

## FOR MORE INFORMATION PLEASE CONTACT

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Bhavnagar : 93754 87930  
Ahmedabad : 93775 87930  
Sanand : 93775 87930  
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Baroda : 93770 87930  
Halol : 63560 02810  
Surat : 93753 87930  
Vapi : 93770 87930  
Mumbai : 93753 87930  
Nasik : 93203 87930  
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Pune : 72858 55955  
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Delhi : 88515 98788  
Delhi : 89504 69265  
Faridabad : 76000 10288  
Ghaziabad : 76000 10288  
Ghaziabad : 88515 98788  
Ghaziabad : 89504 69265  
Noida : 76000 10288  
Noida : 88515 98788  
Noida : 89504 69265  
Sonipat : 89504 69265  
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at  
your service  
anytime  
anywhere



March, 2021

**macpower**

**MACPOWER CNC MACHINES LTD.**

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Note : Technical Specifications and Colors are subject to change as a part of continuous development.



**macpower**

**ALL NEW**  
**5<sup>th</sup> Generation**  
**2020**  
**SERIES**



**GX**  
**series**

**www.macpowercnc.com**

## Company Profile

Macpower CNC Machines Limited (Macpower) welcomes to the world of machining excellence. More than one and half decades of experience and the vision towards creating a niche has transformed Macpower into India's fastest growing CNC Manufacturing Company. This meteoric growth is a result of Macpower's vision of par excellence to manufacture state of the art products, adopting the best in technology.

In 2003, Macpower Group started Macpower CNC Machines Limited, CNC Machines manufacturing unit in an area of around 4 acres and has grown to almost double thereafter with 2 units in operation at present situated at Metoda G. I. D.C., Rajkot (India). Macpower is registered to ISO 9001 (Design), a universally accepted quality assurance designation and MSE-1 certification for highest financial strength and operational ability by CRISIL.

The modern headquarters contains a spacious State of the Art Machine Shop, Totally Equipped Assembly Shops, All Modern Measuring and Testing Equipments, Technologically Advanced Sheet Metal Unit and One of it's Kind Powder Coating Plant make Macpower Totally In-House Manufacturing Company.

Macpower is currently offering widest range of **9** different product categories namely Turning Center, Twin Spindle Turning Center, VMC, Twin Spindle VMC, TurnMill Center, HMC, VTL, DTC, Grinder with **27** versions and **60+** different models serving **27** industry segment world wide with **8000+** installations.

Sales & Service Team presence in **37** cities across the country with **107** qualified engineers and **9** business associates; establishment of multiple regional offices and technology centers across the country to have better connect with our valued customers.

# macpower



# Infrastructure



Macpower has grown multifold by accepting latest technological advancements along with developing state of the art INFRASTRUCTURE facilities like Machine Shop having range of latest mother machineries, well planned assembly lines with Ucrete flooring, modern sheet metal unit , technologically advance 11 tank hot and cold process powder coating plant and an array of latest measuring and testing equipments make Macpower deliver truly world class products through total inhouse manufacturing facilities.

The Ultra Modern machine shop hosts an a series of mother machineries like multi axes internal and external thread grinder, moving column boirng machine, multiple DCMs, tooled up HMCs, surface grinder, series of VMCs, TurnMill Center along with latest material handling facilities and all the mother machineries are equipped with latest high end toolings and separate set of measuring instruments and QC procedure is being laid down for testing of machined components.



# Technologically Advance Machine Shop



## Totally In-house Manufacturing Facilities

Set up in a constructed area of around 1 lakh sq. feet.

Consists of series of multiple mother machineries, state of the art assembly lines, sheet metal units, powder coating plant along with technologically advance measuring and testing equipments.

- 5 axes double column machining centers with universal head
- Synchronous Multiple HMCs
- State of the art Boring Machine



**BORING MACHINE**



## Multiple Double Column Multi Tasking Machines

- State of The Art Multiple Double Column Machining Centers.
- In House Machining of High Accuracy Components.
- Accomplished With High End Fixtures & Angular Heads.



