

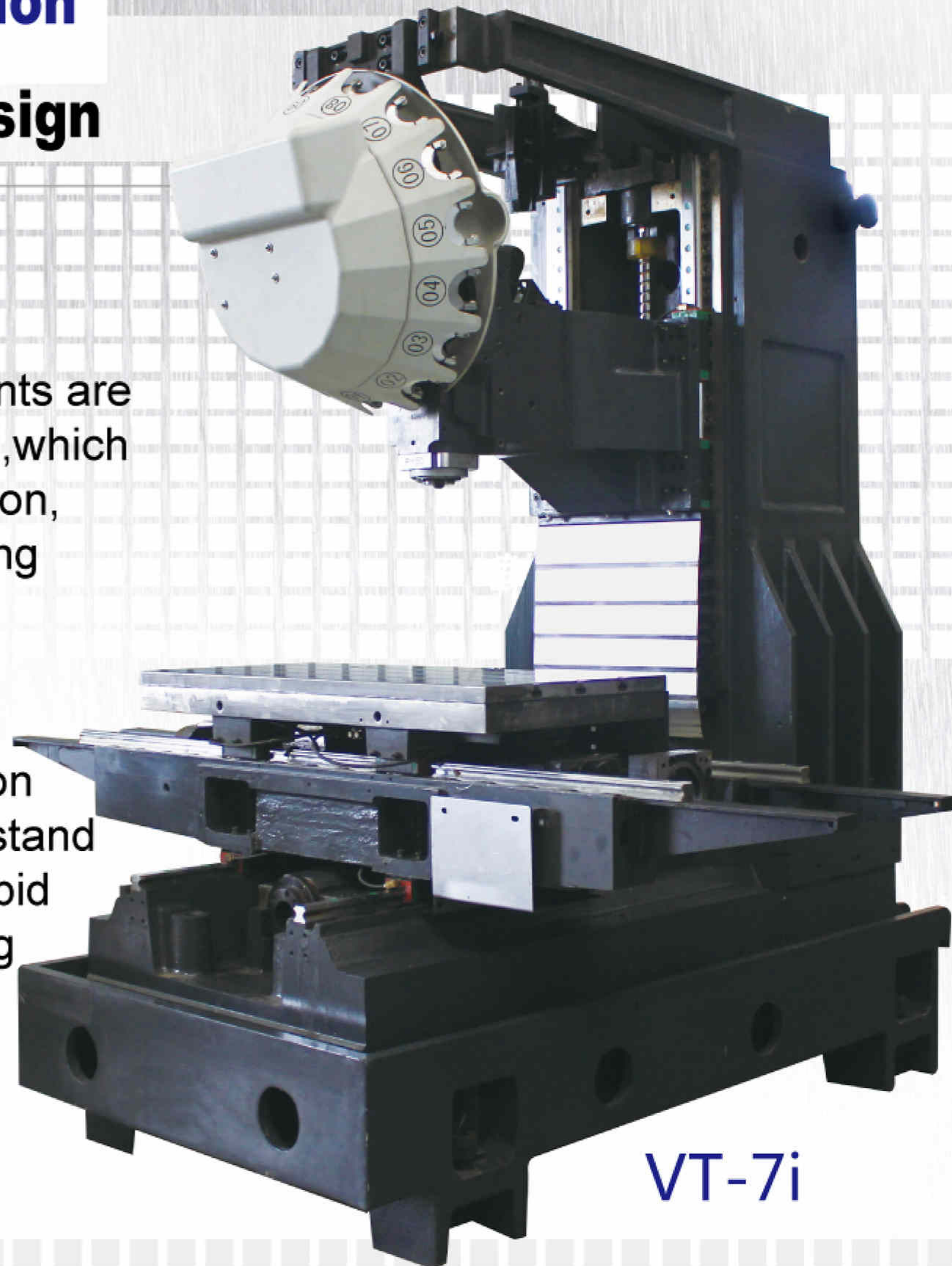
# CNC TAPPING CENTER VT-7i



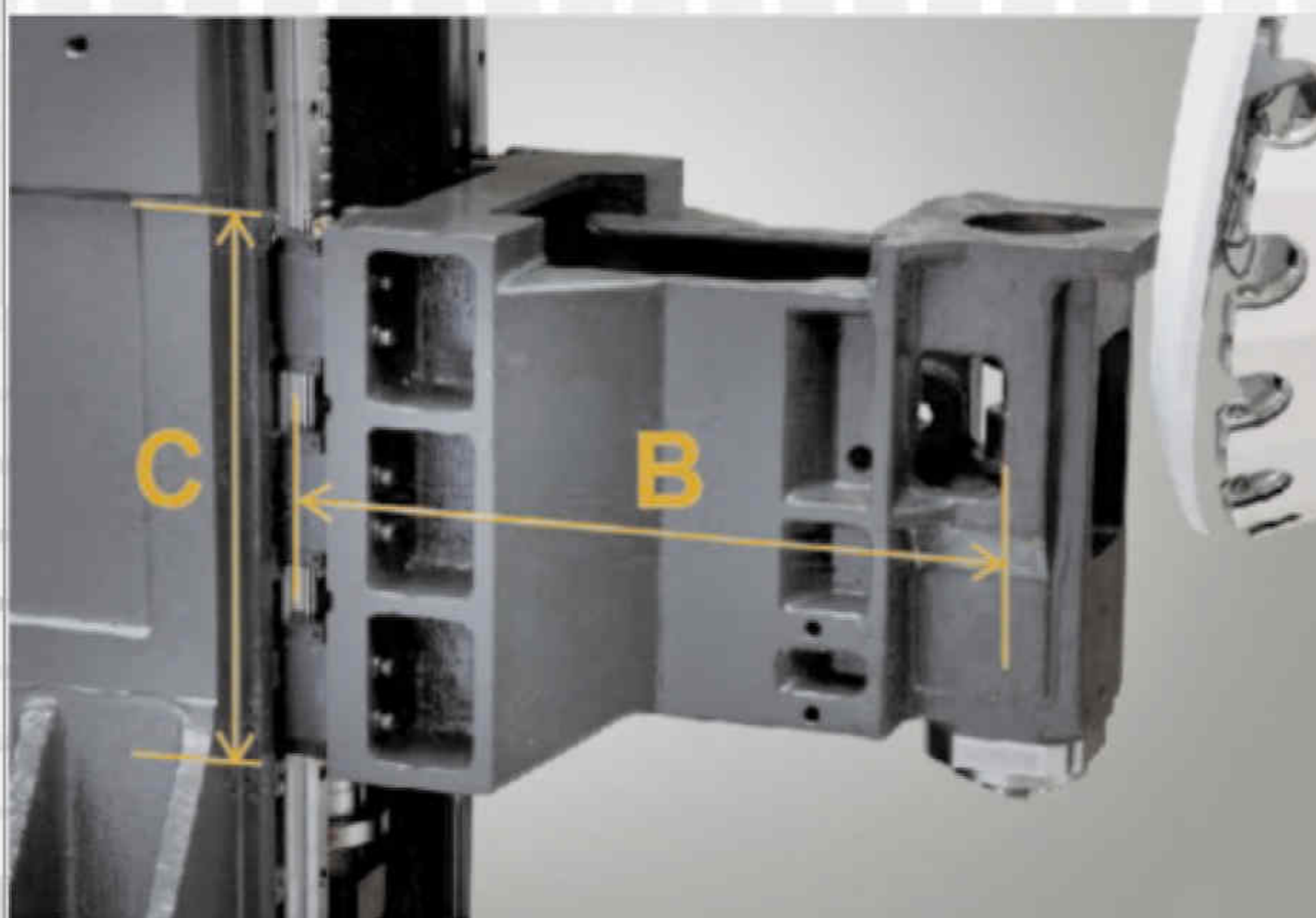


## High-rigidity&High-precision Structural Design

- The major machine components are based on Meehanite cast iron, which is stable in material composition, ensuring machine's long-lasting structural quality.
- Linear guide way is adopted on all three axes in order to withstand heavy loading and tolerate rapid movement, as well as ensuring precise positioning.



