



HIGH PRECISION MACHINERY MANUFACTURER



**QUALITY COMES FROM CONFIGURATION, SERVICE COMES FROM HEART**

HONGKONG BAOFENG PRECISION MACHINERY CO.,LTD.  
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**DONGGUAN BAOKE PRECISION MACHINERY CO.,LTD.**



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BAOFENG – Advanced Design, Superior Quality, Valuable Solutions, Prompt Support





Production base 1

Production base 2

Production base 3

**COMPANY PROFILE**

DONGGUAN BAOKE PRECISION MACHINERY CO.,LTD. is a national high-tech enterprise, committed to the production and sale of CNC machining centers. Its brand "BAOFENG MACHINE" integrates R&D, design, manufacturing, sale and service, specializes in the field of high-quality CNC machining center including vertical, horizontal, double column, drilling and tapping, engraving and milling.

BAOFENG MACHINE is with advanced production equipment and excellent technical team. And with CNC technology application center to provide technical training and application support for customers, as well as ensuring quality by high-precision testing equipment such as the UK Renishaw laser interferometer, ball bar, Taiwan G-tech dynamic balancer, Germany Carl Zeiss three coordinates machine.

Our headquarter is in DONGGUAN, China, from concept to prototype to mass production, our three factories support the whole process of R&D and manufacturing.

We adhere to manufacturing high-quality professional machines, and constantly innovate to meet market demand, to provide customers with more competitive solutions and efficient services.

**CERTIFICATE OF HONOR/PRODUCT INSPECTION**





# Process/Technique

Scientific management, rigorous manufacturing process

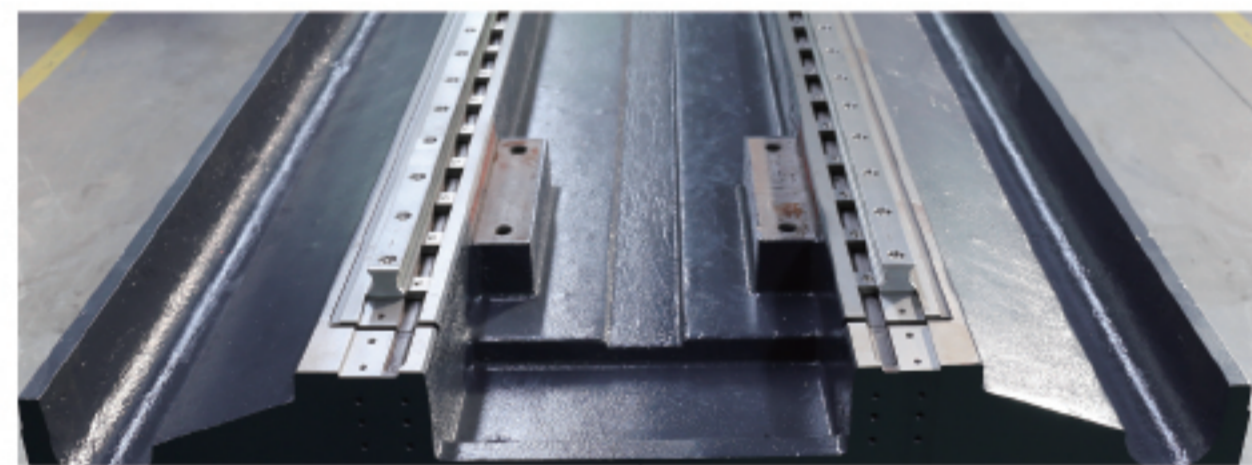
## QUALITY ASSURANCE SYSTEM

HIGH STANDARD PRODUCTION PROCESS



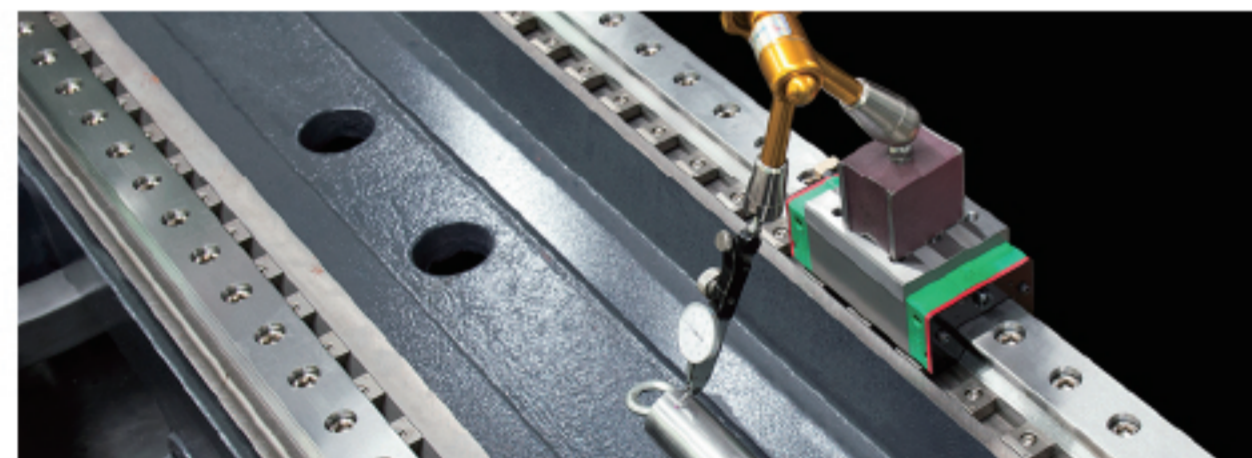
### High grade material casting iron

The machine body adopts high strength HT300 gray casting iron through more than six months of aging treatment after high temperature tempering, could remain a high rigidity and stability even a long time processing.



### Precision casting processing

All rail mounting surfaces through milling and grinding to ensure excellent precision and contact rates above 90%.



### Superb manual scraping

All joint surfaces of the machine body through manually scraped to ensure geometric accuracy and contact rigidity.



### Rigorous assembly crafts

Each part of the machine body need to be inspected; Each step during assembly need to be recorded, even the locking of each screw.



### Running and trial processing

Each machine has been run two days at least before leaving the factory, and through the trial processing.



## High precision detection set

### 1 Renishaw round tester detection

Inspect the circularity, reduce machine dynamic accuracy error, improve geometric accuracy.

### 2 England Renishaw laser interferometer

Verify machine positioning accuracy and repeat positioning accuracy.

### 3 Taiwan G-tech Fieldpaq II dynamic balancer

Dynamic balance vibration detection and correction for spindle driving.

### 4 Germany Carl Zeiss Contura-7106 three coordinates machine

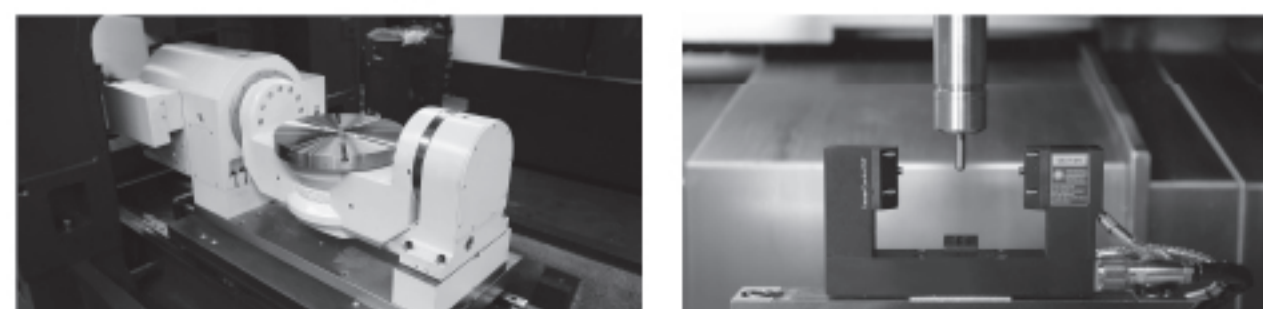
Verify the geometric precision and surface tolerance of precise parts.





## MECHANICAL CHARACTERISTICS

1. FC30 high intensity casting material and gantry type structure to ensure high precision and high dynamic performance.
2. Worm gear transmission for A axis, DDR direct drive for C axis, perfect combination in precision and rigidity.
3. HEIDENHAIN high precision full closed loop position control system.
4. SIEMENS 840D SL 5 axis controller system.
5. RTCP Function supported.



Spec.	Unit	BT-400A <sup>5</sup>	BT-650A <sup>5</sup>
X axis travel	mm	700+175 (tool change travel)	750
Y axis travel	mm	500	800
Z axis travel	mm	400	600
Rotary table Dia.	mm	φ400	φ650
Table load capacity in horizontal/tilting	kg	200/150	500/350
A axis angle range		+30 — -120°	+30 — -120°
C axis angle range		360°	360°
Spindle nose to table	mm	150-550	120-720
Max workpiece	mm	φ500*400	φ800*600
X/Y/Z axis rapid feed	m/min	24/24/24	36/36/36
Controller		SIEMENS 840D SL / HEIDENHAIN TNC 640 HSCI	
Spindle power	kw	15.5	15.5
Spindle speed	rpm	18000	18000
Tool magazine		HSK-A63-24T	HSK-A63-24T
Tool holder		HSK-A63	HSK-A63
Weight	kg	8000	12500

## MECHANICAL CHARACTERISTICS

1. The base of the machine tool and the gantry beam are made of Schneeburg mineral castings, which have excellent shock absorption and extremely low thermal sensitivity, and are the preferred material for ultra-precision machine tools.
2. Three-axis are driven by AC permanent magnet synchronous linear motors. There is no contact friction between the moving and the stator, so there is no wear, and there is error like backlash, pitch error, wear error, which is caused by screw / bearing.
3. Three-axis use a grating ruler for full closed-loop position detection, with high accuracy and fast response.
4. Three-axis rapid traverse 60m/min, acceleration 10m/S<sup>2</sup>.
5. The machine is fully enclosed with a protective cover, equipped with oil mist collector to recover and filter the processing oil mist, which is energy-saving and environmentally friendly, and provides a safe and friendly production environment for machine and operators.

