55BS	3.55/3.55/3.55BS	3.55/3.55/3.55BS	3.55/3.55/3.55BS
3-Axis Cutting Feed Rate	mm/min	10000	10000	10000	6000	6000
3-Axis Rapid Moving	m/min	14/14/14	14/14/14	14/14/14	14/14/14	16/14/16
Others						
Machine Net Weight	kg	5200	5300	6500	7800	7800
Control						
VMC-Series Control		Fanuc 0i-MF Plus, Mitsubishi M80, Siemens 828D, GSK, SYNTEC				

Standard

- **Enclosed Guard (without roof)**
- **Tool Changer of 24 Tools**
- **Chain Type Chip Conveyor**
- **Chip Flushing System**
- **Low Energy Work Light LED**
- **3-Color Warning Light**
- **Volumetric Type Automatic Lubricator**
- **Auto Power Off**
- **Rigid Tapping**
- **Air Conditioner**
- **Air Gun**
- **Coolant Gun**
- **Spindle Oil Cooler**
- **XYZ telescopic waycover**
- **Stainless steel plates for easier chip flushing**
- **Tool Box**
- **Leveling Screws & Blocks**
- **Operation Manual**

3 Axis Box Way

Technical Data

G12	VMC-1270	VMC-1380	VMC-1580	TZ-15	VMC-1890	VMC-2310
1300×700	1360×700	1400×800	1700×800	1700×810	2000×900	2500×1000
1200×700	1200×700	1300×800	1500×800	1500×800	1800×900	2300×1000
5 ×18×120	5 ×18×152.5	5 ×18×152.5	5×22×135	5 ×18×147.5	5×22×165	5×22×160
1200	1000	1000	1500	1500	1600	3000
1200/700/700	1200/700/600	1300/800/700	1500/800/700	1500/800/800	1800/900/680(800)	2300/1000/800
110~810	150-750	100-800	170-870	85-885	160-840(960)	300-1100
750	785	850	810	865	950	1080
Box-way	Box-way	Box-way	Box-way	Box-way	Box-way	Box-way
BT-40 / BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50
10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000
11/15	15/18.5	15/18.5	15/18.5	15/18.5	18.5/22	18.5/22
11/15	15/18.5	15/18.5	15/18.5	15/18.5	18.5/22	18.5/22
12	12	12	12	12	15	15
3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	4.5/4.5/4.5BS
			4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	
4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS
5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS
6000	6000	6000	6000	6000	6000	6000
14/14/14	10/10/12	16/16/12	10/10/12	16/16/14	12/12/12	12/12/12
8700	9400	9300	12000	8800	13800 / 14300	17000
Fanuc 0i-MF Plus, Mitsubishi M80, Siemens 828D, GSK, SYNTEC						

Options

- **Tool Changer of 16/20/30/32 tools**
- **Spindle Upgrade to Direct Drive 10000/12000/15000rpm**
- **Spinde Upgrade Built-in 18000/24000 rpm**
- **Screw Type Chip Conveyor**
- **Tool measuring system**
- **Workpiece measuring system**
- **Linear Scale**
- **Coolant Through Spindle**
- **Air Through Spindle**
- **Oil Mist Collector**
- **Fully-closed Enclosure with roof**
- **Oil Skimmer**

Model	Unit	VMC-L650	VMC-L850	VMC-L1060B	VMC-L1167	G12-II
Table						
Area of Table	mm	800×500	1000×500	1300×600	1200×600	1300×700
Working Area	mm	600×500	800×500	1000×600	1100×600	1200×700
T-solt (number× size ×distance)	mm	3×18×144	5×18×90	5×18×100	5×18×120	5×18×120
Max. Load	kg	500	600	800	800	1200
Travel						
X/Y/Z-Axis Travel	mm	600/500/500	800/500/550	1000/600/600	1100/600/700	1200/700/700
Spindle Nose to Worktable Surface	mm	130-630	110-610	70-670	95-795	110-810
Spindle Center to Column Slideway	mm	560	560	655	654	750
X-axis Guideway	mm	MSR35 roller	MSR35 roller	MSR45 roller	MSR45 roller	2*45 mm roller
Y-axis Guideway	mm	MSR35 roller	MSR45 roller	MSR55 roller	MSR45 roller	4*35 mm roller
Z-axis Guideway	mm	Box-way	Box-way	Box-way	Box-way	Box-way
Spindle						
Taper		BT-40	BT-40	BT-40	BT-40	BT-40 / BT-50
Spindle rpm	rpm	10000/12000	10000/12000	10000/12000	10000/12000	10000/12000
Transmission Method						
Spindle Motor-Fanuc	kw	11/15	11/15	11/15	11/15	11/15
Spindle Motor-Mitsubishi	kw	11/15	11/15	11/15	11/15	11/15
Spindle Motor-Siemens	kw	9	9	9	9	9
3-Axis Motor						
X/Y/Z-Axis Servo Motor-Fanuc	kw	1.8/1.8/3.0BS	1.8/1.8/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
X/Y/Z-Axis Servo Motor-Mitsubishi	kw	1.5/1.5/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS
X/Y/Z-Axis Servo Motor-Siemens	kw	2.85/2.85/3.55BS	2.85/2.85/3.55BS	3.55/3.55/3.55BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS
3-Axis Cutting Feed Rate	mm/min	6000	6000	6000	6000	6000
3-Axis Rapid Moving	m/min	24/24/14	24/24/14	24/24/18	24/24/16	24/24/14
Others						
Machine Net Weight	kg	6000	6000	8300	6200	8700
Control						
VMC-Series Control		Fanuc 0i-MF Plus, Mitsubishi M80, Siemens 828D, GSK, SYNTEC				

Standard

- **Enclosed Guard (without roof)**
- **Tool Changer of 24 Tools**
- **Chain Type Chip Conveyor**
- **Chip Flushing System**
- **Low Energy Work Light LED**
- **3-Color Warning Light**
- **Volumetric Type Automatic Lubricator**
- **Auto Power Off**
- **Rigid Tapping**
- **Air Conditioner**
- **Air Gun**
- **Coolant Gun**
- **Spindle Oil Cooler**
- **XYZ telescopic waycover**
- **Stainless steel plates for easier chip flushing**
- **Tool Box**
- **Leveling Screws & Blocks**
- **Operation Manual**

