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## CNC LATHE

TC II - HTC II

# HISON

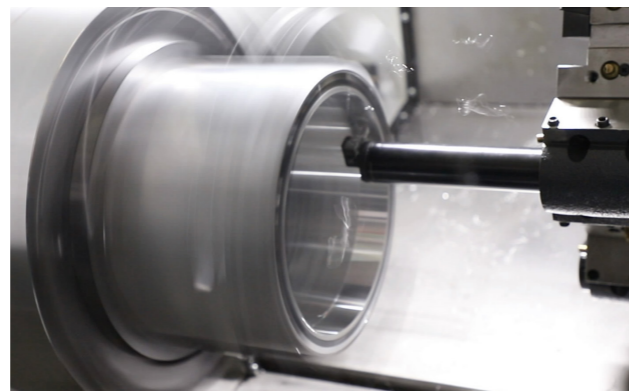
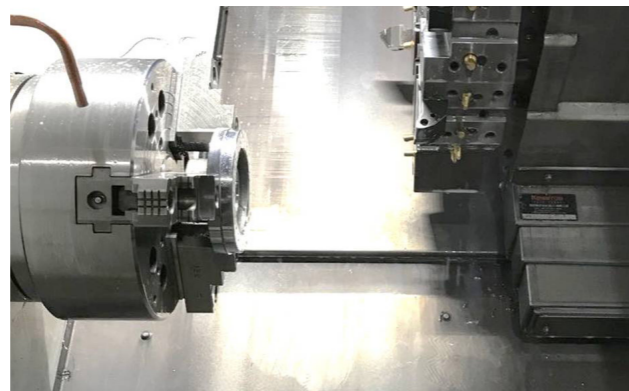
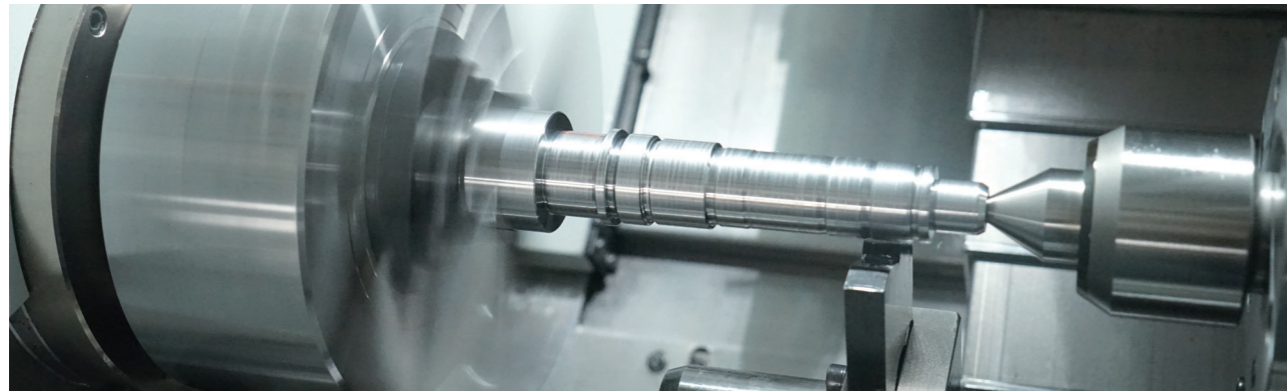




# PRODUCT INTRODUCTION

HTC II series CNC lathes, fully fit the needs of users, focusing on the function characteristics of high precision, high efficiency and high stability. The series is equipped with HISION built-in spindle and servo power turret, the machine can cover  $\phi$  300- $\phi$  520 processing diameter specifications, widely used in automotive parts, aviation general parts industry. Especially suitable for precision machining of small diameter and short shaft products.

TC II series CNC lathes are dedicated to the functions of high rigidity and high stability, aiming to create a cost-effective classic product. This series is a hard rail machine tool, equipped with mechanical spindle and hydraulic turret, can cover  $\phi$  400- $\phi$  800 processing diameter specifications, widely used in automotive parts and general industry. Especially suitable for heavy duty cutting of large diameter and long shaft products.



