

DEDICATE PRECISION METAL MACHINING
SUPPORT SMART MANUFACTURING UPGRADES



MICROMILL IMP&EXP CO.,LTD.
JIANGSU MICROMILL INTELLIGENT TECHNOLOGY CO.,LTD.

ADD: NO.2 FUQIAN SOUTH ROAD, LONGPAO STREET, NANJING
E-MAIL: MICRODRILL@163.COM
MOB: +86 13852283860
WEB: WWW.MICROMILL.CC



Contact By WhatsApp

+86 13852283860

NOTE: WE KEEP THE RIGHTS OF UPGRADING MACHINE APPEARANCE AND TECHNICAL DATA WITHOUT ANY NOTIFICATION, PLEASE SUBJECT TO QUOTATION PROPOSAL BY SALES.



CNC LATHE

EMPOWER YOUR MACHINING WORK



TURN (MILL) CENTER SERIES

QUACARE

Constant Innovation: New Design&Technology

We focus on product quality control to be perfect, Insist on advanced product R&D by using new technology and material, Continuous innovation, provide best optimized high precise machining and one-stop solution for customers.



GANG-TOOL LATHE

**TC-36P
TC-46P**



HORIZONTAL LATHE

**TC-350 (E/M)
TC-460 (E/L/M)
TC-680 (E/L/M)**



HORIZONTAL TURN MILL CENTER

**TC-550CY/SY
TC-680CY**



VERTICAL LATHE

**VL-500
VL-800(M)**

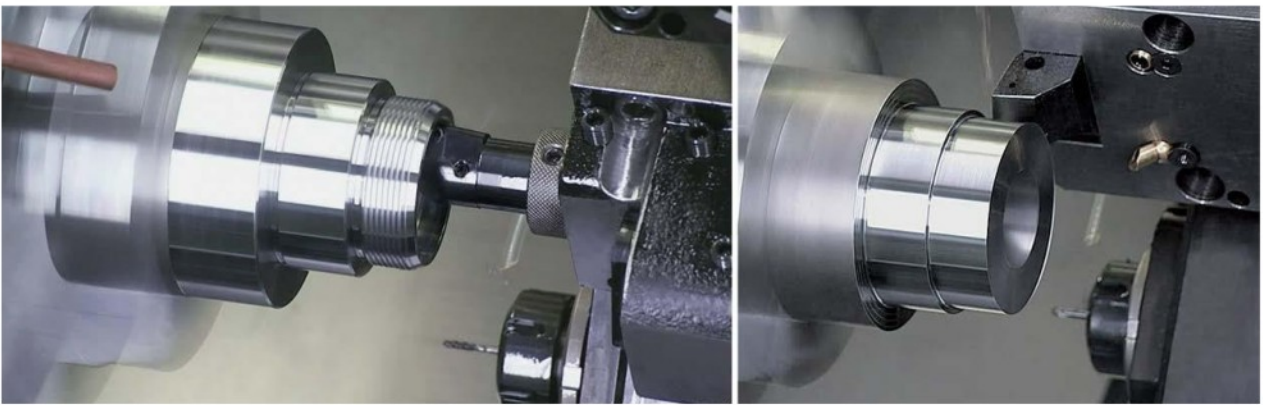
CNC HORIZONTAL LATHE

Linear Guide Series



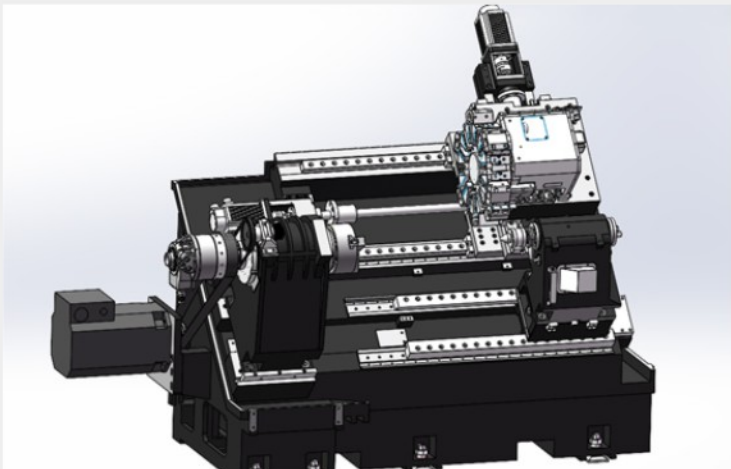
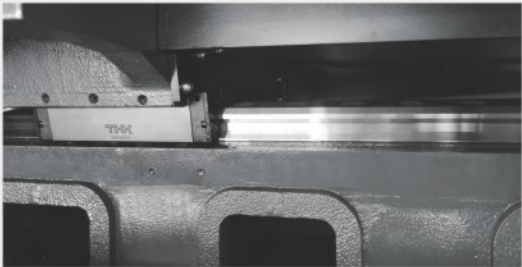
		UNIT:mm
TC-350(E/M) (C-Axis available, M: Turn-mill)		
ChuckSize	6 inch	8 inch
Max.machining diameter	Φ300	Φ350
Max.machining length	320	300
Rod through hole diameter	42	51

		UNIT:mm
TC-460(E/L/M) (C-Axis available, M: Turn-mill)		
Chuck Size	8 inch	10 inch
Max. machining diameter	Φ350	Φ350
Max. machining length	510	750
Rod through hole diameter	51	71



➤ Ultra-high Rigid Box-type Bed & High Speed Linear Guide

Overall high-rigid inclined casting bed with strong shock absorption and high stability. Linear guide provides high follow-ability while do the micromotion and micro conical machining, to achieve high-speed and high-precision machining.



- **Rigid Tool Turret**
Powerful tool turret which adopts direct mounted turning tool holder, combined with NC servo tool changing system, ensure rapid positioning accuracy and stability.
- **M(Turn-mill) Type Tool Turret**
Tool holder is a rod-type 12T tool turret which is used to install turning & milling tools at all workstations. High efficiency 5.5/3.7KW milling motor is equipped for milling tools.

➤ Hydraulic Tailstock(Option)

High rigid hydraulic tailstock helps to achieve high forceful cutting, solve the swing issue which machining the shaft type workpiece.

Note: Backward chip removal is available.