**Screw driven VS Linear Motor driven**

Long transmission chain  
Lower path accuracy  
Backlash exists

Error: 5 μm

Direct transmission  
Fast transmission speed  
High path accuracy  
No backlash

Error: 0.4 μm

XYZ axis all adopt direct drive linear motor

1. High rapid feed, quick acceleration, fast deceleration.
2. No backlash, zero tolerance, permanent high precision.
3. Simple structure, low maintenance cost.
4. No ball screw/nut connector/rack/pinion, so zero wear out.





**DIRECT DRIVE BIG PLUS SPINDLE**

Direct drive 12000RPM and 15000RPM BBT40 spindle optional, and to meet various processing requirements, different spindle motors will be matched to the chosen spindle speed.

**CERAMIC BEARING**

The BBT40 spindle is supported by high-precision ceramic bearings to minimize noise, reduce vibration, and suppress heat growth, which will help improve machining accuracy and surface finish.



**MECHANICAL**

**CHARACTERISTICS**

1. Three axis 1G acceleration, rapid feed is 30m/min.
2. Three axis adopt high rigidity linear guideway, high speed, high precision.
3. Rear chip removal with the powerful chip flushing device, so there is no need to stop the machine to clean it.
4. Variable frequency tool magazine, angle sensing encoder, adjustable speed.



4/5 axis rotary table



Double layered box type base



Coolant through spindle

Standard accessories		Optional accessories	
Spindle oil coolant	Basic installation kits	15000rpm direct drive spindle	Chain type chip conveyor
Rear chip removal device	Oil water separator	18000/20000rpm built in electric spindle	Coolant through spindle
Working light	Pneumatic fixture interface	4th axis rotary table	BT40-24T/30T tool magazine

**BF** | 650V | 850V | 1160V | 1370V

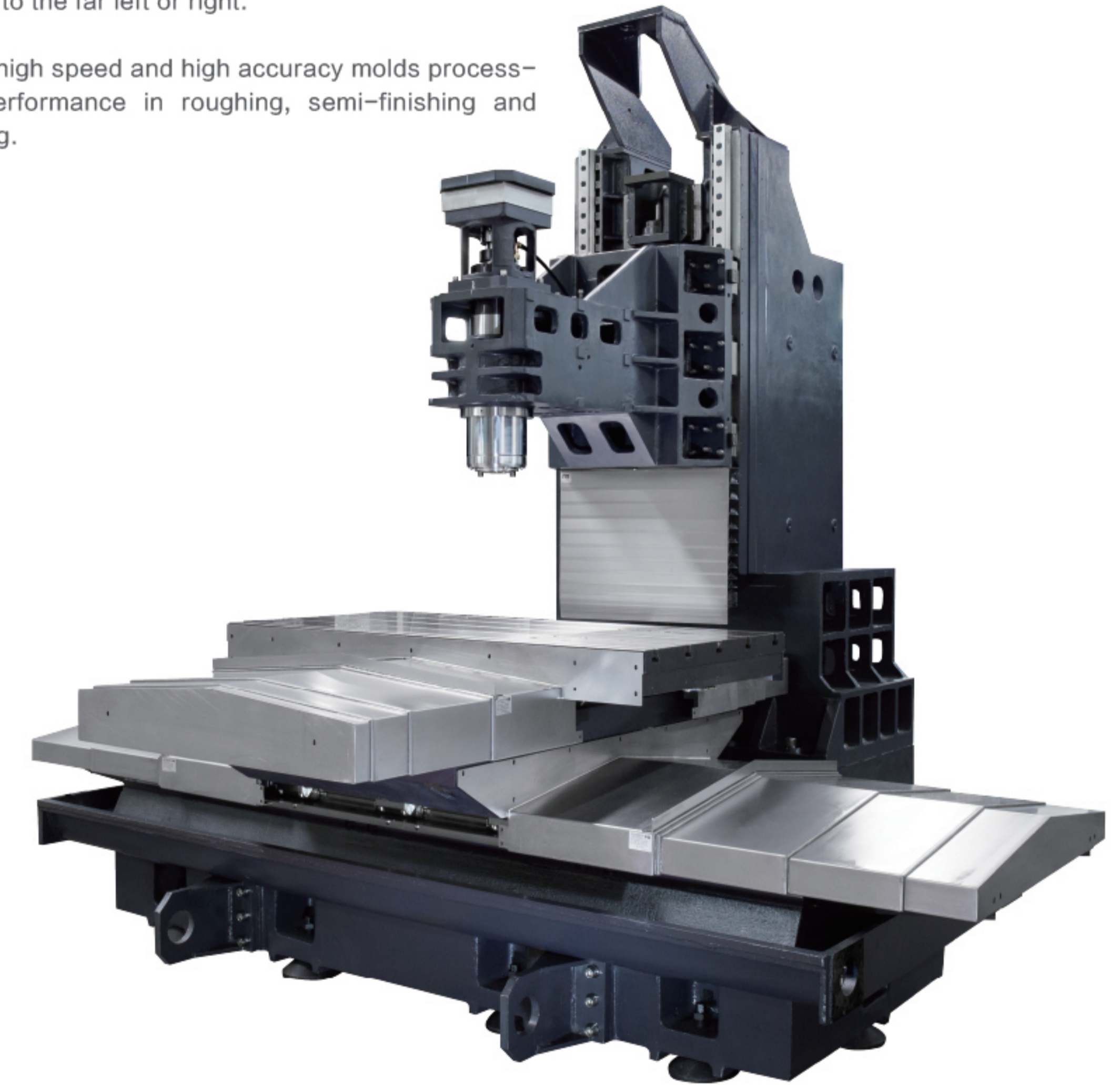




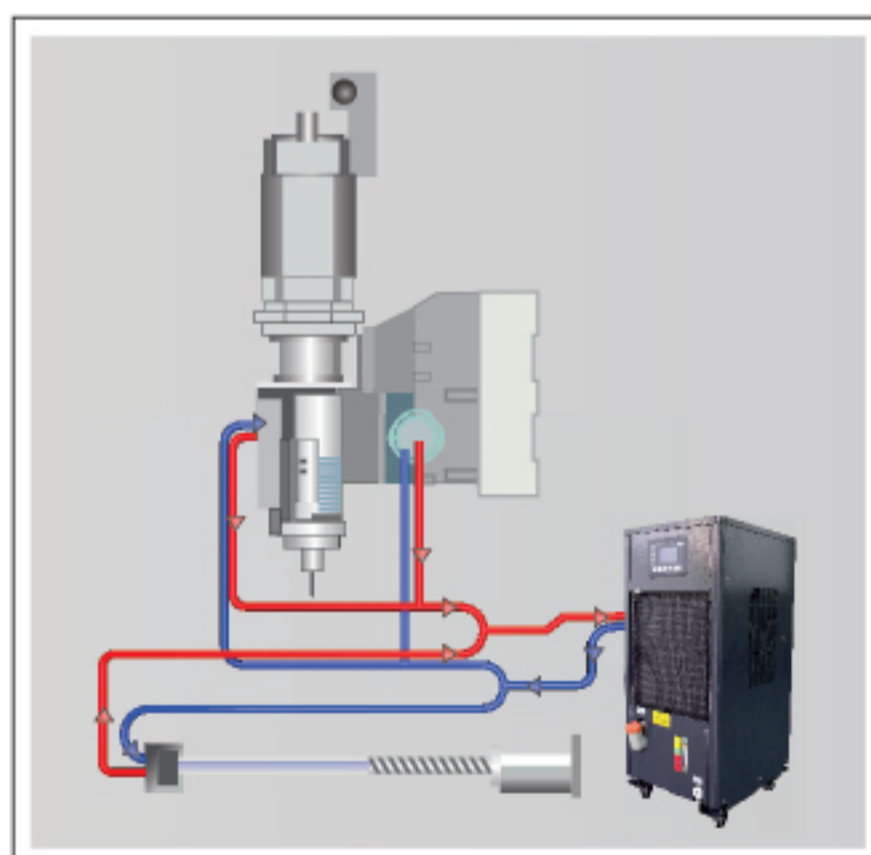
**Innovative machine body structure**

Fully-supported box-type base structure, Y axis is above to X axis, ensuring the table always maintains full support in whole machining range the X/Y axis, avoiding the overhang problem when table moving to the far left or right.

