

**TWINHORN T-6 TURNING CENTER**
**STANDARD FEATURES**

- ▶ Fanuc Oi-Mate-TC / 640 Meters Memory
- ▶ AC Digital Servo & Spindle Drivers
- ▶ 10 Station Servo Driven Turret
- ▶ PCMCIA Slot for Memory Expansion
- ▶ High Precision Linear Guideways
- ▶ Meehanite Cast Iron Bed, Base & Headstock
- ▶ Heat Exchanger for Electrical Cabinet
- ▶ Automatic Power off (M30)
- ▶ Roll Out Coolant Tank & Chip Tray
- ▶ Fanuc Operating & Maintenance Manual
- ▶ One Year Machine Parts Warranty
- ▶ Fanuc 20 HP Spindle Motor
- ▶ 6" 3 Jaw Hydraulic Chuck
- ▶ Spindle Speed 6000 RPM
- ▶ Chip Conveyor & Cart
- ▶ Pitch Error Compensation
- ▶ Auto Lubrication System
- ▶ Differential Bed Ways Configuration
- ▶ RS232 Interface
- ▶ Tool Kit / Work Light
- ▶ Operating & Electrical Manuals
- ▶ Two Year Control Warranty

**MACHINE SPECIFICATIONS**

Travel X Axis -----	7.08" (180mm)
Travel Z Axis -----	14.57" (370mm)
Rapid Feed Rate X Axis -----	472ipm
Rapid Feed Rate Z Axis -----	787ipm
Positioning X Axis -----	0.0004" / 4"
Positioning Z Axis -----	0.0008" / 12"
Repeatability X & Z Axis -----	±0.0001" (±0.003mm)
Swing Over Bed -----	16.54" (420mm)
Swing Over Carriage Cover -----	12.99" (330mm)
Maximum Turning Diameter x Full Length -----	9.84" x 14.57" (250mm x 370mm)
Spindle Center Height -----	36.22" (920mm)
Spindle Nose -----	ASA A-2-5
Spindle Bore -----	2.20" (56mm)
Bar Capacity -----	1.77" (45mm)
Spindle Motor -----	FANUC AC Spindle Motor
Spindle Horse Power -----	20 HP
Spindle Speed -----	6000 RPM
Servo Drive Motor X & Z Axis -----	Fanuc BIS 8 / 3000

Note: Prices and model specifications are subject to change without prior notice. All prices are in U.S. Dollars.



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Turret Tool Disk Diameter (Hex) -----	11" (280mm)
Turret Tool Disk Diameter (VDI) -----	13.39" (340mm)
Turning Tool Shank Size -----	0.75"
Boring Bar Holder Size -----	1.25"
Turret Index Time (Station to Station) -----	0.8 Seconds
Floor Space -----	68.90"x118.50"x72.83" (1750mmx3010mmx1850mm)
Power Requirement -----	220V, 3 Phase, 60Hz, 30kVA, 75Amp
Machine Weight -----	8,370 lb (3800 kg)

**MACHINE PRICES**

T-6/Fanuc Oi-Mate-TC/6"Hydraulic Chuck/10 Station Servo Turret -----	<b>\$55,900</b>
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**OPTIONAL ACCESSORIES**

Turning Tool Holder -----	\$225
Boring Bar Holder -----	\$225
Parts Catcher -----	\$2,200
Auto Tool Setter -----	\$3,650
Auto Door Open/Close -----	T/A
Transformer 30KVA -----	\$1,300
Boring Bar Bushing (Set) 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2 -----	\$560
Morse Taper Bushing (Set) MT#2, MT#3, MT#4 -----	\$240
Soft Jaw 8" Chuck (Pointed) -----	\$65
Soft Jaw 8" Chuck (Flat) -----	\$65
Soft Jaw 10" Chuck (Pointed) -----	\$65
Soft Jaw 10" Chuck (Flat) -----	\$65
5C Collet Chuck A2-5 Overall Length 5" Capacity 1 1/16" -----	\$693
5C Collet Chuck A2-6 Overall Length 5" Capacity 1 1/16" -----	\$809
5C Collet Chuck A2-6 Overall Length 6" Capacity 1 1/16" -----	\$914
5C Collet Chuck A2-8 Overall Length 6" Capacity 1 1/16" -----	\$956
16C Collet Chuck A2-5 Overall Length 6" Capacity 1 5/8" -----	\$851
16C Collet Chuck A2-6 Overall Length 6" Capacity 1 5/8" -----	\$924
16C Collet Chuck A2-8 Overall Length 6" Capacity 1 5/8" -----	\$998
3J Collet Chuck A2-5 Overall Length 6" Capacity 1 3/4" -----	\$882
3J Collet Chuck A2-6 Overall Length 6" Capacity 1 3/4" -----	\$956
3J Collet Chuck A2-8 Overall Length 6" Capacity 1 3/4" -----	\$1,124

