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Manufactured by:



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HEAVY DUTY SERIES (IND-DCCT) REV.05



# HEAVY DUTY TURNING CENTERS

LT-25 LT-30 LT-40

**THINK** Turning®  
 Ace Designers

## About Our Products

**LT-25/30/40** slant bed turning centers are known for their rigidity which is essential for heavy duty cutting of large work pieces. They meet a variety of production requirements like Fly wheels, Hubs, Alloy wheels, Brake drums, Axle shafts etc., A range of center distances as well as different spindle bore sizes are available. These machines provide wide machining areas with minimum tool interference.

### Salient Features

- Cartridge spindle
- Powerful AC spindle motor
- Rigid structure
- Hardened & ground box ways on both axes
- Programmable quill
- Programmable tailstock is a standard feature
- 12 station tool turret
- A2-8 spindle



- All spindles are assembled and tested in a controlled clean room environment. After assembly Spindle assemblies are subject to stringent testing on a electronically controlled automatic testing rigs.
- Temperature of the spindle is monitored and recorded automatically with a pre-set running rhythm.

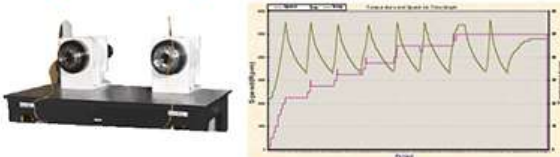
- Any abnormalities recorded are eliminated without any slippages. This rhythmic evaluation ensures thermal stabilization of the entire assembly with the bearings. This guarantees performance and optional bearing longevity.

### Ball Bar Testing

Used to check circular interpolation accuracy of CNC machine. Geometrical errors, Servo related errors, cyclic errors are diagnosed instantaneously.

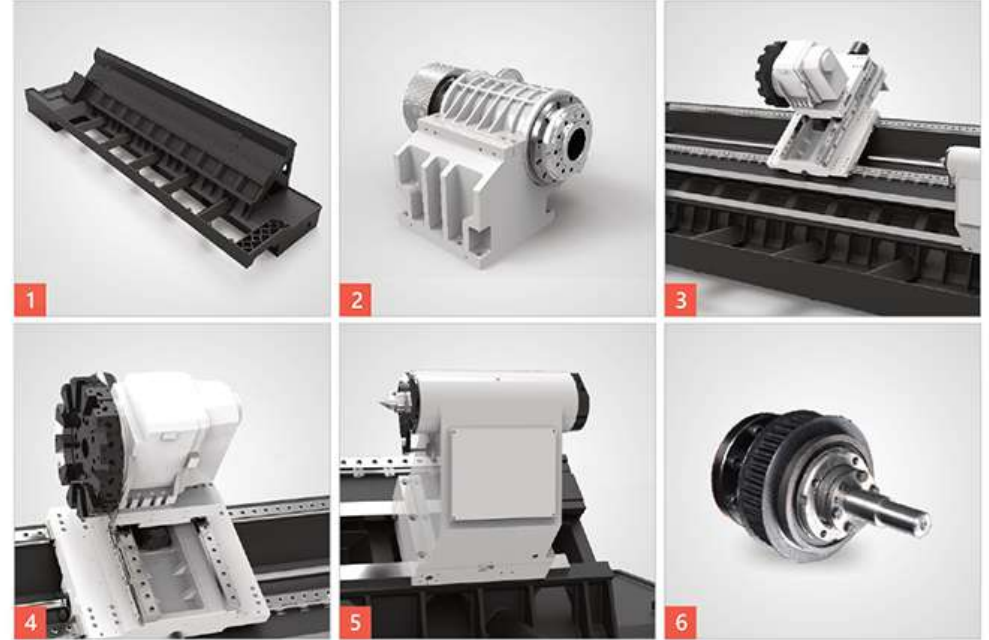


### Computerised Spindle Stabilization



All spindles are thermally stabilised upto maximum speed.

## Machine Elements



### 1. Bed

The bed is fine grain Grade 25 cast iron casting with box type construction. It is heavily ribbed to provide rigidity and is thermally seasoned. The bed is designed for easy chip flow and removal. The chip pan is independently located under the cutting area.