**DCM FOUR STAR**



**DCM SIGMA**

# Inhouse Spindle Manufacturing



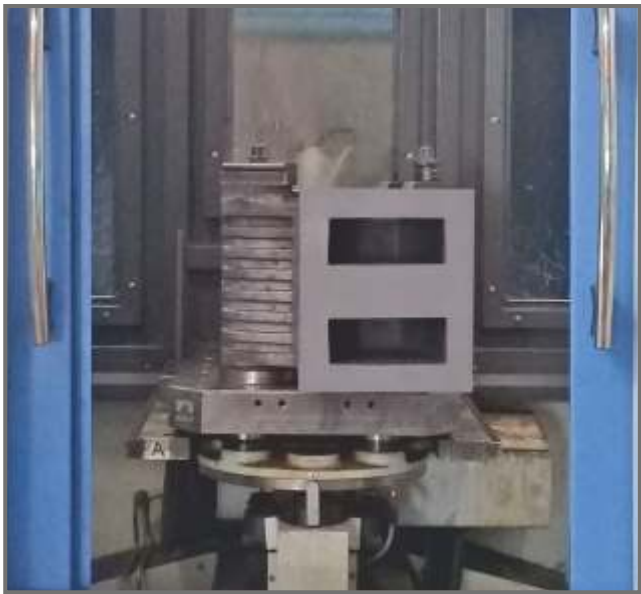
- Kellenberger KEL 100 Universal Cylindrical Grinder with Thread Grinding Facility
- Controlled Temperature Precision Room for spindle assembly.
- Hitech Spindle Balancing System

# Slide Way Grinding Facility

- Slide Way Grinding Machine With 2 Servo Heads
- Direct LM Guide Way Mounting Without Scraping



# Tooled Up Multiple HMCs



High end multiple HMCs with specialized tooling enables multi face machining in single set up with desired accuracy.



HMC



KENT

## Turning Center Assembly



## Machining Center Assembly



## Assembly Areas



- Ucrete flooring.
- Hitech assembly instruments.
- Total dust free working environment.
- Separate Assembly areas have been set up accordingly for product categories like Turning Centers, Machining Centers, TurnMill Centers, Multi Axes Machines.

## Sheet Metal Unit



- 8 Axes AMADA Press Brake with Auto Angle correction.
- SAHAJANAND fiber laser profile cutting machine.
- Modular welding and Assembly set up.
- Separate Storage Area for ready to use Sheet Metal Enclosures.



**SLTL LASER CUTTING**



**AMADA**

## Powder Coating Plant



- With 11 Tank PT Hot and Cold Process System – 1st of It's Kind in Machine Tool Industry.
- GEMA Automatic Powder Coating Gun System
- With Advanced Lab Testing Equipments

# Array of Hitech Instruments

- FARO EDGE Portable CMM
- Auto Collimeter
- In Situ Spindle Balancing Kit
- Laser Belt Alignment and Tension Measurement Kit
- Electronic Level.
- Tool Presetter.



Portable CMM Faro Edge



Laser Belt Alignment Unit



MPM In-Situ Balancing Kit



Wyler Electronic Level



Condition Analyser



Belt Tension Meter



Ballbar Instrument



Tool Presetter



Toolings & Fixtures



Renishaw Laser Instrument



Induction Heater

## High End Softwares



STERP  
the ultimate search for solution  
ERP



creo



SOLID EDGE



Solid Works



Master Cam



E Plan



FEA

Logos shown above belongs to respective organizations.

# Research and Development

Decades of experience and the vision towards creating a niche have what transformed Macpower into India's fastest growing CNC Machines Manufacturing Company.

To Prepare For Tomorrow, We Have To Be Ready Today

Our state-of-the-art Research & Development Department is backbone of our Manufacturing activity and provide foundation. At Macpower, we believe that Strong R&D and innovation is the need.

At Macpower R&D department, we have intelligent minds with diverse backgrounds to develop technology that is not just effective today, but also tomorrow.

As our machine development process afforded by the incorporation of digital design techniques, we were able to take an idea and turn it into a prototype in just under one to two months.

At Macpower, CREO 4 of PTC- 3 D Modelling and Finite Element Analysis (FEA) digital design tools allow our designers to achieve maximum accuracy and flexibility.

At Macpower R & D Performs : New Product Research, New Product Development, Existing Product Updates, New Process development, Innovation



# Why Macpower ?

- Totally In-house Manufacturing Capability
- Wide range of products to choose from
- Effective "Cost to Performance" solution provider
- Believing in partnership with customers and not as buyer and seller
- Efficient after sales service back up
- Availability of spares
- Emphasis on continuous R & D & Training
- Flexibility & Openness to manufacture customized machines
- Fast decision making process
- Macpower is a company with a modern outlook - giving you contemporary solutions through time-tested expertise.

