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NEWAY

Gantry Machining Center
PM Series

Cat.NO.:E-PM-2022-01

Neway Gantry Machining Center

Neway’ s diverse gantry machining center meet the world class machining needs of different industries. The uniqueness of many of their zero-defect manufacturing process has won the trust and praise of many repeat customers worldwide.

Stable Base Castings

All major components use high strength Meehanite casting for increased vibration absorption, resin sand molding, and then rests in a multi stage aging treatment to ensure stability. FEA designed integrated rib reinforcement, provides excellentanti-bending capacity and torsional stability, to ensure rigidity of the castings.

We Build For Your Application

Our diverse line-up and abundant specificationsmeet the ever changing processing needs of different industries. Our machines excel in all types of aluminum alloy, cast iron, steel, and many other exotic materials and complicated parts processing.

Modern Modular Integrated Design

Modern modular design allows us rapid response to the special needs of customers; X/Y/Z axis travel from 1M to 12M to meet the requirements from small to very large workpiece processing; Slide guide, linear roller guide,box way and the use of a square RAM and finally a T-shaped RAM make Neway suitable to meet the different requirements of customer’ s cutting feed, speed and cutting rigidity for the ultimate finish.

FEA and Other Advanced R&D Methods

Through the use of state-of-the-art computer technology all major components (bed, worktable, column, beam, saddle, RAM, etc.) are analyzed for static and dynamic characteristics and response by finite element analysis (FEA) to ensure the proper design for the best performance of the machine in the dynamic and static state.

Building for the Future with Much Higher Standards

Neway applied many measurement procedures, calibration procedure and even thermal testing items in gantry machining center assembly. Each machine must complete a comprehensive cutting test before shipment With the addition of boring and vibration testing, we ensure that the machine tool operates well in a variety of complex cutting conditions to maintain stable, predictable operation.

CONTENTS

01 High Stability

- All the major components utilize high strength Meehanite casting with high vibration absorption qualities. Each part undergoes an aging ensure stress has been relieved and they can provide the utmost stability.

- Surpassing ISO standard, Neway added many other testing items. A pre delivery comprehensive cutting test, final boring and vibration testing, ensures that the machine tool performs well in a variety of complex cutting and environmental conditions.

1 Neway World Class Casting Aging Treatment Process

Neway own foundries to produce the cast iron for CNC machines. Our casting undergo heat aging, natural aging, vibration aging, even chemical aging until the internal stress is fully released to guarantee the precision base or headstockcan be stable and reliable for a long time.

2 Arch Cable Suspended Bridge Design Beam with Special Rib Structure

Arch cable-bridge designed beam with FEA rib structure, effectively solves the problem of drooping over big span beams and significantly improves the y-axis processing and positioning accuracy. In pursuit of the optimal structure; the beam adopts engineered topological optimization techniques and special arrangement for internal structural strength. The mechanical analysis and optimization of the whole machine are applied to provide more weight bearing support and to decrease potential deflection.

3 Neway Transmission Design

Reasonable layout of slide guide way and roller linear guide way. The roller linear guide way are World Class brand with big size. Apply heavy duty guide way and extended slide blocks on special position to ensure smooth travel long-term

4 Milling Head Test Lab

Neway built a comprehensive inspection and assembly Test Lab. With dozens of quality inspections already undergone, the assembled milling head is run in and indexed for a period of 48 hours in the actual operation to ensure the long-term use of the milling head. This stringent testing provides a product that is both accurate and reliable.

5 Three Guide Ways Design

Some models adopted three-guide design, they provide exceptional anti deformation under extreme loads when overturning torque is very strong. With heavy load bearing capacity, the worktable will not vibrate during heavy duty interrupted cutting; this insures the workpiece has a very good flatness and smoothness in finish machining.

02 High Precision

keeps strict control on each process, including processing, assembly, testing etc., to ensure the accuracy of machine; On the basis of ISO standards to set enterprise standards higher, significantly improve the required accuracy, and the positioning accuracy of Neway gantry machining center increased by more than 40% .

1 Word-class Machining Equipment

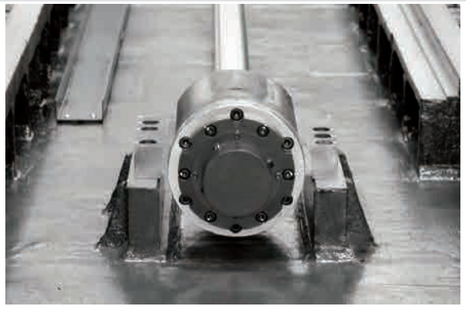
All Major parts of the gantry machining center are processed by World-class Mother Machines. Up to 20 meters long parts can be precision ground on Favretto large size bed grinder. Because both surfaces can be processed in one processing, the squareness and flatness can be guarantteed.

2 Bridge Beam Utilizes Anti Deformation Crown Treatment

To avoid the deforming of the beam caused by the natural drooping of saddle and self-weight; Neway utilizes special technology to make the beam has a small amount of upward bending deformation during processing of beam, After installation, the force deformation and the pre-deformance cancel each other out to achieve the expected accuracy.

3 Separate Motor Mounts Control Thermal Transmission

Separated motor seat, separate the ball screw from the heat resource, reduce the thermal transmission efficiently, avoids backlash and partial deformation. By utilizing high-end German gear box to drive the axis directly, provide compact structure and higher transmission accuracy.



4 Ball Screws Are Pre-tensioned to Eliminate Backlash

Pushing type pre-tension structure, with multi-bearings on both sides of the ball screws, absorbing the thermal deformation effectively while ensuring the pushing rigidity.

The ball screw apply pre-stretched technology, effectively reduce the influence of the heating of the ball screw on the transmission accuracy, improve the accuracy, and strengthen the rigidity and thermal deformation resistance.

5 Additional Support for Long Stroke Ball Screws

The auxiliary supporting system can effectively solve the problems of drooping and flexure of the ball screw, ensuring the transmission accuracy.

- The machine with X axis travel 4m has 1 set of the auxiliary supporting system;
- The machine with X axis travel 6m or longer X axis travel has 2 sets of the auxiliary supporting system.

6 Hand Scraped and Qualified Surfaces

Hand Scraping all important joint faces achieve the highest assembly accuracy, increased rigidity, and better balance loads.

03 High Speed

High-Speed cutting can provide a higher quality surface finish of the work piece. High-speed feed system provides higher machining efficiency.

• High-Speed Spindle (Option)

For the 15000rpm or high spindle speed, the electrical spindle will be applied; from 8000rpm to 15000rpm, the mechanical direct-drive spindle will be applied, which is stable and reliable.

● Buit-in spindle

● Mechanical direct-drive spindle

• High Torque Transmission

Main transmission parts are designed with world-class brands, adopted a large transmission ratio, and double speed gear box which offers high speed and large spindle torque simultaneously.

• Efficient Motion Components

Lighter weight design of motion components to realize fast machining response and conductive to high-speed interpolation processing.

• High-Speed Feed System

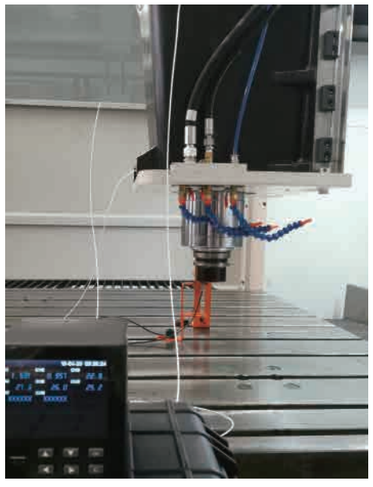
Use high-speed muting ball screws, coordinating with linear roller guide ways realze quiet and stable movement without crawl or stick slip, improving the rapid traverse/feed speed of spindle dramatically.

• High-speed Vibration Control

Neway established strict inspection standards according to accumulated long-term data. By measuring and adjusting the spindle vibration value at variety of speeds to ensure high-speed spindle performance.

• Spindle Oil Cooling System

Neway High-speed type machining centers come equipped with spindle oil cooling system as standard equipment, it controls thermal deformation of spindle effectively, ensuring high-speed cutting ability.



● High speed vibration test

04 Research & Development

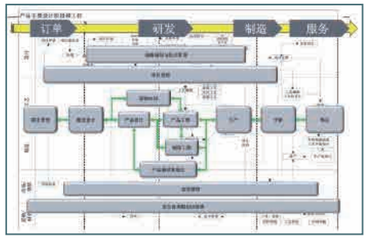
Neway R&D consists of 7 separate R&D departments and employoing 150 Full time engineers providing, 20+new products every year. 10+projects with core competencies focus, using PLM lifecycle management system to improve the efficiency.

Ongoing continuously improving quality refining projects:

- Static stiffness testing and research of machine tools
- Research on Vibration and Dynamic Stiffness of Machine Tools
- Research on Spectrum Analysis of Machine Tools
- Finite Element Analysis of complete Machine and Components
- Thermal deformation analysis of entire machine and components
- Research and application of high-speed ball screw center cooling system
- Research on intelligent development and application of CNC machine tools
- High-pressure chip breaking test and application of the protective seal

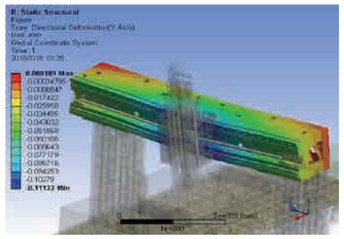
1 PLM Lifecycle Management System

Neway uses the PLM lifecycle management system to improve researching efficiency.



2 Finite Elements Analysis

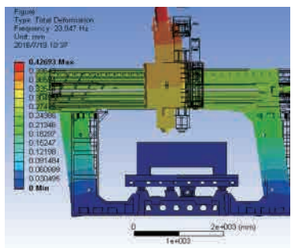
All Major Components are designed using finite element analysis, the optimal layout of the structure, the use of high-quality cast iron materials provides high stability, good vibration damping.



- Analysis of flexural deformation of beam

3 Modal Analysis

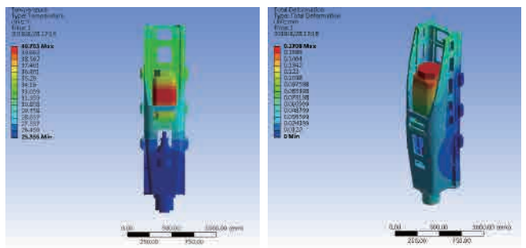
Improves the natural frequency and vibration resistance of machine tools through dynamic performance analysis.



- Analysis of vibration characteristics of large gantry machine

4 Structural Thermal Analysis

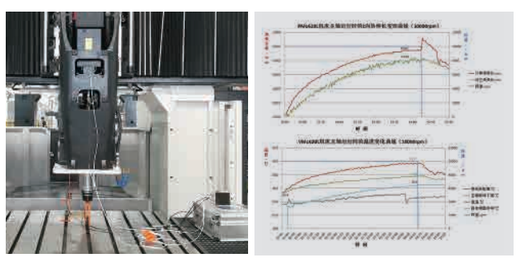
Neway utilizes computerized thermal analysis to reduce and control the spindle thermal deformation.



- Spindle thermal deformation

5 Temperature Rise Analysis

Through temperature raising research to effectively improve machine accuracy and prolong machine using life, reduce the accuracy error induced by the temperature increaseing

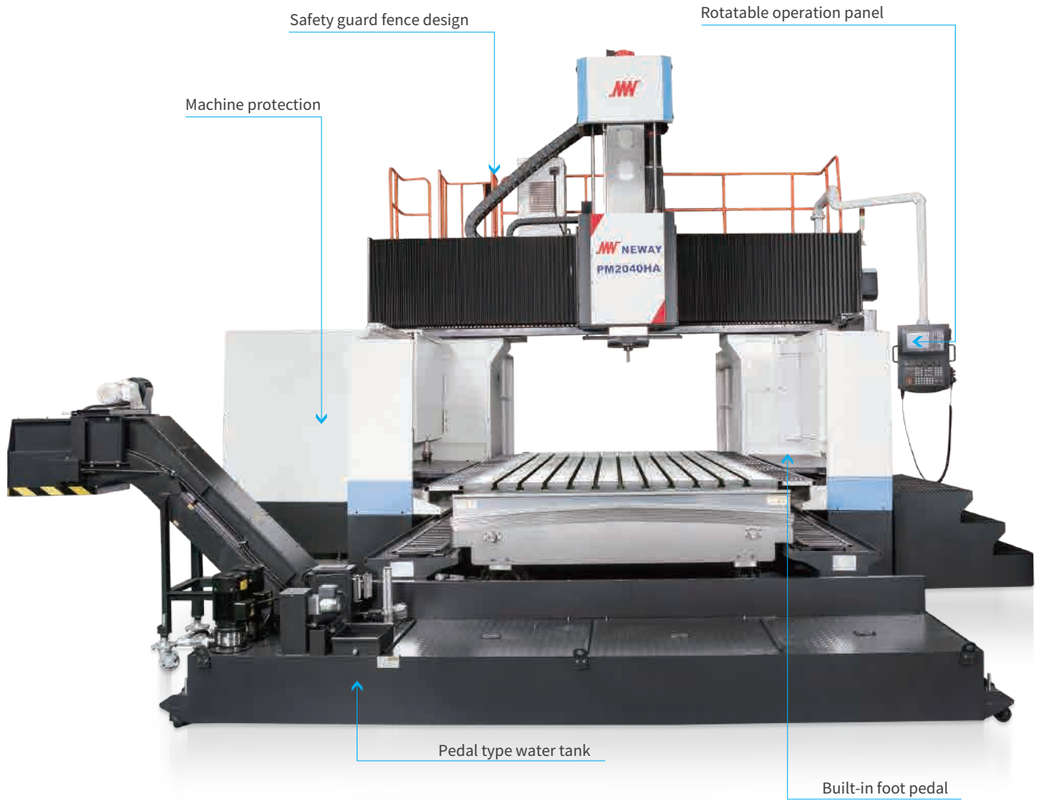


6 Vibration Analysis

The vibration analysis of the main drive system can provide an effective reference for structural improvement and process improvement and reduce the influence of vibration on machine life and machining precision.