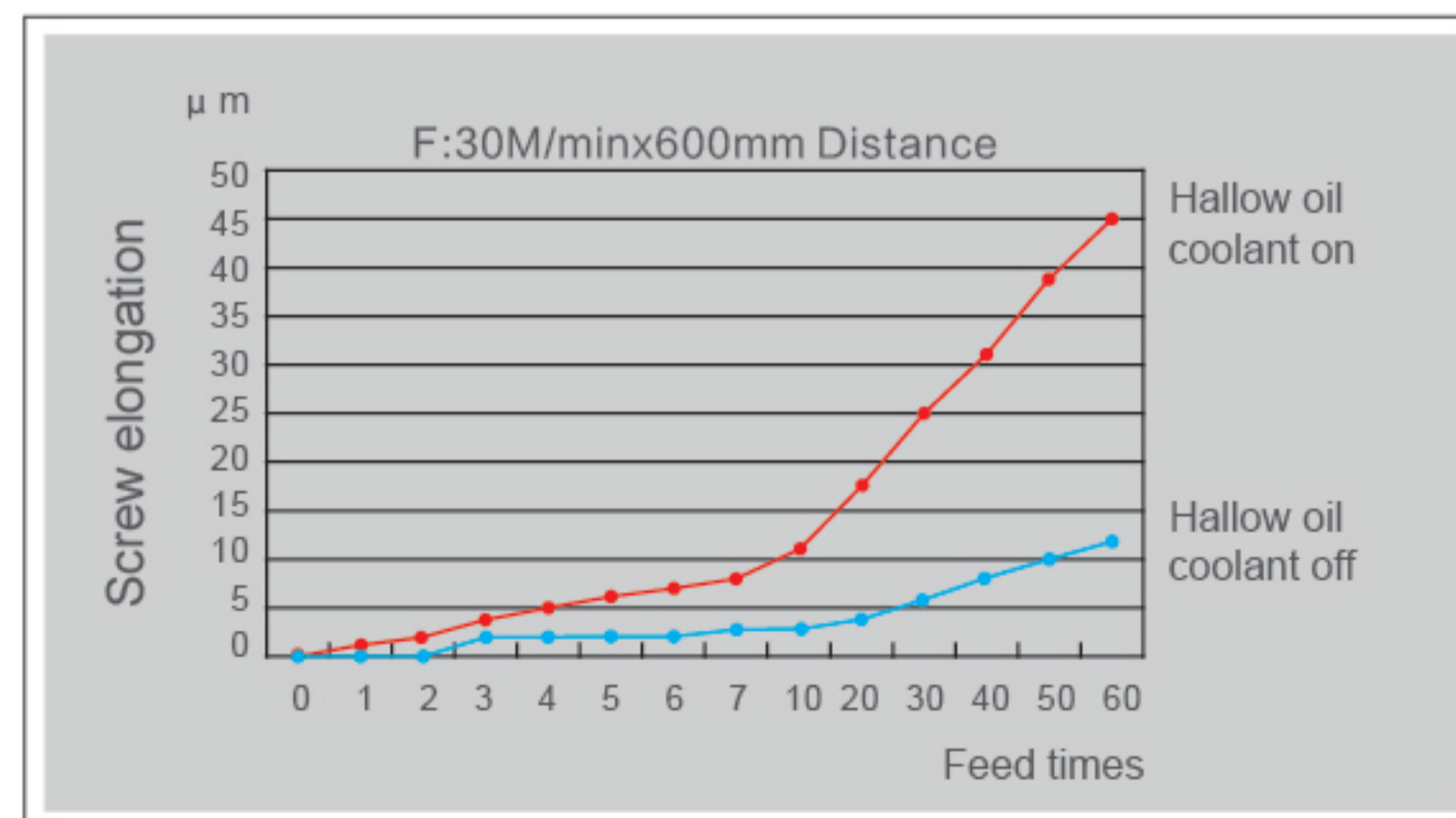
Special design for high speed and high accuracy molds processing, with great performance in roughing, semi-finishing and finishing processing.



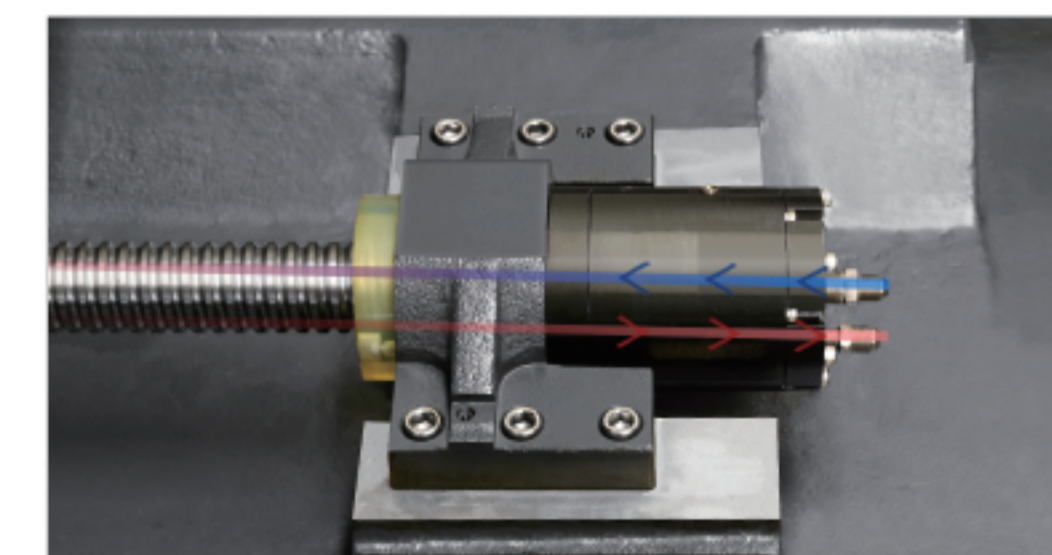
**Innovative design concept** Servo axis and spindle thermal temperature rise suppression system



Spindle and 3 axis screw cooling device



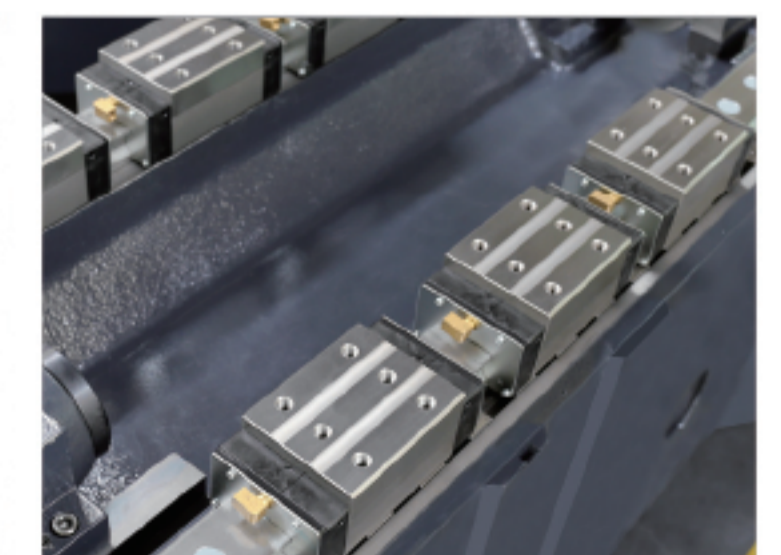
Positioning accuracy with screw cooling device VS Positioning accuracy without screw cooling device



Screw thermal expansion suppression system optional



Double layered box structure of column and base



X/Z axis roller linear guideway with 3 sliders

Standard accessories		Optional accessories	
Spindle oil coolant	Basic installation kits	15000rpm direct drive spindle	Hollow oil-cooling screw Grating ruler
Rear chip removal device	Oil water separator	18000/20000rpm built in electric spindle	Coolant through spindle
Working light	Pneumatic fixture interface	4th axis rotary table	BT40 24T/30T tool magazine

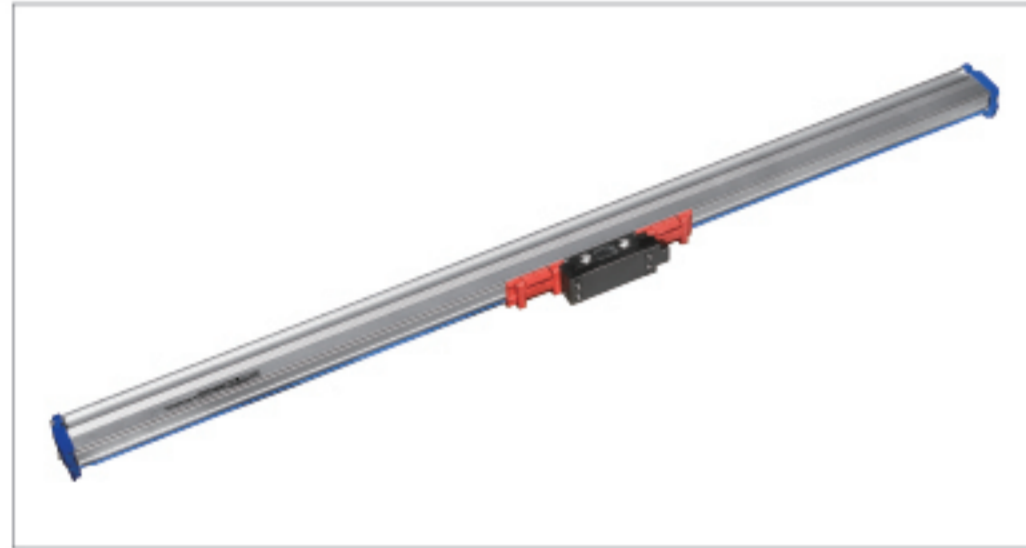
BF | 540VP | 855VP | 960VP | 1166VP | 1370VP



# MECHANICAL

## CHARACTERISTICS

1. Suitable for processing large automobiles, household appliances molds, and mold frames, with a maximum load capacity of 25000KGF.
2. XY axis adopts heavy-duty roller linear guide, Z axis square slide, roller linear guide is optional.
3. The large-span inverted L-shaped Y-axis guideway structure improves the rigidity of the Y-axis and the cutting rigidity of the spindle effectively.
4. One-piece casting structure column, improving the cutting rigidity and precision retention of the whole machine (gantry width less than 2000mm models)



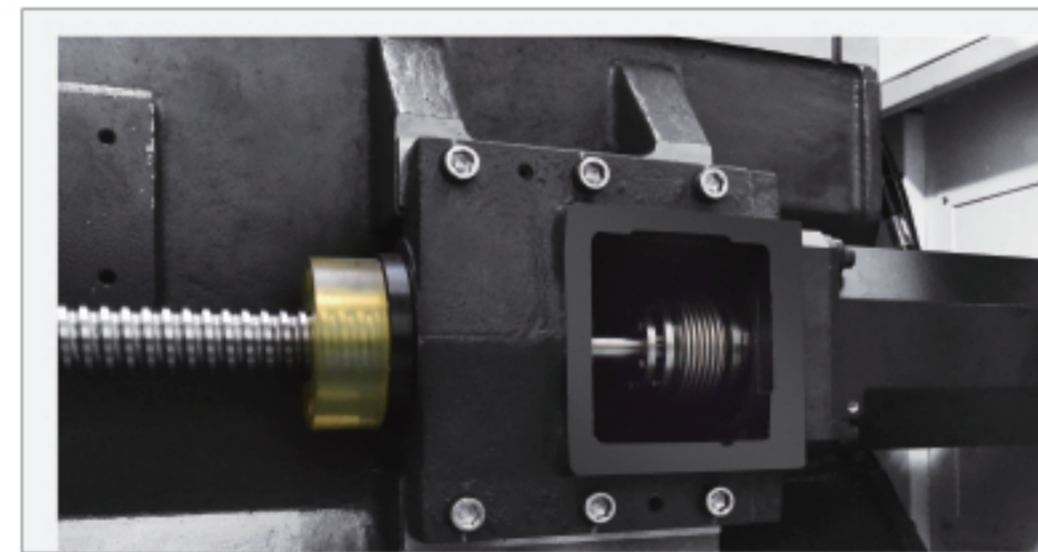
Three-axis optional grating ruler for full closed-loop position detection



