



# EMPOWERED INNOVATION





SERIES



- 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.

#### **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.





#### **OUR VISION**

To Provide Best Solution In Machine Tool Industry.

#### **OUR MISSION**



Fostering A Spirit Of Continuous Learning And Innovation.

To Offer World Class Products Through Continuous Innovation.

To Reach New Sectors Of Industry In Particular And Society At Large By Offering Products Which Make Change In Present State Of Machine Tools.

To Nurture Best Brains In The Company So As To Develop Them As A Future Leader To Enhance The Company To A Newer Level.

To Provide Quick And Effective Service Base To Enhance Customer Satisfaction Index.



#### **INFRASTRUCTURE**









**ASSEMBLY AREA** 



**POWDER COATING AREA** 



SHEET METAL AREA



SPINDLE ASSEMBLY AREA



RESEARCH AND DEVELOPMENT

Major strength of our product quality is usage of highly precision parts as a part of our In-house manufacturing facilities. We have well qualified, trained skilled intellectual capital to manage manufacturing of High technology driven machines. We have proven state of the art manufacturing and assembly facilities to fulfill the customers' need.

#### We have IN HOUSE FACILITIES LIKE.

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

In House **SPINDLE MANUFACTURING AREA** equipped with Kellenberger KEL 100 Universal Cylindrical Grinder with internal and external Thread Grinding Facility and Spindle assembly along with Controlled Temperature Precision Room with Hi tech Spindle Balancing System.

**ASSEMBLY SHOP** has been established with Ucreate flooring, Hi-tech Assembly equipment's & Totally dust Free Environment. In addition Assembly set up classified with product categories like **TURNING CENTERS, MACHINING CENTERS, TURN MILLS CENTER & MULTI AXES CENTERS.** 

**SHEET METAL** division is equipped with 8 Axes AMADA Press Brake with Auto Angle correction, SLTL fiber laser profile cutting machine, Modular welding with Assembly set up & Separate Storage Area for ready to use Sheet Metal enclosures for the world class machine with high quality sheet required for the machine guarding.

**POWDER COATING PLANT** is performing with 11 Tank PT Hot and Cold Process with GEMA Automatic Powder Coating Gun system for preventing from corrosion and giving the best aesthetically appeal design with dynamic looks of machines.

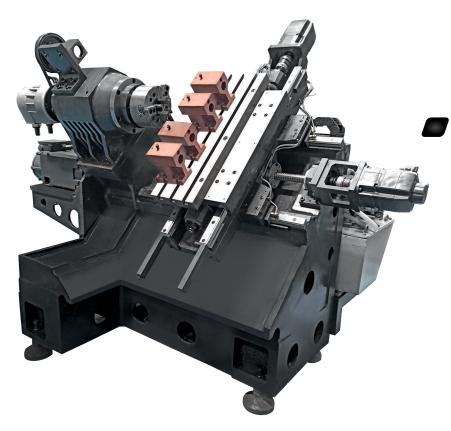
At Macpower **R&D department**, we have intelligent minds with diverse backgrounds to develop technology that is not just effective today, but also tomorrow.

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.





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.

#### 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.







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 Roller Guideways

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



# Double-Anchored

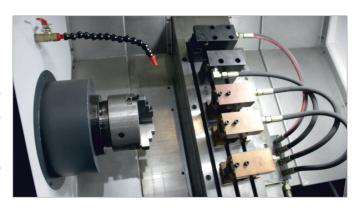
#### **Ball Screws**

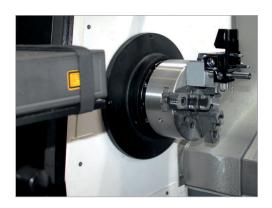
Ball Screws are directed by direct coupled AC servo motor with flexible coupling. This greatly improves positioning accuracy, and provides more accurate threading and contouring. Ball Screws are anchored at both ends and inspected for parallelism with axis guide. Pre-loaded ball nuts eliminate backlash.



#### 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.







#### **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	135x3
Spindle Power (Siemens)	kW	3.7 / 5.5
Spindle Bore	mm	40
Spindle Nose		A2-4
Weight (Approx)	Kg	2000

#### Components



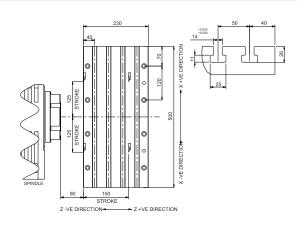




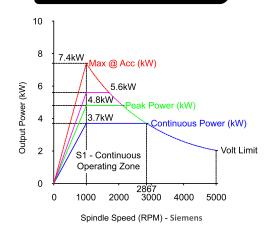




## **Tool Interference Diagram**



#### **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	165x3
Spindle Power (Fanuc)	kW	5.5 / 7.5
Spindle Bore	mm	54
Spindle Nose		A2-5
Weight (Approx)	Kg	2800

