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# CLASSIC SERIES

**THINK** Turning®  
 Ace Designers

**AceMicromatic®**  
 Group Company

# LT-20C Classic



## 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. Chip conveyor option can be provided to the side or rear of the machine.



## 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.



## Overload Tripping Clutch

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



## Axes

X and Z axes feature high precision large diameter ball screws supported at each end by precision class ball screw support bearings. The ball screw is pre-tensioned to minimize the effect of temperature variations. The guide ways are widely spaced to ensure stability, fully protected and are made of hardened and ground box way steel strips. The mating way is bonded with turcite for its superior wear and friction characteristics and hand scraped to perfection.



## 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.



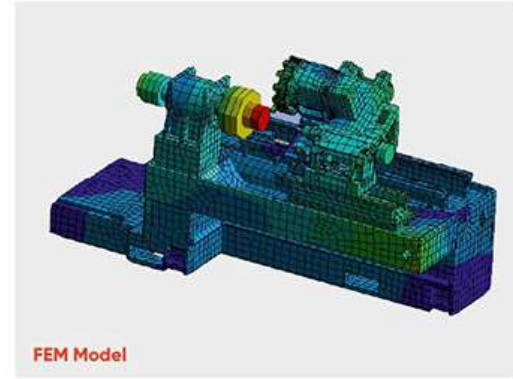
## Tailstock

The tailstock consists of a hydraulically operated quill, which moves inside a housing. The quill and the body are independently moveable.

The tailstock is supported on V and flat guideways. Widely spaced guideways and heavy-duty design of the tailstock ensure rigidity. Foot pedal or program activates the quill. Programmable tailstock can be provided as an option.

## Structural Design Optimised For Accurate Machining

- The structure is optimized using FEM technique.
- Virtual prototyping helped in arriving robust design maximizing tool point stiffness, minimizing vibration and improved power utilization.



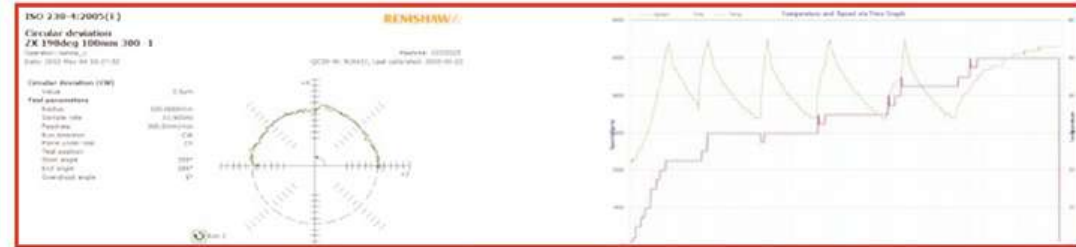
FEM Model

## Spindle Testing

All spindle units undergo stringent testing in a controlled clean environment, including thermal stabilisation to ensure guaranteed performance. Temperature of spindle on running condition is monitored to ensure optimal bearing longevity by stabilising it thermally.

