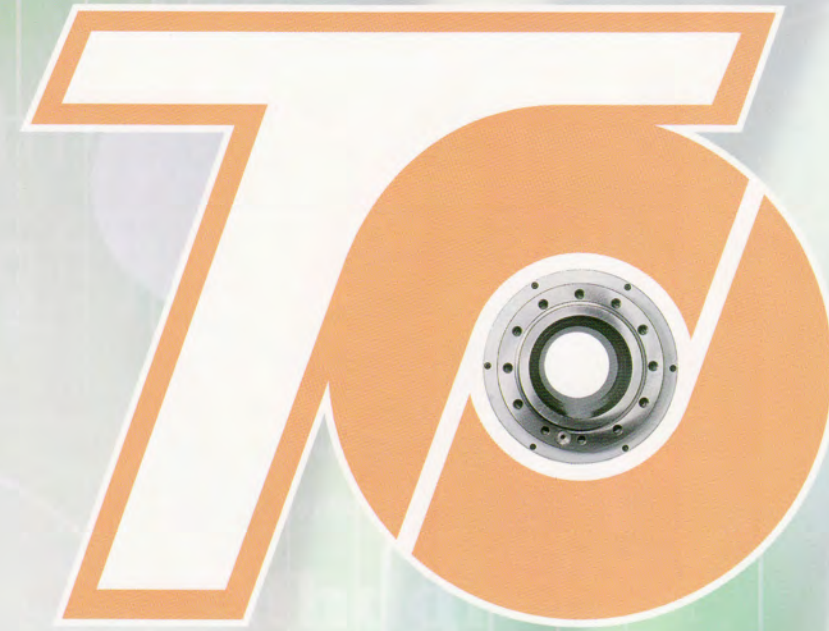
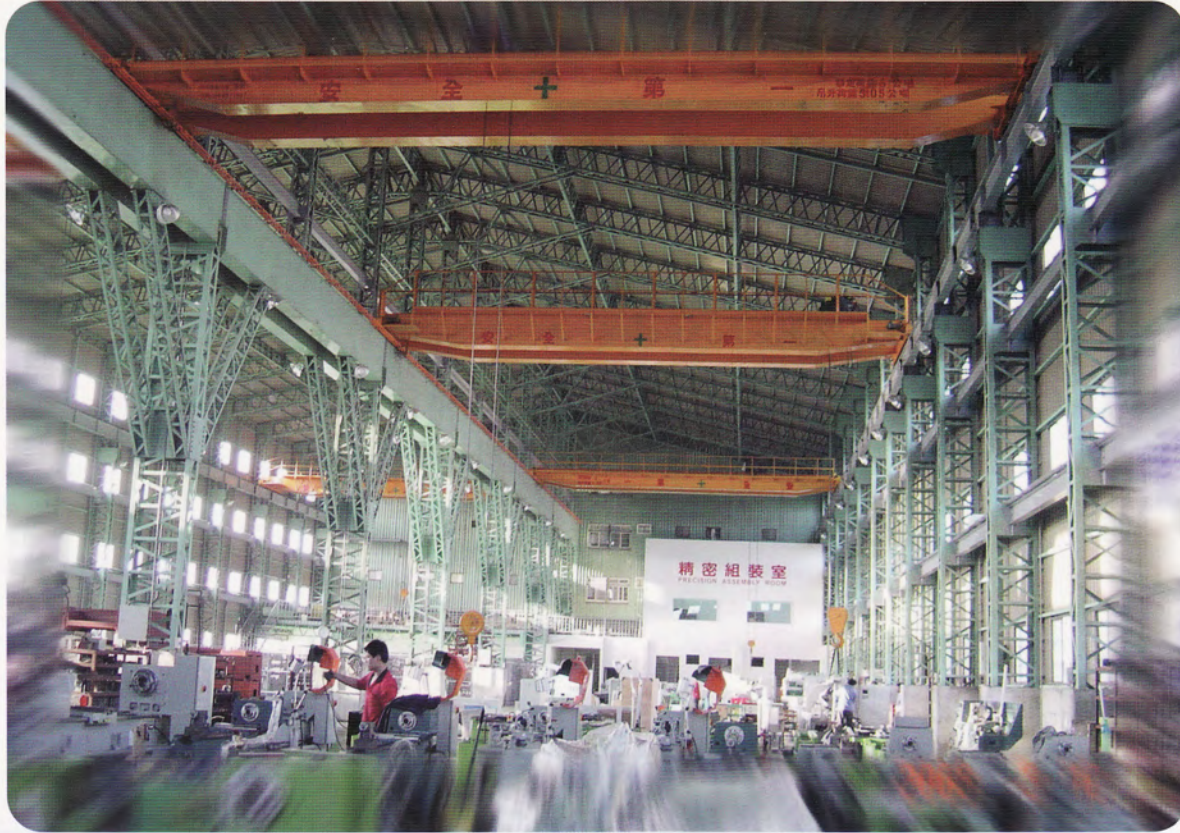


TOP-TURN®



TOP-TURN®

Agency

YAMARIS MACHINERY PTE LTD

No. 15 Pioneer Sector 3 Singapore 628348

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Website: www.yamaris.com.sg

2007.11

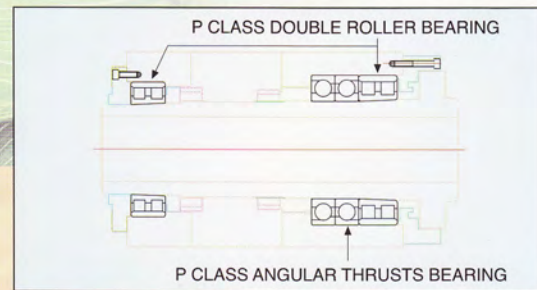
CNC-S26(C)

CNC-S30/S30L(C)

CNC-S33/S33L(C)

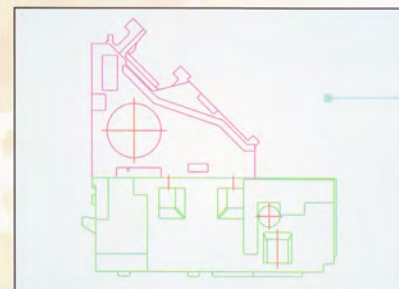
CNC-S36/S36L/S36LL(C)

TOP-TURN®



"High rigidity, high precision spindle"

- Encased in well ribbed headstock for maximum heat dissipation. Thick cast iron casting to dampen vibrations.
- Angular thrust bearings to absorb axial cutting forces. Roller bearings with large bearing areas facilitate heavy cutting.



Slant bed design

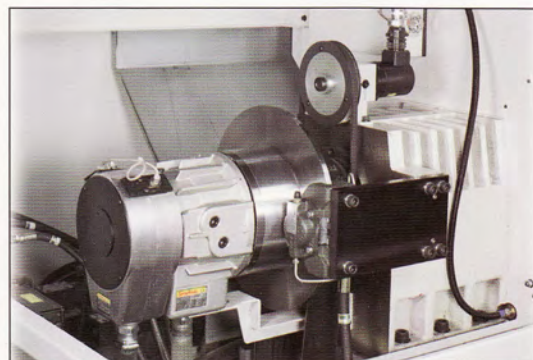
- Torque tube cast into incline to prevent bed twisting
- 45° incline gives adds rigidity to bed structure.
- Ergonomic design offers easy access to turret for tool changing. Improves chip disposal.

