



“ Exceeding Your Expectation ”

“ Leading Into A Greater Future ”

LEADWELL
LEADWELL CNC MACHINES MFG.,CORP.



LEADWELL CNC MACHINES MFG.,CORP.



No.8, Xingke Road, Houli District,
Taichung City 421007, Taiwan
TEL: 886-4-25589008
FAX: 886-4-25589027
E-mail: sales@leadwell.com.tw

www.leadwell.com.tw

※ All performance are based on 220V/3PH/60HZ. Specification are subject to change without notice.

T/LTC Series

**High Performance
Horizontal Turning Center**

**T-7i/T-7iM
T-7iS/T-7iSM
LTC-20i/LTC-20iM**

HIGH PERFORMANCE CNC TURNING CENTER

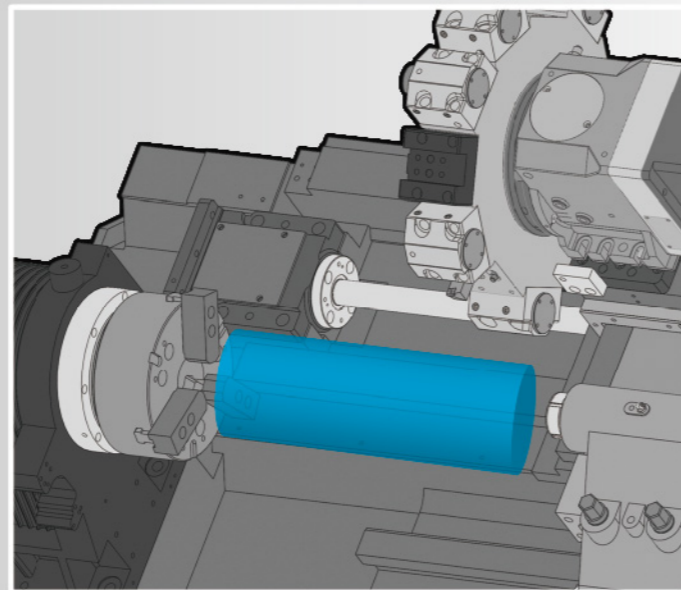
Machine equipped with 8 or 10 inches chuck, high rigid superior construction, high power spindle and different types of servo turret, power turret, tailstock and sub-spindle can enhance machine stability and vibration resistance also reduce processing time and cost. The machine can be applied to automobiles, motorcycles, regular-size components, and various metal processing industries.

T-7i/iM/iS/iSM

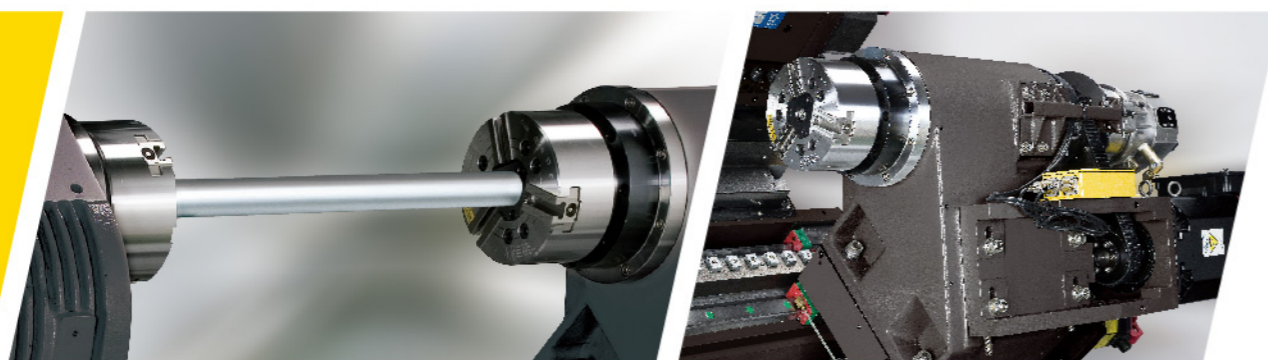
- Max. swing ————— 520mm
- Max. turning diameter — 340-420mm
- Max. turning length — 480-520mm
- Bar capacity ————— $\phi 65$ mm
- Chuck size ————— A2-6/8"

LTC-20i/iM

- Max. swing ————— 565-570mm
- Max. turning diameter — 370-400mm
- Max. turning length — 550-600mm
- Bar capacity ————— $\phi 77$ mm
- Chuck size ————— A2-8/10"



SUB SPINDLE



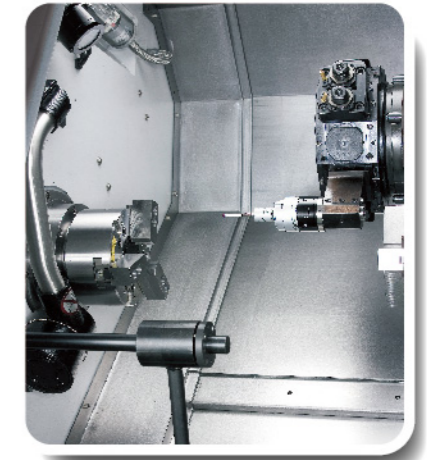
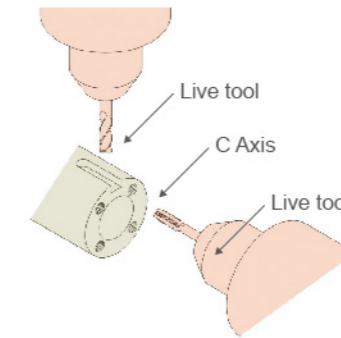
- The sub-spindle replaces the standard tailstock on turning centers.
- A position Czi sensor is attached to the sub-spindle so the sub-spindle can then be synchronized with the main spindle.
- Special software allows the work piece to be transferred from the main spindle to the sub-spindle at any speed for secondary machining operations.
- Allows machining on both end of parts.

LIVE TOOL TURRET

- Each tool can become a rotating tool for both milling and drilling operations.
- Tools can be either radially or axially oriented.

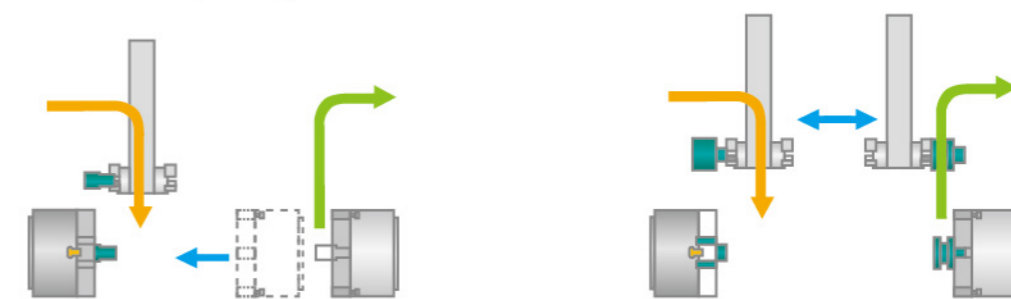
POWER TURRET CUTTING CAPACITY

TOOL	12 live tools
DRILL	14mm
END MILL	20mm
TAPPING	M10XP1.5



AUTOMATION SYSTEM

By loading & unloading components which have a different shape more convenient, it is also applicable for Gantry Robot System.



