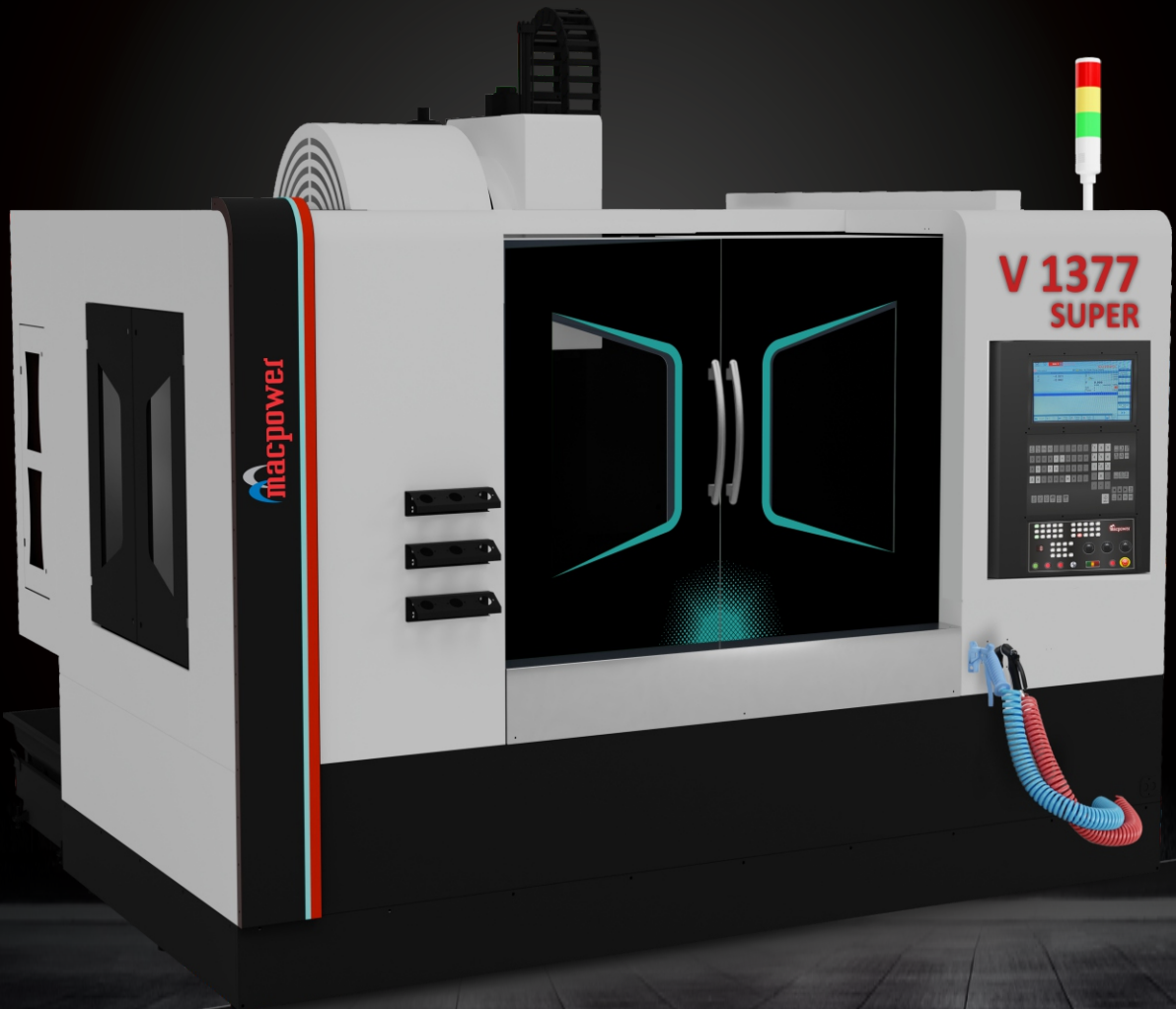


ALL **NEW** 5<sup>TH</sup> GENERATION

**SERIES**



# VERTICAL MACHINING CENTER



# JUMBO SERIES

ONE NUMBER - MULTI SOLUTIONS

FOR SALES INQUIRIES & CUSTOMER CARE



**96-1098-1098**

[WWW.MACPOWERCNC.COM](http://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.



## **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



**MACHINE SHOP AREA**



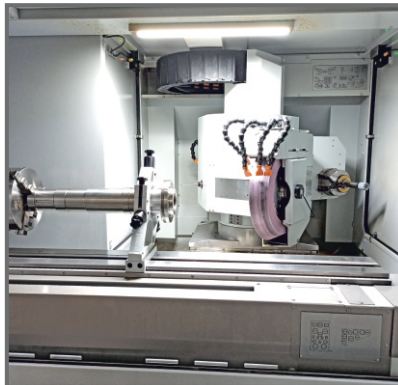
**ASSEMBLY AREA**



**POWDER COATING AREA**



**SHEET METAL AREA**

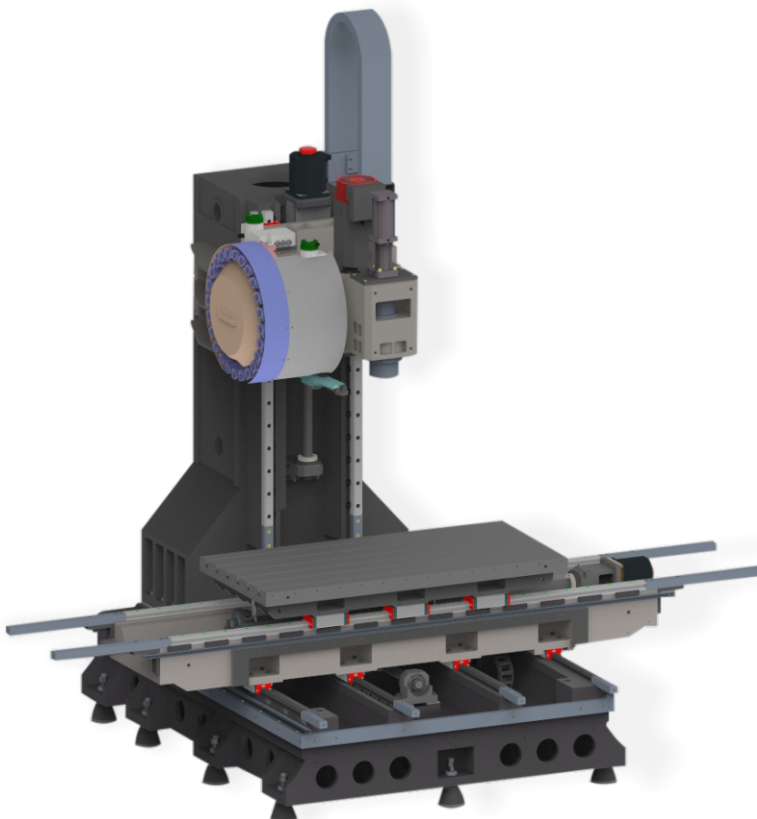


**SPINDLE ASSEMBLY AREA**



**RESEARCH AND DEVELOPMENT**

## **RIGID STRUCTURE**



Sturdiness of the foundation determined the soundness of the structure. The major construction parts are based on FG260 grade cast iron, to ensure optimum harmonic stability and maximum damping during cutting. Base and column are reinforced with heavy ribs for stability and least distortion. The uniform dense, fine graded casting distributed stress and heat throughout the machine structure.

