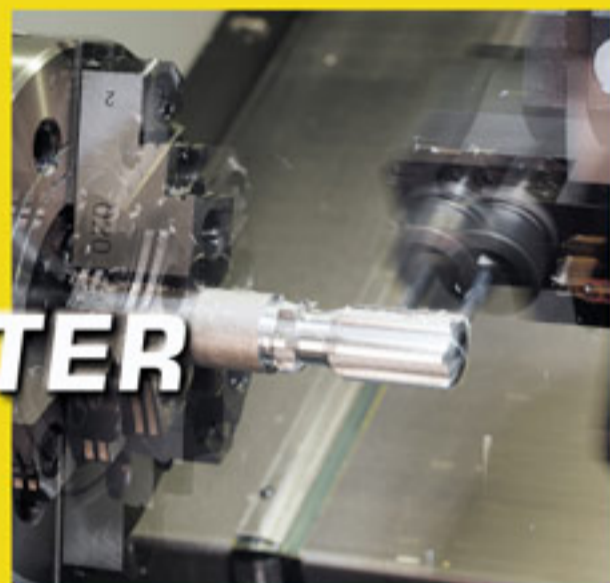


LEADWELL
LEADWELL CNC MACHINES MFG., CORP.

LTC-20
CNC TURNING CENTER





Bar Feeder (optional)

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.

Features

- Convenient parameter setting when workpiece size is changed.
- Remote controller provides convenient running testing and adjustment.
- Self detection for abnormal motions is displayed on the LCD.
- Self detection for stock that is too short.

Specifications:

Bar Diameter Range	Ø5 - Ø65 mm.
Max. Bar Length	1,550 mm. (Bar length depends on spindle length.)
Max. Spindle Length	1,500 mm.
Loading Capacity	Ø65 mm x 10 pcs

Unmatched Capability

Get the Competitive Edge with
LEADWELL'S NEW LTC-20 Turning Center

Extra Wide Box Ways on
X- and Z-axes for Heavy Duty Machining.



Machine Enclosure

The machine is fully enclosed with splash-guards and way covers.

CE approved guarding option includes tempered glass for the operator window.

- *Chip conveyor is optional.*

Unmatched Dependability

COOLANT HOLE THROUGH SPINDLE

51 mm. (Model LTC-20A)

65 mm. (Model LTC-20B, LTC-20BM)

HEAVY CUTTING CAPACITY

O.D. Turning : 704 c.c./min.

Drilling : 500 c.c./min.

MORE POWERFUL SPINDLE DRIVE (0i-TC)

15 kw/20 HP Spindle motor.

MAXIMUM VERSATILITY

- Designed for parts and bar stock machining.
- C-axis is optional.

RAPID TRAVERSES

20 M/min. on X- and Z-axes.



High Chip Removal Rate

Compact Construction but with Greater Capacity than Competitive Models

Built for extra high production, the LEADWELL LTC-20 series Turning Center allows increased heavy cuts and feeds. Its unsurpassed capability and powerful drive give you the high productivity and accuracy that you've been looking for.



Cutting Tests Reports

O.D. TURNING

Cutting Feedrate M/min.	Cutting Depth mm.	Feedrate mm/rev.	Chip Removal Rate c.c./min.	Workpiece Material
200	8	0.4	704	Mild Carbon Steel S45C

SLOTING ON O.D.

Cutting Feedrate M/min.	Slot Width mm.	Feedrate mm/rev.	Distance from Chuck Face	Workpiece Material
100	5	0.08	320	Mild Carbon Steel S45C

DRILLING

Cutting Feedrate M/min.	Hole Dia. mm.	Feedrate mm/rev.	Spindle Speed rpm	Workpiece Material
157	50	0.15	750	Chrome-Molybdenum SCM 440

Why Does the Leadwell LTC-20 Present

Leadwell Applies Advanced Concepts to Create Perfection in Structural Design.

- Leadwell uses only top quality, well-ribbed castings.
- Advanced Finite Elements Analysis (FEA) is used for analyzing new castings 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.