Cs main spindle

- C axis 0.001 high precision. It is the most stable electric control and the most complete design.

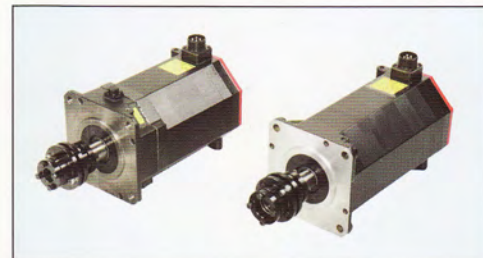
Hydraulic brake

- "Two-step brake system, offers the best working" choice for users.



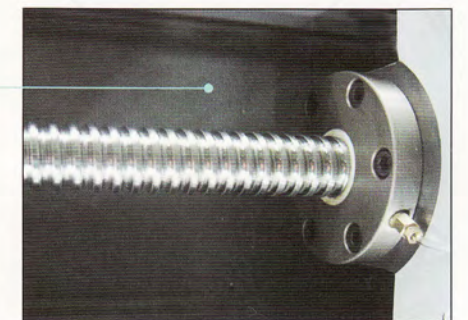
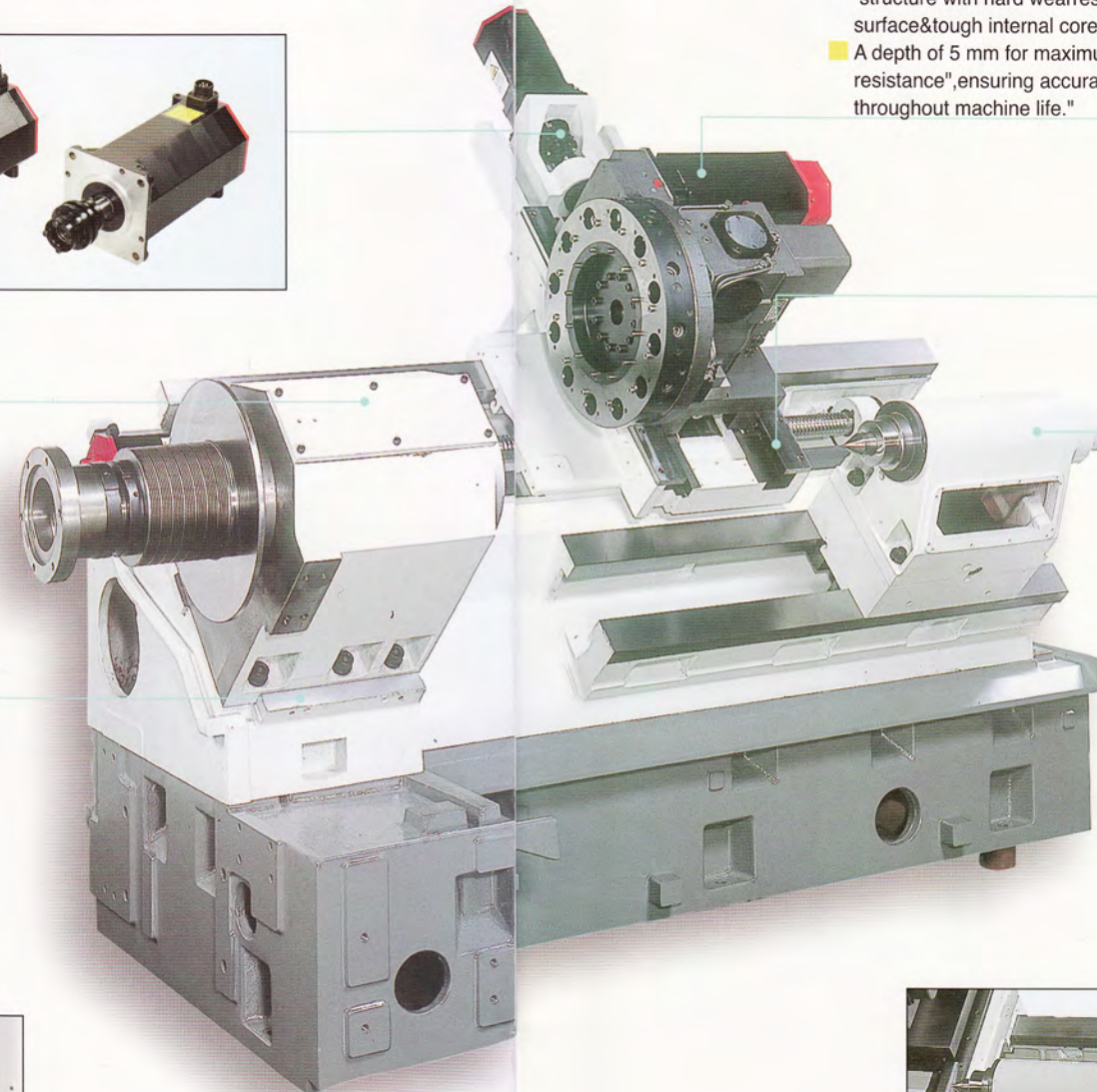
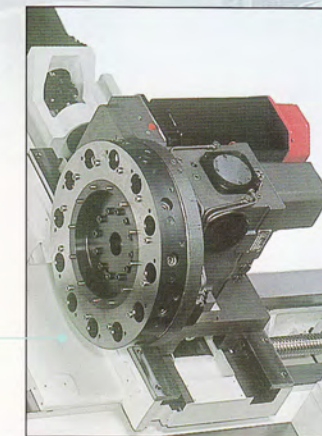
Direct coupled ballscrews

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



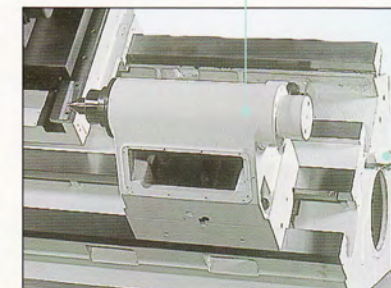
Hardened box slideways

- Cast-iron slideways for maximum rigidity. Nodular grey cast iron offers ideal friction properties without sacrificing toughness.
- Heat treated using high frequency induction heating to produce a wrap around structure with hard wear resistance surface & tough internal core.
- A depth of 5 mm for maximum wear resistance, ensuring accuracies are held throughout machine life.



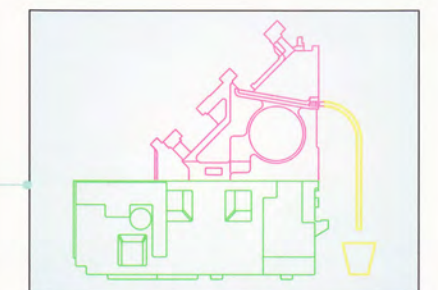
Ball screw structure

- "Using C3 degree ballscrew, and making better precision" in position accuracy.
- "Using strong lubrication system, confirming" the precision of ballscrew and raising the life.



Programmable tailstock

- Mounted on slideways for maximum clamping stability.
- Smooth tow along action by turret.
- Hydraulic clamping to bed with variable hydraulic pressure to tailstock quill. All tailstock movements programmable by M-code.



Separation system for oil & coolant

- A drip tray cast into bed is used to catch waste lubricating oil from Z axis slideway and ballscrew.
- The drip tray is sloped so that the oil can flow to an outlet at the rear of the machine
- This system reduces contamination or dilution of the cutting fluid.