## HIGH CAPACITY **ACCURATE SPINDLE**



The precision cartridge spindle unit having three super precise angular contact bearings at front and two at rear end, this combination ensures higher stiffness. Bearings are perfectly aligned and grease packed for long life.

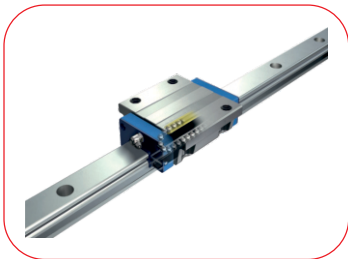
Spindle is indirectly driven by high speed AC spindle motor with reduced pulley ratio, to achieve high spindle torque and optimal performance of machine.

## DOUBLE-ANCHORED **BALL SCREWS**



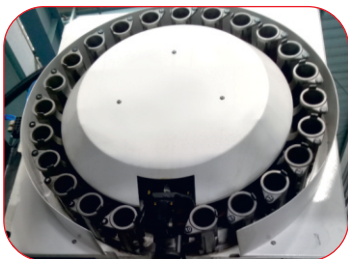
Ball Screws are directed by direct coupled AC servo motor with flexible coupling. This greatly improves positioning accuracy, and provides more accurate threading and contouring. Ball Screws are anchored at both ends and inspected for parallelism with axis guide. Pre-loaded ball nuts eliminate backlash.

## PRECISE LINER **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

## RELIABLE **ATC**



Twin arm type side mounted ATC driven by screw and cam speed up tool changing time with random access and resulted in reduce cycle time and higher productivity. Each subsystem is tested for innumerable cycle at every stage to enhance reliability.

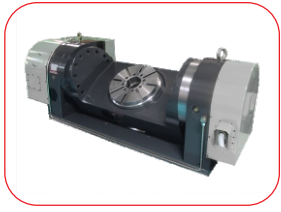
## ADVANCE INSPECTION **TECHNOLOGY**



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 0.01 mm / 300 mm and repeatability accuracy up to 0.007 mm.

# PRODUCTIVITY ENHANCEMENT OPTIONS

## 4TH & 5TH AXIS CAPABILITY



For maximum application and cutting flexibility, usage of 4th Axis or 5th Axis rotary table with high resolution feedback system can be opted. These rotary tables can be programmed through the control system, that can be used to increase productivity by multiple side workpiece in single setting

## COOLANT THROUGH SPINDLE (CTS)



This option provides high pressure filtered coolant directly to the cutting edge minimizing heat distractions, ensuring maximum productivity with today's high performance tooling. High recommended for jobs demanding deep boring and tapping.

## GEAR BOX



For application requiring high cutting for harder material or high cutting speed for soft materials, 2-speed gearbox need to be opted. These gearbox provide higher cutting torque at lower RPM with auto shifting mechanism keeping power constant. Such gearbox get directly coupled to main spindle motor giving production flexibility without disturbing precision.

## FLUSH COOLANT SYSTEM

Efficient chip remove is one of the important factor for better productivity with un-interrupted machining operations can be efficiently enhanced by selections of flush coolant system, high pressure coolant splash via flexible nozzles can be targeted to area of maximum chip accumulation. such a system enhance reduction in machining down time to operate and hence positively effecting productivity.

## CHIP CONVEYOR



Machine can be mounted with chip conveyor option for efficient Swarf removal for entire series. such type of arrangements is very much useful for applications requiring continues machining hours having much metal removal. with help of downtime can be reduce drastically.

## PROBES



A wide choice of spindle and surface-sensing probes as tool & job probes with infrared / radio laser transmission technology are available for increased spindle utilization, work piece setup and work piece measurement.

# V 1377 SUPER

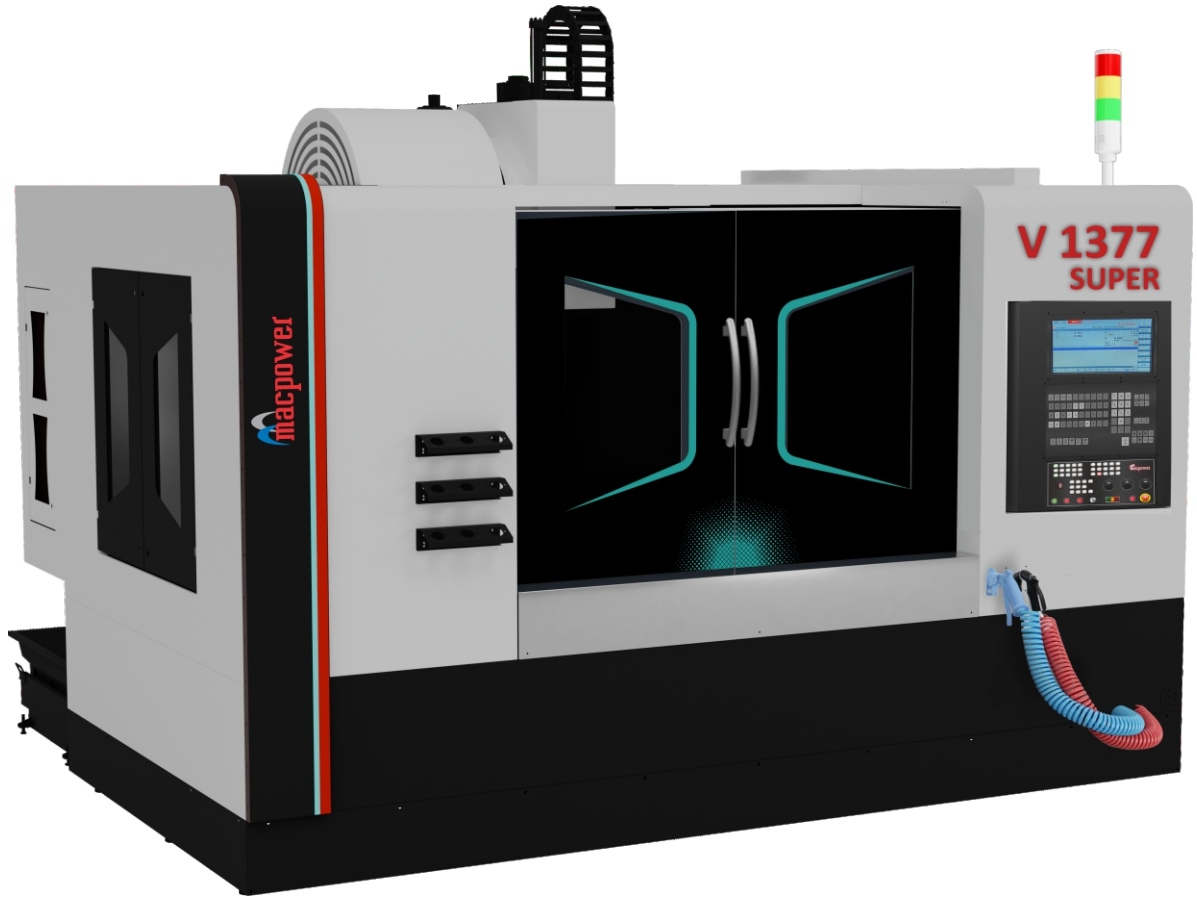
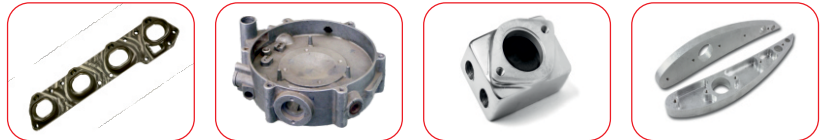
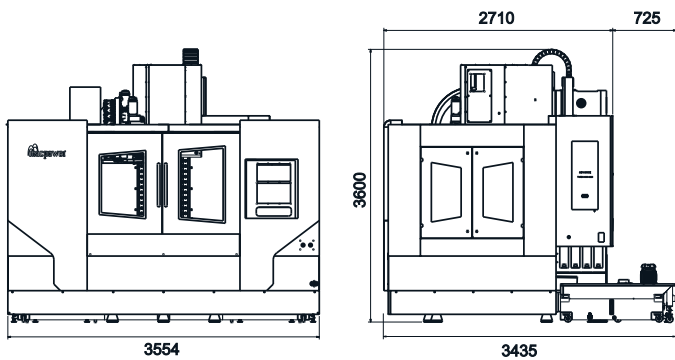


