



"Exceeding Your Expectation"
 "Leading Into A Greater Future"

LEADWELL
 LEADWELL CNC MACHINES MFG.,CORP.



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

T/LTC Series

**High Productivity
 Horizontal Turning Center**

**T-7A/T-7AM
 LTC-20D/LTC-20DM
 LTC-20DMY/LTC-20DSMY**

HIGH PRODUCTIVITY CNC TURNING CENTER

This series has versatility and high-value performance also can choose power turret and C axis to machining such as turning, milling, and drilling applications may be completed in one single machine. It also can contour milling for the various workpieces.

CE-approved guarding is also available as an optional.



SHEET METAL

Fully enclosed splash guards keep chips and coolant contained for a safe clean working environment.

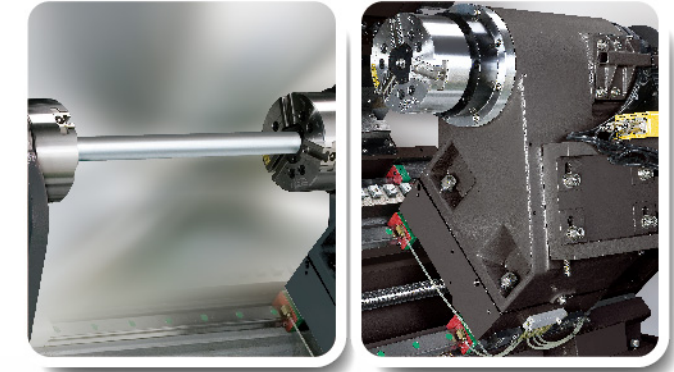
MODEL	T-7A		T-7AM	
X-AXIS TRAVEL	190+20mm		160+20mm	
Z-AXIS TRAVEL	450mm			
CHUCK SIZE	8			
BAR CAPACITY	65mm			

MODEL	LTC-20D	LTC-20DM	LTC-20DMY	LTC-20DSMY
X-AXIS TRAVEL	190+20mm	160+20mm	160+35mm	160+5mm
Z-AXIS TRAVEL	540mm		510mm	580mm
CHUCK SIZE	8			
BAR CAPACITY	65mm			

S

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 by synchro nized 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.



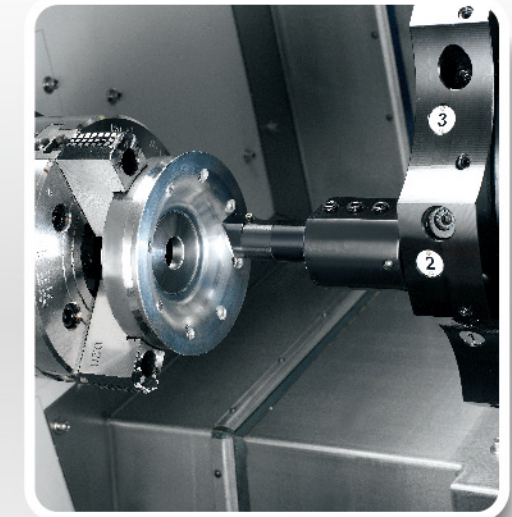
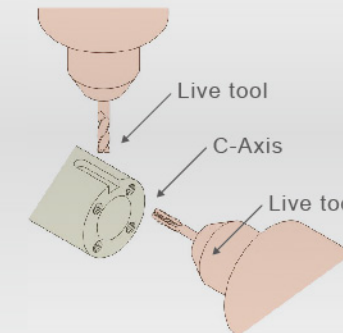
M

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	10mm
END MILL	12mm
TAPPING	M10XP1.5



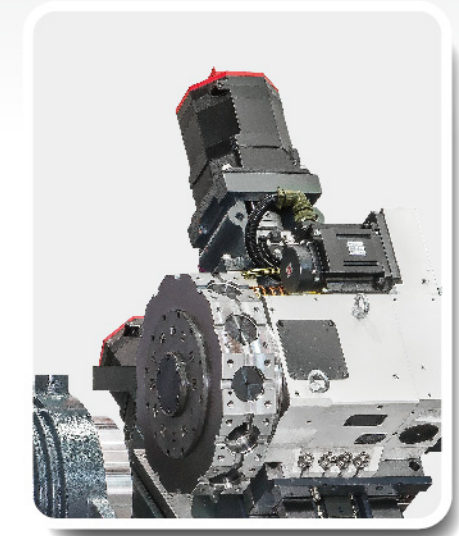
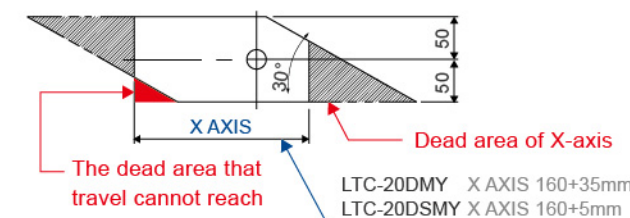
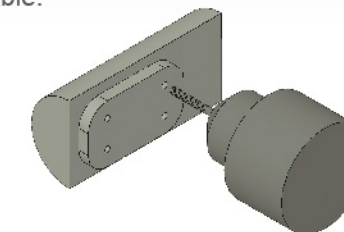
Y

LIVE TOOL TURRET

- The Y-axis design can decrease inaccuracy from machining and arithmetic errors.
- Complex workpieces available.

Virtual Y axis

- Short reaction force
- Good rigidity



STRUCTURE

High Rigid Superior Construction

The 30-degree slant bed design allows chips to fall directly into the chip tank, avoiding accumulation inside the machine. All major components are cast iron which has 10 times the dampening capacity of steel resulting in superior cutting performance.

FEA

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

Spindle

- *Precision spindle to ensure the parts life.
- *Special heat treatment for crucial components with highly accurate draw tube mechanism for highest rigidity.

LTC-20DSMY

Power Turret :

STD: BMT-55
OPT.: VDI-30

Sub-Spindle

To enhance efficiency and reduce accuracy lost due to reversing workpiece manually.