- A complete series of Turning Center Lathe*and satisfies your demand for quality
- "Metal-chip conveyor is built in the machine , saving space and enhancing machine attractiveness."
- "Can rotate 90 degrees and installed with a pull-type electronic hand wheel, the operating case is very east to handle."

Quality---Our company conviction

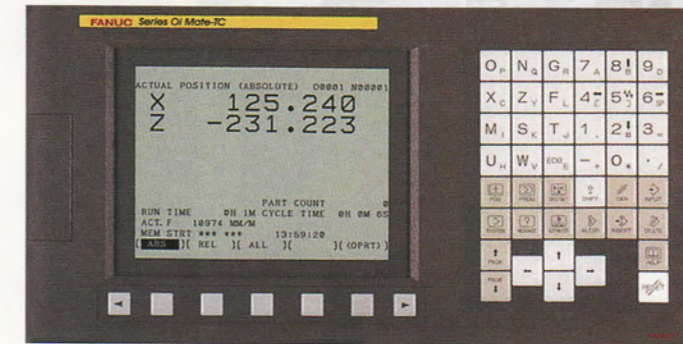
Research---Our company progress power

Service---Our company best guarantee to the customers

TAIWAN LATHE



Computer function

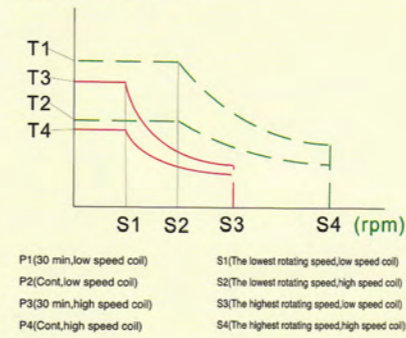


The fanuc control with the strong function

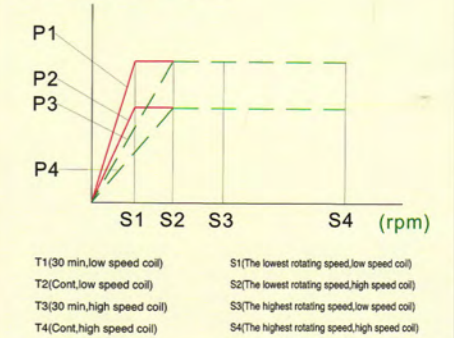
TAIWAN LATHE

Spindle rate/torque output drawing

Torque (kg-m)



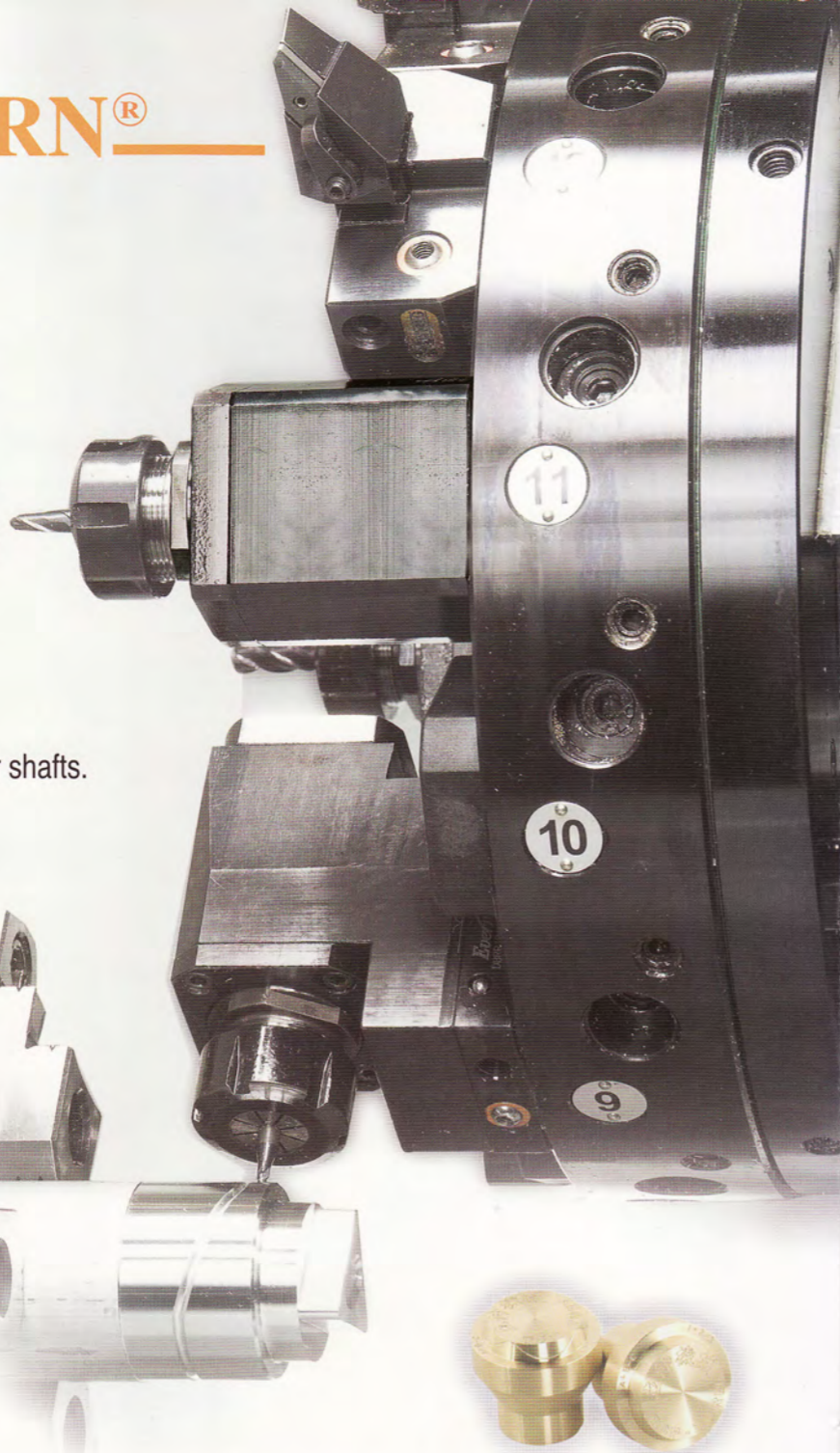
Power Rate (kw)



Machine Type	Main spindle motor	Min.spindle rotating speed at full torque(rpm)	Max.Rotating(rpm)	Rate Kw(Hp)	Torque(Nm)
S26	α p22	(Low speed coil)500	1500	7.5/15	143
S26		(High speed coil)750	6000	11/15	140
S30	α p30	(Low speed coil)233	874	11/18.5	263
S30		(High speed coil)335	3000	15/18.5	249
S33	α p30	(Low speed coil)168	630	11/18.5	263
S33		(High speed coil)241	2500	15/18.5	249
S36	α 22(Three Steps Variable)	43	1800	22/26	
S30C	α p30	(Low speed coil)233	874	11/18.5	263
S30C		(High speed coil)233	3000	15/18.5	249
S33C	α p30	(Low speed coil)168	630	11/18.5	263
S33C		(High speed coil)241	2500	15/18.5	249
S36C	α p40	(Low speed coil)168	630	13/22	310
S36C		(High speed coil)241	2500	18.5/22	307