VT-7i

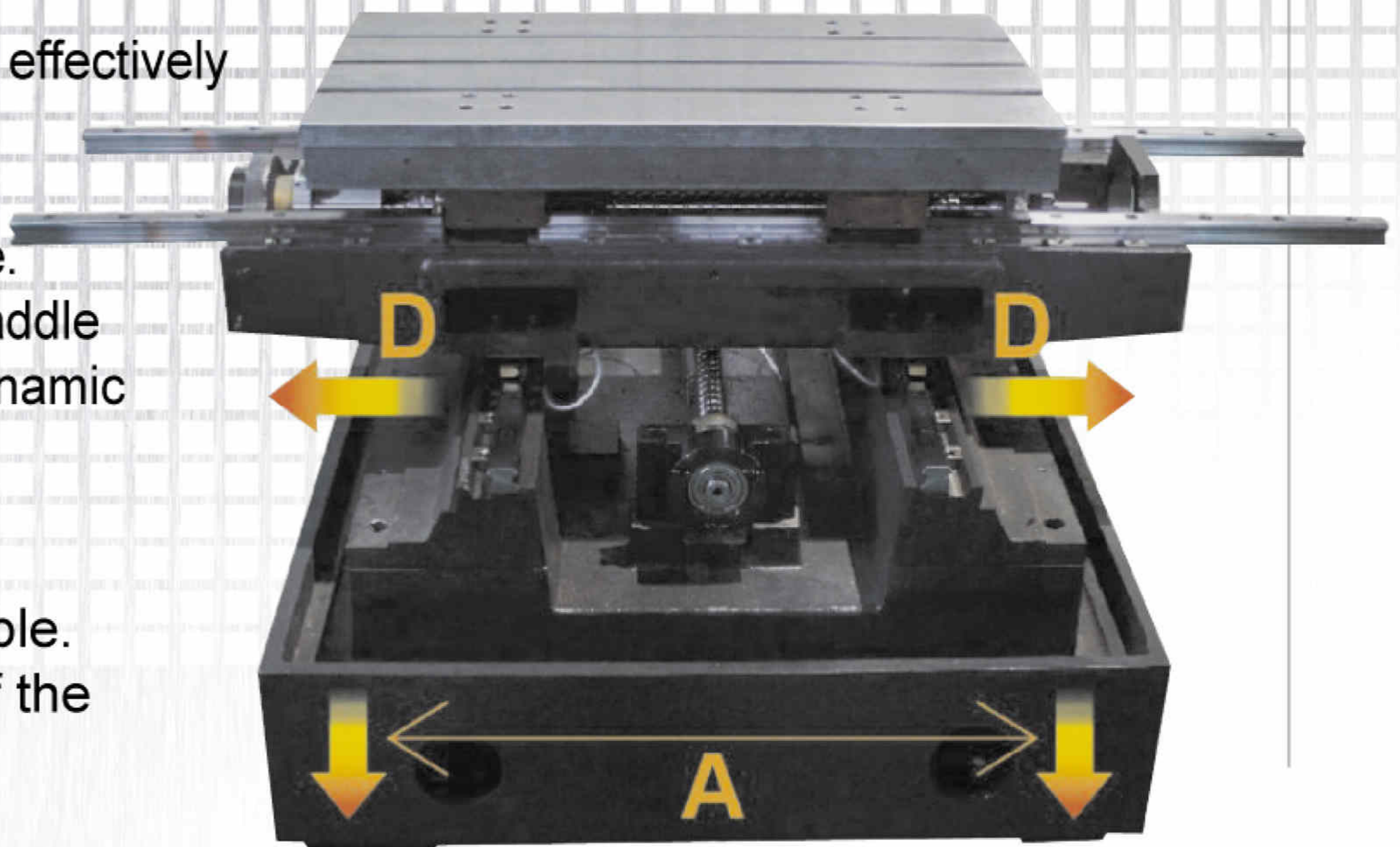


- Optimized design of contacting ratio between Spindle head and column(A:B) provides spindle Head & Spindle rigidity in heavy cutting load, as well as ensures geometric precision of spindle.



## Structural Design of Base Large-span Base Design

- The large-span base effectively supports and evenly disperses the load force from the saddle. Short cantilever of saddle ensures excellent dynamic precision.
- Heavy-duty worktable. Effective support of the machining load.



## IDD-The Optimal Heat Isolation Design Isolated Direct Drive System

- The spindle operates without thermal effect from main motor. Thermal displacement is reduced, thus, the spindle precision and lifespan is guaranteed.
- The spindle is directly coupled to the motor. No noise, backlash, or vibration problems.
- The transmission efficiency is extended from integration of direct coupling. The high quality rigid tapping can be achieved through rotation detection of the motor directly.

