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**SHENYANG MACHINE  
TOOL CO., LTD.**

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**2011**

**GENERAL CATALOGUE**





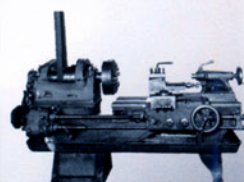
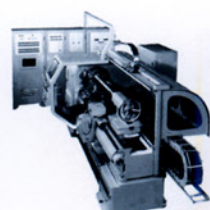
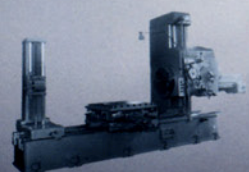
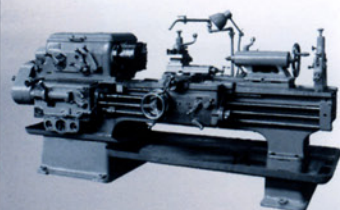
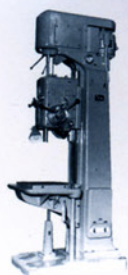
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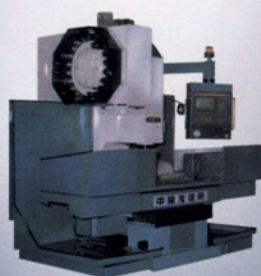


# HISTORY

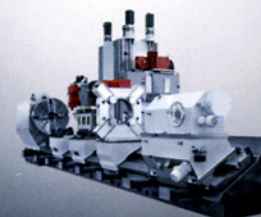
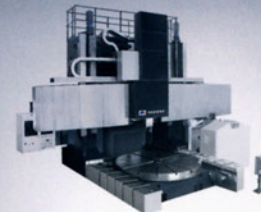
1949~  
1975



1976~  
1999



2000~  
2008



2010~



## Company Profile

Shenyang Machine Tool Co., Ltd. is the largest subsidiary of Shenyang Machine Tool (Group) Co., Ltd., and was formed from the original Shenyang No. 1 Machine Tool Works, the China Czechoslovakia Machine Tool Co. Ltd., the Shenyang CNC Machine Tool Co. Ltd., and the Liaoning Precision Tool Works. It was created in 1993 under Registration Approval number [1992]31 published by the Shenyang Economic System Reform Committee, with a registered capital of RMB 545,470,000. In July 1996 the company shares were listed on the Shenzhen Exchange as "Shenyang Machine Tool" with the code number of 000410.

## Natural Conditions

The company covers an area of 1.15 million square meters, owns 16 subsidiary companies, including 8 subsidiaries that manufacture machine tools, 7 subsidiaries that manufacture the component parts used in machine tools, and an import and export company. It has more than 13,800 employees, 478 of whom have a master's degree or higher. It is equipped with more than 1700 specialized production machines, including 226 high-speed, high-accuracy units such as 5-axis gantry machining centres, horizontal milling and boring centres, etc.

## Main Business

The company's main business is the production of metal cutting machines, and its leading products are CNC machines, conventional machines and machine components. The CNC machines include CNC lathes, CNC milling and boring machines, CNC drilling machines, machining centres, heavy-duty machines, high-speed milling machines, etc. Conventional machines include conventional lathes, conventional drilling machines, conventional horizontal boring and milling machines, etc. Machine components include CNC controls and CNC tooling, etc. The company has developed more than three hundred types and thousands of individual specifications which have been sold in all regions of China, and have been exported to over 80 countries of the world. In 2010 the company produced more than 68,000 machines of various types, including more than 21,000 CNC machines, and achieved sales revenue of RMB 8.05 billion Yuan.

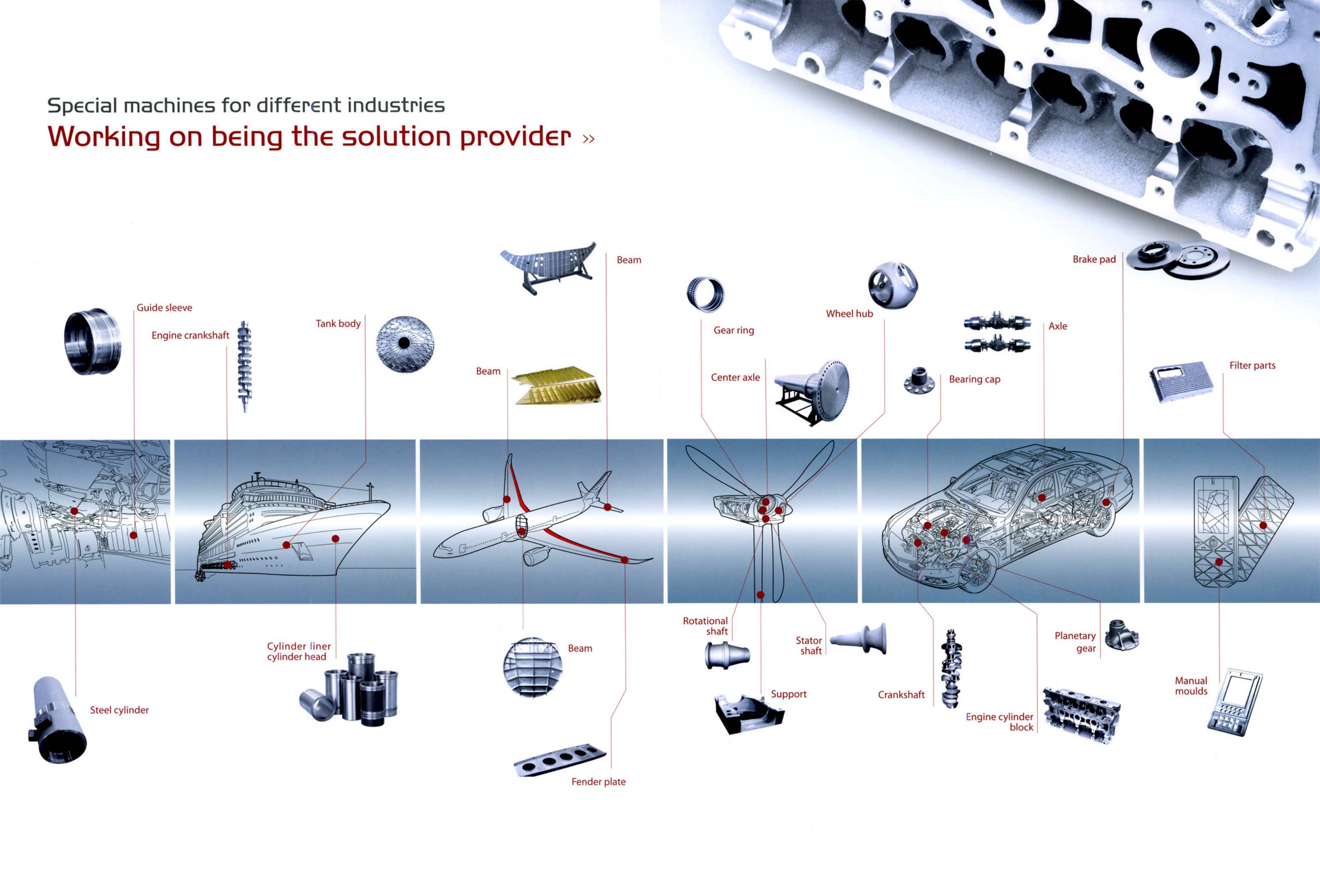
## Future Development Goals

The company will be guided by technological innovation and first-rate quality engineering to focus on the customers needs, to continuously improve its management structure, to accelerate product development and improvement, to promote lean manufacturing and technological evolution, to greatly improve the scales of production and economic benefit in order to achieve its goal of becoming the world's leading enterprise of its type.



Special machines for different industries

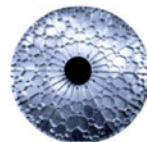
**Working on being the solution provider >>**



Guide sleeve



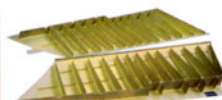
Engine crankshaft



Tank body



Beam



Beam



Gear ring



Wheel hub



Center axle



Axle



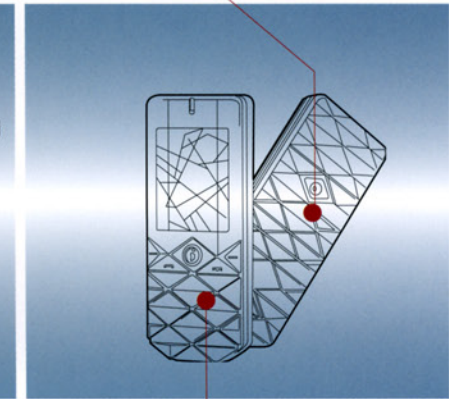
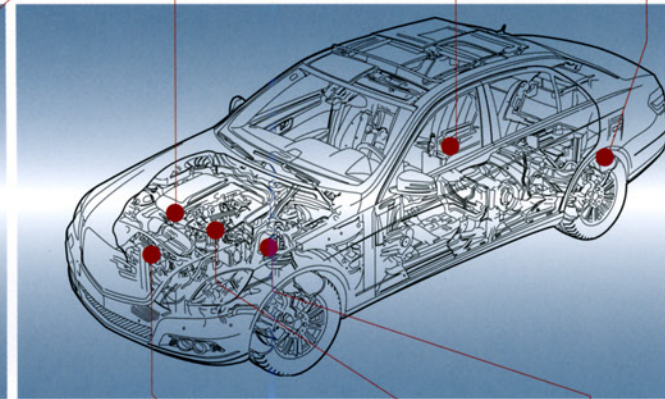
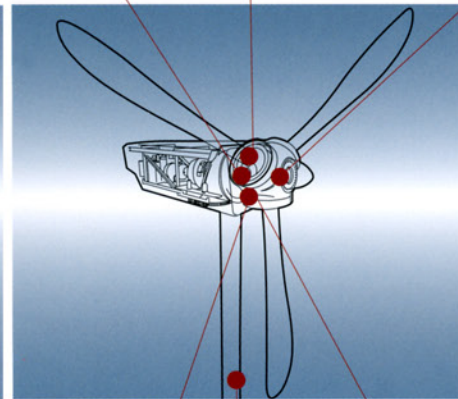
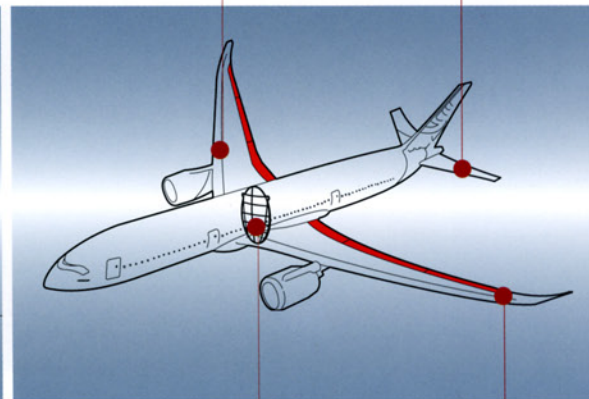
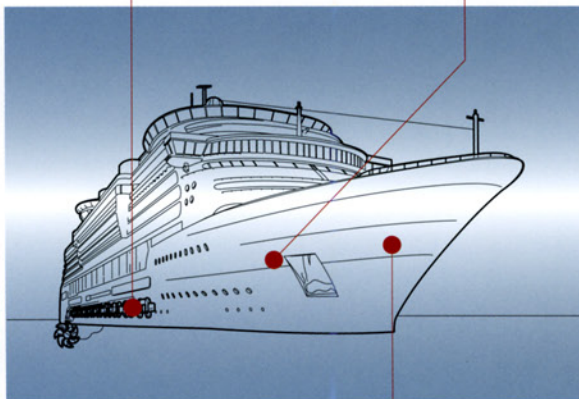
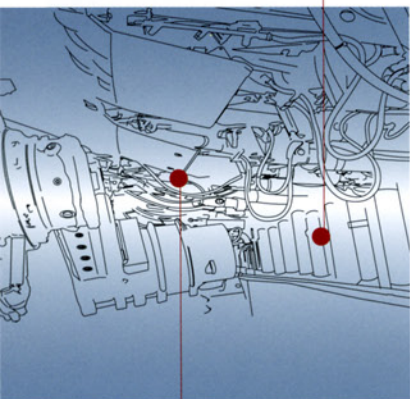
Bearing cap



Brake pad



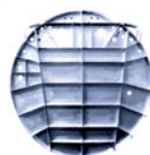
Filter parts



Steel cylinder



Cylinder liner  
cylinder head



Beam



Fender plate



Rotational  
shaft



Support



Stator  
shaft



Crankshaft



Engine cylinder  
block



Planetary  
gear



Manual  
moulds



# MILLING TECHNOLOGY

HMC

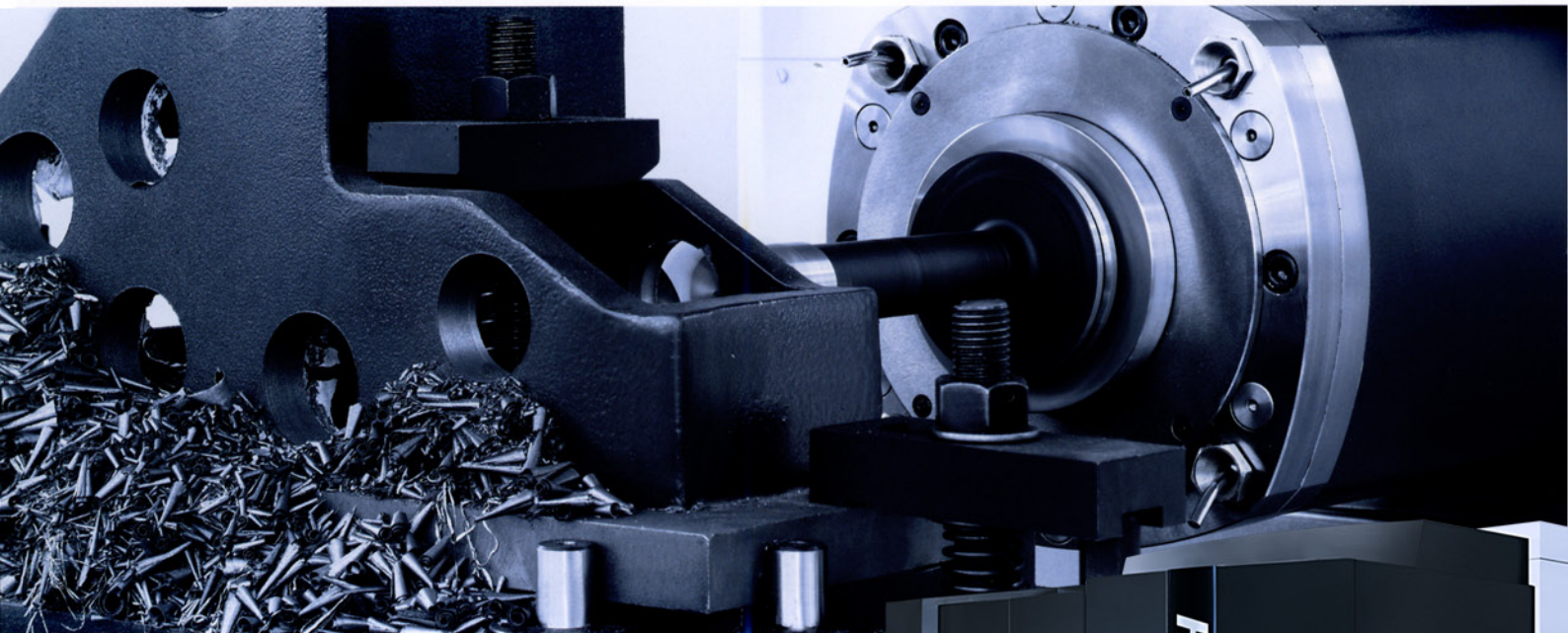
VMC

TC

GMB

GMC





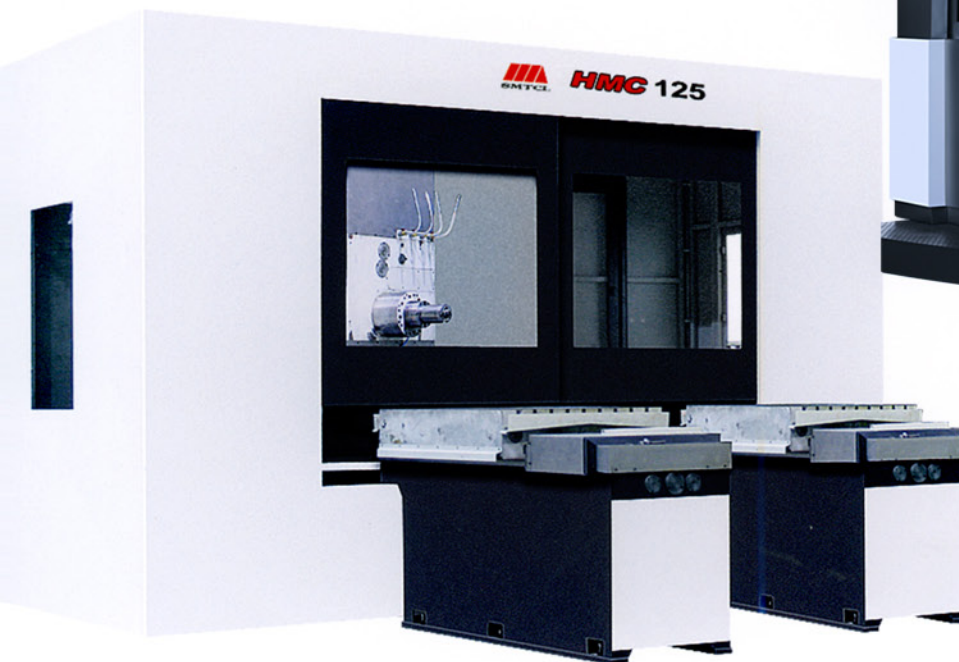
New product of HMC50h is Gantry frame, moving column and front headstock, 160mm spindle, max. table load 600kg all these meet high requirement of holes machining of large-size pump body and power precision deep-hole machining of gearbox body. Spindle 3-shift speed change, wide speed range with big torque, spindle travel 1000mm inner hole machining becomes more easily. Table double gear with 0-clearance driven, high indexing precision, closed loop control and positioning at any angle can ensure u-turn boring precision.

Single column and door type frame structure, CNC vertical rotary table rotate at any angle and five-axis can move simultaneously, max. load is 800kg suitable for high-speed machining curved with surface of complicated parts such as impellers and blades.

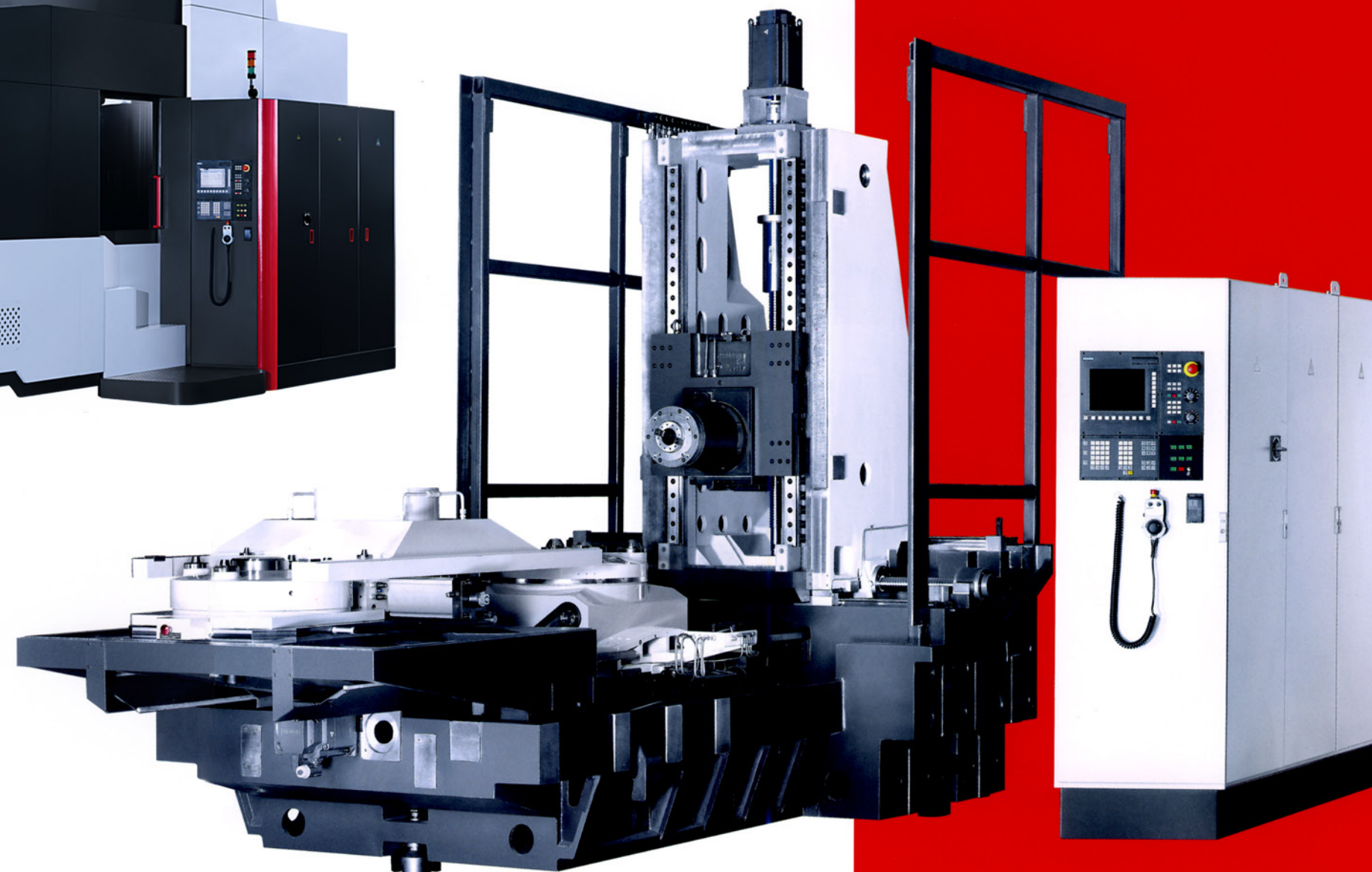
2-shift speed change, spindle reaches 5000rpm to achieve high-speed machining.

Five-axis moving simultaneously and concentrating on worktable can accomplish B,C axis swing, CNC rotary worktable can reach 3150Nm torque when does heavy cutting.

100% numerically servo-drive and integrated solution to deal with die & mould manufacturing program can optimize free surface and swing machining.



Horizontal machining center HMC125

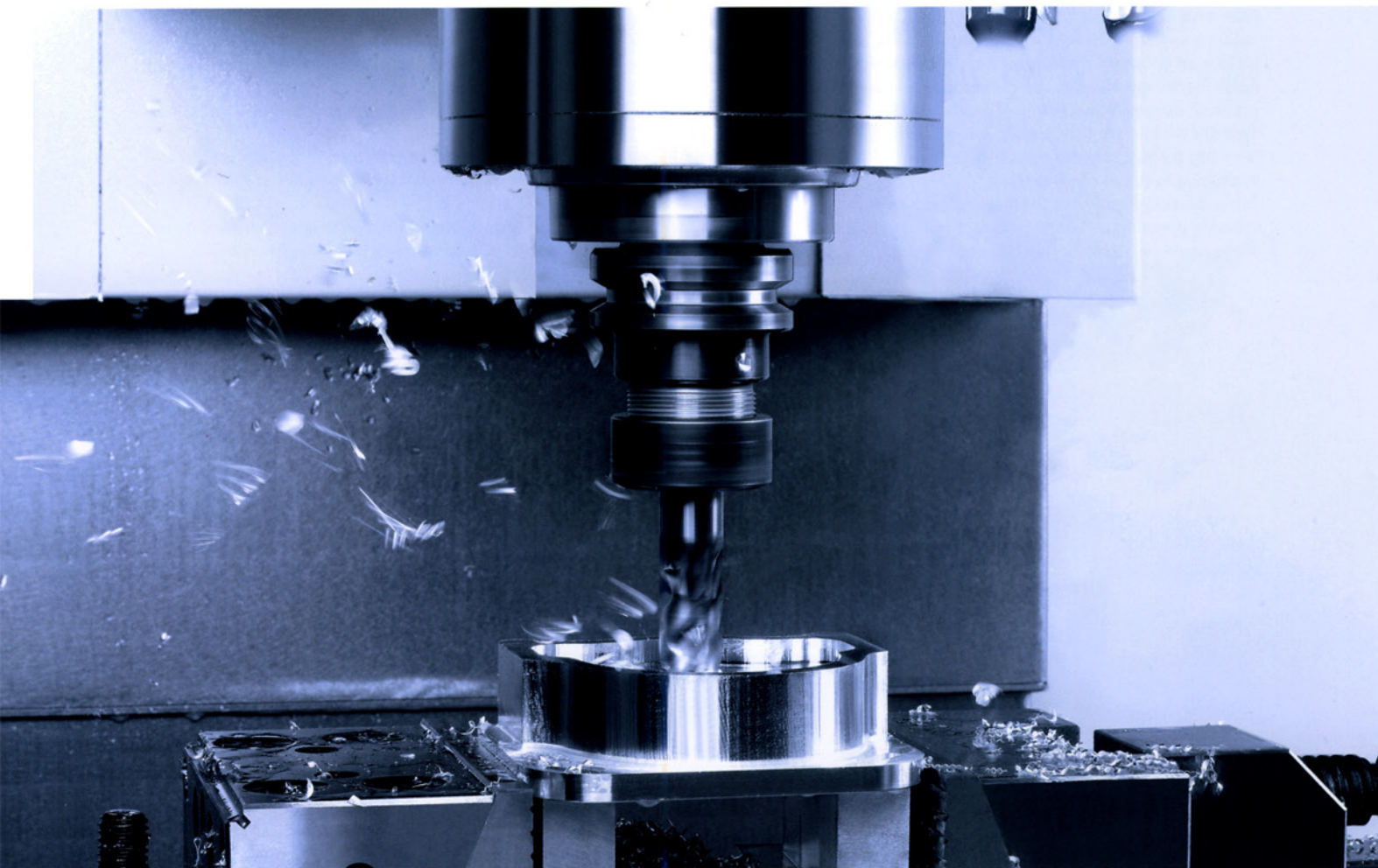


Horizontal machining center HMC63e

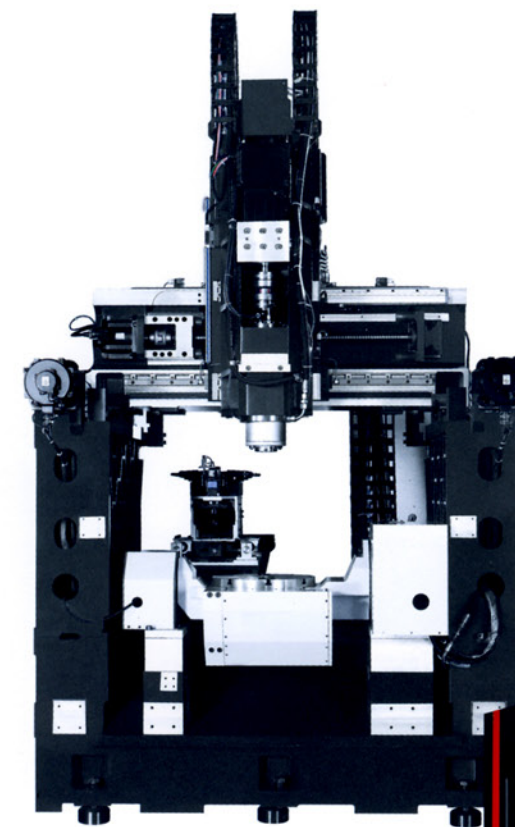
Items	Unit	HMC50e	HMC63e	HMC80e	HMC50c	HMC63c	HMC80c	HMC50h	HMC100(s)	HMC125(s)
Table size	mm	500×500	630×630	800×800	500×500	630×630	800×800	500×500	1000×1000	1250×1250
Max. table load	Kg	500	1200	2000	500	1200	2000	600	3000	4000
Max. spindle speed	rpm	20-6000	20-6000	20-6000	10-10000	10-10000	10-10000	18000	3000	3000
Travel(X-axis)	mm	800	1000	1350	800	1000	1350	630	2000	2000
Travel(Y-axis)	mm	700	900	1100	700	900	1100	630	1200	1200
Travel(Z-axis)	mm	800	900	1100	800	900	1100	630	1200	1200

Note: s means single worktable series optional.





