



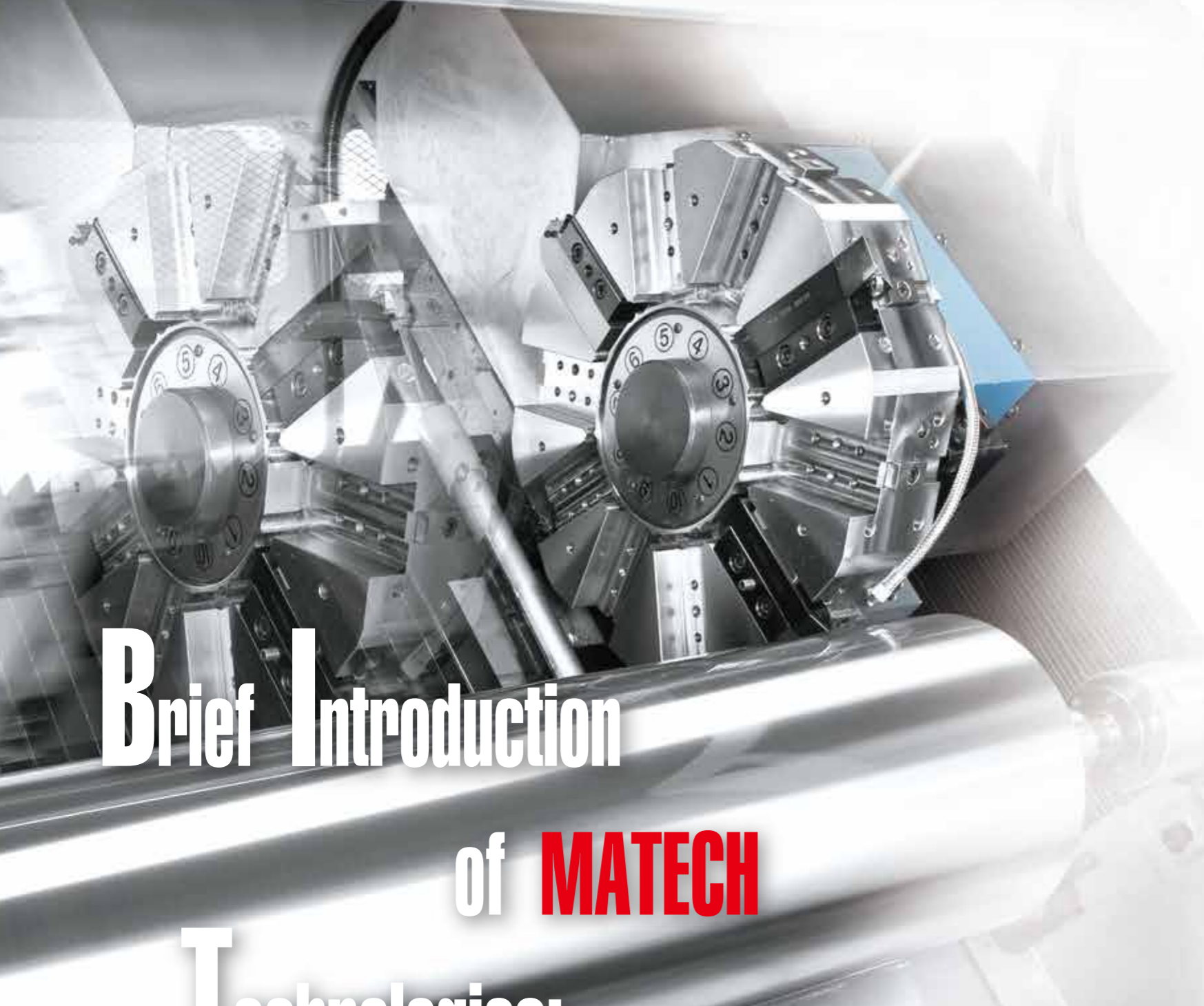
Integrity · Quality · Innovation · Technology

MATECH CNC MACHINETOOLS
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Distinctive Machine Tools from MATECH Mean Higher Performance and Speed



Brief Introduction of **MATECH** Technologies:

MATECH is founded in 1977, we have been always devoting ourselves in high precision spindle design and manufacturing. Since 1982, we started to cooperate with ITRI for developing CNC machine tools (CNC grinding machine) and inspection devices (dynamic balancer). In 1987, Matech and Baltron, a Swiss company, started to develop ultra-precision lathe and marketed machines back to Europe successfully.

