

**LEADWELL**  
LEADWELL CNC MACHINES MFG., CORP.

# *LTC-25i Series*

**CNC TURNING CENTERS**

## The Ultimate in Performance

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



# LTC-25i Series

## The Best Way for Productivity and Profitable Production

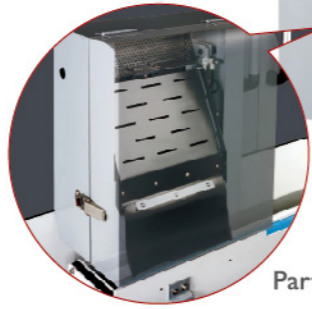
LEADWELL LTC series slant bed CNC turning center is designed and engineered to operate efficiently and precisely with virtually minimum trouble.

When you place a LEADWELL LTC series turning center in your workshop, you will obtain maximum dependability for operational performance year after year.

Compared to the competing models, the LEADWELL LTC series features higher stability in construction. This means absolutely minimized vibration.

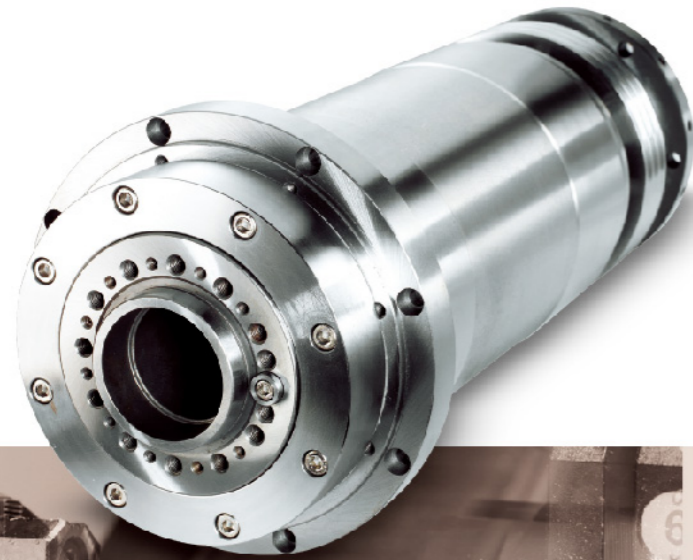
In addition, higher metal removing rate and accuracy are designed into each model in LTC-25i series.

Our objective is to keep your business staying competitive and creating profits.

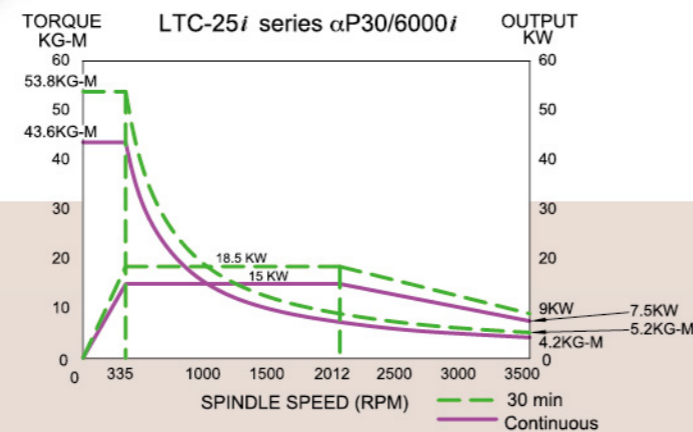


Parts catcher and parts conveyor

Chip conveyor option



### SPINDLE SPEED/OUTPUT DIAGRAM



### CARTRIDGE TYPE SPINDLE

- The heavy-duty spindle utilizes FAG or NSK ABEC-7 bearings to support heavy cutting.
- 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
- All of which produces better part finish in less time.

### MACHINE ENCLOSURE

- LTC-25i series machine are fully enclosed with splash guards and way covers.
- CE approved guarding is also available as an option.

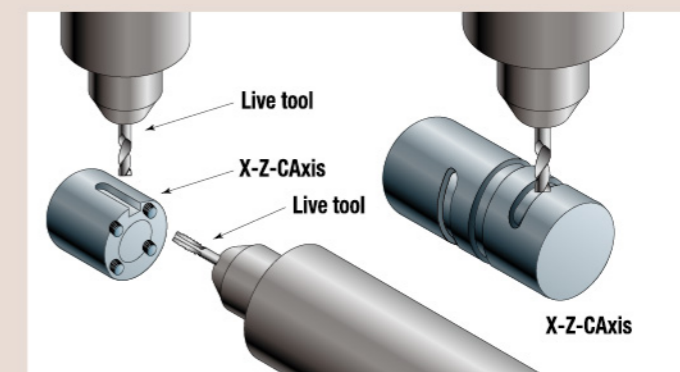
The majority of all turned parts require additional machining (milling, drilling and tapping). LEADWELL's LTC-25iLM provides this capability.

### C-AXIS SERVO OPTION

- A precision position encoder is attached to the high-performance spindle motor. This provides bidirectional spindle control. Precision grooving and rigid tapping can be easily done when the spindle position is then synchronized with the Z-axis motion.
- C-axis positioning resolution is 0.001 degrees
  - C-axis rapid rate is 40 RPM
- Switching between normal turning and synchronization

### LTC-25iM/iLM/iXXLM/iLVM WITH C-AXIS SERVO OPTION

By synchronizing the live tool turret and the C-axis; the LTC-25iM/iLM/iXXLM/iLVM can machine complex cams and slots on both the sides and end of parts. It can also drill and tap holes on both the sides and the end of parts.

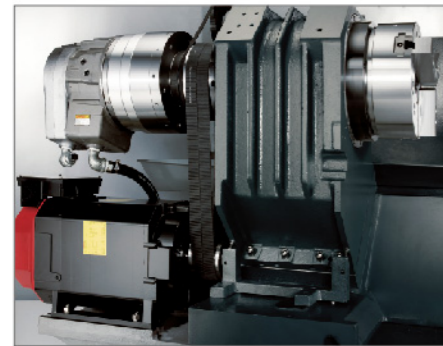


# LTC-25i Series

## Rigid Construction

### SUPERIOR CONSTRUCTION

- All major components of LTC-25i series turning centers are cast iron which has 10 times the dampening capacity of steel resulting in superior cutting performance.
- Castings are well ribbed based on Finite Element Analysis (FEA) for the size and location to ensure high torsional stiffness and minimum vibration
- 45° slant bed combines superior machining accuracy with easy access to the workpiece.