# HTC II / TC II CNC LATHE

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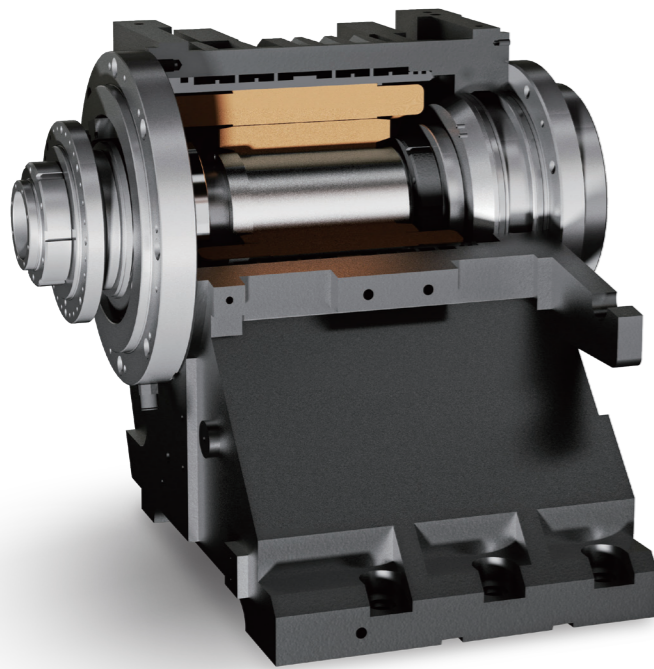






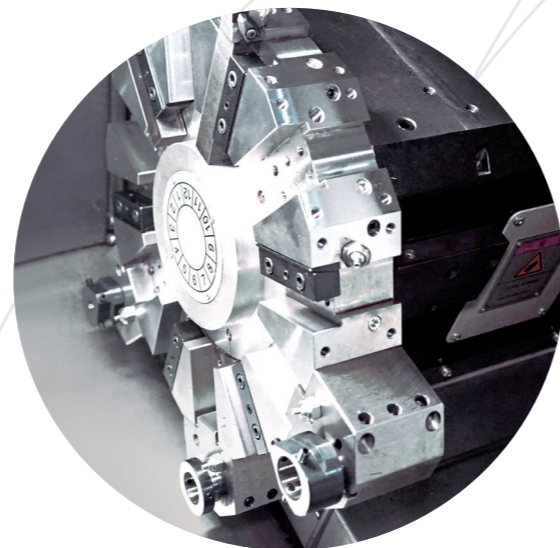
# HTC II

The new generation HTC II series CNC lathe adopts the whole casting bed structure, reasonable reinforcement cavity layout, through the finite element analysis, minimizes the vibration, distortion and thermal deformation, with good thermal stability and long-term accuracy retention.



## Full Range of Built-In Spindle

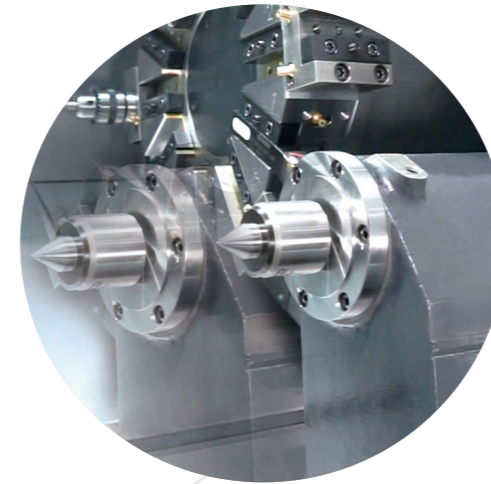
- The spindle is driven directly by the built-in motor, without other transmission links, to achieve "zero transmission" of the machine tool, good reliability.
- Static and dynamic high precision, good stability.
- Built-in spindle speed up and down, short start and stop time, improve production efficiency.
- It satisfies both low speed and high torque and high speed performance.