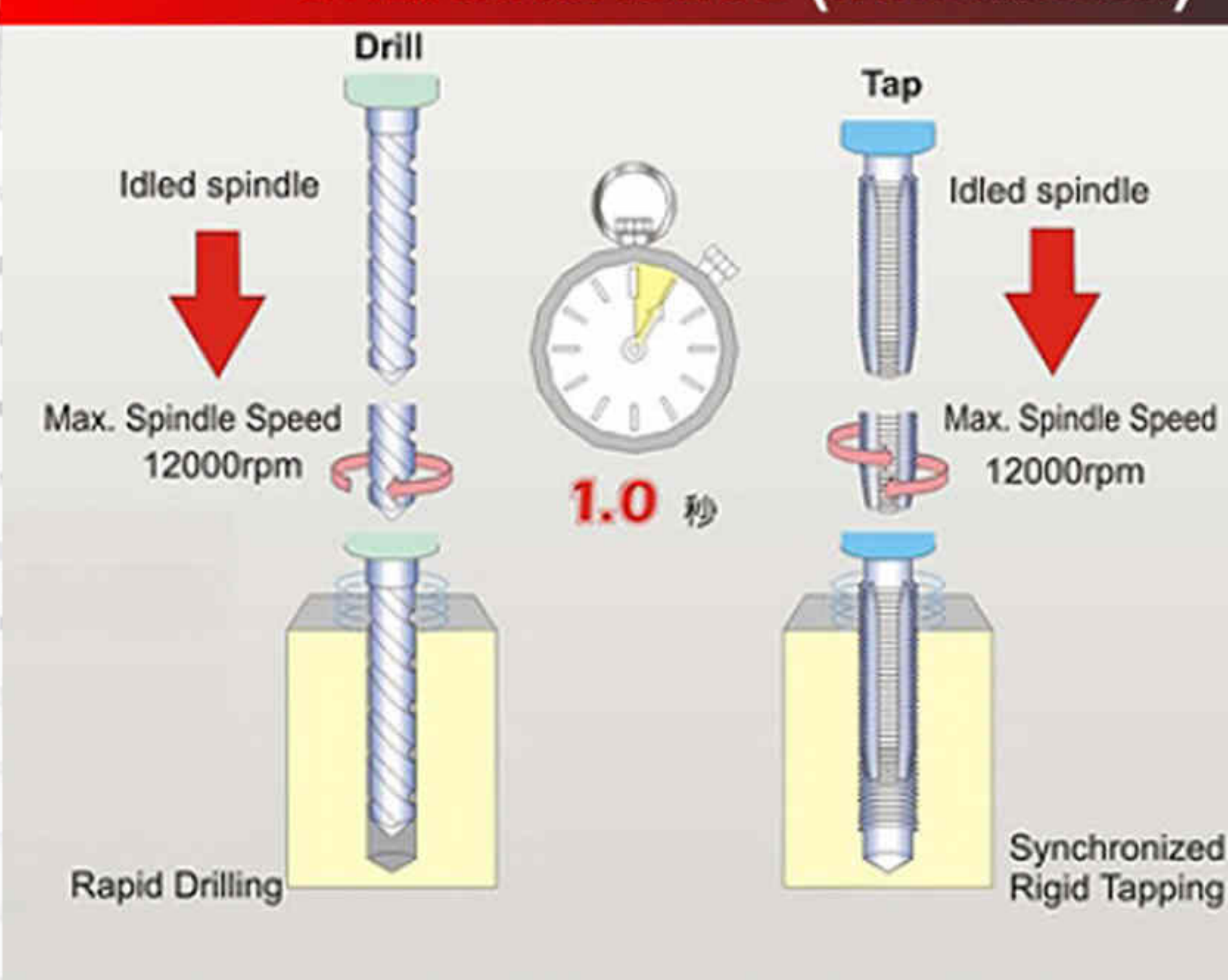




## High-performance Spindle Unit



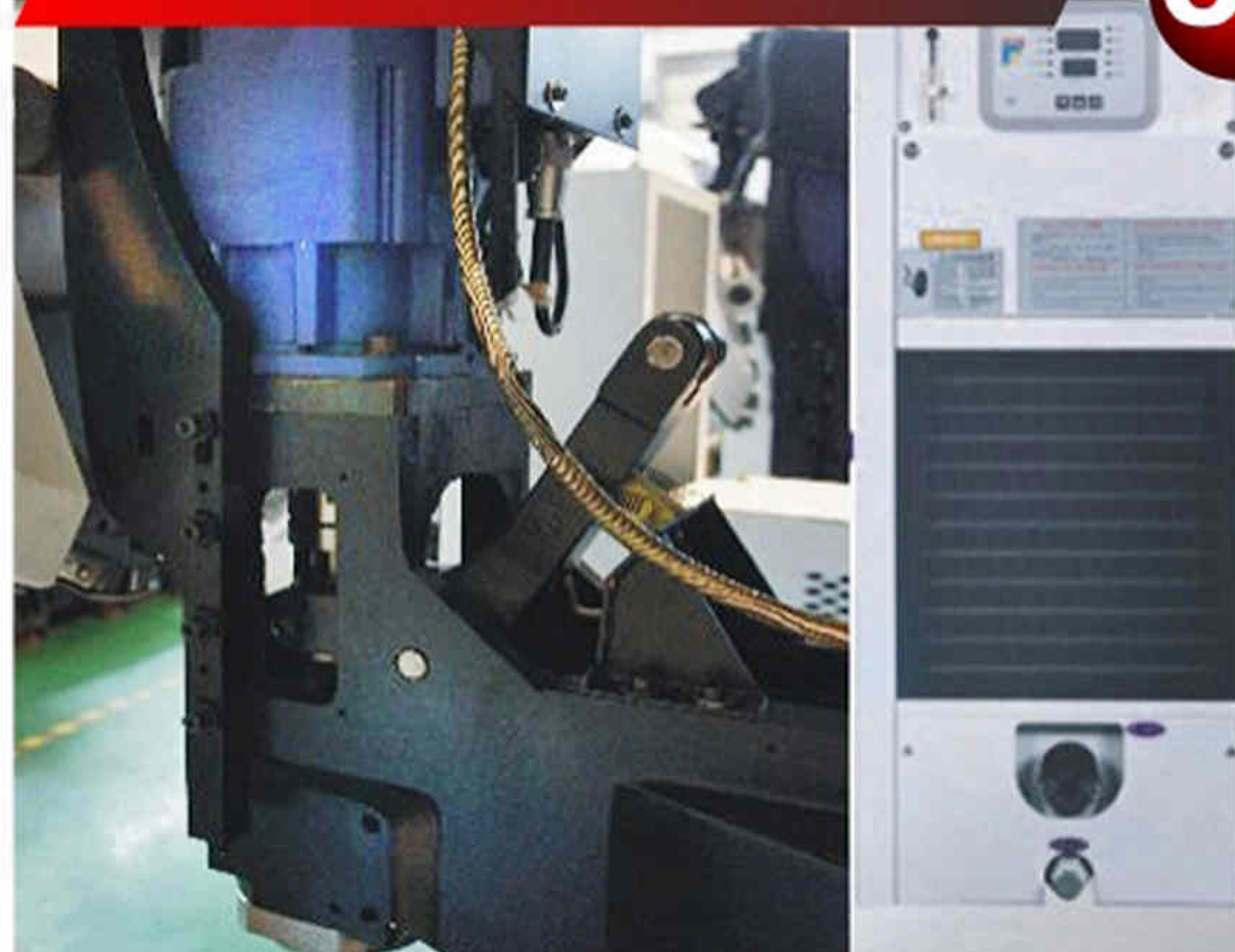
### Low-Inertia Spindle Motor Characteristics (Mitsubishi)