Tailstock

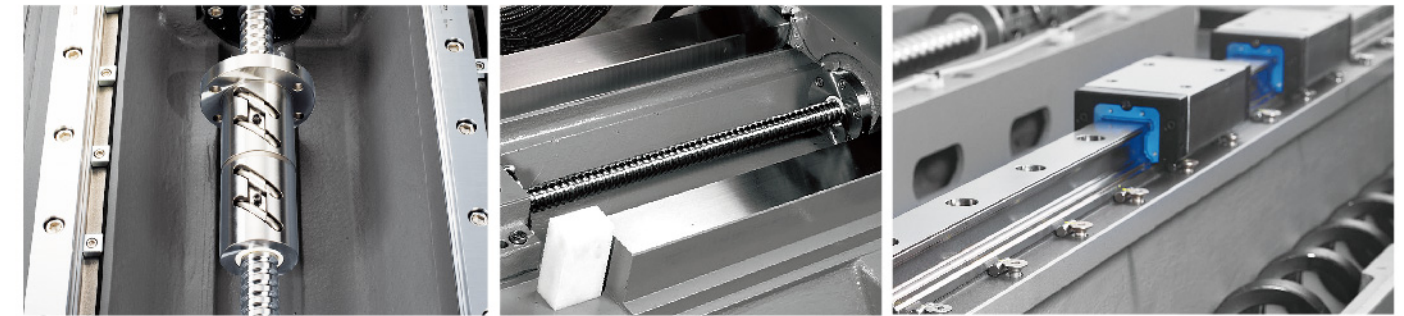
MT-4(MANUAL)

Programmable tailstock (optional)

Movement By Z-axis sliding plate by M code control.

SPINDLE NOSE	SPINDLE SPEED	SPINDLE TORQUE	SPINDLE MOTOR	MODEL
A2-6 8"	4000 RPM	148.2 NM	β12-11/15KW	T-7A(M)/LTC-20D(M)
A2-6 8"	4000 RPM	148.2 NM	α12-11/15KW	T-7A(M)/LTC-20D(M)
A2-6 8"	4000 RPM	147 NM	α12-11/15KW	LTC-20D(S)MY

MODEL	T-7A LTC-20D(M)	T-7AM LTC-20DMY
TAILSTOCK MOVEMENT	360 mm	395 mm
QUILL DIAMETER	75 mm	
QUILL INSIDE TAPER	MT-4	
QUILL STROKE	75 mm	



Precision Ball Screw

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

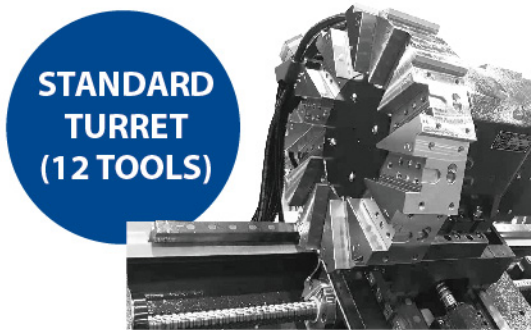
High Rigid Box way

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

High Speed Linear way

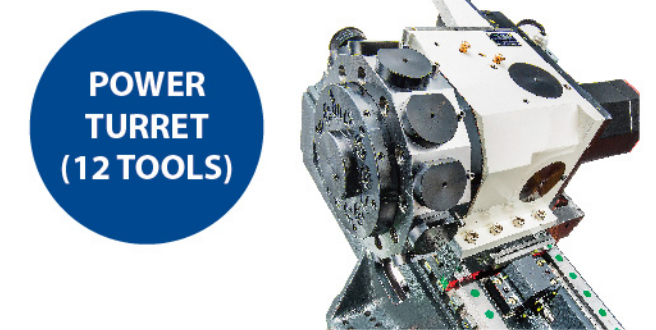
For high-speed cutting, light-duty, higher precision, and lower friction and motor lost. (T series)

HIGH ACCURACY TURRET



STANDARD TURRET (12 TOOLS)

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

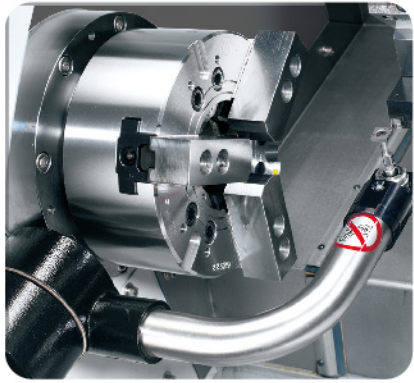


POWER TURRET (12 TOOLS)

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	12
	□25 Ø40	□25 Ø40	□25 Ø40	□25 Ø40
TYPE	Servo motor	Power turret BMT-55/DIN1809	Power turret BMT-55	Power turret BMT-55
CHANGE TIME	0.72sec.	1.125sec.	0.15sec.	1.13sec.
SPEED POWER	---	3000rpm 2.7kw(α12)	6000rpm 2.2kw(α2)	6000rpm 2.2kw(α2)
MODEL	T-7A---STD LTC-20D---STD	T-7AM---STD LTC-20DM---STD	LTC-20DMY---STD	LTC-20DSMY---STD

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.



Bar Feeder

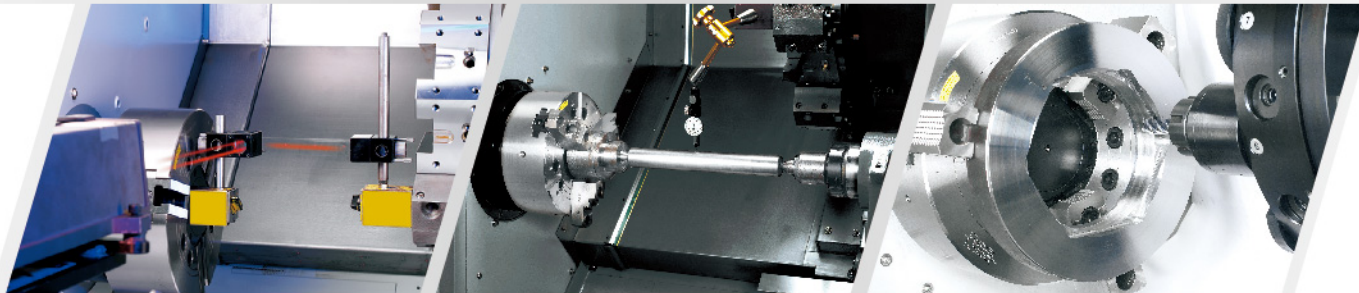
The bar feeder is suggested for unattended bar machining and high production requirements. It handles bars ranging from 5 to 65 mm in diameter. Bar loading can be quickly accomplished. Easy parameter setting for various bar sizes.



