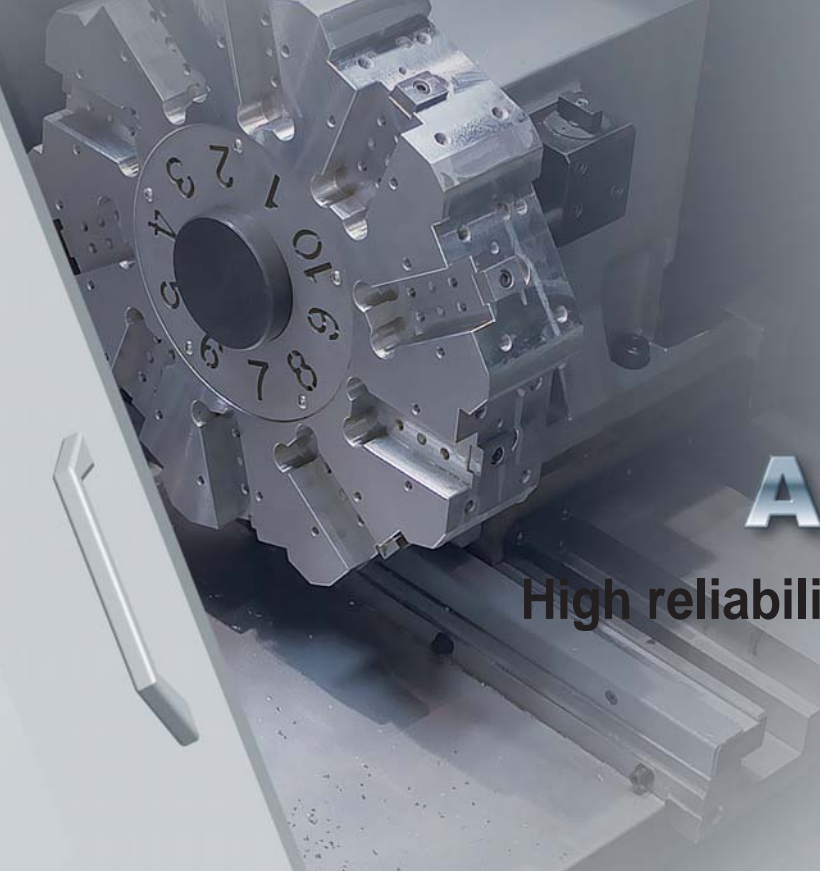


CNC LATHE TURNING CENTER
PL-35A



SAMSUNG MACHINE TOOLS



CNC LATHE TURNING CENTER

AnyTurn PL-35A

High reliability by excellent structure design

- High rigidity bed supporting powerful cutting
- High efficiency reducing significantly non-cutting
- Vibration Prevention, Establishment of Heat Change Measurement

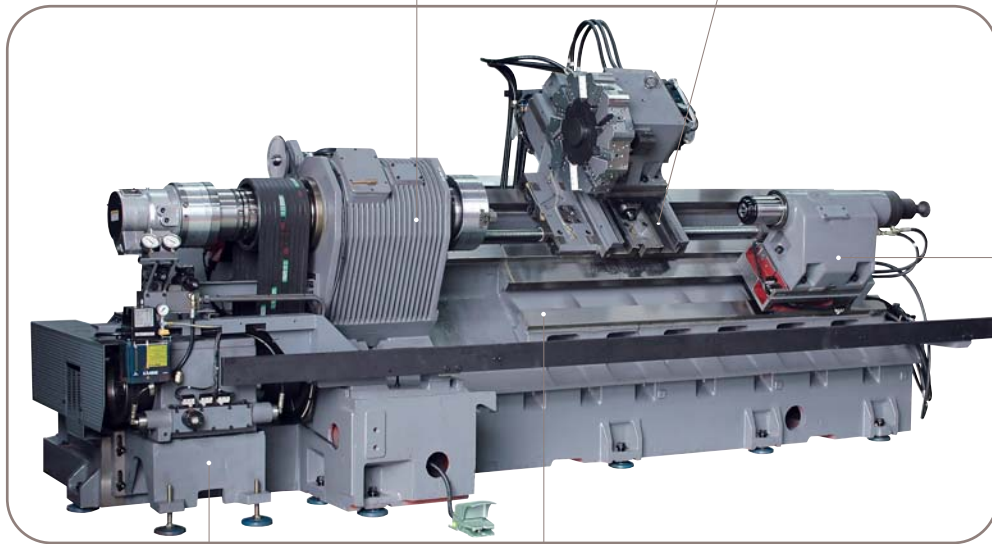
{ High reliability, Minimum Maintaining cost, }
Wide scope of machining area. }

Axis for minimizing the heat change

The heat change of axis had been minimized, the change rate by temperature's increasing of radiator fan type of pin tube rib can be minimized and security machining is possible.