Robot Arm Loading System: The sub-spindle can continue the machining program on the rear side.

The loading of work-pieces become more efficient with the incorporation of the automatic Gantry Robot System.

STRUCTURE

High Rigid Superior Construction

The machine frame with 45 degrees slant bed design, manufactured with the best quality Meehanite cast iron body, scientific rib reinforcement, high rigidity and vibration tolerance base design, and high precision screw have efficient processing performance.

FEA

Casting are well ribbed based on Finite Element Analysis for the size and location to ensure high torsional stiffness and minimum vibration.

Servo Turret

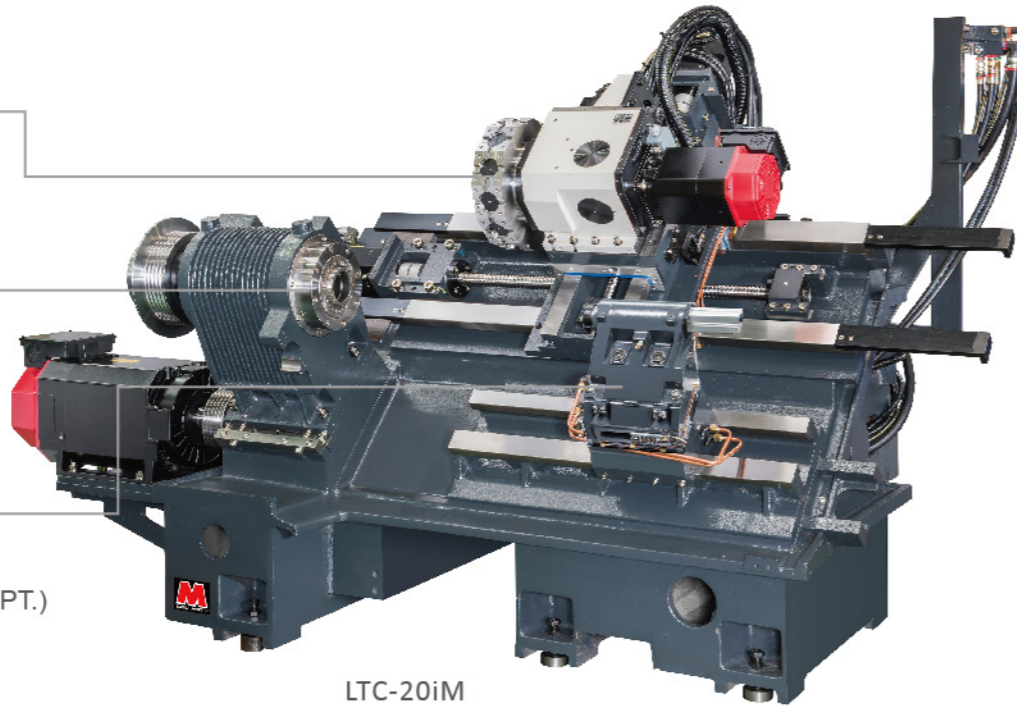
VDI-30(RADIAL)
BMT-55(OPT.)

Main/Sub Spindle

With high rigidity and high operating life.

MANUAL TAILSTOCK(STD)

Programmable tailstock(OPT.)

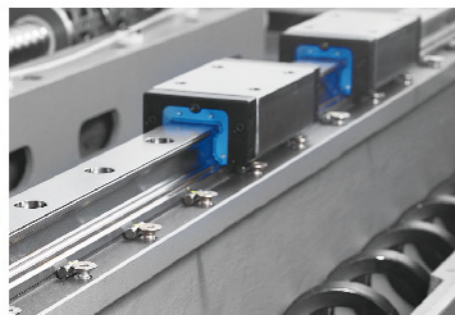


LTC-20iM



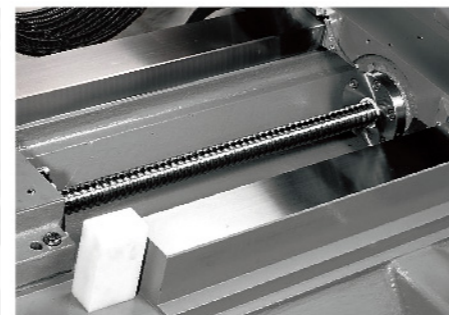
Precision Ball Screw

To apply for high accuracy, low torque fluctuations, and long-term maintenance-free operation by using.



High Speed Linear way

For high-speed cutting, light-duty, higher precision, and lower friction and motor lost. (T series)

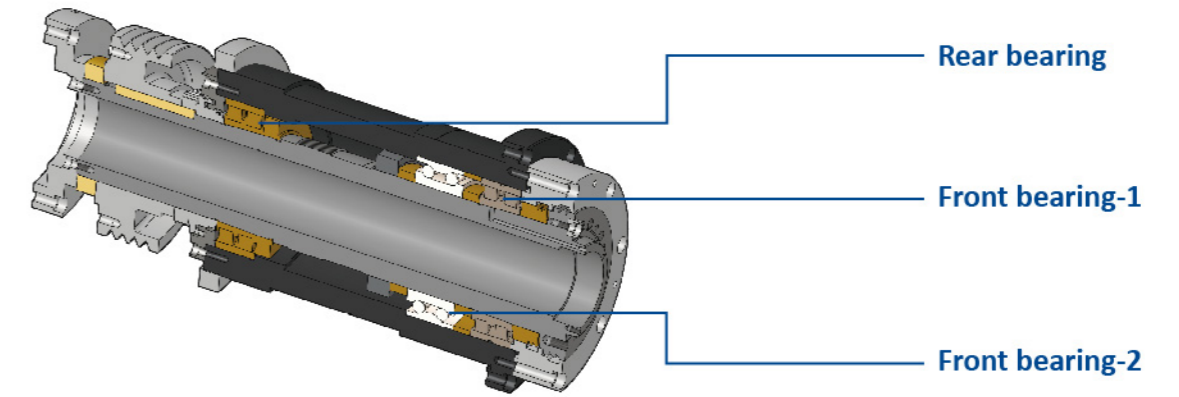


High Rigid Box way

For heavy-duty cutting, stability, fewer vibrations. (LTC series)

HIGH PRECISION SPINDLE

Sleeve type precision spindle can ensure service life with high precision NN-TYPE spindle bearing from Japan and Europe.