Headstock

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

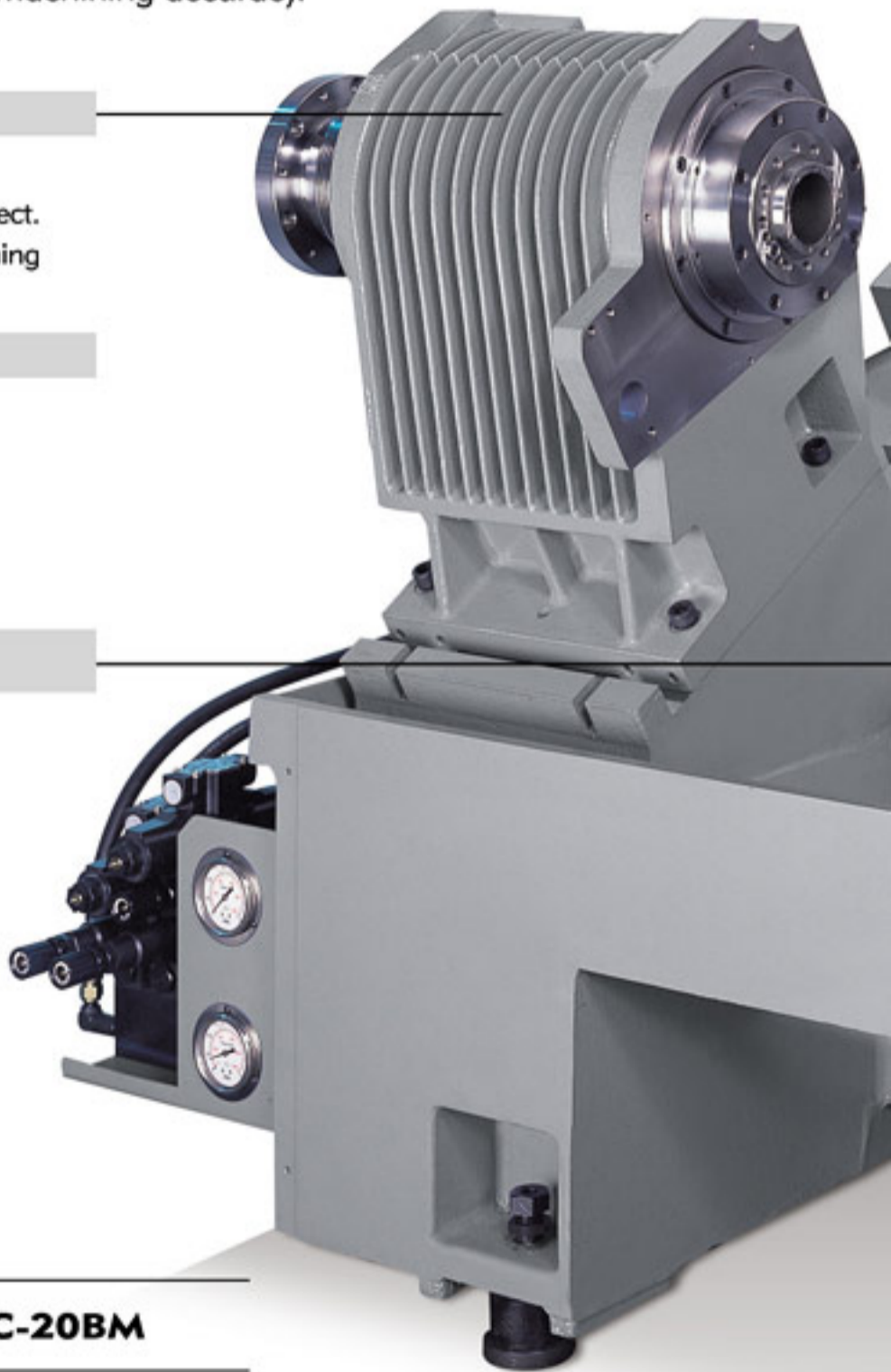
Extra Wide Span For Increased Stability

- The LTC series utilizes oversized box ways for high horse power machining. The extremely rigid body base frame with the box ways provides outstanding stability for precision turning.

30° Massive Slant Bed

Easy Chip Disposal

- The 30° degree slant bed design allows chips to fall directly into the chip tank, avoiding accumulation inside the machine.
- The chip tank employs large wheels, making it easy to move for chip removal and cleaning.
- Chain-type chip conveyor (optional) available on all models.



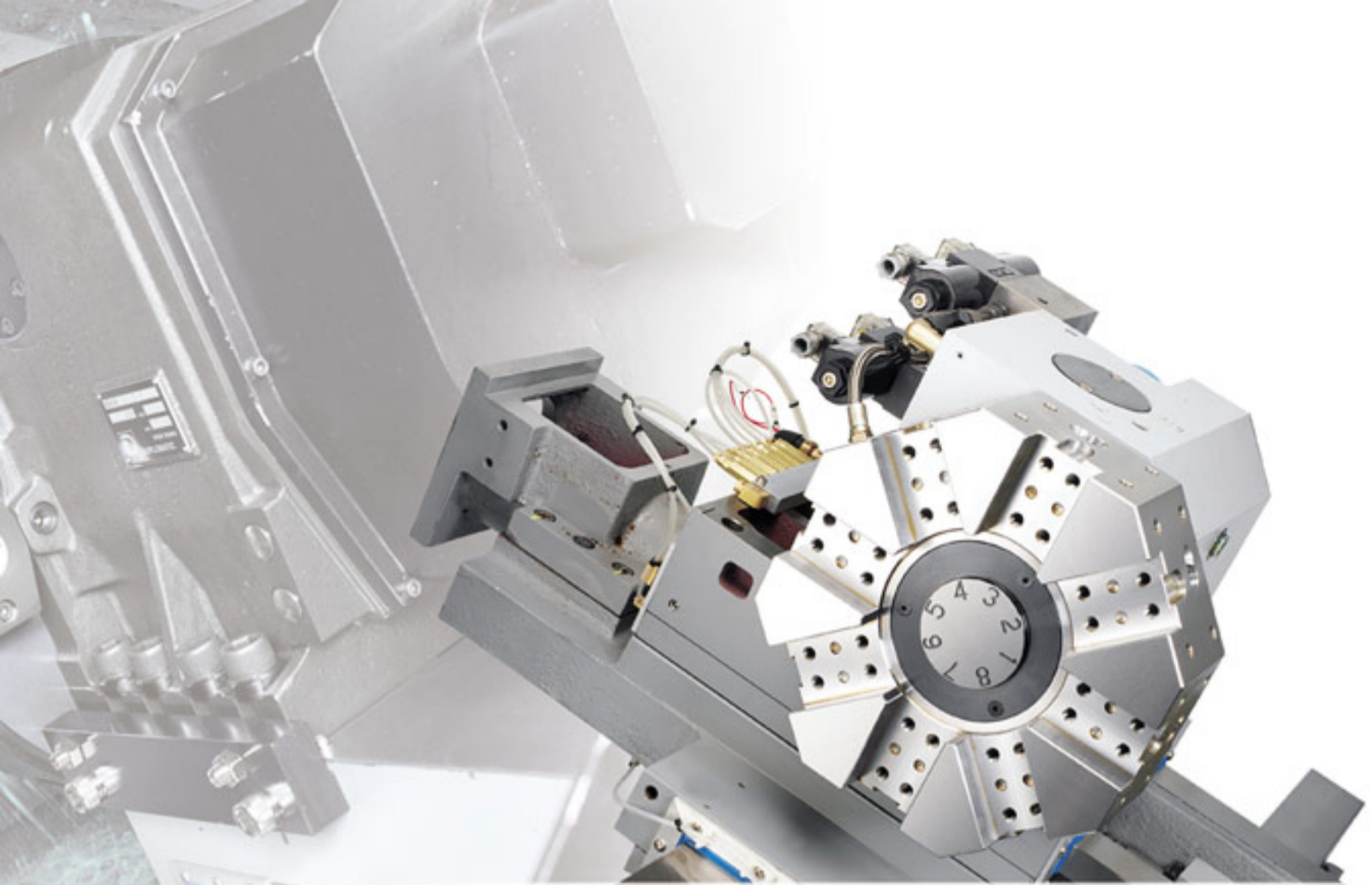
TRAVEL	LTC-20 (A,B)	LTC-20BM
X axis	160+10 mm (6.2"+0.39")	160+7.5 mm (6.2"+0.29")
Z axis	540 mm (21")	540 mm (21")