### 2. Spindle

The cartridge type spindle is assembled and tested in a controlled clean room environment. The bearing configuration gives very high stiffness to the spindle assembly in both axial and radial directions. The bearings are grease lubricated for life. A high torque spindle motor provides power for heavy stock removal.

### 3. Axes

X and Z axes feature precision large diameter ball screws supported at each end by precision class ball screw support bearings. The guide ways are widely spaced to ensure stability, fully protected and are made of hardened and ground box way strips. The mating way is bonded with turcite for its superior wear and friction characteristics and hand scraped to perfection. Automatic metered lubrication is provided to all guide ways & ball screws.

### 4. Turret

Bi-directional tool turret indexes in either direction for shortest indexing time. It is completely enclosed & robust in mechanism with oil bath lubrication. Three piece, Hirth coupling allows the tool disc to be indexed without lifting. It ensures repeatability, positioning accuracy and rigidity.

### 5. Tailstock

The tailstock consists of a hydraulically operated quill, which moves inside a housing. The quill and the body are independently moveable. Widely spaced guideways and heavy duty design of the tailstock ensure rigidity. Foot pedal or program activates the quill. Programmable tailstock is a standard feature.

### 6. Overload Tripping Clutch

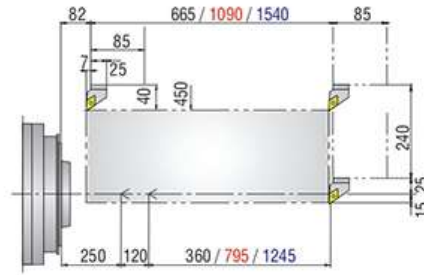
Both axes are provided with overload tripping clutch to minimize damage in the event of an accident.



# LT-25 Series



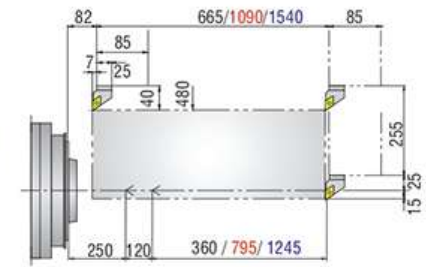
## Machining Range



# LT-30 Series



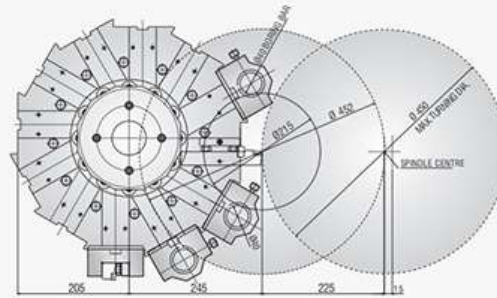
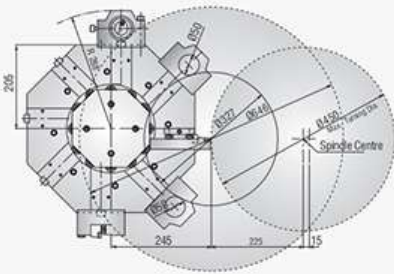
## Machining Range



## Interference Diagram

8 Station

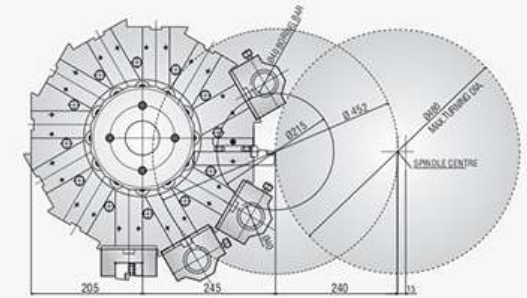
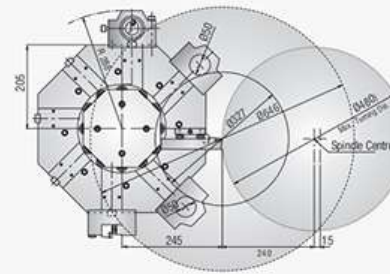
12 Station