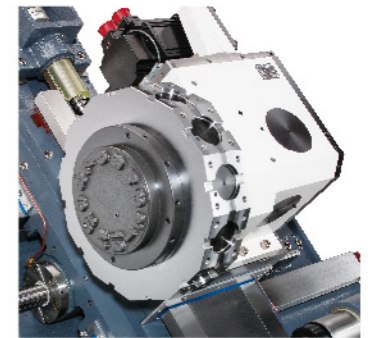
HIGH ACCURACY TURRET

STANDARD TURRET (12 TOOLS)



Driven by servo, rotating smoothly and easily select the tools to avoid the collision.

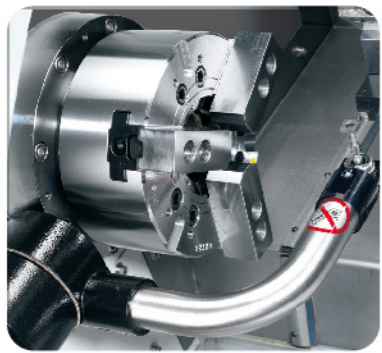
POWER TURRET (12 TOOLS)



With applying for three pieces of curve coupling, indexing belt and offset design to ensure lower noise and backlash while turret rotating.

TOOLS	12	12	12
	□25 Ø40	□25 Ø32	□20 Ø32
Type	Servo motor	Hydraulic turret BMT-55	Power turret VDI-30/DUP
Change time	1.32 sec.	1.2 sec.	1.375 sec.
Speed power	---	---	5000rpm 2.2kw (α12is)
Model	T-7i/LTC-20i	T-7iS	T-7iM/T-7iSM/LTC-20iM

HIGH PERFORMANCE OPTIONS



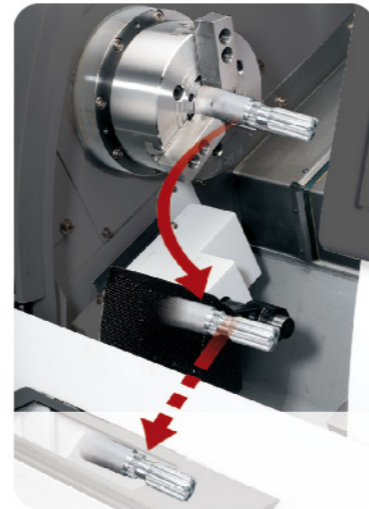
Tool Setter

The tool setter with probe can measure various tool lengths and detect the damaged of tools. Via tool life management, it can be saved all status automatically.



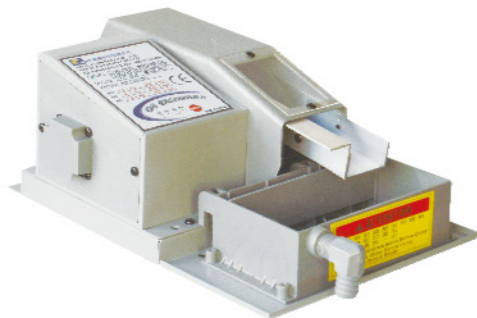
Air Conditioner

Prevent dust, humidity and moisture from entering into the electrical control panel, and improve component life



Parts Catcher

The unique parts catcher improves productivity with the bar feeder option, it also can automatically loaded the finished part into bucket, and then to enhance the productivity.



Oil skimmer

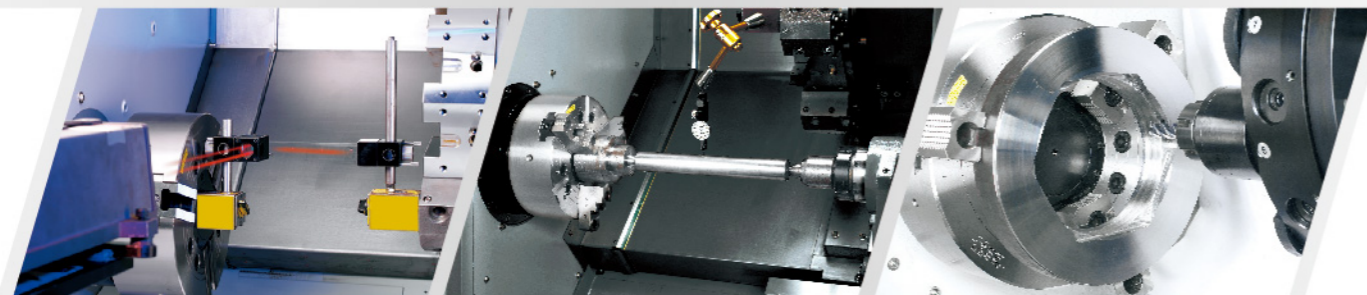
Removing foreign matter and water, reducing wastewater emission, and recycling waste oil extend tool service life.



Oil mist collector

Powerful oil mist collecting performance with low cost and high service life can maintain a clean environment.