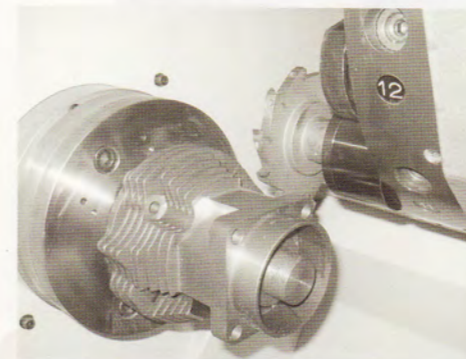
Taiwan Largest Mill-Drill Turning Machine

- Handling turning, milling, engraving and drilling on curved
- surfaces of large and long cylindrical workpieces, this machine is designed for the precision turning and milling of large-size printing rollers, straight-tooth shaft couplings, main shafts, main shaft bearing caps, main-shaft lubricating sleeves, yokes, scrolls, and cambered parts for shafts.
- High PDI 0.001"

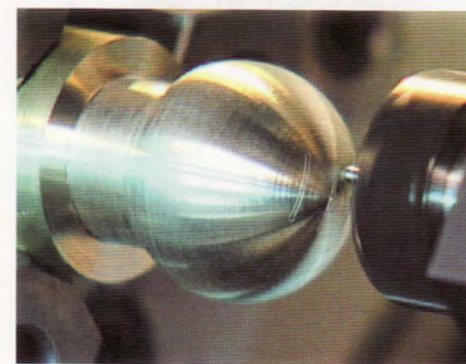


VDI Living Turret Specification

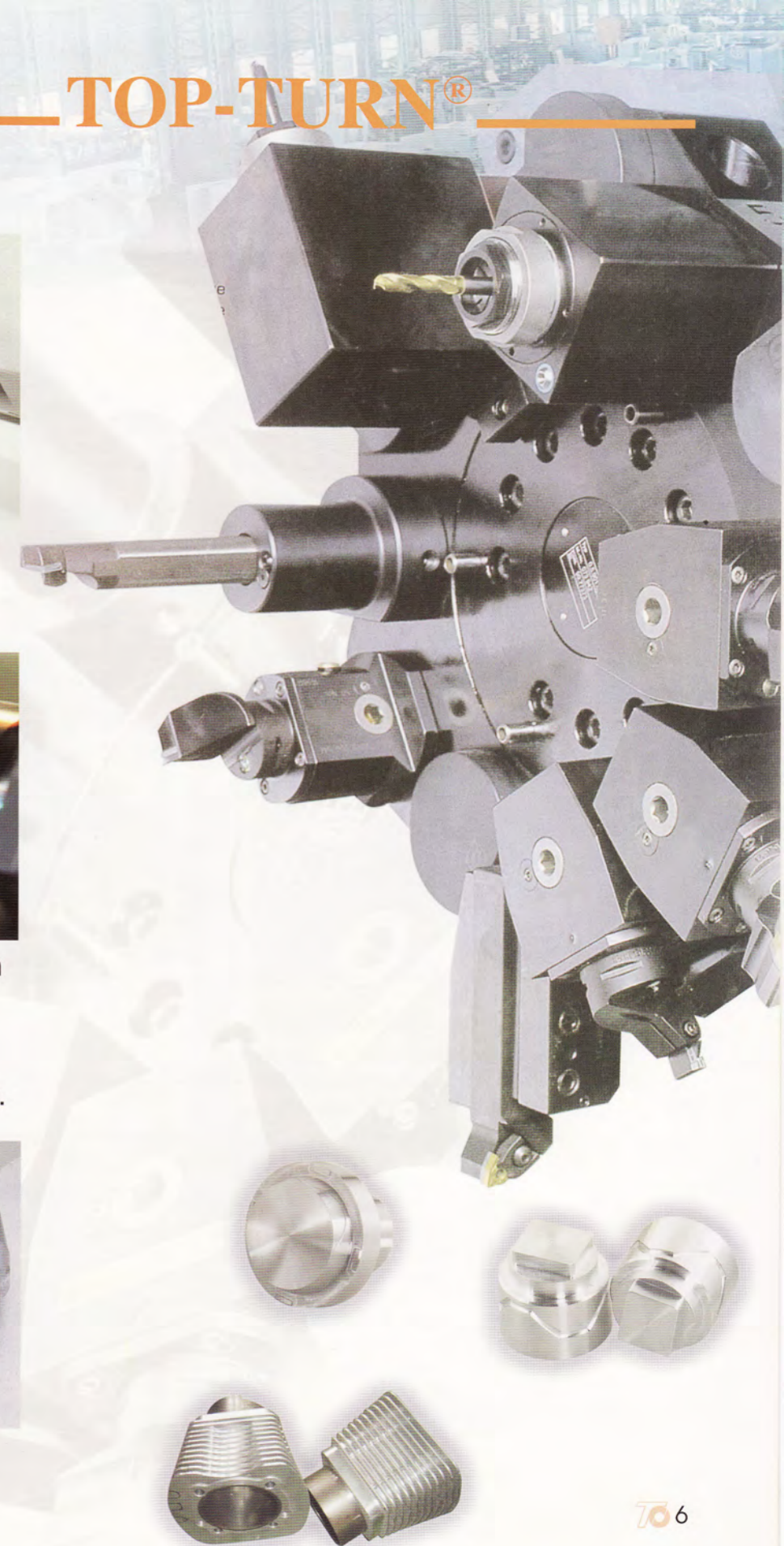
Machine Types	Living Holders	(HP) Motor Power Rate	Max. Rotating Speed	Max. Drilling	Max. Tapping
S30C	VDI40-12 Stations	5/7.5	5000	20mm	M16
S33C	VDI40-12 Stations	5/7.5	5000	20mm	M16
S36C	VDI40-12 Stations	5/7.5	5000	20mm	M16



Cylinder Working Application



Sphere Sculpture Application
It can choose α -Cam software application, decrease working time, and increase efficiency more.



Tooling specifications

Items/Machine	S26	S30	S33	S36
Facing tool size	□25	□32	□32	□32
Facing tool holder	10	10	10	10
Facing cutting tool holder	1	1	1	1
Boring tool holder				
∅40mm	2	Option	Option	Option
∅50mm		2	2	2
Reducing Sleeves				
∅8mm	選配	Option	Option	Option
∅10mm	1	Option	Option	Option
∅12mm	1	1	1	1
∅16mm	1	1	1	1
∅20mm	1	1	1	1
∅25mm	1	1	1	1
∅32mm		1	1	1
Drill Head Sleeves				
MT#1	Option	Option	Option	Option
MT#2	Option	Option	Option	Option
MT#3	Option	Option	Option	Option
MT#4		Option	Option	Option

