

ALL **NEW** 5TH GENERATION

SERIES

EMPOWERED
INNOVATION



GX
SERIES

ONE NUMBER - MULTI SOLUTIONS



FOR SALES INQUIRIES & CUSTOMER CARE
7998-7998-16



TEXT

www.macpowercnc.com



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.

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.



MACHINE SHOP AREA



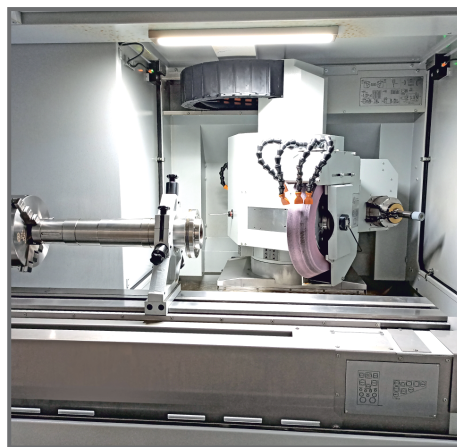
ASSEMBLY AREA



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.

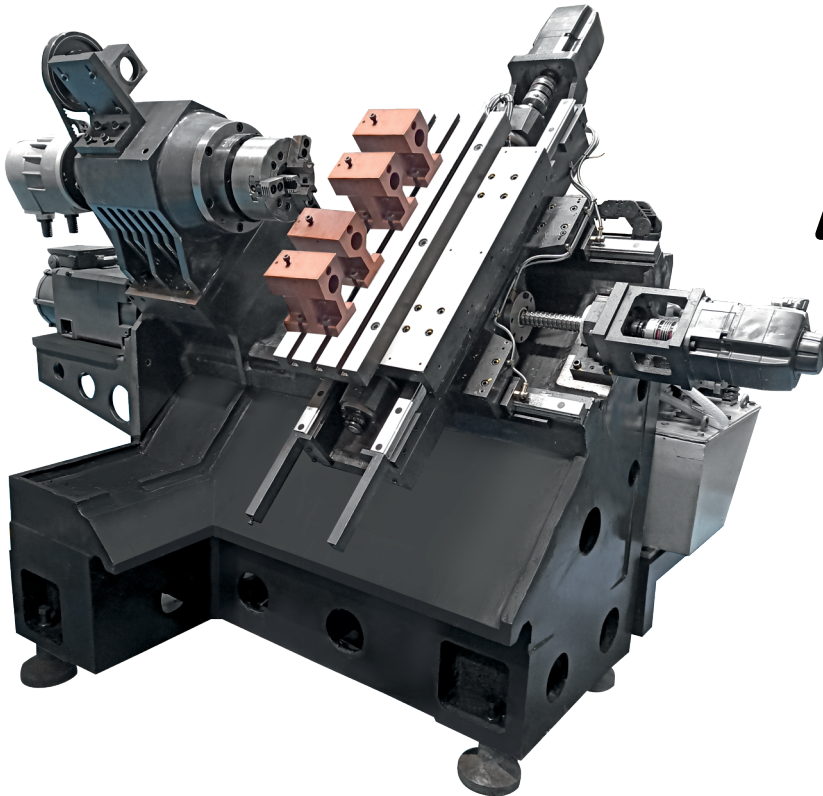
POWDER COATING PLANT is performing with 11 Tank PT Hot and Cold Process with GEMA Automatic Powder Coating Gun system for preventing from corrosion and giving the best aesthetically appeal design with dynamic looks of machines.

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.

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

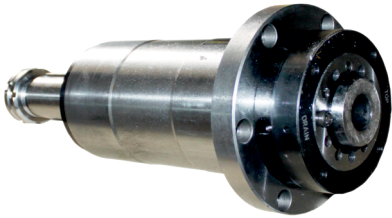
Single piece monoblock structure is made out of grade 25 cast iron for more stability. It is heavily ribbed to provide more rigidity and less distortion during heavy cuts and faster production, with virtually no vibration. Structure also facilitates easy chip disposal. Also the footprint has been reduced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

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.