In the same year, Matech developed aerostatic spindle. In 1991, Matech developed built-in spindle which is used in 7-axis CNC Turning Centers. Both technologies are successfully applied in our self-developing ultra-precision diamond Turning Machines.

At present, Matech is able to supply a wide range of high precision, ultra precision CNC turning machines, Vertical & Horizontal machining centers, all kind of automatic machining cell and Turnkey system.

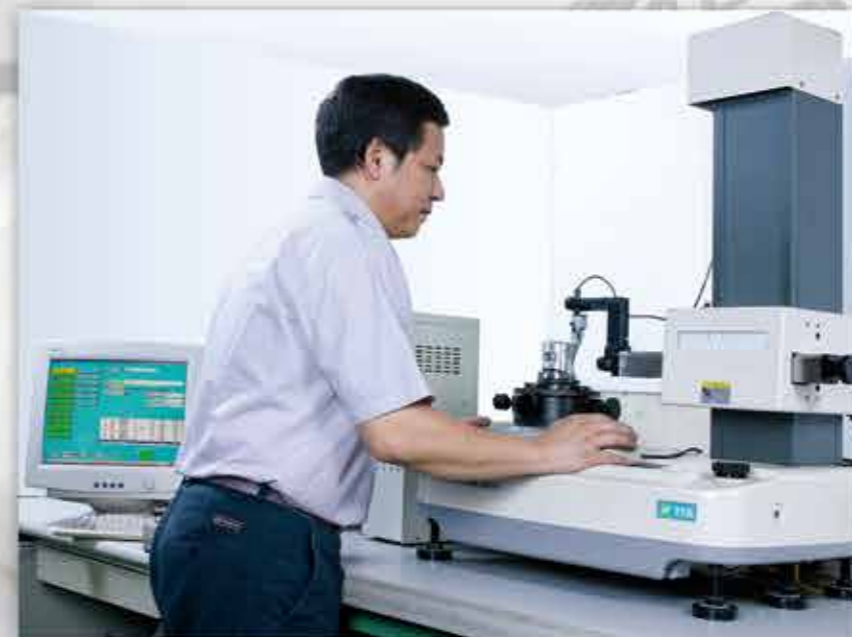
Matech is a high precision machine tool manufacturing company certified by ISO-2000 in Taiwan. "Integrity, Quality, Innovation, Technology" are always our principles of management. We will never give up developing, manufacturing, and marketing of high-tech products. Providing high precision and high value added products to our honorable customers is one thing that Matech has always been good at, and also the power of sustainable development of Matech.

With Matech, there is always higher production and ultra higher precision.

Welcome to Matech.

Matech Industrial Co., Ltd.
CEO

James Chen



HIGH PRECISION CNC LATHES

Sub spindle & Y-axis is available now



SUPER PRECISION CNC LATHE

Gang type tool rack design, avoid repeatability error on the indexing turret. Combining with high accuracy static air spindle, the slide ways are hardened with Turcite-B to maintain high precision and rigidity at the same time. The model is suitable to machine Office Automation parts, computer peripheral equipment, and other precision mechanical parts.

MODEL: MT-20

Model Specifications	MT-20A	MT-20B
Swing over bed	110mm	
Max. turnable dia.	100mm	
Max. turning length	150mm	
Spindle Speed	6000mm	
Spindle Motor	β 3 i	
Chuck size	4"	



COMPACT SLANT BED CNC LATHE

30° slant bed design with high precision spindle, box way slides with turcit-B coating. Suitable for turning O.A. components, automobile parts, motorcycle and bicycle and machine parts, etc.

MODEL: MT-42SG/MT-42ST/MT-42SS

Model Specifications	MT-42SG	MT-42ST	MT-42SS
Swing over bed	410mm (16.14")		
Max. turnable dia.	160mm (6.3")		
Max. turning length	250mm (9.84")		
Spindle speed	5000 R.P.M		
Spindle motor	β 8 i		
Bar capacity	Φ 42mm (1.65")		
Spindle nose	A2-5		
Chuck size	6"		



HIGH PRECISION SLANT BED CNC LATHE

30° slant bed design with high precision spindle, box way slides with turcit-B coating. Suitable for turning O.A. components, automobile parts, motorcycle and bicycle and machine parts, etc.