Independent brand of Feiyang CNC system, 15" touch screen type flat liquid crystal display, and user-friendly designed operating interface.  
The advanced structure and specific measures to mitigate distortion guarantee a high rigidity for the machine tool.  
A split type of protective drawplate on the Y axis is designed for cutting to slide off, is good for the environment; and the lubricating oil is recycled completely to prolong the useful life of the coolant.  
The whole machine is sealed and has a great leak proof capability.



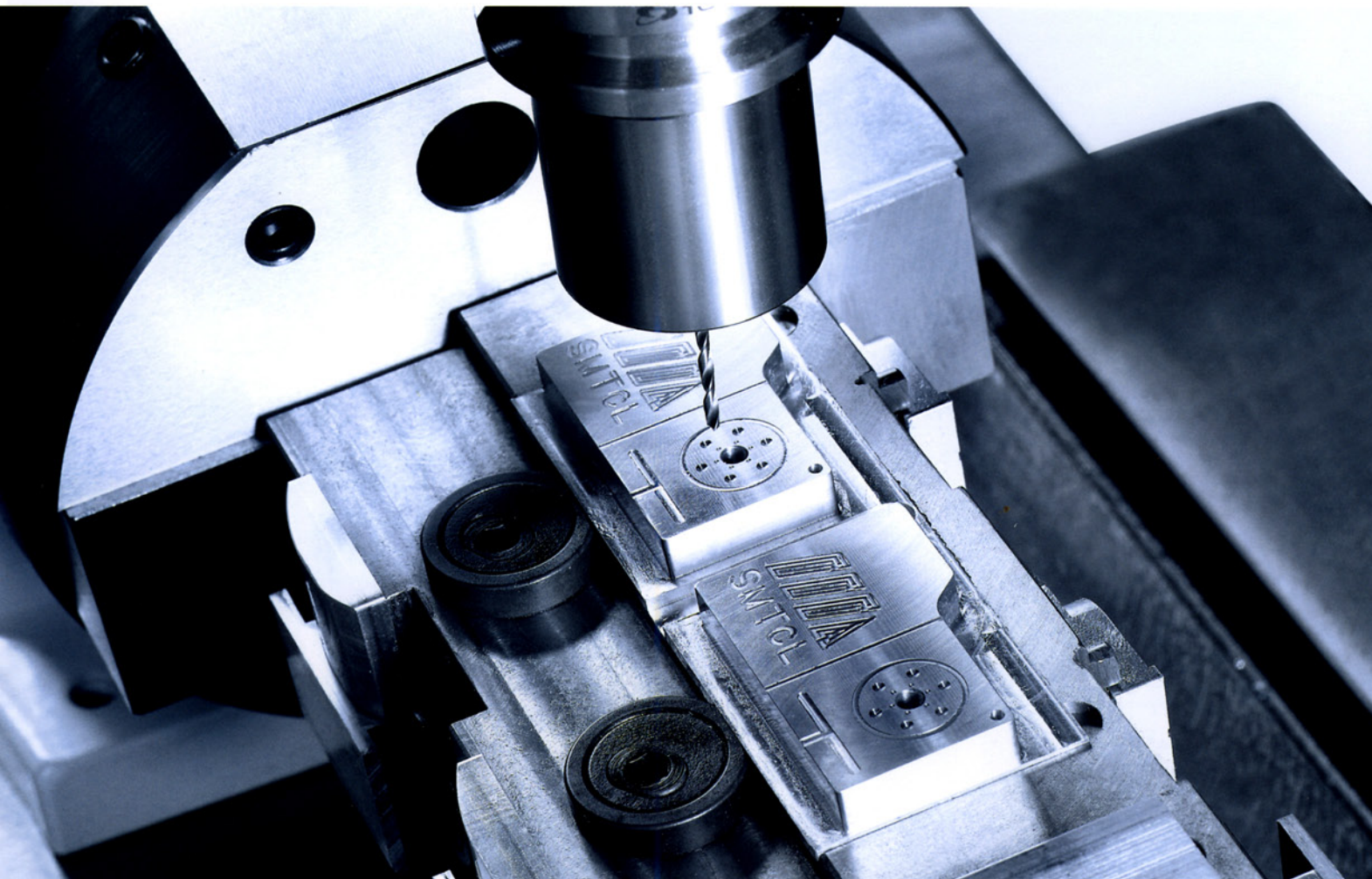
Vertical machining center VMC0656e



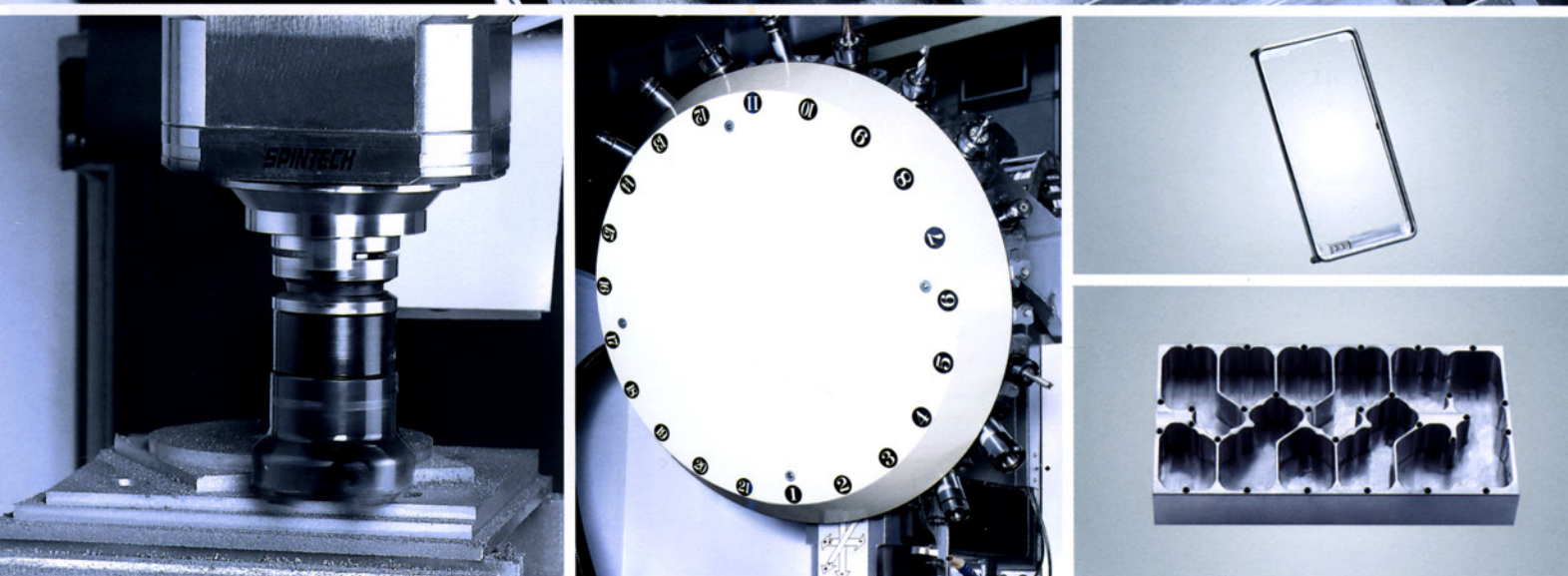
Items	Unit	VMC650E	VMC850E	VMC700B	VMC850B	VMC1000B	VMC1100B	VMC1300B	VMC1600B	VMC2100B
Dimensions of worktable	mm	900×420	1000×500	800×420	1000×500	1200×500	1300×610	1400×700	1700×800	2200×800
Max. load bearing of worktable	kg	600	600	600	600	600	1000	1000	2000	3000
Max. speed of spindle	rpm	50-8000	50-8000	8000	8000	8000	8000/6000	8000/6000/6000	6000	6000
Travel of X/Y/Z axes	mm	650/400/500	850/500/540	700/440/530	850/560/650	1000/610/650	1100/610/650	1300/700/700	1600/800/800	2100/800/800
Rapid travel speed	m/min	32/32/30	32/32/30	32/32/32	32/32/30	32/32/30	32/32/30	24/24/20	24/24/20	18/18/18

Items	Unit	VMC700P	VMC850P	VMC1000P	VMC1100P	VMC1300P	VMC1600P	VMC2180S	VMC21100S	VMC2580S	VMC0656e
Dimensions of worktable	mm	800×420	1000×500	1200×520	1300×610	1400×700	1700×800	2000×800	2200×1000	2700×800	∅400
Max. load bearing of worktable	kg	600	600	600	1000	1500	2000	3000	3000	250	250
Max. speed of spindle	rpm	8000	8000	8000	7000(6000)	6000	6000	20-4500	20-4500	20-4500	8000
Travel of X/Y/Z axes	mm	700/440/530	850/520/550	1000/520/550	1100/630/610	1300/700/700	1600/800/800	2100/800/850	2100/1000/850	2500/800/850	600/560/450
Rapid travel speed	m/min	48/48/48	36/36/36	36/36/36	36/36/24	30/30/24	18/18/18	15/15/10	15/15/10	15/15/10	20/20/20

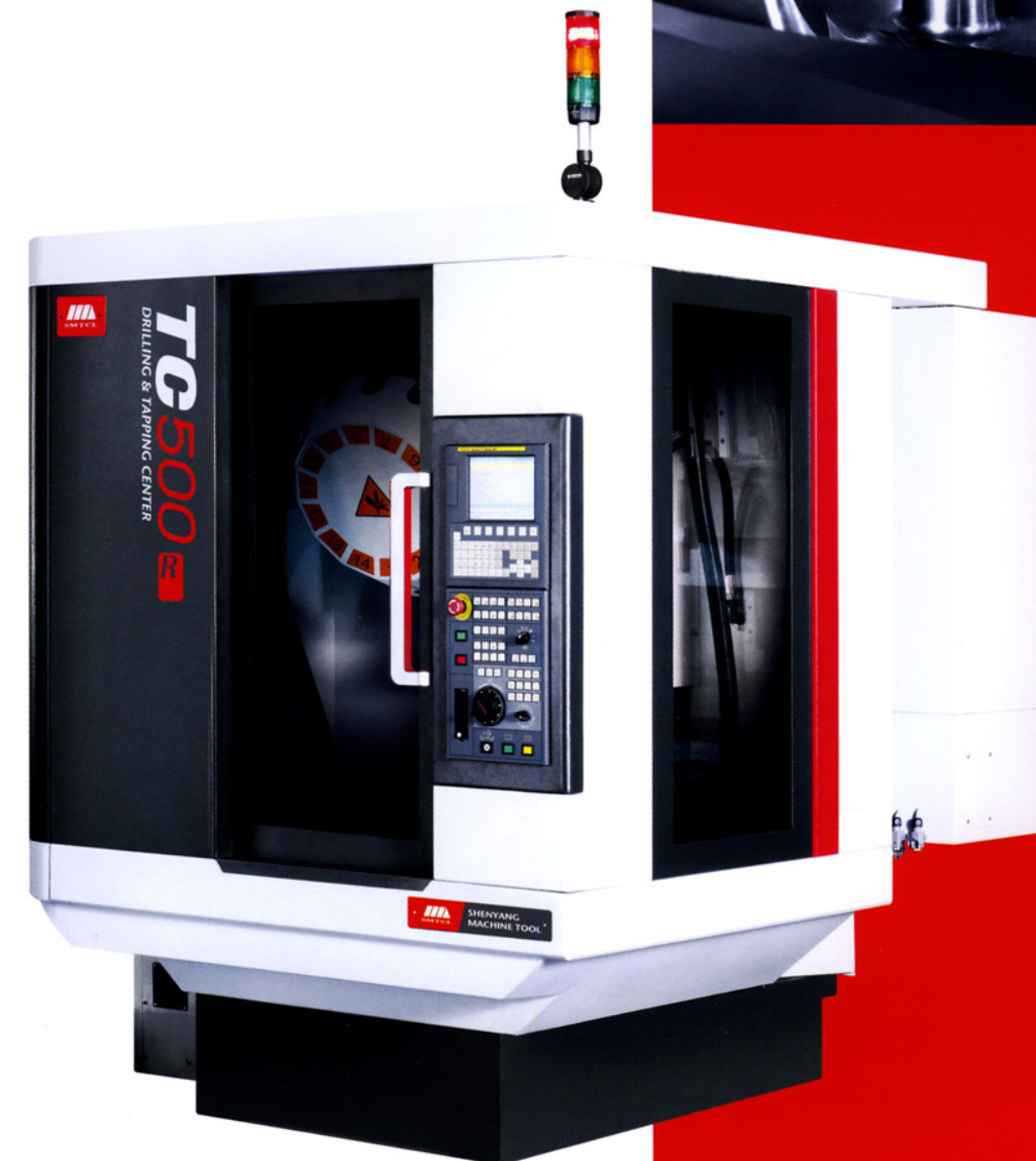




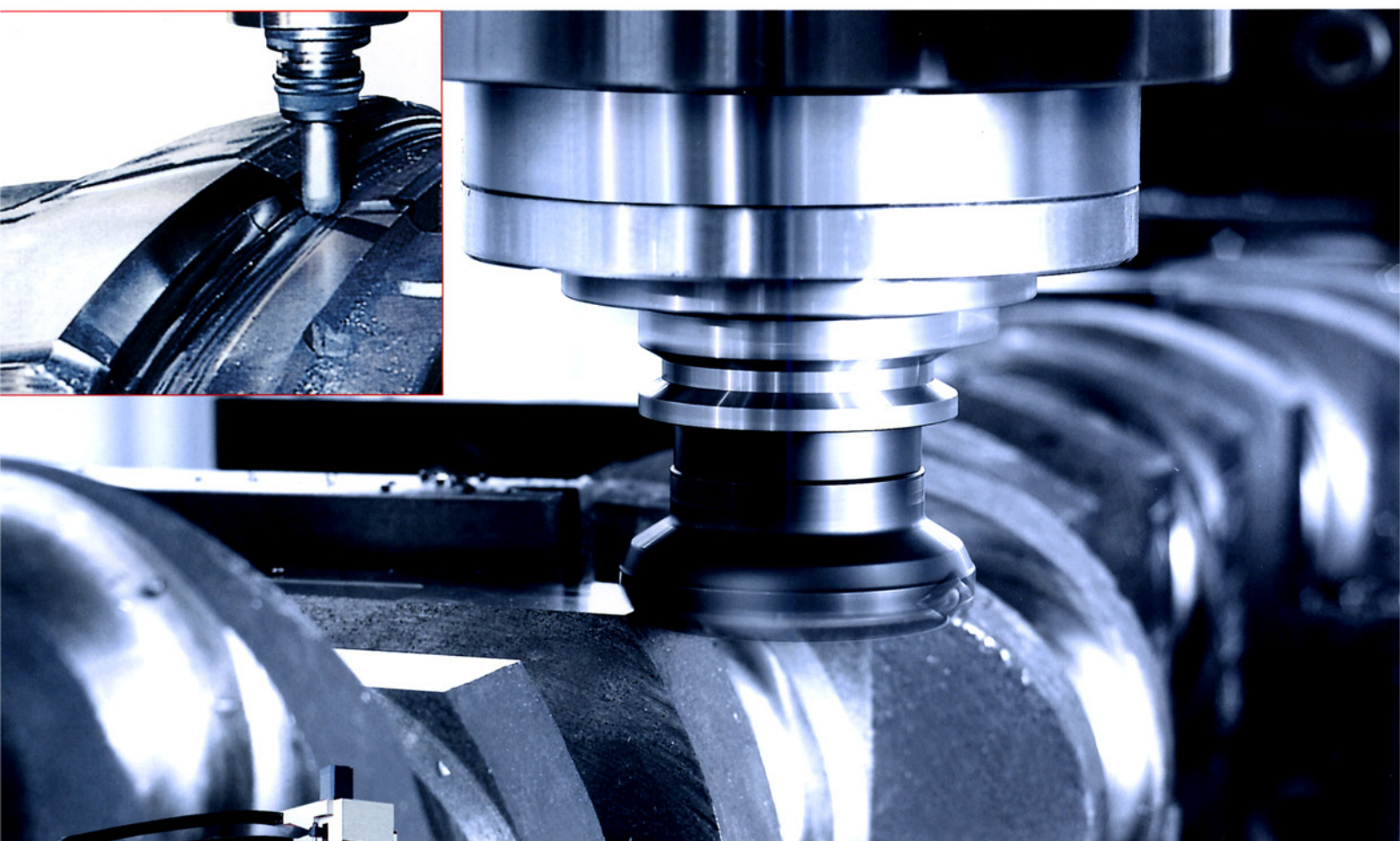
Pursue production efficiency  
Improvement for operation performance  
High precision  
The production efficiency of the machine is improved through optimizing the starting and stopping time of the spindle, adopting simplify and quick-change tool mechanism, and using high-precision G code functions which shorten processing time.  
Standard colour LCD display of 8.4 inches  
Standard built-in PLC function  
Carry PLC function in the NC system, and no setting required between NC and PLC.  
The machine is equipped with new type 0i(MATE)-MD CNC system with high speed and high precision, which greatly improves the machining precision of the machine.



Items	Unit	TC500R	TC700R
Dimensions of worktable	mm	650x400	850x410
Max. load of worktable	kg	250	250
Max. spindle speed	rpm	10000	10000
Rapid travel speed (X/Y/Z)	m/min	48/48/36	48/48/36
Capacity of tool magazine	piece	14	14







Items	Unit	GMB1016	GMB1230	GMB1640	GMB2040	GMB2560	GMB3080
Dimensions of worktable	mm	1000×1600	1250×3000	1600×4000	2000×4000	2500×6000	3000×8000
Maximum loading	kg	3000	6000	12000	14000	22000	20000
Spindle speed range	rpm	40-6000	40-6000	40-6000	40-6000	40-6000	40-6000
Travel X/Y/Z	mm	1600/1000/600	3000/1250/750	4200/2300/1000	4200/2700/1000	6200/3200/1000	8200/4000/1000
Rapid speed X/Y/Z	m/min	20/20/16	20/20/16	10/10/10	10/10/10	10/10/10	10/10/10

The main travel of the machine adopts AC servo-motors with wide speed range and ZF gearbox to provide great torque output at low speed making it suitable for heavy cutting, and constant power in high speed, making it suitable for finish machining as well.

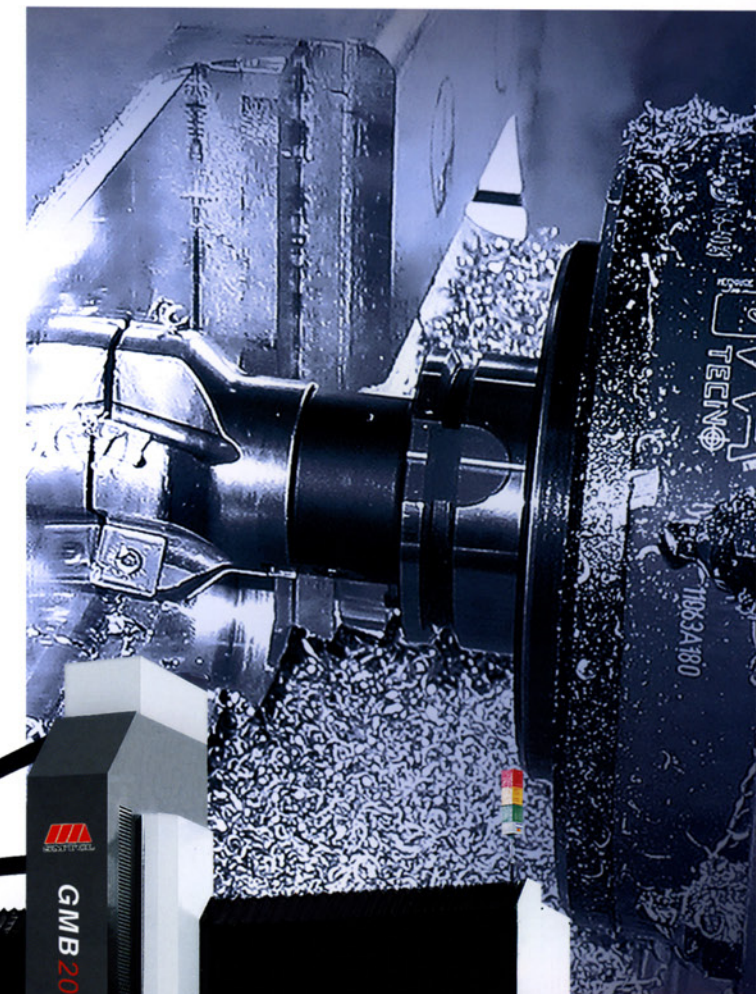
The large cross-section design of the cross-beam and the "step" design of the guide-ways minimize the distance between the lower guide-way and the spindle center-line, and provides increased strength against bending and torsion, in order to render stable cutting characteristics.

The headstock is equipped with a symmetrical double hydraulic balancing mechanism to provide steady and accurate movement of the headstock.

The spindle is supported by precision bearings to increase rigidity and minimize run-out. It comes equipped with an oil chiller to minimize change in spindle temperature during operation, thus reduce thermal distortion.

The bed, column, cross-beam, guideways, and spindle box of the machine are made of iron cast in resin-bonded sand, and the ample ribbing structure provides superb rigidity and steadiness of movement.

The table of the machine has excellent positioning accuracy and static response characteristics, owing to the optimal design which combines a high-inertia AC servo-motor, high quality ball screws, and heavy-duty linear guide-ways.



Gantry type boring and milling machining center GMB2040

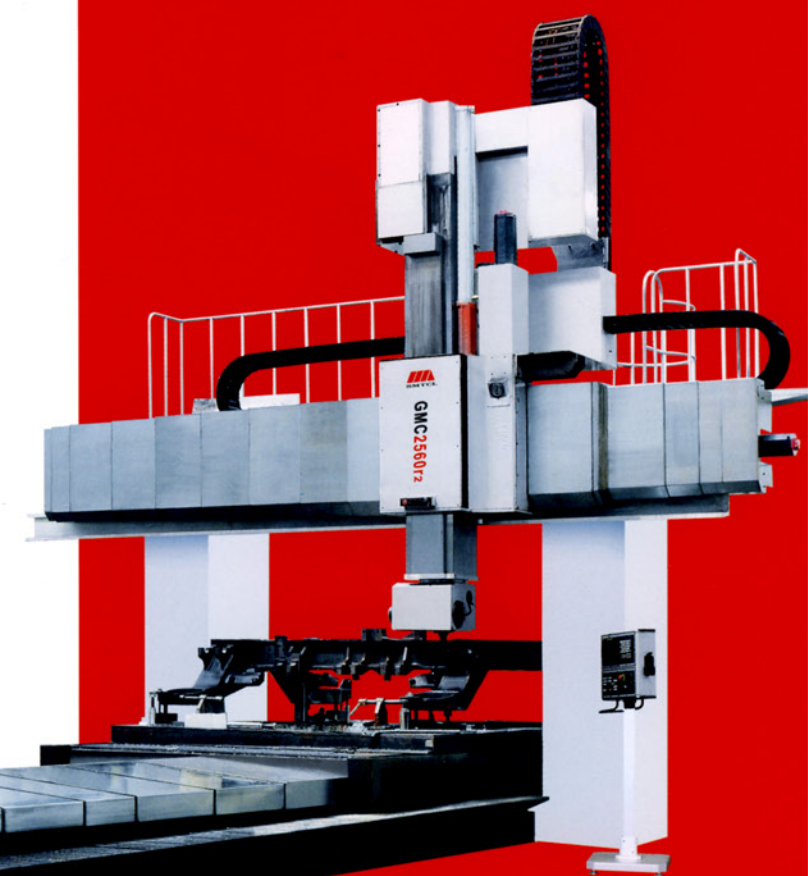
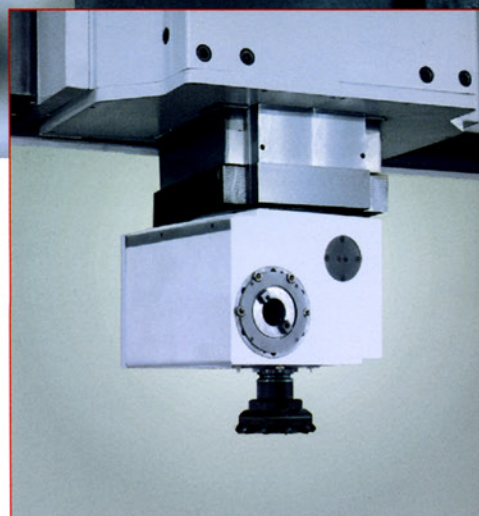
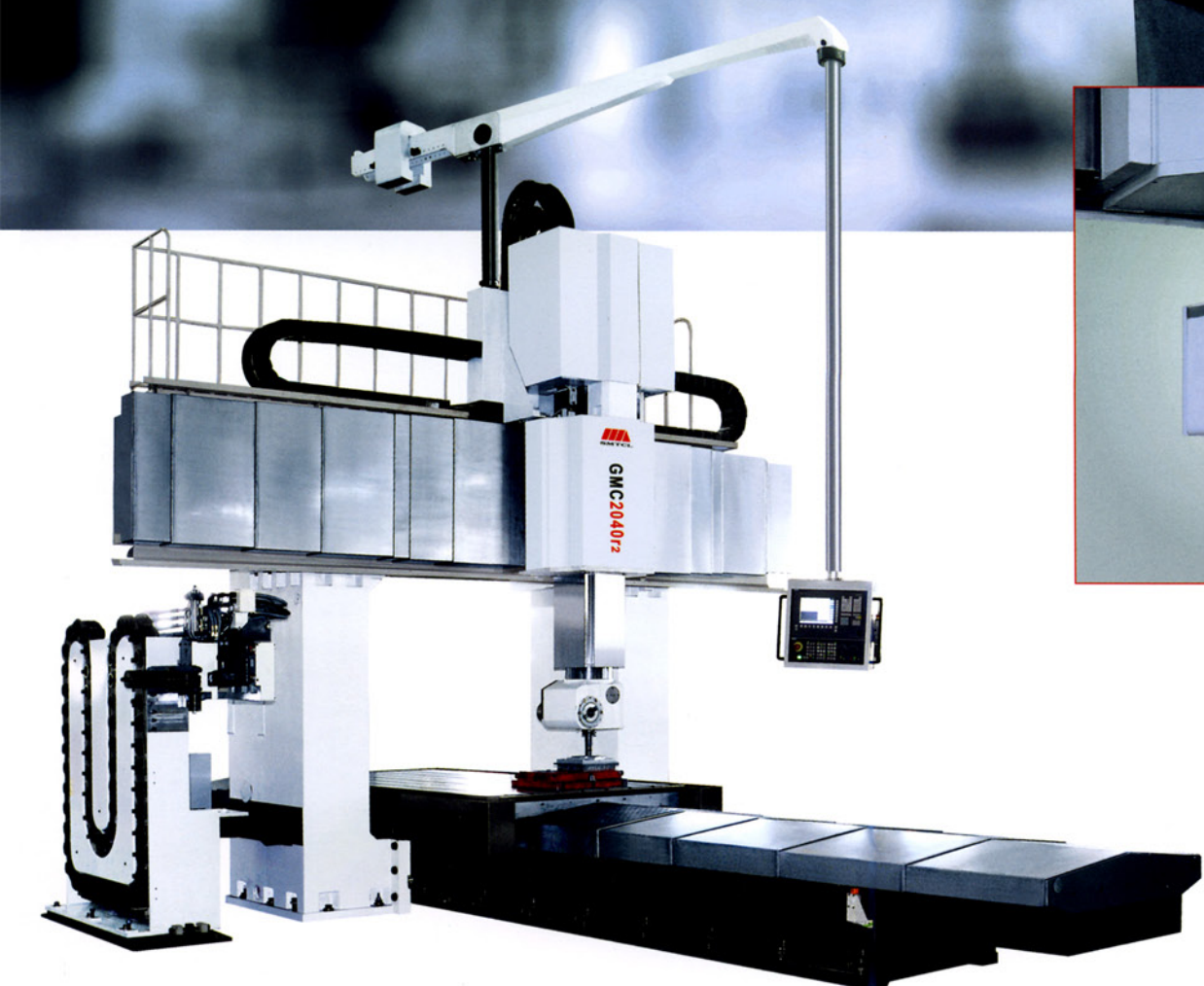
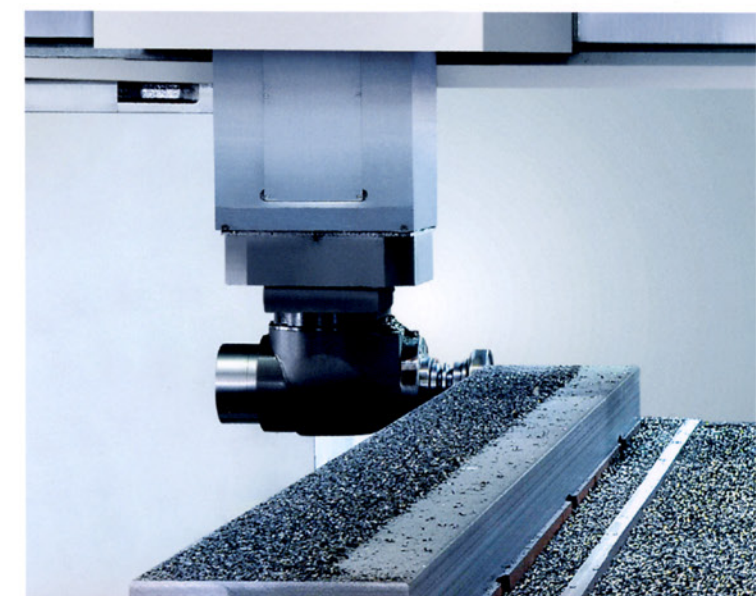




Advanced, safe, stable and efficient electric control system  
Cross beam cast in resin-sand, steel insert guideways hardened to HRC 60+/- 2 and ground. It features low coefficient of friction and large bearing capacity, and is suitable for heavy cutting.  
Bed section is cast using resin-sand technique, is very sturdy and rigid in its construction, and can fully support the weight of the gantry to keep the machine true and accurate to its purpose.  
The spindle head integrates vertical and horizontal spindle orientation, and can be indexed in a rotary axis to increments of 5 degrees, and can allow machining on 5 faces of the work-piece.  
The bed, columns, cross beam and ram are all cast using resin-sand technology, with well-designed ribbing, producing a machine frame with high rigidity and excellent stability.