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 Roller Guideways

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

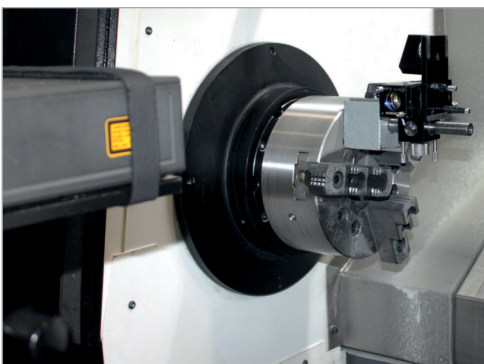
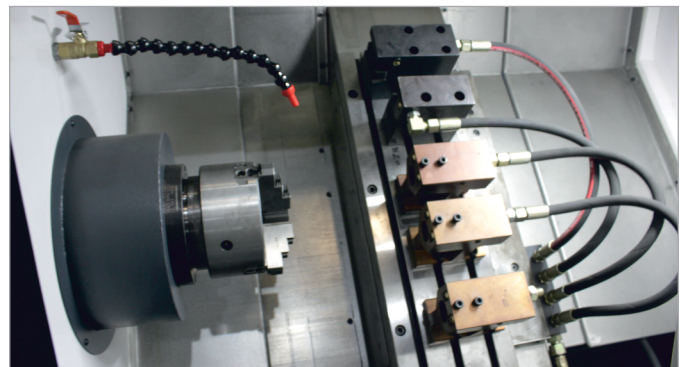


Double-Anchored Ball Screws

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.



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

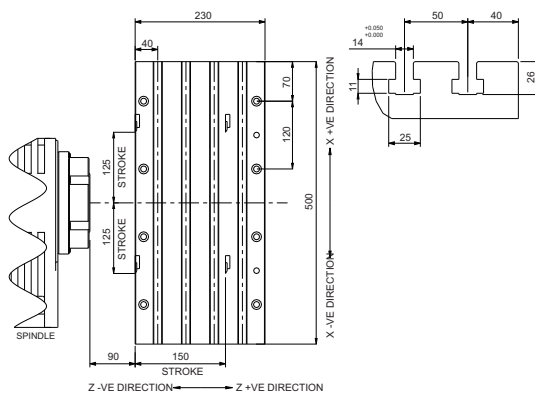


Std. Turning Dia.	mm	90
Max. Turning Dia.	mm	135
Max. Turning Length	mm	150
Travel (X / Z)	mm	250 / 150
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	135x3
Spindle Power (Siemens)	kW	3.7 / 5.5
Spindle Bore	mm	40
Spindle Nose		A2-4
Weight (Approx)	Kg	2000

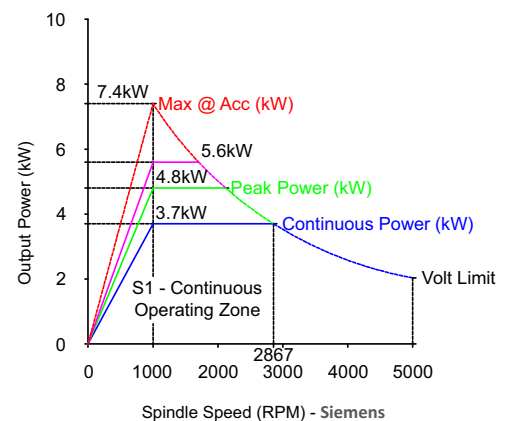
Components



Tool Interference Diagram



Power Diagram



GX 100 JR. PLUS

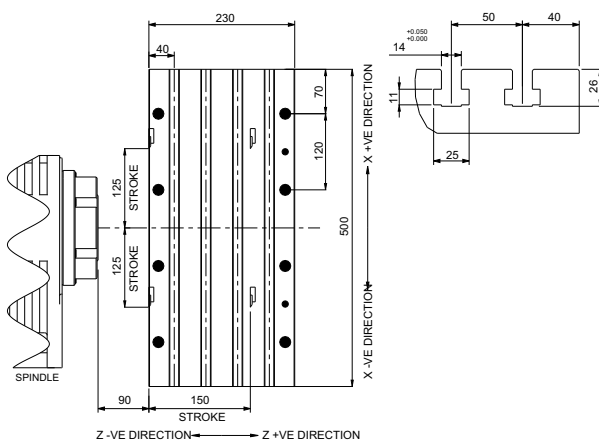


Std. Turning Dia.	mm	90
Max. Turning Dia.	mm	135
Max. Turning Length	mm	150
Travel (X / Z)	mm	250 / 150
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	165x3
Spindle Power (Siemens)	kW	3.7 / 5.5
Spindle Bore	mm	54
Spindle Nose		A2-5
Weight (Approx)	Kg	2100

