

LEADWELL
LEADWELL CNC MACHINES MFG., CORP.

LTC-60

CNC TURNING CENTERS

The Ultimate in Performance

LEADWELL CNC MACHINES MFG., CORP

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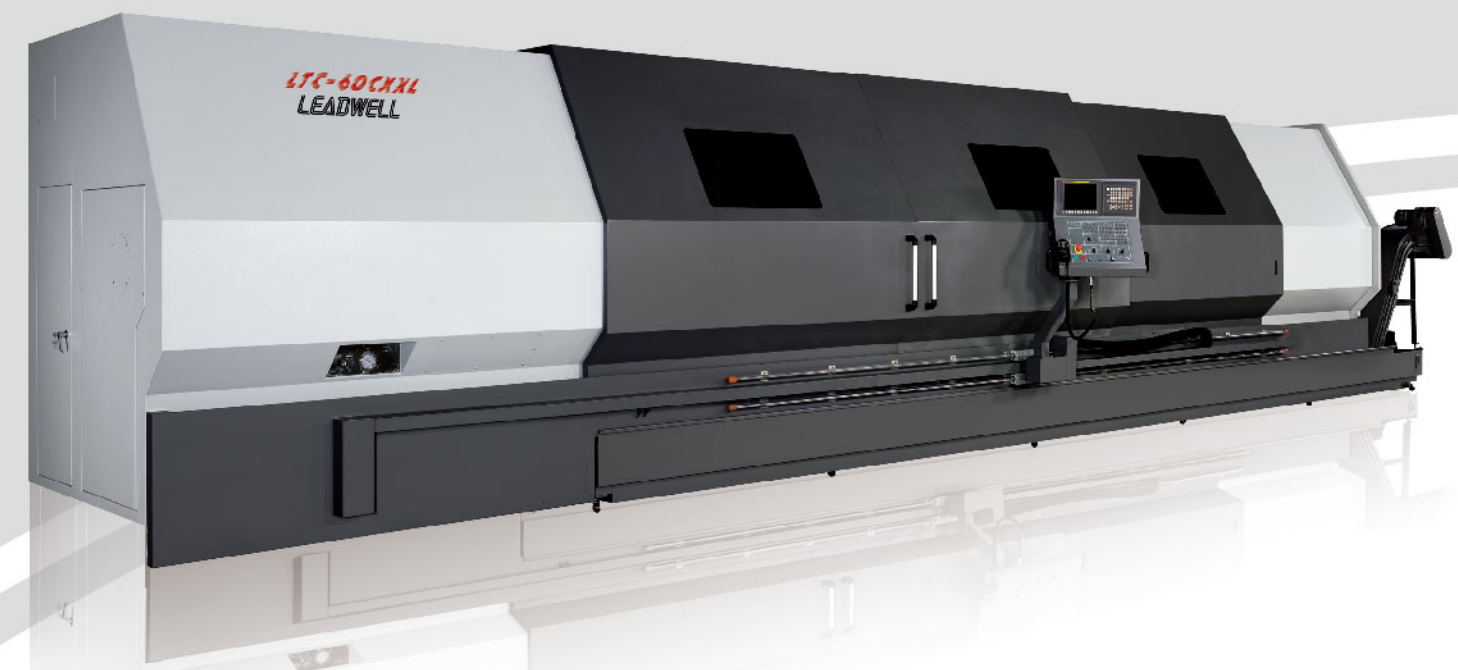
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※ All performance are based on 220V/3PH/60HZ. Specification are subject to change without notice.



LTC-60 CNC TURNING CENTER

Saves Time! Saves Money!