### 100% Ball Bar Testing

### Computerised Spindle Stabilization



## Applications Examples

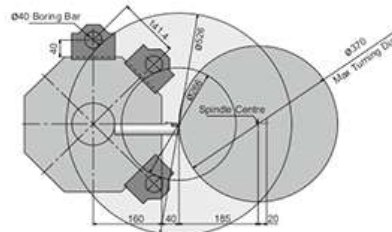


# LT-20C Classic

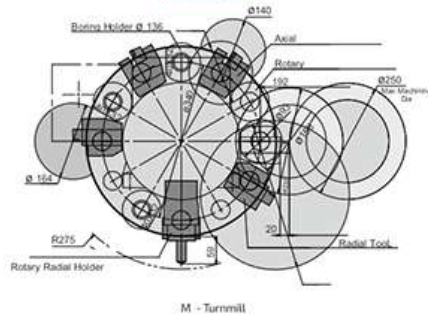


## Interference Diagram

LT-20C Classic / LT-20C Classic 500  
8 Station

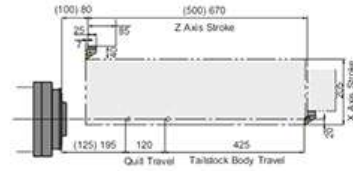


LT-20C Classic M



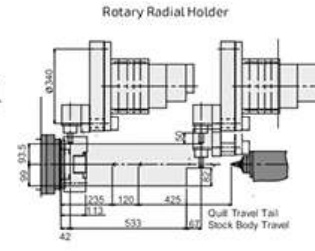
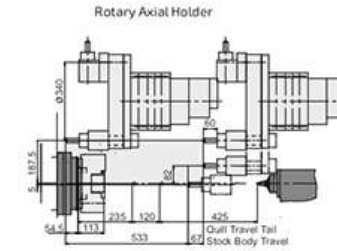
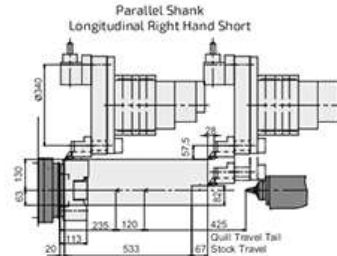
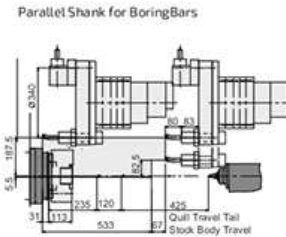
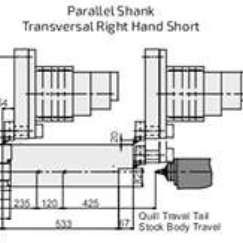
## Machining Range Diagram

LT-20C Classic (LT-20C Classic 500)

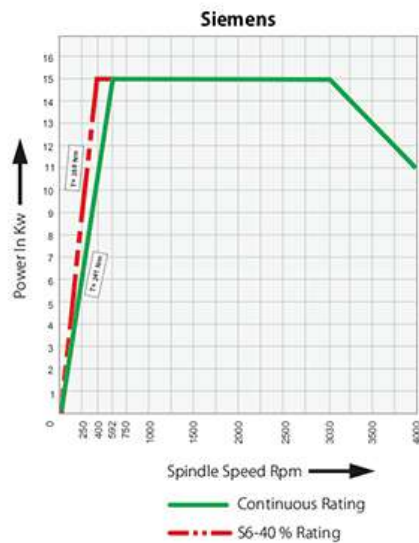
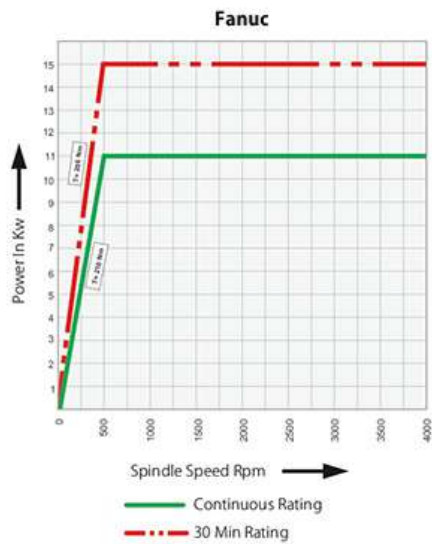


( ) Values mentioned in bracket are for LT-20C Classic 500 (Short Stroke) Version

LT-20C Classic M / LT-20C Classic LM M

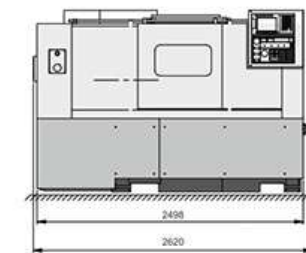
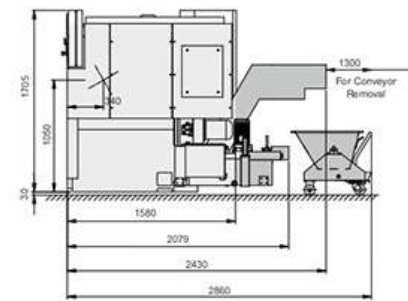


## Power Torque Diagram

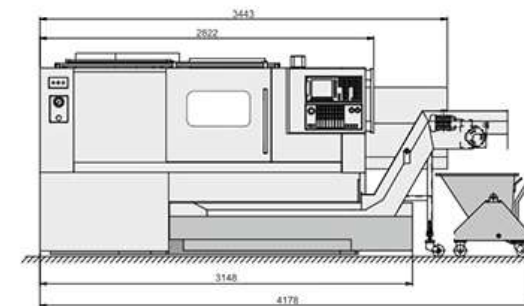
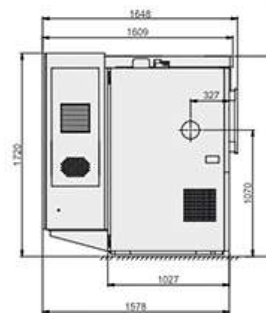


## Overall Views

LT-20C Classic 500 (Short Stroke)