## Full Series Servo Turret (Optional Power Turret)

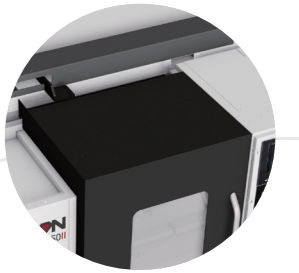
The whole series of HTCII lathes are equipped with servo turret, which is fast in positioning and reliable in transmission link. The application of servo turret realizes the synchronous tool change in the process of machine zeroing and improves the production efficiency.

# HTC II



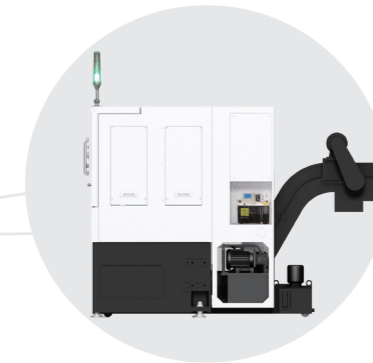
## Rear Chip Removal

HTC II series adopts rear chip mode, compact structure, small footprint, suitable for automatic processing.



## Automatic Protection Module

Automatic door, automatic skylight modular design, convenient installation.



## Servo Tailstock (Option)

Servo motor control, quick response, accurate control of position and jacking force. Easy to automate.

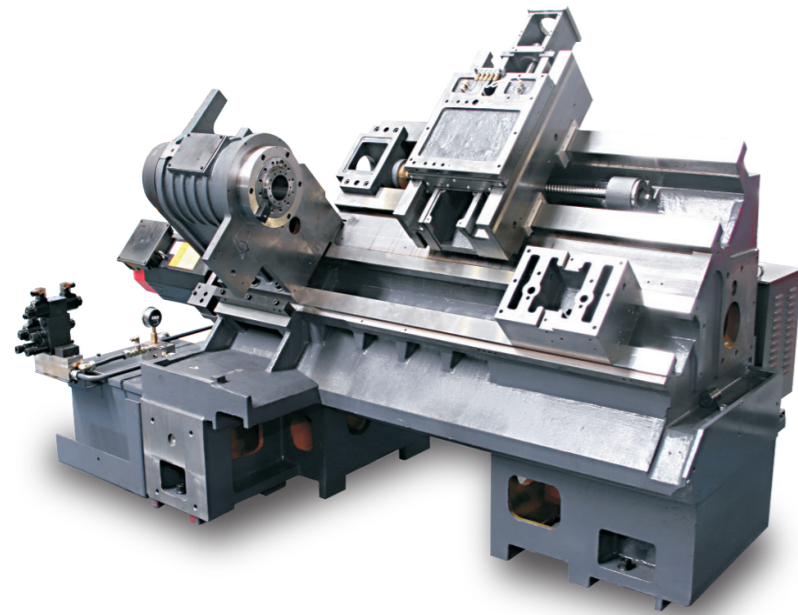






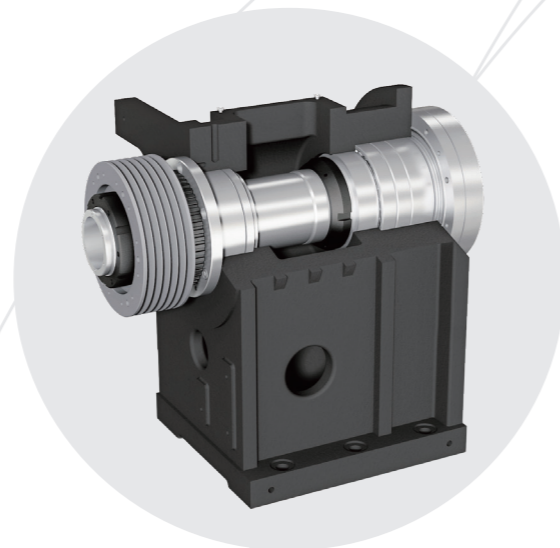
# TC/ TC II

TC series CNC lathes adopt 45° integral casting bed structure and hardened grinding guide rail form. All castings are optimized by finite element analysis to ensure high precision and high stability of the machine tool. Perfect automatic interface, modular automatic protection design, for the rapid implementation of automation to provide a guarantee.



