

LEADWELL
LEADWELL CNC MACHINES MFG.,CORP.

LTC-50 / 60 Series

CNC TURNING CENTERS

The Ultimate in Performance

LEADWELL CNC MACHINES MFG.,CORP.

NO.23, Gong 33th Road, Taichung Industrial Park

Taichung 407, Taiwan

TEL: 886-4-23591880

FAX: 886-4-23592555, 23593875

E-mail: sales@leadwell.com.tw

www.leadwell.com.tw

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





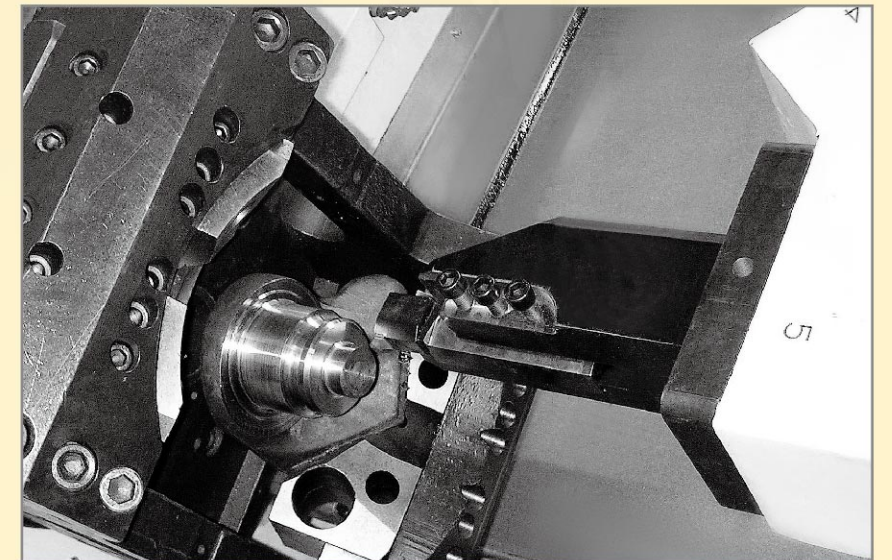
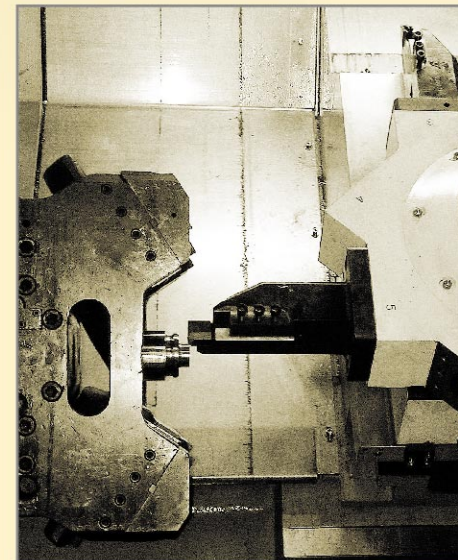
LEADWELL LTC-50/60 Series for Productivity and Profitability

The LEADWELL LTC-50/60 series slant bed CNC turning centers are engineered for speed, precision, and enhanced productivity. You can depend on LEADWELL's LTC-50/60 series to operate reliably year after year. The rigid construction provides superior stability for heavy metal removal and excellent workpiece accuracy. LEADWELL turning centers will help keep your business competitive and profitable.

Innovative Design for Greater Capacity

- A large capacity CNC turning center with box ways on all axes.
- 18 inch (on LTC-50) / 21 inch (on LTC-60) chuck with large hole through spindle for 4.5 inch bar capacity.
- Z-axis available up to 4100mm (LTC-50) / 6000mm (LTC-60) - excellent for machining long workpieces.
- 45 degree slant-bed provides maximum stability and rigidity.
- Extra powerful spindle motor 37 KW / 49.6 HP.

▼ The large workpiece capacity of the LTC-50/60 is ideal for heavy duty machining. This machine is even suitable for machining oversized workpieces, including components for drilling rigs.



