

**NEW Standard  
Slant Bed CNC TEACH-IN Lathe**



# The new slant bed CNC TEACH-IN lathe from ARIX gives extraordinary machining capacity, stability and precision.

The specially designed structure enhances the heavy cutting capabilities and easy operation TEACH-IN controller makes the quick and simple setup and programming.

## Heavy duty Meehanite Cast Bed

- The optimal structure is ribbed for maximum stiffness.
- The gray cast iron offers excellent damping properties and Meehanite process ensures the casting is properly heat treated and annealed before aging.
- The homogenized casting is free from any stress concentrations that can withstand any heavy-duty cutting.
- 45° slant bed construction assures solid support of turret and efficient chip removal.

## Hand Scrapped Box side ways

- The Cast-in slide-ways generates the maximum rigidity.
- The heat treatment by high frequency induction heating produces a depth of 0.5 mm maximum wear resistance structure with tough internal core.
- The precise & fine hand scrapping on all contact surfaces ensure the accuracies are held throughout machine life.



## High rigidity, High Precision Spindle

- The spindle is encased in the ribbed headstock for maximum heat dissipation.
- The thick cast iron case can damp all the vibration from cutting.
- For spindle configuration, the angular thrust bearings to absorb axial cutting forces and the roller bearings with large bearing areas facilitate heavy cutting capacity.

## Fast indexing, durable turret

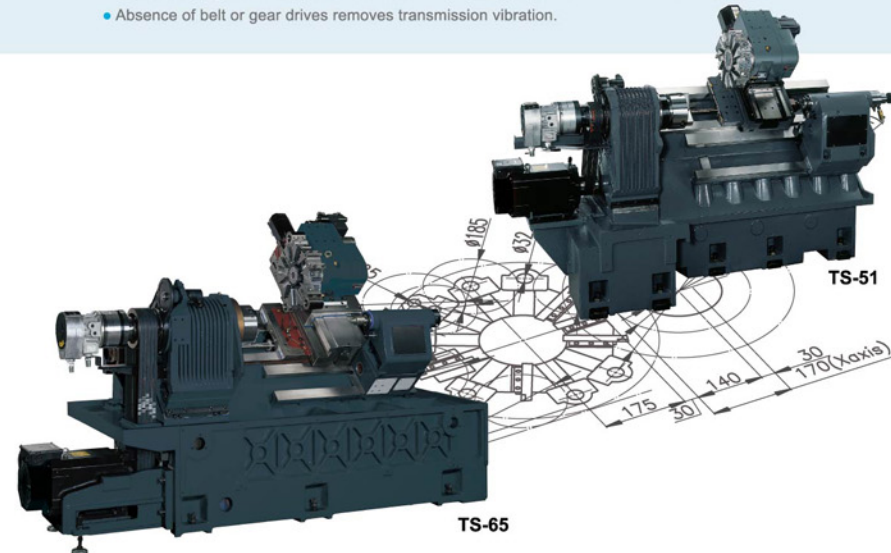
- The turret has Curvic coupling for high positioning accuracy and the hydraulic clamping for heavy cutting.
- The fast indexing with bi-directional random selection can shorten the setup time.
- The hydraulic index motor offers optimum service life.

## Programmable tailstock

- The tailstock on slide way gives maximum clamping stability.
- The smooth tow along action is done by turret.
- The hydraulic clamping to bed has variable hydraulic pressure to tailstock quill.
- All tailstock movements are programmable by M-code.

## Direct Drive Mechanism

- High precision preloaded ballscrews for reduced backlash.
- Direct coupling eliminates motor backlash and improves torque transmission characteristics.
- Absence of belt or gear drives removes transmission vibration.