VMC- L1380	VMC- L1580	TZ-15-II	VMC- L1690	VMC- L1890	TZ-18-II	TZ-20-II	VMC-L2310
1400×800	1700×800	1700×810	1800×900	2000×900	2000×900	2200×900	2500×1000
1300×800	1500×800	1500×800	1600×900	1800×900	1800×900	2000×900	2300×1000
5×18×135	5×22×135	5×18×147.5	5×22×165	5×22×165	5×18×147.5	5×18×147.5	5×22×160
1000	1500	1500	1600	1600	2000	2000	3000
1300/800/700	1500/800/700	1500/800/800	1600/900/600	1800/900/600	1800/900/1000	2000/900/1000	2300/1000/800
100-800	130-830	85-885	160-760	160-760	200-1200	200-1200	180-980
850	855	865	950	950	950	950	1080
MSR45 roller(6 slides)	MSR55LS	MSR45 roller	MSA55LS	MSA55LS	MSA45LS	MSR45 roller	55 roller
MSR45 roller(4 rails)	MSR45LS (4 rails)	MSR45 roller	MSA45LS	MSA45LS	MSA45LS	MSR45 roller	45 roller
Box-way	Box-way	Box-way	Box-way	Box-way	Box-way	Box-way	Box-way
BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50
			8000/10000/12000				
15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
15	15	15	15	15	15	15	15
3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS
4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS
5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS
6000	6000	6000	6000	6000	6000	6000	6000
16/16/12	12/12/12	24/24/14	12/12/12	12/12/12	20/20/14	20/20/14	12/12/12
9800	12500	8800	12800	13800 / 14300	13800 / 14300	10800	16000
Fanuc 0i-MF Plus, Mitsubishi M80, Siemens 828D, GSK, SYNTEC							

Options

- **Tool Changer of 16/20/30/32 tools**
- **Spindle Upgrade to Direct Drive 10000/12000/15000rpm**
- **Spinde Upgrade Built-in 18000/24000 rpm**
- **Screw Type Chip Conveyor**
- **Tool measuring system**
- **Workpiece measuring system**
- **Linear Scale**
- **Coolant Through Spindle**
- **Air Through Spindle**
- **Oil Mist Collector**
- **Fully-closed Enclosure with roof**
- **Oil Skimmer**

Model	Unit	V6	VMC-L855	VMC-L866	VMC-L1166	V-1160
Table						
Area of Table	mm	720×400	1000×500	1000×550	1200×550	1200×600
Working Area	mm	600×420	800×500	850×600	1100×600	1100×600
T-solt (number× size ×distance)	mm	4 ×14×80	4 ×18×105	5 ×18×100	5 ×18×100	5 ×18×100
Max. Load	kg	350	800	800	1000	800
Travel						
X/Y/Z-Axis Travel	mm	600/420/450	800/500/550	850/600/600	1100/600/600	1100/600/600
Spindle Nose to Worktable Surface	mm	100-550	100-650	100-700	100-700	120-720
Spindle Nose to Column Slideway	mm	456	500	550	680	650
X-axis Guideway	mm	MSA30LA	35 mm roller	45 mm roller(6 slides)	45 mm roller(6 slides)	45 mm roller
Y-axis Guideway	mm	MSA30LA	35 mm roller	45 mm roller	45 mm roller	45 mm roller
Z-axis Guideway	mm	MSA35LS	35 mm roller	45 mm roller(6 slides)	45 mm roller(6 slides)	45 mm roller
Spindle						
Taper		BT-40	BT-40	BT-40	BT-40	BT-40
Spindle rpm	rpm	12000	10000/12000	12000	12000	10000/12000
Transmission Method						
Spindle Motor-Fanuc	kw	7.5/11	11/15	11/15	11/15	11/15
Spindle Motor-Mitsubishi	kw	5.5/7.5	7.5/11	11/15	11/15	11/15
Spindle Motor-Siemens	kw	7	9	9	9	9
3-Axis Motor						
X/Y/Z-Axis Servo Motor-Fanuc	kw	1.8/1.8/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
X/Y/Z-Axis Servo Motor-Mitsubishi	kw	1.5/1.5/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
X/Y/Z-Axis Servo Motor-Siemens	kw	2.85/2.85/3.55BS	3.55/3.55/3.55BS	3.55/3.55/3.55BS	3.55/3.55/3.55BS	3.55/3.55/3.55BS
3-Axis Cutting Feed Rate	mm/min	10000	10000	10000	10000	10000
3-Axis Rapid Moving	m/min	48/48/48	48/48/36	36/36/36	36/36/36	36/36/24
Others						
Machine Net Weight	kg	4200	5800	7000	7200	6000
Control						
VMC-Series Control		Fanuc 0i-MF Plus, Mitsubishi M80, Siemens 828D, GSK, SYNTEC				

Standard

- **Enclosed Guard (without roof)**
- **Tool Changer of 24 Tools**
- **Chain Type Chip Conveyor**
- **Chip Flushing System**
- **Low Energy Work Light LED**
- **3-Color Warning Light**
- **Volumetric Type Automatic Lubricator**
- **Auto Power Off**
- **Rigid Tapping**
- **Air Conditioner**
- **Air Gun**
- **Coolant Gun**
- **Spindle Oil Cooler**
- **XYZ telescopic waycover**
- **Stainless steel plates for easier chip flushing**
- **Tool Box**
- **Leveling Screws & Blocks**
- **Operation Manual**

TZ-12-III	G12-III	VMC-L1380A	TZ-15-III	VMC-L1580A	VMC-L1890A	TZ-20-III
1360×710	1300×700	1400×800	1700×810	1700×800	2000×900	2200×900
1200×650	1200×700	1300×800	1500×800	1500×800	1800×900	2000×900
5 ×18×152.5	5 ×18×120	5 ×18×135	5 ×18×147.5	5 ×22×135	5 ×22×165	5 ×18×147.5
1000	1200	1000	1500	1500	1600	2000
1200/650/700	1200/700/700	1300/800/700	1500/800/800	1500/800/700	1800/900/800	2000/900/900
75-775	110-810	100-800	85-885	160-960	160-960	200-1200
785	750	850	865	950	950	950
45 mm roller	45 mm roller	MSR45 (6 slides)	MSR45 roller	MSA55LS	MSA55LS	MSR45 roller
45 mm roller	35 mm roller	MSR45 (4 rails)	MSR45 roller	MSA45LS (4 rails)	MSA45LS	MSR45 roller
45 mm roller	45 mm roller	MSR55 (6 slides)	MSR45 roller	MSA55LS2	MSA55LS	MSR45 roller
BT-40	BT-40 / BT-50	BT-50	BT-50	BT-50	BT-50	BT-50
10000/12000	10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000	8000/10000/12000
11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5
9	9	15	15	15	15	15
3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS	3.0/3.0/3.0BS
	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS
3.0/3.0/3.0BS	3.0/3.0/3.0BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS	4.5/4.5/4.5BS
3.3/3.3/5.5BS	3.3/3.3/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS	5.5/5.5/5.5BS
10000	10000	10000	10000	6000	6000	6000
24/24/16	24/24/16	24/24/20	24/24/16	20/20/16	12/12/12	20/20/16
7300	8700	9800	8800	12500	13800	10800
Fanuc 0i-MF Plus, Mitsubishi M80, Siemens 828D, GSK, SYNTEC						