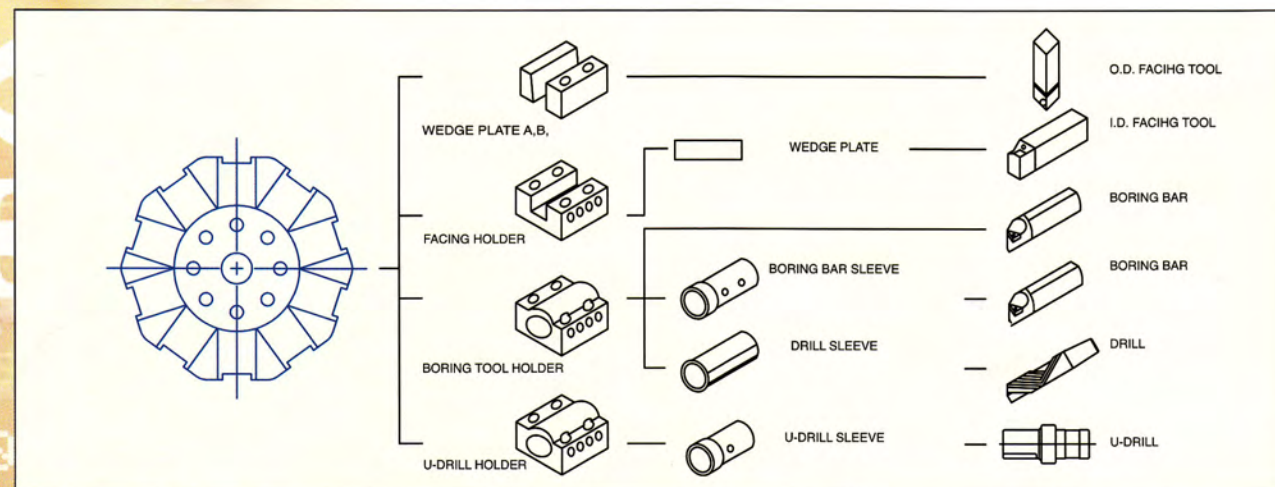
Standard Accessories

1. Hydraulic Chuck
2. Servo Turret
3. Programmable Tailstock
4. Hydraulic System
5. Coolant System
6. Aut Lubrication
7. Work Light (Three Colors)
8. Hard jaw and soft jaw per one

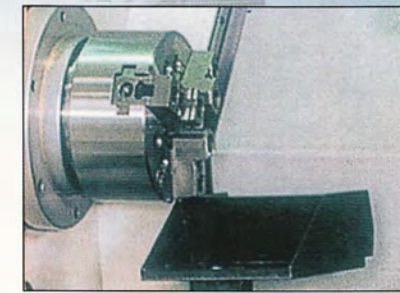
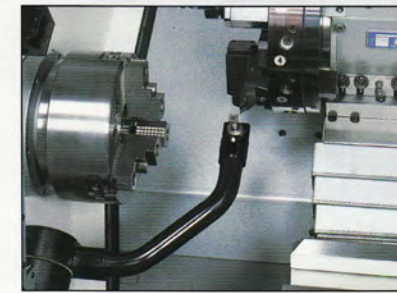
Optional Accessories

1. Auto Door
2. Tool Probe
3. Parts Catcher
4. Transformer
5. High Pressure Pump
6. Bar Feeder
7. Bar Feeder Interface
8. C-Axis
9. Y-Axis
10. Built-in Spindle
11. Sub-Spindle
12. Gantry Robot
13. Chip Conveyor
14. Spindle Air Blow Device

Tooling System



Optional Accessories

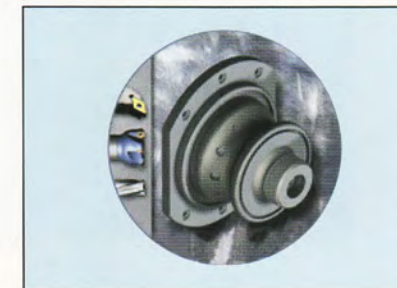


Tool probe

No longer the need to perform tedious time consuming cuts to determine tool geometry's, with a tool presenter once the reference tool is determined the operator need only touch the tool tip to the presetter sensor to get the tool geometries. While not only reducing tool set-up time, tool presetters also reduce down time due to tool breakages.

Parts catcher

To enhance the machine productivity a parts catcher is available to work in conjunction with the bar feed system. The parts catcher is fully programmable to allow automated running with finished parts being dispensed in collection tray in door compartment.



CAM

Complex curved surface milling, sculptured working, and you will produce all products easily.

Bar feeder

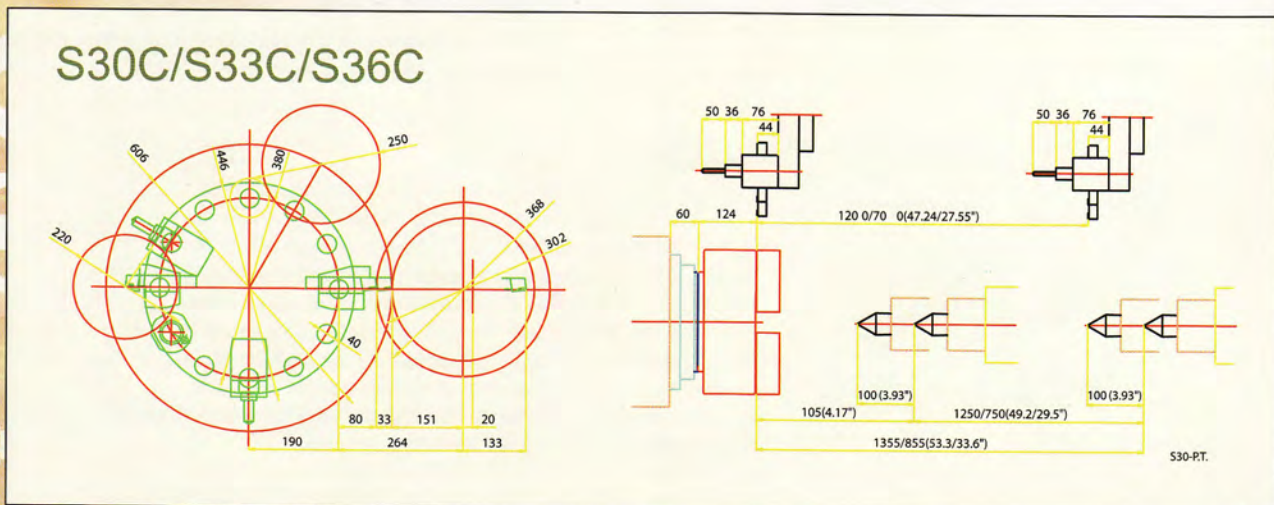
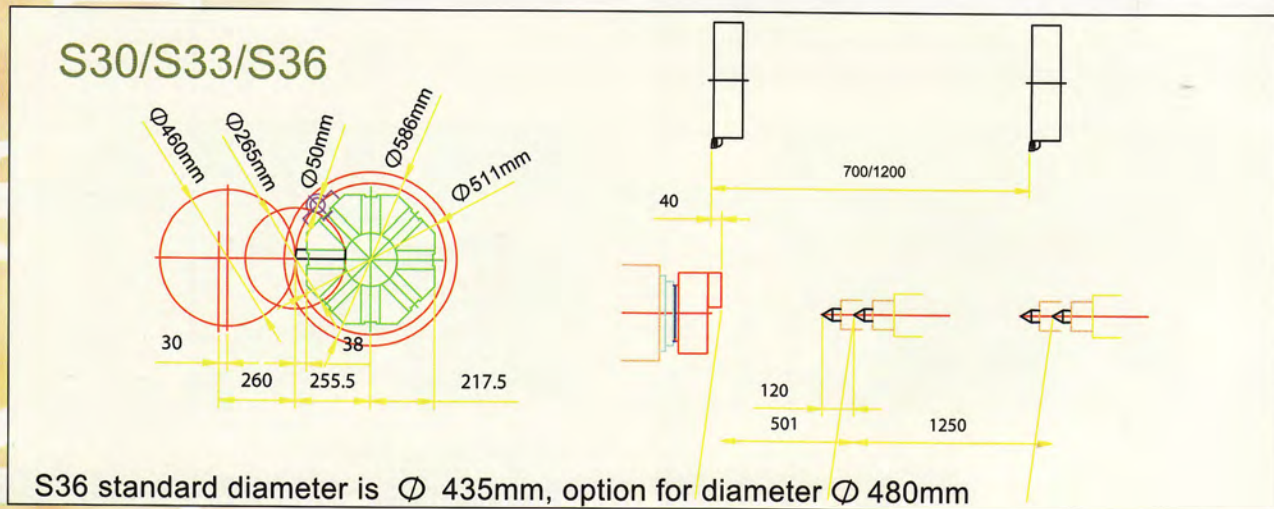
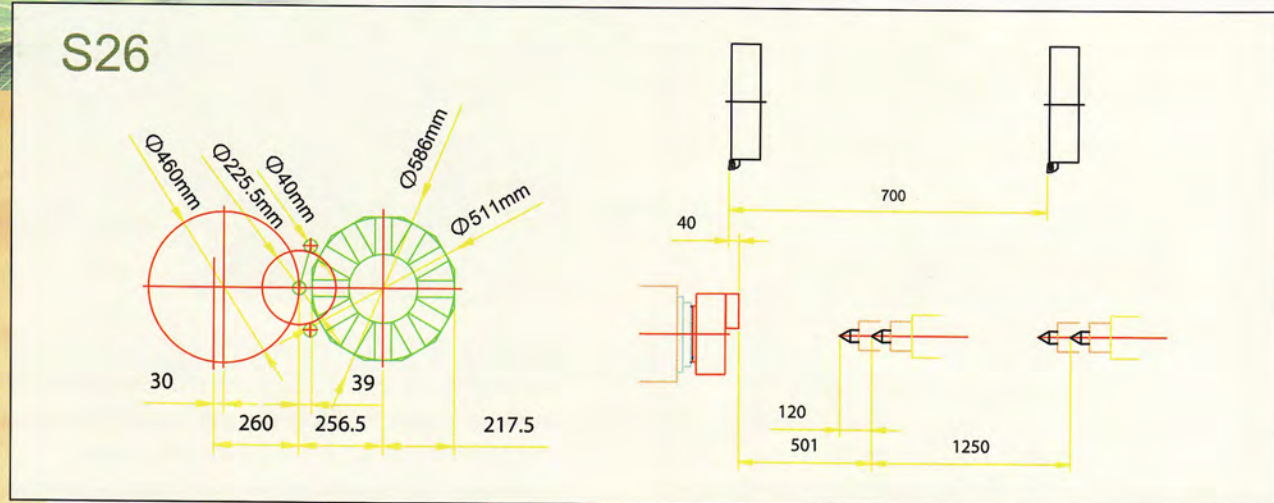
Choosing the certain bar to work, without manpower working, and it can run by 24 hours. Machine automatic process, increasing high speed, and high precision of cutting efficiency.