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.

HIGH QUALITY ASSURANCE



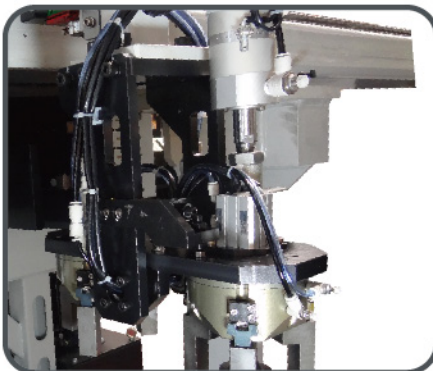
Laser Calibration

Machine Geometric Checking

Cutting Testing

AUTOMATION SYSTEM

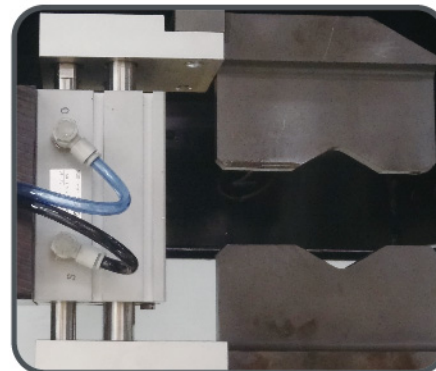
By loading & unloading components which have a different shape more convenient, it is also applicable for Gantry Robot System.



Gantry Robot (optional)



IN/OUT Stoker (optional)



External Turning Device (optional)

CHIP REMOVAL SYSTEM

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

CUTTING PERFORMANCE

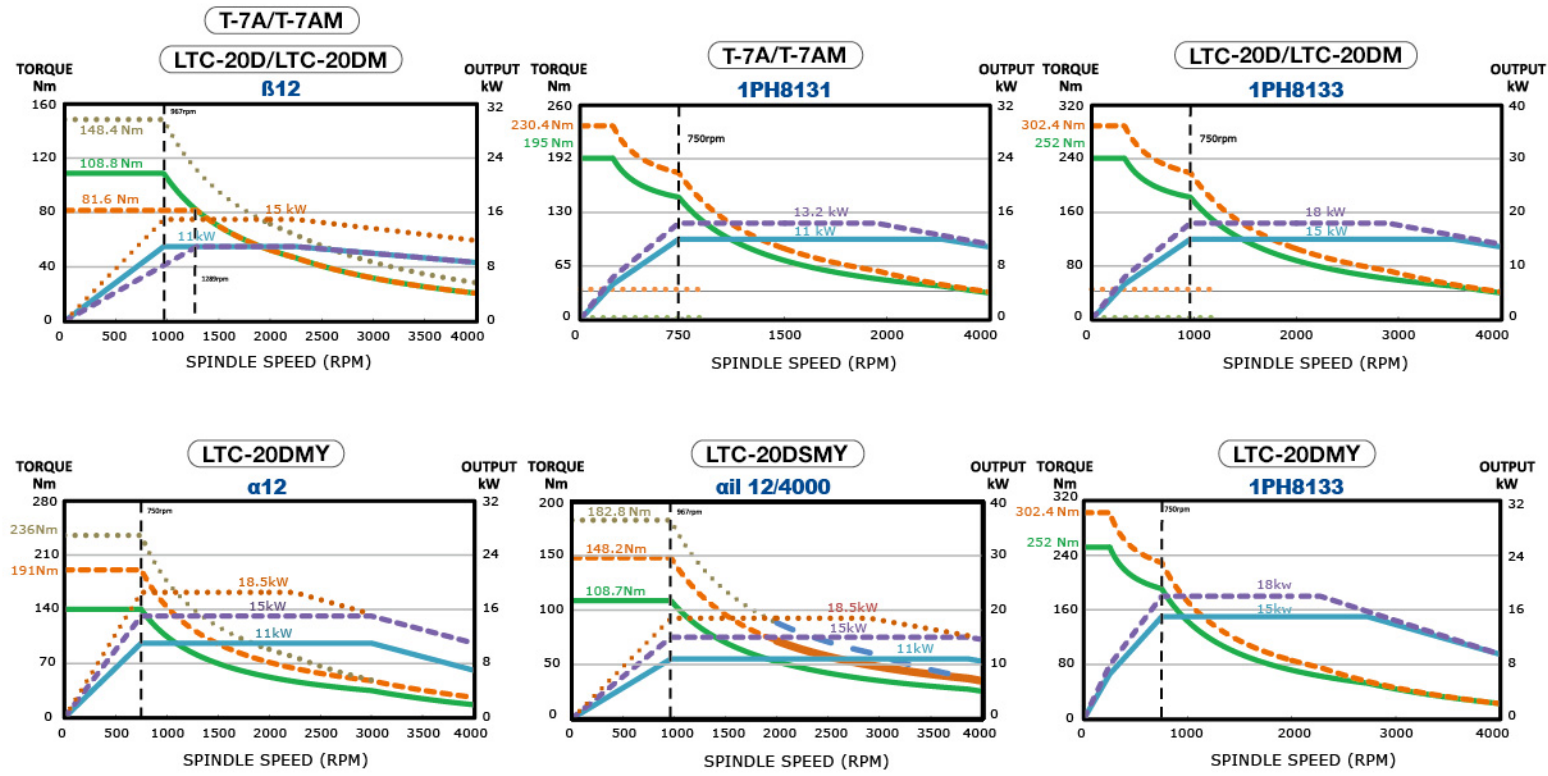


	TOOL mm	CUTTING SPEED m/min	SPINDLE SPEED rpm	FEED PER mm/rev	FEED RATE mm/min	CUTTING DEPTH mm
Heavy Cutting	---	225	779	0.3	234	4
Keyway	5	140	637	0.15	96	5
Fast Drilling	Ø50	157	1000	0.18	180	60
Rigid Tapping	M20	11	180	2.5	450	35
Power Drilling	Ø12	25	663	0.12	80	36
Power Rigid Tapping	M14	13	300	2	600	28
Power End Milling Keyway	Ø16	40	796	0.03	96	12