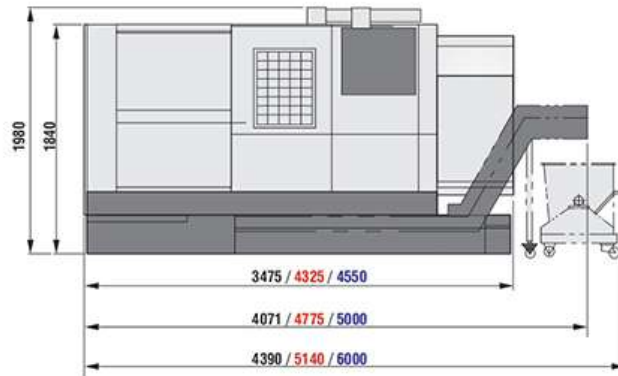
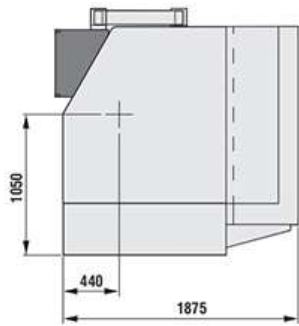
## Interference Diagram

8 Station

12 Station



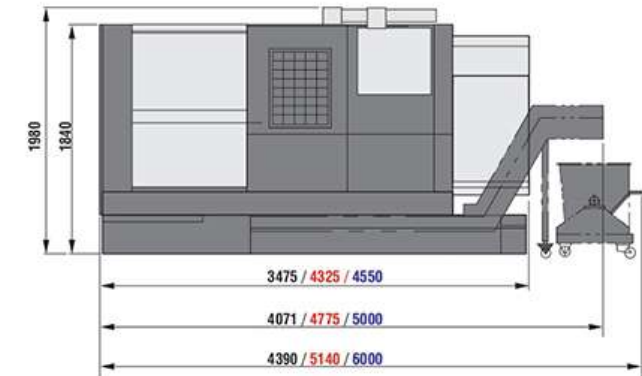
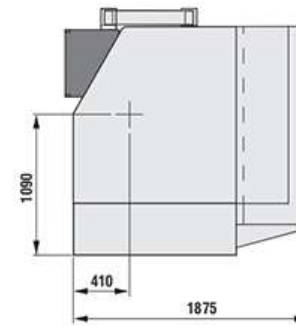
## Overall Views