Such Exceptional Stability and Rigidity?



Picture Shown: LTC-20A

Leadwell <5



Heavy Duty Turret

The LTC Series Turret features 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 a 0.25 second station-to station indexing time.



Precision Scraping

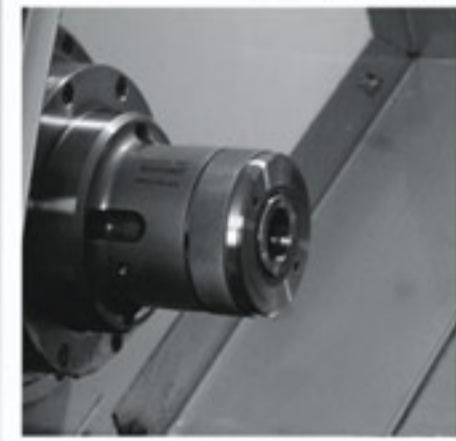
The slideways on the Leadwell LTC-20 are precision scraped using fine craftsmanship to create extremely smooth movement.

Rigid Headstock (LTC-20B)

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



Precision, Rigid Spindle



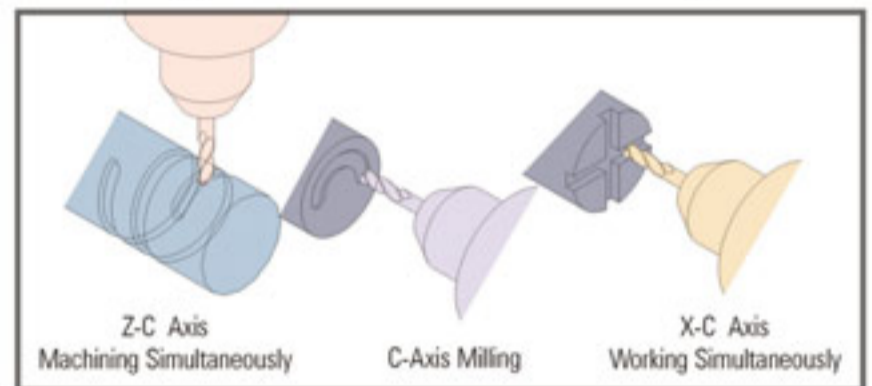
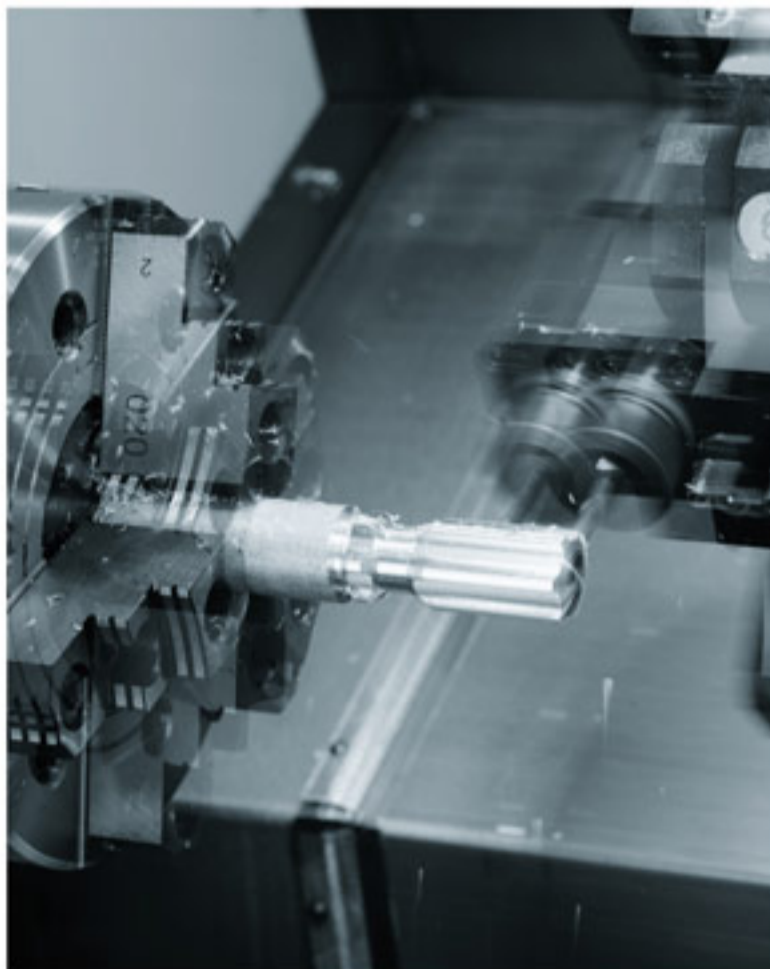
Collet Chuck (optional)