TABLE SIZE (CLAMPING AREA)	MM	700 x 1450
AXIS STROKE (X / Y / Z)	MM	1310 / 710 / 710
RAPID FEED RATES X/Y/Z AXIS	M/MIN	24/24/20
LOAD CAPACITY	KG	1500
SPINDLE	-	BT40/BT50
RATED POWER(FANUC)	KW	11 / 15
WEIGHT (APPROX)	KG	9525 / 10120
DIMENSIONS (APPROX) (WXDXH)	MM	3554x3435x3600 (BT-40) 3554x3435x3685 (BT-50)

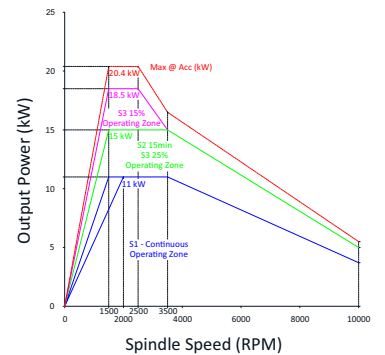
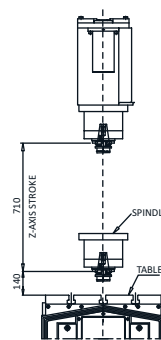
## COMPONENTS



## Machine Dimensions



## MACHINING RANGE & POWER DIAGRAM



# V 1577 SUPER

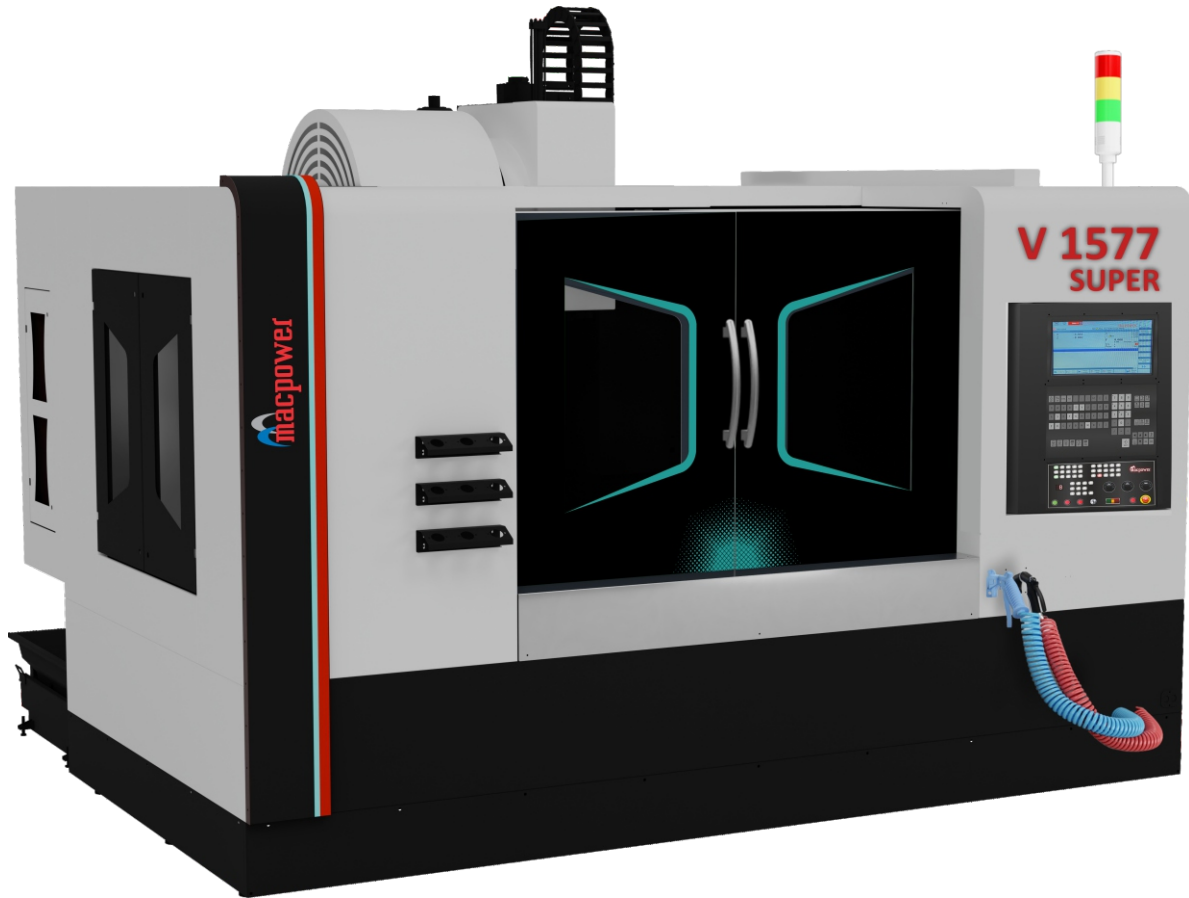
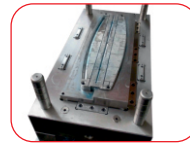
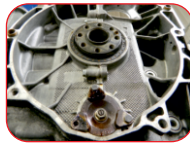
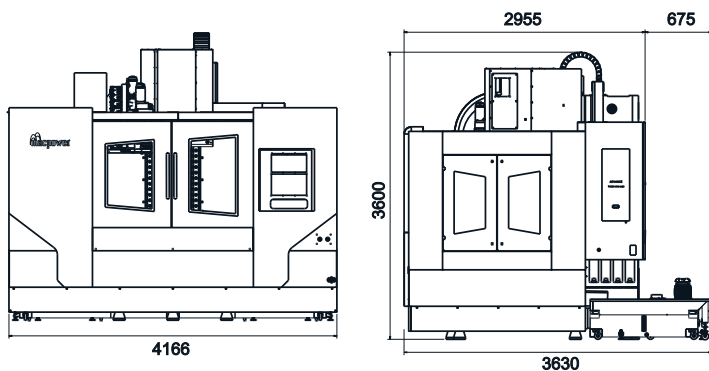