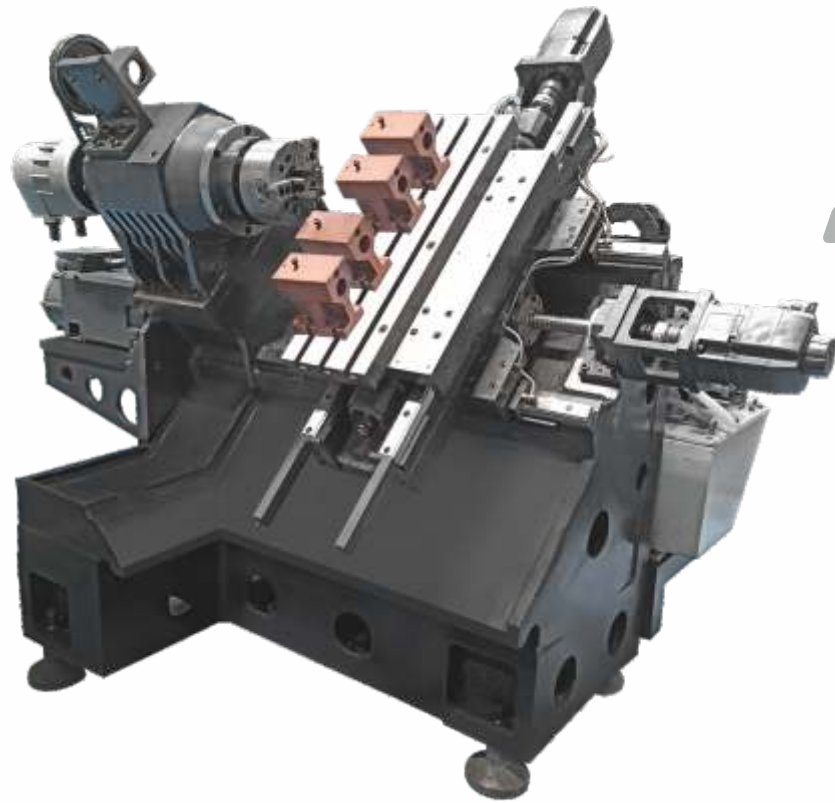


## Industry 4.0 & IoT

- We Provide Full Machine Remote Monitoring.
- Analysis of Utilization Rate of Machine.
- Machine Alaram Analysis.
- CNC Programme Upload / Download.
- Analysis of Down Time.
- Machine Status History.
- Single to Multiple Machine Connectivity.
- Operated on PC & Mobile.
- Customized Application Development.

## Overview

In today's competitive market, you need robust CNC turning centers with uncompromised performance and specifications to produce world class products quickly accurately and with minimum non productive time.



### Structure & frame

Single piece monoblock structure is made out of grade 25 cast iron for more stability. It is heavily ribbed to provide more rigidity and less distortion during heavy cuts and faster production, with virtually no vibration. Structure also facilitates easy chip disposal. Also the footprint has been reduced to save valuable space at customer's end.



### Spindle

The spindle is of cartridge type design and uses 3 super precision angular contact bearings at front and 2 angular contact bearings at rear end. The bearing configuration gives high stiffness to the spindle assembly in both axial and radial direction.

### Precise Linear Guideways

All axes are furnished with precise and heavy load capacity re-circulating ball guide ways enabling high acceleration-de acceleration and hence better productivity.



### Double-Anchored Ball Screws

Ball Screws are directed by direct coupled AC servo motor with flexible coupling. This greatly improves positioning accuracy, and provides more accurate threading and contouring. Ball Screws are anchored at both ends and inspected for parallelism with axis guide. Pre-loaded ball nuts eliminate backlash.



### Linear Tooling

Linear Tooling helps in faster production by reducing overall cycle time thereby improving productivity at large and helps in reducing cost per component for the customer.



### Carriage Assembly

X and Z Slide are mounted on precise four circuit linear motion blocks with high load carrying capacity, designed to support increased acceleration and deceleration rates as well as cutting pressure.

### Guarding

Equipped with the advantage of an ergonomic design. The machine comes with a full guard that enables a clean premise throughout the operation. These feature prevents contamination being spread on to machine slides, switches and other electrical devices.