BF Gear box



Two-speed gear head (spindle can be equipped with a two-speed gear head)



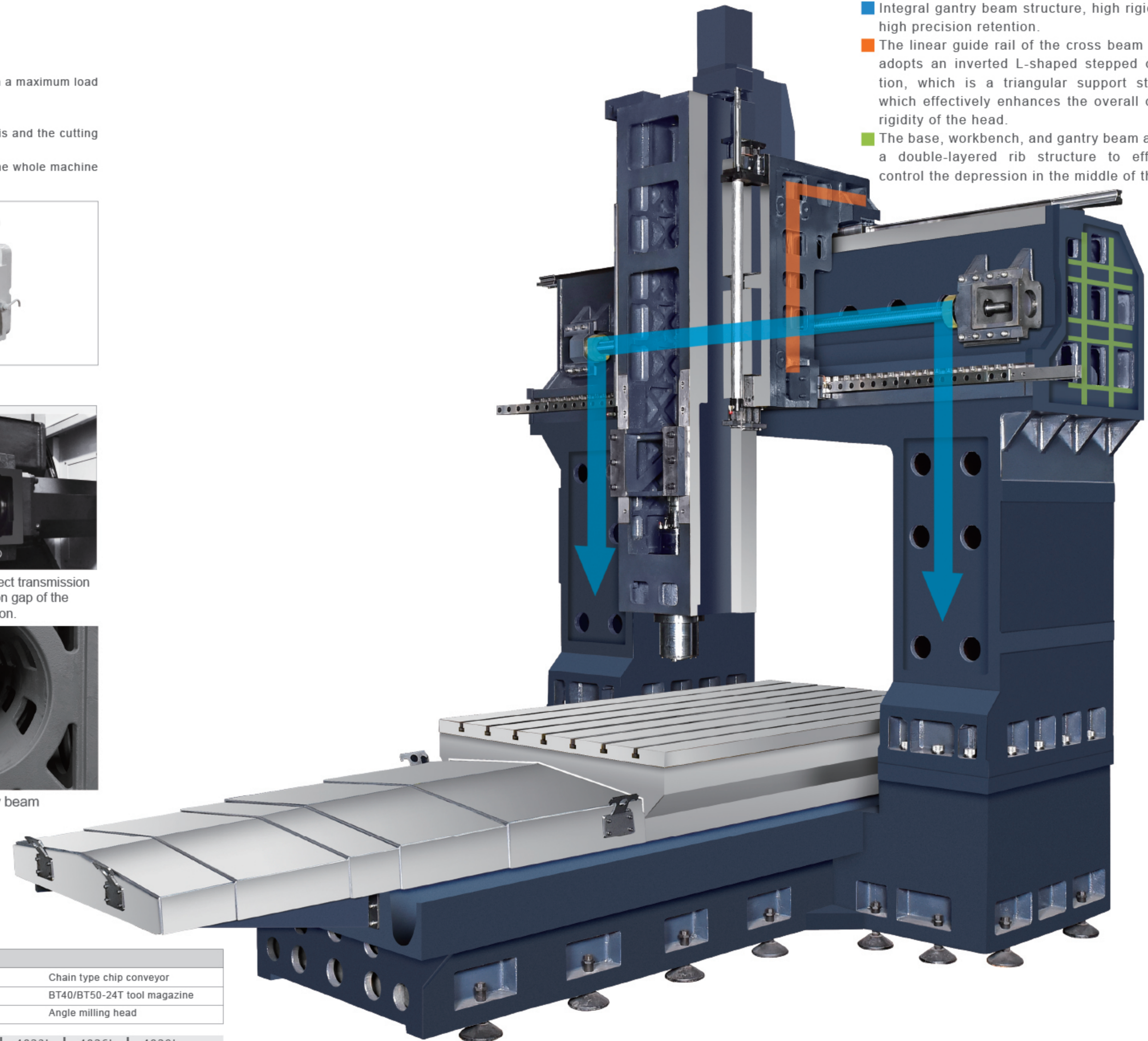
The three-axis servo motor has a direct transmission structure to avoid the transmission gap of the deceleration transmission.



Double-layered box structure



Crossed structure gantry beam



- Integral gantry beam structure, high rigidity and high precision retention.
- The linear guide rail of the cross beam (Y-axis) adopts an inverted L-shaped stepped distribution, which is a triangular support structure, which effectively enhances the overall dynamic rigidity of the head.
- The base, workbench, and gantry beam all adopt a double-layered rib structure to effectively control the depression in the middle of the beam.

Standard accessories		Optional accessories	
Spindle oil coolant	Basic installation kits	BF Gearbox	Chain type chip conveyor
Heat exchanger	Screw chip conveyor	Gear head 6000rpm	BT40/BT50-24T tool magazine
Working light		Temperature rise compensation system	Angle milling head

B F	1613V	2016V	2513V	2518V	2016L	2518L	3023L	3026L	4023L	4026L	4029L
	5026L	5029L	6026L	6029L	6032L	8032L					





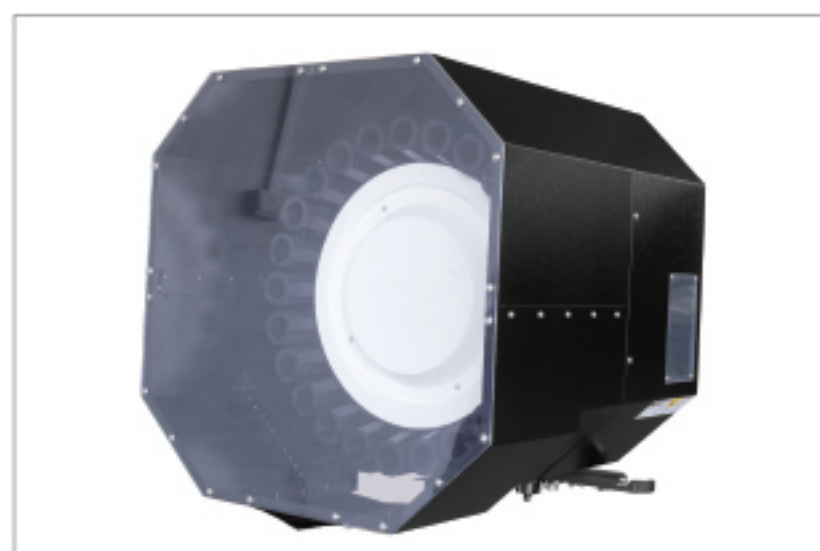
## MECHANICAL

### CHARACTERISTICS

1. X/Y axis linear guideway, Z-axis box way to ensure good precision and cutting rigidity.
2. Box type base and large span A type column to ensure good precision.
3. Double nut design precision ball screw, five ball bearings are used to lock the supporting seats at both ends and pre-tensioned to eliminate the thermal elongation error of the screw and ensure the thermal stability of the machine.
4. All lubrication systems adopt volumetric distribution valves to ensure uniform oil supply to all lubrication points, good mechanical lubrication, and longer service life.



4th axis rotary table



Arm type tool magazine



BF gear box

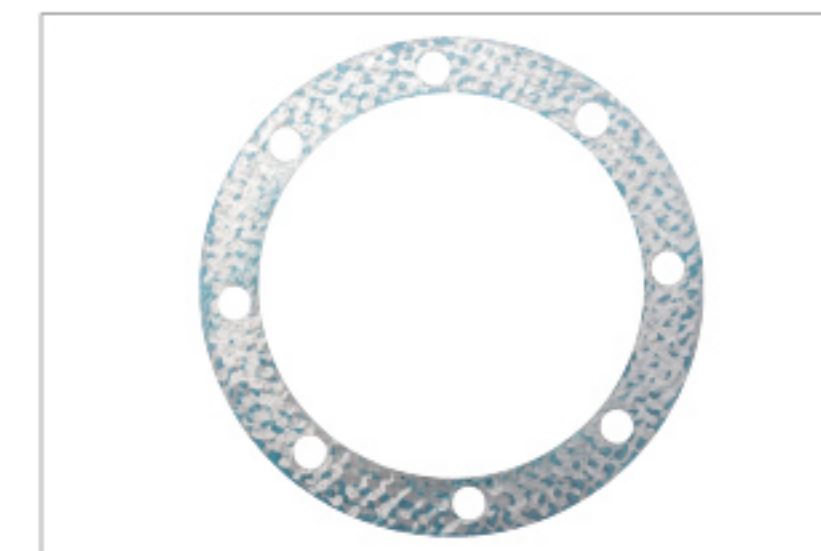
Standard accessories		Optional accessories	
Spindle oil coolant	Working light	Chain type chip conveyor	BF gear box( for BT50)
Heat exchanger		Screw type chip conveyor	
Basic standard kits		24T tool magazine	

**B K** | 850L | 1165L | 1375L | 1580L | 1890L | BF-1613L (double column machine center)

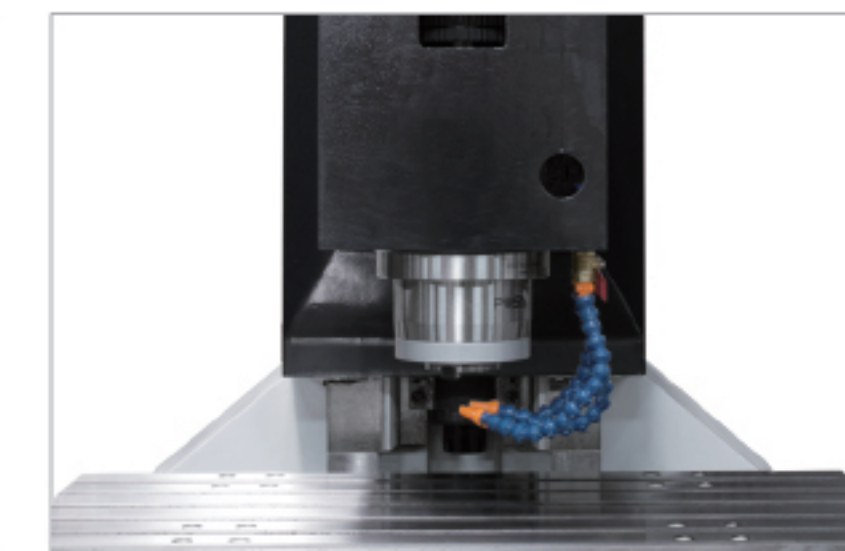
## MECHANICAL

### CHARACTERISTICS

1. High-grade Meehanite casting with high temperature tempering and aging treatment to eliminate internal stress and ensure long-term maintenance of mechanical accuracy.
2. The work table and the three-axis sliding guide have gone high-frequency heat treatment, the hardness is HRC50, and the wear resistance is excellent.
3. The sliding surface of the three-axis guide rail is pasted with Japanese Turcite-B wear-resistant film, which is finely scraped by professional technicians to achieve better anti-wear effect and smaller friction coefficient.



