

# Pinacho



## smart-turn 6

CNC lathes



# "Conversational Touch Screen Programming"

"PINACHO SMART TURN CNC Lathes come with Unique, Dual Programming System -

- SMART MODE - Easy to use Conversational Touch Screen Programming.
- ISO MODE - Standard ISO Programming using G & M Codes.

This unique feature combines the advantages of a CNC Lathe with the ease of use of a Conventional Lathe. SMART TURN CNC Lathe is useful in all industries with Turning applications. These machines are most useful in Batch Production of any size, Long Jobs and Heavy Metal removal.

## 3 Modes of Operation

Like a Conventional Lathe :

- 2 Electronic Hand Wheels are provided so operators can use the Lathe like a Conventional Lathe

Smart Turn Programming Mode :

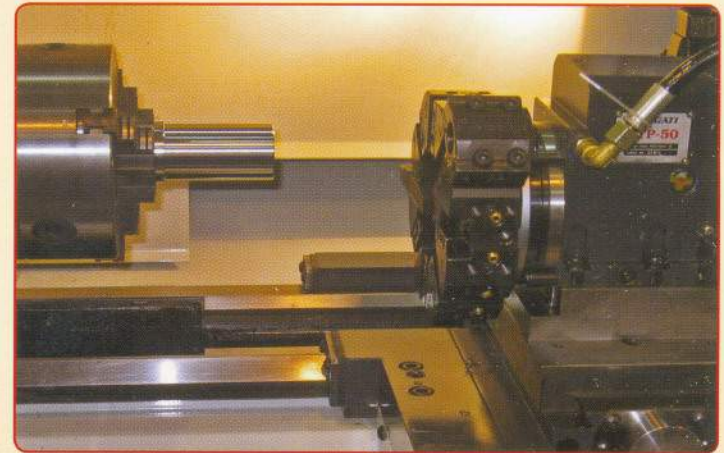
- Operators using manual Lathes can use the SMART 6 system without having CNC experience.
- Machining is carried out by using a comprehensive choice of automatic cycles selected through the touch screen.
- Complete range of automatic turning cycles.
- Capacity to save up to 40 different operations that can be linked in a single program makes the machining of complex components fully automatic.
- Tool offset for upto 16 Tools.
- Inch or Metric display.
- Possibility to program cutting parameters (feed, spindle speed, tool) differently for each cycle.

ISO Programming Mode:

- Using standard ISO codes like G / M codes, possibility to program all type of operations and automatic movements.
- Capacity up to 64 different offsets for tools.
- 240 KB memory capacity for programs.

## advantages

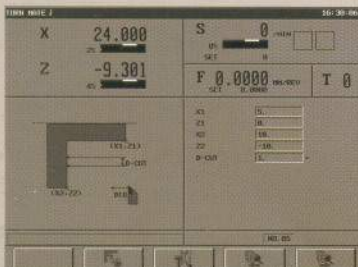
- All the advantages of a CNC lathe, combined with the flexibility and ease of use of a Conventional Lathe.
- Components of complicated geometries can be turned without using Taper Turning / Hydro Copying attachments.
- A very large range of threads can be produced without setting up Gear trains.
- Greatly reduced set up time means increased productivity.
- Ideal for small batch production of CNC Quality / Accuracy turned components.



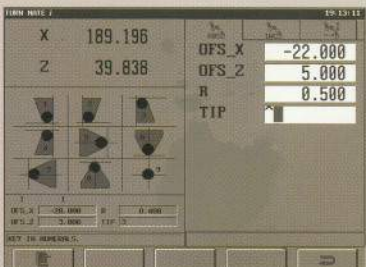
8 Station Turret



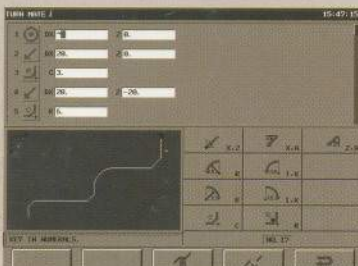
By using the SMART TURN 6, any operator can gradually familiarize with the CNC for lathes. Pressing one key, the SMART TURN 6 can be handled as a full CNC programmable in ISO.



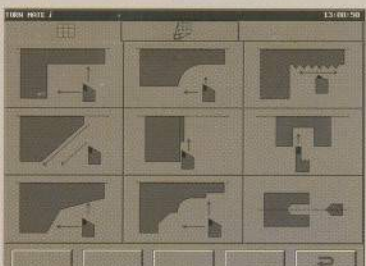
All data for the machining process in one single screen.