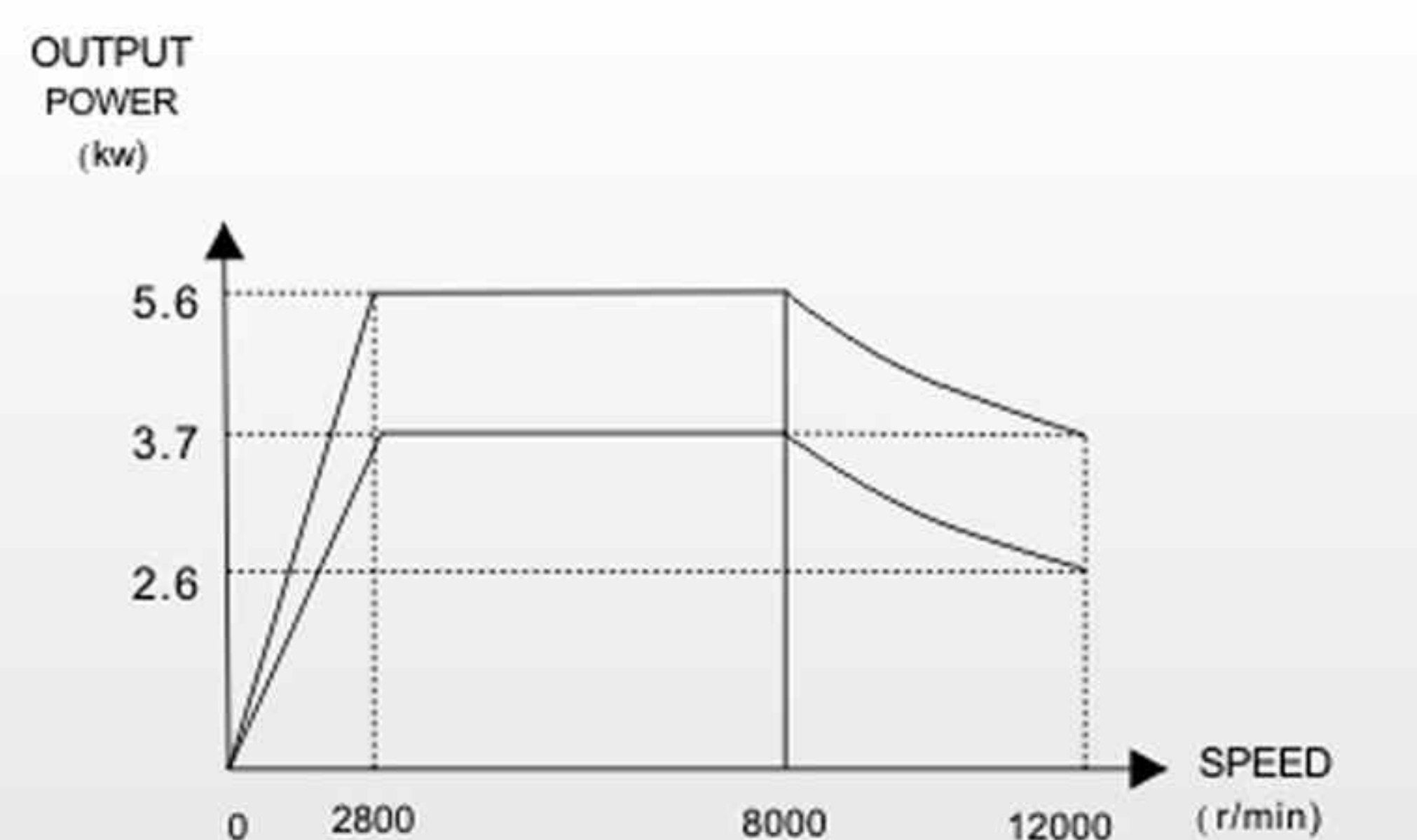
### Spindle Direct Drive System



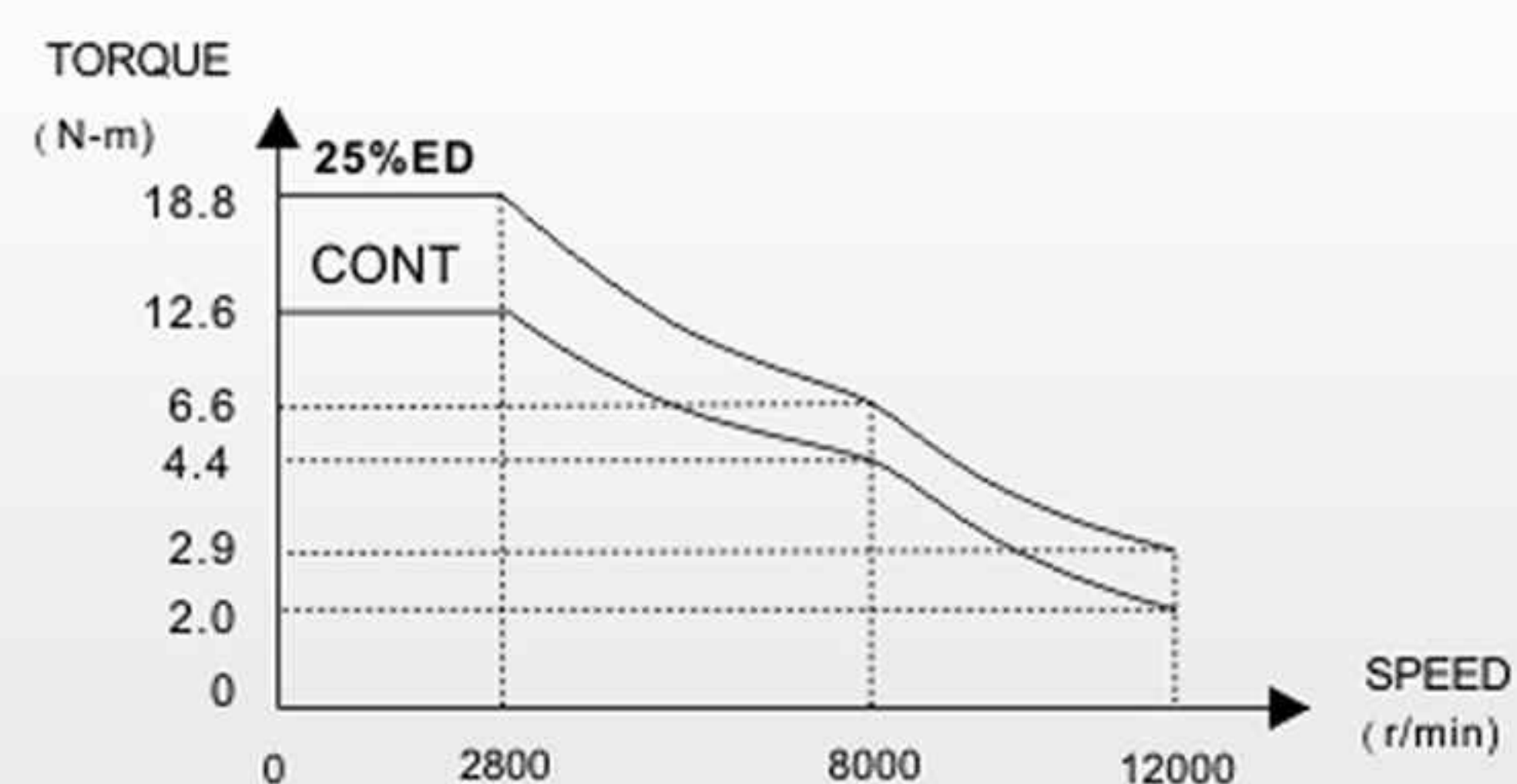
### Spindle Coolant System



### 12000 RPM Spindle Power and Torque

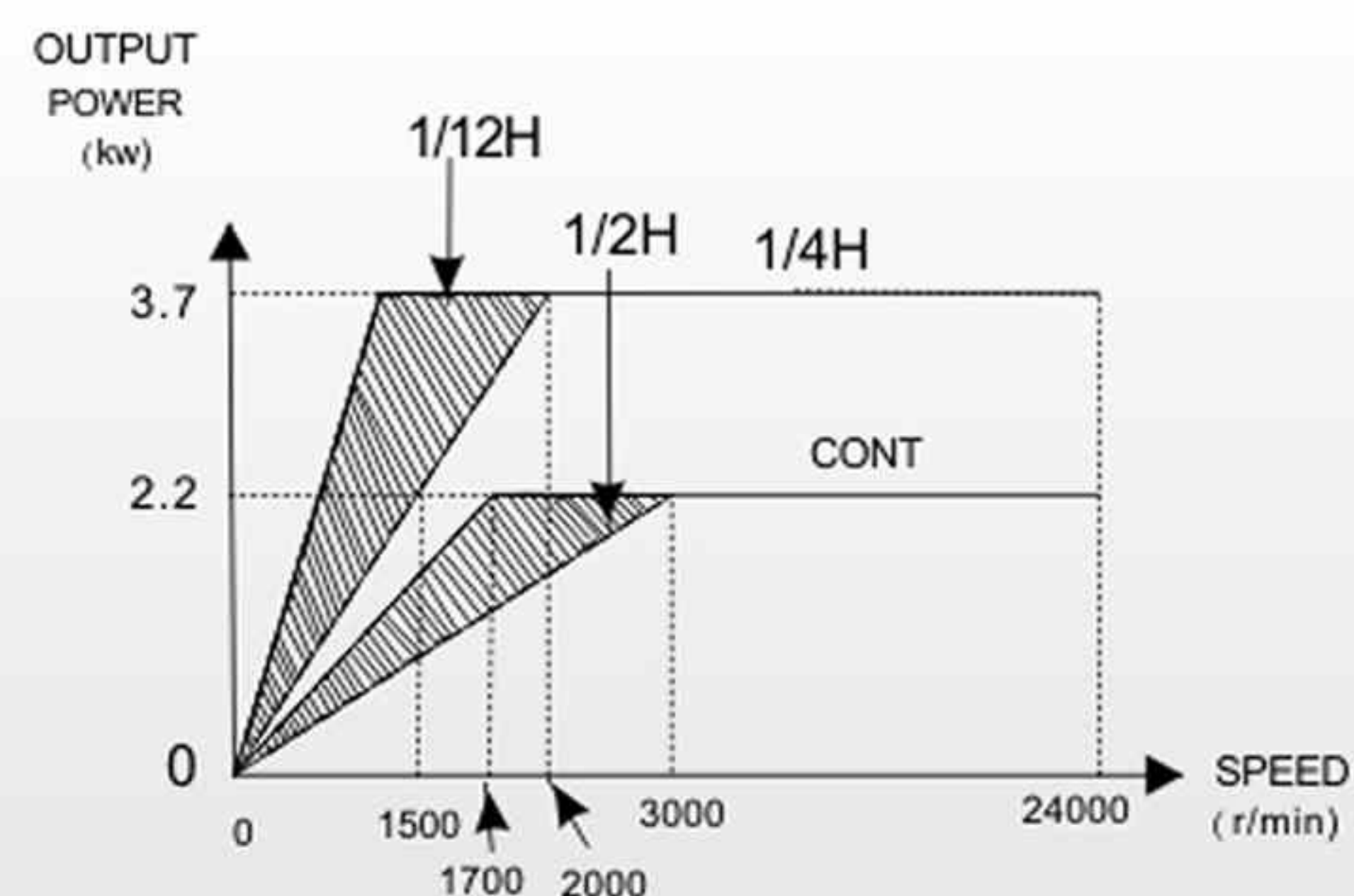


OUTPUT POWER - SPEED CHARACTERISTIC NORMAL

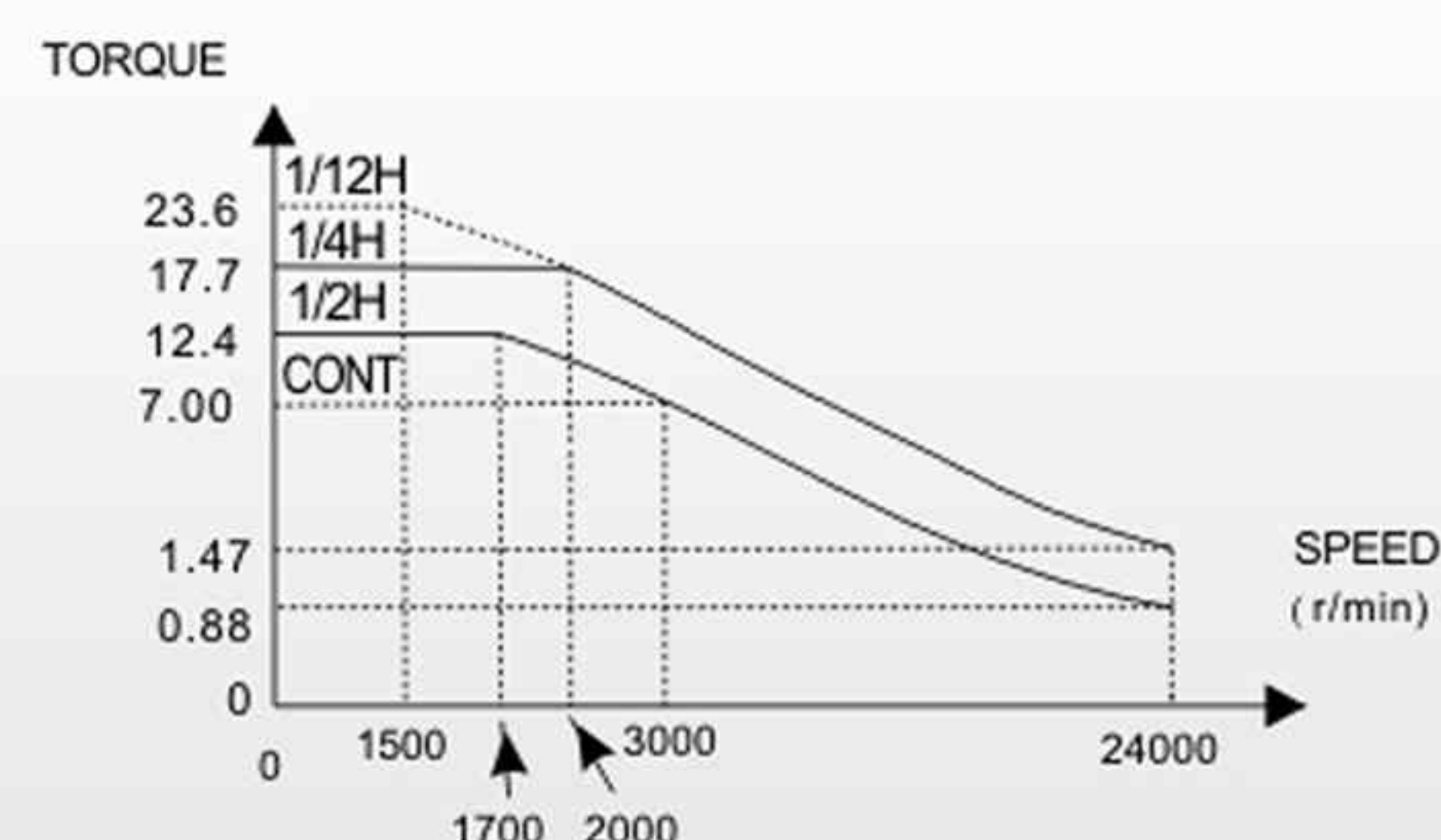