MODEL: MTN-52SG / MTN-52ST

Model Specifications	MTN-52SG	MTN-52ST
Swing over bed	450mm (17.7")	
Max. turnable dia.	210mm (8.27")	
Max. turning length	300mm (16.1")	
Spindle speed	4200 R.P.M	
Spindle motor	β 12 i	
Bar capacity	Φ 52mm (2.04")	
Spindle nose	A2-6	
Chuck size	8"	

MTN-52S SLANT BED CNC LATHE SPECIFICATIONS (SG: GANG TYPE, ST: TURRET TYPE)

HIGH PRECISION SLANT BED CNC LATHE

High rigidity 45° true slant bed design with turcite-B coating slides, thermal distortion resistance headstock. Using wide range, continuous rated output torque AC spindle motor. Offers low-vibration and low-noise, smooth cutting. Standard 12 positional bi-directional turret and rigid hydraulic tailstock, suitable for turning automobile and motorcycle parts, machine parts, etc. (optional C axis, live tool turret, sub-spindle is available on this series. Auto cell configuration w/robot or bar feeder is also available).

MODEL: MT-52/450, MT-52/600, MT-52/750

Model Specifications	MT-52/450	MT-52/600	MT-52/750
Swing over bed		Φ 600mm (23.62")	
Max. turnable dia.		Φ 320mm (12.59")	
Max. turning length	430mm (16.92")	580mm (22.83")	730mm (28.74")
Spindle speed		3600 R.P.M	
Spindle motor		α 18iP	
Bar capacity		Φ 52mm (2.05")	
Chuck size		8"	



HIGH PRECISION SLANT BED CNC LATHE

High rigidity 45° true slant bed design with turcite-B coating slides, thermal distortion resistance headstock. Using wide range, continuous rated output torque AC spindle motor. Offers low-vibration and low-noise, smooth cutting. Standard 12 positional bi-directional turret and rigid hydraulic tailstock, suitable for turning automobile and motorcycle parts, machine parts, etc. (optional C-axis, live tool turret, sub-spindle is available on this series. Auto cell configuration w/robot or bar feeder is also available).

MODEL: MT-65/450, MT-65/600, MT-65/750

Specification Models	MT-65/450	MT-65/600	MT-65/750
Swing over bed		Φ 600mm (23.62")	
Max. turnable dia.		Φ 320mm(12.59")	
Max. turning length	416mm (16.37")	566mm (22.28")	716mm (28.")
Spindle speed		3600 R.P.M	
Spindle motor		α 22iP	
Bar capacity		Φ 65mm(2.55")	
Chuck size		10"	



HIGH PRECISION SLANT BED CNC LATHE

High rigidity 45° true slant bed design with turcite-B coating slides, thermal distortion resistance headstock. Using wide range, continuous rated output torque AC spindle motor. Offers low-vibration and low-noise, smooth cutting. Standard 10 positional bi-directional turret and rigid hydraulic tailstock, suitable for turning automobile and motorcycle parts, machine parts, etc. (optional C-axis, live tool turret, sub-spindle is available on this series. Auto cell configuration w/robot or bar feeder is also available).

MODEL: MT-75 /600, 1100, 1600, 2100
MT-95 /600, 1100, 1600, 2100
MT-105 /600, 1100, 1600, 2100

Model Specifications	MT-75/600 MT-95/600 MT-105/600	MT-75/1100 MT-95/1100 MT-105/1100	MT-75/1600 MT-95/1600 MT-105/1600	MT-75/2100 MT-95/2100 MT-105/2100
Swing over bed	MT-75 = Φ 640mm(25.19") / MT-95 = Φ 640mm(25.19") / MT-105 = Φ 740mm(29.13")			
Max. turnable dia.	MT-75 = Φ 400mm(15.75") / MT-95 = Φ 450mm(17.71") / MT-105 = Φ 580mm(22.83")			
Standard. dia.	MT-75 / MT-95 = Φ 360mm(14.17") / MT-105 = Φ 500mm(19.68")			
Max. turning length	530mm (20.86")	1030mm (40.55")	1530mm (60.23")	1930mm (85.98")
Spindle speed	MT-75 = 3500rpm / MT-95 = 2500rpm / MT-105 = 2000rpm			
Spindle motor	MT-75 = α 40ip / MT-95 = α 40ip / MT-105 = α 22i + ZF Gearbox			
Bar capacity	MT-75 = Φ 75mm / MT-95 = Φ 95mm / MT-105 = Φ 105mm			
Chuck size	MT-75 = 10" / MT-95 = 12" / MT-105 = 15"			

Optional Accessories: Live Tool Turret, Parts Catcher, Auto Loading System.