05 Humanized Design

Based on ergonomics and customer feedback, careful design, continuous optimization to realize good operability, and convenient adjustment and maintenance.

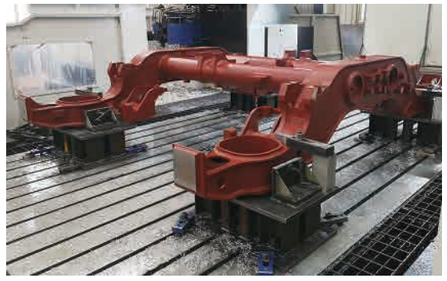


- Moveable Operation Panel: it can be rotated to to the best position for smoother operation
- Pedal Type Water Tank: Easy to clean and used as a foot pedal as well
- Built-in Foot Pedal: Convenient up and down, save time
- External Foot Pedal: Easy to operate, safe and reliable
- Safety Guard Fence Design: Safe and reliable
- Machine Guarding Protection: Safe and reliable, to avoid chips and coolant fluid splashing outside
(Full enclosure can be equipped as option, some models can be equipped with the full enclosure with roof.)
- Neway allows convenient custom operation direction and the chip evacuation direction.

06 Industry Application

Complete product specifications, abundant configurations, to ensure Neway double column machining center are widely applied in various industries.

Industry	Ship
Material	16Mn/Q345A
Processing	Milling face, Boring hole,Drilling,Tapping
Machine Model	PM2030HA



Industry	Rail transit
Material	Alloy steel
Processing	Milling face, Boring hole,Drilling,Tapping
Machine Model	PM3050HA

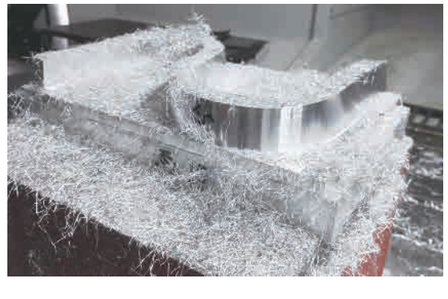
Industry	Nuclear power
Material	Q235A
Processing	Drilling
Machine Model	PM3080HA

Industry	Marine engine
Material	HT250
Processing	Milling face, Boring, Drilling, Tapping, Reaming
Machine Model	PM2040HA

Industry	Wind power
Material	HT250
Processing	Milling face, Drilling,Tapping
Machine Model	PM3060HZ

Industry	Mold
Material	Aluminum
Processing	Milling curve face, Milling groove
Machine Model	PM2040HA

Industry	Mould
Material	Die steel
Processing	Contour machining
Machine Model	PM2040HA



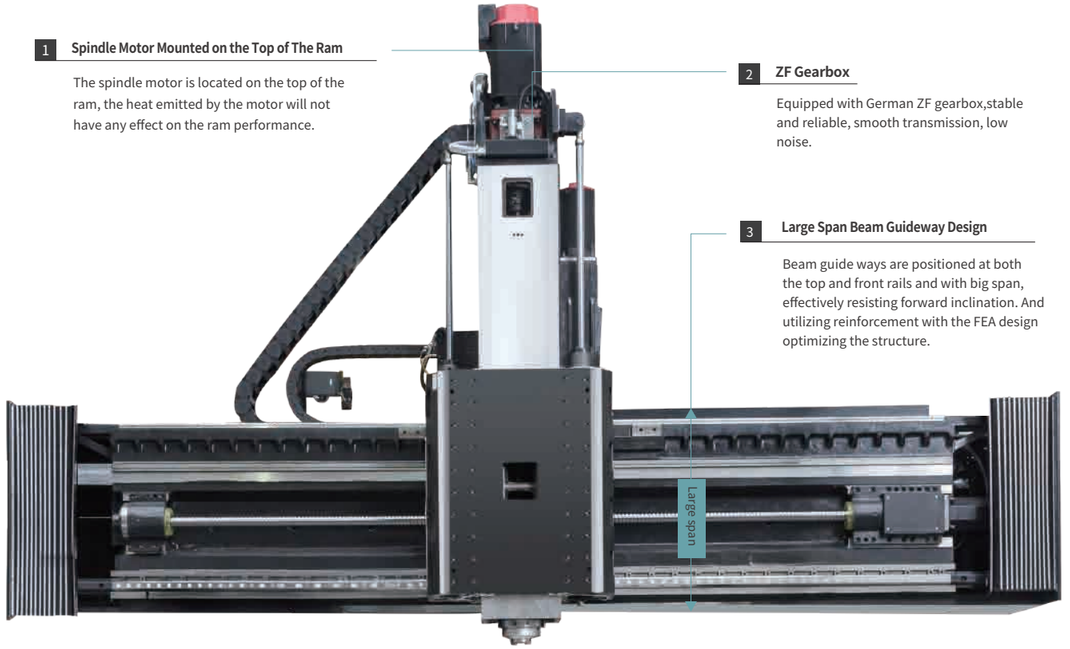
Industry	Aviation
Material	Aluminum
Processing	Milling face, Milling groove
Machine Model	PM2560U

PM-HA Series
High-speed Gantry Machining Center

- This series adopts the fixed gantry frame and the worktable moving structure, with high rigidity, high precision, large torque, good dynamic characteristics and more.
- Bed, column, saddle, spindle box, worktable and other key parts all use resin sand molding, high-strength and high-quality cast iron to provide good stability.
- Some models of PM25 series use 3- guide way design on X axis, anti-rotation torque capability is very strong. Worktable will not vibrate when heavy duty cutting; and can realize best flatness of workpiece when finish machining.
- Well suited to Aerospace, Rail Transportation, Wind Power, Mold and many other industries. By equipped with milling head, they can complete five face milling, drilling, boring, expansion, hinge, countersink, tapping, etc by one time clamping.

Main parameters

		PM1220HA	PM1530HA	PM1830HA	PM2040HA	PM2560HA	PM3080HA
Worktable size	mm	1200×2000	1500×3000	1800×3000	2000×4000	2500×6000	3000×8000
Axis travel X/Y/Z	mm	2200×1500×800	3200×1900×800	3200×2700×800	4200×3200×1000	6200×3700×1000	8500×4200×1250
Spindle speed	mm	40~6000	40~6000	40~6000	40~6000	40~6000	40~6000
Max. output torque	N.m	788/1295	788/1295	525/647	770/910	770/910	770/910
Spindle motor power	kW	15/18.5	15/18.5	15/18.5	22/26	22/26	22/26



1 Spindle Motor Mounted on the Top of The Ram

The spindle motor is located on the top of the ram, the heat emitted by the motor will not have any effect on the ram performance.

2 ZF Gearbox

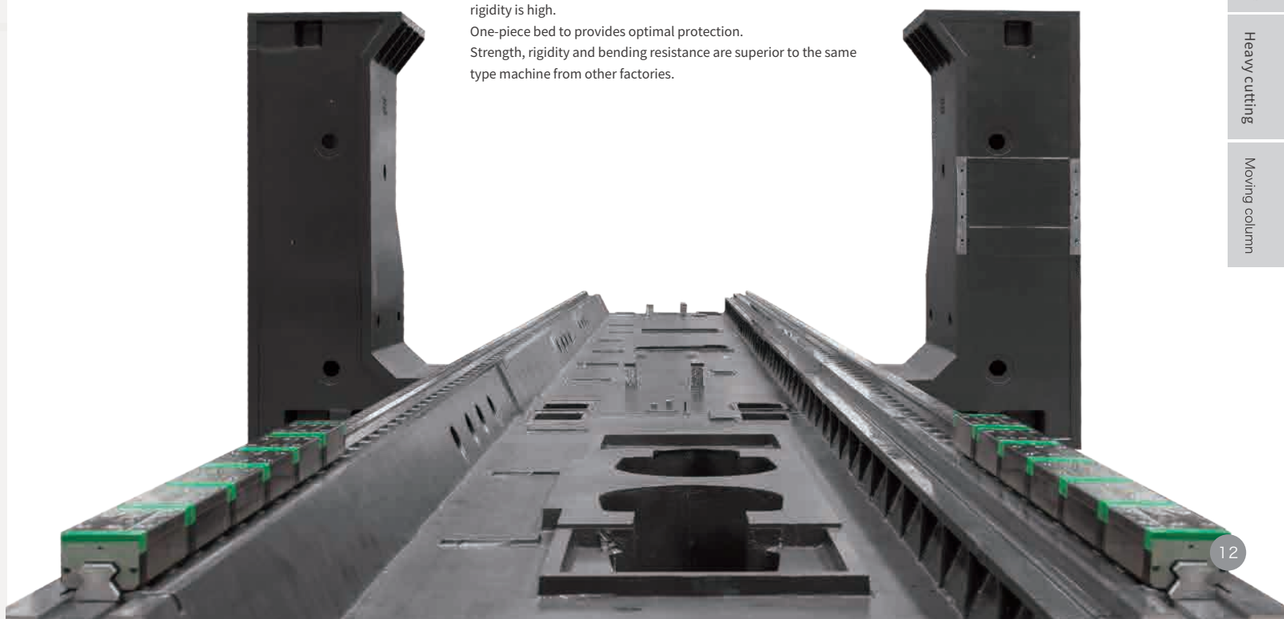
Equipped with German ZF gearbox,stable and reliable, smooth transmission, low noise.

3 Large Span Beam Guideway Design

Beam guide ways are positioned at both the top and front rails and with big span, effectively resisting forward inclination. And utilizing reinforcement with the FEA design optimizing the structure.

All structural components are analyzed for static and dynamic characteristics and response by finite element analysis (FEA) to ensure the machine with best performance in the dynamic and static state.

The use of roller-type linear guide ways increases rigidity and speed. The guide way span layout is optimal and the structural rigidity is high.
One-piece bed to provides optimal protection.
Strength, rigidity and bending resistance are superior to the same type machine from other factories.

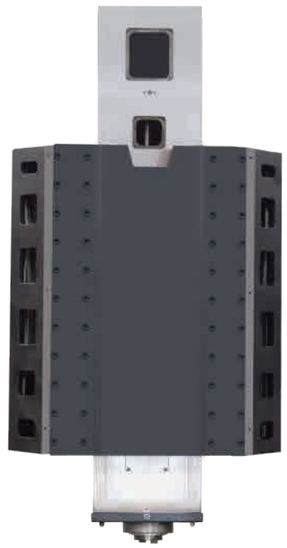


- **All-inclusive Square Ram**

  All-inclusive square ram design, 8 sliding guide way rails around the ram. The ram provides the best anti-bending capacity and superior cutting performance.

- **High Torque Spindle**

  Imported world-class spindle units with strong cutting ability, high-speed. The maximum torque output 770/910N.m.



- **Saddle Design**

  The ram is very well supported by the sliding saddle, ensuring the highest dynamic performance and static rigidity, providing an extremely solid foundation for precision machining.

- **Y Axis Guide Way Stepped Structure**

  Y-axis guide way with stepped configuration provides the shortest distance between lower guide way and spindle center, this combined with heavy roller slide provides effective resistance to overturning torque during machining.