Options

- **Tool Changer of 16/20/30/32 tools**
- **Spindle Upgrade to Direct Drive 10000/12000/15000rpm**
- **Spinde Upgrade Built-in 18000/24000 rpm**
- **Screw Type Chip Conveyor**
- **Tool measuring system**
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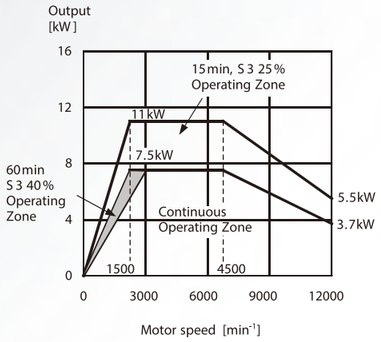
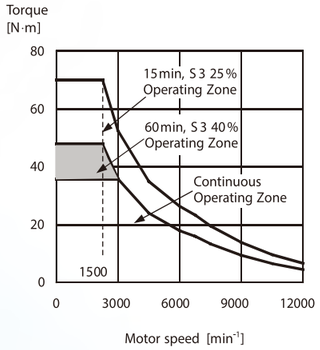
- **Linear Scale**
- **Coolant Through Spindle**
- **Air Through Spindle**
- **Oil Mist Collector**
- **Fully-closed Enclosure with roof**
- **Oil Skimmer**

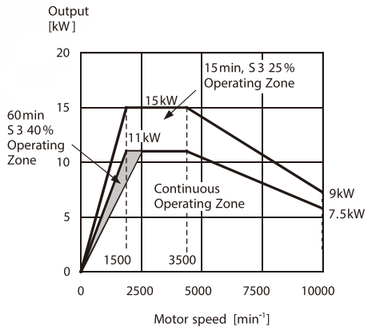
Torque-Power Diagrams-Fanuc

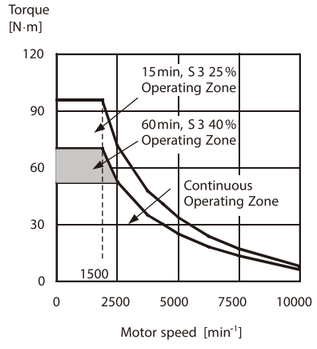
VMC-V6/855
Fanuc-Drive



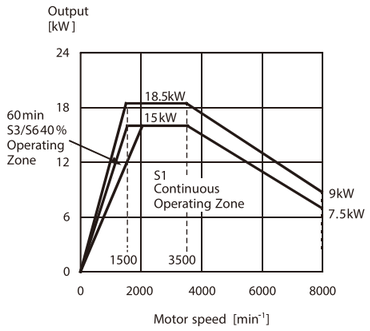


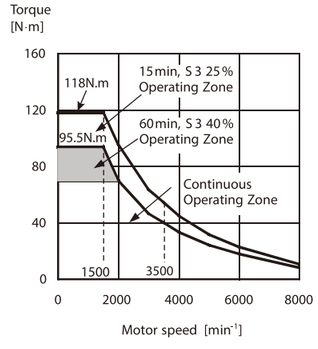
VMC-855/1060/1166/G12/1270
Fanuc-Drive





VMC-G12/1270/1370/1570/1690/1890
Fanuc-Drive

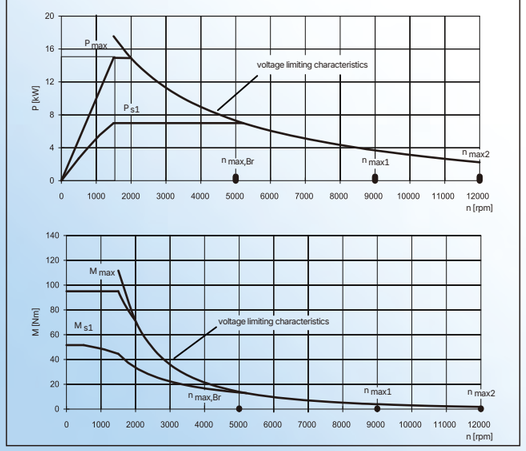




Torque-Power Diagrams-Siemens

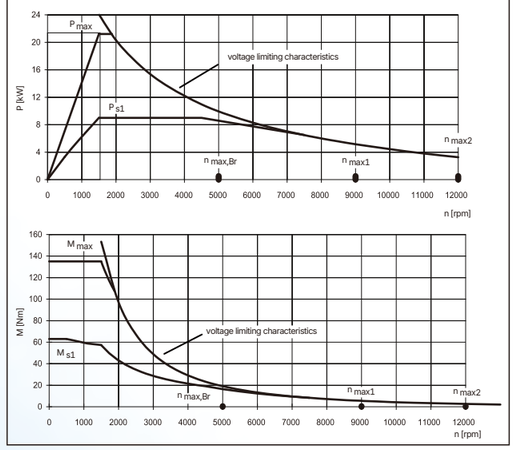
VMC-V6/855 Siemens-Drive

nrated [rpm]	Prated [kW]	Mrated [Nm]	Irated [A]	nmax1 [rpm]	nmax2 [rpm]	nmax3 [rpm]	nmax, Br [rpm]	n2 [rpm]	Mmax [Nm]	Imax [A]	M0 [Nm]	I0 [A]
1500	7,0	45	17,5	9000	12000	-	5000	5250	95	38	52	20



VMC-1060/1166 Siemens-Drive

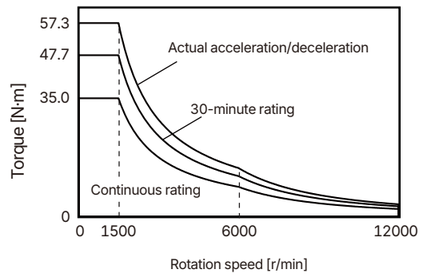
nrated [rpm]	Prated [kW]	Mrated [Nm]	Irated [A]	nmax1 [rpm]	nmax2 [rpm]	nmax3 [rpm]	nmax, Br [rpm]	n2 [rpm]	Mmax [Nm]	Imax [A]	M0 [Nm]	I0 [A]
1500	9.0	57	23.5	9000	12000	-	5000	4500	135	54	63	25



Torque-Power Diagrams-Mitsubishi

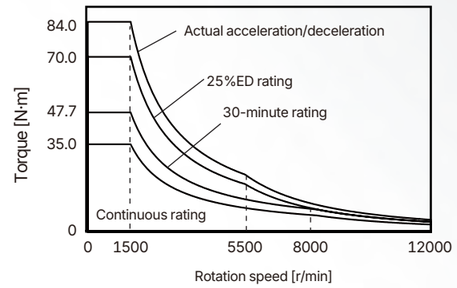
VMC-V6 Mitsubishi-Drive

[Motor with fan series SJ-D7.5/120-01]