Items	Unit	GMC1530r2	GMC2040r2
Dimensions of worktable	mm	1500x3000	2000x4000
Maximum loading	kg	10000	20000
Spindle speed range	rpm	10-2000	10-2000
Travel X/Y/Z	mm	3600/2700/1000(1250 option)	4200/3200/1000(1250 option)
Rapid speed X/Y/Z	m/min	13/13/10	13/13/10

Items	Unit	GMC2060r2	GMC2550r2	GMC2560r2
Dimensions of worktable	mm	2000x6000	2500x5000	2500x6000
Maximum loading	kg	25000	25000	25000
Spindle speed range	rpm	10-2000	10-2000	10-2000
Travel X/Y/Z	mm	6200/3200/1000(1250 option)	5200/3200/1000(1250 option)	6200/3200/1000(1250 option)
Rapid speed X/Y/Z	m/min	10/13/10	10/13/10	10/13/10





# BORING TECHNOLOGY

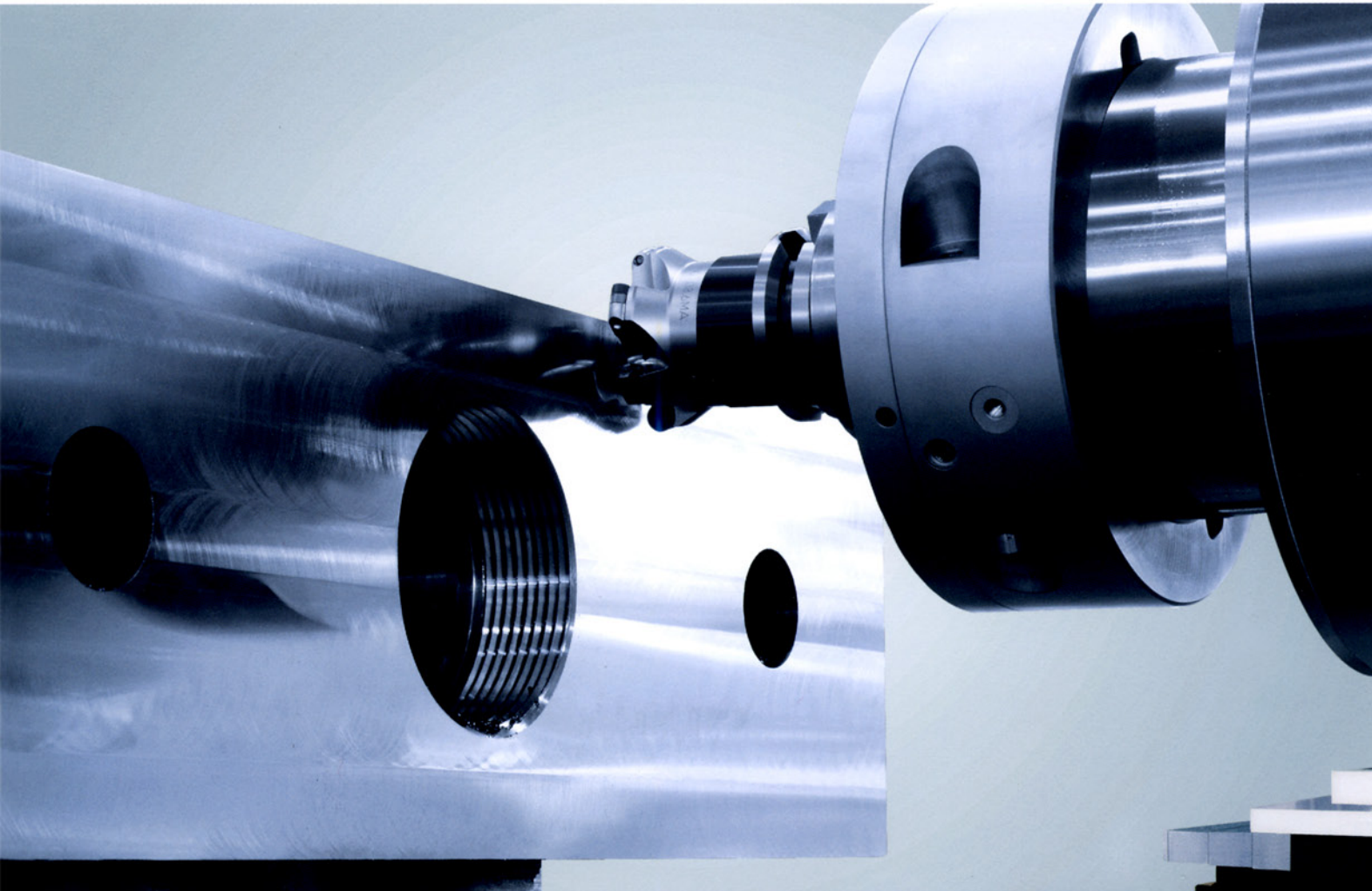
PBC  
FBC  
AH  
TPX



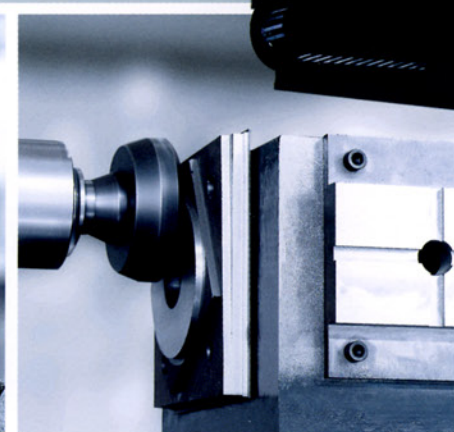
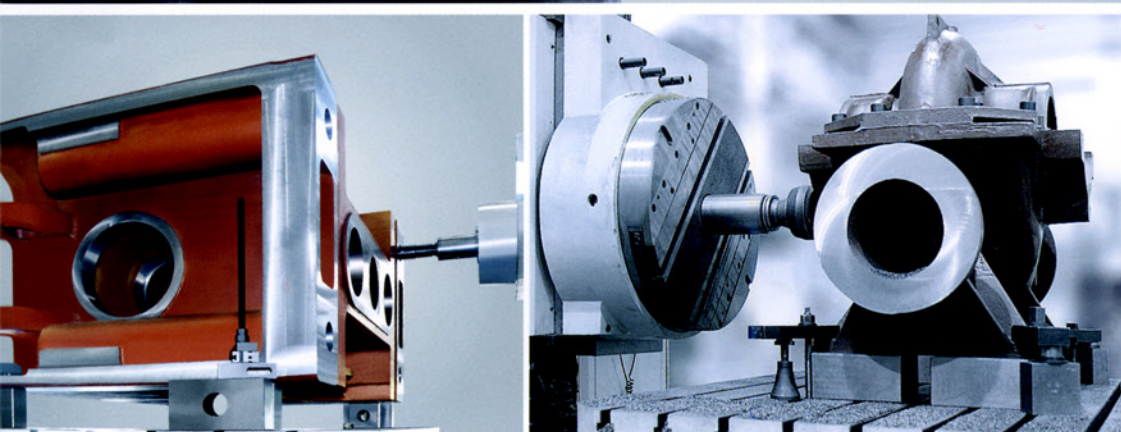
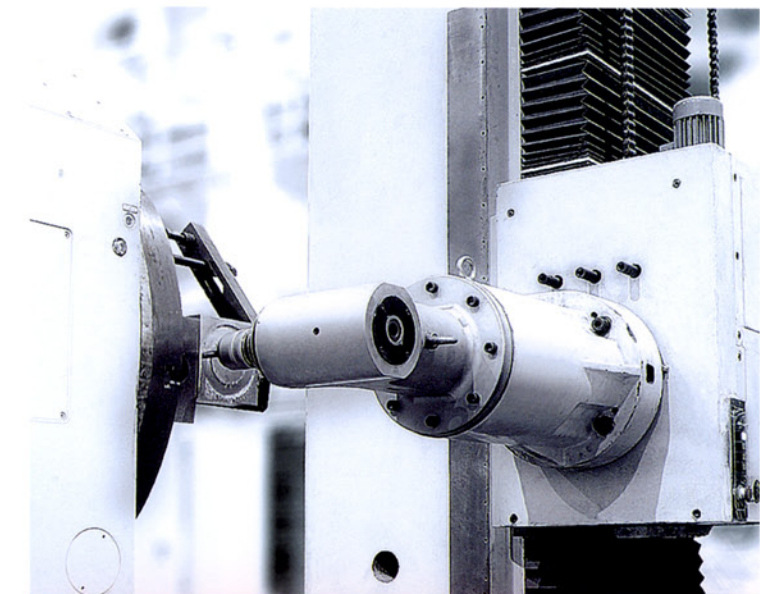
Model of value  
rational choice

## PBC SERIES

PLANNER TYPE CNC MILLING  
AND BORING MACHINE  
(MACHINING CENTER)



Single column, side spindle box, applied to multi-hole parts and boxes that has high requirement of accuracy of distance between holes.  
Spindle feed by numeral control, big axis resistance force, powerful cutting.  
Double worm gears and worm drives system in B axis to remove clearance.  
Spindle hydraulic 2 grades speed, gears drive, high speed, big torque.  
Any four axes among XYZBW can simultaneously moving, multi module design to meet different requirement.



CNC horizontal milling and boring machine PBC110(e)

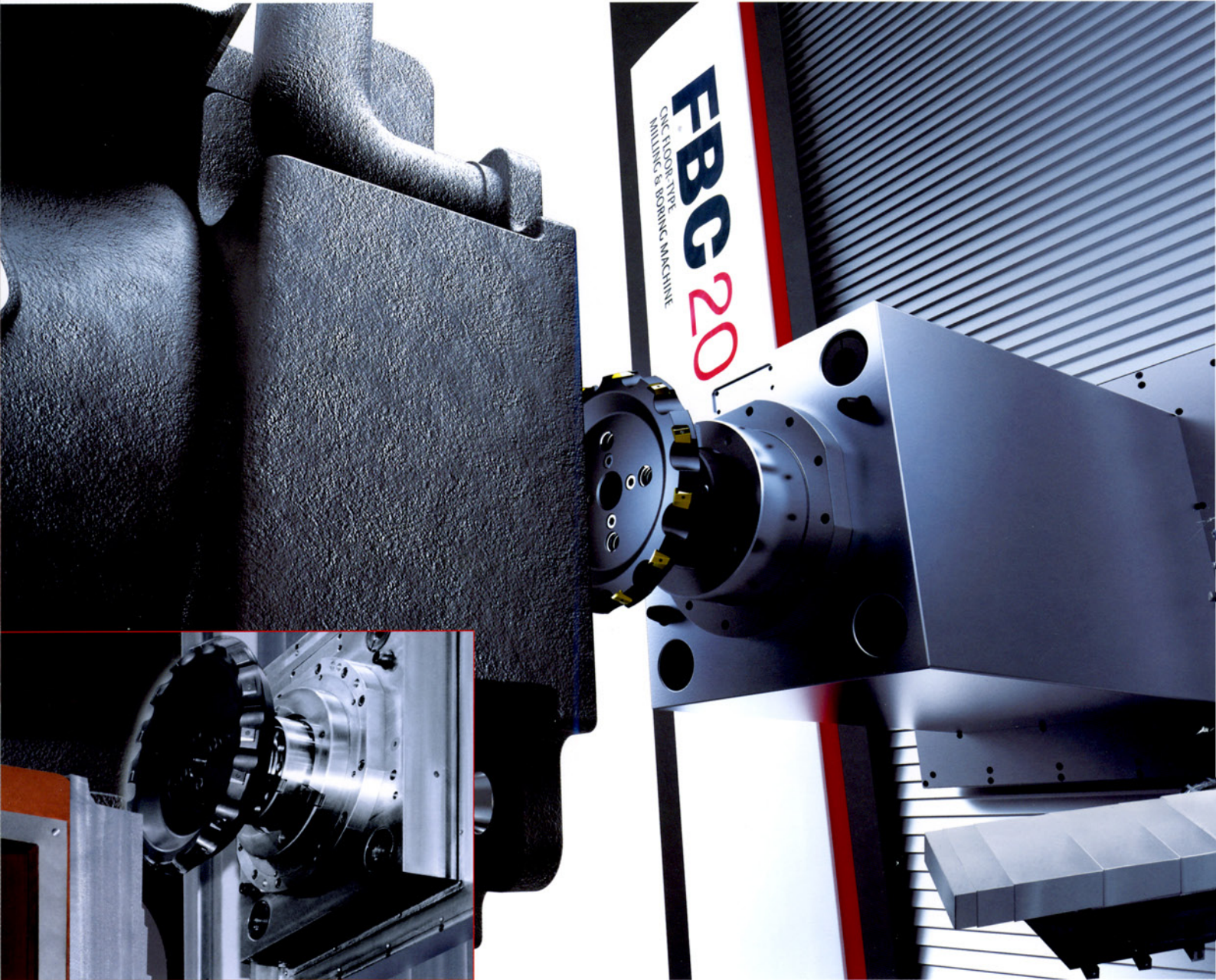


CNC horizontal milling and boring machine PBC160r

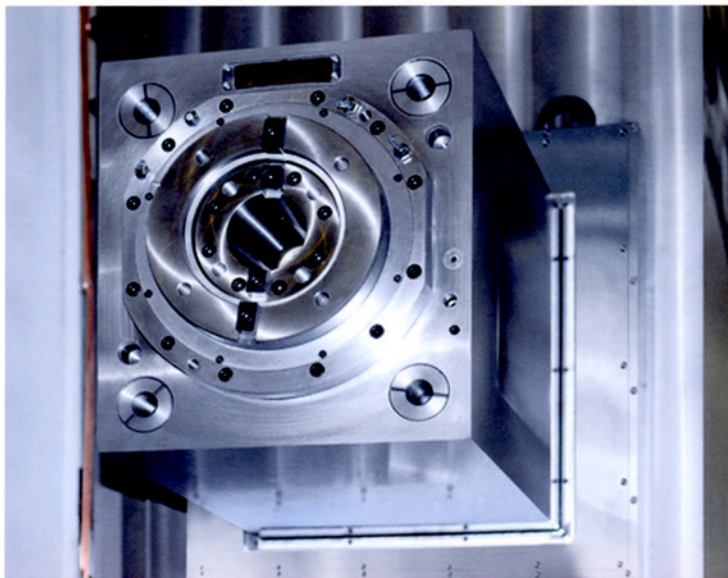
Items	Unit	PBC110e	PBC130e	PBC110(f)	PBC130(f)	PBC160	PBC130r	PBC160r
Dimensions of worktable	mm	1250×1400	1600×1800	1000×1250	1400×1600	1600×1800	2000×2000	2000×2000
Max. load of worktable	kg	5000	10000	5000	10000	10000	10000	10000
Spindle diameter	mm	∅110	∅130	∅110	∅130	∅160	∅130	∅160
Worktable travel X	mm	2000	2000	2000	2000	3000	2000	3000
Headstock travel Y	mm	1500	1600	1500	1600	2000	1600	2000
Upright column travel Z	mm	1200	1600	1200	1600	2000	1600	2000
Spindle travel W	mm	550	800	550	800	1000	700/700*	700/700*

Note: f for facing head series, r for square ram series 480×480, and ★ ram travel.





Single column, multi-grades spindle speed, quick and big-torque cutting.  
Double motors drive for X axis (when X axis travel longer than 4000mm), any four axis among XYZBW can simultaneously moving.  
Closed loop, high positioning accuracy.  
Big section ram, 4 angles or 8 angles contact. Big torque, good rigidity, suitable for quick cutting, CNC square ram, moveable spindle can deep machining.  
Hydraulic cylinder can compensate temperature rising effect and gravity effect, guarantee spindle sticking out accuracy.  
Auto operation room, convenient and safe.



Items	Unit	FBC110	FBC130	FBC130r	FBC160r	FBC200r
Spindle diameter	mm	∅110	∅130	∅130	∅160	∅200
Upright column travel X	mm	4000	4000	4000	4000	6000
Headstock travel Y	mm	1500	1600	2000	2000	4000(5000)
Ram travel Z	mm	-	-	700	700	1250
Spindle travel W	mm	550	800	700	700	1200
Ram section size	mm	-	-	480×480	480×480	520×580

Note: upright column travel -X axis increased by degrees each 1000mm.

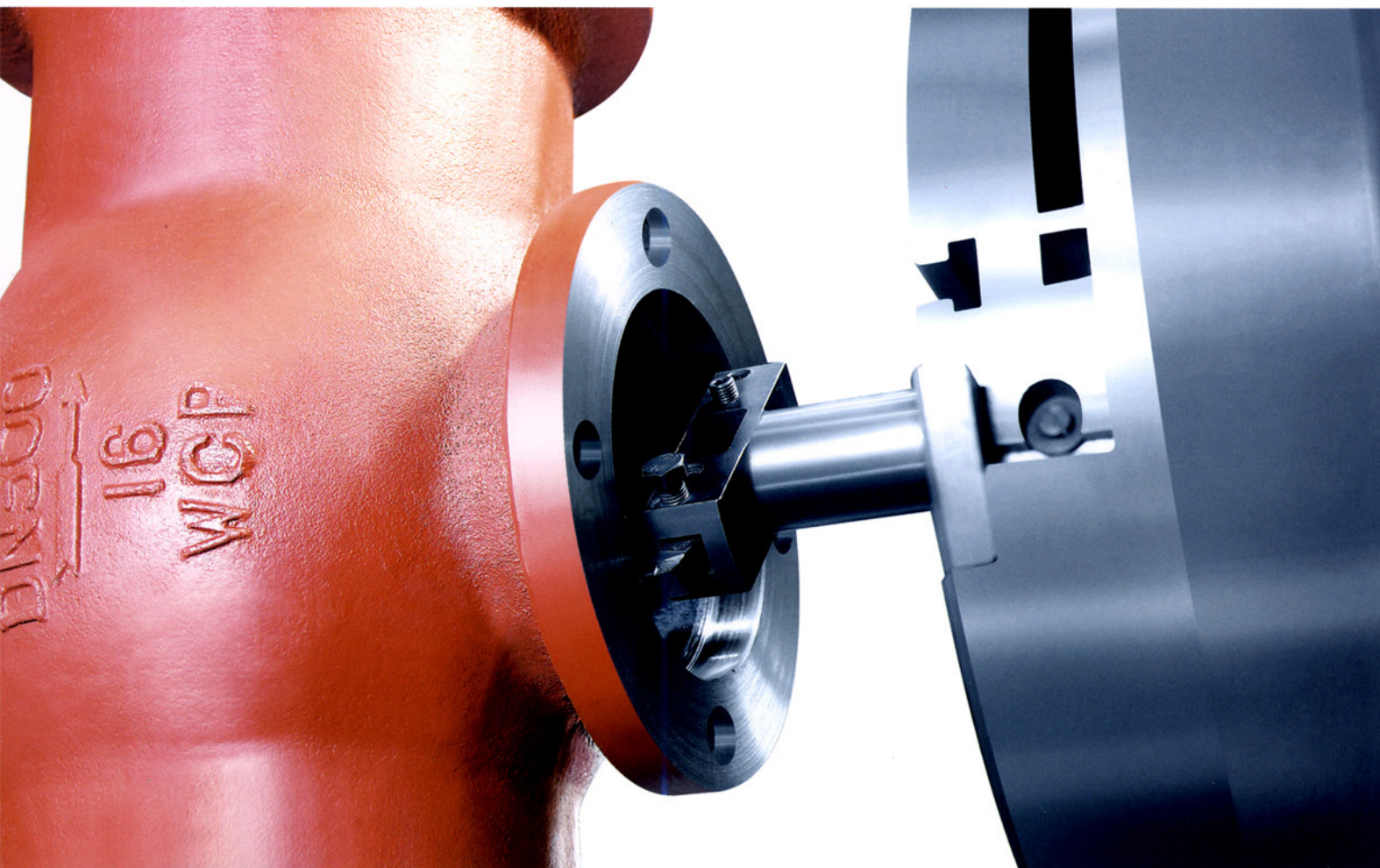


# AH

Advanced structure,  
guarantee  
ideal product features

## AH SERIES

AUTO HORIZONTAL MILLING  
AND BORING MACHINE



AH series auto horizontal boring and milling machine which can be operated easily, can machine on box, shell, frame and other large parts for drilling, boring, reaming, broaching, reaming, spot-facing and tapping. The excellent products are widely used in energy sources, transportation, heavy, petrochemical and other mechanical industries. It is the key equipment for machining box type parts.

Auto milling and boring machine is a new developed product, which has the following characteristics:

One key cycle: high efficiency.

Drilling cycle: rapid trending, drill feeding and full speed returning.

Peck drilling cycle: deep hole drilling, fixed depth chip removal, rapid replacement and continued drilling feed.

Floating tapping cycle: automatic calculation of feed speed on given pitch; spindle reversal back after reaching located place and return to original place automatically.

Automatic face milling cycle.

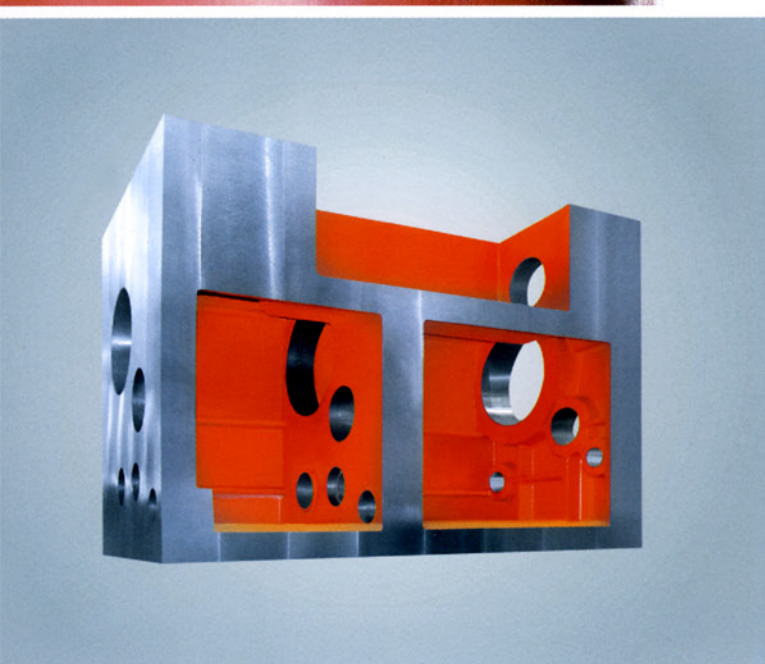
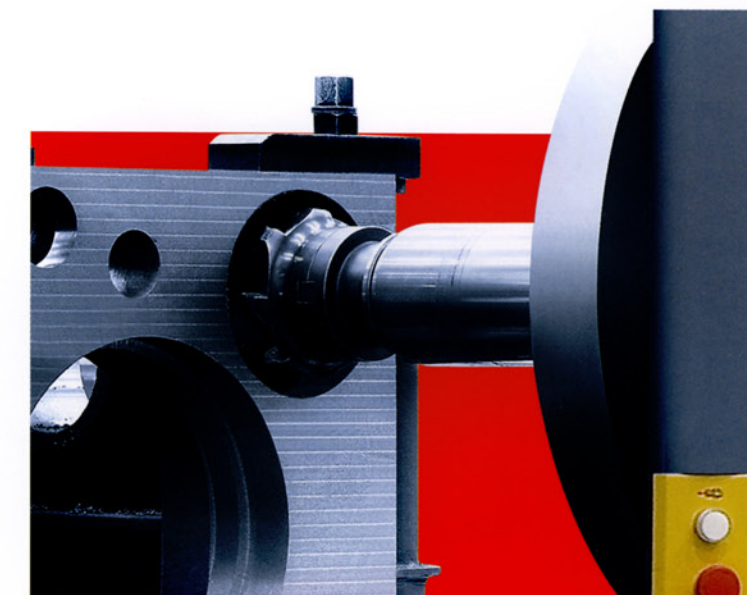
Easy operation by simple training with low labor cost.

Point to point automatic positioning: positioning accuracy up to  $\pm 0.02\text{mm}$ .

Safe and reliable: perfect protection device according with international standards.

Environment Protection: ingenious designed oil groove achieving lubrication oil recycle; integrated hydraulic system on headstock and bed reducing the oil wear; idle running power reduced and less power loss by shorten gearing chain.