TABLE SIZE (CLAMPING AREA)	MM	700 x 1650
AXIS STROKE (X / Y / Z)	MM	1510 / 710 / 710
RAPID FEED RATES X/Y/Z AXIS	M/MIN	24/24/20
LOAD CAPACITY	KG	1500
SPINDLE	-	BT40/BT50
RATED POWER(FANUC)	KW	11 / 15
WEIGHT (APPROX)	KG	10000 / 10500
DIMENSIONS (APPROX) (WDXHX)	MM	4166x3630x3600 (BT-40) 4166x3630x3685 (BT-50)

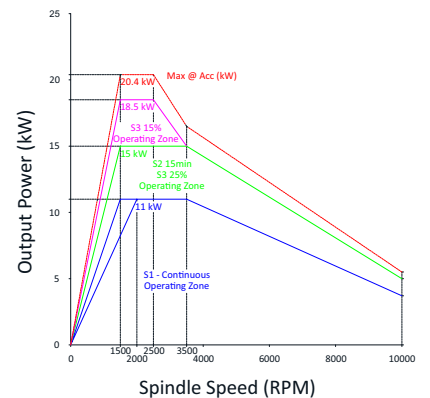
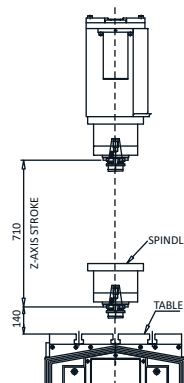
## COMPONENTS



## Machine Dimensions



## MACHINING RANGE & POWER DIAGRAM



# V 1588 SUPER

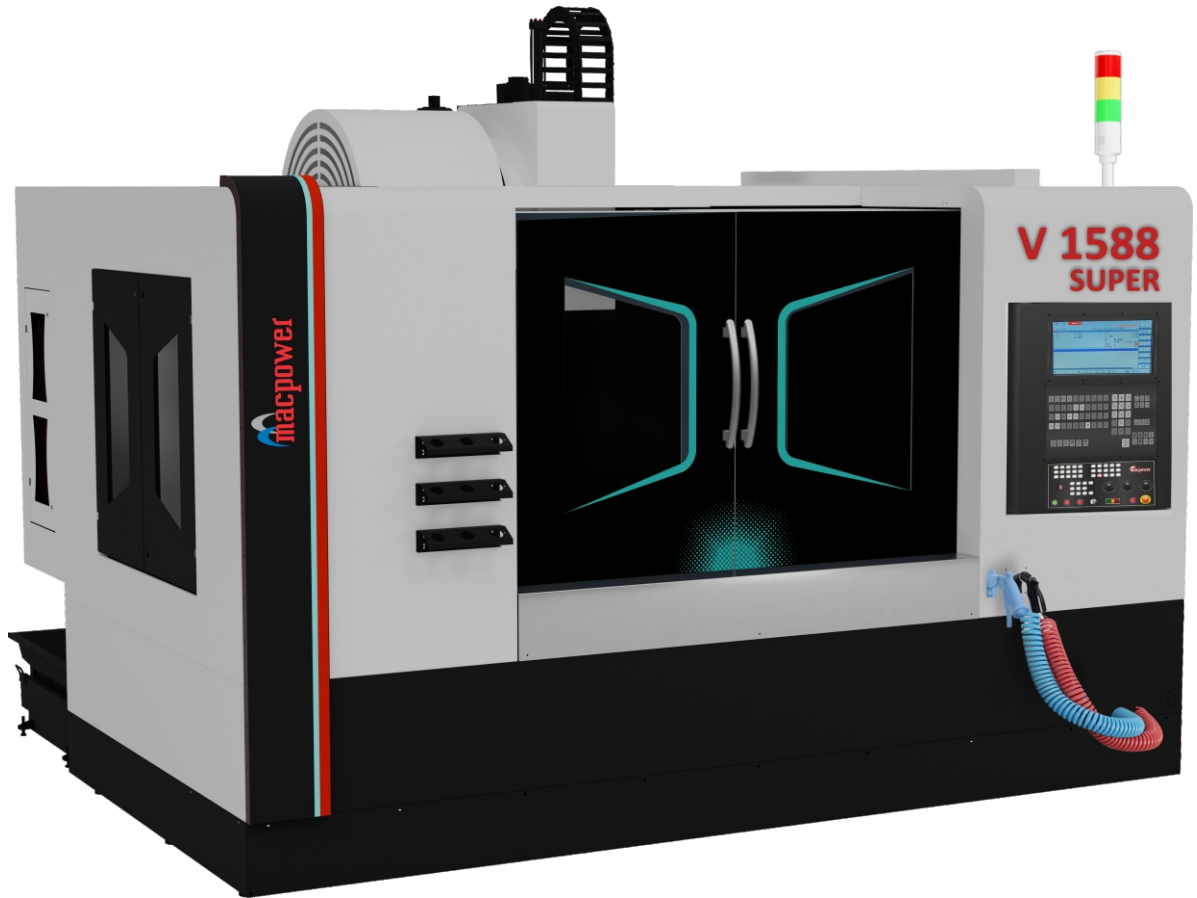
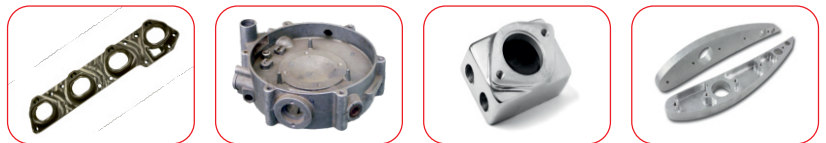
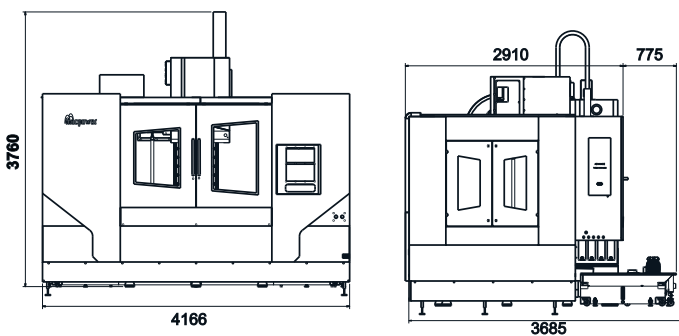


TABLE SIZE (CLAMPING AREA)	MM	800 x 1700
AXIS STROKE (X / Y / Z)	MM	1510 / 810 / 810
RAPID FEED RATES X/Y/Z AXIS	M/MIN	20/20/20
LOAD CAPACITY	KG	2200
SPINDLE	-	BT40/BT50
RATED POWER(FANUC)	KW	11 / 15
WEIGHT (APPROX)	KG	12280 / 12930
DIMENSIONS (APPROX) (WXDXH)	MM	4166x3685x3760 (BT-40) 4166x3685x3845 (BT-50)