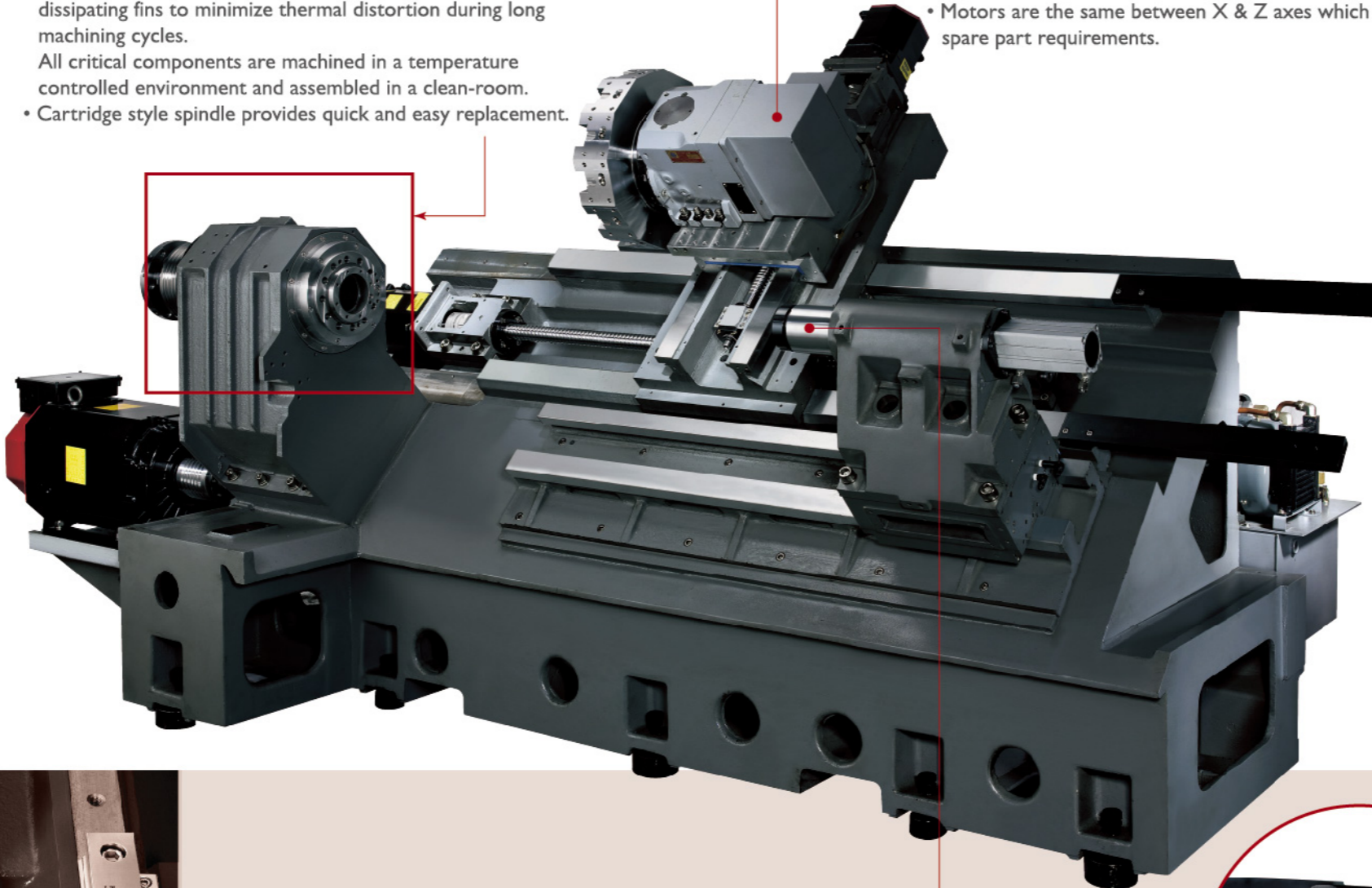
• A2-11 12" chuck 103mm spindle bore (option)

### HEADSTOCK

- Heavy duty thermally symmetrical headstock design has heat dissipating fins to minimize thermal distortion during long machining cycles.
- All critical components are machined in a temperature controlled environment and assembled in a clean-room.
- Cartridge style spindle provides quick and easy replacement.



OPT: Power turret EWS BMT-65



### DIRECTLY COUPLED SERVO MOTORS

The LTC-25i series servo motors are connected directly to the ball screws with rigid shaft couplings. These couplings ensure that even under severe loading from sharp corner machining, precise interpolation is achieved. This design is superior to both belt driven and flexible shaft coupling designs.

- LTC-25i series motors have 1,000,000 pulse encoders for high accuracy positioning of linear axes
- Motors are the same between X & Z axes which reduces spare part requirements.

### DOUBLE-NUT BALL SCREWS

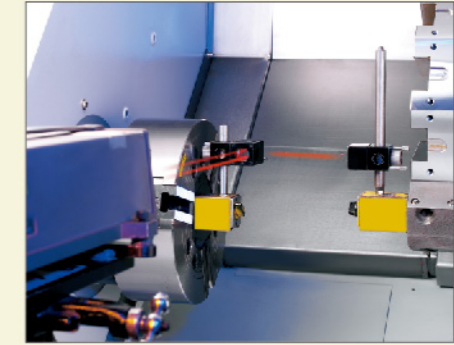
LEADWELL uses only premium quality preloaded double-nut ball screws on the machines. Each ball screw is accurately aligned parallel to the linear guide ways and anchored at both ends. They are then pre-tensioned to improve machine stiffness and reduce thermal growth. With this design they exceed customer requirements for accuracy and maximum life.

### TAILSTOCK

- Heavy duty tailstock with large diameter quill and precision Morse taper provide outstanding rigidity.
- Quill adjustment is hydraulic

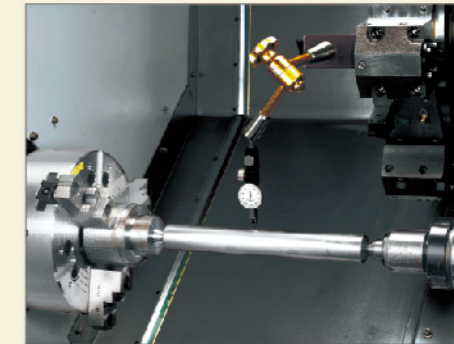


## High Quality Assurance



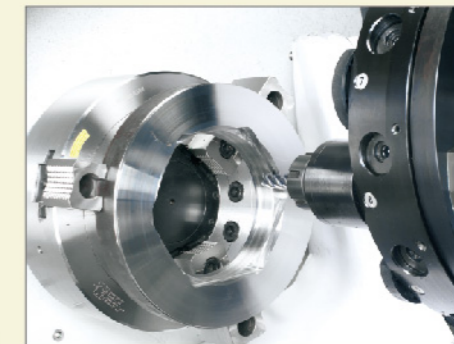
### LASER CALIBRATION

- Lasers are used to measure the positioning accuracy of every machine over the full travel of each axis. Leadwell uses these measurements to compensate any axis error so that each machine meets the high accuracy requirements.
- Each machine is shipped with a positioning accuracy chart.