CNC HORIZONTAL LATHE

Box Guide Series



LONG
CREDIBILITY



HIGH
RIGIDITY



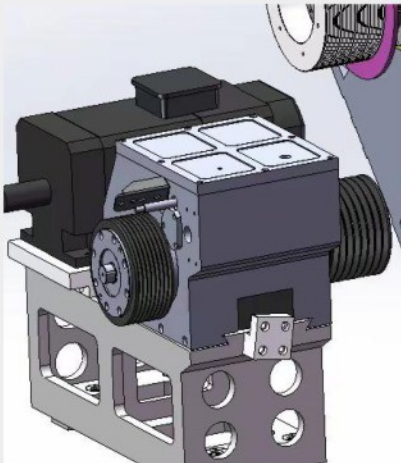
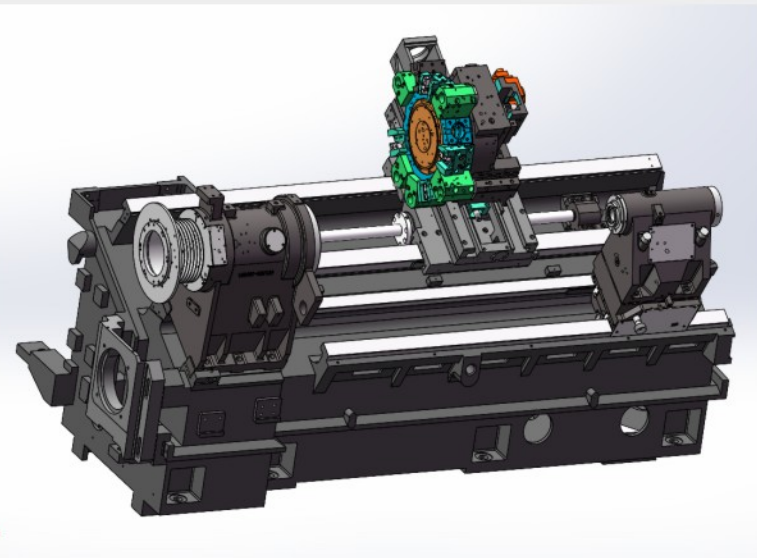
DURABLE
STABILITY

		UNIT:mm
TC-680E (C-Axis available, M: Turn-mill)		
Chuck Size	10 inch	12 inch
Max. machining diameter	Φ460	Φ460
Max. machining length	1000	1000
Rod through hole diameter	71	71

		UNIT:mm
TC-680EL (C-Axis available, M: Turn-mill)		
Chuck Size	12 inch	15 inch
Max. machining diameter	Φ600	Φ600
Max. machining length	1500	2000
Rod through hole diameter	71	90

➤ Rigid Bed Body

- + Large slide guide type high-loading model, available for heavy cutting of big-diameter at low speed.
- + High rigidity box guide, the slide surface is designed with professional scraping process and precise oil guiding grooves, ensuring excellent transmission efficiency.
- + Inclined back type integrated box structure bring with low center of gravity and stable precision.



➤ High Rigidity Spindle System

Spindle adopts big-diameter high accuracy oblique angle ball bearing and roller bearing, suitable for high-speed precision cutting and low-speed heavy cutting.

● Extra Option

EL series spindle can work with gearbox, it can exert excellent cutting ability. Improve the continuous rated torque by re-modifying the reduction ratio with the spindle motor.

➤ Forceful Tool Turret

Equipped with forceful servo hydraulic tool turret, provide high-intensity cutting loads, internal mechanical components are strong and tough, meet strict requirements of high performance.

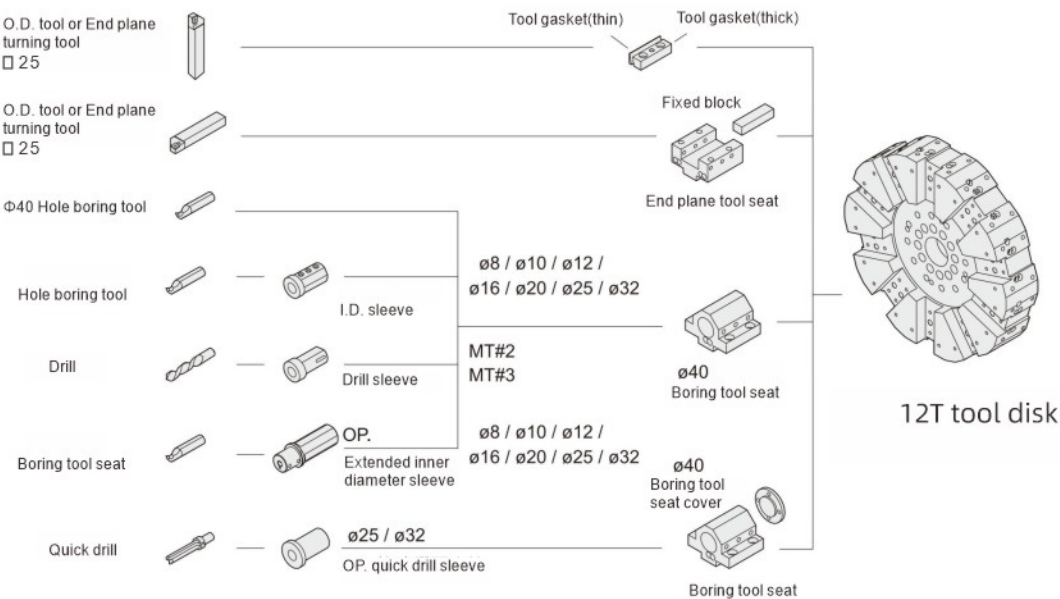
➤ Optional M(Turn Mill) Tool Turret

12T rod-type tool turret can be used to install turning and milling tools at all workstations