HIGH QUALITY ASSURANCE



Laser Calibration

Machine Geometric Checking

Cutting Testing

CHIP REMOVAL SYSTEM

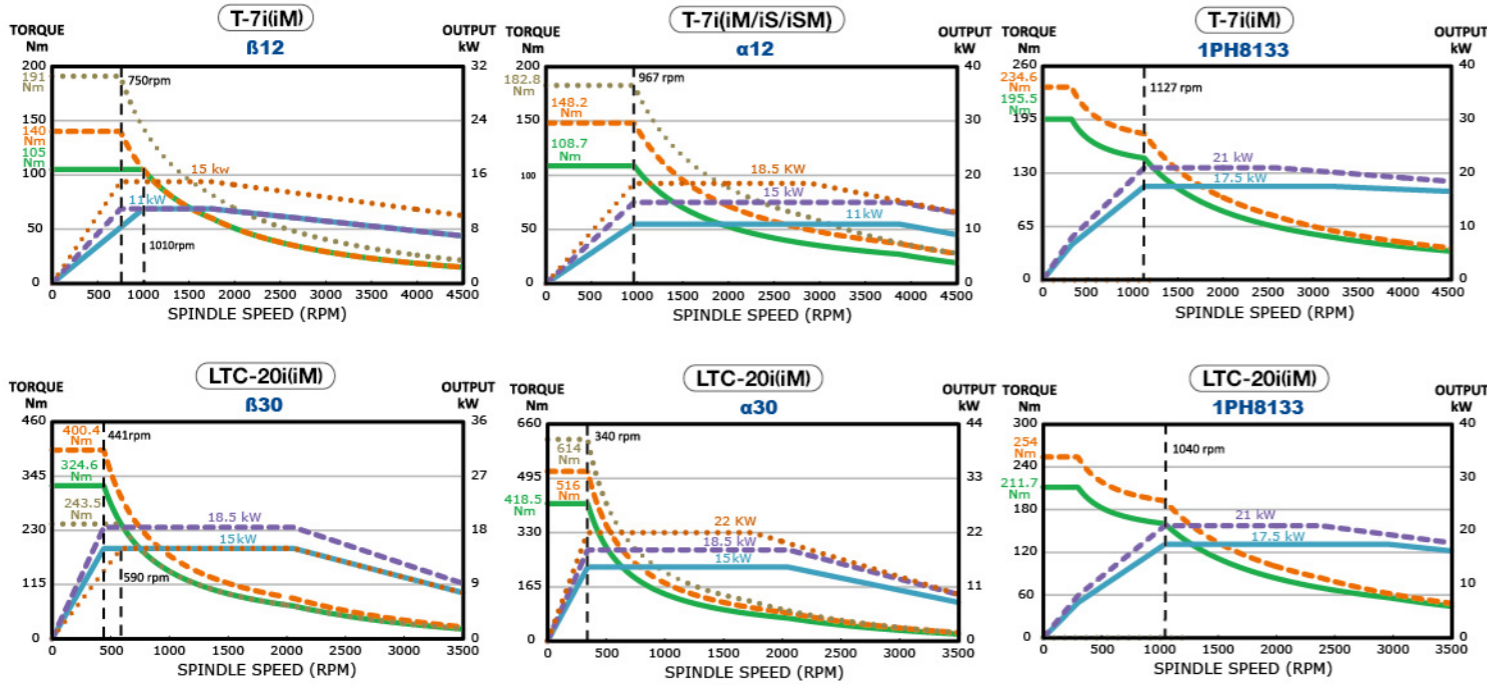
Type	Chain	Scraper	Precision Scraper
View			
Process	*chain type:>6mm chips or with round & thin chips *chain type with cylinder brush:>2mm chips or non-round or thin chips	2mm-6mm chips	<6mm chip

CUTTING PERFORMANCE

	Heavy Cutting	Keyway	Fast Drilling	Rigid Tapping
Material: S45C Model: LTC-20i				
TOOL(mm)	60	5	Ø50	M20
CUTTING SPEED(m/min)	225	140	157	---
SPINDLE SPEED(rpm)	700	428	1000	500
FEED PER(mm/rev)	0.42	0.15	0.18	---
CUTTING DEPTH(mm)	4	5	40	25

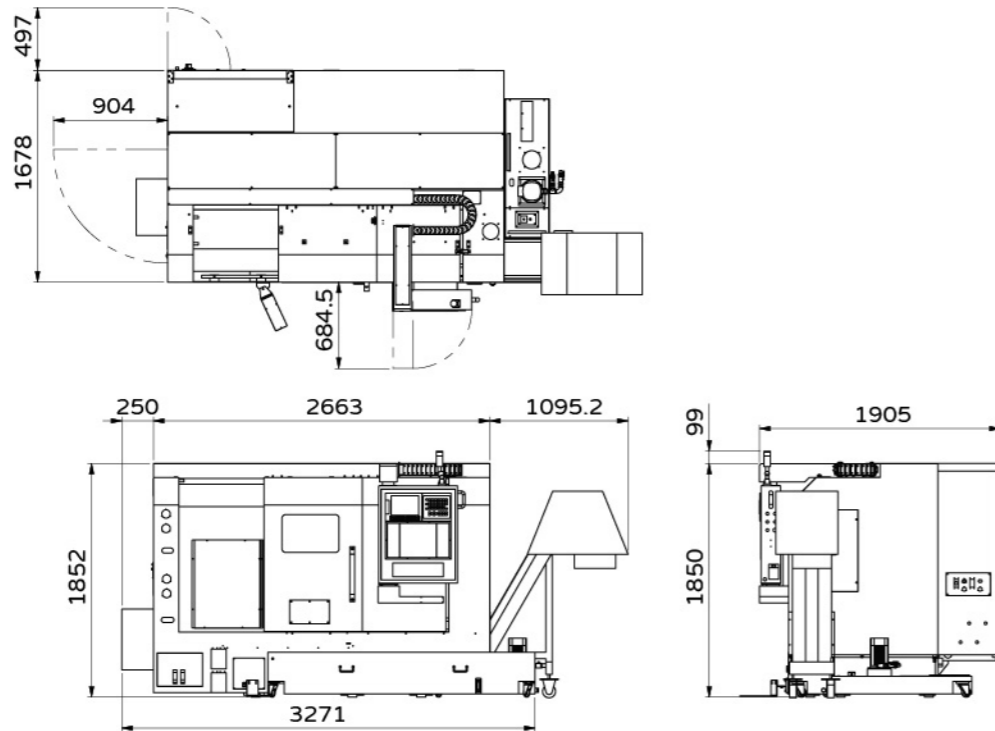
SPINDLE POWER CURVE

— Torque- S1 (Nm) — Output- S1 (kW) - - - Torque - S3-25% (Nm)
- - - Torque- S2 30 min (Nm) - - - Output- S2 30 min (kW) - - - Output - S3-25% (kW)