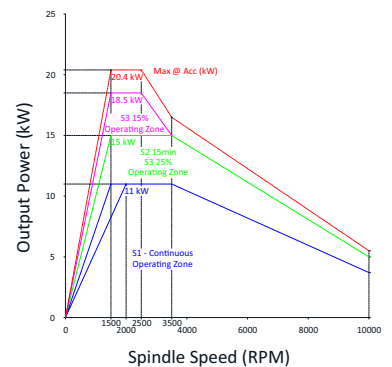
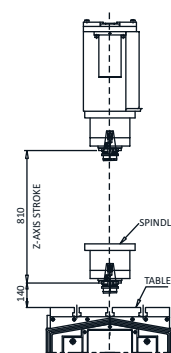
## COMPONENTS



## Machine Dimensions



## MACHINING RANGE & POWER DIAGRAM



# V 1688 SUPER

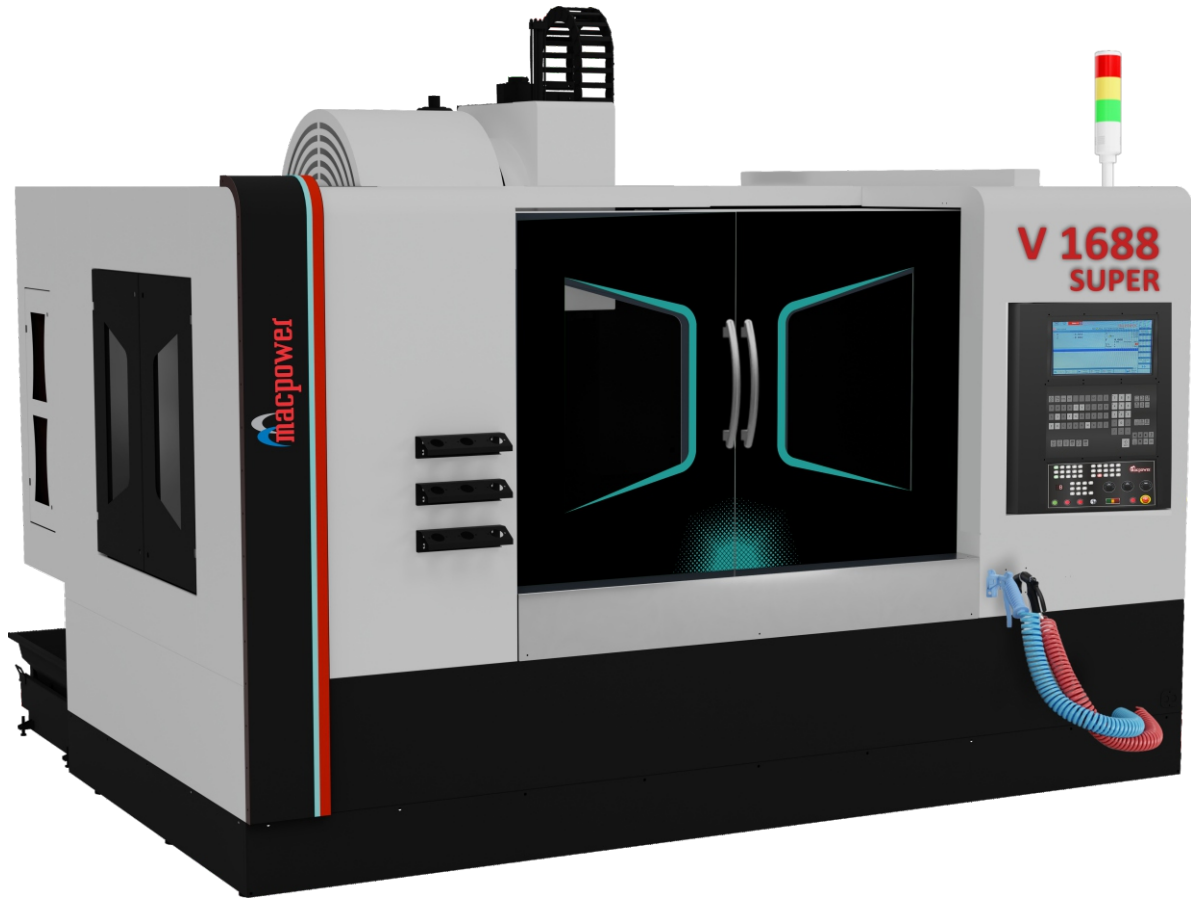
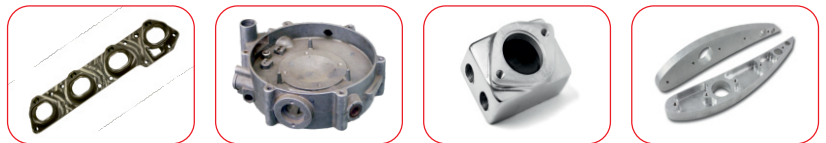
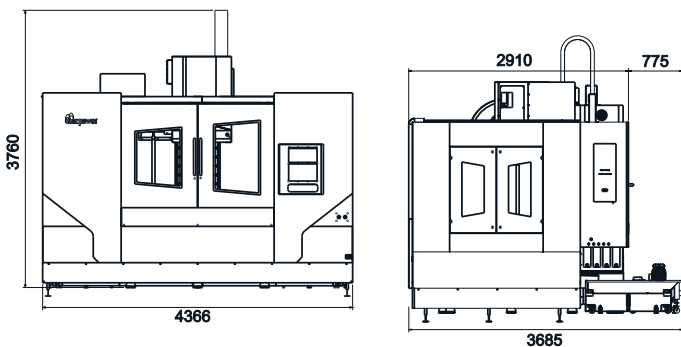


TABLE SIZE (CLAMPING AREA)	MM	800 x 1800
AXIS STROKE (X / Y / Z)	MM	1610 / 810 / 810
RAPID FEED RATES X/Y/Z AXIS	M/MIN	20/20/16
LOAD CAPACITY	KG	2300
SPINDLE	-	BT40/BT50
RATED POWER(FANUC)	KW	11 / 15
WEIGHT (APPROX)	KG	12500 / 13150
DIMENSIONS (APPROX) (WDXH)	MM	4366x3685x3760 (BT-40) 4366x3685x3845 (BT-50)