#### Components



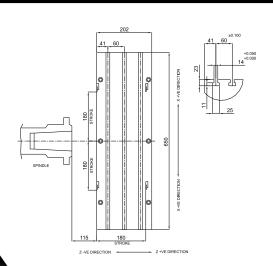




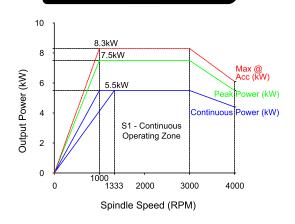




## **Tool Interference Diagram**



# Power Diagram



# macpower

# **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	200x3
Spindle Power (Fanuc)	kW	7.5 / 11
Spindle Bore	mm	63
Spindle Nose		A2-6
Weight (Approx)	Kg	3000

#### Components



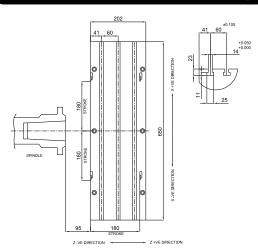




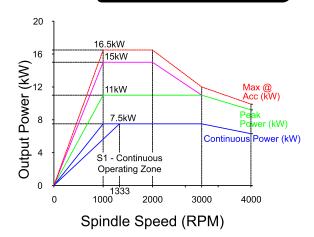




## Tool Interference Diagram



# Power Diagram



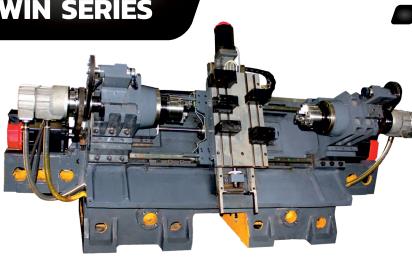


# GX SERIES MACHINE CONFIGURATIONS

DESCRIPTION	UNIT	GX 100 JUNIOR	GX 100 SUPER	GX 200 SUPER
CAPACITY				
Standard Turning Dia.	mm	Ø 90	Ø 100	Ø 200
Maximum Turning Dia.*	mm	Ø 135	Ø 165	_
Swing Over Bed	mm	Ø 150	Ø 300	Ø 500
Maximum Turning Length	mm	150	180	180
Distance Between Center	mm	-	N/A	-
SLIDES				
Cross (X axis) Travel	mm	250	360	360
Longitudinal (Z axis) Travel	mm	150	180	180
Rapid Feed (X axis)	m/min	24	24	24
Rapid Feed (Z axis)	m/min	24	24	24
MAIN SPINDLE				
Spindle Nose	_	A2-4	A2-5	A2-6
Spindle Bore	mm	Ø 40	Ø 54	Ø 63
Max. Bar Capacity	mm	Ø 25	Ø 42	Ø 51
Chuck Size	mm	Ø 135 x 3 Jaw	Ø 165 x 3 Jaw	Ø 200 x 3 Jaw
Speed Range	rpm	50 - 5000	50 – 4000	50 – 3500
Full Power Range	rpm	1000-2867	1000 – 3000	1000 – 3000
Spindle Motor (Continues Rating)		3.7 / 5.5		
Spindle Motor (15min. Rating)	KW	(Siemens)	5.5 / 7.5	7.5 / 11
TOOLING ARRANGEMENT				
No. of Tools	No.	5	5	5
Tool Size	mm	20 x 20	25 x 25	25 x 25
Max. Boring Bar Capacity	mm	Ø 25	Ø 32	Ø 40
ACCURACY				
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
Dimensions (W x D x H)(Approx.)	mm	2280x1435x1525	2665x1590x1765	2700X1800X1905
SYSTEM				
Fanuc	_	OI TF PLUS	OI TF PLUS	OI TF PLUS
Siemens	_	808 D	828 D	828 D

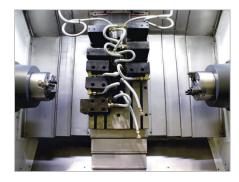






# Rigid & Massive Structure

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.



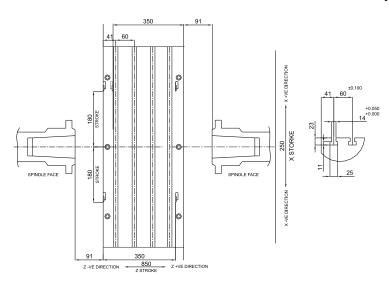
#### Linear Tooling

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.

## Advantages...

- · 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.