Hexahedral Sphere Slide Way Frame

Carriage having the wide guide plane and hexahedral sphere slide frame ensures long life.



Optional Output Converting Transmission

High power Gear transmission is optional, if it is high-power machined, gear vibration is completely blocked and high precious machining is possible.

High Rigid Slant Bed

Chip discharge applying the 45° Slant Bed ensures high rigid pipe rib type of bed and wide guide surface of hex section slide way ensures the security and long period of life.

Self Tail Stock

High rigidity tail stock having the wide guide plane includes the live center, and can transfer by program automatically

Model PL35A is the latest product manufactured by Samsung utilizing all its FA know-how available

■ Implementation the security machining as backlash and anti vibration mechanism.

AC Servo Motor of transmitting coordinate is engaged in the ball screw and vibration with backlash is not existed. In particular, main coordinate had been equipped with (1:12)AC Spindle Motor. Due to no gear, vibration is very low and high machining degree can be obtained.

■ Reducing no-cutting time equipped the high partition turret of 0.7second.

Turret's separation adapts the Nonstop Random Index method using the Index Motor developed by Smac and tool can be selected by 0.7 second (5 section: 1.0 second). Also, position is determined by fast seed of Rapid feed speed degree X axis : 18m/min, Z axis : 24m/min. Reducing the idle time significantly we promise the high efficiency.



■ Centering operation panel.

Centering operation panel of 8.4 inch color LCD monitor can turn to 90 degree, support of wide alarm message for each error of machine and control unit highly provides the comfortable of worker

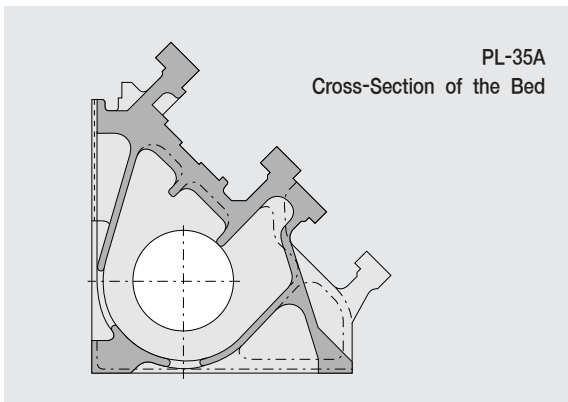


“High reliability requiring the Automation · No-person corresponding the advanced mechanism”

■ TOOLING SYSTEM

■ High rigid SLANT TYPE BED showing high stability among the powerful cutting machining

As body is excellent pipe type of structure in the rotation rigidity · bending rigidity, cutting kick back is suppressed in the powerful heavy cutting, security machining is possible. Also by applying the Slant Type, accessible to machining object and chip's discharge is more convenient



Featuring superior workability and chip-discharging capability, the bed is designed in a single tube structure boasting strong durability even in heavy-duty cutting.

■ Establishment of Heat Change Measurement and correspondence with security long successive machining.

Heat radiation prevention of axis and Heat Change Measurement according with high speed of axis rotation speed is major subject.

Axis of PL30A was not used the gear that occurs the heat, during designing the axis, structure with heat removing function is adapted. Also the back of machine is installed, thorough heat change preventing measure has been taken, feed instrument, X, Z axis ball screw has 3 point support structure, also applying the pre-pressured, heat inflation by heating is prevented.

■ Detailed consideration, installation of separated coolant oil tank, easily cleaning

As coolant oil tank is separated from machine body, chip and coolant oil has no effect, easily cleaned.

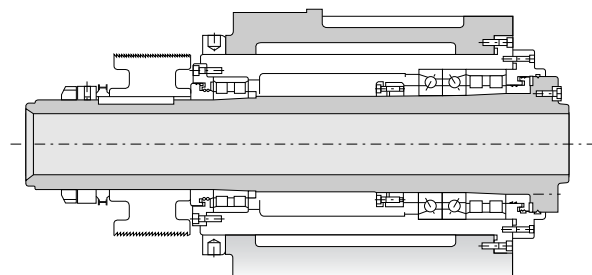
■ Fault such as, lubricant leakage, etc can rapidly detect by pressure detection unit installed type of wet type oil supply unit

lubricant supply of wet type surface is static capacity lubrication system, detects the quantity shortage and ensures the proper quantity. Additional, fault such as, lubricant leakage of guide pipe is detected by lubricant pressure detecting unit, also increases the reliability highly.