Precision scrapped



Machine head Strengthened ribs box type head, better stability

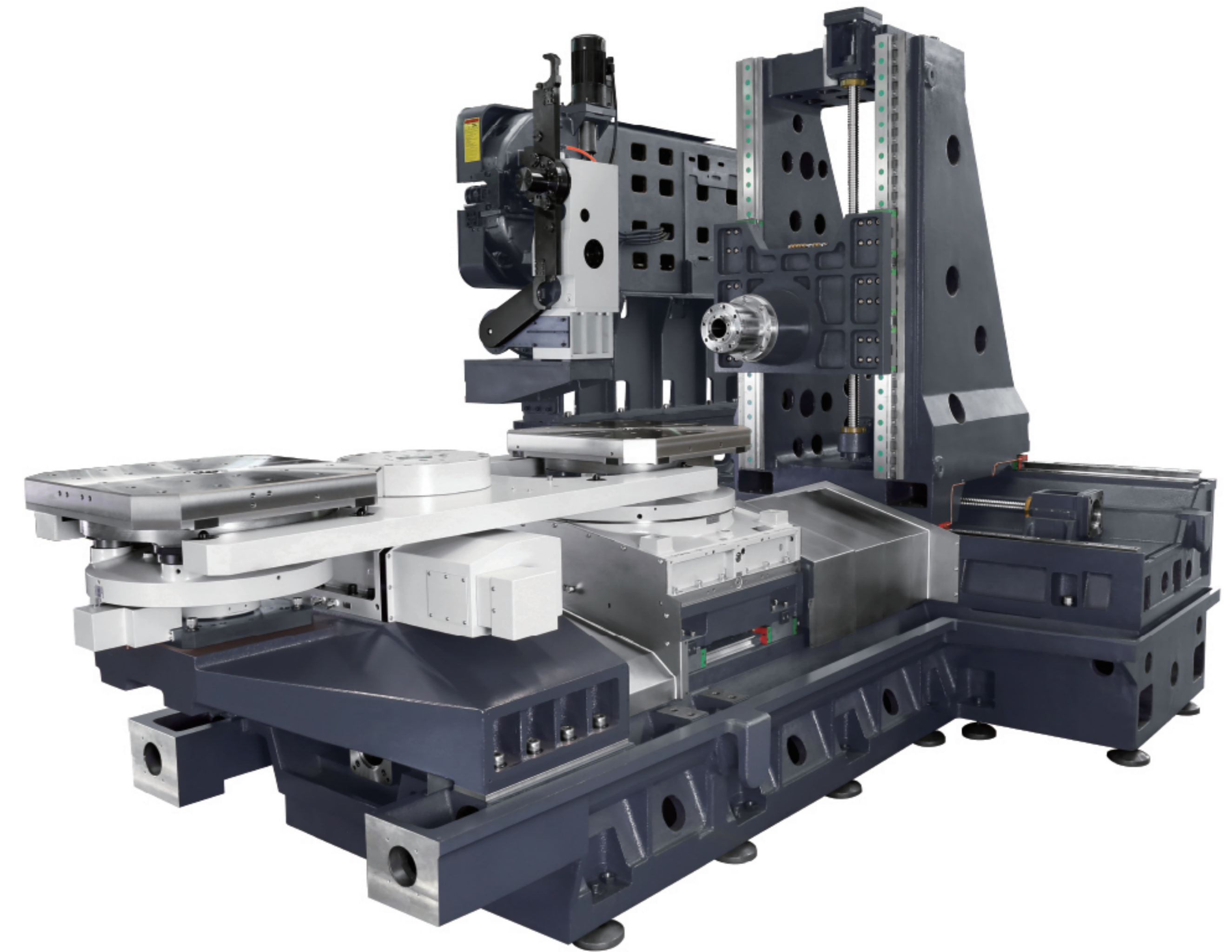
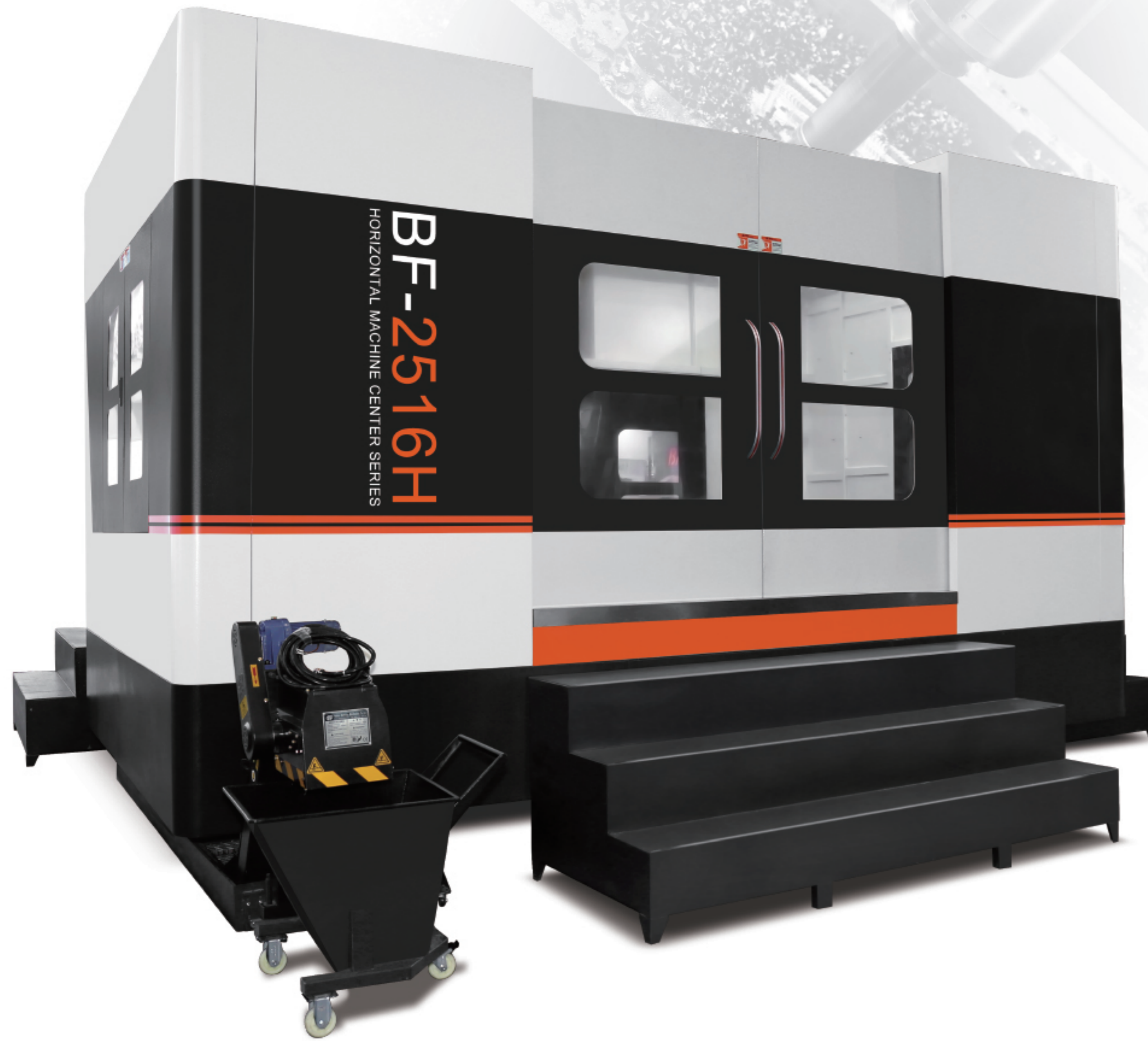


Column Large span A type structure column, better rigidity and stability

Standard accessories		Optional accessories	
Spindle oil coolant	Basic standard kits	Chain type chip conveyor	BF gear box( for BT50)
Heat exchanger	Working light	Screw type chip conveyor	
		24T tool magazine	