LT-20C Classic



All dimensions are in mm

# Specifications

Model	Units	LT-20C Classic 500	LT-20C Classic	LT-20C Classic 500LM	LT-20C Classic LM	LT-20C Classic 500 M LT-20C Classic 500 LM M	LT-20C Classic M LT-20C Classic LM M
<b>Control System</b>		Fanuc/Siemens	Fanuc/Siemens	Fanuc/Siemens	Fanuc/Siemens	Fanuc/Siemens	Fanuc/Siemens
<b>Capacity</b>							
Swing Over Bed	mm	550	550	550	550	550	550
Swing Over Carriage	mm	290	290	330	330	290	330
Maximum Turning Dia	mm	370	370	370	370	250	250
Maximum Turning Length <sup>2</sup>	mm	500	670	500	670	500	600
Distance Between Centers <sup>1</sup>	mm	500	670	500	670	500	670
<b>Spindle</b>							
Spindle Size / Nose		A2-6	A2-6	A2-6	A2-6	A2-6	A2-6
Bore Through Spindle	mm	63	63	63	63	63	63
Maximum Bar Capacity <sup>3</sup>	mm	51	51	51	51	51	51
Chuck Size	mm	refer quote	refer quote	refer quote	refer quote	refer quote	refer quote
Front Bearing Bore	mm	100	100	100	100	100	100
Spindle Motor Power-Fanuc (Continuous)	kW	11	11	11	11	11	11
Spindle Motor Power-Fanuc (30min)	kW	15	15	15	15	15	15
Full Power Range - Fanuc	rpm	500-4000	500-4000	500-4000	500-4000	500-4000	500-4000
Spindle Motor Power-Siemens (Continuous)	kW	15	15	15	15	15	15
Spindle Motor Power-Siemens (S6-40%)	kW	15	15	15	15	15	15
Full Power Range - Siemens	rpm	592-3030	592-3030	592-3030	592-3030	592-3030	592-3030
<b>Axes</b>							
Types of Guideways		HGBT	HGBT	LM	LM	HGBT / LM	HGBT / LM
X-Axis Stroke	mm	205	205	205	205	192	192
Z-Axis Stroke	mm	500	670	500	670	600	600
X&Z Axes Rapid	m/min	20	20	30	30	20/30	20/30
<b>Turret</b>							
Turret Type		BTP-100	BTP-100	BTP-100	BTP-100	Axial Tool Turret	Axial Tool Turret
No of Station		8 (12)	8 (12)	8 (12)	8 (12)	12	12
Boring Bar Dia Max	mm	ø40	ø40	ø40	ø40	ø40	ø40
OD Turning Tool Size	mm	25 x 25	25 x 25	25 x 25	25 x 25	25 x 25	25 x 25
Rotary Tool Power	kW	NA	NA	NA	NA	3.7	4.5
Rotary Tool Motor Speed	rpm	NA	NA	NA	NA	4000	3000
<b>TailStock</b>							
Quill Dia		80	80	80	80	80	80
Quill Travel	mm	120	120	120	120	120	120
Taper in Quill	mm	MT-4	MT-4	MT-4	MT-4	MT-4	MT-4
Thrust @20 Bar	kgf	500	500	500	500	500	500
Coolant Tank Capacity	ltr	160	160	160	160	180	180
<b>Hydraulic System</b>							
Hydraulic Pump Capacity	lpm	14	14	14	14	14	14
Hydraulic Power Pack Tank Capacity	litre	45	45	45	45	45	45
<b>Overall Dimensions (LxWxH)</b>	mm	2498x1587x1705	3310x1535x1760	2498x1587x1705	3310x1535x1760	3310x1535x1760	3433x1648x1720
<b>Overall Weight (without packing) Approx.</b>	Kg	~4000	~4500	~5000	~5000	~5000	~5000

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

1. Refer interference diagram
2. Refer machining range diagram
3. Refer appropriate work-holding

( ) Values mentioned in bracket are optional

- HGBT - Hardened ground box type
- LM - Linear motion guideways
- NA - Not Applicable

## Standard Features

- Cartridge type spindle
- AC spindle drives
- AC axes drives
- High speed bi-directional tool turret
- Linear Motion Guideways
- Turcite anti-slipstick liners on slide way surfaces
- Tailstock with Add-on type live centre
- Automatic centralized oil lubrication
- Built-in lighting system & over load trip clutch for axes
- OD tool holder damping blocks (8 No's)
- Boring bar holder (4 Nos)
- Facing tool holder (2 Nos)
- Set of sleeves
- Coolant systems with side tray
- Programmable quill

## Optional Features

- Fully tooled up solutions to meet customer needs
- Chip conveyor at side or rear
- A wide variety of power operated work-holding (chucks, collets, fixtures, etc) and tooling
- 12 station Turret ( Other than Turnmill)
- Auto door
- Tool touch probe
- Parts catcher
- Bar feeder
- Programmable Tailstock
- Steady Rest
- VDI Disc on Turret
- A2-8 spindle
- Manual guide i
- Door interlock
- Built in live center for Tailstock
- Torque enhancement by star delta