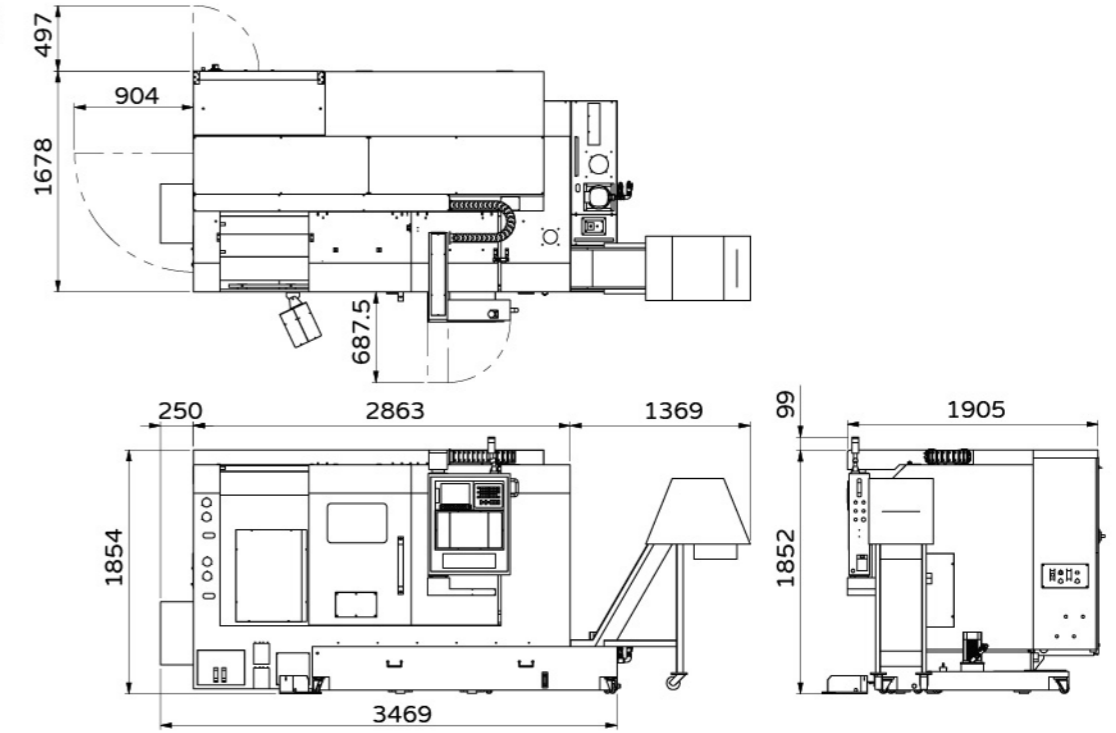
OUTLINE DIMENSION

T-7i/iM
LTC-20i/iM



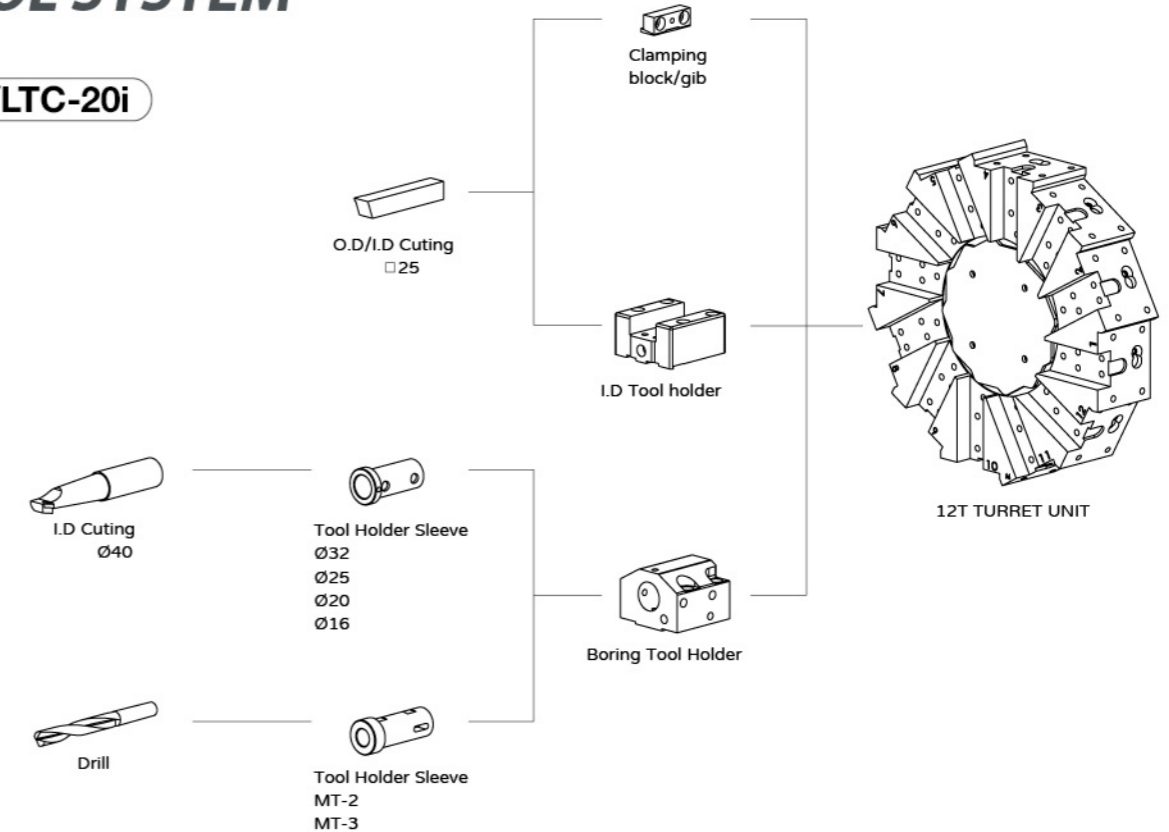
OUTLINE DIMENSION

T-7iS/iSM



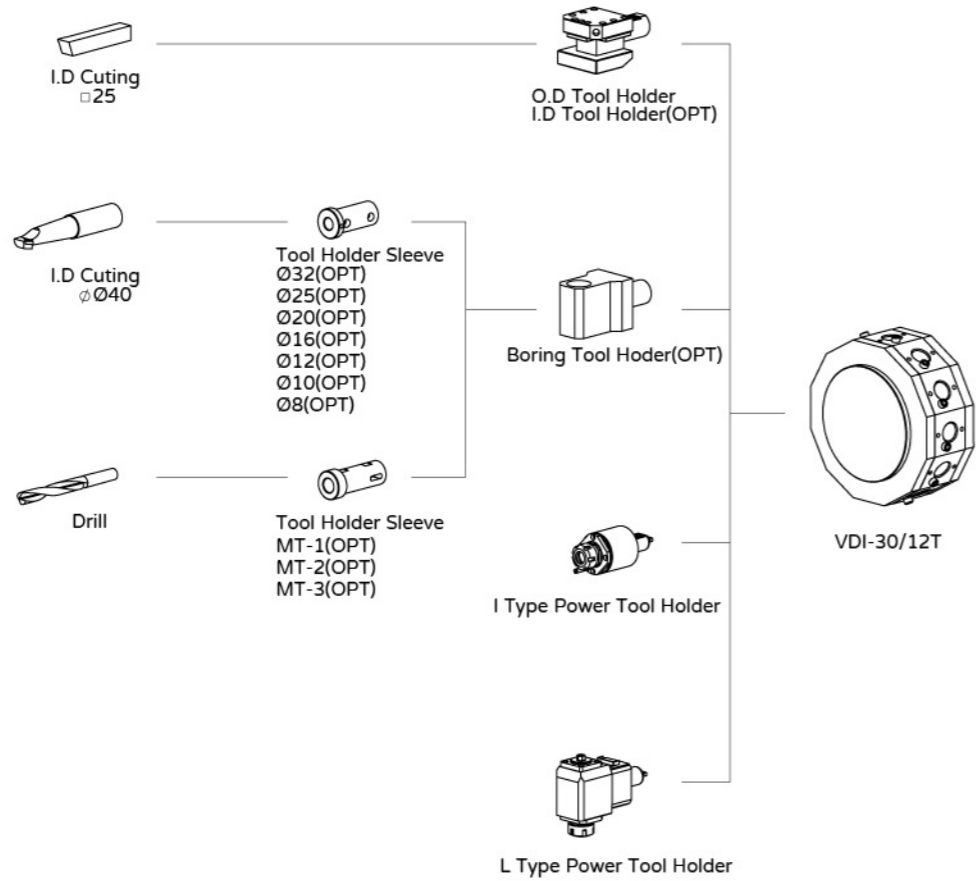
TOOL SYSTEM

T-7i/LTC-20i

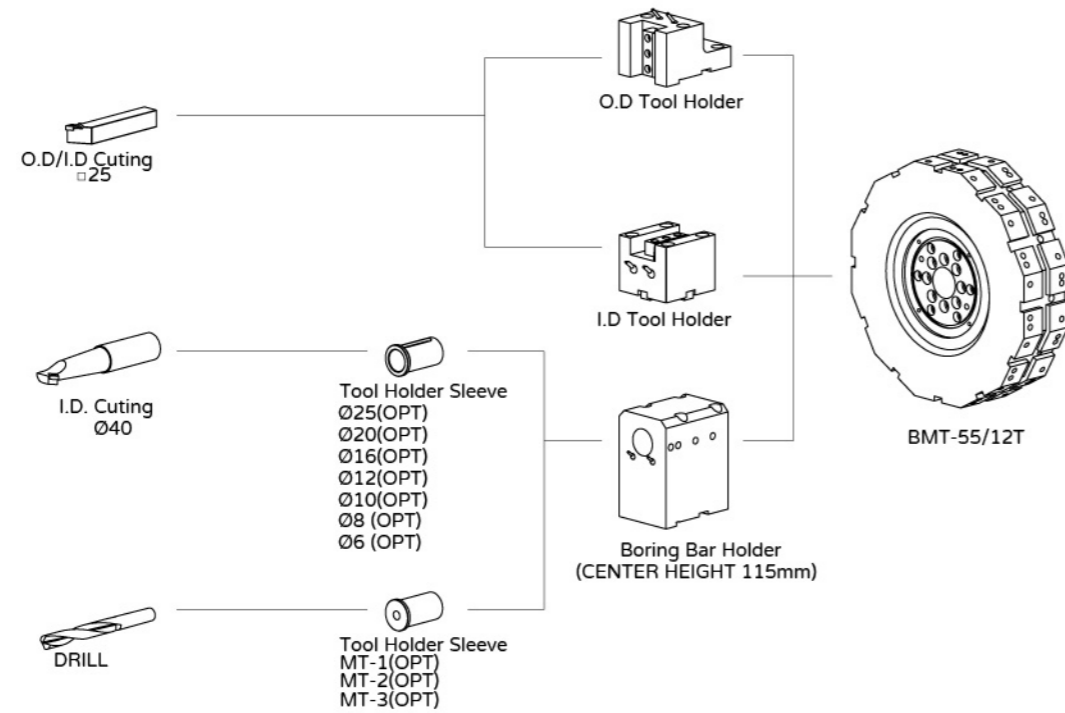


TOOL SYSTEM

T-7iM/iSM
LTC-20iM

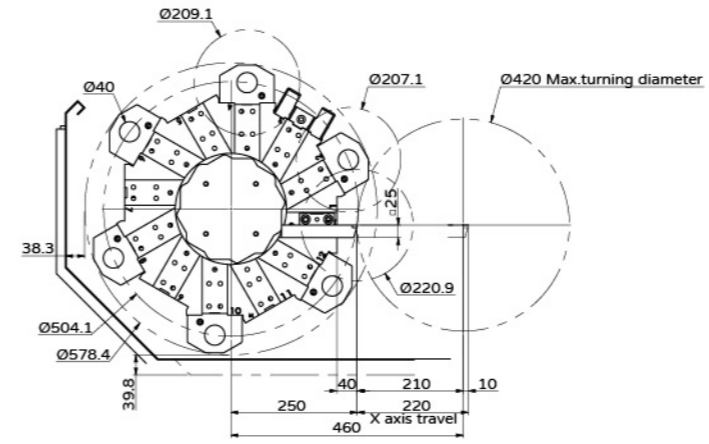


T-7iS

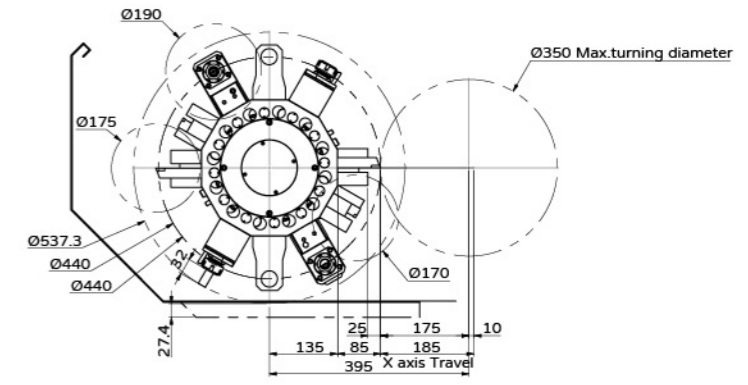


TOOLING INTERFERENCE

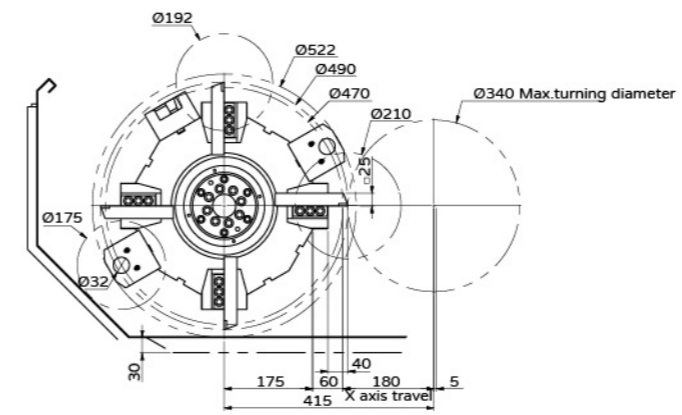
T-7i



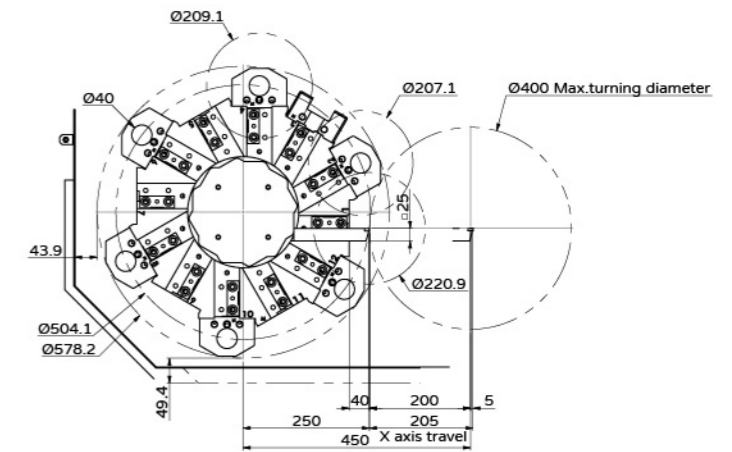
T-7iM/iSM
VDI30



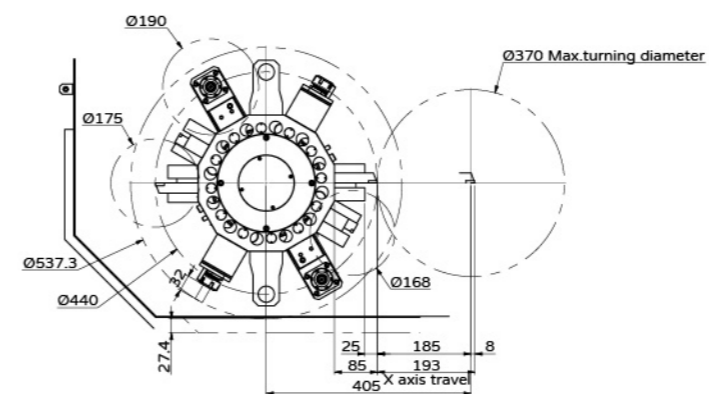
T-7iS



LTC-20i

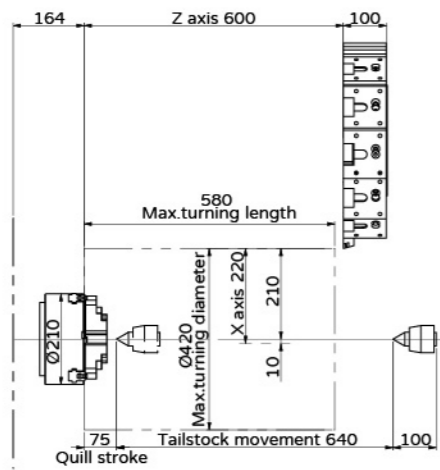


LTC-20iM

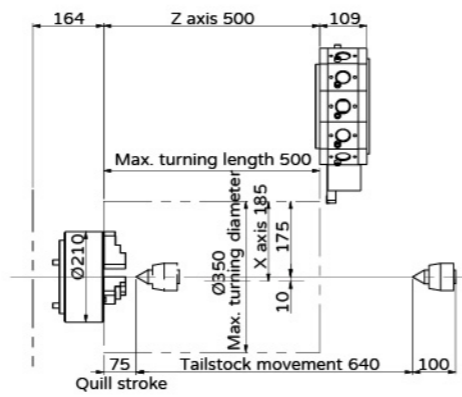


WORKING CAPACITY

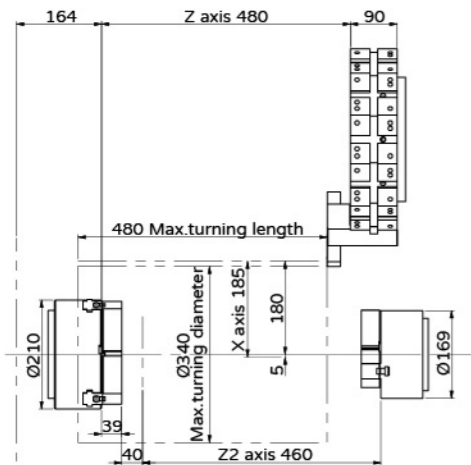
T-7i



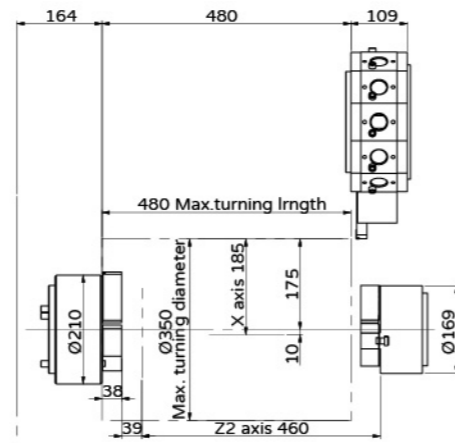
T-7iM



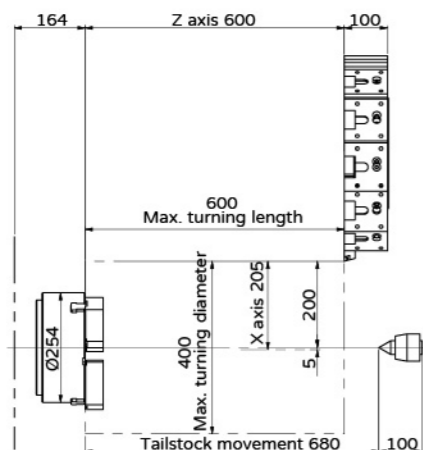
T-7iS



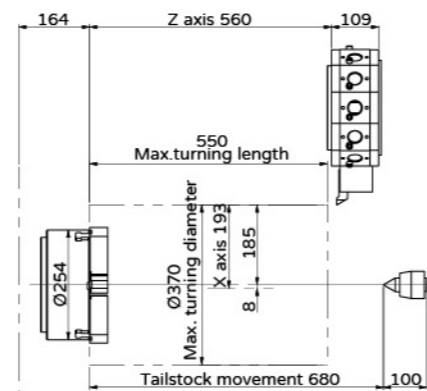
T-7iSM



LTC-20i



LTC-20iM



MACHINE SPECIFICATIONS

ITEM	MODEL	T-7i	T-7iM	T-7iS	T-7iSM
CAPACITY					
Max. swing	mm(in)	520(20.5)	520(20.5)	520(20.5)	520(20.5)
Max. turning diameter	mm(in)	420(16.5)	350(13.7)	340(13.3)	350(13.7)
Max. turning length	mm(in)	580(22.8)	500(19.7)	480(18.9)	480(18.9)
Bar capacity	mm(in)	66(2.6)	66(2.6)	66(2.6)	66(2.6)
TRAVEL					
X-axis travel	mm(in)	210+10(8.3+0.4)	175+10(6.8+0.4)	180+5(7.08+0.2)	175+10(6.8+0.4)
Z-axis travel	mm(in)	600(23.62)	500(19.7)	480(18.9)	480(18.9)