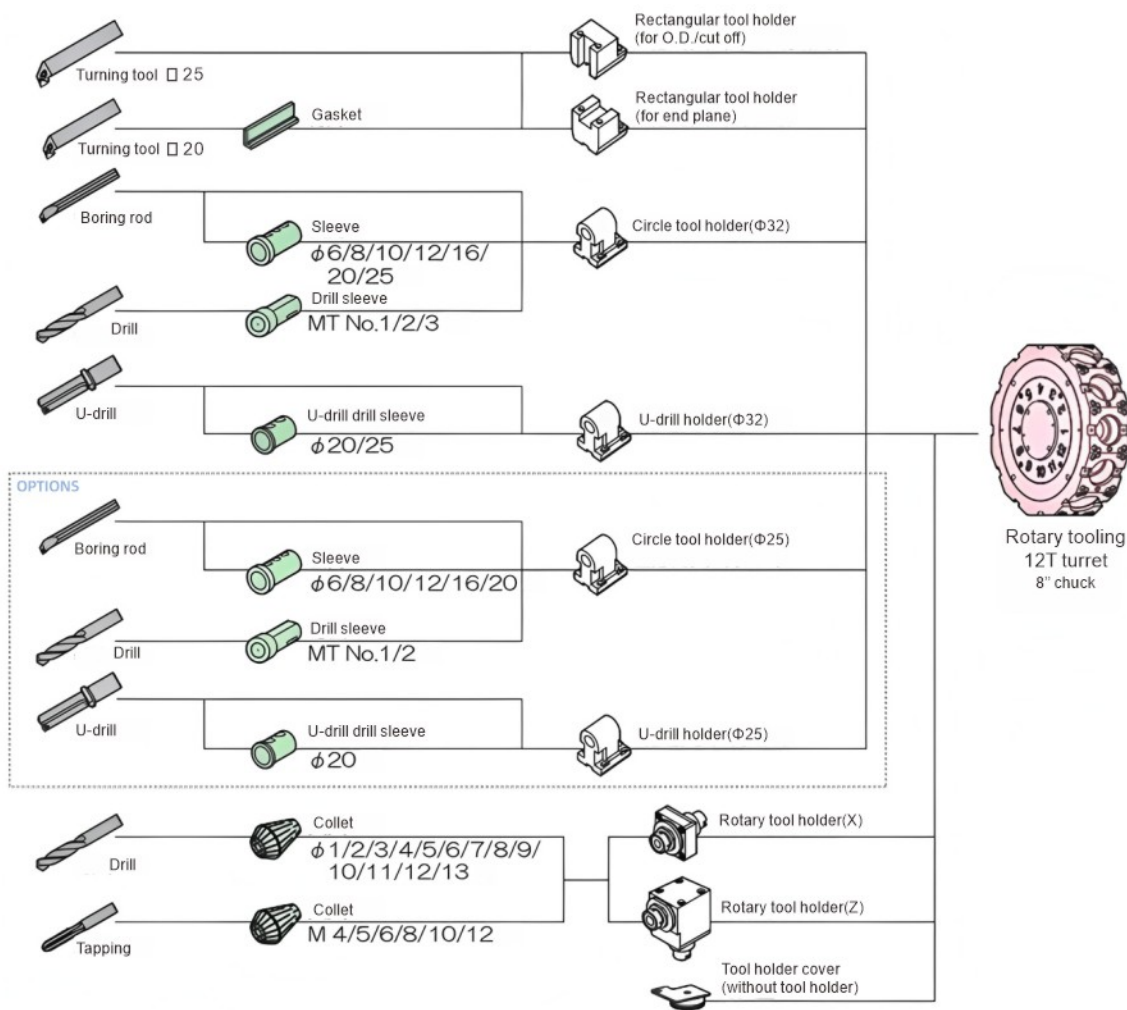


➤ Servo Turret & Tools System Chart

UNIT: mm



➤ M Live Turret & Tools System Chart



TECHNICAL DATA

Model	Unit	TC-350E/M	TC-350/M	TC-460E/M	TC-460EL/M	TC-680E/M	TC-680EL/M
Capacity							
Swing over bed	mm	500	500	600	600	650	
Swing over saddle	mm	300	350	460	600		
Max. machining diameter	mm	170	210	360	360		
Max. machining length	mm	320	300	510/480	750/720	1000	1500/2000/3000
Spindle/Chuck							
可増配: 変速箱							
Spindle nose	-	A2-5	A2-6	A2-6或A2-8	A2-8	A2-8	A2-11
Spindle hole diameter	mm	56	66	66	86	86	102
Rod through hole diameter	mm	45	51	51	71	71	90
Hydraulic chuck size	-	6"	8"	8"	10"	10"/12"	10"/12"
Maximum spindle speed	rpm	5000	3000/4000	3000/4000	2600	2600	2000
Spindle motor power	kW	7.5	11-15	11-15	15-18.5	15-18.5	18.5-22
X/Z Axial Data							
Guide type	-	Linear guide	Linear guide	Linear guide	Linear guide / box-type guide		
Max. travel distance	mm	200/385	220/540	240/1100	350/(1600/2100/3100)		
Rapid traverse rate	m/min	30	28	24	20		
Tailstock							
Quill diameter	mm	65	-	80	100	140	
Quill travel distance	mm	80	-	80	100	140	
Quill sleeve taper	-	MT 4#	-	MT 5#	MT 5#	MT 5#	
X/Z Axis Accuracy							
Repeatability accuracy	mm	±0.003	±0.003	±0.003	±0.005		
Turret							
Servo tool turret	-	12T	12T	10T/12T	12T		
Live turret (M)	-	BMT45-12T	BMT55-12T	BMT55-12T	BMT55-12T/BMT65-12T		
Rotary head speed	rpm	5000	5000	5000	4000		
General							
Overall size(L*W)	mm	2255×1630	2850×1780	3185×1780	3735×1630	(4900×5800×7100)×2280	
Net weight(approx.)	kg	3000	4000	4700	5700	7600/9000/10300	

STANDARD CONFIGURATION

- ☐ FANUC CNC System
- ☐ 12T Servo Tool Turret
- ☐ Hollowed Hydraulic Chuck
- ☐ Coolant System
- ☐ Fully-closed Machining Area
- ☐ Automatic Lubrication System
- ☐ Leveling Adjustment Pad Iron
- ☐ Servo Spindle Motor
- ☐ Chip Collection Cooling Tank
- ☐ Foot Pedal Switch
- ☐ Hydraulic tailstock
- ☐ 3-colour Indication Light

EXTRA OPTIONS

- ☐ MITSUBISHI/SYNTEC System
- ☐ Auto Chip Removal Conveyor + Trolley
- ☐ Automatic Tool Setting Device
- ☐ 12T Live Turret

CNC HORIZONTAL TURN-MILL CENTER SERIES

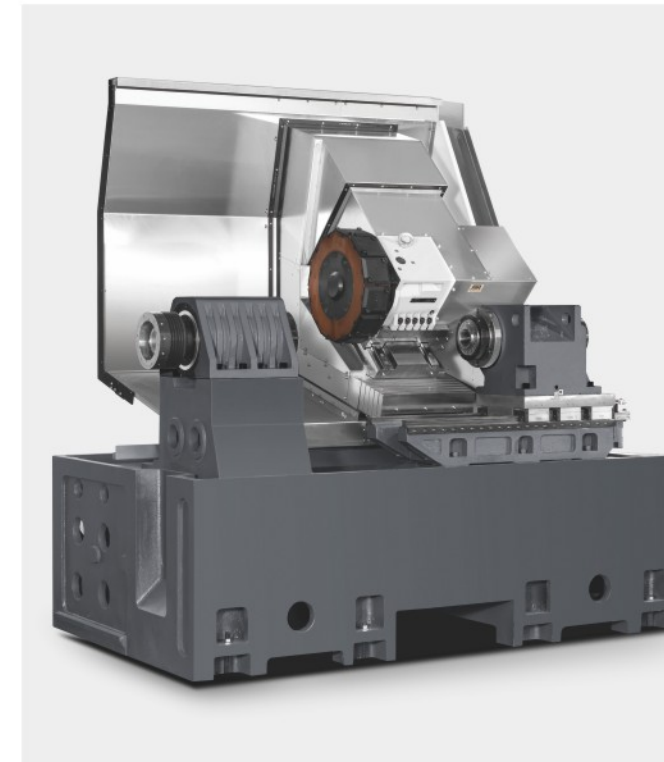
One Time Clamping, Directly Finish Machining

Achieve excellent high-efficiency performance

High Accuracy

High Rigidity

High Efficiency



➤ Optional Enhanced Tailstock

Tailstock body adopts high duty linear guide with anti-dust structure, servo programming control is optional, to achieve the perfect combination of high rigidity and flexibility.

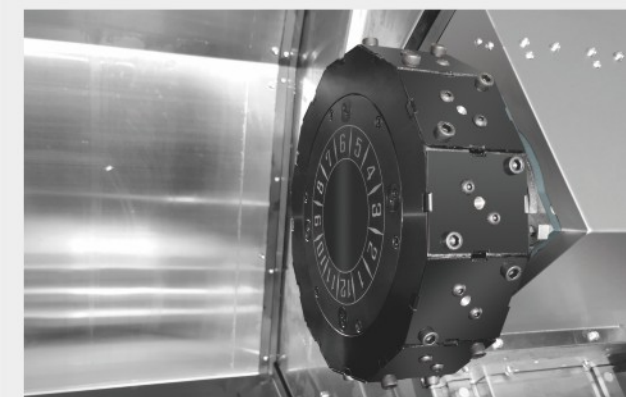
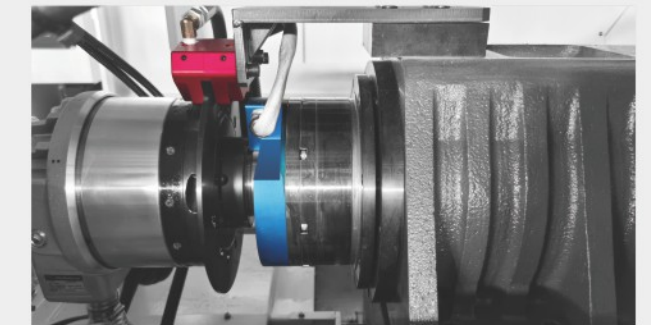


◀ Lathe Bed Structure

- + Integral type interpolation Y bed structure bring with excellent shock-resistance and thermal stability, during the machining process, it can significantly decrease the amplitude and natural frequency, improve the stability of processing accuracy and surface quality.
- + Heavy duty extended sliding block roller guide bring with optimized immunity and rigidity, meet heavy cutting capacity and get a longer life time.