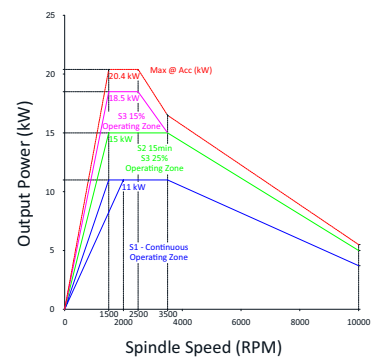
## COMPONENTS



## Machine Dimensions



## MACHINING RANGE & POWER DIAGRAM



# V 1888 SUPER

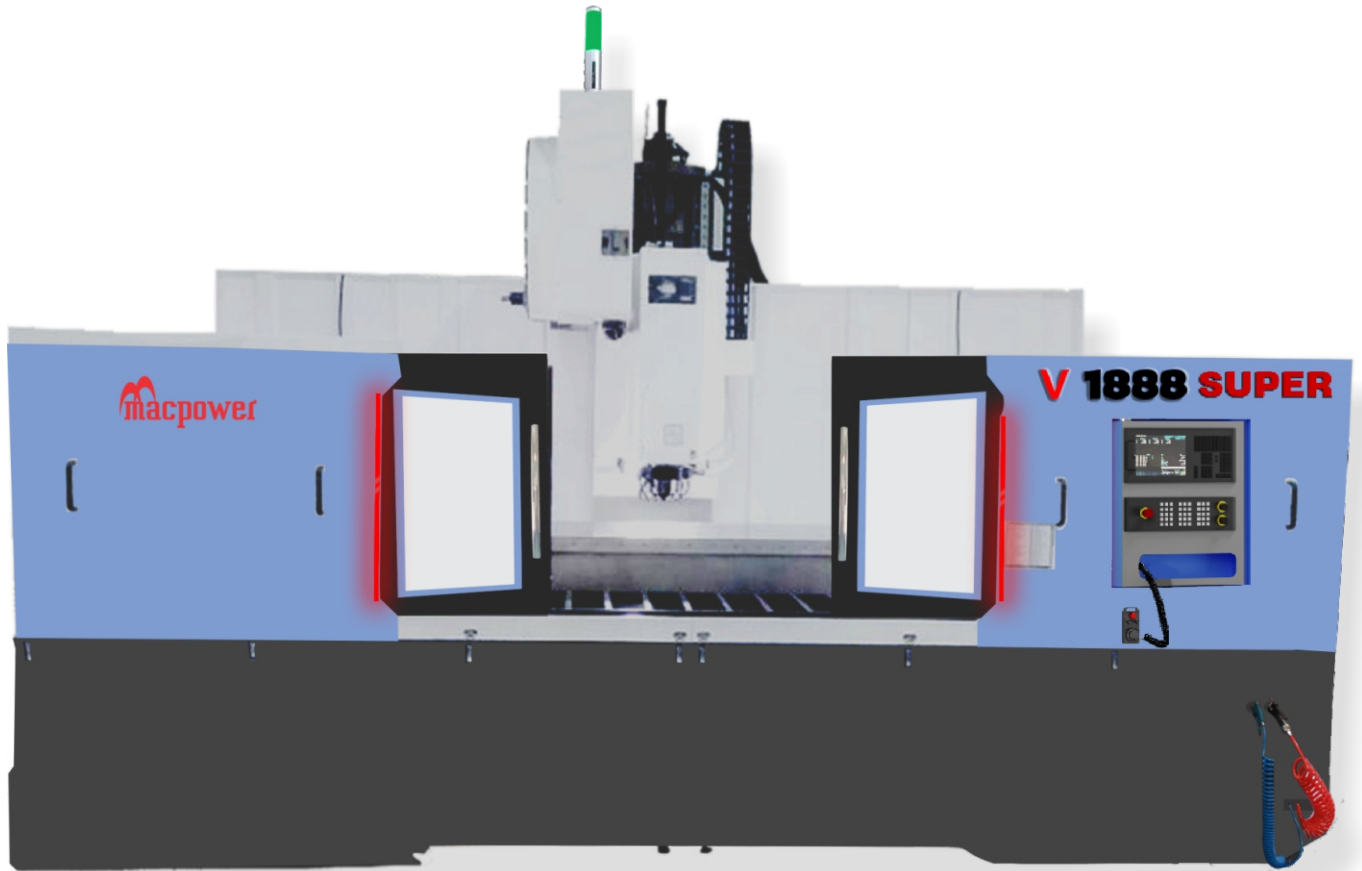
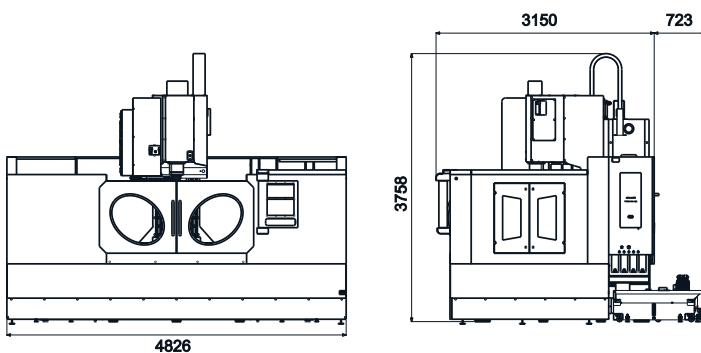


TABLE SIZE (CLAMPING AREA)	MM	800 x 2000
AXIS STROKE (X / Y / Z)	MM	1825 / 810 / 810
RAPID FEED RATES X/Y/Z AXIS	M/MIN	20/20/16
LOAD CAPACITY	KG	2600
SPINDLE	-	BT40/BT50
RATED POWER(FANUC)	KW	11 / 15
WEIGHT (APPROX)	KG	13500 / 14150
DIMENSIONS (APPROX) (WxDxH)	MM	4826x3873x3758 (BT-40) 4826x3873x3843 (BT-50)