**B K** | 850B | 850C | 1165B | 1170B | 1580B | 1690B | 1890B

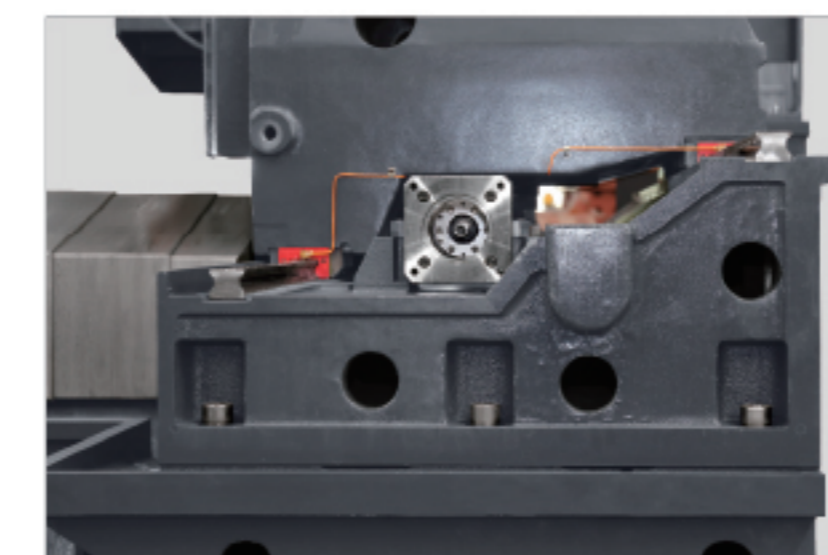




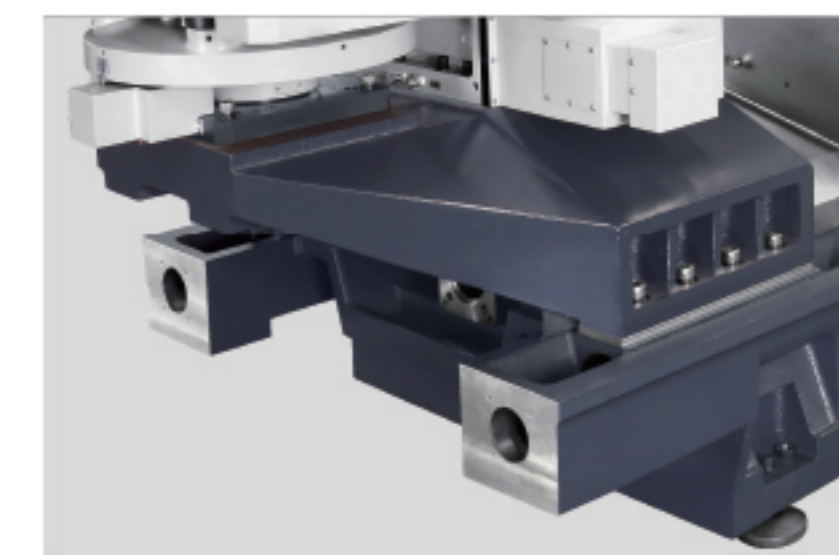
## MECHANICAL

### CHARACTERISTICS

1. T-type base, full support structure for each axis.
2. Large capacity tool magazine, strong processing adapt-ability.
3. Single and double exchange pallets are optional.
4. Automatic chip removal, reducing cleaning downtime.
5. Wide processing range, suitable for processing all kinds of mechanical parts.



The X-axis parallel rail adopts a stepped distribution to enhance the rigidity of the column when cutting in the Z-axis direction.



The base is supported by a large span to ensure the stability of the whole machine. The key components have passed finite element analysis to ensure the stability and rigidity of the machine.

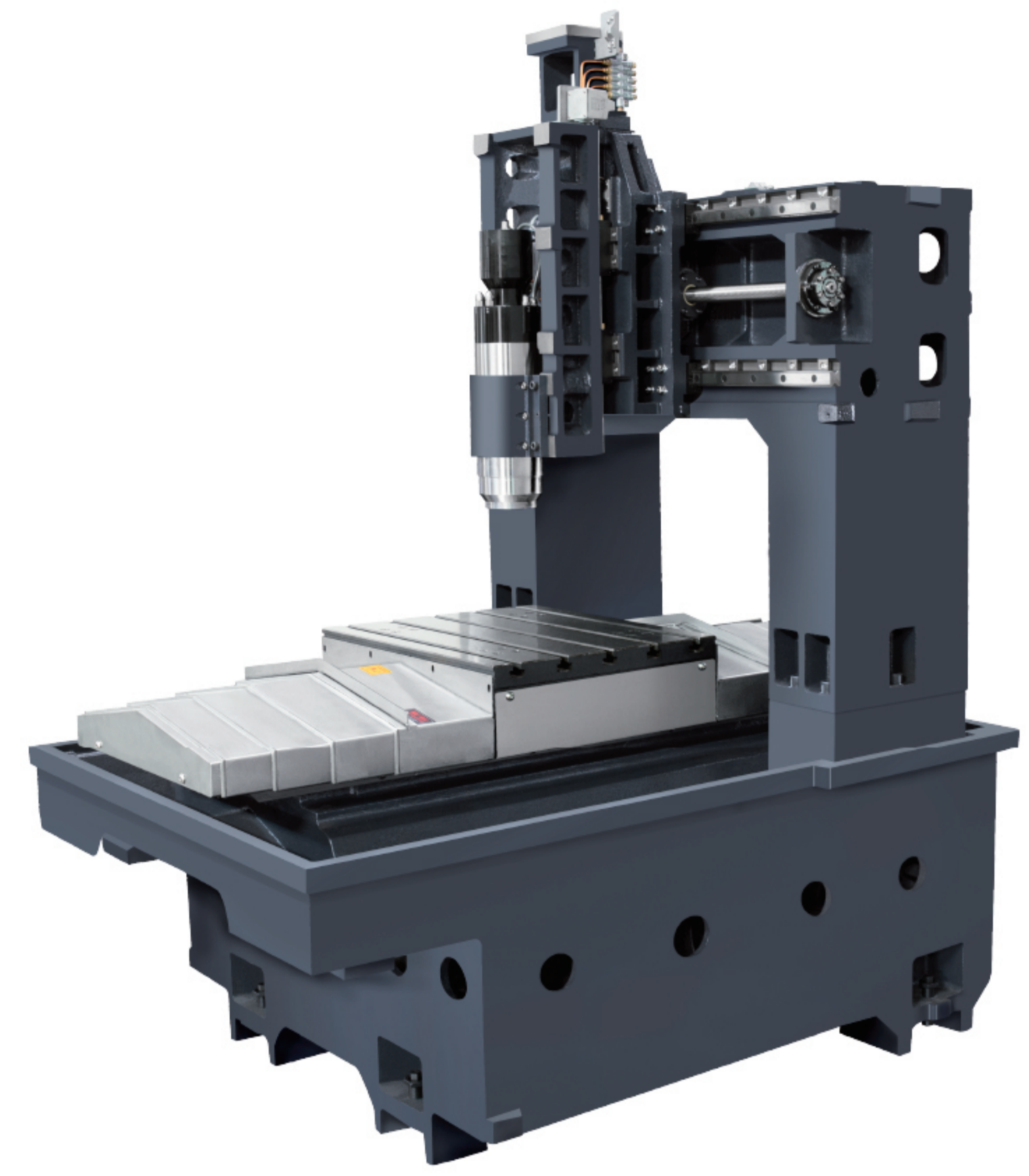


The column adopts a large triangular structure design, which makes the seismic performance better and the processing more stable.

BF | H50 | H63 | H80 | H100 | 2516H

Standard accessories	Optional accessories
Spindle oil coolant	BT50-24T tool magazine
Basic installation sets	Screw type chip conveyor
Working light	Chain type chip conveyor
	BF gear box
	BBT50-8000 rpm build in spindle





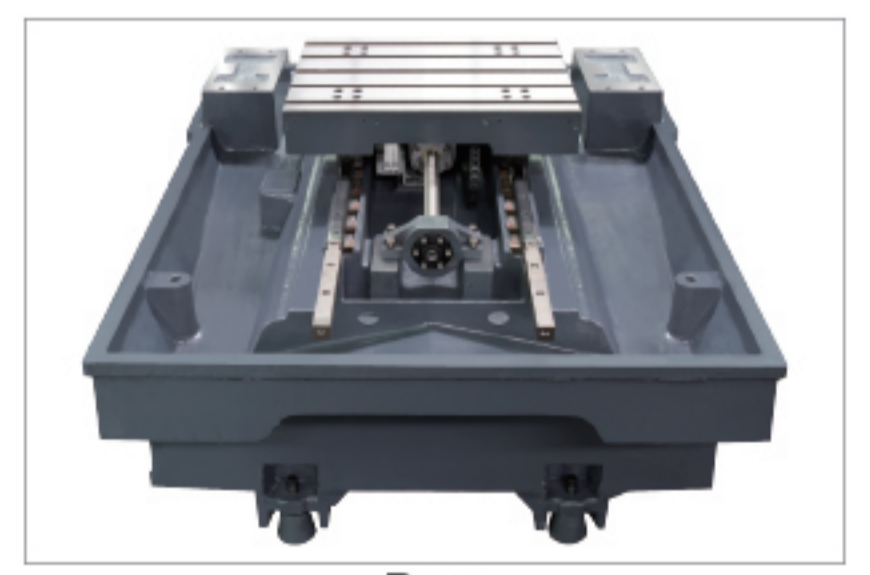
Spindle

High-speed and high-precision built-in electric spindle, spindle deflection is controlled within  $\pm 0.001\text{mm}$ .



Column

Integrated casting double-layer reinforced rib gantry structure to improve rigidity and anti-torque strength.



Base

Double-layer box base to ensure high stability and high rigidity.

## MECHANICAL CHARACTERISTICS

1. The machine has a compact appearance and a small floor space.
2. The machine tool structure is optimized through finite element analysis, with strong rigidity and stable structure.
3. The Z-axis moving parts adopt lightweight design, and the responsivity during processing is excellent.

BF | 650E | 870E | T600

Standard accessories	Optional accessories
Spindle oil coolant	BT30-24000 rpm built-in electric spindle
ER25/32-24000 rpm built-in electric spindle	BT30-12T tool magazine
Working light	





High speed high efficiency

Best choice for mass production

Spindle rotation speed	Rapid speed	Tool exchange time
20000rpm (or 24000rpm)	X: 48m/min	T-T: 2.0s
	Y: 48m/min	
	Z: 48m/min	



MECHANICAL

CHARACTERISTICS

1. Large A-shaped column, X/Y/Z fast-moving 48M/min, acceleration up to 1G.
2. Rigid tapping speed S4000, specification M16 (aluminum).
3. The back-flushing chip removal with a powerful chip removal device, no need to stop the machine for cleaning.
4. Improved clamping arm type tool exchange structure, (T-T) tool exchange time 2.0s.