LEADWELL LTC-60 Series for Productivity and Profitability

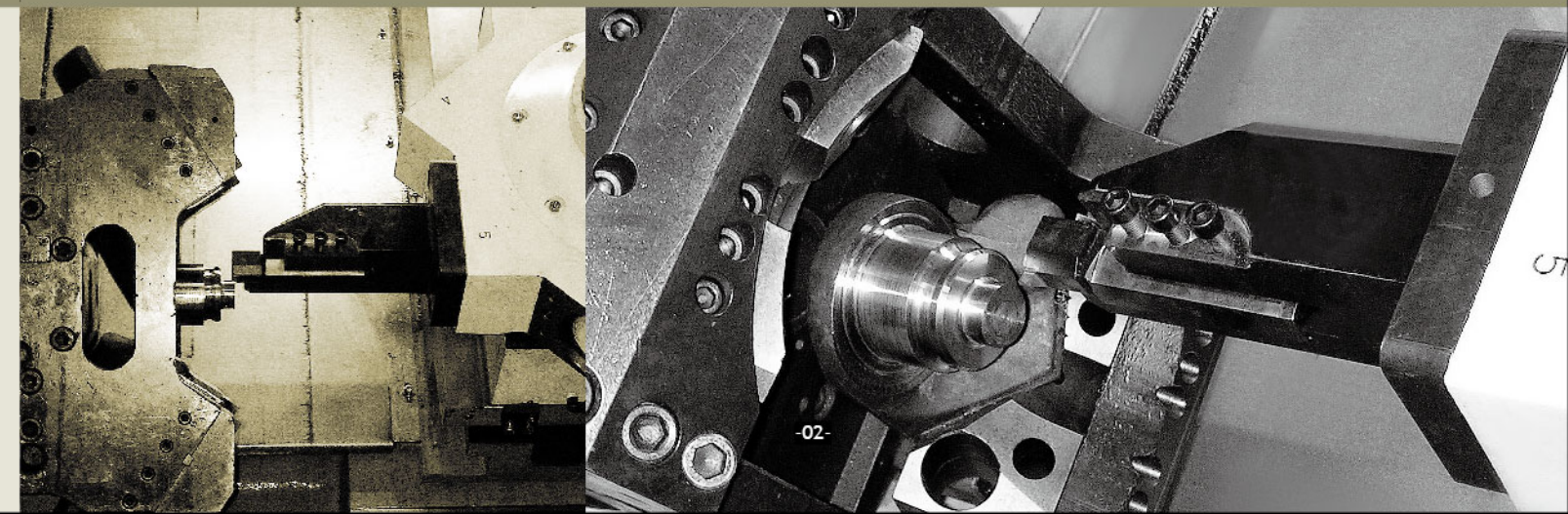
The LEADWELL LTC-60 series slant bed CNC turning centers are engineered for speed, precision, and enhanced productivity. You can depend on LEADWELL's LTC-60 series to operate reliably year after year. The rigid construction provides superior stability for heavy metal removal and excellent workpiece accuracy.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



The large workpiece capacity of the LTC-60 is ideal for heavy duty machining. This application uses special tooling used to machine large oil well drilling tools.

Innovative Design for Greater Capacity

- A large capacity CNC turning center with box ways on all axes.
- 21 inch chuck with large hole through spindle for 4.5 inch bar capacity - OPT. 7.125 inch bar capacity.
- Z-axis available up to 6,000 mm (236 inches) - excellent for machining long parts.
- 45 degree slant-bed provides maximum stability and rigidity.
- Extra powerful spindle motor 37 KW / 49.6 HP.



LEADWELL Guarantees Superior Stability and Accuracy

Massive Slant Bed Construction

LEADWELL turning centers are of rigid cast iron construction to give a superior machining accuracy for years to come. The 45-degree slant bed allows for 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.
- Isolated gear box.
- Standard H.T.D belt.