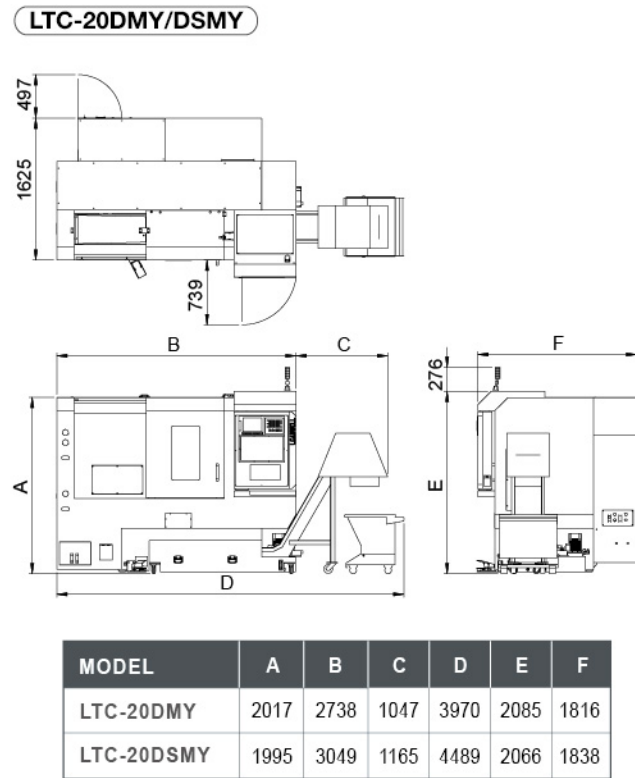
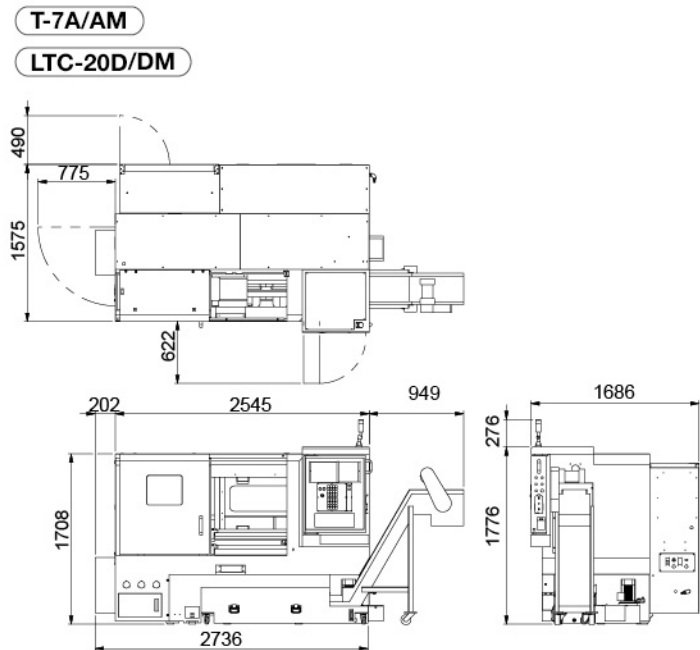
Material:S45C Model: LTC-20DM