● 630 ● 1000 ● 1500

All dimensions in mm

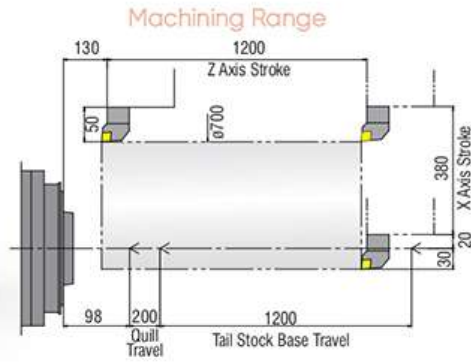
## Overall Views



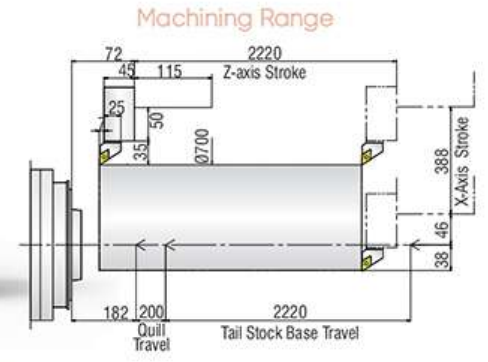
● 630 ● 1000 ● 1500

All dimensions in mm

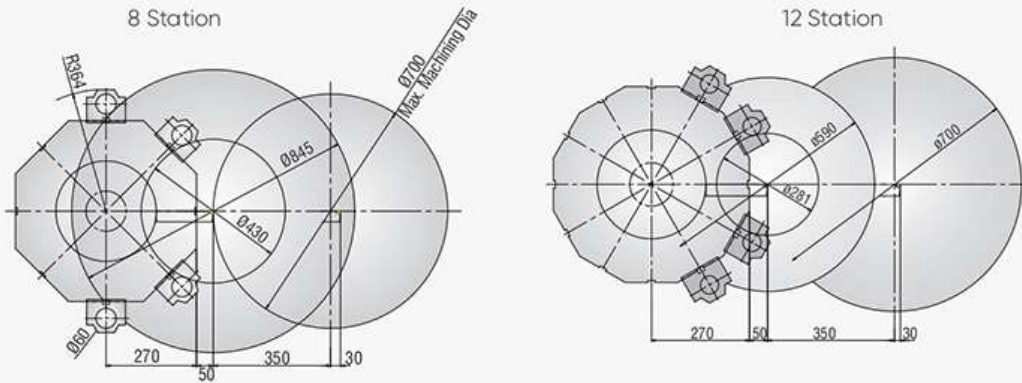
# LT-40 (1000)



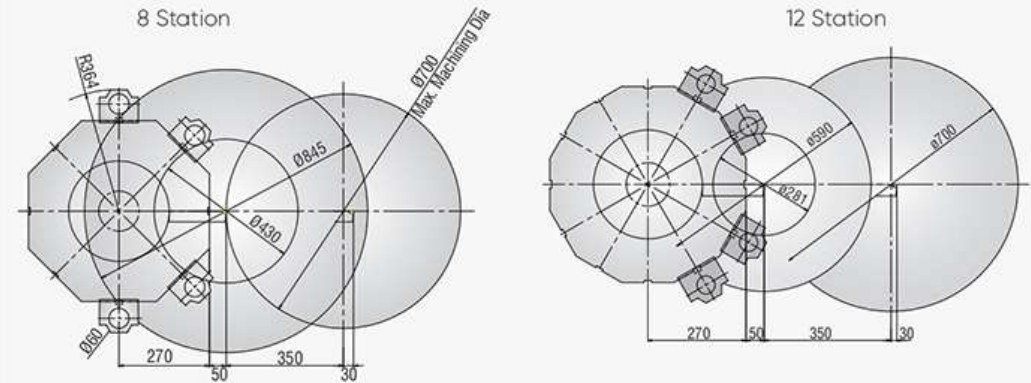
# LT-40 (2000)