Machine specifications are subjects to change without notification.

VERTICAL MACHINE CENTER



MODEL: MVC-550 / MVC-710 / MVC-850 / MVC-1020 / MVC-1300 / MVC-1500 / MVC-1800 / MVC-2000

Model Specifications	MVC-550	MVC-710	MVC-850	MVC-1020	MVC-1300	MVC-1500	MVC-1800	MVC-2000
3 axes travel	Linear Guideway Series							
X-axis stroke	550mm	710mm	850mm	1020mm	1300mm	1500mm	1800mm	2000mm
Y-axis stroke	410mm	460mm	550mm		750mm		900mm	
Z-axis stroke	460mm	550mm	580mm		700mm		750mm	
Spindle nose to table surface	650mm x 410mm	760mm x 420mm	1020mm x 550mm	1190mm x 550mm	1300mm x 750mm	1500mm x 750mm	1850mm x 900mm	2050mm x 900mm
X, Y, Z axes rapid feed	30 / 35 / 35mm		35 / 45 / 45mm		45 / 45 / 45mm		45 / 45 / box way mm	
Spindle taper	BT-40		BT-40		BT-40		BT-50	
Spindle speeds	8000rpm		8000rpm		8000rpm		6000rpm	
Spindle drive	Belt		Belt		Belt		Belt	
Spindle motor	5.5 / 7.5Kw		5.5 / 7.5Kw		7.5 / 11Kw		11 / 15Kw	

HORIZONTAL MACHINE CENTER

MODEL: MHC-630A / MHC-630B

Model Specifications	MHC-630A	MHC-630B
Capacity		
X-axis stroke		750mm
Y-axis stroke		640mm
Z-axis stroke		710mm
Spindle nose to table surface	186 – 896mm	
Spindle axis to column surface	115 – 749mm	
Spindle		
Spindle drive system (direct, belt, gear, etc.)	Belt	
Spindle speed	5000rpm	
Spindle motor model	α 15 / 7000 i	
Spindle motor power (30 min/cont.)	15 / 18.5 Kw	
Spindle taper	CAT50 / BT50 / ISO50	
ATC: Arm type ATC (Standard)		
Number of tools	24/30/40/60	
Maximum tool diameter (*)	Φ 110mm	
Maximum tool length	400mm	
Maximum tool weight	15kg	
Tool changing time (tool-to-tool)	7 - 8	
Dimensions		
Machine height	3200mm	
Floor space	5200 x 4000mm	
Machine net weight	15500kg	16000kg



OPTIONS: Direct drive high speed spindle 10,000 rpm.
 Duplex machining cell for mass production applications.
 Larger capacity automatic tool changing system.
 Multi-station automatic pallet changing system.
 Auto loading/unloading systems.
 Turn key system.
 Extra long X-axis stroke: 1,000 mm; 1,500 mm; 2,000mm; 2,500mm.



* Milling/Drilling and Tapping Station of Double Bore Brake Caliper Line
 * High rigidity, precision, efficiency, and versatility are the principles of our milling/drilling and tapping station of double bore brake caliper line. This set of machines can significantly improve production and efficiency while you cut down cost and time. The production line offers the best solution for your machinery matters.

* Turning Station of Double Bore Brake Caliper Line
 * Distinctive machine tools from MATECH mean higher performance and speed. Our turning station of double bore brake caliper line can greatly enhance turning efficiency resulting in much greater production and performance. This production line has all it needs to get your job done within the shortest time.