SPINDLE POWER CURVE

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

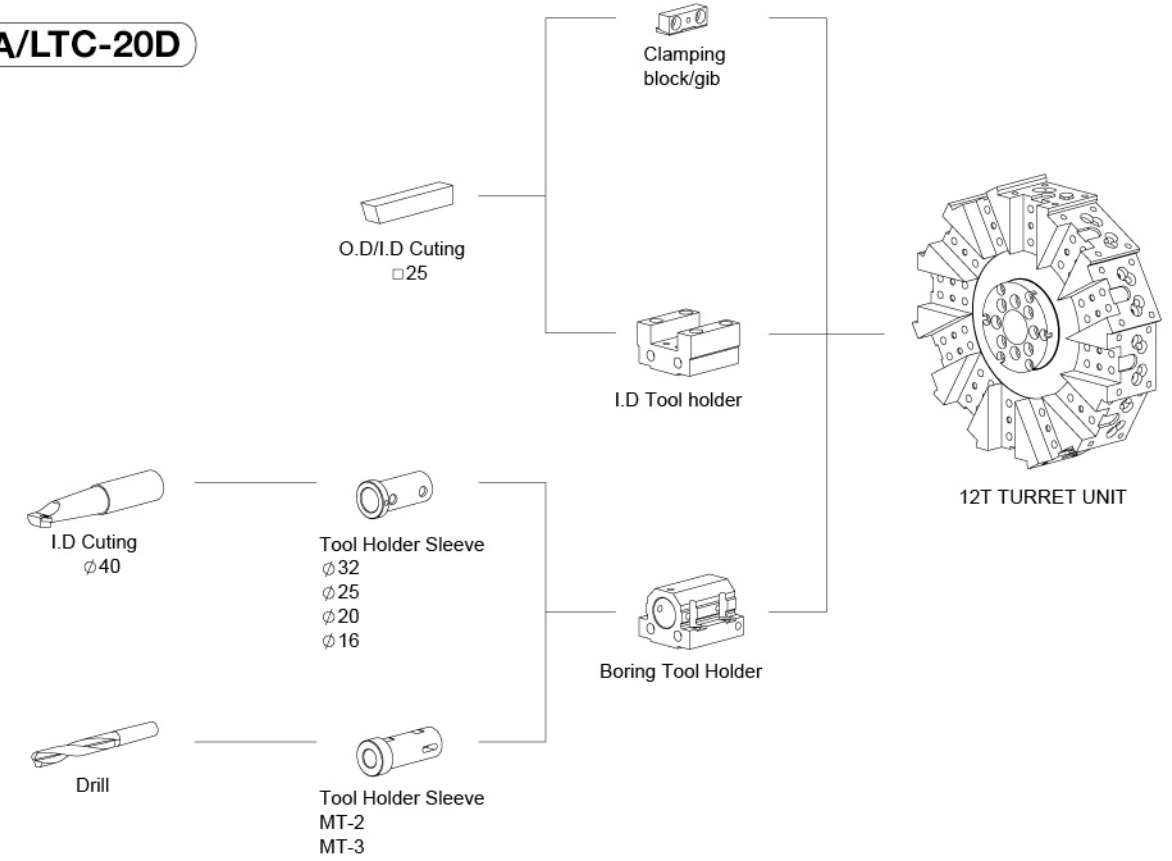


OUTLINE DIMENSION

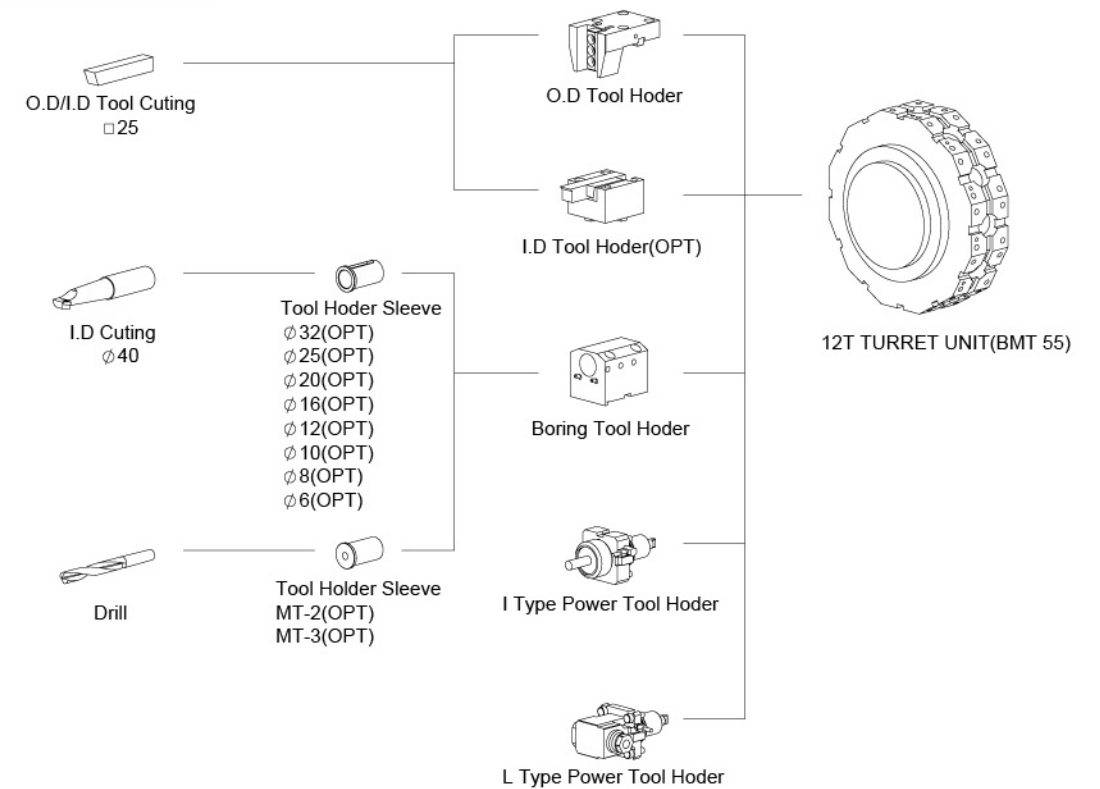


TOOL SYSTEM

T-7A/LTC-20D

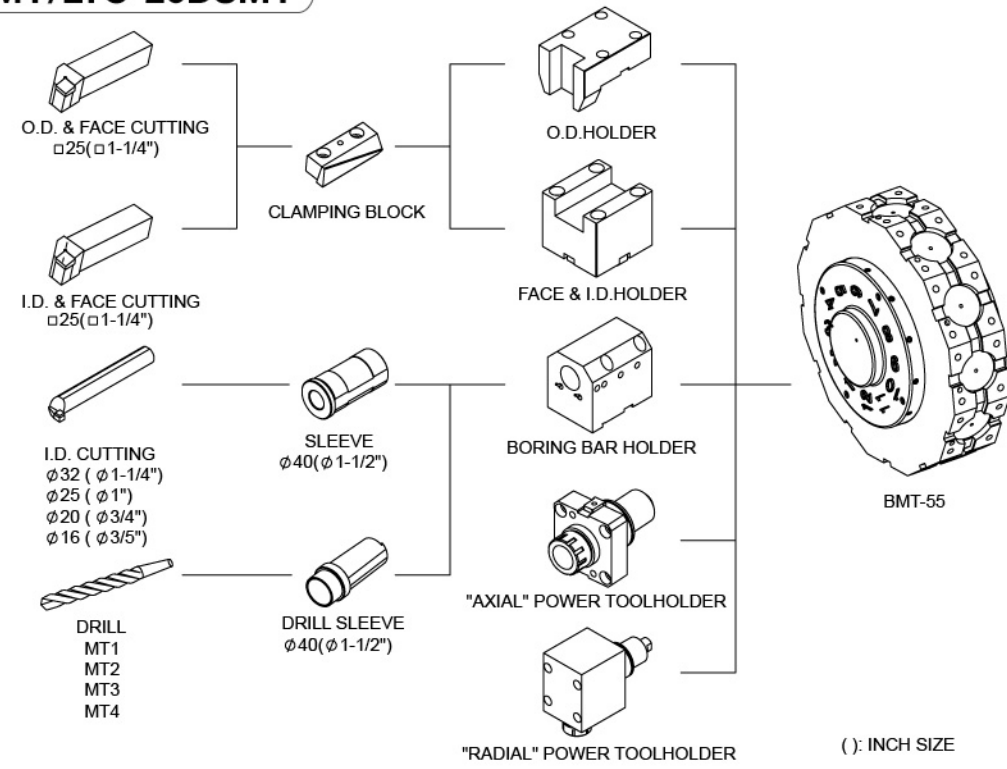


T-7AM/LTC-20DM



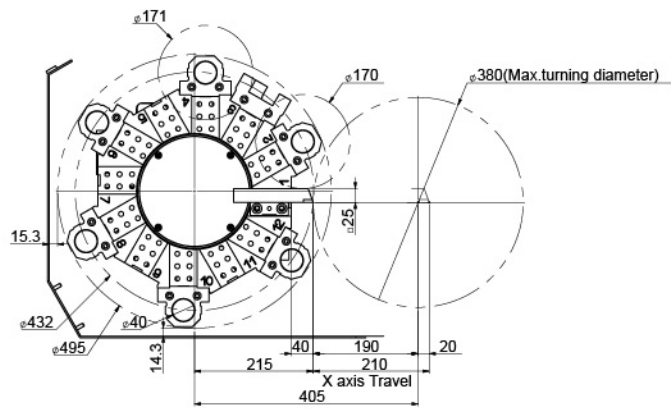
TOOLING SYSTEM

LTC-20DMY/LTC-20DSMY

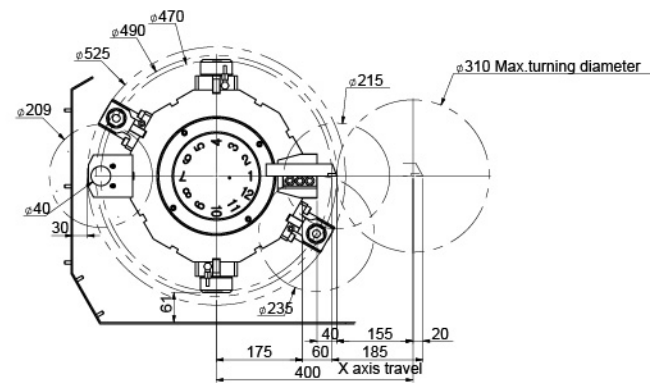


TOOLING INTERFERENCE

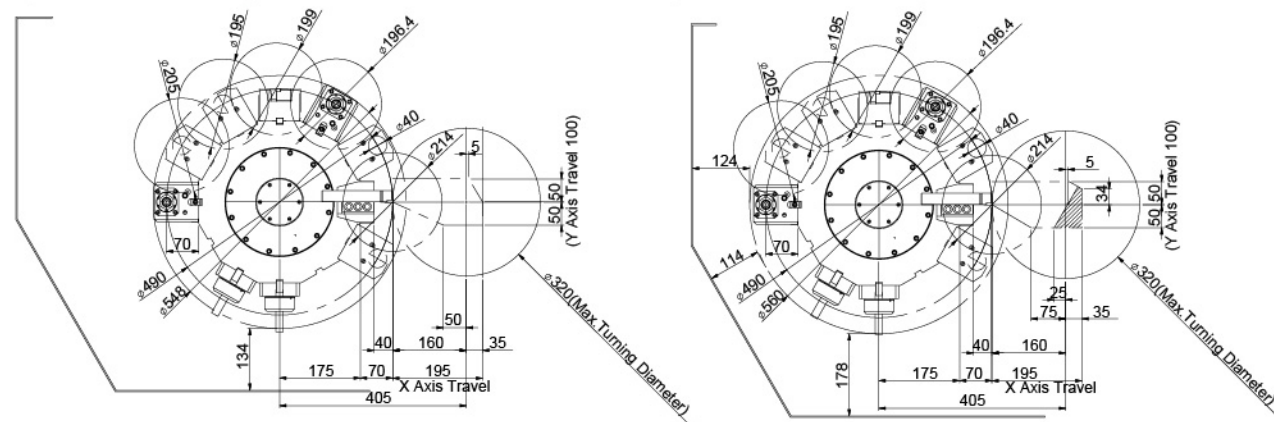
T-7A/LTC-20D



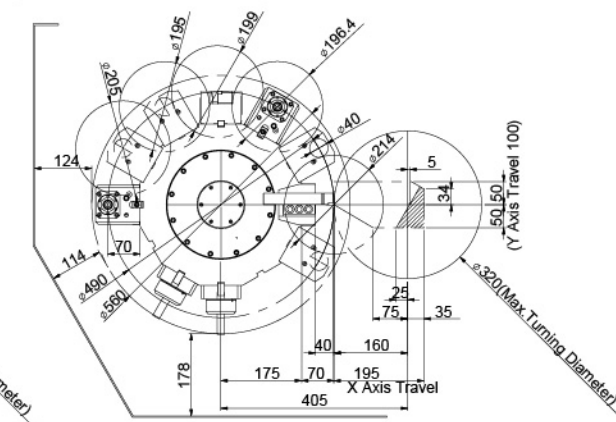
T-7AM/LTC-20DM



LTC-20DMY

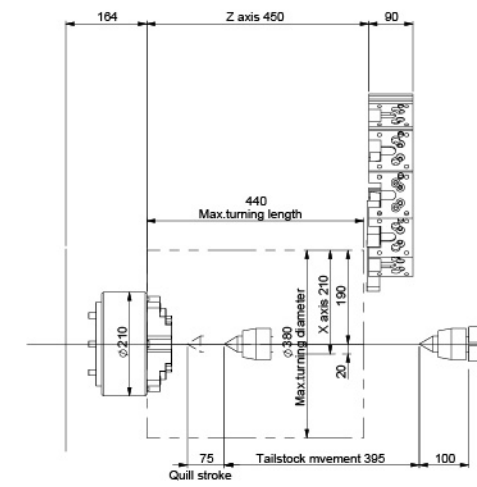


LTC-20DSMY

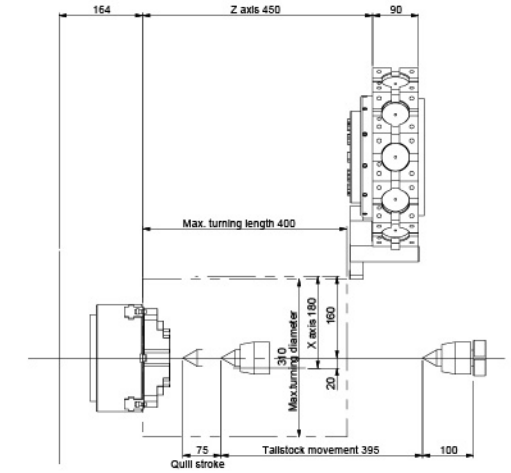


WORKING CAPACITY

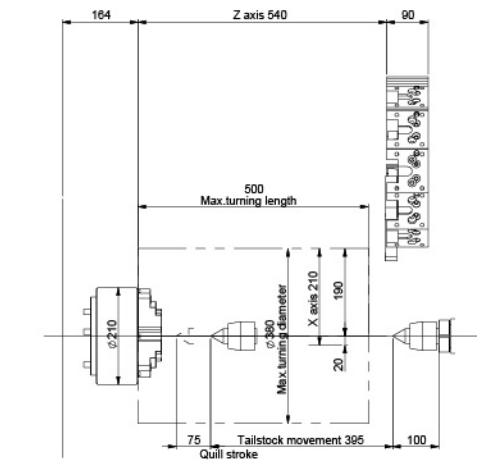
T-7A



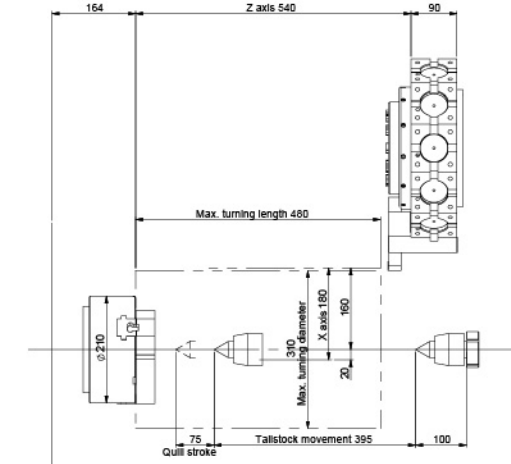
T-7AM



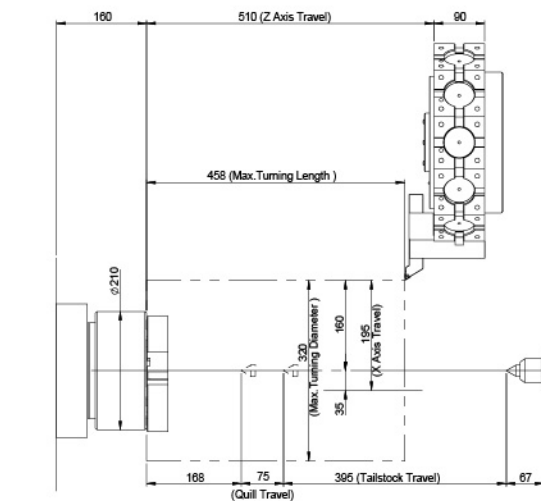
LTC-20D



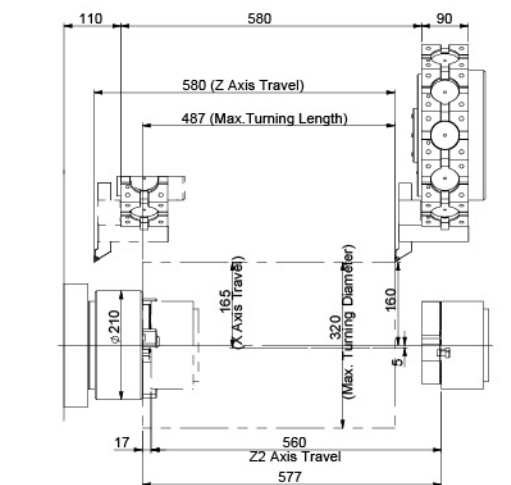
LTC-20DM



LTC-20DMY



LTC-20DSMY