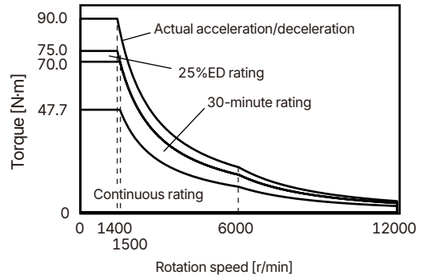
VMC-855 Mitsubishi-Drive

[Motor with fan series SJ-DG7.5/120-05T]



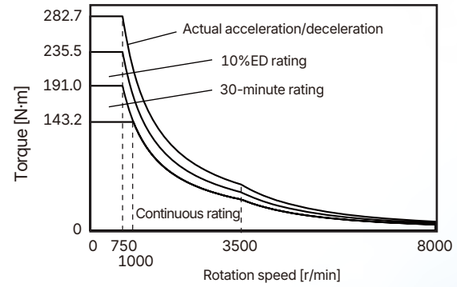
VMC-855/866/1166 Mitsubishi-Drive

[Motor with fan series SJ-DG11/120-03T]



VMC-1270/1370/1570/1690/1890 Mitsubishi-Drive

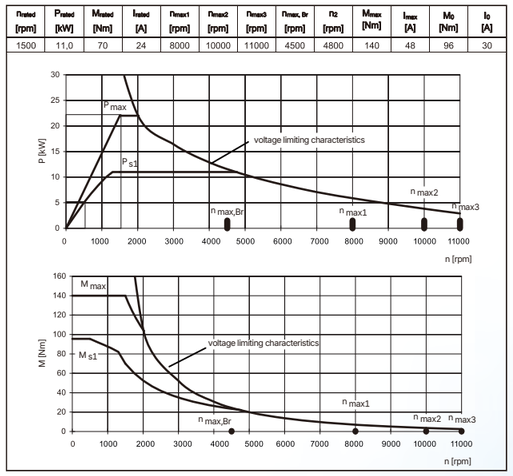
[Motor with fan series SJ-DN18.5/80-01]



Torque-Power Diagrams-Siemens

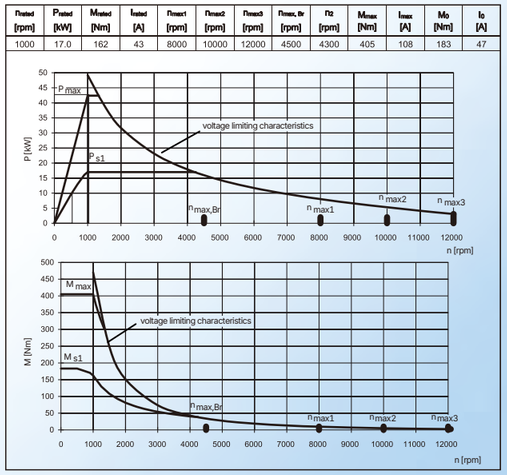
VMC-1060/1166/G12/1270 Siemens-Drive

nrated [rpm]	Prated [kW]	Mrated [Nm]	Irated [A]	nmax1 [rpm]	nmax2 [rpm]	nmax3 [rpm]	nmax, Br [rpm]	n2 [rpm]	Mmax [Nm]	Imax [A]	M0 [Nm]	I0 [A]
1500	11,0	70	24	8000	10000	11000	4500	4800	140	48	96	30



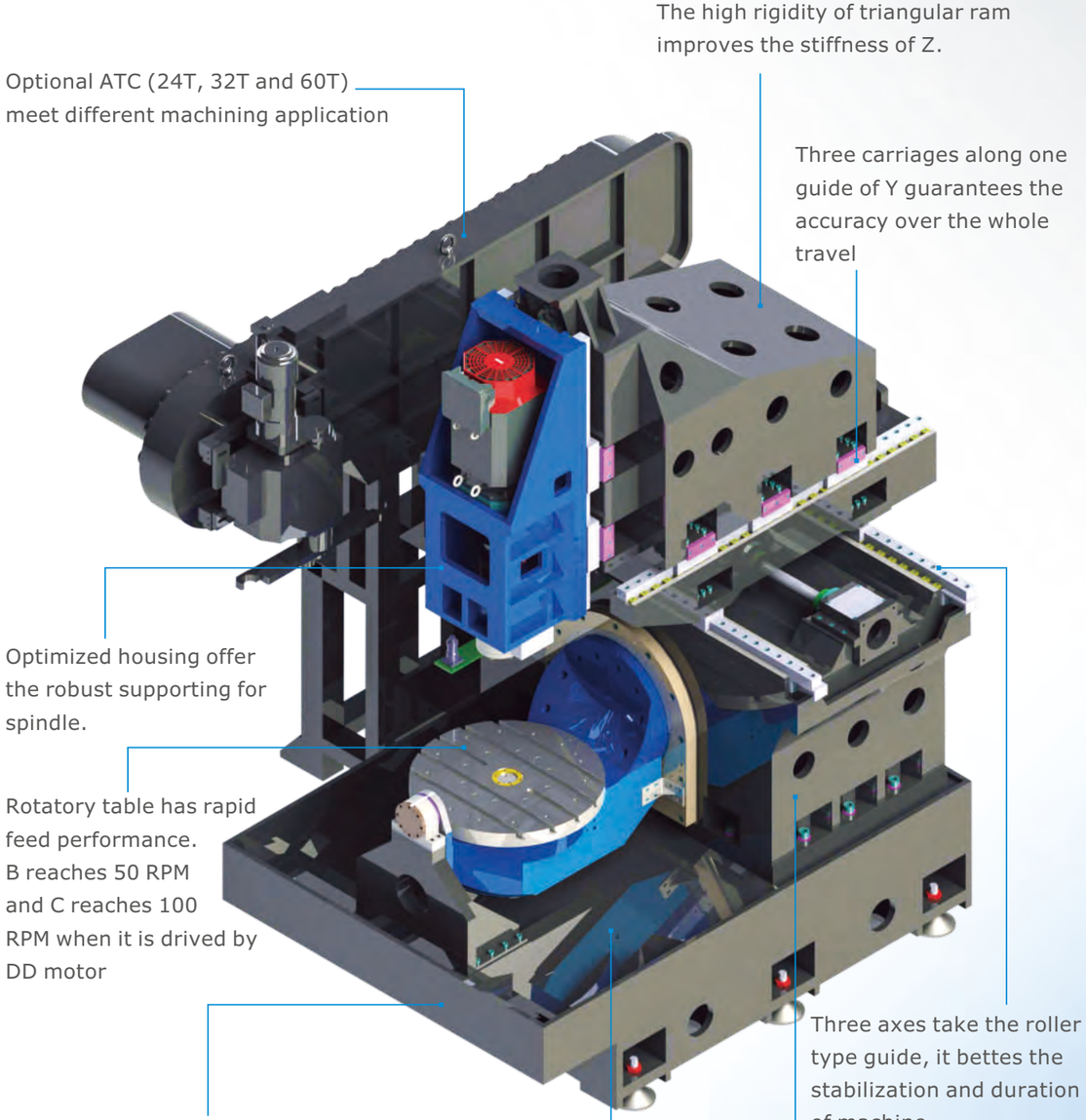
VMC-1370/1570/1690/1890 Siemens-Drive

nrated [rpm]	Prated [kW]	Mrated [Nm]	Irated [A]	nmax1 [rpm]	nmax2 [rpm]	nmax3 [rpm]	nmax, Br [rpm]	n2 [rpm]	Mmax [Nm]	Imax [A]	M0 [Nm]	I0 [A]
1000	17.0	162	43	8000	10000	12000	4500	4300	405	108	183	47