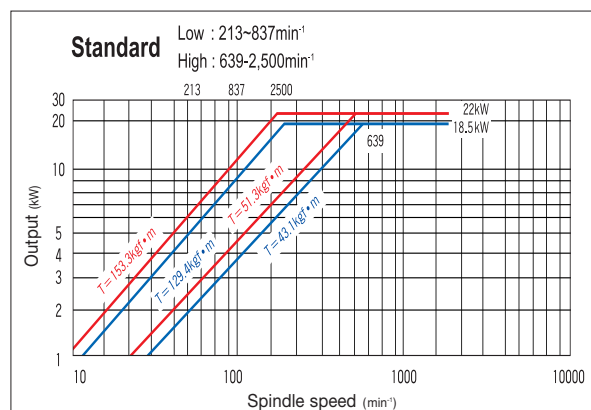
■ High precision, security of axis structure

To operate and stop the axis rapidly, powerful axis motor had been used, the inertial of axis had been minimized.

Axis is supported in the front and rear by 2 P4 class of high precision bearing, double Angular Thrust Ball Bearing between its, is supported, maintains good stability in the heavy cutting.



■ Spindle power and torque diagram



공구계통도

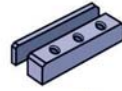
O.D. & FACE CUTTING

□ 25 CUTTING TOOL
(□ 1")



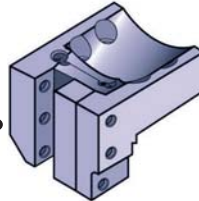
TURRET HEAD

B27007 ⑩
B27008 ⑩
[B27009 ⑩]



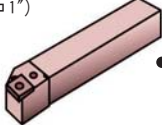
CENTER WORK HOLDER

T00098 ② [T00099 ②]



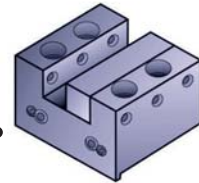
FACE & I.D. CUTTING

□ 25 CUTTING TOOL
(□ 1")



FACE & I.D. HOLDER

T00096 ② [T00097 ②]
B44047 ②



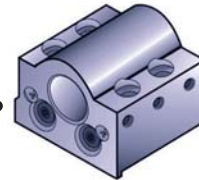
I.D. CUTTING

φ 50 BORING BAR
(φ 2")



BORING BAR HOLDER

T10058 ④ [T10059 ④]



φ 40 BORING BAR
(φ 1 1/2")



BORING BAR SLEEVE

T20172(φ 40) ① [T20173(φ 1 1/2") ①]
T20170(φ 32) ① [T20171(φ 1 1/4") ①]
T20168(φ 25) ① [T20169(φ 1") ①]
T20166(φ 20) ① [T20167(φ 3/4") ①]
T20164(φ 16) ① [T20165(φ 5/8") ①]
T20162(φ 12) ① [T20163(φ 1/2") ①]
T20160(φ 10) ① [T20161(φ 3/8") ①]

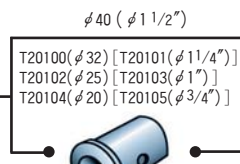
DRILL



DRILL SOCKET

T22044(MT.4) ① [T22045(MT.4) ①]
T22056(MT.3) ① [T22057(MT.3) ①]

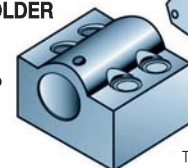
U-DRILL



U-DRILL SOCKET

φ 40 (φ 1 1/2")
T20100(φ 32) [T20101(φ 1 1/4")]
T20102(φ 25) [T20103(φ 1")]
T20104(φ 20) [T20105(φ 3/4")]

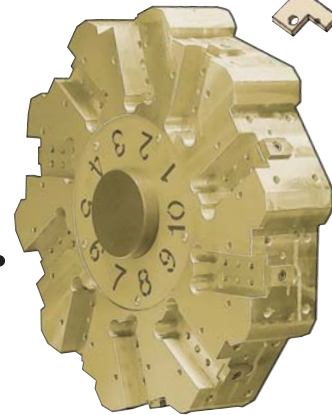
U-DRILL HOLDER



F70032

T13072(I.D. φ 50)
[T13073(I.D. φ 2")]

B52059 ⑩



TURRET HEAD

PL 35A:10-StationTurret
(option :12-StationTurret)