Encoder for Full C Axis Applications

Available as Live Tool or Non Live Tools

Rugged Tailstock

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



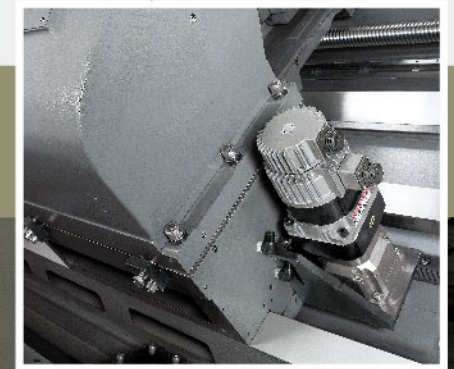
Headstock

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

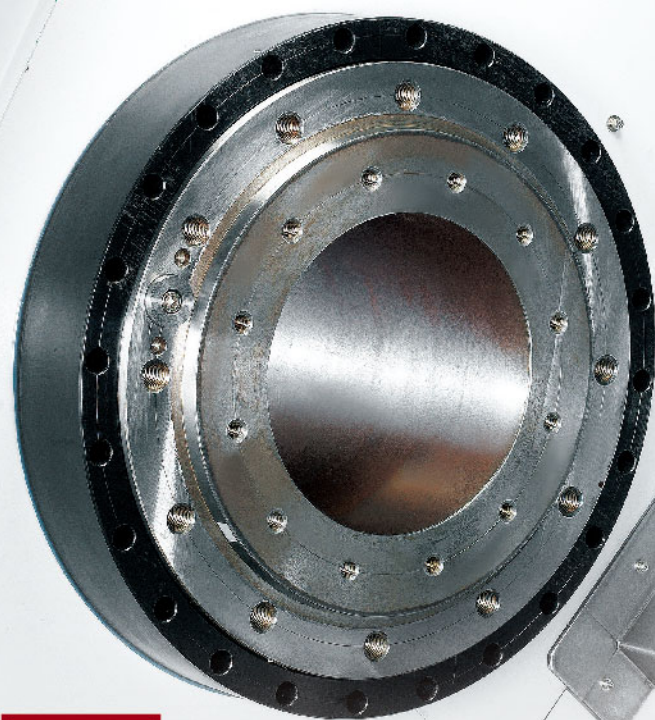
Extra Wide Span for Increased Stability

- The LTC-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.

Servo Motor Driven for Tailstock



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 the tool information to reduce tool setup time.



ø266mm (10.5") OPT.

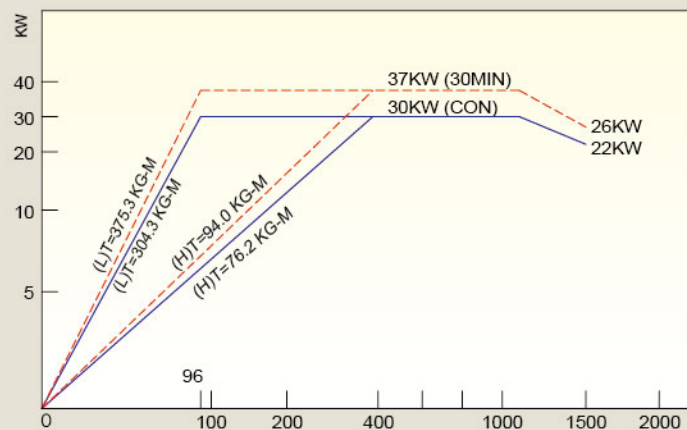
- Wide bearing spacing for high rigidity
- Special heat treatment for critical parts
- Highly accurate draw tube mechanism
- Precision Labyrinth seal
- Large diameter quill for high rigidity
- Optimum spacing of front bearings to spindle nose for highest rigidity

Precision Rigid Spindle

SPINDLE SPEED/OUTPUT DIAGRAM

SPINDLE SPEED (RPM)

30 15-1500RPM/ON MODEL LTC-60



FANUC 0i-TC



- Controlled axis
- Simultaneously controlled axes
- Least input increment
- Emergency stop
- Mirror image
- Follow up
- Servo off
- Backlash compensation
- Stored pitch error compensation
- DNC operation
- Manual reference position return
- Exact stop
- Rapid traverse override
- Automatic acceleration/deceleration
- Override cancel
- Tape code: EIA RS244 / ISO 840

- Label skip
- Optional block skip
- Decimal point programming
- Rotary axis designation
- Automatic coordinate system setting
- Workpiece coordinate system
- Programmable data input
- Rigid tapping
- Tool function
- Cutter compensation C
- Canned cycles
- Background editing
- Status display
- Clock function
- Self-diagnosis function
- Alarm display

- 8.4" color LCD
- Part program storage length: 640M
- Chinese language display
- Data service & CF card
- 10.4" color LCD (0i-C/18i-TB)
- Tool setter
- Remote MPG

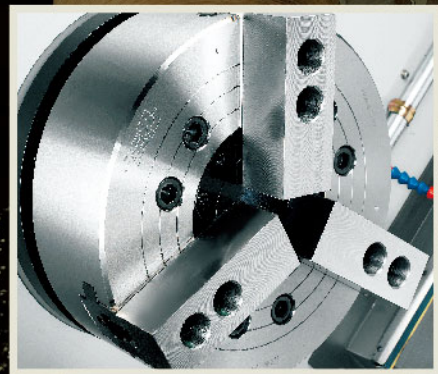
Quality Features Guarantee Greater Performance

High Chip Removal Rate - Easier Than Ever!