CNC TURNING CENTER LEADING ACCURACY AND STABILITY

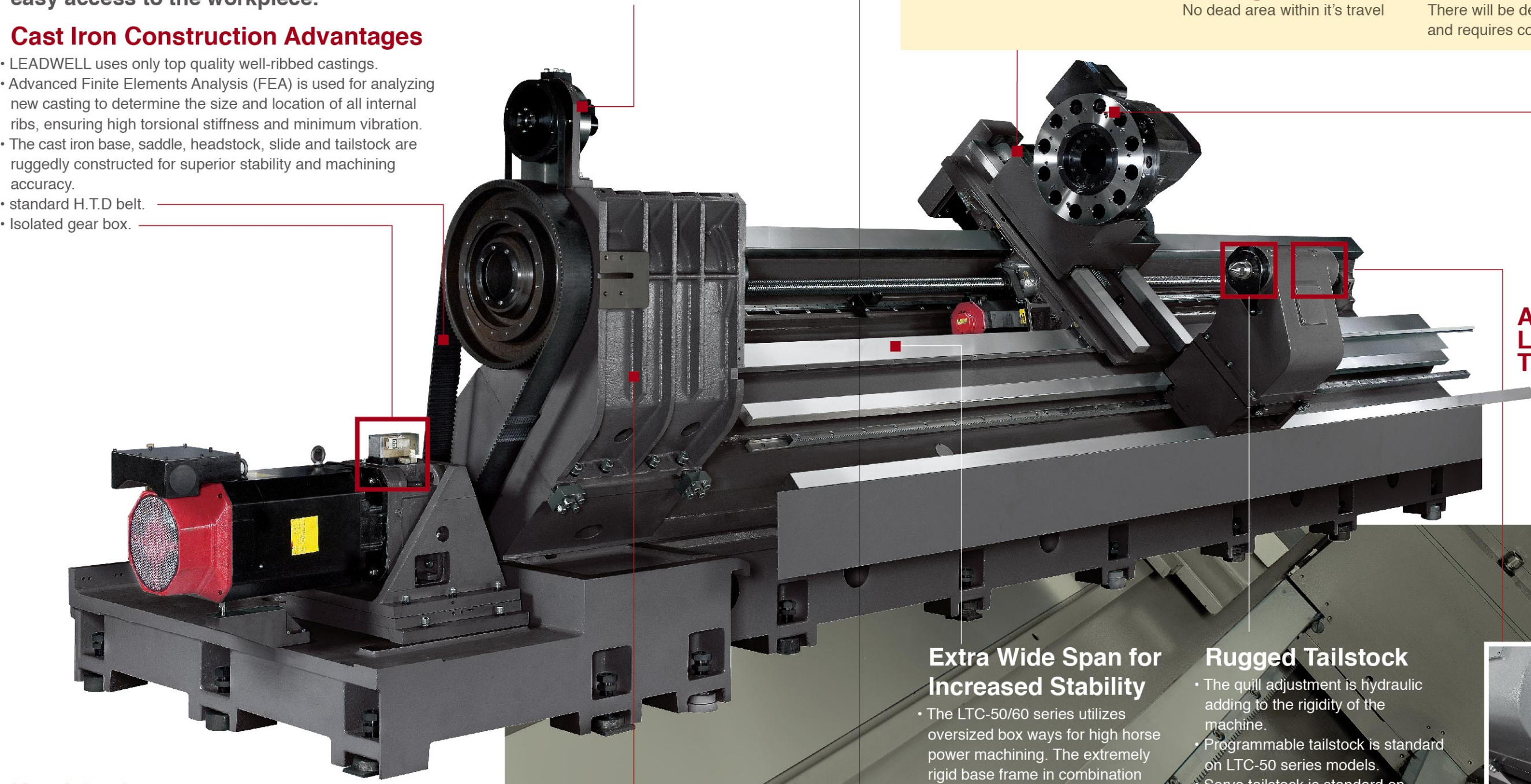
Massive Slant Bed Construction

LEADWELL turning centers are built from rigid cast iron construction to give a superior machining accuracy for years to come. The 45-degree slant bed has a stronger frame with easy access to the workpiece.

Cast Iron Construction Advantages

- LEADWELL uses only top quality well-ribbed castings.
- Advanced Finite Elements Analysis (FEA) is used for analyzing new casting to determine the size and location of all internal ribs, ensuring high torsional stiffness and minimum vibration.
- The cast iron base, saddle, headstock, slide and tailstock are ruggedly constructed for superior stability and machining accuracy.
- standard H.T.D belt.
- Isolated gear box.

Encoder for Full C Axis Applications



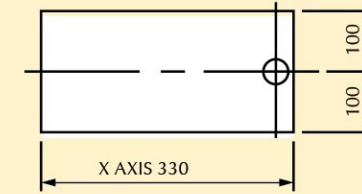
Headstock

The headstock has a thermally symmetric design with heat dissipating fins. It prevents thermal distortion during long machining cycles.

STRUCTURE

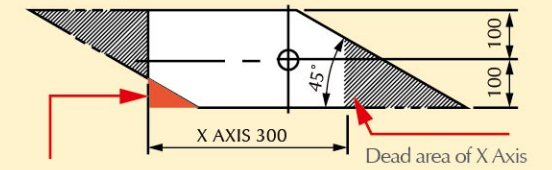
Orthogonal Y axis Explanation

Y axis is orthogonal placed on the X axis to ensure the full range of travel and to maximize the machining purposes.



Orthogonal Y axis

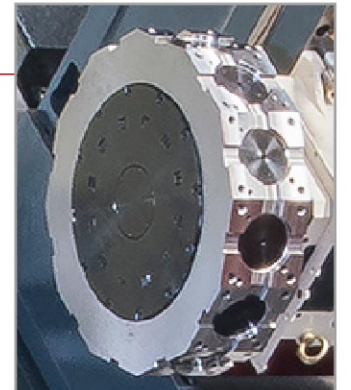
No dead area within it's travel



The dead area that the travel cannot reach

Virtual Y axis

There will be dead area within it's travel, and requires complex programs.