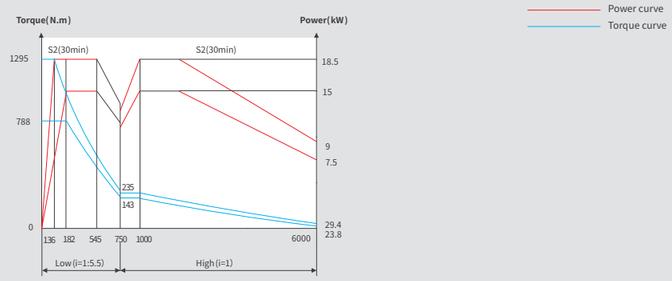
Note: the features above are suitable for some machines

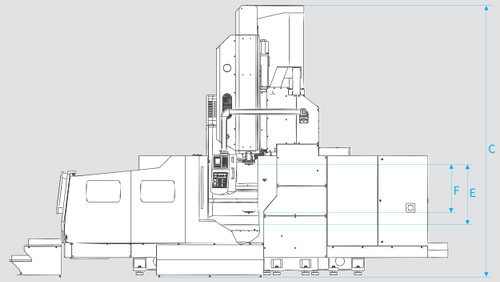
Spindle Power Torque Diagram

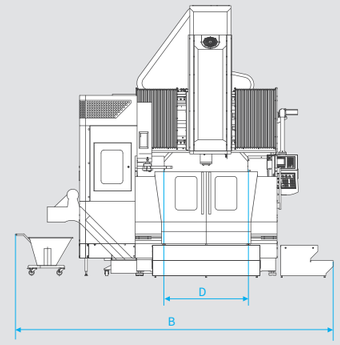
External Dimensions

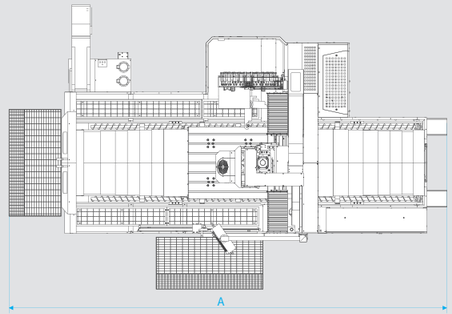
(Unit: mm)

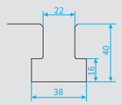
PM12/15HA Series











T grooves in the worktable

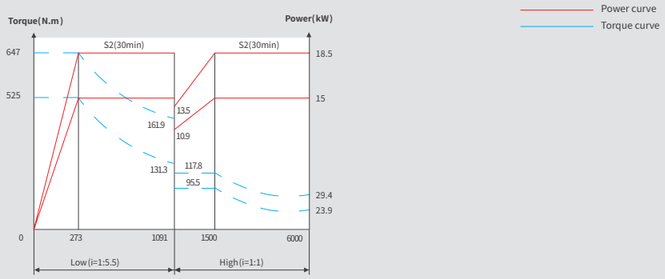
Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM1220HA	7300	5500	4500	1400	1000	800
PM1230HA	9540					
PM1520HA	7600	5900	4550	1800		
PM1530HA	9700					

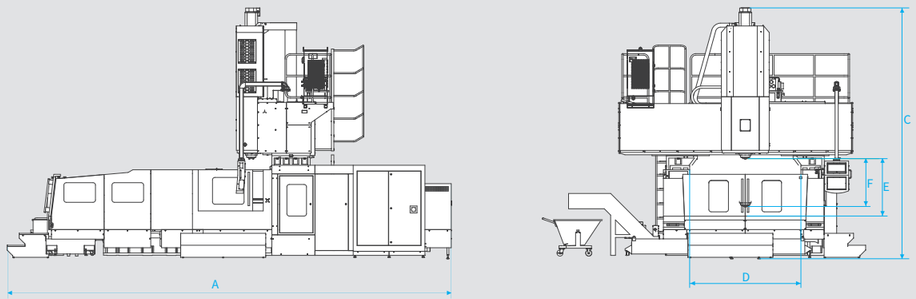
Spindle Power Torque Diagram

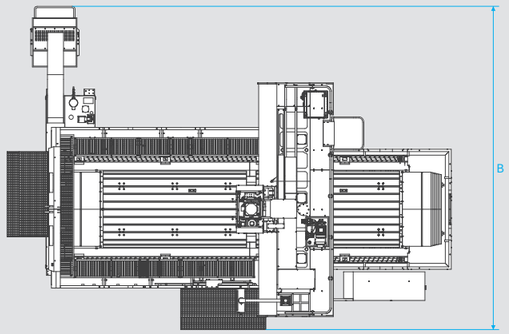
External Dimensions

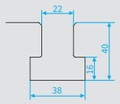
(Unit: mm)

PM18HA Series









T grooves in the worktable

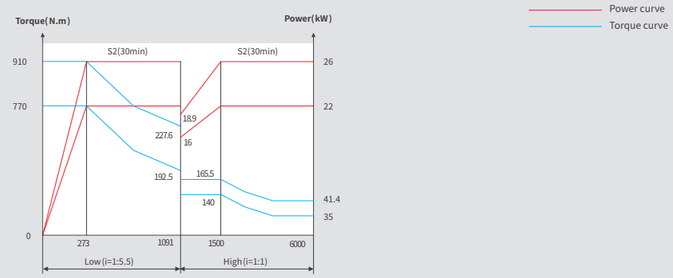
Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM1830HA	9500	6500	5050[5250]	2300	1000[1200]	800[1000]
PM1840HA	11500					

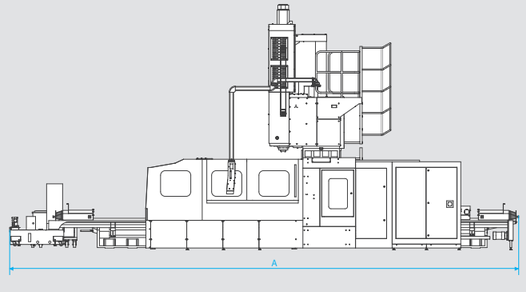
Spindle Power Torque Diagram

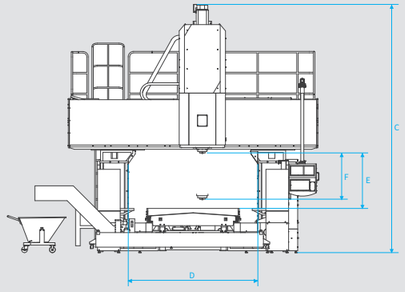
External Dimensions

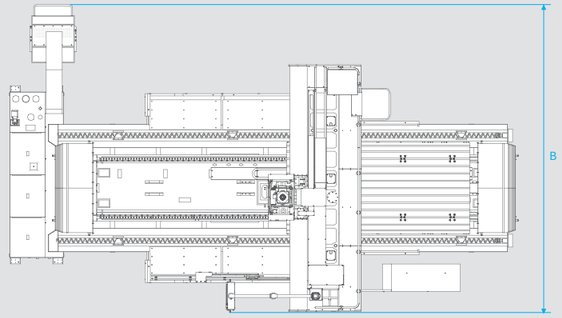
(Unit: mm)

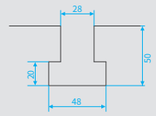
PM20/25/30HA Series











T grooves in the worktable

Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM2030HA	9000	6500	5400[6100]	2800[3200]	1200[1500]	1000[1250]
PM2040HA	11000					
PM2060HA	15000					
PM2080HA	20000					
PM2540HA	11000	6900	5400[6200]			
PM2560HA	15400	7500	5500[6300]	3300		
PM2580HA	20100					
PM25100HA	25500				1200[1500]	
PM3040HA	11500		6200	3800	1500	1250
PM3060HA	15400					
PM3080HA	20100					
PM30100HA	25500				1440	

Item		Unit	PM1220HA	PM1230HA	PM1520HA	PM1530HA	PM1830HA	PM1840HA	PM2030HA	PM2040HA	PM2060HA	PM2080HA
Worktable	Worktable width	mm	1200		1500		1800		2000			
	Worktable length	mm	2000	3000	2000	3000	3000	4000	3000	4000	6000	8000
	Table load	kg	3500	5500	6000	7000	10000	12000	16000	20000	26000	28000
Capacity	Worktable travel (X axis)	mm	2200	3200	2200	3200	3200	4200	3200	4200	6200	8500
	Carriage travel (Y axis)	mm	1500 [1700]		1900		2700		3200			
	Ram travel (Z axis)	mm	800		800		800 [1000]		1000 [800] [1250]			
	Spindle terminal to worktable	mm	200～1000		200～1000		200～1000 [200～1200]		200～1200 [200～1000] [250～1500]			
	Column span	mm	1400[1600]		1800		2300		2800 [3200]			
Spindle	Tool shank size	-	BT50		BT50		BT50		BT50			
	Spindle speed	r/min	40～6000		40～6000		40～6000		40～6000 [Z axis1250：40～4500]			
	Max. output torque	N.m	788/1295		788/1295		525/647 [770/910]		770/910			
	Spindle motor power	kW	15/18.5		15/18.5		15/18.5 [22/26]		22/26			
	Ram section	mm	400×320		400×320		400×400		400×400 [Z axis1250：420×420]			
Rapid travel	X/Y/Z axis rapid trave	m/min	24/24/15	15/24/15	12/24/15	12/24/15	20/18/15	15/18/15	15/15/12	15/15/12	12/15/12	10/15/10
ATC	Tool position	-	24 [32/40/60]		24 [32/40/60]		[24/32/40/60]		[24/32/40/60]			
	Max. tool diam./length/weight	mm/mm/kg	Φ110/350/15		Φ110/350/15		Φ105/350/15		Φ105/350/15			
	Max. tool diameter (empty neighbor)	mm	Φ200		Φ200		Φ200		Φ200			
Accuracy GB/T17421.2-2016 ISO 230-2:2006	X axis (positioning/repeatability)	mm	0.012/0.008	0.015/0.010	0.012/0.008	0.015/0.010	0.018/0.010	0.020/0.012	0.018/0.010	0.020/0.012	0.028/0.018	0.032/0.020
	Y axis (positioning/repeatability)	mm	0.012/0.008		0.014/0.009		0.015/0.010		0.018/0.012			
	Z axis (positioning/repeatability)	mm	0.012/0.008		0.014/0.009		0.015/0.010		0.015/0.010 [Z axis1250：0.018/0.012]			
	CNC system	-	NEWAY FANUC [SIEMENS]				NEWAY FANUC [SIEMENS]		NEWAY FANUC [SIEMENS]			
	Machine weight	kg	19000	23000	21000	25000	30000	35000	41000	45000	55000	65000

PM12/15HA Standard configuration:

ZF gear box, spindle and gear box cooling system, long terminal spindle, spindle air curtain protection system, ram balance system, X/Y/Z axis direct drive (no belt), disc-type tool magazine with 24 tool positions, full protection (including internal pedal), automatic chip conveying system, LED lights and caution lights, MPG, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air coolant system and water coolant system for tool, air gun, oil-water separation equipment.

PM12/15HA Options:

Milling head, DIN/CAT/ISO taper, coolant through spindle, column heighten increase, full protection with roof, tool magazine 32/40/60T, rotary table, grating ruler, oil-mist collection equipment, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

PM18HA Standard configuration:

ZF gear box, full-protection square ram, spindle and gear box cooling system, short terminal spindle, spindle air curtain protection system, ram balance system, X/Y/Z axis direct drive (no belt), full protection (including internal pedal), beam handrail and stairs, automatic chip conveying system, LED lights and caution lights, MPG, electric cabinet air-conditioner, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air coolant system and water coolant system for tool, air gun, oil-water separation equipment.

PM18HA Options:

Milling head, DIN/CAT/ISO taper, long terminal spindle, coolant through spindle, column height increase, tool magazine 24/32/40/60T, vertical and horizontal tool magazine 32/40/60T, rotary table, grating ruler, oil-mist collection device, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

[ ]Option

Item		Unit	PM2540HA	PM2560HA	PM2580HA	PM25100HA	PM3040HA	PM3060HA	PM3080HA	PM30100HA
Worktable	Worktable width	mm	2500				3000			
	Worktable length	mm	4000	6000	8000	10000	4000	6000	8000	10000
	Table load	kg	22000	30000	35000	40000	25000	35000	40000	45000
Capacity	Worktable travel (X axis)	mm	4200	6200	8500	10500	4200	6200	8500	10500
	Carriage travel (Y axis)	mm	3200	3700 [4200]			4200 [4600]			
	Ram travel (Z axis)	mm	1000 [1250]				1000 [1250]			
	Spindle terminal to worktable	mm	200～1200 [250～1500]			140～1140 [190-1440]	250～1500			190-1440
	Column span	mm	2800 [3200]	3300 [3800]			3800 [4200]			
Spindle	Tool shank size	-	BT50				BT50			
	Spindle speed	r/min	40～6000 [Z axis1250：40～4500]				40～6000 [Z axis1250：40～4500]			
	Max. output torque	N.m	770/910				770/910			
	Spindle motor power	kW	22/26				22/26			
	Ram section	mm	400×400 [Z axis1250：420×420]				400×400 [Z axis1250：420×420]			
Rapid travel	X/Y/Z axis rapid trave	m/min	12/12/12	12/12/12	10/12/12	8/12/12	12/12/12	12/12/12	10/12/12	8/12/12
ATC	Tool position	-	[24/32/40/60]				[24/32/40/60]			
	Max. tool diam. /length/weight	mm/mm/kg	Φ105/350/15				Φ105/350/15			
	Max. tool diameter (empty neighbor)	mm	Φ200				Φ200			
Accuracy GB/T17421.2-2016 ISO 230-2:2006	X axis (positioning/repeatability)	mm	0.020/0.012	0.028/0.018	0.032/0.010	0.038/0.024	0.020/0.012	0.028/0.018	0.032/0.010	0.038/0.024
	Y axis (positioning/repeatability)	mm	0.024/0.016				0.028/0.018			
	Z axis (positioning/repeatability)	mm	0.015/0.010 [Z axis1250：0.018/0.012]				0.018/0.012			
	CNC system	-	NEWAY FANUC [SIEMENS]				NEWAY FANUC [SIEMENS]			
	Machine weight	kg	50000	65000	85000	95000	55000	70000	90000	100000

PM20/25/30HA Standard configuration:

ZF gear box, full-protection square ram, spindle and gear box cooling system, short terminal spindle, spindle air curtain protection system, ram balance system, X/Y/Z axis direct drive (no belt), processing area protection, beam handrail and stairs, automatic chip conveying system, LED lights and caution lights, MPG, electric cabinet air-conditioner, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and horizontal level components, air cooling system and water cooling system for tool, air gun, cutting compound oil-water separation equipment.

PM20/25/30HA Options:

Milling head, DIN/CAT/ISO taper, long terminal spindle, coolant through spindle, column span increase, column height increase, tool magazine 24/32/40/60T, vertical and horizontal tool magazine 32/40/60T, rotary table, grating ruler, full protection, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

[ ]Option

PM-HC Series
High-speed Gantry Machining Center

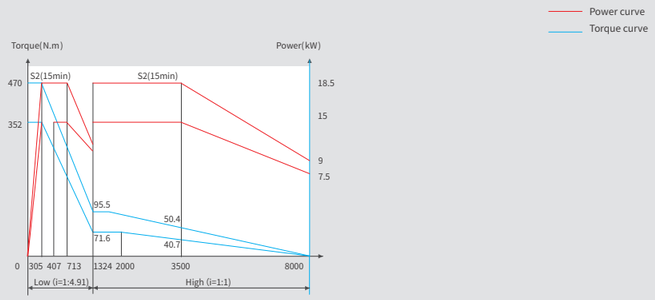
- This series adopts the fixed gantry frame and the worktable moving structure, with high rigidity, high precision, large torque, good dynamic characteristics and more.
- Bed, column, saddle, spindle box, worktable and other key parts all use resin sand molding, high-strength and high-quality cast iron to provide good stability.
- Well suited to Aerospace, Rail Transportation, Wind Power, Mold and many other industries. By equipped with milling head, they can complete five face milling, drilling, boring, expansion, hinge, countersink, tapping, etc by one time clamping.