Items	Unit	AH90	AH110	AH130
Spindle diameter	mm	90	110	130
Max. spindle torque	N.m	820	1250	3200
Range of spindle speed	r/min	8-1000	8-1100	8-800
Max. facing torque	N.m	-	1960	4700
Positioning accuracy (X/Y/Z/W)	mm	$\pm 0.02/1000$	$\pm 0.02/1000$	$\pm 0.02/1000$



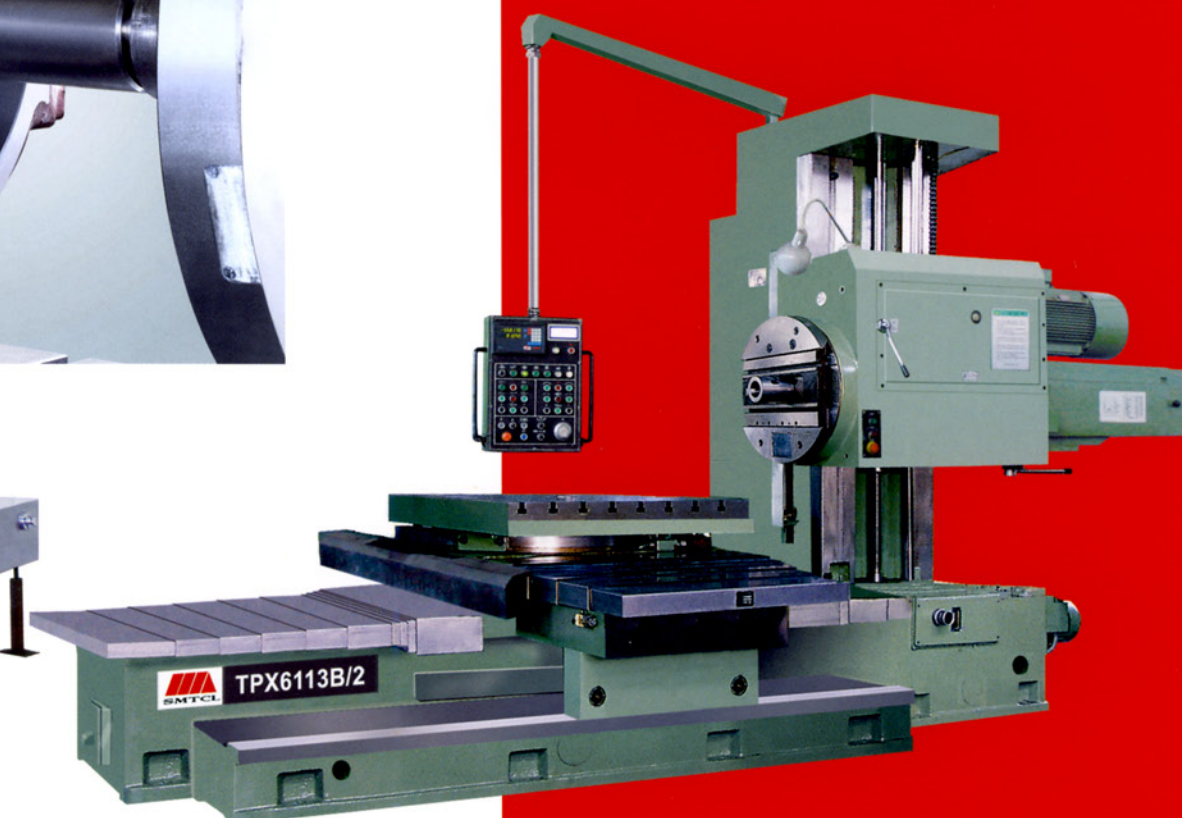
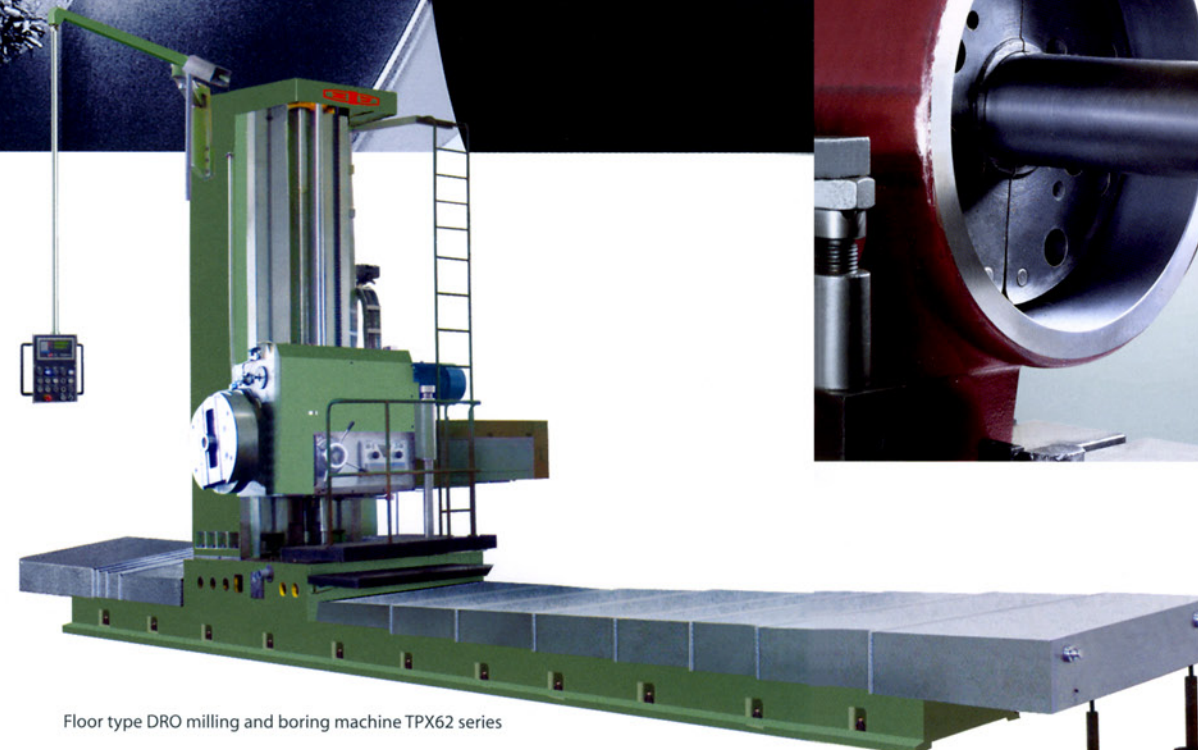
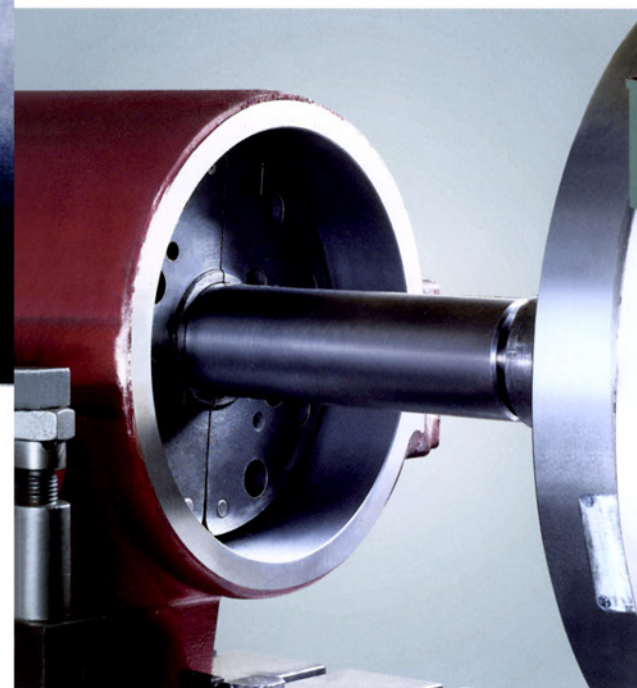




The spindle is in good stiffness and rotation rate range variable.

The main spindle speed and traversing speed change adopting hydraulic pressure preelection. Which is easy to handle with 4x90 convenient working table of operation allocation adopt optics, which is high accuracy.

X, Y-axis are equipped with the United Kingdom ball bars digital ruler as well as Raster Data Display Instrument with a remembering function.



Items	Unit	TPX6111B	TPX6111B/2	TPX6111B/3	TPX6111C/3	TPX6113	TPX6113/2	TPX6113B/2	TPX6211	TPX6213
Main spindle diameter	mm	110	110	110	110	130	130	130	110	130
Spindle speed range	r/min	8-1000	8-1000	8-1000	8-1100	4-800	4-800	8-800	8-1000	4-800
Main motor power	kW	7.5	7.5	7.5	15	15	15	18.5	7.5	15
Max. spindle torque	N.m	1225	1225	1225	1250	3136	3136	2950	1225	3136
Max. facing head torque	N.m	1960	1960	1960	1960	4900	4900	4694	1960	4900



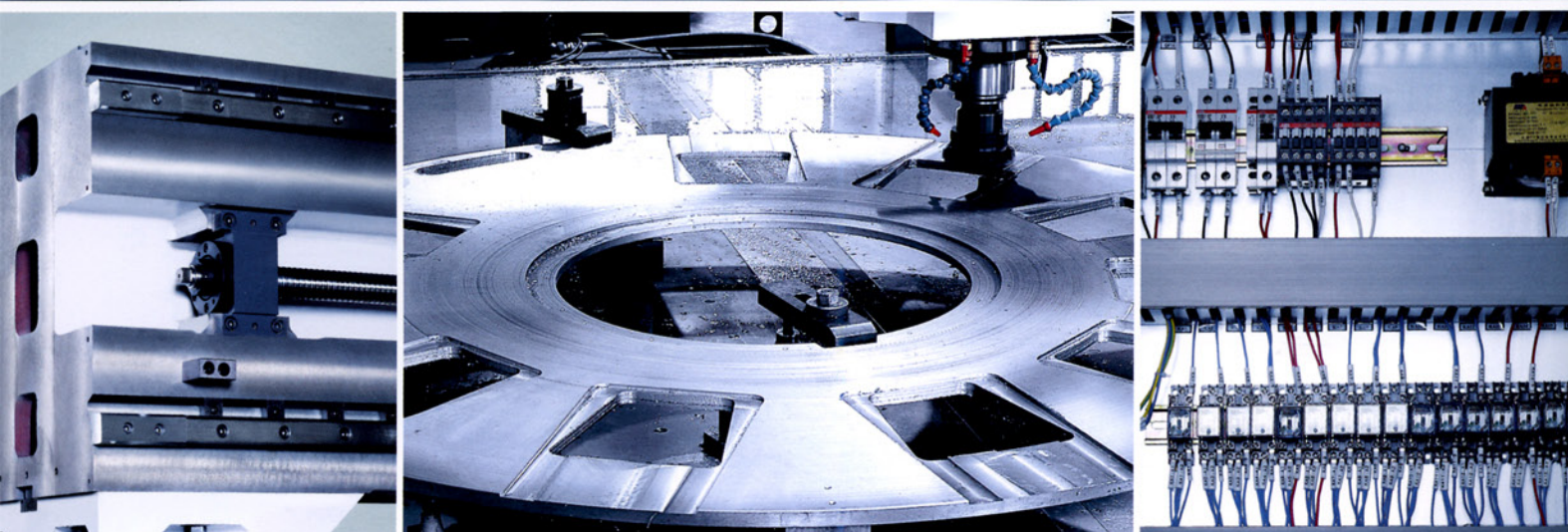
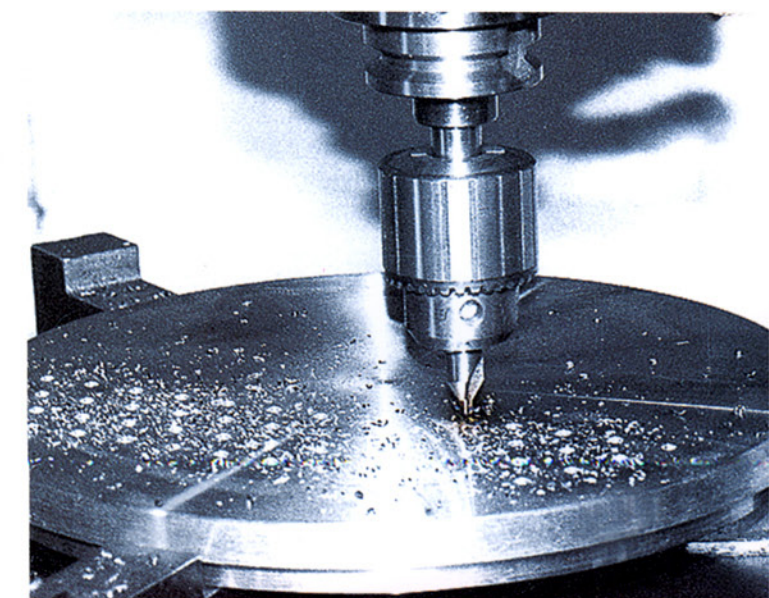
**DRILLING  
TECHNOLOGY**

**GDC  
Z**





The machine adopts gantry construction and the columns and beam are fixed-connection by steel plate to eliminate welding deformation effectively. The deformation generated by drilling axial force can be controlled by strong anti-bend capability of the beam. The imported spindle components features high rigidity and high accuracy. It is convenient, quickly and reliable to adopt pneumatic releasing tool and spring clamping tool. The axes driven by ball screw with high accuracy features smooth transmission and high accuracy. The roller linear guideway of X and Y axes provides large connection rigidity and accuracy retaining for long time.



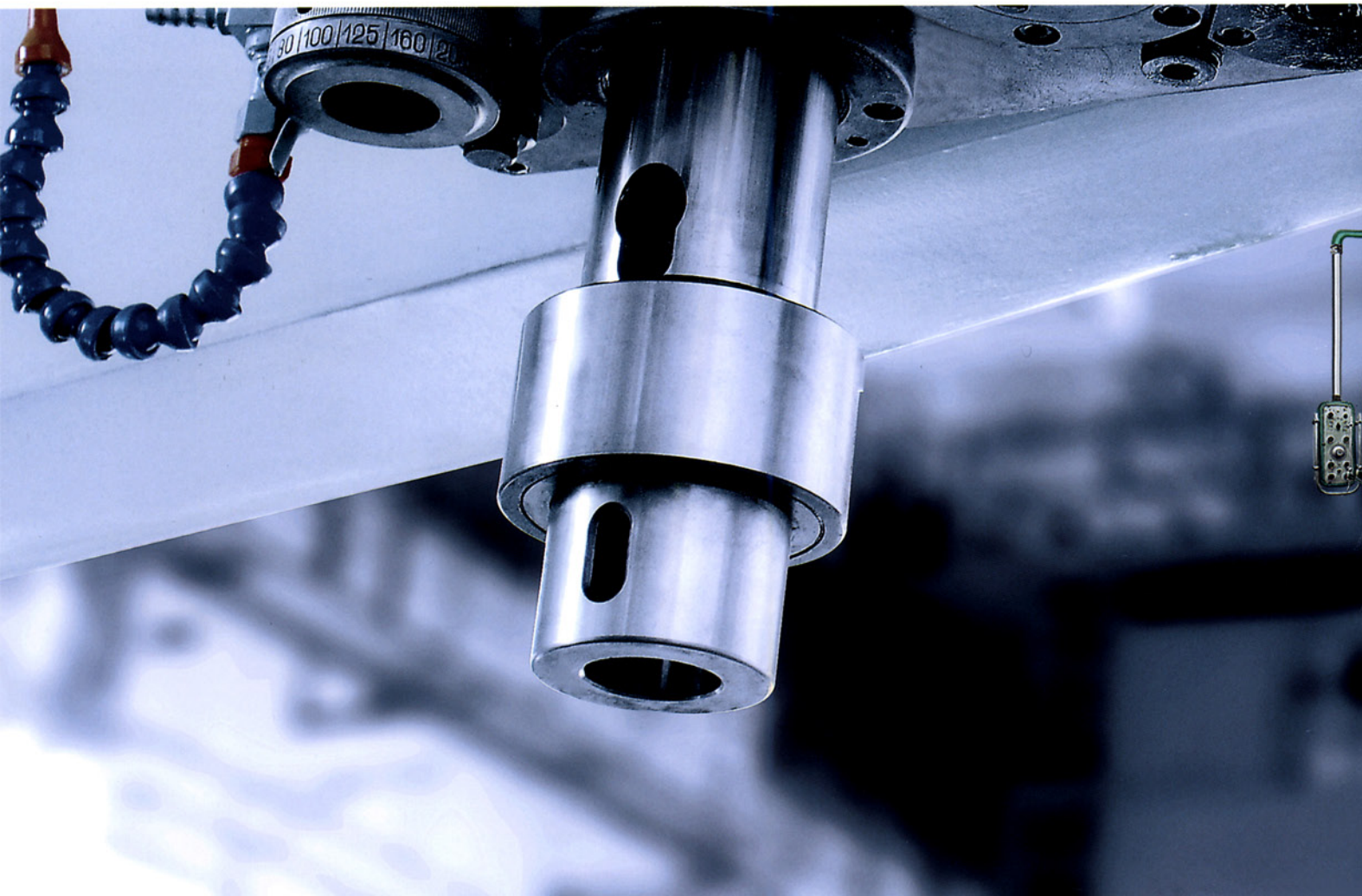
Items	Unit	GDC1012A	GDC1016A	GDC1216A	GDC1220A	GDC1230A	GDC1620A	GDC1630A
Worktable size	mm	1000×1250	1000×1600	1250×1600	1250×2000	1250×3000	1600×2000	1600×3000
Max. drilling diameter	mm	∅40	∅40	∅40	∅40	∅40	∅40	∅40
Spindle motor power	kW	12	12	12	12	12	12	12
Max. load of worktable	kg	1550	1550	1600	1600	2000	2500	2700



Durable quality  
reflected

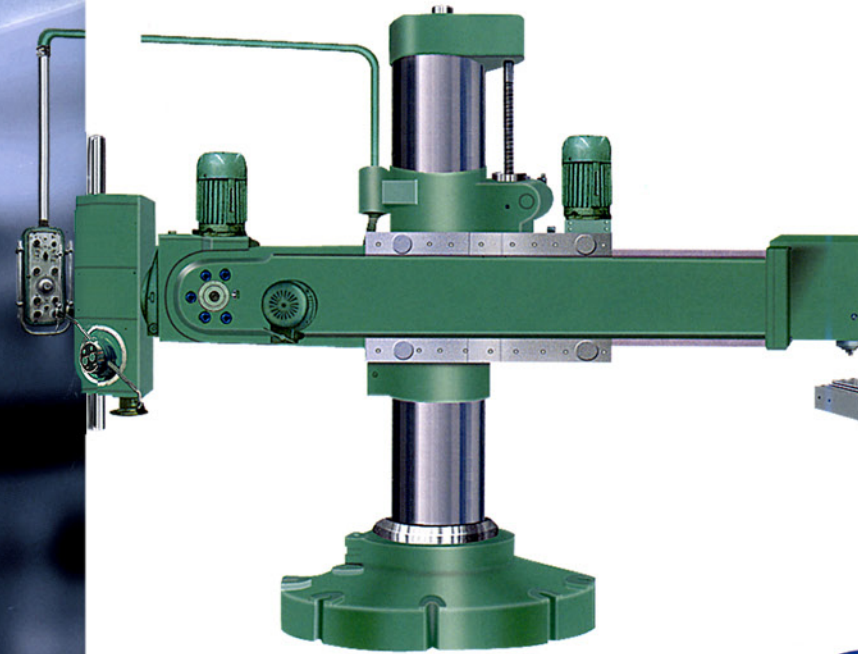
# Z SERIES

## RADIAL DRILLING MACHINE

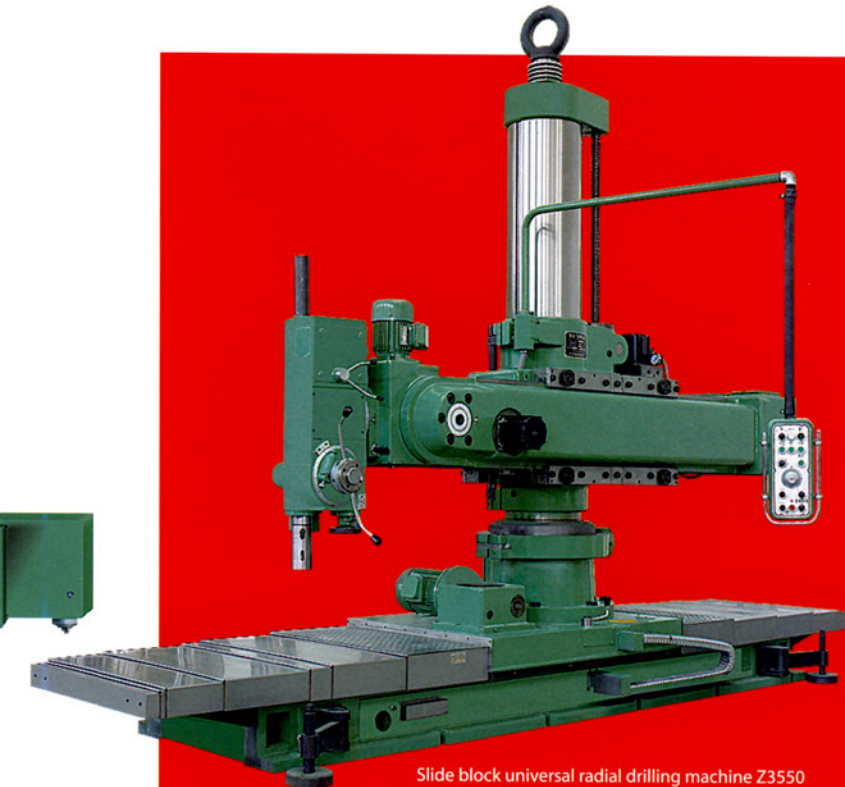


The series of products won the state quality gold medal.

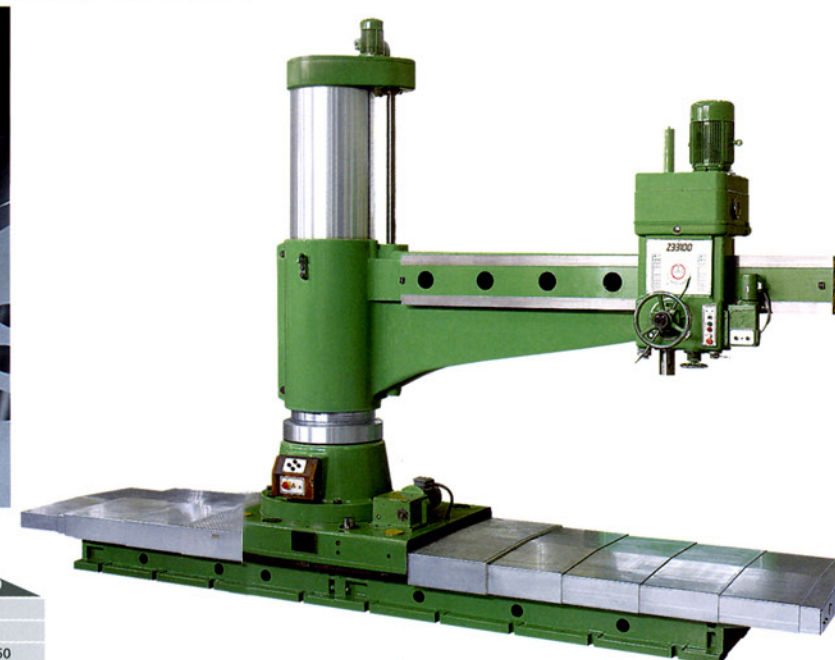
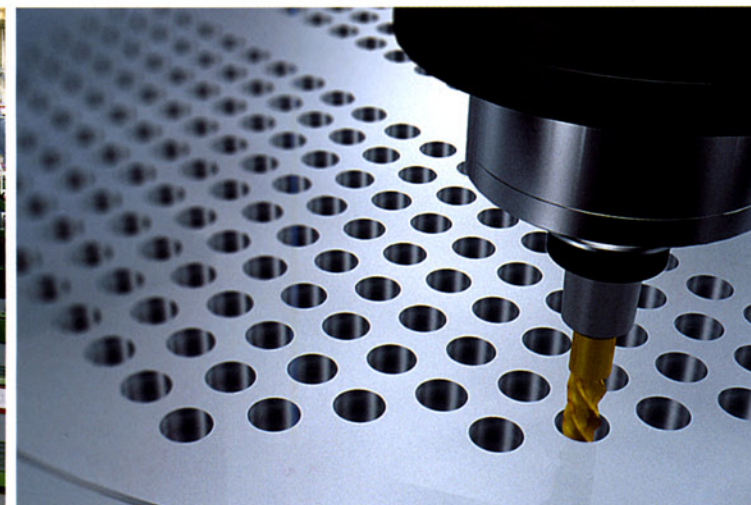
Z3050×16/1 has 16 variable speeds and feeds enable economic and high efficiency. Clamping and speed changes are achieved by hydraulics that is very reliable. Mechanical and electrical controls are centralized on the headstock for fast and easy operation.



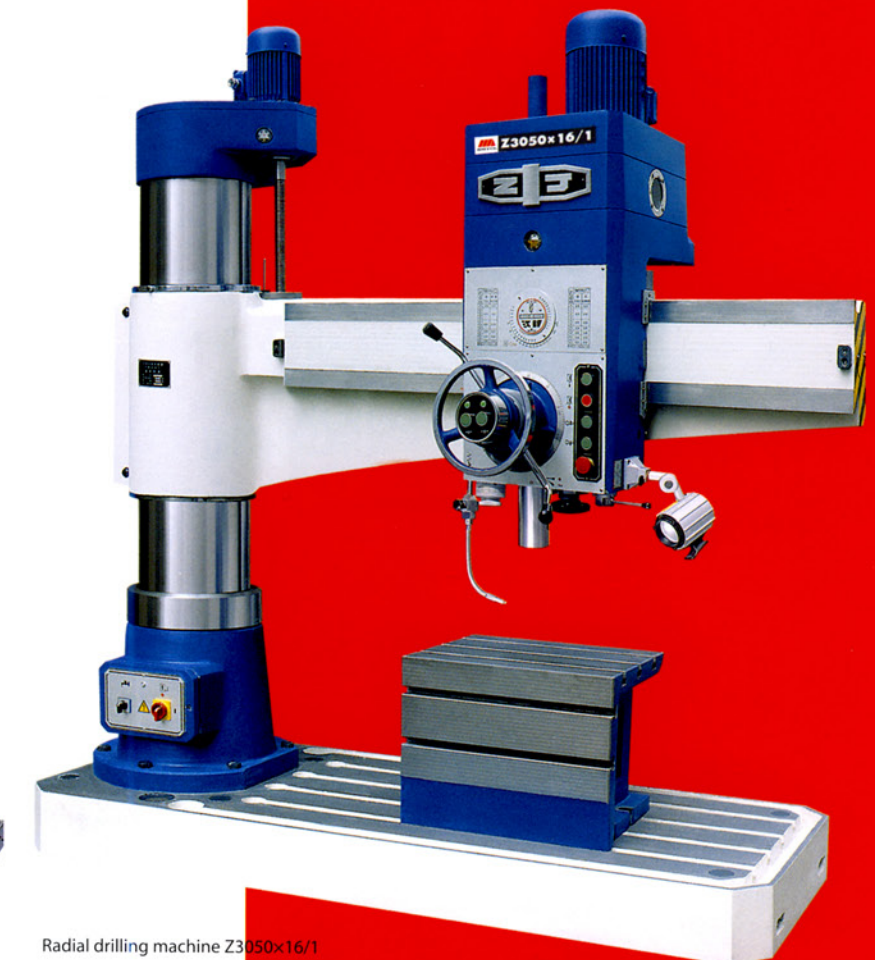
Universal radial drilling machine Z3150



Slide block universal radial drilling machine Z3550



Slide block radial drilling machine Z33100×40



Radial drilling machine Z3050×16/1

Items	Unit	Z3032×8/1	Z3040×12/1	Z3050×16/1	Z3063×20/1	Z3080×25	Z30100×31	Z30125×40	Z3150	Z3350	Z33100×40	Z3550
Maximum drilling diameter	mm	32	40	50	63	80	100	125	50	50	100	50
Travel of spindle	mm	240	315	315	400	450	500	560	315	315	500	315
Range of spindle speeds	r/min	75-1220	25-2000	25-2000	20-1600	16-1250	8-1000	6.3-800	16-1250	25-2000	16-1250	16-1250
Main motor power	kW	1.5	3	4	5.5	7.5	15	18.5	7.5	4	15	4



# TURNING TECHNOLOGY

HTC

HTC (LARGE)