# Quality Features Assure Greater Value!

**RIGIDITY... STABILITY... PRECISION...**



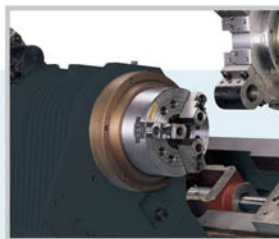
## MX5 User-friendly Controller

- With compact panel provides the most user-friendly controller from teach-in functions and other functions like MPG simulation.



## HIGH SPEED THROUGH-HOLE ROTARY HYDRAULIC CYLINDER

- The hydraulic chuck is controlled by a high speed through-hole rotary cylinder.
- The high quality rotary cylinder features compact construction and light weight to reduce the burden of machinery, while ensuring stability at high speed running.



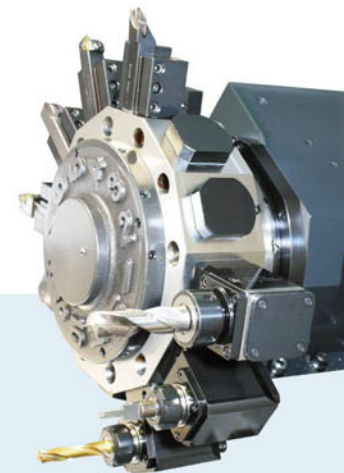
## HYDRAULIC CHUCK

- The CNC lathe has a standard hydraulic chuck controlled by a foot switch for efficient clamping of workpieces.



## HIGH PRECISION SPINDLE

- The spindle is mounted with high precision class P4 NN type roller bearing and trust bearing, providing outstanding radial and trust loads.
- The spindle is precision machined from high quality alloy steel, hardness, precision ground and dynamical balanced, making it ideal for heavy duty machining.



## TURRETS

- VDI30, 12-Position power turret with AC servomotor.
- Tool drive with spindle orientation.
- Tools individually driven.
- Radial tool mounting.



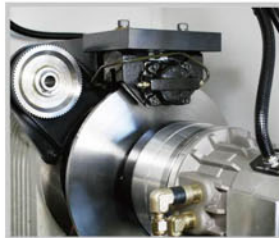
## DIRECT DRIVE ON X-, Z-AXES

- The X-, Z-axes ball screws are directly driven by servomotors.
- The high precision ball screws, combined with pre-loaded double nuts and rigid coupling, assure high positioning and repeatability accuracy.



## POWERFUL SPINDLE DRIVE

- The spindle is driven by a powerful motor providing great horsepower output for heavy duty machining.



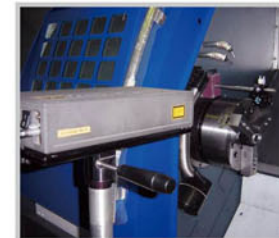
## SPINDLE HYDRAULIC BRAKE

- The two steps hydraulic brake that can ensure the smooth C axis motion for machining in light braking force. The heavy braking can stop and take all the vibration from milling operations.



## AUTOMATIC LUBRICATION SYSTEM

- The automatic lu-bricator provides lubrication to all slideways, ball screws and tail-stock ensures smooth motions at all times.



## FASTER INSPECTION

- All machines undergo laser inspection and calibration before shipment.

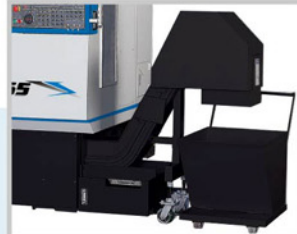


# Option Accessories



## TOOL PRE-SETTER (option)

- ▶ The tool pre-setter effectively reduces cutting tests while saving machining time.
- ▶ The mechanism is used for measuring the tool diameter and length.
- ▶ The tool adjustment arm is powered and program controlled.



## CHIP CONVEYOR (option)

- ▶ The chip conveyor can bring the chips away from the working area to avoid the thermal effect of chips.
- ▶ It saves the time for clean up the chips and can be controlled by program.