TORQUE - SPEED CHARACTERISTIC NORMAL

### 24000 RPM Spindle Power and Torque



OUTPUT POWER - SPEED CHARACTERISTIC NORMAL



TORQUE - SPEED CHARACTERISTIC NORMAL



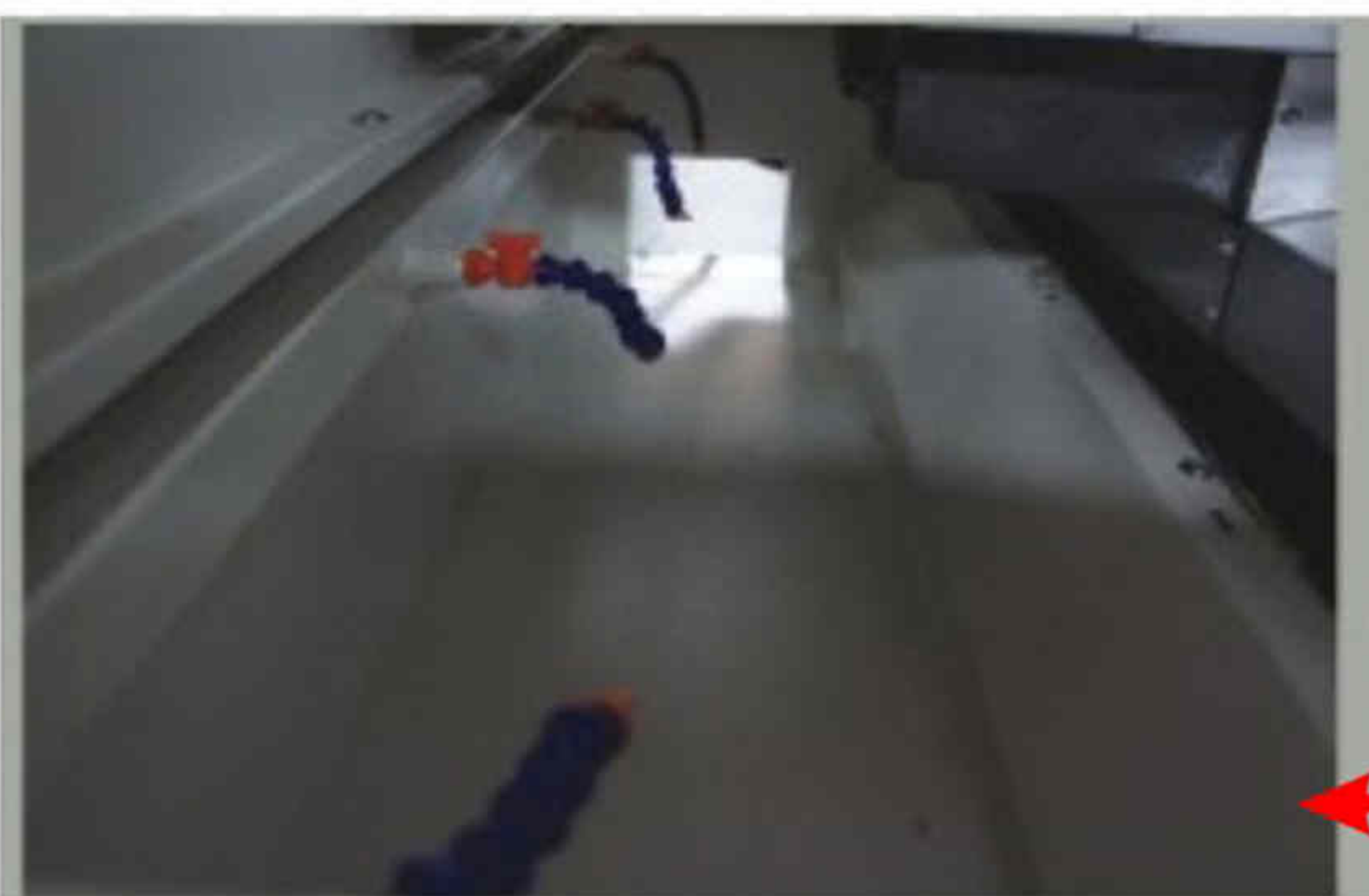
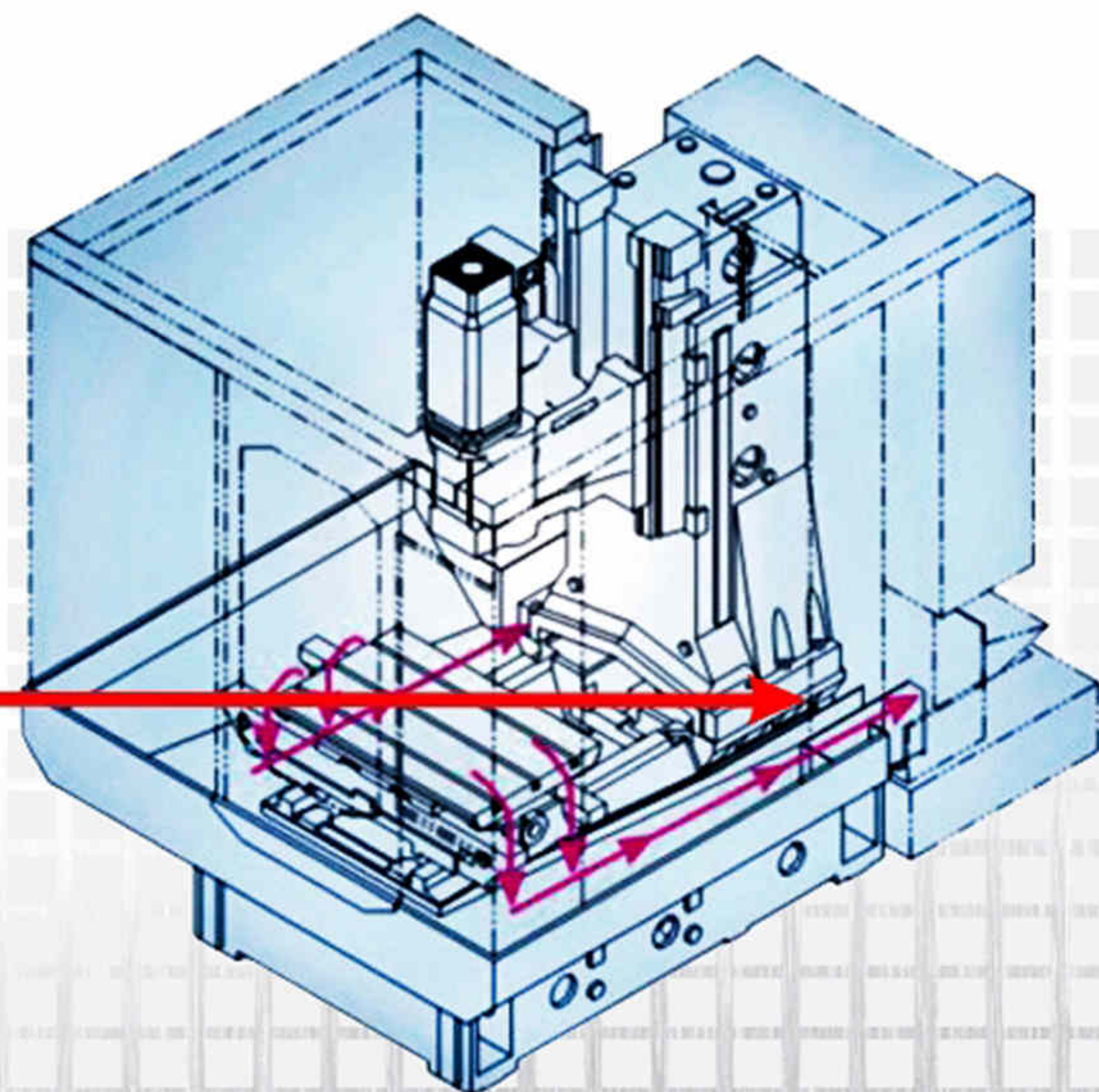
# High-speed High-precision Drive System