MACHINE SPECIFICATIONS

ITEM	MODEL	T-7A	T-7AM	LTC-20D	LTC-20DM
CAPACITY					
Max. swing	mm(in)	500(19.6)	540(21.2)	500(19.6)	540(21.2)
Max. turning diameter	mm(in)	380(14.9)	310(12.2)	380(14.9)	310(12.2)
Max. turning length	mm(in)	440(17.3)	400(15.7)	500(19.7)	480(18.9)
Bar capacity	mm(in)	65(2.5)	65(2.5)	65(2.5)	65(2.5)
TRAVEL					
X-axis travel	mm(in)	190+20(7.4+0.78)	160+20(6.2+0.78)	190+20(7.4+0.78)	160+20(6.2+0.78)
Z-axis travel	mm(in)	450(17.7)	450(17.7)	540(21.2)	540(21.2)
SPINDLE					
Spindle speed	rpm	4000	4000	4000	4000
Chuck size	in	8	8	8	8
Type of spindle nose		A2-6	A2-6	A2-6	A2-6
Spindle motor type	Fanuc	β12	β12	β12	β12
Spindle motor power (cont./15min)	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)
TURRET					
Number of tool stations	pcs	12(SERVO)	12	12(SERVO)	12
Shank height for square tool	mm(in)	25(1)	25(1) BMT-55	25(1)	25(1) BMT-55