## COOLANT SYSTEM & OIL / WATER SEPARATOR (option)

- ▶ High capacity designed coolant tank maintains the coolant temperature.
- ▶ The submerged type coolant pump delivers high pressure coolant to flush chips and extend tool service life.
- ▶ High efficient disk type oil / water separator provides quick oil / water separate (option).

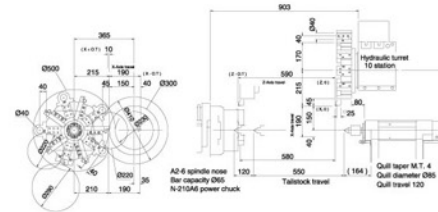


## PROGRAMMABLE TAILSTOCK (option)

- ▶ The ruggedly constructed, programmable tailstock and quill movement can be controlled on the control panel for easy set-up and accurate positioning.
- ▶ Tailstock movement is driven by turret slide.

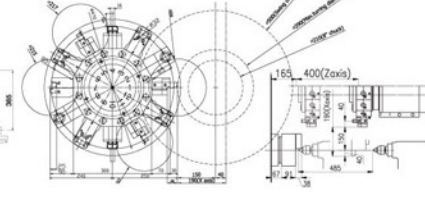
## TS-65 / H10 TOOLING INTERFERENCE

(Hydraulic turret 10 station, Tool holder Ø40, Tool shank 25) Unit: mm



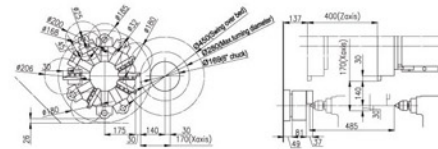
## TS-51 / H12 LIVE TOOLING INTERFERENCE

(Hydraulic turret 12 station, Tool holder Ø40, Tool shank 25) Unit: mm



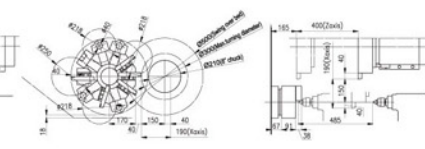
## TS-45 / H12 TOOLING INTERFERENCE

(Hydraulic turret 12 station, Tool holder Ø32, Tool shank 20) Unit: mm

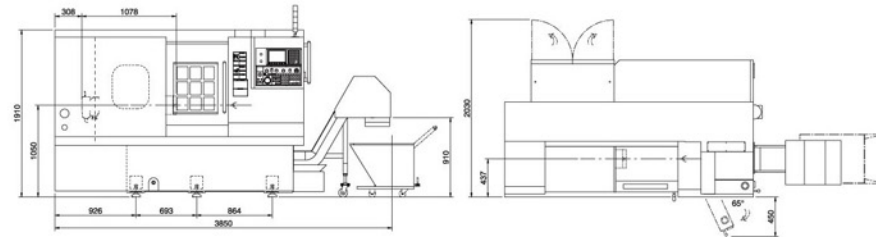


## TS-51 / H10 TOOLING INTERFERENCE

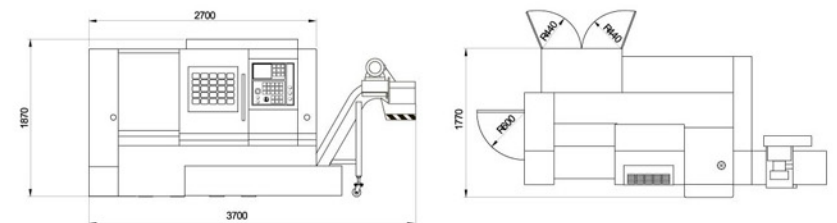
(Hydraulic turret 10 station, Tool holder Ø40, Tool shank 25) Unit: mm