➤ High Precision Electric Spindle

- + Back-mounted type motor structure has obvious advantages in low speed large torque, high speed high accuracy, quick start/stop and accurate control, ultra-low vibration, etc sides.
- + Spindle uses maintenance-free lubrication structure design, temperature growing while running is so low that has a long lifetime.



◀ Live Turret

- + Turret equips with 12/16 tool positions BMT type live turret, each tool position can mount live tooling.
- + Maximum rotation speed while do the milling works is up to 5000rpm.

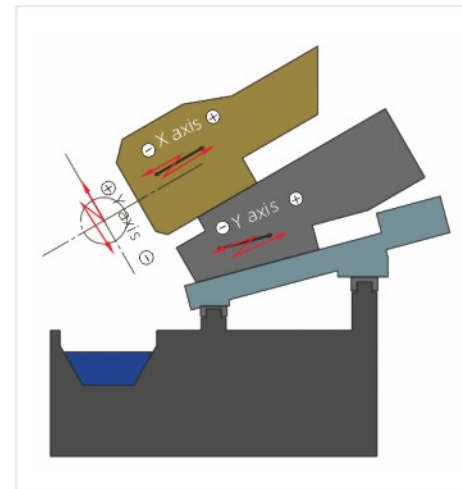
➤ Y-Axis(CY)

Y-Axis(Basic Structure)

- + Interpolation motion method structure
- + Y-Axis equips with THK heavy duty roller guide
- + High accuracy and wide machining range Y-Axis travel distance, provide diverse milling performance

Live Turret

- + Precise milling force uses high power, high torque servo motor, provide better machining performance



Y-Axis travel distance: +58 to -58mm

● Machining Application

Widely used in Automotive, Aerospace, Medical equipment, Modules etc, industries.



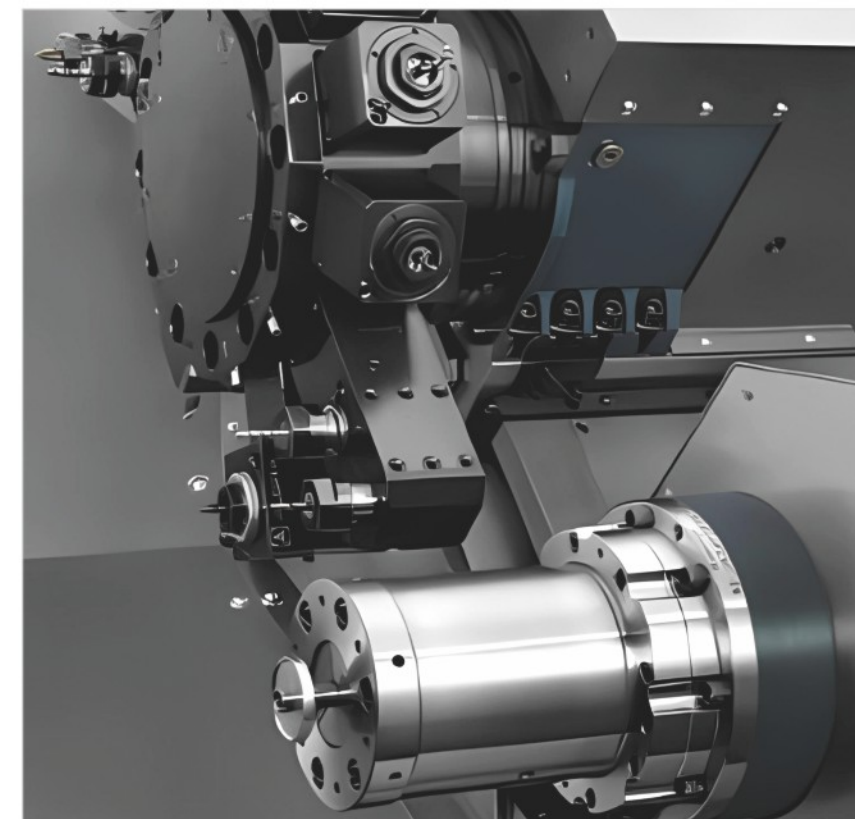
SUB-SPINDLE can achieve fully synchronous turning

Raw material - Finished workpiece: 1-time forming

Achieve fast&precise production of complex parts

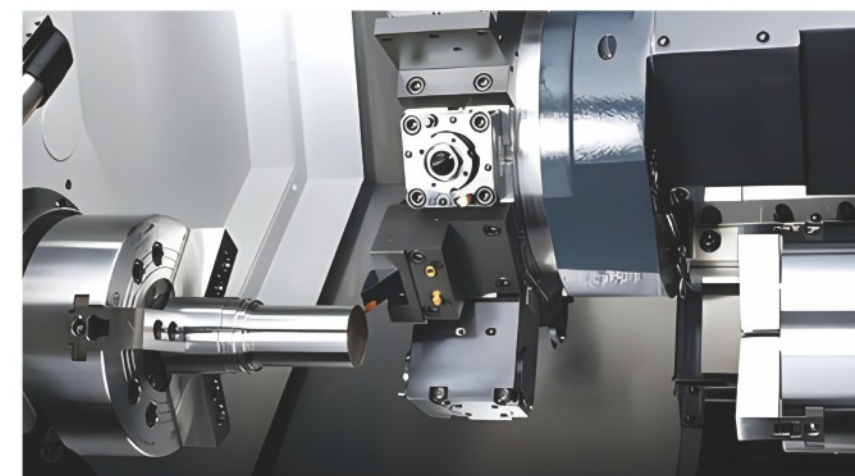
➤ Sub-Spindle(SY)

- + Double spindle can machine two ends of workpiece at the same time by one-time clamping.
- + Greatly simplify manual operation, increase production capacity and decrease machining process at the same time.