BF | T6 | T800

High rigid machine structure

The machine body adopts high strength HT300 gray casting iron, which could remain a high rigidity and stability even a long time processing.

Standard accessories		Optional accessories	
BT30-21T tool magazine	Spindle oil coolant	4th axis rotary table	Pneumatic fixture interface
BT30-20000 rpm direct drive spindle	Oil water separator	Column heightening 100-200mm	
Rear chip removal device	Basic installation sets	BT30-24000 rpm direct drive spindle	





## MECHANICAL CHARACTERISTICS

1. High rigidity moving parts with a lightweight design, rapid feed 48M/min, acceleration up to 1G.
2. X/Y/Z axis are supported by linear rails to ensure fast speed and high precision.
3. The after-flushing chip removal method is combined with a powerful chip removal device, without stopping the machine for cleaning.
4. With pre-release clamping tool induction design to ensure quick tool change.

BF | V8 | V10 | V11 | V13 | 858V

### DIRECT DRIVE

The spindle motor directly drives the spindle through the coupling, which makes the spindle start or stop more sensitive, and achieves high-speed and high-precision effects when drilling and tapping.

### SHORT-NOSE SPINDLE

Short-nose design of direct-connection and high-speed spindle with excellent rigidity, increase efficiency and reduces abrasion of the tools.



Standard accessories		Optional accessories
Spindle oil coolant	Oil water separator	4th axis rotary table
After flushing device	BT40-24T tool magazine	Chain type chip conveyor
Working light		

SPECIFICATION	Unit	BF-V8	BF-V10	BF-V11	BF-V13	BF-858V
X/Y/Z axis travel	mm	800x550x500	1000x600x600	1150x650x600	1300x700x700	800x500x800
Table size	mm	900x500	1100x600	1200x600	1400x650	900x500
T-slot	mm	5-18x100	5-18x100	5-18x100	5-18x125	5-18x100
Max load on table	kg	600	700	800	700	600
Spindle center to column	mm	570	655	658	770	520
Spindle nose to table	mm	130-680	150-750	130-780	120-820	130-930
X/Y/Z axis motor	KW	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0	2.0/2.0/3.0
X/Y/Z rapid feed	m/min	48/48/48	36/36/36	36/36/36	30/30/30	48/48/48
Controller		MITSUBISHI:M80 / FANUC:Oi-MF PLUS/ SIEMENS 828D				
Spindle type		Direct drive BBT40	Direct drive BBT40	Direct drive BBT40	Direct drive BBT40	Direct drive BBT40
Spindle speed	rpm	12000	12000	12000	12000	12000
Spindle motor	KW	7.5/15	11	11	11	11
Positioning accuracy	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Repeated positioning	mm	±0.002/300	±0.002/300	±0.002/300	±0.002/300	±0.002/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	2600x2750x3030	2800x3200x3290	3200x2810x3290	3500x3600x3100	2600x2800x3300
Weight	kg	5100	6000	7000	7500	6000



**V** series linear way machining center

SPECIFICATION	Unit	BF-650V	BF-850V	BF-1160V	BF-1370V
X/Y/Z axis travel	mm	650x500x500	800x500x500	1150x650x650	1300x700x700
Table size	mm	720x450	900x500	1200x600	1450x700
T-slot	mm	5-18x90	5-18x100	5-18x100	5-18x152
Max load on table	kg	400	600	800	1500
Spindle center to column	mm	480	520	650	755
Spindle nose to table	mm	150-600	140-640	130-780	155-855
X/Y/Z axis motor	KW	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0
X/Y/Z rapid feed	m/min	30/30/30	30/30/30	30/30/30	30/30/30
Controller		MITSUBISHI:M80/FANUC:Oi-MF PLUS/SIEMENS 828D			
Spindle type		Direct drive BBT40-Φ120	Direct drive BBT40-Φ140	Direct drive BT40-Φ150	Direct drive BBT40-Φ150
Spindle speed	rpm	12000	12000	12000	12000
Spindle motor	KW	7.5/11	11/15	11/15	11/15
Positioning accuracy	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Repeated positioning	mm	±0.002/300	±0.002/300	±0.002/300	±0.002/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	2200x2780x2730	2600x2750x2900	3200x2810x3290	3300x3200x3140
Weight	kg	4500	5500	7000	10500

SPECIFICATION	Unit	BF-540VP	BF-850VP	BF-960VP	BF-1166VP	BF-1370VP
X/Y/Z axis travel	mm	500x400x220	800x550x550	900x600x400	1150x660x600	1300x700x700
Table size	mm	500x400	900x500	1000x600	1300x650	1450x700
T-slot	mm	6-18x100	5-18x100	6-18x100	5-18x100	5-18x152
Max load on table	kg	150	600	800	1100	1500
Spindle center to column	mm	162	520	490	710	755
Spindle nose to table	mm	130-350	140-640	150-550	120-720	155-855
X/Y/Z axis motor	KW	Linear Motor	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0	4.5/4.5/4.5
X/Y/Z rapid feed	m/min	60/60/60	30/30/30	20/20/20	30/30/30	30/30/30
Controller		MITSUBISHI:M80/FANUC:Oi-MF PLUS/SIEMENS 828D				
Spindle type		Built-in HSKE40-Φ120	Direct drive BBT40-φ140	Built-in HSKA63-Φ200	Direct drive BBT40-Φ150	Direct drive BBT40-Φ150
Spindle speed	rpm	30000	15000	18000	12000	12000
Spindle motor	KW	11	11/15	15.5	11/15	11/15
Positioning accuracy	mm	±0.002/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Repeated positioning	mm	±0.002/300	±0.002/300	±0.002/300	±0.002/300	±0.002/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	2000x2120x2047	2600x2750x2900	2950x2800x3000	3330x3300x3200	3300x3200x3140
Weight	kg	4000	5500	8000	8000	10500

**L** series linear way machining center

SPECIFICATION	Unit	BK-850L	BK-1165L	BK-1170L	BK-1370L
X/Y/Z axis travel	mm	800x500x500	1100x650x650	1100x700x700	1300x700x690
Table size	mm	1000x500	1300x650	1300x700	1500x700
T-slot	mm	5-18x90	5-18x120	5-18x125	5-18x152
Max load on table	kg	550	1000	1000	1500
Spindle center to column	mm	520	650	680	775
Spindle nose to table	mm	160-660	110-810	110-810	190-880
X/Y/Z axis motor	KW	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0
X/Y/Z rapid feed	m/min	30/30/18	30/30/18	30/30/18	24/24/18
Controller		MITSUBISHI:M80/FANUC:Oi-MF PLUS/SIEMENS 828D			
Spindle type		Belt drive BT40	Belt drive BT40	Belt drive BT40	Belt drive BT50
Spindle speed	rpm	8000	8000	8000	8000
Spindle motor	KW	11	11/15	11/15	11/15
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	2760x2900x2800	3560x2760x3300	3560x2760x3300	3760x2915x2700
Weight	kg	5000	7000	8000	9000

SPECIFICATION	Unit	BK-1375L	BK-1580L	BK-1690L	BK-1890L
X/Y/Z axis travel	mm	1300x750x700	1500x800x700	1600x900x700	1800x900x700
Table size	mm	1450x700	1700x800	1800x900	2000x900
T-slot	mm	5-18x152	5-22x140	5-22x165	5-22x165
Max load on table	kg	1200	1500	1600	1800
Spindle center to column	mm	810	820	950	950
Spindle nose to table	mm	160-860	120-820	160-860	160-860
X/Y/Z axis motor	KW	3.0/3.0/3.0	4.5/4.5/4.5	4.5/4.5/4.5	4.5/7.0/4.5
X/Y/Z rapid feed	m/min	18/18/15	18/18/15	18/18/15	18/18/15
Controller		MITSUBISHI:M80/FANUC:Oi-MF PLUS/SIEMENS 828D			
Spindle type		Belt drive BT50	Belt drive BT50	Belt drive BT50	Belt drive BT50
Spindle speed	rpm	8000	8000	8000	8000
Spindle motor	KW	11/15	15/18.5	15/18.5	15/18.5
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	3700x3700x2950	4400x3900x3500	4510x3360x2900	5000x4100x3800
Weight	kg	9000	11000	13500	14000



## Double column machining center

SPECIFICATION	Unit	BF-1613V	BF-2016V	BF-2513V	BF-2518V	BF-2016L	BF-2518L
X/Y/Z axis travel	mm	1600x1400x600	2000x1600x800	2400x1400x600	2600x1800x900	2200x1600x800	2600x1800x900
Table size	mm	1650x1100	2200x1300	2500x1100	2700x1400	2200x1300	2700x1400
T-slot	mm	7-18x150	7-22x190	7-18x150	7-22x180	6-22x190	7-22x180
Max load on table	1000kg	3	5	4	8	5	8
Gantry width	mm	1430	1630	1430	1750	1630	1750
Spindle nose to table	mm	180-780	200-1020	180-780	250-1150	250-1050	200-1100
X/Y/Z axis motor	KW	3.0/3.0/3.0	7.0/4.5/4.5	4.5/4.5/4.5	7.0/7.0/7.0	7.0/4.5/4.5	6.0/3.0/3.0
X/Y/Z rapid feed	m/min	20/20/20	15/15/15	15/15/12	15/15/12	15/15/12	15/15/12
Controller		Mitsubishi M80/Fanuc Oi-MF PLUS/Siemens 828D					
Spindle type		BBT40-45°	BBT50-45°	BBT40-45°	BBT50-45°	BT50-45°	BT50-45°
Spindle speed	rpm	12000	10000	12000	6000	6000	6000
Spindle motor	KW	11/15	15/18.5	11/15	22/26	22/26	15/18.5
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	5100x3500x4000	7060x4150x4260	6900x4000x4000	7500x5000x4600	6400x4800x4200	7800x4800x4600
Weight	kg	13000	18000	17000	28000	21000	28000