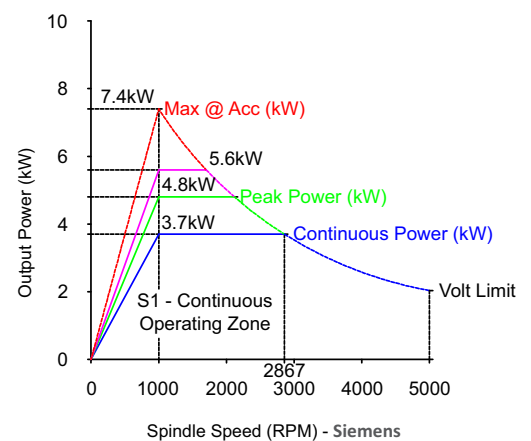
Components



Tool Interference Diagram

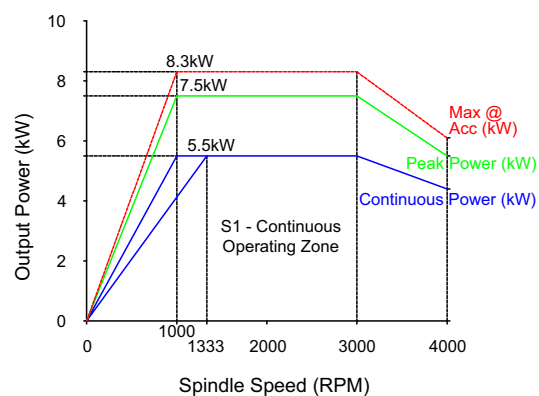
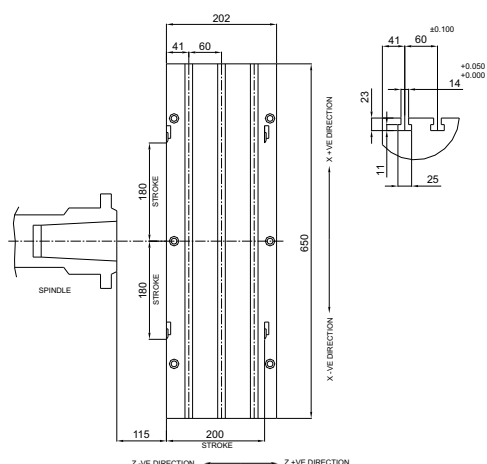


Power Diagram





Power Diagram



GX 200 SUPER

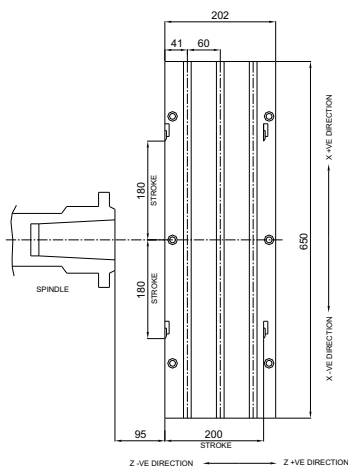


Std. Turning Dia.	mm	200
Max. Turning Length	mm	200
Travel (X / Z)	mm	360 / 200
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	200x3
Spindle Power (Fanuc)	kW	7.5 / 11
Spindle Bore	mm	63
Spindle Nose		A2-6
Weight (Approx)	Kg	2600

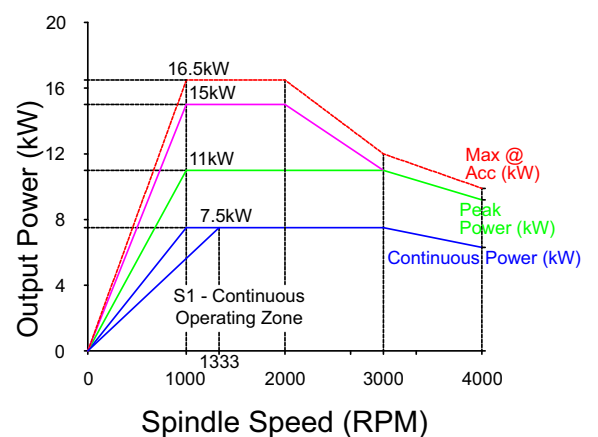
Components



Tool Interference Diagram



Power Diagram



GX SERIES

MACHINE CONFIGURATIONS

DESCRIPTION	UNIT	GX 100 JUNIOR	GX 100 JUNIOR PLUS	GX 100 SUPER	GX 200 SUPER
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CAPACITY