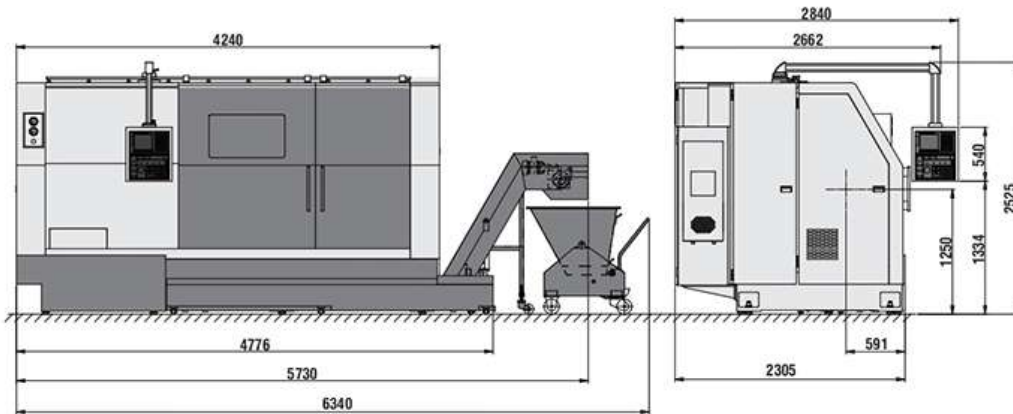
## Interference Diagram



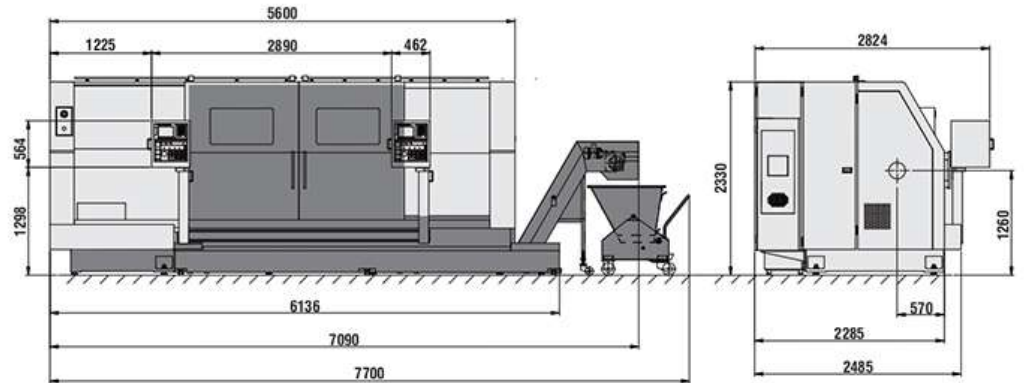
## Interference Diagram



## Overall Views



## Overall Views

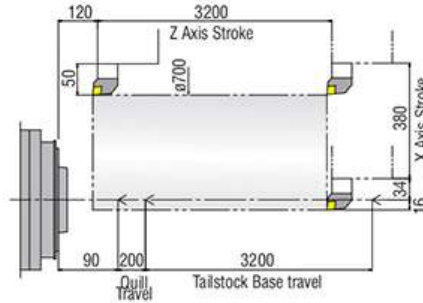




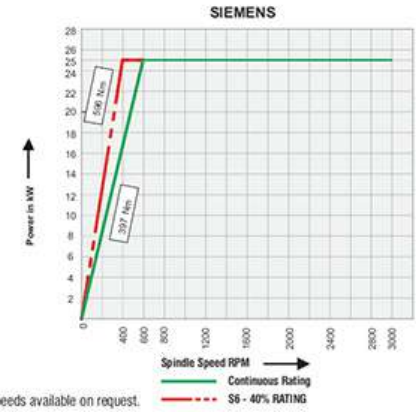
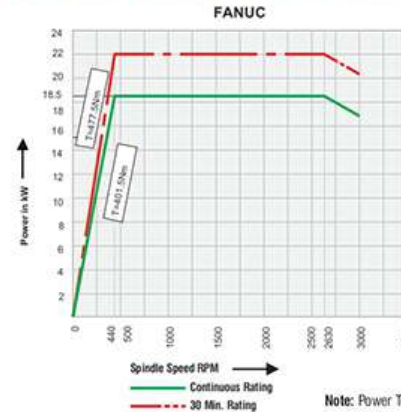
# LT-40 (3000)



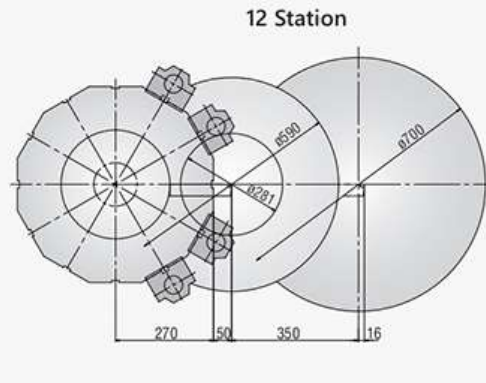
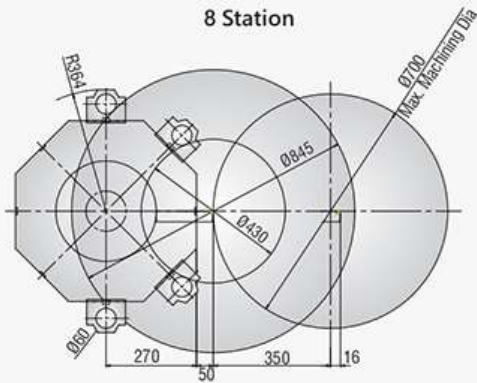
## Machining Range