Z2-axis travel	mm(in)	---	---	460(18.1)	460(18.1)
SPINDLE(MAIN)					
Spindle speed	rpm	4500	4500	4500	4500
Chuck size	in	8"	8"	8"	8"
Type of spindle nose		A2-6	A2-6	A2-6	A2-6
Spindle motor type	Fanuc	β12i	α12	α12	α12
Spindle motor power (cont./30min)	kw(hp)	11/15(14.7/20.1)	11/15(14.7/20.1)	11/15(14.7/20.1)	11/15(14.7/20.1)
SPINDLE(SUB)					
Spindle speed	rpm	---	---	4500	4500
Chuck size	in	---	---	6"	6"
Type of spindle nose		---	---	A2-5	A2-5
Spindle motor type	Fanuc	---	---	α6	α6
Spindle motor power (cont./30min)	kw(hp)	---	---	5.5/7.5(7.3/10)	5.5/7.5(7.3/10)
TURRET					
Number of tool stations	pcs	12	12	12	12
Shank height for square tool	mm(in)	25(1)	20(0.8)	25(1)	20(0.8)
Shank diameter for boring bar	mm(in)	40(1.6)	32(1.3)	32(1.3)	32(1.3)
Rotary tool spindle speed range: axis units	rpm	---	5000	---	5000
Rotary tool spindle speed range: radial units	rpm	---	5000	---	5000
Rotary tool motor power (cont./30min)	kw(hp)	---	2.2(3)	---	2.2(3)
FEED RATE					
X/Z/Z2-axis rapid traverse	m/min(in)	36/36/--- (1417/1417/---)	36/36/--- (1417/1417/---)	36/36/20 (1417/1417/787.4)	36/36/20 (1417/1417/787.4)
FEED MOTORS					
X/Z/Z2-axis motor	kw(hp)	1.8/1.8/--- (2.4/2.4/---)	3/3/--- (4/4/---)	3/3/1.6 (4/4/2.1)	3/3/1.6 (4/4/2.1)
TAILSTOCK					
Quill diameter	mm(in)	75(3)	75(3)	---	---
Quill inside taper	M.T	4	4	---	---
MACHINE SIZE					
Floor space(L)	mm(in)	3023(119)	3023(119)	3113(122.5)	3113(122.5)