Easy definition of the tool dimensions.

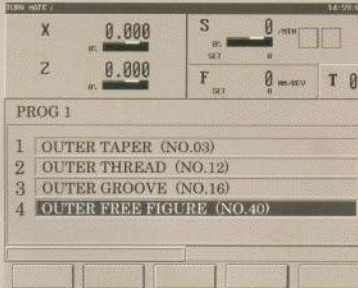


Easy to use workpiece profile cycle.

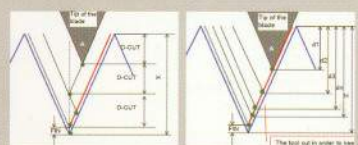


Complete range of automatic turning cycles:

- Profile definition cycle for external/internal roughing and finishing.
- External/internal facing.
- Cylindrical and taper threads.
- Grooving.
- Drilling and tapping.



Linking of programmed cycles allows complete workpiece machining from start to finish.



Different threading methods selection.



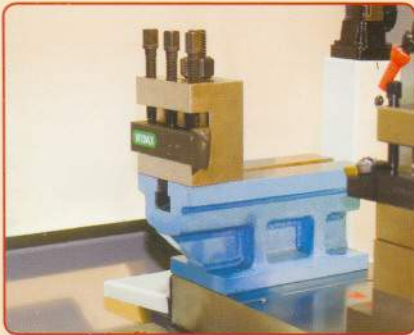


## standard accessories

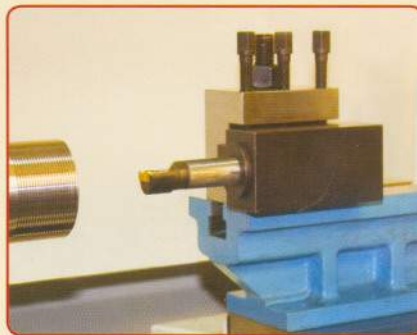
- CNC System Oi Mate TC, Spindle motor and Servo motors from Fanuc.
- LCD Touch Screen 7.2" with Large Graphic icons.
- RS 232 port and PCMCIA Card slot.
- 4 Way automatic square toolpost.
- Fully enclosed guarding and chip collecting tray.
- Coolant equipment.
- Automatic lubrication of the slide ways.
- Constant surface speed.
- Electronic handwheels for the X and Z axis.
- Low voltage work light.
- Main spindle reducing bush and fixed centers.
- Instruction manual.

## optional accessories

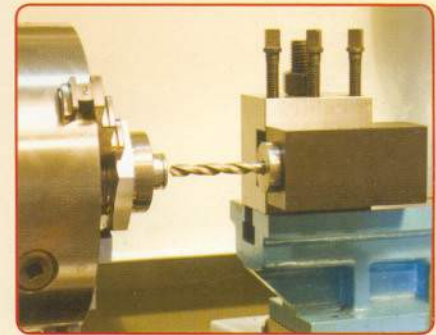
- Steel universal 3-jaw chuck.
- Independent 4-jaw chuck.
- Face plate.
- Fixed steady rest pad/roller type.
- Follow rest pad type.
- Rear toolpost.
- Turning Tool holder for Rear toolpost.
- Boring Tool Holder for Indexing Tool Post / Rear Tool Post.
- Morse Taper Tool Holder for Indexing Tool Post / Rear Tool Post.
- Revolving Centre.
- Reducing Sleeves.
- 8 station Automatic Turret.
- Hydraulic Chuck.
- Hydraulic Tailstock.
- Hydraulic Powerpack.
- Foot Pedal for Hydraulic Chuck.



Rear Tool Post with Turning Tool Holder.



Rear Tool Post with Boring Tool Holder.



Morse Taper Tool Holder for Rear Tool Post.



Boring Tool Holder for Indexing Tool Post.



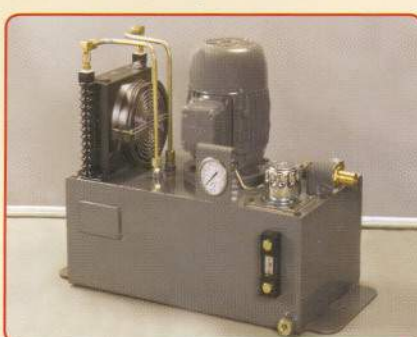
Morse Taper Tool Holder for Indexing Tool Post.