○ : Standard Set Numbers
[] : Inch Type

■ Machine Specifications

Item		Unit	PL-35A/750	PL-35A/1500
Capacity	Swing over bed	mm	ø 600	
	Swing over saddle	mm	ø 425	
	Distance between centers	mm	890	1,640
	Maximum machining diameter	mm	ø 490	
	Maximum machining length	mm	780	1,530
Travel	X-axis	mm	275(30+245)	
	Z-axis	mm	855	1,605
Spindle	Spindle speed	inch	9~2,500	
	Spindle nose	mm ⁻¹ ,rpm	ASA A ₂ -8	
	Bore diameter		ø 105	
	Bearing inner diameter	mm	ø 160	
Turret	Number of tool positions		10(12)	
	Shank size for square tool	mm	□25	
	Shank diameter for boring ba	mm	ø 50	
	Indexing time	sec	0.7	
Feedrate	Rapid traverse rate (X/Z)	m/min	X:12,Z:15	
	Feed per revolution (X/Z)	mm	X,Z : 0.0016~500	X : 0.0003~342, Z : 0.0002~428
	JOG feedrate (X/Z)	m/min	X,Z:1,260	
Tailstock	Tailstock travel	mm	706	1,495
	Tailstock spindle diameter	mm	ø 130	
	Taper of tailstock spindle		MT4 <Built-in>	
	Tailstock spindle travel	mm	120	
Motor	Spindle drive motor (cont./30min.)	kW	18.5/22 (22/30)	
	X-axis	kW(HP)	3.1	
	Z-axis	kW(HP)	4.0	
Electric power supply		KVA	46(58)	
Coolant tank capacity		l (gal.)	110	180
Required floor space		mm	3,620 x 1,815	4,700 x 1,815
Machine weight		kg(lb.)	8,000	9,000
CNC System	Fanuc F-0iT (18iT)			

• Figures in inches are converted from metric measurements.
 • Design and specifications subject to change without notice.

() : Option

■ Standard Accessories

- COOLANT SYSTEM
- BUILT-IN WORK LIGHT
- SPLASH GUARD
- HAND TOOLS
- 12 " HYDRAULIC CHUCK
- SOFT JAW 3SET
- TURRET HOLDER
- LEVELING BLOCK

■ Optional Accessories

- HARD JAW 1SET
- CHIP CONVEYOR WITH BUCKET
- INTERNAL TOOL PRE-SETTER
- AIR BLOW UNIT
- PROGRAMMABLE TAIL STOCK
- AUTOMATIC MEASURING SYSTEM

■ NC Unit Specifications / FANUC 0i-T

	Item	Specification
Controls	Simultaneous controllable axes	X, Z axes
	Least command increment	0,001 mm (0,000039")
	Least input increment	0,001 mm (0,000039")
Feed functions	Feedrate override	0 ~ 150% (10% unit)
	Dwell	G04
	Zero return	G27, G28, G30
	Pulse handle feed	x1, x10, x100
	Rapid traverse rate override	F0, 25%, 50%, 100%
	Feedrate per minute	G98
	Feedrate per revolution	G99
Tool functions	3rd and 4th reference return	
	Feed forward function	
	Tool number command	T4 - digit
	Tool nose radius compensation	G40 - G42
	Number of tool offsets	16 pairs
	Tool geometry/wear offset	Geometry & wear data
Programming functions	Tool life management	
	Tool path graphic display	
	Absolute/ incremental programming	X, Z & U, W
	Constant surface speed control	G96, G97
	Multiple repetitive canned cycle	G70 - G76
	Simple canned cycle	G90, G92, G94
	Decimal point input	Decimal point value
	Inch/metric conversion	G20, G21
	Circular interpolation by radius programming	Radius R instead of I, K
	Chamfering & corner R programming	Chamfer & corner R can be machined
	Sub program call	4 Nested holds
	Thread cutting cycle retract	Thread cutting is temp. stop, return to start point
	Work coordinate system selection	G54 - G59
	Local/ machine coordinate system	G52, G53
	Maximum programmable dimension	± 99999,999 mm (9999,9999")
	M function	M3 digit
	User macros	
Tape functions	Variable lead thread cutting	
	Continuous thread cutting	
	Drilling canned cycle (G80 series)	
	Line/ angle (direct dimension) programming	
	Three G code system (selectable)	
Other functions	Input code	ISO, EIA
	I/O interface	RS-232C
	Part program storage length	640m
	Number of stored programs	200EA
Other functions	Search function	Sequence, program, address search
	MDI/CRT unit	8,4" TFT
	Stored stroke check 1	Overtravel control
	Background editing	Program editing during auto. operation
	Help function	Alarm & operation display
	Running time / Parts number display	Auto. running time & parts No. display
	Load meter display	Spindle load display
	Self diagnostic function	Self-dgn.Test
	Expanded program editing	Copy, move, change of NC program
	Stored stroke 2 and 3	
Spindle orientation		

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