When your operations require higher efficiency to stay competitive, LEADWELL's LTC-60 can help you.

CUTTING TEST RESULTS

O.D. TURNING				
Cutting Feedrate M/min.	Cutting Depth mm.	Feedrate mm/rev.	Chip Removal Rate c.c./min.	Workpiece Material
180	11	0.35	1054.7	S45C
SLOT TINGON O.D.				
Cutting Feedrate M/min.	Slot Width mm.	Feedrate mm/rev.	Distance from Chuck Face	Workpiece Material
103.2	3	0.2	300 mm	S45C
DRILLING				
Cutting Feedrate M/min.	Hole Dia. mm.	Feedrate mm/rev.	Spindle Speedrpm	Workpiece Material
77.4	80	0.15	516	S45C

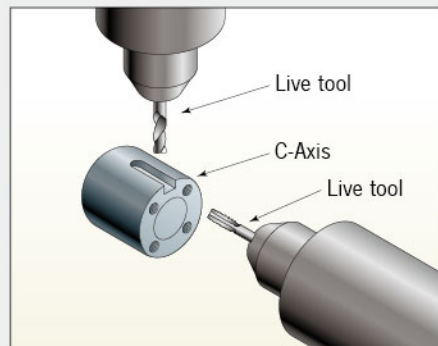


Chuck (STD.)

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

Live Tooling Option

The Live Tooling option turns the turret into multiple auxiliary spindles. The turret spindle supports milling, drilling, and tapping.



C-Axis Option

The headstock spindle becomes a fully programmable servo axis with the C-Axis option.