➤ Sub-Spindle(Electric Spindle)

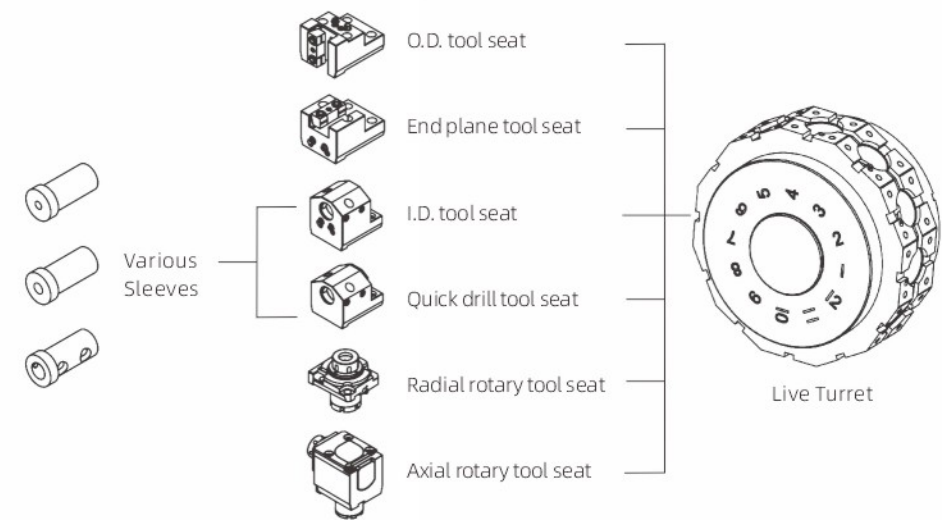
- + High rigidity, high stability built-in permanent magnet synchronous motor
- + High speed and high accuracy indexing control
- + Supported Spec.:
A2-5(6") spindle speed: 5000rpm
A2-6(8") spindle speed: 4500rpm



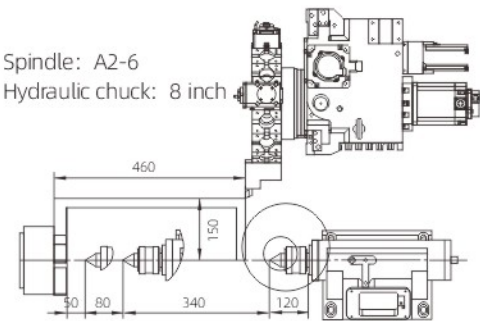
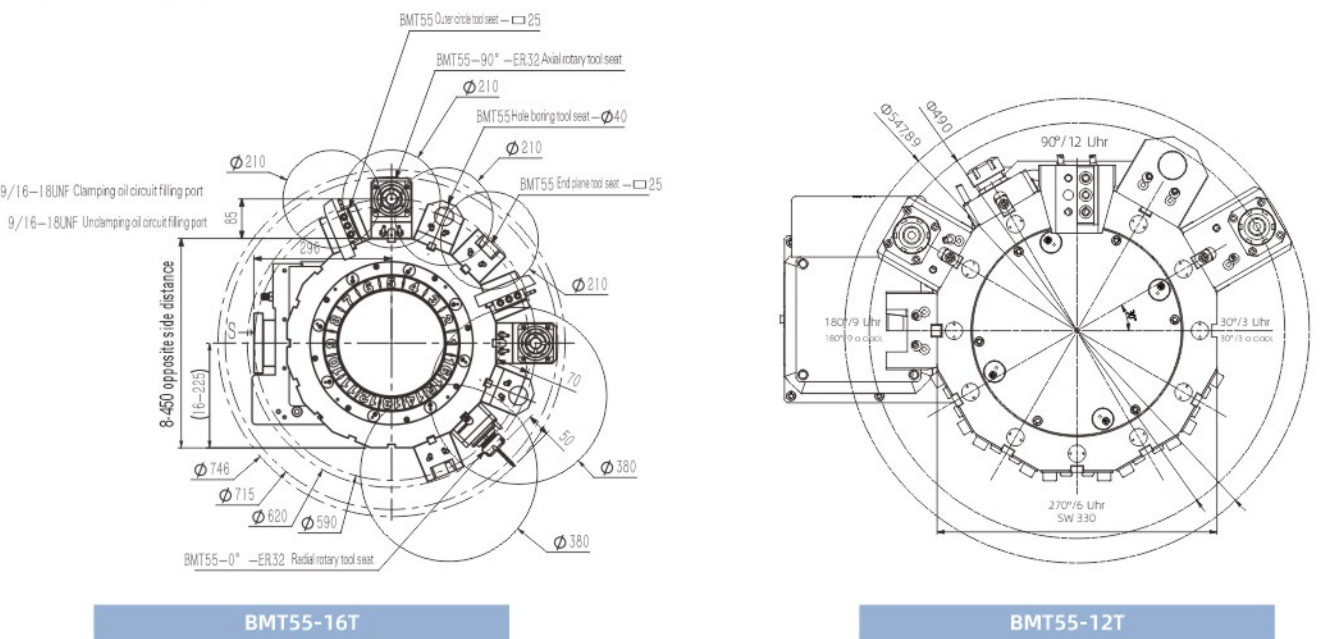
● Machining Application

Widely used in Automotive, Aerospace, Medical equipment, Modules etc, industries.

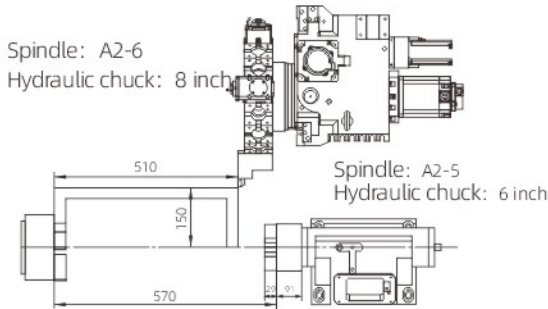
Turret&Tool System Chart



Tool Disc Interference Pattern



TC-550CY Single spindle machining rage



TC-550CY Double spindle machining rage

TECHNICAL DATA

Model	Unit	TC-550CY	TC-550SY	TC-680CY
Capacity				
Swing over bed	mm	550	600	630
Max. machining diameter	mm	260	260	400
Max. machining length	mm	420	500	1000
Spindle/Chuck				
Spindle nose	-	A2-6 or A2-8	A2-6 or A2-8	A2-8
Spindle hole diameter	mm	66	86	86
Rod through hole diameter	mm	52	72	72
Hydraulic chuck size	-	8"	10"	10" or 12"
Maximum spindle speed	rpm	4000	2600	2600
Spindle motor power	kW	11-15	15/18.5	15/18.5
Sub-spindle/Chuck				
Spindle nose	-	-	A2-5	-
Spindle hole diameter	mm	-	56	-
Rod through hole diameter	mm	-	45	-
Hydraulic chuck size	-	-	6"	-
Maximum spindle speed	rpm	-	5000	-
Spindle motor power	kW	-	11	-
X/Z/Y Axial Data				
X/Z/Y axis guide type	-	Linear guide	Linear guide	Linear guide
X/Z axis Max. travel distance	mm	230(-95 to +135) / 500	230(-95 to +135)/ 600	380(-150 to +230)/ 1150
Y axis travel distance	mm	+50 to -50	+50 to -50	+75 to -75
X/Z/Y axis rapid traverse rate	m/min	24/10/24	24/10/24	24/10/24
Tailstock				
Quill diameter/travel distance	mm	80/100	-	150/-
Tailstock travel distance	mm	400	-	700
Quill sleeve taper	-	MT 5#	-	MT 5#
Z/B Axis				
Z/B axis guide type	-	-	Linear guide/500	-
Z/B axis Max. Travel distance	mm	-	-	-
X/Z Axis Accuracy				
Repeatability accuracy	mm	±0.003	±0.003	±0.005
Turret				
Live turret	-	BMT55-16T	BMT55-12T	BMT65-12T
Rotary head speed(M+Y)	rpm	5000	5000	5000
General				
Overall size(L*W)	mm	2300×1650	2900×1950	5200×2350
Net weight(approx.)	kg	4500	5500	8000