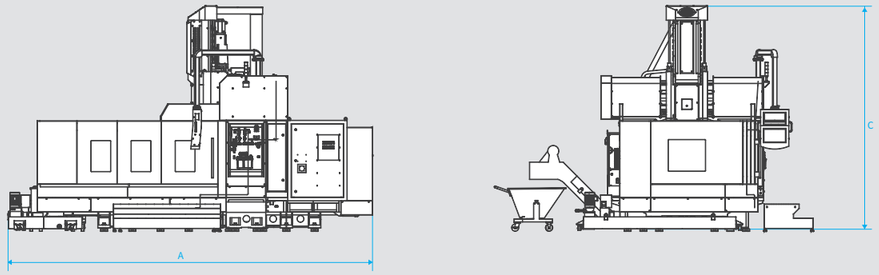
Main parameters		PM1320HC	PM1525HC	PM2030HC	PM2040HC	PM2060HC
Worktable size	mm	1300×2100	1500×2600	2000×3000	2000×4000	2000×6000
Axis travel X/Y/Z	mm	2200×1500×800	2700×1700×800	3000×2700×1000	4200×2700×1000	6200×2700×1000
Spindle speed	r/min	40～8000	40～8000	40~6000	40~6000	40~6000
Max. output torque	N.m	352/470	352/470	770/910	770/910	770/910
Spindle motor power	kW	15/18.5	15/18.5	22/26	22/26	22/26

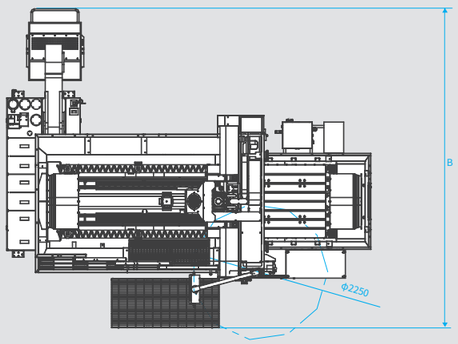
Spindle Power Torque Diagram　External Dimensions

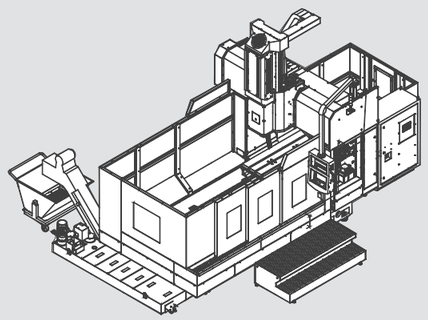
(Unit: mm)

PM13/15HCSeries







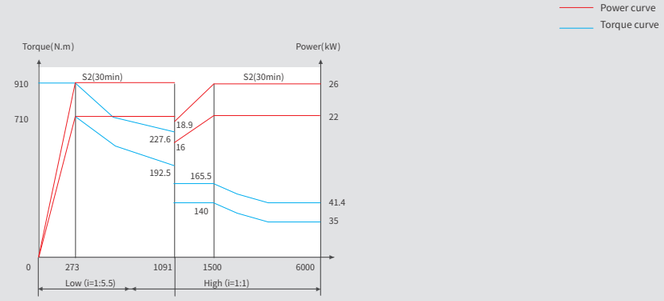


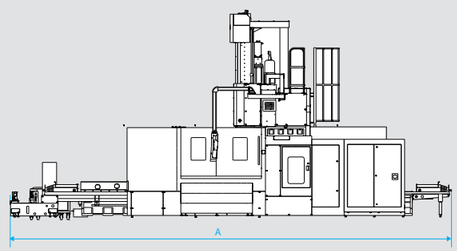
Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM1320HC	6450	5380	4000	1600	200-1000	800
PM1525HC	7450	5580	4000	1800		

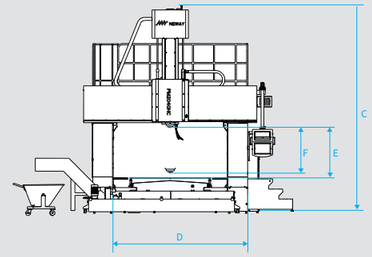
Spindle Power Torque Diagram　External Dimensions

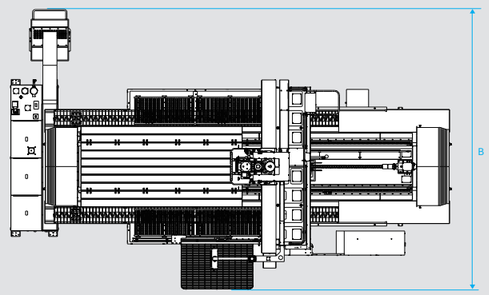
(Unit: mm)

PM20HC Series









Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM2030HC	9000	6500	5100	2800	1250	1000
PM2040HC	11000					
PM2060HC	15400					

Item	Unit	PM1320HC	PM1525HC	PM2030HC	PM2040HC	PM2060HC
Worktable width	mm	1300	1500	2000		
Worktable length	mm	2100	2600	3000	4000	6000
Table load	kg	3500	8000	14000	18000	24000
Worktable travel (X axis)	mm	2200	2700	3200	4200	6200
Carriage travel (Y axis)	mm	1500	1700	2700		
Ram travel (Z axis)	mm	800		1000		
Spindle terminal to worktable	mm	200～1000	200～1000	250～1250		
Column span	mm	1600	1800	2800		
Tool shank size	-	BT50		BT50		
Spindle speed	r/min	40～8000		40～6000		
Max. output torque	N.m	352/470		770/910		
Spindle motor power	kW	15/18.5		22/26		
Ram section	mm	400×395		400×400		
X/Y/Z axis rapid trave	m/min	24/24/15	15/24/15	15/20/15	15/20/15	15/20/15
Tool position	-	[24/32/40]		[24/32/40/60]		
Max. tool diam. /length/weight	mm/mm/kg	Φ110/350/15		Φ105/350/15		
Max. tool diameter (empty neighbor)	mm	Φ200		Φ200		
X axis (positioning/repeatability)	mm	0.012/0.008		0.018/0.012	0.020/0.012	0.028/0.018
Y axis (positioning/repeatability)	mm	0.012/0.008		0.018/0.012		
Z axis (positioning/repeatability)	mm	0.012/0.008		0.015/0.010		
CNC system	-	NEWAY FANUC [SIEMENS]				
Machine weight	kg	19000	22000	36000	40000	48000

Standard configuration:

ZF gear box, spindle and gear box cooling system, long terminal spindle, spindle air curtain protection system, ram balance system, X/Y/Z axis direct drive (no belt), disc-type tool magazine with 24 tool positions, full protection (including internal pedal), automatic chip conveying system, LED lights and caution lights, MPG, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air cooling system and water cooling system for tool, air gun, cutting compound oil-water separation equipment.

Options:

Milling head, DIN/CAT/ISO taper, coolant through spindle, column heighten increase, full protection, tool magazine 32/40/60T, rotary table, grating ruler, oil-mist collection equipment, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

[ ]Option

PM-L Series

High-speed Direct Drive Spindle Gantry Machining Center

- This series apply spindle motor direct driver the high-speed spindle; spindle speeds up to 15,000rpm;
- The mechanical spindle is well proven and reliable, easy maintenance and durable;
- The lightweight design of sliding saddle and RAM for faster-moving speed;
- Suitable for machining in the fields of mold finishing, aluminum processing, auto parts, aerospace, engineering machinery, etc.

1 Hi-Speed Direct Drive Spindle (DDS)

Hi-speed direct drive spindle adopts advanced assembly technology and effective test method to ensure the minimum vibration of the spindle during high-speed motion, improve machining precision and greatly improve work piece surface' s quality.

2 Top Layout of Beam Guide Way

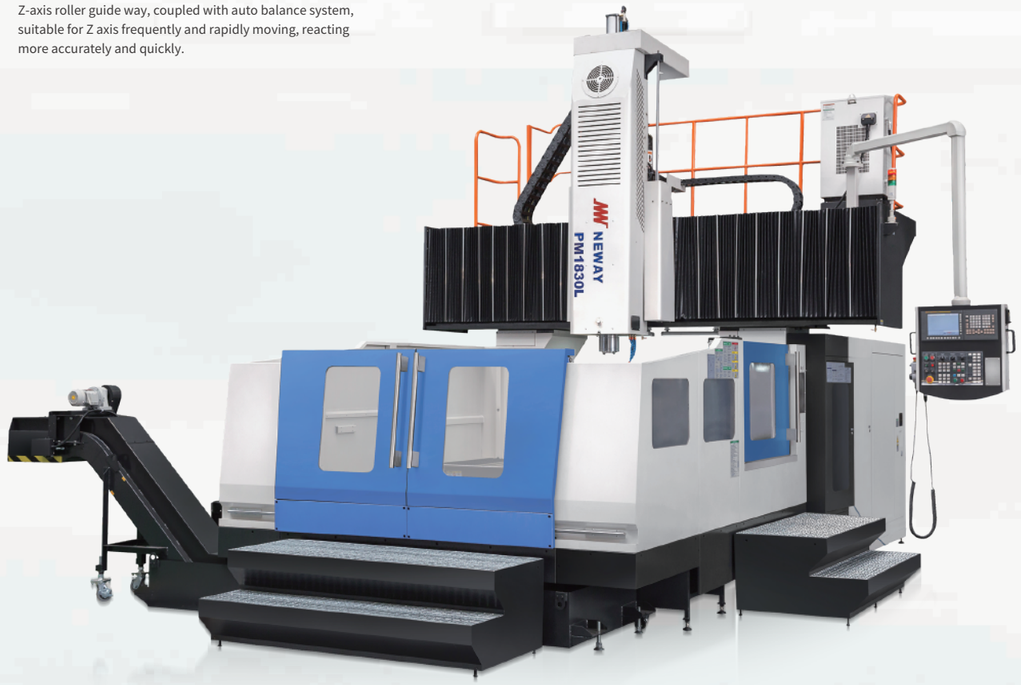
The guide way on the beam is arranged on the top of the beam, extend the distance of the guide way, increasing the rigidity of the saddle support and increasing the anti-roll ability of the spindle box.

3 Integral Design For Saddle, Motor Base and Cylinder Support

Integrated design for the saddle, motor base and cylinder support to providee stronger support and overall rigidity. Neway reduced the length of the hydraulic line, the accumulator was placed on the saddle, and the unclamping cylinder is arranged on the top of the ram which reduced the pressure loss and make the actuator response faster.

4 Z-axis Liner Guide Way, Auto Balance System

Z-axis roller guide way, coupled with auto balance system, suitable for Z axis frequently and rapidly moving, reacting more accurately and quickly.

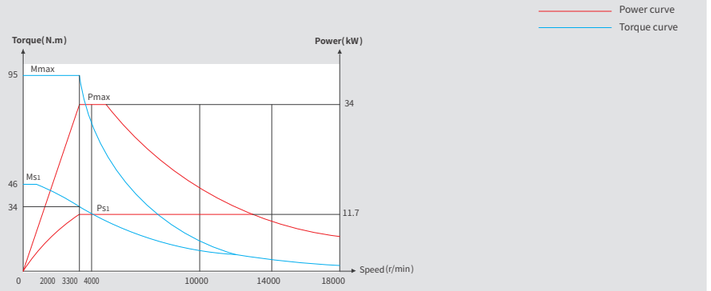


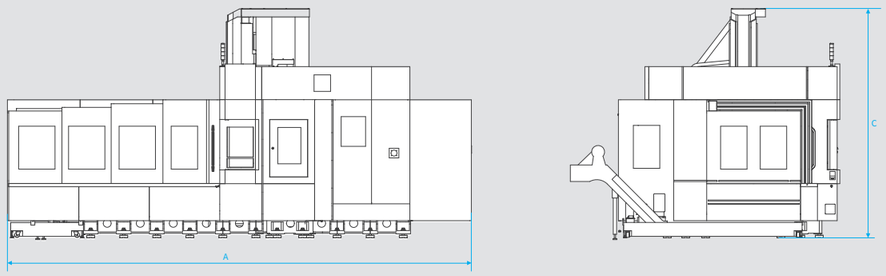
Spindle Power Torque Diagram

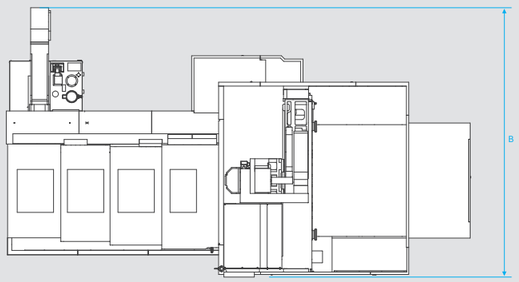
External Dimensions

(Unit: mm)