HIGH PRECISION CNC OVAL TURNING MACHINE

ENGINE PISTON TURNING SERIES I

- * MATECH CNC PISTON TURNER is developed for piston skirt's oval or complex shape turning.
- * The OVAL shape generator axis is an autonomous, highly dynamic positioning system.
- * Due to the high-performance real-time control kernel and extremely short controller sampling times, very fast and highly accurate positioning operations can be executed with the aid of the actuator.
- * A hydraulic t

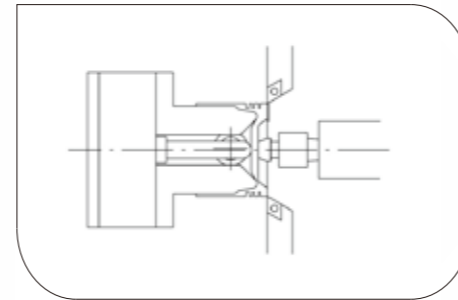


MODEL: PISTON A, B, C, S

Model Specifications	PISTON TURNER A	PISTON TURNER B	PISTON TURNER C	PISTON TURNER S	PISTON TURNER F
Capacity					
Max. Piston diameter	100mm	300mm	200mm	200mm	300 mm
Max. Piston length	100mm	310mm	250mm	250mm	475 mm
Spindle					
Spindle nose	A2-5	A2-6	A2-6	A2-6	A2-6
Spindle bearing inner dia.	75mm	100mm	100mm	110mm	100 mm
Spindle drive motor	11kw	11kw	11kw	11kw	11 KW
	35.8Nm	114.6Nm	85.9Nm	114.6Nm	114.6 Nm
Spindle bore	42mm	52mm	52mm	65mm	52 mm
Max. Spindle speed	50-5,000rpm	36-3,600rpm	36-3,600rpm	36-1,500rpm	36-3600 rpm
X-axis					
X-axis stroke	± 80mm	200mm + 10mm	± 75mm	± 75mm	210 mm
Rapid traverse	20m/min.	20m/min.	15m/min.	20m/min.	20m/min
Servo motor	1.2kw	3kw	1.4kw	1.6kw	3 KW
	7Nm, Max. 15Nm	12Nm, Max. 35Nm	20Nm, Max. 39Nm	8Nm, Max. 29Nm	12Nm
Movement resolution	0.001mm	0.001mm	0.001mm	0.001mm	0.001 mm
Z-axis					
Z-axis stroke	200mm	460mm	370mm	370mm	610 mm
Rapid traverse	24m/min.	24m/min.	18m/min.	24m/min.	24 m/min
Servo motor	1.2kw	3kw	1.4kw	1.6kw	3 KW
	7Nm, Max. 15Nm	12Nm, Max. 35Nm	20Nm, Max. 39Nm	8Nm, Max. 29Nm	12Nm
Movement resolution	0.001mm	0.001mm	0.001mm	0.001mm	0.001 mm
Y-axis ellipse generator					
Max. Travel	8mm	8mm	8mm	8mm	8 mm
Actuator	Linear motor	Linear motor	Linear motor	Linear motor	Linear Motor
Movement resolution	0.0001mm	0.0001mm	0.0001mm	0.0001mm	0.0001 mm
Static positioning accuracy	± 0.0005mm	± 0.0005mm	± 0.0005mm	± 0.0005mm	± 0.0005 mm
Repeat positioning accuracy	± 0.001mm	± 0.001mm	± 0.001mm	± 0.001mm	± 0.001 mm
Tailstock					
Quill diameter	60mm	90mm	80mm	80mm	90 mm
Quill travel	100mm	150mm	150mm	150mm	150 mm
Tool turret	X	0	X	X	0

PRECISION CNC EXTERNAL TURNING MACHINE

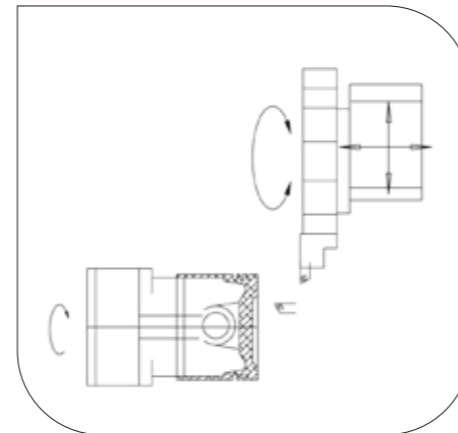
MODEL: MT-42SA, MT-52SA



- These two CNC piston O.D. turning machines are a special version modified from MATECH MT-42ST and MT-52S CNC lathe.
- Clamping fixtures including: Hydraulic expanding chuck plus End Stopper and Hydraulic Tailstock. Since this machine takes piston I.D. and inner end surface as clamping guidance, the piston wall thickness can be controlled to a very low variation level.