STANDARD CONFIGURATION

- ☐ FANUC CNC System
- ☐ 12T Live Tool Turret
- ☐ 8" Hollowed Hydraulic Chuck
- ☐ 6" Hollowed Sub Chuck
- ☐ Coolant System

EXTRA OPTIONS

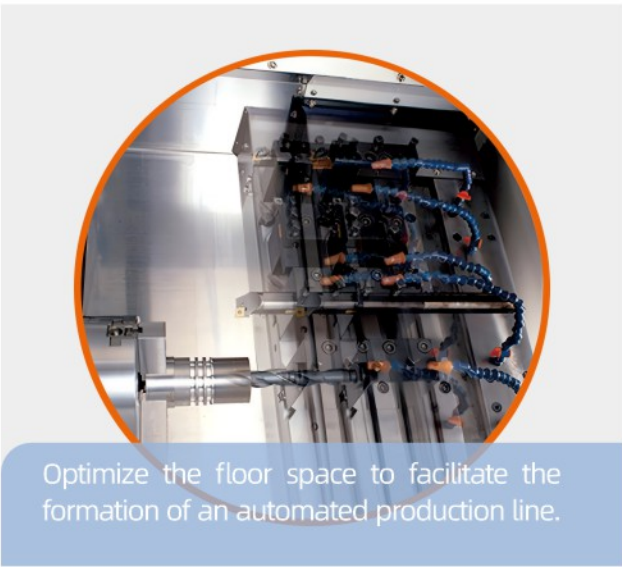
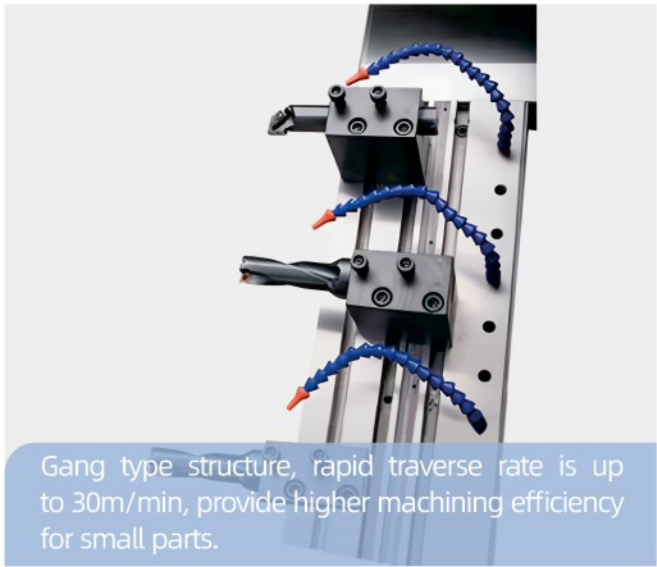
- ☐ MITSUBISHI/SIEMENS System
- ☐ Auto Chip Removal Conveyor + Trolley
- ☐ 10" hydraulic rotary chuck
- ☐ 15T Live Turret

CNC GANG-TOOL LATHE

Smaller Bed, Faster Machining Speed



PERFORMANCE/TECHNICAL DATA



Model	Unit	TC-36P	TC-46P
Capacity			
Swing over bed	mm	300	400
Max. machining diameter	mm	100	300
Max. machining length	mm	200	280
Spindle/Chuck			
Spindle nose	-	A2-4	A2-5
Spindle hole diameter	mm	46	56
Rod through hole diameter	mm	35	45
Collet/Hydraulic chuck size	-	36 form / 5"	46 form / 6"
Maximum spindle speed	rpm	5000	5000
Spindle motor power	kW	5.5	7.5
X/Z Axial Data			
X/Z axis guide type	-	Linear guide	Linear guide
X/Z axis Max. travel distance	mm	700(radius: 350) / 240	880(radius: 440) / 290
X/Z axis rapid traverse rate	m/min	30	30
X/Z Axis Accuracy			
Repeatability accuracy	mm	±0.003	±0.003
Turret			
Turret type	-	Gang type	Gang type
General			
Overall size(L*W)	mm	1800×1400	2210×1550
Net weight(approx.)	kg	1800	2600

CNC VERTICAL LATHE

Larger Size Parts, Forceful Cutting



LONG
CREDIBILITY



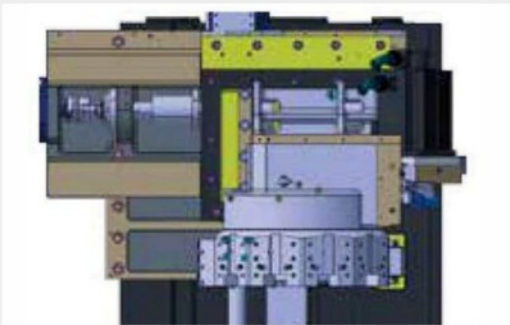
HIGH
RIGIDITY



DURABLE
STABILITY

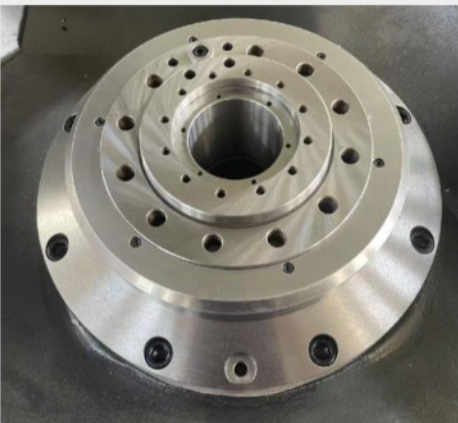
► Bed

High rigidity box guide and high tension Meehanite casting iron bed design, provide high rigidity guarantee for high precision and heavy duty cutting.



▲ Axial Feed Structure

All axis use box guide structure, at the same time, enlarge the guide's width and spacing, effectively enhance the rigidity of the equipment to make it more suitable for heavy-duty cutting.



◀ High Performance Spindle

Equip with high performance spindle, Minimize the vibration and thermal errors generated during the spindle machining process to the greatest extent, the surface accuracy of the processed components has been further improved, extend the tools service life.



▲ High Productivity

Adopt high efficiency spindle and new servo turret8T/12T(live turret is optional), improve production efficiency.