### MACHINE GEOMETRIC CHECKING

Precision indicators are used to verify that spindle run-out and headstock to tailstock alignment meet all specifications.



### CUTTING AND COOLANT TESTING

Each machine must complete rigorous cuttings test to ensure machine integrity. Coolant tests guarantee that all components are working properly and that machine 100% leak proof.

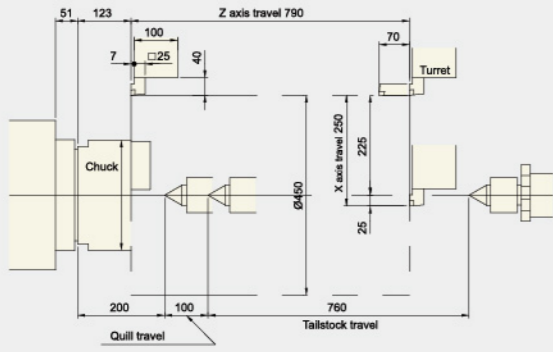
### 48 HRS NON-STOP RELIABILITY TEST

Each machines is cycled for 48 hrs to help ensure the highest reliability

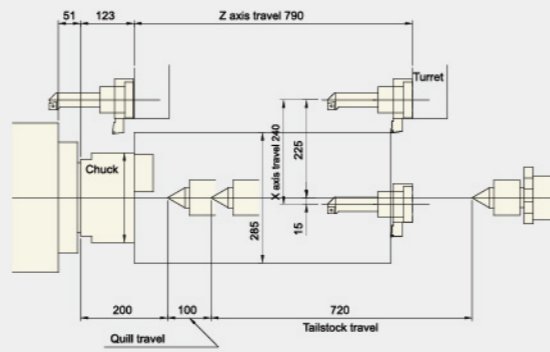
# Working Capacity

Unit:mm

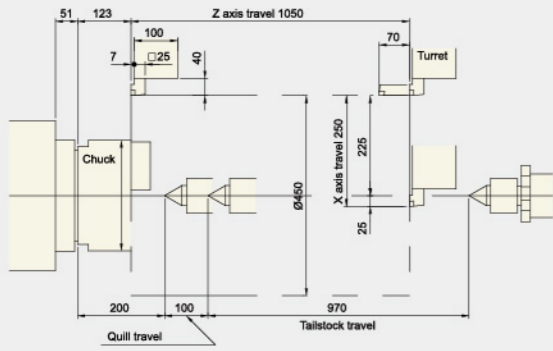
**LTC-25i**



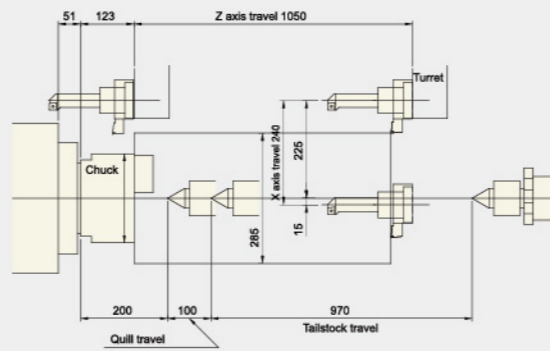
**LTC-25iM**



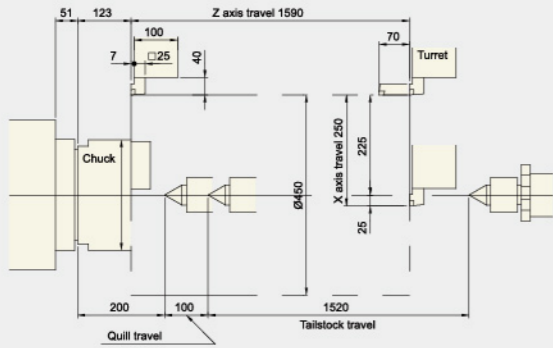
**LTC-25iL**



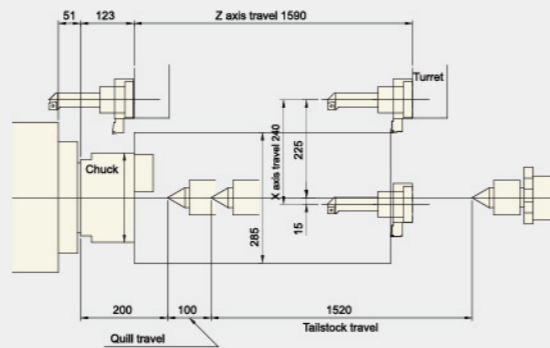
**LTC-25iLM**



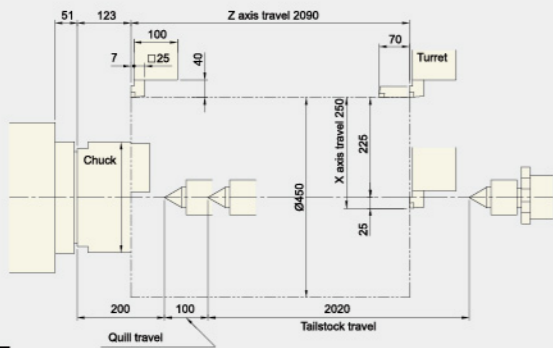
**LTC-25iXXL**



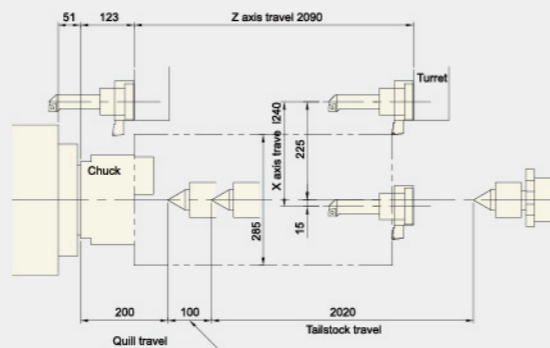
**LTC-25iXXLM**



**LTC-25iLV**



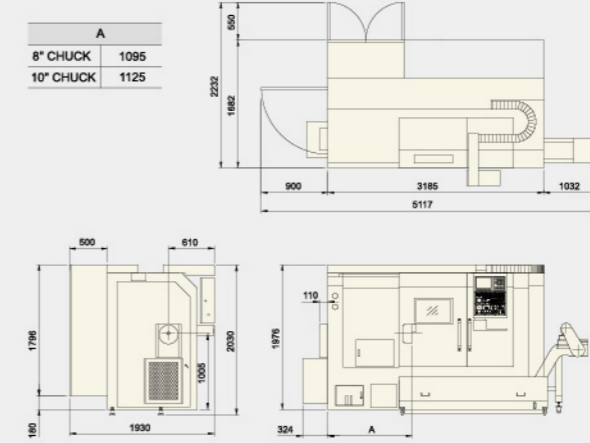
**LTC-25iLVM**



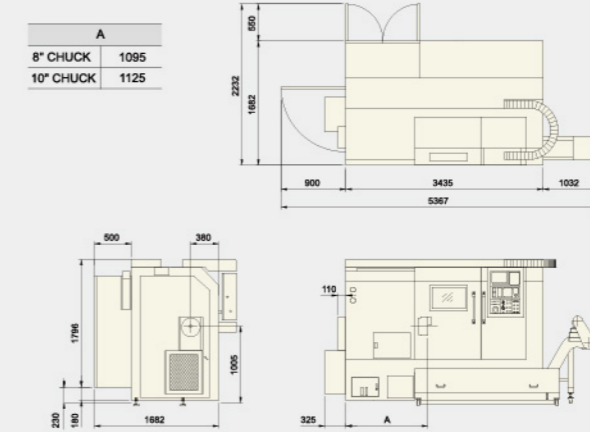