HIGH PRECISION CNC PIN HOLE DRILLING & PRE BORING MACHINE

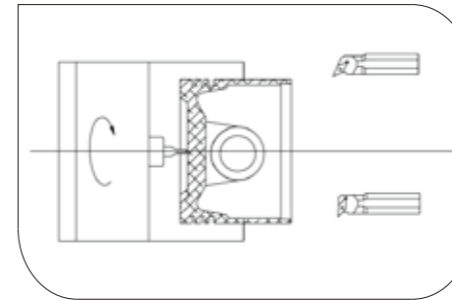
MODEL: MT-42SP, MT-52SP



- Due to piston pinhole, counter bore, chamfer and circlip grooves shall be concentric, it's better using turning center for pre-boring process.
- Generally, there are four tools to be used on this machine. The first tool is a spade drill for opening the pinhole. The second tool is a counter boring tool used to finish counter bores; the third tool is a grooving tool for circlip grooves turning and the fourth is a boring tool used for semi-finishing of the hole.
- Piston is clamped on a self-centering two jaws chuck in radial direction. Piston is rotating during machining.

CNC FIXTURE SEAT & CENTER HOLE MACHINE

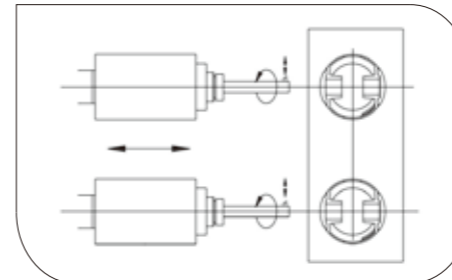
MODEL: MT-42SD, MT-52SD



- Clamping fixture on both machines is an extra long jaws hydraulic chuck, clamp piston OD for turning.
- Both MT-42SD and MT-52SD integrate a built-in drilling device, which being supported by linear bearings and seat on the bore of drawing tube, drill the center during turning the fixture seat.
- MT-42SD is a 30 slant bed gang tool machine for turning smaller pistons while the MT-52SD is a 45 turn slant bed machine for bigger pistons.

CNC FINE BORING MACHINE

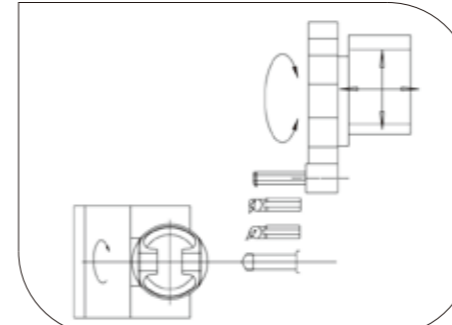
MODEL: MFB-120/2F



- MFB-120/2F is a one spindle / two station high precision CNC boring machine. Especially designed for pinhole finish boring.
- The tool tip of the boring bar is driven by servomotor, and controlled by CNC, therefore, it can bore trumpet type bore and the dimension of the bore can be easily controlled and compensated. Box way slide ensures high rigidity boring of the machine.
- This machine bores two pistons at a time. There is an in-position detection sensor on each clamping fixture. Therefore the tolerance of finished work piece can be easily controlled.

CNC COMBUSTION BOWL TURNING MACHINE

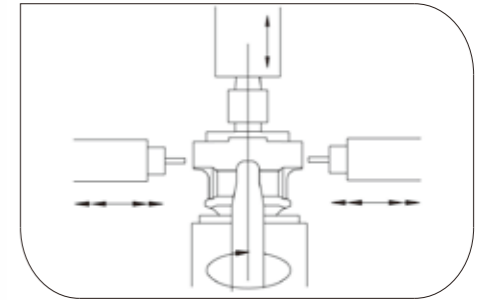
MODEL: MT-42SC, MT52SC



- MT-42SD is a 30 slant bed gang tool machine for turning MT-42SC is a 30 slant bed gang tool type CNC lathe and MT-52S is a 45 true slant bed high precision CNC lathe. The use of special holding fixture with hydraulic cylinder drawing back system makes these two machines possible to turn combustion bowl easily.