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## Twinhorn T-6 Machine Specifications

### 1. HEADSTOCK

#### A. Spindle Bearings

Front Angular Contact -----	7018A5P4
O.D -----	5.51" (140mm)
I.D -----	3.54" (90mm)
Width -----	2.13" (54mm)
Rear Double Row Roller -----	NN3016KP4
O.D -----	4.921" (125mm)
I.D -----	3.15" (80mm)
Width -----	1.34" (34mm)

#### B. Spindle Shaft Hardness

-----	HRC 55 ± 3°
Spindle Bore -----	2.20" (56mm)
Spindle Nose -----	ASA A-2-5
Spindle Runout Max. -----	0.0002" (0.005mm)
Spindle Taper -----	M.T. #6
Bar Capacity -----	1.77" (45mm)

#### C. Chuck

6" Chuck -----	Tonfou TF3B
Plunger Stroke -----	0.47" (12mm)
Jaw Stroke -----	0.22" (5.5mm)
Max. Clamping Dia with standard soft jaw -----	6"
Min. Clamping Dia with standard soft jaw -----	0.39"
Max. Speed RPM -----	6000RPM
Max. Clamping Force -----	12,786 lb (5812kg)

#### D. Rotating Cylinder For TF3B-6"A5

-----	Tonfou RC6
Piston Stroke -----	0.59" (15mm)
Max RPM -----	7000RPM
Max Pressure -----	88 lb (40kg)

#### Rotating Cylinder For TF3B-8"A6

-----	Tonfou RC8
Piston Stroke -----	0.87" (22mm)
Max RPM -----	6200RPM
Max Pressure -----	88 lb (40kg)

#### Rotating Cylinder For TF3B-10"A8

-----	Tonfou RC10
Piston Stroke -----	0.98" (25mm)
Max RPM -----	4700RPM
Max Pressure -----	88 lb (40kg)

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## 2. TURRET

A. Type	-----	10 Station Servo Driven
B. Servo Motor	-----	Fanuc AC Alpha 6/20000
C. Gear Coupling	-----	24 Teeth Curvic
D. Clamping Force	-----	6,485 lb (2948kg)
E. Indexing	-----	Servo Driven
F. Indexing Time (Station to Station)	-----	0.8 Seconds
G. Turning Tools	-----	0.75"
H. Boring Tools	-----	1.25"
I. Min. Interference Dia. (Adjacent Position Loaded) 8 Tools	-----	8.5" (216mm)
12 Tools	-----	7.70" (196mm)

## 3. X AXIS

A. Ballscrew Dia.	-----	1.25" (32mm)
Lead	-----	0.24" (6mm)
Accuracy	-----	0.0002" (0.005mm)
Drive Motor (Standard)	-----	Fanuc AC Alpha 6/2000
B. Thrust (Continuous)	-----	670 lb (304kg)
(Maximum)	-----	7,010 lb (3180kg)
C. Rapid Rate	-----	468ipm
D. Travel	-----	(180 mm) 7.08"
E. Positioning	-----	0.0004"/4"
F. Repeatability	-----	± 0.0001"

## 4. Z AXIS

A. Ballscrew Dia.	-----	1.26" (32mm)
Lead	-----	0.39" (10mm)
Accuracy	-----	0.0002" (0.005mm)
B. Drive Motor (Standard)	-----	Fanuc Alpha 6/2000
C. Thrust (Continuous)	-----	1,177 lb (534kg)
(Maximum)	-----	6,878 lb (3120kg)
D. Rapid Rate	-----	780ipm
E. Travel	-----	14.57" (370mm)
F. Positioning	-----	0.0008"/12"
G. Repeatability	-----	± 0.0001"

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**5. TAILSTOCK (Option on T-6)**

- A. Holding Force ----- 1,350 lb (613kg)
- B. Quill Diameter and Travel ----- 2.95" x 3.94" (75mm x 100mm)
- C. Quill Taper ----- M.T. #4
- D. Slideway ----- Box Guideway

**6. BED**

- A. Cast Iron ----- Meehanite Process
- B. Width ----- 14.9"
- C. Angle ----- 45 Degrees

**7. FLOOR SPACE REQUIREMENTS**

- A. Length ----- 83.27" (2115mm)
- B. Width ----- 32.68" (830mm)

**8. PACKING SIZE**

- A. Length ----- 118.50" (3010mm)
- B. Width ----- 68.90" (1750mm)
- C. Height ----- 72.83" (1850mm)

**9. WEIGHT**

- A. Gross ----- 8,360 lb (3800kg)

**10. POWER REQUIREMENTS**

- A. 220 Volt ----- 208/220 VAC, 3 Phase / 75 Amps
- B. 440 Line Voltage ----- Minimum: 440-220 3 Phase, Transformer / 30 KVA

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