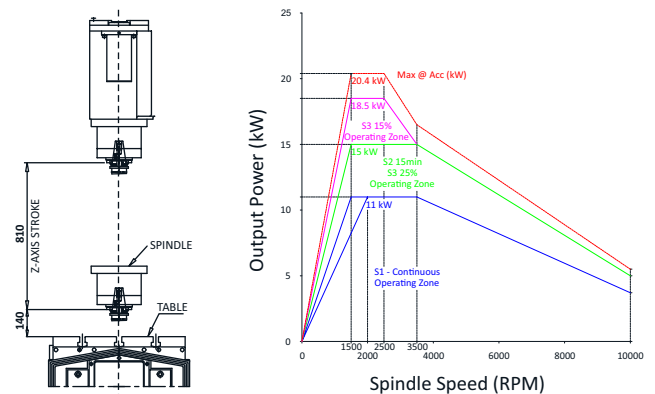
## COMPONENTS



## Machine Dimensions



## MACHINING RANGE & POWER DIAGRAM



# V 2199 SUPER

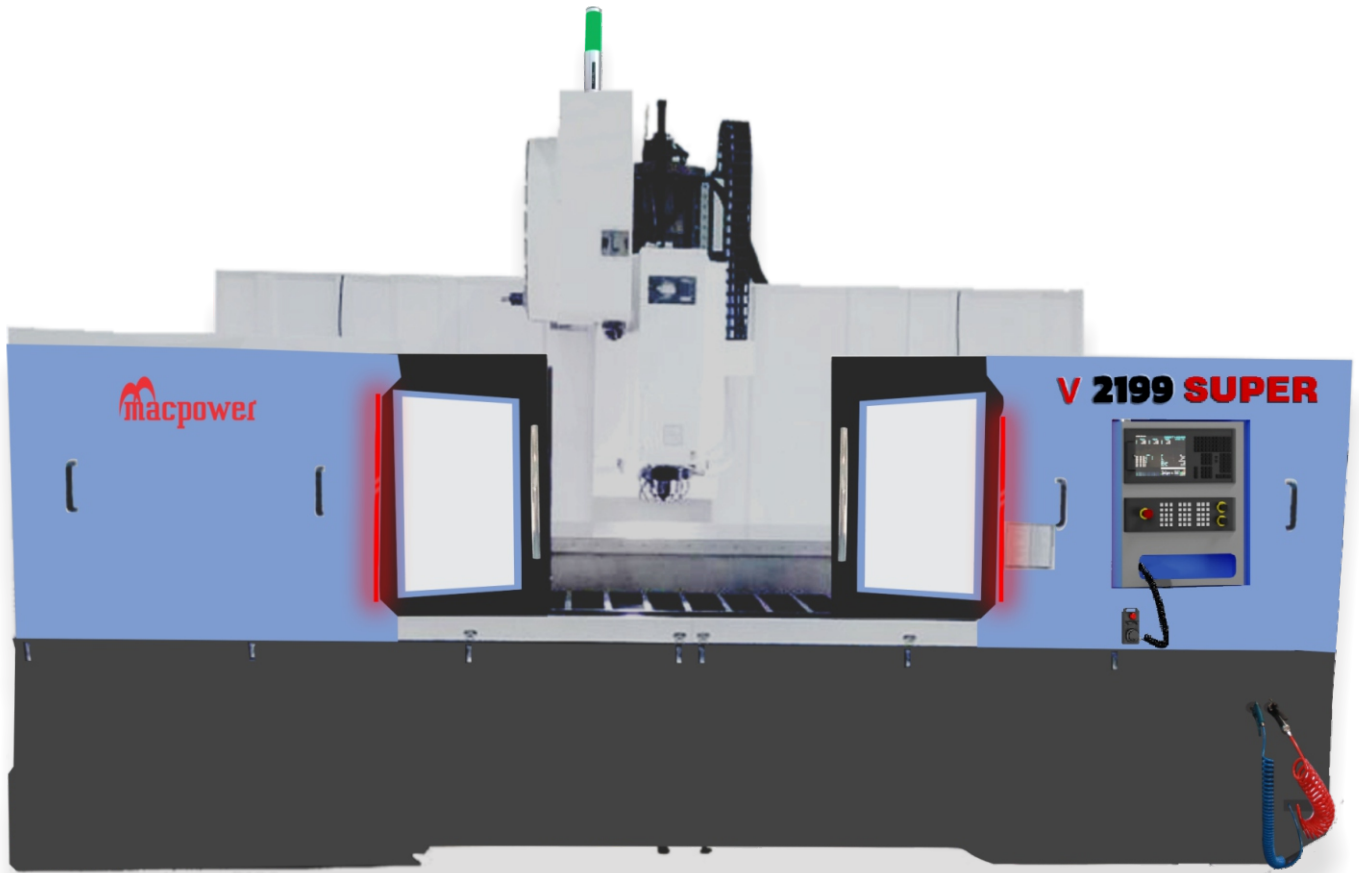
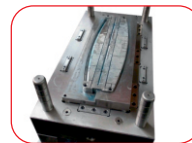
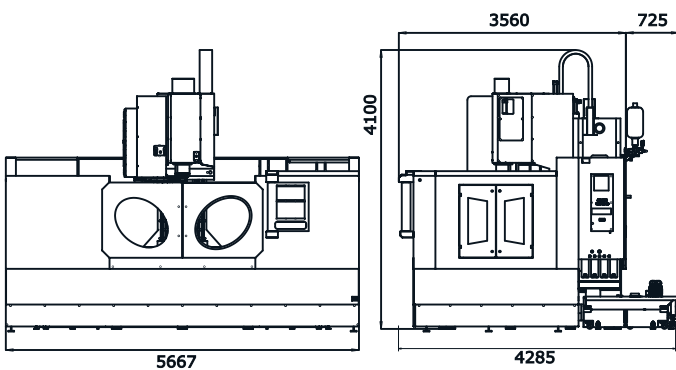


TABLE SIZE (CLAMPING AREA)	MM	900 x 2400
AXIS STROKE (X / Y / Z)	MM	2100 / 910 / 910
RAPID FEED RATES X/Y/Z AXIS	M/MIN	15/15/15
LOAD CAPACITY	KG	2800
SPINDLE	-	BT40/BT50
RATED POWER(FANUC)	KW	11 / 15
WEIGHT (APPROX)	KG	18000 / 18800
DIMENSIONS (APPROX) (WXDXH)	MM	5667x4285x4100 (BT-40) 5667x4285x4185 (BT-50)

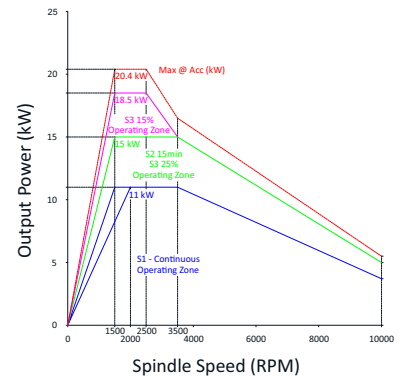
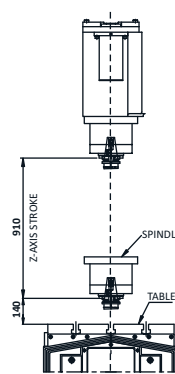
## COMPONENTS



## Machine Dimensions



## MACHINING RANGE & POWER DIAGRAM



# ACCESSORIES

## STANDARD

- LM GUIDEWAYS
- 24 TOOL ATC
- WORK LIGHT
- HAND WHEEL
- LEVELING PAD
- RING COOLANT
- PATROL LIGHT
- AIR GUN
- CENTRALIZED LUBRICATION SYSTEM
- PULL STUD
- DRY AIR CUTTING

## OPTIONAL

- COOLANT GUN
- AUTO DOOR
- CHIP CONVEYOR
- GLASS SCALE
- VOLTAGE STABILIZER
- FLUSH COOLANT
- COOLANT THROUGH SPINDLE
- 30 TOOL ATC
- ROTARY TABLE
- ROTARY TILTING TABLE
- GEAR BOX
- HIGHER RPM SPINDLES
- SPINDLE CHILLER
- INDEXER
- TOOL PROBE
- WORK PROBE
- TOOLED UP SOLUTIONS
- VERTICAL AXIS PULL UP DURING POWER FAILURE