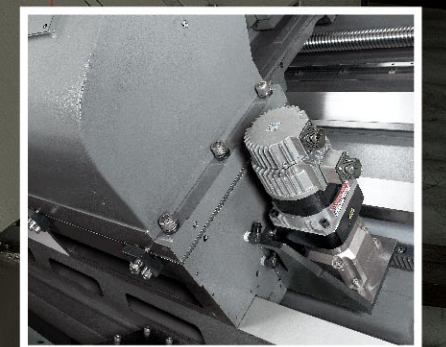
Available for Non Live Turret and Live Turret + Y axis

Extra Wide Span for Increased Stability

- The LTC-50/60 series utilizes oversized box ways for high horse power machining. The extremely rigid base frame in combination with the box ways provide outstanding stability for precision turning.

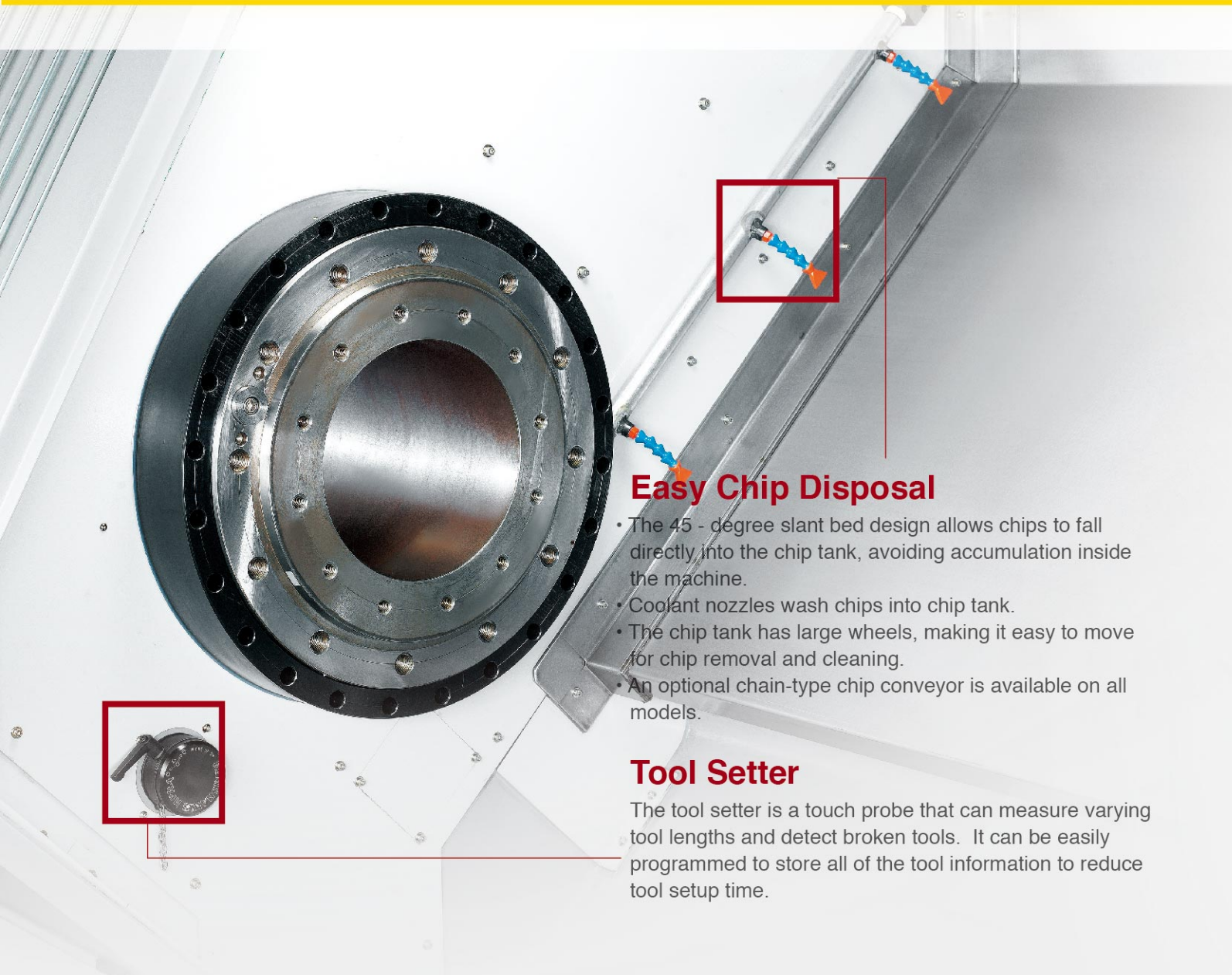
Rugged Tailstock

- The quill adjustment is hydraulic adding to the rigidity of the machine.
- Programmable tailstock is standard on LTC-50 series models.
- Servo tailstock is standard on LTC-60 series models.