Floor space(W)	mm(in)	1908(75.1)	1908(75.1)	1908(75.1)	1908(75.1)
Floor space(H)	mm(in)	1862(73.3)	1862(73.3)	1850(72.8)	1844(72.6)
Machine weight	kg	4500	4500	4900	4900
Power requirement	KVA	30	35	45	45
controller		0i-TF/T3	0i-TF	0i-TF	0i-TF

*Available controller: SIEMENS/FAGOR/HEIDENHAIN

MACHINE SPECIFICATIONS

ITEM	MODEL	LTC-20i	LTC-20iM
CAPACITY			
Max. swing	mm(in)	570(22.4)	565(22.2)
Max. turning diameter	mm(in)	400(15.7)	370(14.6)
Max. turning length	mm(in)	600(23.6)	550(21.6)
Bar capacity	mm(in)	77(3)	77(3)
TRAVEL			
X-axis travel	mm(in)	200+5(7.87+0.2)	185+8(7.3+0.3)
Z-axis travel	mm(in)	600(23.62)	560(22)
SPINDLE			
Spindle speed	rpm	3500	3500
Chuck size	in	10"	10"
Type of spindle nose		A2-8	A2-8
Spindle motor type	Fanuc	βP30	αP30
Spindle motor power (cont./15min)	kw(hp)	15/18.5(20.1/24.8)	15/18.5(20.1/24.8)
TURRET			
Number of tool stations	pcs	12	12
Shank height for square tool	mm(in)	25(1)	20(0.8)
Shank diameter for boring bar	mm(in)	40(1.6)	32(1.3)
Rotary tool spindle speed range: axis units	rpm	---	5000
Rotary tool spindle speed range: radial units	rpm	---	5000
Rotary tool motor power	kw(hp)	---	2.2(3)
FEED RATE			
X/Z-axis rapid traverse	m/min(in)	20/20(787.4/787.4)	20/20(787.4/787.4)
FEED MOTORS			
X/Z-axis motor	kw(hp)	2.5/2.5(3.4/3.4)	3/4(4/5.4)
TAILSTOCK			
Quill diameter	mm(in)	75(3)	75(3)
Quill inside taper	M.T	4	4
MACHINE SIZE			