# JUMBO – SERIES MACHINE CONFIGURATIONS

DESCRIPTION	UNIT	V 1377 SUPER	V 1577 SUPER
<b>CAPACITY</b>			
X AXIS TRAVEL	MM	1310	1510
Y AXIS TRAVEL	MM	710	710
Z AXIS TRAVEL	MM	710	710
RAPID FEED RATES X/Y/Z AXIS	M/MIN	24/24/20	24/24/20
DISTANCE FROM TABLE TOP TO SPINDLE FACE	MM	140-850	140-850
<b>TABLE</b>			
TABLE SIZE (CLAMPING AREA)	MM	700 X 1450	700 X 1650
NO./WIDTH/CD OF T-SLOTS	MM	5/18/125	5/18/125
MAX SAFE LOAD ON TABLE	KG	1500	1500
<b>MAIN SPINDLE</b>			
TAPER	-	BT40/BT50	BT 40/BT 50
SPEED	RPM	80-8000/60-6000	80-8000/60-6000
CUTTING FEED RATE	MM/MIN.	1-10000	1-10000
RATED POWER (FANUC)	KW	11/15	11/15
<b>AUTO TOOL CHANGER</b>			
TYPE	-	TWIN ARM	TWIN ARM
NO. OF TOOLS (BT 40/BT 50)	-	24/20	24/20
TOOL SELECTION	-	RANDOM	RANDOM
MAX. TOOL DIA. (POCKET FULL/EMPTY) (BT 40/BT 50)	MM	80/150, 125/200	80/150, 125/200
TOOL LENGTH (BT 40/BT 50)	MM	300/400	300/400
TOOL WEIGHT (BT 40/BT 50)	KG	7/20	7/20
<b>ACCURACY (AS PER JIS)</b>			
POSITIONING	MM	0.01	0.01
REPEATABILITY	MM	0.007	0.007
<b>INSTALLATION DATA</b>			
PNEUAMTIC SUPPLY	BAR	6	6
MACHINE WEIGHT (APPROX)	KG	9525/10120	10000/10500
TOTAL CONNECTED LOAD	KVA	26	26
POWER SUPPLY	-	AC 440 V, 50HZ, 3PH.	AC 440 V, 50HZ, 3PH.
MACHINE DIMENSIONS (WXDXH) (APPROX)	MM	3554x3435x3600 (BT-40) 3554x3435x3685 (BT-50)	4166x3630x3600 (BT-40) 4166x3630x3685 (BT-50)
<b>SYSTEM</b>			
FANUC	-	OI MF PLUS (ADV MILL)	OI MF PLUS (ADV MILL)
SIEMENS	-	828D	828D
MITSUBISHI	-	M80 V	M80 V

# JUMBO – SERIES MACHINE CONFIGURATIONS

DESCRIPTION	UNIT	V 1588 SUPER	V 1688 SUPER
<b>CAPACITY</b>			
X AXIS TRAVEL	MM	1510	1610
Y AXIS TRAVEL	MM	810	810
Z AXIS TRAVEL	MM	810	810
RAPID FEED RATES X/Y/Z AXIS	M/MIN	20/20/20	20/20/16
DISTANCE FROM TABLE TOP TO SPINDLE FACE	MM	140-950	140-950
<b>TABLE</b>			
TABLE SIZE (CLAMPING AREA)	MM	800 X 1700	800 X 1800
NO./WIDTH/CD OF T-SLOTS	MM	6/18/125	6/18/125
MAX SAFE LOAD ON TABLE	KG	2200	2300
<b>MAIN SPINDLE</b>			
TAPER	-	BT40/BT50	BT40/BT50
SPEED	RPM	80-8000/60-6000	80-8000/60-6000
CUTTING FEED RATE	MM/MIN.	1-10000	1-10000
RATED POWER (FANUC)	KW	11/15	11/15
<b>AUTO TOOL CHANGER</b>			
TYPE	-	TWIN ARM	TWIN ARM
NO. OF TOOLS (BT 40/BT 50)	-	24/20	24/20
TOOL SELECTION	-	RANDOM	RANDOM
MAX. TOOL DIA. (POCKET FULL/EMPTY) (BT 40/BT 50)	MM	80/150, 125/200	80/150, 125/200
TOOL LENGTH (BT 40/BT 50)	MM	300/400	300/400
TOOL WEIGHT (BT 40/BT 50)	KG	7/20	7/20
<b>ACCURACY (AS PER JIS)</b>			
POSITIONING	MM	0.01	0.01
REPEATABILITY	MM	0.007	0.007
<b>INSTALLATION DATA</b>			
PNEUAMTIC SUPPLY	BAR	6	6
MACHINE WEIGHT (APPROX)	KG	12280 / 12930	12500 / 13150
TOTAL CONNECTED LOAD	KVA	26	26
POWER SUPPLY	-	AC 440 V ,50HZ, 3PH.	AC 440 V ,50HZ, 3PH.
MACHINE DIMENSIONS (WXDXH) (APPROX)	MM	4166x3685x3760 (BT-40) 4166x3685x3845 (BT-50)	4366x3685x3760 (BT-40) 4366x3685x3845 (BT-50)
<b>SYSTEM</b>			
FANUC	-	OI MF PLUS (ADV MILL)	OI MF PLUS (ADV MILL)
SIEMENS	-	828D	828D
MITSUBISHI	-	M80 V	M80 V

# JUMBO – SERIES MACHINE CONFIGURATIONS

DESCRIPTION	UNIT	V 1888 SUPER	V 2199 SUPER
<b>CAPACITY</b>			
X AXIS TRAVEL	MM	1825	2100
Y AXIS TRAVEL	MM	810	910
Z AXIS TRAVEL	MM	810	910
RAPID FEED RATES X/Y/Z AXIS	M/MIN	20/20/16	15/15/15
DISTANCE FROM TABLE TOP TO SPINDLE FACE	MM	140-950	140-1050
<b>TABLE</b>			
TABLE SIZE (CLAMPING AREA)	MM	800 X 2000	900 X 2400
NO./WIDTH/CD OF T-SLOTS	MM	6/18/125	6/18/125
MAX SAFE LOAD ON TABLE	KG	2600	2800
<b>MAIN SPINDLE</b>			
TAPER	-	BT40/BT50	BT40/BT50
SPEED	RPM	80-8000/60-6000	80-8000/60-6000
CUTTING FEED RATE	MM/MIN.	1-10000	1-10000
RATED POWER (FANUC)	KW	11/15	11/15
<b>AUTO TOOL CHANGER</b>			
TYPE	-	TWIN ARM	TWIN ARM
NO. OF TOOLS (BT 40/BT 50)	-	24/20	24/20
TOOL SELECTION	-	RANDOM	RANDOM
MAX. TOOL DIA. (POCKET FULL/EMPTY) (BT 40/BT 50)	MM	80/150, 125/200	80/150, 125/200
TOOL LENGTH (BT 40/BT 50)	MM	300/400	300/400
TOOL WEIGHT (BT 40/BT 50)	KG	7/20	7/20
<b>ACCURACY (AS PER JIS)</b>			
POSITIONING	MM	0.01	0.01
REPEATABILITY	MM	0.007	0.007
<b>INSTALLATION DATA</b>			
PNEUAMTIC SUPPLY	BAR	6	6
MACHINE WEIGHT (APPROX)	KG	13500/14150	18000/18800
TOTAL CONNECTED LOAD	KVA	30	30
POWER SUPPLY	-	AC 440 V, 50HZ, 3 PH.	AC 440 V ,50HZ, 3 PH.
MACHINE DIMENSIONS (WXDXH) (APPROX)	MM	4826x3873x3758 (BT-40) 4826x3873x3843 (BT-50)	5667x4285x4100 (BT-40) 5667x4285x4185 (BT-50)
<b>SYSTEM</b>			
FANUC	-	OI MF PLUS (ADV MILL)	OI MF PLUS (ADV MILL)
SIEMENS	-	828D	828D
MITSUBISHI	-	M80 V	M80 V