The spindle is available to mount with a collet chuck, providing faster chucking for bar stock. Various sizes of collet are supplied upon customers' request.



- Leadwell produces a superior spindle. Built with high precision P4 grade bearings, the one-piece cartridge ensures precise alignment for smooth, run-out free operation.
- The massive headstock, rigid spindle and superior bearing design along with high RPM, all facilitate heavy stock removal and precision tolerances.
- Both the headstock and spindles are machined in a temperature-controlled environment and are assembled in a clean room.

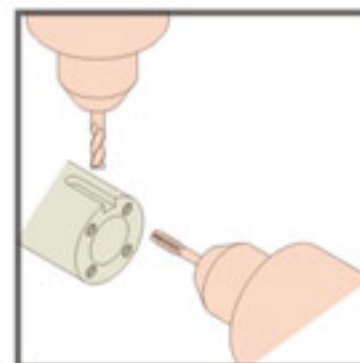
With C-axis to Achieve Versatility and Productivity



C-AXIS

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

- C-axis index resolution: 0.001 °.



Live Tooling Option

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

High Productivity Options

MULTI-PROCESSING OPTIONS

Most turned parts require additional machining procedures such as milling, drilling, tapping, etc. Leadwell offers two options that turn their CNC lathes into multi-process turning centers. These options provide the benefits of a lathe, plus the extra versatility of a machining center. This allows faster production times and higher efficiency - all in one package.

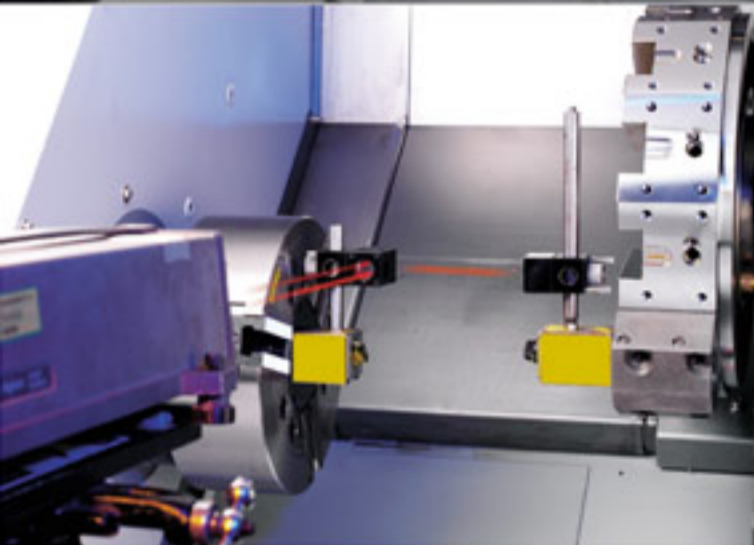


Tool Setter (Optional)

The tool setter has a touch sensor that can measure varying tool lengths and detect broken tools. It can be easily programmed to store all the tool information to reduce tool change time.

Parts Catcher (optional)

- Leadwell unique parts catcher improves productivity with the bar feeder option.
- The parts catcher automatically rotates to position under the finished part and transfers it outside the operator door. This eliminates the need to stop the machine and retrieve the finished parts.



LASER INSPECTION

An advanced laser instrument is employed for inspecting and compensating linear accuracy and pitch error. This assures optimum axis travel accuracy.