Shank diameter for boring bar	mm(in)	40(1.5)	40(1.5) BMT-55	40(1.5)	40(1.5) BMT-55
Rotary tool spindle speed range: axis units	rpm	---	5000	---	5000
Rotary tool spindle speed range: radial units	rpm	---	5000	---	5000
Rotary tool motor power	kw(hp)	---	2.2(3)	---	2.2(3)
FEED RATE					
X/Z-axis rapid traverse	m/mm(in)	30/30(1181/1181)	30/30(1181/1181)	20/20(787.4/787.4)	20/20(787.4/787.4)
FEED MOTORS					
X/Z-axis motor	kw(hp)	1.8/1.8(2.4/2.4)	1.8/1.8(2.4/2.4)	1.8/1.8(2.4/2.4)	1.8/1.8(2.4/2.4)
TAILSTOCK					
Quill diameter	mm(in)	75(3)	75(3)	75(3)	75(3)
Quill inside taper	M.T	4	4	4	4
MACHINE SIZE					
Floor space(L)	mm(in)	2745(108)	2745(108)	2745(108)	2745(108)
Floor space(W)	mm(in)	1680(66.1)	1680(66.1)	1680(66.1)	1680(66.1)
Floor space(H)	mm(in)	1780(70)	1780(70)	1780(70)	1780(70)
Machine weight	kg	4000	4000	4000	4000
Power requirement	KVA	30	35	30	35
controller		0i-TF/T3	0i-TF/T3	0i-TF/T3	0i-TF/T3