## TS-65 Floor Plans



## TS-51 Floor Plans



# Machine Specifications:

MODEL		UNIT	TS-45	TS-51	TS-65
Travel	Max.Swing over Bed	mm	450	500	630
	Max.Swing over Cross Slide	mm	280	300	300
	Distance Between Centers	mm	485	485	550
	Max.Turning Length	mm	400	400	580
	Max.Turning Diameter	mm	280	300	340
	Max.Bar Diameter	mm	Ø45	Ø51	Ø65
Spindle	Hyd.Chuck Diameter	inch	6"	8"	10"
	Hole.Through Spindle	mm	Ø56	Ø61	Ø78
	Spindle Nose	Type	A2-5	A2-6	A2-6
	Bearing Type	Type	7018	NN3020	120BTM
	Spindle Bearing Dia.	mm	90	100	120
	Spindle Motor	Hp	20	25	25
	Spindle Speed	r.p.m	6000	4200	3500
Turret	Turret Type	Type	Hyd./Servo Turret	Hyd./Servo Turret	Hyd.
	Tool Shank / Tool Amount	mm	20 / 12	25 / 10	25 / 10
	Tool Holder Bore Dia.	mm	Ø32	Ø40	Ø40
X-axis	Travel	mm	140 + 30	150 + 40	150 + 40
	Rapid Traverse Rate	M/mm	20(16)	20(16)	15(16)
	Servomotor	Kw	1.5	1.5	1.5
Z-axis	Travel	mm	400	400	590
	Rapid Traverse Rate	M/min	10	10	20
	Servomotor	Kw	3.5	3.5	3.5
Tailstock	Quilt Diameter	mm	Ø80	Ø80	Ø85
	Morse Slidway	Type	MT.4	MT.4	MT.4
X-axis Slideway		Type	Linear Way	Box Way	Box Way
Z-axis Slideway		Type	Linear Way	Box Way	Box Way
Coolant Tank Capacity		Liter	90	90	180
Hydraulic Pump Motor		Hp	2	2	3
Machine Dimensions	Floor Space	cm	195x175	195x175	400 x 189
	Machine Weight	kg	4200	4500	6000

■ Design and specifications are subject to change without prior notice.

## STANDARD EQUIPMENT:

- 1.Coolant system
- 2.Chuck open/close confirmation
- 3.Hydraulic pressure confirmation
- 4.Fully enclosed splash guard
- 5.Tricolor alarm lamp
- 6.Leveling bolts and blocks
- 7.Heat exchanger
- 8.Wark lamp
- 9.Tool box
- 10.CNC controller
- 11.Boring bar holder 2 sets.
- 12.O.D./facing tool holder 2 sets.
- 13.U drill holder 1 sets.
- 14.Boring socket : for H10  
\*Ø12/Ø16/Ø20/Ø25/Ø32 1piece for each  
\*Drilling socket MT.3 x Ø40 1 piece
- 15.Boring socket : for H12  
\*Ø12/Ø16/Ø20/Ø25 1piece for each  
\*Drilling socket MT.3 x Ø32 1 piece.
- 16.Pedal swith for chuck open & close.
- 17.Hydraulic hollow chuck open & close.
- 18.Auto lubrication system.
- 19.Soft jaws & hard jaws 1 set for each.
- 20.Operation manual.
- 21.senice manual.

## OPTIONAL EQUIPMENT:

- 1.Oil mist collector
- 2.Auto length measuring toolsetter
- 3.Hydraulic power unit cooling system
- 4.Auto door
- 5.Air conditioner
- 6.Oil/water separator
- 7.Cutting fluid cooling device
- 8.20 kg.high pressure coolant system
- 9.Chip conveyor
- 10.Programmable tailstock
- 11.Transformer
- 12.Bar feeder
- 13.Bar feeder interface
- 14.Parts catcher
- 15.Parts conveyor
- 16.Chuck high/low pressure change
- 17.Collet chuck
- 18.CE configuration.
- 19.Part cut off detection.
- 20.Air blow system for cleaning chuck.
- 21.VDI 30 x 12 tools / 20mm Turret.
- 22.Cs axis control & function with break system /  
VDI 30 revolving tool turret.

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