HMU-series (tilting axis on Y axis)

Model	Unit	HMU-400	HMU-650
X travel	mm	800	800
Y travel	mm	360	520
Z travel	mm	400	500
4th axis travel	°	C: N*360°	C: N*360°
5th axis travel	°	B:-110°~+110°	B:-120°~+120°
Table Size	mm	Φ400	Φ650
Table load	kg	200/160 (Ver/ Hor)	300/180(Ver/Hor)
Spindle Speed	rpm	12000	15000
Spindle power	kw	7.5	9
Spindle Taper	ISO/BT	BT40/Φ120	BT40/Φ150
Drive Type		Direct	Direct
X/Y/Z Rapid speed	m/min	36/36/36	24/24/24
Feed Rate	m/min	15	15
Machine weight	Ton	7.8	9.6



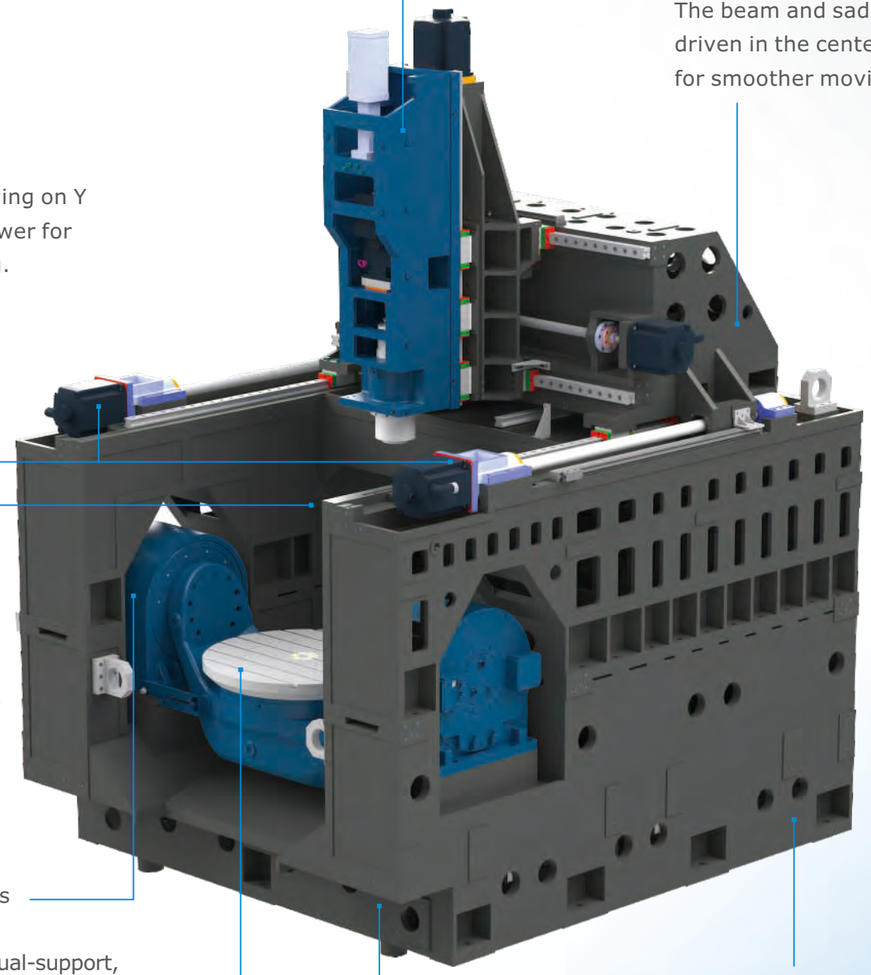
C-series (tilting axis on X axis)

Model	Unit	C-260	C-400	C-630	C-800
X travel	mm	400	500	650	800
Y travel	mm	500	500	750	950
Z travel	mm	350	450	500	600
4th axis	°	C: N*360°	C: N*360°	C: N*360°	C: N*360°
5th axis	°	A: -120°~+120°	A:-120°~+120°	A:-120°~+120°	A:-120°~+120°
Table Size	mm	Φ 260	Φ 475	Φ 630	Φ800
Table load	kg	60/ 50 (Ver/ Hor.)	500	600	1200
Spindle Taper		BT 30 / BBT 30	BBT40/ HSK-A63	BBT40/ HSK-A63	BBT40/ HSK-A63
Spindle Speed	rpm	15000/20000	12000/15000/18000	12000/15000/18000	12000/15000/18000
Spindle Power	kw	5.5/7.5	7.5/ 11/ 15/ 18	7.5/ 11/ 15/ 18	7.5/ 11/ 15/ 18
X/Y/Z Rapid speed	m/min	36/36/36	32/32/32	30/24/30	30/18/30
Feed Rate	m/min	20/20/20	20/20/20	20/20/20	20/15/20
Machine weight	Ton	4.5	8	9	11

The feed rated and rapid movement of axial is dramatically increased, improves the dynamic response of components and boosts processing efficiency.

The beam and saddle are driven in the center of mass for smoother moving.

Dual motor driving on Y axis, double power for efficient cutting.



Built-in tool magazine to reduce footprint.

A-axis of C-800 is designed with dual-drive and dual-support, enjoys better rigidity and dynamic response.

Compact design, smaller footprint with the same travel.

C-axis can be equipped with optional high-speed torque motor, to realize turning function.

Front chip removal design facilitates chip removal and maintenance.