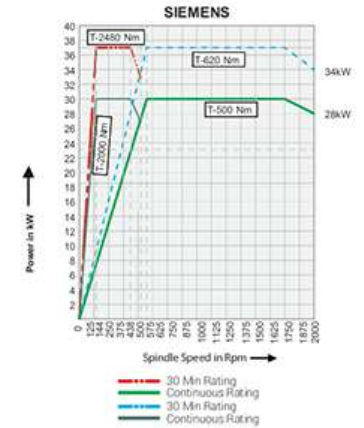
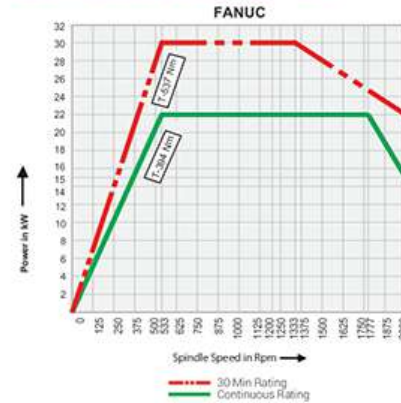
## Power Torque Diagram (LT-25, LT-30)



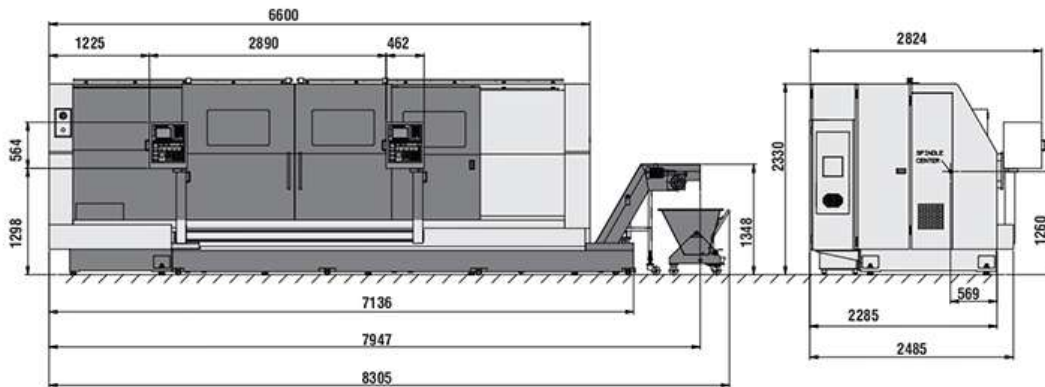
## Interference Diagram



## Power Torque Diagram (LT-40)



## Overall Views



All dimensions in mm

## Standard Features

- Cartridge type spindle
- AC spindle drives and axes drives
- High speed bi-directional tool Turret
- Hardened and ground guideway strips
- Turcite anti-slipstick liners on slide way surfaces
- Overload trip clutches on both axes
- Failsafe brake for x axis
- Programmable tailstock
- Basic hydraulic system
- Automatic centralised oil lubrication
- Coolant system
- Built-in lighting system
- OD turning tool blocks (8 Nos)
- Boring bar holders (4 Nos)
- Facing tool holders (2 Nos)
- Set of sleeves for boring bars

## Optional Features

- Chip conveyor
- VDI disc
- 12 station turret
- Tool touch probe
- A2-11 spindle
- Steady rest
- Programmable steady rest
- Auto door
- Geared Headstock (with A2-8 Spindle)
- Torque enhancement by Star-Delta feature
- Door interlock
- Manual guide i