# Machine Dimensions

Unit:mm

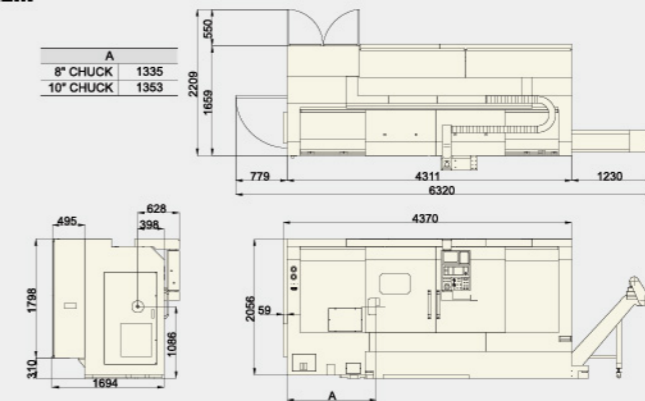
**LTC-25i / LTC-25iM**



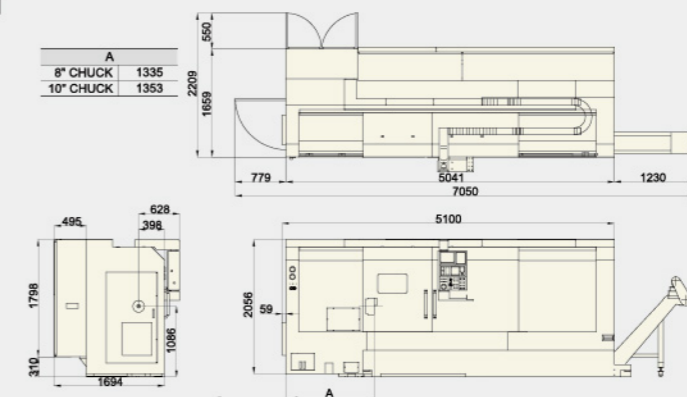
**LTC-25iL / LTC-25iLM**



**LTC-25iXXL / LTC-25iXXLM**



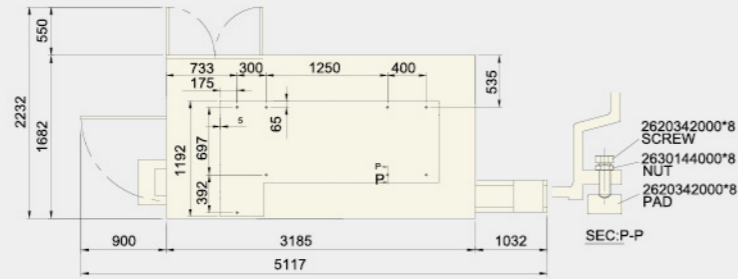
**LTC-25iLV / LTC-25iLVM**



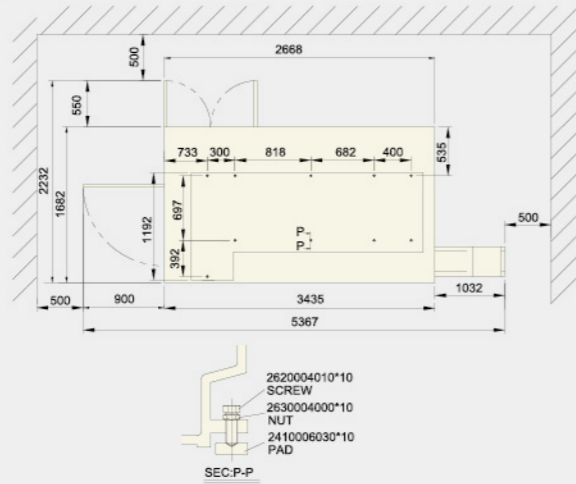
# Foundation Drawing

Unit:mm

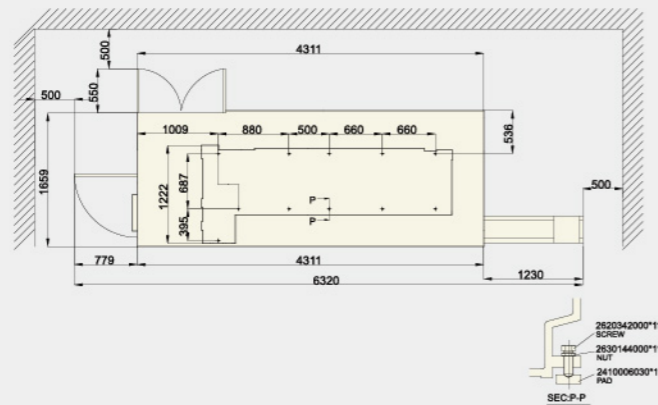
LTC-25i / LTC-25iM



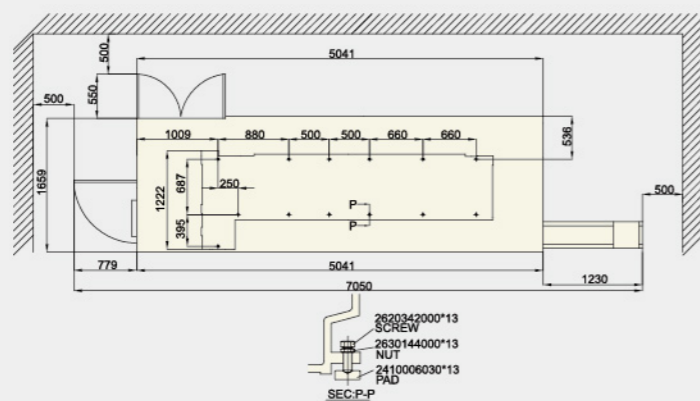
LTC-25iL / LTC-25iLM



LTC-25iXXL / LTC-25iXXLM



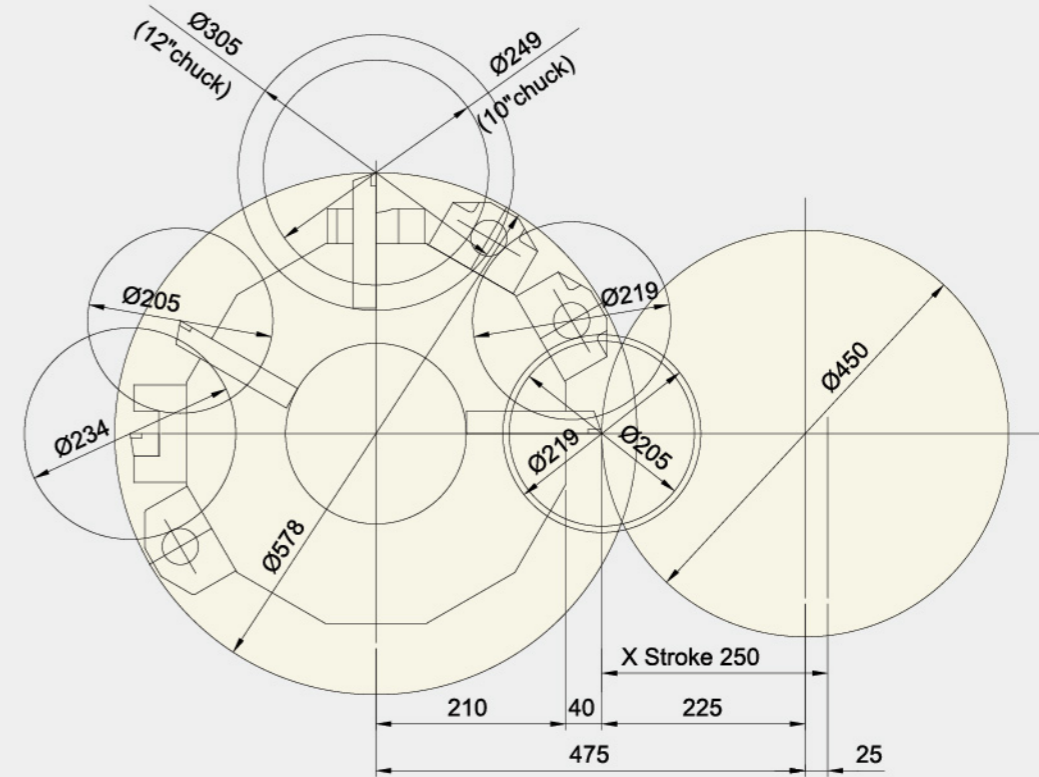