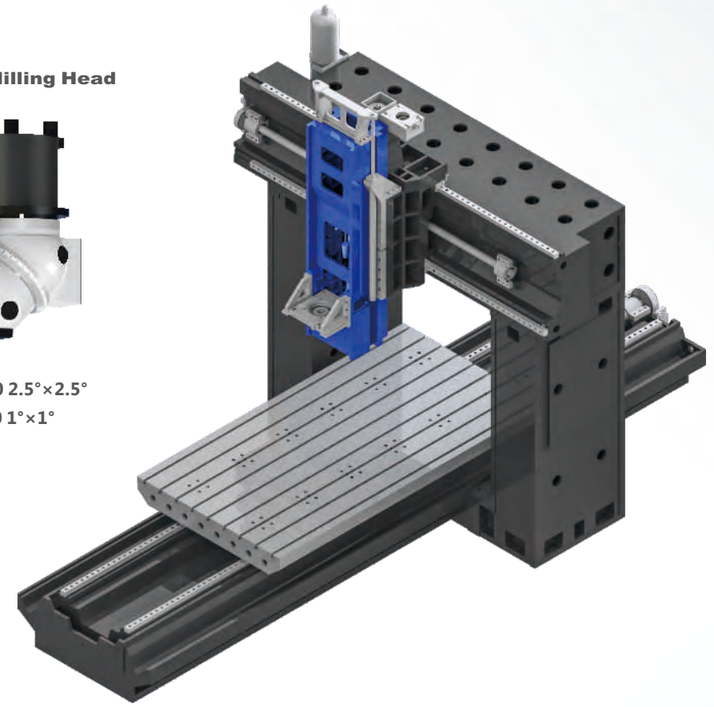
Double Column Machining Center

Optional:

Universal Auto-indexing Milling Head

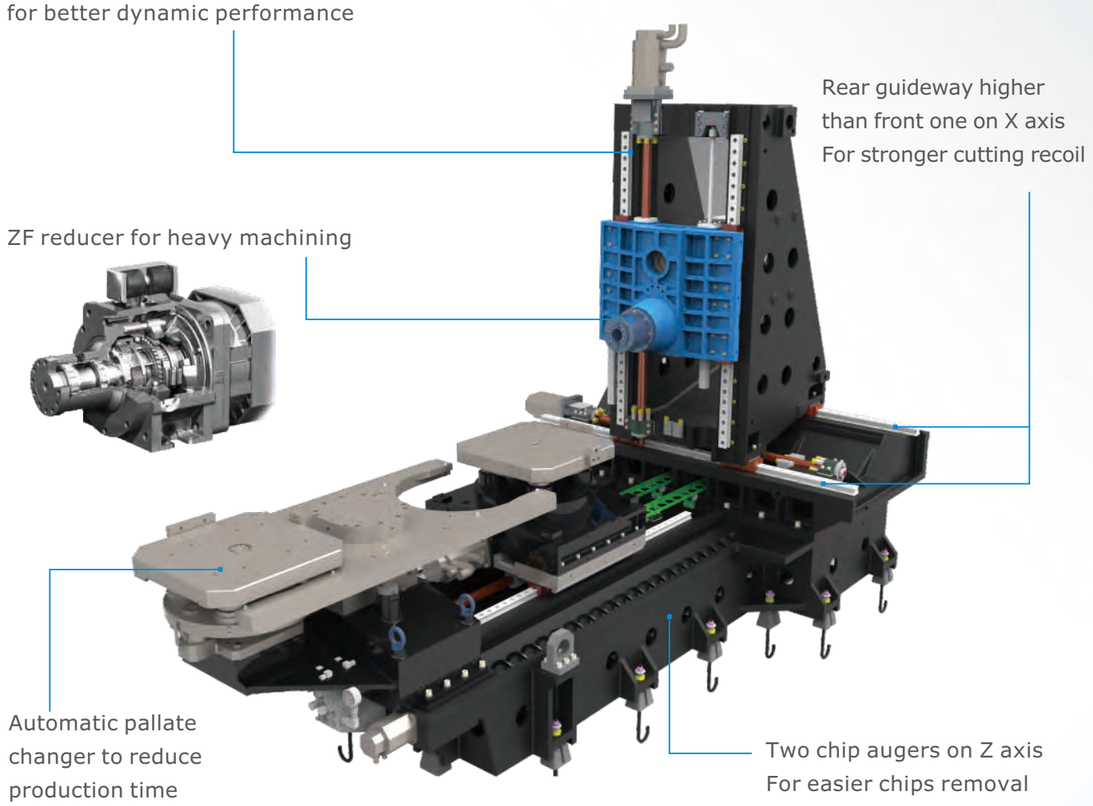
CVOI-1000 2.5°×2.5°
CVOI-6000 1°×1°

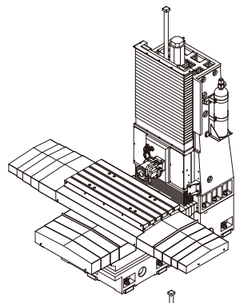
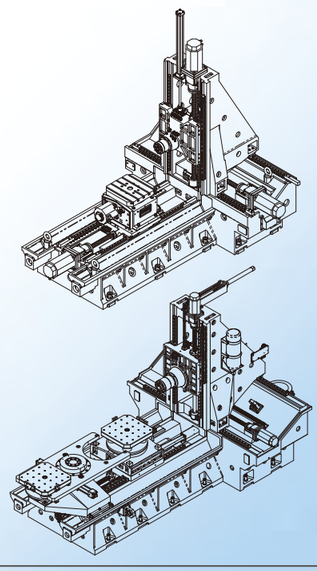
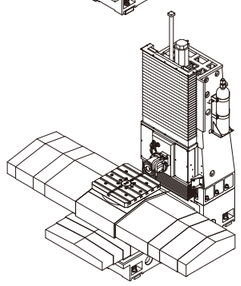
VGCI-1000 2.5°×2.5°
VGCI-6000 1°×1°



Model	Unit	SP-1000B/C	SP-1200B/C	SP-1500B/C	SP-1800B/C	SP-2000B	SP-2200B/C	SP-2500B/C	SP-2900B/C	SP-3200B/C	SP-3800B/C	SP-4200B/C
X travel	m	1.2/1.6/2.0	1.6/2.1	1.6/2.2/2.7/3.2	2.2/2.7/3.2/4.2	2/2.5/3/3.5/4	2.2/3//4/5/6	3/4/5/6	3/4/5/6	4/5/6/8	4/5/6/8	4/5/6/8
Y travel	mm	1100	1200	1500	2100	2000	2200	2700	2900	3200	3800	4200
Z travel	mm	800	800	800	1000	1000	1000/1250	1000/1250	1000/1250	1250	1250	1500
Table length	mm	1.4/1.8/2.2	1.6/2.1	1.6/2.0/2.5/3.0	2/2.5/3/4	2/2.5/3/3.5/4	2.2/3/4/5/6	3/4/5/6.2	3/4/5/6	4/5/6/8	4/5/6/8	4.2/5.2/6.2/8.2
Table width	mm	900	1000	1200	1500	1600	1800	2300	2500	2700	3200	3200
Distance between columns	mm	1100	1200	1550	1800	2000	2200	2700	2900	3200	3700	4200
Spindle Speed (B)	rpm	8000	8000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Spindle Speed (C)	rpm	12000	12000	12000	12000	6000	6000	6000	6000	6000	6000	6000
Spindle Power	KW	15-18.5	15-18.5	18.5-22	18.5-22	22	22	30	30	30	30-37	37-50
Spindle Taper	ISO/BT	BT-50 / BT-40	BT-40 / BT-50	BT-50 / BT-40	BT-40 / BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	BT-50
XY linear (B)	m/min	20 / 20 / 12	14/14/10	18 / 18 / 12	14/14/10	16 / 16 / 12	16 / 16 / 12	12 / 12 / 8	12 / 12 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8
XYZ linear (C)	m/min	20 / 20 / 20	14/14/14	18 / 18 / 18	14/14/14							
Table Load	Ton	1.6/2/2.4	3/4	3/4/5/6	4/5/6/8	4/5/6/7/8	4/6/10/12/15	15/18/20/25	15/18/20/25	18/20/25/30	18/20/25/30	30/35/40/42/45/50
Machine Weight	Ton	12/13/14	12.5/13.5	16/17/18/19	17/18/19.5/22	28/33/38/43/48	30/36/40/46/53	47/51/57/68	52/56/62/72	66/74/82/98	68/76/84/100	98/103/108/118/133/158