Floor space(L)	mm(in)	3023(119)	3023(119)
Floor space(W)	mm(in)	1908(75.1)	1908(75.1)
Floor space(H)	mm(in)	1862(73.3)	1862(73.3)
Machine weight	kg	4700	4700
Power requirement	KVA	40	40
controller		0i-TF/T3	0i-TF

*Available controller: SIEMENS/FAGOR/HEIDENHAIN

MACHINE ACCESSORIES

ITEM	MODEL	T-7i	T-7iM	T-7iS	T-7iSM	LTC-20i	LTC-20iM
Metric disc		●	●	●	●	●	X
VDI disc		X	●	X	●	X	●
Inch disc		■	X	X	X	■	X
Manual tailstock		●	●	X	X	●	●
Three layers warning light		●	●	●	●	●	●
Buzzer		●	●	●	●	●	●
Heat exchanger		●	●	●	●	●	●
Full enclosed splash guard		●	●	●	●	●	●
3 jaw open center chuck		●	●	●	●	●	●
Foot switch		●	●	●	●	●	●
High pressure pump 3Bar		●	●	●	●	●	●
Sub spindle air outer blow		X	X	●	●	X	X
Transformer		■	■	■	■	■	■
Programmable tailstock		■	■	X	X	■	■
Rocker arm of parts catcher		■	■	■	■	■	■
Air conditioner		■	■	■	■	■	■
Bar feeder		■	■	■	■	■	■
Auto door		■	■	■	■	■	■
Spindle air outer blow		■	■	■	■	■	■
High pressure pump (4BAR)		■	■	■	■	■	■
Chip conveyor and bucket		■	■	■	■	■	■
Collet chuck		■	■	■	■	■	■
Oil mist collector		■	■	■	■	■	■
Oil skimmer		■	■	■	■	■	■
Manual tool setter		■	■	■	■	■	■
Tool setter		■	■	■	■	■	■
3 jaw close center chuck		■	■	■	■	■	■
Robot		■	■	■	■	■	■
Manual steady rest		X	X	X	X	X	X
Auto steady rest with hydraulic		X	X	X	X	X	X
Spindle air inner blow		X	X	X	X	X	X
Two speed gearbox		X	X	X	X	X	X

● : STD / ■ : O.P.T(DESIGNED) / X : N/A(NOT AVAILABLE)