LTC-25iLV / LTC-25iLVM



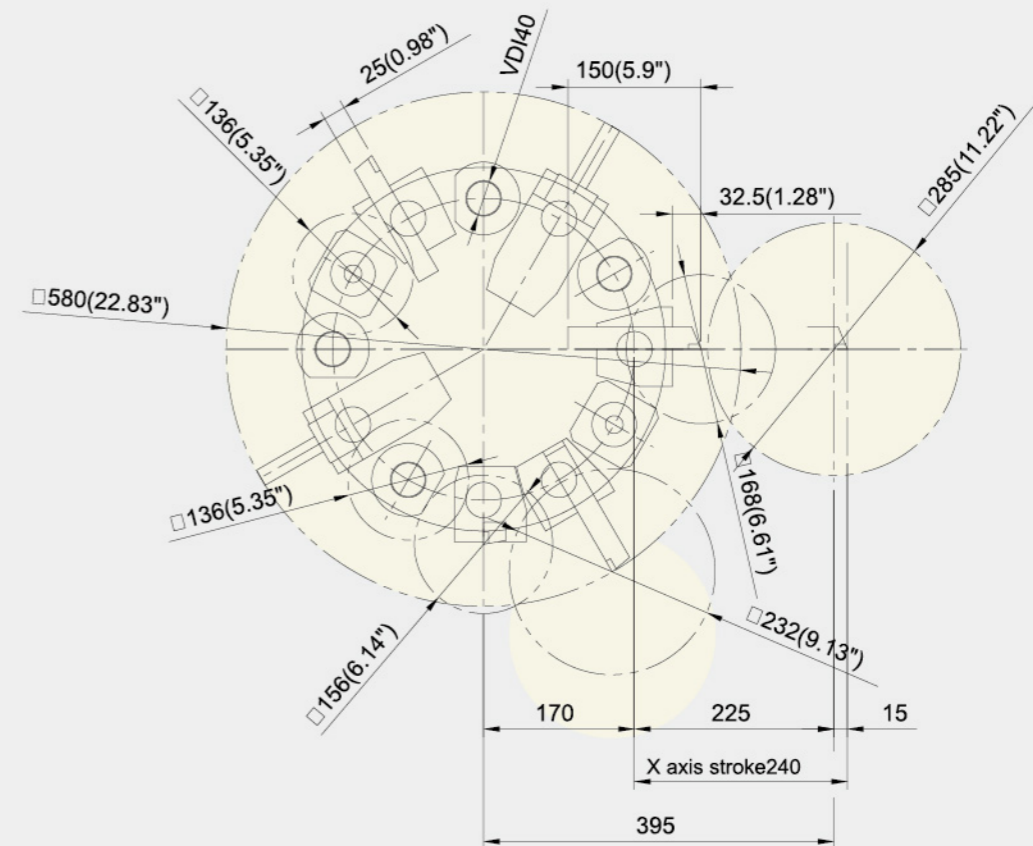
# Tooling interference

Unit:mm

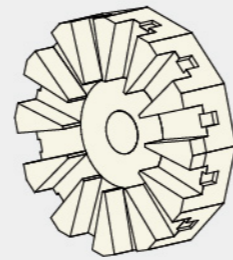
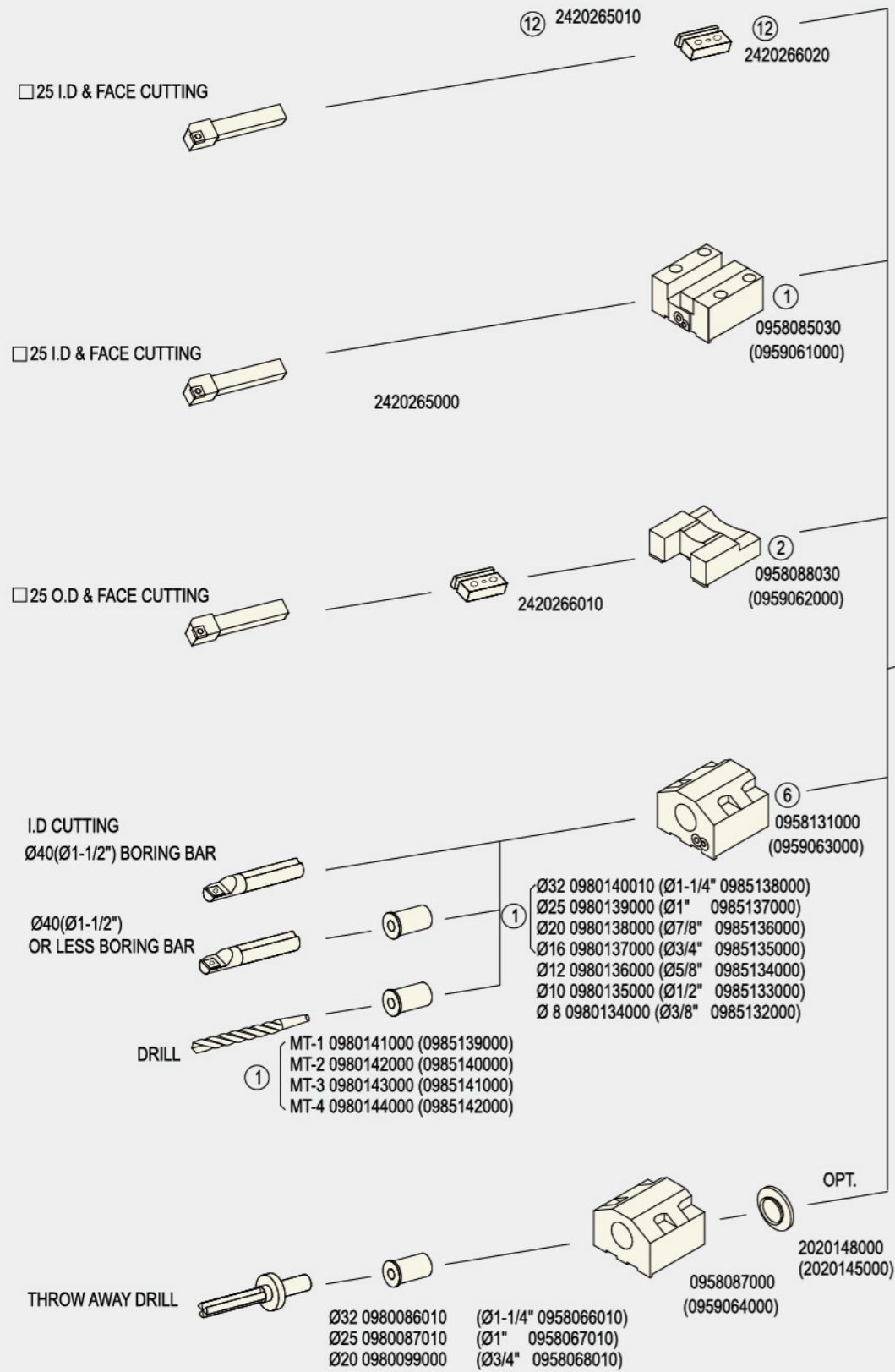
LTC-25i / LTC-25iL / LTC-25iXXL / LTC-25iLV



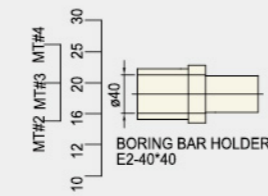
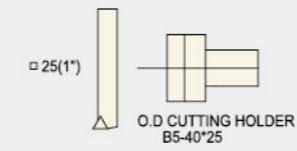
LTC-25iM / LTC-25iLM / LTC-25iXXLM / LTC-25iLVM



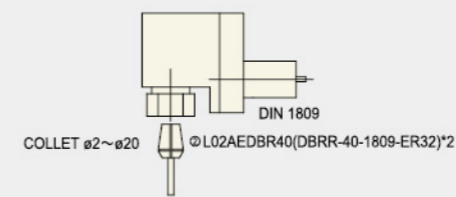
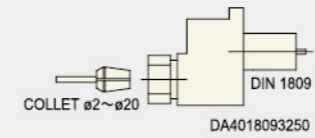
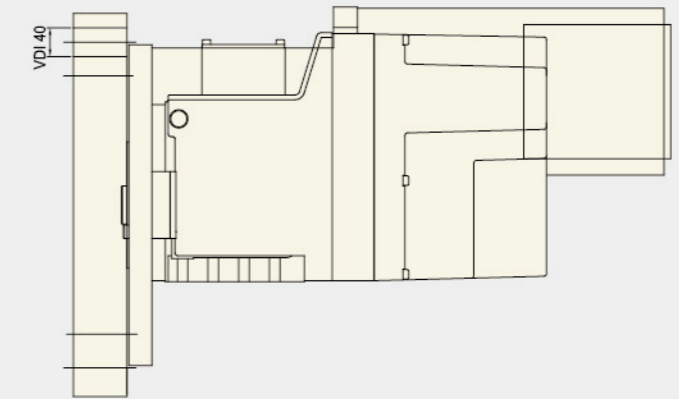
## LTC-25i / LTC-25iL / LTC-25iXXL / LTC-25iLV