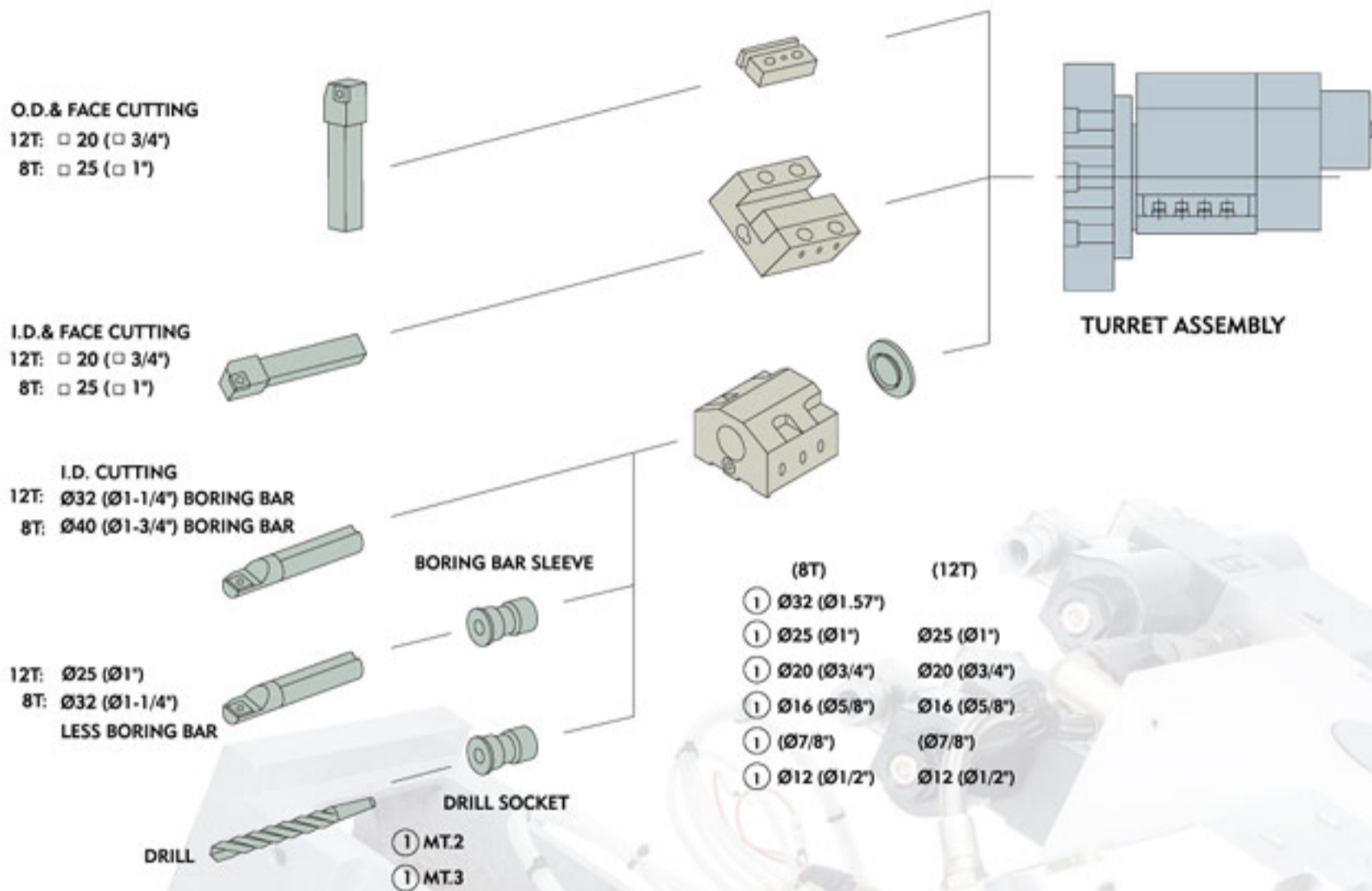


Hydraulic Tailstock

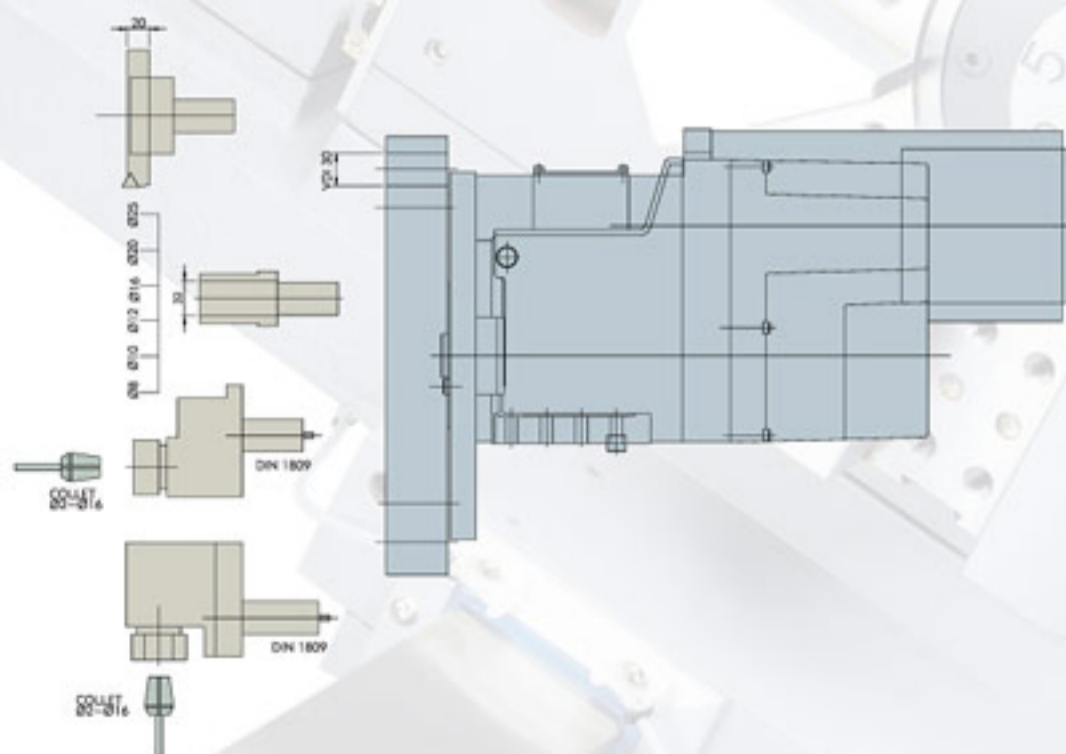
- The heavy duty tailstock is fastened to the lower guide of the machine base. The heavy casting, large diameter quill and precision Morse taper center provide outstanding rigidity. The quill adjustment is hydraulically operated for convenience.
- Programmable tailstock is optional.
- Rotary tailstock is optional.