PM13/15L Series

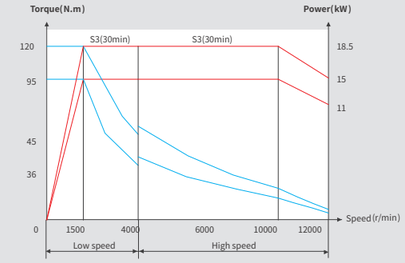




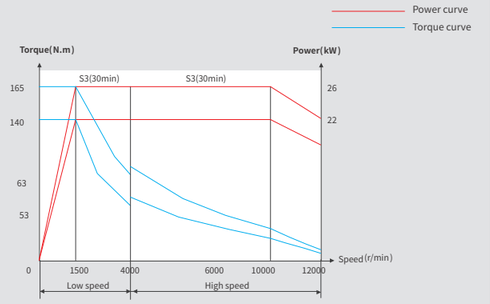


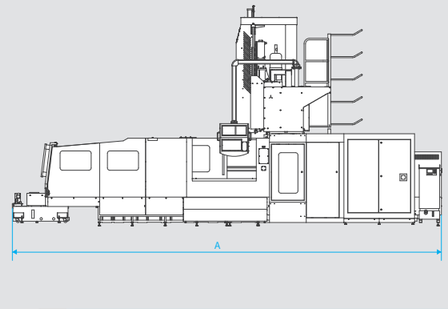
Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM0813L	3280	4080	3480	1400	150-850	700
PM1320L	6020	3980				
PM1330L	8020					
PM1525L	7020	4080		1600		

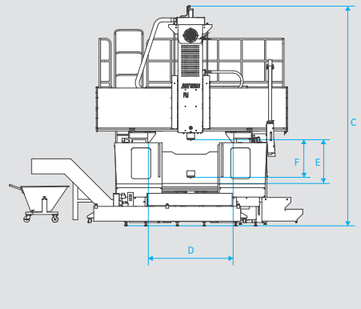
PM18L Series

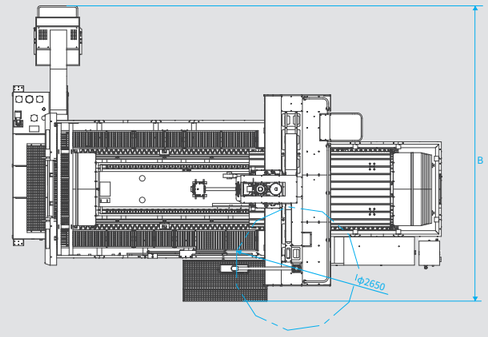


PM20L Series

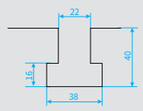








T grooves in the worktable



PM16L/18L/PM20L

Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM1830L	9100	6250	4700	2300	930	800
PM1840L	11100					
PM2040L	11100	6500	5000	2800	1130	1000
PM2060L	15100					

Item	Unit	PM0813L	PM1320L	PM1330L	PM1525L	PM1830L	PM1840L	PM2040L	PM2060L
Worktable width	mm	1300			1500	1800		2000	
Worktable length	mm	900	2100	8000	2600	3000	4000	4000	6000
Table load	kg	1500	3500	35000	8000	10000	12000	20000	26000
Worktable travel (X axis)	mm	800	2200	8500	2700	3200	4200	4200	6200
Carriage travel (Y axis)	mm	1300			1500	2700		2700	
Ram travel (Z axis)	mm	700			700	800[1000]		1000～1130]	
Spindle terminal to worktable	mm	150-850			150-850	130～930 [130～1130]		180～1180	130～1130
Column span	mm	1400			1600	2300		2800	
Tool shank size	-	BT40			BT40	BT50 [BT40]		BT50 [BT40]	
Spindle speed	r/min	15000			15000	100～12000 [BT40:15000]		100～10000 [BT40:15000]	
Max. output torque	N.m	34/46			34/46	95/118[BT40:70/96]		140/165 [BT40:70/96]	
Spindle motor power	kW	11.7/15.8			11.7/15.8	15/18.5 [BT40:11/15]		22/26 [BT40:11/15]	
Ram section	mm	350×350			350×350	450×400		450×400	
X/Y/Z axis rapid trave	m/min	12/12/12	18/24/24		18/24/24	20/18/20	15/18/20	15/15/15	12/15/15
Tool position	-	[24/32]			[24/32]	[24/32/40/60]		[24/32/40/60]	
Max. tool diam./length/weight	mm/mm/kg	ϕ80/250/8			ϕ80/250/8	Φ105/350/15		Φ105/350/15	
Max. tool diameter (empty neighbor)	mm	/			/	Φ200		Φ200	
X axis (positioning/repeatability)	mm	0.012/0.008	0.012/0.008	0.015/0.010	0.012/0.008	0.018/0.010	0.020/0.012	0.020/0.012	0.028/0.018
Y axis (positioning/repeatability)	mm	0.012/0.008			0.012/0.008	0.015/0.010		0.018/0.012	
Z axis (positioning/repeatability)	mm	0.012/0.008			0.012/0.008	0.015/0.010		0.015/0.010	
CNC system	-	SIEMENS 828D [NEWAY FANUC]				NEWAY FANUC[SIEMENS]			
Machine weight	kg	12000	18000	22000	22000	25000	28000	40000	50000

Standard configuration (PM08/13/15L):

High-speed direct drive mechanical spindle, spindle constant temperature cooling system, spindle motor constant temperature cooling system, long terminal spindle, spindle air curtain protection system, X/Y/Z axis with roller guideway, X/Y/Z axis direct drive (no belt), full protection with roof, automatic chip conveying system, LED lights and caution lights, MPG, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air cooling and water cooling system of tools, air gun, oil-water separation device.

Options (PM08/13/15L):

Grating ruler, DIN/CAT/ISO taper, tool magazine 24/32T, rotary table,workpiece measuring device, water gun, special functions of CNC controller, electric cabinet air-conditioning, coolant through spindle.

Standard configuration(PM18/20L):

High-speed direct drive mechanical spindle, spindle constant temperature cooling system, long terminal spindle, spindle air curtain protection system, ram balance system, X/Y/Z axis with roller guideway, X/Y/Z axis direct drive (no belt), full protection (PM18L), beam handrail and safety stairs, automatic chip conveying system, LED lights and caution lights, MPG, air conditioner of E-cabinet, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air cooling and water cooling system of tools, air gun, oil-water separation device.

Options(PM18/20L):

Different torque and spindle speed, linear scale, DIN/CAT/ISO taper, tool magazine 24/32/40/60T, column height increase, rotary table, full protection with roof (PM18L), full protection without roof (PM20L), tool detection device, workpiece measuring device, water gun, special functions of CNC controller., etc.

[ ]Options

PM-V Series

High-Speed Built-in Spindle Ganty Machining Center

- This series of machines adopt 15,000rpm, or higher speed electrical spindle, the main drive chain shortens to zero which makes the machine more stable and more accurate in working and improving the quality of the workpiece;
- The motor is set in the middle of the bearings, compact structure, improved spindle' s strength and cutting capabilities;
- Less vibration offers a more stable process, with higher accuracy and better surface finishing when processing parts;
- Adopts full protection cover with roof for small models to avoid the chip or coolant splash outside.
- Suitable for aerospace, auto industry, rail transit, wind power, aluminum alloy, mold, etc.

Main parameters

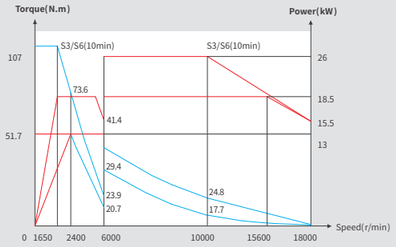
		PM1220V	PM1530V	PM1830V	PM2040V
Worktable size	mm	1200×2000	1500×3000	1800×3000	2000×4000
Axis travel X/Y/Z	mm	2200×1200×800	3200×1900×800	2200×2700×800	4200×3200×1000
Spindle speed	mm	100~18000	100~18000	100~18000	100~18000
Max. output torque	N.m	51.7/107	51.7/107	88.3/159	88.3/159
Spindle motor power	kW	13/18.5	13/18.5	18.5/25	18.5/25

Spindle Power Torque Diagram

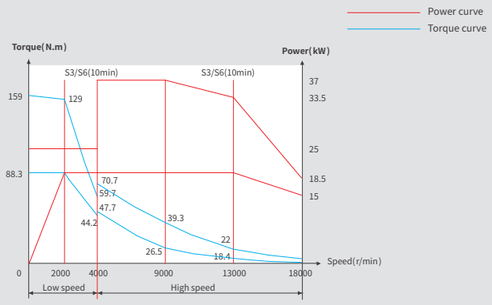
External Dimensions

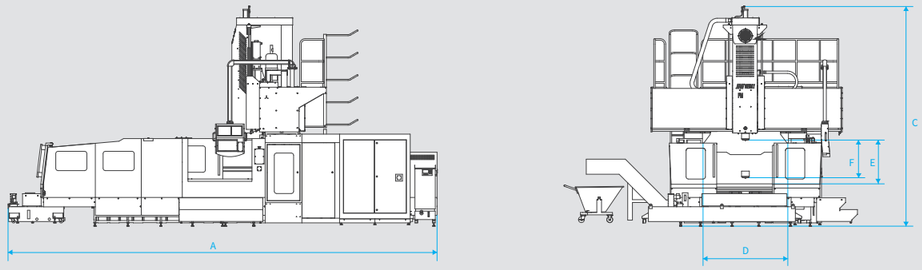
(Unit: mm)

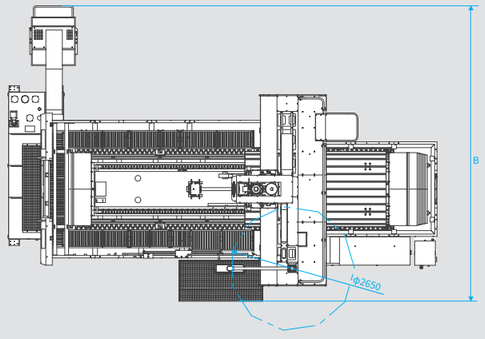
PM12/15V Series



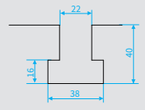
PM18/20V Series







T grooves in the worktable



PM16V/18V/PM20V

Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM1220V	7300	5500	4300	1400	1000	800
PM1230V	9540					
PM1520V	7600	5900	4350	1800		
PM1530V	9700					
PM1830V	9100	6250	4700	2300		
PM1840V	11100					
PM2040V	11100	6500	5000	2800	1200	1000
PM2060V	15100					

Item	Unit	PM1220V	PM1230V	PM1520V	PM1530V	PM1830V	PM1840V	PM2040V	PM2060V
Worktable width	mm	1200		1500		1800		2000	
Worktable length	mm	2000	3000	2000	3000	3000	4000	4000	6000
Table load	kg	3500	5500	6000	7000	10000	12000	20000	26000
Worktable travel (X axis)	mm	2200	3200	2200	3200	3200	4200	4200	6200
Carriage travel (Y axis)	mm	1500		1900		2700		2700	
Ram travel (Z axis)	mm	800		800		800 [1000]		1000	
Spindle terminal to worktable	mm	110～910		110～910		200～1000 [200～1200]		250-1250	200～1200
Column span	mm	1400		1800		2300		2800	
Tool shank size	-	HSK-A63		HSK-A63		HSK-A63		HSK-A63	
Spindle speed	r/min	100～18000		100～18000		100～18000		100～18000	
Max. output torque	N.m	51.7/107		51.7/107		88.3/159		88.3/159	
Spindle motor power	kW	13/18.5		13/18.5		18.5/25		18.5/25	
Ram section	mm	400×320		400×320		450×400		450×400	
X/Y/Z axis rapid trave	m/min	24/24/15	15/24/15	15/24/15	12/24/15	20/18/20	15/18/20	15/15/15	12/15/15
Tool position	-	24 [32/40/60]		24 [32/40/60]		[24/32/40/60]		[24/32/40/60]	
Max. tool diam./length/weight	mm/mm/kg	Φ80/300/8		Φ80/300/8		Φ80/300/8		Φ80/300/8	
Max. tool diameter (empty neighbor)	mm	Φ150		Φ150		Φ150		Φ150	
X axis (positioning/repeatability)	mm	0.012/0.008	0.015/0.010	0.012/0.008	0.015/0.010	0.018/0.010	0.020/0.012	0.020/0.012	0.028/0.018
Y axis (positioning/repeatability)	mm	0.012/0.008		0.014/0.009		0.015/0.010		0.018/0.012	
Z axis (positioning/repeatability)	mm	0.012/0.008		0.012/0.008		0.015/0.010		0.015/0.010	
CNC system	-	NEWAY FANUC[SIEMENS]		NEWAY FANUC[SIEMENS]		NEWAY FANUC[SIEMENS]			
Machine weight	kg	18000	22000	20000	24000	25000	28000	40000	50000

Standard configuration:

Built-in motor spindle (HSK-A63) from Germany, spindle cooling system, spindle lubrication system, spindle air curtain protection system, ram balance system, X/Y/Z axis roller guideway, X/Y/Z axis direct drive (no belt), full protection (except for PM20V), automatic chip conveying system, LED lighting and caution lights, MPG, electric cabinet air-conditioning, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air and coolant tool cooling system, air gun, cutting compound oil-water separation device.