*Available controller: SIEMENS/FAGOR/HEIDENHAIN

MACHINE SPECIFICATIONS

ITEM	MODEL	LTC-20DMY	LTC-20DSMY
CAPACITY			
Max. swing	mm(in)	570(22.4)	570(22.4)
Max. turning diameter	mm(in)	320(12.5)	320(12.5)
Max. turning length	mm(in)	458(18)	487(19.1)
Bar capacity	mm(in)	65(2.5)	65(2.5)
TRAVEL			
X-axis travel	mm(in)	160+35(6.2+1.37)	160+5(6.2+0.2)
Z-axis travel	mm(in)	510(20)	580(22.8)
Y-axis travel	mm(in)	±50(±1.96)	±50(±1.96)
Z2-axis travel	mm(in)	---	560(22)
SPINDLE(MAIN)			
Spindle speed	rpm	4000	4000
Chuck size	in	8	8
Type of spindle nose		A2-6	A2-6
Spindle motor type	Fanuc	α12	α12
Spindle motor power (cont./30min)	kw(hp)	11/15(14.7/20.1)	11/15(14.7/20.1)
SPINDLE(SUB)			
Spindle speed	rpm	---	4500
Chuck size	in	---	6
Type of spindle nose		---	A2-5
Spindle motor type	Fanuc	---	α6
Spindle motor power (cont./30min)	kw(hp)	---	5.5/7.5(7.1/10)
TURRET			
Number of tool stations	pcs	12	12
Shank height for square tool	mm(in)	25(1) BMT-55	25(1) BMT-55
Shank diameter for boring bar	mm(in)	40(1.5) BMT-55	40(1.5) BMT-55
Rotary tool spindle speed range: axis units	rpm	6000	6000
Rotary tool spindle speed range: radial units	rpm	6000	6000
Rotary tool motor power (cont./30min)	kw(hp)	2.2/3.7(3/5)	2.2/3.7(3/5)
FEED RATE			
X/Z/Y/Z2-axis rapid traverse	m/min(in)	30/30/30/--- (1181/1181/1181/---)	30/30/30/30 (1181/1181/1181/1181)
FEED MOTORS			
X/Z/Y/Z2-axis motor	kw(hp)	3/3/3/--- (4/4/4/---)	3/3/3/1.6 (4/4/4/2.1)
TAILSTOCK			
Quill diameter	mm(in)	75(3)	---
Quill inside taper	M.T	4	---
MACHINE SIZE			
Floor space(L)	mm(in)	2680(105.5)	3000(118.1)
Floor space(W)	mm(in)	1625(64)	1625(64)
Floor space(H)	mm(in)	2170(85.4)	2170(85.4)
Machine weight	kg	4600	4850
Power requirement	KVA	35	35
controller		0i-TF	0i-TF

*Available controller: SIEMENS/FAGOR/HEIDENHAIN

MACHINE ACCESSORIES

ITEM \ MODEL	T-7A	T-7AM	LTC-20D	LTC-20DM
Metric disc	●	X	●	X
BMT-55 disc	X	●	X	●
Manual tailstock	●	●	●	●
Three layers warning light	●	●	●	●
Heat exchanger	●	●	●	●
Full enclosed splash guard	●	●	●	●
3 jaw open center chuck	●	●	●	●
Foot switch	●	●	●	●
High pressure pump 3Bar	●	●	●	●
Auto door	■	■	■	■
Spindle air outer blow	■	■	■	■
Chip conveyor and bucket	■	■	■	■
Collet chuck	■	■	■	■
Transformer	■	■	■	■
Bar feeder	■	■	■	■
Parts catcher	■	■	■	■
Air conditioner	■	■	■	■
Oil skimmer	■	■	■	■
Oil mist collector	■	■	■	■
Programmable tailstock	■	■	■	■
Tool setter	■	■	■	■
Robot	■	■	■	■
3 jaw close center chuck	■	■	■	■
Manual steady rest	X	X	X	X
Auto steady rest with hydraulic	X	X	X	X
Spindle air inner blow	X	X	X	X
Two speed gearbox	X	X	X	X

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

MACHINE ACCESSORIES

ITEM \ MODEL	LTC-20DMY	LTC-20DSMY
BMT-55 disc	●	●
Programmable tailstock	●	X
Buzzer	●	●
Heat exchanger	●	●
Full enclosed splash guard	●	●
3 jaw open center chuck	●	●
Foot switch	●	●
High pressure pump 3Bar	●	●
Three layers warning light	●	●
Sub spindle air outer blow	X	●
Robot	■	■
Spindle air outer blow	■	■
High pressure pump 4bar	■	■
Chip conveyor and bucket	■	■
Collet chuck	■	■
Transformer	■	■
Bar feeder	■	■
Parts catcher	■	■
Air conditioner	■	■
Oil skimmer	■	■
Oil mist collector	■	■
Robot	■	■
3 jaw close center chuck	■	■
Manual steady rest	X	X
Auto steady rest with hydraulic	X	X
Spindle air inner blow	X	X
Two speed gearbox	X	X

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