Standard Turning Dia.	mm	Ø 90	Ø 90	Ø 100	Ø 200
Maximum Turning Dia.*	mm	Ø 135	Ø 135	Ø 165	–
Swing Over Bed	mm	Ø 150	Ø 150	Ø 300	Ø 500
Maximum Turning Length	mm	150	150	200	200

SLIDES

Cross (X axis) Travel	mm	250	250	360	360
Longitudinal (Z axis) Travel	mm	150	150	200	200
Rapid Feed (X axis)	m/min	24	24	24	24
Rapid Feed (Z axis)	m/min	24	24	24	24

MAIN SPINDLE

Spindle Nose	–	A2-4	A2-5	A2-5	A2-6
Spindle Bore	mm	Ø 40	Ø 54	Ø 54	Ø 63
Max. Bar Capacity	mm	Ø 25	Ø 42	Ø 42	Ø 51
Chuck Size	mm	Ø 135 x 3 Jaw	Ø 165 x 3 Jaw	Ø 165 x 3 Jaw	Ø 200 x 3 Jaw
Speed Range	rpm	50 - 5000	50 - 4000	50 - 4000	50 - 3500
Full Power Range	rpm	1000-2867	1000-2867	1000 - 3000	1000 - 3000
Spindle Motor (Continues Rating)	KW	3.7 / 5.5	3.7 / 5.5	5.5 / 7.5	7.5 / 11
Spindle Motor (15min. Rating)		(Siemens)	(Siemens)		

TOOLING ARRANGEMENT

No. of Tools	No.	5	5	5	5
Tool Size	mm	20 x 20	20 x 20	25 x 25	25 x 25
Max. Boring Bar Capacity	mm	Ø 25	Ø 25	Ø 32	Ø 40

ACCURACY

Positioning Accuracy	mm	0.008	0.008	0.008	0.008
Repeatability	mm	0.007	0.007	0.007	0.007

OTHER DATA

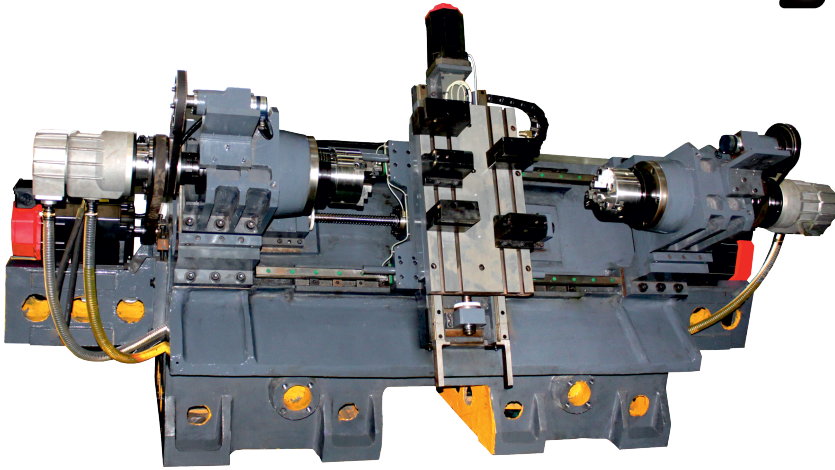
Weight (Approx.)	kg.	2000	2100	2500	2600
Dimensions (L x W x H)(Approx.)	mm	2385x1455x1525	2385x1455x1525	2550x1560x1770	2550x1560x1770

SYSTEM

Fanuc	–	OI TF PLUS	OI TF PLUS	OI TF PLUS	OI TF PLUS
Siemens	–	808 D	808 D	828 D	828 D

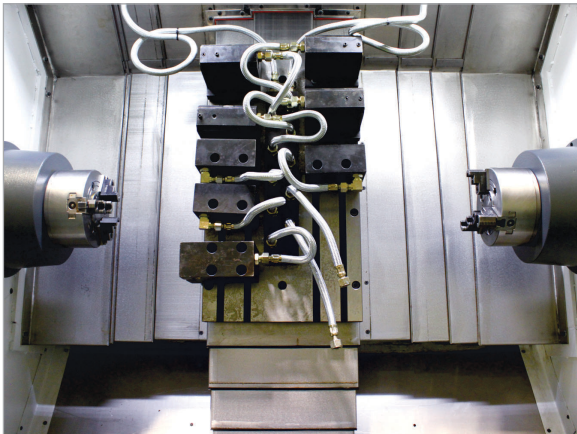
*Max. Turning Dia is For Limited Length

OVERVIEW TWIN SERIES



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..