ETC

CAK

SH

STC/SUC

CA/CW

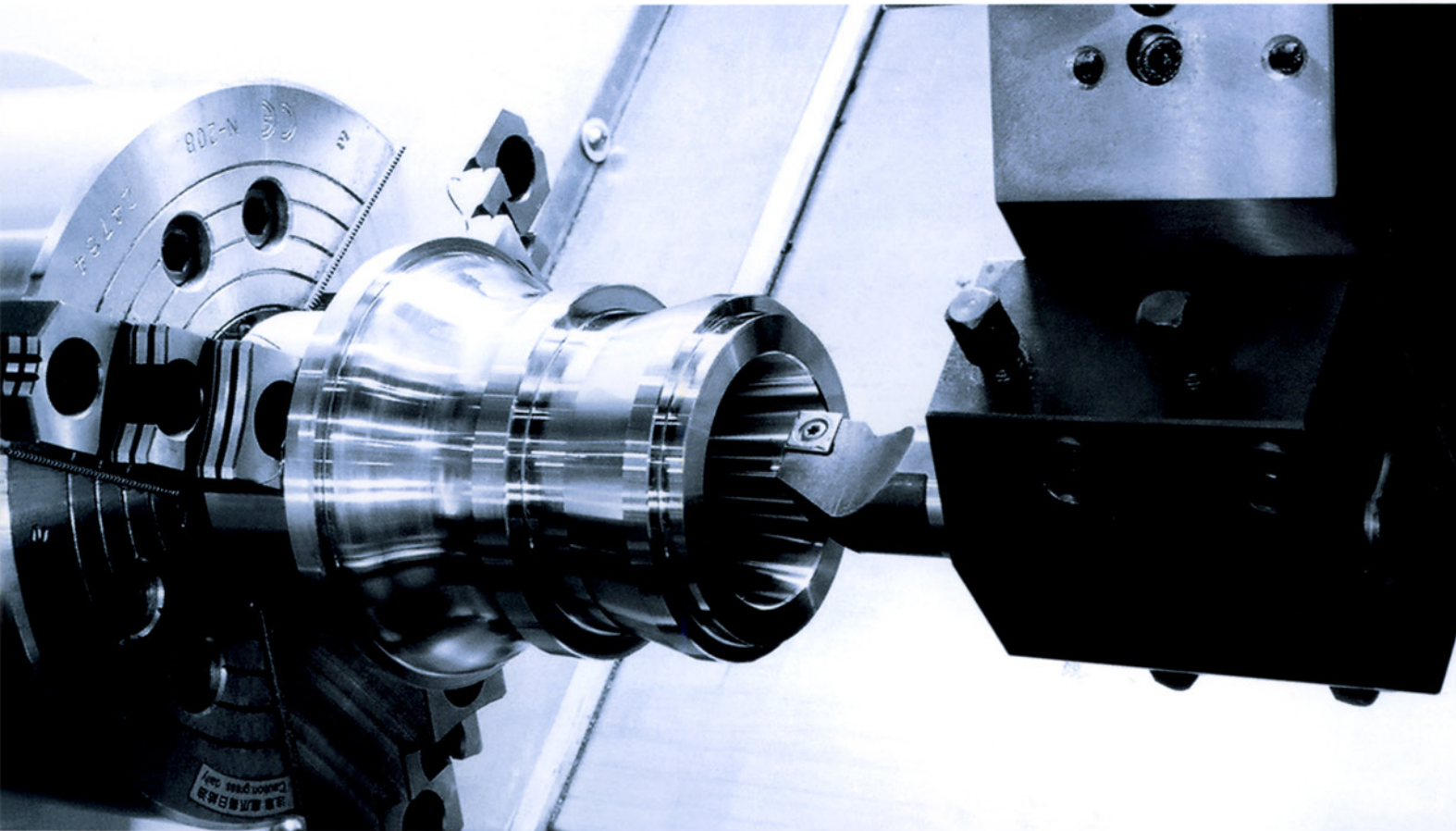
VTC

GTC

GTM

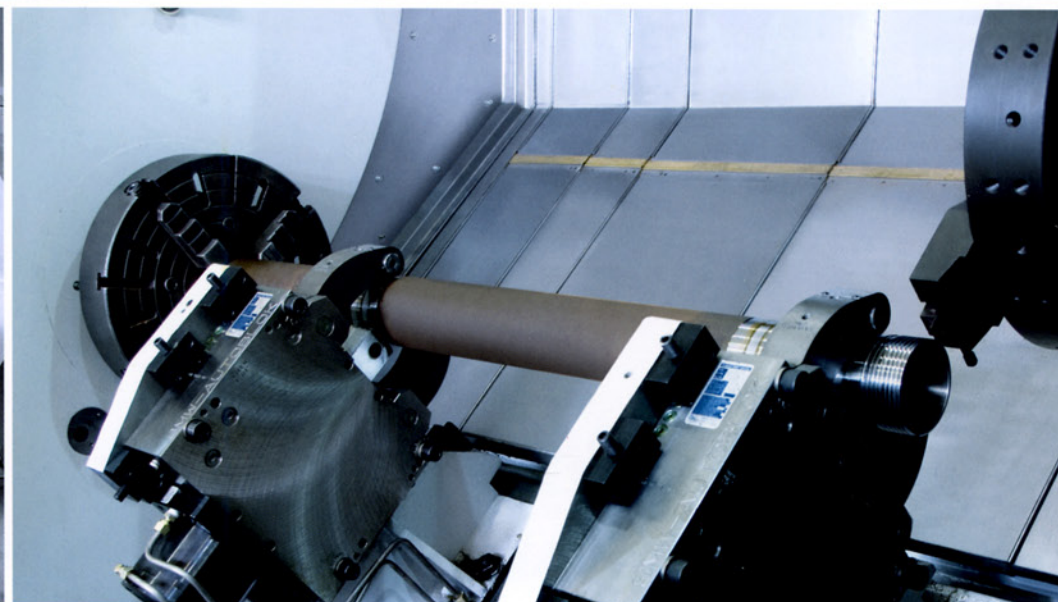
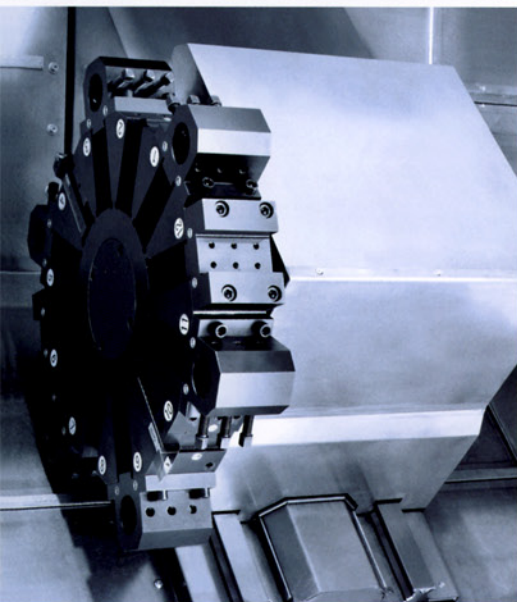
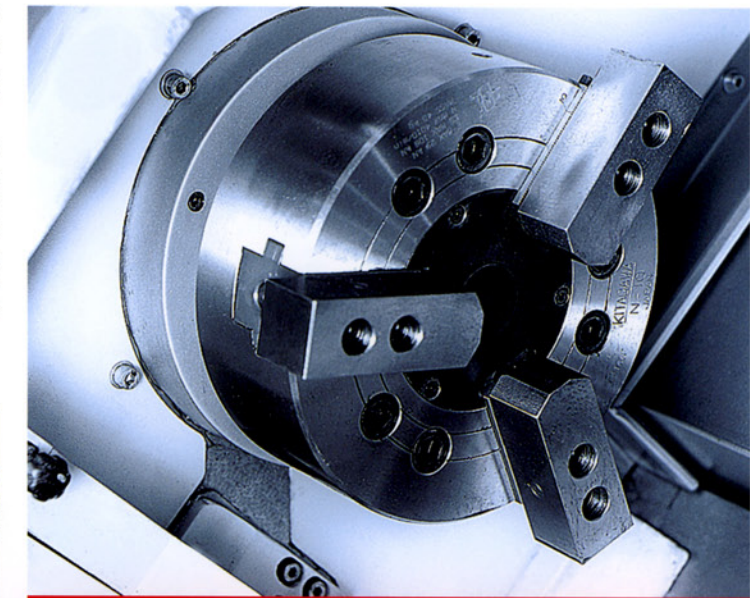
VERTITURN





HTC machine is horizontal slant-bed CNC lathe which permits high-speed machining, highly intelligent, efficient, and safe operation. Its structure has been designed using finite element analysis software, breaking through previous limitations of design engineering, producing a machine of high accuracy and repeatability, with consistent results.

This ideal combination of spindle assembly and feed mechanism raises the level of high speed performance. The work area of the machine has been increased in volume by nearly 50% despite little change in the overall dimensions of the machine, and this means that the machine will be much more efficient for the user. The patented oil-water separation unit can improve environmental conformity, and reduce production costs to the user. This is a world class machine that is competitive with any other machine in the marketplace.



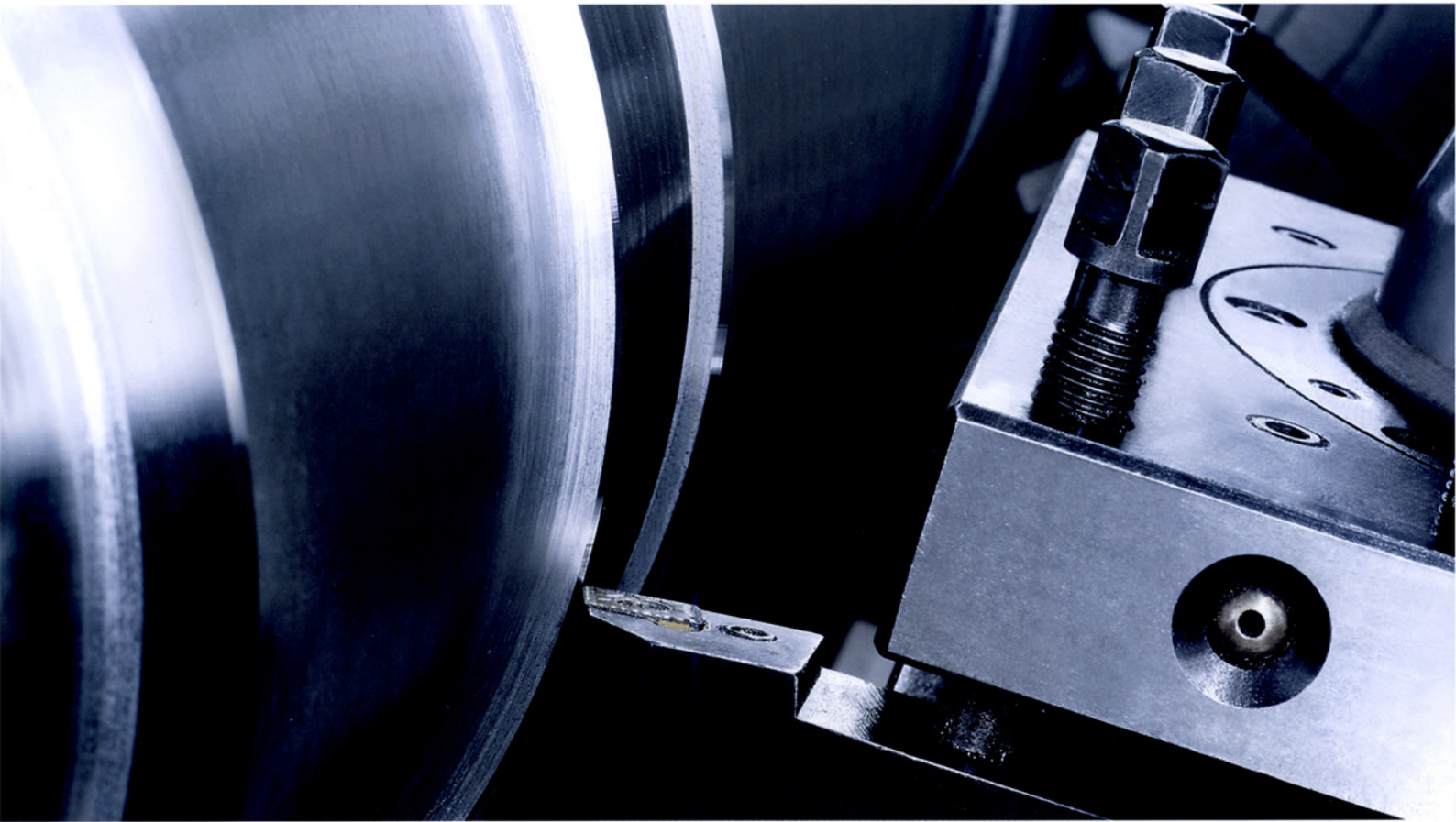
Items	Unit	HTC1608	HTC1635	HTC20n series	HTC3230	HTC32 series	HTC40n/50n series	HTC63n series	HTC80n series
Max. swing dia. over bed	mm	480	400	480	520	460	700	800	950
Max. cutting diameter	mm	160	160	200(shaft)/260(disc)	320	320	400/500	630	800
Spindle bore diameter	mm	40	43	52/62	80	62/80	80/104(option)	96	130
Range of spindle speed	rpm	100-5000	200-4000/60-6000	50-4000	35-2500/50-1500	200-3000/200-2600	35-3500/35-3000	20-2000/768	20-1200/2500



High stiffness, high strength and good stability

## HTC SERIES

### LARGE - TYPE CNC LATHE



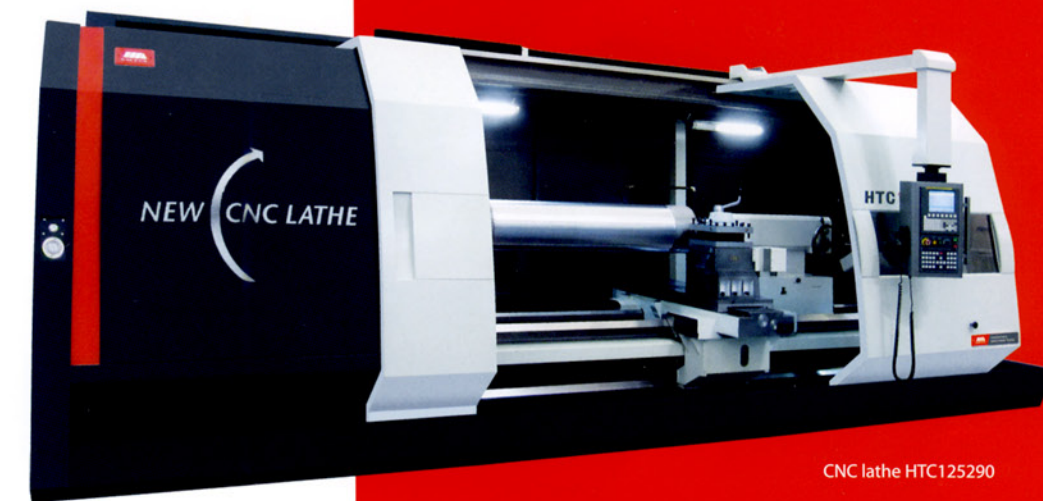
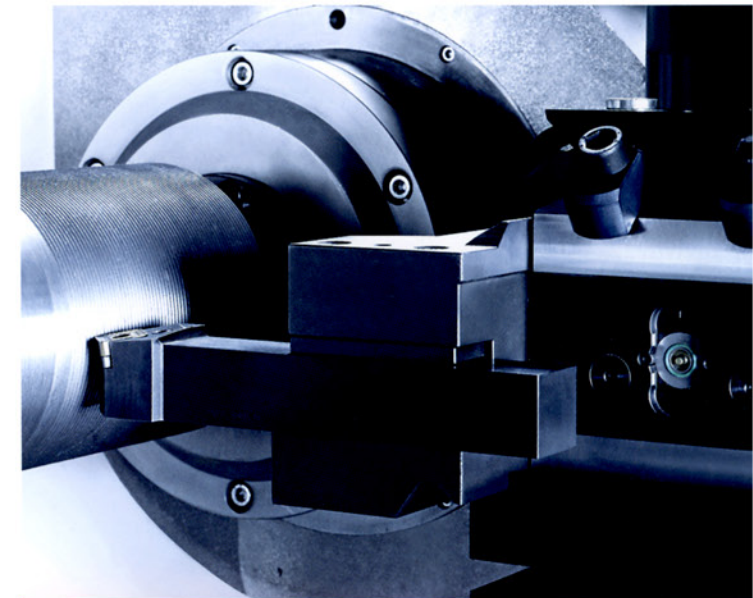
There are light, medium, heavy, and super-heavy versions of this series of machine. Maximum swing diameter from 1000 mm. to 3150 mm. and maximum weight of work-piece held between centers of from 5-tonnes to 160 tonnes.

The light series adopts vee-and-flat type of guideway; the medium series has either double rectangular "box" type ways, or integral triple guideways; the heavy series incorporates integral "quad" box-ways; the super-heavy series has separate quad box-ways.

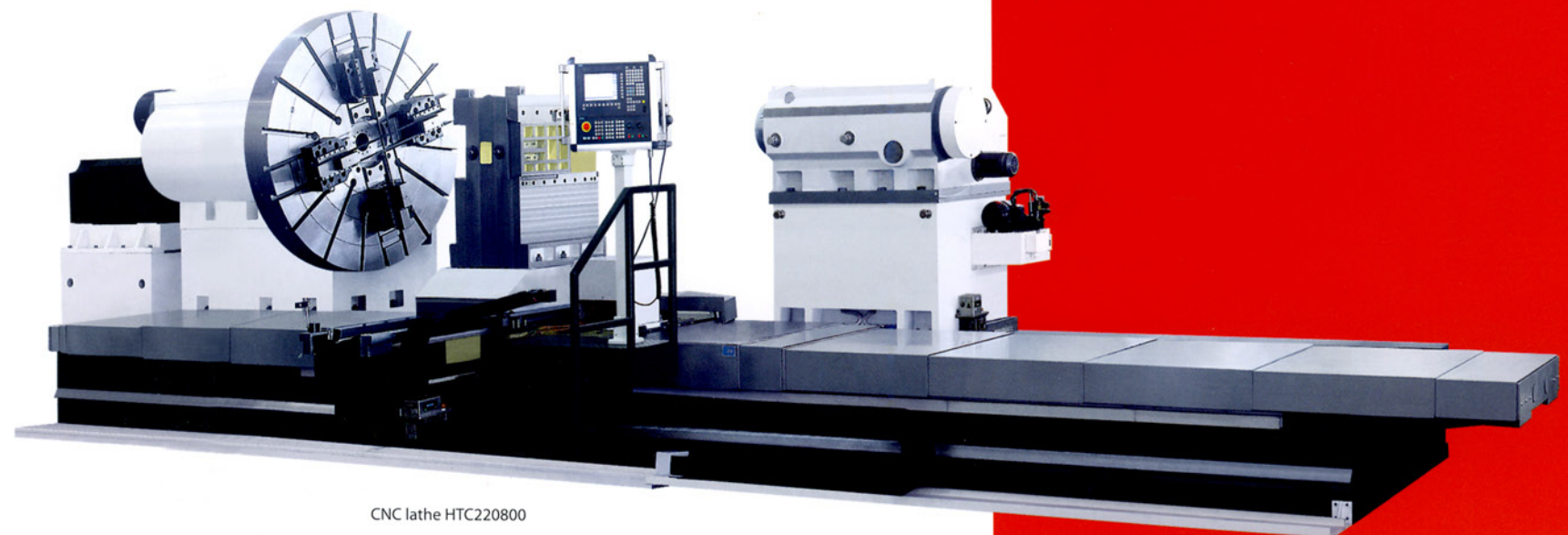
This series can machine various shaft and disc-type work-pieces. It can also turn thread, circular, arc, cone, inside and outside curved surfaces of rotary parts, and can meet the speed requirements of ferrous and non-ferrous metals for high-speed cutting.

This series of machine is designed principally for the machining of rotary work-pieces with high efficiency, in large batches, and with high accuracy in the fields of ship-building, railway locomotive, aerospace, military, metallurgy, etc.

The rigid configuration of the bed, spindle, and tail-stock greatly enhance the overall rigidity of the machine, ensuring stability during heavy cutting.



CNC lathe HTC125290



CNC lathe HTC220800

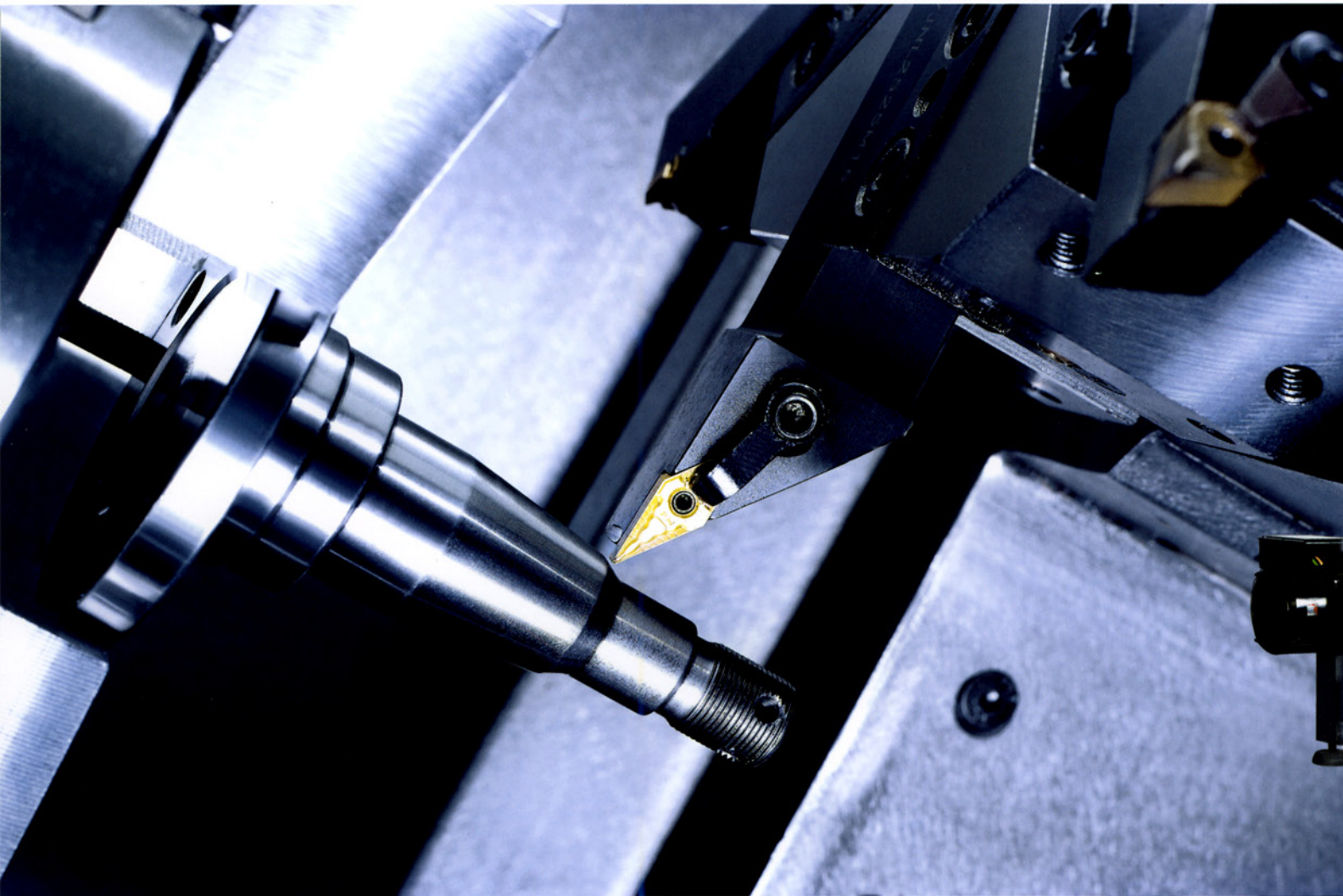
Items	Unit	HTC100	HTC125	HTC160	HTC200	HTC220	HTC250	HTC315
Max. swing dia. over bed	mm	1000	1250	1600	2000	2200	2500	3150
Max. cutting length	mm	1300-16000	1300-16000	1500-16000	1500-16000	5000-16000	5000-16000	5000-16000
Max. weight of workpiece	ton	5/10/15/18/25/40	5/10/15/18/25/40	10/25/32/40/50/63	10/25/32/40/50/63	25/40/50	25/40/50/63/80/125/160	40/50/63/80/125/160



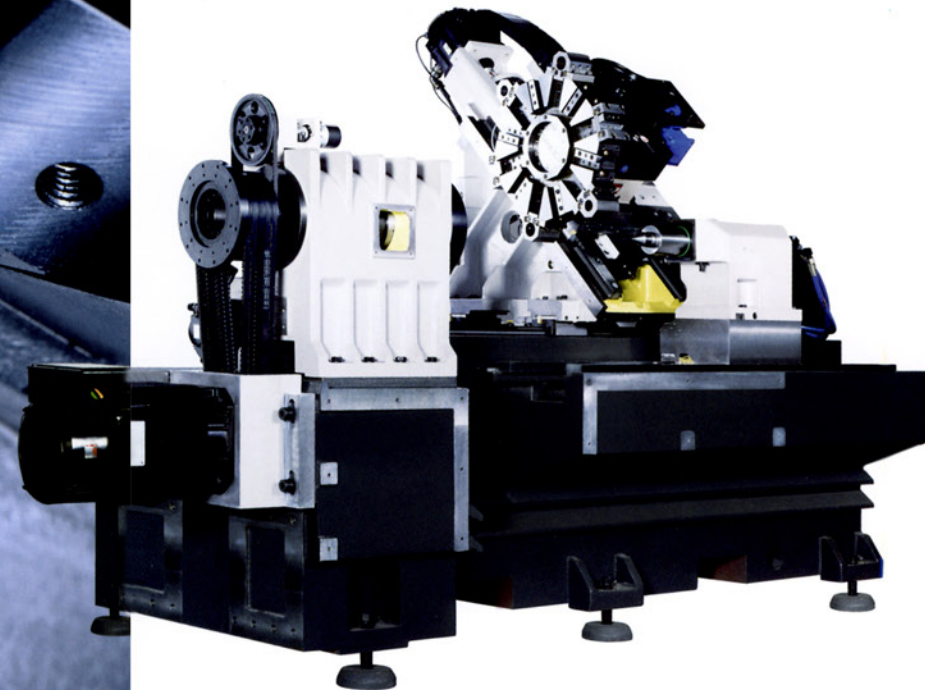
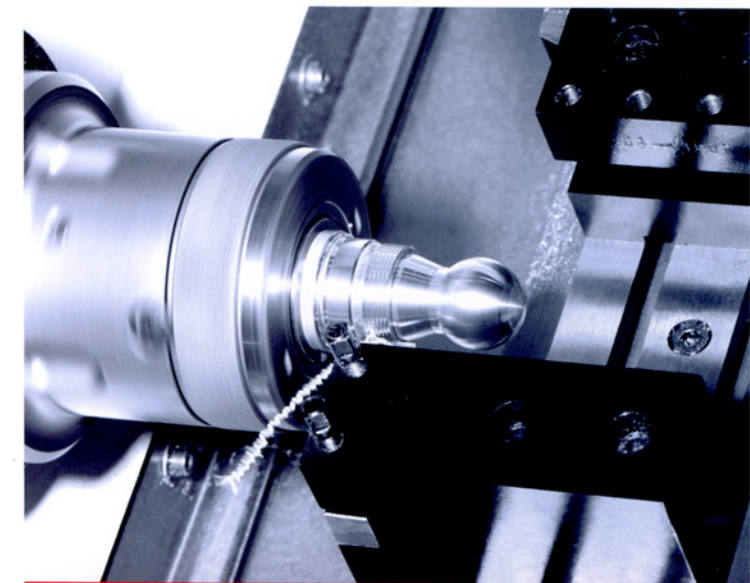
High accuracy,  
high efficiency

## ETC SERIES

### NEW CNC LATHE

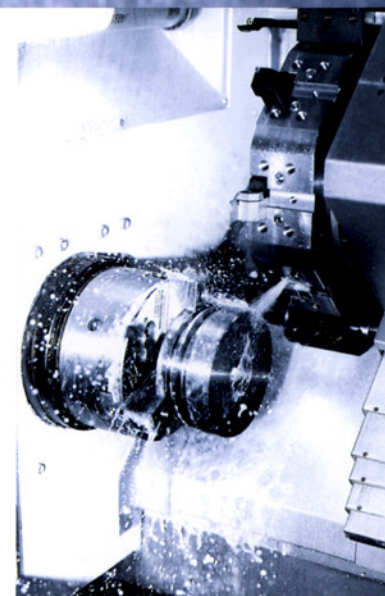


ETC series horizontal CNC lathe is designed by combining with market demand.It can process various shaft-shape and disc-shaped workpieces effectively, and meet the requirement of major users. Its cost performance is very high, and can be equipped with auto loading-unloading device for workpiece to realize peocessing workpiece in auto mode, reducing labor cost.