## Specifications

| DESCRIPTION   | UNITS              | LT-25                            |                 |                 | LT-30                            |                 |                 | LT-30 1500M /                    | LT-40          |                                   |                |
|---|--------------------|----------------------------------|-----------------|-----------------|----------------------------------|-----------------|-----------------|----------------------------------|----------------|-----------------------------------|----------------|
|   |                    | 630                              | 1000            | 1500            | 630                              | 1000            | 1500            |                                  | 1000           | 2000                              | 3000           |
| <b>Control System</b>                                       |                    | Fanuc / Siemens                  | Fanuc / Siemens | Fanuc / Siemens | Fanuc / Siemens                  | Fanuc / Siemens | Fanuc / Siemens | Fanuc / Siemens                  | Fanuc/Siemens  | Fanuc/Siemens                     | Fanuc/Siemens  |
| <b>CAPACITY</b>   |                    |                                  |                 |                 |                                  |                 |                 |                                  |                |                                   |                |
| Swing Over Bed  | mm                 | 545                              | 545             | 545             | 650                              | 650             | 650             | 650                              | 800            | 800                               | 800            |
| Distance Between Centers <sup>1</sup>                       | mm                 | 630                              | 1050            | 1500            | 630                              | 1050            | 1500            | 1500                             | 1200           | 2200                              | 3200           |
| Maximum Turning Dia   | mm                 | 450                              | 450             | 450             | 480                              | 480             | 480             | 390                              | 700            | 700                               | 700            |
| Between Centre Turning Dia                                  | mm                 | 310                              | 310             | 310             | 415                              | 415             | 415             | 390                              | 575            | 575                               | 575            |
| Maximum Turning Length <sup>1,2</sup>                       | mm                 | 665                              | 1050            | 1500            | 665                              | 1050            | 1500            | 1500                             | 1000           | 2000                              | 3000           |
| <b>SPINDLE</b>  |                    |                                  |                 |                 |                                  |                 |                 |                                  |                |                                   |                |
| Spindle Nose  |                    | A2-8 (A2-11)                     | A2-8(A2-11)     | A2-8 (A2-11)    | A2-8 (A2-11)                     | A2-8 (A2-11)    | A2-8 (A2-11)    | A2-8 (A2-11)                     | A2-11          | A2-11                             | A2-11          |
| Bore through Spindle  | mm                 | 80 (105)                         | 80 (105)        | 80 (105)        | 80 (105)                         | 80 (105)        | 80 (105)        | 80 (105)                         | 132            | 132                               | 132            |
| Front Bearing Bore  | mm                 | 120 (150)                        | 120 (150)       | 120 (150)       | 120 (150)                        | 120 (150)       | 120 (150)       | 120 (150)                        | 180            | 180                               | 180            |
| Maximum Bar Capacity <sup>3</sup>                           | mm                 | 68 (90)                          | 68 (90)         | 68 (90)         | 68 (90)                          | 68 (90)         | 68 (90)         | 68 (90)                          | 117            | 117                               | 117            |
| Maximum Spindle Speed <sup>4</sup>                          | rpm                | 3000 (2000)                      | 3000 (2000)     | 3000 (2000)     | 3000 (2000)                      | 3000 (2000)     | 3000 (2000)     | 3000 (2000)                      | 2400           | 2000                              | 2000           |
| Spindle Motor Power (30 min. Rating)                        | kw                 | 22                               | 22              | 22              | 22                               | 22              | 22              | 22                               | 30             | 30                                | 30             |
| Spindle Motor Power - Siemens (Continuous / S-6 40% Rating) | kw                 | 25                               | 25              | 25              | 25                               | 25              | 25              | 25                               | 30             | 30                                | 30             |
| Spindle Motor Power (Continuous Rating)                     | kw                 | 18.5                             | 18.5            | 18.5            | 18.5                             | 18.5            | 18.5            | 18.5                             | 22             | 22                                | 22             |
| Full Power Range - Fanuc                                    | rpm                | 440-2630                         | 440-2630        | 440-2630        | 440-2630                         | 440-2630        | 440-2630        | 440-2630                         | 533-1333       | 533-1333                          | 533-1333       |
| Full Power Range - Siemens                                  | rpm                | 400-3000                         | 400-3000        | 400-3000        | 400-3000                         | 400-3000        | 400-3000        | 400-3000                         | 230-2000       | 230-2000                          | 230-2000       |
| Standard Chuck Size   | mm                 | 250 (315/400)                    | 250 (315/400)   | 250 (315/400)   | 250 (315/400)                    | 250 (315/400)   | 250 (315/400)   | 250 (315/400)                    | 400            | 400                               | 400            |