Gantry robots

2-axis gantry robots for the TOP-TURN series lathes offer a complete turnkey system that will run unmanned 24 hrs a day. This is a simple solution for the customer looking to Factory Automation as a means to increase production and reduce overheads. The gantry loader offers a reliable and affordable system that will automate the loading and unloading of any workpieces. A wide variety of workfeeders are available so that human input can be reduced with enough flexibility to handle various workpiece diameters. The system's flexibility means factory automation is now available for batch production.

Interference & Working Area

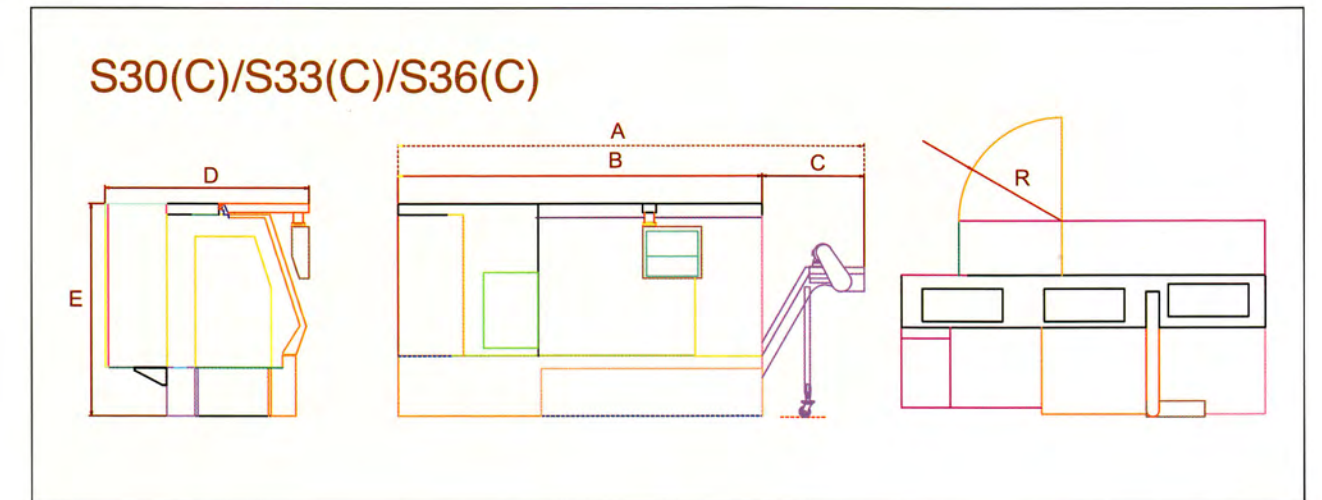


Control System

Item	FANUC Oi-TC	FANUC 18i-TB
controlled axes	2 Axes	
Minimum output	X-Axis:0.0005mm Z-Axis:0.001mm	
Minimum input	0.001mm	
Spindle function	S4 digit	
constant surface speed control	G96,G97	
Spindle speed ove	50%~120%	
Override	0%~150%	
Reference position return	G27,G28	
Manual pulse gene	0.001mm/0.01mm/0.1mm/min	
Tool offset memory	± 6 digit 64	
Tool nose radius	G40~G42	
Tool gebmetry/wea	Std	
Tool function	T7 + 1/T6 + 2 digits	
Chamfering/corner	Std	
Canned cycles	G90,G92,G94	
Multiple repetiti	G70~G76	
Decimal point inp	Std	
Background editin	Std	

Item	FANUC Oi-TC	FANUC 18i-TB
Run hour display	Std	
Part program storage	640M (256KB)	2560M (1024KB)
Thread cutting	G76,G32,G92	
Program number	04 digits	
Inch/metric conversi	G20, G21	
Program code	EIA RS244/ISO 840	
Tape punching interface	RS232C	
MDI/LCD	8.4"LCD(Option 10.4")	10.4"LCD
single block	Std	
Machine lock	Std	
Memory protect	Std	
Stored stroke	Std	
Dwell	G04	
Conversational programming	Opt	
Direct input of draw	No.	
Tangential Exit	Std	
Mirror Image	Std	

Machine Layout



MODEL	A	B	C	D	E	R
CNC-S30(C)	4296mm	3356mm	940mm	1752mm	1950mm	950mm
CNC-S33(C)	4990mm	4050mm	940mm	1752mm	1950mm	950mm
CNC-S36(C)	5090mm	4200mm	940mm	1900mm	2100mm	950mm