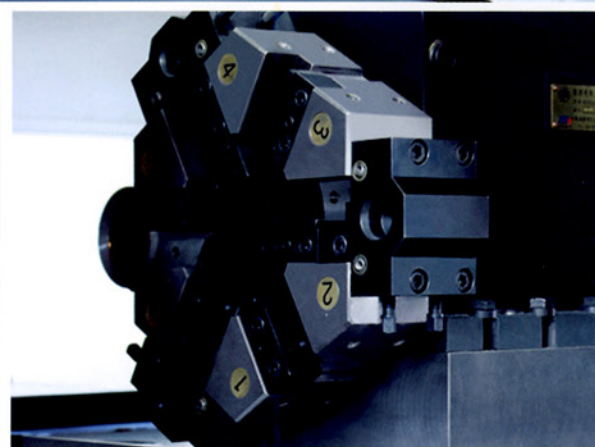
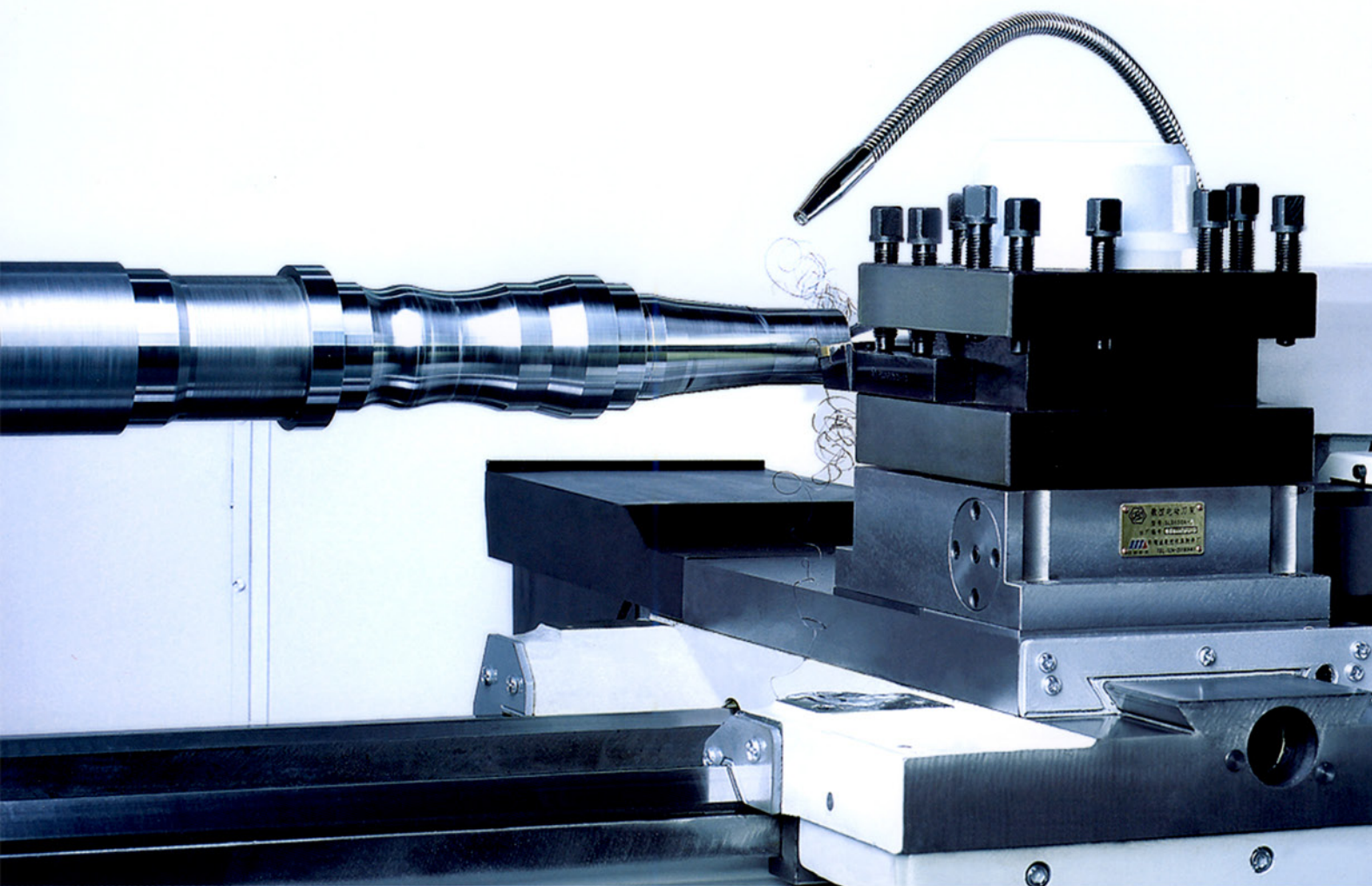


Items	Unit	ETC1625p	ETC3635p	ETC1625u	ETC3635u	ETC3650u	ETC3650e
Max.swing dia. over bed	mm	450	420	450	420	420	420
Max.swing dia. over carriage	mm	160	170	200	260	260	260
Max. cutting diameter	mm	160	360	160	360	360	360
Max. cutting length	mm	250	350	250	350	500	500
Max. spindle speed	r/min	4000	3000	4000	3000	3000	2400
Spindle bore	mm	∅50	∅53	∅50	∅53	∅62	∅62
Max. dia of the bar	mm	∅38	∅36	∅38	∅36	∅50	∅50
Form of turret	piece	gang tool	gang tool	horizontal 6-position	horizontal 6-position	horizontal 6-position	horizontal 8-position
Main motor power	kW	5.5/7.5	7.5/11	5.5/7.5	7.5/11	11/15	11/15

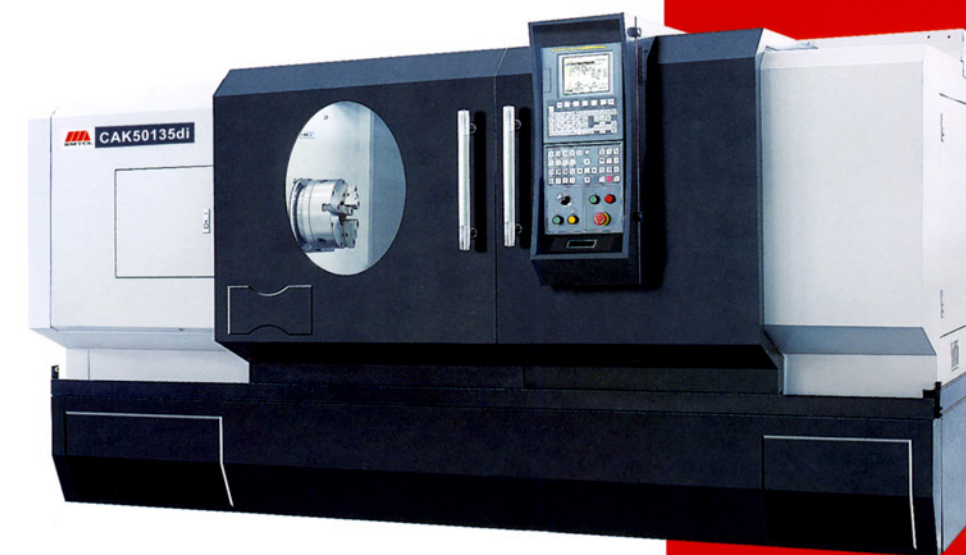
Items	Unit	ETC1625h	ETC3650h	ETC3675h	ETC5050h	ETC5075h	ETC50100h	ETC50150h
Max.swing dia. over bed	mm	450	420	420	590	590	590	590
Max.swing dia. over carriage	mm	200	260	260	330	330	330	330
Max. cutting diameter	mm	160	360	360	500	500	500	500
Max. cutting length	mm	250	500	750	500	750	1000	1500
Max. spindle speed	r/min	4000	3000	3000	3000	3000	3000	3000
Spindle bore	mm	∅50	∅62	∅62	∅62	∅62	∅62	∅62
Max. dia of the bar	mm	∅38	∅50	∅50	∅50	∅50	∅50	∅50
Form of turret	piece				horizontal 8-position			
Main motor power	kW	5.5/7.5	11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5







The series of lathes bed saddle attaches the TSF guideway board, and has steady precise. The tool rest has the vertical four positions, the vertical six positions, the horizontal six positions and so on many kinds of forms. The system has many choice such as FANUC, GSK, SMTCL-NC100, SIEMENS and so on. The feed system will through servo electrical machinery to drive the ball bearing guide screw, and has higher precision.



Items	Unit	CAK36 series	CAK40 series	CAK50 series	CAK61 series	CAK63 series	CAK80 series	CAK100Q series
Max. swing dia. over bed	mm	Ø360	Ø400	Ø500	Ø610	Ø630	Ø800	Ø1000
Max. cutting length	mm	650	850	600-1860	600-1860	600-2850	1350-4850	1300-4800
Spindle bore	mm	Ø53	Ø53	Ø70	Ø70	Ø104	Ø104	Ø104
Main motor power	KW	5.5	5.5	7.5	7.5	11	15	15
Total power	KVA	15	15	15	15	22	22	30



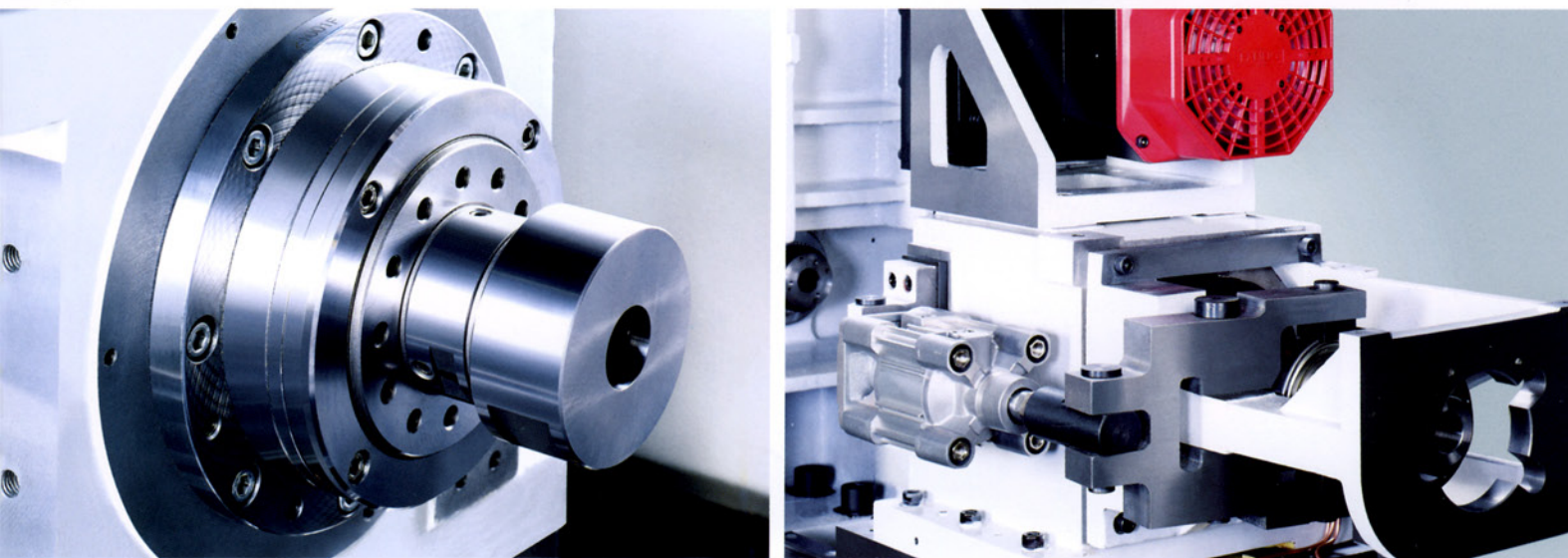
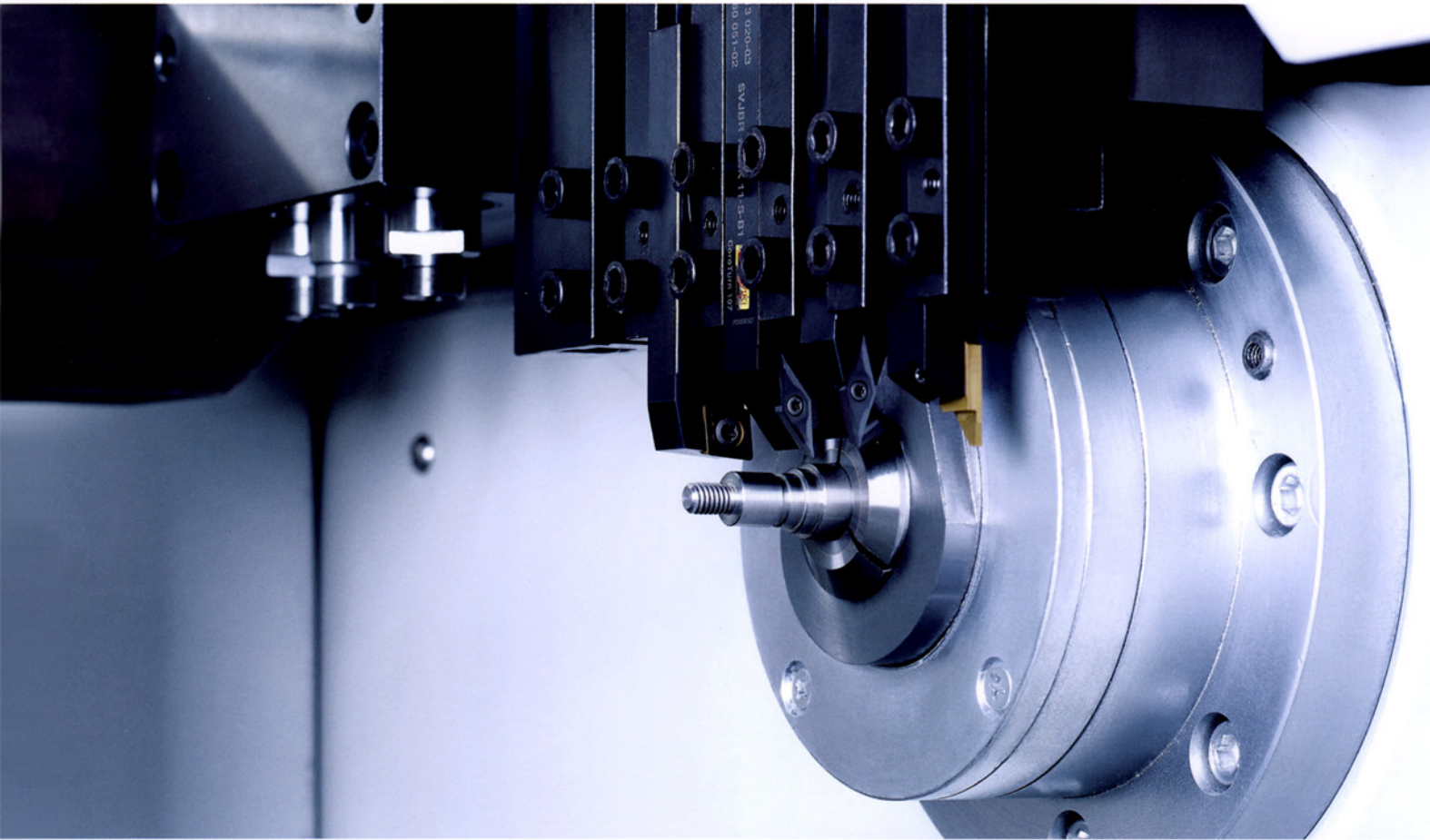
# SH

Best solution for  
small workpiece

## SH SERIES

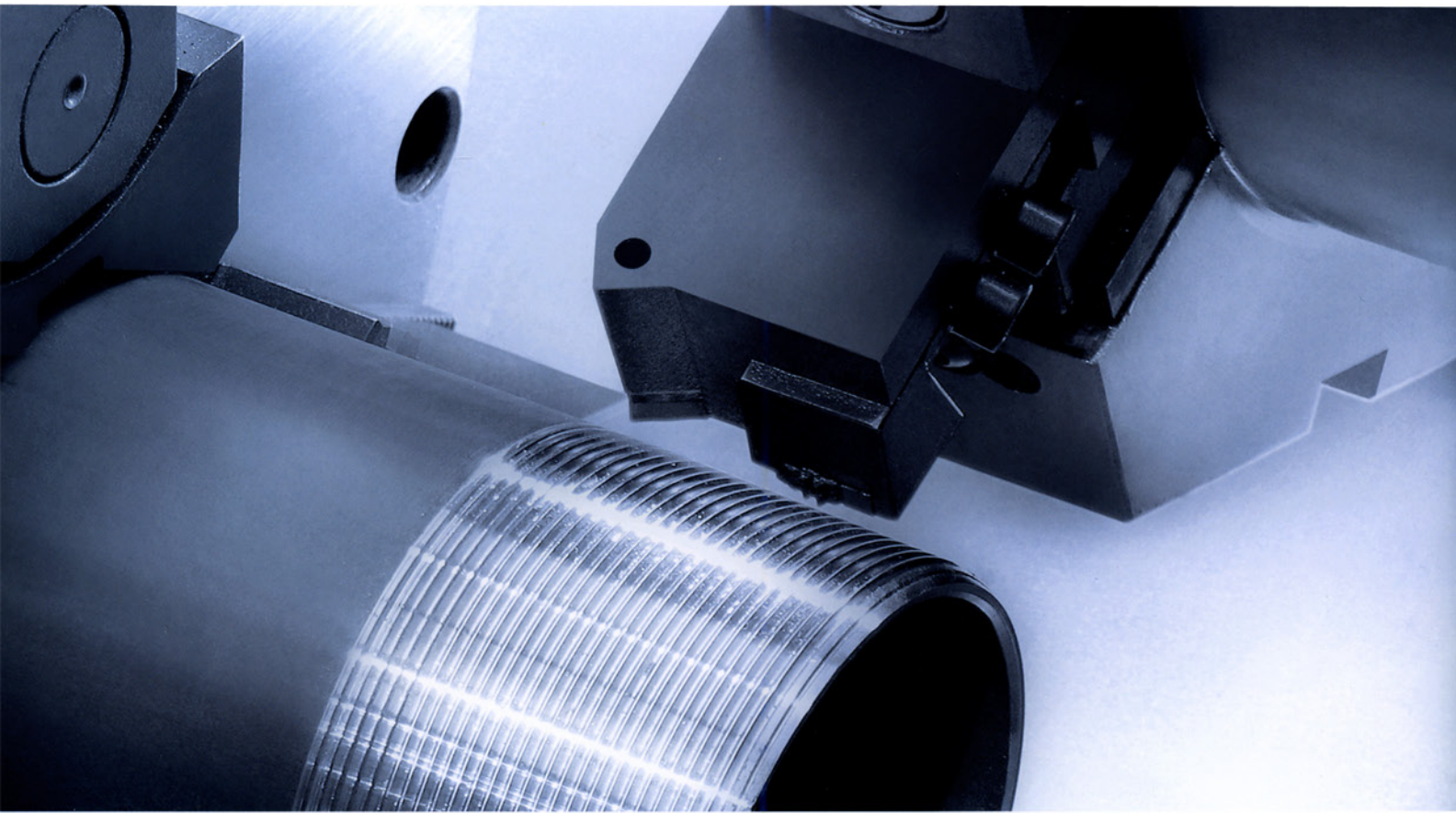
### SLIDING HEADSTOCK CNC LATHE

SH straight-cut NC machine is developed and designed for specifically meeting the needs of long-and-thin shaft-shaped parts with small diameter. SH20-5 is single-spindle structure and SH20-7 is double-spindle structure. The machine is suitable for turning, milling, drilling and tapping etc. in high efficiency and high accuracy. When it is equipped with a automatic feeder for bars, it can continuously process cold-draw round bars and polishing stick in auto cycle mode. The machine is mainly use in such industries as electronics, information, instruments, electromechanical products, and is an irreplaceable machine for processing the parts with small diameter in high efficiency and high precision.

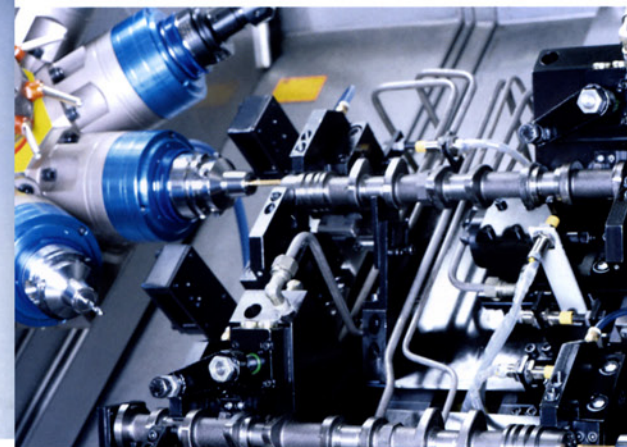


Items	Unit	SH20-5	SH20-7
Max. swing diameter	mm	Ø20	Ø20
Max. spindle speed	rpm	6000	6000
Spindle bore diameter	mm	Ø21	Ø21
Spindle motor	kW	2.2/3.7	2.2/3.7





Apply to petroleum industry, steel tube factory industry broadly. Suitable for various pipe thread. The machine is designed that pair of chuck structure, which use fluctuating Calm traveling schedule chuck. The high-power electric motor, with high rotation rate chief axis and allocation combination cutter can carry out compound cutting. Positioning device and Calm support tailstock overcome the gas thread cantilever cutting deficiency which is easy to produce oscillation, greatly increase the stiffness of the whole machine.



Pipe thread CNC lathe SUC0203



Pipe thread CNC lathe STC34100b pipe

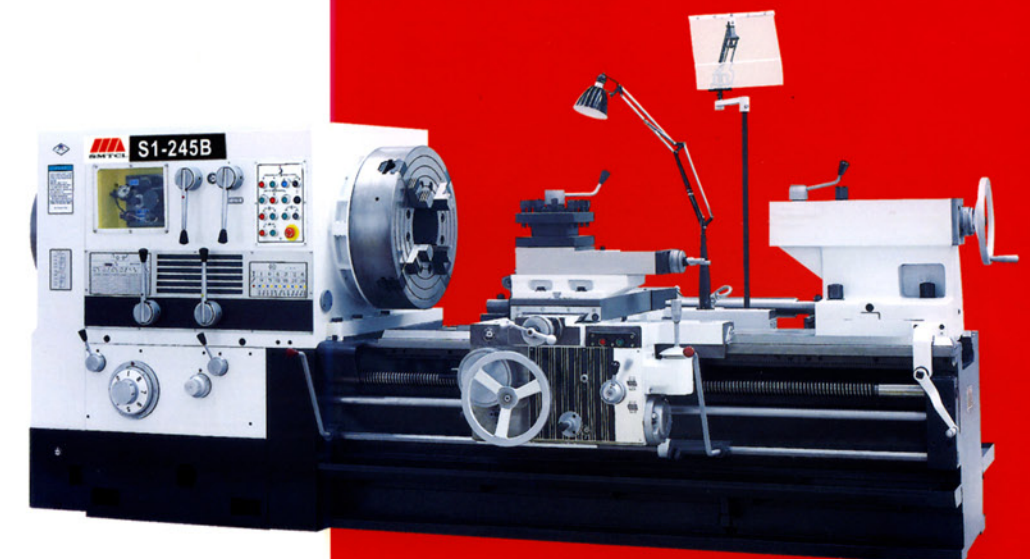
Items	Unit	STC34 series	STC22/24 series	STC1135pipe	STC1835pipe	STC3440n	STC1460n	STC1850n	SUC8150	SUC8105	SUC0203	HTC6330b	S1-245B	S1-262A
Max. cutting length	mm	1000/1500/3000	1000	350	350	400	500	400	300	150	130	300	1000/1500	1000/1500/3000
Max. cutting diameter	mm	340	219(elec.)/245(hydra.)	60-114	60-180	340	140	180	533	508	340	630	60-219	114-340
Range of spindle speed	rpm	7-310	7-310/7-400	97-605(90-660)	170-660(90-610)	90-400	90-800	200-700	90-800/90-500	50-200	90-400	20-1400	8-306	5.6-254
Main motor power	kW	18.5	18.5	9/11(15/18.5)	15/18.5	45/55	30	30/37	45/55	30/37	30/37	30/37	18.5	18.5



Pipe thread CNC lathe STC1850n



Pipe thread CNC lathe STC1835pipe



Pipe thread CNC lathe S1-245B/1000

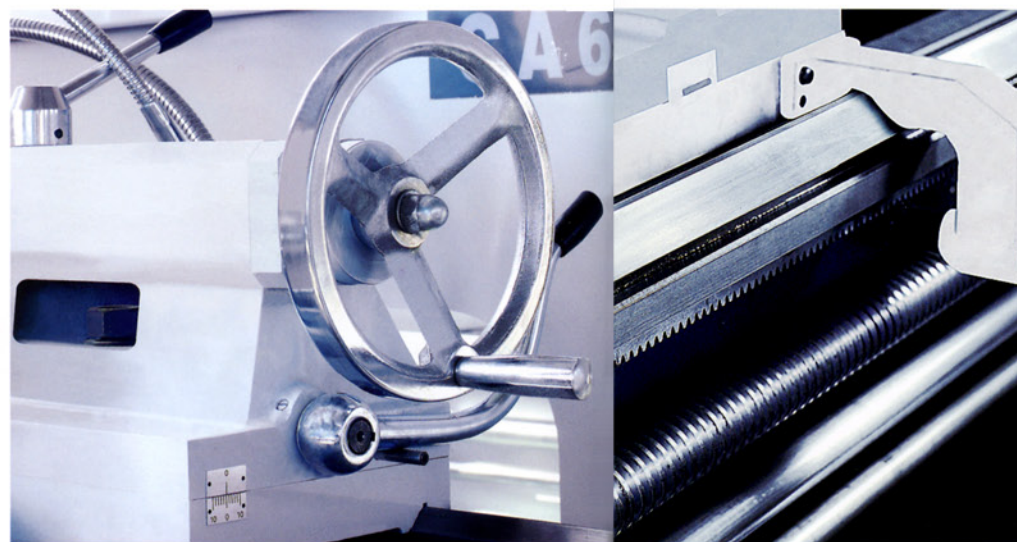
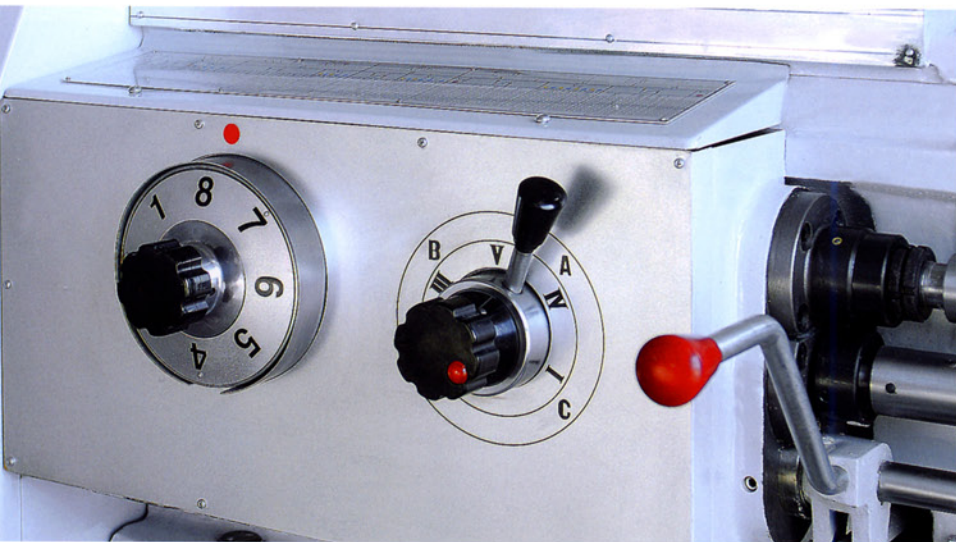


# CA

## CA SERIES

### CONVENTIONAL LATHE

CA series is suitable for machining internal and external surface of cylinder, conic surface and other rotating surface. It is capable of turning various threads such as metric and inch. With max. spindle speed of 1600r/min, and low noise less than 83 decibel. Motor is equipped with motor starter which protect against overcurrent and over heat. Manual brake and foot brake are both available.