Servo Motor Driven for Tailstock(LTC-60)

HIGH PRODUCTIVITY OPTIONS



Easy Chip Disposal

- The 45 - degree slant bed design allows chips to fall directly into the chip tank, avoiding accumulation inside the machine.
- Coolant nozzles wash chips into chip tank.
- The chip tank has large wheels, making it easy to move for chip removal and cleaning.
- An optional chain-type chip conveyor is available on all models.

Tool Setter

The tool setter is a touch probe that can measure varying tool lengths and detect broken tools. It can be easily programmed to store all of the tool information to reduce tool setup time.

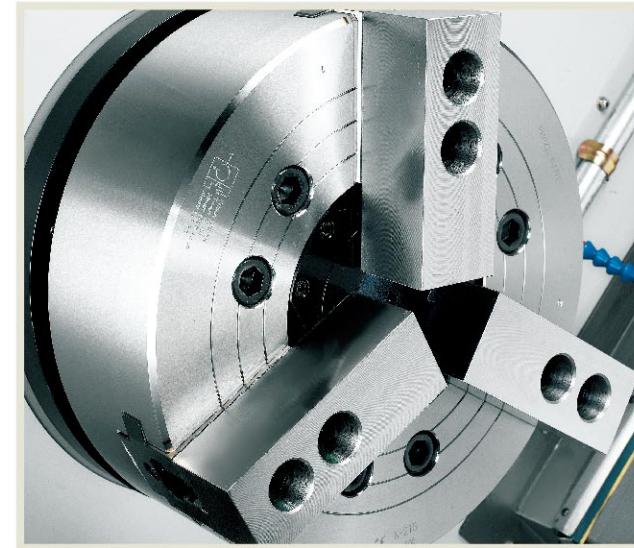
PRECISION RIGID SPINDLE



ø266mm (10.5") OPT.
 (ø285(11"))

- Wide bearing spacing for high rigidity
- Special heat treatment for critical parts
- Highly accurate draw tube mechanism
- Precision Labyrinth seal
- Large diameter quill for high rigidity
- Optimum spacing of front bearings to spindle nose for highest rigidity

CNC TURNING CENTER



Chuck (STD.)

Each LEADWELL lathe comes with a 3-jaw hydraulic through hole chuck.



Double Chuck Spindle Design

It has clamping and supporting functions. Highly suitable for long tube work-pieces.

Chuck, Air(OPT)

Single or Double

High Chip Removal Rate - Easier Than Ever!

When your operations require higher efficiency to stay competitive.

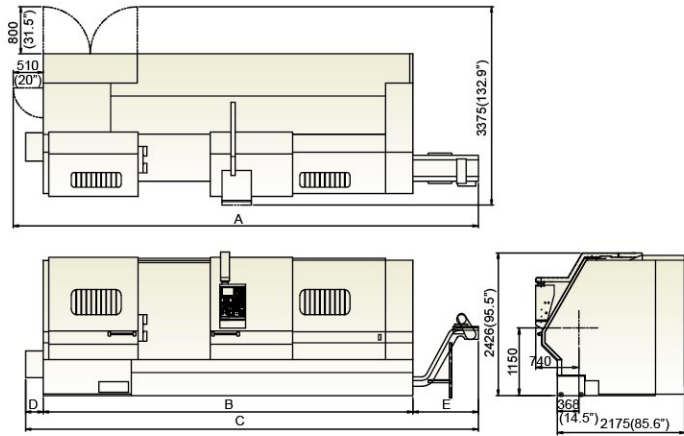
CUTTING TEST RESULTS

O.D.TURNING				
Cutting Feed Rate M/min.	Cutting Depth mm.	Feed Rate mm/rev.	Chip Removal Rate c.c./min.	Workpiece Material
180	11	0.35	1054.7	S45C

GROOVING				
Cutting Feed Rate M/min.	Slot Width mm.	Feed Rate mm/rev.	Distance from Chuck Face	Workpiece Material
103.2	3	0.2	300 mm	S45C

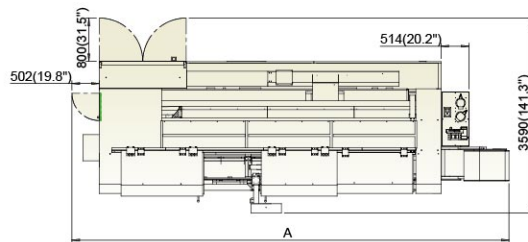
DRILLING				
Cutting Feed Rate M/min.	Hole Dia mm.	Feed Rate mm/rev.	Spindle Speed (rpm)	Workpiece Material
77.4	80	0.15	516	S45C

OUTLINE DIMENSION

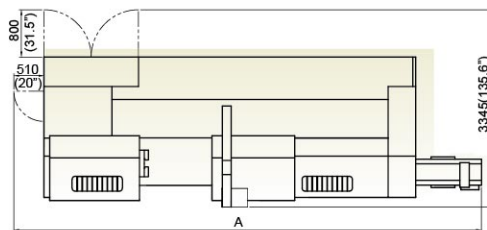
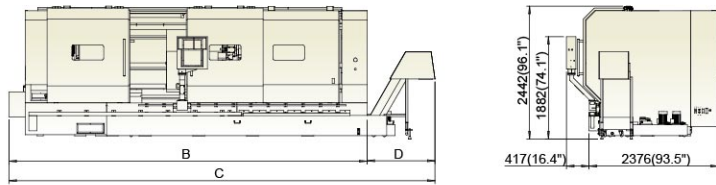