Model

WORKING CAPACITY	S30 (S30CY)	S30L (S30LCY)	S33 (S33CY)
SWING OVER BED mm(in)	Ø 670 (26.3")	Ø 670 (26.3")	Ø 670 (26.3")
MAX.TURNING DIAMETER mm(in)	460 (18")	460 (18")	500 (19.7")
MAX.TURNING LENGTH mm(in)	700 (27.6")	1200 (47.2")	700 (27.6")
DISTANCE BETWEEN CENTER mm(in)	850 (33.5")	1350 (53.2")	850 (33.5")
HYDRAULIC CHUCK DIAMETER mm(in)	250 (10")	250 (10")	300 (12")
SPINDLE			
GEAR BOX SPEED	—	—	—
SPINDLE SPEED(rpm)	3500	3500	2500
SPINDLE NOSE	A2-8	A2-8	A2-11
SPINDLE MOTOR kw(hp)	15/18.5kw(20/25 hp)	15/18.5kw(20/25 hp)	15/18.5kw(20/25 hp)
HOLE THROUGH SPINDLE mm(in)	Ø 87(2.16")	Ø 87(2.16")	Ø 105(4.13")
BAR CARACITY mm(in)	Ø 75(2.95")	Ø 75(2.95")	Ø 91(3.58")
FRONT BEARING ID mm(in)	Ø 130(5.1")	Ø 130(5.1")	Ø 160(6.3")
TURRET			
TYPE OF TURRET	SERVO	SERVO	10
NUMBERS OR TOOL STATION	10	10	□32
SHANK HEIGHT FOR SQUARE TOOL mm	□32	□32	Ø 50
MAX ID TOOL mm	Ø 50	Ø 50	
X-AXIS			
TYPE	Box way	Box way	270+30
TRAVEL mm(in)	270+30	270+30	24m/min
RAPID MOTION SPEED (m/min)	24m/min	24m/min	Ø 40*P10
BALL SCREW (mm)	Ø 40*P10	Ø 40*P10	
Z-AXIS			
TYPE	Box way	Box way	800(31.5")
TRAVEL mm(in)	800(31.5")	1300(51.2")	24m/min
RAPID MOTION SPEED (m/min)	24m/min	24m/min	Ø 50*P10
BALL SCREW (mm)	Ø 50*P10	Ø 50*P10	
Y-AXIS(OPTION)			
TYPE	Box way	Box way	Box way
TRAVEL mm(in)	±55	±55	±55
RAPID MOTION SPEED (m/min)	24m/min	24m/min	24m/min
BALL SCREW mm(in)	Ø 50*P10	Ø 50*P10	Ø 50*P10
HYDRAULIC SYSTEM			
TANK CAPACITY (liter)	60	60	60
HYDRAULIC UNIT MOTOR kw(hp)	1.46(2)	1.46(2)	1.46(2)
COLLANT SYSTEM			
TANK CAPACITY (liter)	160	210	160
COOLANT PUMP MOTOR kw(hp)	1/4	1/4	1/4
MACHINE SIZE			
WIDTHxDEPTHxHEIGHT (mm)	3370x1752x1950	4100x1752x1950	3370x1752x1950
NET WEIGHT (kgs)	6100	6600	6200
TAILSTOCK			
TAILSTOCK MOVEMENT mm(in)	750(30")	1250(30")	750(30")
QUILL DIAMETER mm(in)	Ø 110(4.3")	Ø 110(4.3")	Ø 110(4.3")
QUILL TRAVEL mm(in)	100(4")	100(4")	100(4")
QUILL INSIDE TAPER	M.T.#5	M.T.#5	M.T.#5

Model

WORKING CAPACITY	S33L (S33LCY)	S36 (S36CY)	S36L (S36LCY)	S36LL (S36LLCY)
SWING OVER BED mm(in)	Ø 670 (26.3")	Ø 780 (30.7")	Ø 780 (30.7")	Ø 780 (30.7")
MAX.TURNING DIAMETER mm(in)	500 (19.7")	500 (19.7") 550 (21.7")	500 (19.7") 550 (21.7")	500 (19.7") 550 (21.7")
MAX.TURNING LENGTH mm(in)	1200 (47.2")	700 (27.6")	1200 (47.2")	1700 (66.9")
DISTANCE BETWEEN CENTER mm(in)	1350 (53.2")	850 (33.5")	1350 (53.2")	1850 (33.5")
HYDRAULIC CHUCK DIAMETER mm(in)	200 (12")	380 (15")	380 (15")	380 (15")
SPINDLE				
GEAR BOX SPEED	—	3 Steps	3 Steps	3 Steps
SPINDLE SPEED(rpm)	2500	1--1200	1--1200	1--1200
SPINDLE NOSE	A2-11	A2-11	A2-11	A2-11
SPINDLE MOTOR kw(hp)	15/18.5kw(20/25 hp)	22/26kw(30/35 hp)	22/26kw(30/35 hp)	22/26kw(30/35 hp)
HOLE THROUGH SPINDLE mm(in)	Ø 105(4.13")	Ø 165(6.6")	Ø 165(6.6")	Ø 165(6.6")
BAR CARACITY mm(in)	Ø 91(3.58")	Ø 117(4.6")	Ø 117(4.6")	Ø 117(4.6")
FRONT BEARING ID mm(in)	Ø 160(6.3")	Ø 220(8.7")	Ø 220(8.7")	Ø 220(8.7")
TURRET				
TYPE OF TURRET	SERVO	SERVO	SERVO	SERVO
NUMBERS OR TOOL STATION	10	10	10	10
SHANK HEIGHT FOR SQUARE TOOL mm	□32	□32	□32	□32
MAX ID TOOL mm	Ø 50	Ø 50	Ø 50	Ø 50
X-AXIS				
TYPE	Box way	Box way	Box way	Box way
TRAVEL mm(in)	270+30	275+30	275+30	275+30
RAPID MOTION SPEED (m/min)	24m/min	15m/min	15m/min	15m/min
BALL SCREW (mm)	Ø 40*P10	Ø 40*P10	Ø 40*P10	Ø 40*P10
Z-AXIS				
TYPE	Box way	Box way	Box way	Box way
TRAVEL mm(in)	1300(51.2")	800(31.5")	1300(51.2")	1800(70.9")
RAPID MOTION SPEED (m/min)	24m/min	24m/min	24m/min	15m/min
BALL SCREW (mm)	Ø 50*P10	Ø 50*P10	Ø 50*P10	Ø 50*P10
Y-AXIS(OPTION)				
TYPE	Box way	Box way	Box way	Box way
TRAVEL mm(in)	±55	±55	±55	±55
RAPID MOTION SPEED (m/min)	24m/min	8m/min	8m/min	8m/min
BALL SCREW mm(in)	Ø 50*P10	Ø 40*P10	Ø 40*P10	Ø 40*P10
HYDRAULIC SYSTEM				
TANK CAPACITY (liter)	60	60	60	60
HYDRAULIC UNIT MOTOR kw(hp)	1.46(2)	1.46(2)	1.46(2)	1.46(2)
COLLANT SYSTEM				
TANK CAPACITY (liter)	210	160	210	260
COOLANT PUMP MOTOR kw(hp)	1/4	1/4	1/4	1/4
MACHINE SIZE				
WIDTHxDEPTHxHEIGHT (mm)	4100x1752x1950	4200x1900x2100	4700x1900x2100	5200x1900x2100
NET WEIGHT (kgs)	6700	7100	8200	9350
TAILSTOCK				
TAILSTOCK MOVEMENT mm(in)	1250(30")	750(30")	1250(30")	1750(30")
QUILL DIAMETER mm(in)	Ø 110(4.3")	Ø 110(4.3")	Ø 110(4.3")	Ø 110(4.3")
QUILL TRAVEL mm(in)	100(4")	100(4")	100(4")	100(4")
QUILL INSIDE TAPER	M.T.#5	M.T.#5	M.T.#5	M.T.#5

Company Profile

Company Foundation: March, 1982"

Staffs: 50

Factory Space: 1500 level ground
1982 Developing LUX-1340 Series High Speed Lathes, and major sales in the U.S.A market.