### Advance Inspection Technology

Laser Calibration is carried out to insure the linear accuracy, providing accurate compensation for pitch and backlash. The machine facilities the attainment of positional accuracy up to 0.010 mm / 300 mm and repeatability accuracy up to 0.007 mm.

# GX 100 Junior

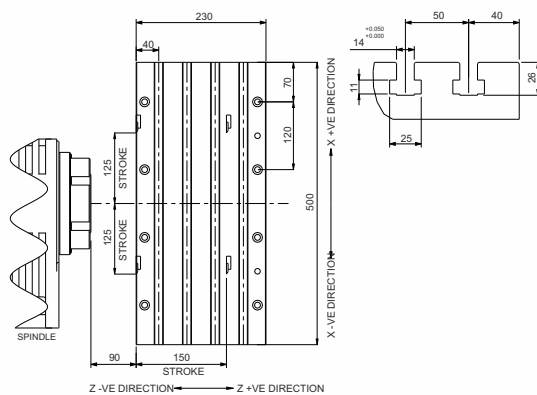


Std. Turning Dia.	mm	90
Max. Turning Dia.	mm	135
Max. Turning Length	mm	150
Travel (X / Z)	mm	250 / 150
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	135
Spindle Power (Siemens)	kW	3.7 / 5.5
Spindle Bore	mm	36
Spindle Nose		A2-4
Weight (Approx)	Kg	2000

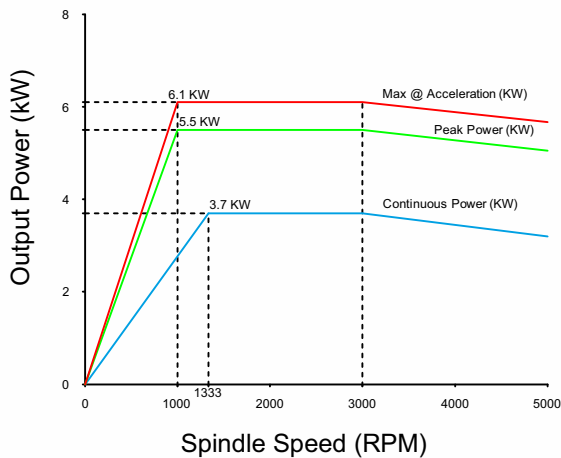
## Components



## Tool Interference Diagram



## Power Diagram



# GX 100 Super

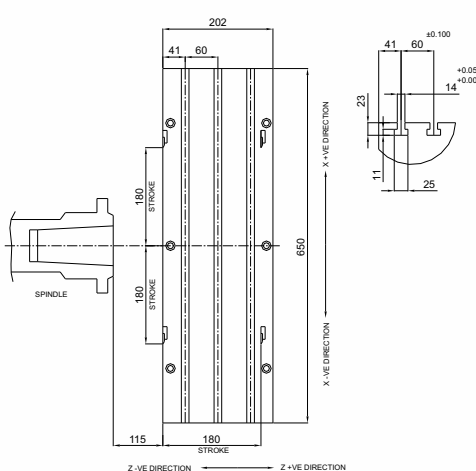


Std. Turning Dia.	mm	100
Max. Turning Dia.	mm	165
Max. Turning Length	mm	180
Travel (X / Z)	mm	360 / 180
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	165
Spindle Power (Fanuc)	kW	7.5 / 11
Spindle Bore	mm	54
Spindle Nose		A2-5
Weight (Approx)	Kg	2800