Conventional lathe CA6136/1000



Conventional lathe CA6261B/1000

Items	Unit	CA6136	CA6240A	CA6250B	CA6261B	CA6266C
Swing over bed	mm	360	400	500	610	660
Swing over gap width in gap	mm	-	630×210	720×210	830×210	870×210
Max. workpiece length	mm	1000	2000	3000	3000	3000
Main motor power	kW	4	7.5	7.5	7.5	7.5
Spindle speed range	r/min	Forward 37-1600(12) Reverse 102-1570(6)	Forward 11-1600(24) Reverse 14-1580(12)	10-1400(24)	10-1400(24)	14-1250(24)

China's industrial  
awards products

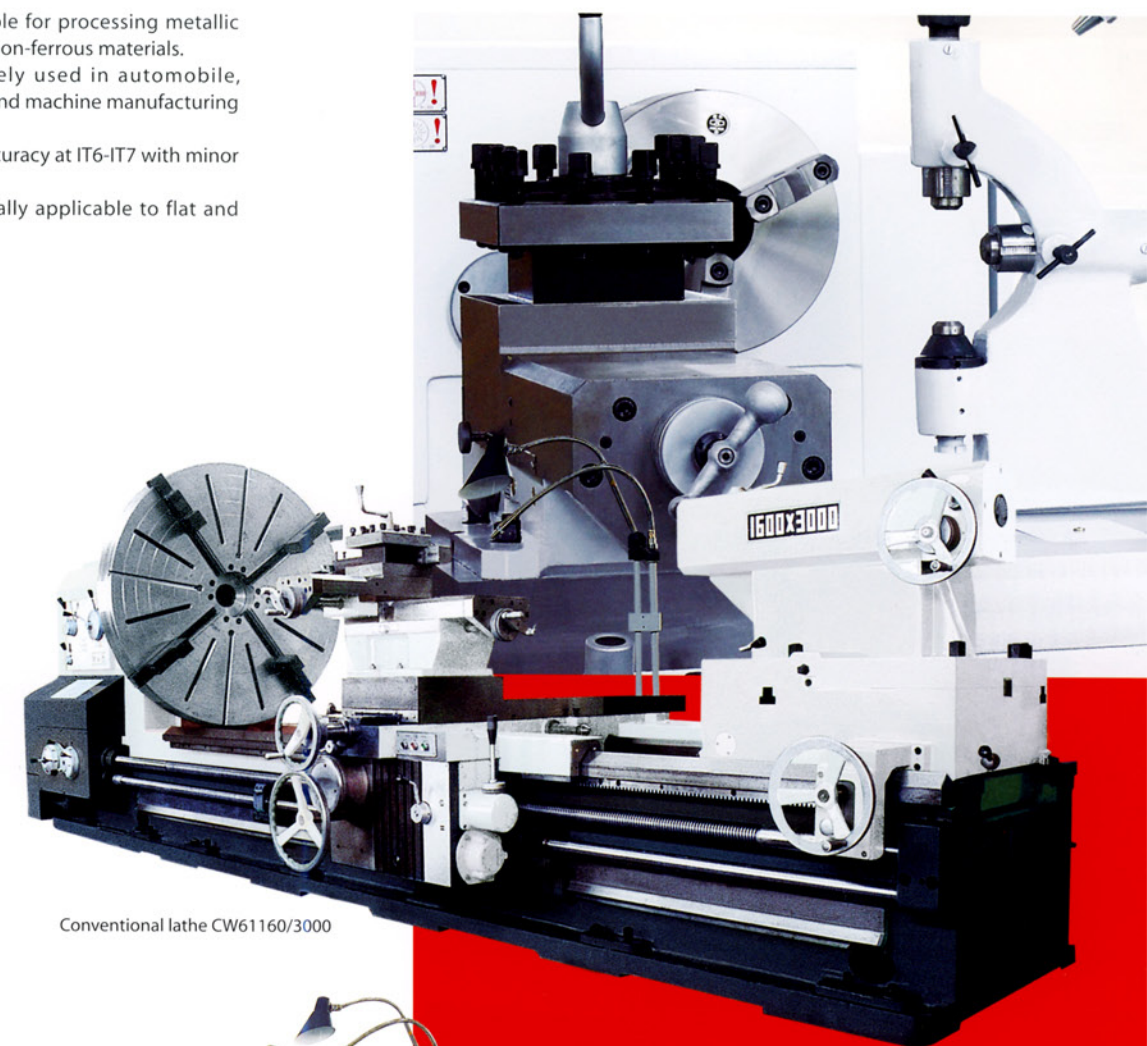
Mirror of turning  
Made in china

# CW

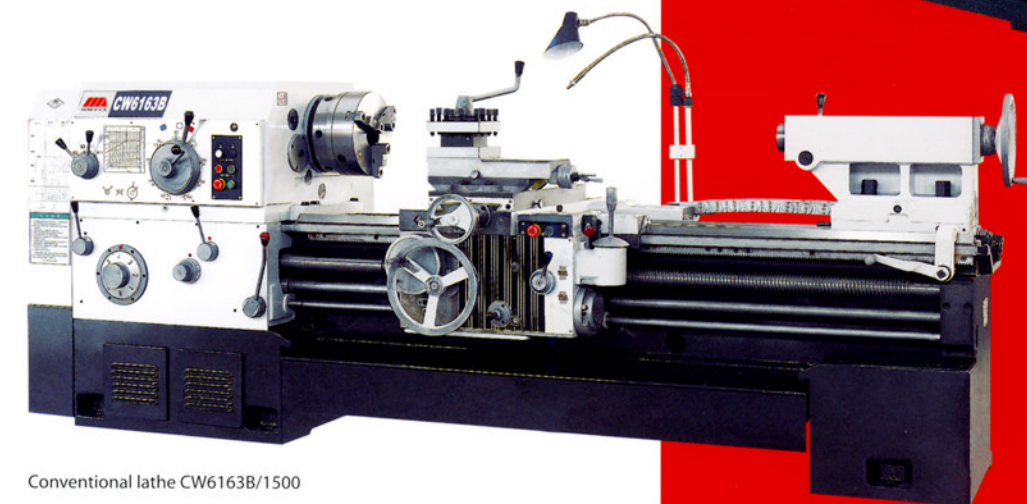
## CW SERIES

### CONVENTIONAL LATHE

The series of lathes are favorable for processing metallic materials as cast iron, steel, and non-ferrous materials. The series of lathes are widely used in automobile, petrochemical, military, railway, and machine manufacturing industries. The lathes can reach working accuracy at IT6-IT7 with minor surface roughness. The saddle bed lathe is especially applicable to flat and unusual part manufacturing.



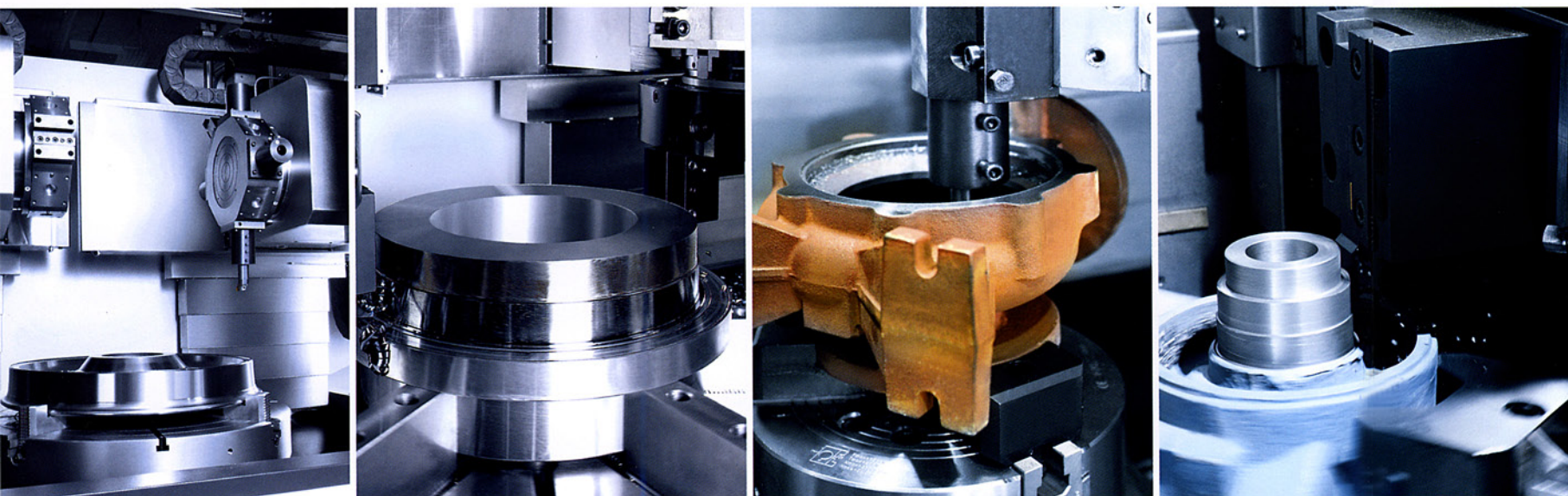
Conventional lathe CW61160/3000



Conventional lathe CW6163B/1500

Items	Unit	CW6163B	CW6180B	CW61100B	CW61160	CW61200
Maximum swing diameter over bed	mm	630	800	1000	1600	2000
Maximum workpiece length	mm	7000	14000	16000	16000	16000
Main motor power	kW	11	11 or 15	22	22	22
Maximum weight of workpiece	kg	2500	2500	5000	12000	12000

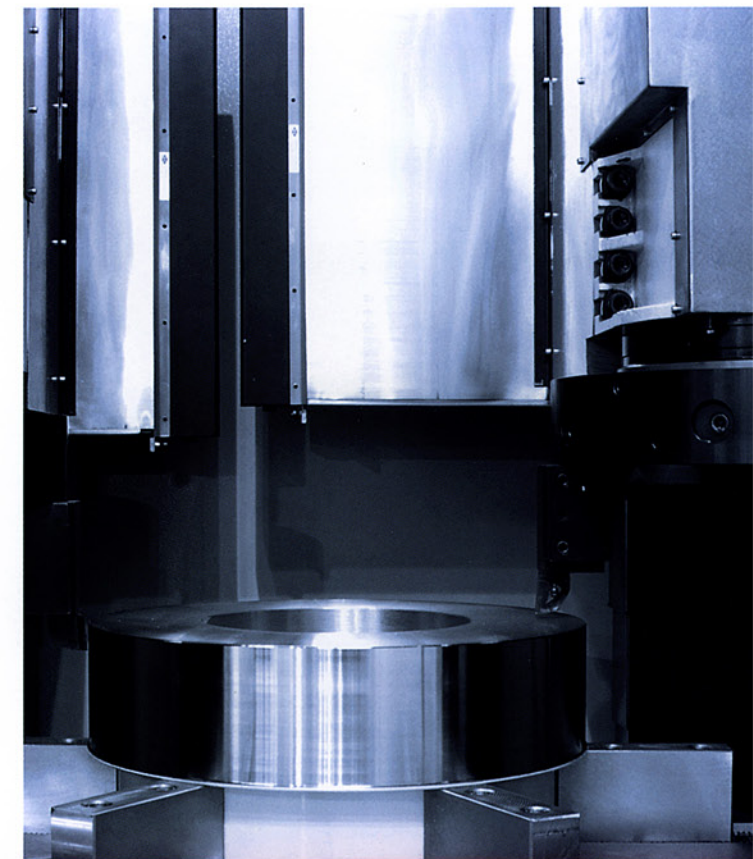




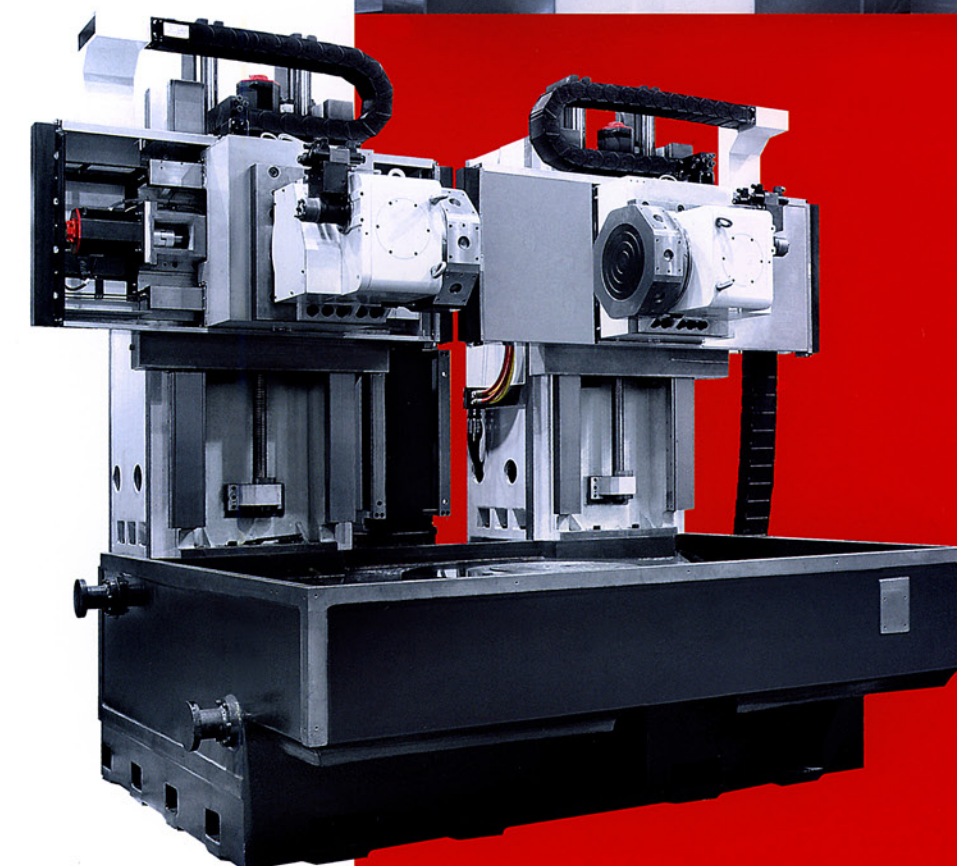
Spindle unit is designed in accordance with the standard of high-rigidity type spindle. Machine is equipped with high-speed spindle and NSK angular contact spindle bearings which have features of high precision and good rigidity.

This serial vertical lathe has wide range of specifications. It is highly suitable for large-quantity, high precision, strict size consistency required parts machining, especially suitable for such as the requirements of automotive components machining industry.

Z-axis is equipped with balancing cylinder, which is able to extend the service life of screw. It has features of Z-axis smooth movement, non-crawling and so on.



Items	Unit	VTC3240	VTC5060	VTC6070	VTC8080	VTC6370d	VTC10080d	VTC12580d	GTC10080	GTC10080a
Max.swing dia. over bed	mm	500	600	780	1000	900	1200	1600	1200	1400
Max. cutting diameter	mm	320	500	600	800	630	1000	1000(shaft)/1250(disc)	1000	1250
Max. work piece height	mm	400	600	700	800	700	800	800	800	800
Range of spindle speed	r/min	50-2500	50-2000	50-750	50-800	5-1000/5-1800	5-175/175-400	5-145/145-300	2-200/7-300	2-200/7-300
Main motor power	kW	15/18.5	22/30	22/30	37/45	45/55	45/55	100	37/45	37/45
Form of turret		Horizontal, 8-station	Horizontal, 8-station	Horizontal, 8-station	Vertical, 6-station	Horizontal 8-station(double)	Horizontal 8-station(double)	Horizontal 8-station(double)	Vertical 4-station turret or 12-station tool magazine	Vertical 4-station turret or 12-station tool magazine



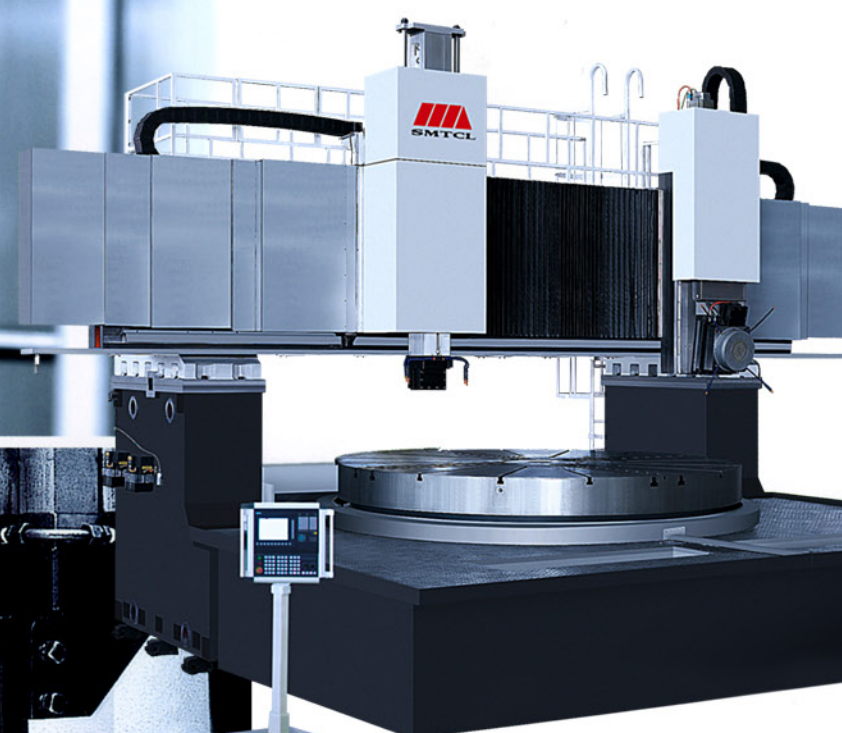
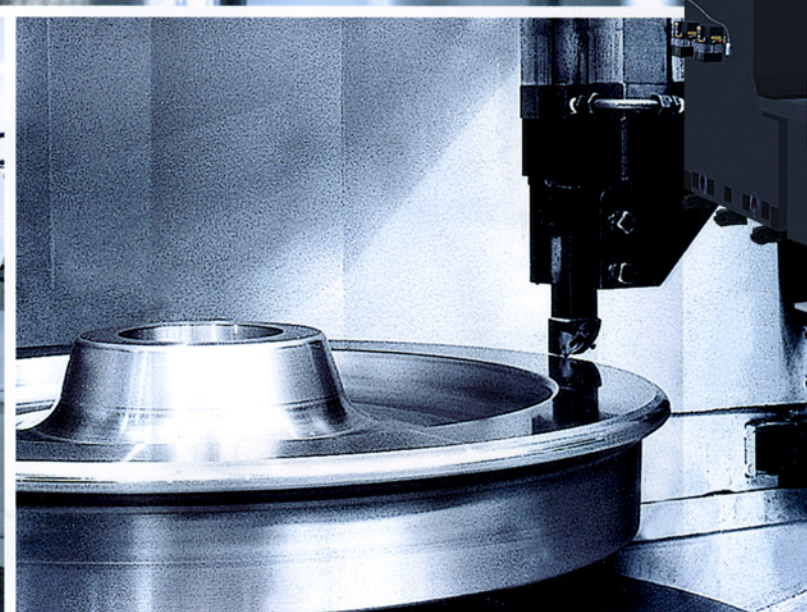
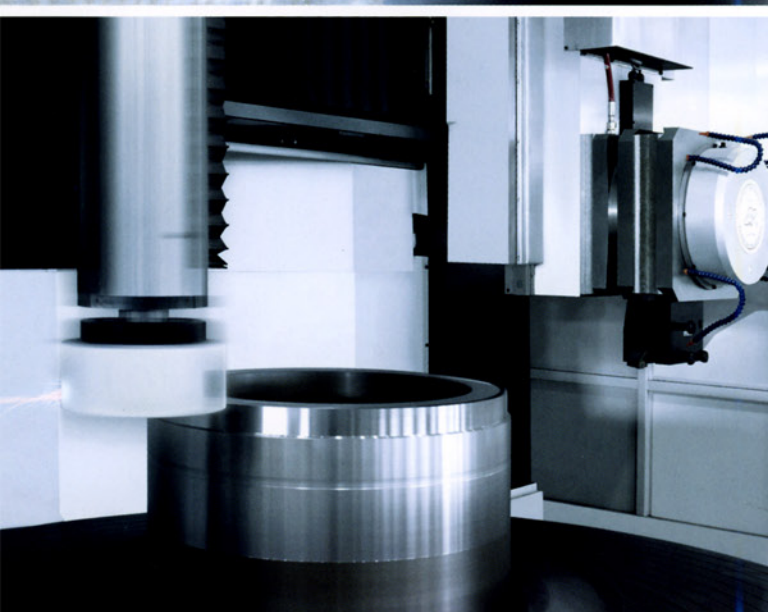
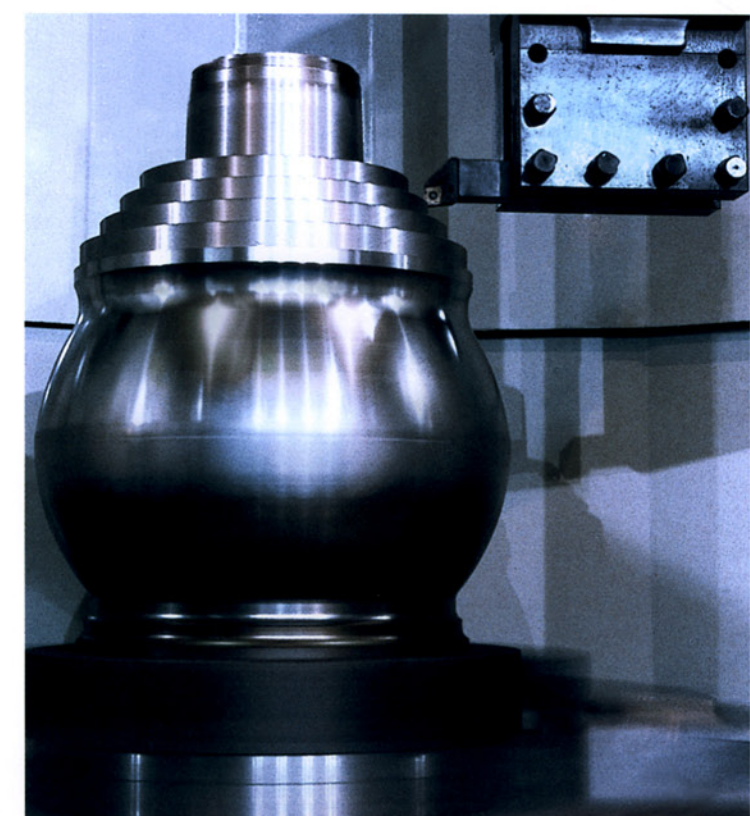
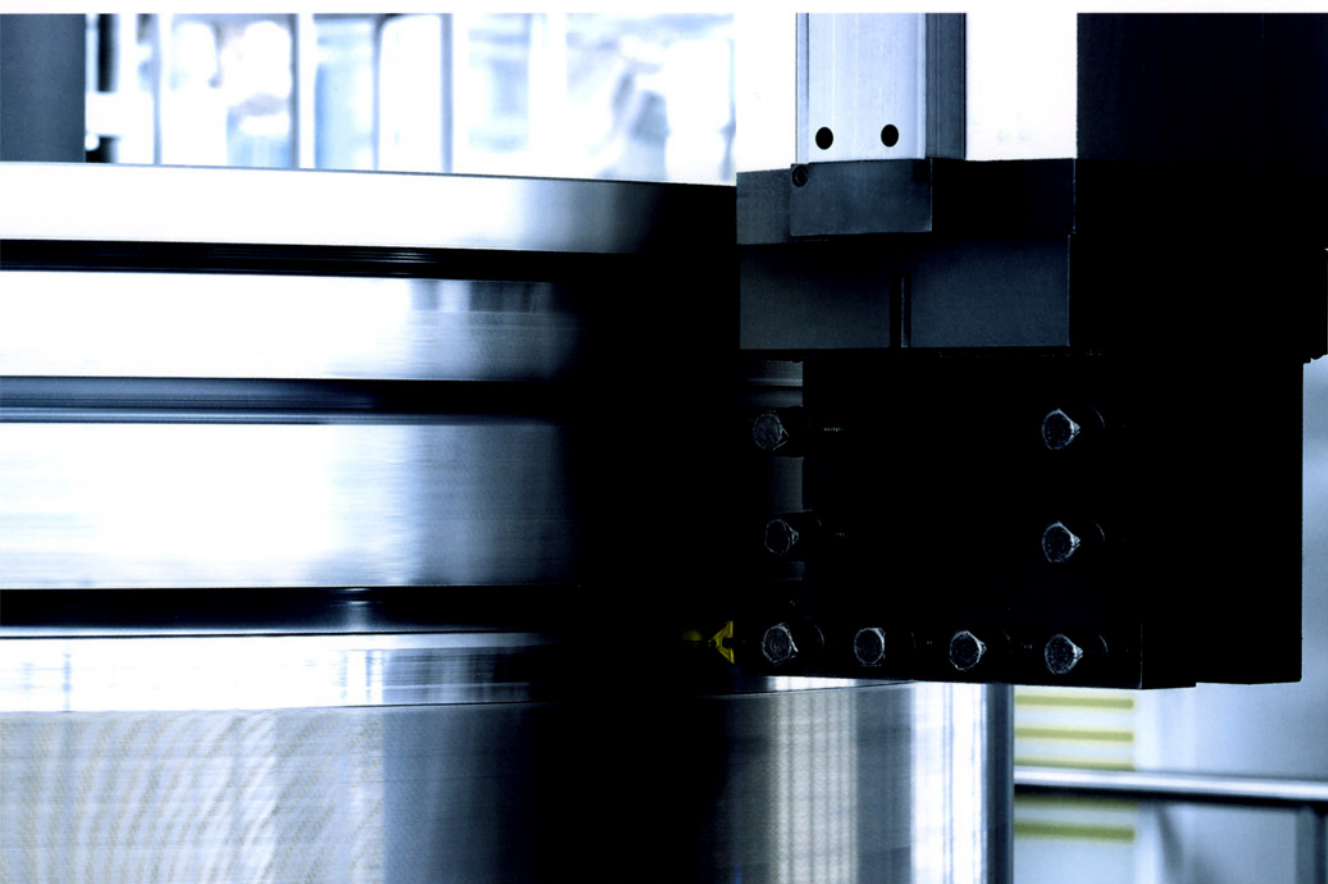
Vertical CNC lathe VTC12580d



GTC series machines are suitable for turning large-size disc type workpieces such as wheel, motor shell, valve body, flange, motor body and pump etc.

GTC series machines are the large-size CNC vertical lathe with movable beam or with fix beam that developed by SMTCL on the basis of Introduction of HOMMA's technologies, Japan. Meanwhile, we invite HOMMA's expert to work in SMTCL for technical instructions long time.

GTC series machines can be equipped with Measuring sensor for workpiece and Tool eye for tools, so it can be realized running automatically and unmanned machining, in order to reduce the running cost.