Unit:mm

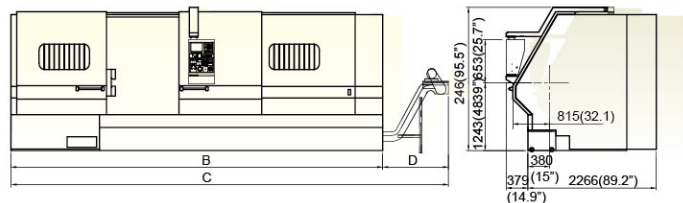
MODEL	A	B	C	D	E
LTC-50B(C)	5940 (233.8)	4316 (169.9")	5730 (225.6")	300 (11.8")	1114 (43.9")
LTC-50B(C)L	6930 (272.8")	5306 (208.9")	6720 (264.5")	300 (11.8")	1114 (43.9")
TC-50B(C)XL	7920 (311.8")	6296 (247.8")	7710 (303.5")	300 (11.8")	1114 (43.9")
LTC-50B(C)XXL	9860 (388.1")	7950 (313.0")	9350 (368.1")	-	1400 (55.1")



MODEL	A	B	C	D
LTC-50M/Y	6077 (239.3")	4616 (181.7")	5867 (231")	1251 (49.3")
LTC-50LM/LY	7067 (278.2")	5606 (220.7")	6857 (270")	1251 (49.3")
LTC-50XLM/XLY	8049 (316.9")	6596 (259.7")	7847 (309")	1251 (49.3")
LTC-50XXLM/XXLY	10060 (396.1")	7950 (313.0")	9550 (376")	1600 (63.0")



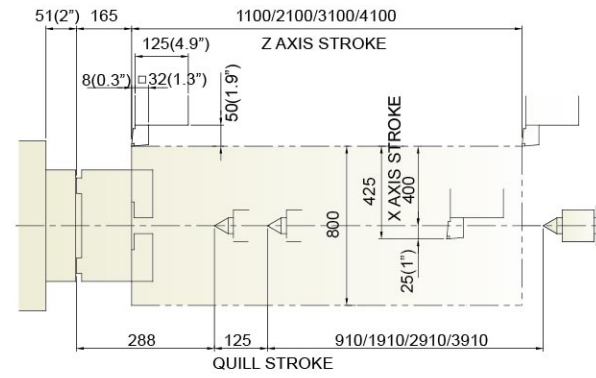
MODEL	A	B	C	D
LTC-60 CXL	11010 (433.5")	9090 (357.9")	10500 (413.4")	1410 (55.5")
LTC-60 CXXL	12100 (476.4")	10250 (401.7")	11590 (456.3")	1410 (55.5")