- 3-axis direct drive motor fully eliminates backlash, achieves high-precision and provides stability during high-speed transmission.
- High-speed, high-precision linear guide way on all 3 axes ensures high acceleration and enhanced working efficiency and productivity.
- High-speed High-precision Linear Guide Way
- Linear guide ways with zero backlash ensures consistent cutting surface on curve or slope cutting.
- Ideal for high speed travel and the drive power requirement can be minimized significantly.
- By using rolling contact instead of sliding contact, linear guide way reduces friction loss, reacts, and increases positioning accuracy.
- Load capacity is high on multiple directions, Multiple contact points are maintained when machining, cutting rigidity can be ensured.
- It is easy to assembly and interchange for lubrication system.
- Long lifespan can be achieved as a result of extreme low friction loss in the linear guide way.

## Ball-type Linear Guide Way



## Optimal Chip Removal Flow



## Optimal Chip Removal Angle



## Automatic Lubrication System

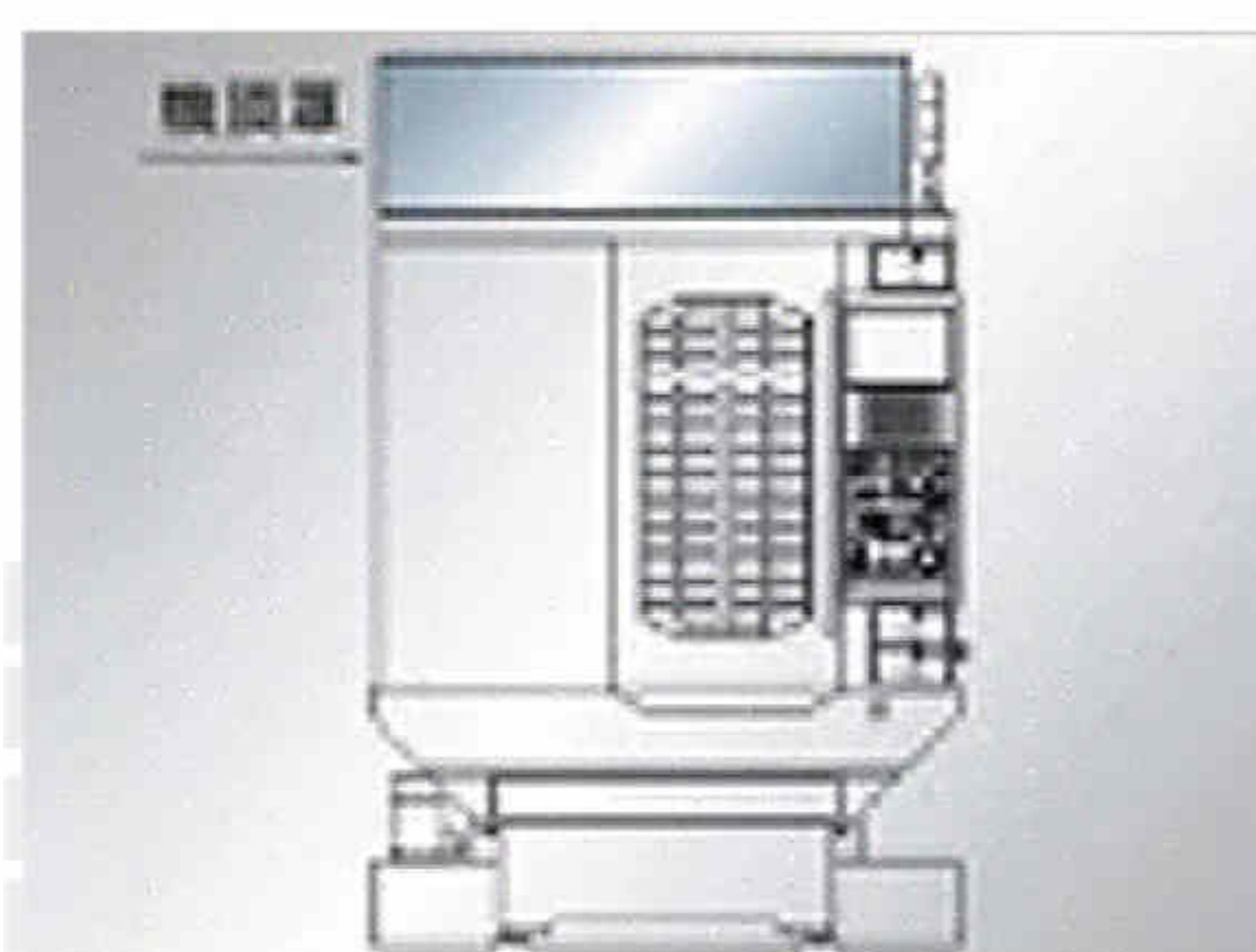


## Pneumatic System



## Optional Accessories

### Top Protection Hood



### 4-Axis



### Workpiece Measurement System



### Top length Measuring System

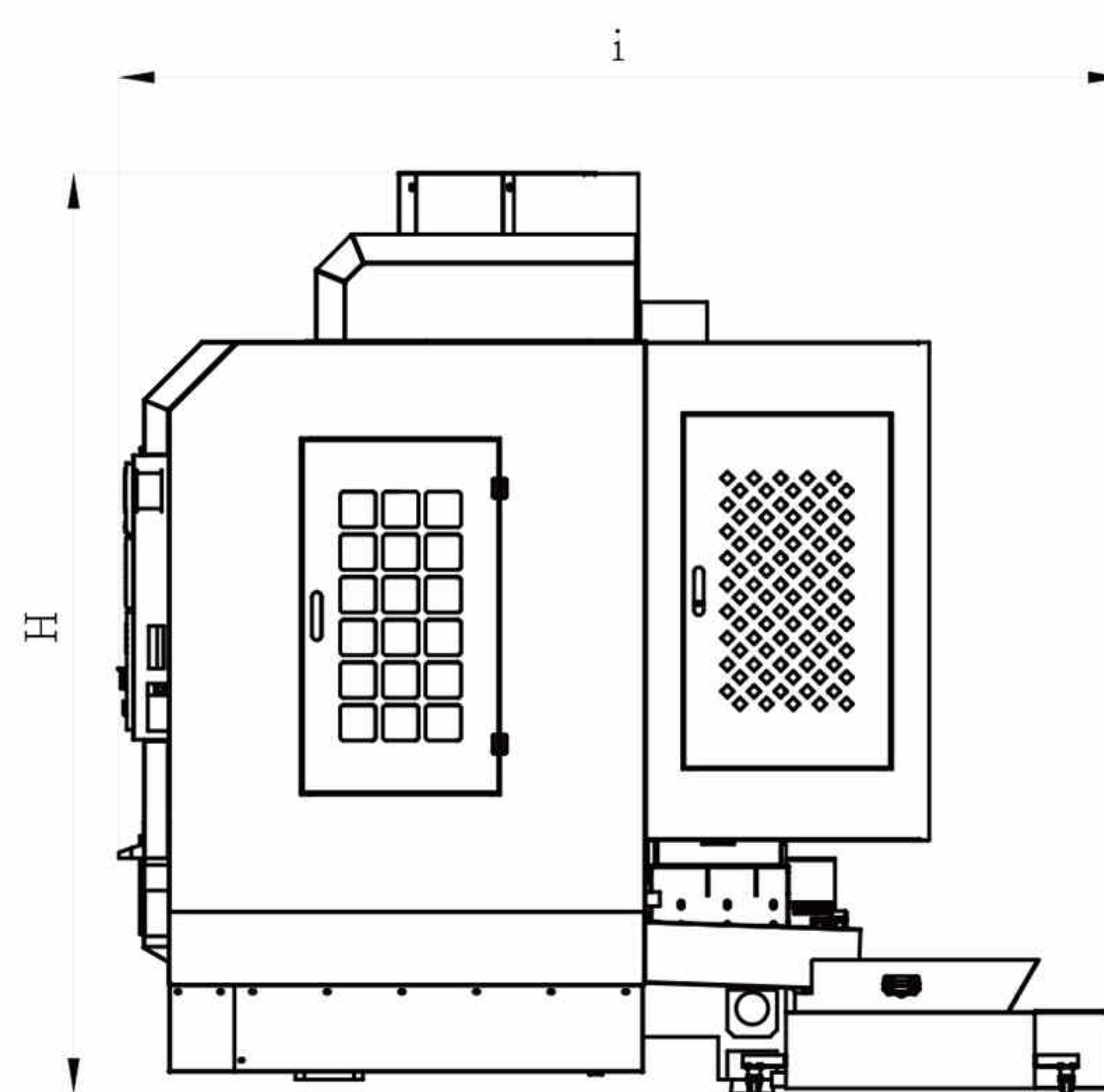
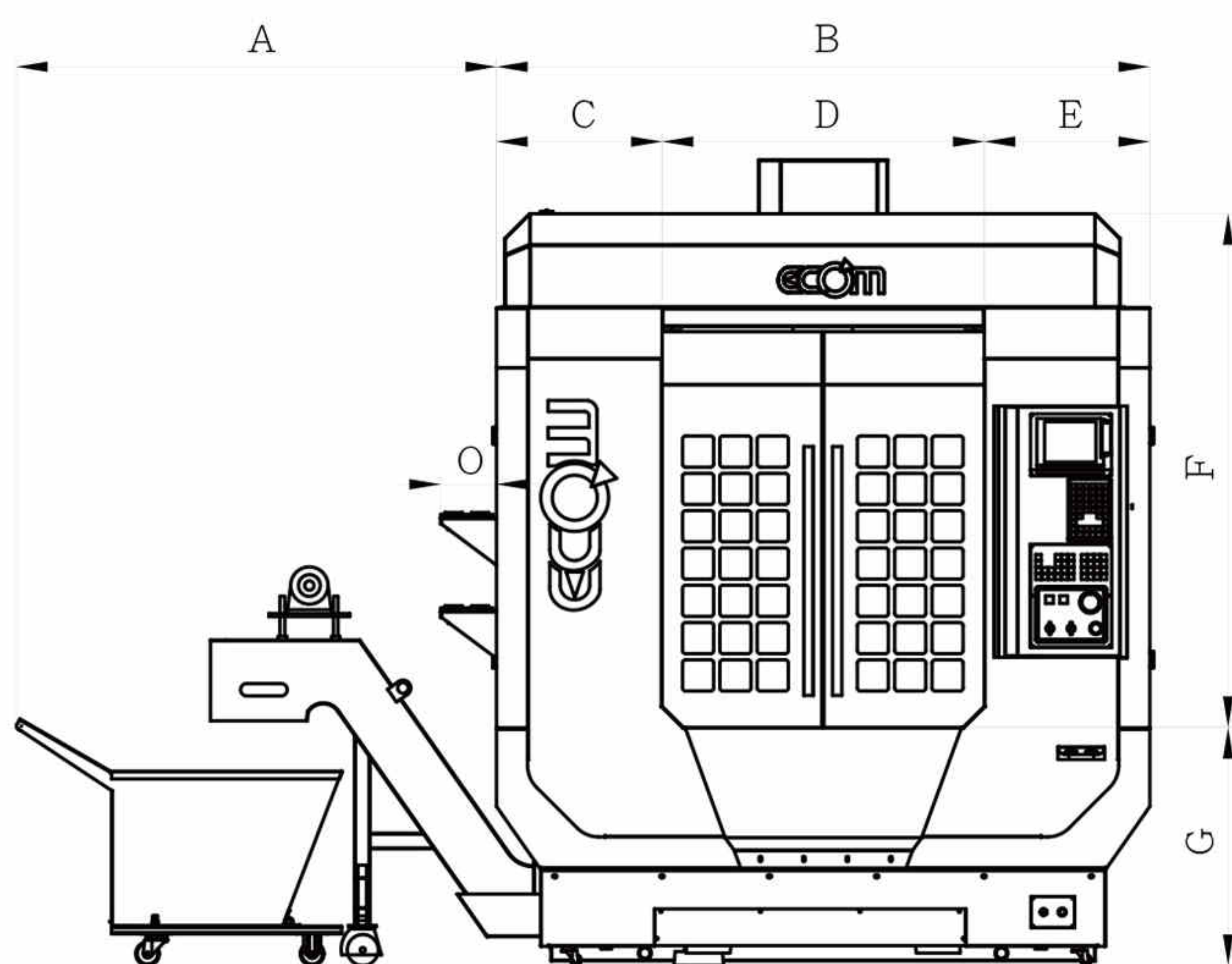
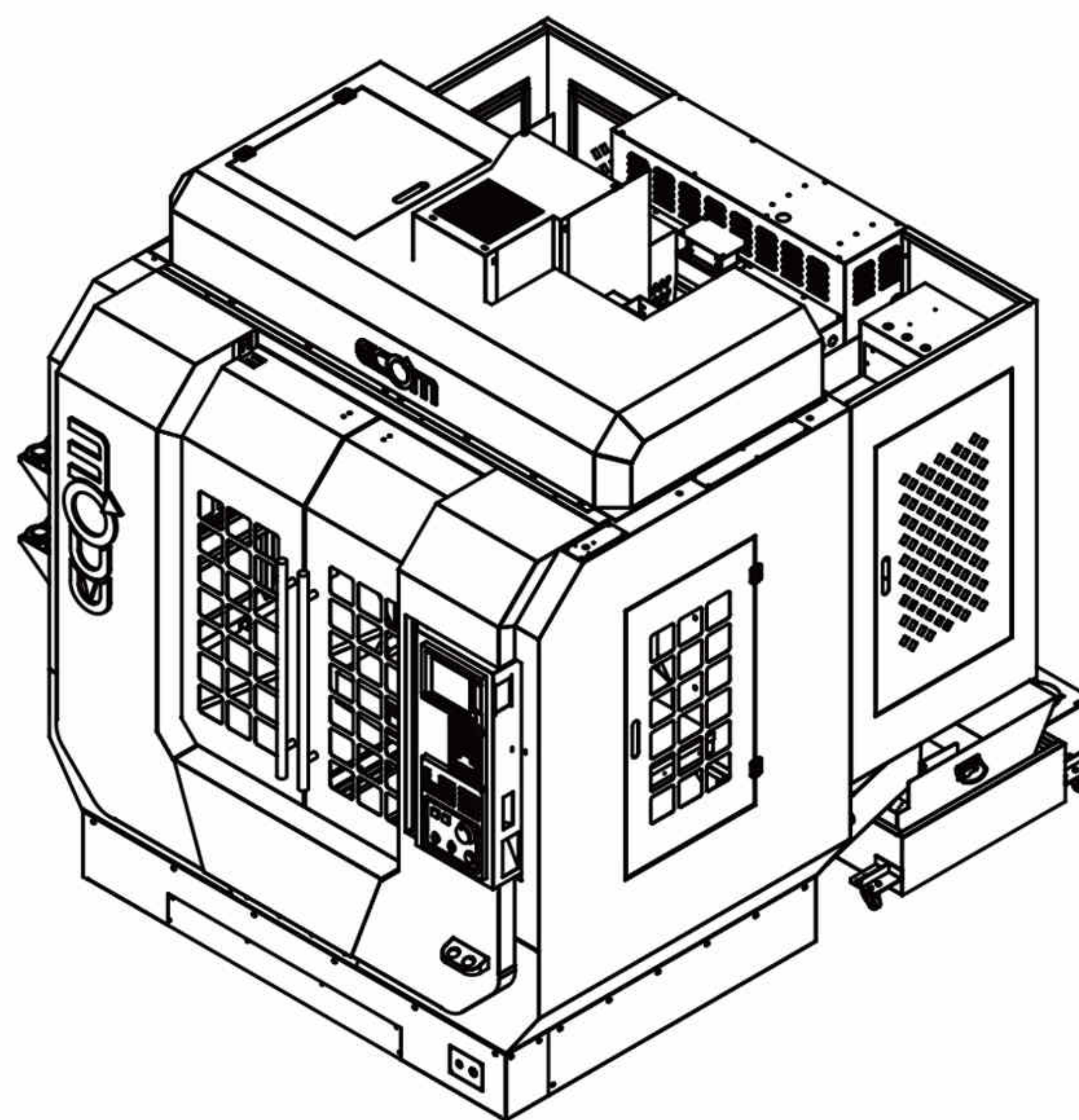
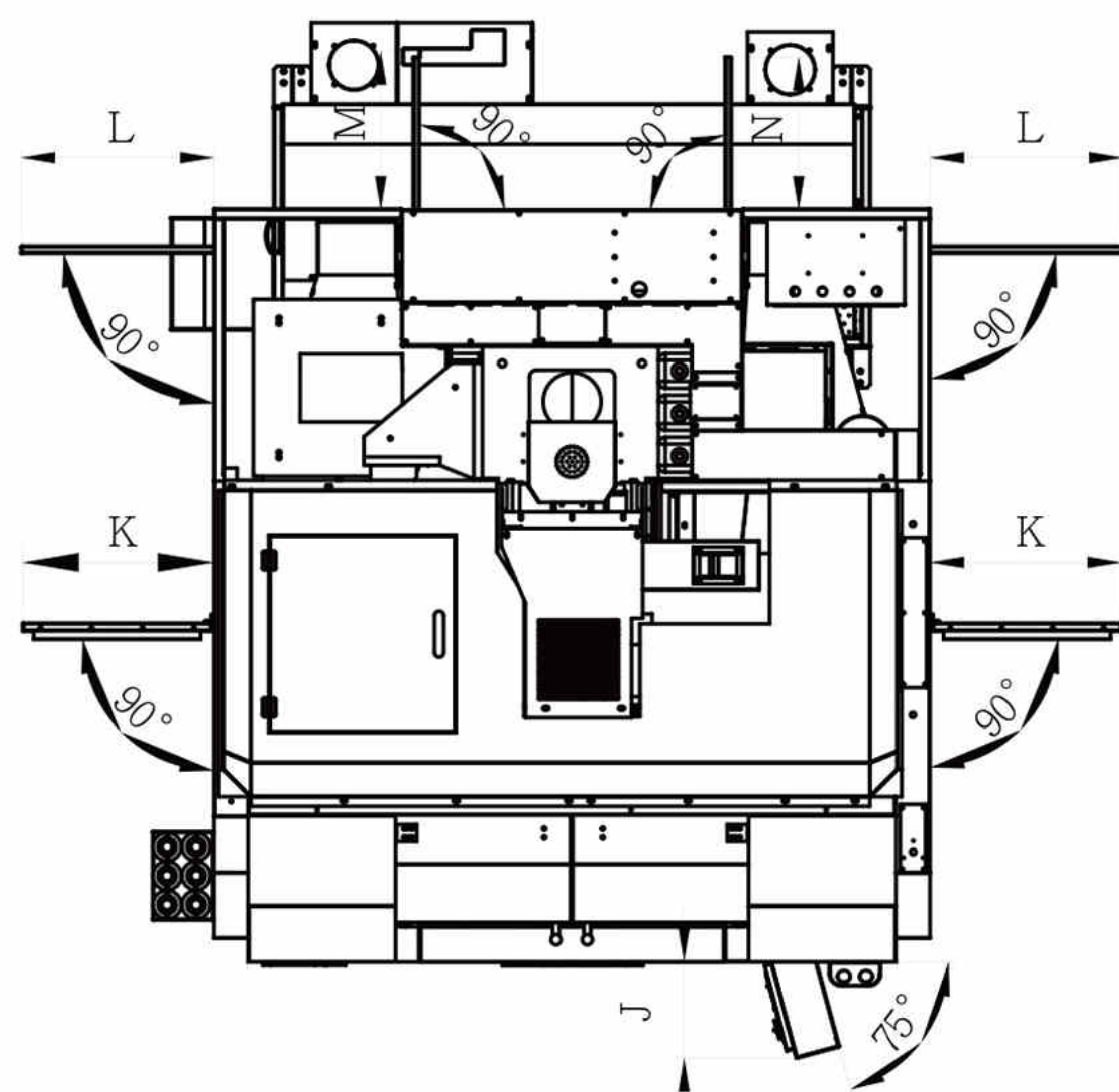