## LTC-25iM / LTC-25iLM / LTC-25iXXLM / LTC-25iLVM



○ : NO OF STANDARD SET  
 DIN 69880 40



# Machine Specifications

| ITEM                          | MODEL       | LTC-25i          | LTC-25iM                   |
|-------------------------------|-------------|------------------|----------------------------|
| <b>CAPACITY</b>               |             |                  |                            |
| Max swing                     | Unit        |                  |                            |
|                               | mm (in)     | ø670 (26.3")     | ø637 (25")                 |
| Max turning diameter          | mm (in)     | ø450 (17.7")     | ø285 (11.2")               |
| Max turning length            | mm (in)     | 760 (29.9")      | 745 (29.3")                |
| Bar capacity                  | mm (in)     | ø77 (3")         | ø77 (3")                   |
| <b>TRAVEL</b>                 |             |                  |                            |
| X axis                        | mm (in)     | 225+25 (8.8"+1") | 225+15 (8.8+0.5)           |
| Z axis                        | mm (in)     | 790 (31.1")      | 790 (31.1")                |
| <b>SPINDLE</b>                |             |                  |                            |
| Spindle speeds range          | rpm         | 3500             | 3500                       |
| Chuck size                    | mm (in)     | 254 (10")        | 254 (10")                  |
| Spindle nose                  |             | A2-8             | A2-8                       |
| Spindle motor power           | kW (HP)     | 18.5 (24.8)      | 18.5 (24.8)                |
| <b>TURRET</b>                 |             |                  |                            |
| Number of tool stations       | pcs         | 12               | 12                         |
| Shank height for square tool  | mm (in)     | □25 (1")         | 25(1") VDI40 / BMT65 OPT   |
| Shank diameter for boring bar | mm (in)     | ø40 (1.5")       | 40(1.5") VDI40 / BMT65 OPT |
| <b>FEEDRATE</b>               |             |                  |                            |
| X axis rapid traverse         | M/min (ipm) |                  | 15(590.5)                  |
| Z axis rapid traverse         | M/min (ipm) |                  | 20(787.4)                  |
| <b>FEED MOTORS</b>            |             |                  |                            |
| X axis motor                  | kW (HP)     |                  | 3(4)                       |
| Z axis motor                  | kW (HP)     |                  | 4(5.4)                     |
| <b>TAILSTOCK</b>              |             |                  |                            |
| Quill diameter                | mm (in)     | ø100(3.9")       | ø100(3.9")                 |
| Quill inside taper            | M.T         | 5                | 5                          |
| <b>MACHINE SIZE</b>           |             |                  |                            |
| Total machine weight          | kg          | 6000             | 6200                       |
| Machine length                | mm (in)     |                  | 3905(153.7)                |
| Machine width                 | mm (in)     | 1930 (76")       | 1930 (76")                 |
| Machine height                | mm (in)     |                  | 1980(78)                   |
| Power requirement             | KVA         | 40               | 40                         |
| Computer control              | FANUC       | 0i-T             | 0i-T                       |

## STANDARD ACCESSORIES

- Metric disc
- Manual tailstock
- Buzzer
- Heat exchanger
- Full enclosed splash guard
- 3 jaw open center chuck
- Foot switch
- Wide angle V-belt
- VDI disc (For LTC-25iM)

## OPTIONAL ACCESSORIES

- Inch disc
- Tool setter
- Programmable Tailstock
- Manual steady rest
- Hydraulic steady rest
- Alarm lamp
- Air conditioner
- Bar feeder
- Auto door
- Spindle air outer blow
- High pressure pump
- Chip conveyer
- Chip bucket
- Two speed gearbox
- Collect chuck
- Mist separator
- Oil skimmer
- H.T.D belt
- Transformer
- EWS Turret BMT-65

# Machine Specifications

| ITEM                          | MODEL       | LTC-25iL         | LTC-25iLM                  |
|-------------------------------|-------------|------------------|----------------------------|
| <b>CAPACITY</b>               |             |                  |                            |
| Max swing                     | Unit        |                  |                            |
|                               | mm (in)     | ø670 (26.3")     | ø637 (25")                 |
| Max turning diameter          | mm (in)     | ø450 (17.7")     | ø285 (11.2")               |
| Max turning length            | mm (in)     | 1020 (40.1")     | 1005 (39.5")               |
| Bar capacity                  | mm (in)     | ø77 (3")         | ø77 (3")                   |
| <b>TRAVEL</b>                 |             |                  |                            |
| X axis                        | mm (in)     | 225+25 (8.8"+1") | 225+15 (8.8+0.5)           |
| Z axis                        | mm (in)     | 1050 (41.3")     | 1050 (41.3")               |
| <b>SPINDLE</b>                |             |                  |                            |
| Spindle speeds range          | rpm         | 3500             | 3500                       |
| Chuck size                    | mm (in)     | 254 (10")        | 254 (10")                  |
| Spindle nose                  |             | A2-8             | A2-8                       |
| Spindle motor power           | kW (HP)     | 18.5 (24.8)      | 18.5 (24.8)                |
| <b>TURRET</b>                 |             |                  |                            |
| Number of tool stations       | pcs         | 12               | 12                         |
| Shank height for square tool  | mm (in)     | □25 (1")         | 25(1") VDI40 / BMT65 OPT   |
| Shank diameter for boring bar | mm (in)     | ø40 (1.5")       | 40(1.5") VDI40 / BMT65 OPT |
| <b>FEEDRATE</b>               |             |                  |                            |
| X axis rapid traverse         | M/min (ipm) |                  | 15(590.5)                  |
| Z axis rapid traverse         | M/min (ipm) |                  | 20(787.4)                  |
| <b>FEED MOTORS</b>            |             |                  |                            |
| X axis motor                  | kW (HP)     |                  | 3(4)                       |
| Z axis motor                  | kW (HP)     |                  | 4(5.4)                     |
| <b>TAILSTOCK</b>              |             |                  |                            |
| Quill diameter                | mm (in)     | ø100(3.9")       | ø100(3.9")                 |
| Quill inside taper            | M.T         | 5                | 5                          |
| <b>MACHINE SIZE</b>           |             |                  |                            |
| Total machine weight          | kg          | 6500             | 6700                       |
| Machine length                | mm (in)     |                  | 4155(163.6)                |
| Machine width                 | mm (in)     | 1930 (76")       | 1930 (76")                 |
| Machine height                | mm (in)     |                  | 1980(78)                   |
| Power requirement             | KVA         | 40               | 40                         |
| Computer control              | FANUC       | 0i-T             | 0i-T                       |

## STANDARD ACCESSORIES

- Metric disc
- Manual tailstock
- Buzzer
- Heat exchanger
- Full enclosed splash guard
- 3 jaw open center chuck
- Foot switch
- Wide angle V-belt
- VDI disc (For LTC-25iLM)

## OPTIONAL ACCESSORIES

- Inch disc
- Tool setter
- Programmable Tailstock
- Manual steady rest
- Hydraulic steady rest
- Alarm lamp
- Air conditioner
- Bar feeder
- Auto door
- Spindle air outer blow
- High pressure pump
- Chip conveyer
- Chip bucket
- Two speed gearbox
- Collect chuck
- Mist separator
- Oil skimmer
- H.T.D belt
- Transformer