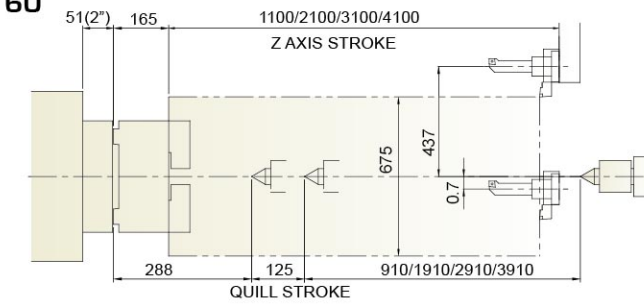
WORKING CAPACITY

LTC-50

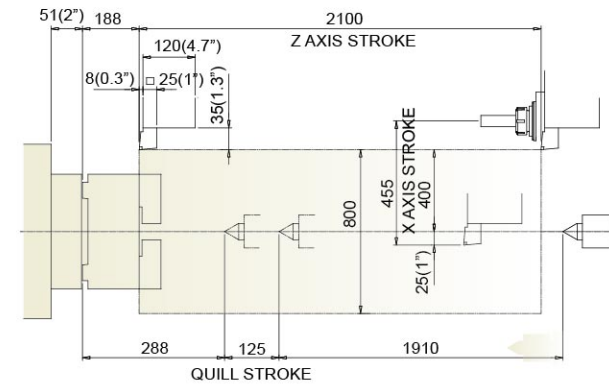
Standard



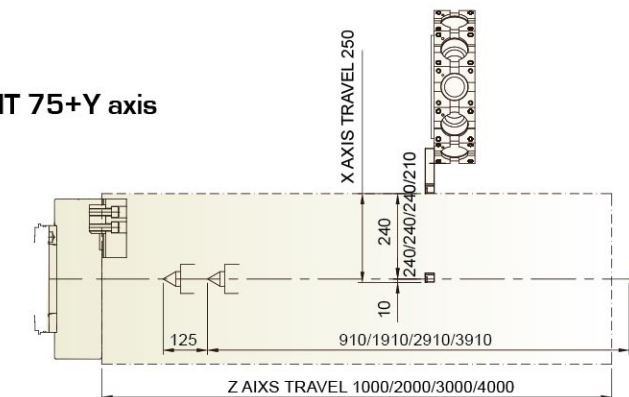
Option:VDI 60



Option BMT 75



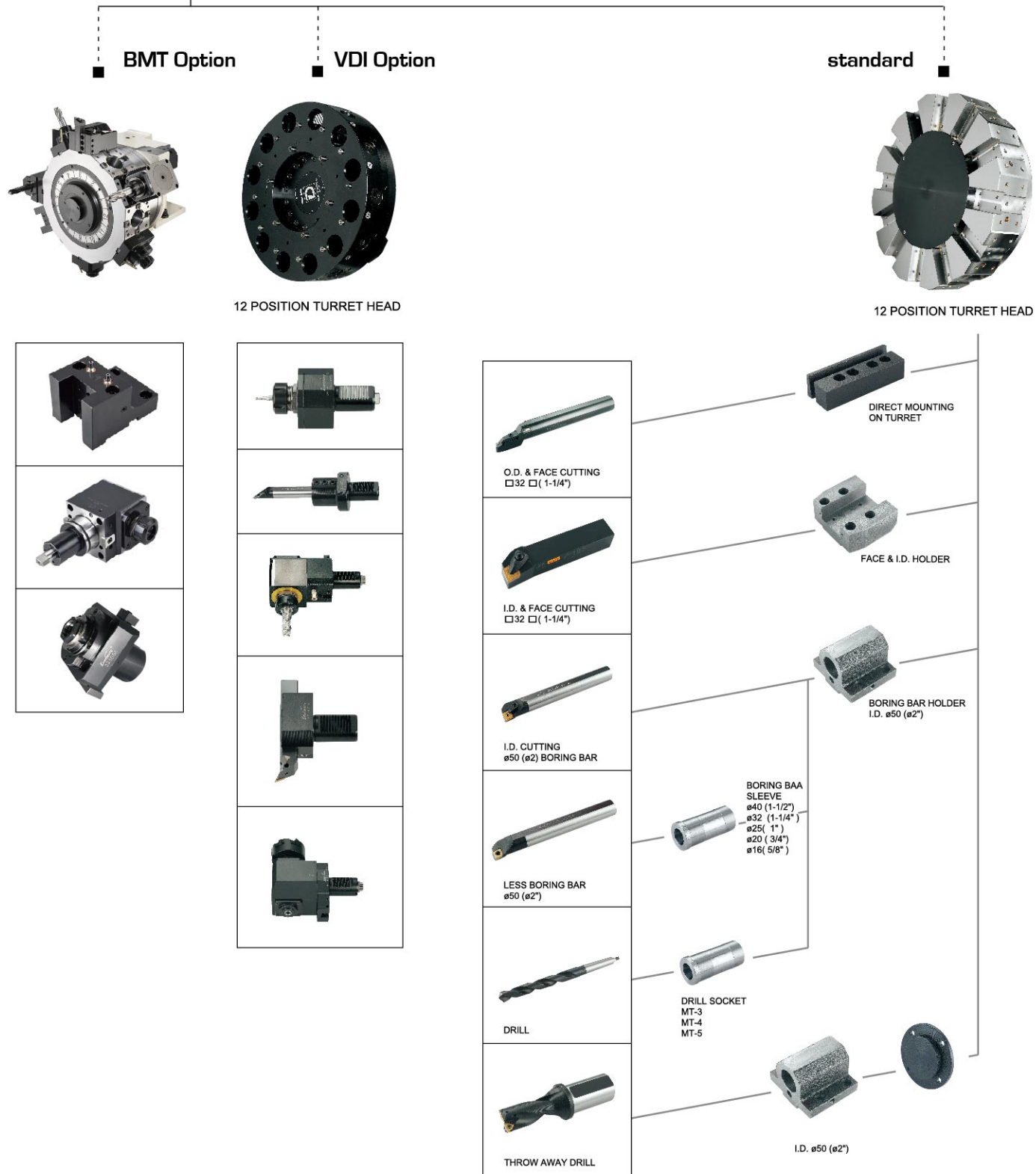
Option: BMT 75+Y axis



TOOLING SYSTEM

Heavy Duty Turret

The LTC series turret features a robust casting and a large coupling face adding extreme rigidity to the machine. This added rigidity provides increased metal removal rates, extends tool life, enhances finishing quality, and ensures long term accuracy. A reliable high torque hydraulic indexing motor controls turret rotation, deceleration and clamping. Turret indexing is bi-directional with 1.7 second station-to-station indexing time.