UNIT:mm

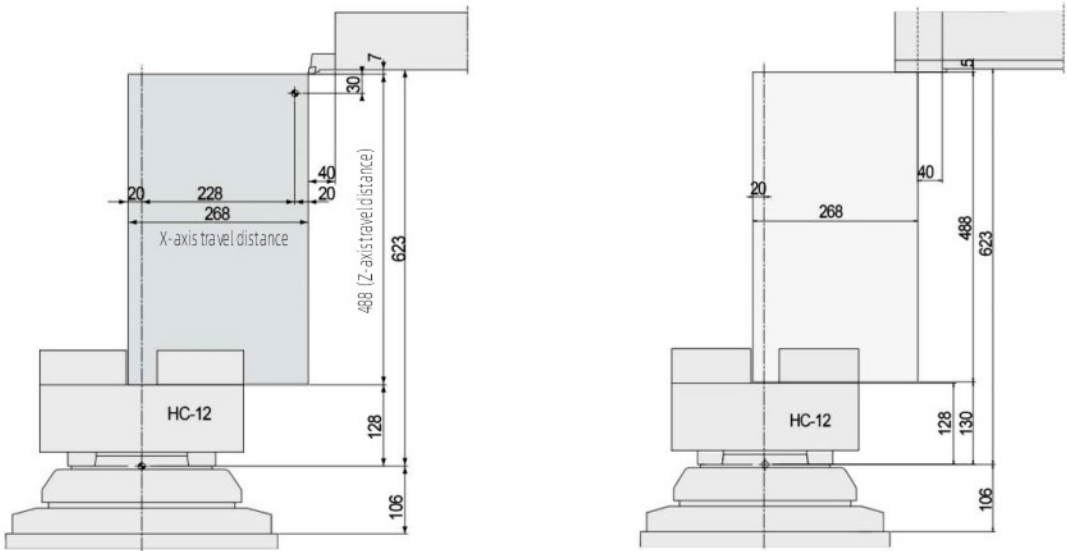
VL-500		
Chuck Size	12 inch	15 inch
Max. machining diameter	Φ496	Φ496
Max. machining length	461	461
Rod through hole diameter	12T	12T

UNIT:mm

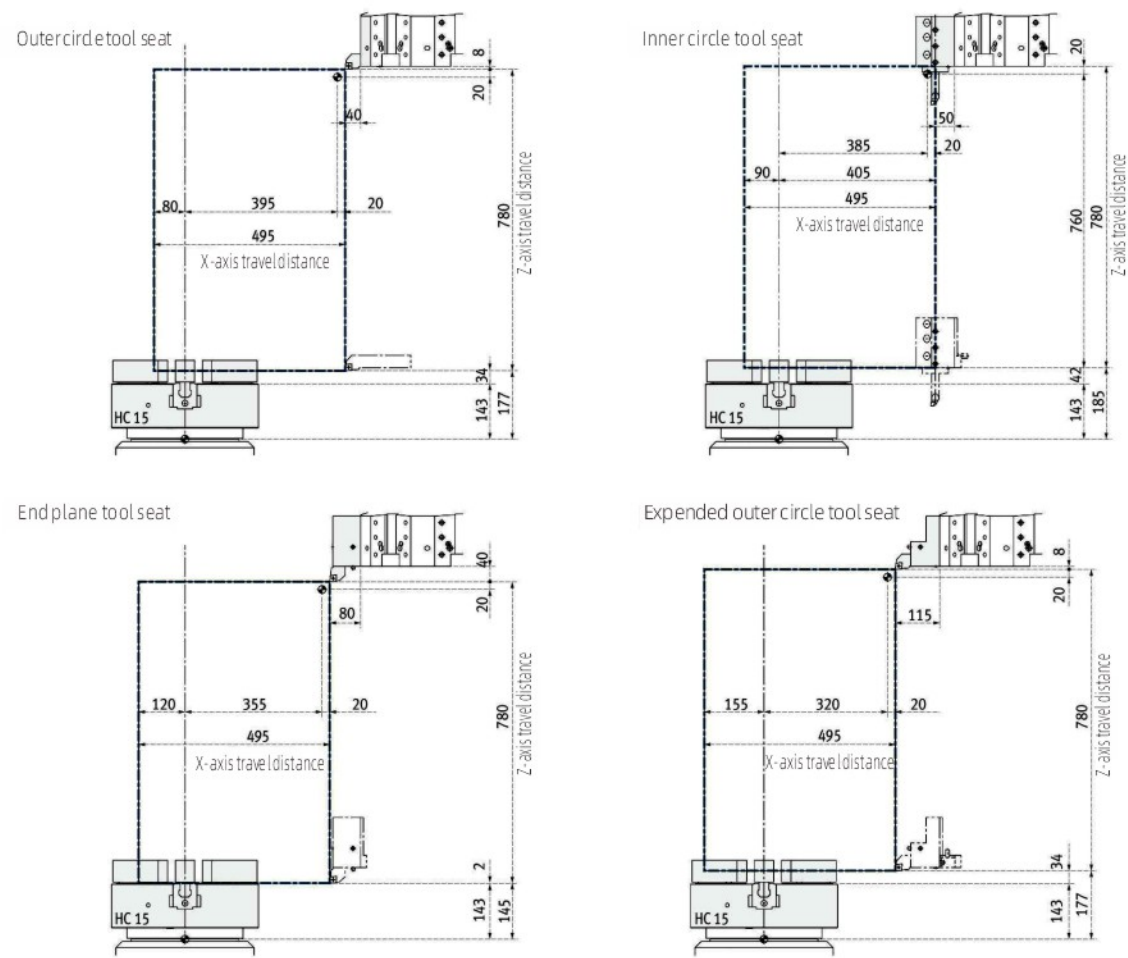
VL-800/M (C-Axis available, M: Turn-mill)		
Chuck Size	15(18/21/24) inch	
Max. machining diameter	Φ830	
Max. machining length	780	690
Rod through hole diameter	8(10/12)T	