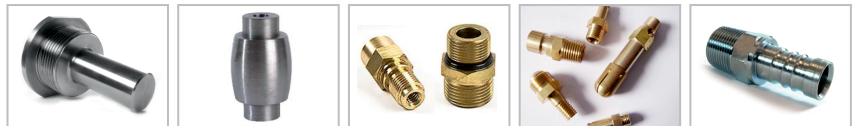
- No idle time Resulting in higher productivity.
- two setup available on one machine one half of a job can be completed on one spindle while the second half be completed on the other spindle.
- Macpower CNC used liner tooling system to reduce machining time because of faster positioning of tools compared 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.

GX 100 JR. TWIN

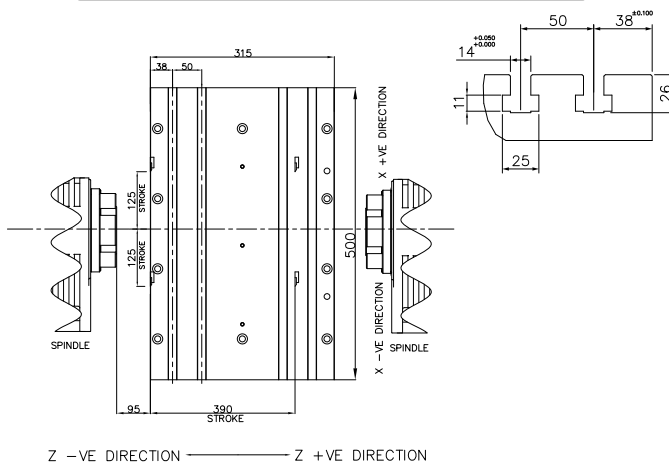


Std. Turning Dia.	mm	90
Max. Turning Dia*	mm	165
Max. Turning Length	mm	125
Travel (X / Z)	mm	250 / 390
Rapid Feed (X / Z)	m/min	24
Chuck Size	mm	135
Spindle Power (Siemens)	kW	3.7 / 5.5
Spindle Bore	mm	40
Spindle Nose		A2-4
Weight (Approx)	Kg	3800

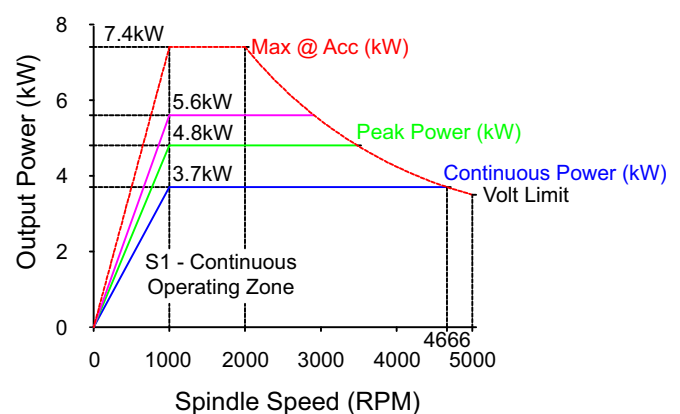
Components

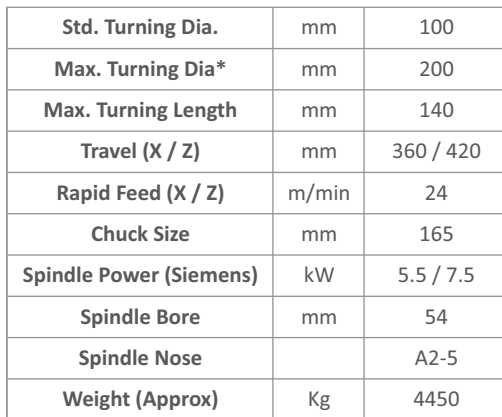


Tool Interference Diagram



Power Diagram





Technical drawing of a 3-axis machine tool, showing front, side, and detail views with dimensions.