MACHINE SPECIFICATIONS

ITEM	MODEL	LTC-50B/BL/BXL LTC-50C/CL/CXL	LTC-50BXXL/CXXL	LTC-50M/LM/XLM/XXLM	LTC-50Y/LY/XLY/XXLY
CAPACITY				VDI 60 / BMT 75	BMT 75
Max swing	mm(in)	900/900/850 (35.4/35.4/33.5)	850(33.4)	900/900/850/850 (35.43/35.43/33.46/33.46)	900/900/850/850 (35.43/35.43/33.46/33.46)
Swing over cross slide	mm(in)	700(27.55)	700(27.55)	700(27.55)	700(27.55)
Max turning diameter	mm(in)	800(31.5)	800(31.5)	675(26.6) VDI 60 800(31.5) BMT 75	480(18.89)
Max turning length	mm(in)	1006/2006/3006 (39.6/78.9/118.3)	4006(157.7)	1006/2006/3006/4006 (39.6/78.9/118.3/157.7)	910/1910/2910/3910 (35.8/75.2/114.6/153.9)
Bar capacity	mm(in)	117(4.6)	117(4.6)	117(4.6)	117(4.6)
TRAVEL					
X axis	mm(in)	400+25(15.7+1)	400+25(15.7+1)	437+18(17.2+0.71) VDI 60 430+25(16.9+0.98) BMT 75	240+10(9.44+0.39)
Z axis	mm(in)	1100/2100/3100 (43.3/82.6/122)	4100(161.4)	1100/2100/3100/4100 (43.3/82.6/122/161.4)	1010/2010/3010/4010 (39.7/79.1/118.5/157.8)
Y axis	mm(in)	-	-	-	$\pm 100(\pm 3.9)$
SPINDLE					
Spindle speed	rpm	15-1500	15-1500	15-1500	15-1500
Chuck size	mm(in)	381/457(15/18)	381/457(15/18)	450(18)	450(18)
Type of spindle nose		A2-11	A2-11	A2-11	A2-11
Spindle motor power	Kw(hp)	37(49.6)	37(49.6)	37(49.6)	37(49.6)
TURRET					
Number of tool stations	PCS	12	12	12	12
Shank height for square tools	mm(in)	32(1.26)	32(1.26)	32(1.26) VDI 60 25(1) BMT 75	32(1.26) BMT 75
Shank diameter for boring bar	mm(in)	50(1.9)	50(1.9)	50(1.9) VDI 60 / BMT 75	50(1.9) BMT 75
Index time(adjacent tools)	sec	1.5	1.5	2.2 VDI 60 1.3 BMT 75	0.5
Index time(180deg)	sec	6.5	6.5	2.9 VDI 60 3.18 BMT 75	3
Rotary tool speed(axial)	rpm	-	-	3000	3000
Rotary tool speed(radial)	rpm	-	-	3000	3000
Rotary tool motor power	Kw(hp)	-	-	15(20) VDI 60 11(14.7) BMT 75	6(8)
FEED RATE					
X axis rapid traverse	m/min(in)	10(393.7)	10(393.7)	10(393.7)	10(393.7)
Z axis rapid traverse	m/min(in)	12(472.4)	8(314.9)	12/12/12/8 (472/472/472/314.9)	12/12/12/8 (472/472/472/314.9)
Y axis rapid traverse	m/min(in)	-	-	-	7.5(295.28)
MOTOR					
X/Z axis motor	Kw(hp)	4/7(5.4/9.4)	4/7(5.4/9.4)	4/7 (5.4/9.4)	4/7 (5.4/9.4)
Y axis motor	Kw(hp)	-	-	-	3(4)
TAILSTOCK					
Tailstock movement type		Hydraulic	Hydraulic	Hydraulic	Hydraulic
Quill diameter	mm(in)	155(6.1)	155(6.1)	155(6.1)	155(6.1)
Quill inside taper	M.T	6	6	6	6
MACHINE SIZE					
Height of machine(H)	mm(in)	2426(95.5)	2426(95.5)	2426(95.5)	2426(95.5)
Floor space(L)	mm(in)	4616/5606/6596 (181.7/220.7/259.6)	7950(313)	4616/5606/6596/7950 (181.7/220.7/259.6/312.9)	4616/5606/6596/7950 (181.7/220.7/259.6/312.9)
Floor space(W)	mm(in)	2575(101.4)	2575(101.38)	2575(101.37)	2575(101.4)
Total machine weight	Kg	15000/17000/20000	22000	15000/17000/20000/22000	15000/17000/20000/22000
Power requirement	KVA	70	70	70	70
Control	FANUC	0i-T			