| <b>AXES</b>   |                    |                                  |                 |                 |                                  |                 |                 |                                  |                |                                   |                |
| Type of Guideways   |                    | Hardened & ground Box type steel |                 |                 | Hardened & ground Box type steel |                 |                 | Hardened & ground Box type steel | LM Guideways   | Integral Hardened & Ground Roller | LM Guideways   |
| X-Axis Stroke   | mm                 | 240                              | 240             | 240             | 255                              | 255             | 255             | 255                              | 380            | 380                               | 380            |
| Z-Axis Stroke   | mm                 | 665                              | 1090            | 1540            | 665                              | 1090            | 1540            | 1540                             | 1200           | 2200                              | 3200           |
| X & Z Axes Rapid Rate                                       | m/min              | 15                               | 15              | 15              | 15                               | 15              | 15              | 15                               | 20             | 15                                | 20             |
| <b>TOOLING</b>  |                    |                                  |                 |                 |                                  |                 |                 |                                  |                |                                   |                |
| Number of Tools Maximum                                     |                    | 8 (12)                           | 8 (12)          | 8 (12)          | 8 (12)                           | 8 (12)          | 8 (12)          | 12                               | 8(12)          | 8(12)                             | 8(12)          |
| Boring Bar Dia Maximum                                      | mm                 | 50 (40)                          | 50 (40)         | 50 (40)         | 50 (40)                          | 50 (40)         | 50 (40)         | 40                               | 60             | 60                                | 60             |
| OD Turning Tool Size  | mm                 | 25x25                            | 25x25           | 25x25           | 25x25                            | 25x25           | 25x25           | 25x25                            | 32 x 32        | 32 x 32                           | 32 x 32        |
| <b>TAILSTOCK</b>  |                    |                                  |                 |                 |                                  |                 |                 |                                  |                |                                   |                |
| Tailstock Base Travel                                       | mm                 | 360                              | 795             | 1245            | 360                              | 795             | 1245            | 1245                             | 1200           | 2220                              | 3200           |
| Tailstock Quill Travel                                      | mm                 | 120                              | 120             | 120             | 120                              | 120             | 120             | 120                              |                |                                   |                |
| Tailstock Quill Dia.  | mm                 | 100                              | 100             | 100             | 100                              | 100             | 100             | 100                              | 150            | 150                               | 150            |
| Quill Taper   |                    | MT-5                             | MT-5            | MT-5            | MT-5                             | MT-5            | MT-5            | MT-5                             | MT-6           | MT-6                              | MT-6           |
| Coolant Tank Capacity                                       | litre              | 170                              | 230             | 250             | 170                              | 230             | 250             | 250                              | 250            | 300                               | 500            |
| <b>HYDRAULIC SYSTEM</b>                                     |                    |                                  |                 |                 |                                  |                 |                 |                                  |                |                                   |                |
| Hydraulic Pump Capacity                                     | lpm                | 38                               | 38              | 38              | 38                               | 38              | 38              | 38                               | 38             | 38                                | 38             |
| Hydraulic Power Pack Tank Capacity                          | litre              | 70                               | 70              | 70              | 70                               | 70              | 70              | 70                               | 70             | 70                                | 70             |
| System pressure   | kg/cm <sup>2</sup> | 30                               | 30              | 30              | 30                               | 30              | 30              | 30                               | 30             | 30                                | 30             |
| <b>Overall Machine Dimensions (LxWxH)</b>                   | mm                 | 3475x1875x1980                   | 4325x1875x1980  | 4560x1875x1980  | 3475x1875x1980                   | 4325x1875x1980  | 4560x1875x1980  | 5000x1875x1990                   | 5025x2350x2430 | 6500x2300x2350                    | 7146x2400x2485 |
| <b>Overall Machine Weight (Without Packing)</b>             | kg                 | ~5500                            | ~6500           | ~7500           | ~5500                            | ~6500           | ~7500           | ~8500                            | ~9000          | ~12000                            | ~18000         |

Specifications correct at the time of print. Owing to continuous up-gradation of our products, the specification may change and to be re-confirmed at the time of ordering.

<sup>1</sup> Refer machining range diagram

<sup>2</sup> With Appropriate workholding

**Note:**(a) Figures in brackets are optional. (b) Features shown may not be part of the standard equipment.