Front View (Left): Shows the spindle and tool holder assembly. Dimensions include 180 STROKE (vertical), 91 (horizontal distance from spindle center to tool holder), 41 (horizontal distance from tool holder to first guide), 60 (horizontal distance between guides), 355 (total horizontal length), and 65.5 (total horizontal length including tool holder).

Side View (Right): Shows the tool holder and guide assembly. Dimensions include 60 (horizontal distance from tool holder to first guide), 41 (horizontal distance between guides), 14 (vertical distance from tool holder to first guide), 11 (vertical distance from tool holder to second guide), 25 (vertical distance from tool holder to third guide), and 23 (vertical distance from tool holder to fourth guide). A tolerance of ± 0.100 is indicated for the 41 dimension.

Detail View (Bottom): Shows the tool holder and guide assembly in detail. Dimensions include 180 STROKE (vertical), 91 (horizontal distance from spindle center to tool holder), 41 (horizontal distance from tool holder to first guide), 60 (horizontal distance between guides), 355 (total horizontal length), and 65.5 (total horizontal length including tool holder). The spindle is labeled "SPINDLE" and the tool holder is labeled "TOOL HOLDER".

Annotations: "X - VE DIRECTION" and "X + VE DIRECTION" are indicated for the side view. "Z - VE DIRECTION" and "Z + VE DIRECTION" are indicated for the front view.

The graph shows the power characteristics of a 1000W spindle motor. The Y-axis represents Output Power in kW (0 to 8), and the X-axis represents Spindle Speed in RPM (0 to 5000). The red line represents the maximum power available, which is 7.4kW at 1000 RPM. The green line represents the peak power, which is 5.6kW at 1000 RPM. The blue line represents the continuous power, which is 3.7kW at 1000 RPM. The power decreases as spindle speed increases, reaching a 'Volt Limit' at 4666 RPM. The 'S1 - Continuous Operating Zone' is indicated for speeds up to 1000 RPM.

Spindle Speed (RPM)	Max @ Acc (kW)	Peak Power (kW)	Continuous Power (kW)
0	0	0	0
1000	7.4	5.6	3.7
2000	7.4	5.6	3.7
4666	~4.5	~4.5	3.7
5000	~3.5	~3.5	~3.5

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	390	420
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
Tool Size	mm	20x20	25 x 25
Max. Boring Bar Capacity	mm	25	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	3200x1990x1745	3490x1980x1965
SYSTEM			
Fanuc	-	OI TF PLUS	OI TF PLUS
Siemens	-	828D	828D

*Max. Turning Dia is For Limited Length

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
Jamnagar	:	74860 42366
Surendranagar	:	74860 42366
Morbi	:	93777 87930
Bhavnagar	:	93777 87930
Ahmedabad	:	93775 87930
Sanand	:	93775 87930
Anand	:	93775 87930
Baroda	:	63560 02810
Halol	:	63560 02810
Surat	:	93753 87930
Vapi	:	93753 87930
Mumbai	:	93203 87930
Nasik	:	93713 87930
Aurangabad	:	93456 87930
Kolhapur	:	72858 55955
Pune	:	93210 87930
Ahmednagar	:	93210 87930

NORTH ZONE

Delhi	:	76000 10288
Faridabad	:	74860 29853
Ghaziabad	:	72111 02820
Noida	:	76000 10288
Gurugram	:	63588 11123
Haryana	:	89504 69265
Sonipat	:	89504 69265
Ludhiana	:	99886 93302
Mohali	:	99886 93302
Jaipur	:	72111 88869
Alwar	:	72111 88869
Jodhpur	:	72111 88869

EAST ZONE

Kolkata	:	93758 45361
Jameshedpur	:	93758 45361

SOUTH ZONE

Hyderabad	:	72111 03869
Bangalore	:	72111 03869
Chennai	:	63560 02822
Belgaum	:	91641 02610
Coimbatore	:	72111 02822
Trichy	:	72111 02822
Kerala	:	72111 02822

CENTRAL ZONE

Indore	:	99747 97756
Bhopal	:	87706 96570

*at
your service
anytime
anywhere*



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