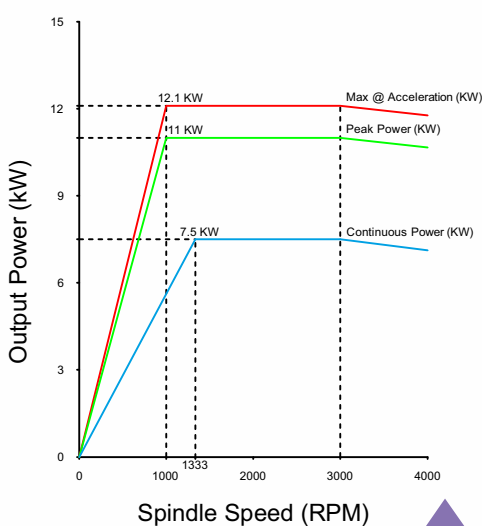
## Components



## Tool Interference Diagram



## Power Diagram



# NEW GX 200 Super

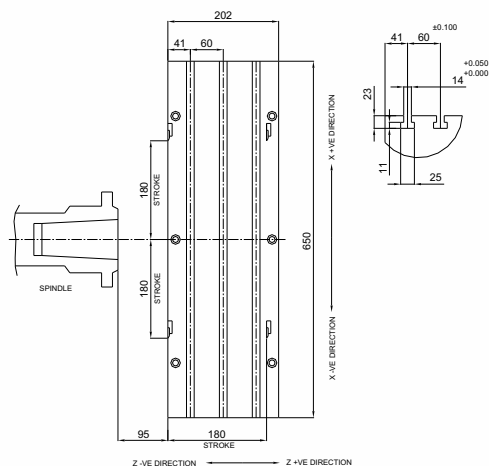


Std. Turning Dia.	mm	200
Max. Turning Length	mm	180
Travel (X / Z)	mm	360 / 180
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	200
Spindle Power (Fanuc)	kW	7.5 / 11
Spindle Bore	mm	63
Spindle Nose		A2-6
Weight (Approx)	Kg	3000

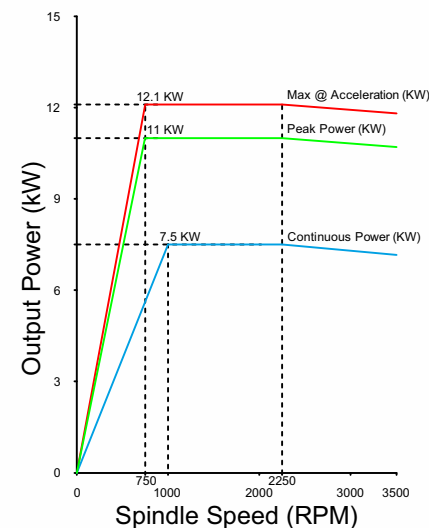
## Components



## Tool Interference Diagram



## Power Diagram



# GX Series Machine Configurations

DESCRIPTION	UNITS	GX 100 JUNIOR	GX 100 SUPER	GX 200 SUPER
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## CAPACITY

Std. Turning Dia.	mm	90	100	200
Max. Turning Dia.	mm	135	165	-
Swing Over Bed	mm	150	300	500
Max. Turning Length	mm	150	180	180

## SLIDES

Cross (X axis) Travel	mm	250	360	360
Longitudinal (Z axis) Travel	mm	150	180	180
Rapid Feed (X & Z axis)	m/min	24	24	24

## MAIN SPINDLE

Spindle Nose		A2-4	A2-5	A2-6
Spindle Bore	mm	36	54	63
Max. Bar Capacity	mm	25	42	51
Chuck Size	mm	135	165	200
Speed Range	rpm	50 - 5000	50 - 4000	50 - 3500
Full Power Range	rpm	1333 - 3000	1333 - 3000	1000 - 2250
Spindle Motor (Fanuc)	kW	5.5 / 7.5	7.5 / 11	7.5 / 11
Spindle Motor (Siemens)	kW	3.7 / 5.5	7 / 9	9 / 11

## TOOLING ARRANGEMENT

No. of Tools	-	5	5	5
Tool Size	mm	20 x 20	25 x 25	25 x 25
Max. Boring Bar Capacity	mm	25	32	40
Positioning Accuracy	mm	0.008	0.008	0.008
Repeatability	mm	0.007	0.007	0.007

## OTHER DATA

Weight (Approx)	Kg	2000	2800	3000
Machine Dimensions (WxDxH) (Approx)	mm	2280 x 1435 x 1525	2665 x 1590 x 1765	2700 x 1800 x 1905

## SYSTEM

Fanuc	Oi TF	Oi TF	Oi TF
Siemens	808D ADVANCE	828D	828D
Mitsubishi	E80	E80	E80

## A detailed view of a small, blue and yellow industrial machine, likely a micro-milling or precision grinding tool, mounted on a base. The machine features a central spindle with a rotating tool bit, a feed mechanism on the left, and a base with yellow mounting feet.

Single piece monoblock structure is made out of grade 25 cast iron for more stability. It is heavily ribbed to provide more rigidity and less distortion during heavy cuts and faster production, with virtually no vibration. Structure also facilitates easy chip disposal. Also the footprint has been reduced to save valuable space at customer's end.