Horizontal Machining Center



		Column-fixed Style					Column-moving Style			
Model	**Unit**	**GW-9**	**LW1075**	**LW1290**	**LW1814**		**TH40**	**TH50**	**TH63**	
X travel	mm	900	1000	1200	1800		600	800	1100	
Y travel	mm	750	750	900	1400		600	800	800	
Z travel	mm	600	600/900	700	900		600	800	1100	
Fixed table	mm	600*1050	600*1300	700*1360	900*2000					
Rotary table	mm	400*400 / 500*500	630*630	630*630	800*800		400*400	500*500	630*630	
Number of table	mm	1/2	1	1			1	1/2	1/2	
Indexing Unit	°	1 / 0.001	1 / 0.001	1 / 0.001	1 / 0.001		1 / 0.001	1 / 0.001	1/0.001	
Spindle Speed	rpm	8000	6000	6000	6000		8000	6000	6000	
Spindle Power	KW	7.5-11	11-15	11-15	15-18		7.5-11	11-15	11-15	
Spindle Taper	ISO/BT	BT-40	BT-50	BT-50	BT-50		BT-50	BT-50	BT-50	
XYZ linear	m/min	30 / 30 / 30	24 / 24 / 24	24 / 24 / 24	24 / 24 / 24		36 / 36 / 36	24 / 24 / 24	24 / 24 / 24	
XZ linear	m/min	30 / 14 / 30	24 / 14 / 24	24 / 14 / 24	24 / 14 / 24					
Table Load	Kg	600	800	1600	1800		400	500	800	
Machine Weight	Ton	6	7	9.8	14		6	10.5	14	

After development of 25 years, we have become a union with 7 production bases and 18 branches, with its headquarters located at 'spring city' Kunming.

Our union is specialized in the research and development of various types of CNC machine tools, closely focusing on market demand and customer satisfaction. Through continuous learning, absorption and independent innovation of advanced concepts on machine tool design and production, and continuous introduction of advanced machine tool manufacturing process and technical equipment home and abroad, we have formed a complete and scientific production process, quality assurance system, as well as the ability to develop dozens of series and hundreds of models, with production capacity of about 8000 sets of structures per year.

Main products: vertical machining centers, double-column milling machines, gantry-moving machining center, beam-moving machining centers, CNC boring and milling machines, horizontal machining centers, horizontal turning centers, vertical turning centers.

Advantages: We have a highly efficient team of over 400 craftsmen with more than 20 years of experience in processing, scraping, assembling and testing, and we strive for perfection in every component and every production process. We also have advanced and high-precision testing equipment such as Three-Coordinate Measuring Machines, Straightness Measuring Instrument, Laser Interferometer, Ballbars, etc., which strictly test and control the quality of the manufacturing process, thereby ensuring stable and reliable quality of products and the improvement of production efficiency.

Corporate strategy
Become an one-stop solution supplier of metal processing equipments

Product positioning
Replace imports of second-level manufacturers from USA, Taiwan and South Korea

Development direction
Devision and specialization of each step, developping a scientific production process

Corporate mission
Creat success for every client who trusts us

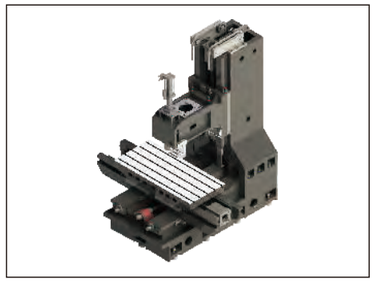

Kunming factory

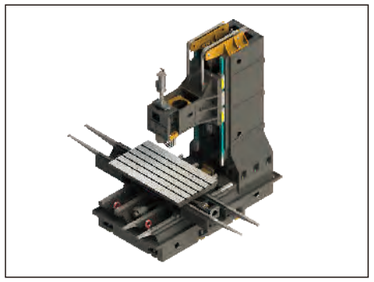

Yuxi 1st factory

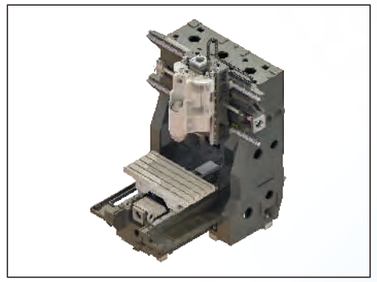

Chongqing factory

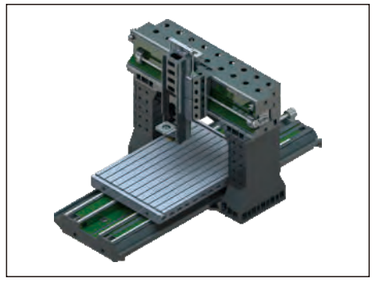

Yuxi 2nd factory

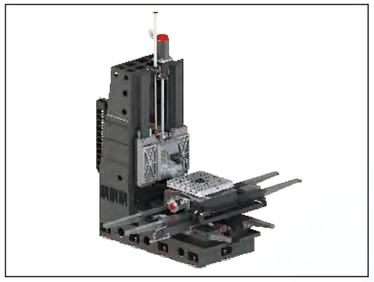
Typical products:

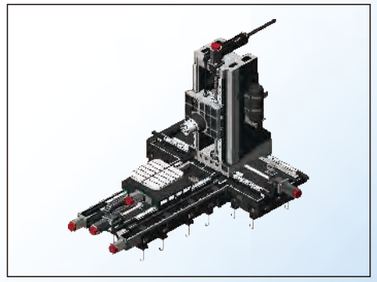

Box-Way VMC

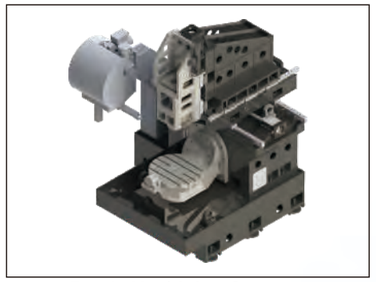

Linear Way VMC

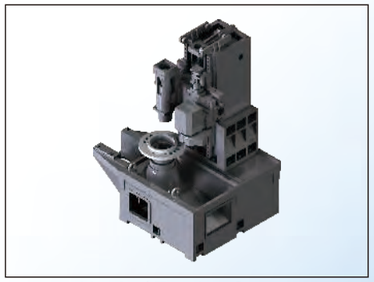

Gantry-type Machining Center

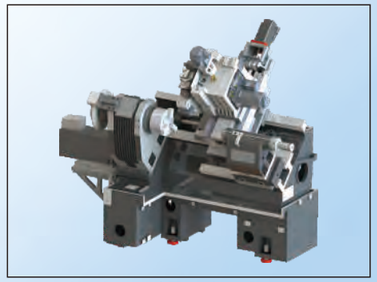

Double-Column Machining Center


Horizontal Machining Center


Horizontal Machining Center


5-axis Machining Center


Vertical Turning Center


Horizontal Turning Center

Good machines are made of good components

Our good supply chain contributes to our continued reputation for high quality.

We enjoys good relationships with most of the top-level component suppliers around the world, for each kind of component, we have several suppliers to compete with each other, to help make sure the supply of key components to be efficient and stable, our suppliers include :

1. Germany Rexroth, R+W, INA, FAG, ZF,
2. Spanish Korta, Ipiranga, MILKO (EMENA),
3. Japan NSK, THK, Sino-Japanese Nika Yoki (Herg)
4. Taiwan Hiwin, PMI, Royal, Posa, Spinture, Spinder, Detron, Parkson, GSA plus, Deta, Poju (S&Y), Chen Sound, Keyarrow,
5. American Pioneer, Timken, Sino-American Byjur (JV), etc.

All the suppliers has their agents / representatives and stocks in our union, which makes the delivery time of popular models of frames within one week. popular models of complete machine within 40 days.

Rexroth Bosch Group

INA

FAG

POJU

Milko illing Heads

HIWIN®

PMI Linear Motion Systems

R+W COUPLING TECHNOLOGY

POSA

NSK

THK

ZF

BIJUR DELIMON INTERNATIONAL

FANUC

detron

SIEMENS

SYNTEC

HEIDENHAIN

Good machines are made of high-quality castings

Our maintaining of high quality level owe to our partners of foundries.

Our high class GG25-GG35 casting products are low sulfur and low carbon. Casting parts were once subject to Metallurgic Analysis according to European Laboratory. The results show that a material hardness ofabove 200 HBW Brinell and a homogeneous distribution of the graphite structure can be guaranteed. Right now we not only meet the demand of famous Chinese machine tool OEMS but also serve for the clientsfrom Spain, Germany, Italy, Japanese and Czech, etc.

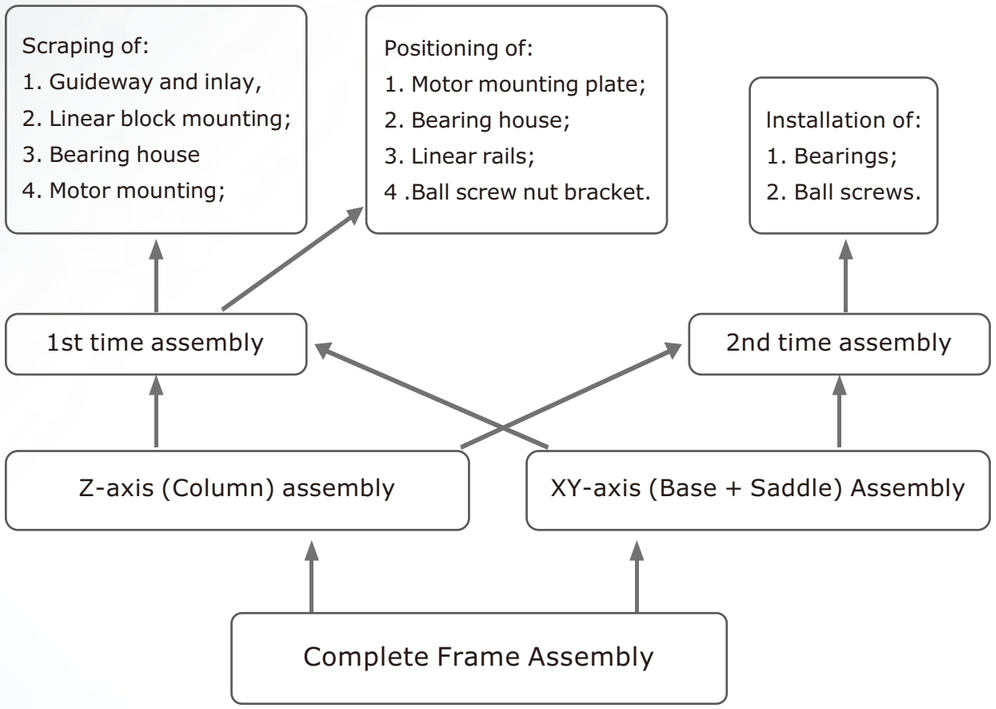
Casting capabilities:

Maximum unit weight of casting: 50 tons
Yearly producing capability: 80,000 tons
4 sets of 40t/h resin bonded sand treatment systems with hydraulic up/down mechanisim, six mixing mills
2 sets of 15t/h automatic cupolas
2 sets of 3m x 12m sand shot-blasting rooms
2 sets of 3m x 12m automatically electrical furnace for heat treatment

Quality Control Testing Equipment:

Direct reading spectrograph
Metalloscope
Complete physical and chemical analyzing and testing as well as flaw detection equipment

Good machines are built by high-efficiency and collaborative teams, with scientific process control.



The concept of Detailed Division Of Labor is implemented throughly in the structure of our frame union and the process of machine toolframe production.

1. Each small assembly process are devided into smaller work steps, each smaller step is implemented by sevevral independent and collaborative teams;
2. Each assembly team is responsible for the result of their own step, and responsible to the acceptance of next procedure;
3. All the results of each small steps are well documented in data base and could be easily tracked in the future when necessary;
4. All the suppliers of components, all the independent assembly teams, are involved in the aftersales service of domestic market, which made them try to find the best way to make their step perfect at the begining before machine is delivered, instead of solving the problem at clients' factory.

Good machines are built with good mother machines.

More than 30 sets of imported machining equipments and grinding equipments, mostly from Europe, ensure the accuracy of our products.

Castings machined and grinded by high-quality mother machines imported from Europe and Taiwan:

1) More than 20 sets of double-column machining centers and universal bed mills from Nicolas Correa (Spain);
2) Horizontal machining center of DMG from Germany;
3) Bridge type grinding machine from FAVERTTO (Italy) ;
4) Bridge type grinding machine from DANOBAT (Spain);
5) 8 sets of double-column grinding machines and universal grinding machines from Taiwan.