Steady Rest



Follow Rest.



Hydraulic Power Pack.



Hydraulic Chuck.



# technical specifications

## smart-turn 6 CNC lathes

CAPACITY		Smart 180	Smart 225
Centre height	MM	180	225
Centre distance	MM	750/1000	1000/1500
Swing over bed	MM	360	450
Swing over carriage	MM	300	370
Swing over cross slide	MM	190	260
Bed width	MM	250	300

### HEAD STOCK

Main spindle bore	MM	42	65
Spindle bearing OD	MM	110 & 100	150 & 140
Main spindle nose		A2-5	A2-6
Main spindle Morse taper		4	5
Variable spindle speed r.p.m		0-4000	0 - 3000

### SLIDE AND CARRIAGE

Working feed Z.X	MM/MIN	0-7000	0 - 7000
Rapid feed Z.X	Mtrs/MIN	10	10
Z-axis Ball screw Dia	MM	38	38
Z-axis Ball screw pitch	MM	10	10
X-axis Ball screw Dia	MM	20	20
X-axis Ball screw pitch	MM	5	5
Cross Slide Travel	MM	195	255

### TAIL STOCK

Tail stock barrel diameter	MM	58	68
Tail stock barrel travel	MM	180	200
Tail stock Morse taper		4	5

### MOTOR POWER

Main motor power	Kw	7.5	9
Pump motor power	Kw	0.06	0.06

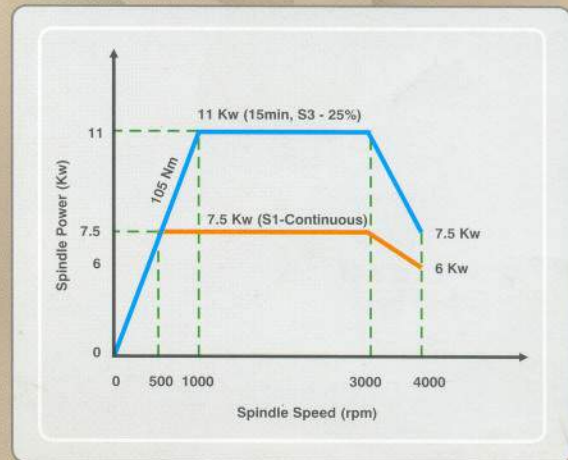
### OPERATING SYSTEM

FANUC Oi-MATE TC

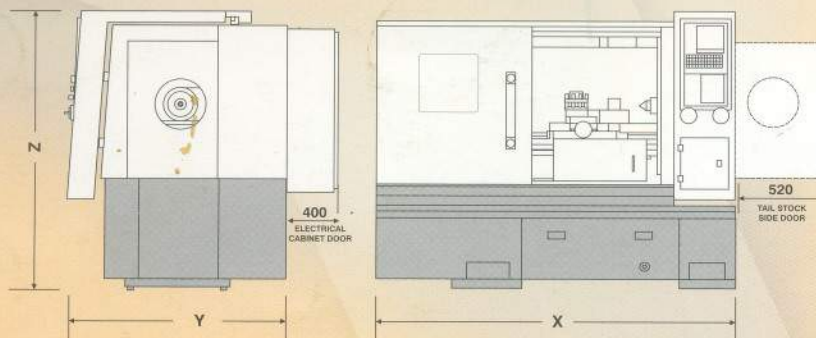
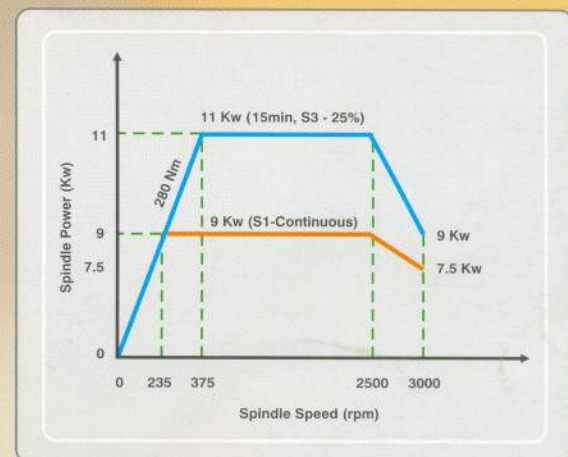
### OTHERS