## 45° Integral Inclined Bed

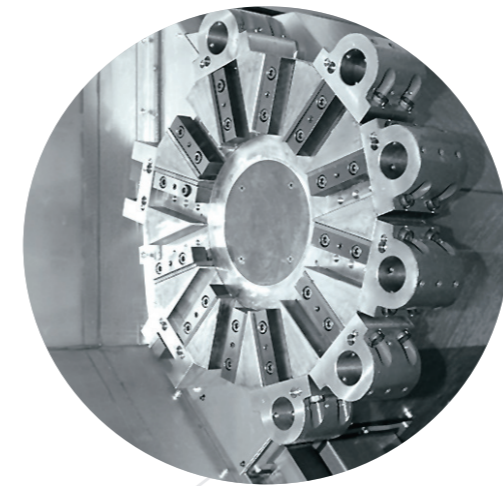
The integral 45° inclined bed realizes the high rigidity, high stability and easy chip removal of the lathe. The guide rail has been hardened and finely ground, and wear-resistant soft belt is pasted on the sliding surface.



## High Rigidity Spindle

The whole series adopts imported bearings, two points support, front end adopts double row cylindrical roller bearings and high-speed thrust angular contact bearings, rear end adopts double row cylindrical roller bearings, strong rigidity, suitable for heavy cutting and precision cutting.

# TC/ TC II



## Customized Cutter Head (Optional Power Cutter Tower)

TC series standard with 12 station hydraulic turret, suitable for heavy cutting. Customize the cutter head, so that the rigidity of the cutter block and the tool interference area is small.

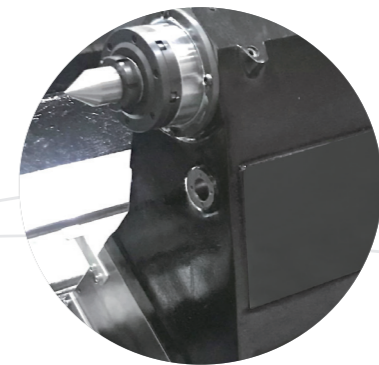
## Hydraulic Tailstock

Split tailstock structure, convenient and reliable adjustment; The whole movement of the tailstock is driven by the saddle; The telescopic sleeve is driven by hydraulic pressure and can be controlled programmatically.



## Automatic Protection Module

Automatic door, automatic skylight modular design, convenient installation.





# HTC II

Items	Unit	HTC150 II×290	HTC200 II × 360	HTC200 II × 560	HTC300 II × 580
<b>» Machining capacity</b>					
Max.swing over bed	mm	Φ550	Φ620	Φ620	Φ620
Max.swing over saddle	mm	Φ300	Φ410	Φ410	Φ420
Max.turning dia.	mm	Φ300	Φ400	Φ400	Φ520
Max.turning length	mm	290	360	560	600
Spindle center to ground	mm	1030	1035	1035	1110
<b>» Spindle</b>					
Max.spindle speed	rpm	4500	4500	4500	3500
Spindle power(S1/S6)	kW	11/15	11/15	11/15	15/18.5
Spindle torque(S1/S6)	Nm	158/211	158/211	158/211	251/305
Spindle nose taper	-	JISA2-6	JISA2-6	JISA2-6	JISA2-8
Spindle through hole	mm	Φ62	Φ66	Φ66	Φ76
Spindle bearing diameter	mm	Φ100	Φ100	Φ100	Φ120
Chuck size	inch	8	8	8	10
Bar capacity dia.	mm	Φ50	Φ50	Φ50	Φ65
<b>» Turret</b>					
Type	-	Servo V8	Servo V12	Servo V12	Servo V12
OD tool size	mm	25×25	25×25	25×25	25×25
Max. boring bar size	mm	Φ32	Φ40	Φ40	Φ40
Indexing time	sec/step	0.2	0.2	0.2	0.2
<b>» Tailstock</b>					
Tailstock type	-	-	-	Hydraulic	Hydraulic
Tailstock travel	mm	-	-	550	500
Quill taper	-	-	-	MT.NO.5	MT.NO.4
<b>» Feed</b>					
X/Z axis travel	mm	180/345	215/415	215/615	280/695
Rapid feed X/Z	m/min	30/30	24/30	24/30	24/30
Guideway type	-	Linear guideway	Linear guideway	Linear guideway	Box guideway
X/Z axis power	kW	1.2/1.2	1.8/1.8	1.8/1.8	3/3
<b>» Precision (GB/T16462.4-2007)</b>					
X/Z Positioning accuracy	mm	0.008/0.008	0.008/0.008	0.008/0.010	0.008/0.012
X/Z Repeatability accuracy	mm	0.005/0.005	0.005/0.005	0.005/0.005	0.005/0.008
<b>» Others</b>					
Power capacity	kVA	30	35	35	35
Coolant tank	L	180	225	240	280
Machine weight	t	3.8	4.2	4.8	5.3
Machine size(LxWxH) (without conveyor)	mm	1880×1600×1760	2820×1850×1750	3100×1850×1750	2600×1800×2140