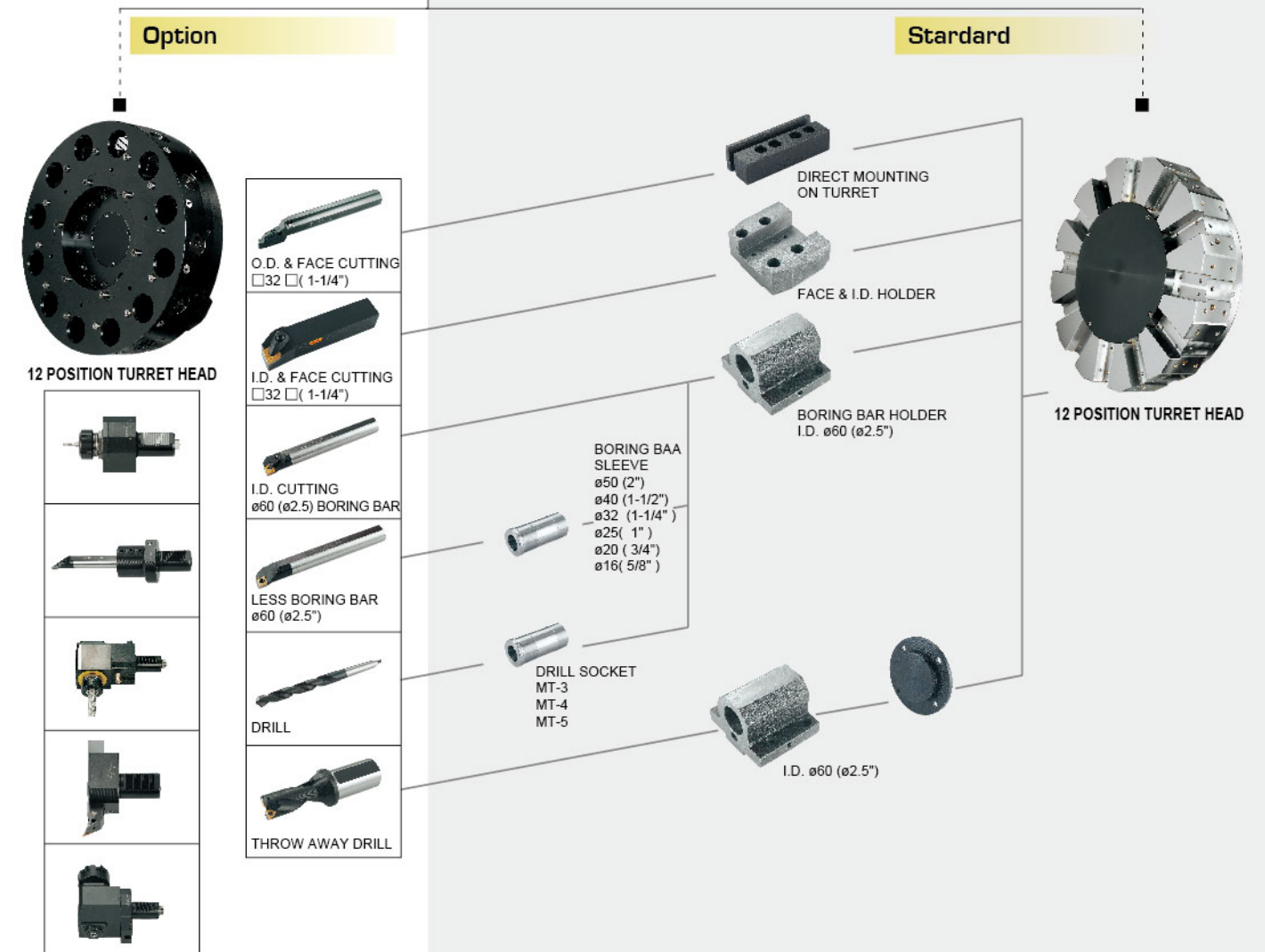
- C Axis index resolution: 0.04 degrees

By synchronizing the optional C Axis with the live tooling, machining of cylindrical cams and other complex work pieces becomes easy, saving time and money for each part. Switching between normal turning & synchronization with live tooling takes less than 1 second.

TOOLING SYSTEM

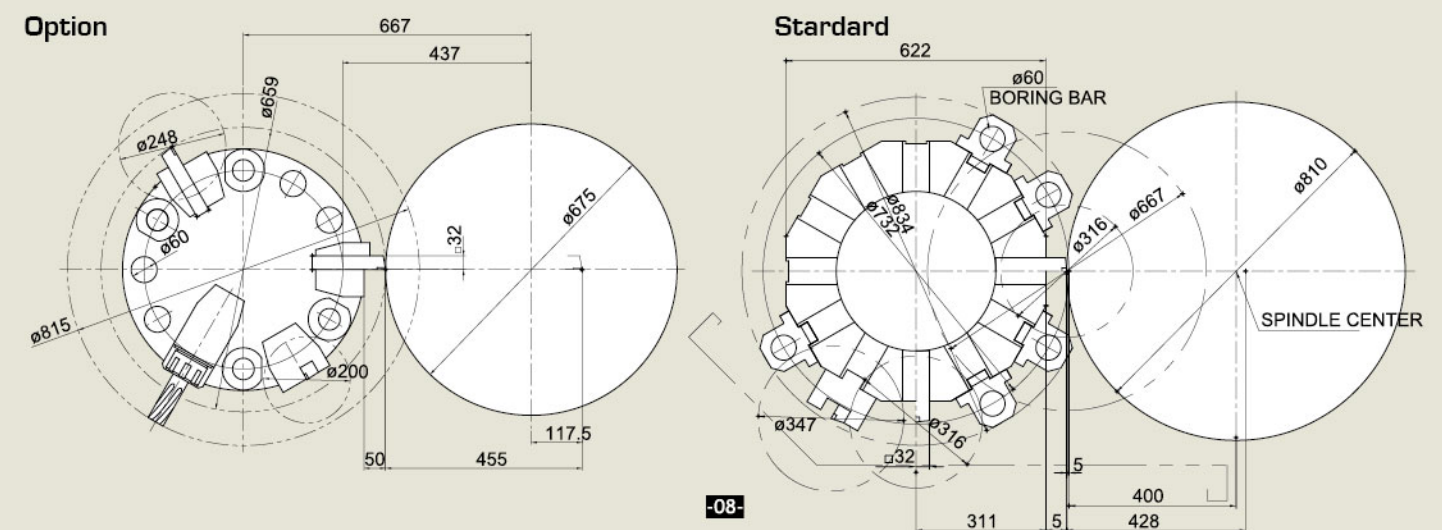
Heavy Duty Turret

The LTC-60 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.