Linear Tooling helps in faster production by reducing overall cycle time thereby improving productivity at large and helps in reducing cost per component for the customer.

- No idle time Resulting in higher productivity.
- two setup available on one machine one half of a job can be completed on one spindle while the second half be completed on the other spindle.
- Macpower CNC used liner tooling system to reduce machining time because of faster positioning of tools compared to turret.
- less manpower required & space taken in similar to be one machine.
- Machine working in one spindle same time operator change completed job from second spindle.

[illegible]

<b>Std. Turning Dia.</b>	mm	90
<b>Max. Turning Dia.</b>	mm	165
<b>Max. Turning Length</b>	mm	125
<b>Travel (X / Z)</b>	mm	250 / 400
<b>Rapid Feed (X / Z)</b>	m/min	24
<b>Chuck Size</b>	mm	135
<b>Spindle Power (Fanuc)</b>	kW	5.5 / 7.5
<b>Spindle Bore</b>	mm	36
<b>Spindle Nose</b>		A2-4
<b>Weight (Approx)</b>	Kg	3800

The graph shows the power characteristics of a 1500W spindle motor. The Y-axis represents Output Power in kW (0 to 10), and the X-axis represents Spindle Speed in RPM (0 to 3500). Three power curves are plotted:

- Max @ Acceleration (KW):** A red line that rises linearly from (0,0) to (750, 8.3 kW) and then remains constant at 8.3 kW up to 2250 RPM.
- Peak Power (KW):** A green line that rises linearly from (0,0) to (750, 7.5 kW) and then remains constant at 7.5 kW up to 2250 RPM.
- Continuous Power (KW):** A blue line that rises linearly from (0,0) to (1000, 5.5 kW) and then remains constant at 5.5 kW up to 3500 RPM.

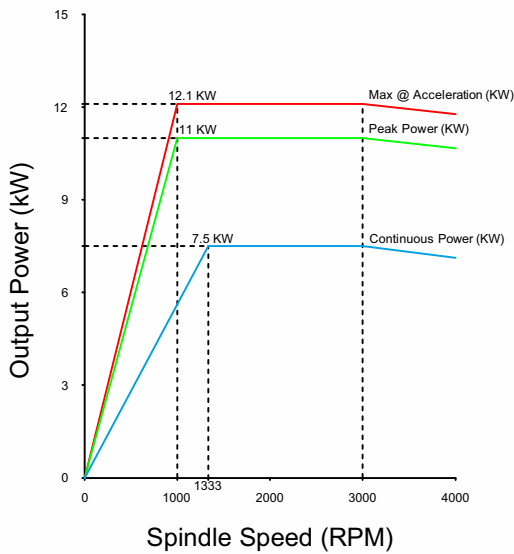
Vertical dashed lines indicate the RPM values corresponding to the power limits: 750 RPM for Max Acceleration and Peak Power, and 1000 RPM for Continuous Power. A horizontal dashed line is drawn at 5.5 kW, intersecting the Continuous Power curve at 1000 RPM.

# GX 100 Twin



Std. Turning Dia.	mm	100
Max. Turning Dia.	mm	200
Max. Turning Length	mm	140
Travel (X / Z)	mm	360 / 450
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	165
Spindle Power (Fanuc)	kW	7.5 / 11
Spindle Bore	mm	54
Spindle Nose		A2-5
Weight (Approx)	Kg	4450

Power Diagram



## Components



# GX Twin Series Machine Configurations

DESCRIPTIONUNITGX 100 Jr. TwinGX 100 Twin

## CAPACITY

Std. Turning Dia.	mm	90	100
Max. Turning Dia.	mm	165	200
Swing Over Bed	mm	180	375
Max. Turning Length	mm	125	140
Dist. Between Chuck to Chuck	mm	700	800

## SLIDES

Cross (X axis) Travel	mm	250	360
Longitudinal (Z axis) Travel	mm	400	450
Rapid Feed (X & Z axis)	m/mm	24	24

## MAIN SPINDLE

Spindle Motor (Fanuc)	kW	5.5/7.5	7.5/11
Spindle Nose	--	A2-4	A2-5
Spindle Bore	mm	36	54
Max. Bar Capacity	mm	25	42
Chuck Size	mm	135	165
Speed Range	rpm	50 - 5000	50 - 4000
Full Power Range	rpm	1333 - 3000	1333 - 3000