► Machining Range

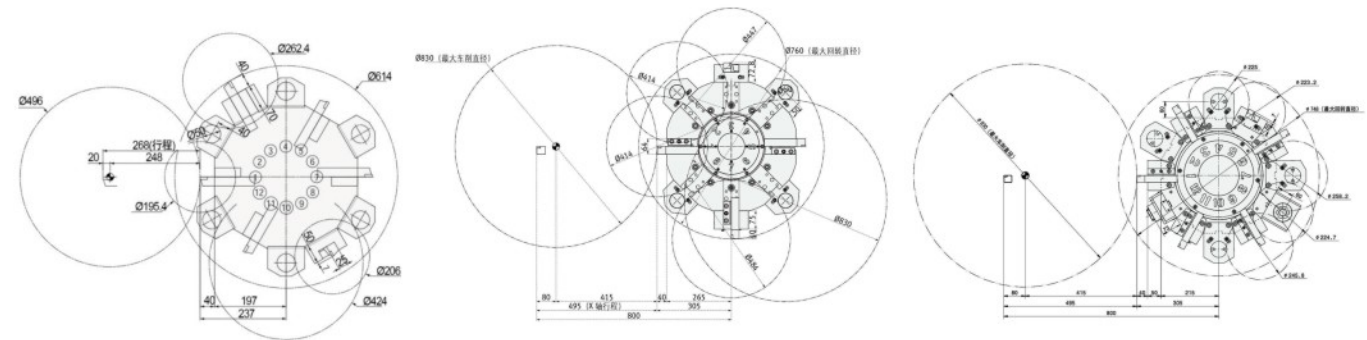
VL-500



VL-800



► Tool Disc Interference Pattern

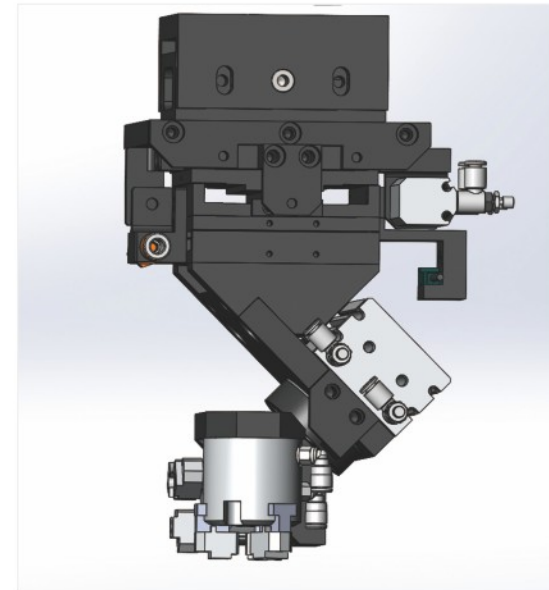


TECHNICAL DATA

Model	Unit	VL-500	VL-800	VL-800M
Capacity				
Swing over bed	mm	Ø600	Ø900	Ø900
Swing over saddle	mm	Ø500	Ø740	Ø740
Max. machining diameter(disc workpiece)	mm	Ø495	Ø830	Ø830
Recommended machining diameter	mm	Ø305	Ø550	Ø550
Max. machining length	mm	460	780	690
Spindle/Chuck				
Spindle nose	-	A2-8	A2-11	A2-11
Spindle hole diameter	mm	Ø90	Ø90	Ø90
Hydraulic chuck size	inch	12"	15"/18"/21"/24"	15"/18"/21"/24"
Maximum spindle speed	rpm	2000	1000	1000
Spindle motor power	KW	18.5-22	22/30	22/30
X/Z Axial Data				
X/Z axis guide type	-	Box-type	Box-type	Box-type
X/Z axis Max. travel distance	mm	265(245+20) / 488	495 / 780	495 / 780
X/Z axis rapid traverse rate	m/min	20	20	20
X/Z Axis Accuracy				
X/Z Axis Repeatability accuracy	mm	±0.005	±0.005	±0.005
Turret				
Servo tool turret	-	12T	8T/12T	-
Live turret (M)	-	-	-	BMT75-12T
Rotary head speed	rpm	-	-	4000
Outer circle tool model	mm	25X25	32X32	25X25
Boring hole tool diameter	mm	50	60	50
General				
Overall size(L*W*H)	mm	1480*2750*3200	2010*3115*3638	2010*3115*3638
Net weight(approx.)	kg	5950	9400	9450

Not only provide CNC machines, But also bring with automation solutions

- + Always put the improvement of customers' productivity and quality first.
- + We analyze the problems encountered by customers with unique technology.
- + Provide customers with practical, effective overall solutions which can solve the problems.



Modular Design, Multi-Systems Options

- More well-known advanced CNC systems
- Nano CNC with high speed and accuracy
- Multi-Axes motion and rapid response motion control

High-performance Electric Control System

Composed of advanced electronic components, Control performance is stable and reliable.

FANUC

FANUC PLUS new system function

New protective structure with FANUC preventive maintenance technology



MITSUBISHI ELECTRIC

MITSUBISHI system, High speed high accuracy function

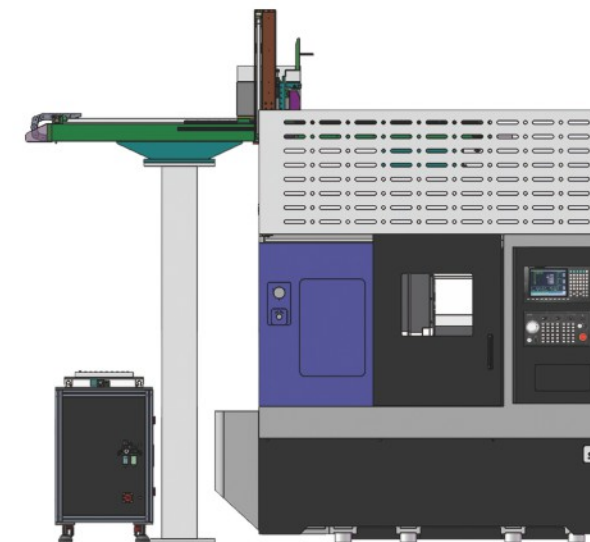
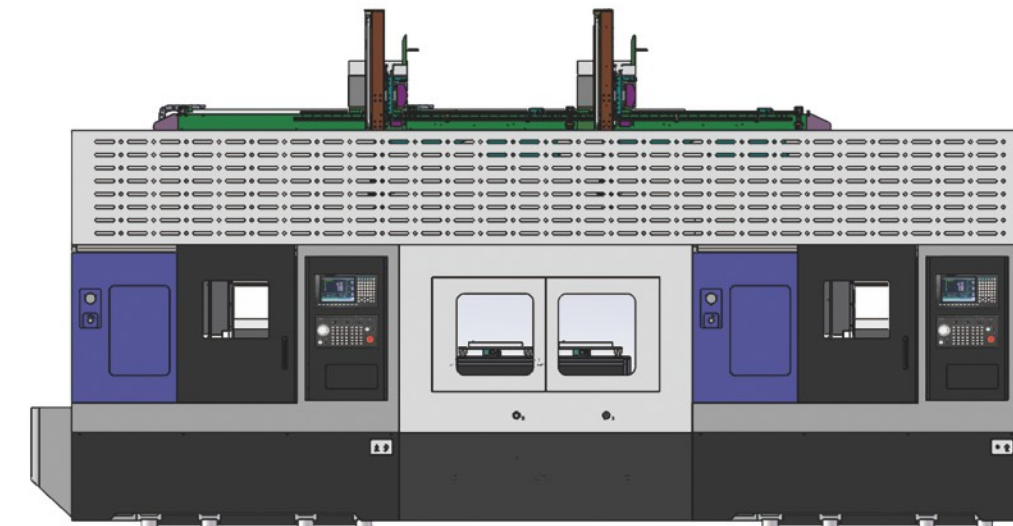
MITSUBISHI CNC E80 Series

NEW

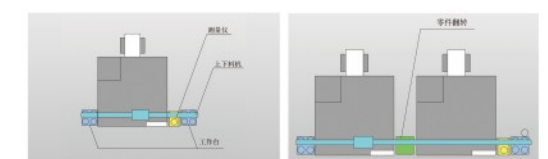


Intelligent Combination Manufacturing Unit

Integrated automation TLUS(Truss Loading & Unloading System)

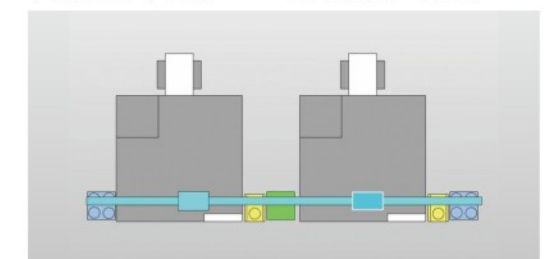


Manufacturing Unit Configuration Examples



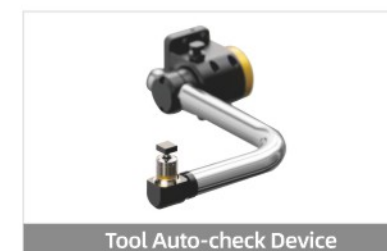
1-1 (1 lathe - 1 TLUS)

2-1 (2 lathes - 1 TLUS)



2-2 (2 lathes - 2 TLUSs)

Special Options



Tool Auto-check Device



Workpiece Detection Device



Automatic Bar Feeder