CNC OIL HOLE DRILLING MACHINE

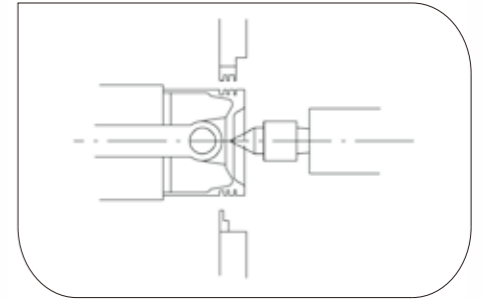
MODEL: MD-10HC



- MD-10HC is a twin spindle CNC drilling machine. Which adopted a CNC index table for positioning the piston oil hole position. These two spindles are mounted in horizontal position. The index resolution is 1.
- Two drilling spindles drill two oil holes at the same sequence and drill the next two hole after indexing.

CNC RING GROOVE TURNING MACHINE

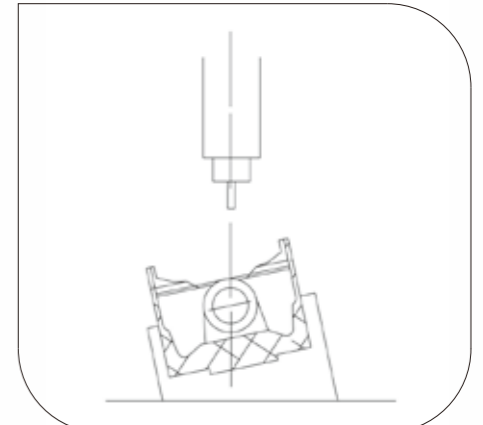
MODEL: MRT-42, MRT-52



- The basic machine of MRT-42 is a gang tool machine while MRT-52 is a 45 slant bed machine with 12 positional turret. Both machines are capable for using of plunge or single tip tools.
- Since these two machines are CNC controlled, therefore they are convenient to machine taper ring grooves with smooth finish.
- The hydraulic tailstock offers high rigidity support to the piston for heavy plunge turning.

BOSS HOLES (TO PIN HOLES) DRILLING MACHINE

MODEL: MD-10V



- MD-10V is a hydraulic operated twin spindle vertical drilling machine. Which adopts a tilting table for positioning of the piston. These two spindles are mounted in vertical position. Two spindles are adjustable in distance.
- Two drilling spindles drill two boss holes at the same sequence.

HIGH PRECISION CNC VERTICAL OVAL TURNING MACHINE

MVP Series Machine Features

- * The high precision CNC vertical piston turner is specially designed for automated production line application. The machine takes advantage of its unique design and can surely be great space saving solution.
- * Vertical turning center offers reduced deflection error.
- * The multi cutting tool post design is convenient to select suitable tools for different work pieces in order to extend tool lifetime and machining efficiency.

MODEL: MVP-200

Model Specifications	MVP-200	MVP-200T
Capacity		
Piston diameter	Φ 50-200mm	Φ 50-180mm
Piston length	250mm	200mm
Spindle		
Max speed	3600rpm	
Spindle nose	A2-6 ISO	
Bearing i.D.	Φ 90mm	
Slides X-axis		
Speed	15m/min	
Stroke	85mm	±75mm
Slides Y-axis		
Speed	15m/min	
Stroke	42mm	
Slides Z-axis		
Speed	15m/min	
Stroke	270mm	220mm
Tailstock		
Taper	4 MT	
Quill dia.	Φ 75mm	
Stroke	150mm	
Motor		
Spindle	(112S)7.5kw	
X-axis (a8i)	1.6kw	
Z-axis (a22i)	4kw	
Y-axis (a4i)	1.4kw	
Oval tool		
Tool number	4	
Tool shank	□ 12x12mm	
Grooving tool		
Tool number	NO	4
Hydraulic		
Tank capacity	25L	
Lubrication		
Tank capacity	2L	
Coolant		
Tank capacity	400L	
Power		
	220V	
	40KVA	
Air supply		
Pressure	0.5Mpa	
Flow rate	26L/min	
Dimension		
Width	1800mm	
Depth	3000mm	