### Safety Switch





## Mechanical Dimensions



MODELS	Unit	A	B	C	D	E	F	G	H	i	J	K	L	M	N	O
VT-7i	mm	1550	2100	535	1030	535	1650	765	2590	2825	280	560	565	465	450	180



## Specifications

Travel			
X - Axis Travel	mm	700	
Y - Axis Travel	mm	450	
Z - Axis Travel	mm	330	
Spindle Nose To Table	mm	110-440	
Spindle Center To Z - Rail	mm	500	
Table			
Table Size	mm	900 X 420	
T - Slot	mm	3*14*100	
Maximum Table Load	kg	300kg	
Spindle			
Spindle Taper		BT-30	
Type Of Driving		直結式 (Direct Type)	
Spindle RPM	rpm	50-12000 rpm	
Feed Rate			
X. Y Axis Rapid Feed Rate	m/mim	48	
Z Axis Rapid Feed Rate	m/mim	48	
X. Y. Z Max.Cutting Feed Rate	m	10m/min	
Automatic tool changer			
Tool Capacity/Change Time(T-T)		16T (1.4sec)	
Max. Tool Diameter*Length		Φ80*200mm	
Max. Tool Weight	kg	3.0 kg	
Motors			
Spindle Motor	kw	Fanuc 3.7kw/5.5kw	Mitsubishi 3.7kw/5.5kw
X. Y Axis Servo Motor	kw	2.2kw	1.5kw
Z Axis Servo Motor	kw	3.0kw BS	3.0kw BS
Machine Accuracy			
Positioning Accuracy (JIS)	mm	± 0.005mm / 300mm	
Repeat Poitioning Accuracy (JIS)	mm	± 0.003mm	
Others			
Approximate Weight	kg	4500	
Floor Space Measurement(L*W*H)	mm	2100*2800*2330	

★ SPECIFICATIONS SUBJECT TO CHANGED WITHOUT PRIOR NOTICE. THANKS!

## Standard Accessories

Mitsubishi M80B Controller  
 BT30-16T  
 Direct Type 12000rpm  
 Spindle coolant System  
 Air blast through spindle  
 Rigit tapping  
 RS232 interface  
 CF card interface  
 Work lamp  
 Alarm lamp  
 Auto power off  
 Auto lubrication system  
 Cutting coolant unit  
 High pressure water & air gun  
 Manual pulse generator  
 Flushing device  
 Full splash guard  
 Heat exchanger for control cabinet  
 Leveling bolts and blocks  
 Tool box  
 Operation manual

## Optional Accessories

Fanuc 0i-MF α (5)  
 Mitsubishi M80A Controller  
 Direct Type (20000rpm)  
 ATC-BT 30 - 21T  
 Servo type ATC-BT30-16T/21T  
 Around spindle cutting coolant system  
 Coolant through spindle  
 column raised:100mm/200mm  
 Tool length measurement system  
 Disk type oil-water separator  
 Oil mist collector  
 4th Axis (Φ125/170/210mm)  
 Auto door  
 CE standard

## Products



Horizontal Machining Center

Vertical Machining Center

Vertical Tapping Center

Vertical Machining Center

Double-Column Machining Center



東剛精機

E-mail: [ecomcnc@hotmail.com](mailto:ecomcnc@hotmail.com)

Taiwan Factory :

Tel: +886-4-7389907 Fax: +886-4-7382139

Address: No. 376, Sec. 3, Taihe Rd., Changhua City,  
 Changhua County 500, Taiwan

China Factory - Fujian :

Tel: +86-596-7672668 Fax: +86-596-7672636

Address: Next To National Highway 319, Economic  
 Development Zone of Fengtian Town, Nanjing County  
 Zhangzhou CN



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