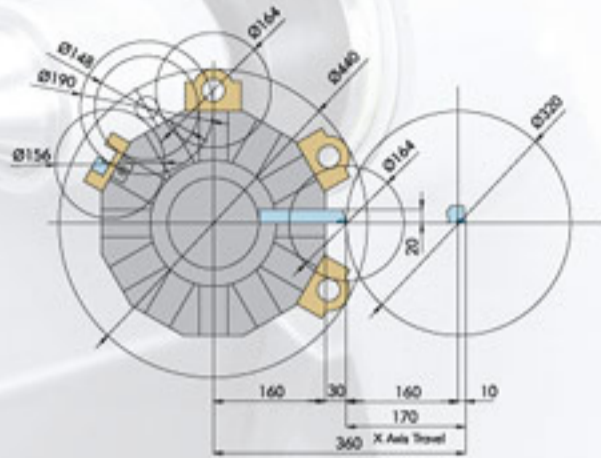
Tooling System



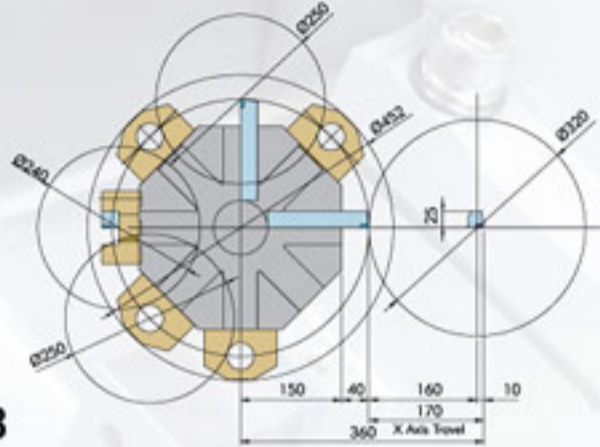
Power Tooling System



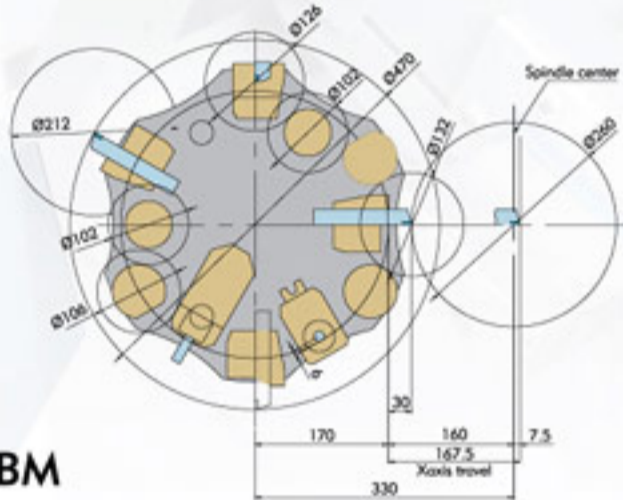
Tooling Interference



LTC-20A

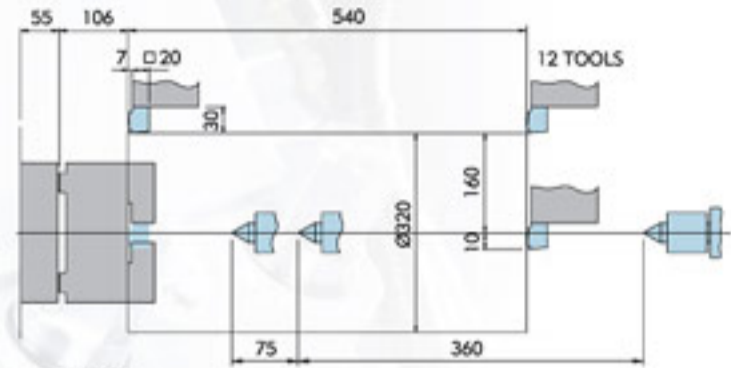


LTC-20B

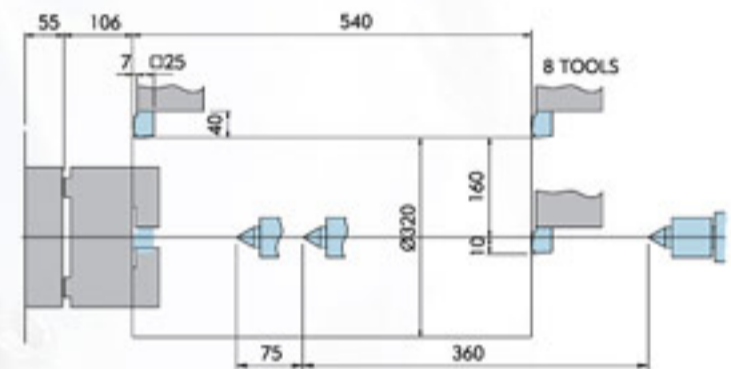


LTC-20BM

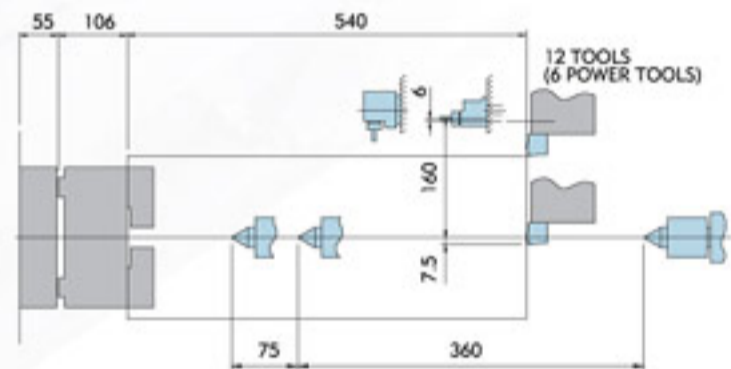
Working Capacity



LTC-20A

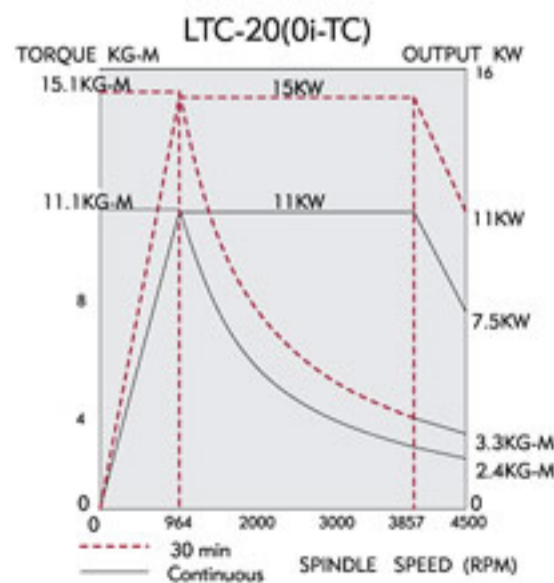
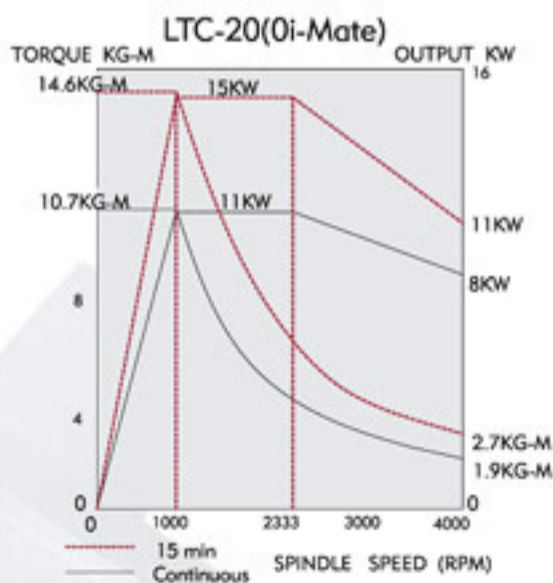


LTC-20B



LTC-20BM

Spindle Speed/Output Diagram



Machine Specifications

CAPACITY	LTC-20A	LTC-20B
Max. swing	Ø450mm (17.7")	Ø450mm (17.7")
Swing over cross slide	Ø322mm (12.6")	Ø322mm (12.6")
Max. turning diameter	Ø320mm (12.5")	Ø320mm (12.5")
Max. turning length	500mm (19.6")	500mm (19.6")
Bar capacity	Ø51mm (2")	Ø65mm (2.5")
Max. workpiece weight (with tailstock)	115 kg	115 kg
TRAVEL		
X axis	160+10mm (6.2+0.39")	160+10mm (6.2+0.39")
Z axis	540mm (21")	540mm (21")
SPINDLE		
Spindle speed range	4000 rpm	4000 rpm (opt.)
Chuck size	6"	8"