## Standard Configuration

- |  |  |  |
|--|--|--|
| 1. Controller: FANUC 0i<br>SIEMENS 828D (Option) | 6. Hydraulic tailstock<br>(except HTC150II & HTC200II × 360) | 11. Soft jaw                           |
| 2. Cutting cooling                               | 7. Tool holder   | 12. 3-Color signal lamp, working light |
| 3. Full enclosure                                | 8. External chain type chip conveyor (rear)                  | 13. Chuck foot switch                  |
| 4. Servo turret                                  | 9. Standard accessories                                      | 14. Safety lock door                   |
| 5. Soild hydraulic chuck                         | 10. Common maintenance tool                                  | 15. Trolley                            |
|  |  | 16. Ground installation                |

# TC II

Items	Unit	TC25 II × 500	TC25 II × 1000	TC30 II × 500	TC30 II × 1000	TC30 II × 1500
<b>» Machining capacity</b>						
Max.swing over bed	mm	Φ560	Φ560	Φ650	Φ650	Φ650
Max.swing over saddle	mm	Φ320	Φ320	Φ420	Φ420	Φ420
Max.turning dia.	mm	Φ400	Φ400	Φ500	Φ500	Φ500
Max.turning length	mm	548	1000	500	1000	1490
Spindle center to ground	mm	980	980	1030	1030	1030
<b>» Spindle</b>						
Max.spindle speed	rpm	4500	4500	3500	3500	3500
Spindle motor power (S1/S6)	kW	11/15	11/15	15/18.5	15/18.5	15/18.5
Spindle torque (S1/S6)	Nm	140/250	140/250	245/400	245/400	245/400
Spindle nose	-	A2-6	A2-6	A2-8	A2-8	A2-8
Spindle through-hole diameter	mm	Φ62	Φ62	Φ76	Φ76	Φ76
Spindle bearing diameter(Front)	mm	Φ100	Φ100	Φ120	Φ120	Φ120
Chuck size	inch	8	8	10	10	10
Bar capacity dia.	mm	Φ50(OptΦ65)	Φ50(OptΦ65)	Φ64(OptΦ88)	Φ64(OptΦ88)	Φ64(OptΦ88)
<b>» Turret</b>						
Type	-	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Turret capacity	-	12	12	12	12	12
OD tool size	mm	25×25	25×25	25×25	25×25	25×25
Max. boring bar size	mm	Φ40	Φ40	Φ40	Φ40	Φ40
Tool changing time(including clamp)	s	0.55	0.55	0.58	0.58	0.58
<b>» Tailstock</b>						
Tailstock type	-	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Tailstock travel	mm	410	730	410	730	1100
Quill dia.	mm	Φ100	Φ100	Φ100	Φ100	Φ100
Quill travel	mm	120	120	120	120	120
Quill bore taper	-	MT NO.4	MT NO.4	MT NO.5	MT NO.5	MT NO.5
<b>» Feed</b>						
X/Z axis travel	mm	210/610	210/1050	260/580	260/1050	260/1550
Rapid feed X/Z	m/min	24/30	24/30	16/20	16/20	16/20
Servo motor power X/Z	kW	1.8/1.8	1.8/1.8	2.5/2.5	2.5/2.5	2.5/2.5
Servo motor torque X/Z	Nm	11/11	11/11	20/20	20/20	20/20
<b>» Precision(GB/T16462.4-2007)</b>						
X/Z Positioning accuracy	mm	0.008/0.010	0.008/0.012	0.008/0.010	0.008/0.012	0.008/0.015
X/Z Repeatability accuracy	mm	0.005/0.006	0.005/0.008	0.005/0.006	0.005/0.008	0.005/0.010
<b>» Others</b>						
Power capacity	kVA	25	25	30	30	30
Coolant tank	L	200	250	200	250	300
Machine weight	t	4.5	5	4.9	5.4	6.3
Machine size(LxWxH) (without conveyor)	mm	4200×2050×1900	4600×2050×1900	4200×2050×2020	4600×2050×2020	5350×2050×2020