1983 Developing LUX-1440 and LUX-1600 Series high Speed Lathes.

1984 Exploring European Market.

1989 Developing LUX-2100 and LUX-1800 Series High Speed Lathes, and starting the world.

1993 Developing CE Standard Certificate, and Promoting CNC Lathe types: CNC-406, CNC-536 and CNC-660 Series Machine Types to Italian and European Market."

1996 Creating Slant Bed Type ""S"" Series CNC-S25B, and going on the Development of Turning Center Lathe Duplicate and Big Machine Types"

1998 Registering TOP-TURN Brand

2000 Producing mark ""Victor"" lathe, and producing TOP Series Lathes to it. (OEM) Researching and Promoting CNC Lathes: S15, S20, and Turning Center: S20C Series. With European quality spirit, and establish constant base in Taiwan.

2001 Promoting the first CNC large slant bed lathe S40, and S15, S20 were sold to European market in the same year."

2002 Under confirming with company fast growth and quality, our business promoted fast. The second stage development, purchased the new factory near the secondary freeway and starting to develop large turning center: S40C and S50C.

Floor Space: 5200 square meters Factory Space: 4600 square meters

- 2003
1. Developing slant bed lathes S30/S33 and Turning Center Lathes S30C/S33C
 2. Under various of big slant bed lathes demand, developing ""Order Make"" big flat bed "4-way" machine types S60~S100"
 3. Applying for the subsidy from "", and developing linear motor technology application."
 4. Promoting toolroom machine type S11, the specific machine types for electronic, clocks and watches", and main market is American air-flight industry."
 5. As for toolroom series, developing universal cylindrical grinder series: OD618, OD820, OD618A, and OD820A NC grinders."

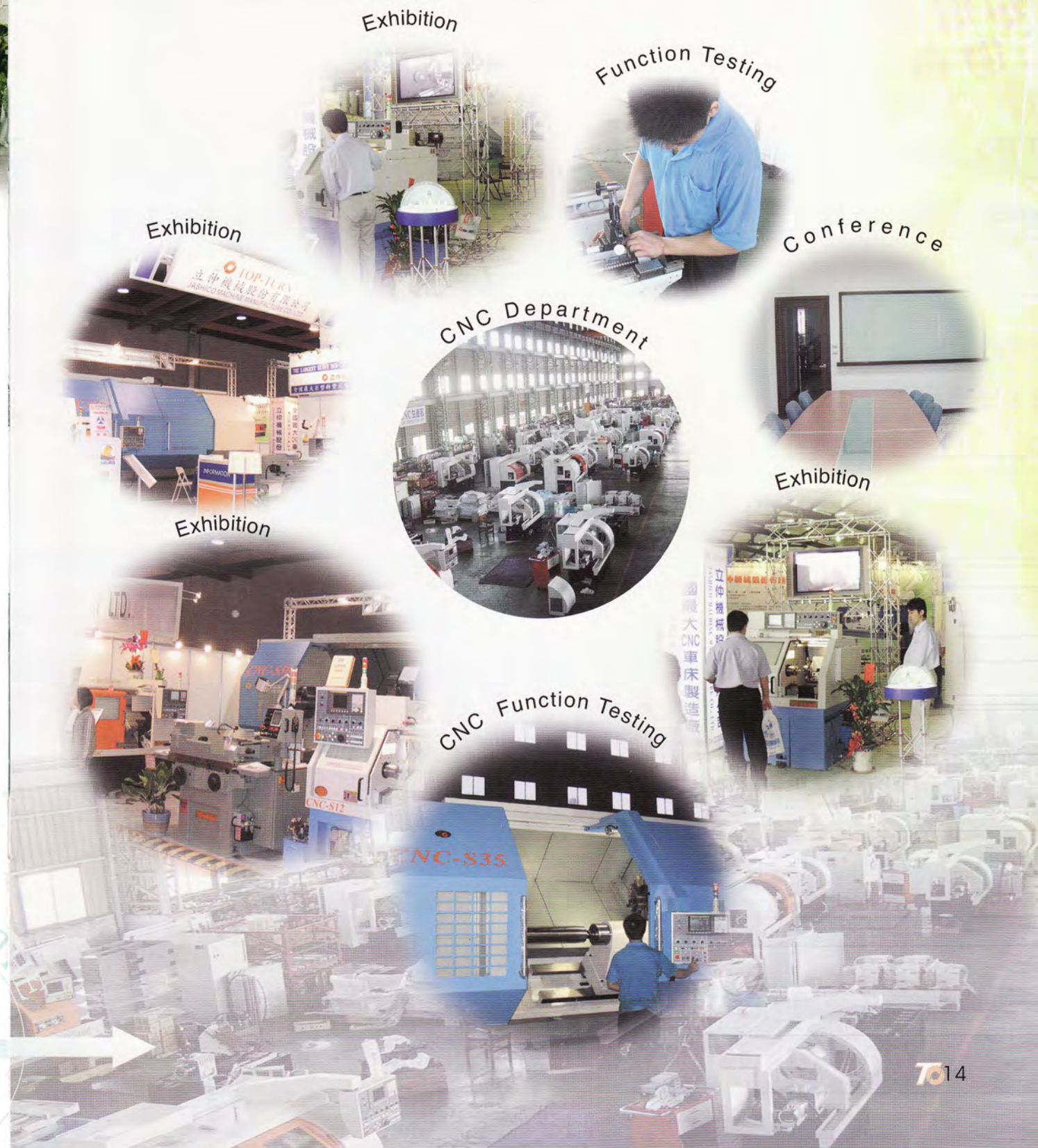
- 2004
1. In connection with market demand, taking complete ""PLC"" and ""Structure"" design", and developing full series of Turning Center Lathe"
 - In connection with small type and high precision parts, developing "S12" gang type series and combine automatic devices."
 - Full series types : CNC lathes S11, S12, S16, S25, S30, S33, and big CNC lathes S40~S100", full Turning Center series: CNC-S16C, S20C, S30C, S33C and large series: CNC-S40C~S100C.

2005 Up to this moment, ""Top-Turn"" high quality route has been gradually confirmed by the world. We will take more stable quality route in the future. ""TOP-TURN"" will also cooperate with foreign high technology countries, and will develop more suitable products to support the industries."

2006 We will raise all series of turning center machine types and specifications, develop up to finish S26 and S36 machine types design, toward the high precision duplicate design in the new century.



"With 1500 level grounds firm area, complete staffs organization high-quality service and"
"professionals' quality supervision, and creating to meet customers' product demand level."



Exhibition

Function Testing

Conference

Exhibition

CNC Department

Exhibition

Exhibition

CNC Function Testing