Type of spindle nose	A2-5	A2-6
Through spindle hole diameter	Ø62mm (2.4")	Ø76mm (2.9")
Spindle motor power	15KW (20HP)	15KW (20HP)
TURRET		
Number of tool stations	12	8
Shank height for square tool	□ 20mm (0.75")	□ 25mm (1")
Shank diameter for boring bar	Ø32mm (1.25")	Ø40mm (1.5")
Turret indexing time (one tool)	0.4 sec	0.4 sec
Turret indexing time (180 deg)	1.4 sec	1.4 sec
Rotary tool spindle speed range: Axis units	–	–
Rotary tool spindle speed range: Rad. units	–	–
Rotary tool motor power	–	–
FEEDRATE		
X axis rapid traverse	20000mm (788") /min	20000mm (788") /min
Z axis rapid traverse	20000mm (788") /min	20000mm (788") /min
TAILSTOCK		
Quill movement type	Hydraulic	Hydraulic
Quill stroke	75mm (3")	75mm (3")
Quill diameter	Ø75mm (3")	Ø75mm (3")
Quill inside taper	4 M.T.	4 M.T.
MACHINE SIZE		
Power supply	30 KVA	30 KVA
Total machine weight	3500 kg	3700 kg
Machine dimension (H)	2420mm (95.3")	2420mm (95.3")
Machine dimension (L)	1580mm (62.2")	1580mm (62.2")
Machine dimension (W)	1710mm (68")	1710mm (68")