Options:

Different torque and spindle speed of motorized spindle, BT taper (8000rpm or lower speed), coolant through spindle, grating ruler, tool magazine 24/32/40/60T, column height increase, rotary worktable, full protection with roof (except for PM20V), full protection (PM20V), tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

[ ]Option

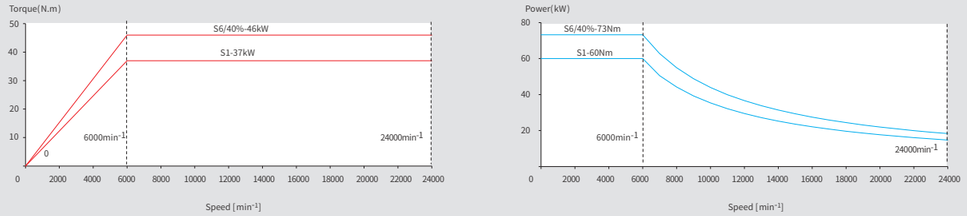
PM-U Series
High-Speed 5 Axis Gantry Machining Center

- This series of machine adopts the moving worktable, fixed column gantry frame, five-axis interpolation, high automation;
- Equipped with world-class A&C rotary milling head to finish the complex curve 5 axis processing;
- Adopted a double wound high torque motor and built-in spindle to simplify the transmission structure and improve the reliability of the machine;
- 3 axis are with roller linear guide ways to realize good dynamic response; and 4 guide-ways layouts in Z-axis to achieve the balance between high rigidity and fast response;
- Suitable for complex curved parts high precision machining in aerospace, mold and die, and other industries.

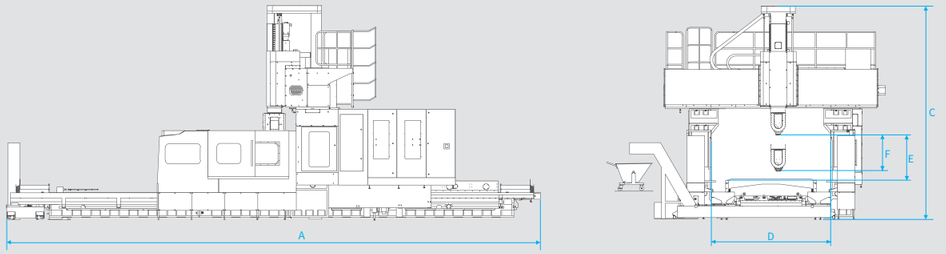
Spindle Power Torque Diagram
External Dimensions

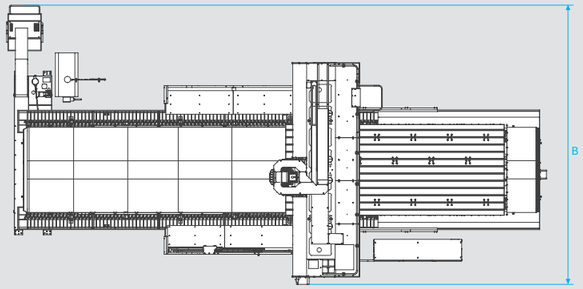
(Unit: mm)

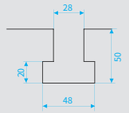
PM20/25U Series



24000rpm spindle motor power & torque curve







T grooves in the worktable

Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM2040U	11000	5500	6000	2800	1200	1000
PM2060U	15000					
PM2560U	16000	7000	6500	3300	1200	1000
PM2580U	21000					

Item		Unit	PM2040U	PM2060U	PM2560U	PM2580U
Worktable	Worktable width	mm	2000		2500	
	Worktable length	mm	4000	6000	6000	8000
	Table load	kg	20000	26000	30000	35000
Capacity	Worktable travel (X axis)	mm	4200	6200	6200	8500
	Carriage travel (Y axis)	mm	3200		3700	
	Ram travel (Z axis)	mm	1200[1250]		1000[1250]	
	Spindle terminal to worktable	mm	200-1200[250-1500]		200-1200[250-1500]	
	Column span	mm	2800		3300	
Five-axis Head	Tool shank size	-	HSK-A63		HSK-A63	
	Spindle speed	r/min	24000		24000	
	Max. output torque	N.m	60/73		60/73	
	Spindle motor power	kW	37/46		37/46	
	A/C axis indexing angle	°	±105/±360		±105/±360	
	A/C axis indexing positioning accuracy	arc-second	±5/±3		±5/±3	
Rapid travel	X/Y/Z axis rapid trave	m/min	15/15/15	12/15/15	12/12/12	10/12/12
ATC	Tool position	-	[24/32/40/60]		[24/32/40/60]	
	Max. tool diam./length/weight	mm/mm/kg	ϕ80/350/8		ϕ80/350/8	
Accuracy GB/T17421.2-2016 ISO 230-2:2006	Max. tool diameter (empty neighbor)	mm	ϕ150		ϕ150	
	X axis (positioning/repeatability)	mm	0.020/0.012	0.025/0.016	0.025/0.016	0.030/0.020
	Y axis (positioning/repeatability)	mm	0.017/0.010		0.020/0.012	
	Z axis (positioning/repeatability)	mm	0.012/0.008		0.012/0.008	
	CNC system		SIEMENS[HEIDENHAIN]			
	Machine weight	kg	45000	55000	65000	85000

Standard configuration:

5-axis milling head imported from Europe, A/C axis driven by torque motor directly, high-speed motorized spindle, spindle and A/C axis cooling system, spindle oil and air lubrication system, spindle temperature rise protection, spindle air curtain protection, ram balance system, X/Y/Z axis with grating ruler, processing area protection, beam handrail and stairs, automatic chip conveying system, LED lighting and caution lights, MPG, electric cabinet air-conditioner, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air coolant and water coolant system for tool, air gun, cutting compound oil-water separation device.

Options:

Single 5 axis milling head, different torque and spindle speed of motorized spindle, coolant through spindle, tool magazine 24/32/40/60T, column height increase, full protection, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

[ ]Option

PMB-U Series

High-speed 5 Axis Bridge Type Cross-rail Machining Center

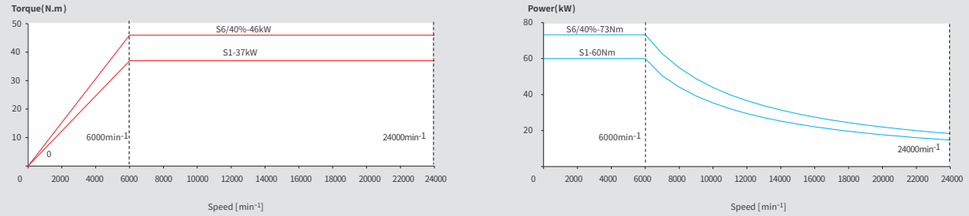
- This series of machines adopt bridge type, moving beam, fixed worktable;
- X-axis adopts 4 guide-ways, double drive, X1, X2 using double-motor anti-backlash, to ensure it is stable and reliable;
- Equipped with World-Class A&C rotary milling head to realize 5-axis processing of complex curve;
- Dual wound high-torque motor + built-in motor spindle simplifies drive mechanism and improves machine reliability;
- Suitable for complex curve parts high precision processing from aerospace, auto industry, rail transit, wind power, aluminum alloy, mold and other industries.

Spindle Power Torque Diagram

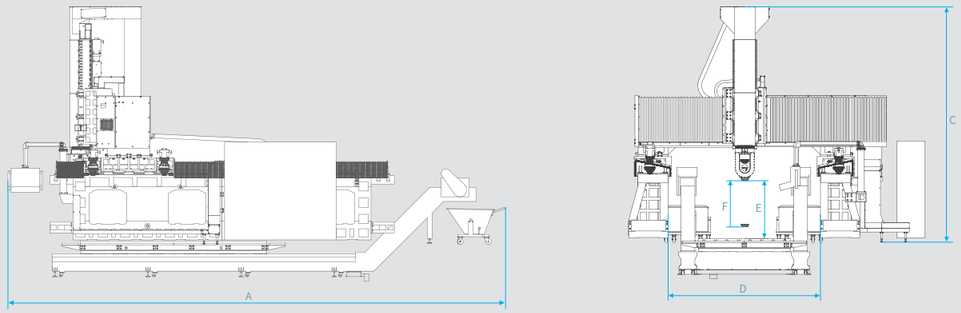
External Dimensions

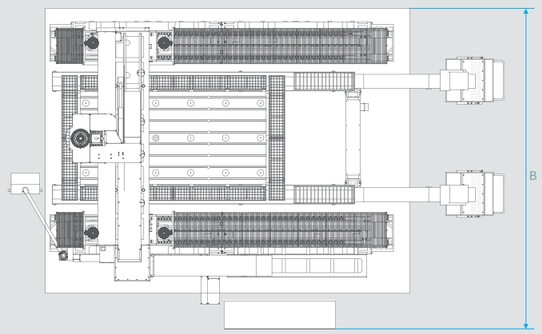
(Unit: mm)

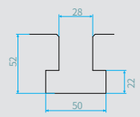
PMB20/25/30U Series



24000rpm spindle motor power & torque curve







T grooves in the worktable

Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PMB2040U	10500	7000	5500	3300	1300	1000 [1250]
PMB2060U	12700					
PMB2560U	12700	7650	5500	3800	1300	
PMB3060U	12700	8300	5750	4300	1300	

Item		Unit	PMB2040U	PMB2060U	PMB2540U	PMB2560U	PMB3060U
Worktable	Worktable width	mm	2000		2500		3000
	Worktable length	mm	4000	6000	4000	6000	6000
	Table load	kg/m^2	5000		5000		5000
Capacity	Worktable travel (X axis)	mm	4000	6000	4000	6000	6000
	Carriage travel (Y axis)	mm	2300		2800		3300
	Ram travel (Z axis)	mm	1000[1250][1500]		1000[1250][1500]		
	Spindle terminal to worktable	mm	300-1300[400-1650][150-1650]		300-1300[400-1650][150-1650]		
	Column span	mm	3200		3700		4200
Five-axis Head	Tool shank size	-	HSK-A63		HSK-A63		HSK-A63
	Spindle speed	r/min	24000		24000		24000
	Max. output torque	N.m	60/73		60/73		60/73
	Spindle motor power	kW	37/46		37/46		37/46
	A/C axis indexing angle	°	±105/±360		±105/±360		±105/±360
	A/C axis indexing positioning accuracy	arc-second	±5/±3		±5/±3		±5/±3
Rapid travel	X/Y/Z axis rapid trave	m/min	25/25/25		25/25/25		25/25/25
ATC	Tool position	-	[12/24/32]		[12/24/32]		[12/24/32]
	Max. tool diam./length/weight	mm/mm/kg	ϕ80/350/8		ϕ80/350/8		ϕ80/350/8
Accuracy GB/T17421.2-2016 ISO 230-2:2006	Max. tool diameter (empty neighbor)	mm	ϕ150		ϕ150		ϕ150
	X axis (positioning/repeatability)	mm	0.020/0.012	0.030/0.020	0.020/0.012	0.030/0.020	0.030/0.020
	Y axis (positioning/repeatability)	mm	0.016/0.010		0.020/0.012		0.025/0.016
	Z axis (positioning/repeatability)	mm	0.012/0.008		0.012/0.008		0.012/0.008
	CNC system		SIEMENS [HEIDENHAIN]				
	Machine weight	kg	60000	70000	70000	90000	100000

Standard configuration:

5-axis milling head imported from Europe, A/C axis driven by torque motor directly, high-speed motorized spindle, spindle and A/C axis cooling system, spindle oil and air lubrication system, spindle temperature rise protection, spindle air curtain protection, ram balance system, X/Y/Z axis with grating ruler, stainless-steel telescopic cover, full protection, beam handrail and stairs, automatic chip conveying system, LED lighting and caution lights, MPG electric cabinet air-conditioner, centralized lubrication system, anchor bolts and level adjustment components, air coolant and water coolant system for tool , air gun, cutting compound oil-water separation device.

Options:

Single 5 axis milling head, different torque and spindle speed of built-in motor spindle, coolant through spindle, tool magazine 12/24/40/60T, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

[ ]Option

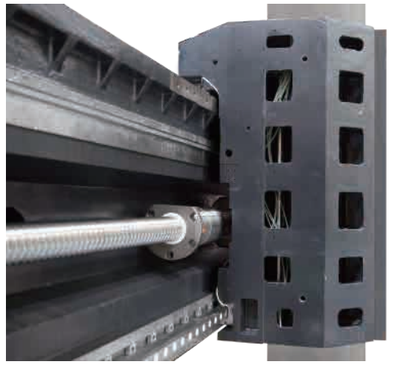
PM-HZ Series
Heavy Cutting Gantry Machining Center

- This series machine adopt gantry frame fixed, worktable moving structure, with high rigidity, high precision, big torque and good dynamic charateristics;
- The main key parts such as bed, column, saddle, headstock, worktable are made of high-strength and high-quality cast iron, resin sand molding, and good stability;
- Large-capacity square ram design, the size of the main drive spindle is enlarged, and the low-speed transmission ratio of the main drive is up to 1:8, achieving high torque with lower power;
- Adopt the international advanced machine tool design concept and use the most advanced and reliable functional accessories;
- They are suitable for machining in the fields of valves, auto parts, civil aviation, construction machinery and other industries

Main parameters		PM2040HZ	PM2560HZ	PM3060HZ
Worktable size	mm	2000×4000	2500×6000	3000×6000
Axis travel X/Y/Z	mm	4200×3200×1000	6200×3700×1000	6200×4200×1250
Spindle speed	mm	40~3500	40~3500	40~3500
Max. output torque	kW	1120/1320	1120/1320	1120/1320
Spindle motor power	r/min	22/26	22/26	22/26

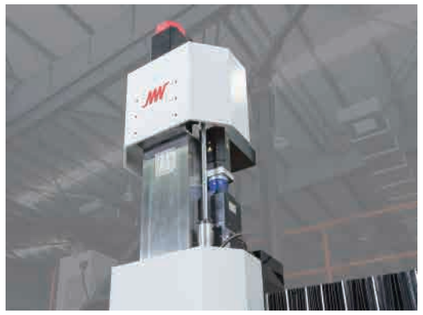
1 Ladder type beam design

- Y axis guideway with ladder configuration, the distance between lower guideway and spindle center is minimized, combined with heavy duty roller sliders can resist the overturn torque when machining.
- The saddle cover the ram completely; the large cross-section beam and the large ram to realize better anti-bending and cutting force resistance; the square ram is fully contained to guarantee the higher cutting stability.