## Standard Configuration

- |   |  |  |
|---|--|--|
| 1. Controller: FANUC 0i<br>SIEMENS 828D | 6. Soild hydraulic chuck                   | 12. Ground installation                |
| 2. Hydraulic and lubrication system     | 7. Tool holder                             | 13. Common maintenance tools           |
| 3. Cutting cooling                      | 8. Hydraulic tailstock with live center    | 14. Soft jaw                           |
| 4. Full enclosure                       | 9. External chain type chip conveyor(side) | 15. 3-color signal lamp, working light |
| 5. 12T hydraulic turret station         | 10. Standard accessories                   | 16. Chuck foot switch                  |
|   | 11. Flexible packaging                     | 17. Trolley                            |





# TC

Items	Unit	TC35A×1000	TC35A×1500	TC35A×2000
<b>» Machining capacity</b>				
Max.swing over bed	mm	Φ700	Φ700	Φ700
Max.swing over saddle	mm	Φ600	Φ600	Φ600
Max.turning dia.	mm	Φ630	Φ630	Φ630
Max.turning length	mm	1000	1500	2000
Height of spindle center from ground	mm	1150	1150	1150
<b>» Spindle</b>				
Max.spindle speed	rpm	2500	2500	2500
Spindle motor power (S1/S6)	kW	15/18.5	15/18.5	15/18.5
Spindle torque (S1/S6)	Nm	485/600	485/600	485/600
Spindle nose	-	A2-11	A2-11	A2-11
Spindle bore	mm	Φ102	Φ102	Φ102
Spindle bearing diameter(Front)	mm	Φ150	Φ150	Φ150
Chuck size	inch	12	12	12
Bar capacity dia.	mm	Φ88(OptΦ113)	Φ88(OptΦ113)	Φ88(OptΦ113)
<b>» Turret</b>				
Turret capacity	-	12	12	12
OD tool size	mm	32×32	32×32	32×32
Max. boring bar size	mm	Φ50	Φ50	Φ50
Tool changing time(including clamp)	s	0.65	0.65	0.65
<b>» Tailstock</b>				
Tailstock type	-	Hydraulic	Hydraulic	Hydraulic
Tailstock travel	mm	700	1200	1700
Quill dia.	mm	Φ130	Φ130	Φ130
Quill travel	mm	120	120	120
Quill bore taper	-	Dead MT NO.5	Dead MT NO.5	Dead MT NO.5
<b>» Feed</b>				
X/Z axis travel	mm	345/1060	345/1560	345/2060
Rapid feed X/Z	m/min	16/20	16/20	16/16
Servo motor power X/Z	kW	3.0/3.0	3.0/3.0	3.0/3.0
Servo motor torque X/Z	Nm	20/20	20/20	20/20
<b>» Precision (GB/T16462.4—2007)</b>				
X/Z Positioning accuracy	mm	0.008/0.012	0.008/0.015	0.008/0.020
X/Z Repeatable positioning accuracy	mm	0.005/0.008	0.005/0.010	0.005/0.012
<b>» Others</b>				
Power capacity	kVA	35	35	35
Coolant tank	L	250	290	330
Machine weight	t	9	10	11
Machine size(LxWxH) (without conveyor)	mm	5400×2200×2200	5800×2200×2200	6400×2350×2400