SPECIFICATION	Unit	BF-5029L	BF-6026L	BF-6029L	BF-6032L	BF-8032L
X/Y/Z axis travel	mm	5200x3300x1000	6200x2600x1000	6200x3300x1000	6200x3600x1250	8200x3600x1250
Table size	mm	5000x2400	6000x2200	6000x2400	6000x2600	8000x2600
T-slot	mm	12-26x200	11-26x200	12-26x200	13-26x200	13-26x200
Max load on table	1000kg	28	28	30	32	35
Gantry width	mm	2900	2650	2900	3200	3200
Spindle nose to table	mm	280-1280	280-1280	280-1280	350-1600	350-1600
X/Y/Z axis motor	KW	9.0/9.0/9.0	9.0/9.0/9.0	9.0/9.0/9.0	9.0/9.0/9.0	9.0/7.0/7.0
X/Y/Z rapid feed	m/min	12/12/12	12/12/12	12/12/12	10/10/10	10/10/10
Controller		Mitsubishi M80/Fanuc Oi-MF PLUS/Siemens 828D				
Spindle type		BT50-45°	BT50-45°	BT50-45°	BT50-45°	BT50-45°
Spindle speed	rpm	6000	6000	6000	6000	6000
Spindle motor	KW	22/26	22/26	22/26	22/26	22/26
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	11000x6000x5000	16000x5300x5000	16000x6000x5000	16000x7000x6000	18000x7000x6000
Weight	kg	57000	60000	65000	72000	82000

## Horizontal machine center

SPECIFICATION	Unit	BF-3023L	BF-3026L	BF-4023L	BF-4026L	BF-4029L	BF-5026L
X/Y/Z axis travel	mm	3200x2300x1000	3200x2600x1000	4200x2300x1000	4200x2600x1000	4200x3300x1000	5200x2600x1000
Table size	mm	3000x1800	3000x2200	4000x1800	4000x2200	4000x2400	5000x2200
T-slot	mm	10-22x180	11-26x200	10-22x180	11-26x200	12-26x200	10-22x200
Max load on table	1000kg	12	16	16	22	24	24
Gantry width	mm	2350	2650	2350	2650	2900	2650
Spindle nose to table	mm	280-1280	280-1280	280-1280	280-1280	280-1280	280-1280
X/Y/Z axis motor	KW	7.0/7.0/7.0	7.0/7.0/7.0	7.0/7.0/7.0	7.0/7.0/7.0	7.0/7.0/7.0	9.0/9.0/9.0
X/Y/Z rapid feed	m/min	12/12/12	12/12/12	12/12/12	12/12/12	12/12/12	12/12/12
Controller		Mitsubishi M80/Fanuc Oi-MF PLUS/Siemens 828D					
Spindle type		BT50-45°	BT50-45°	BT50-45°	BT50-45°	BT50-45°	BT50-45°
Spindle speed	rpm	6000	6000	6000	6000	6000	6000
Spindle motor	KW	22/26	22/26	22/26	22/26	22/26	22/26
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	8500x5000x4800	8500x5300x5000	11000x5000x4800	11000x5300x5000	11000x6000x5000	14000x5300x5000
Weight	kg	30000	35000	36000	42000	48000	52000

SPECIFICATION	Unit	BF-H50	BF-H63	BF-H80	BF-H100	BF-2516H
X/Y/Z axis travel	mm	900x750x600	1050x900x850	1800x1500x1000	2500x1600x1400	2600x1600x1400
Table size	mm	500x500	630x630	800x800	1000x1000	1000x1000
T-slot	mm	5-18x100	5-18x152.5	7-22x100	9-22x100	9-22x100
Max load on table	kg	600	1200	2000	4000	6000
Max turning diameter/height of workpiece	mm	Φ800*750	Φ1000*1000	Φ2000*1400	Φ2500*1600	Φ2500*1600
Spindle center to table	mm	30-780	80-980	0-1400	200-1800	125-1725
Spindle nose to table	mm	130-730	275-1125	180-1180	250-1650	250-1550
X/Y/Z axis motor	KW	3.0/3.0/3.0/2.0	7.0/4.5/4.5/3.0	3.0/3.0/3.0/3.0	6.0/7.0/7.0/4.0	7.0/7.0/7.0
A-axis rotation speed	rpm	10	10	10	10	Optional
X/Y/Z rapid feed	m/min	36/36/36	24/24/24	12/12/12	12/12/12	12/12/12
Controller		MITSUBISHI:M80A/M80B/FANUC:Oi-MF PLUS/SIEMENS 828D				
Spindle type		BT40	BT50	BT50	BT50	BT50
Spindle speed	rpm	12000	8000	6000	6000	6000
Spindle motor	KW	11/15	22/26	22/26	22/26	22/26
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	2800x2800x2600	3700x3200x3500	3700x3100x3100	7300x5000x4800	7500x5500x4400
Weight	kg	7000	11000	18000	28000	26000



## B series Box way machining center

SPECIFICATION	Unit	BK-850B	BK-850C	BK-1165B	BK-1170B
X/Y/Z axis travel	mm	800x500x500	800x500x700	1100x650x700	1100x700x700
Table size	mm	1050x500	1000x530	1300x600	1300x650
T-slot	mm	5-18x90	5-18x100	5-18x100	5-18x120
Max load on table	kg	800	1000	800	1300
Spindle center to column	mm	510	575	675	735
Spindle nose to table	mm	130-630	110-810	120-820	110-810
X/Y/Z axis motor	KW	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0	3.0/3.0/3.0
X/Y/Z rapid feed	m/min	15/15/12	15/15/12	24/24/18	15/15/12
Controller		Mitsubishi M80/Fanuc 0i-MF PLUS/Siemens 828D			
Spindle type		Belt drive BT40	Belt drive BT40	Belt drive BT40	Belt drive BT40
Spindle speed	rpm	8000	8000	8000	8000
Spindle motor	KW	11	11	11/15	11/15
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	2600x2250x2800	2800x2400x2800	3300x2695x3240	3500x3600x3100
Weight	kg	5000	6000	8000	9000

SPECIFICATION	Unit	BK-1370B	BK-1580B	BK-1690B	BK-1890B
X/Y/Z axis travel	mm	1300x700x700	1500x800x700	1600x900x700	1800x900x700
Table size	mm	1450x700	1700x800	1800x900	2000x900
T-slot	mm	5-18x152	5-22x135	5-22x165	5-22x165
Max load on table	kg	1500	1800	2000	2200
Spindle center to column	mm	768	810	950	950
Spindle nose to table	mm	115-815	160-860	160-860	160-860
X/Y/Z axis motor	KW	3.0/3.0/3.0	4.5/4.5/4.5	4.5/7.0/4.5	4.5/7.0/4.5
X/Y/Z rapid feed	m/min	18/18/15	15/15/12	15/15/12	15/15/12
Controller		Mitsubishi M80/Fanuc 0i-MF PLUS/Siemens 828D			
Spindle type		Belt drive BT50	Belt drive BT50	Belt drive BT50	Belt drive BT50
Spindle speed	rpm	8000	8000	8000	8000
Spindle motor	KW	11/15	15/18.5	22/26	22/26
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.005/300	±0.005/300
Repeated positioning	mm	±0.003/300	±0.003/300	±0.003/300	±0.003/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar	6~7bar	6~7bar
Dimension	mm	3900x3220x3140	4300x3800x3350	4510x3380x2900	5000x4100x3800
Weight	kg	11000	11000	13500	14000

## T series drilling and tapping center

SPECIFICATION	Unit	BF-T6	BF-T800
X/Y/Z axis travel	mm	600x400x300	800x420x300
Table size	mm	700x420	900x420
T-slot	mm	3-14x135	3-14x135
Max load on table	kg	400	400
Spindle center to column	mm	420	456
Spindle nose to table	mm	150-460	125-425
X/Y/Z axis motor	KW	1.5/1.5/3.0	2.5/2.5/2.7
X/Y/Z rapid feed	m/min	48/48/48	48/48/48
Controller		MITSUBISHI:M80/FANUC:0I-MF PLUS/SIEMENS 828D	
Spindle type		BT30	BT30
Spindle speed	rpm	20000	20000
Spindle motor	KW	5.5/7.5	5.5-20000
Positioning accuracy	mm	±0.003/300	±0.003/300
Repeated positioning	mm	±0.002/300	±0.002/300
Air pressure	kg/cm <sup>2</sup>	6~7bar	6~7bar
Dimension	mm	1800x2500x2400	2100x2500x2400
Weight	kg	3700	3900

## E M series engraving and milling machine center

SPECIFICATION	Unit	BF-650E	BF-870E	BF-T600
X/Y/Z axis travel	mm	600x500x250	800x700x350	600x400x300
Table size	mm	600x500	800x600	700x420
T-slot	mm	5-16x100	5-16x100	3-14x135
Max load on table	kg	400	500	420
Spindle center to column		Syntec 21MA/ Mitsubishi E80		Mitsubishi M80
Spindle nose to table	mm	70-330	40-380	150-480
X/Y/Z axis motor	KW	0.85/0.85/0.85	1.3/1.3/1.3	1.5/1.5/3.0
X/Y/Z rapid feed	m/min	12/12/12	12/12/12	24/24/24
X/Y/Z Cutting feed	m/min	8/8/8	8/8/8	10/10/10
Spindle type		ER25/ER32	ER25/ER32	BT30
Spindle speed	rpm	24000rpm (Standard) 18000/30000 rpm(optional)		20000
Spindle motor	KW	7.5	7.5	3.7/5.5
Positioning accuracy	mm	±0.005/300	±0.005/300	±0.003/300
Repeated positioning	mm	±0.003/300	±0.005/300	±0.002/300
Air pressure	kg/cm <sup>2</sup>	6	6	6~7bar
Dimension	mm	1850x2000x2330	2440x1930x2400	1900x2500x2400
Weight	kg	3500	4000	3700