MACHINE SPECIFICATIONS

ITEM	MODEL	LTC-60CXL/CXXL	LTC-60XLM/XXLM	LTC-60XLY/XXLY
CAPACITY	Unit		VDI 60 / BMT 75	BMT 75
Max swing	mm(in)	1020(40.16)	1020(40.16)	1020(40.16)
Swing over cross slide	mm(in)	920(36.22)	920(36.22)	920(36.22)
Max turning diameter	mm(in)	810(31.89)	675(26.57) VDI 60 800(31.5) BMT 75	640(25.19)
Max turning length	mm(in)	5000(196.85)/6000(236.22)	5000(196.85)/6000(236.22)	5000(196.85)/6000(236.22)
Bar capacity	mm(in)	117(4.6)	117(4.6)	117(4.6)
TRAVEL				
X axis	mm(in)	400+28(15.75+1.1)	437+18(17.2+0.71) VDI 60 430+25(16.9+0.98) BMT 75	320+10(12.59+0.39)
Z axis	mm(in)	5000(196.85)/6000(236.22)	5000(196.85)/6000(236.22)	5000(196.85)/6000(236.22)
Y axis	mm(in)	—	—	±100(±3.9)
SPINDLE				
Spindle speed	rpm	1500	1500	1500
Chuck size	mm(in)	533(21)	533(21)	533(21)
Type of spindle nose		A2-15	A2-15	A2-15
Spindle motor power	Kw(hp)	37(49.6)	37(49.6)	37(49.6)
TURRET				
Number of tool stations	PCS	12	12	12
Shank height for square tools	mm(in)	32(1.25)	32(1.25) VDI 60 / BMT 75	25(1)
Shank diameter for boring bar	mm(in)	60(2.36)	50(2) VDI 60 / BMT 75	50(2)
Index time(adjacent tools)	sec	1.5	1.3	1.3
Index time(180deg)	sec	6.5	3.18	3.18
Rotary tool speed(axial)	rpm	—	3000	4000
Rotary tool speed(radial)	rpm	—	3000	4000
Rotary tool motor power	Kw(hp)	—	15(20)	10(13.4)
FEED RATE				
X axis rapid traverse	m/min(in)	10(393.7)	10(393.7)	10(393.7)
Z axis rapid traverse	m/min(in)	12(472.44)	12(472.44)	12(472.44)
B axis rapid traverse	m/min(in)	10(393.7)	—	7.5(295.2)
MOTOR				
X/Z axis motor	Kw(hp)	4/7(5.4/9.4)	4/7(5.4/9.4)	4/7(5.4/9.4)
Y axis motor	Kw(hp)	—	1.6(2.1)	1.6(2.1)
TAILSTOCK				
Tailstock movement type		Servo	Servo	Servo
Quill diameter	mm(in)	165(6.5)	165(6.5)	165(6.5)
Quill inside taper	M.T	6	6	6
MACHINE SIZE				
Height of machine(H)	mm(in)	2426(95.51)	2426(95.51)	2426(95.51)
Floor space(L)	mm(in)	9090/10205(357.78/401.77)	9090/10205(357.78/401.77)	9090/10205(357.78/401.77)
Floor space(W)	mm(in)	2700(106.3)	2700(106.3)	2700(106.3)
Total machine weight	Kg	27000/32000	27000/32000	27000/32000
Power requirement	KVA	70	70	70
Control	FANUC		0i-T	

MACHINE ACCESSORIES

ITEM	MODEL	LTC-50B(C)/B(C)L/ B(C)XL/B(C)XXL	LTC-50M/LM/ XLM/XXLM	LTC-50Y/LY/ XLY/XXLY	LTC-60CXL/ CXXL	LTC-60XLM/ XXLM	LTC-60XLY/XXLY
Programmable tailstock		●	●	●	●	●	●
Buzzer		●	●	●	●	●	●
Air conditioner		●	●	●	●	●	●
Full enclosed splash guard		●	●	●	●	●	●
Two speed gearbox		●	●	●	●	●	●
3 jaw open center chuck		●	●	●	●	●	●
Fanuc 0i-T		●	●	●	●	●	●
Foot switch		●	●	●	●	●	●
H.T.D belt		●	●	●	●	●	●
Chip conveyor		■	■	■	●	●	●
Inch disc		■	X	X	■	X	X
VDI disc		■	X	●	■	X	X
Tool setter		■	■	■	■	■	■
Manual steady rest		■	■	■	■	■	■
Hydraulic steady rest		■	■	■	■	■	■
Alarm lamp		■	■	■	■	■	■
Spindle air outer blow		■	■	■	■	■	■
4 bar High pressure pump		■	■	■	■	■	■
Chip bucket		■	■	■	■	■	■
Mist separator		■	■	■	■	■	■
Transformer		■	■	■	■	■	■
Linear Scale (X axis)		■	■	■	■	■	■
Chuck high low pressure		■	■	■	■	■	■
Auto door		■	▲	▲	▲	▲	X
Oil skimmer		▲	■	■	■	■	■
Automatic workpiece measurement		▲	▲	▲	▲	▲	▲
Heat exchanger		▲	▲	▲	▲	▲	▲
Robot		▲	▲	▲	▲	▲	▲
3 jaw close center chuck		▲	▲	▲	▲	▲	▲
Mitsubishi control		▲	▲	▲	▲	▲	▲
Linear Scale (Z axis)		▲	▲	▲	▲	▲	▲
Manual tailstock		X	X	X	X	X	X
Parts catcher		X	X	X	X	X	X
Bar feeder		X	X	X	X	X	X
Collect chuck		X	X	X	X	X	X
Spindle air inner blow		X	X	X	X	X	X
Wide angle V-belt		X	X	X	X	X	X
Micro V belt		X	X	X	X	X	X

●:STD / ■:OPT(DESIGNED) / ▲:OPT(TO BE ADVISED) / X:N/A(NOT AVAILABLE)