## Standard Configuration

- |   |  |  |
|---|--|--|
| 1. Controller: FANUC 0i<br>SIEMENS 828D | 6. Solid hydraulic chuck                   | 12. Ground installation                |
| 2. Hydraulic and lubrication system     | 7. Tool holder                             | 13. Common maintenance tools           |
| 3. Cutting cooling                      | 8. Hydraulic tailstock                     | 14. Soft jaw                           |
| 4. Full enclosure                       | 9. External chain type chip conveyor(side) | 15. 3-color signal lamp, working light |
| 5. 12T hydraulic turret station         | 10. Standard accessories                   | 16. Chuck foot switch                  |
|   | 11. Flexible packaging                     | 17. Trolley                            |

# TC

Items	Unit	TC40A×1500	TC40A×2750
<b>» Machining capacity</b>			
Max.swing over bed	mm	Φ800	Φ800
Max.swing over saddle	mm	Φ650	Φ650
Max.turning dia.	mm	Φ800	Φ800
Max.turning length	mm	1500	2750
Height of spindle center from ground	mm	1200	1200
<b>» Spindle</b>			
Max.spindle speed	rpm	2000	2000
Spindle motor power (S1/S6)	kW	30/37	30/37
Spindle torque (S1/S6)	Nm	(L)2910/3574 (M)1134/1392 (H)453/557	(L)2910/3574 (M)1134/1392 (H)453/557
Spindle nose	-	A2-11	A2-11
Spindle bore	mm	Φ105	Φ105
Spindle bearing diameter(Front)	mm	Φ170	Φ170
Chuck size	inch	15	15
Bar capacity dia.	mm	Φ98	Φ98
<b>» Turret</b>			
Turret capacity	-	12	12
OD tool size	mm	32×32	32×32
Max. boring bar size	mm	Φ60	Φ60
Tool changing time(including clamp)	s	0.85	0.85
<b>» Tailstock</b>			
Tailstock type	-	Hydraulic	Hydraulic
Tailstock travel	mm	1100	2400
Quill dia.	mm	Φ160	Φ160
Quill travel	mm	150	150
Quill bore taper	-	Dead MT NO.5	Dead MT NO.5
<b>» Feed</b>			
X/Z axis travel	mm	410/1570	410/2820
Rapid feed X/Z	m/min	12/12	12/12
Servo motor power X/Z	kW	4/7	4/7
Servo motor torque X/Z	Nm	22/30	22/30
<b>» Precision (GB/T16462.4—2007)</b>			
X/Z Positioning accuracy	mm	0.008/0.015	0.008/0.020
X/Z Repeatable positioning accuracy	mm	0.008/0.015	0.005/0.012
<b>» Others</b>			
Power capacity	kVA	60	60
Coolant tank	L	270	350
Machine weight	t	12.5	14.5
Machine size(LxWxH) (without conveyor)	mm	6450×2600×2400	7600×2850×2600

## Standard Configuration

- |   |  |  |
|---|--|--|
| 1. Controller: FANUC 0i<br>SIEMENS 828D | 6. Solid hydraulic chuck                   | 12. Ground installation                |
| 2. Hydraulic and lubrication system     | 7. Tool holder                             | 13. Common maintenance tools           |
| 3. Cutting cooling                      | 8. Hydraulic tailstock                     | 14. Soft jaw                           |
| 4. Full enclosure                       | 9. External chain type chip conveyor(side) | 15. 3-color signal lamp, working light |
| 5. 12T hydraulic turret station         | 10. Standard accessories                   | 16. Foot switch with chuck tailstock   |
|   | 11. Flexible packaging                     | 17. Trolley                            |