2 Z axis drive system set on the side

Short distance between the center of the spindle and the y-axis guideway reduces the turnover torque and improves the rigidity of the machine.

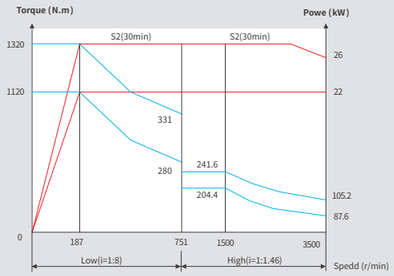


Spindle Power Torque Diagram

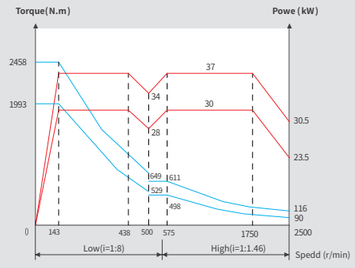
External Dimensions

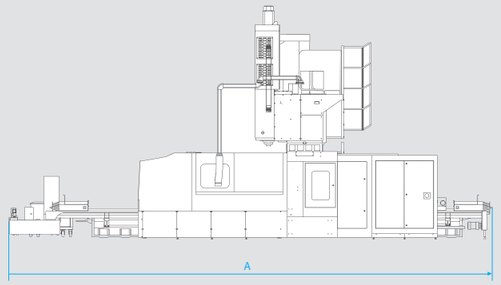
(Unit: mm)

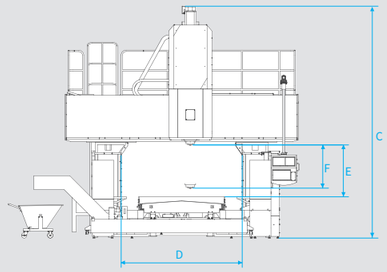
PM-HZ Series

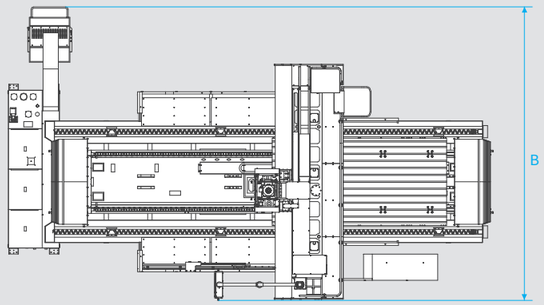


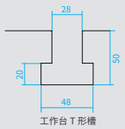
PM-SC Series











Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM2030HZ	9000	6500	6150[6400]	2800[3200]	1200 [1500]	1000[1250]
PM2040HZ	11000					
PM2060HZ	15000					
PM2080HZ	20000					
PM2540HZ	11000	5900	5900[6600]			
PM2560HZ	15400	7500	6000[6700]	3300		
PM2580HZ	20100					
PM25100HZ	25500				1140 [1440]	
PM3040HZ	11500		6600	3800	1500	1250
PM3060HZ	15400					
PM3080HZ	20100					
PM30100HZ	25500				1440	
PM30120HZ	31500					
PM30140HZ	36000	6700				

Type	A	B	C	D	E	F
	Length	Width	High	Column span	Spindle terminal to worktable	Z axis travel
PM2560SC	15400	7500	6800 [7500]	3300	1500 [1800]	1250[1500]
PM2580SC	20100				1440 [1740]	
PM25100SC	25500					
PM3040SC	11500			3800	1500 [1800]	
PM3060SC	15400					
PM3080SC	20100				1440 [1740]	
PM30100SC	25500					
PM30120SC	31500					
PM30140SC	36000	6700				

Item	Unit	PM2030HZ	PM2040HZ	PM2060HZ	PM2080HZ	PM2540HZ	PM2560HZ	PM2580HZ	PM25100HZ
Worktable width	mm	2000				2500			
Worktable length	mm	3000	4000	6000	8000	4000	6000	8000	10000
Table load	kg	16000	20000	26000	28000	22000	30000	35000	40000
Worktable travel (X axis)	mm	3200	4200	6200	8500	4200	6200	8500	10500
Carriage travel (Y axis)	mm	3200				3200	3700 [4200]		
Ram travel (Z axis)	mm	1000 [1250]				1000 [1250]			
Spindle terminal to worktable	mm	200～1200 [250～1500]				200～1200 [250～1500]			140~1140 [190-1440]
Column span	mm	2800 [3200]				2800 [3200]	3300[3800]		
Tool shank size	-	BT50				BT50			
Spindle speed	r/min	40～3500				40～3500			
Max. output torque	N.m	1120/1320				1120/1320			
Spindle motor power	kW	22/26				22/26			
Ram section	mm	420×420				420×420			
X/Y/Z axis rapid trave	m/min	15/15/10	15/15/10	12/15/10	10/15/10	12/12/10	12/12/10	10/12/10	8/12/10
Tool position	-	[24/32/40/60]				[24/32/40/60]			
Max. tool diam./length/weight	mm/mm/kg	Φ105/350/15				Φ105/350/15			
Max. tool diameter (empty neighbor)	mm	Φ200				Φ200			
X axis (positioning/repeatability)	mm	0.018/0.010	0.020/0.012	0.028/0.018	0.032/0.020	0.020/0.012	0.028/0.018	0.032/0.020	0.038/0.024
Y axis (positioning/repeatability)	mm	0.018/0.012				0.024/0.016			
Z axis (positioning/repeatability)	mm	0.015/0.010[Z轴1250：0.018/0.012]				0.015/0.010[Z轴1250：0.018/0.012]			
CNC system	-	NEWAY FANUC[SIEMENS]				NEWAY FANUC[SIEMENS]			
Machine weight	kg	41000	45000	55000	65000	52000	67000	87000	97000

Standard configuration:

ZF gear box, full-protection square ram, spindle and gear box cooling system, short terminal spindle, spindle air curtain system, ram balance system, X/Y/Z axis direct drive (no belt), processing area protection, beam handrail and stairs, automatic chip conveying system, LED lights and caution lights, MPG, electric cabinet air-conditioner, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air coolant and water coolant system for tool , air gun, cutting compound oilwater separation equipment.

Options:

Milling head, DIN/CAT/ISO taper, coolant through spindle, column span increase, column height increase, tool magazine 24/32/40/60T, vertical and horizontal
l tool magazine 32/40/60T, rotary worktable, grating ruler, full protection, tool detection device, Workpiece measuring device, water gun, special functions of CNC controller.

Item		Unit	PM3040HZ	PM3060HZ	PM3080HZ	PM30100HZ	PM30120HZ	PM30140HZ	PM2560SC	PM2580SC	PM25100SC	PM3040SC	PM3060SC	PM3080SC	PM30100SC	PM30120SC	PM30140SC
Worktable	Worktable width	mm	3000						2500			3000					
	Worktable length	mm	4000	6000	8000	10000	12000	14000	6000	8000	10000	4000	6000	8000	10000	12000	14000
	Table load	kg	25000	35000	40000	45000	45000	45000	30000	35000	40000	25000	35000	40000	45000	45000	45000
Capacity	Worktable travel (X axis)	mm	4200	6200	8500	10500	12500	14500	6200	8500	10500	4200	6200	8500	10500	12500	14500
	Carriage travel (Y axis)	mm	4200 [4600]						3700 [4200]			4200 [4600]					
	Ram travel (Z axis)	mm	1250						1250[1500]			1250[1500]					
	Spindle terminal to worktable	mm	250～1500			190-1440			250～1500 [300～1800]		190-1440[240-1740]	250～1500 [300～1800]			190-1440[240-1740]		
	Column span	mm	3800 [4200]						3300 [3800]			3800 [4200]					
Spindle	Tool shank size	-	BT50						BT50			BT50					
	Spindle speed	r/min	40～3500						40～2500			40～2500					
	Max. output torque	N.m	1120/1320						1993/2458			1993/2458					
	Spindle motor power	kW	22/26						30/37			30/37					
	Ram section	mm	420×420						450×450			450×450					
Rapid travel	X/Y/Z axis rapid trave	m/min	12/12/10	12/12/10	10/12/10	8/12/10			12/12/10	10/12/10	8/12/10	12/12/10	12/12/10	10/12/10	8/12/10		
	Tool position	-	[24/32/40/60]						[24/32/40/60]			[24/32/40/60]					
ATC	Max. tool diam./length/weight	mm/mm/kg	Φ105/350/15						Φ105/350/15			Φ105/350/15					
	Max. tool diameter (empty neighbor)	mm	Φ200						Φ200			Φ200					
Accuracy GB/T17421.2-2016 ISO 230-2:2006	X axis (positioning/repeatability)	mm	0.020/0.012	0.028/0.018	0.032/0.020	0.038/0.024			0.028/0.018	0.028/0.018	0.038/0.024	0.020/0.012	0.028/0.018	0.032/0.020	0.038/0.024		
	Y axis (positioning/repeatability)	mm	0.028/0.018						0.024/0.016			0.028/0.018					
	Z axis (positioning/repeatability)	mm	0.018/0.012						0.018/0.012[Z axis 1500：0.020/0.012]			0.018/0.012[Z axis 1500：0.020/0.012]					
	CNC system	-	NEWAY FANUC[SIEMENS]						NEWAY FANUC[SIEMENS]			NEWAY FANUC[SIEMENS]					
	Machine weight	kg	57000	72 000	92000	102000	112000	122000	68000	88000	98000	58000	73000	93000	103000	113000	123000

Standard configuration:

ZF gear box, full-protection square ram, spindle and gear box cooling system, short terminal spindle, spindle air shrouding protection system, ram balance system, X/Y/Z axis direct drive (no belt), processing area protection, beam handrail and stairs, automatic chip conveying system, LED lights and caution lights, MPG, electric cabinet air-conditioner, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air coolant and water coolant system for tool, air gun, cutting compound oil-water separation equipment.

Options:

Milling head, DIN/CAT/ISO taper, coolant through spindle, column span increase, column height increase, tool magazine 24/32/40/60T, vertical and horizontal tool magazine 32/40/60T, rotary worktable, grating ruler, full protection, tool detection device, Workpiece measuring device, water gun, special functions of CNC controller.

[ ]Options

PM-MSC series

Moving column gantry machining center

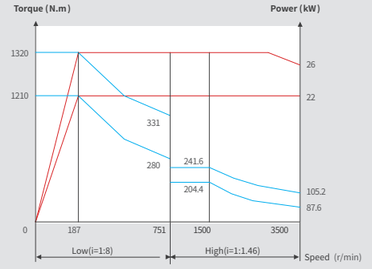
- The series of models with gantry frame moving, table fixed, with super-strong load capacity;
- With the same travel parameters, the footprint is only 3/5 of the column-fixed -type gantry machines, saving you workshop space cost;
- X axis use the left and right two servo motors, a total of four servo motors for dual-drive synchronous control, electrical control to eliminate the reverse gap, improve positioning accuracy and repeatability positioning accuracy;
- X axis use two large-span heavy-duty roller linear guide ways, super-large column surface, together to ensure the gantry moving stably and precisely.

Spindle Power Torque Diagram

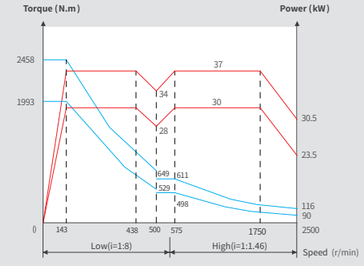
External Dimensions

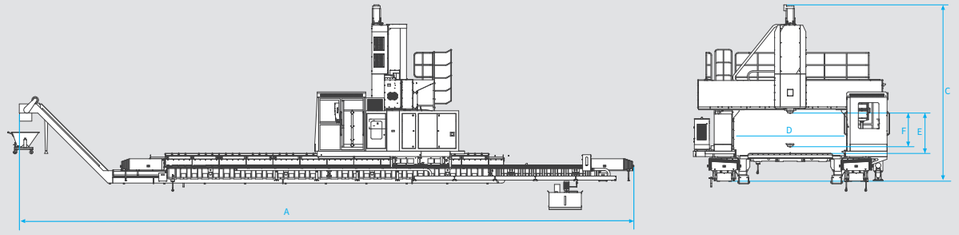
(Unit: mm)

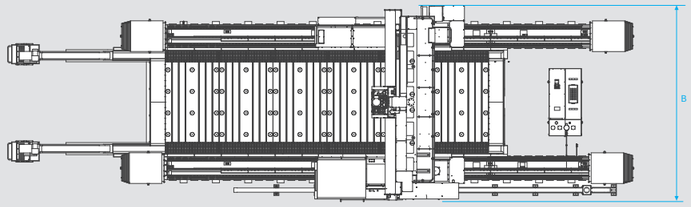
PM-MHZ Series

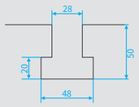


PM-MSC Series









Type	A	B	C	D	E	F
	Length	Widh	High	Column span	Spindle terminal to worktable	Z axis travel
PM30100MHZ(MSC)	21000	7300	6550	4200	250-1500	1250
PM30120MHZ(MSC)	23000					
PM30140MHZ(MSC)	25000					
PM30160MHZ(MSC)	27000					
PM40100MSC	21600	8150(8550)	7400	5200(5600)	500-2000	1500
PM40120MSC	23600					
PM40140MSC	25600					
PM40160MSC	27600					