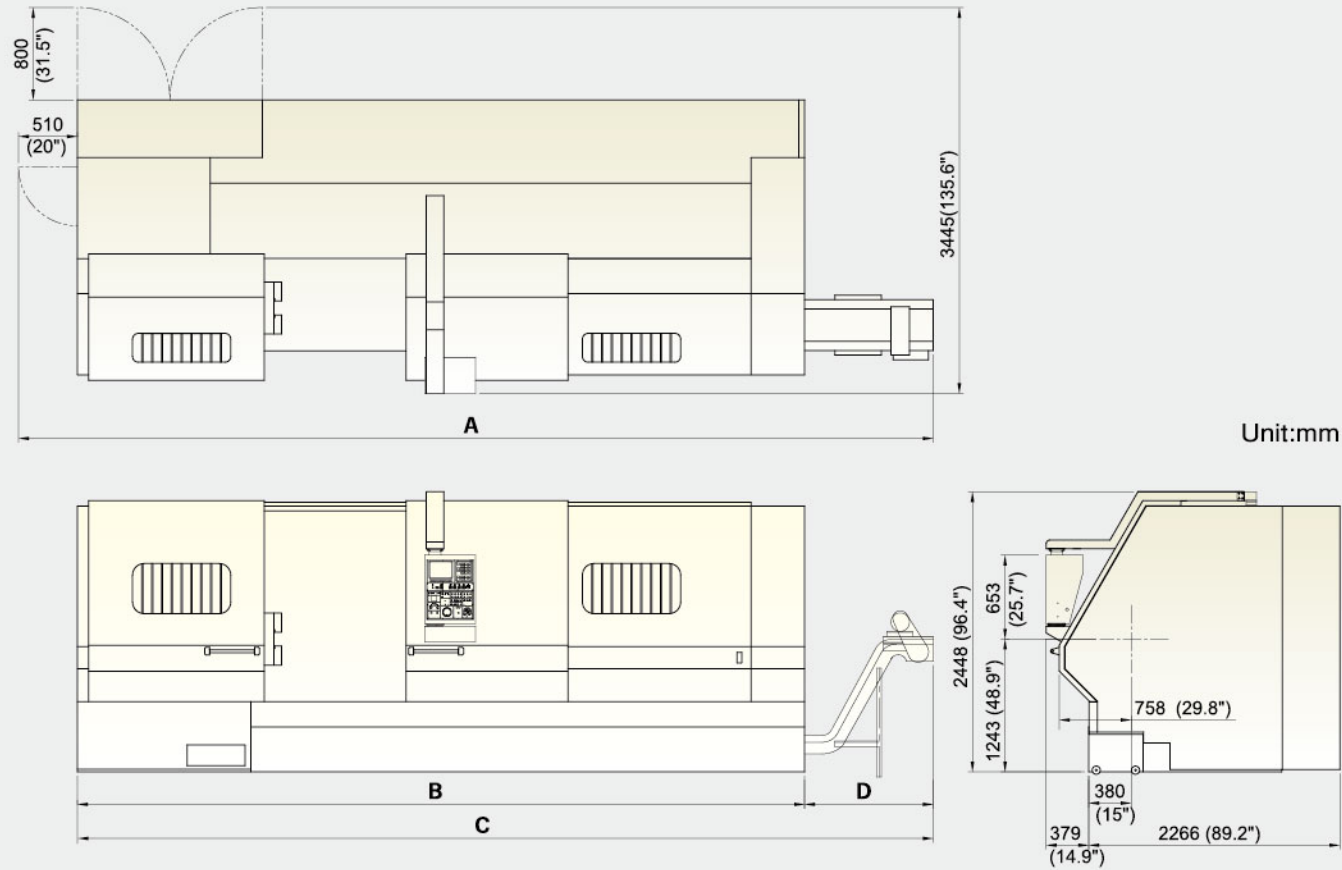


TOOLING INTERFERENCE

Unit:mm



MACHINE DIMENSIONS

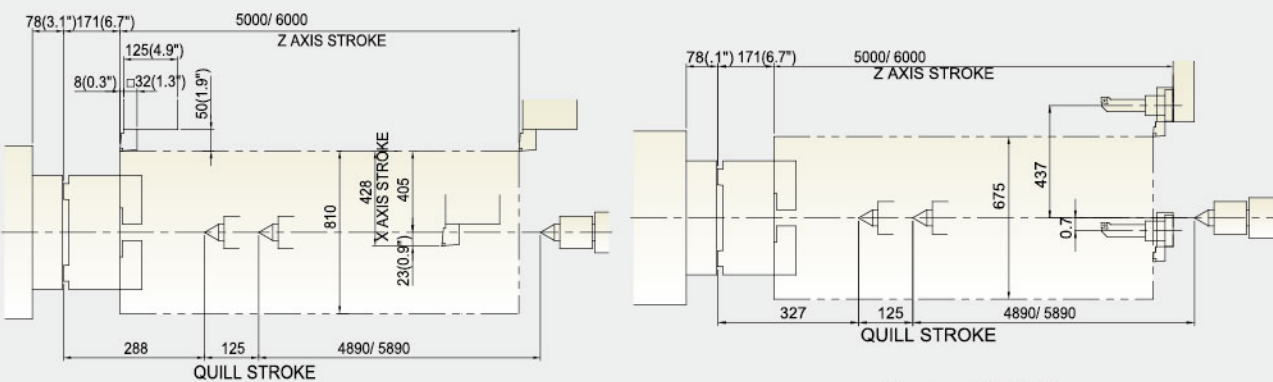


Unit:mm

MODE	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-60 CUTTING RANGE



Option:VDI 60

MACHINE SPECIFICATIONS

ITEM	MODEL	LTC-60 CXL/CXXL
CAPACITY		
Max. swing	mm (in)	1020 (40.2)
Swing over cross slide	mm (in)	920 (36.2)
Max. turning diameter	mm (in)	810 (31.9)
Max. turning length	mm (in)	5000/6000 (196.9/236.2)
Bar capacity	mm (in)	117 (4.6)
Max. workpiece weight (w/tailstock)	kg (lb)	4000 (8800)
TRAVEL		
X axis	mm (in)	405+23(15.9+0.9)
Z axis	mm (in)	5000/6000 (196.9/236.2)
SPINDLE		
Spindle speed range	rpm	1500
Chuck size	mm (in)	533.4 (21)
Spindle nose		A2-15
Hole through spindle	mm (in)	185 (7.125)
Spindle power	kW (HP)	37 (49.6)
Spindle torque	Kg-m	379.3
TURRET		
Number of tool		12
Shank height for square tools	mm (in)	32 (1.26)
Shank diameter for boring tools	mm (in)	60 (2.5)
Index time (adjacent tools)	sec	1.5
Index time (180)	sec	6.5
FEDRATE		
X axis rapid traverse	M/min(in/min)	10 (394)
Z axis rapid traverse	M/min(in/min)	12 (472)
TAILSTOCK		
Quill movement type		Servo+Gear