## TOOLING ARRANGEMENT

No. of Tools	No.	10	10
Tool Size	mm	25x25	25 x 25
Max. Boring Bar Capacity	mm	32	32

## ACCURACY (As Per JIS)

Positioning Accuracy	mm	0.008	0.008
Repeatability	mm	0.007	0.007

## OTHER DATA

Weight (Approx)	Kg.	3800	4450
Machine Dimensions (WxDxH) (Approx)	mm	3200x2350x1745	3680x2355x1965

## SYSTEM

Fanuc	Oi TF	Oi TF
Siemens	828D	828D
Mitsubishi	E80	E80

# GX Series

## Machine Configurations

DESCRIPTION	UNITS	GX 100 JUNIOR	GX 100 SUPER	GX 200 SUPER
CAPACITY				
Std. Turning Dia.	mm	90	100	200
Max. Turning Dia.	mm	135	165	-
Swing Over Bed	mm	150	300	500
Max. Turning Length	mm	150	180	180
SLIDES				
Cross (X axis) Travel	mm	250	360	360
Longitudinal (Z axis) Travel	mm	150	180	180
Rapid Feed (X & Z axis)	m/min	24	24	24
MAIN SPINDLE				
Spindle Nose		A2-4	A2-5	A2-6
Spindle Bore	mm	36	54	63
Max. Bar Capacity	mm	25	42	51
Chuck Size	mm	135	165	200
Speed Range	rpm	50 - 5000	50 - 4000	50 - 3500
Full Power Range	rpm	1333 - 3000	1333 - 3000	1000 - 2250
Spindle Motor (Fanuc)	kW	5.5 / 7.5	7.5 / 11	7.5 / 11
Spindle Motor (Siemens)	kW	3.7 / 5.5	7 / 9	9 / 11
TOOLING ARRANGEMENT				
No. of Tools	-	5	5	5
Tool Size	mm	20 x 20	25 x 25	25 x 25
Max. Boring Bar Capacity	mm	25	32	40
Positioning Accuracy	mm	0.008	0.008	0.008
Repeatability	mm	0.007	0.007	0.007
OTHER DATA				
Weight (Approx)	Kg	2000	2800	3000
Machine Dimensions (WxDxH) (Approx)	mm	2280 x 1435 x 1525	2665 x 1590 x 1765	2700 x 1800 x 1905
SYSTEM				
Fanuc		0i TF	0i TF	0i TF
Siemens		808D ADVANCE	828D	828D
Mitsubishi		E80	E80	E80



# GX Twin Series

## Machine Configurations

DESCRIPTION	UNIT	GX 100 Jr. Twin	GX 100 Twin
CAPACITY			
Std. Turning Dia.	mm	90	100
Max. Turning Dia.	mm	165	200
Swing Over Bed	mm	180	375
Max. Turning Length	mm	125	140
Dist. Between Chuck to Chuck	mm	700	800
SLIDES			
Cross (X axis) Travel	mm	250	360
Longitudinal (Z axis) Travel	mm	400	450
Rapid Feed (X & Z axis)	m/mm	24	24
MAIN SPINDLE			
Spindle Motor (Fanuc)	kW	5.5/7.5	7.5/11
Spindle Nose	--	A2-4	A2-5
Spindle Bore	mm	36	54
Max. Bar Capacity	mm	25	42
Chuck Size	mm	135	165
Speed Range	rpm	50 - 5000	50 - 4000
Full Power Range	rpm	1333 - 3000	1333 - 3000
TOOLING ARRANGEMENT			
No. of Tools	No.	10	10
Tool Size	mm	25x25	25 x 25
Max. Boring Bar Capacity	mm	32	32
ACCURACY (As Per JIS)			
Positioning Accuracy	mm	0.008	0.008
Repeatability	mm	0.007	0.007
OTHER DATA			
Weight (Approx)	Kg.	3800	4450
Machine Dimensions (WxDxH) (Approx)	mm	3200x2350x1745	3680x2355x1965
SYSTEM			
Fanuc		0i TF	0i TF
Siemens		828D	828D
Mitsubishi		E80	E80