## Machine Specifications

| ITEM                          | MODEL       |      | LTC-25iXXL       | LTC-25iXXLM                |
|-------------------------------|-------------|------|------------------|----------------------------|
| <b>CAPACITY</b>               |             | Unit |                  |                            |
| Max swing                     | mm (in)     |      | ø670 (26.3")     | ø637 (25")                 |
| Max turning diameter          | mm (in)     |      | ø450 (17.7")     | ø285 (11.2")               |
| Max turning length            | mm (in)     |      | 1520(59.8)       | 1505(59.3)                 |
| Bar capacity                  | mm (in)     |      | ø77 (3")         | ø77 (3")                   |
| <b>TRAVEL</b>                 |             |      |                  |                            |
| X axis                        | mm (in)     |      | 225+25 (8.8"+1") | 225+15 (8.8+0.5)           |
| Z axis                        | mm (in)     |      | 1550(61)         |                            |
| <b>SPINDLE</b>                |             |      |                  |                            |
| Spindle speeds range          | rpm         |      | 3500             | 3500                       |
| Chuck size                    | mm (in)     |      | 254 (10")        | 254 (10")                  |
| Spindle nose                  |             |      | A2-8             | A2-8                       |
| Spindle motor power           | kW (HP)     |      | 18.5 (24.8)      | 18.5 (24.8)                |
| <b>TURRET</b>                 |             |      |                  |                            |
| Number of tool stations       | pcs         |      | 12               | 12                         |
| Shank height for square tool  | mm (in)     |      | □25 (1")         | 25(1") VDI40 / BMT65 OPT   |
| Shank diameter for boring bar | mm (in)     |      | ø40 (1.5")       | 40(1.5") VDI40 / BMT65 OPT |
| <b>FEEDRATE</b>               |             |      |                  |                            |
| X axis rapid traverse         | M/min (ipm) |      | 15(590.5)        |                            |
| Z axis rapid traverse         | M/min (ipm) |      | 20(787.4)        |                            |
| <b>FEED MOTORS</b>            |             |      |                  |                            |
| X axis motor                  | kW (HP)     |      | 3(4)             |                            |
| Z axis motor                  | kW (HP)     |      | 4(5.4)           |                            |
| <b>TAILSTOCK</b>              |             |      |                  |                            |
| Quill diameter                | mm (in)     |      | ø100(3.9")       | ø100(3.9)                  |
| Quill inside taper            | M.T         |      | 5                | 5                          |
| <b>MACHINE SIZE</b>           |             |      |                  |                            |
| Total machine weight          | kg          |      | 8100             | 8500                       |
| Machine length                | mm (in)     |      | 4625(182)        |                            |
| Machine width                 | mm (in)     |      | 1930 (76")       | 1930 (76")                 |
| Machine height                | mm (in)     |      | 2140(84.3)       |                            |
| Power requirement             | KVA         |      | 40               | 40                         |
| Computer control              | FANUC       |      | 0i-T             | 0i-T                       |

### STANDARD ACCESSORIES

- Metric disc
- Manual tailstock
- Buzzer
- Heat exchanger
- Full enclosed splash guard
- 3 jaw open center chuck
- Foot switch
- Wide angle V-belt
- VDI disc (For LTC-25iXXLM)

### OPTIONAL ACCESSORIES

- Inch disc
- Tool setter
- Manual steady rest
- Hydraulic steady rest
- Alarm lamp
- Air conditioner
- Bar feeder
- Auto door
- Spindle air outer blow
- High pressure pump
- Chip conveyer
- Chip bucket
- Two speed gearbox
- Collect chuck
- Mist separator
- Oil skimmer
- H.T.D belt
- Transformer

## Machine Specifications

| ITEM                          | MODEL       |      | LTC-25iLV        | LTC-25iLVM                 |
|-------------------------------|-------------|------|------------------|----------------------------|
| <b>CAPACITY</b>               |             | Unit |                  |                            |
| Max swing                     | mm (in)     |      | ø670 (26.3")     | ø637 (25")                 |
| Max turning diameter          | mm (in)     |      | ø450 (17.7")     | ø285(11.2)                 |
| Max turning length            | mm (in)     |      | 2020(79.5)       | 2005(78.9)                 |
| Bar capacity                  | mm (in)     |      | ø77 (3")         | ø77 (3")                   |
| <b>TRAVEL</b>                 |             |      |                  |                            |
| X axis                        | mm (in)     |      | 225+25 (8.8"+1") | 225+15 (8.8+0.5)           |
| Z axis                        | mm (in)     |      | 2050(80.7)       |                            |
| <b>SPINDLE</b>                |             |      |                  |                            |
| Spindle speeds range          | rpm         |      | 3500             | 3500                       |
| Chuck size                    | mm (in)     |      | 254 (10")        | 254 (10")                  |
| Spindle nose                  |             |      | A2-8             | A2-8                       |
| Spindle motor power           | kW (HP)     |      | 18.5 (24.8)      | 18.5 (24.8)                |
| <b>TURRET</b>                 |             |      |                  |                            |
| Number of tool stations       | pcs         |      | 12               | 12                         |
| Shank height for square tool  | mm (in)     |      | □25 (1")         | 25(1") VDI40 / BMT65 OPT   |
| Shank diameter for boring bar | mm (in)     |      | ø40 (1.5")       | 40(1.5") VDI40 / BMT65 OPT |
| <b>FEEDRATE</b>               |             |      |                  |                            |
| X axis rapid traverse         | M/min (ipm) |      | 15(590.5)        |                            |
| Z axis rapid traverse         | M/min (ipm) |      | 20(787.4)        |                            |
| <b>FEED MOTORS</b>            |             |      |                  |                            |
| X axis motor                  | kW (HP)     |      | 3(4)             |                            |
| Z axis motor                  | kW (HP)     |      | 4(5.4)           |                            |
| <b>TAILSTOCK</b>              |             |      |                  |                            |
| Quill diameter                | mm (in)     |      | ø100(3.9")       | ø100(3.9")                 |
| Quill inside taper            | M.T         |      | 5                | 5                          |
| <b>MACHINE SIZE</b>           |             |      |                  |                            |
| Total machine weight          | Kg          |      | 9100             | 9500                       |
| Machine length                | mm (in)     |      | 5355(211)        |                            |
| Machine width                 | mm (in)     |      | 1930(76)         |                            |
| Machine height                | mm (in)     |      | 2140(84.3)       |                            |
| Power requirement             | KVA         |      | 40               |                            |
| Computer control              | FANUC       |      | 0i-T             |                            |

### STANDARD ACCESSORIES

- Metric disc
- Manual tailstock
- Buzzer
- Heat exchanger
- Full enclosed splash guard
- 3 jaw open center chuck
- Foot switch
- Wide angle V-belt
- VDI disc (For LTC-25iLVM)

### OPTIONAL ACCESSORIES

- Inch disc
- Tool setter
- Manual steady rest
- Hydraulic steady rest
- Alarm lamp
- Air conditioner
- Bar feeder
- Auto door
- Spindle air outer blow
- High pressure pump
- Chip conveyer
- Chip bucket
- Two speed gearbox
- Collect chuck
- Mist separator
- Oil skimmer
- H.T.D belt
- Transformer