Quill stroke	mm (in)	125 (4.92)
Quill diameter	mm (in)	165 (6.4)
Quill inside taper	M.T.	6
MACHINE SIZE		
Power supply	KVA	70
Machine dimension (L)	mm (in)	9090/10205 (357.9/401.7)
Machine dimension (W)	mm (in)	2645 (104.1)
Machine dimension (H)	mm (in)	2448 (96.4)
Total machine weight	kg (lb)	27000/32000 (59400/70400)

STANDARD ACCESSORIES

- RS232 interface
- Fully enclosed guarding
- Work light
- Metric or inch tool disc
- Heat exchanger
- Leveling screws and pads
- Maintenance tool box
- Buzzer
- 3" jaw open center chuck
- Food peddle switch
- Programmable tailstock
- H.T.D belt
- Air conditioner in cabinet
- 2 speed gearbox
- Shower coolant system

OPTIONAL ACCESSORIES

- VDI tool disc
- Tool setter
- Status lights
- Tool tip air blow system
- High pressure coolant
- Oil mist collector
- Chip conveyor
- Chip bucket
- Manual steady rest
- Automatic hydraulic steady rest
- Linear scales
- Oil skimmer
- Transformer
- Spindle side coolant nozzle

HEAVY DUTY TURRET (OPT.)

LTC-60 CXL/CXXL		
TRAVEL	X axis	437+18 (17.2+1)
	Shank height for square tools	VDI ø60
TURRET	Shank diameter for boring tools	VDI ø60
	Index time (adjacent tools)	1.3
	Index time (180)	3.18 VDI ø60