# Accessories

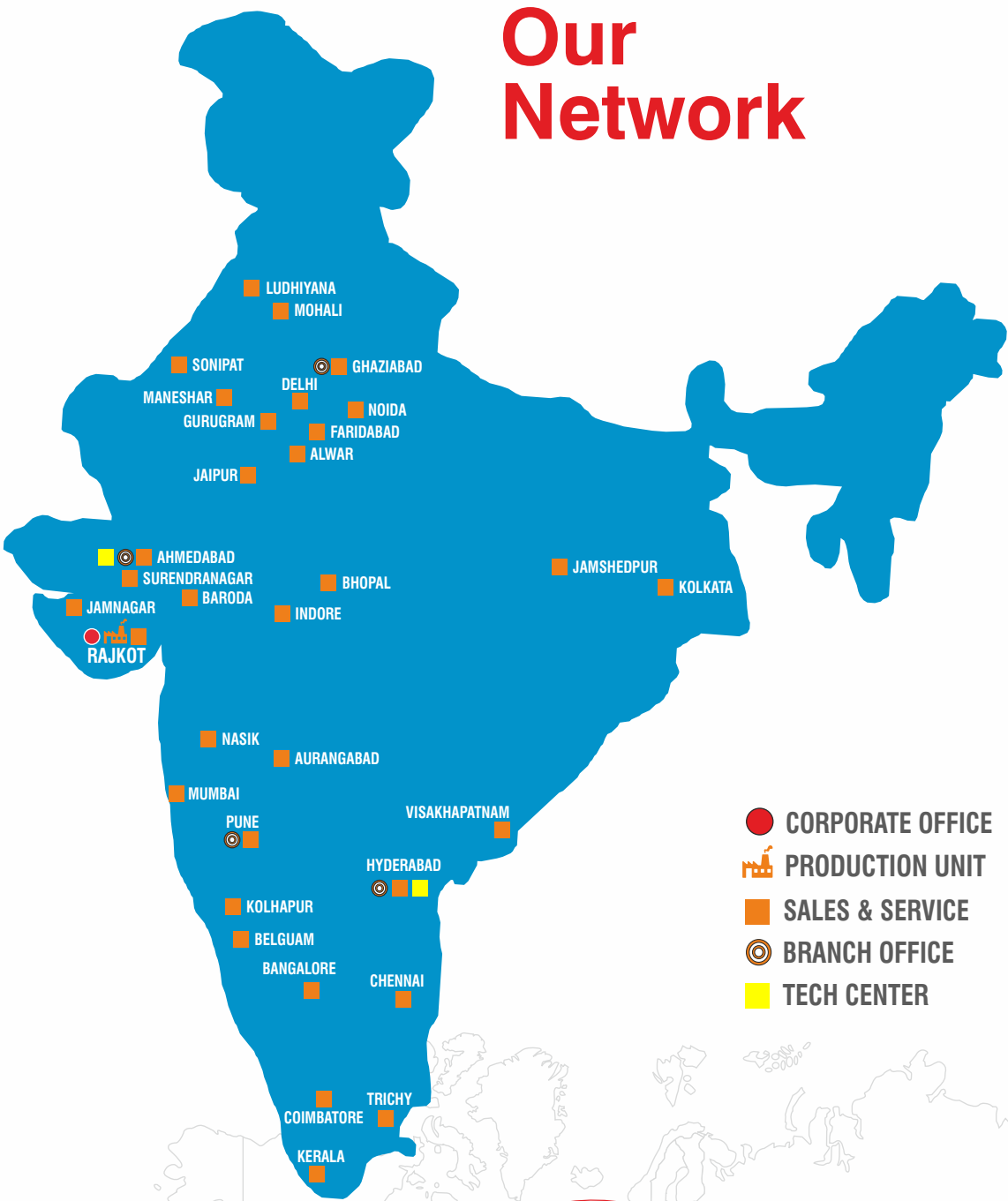
## STANDARD

- Linear Motion Guide Ways
- AC Spindle Drive & AC Servo Drive
- Hydraulic Chuck with Actuating Hollow Cylinder
- Hydraulic Unit
- Coolant System
- Centralized Lubrication System
- Axial & Radial Blocks
- Boring Bar Blocks
- Patrol Light
- Foot Switch

## OPTIONAL

- Chip Conveyor
- Bar Feeder
- Stabilizer
- Hydraulic Collet Chuck
- Auto Door
- Oil Skimmer
- Steady Rest
- Tooled Up Solution
- Tool Probe
- Work Probe

# Our Network



# Our Presence