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

Machine Dimensions

LTC-20BM

Ø450mm (17.7")
 Ø322mm (12.6")
 Ø260mm (10.23")
 450mm (17.7")
 Ø65mm (2.5")
 115 kg

160+7.5mm (6.2+0.29")
 540mm (21")

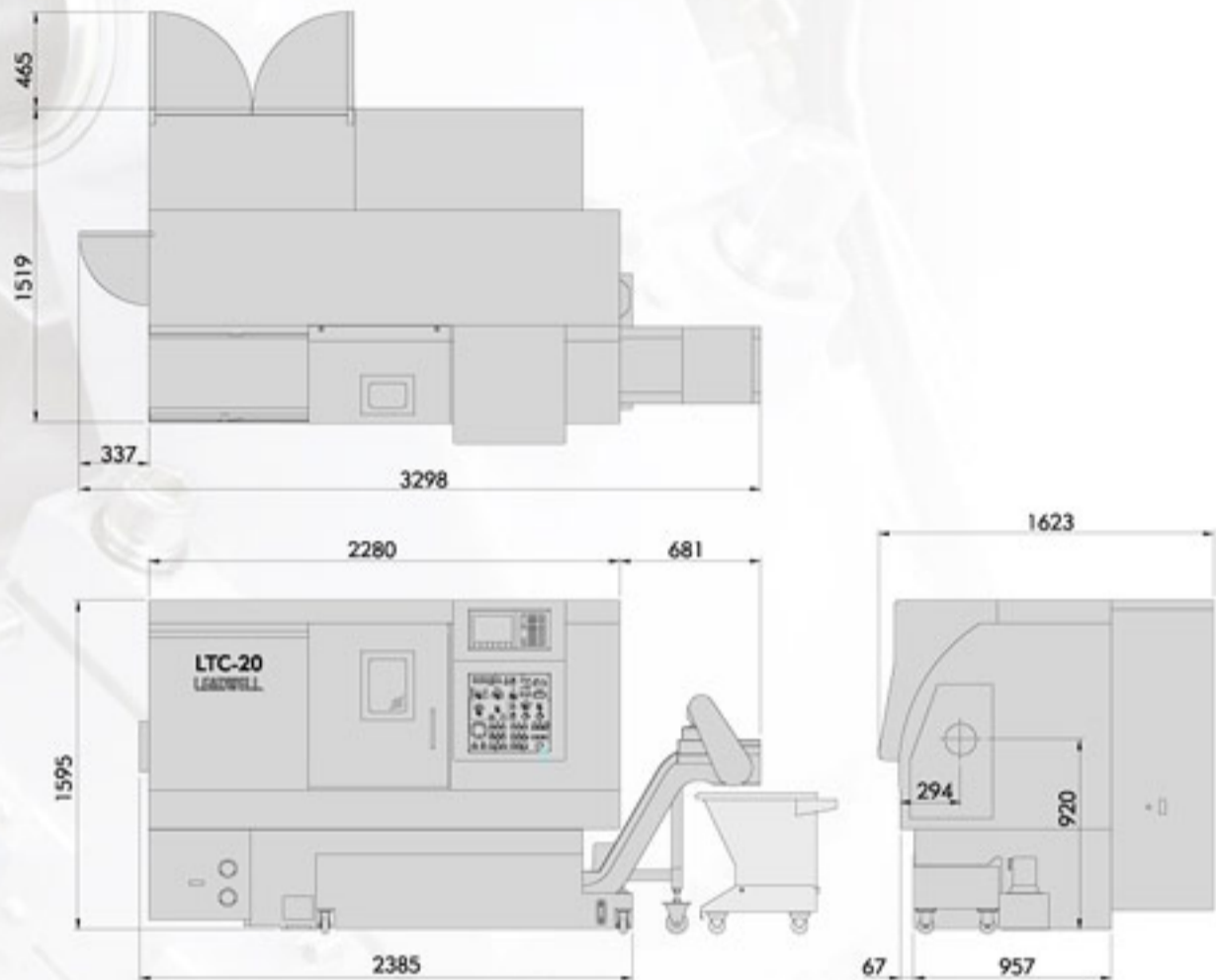
4000 rpm
 8"
 A2-6
 Ø76mm (2.9")
 15KW (20HP)

12 (6 live tools)
 VDI 30 □ 20mm (0.78")
 VDI 30 □ 32mm (1.25")
 0.23 sec
 0.7 sec
 6000 rpm
 6000 rpm
 3.7 kw (5.0HP)

20000mm (788") /min
 20000mm (788") /min

Hydraulic
 75mm (3")
 Ø75mm (3")
 4 M.T.

30 KVA
 3900 kg
 2420mm (95.3")
 1580mm (62.2")
 1710mm (68")



Standard Accessories

- Chuck
- Chuck cylinder
- Soft jaw
- Hard jaw
- Face & I..D. holder (M)
- O.D. holder
- Clamping block & clamping gib (M)
- Level block
- Foot switch
- Tool box
- Boring bar holder Ø20 / Ø25 / Ø32
- Boring bar sleeve MT#2, MT#3,
- Heat exchanger

Optional Accessories

- Throw-away drill holder
- Holder cover
- Throw-away drill socket Ø20 / Ø25 / Ø32
- Boring bar sleeve Ø8 / Ø10 / Ø12
- Chip conveyor
- Bucket tank
- Programmable tailstock
- Steady rest
- Alarm lamp

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