Item		Unit	PM30100MHZ	PM30120MHZ	PM30140MHZ	PM30160MHZ	PM30120MSC	PM301400MSC	PM30160MSC	PM40100MSC	PM40120MSC	PM40140MSC	PM40160MSC
Worktable	Worktable width	mm	3000				3000			4000			
	Worktable length	mm	10000	12000	14000	16000	12000	14000	16000	10000	12000	14000	16000
	Table load	Kg/m^2	15000				15000			15000			
Capacity	Gantry travel (X axis)	mm	10500+750(Change head)	12500+750(Change head)	14500+750(Change head)	16500+750(Change head)	12500+750(Change head)	14500+750(Change head)	16500+750(Change head)	10500+750(Change head)	12500+750(Change head)	14500+750(Change head)	16500+750(Change head)
	Carriage travel (Y axis)	mm	4600				4600			5200[5600]			
	Ram travel (Z axis)	mm	1250[1500]				1250[1500]			1500			
	Spindle terminal to worktable	mm	250~1500[300-1800]				250-1500[300-1800]			500-2000			
	Column span	mm	4200[4600]				4200[4600]			5200[5600]			
Spindle	Tool shank size	-	P50T-I（MAS403）				P50T-I（MAS403）			P50T-I（MAS403）			
	Spindle speed	r/min	40-3500				40-2500			40-2500			
	Max. output torque	N.m	1120/1320				1993/2458			1993/2458			
	Spindle motor power	kW	22/26				30/37			30/37			
	Ram section	mm	420x420[450x450]				450×450			450×450			
Rapid travel	X/Y/Z axis rapid trave	m/min	12/12/10				12/12/10			10/10/10			
ATC	Tool position	-	24/32/40/60				[24/32/40/60]			[24/32/40/60]			
	Max. tool diam./length/weight	mm/mm/kg	Φ125/350/20				Φ125/350/20			Φ125/350/20			
	Max. tool diameter (empty neighbor)	mm	Φ225				Φ225			Φ225			
Accuracy GB/T17421.2-2016 ISO 230-2:2006	X axis (positioning/repeatability)	mm	0.038/0.024	0.038/0.024	0.038/0.024	0.045/0.028	0.038/0.024	0.038/0.024	0.045/0.028	0.038/0.024	0.038/0.024	0.038/0.024	0.045/0.028
	Y axis (positioning/repeatability)	mm	0.028/0.018				0.028/0.018			0.038/0.024			
	Z axis (positioning/repeatability)	mm	0.018/0.012[0.020/0.012]				0.018/0.012[0.020/0.012]			0.021/0.014			
	CNC system	-	NEWAY FAUNC [SIEMENS 828D]				NEWAY FANUC [SIEMENS 828D]			NEWAY FAUNC [SIEMENS 828D]			
	Machine weight	kg	100000	110000	120000	130000	110000	120000	130000	110000	125000	138000	150000

Standard configuration:

ZF gear box, full-protection square ram, spindle and gear box cooling system, short terminal spindle, spindle air curtain system, ram balance system, X/Y/Z axis direct drive (no belt), processing area protection, beam handrail and stairs, automatic chip conveying system, LED lights and caution lights, MPG, electric cabinet air-conditioner, centralized lubrication system, stainless-steel telescopic cover, anchor bolts and level adjustment components, air coolant and water coolant system for tool , air gun, cutting compound oil-water separation equipment.

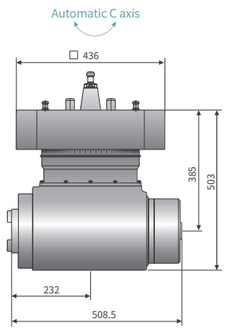
Options:

Milling head, DIN/CAT/ISO taper, coolant through spindle, column span increase, column height increase, tool magazine 24/32/40/60T, vertical and horizontal tool magazine 32/40/60T, rotary worktable, grating ruler, full protection, tool detection device, workpiece measuring device, water gun, special functions of CNC controller.

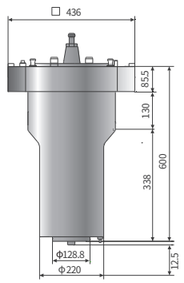
[ ]Options

Milling Heads

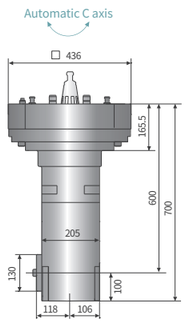
Neway-made Milling Head



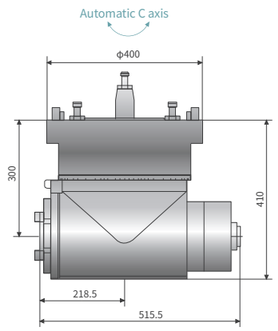
NWM-AR5-75
Auto head exchange, tool change
25kW/2000rpm/750N.m



NWM-AE-75
Auto head exchange, tool change
25kW/2000rpm/750N.m

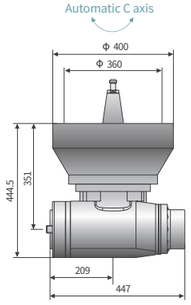


NWM-AER-75
Auto head exchange, manual tool change
25kW/800rpm/500N.m

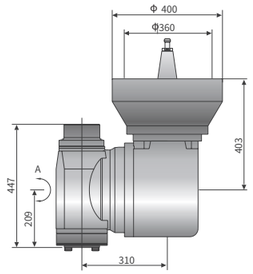


NWM-AR5-50
Auto head exchange, tool change
18kW/2000rpm/500N.m

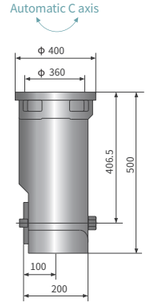
Taiwan Milling Head



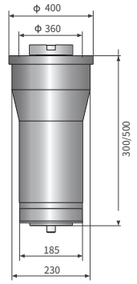
Auto head exchange, tool change
3500rpm/600N.m



Auto head exchange, manual C axis, manual A axis
3500rpm/600N.m

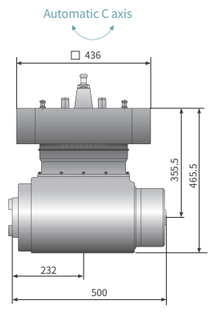


Auto head exchange, manual tool change
3500rpm/600N.m

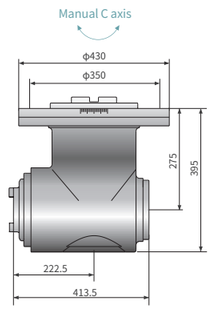


Auto head exchange, tool change
3500rpm/600N.m

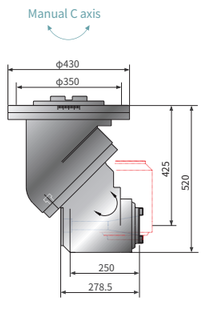
European Milling Head



Auto head exchange, tool change, automatic C axis
Auto head exchange, manual tool change, automatic C axis
25kW/2000rpm/750N.m

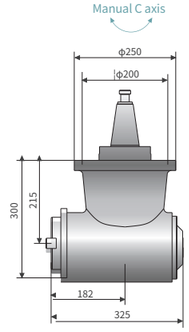


Auto head exchange, manual tool change
30kW/2000rpm/1500N.m

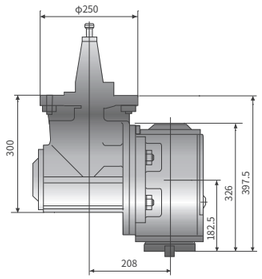


Auto head exchange, manual tool change
25kW/2000rpm/750N.m

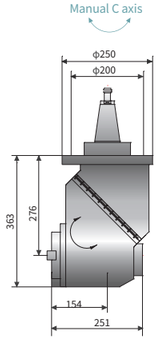
Economical Milling Head



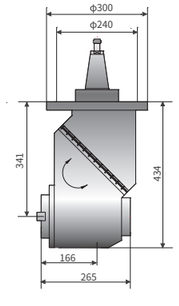
Auto head exchange, manual tool change
38kW/2000rpm



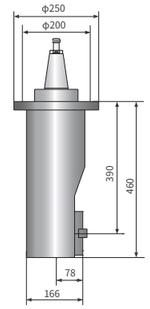
Auto head exchange, manual tool change
38kW/2000rpm



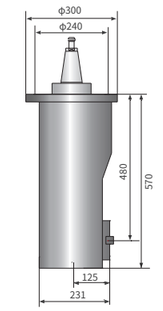
Auto head exchange, tool change
38kW/1200rpm



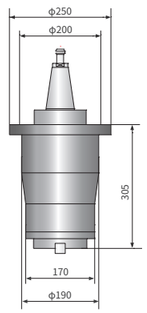
Auto head exchange, tool change
42kW/1200rpm



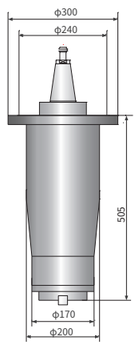
Auto head exchange, tool change
38kW/800rpm/40 tools



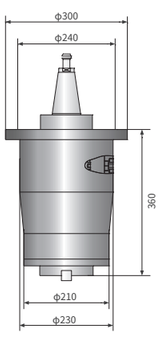
Auto head exchange, tool change
38kW/2000rpm/50 tools



Auto head exchange, manual tool change
38kW/2000rpm/Inner unclamping



Auto head exchange, tool change
38kW/2000rpm/Outer unclamping



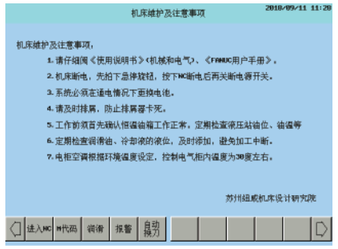
Auto head exchange, tool change
63kW/2000rpm/Outer unclamping

CNC System

The combination of powerful system functions and in-depth secondary function development greatly improves the ease of use of the machine tool;The secondary development of the system brings convenience to customers in terms of machine tool use, debugging, safety

1 Machine Maintenance and Precautions

Describes the precautions regarding the use of the machine and display the buttons to enter other screens.



2 M Code

Common M codes, no need to look up to the operation manual.

3 Alarm Help In Text

When the alarm appears, operator can find the corresponding solution from this page, which is very convenient for customer using.

4 Lubrication Supporting Picture

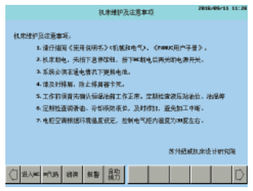
Quickly set the time of lubrication and lube intervals； easy to check the working status of the lubricating pump.

5 Vertical and Horizontal Tool Magazine Signal

Displays the signal status of the tool magazine, as well as the name of the tool on the tool magazine and spindle, to help customers handling the tool magazine’ s problems easier.

1 Choose Functions

Open and shield some functions of the machine.



2 Vertical Tool Magazine Debugging

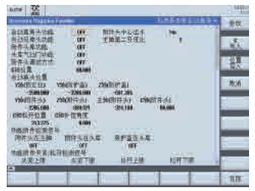
From this page to check ATC signal status and control ATC movement. Easy to resolve the ATC problems.

3 Vertical and Horizontal Tool Magazine Debugging

Set up the vertical and horizontal tool magazine functions. View the ATC status through the screen and set the tool replacement point.

4 Accessory Milling Head Debugging

View the signal status of milling head and set the indexing position and head clamping position.



Production and inspection

• Roundness inspection

• Laser interference accuracy inspection

• Online vibration testing

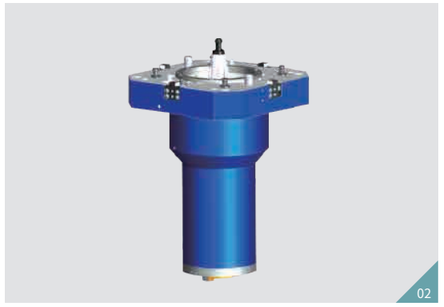
• Coordinate measuring

• Scraping

• Accessory milling head testing lab

Options


01


02


03


04


05


06

01 Neway auto right angle milling head

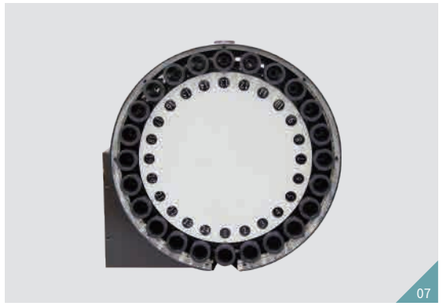
02 Neway auto extension milling head

03 Manual right angle milling head

04 Manual universal milling head

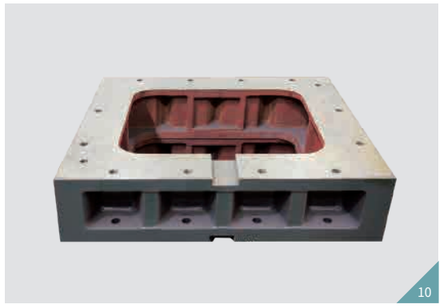
05 Vertical and horizontal chain type tool magazine

06 Ordinary chain type tool magazine


07


08


09


10


11


12


13

14

07 Disk type tool magazine

08 Grating ruler

09 Coolant through spindle

10 Raising block

11 4th axis rotary table

12 Horizontal rotary worktable

13 Tool measurement

14 Workpiece measurement