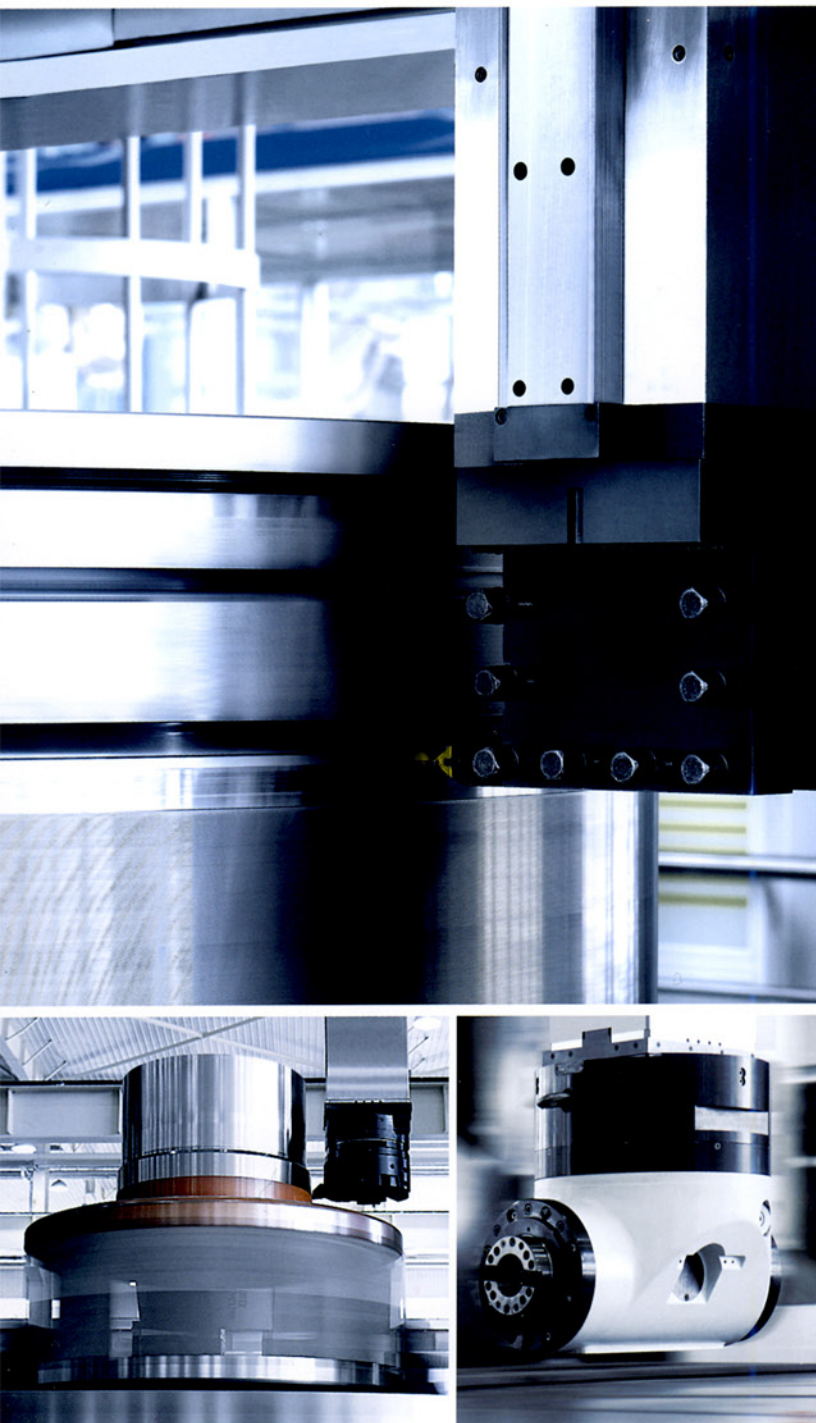


Vertical CNC lathe GTC35060



Items	Unit	GTC16090	GTC20090	GTC250110	GTC300125	GTC350160	GTC400160	GTC500200	GTC500200
Diameter of worktable	mm	∅1250(1400)	∅1600	∅2000	∅2500	∅3300	∅3600	∅4500	∅5700
Max. turning diameter	mm	∅1600	∅2000	∅2500	∅3000	∅3500	∅4000	∅5000	∅6300
Max. height of workpiece	mm	1200(1600)	1600	2000	2000	2800	2800	4000	4000
Table rotating speed	r/min	1-312	1-254	1-180	1-160	1-60	1-60	0.5-40	0.5-32
Main motor power	kW	AC 37/39	AC 45/60	AC 60	AC 60	AC 55/60/100	AC 55/60/100	AC 80	AC 100
Stations of tool magazine for turning tools		12	12	12	12	12	12	optional 8	optional 8





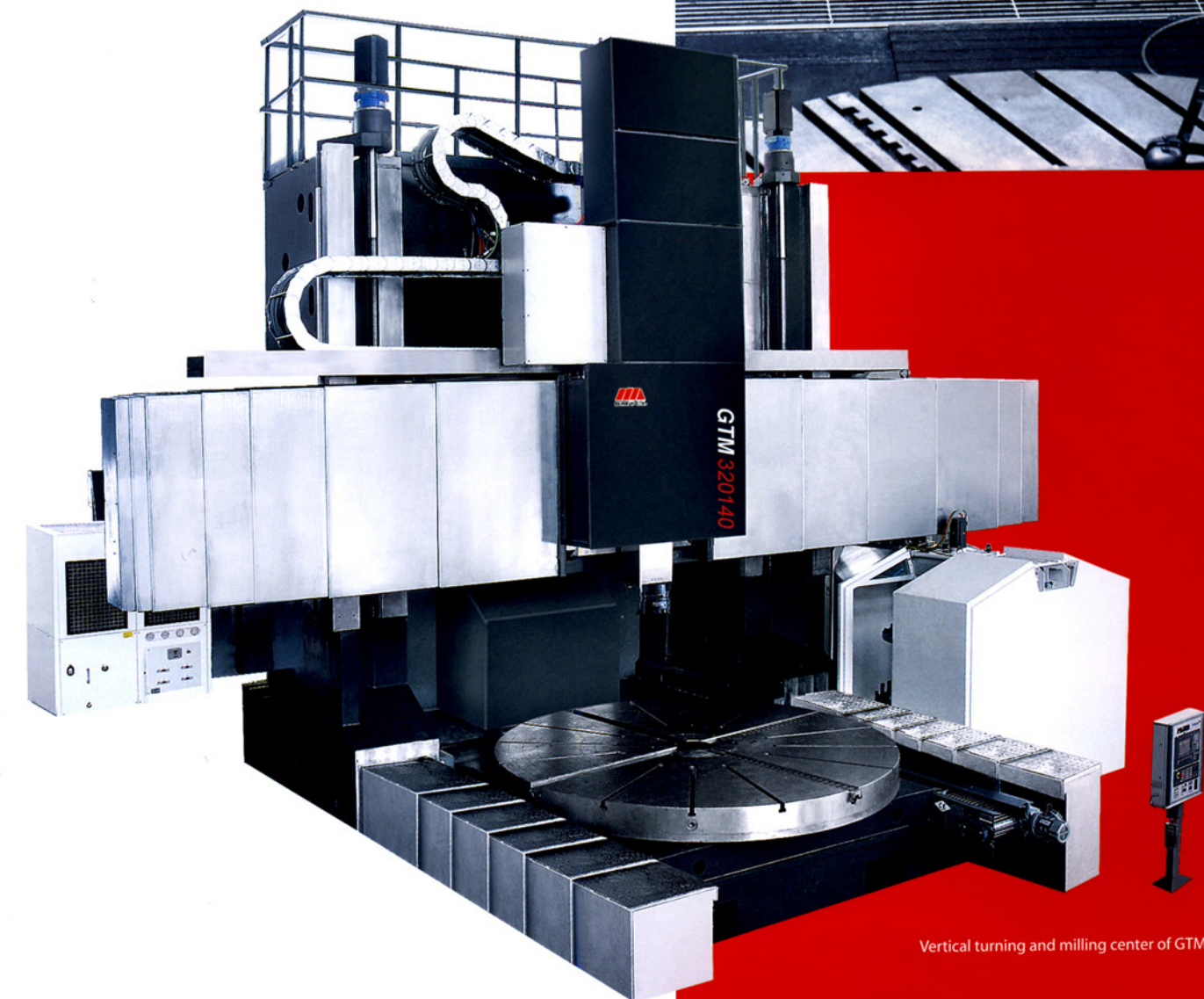
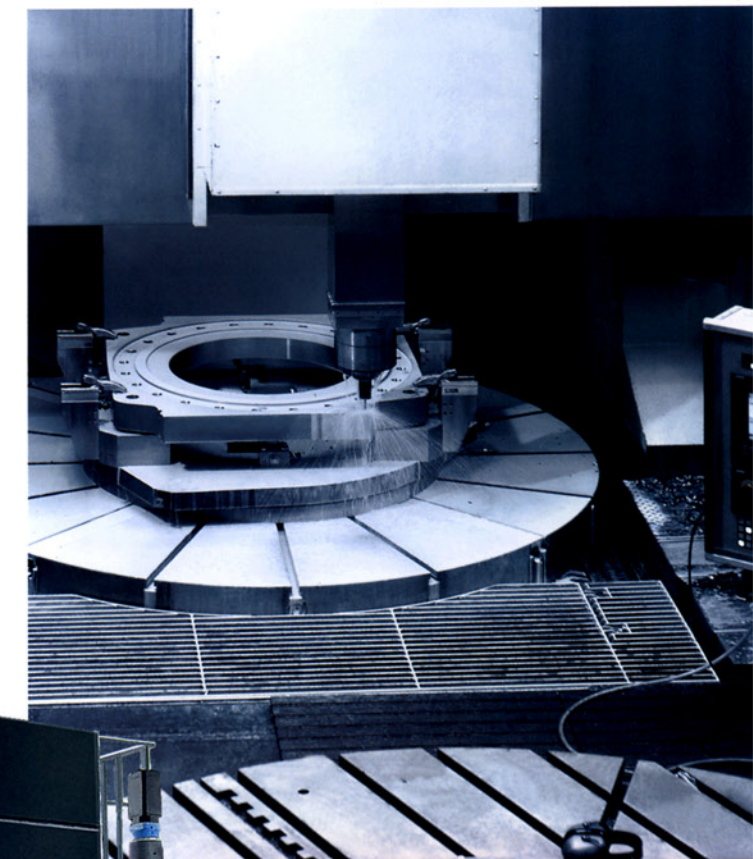
It is a double-column, portal shaped structure with synchronous movement and vertical movement of the crossbeam. It is used for five-axis processing of inside and outside spatial surfaces of parts such as large-sized cabinets.

70000Nm of maximum cutting torque, 2400Nm of milling, are applied to the heavy cutting of hard and high density materials.

A 280×240mm built-in ram and travel of 1400/1600mm makes it easy to process large-sized work pieces.

The rotary table is driven synchronously by the twin spindle motor with a more exact positioning and a higher degree of accuracy. The crossbeam's vertical movements are also driven synchronously and can be automatically locked at any position. It has a large bearing capacity with high precision accuracy due to the hydrostatic guideway system.

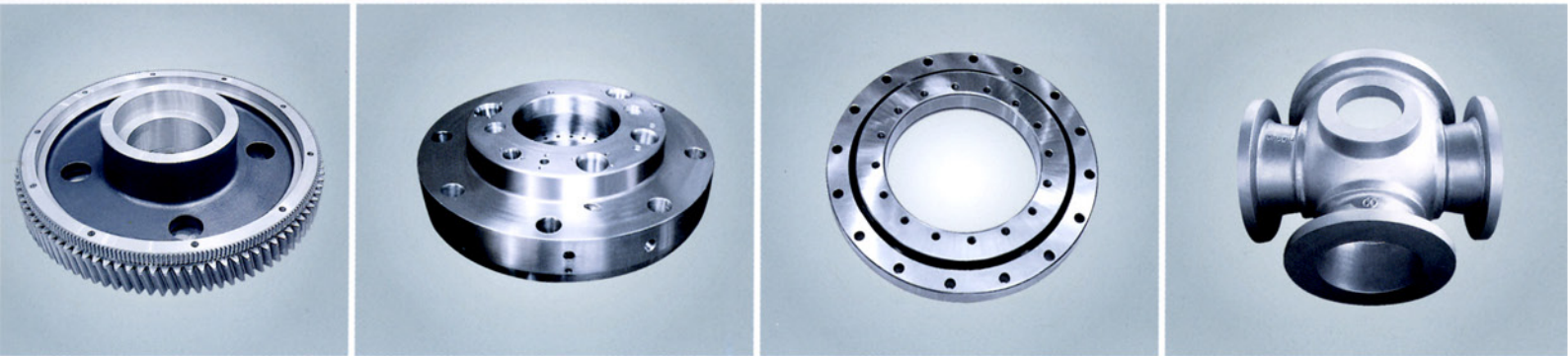
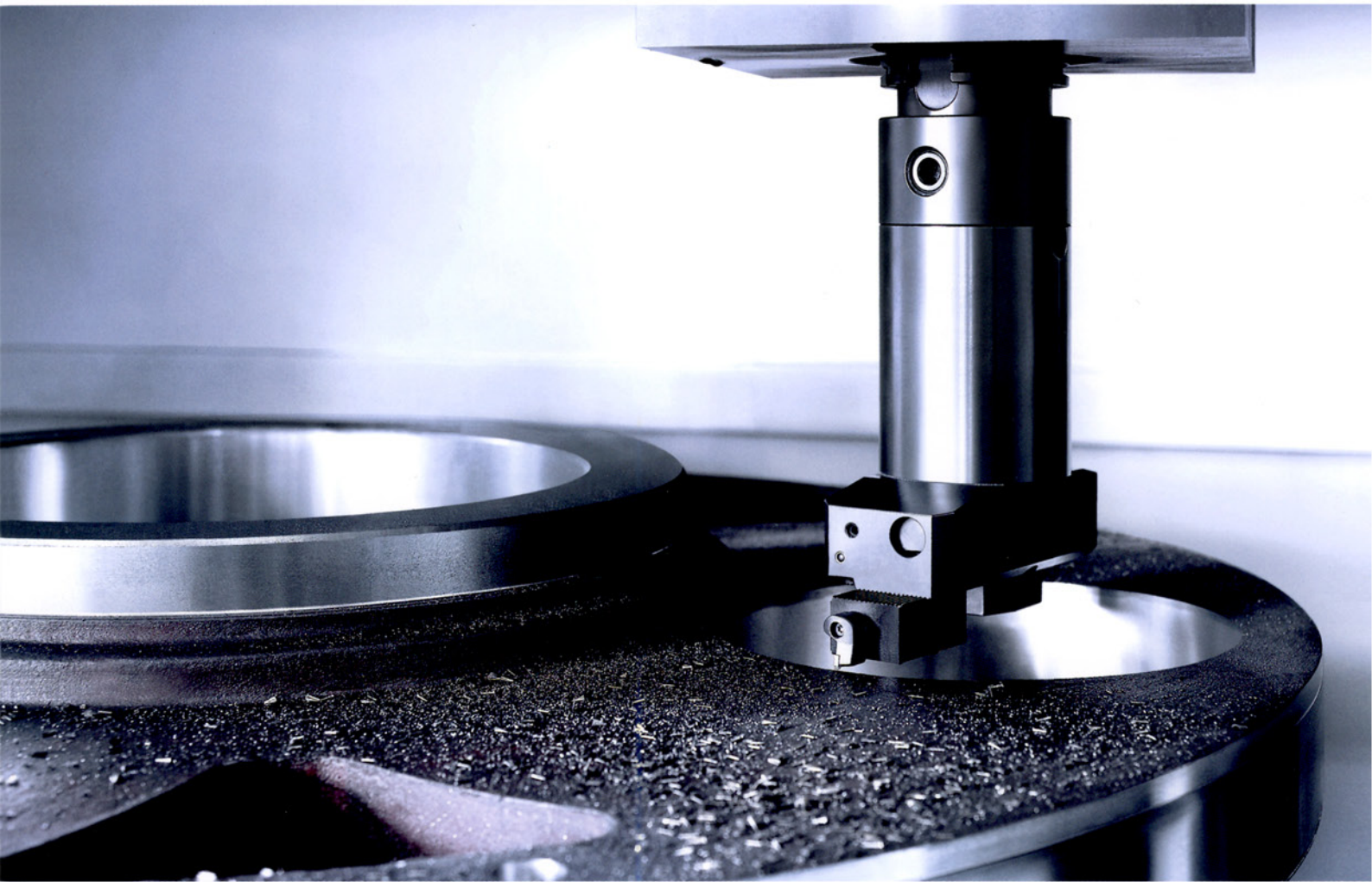
The multiform tool holder, boring and milling head, and angle head exchange automatically to clamp.



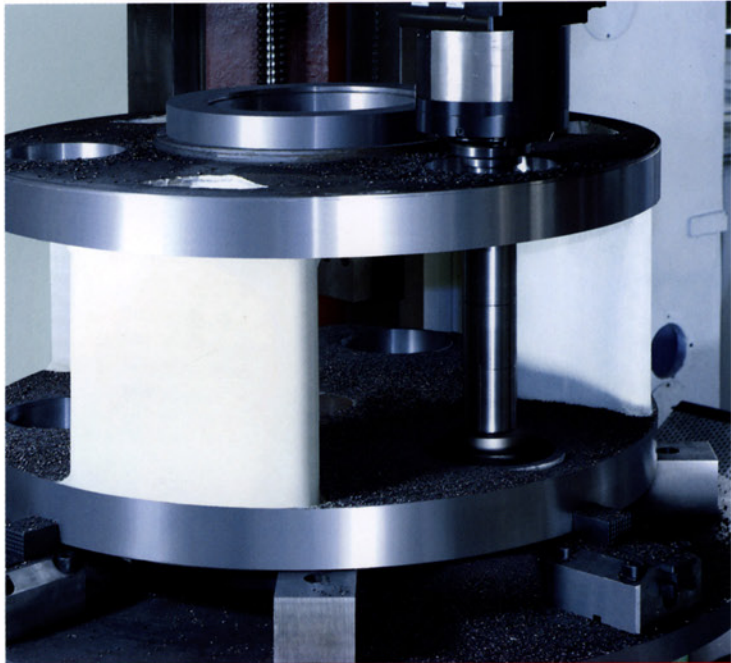
Items	Unit	GTM160140/160(f)	GTM200140/160(f)	GTM250140/160(f)	GTM320140/160(f)	GTM430140/160(f)
Max. cutting diameter	mm	∅1600	∅2000	∅2500	∅3200	∅4300
Max. processing height	mm	1600	2000	2000	2500	3000
Max. weight of work piece	tons	10	15	20	25	40
Rotary table diameter	mm	∅1250/∅1400	∅1600/∅1800	∅2000/∅2250	∅2500/∅2800	∅3200/∅3500
Max. boring & milling spindle speed	rpm	3150	3150	3150	3150	3150
Max. Rotating speed of table	rpm	335	265	200	180	120

Note: f means fixed gantry.





The feasible heavy cutting and high precision of the machine thanks for the specialized design.  
The casting parts features with specialized design and feasible anti-vibration design.  
The stable frame structure includes base, columns and top beam.  
The continuous and constant temperature distribution of the machine thanks for symmetric frame structure and driving unit.  
The linear rolling guideway is adopted on X axes.  
The large-size ballscrew enhances the transmission rigidity of each axes.  
The linear measure system (Scale) is adopted on X/Z axis.  
The pre-load is imposed on axial thrusting ball bearing and angular contacting ball bearing.  
Main drive is controlled by double motor with different power, which can pre-loading of C-axis during milling status to release the clearance.  
VERTITURN series CNC Vertical turning machine is mainly machining large-size and complicated discal workpieces with high accuracy, multi-procedure in the fields of aerospace, shipping, wind power, military, bearing, valve, mine etc. Use this series machine, some technological equipment can be saved, the preparing period for production can be shortened, the quality can be guaranteed and productivity can be improved.



Items	Unit	VERTITURN1	VERTITURN2	VERTITURN3	VERTITURN4	VERTITURN5	VERTITURN6
Worktable dia.	mm	∅1250	∅1600	∅2000	∅2500	∅3000	∅3500
Max. turning dia.	mm	∅1600	∅2000	∅2500	∅3000	∅3500	∅4000
Max. turning height	mm	1200	1200	1600/2000/2500	2000/2500	2000/2500	2000/2500
Max. weight of workpiece	ton	8	12	16	20	25	30
Main motor power	KW	turning 60/milling 29	turning 60/milling 29	turning 60/milling 29	turning 60/milling 29	turning 71/milling 29	turning 71/milling 29
Max. rotary speed of worktable	rpm	437	345	225	195	150	128

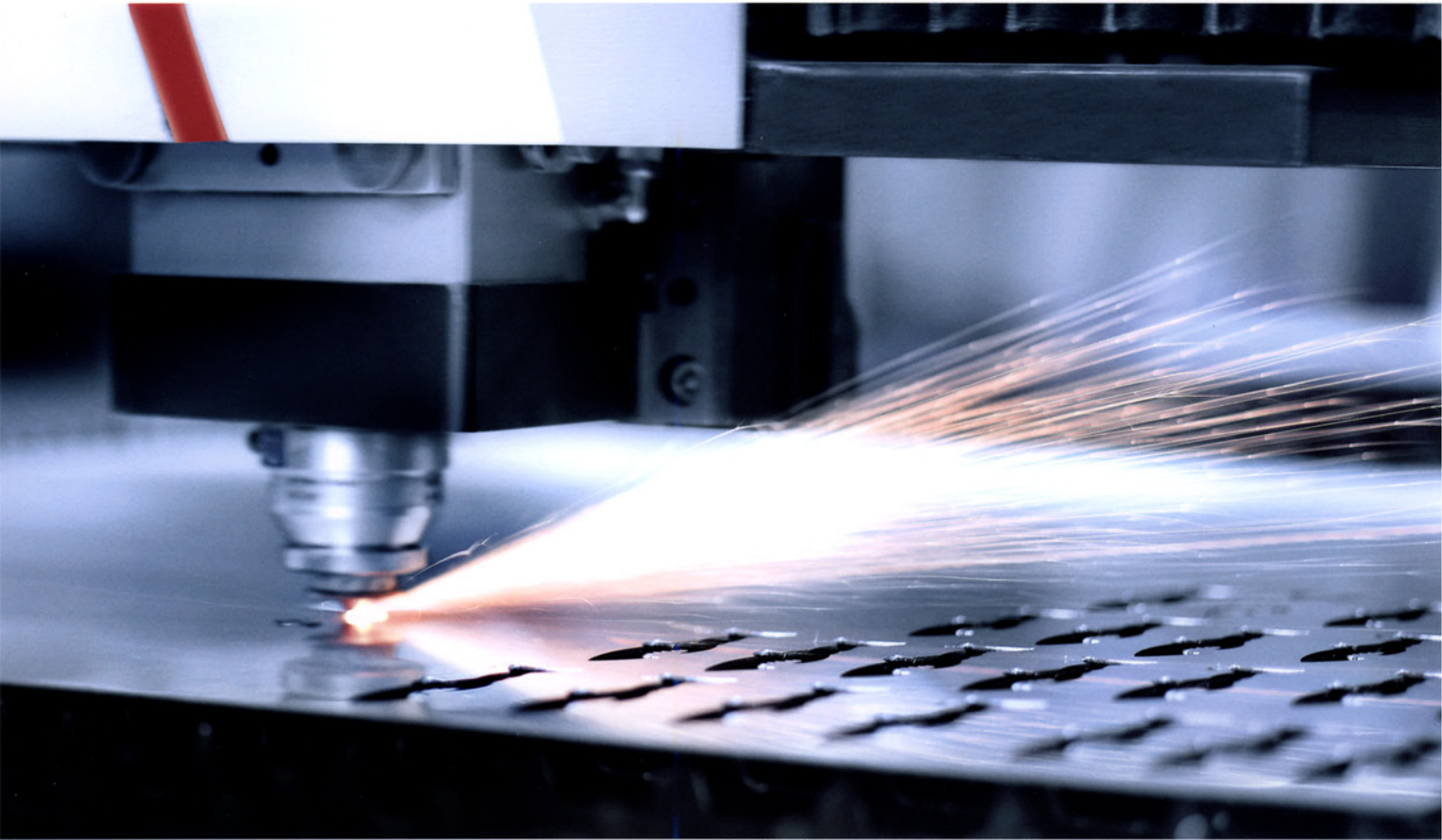


**LASER  
TECHNOLOGY**

**SLM**



New concept  
new experience



The latest SLM series with high quality parts can make the machining availability of higher precision and efficiency. Optimize machine's configuration, use imported mechanical transmission components, and adopt advanced intelligent CNC system, integrated control of the laser generator, hydraulic, electrical, all these characteristic make obvious energy savings. Product develops the management of automatic process parameters and other laser technique can improve cutting quality as well as the processing efficiency. The remote monitoring function is realized by using advanced data communication system which can improve the efficiency of the supervision and after-sales service.

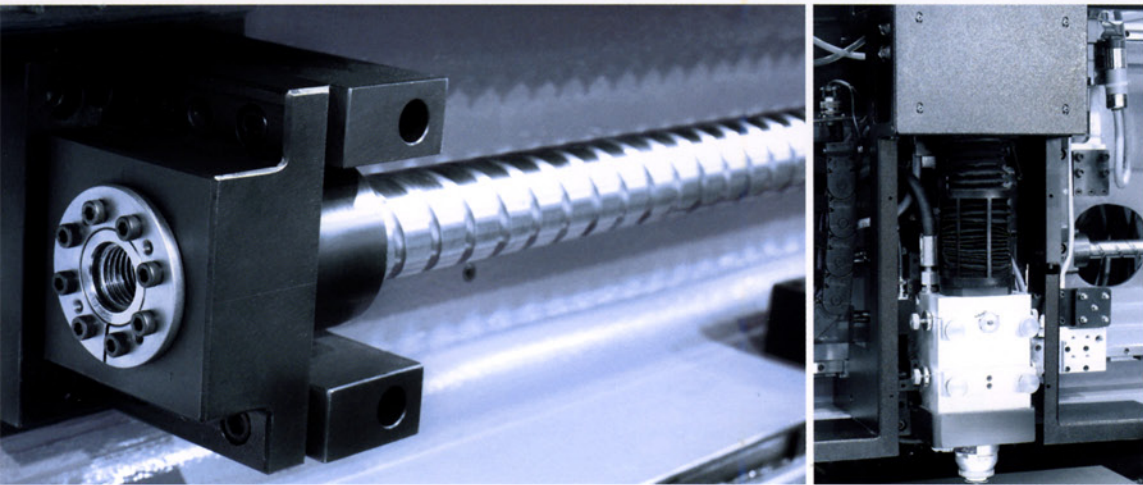
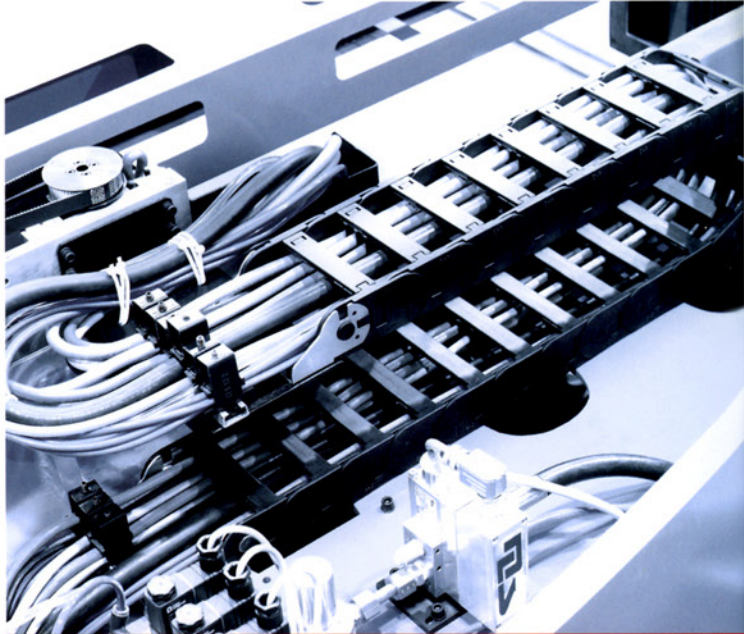
The unique cantilever-type of full flying optics is used for high quality and high efficiency cutting for all kinds of plate. The cantilever made from cast aluminum, light weight and small inertia with high speed.

The integrated structure, small floor area and stable optics path guarantee the processing quality.

Efficient pneumatic system: closed loop pneumatic control structure with good performance and high accuracy.

Noble quality with advanced configuration: screws, railways and other major transmission components are imported from advanced overseas companies. Tripartite valve, proportional valve, towline, cable and other key components adopt international famous brand which own high reliability and long service life.

New appearance: The top design company carefully crafted SLM series products. The original appearance shows the international trend. Advanced laser blanking, welding craft greatly improves the refined level of the manufacture.



Items	Unit	SLM3015h		SLM4020h	
		ANCA	Siemens 840D	ANCA	Siemens 840D
Travel X/Y/Z	mm	3000/1500/150	3000/1500/110	4000/2000/150	4000/2000/110
Max. weight of work piece	kg	750	750	1300	1300
Max. speed of positioning	m/min	140	140	110	110
Lancing width	mm	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2
Max. acceleration	m/s <sup>2</sup>	1.2g	1.2g	0.8g	0.8g
Lancing degree of roughness	μm	≤ 6.3	≤ 6.3	≤ 6.3	≤ 6.3

\*Please refer to 5mm of plating thickness for lancing width and degree of roughness



# GLOBAL MARKETING & SERVICE NETWORK



★ SHENYANG MACHINE TOOL CO., LTD.

- Established Branch Company
- To Be Established Branch Company
- ★ Established Service Platform
- ▲ To Be Established Service Platform