Hole through Hydraulic Chuck	MM	30	50
Hydraulic Tailstock Barrel Travel	MM	125	150

## smart-turn 180



## smart-turn 225



### Smart 180

ABC	X mm	Y mm	Z mm	WEIGHT Kg
750	2080	1270	1700	1300
1000	2357	1270	1700	1580

### Smart 225

ABC	X mm	Y mm	Z mm	WEIGHT Kg
1000	2547	1327	1765	1824
1500	3047	1327	1765	2174

MANUFACTURERS :  
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**Advanced Compact CNC Turning Center  
Designed to Produce Small  
Precision Parts with Unsurpassed Accuracy**

# **QUICK TURN 6T**



- Integral spindle/motor for powerful, high-speed and high-precision operation 5.5 kW (7.5 HP) - 7000 rpm
- High-speed, high-accuracy, non-lift indexing octagonal drum turret (dodecagonal drum turret optionally available)
- Unsurpassed accuracy thanks to integral spindle/motor and precision linear guides
- Fastest rapid traverse rate for this class turning center: 30 m/min
- High-speed gantry robot for unmanned operation
- Bar-feeder system with maximum bar material diameter of 32 mm
- CNC system designed from the operator's perspective

**Mazak**



## Standard Machine Specifications

Max. swing	440 mm
Max. machining dia.	130 mm
Max. bar work dia.	32 mm
X-axis stroke	80 mm
Z-axis stroke	200 mm
Spindle speed	35 ~ 7000 RPM
No of spindle speed ranges	Stepless
Spindle face	115 mm dia. flat nose
Spindle bore	44 mm
Turrent type / Tool capacity	Octagonal 8-position drum turret / 8 tools
Tool holder shank height	20 mm
Boring bar shank dia.	20 mm
Rapid traverse rate	30000 mm/min
Jog feed rate	1 to 2000 mm/min (25 steps)
Spindle motor (30 min./cont. rating)	AC5.5kW(7.5 HP) / 3.7kW (5 HP)
Coolant pump	0.18 kW (0.25 HP)
Electric power requirement (30 min./cont. rating)	11.8/9.3 kVA
Coolant tank capacity	65 L (17.2 gal)
Machine height	1600 mm
Floor space requirement	L1710mm x W1342 mm
Machine weight	1900 kg



### Designed to produce:

- ◆ Computer components
- ◆ Electronic components
- ◆ Video tape recorder components
- ◆ Optical equipment components
- ◆ Precision bearings
- ◆ Medical equipment components
- ◆ Small automotive components

### Standard Equipment

- Tool life management
- 5" hydraulic chuck (non-through hole) with 1 set of soft jaws
- Standard tooling package
- Coolant system
- Totally enclosed cover
- Work light
- Door interlock
- Adjusting tools - 1 set
- Manuals - 1 set
- Foundation kit

### (Factory Automation)

- Gantry robot system
- Preparation for bar feeder
- Filler tube
- Bar puller
- Automatic parts catcher
- Tool Eye (manual)
- 3-color machine status indicator light (with/without buzzer)
- Automatic power off
- Automatic open/close cover
- Automatic chuck jaw open/close
- Chuck air blast
- Spindle orient

### (Machine)

- Dodecagonal drum turret
- Tailstock (MT3) Max. swing: 320 mm (12.60 in.) dia.
- 5" hydraulic chuck (through hole)
- 4" pneumatic high-precision chuck
- Collet chuck
- Movable foot switch
- Special machine color
- Transformer

### (High-precision)

- Coolant temperature control system
  - High-power coolant (0.4 kW pump)
  - Cooling unit for X-axis ball screw
  - Additional headstock cooling fan
- (Safety)**
- Hydraulic pressure interlock
  - Current leakage breaker
  - Chuck jaw open/close confirmation

### (Chip disposal/coolant system)

- Chip conveyor (rear/side exit)
- Chip bucket (fixed/swing)
- Oil mist coolant
- Preparation for oil mist collector

### Factory Automation Equipment and Other Optional Accessories

The accuracy data and other data presented in this catalog were obtained under specific conditions. They may not be duplicated under different conditions (room temperature, workpiece material, tool material, cutting conditions, etc.)

- \* Specifications are subject to change without notice.
- \* This product is subject to all applicable export control laws and regulations.

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