#### Tool Interference Representative



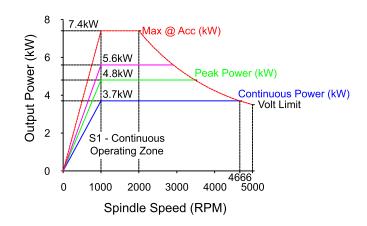


# GX 100 JR. TWIN



Std. Turning Dia.	mm	90
Max. Turning Dia.	mm	165
Max. Turning Length	mm	125
Travel (X / Z)	mm	250 / 400
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	135
Spindle Power (Siemens)	kW	3.7 / 5.5
Spindle Bore	mm	40
Spindle Nose		A2-4
Weight (Approx)	Kg	3800

# **Power Diagram**



## **Components**











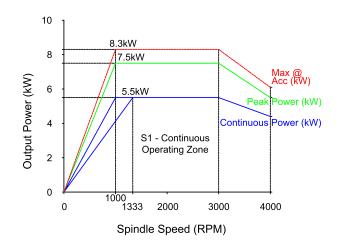


# **GX 100 TWIN**



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	5.5 / 7.5
Spindle Bore	mm	54
Spindle Nose		A2-5
Weight (Approx)	Kg	4450

## **Power Diagram**



## **Components**













# 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/min	24	24
MAIN SPINDLE			
Spindle Motor (Fanuc)	kW	(Siemens) 3.7/5.5	(Fanuc) 5.5/7.5
Spindle Nose		A2-4	A2-5
Spindle Bore	mm	40	54
Max. Bar Capacity	mm	25	42
Chuck Size	mm	135	165
Speed Range	rpm	50 - 5000	50 - 4000
Full Power Range	rpm	1000 - 4666	1000 - 3000
TOOLING ARRANGEMENT			
No. of Tools	No.	10	10
			10
Tool Size	mm	25x25	25 x 25
	mm mm	25x25 32	
Max. Boring Bar Capacity			25 x 25
Max. Boring Bar Capacity  ACCURACY (As Per JIS)			25 x 25
Max. Boring Bar Capacity  ACCURACY (As Per JIS)  Positioning Accuracy	mm	32	25 x 25 32
Max. Boring Bar Capacity  ACCURACY (As Per JIS)  Positioning Accuracy Repeatability	mm	0.008	25 x 25 32 0.008
Max. Boring Bar Capacity  ACCURACY (As Per JIS)  Positioning Accuracy Repeatability  OTHER DATA	mm	0.008	25 x 25 32 0.008
Max. Boring Bar Capacity  ACCURACY (As Per JIS)  Positioning Accuracy Repeatability  OTHER DATA Weight (Approx) Machine Dimensions (WxDxH)	mm mm mm	0.008 0.007	25 x 25 32 0.008 0.007
Max. Boring Bar Capacity  ACCURACY (As Per JIS)  Positioning Accuracy Repeatability  OTHER DATA  Weight (Approx)  Machine Dimensions (WxDxH)  (Approx)	mm mm mm	0.008 0.007 3800	25 x 25 32 0.008 0.007
Tool Size Max. Boring Bar Capacity  ACCURACY (As Per JIS) Positioning Accuracy Repeatability  OTHER DATA Weight (Approx) Machine Dimensions (WxDxH) (Approx)  SYSTEM Fanuc	mm mm mm	0.008 0.007 3800	25 x 25 32 0.008 0.007



#### **ACCESSORIES**

#### **STANDARD**

- Roller 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

#### FOR MORE INFORMATION PLEASE CONTACT

#### **WEST ZONE**

Rajkot 93777 87930 74860 42366 Jamnagar 74860 42366 Surendranagar: 93777 87930 Morbi 93777 87930 Bhavnagar

Ahmedabad 93775 87930 93775 87930 Sanand Anand 93775 87930 Vadodara 93770 87930 Halol 93770 87930 93770 87930 Surat 93770 87930 Vapi Mumbai 93203 87930 Nashik 93203 87930

93712 87930 Aurangabad Ahmednagar 93712 87930 Kolhapur 93210 87930 93210 87930 Pune

63588 11122

72111 88869 Jaipur Alwar 72111 88869

**Jodhpur** 72111 88869

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89504 69265 Faridabad 76000 10288 Ghaziabad 76000 10288

89504 69265

Noida 76000 10288 89504 69265

89504 69265 Sonipat

76000 10288

Ludhiana 99886 93302 Mohali 99886 93302

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93758 45361

93758 45361 Jameshedpur :

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Coimbatore 88704 77026 Trichy 88704 77026 Kerala 88704 77026

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#### MACPOWER CNC MACHINES LTD

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Note: Technical Specifications and Colors are subject to change as a part of continous develo