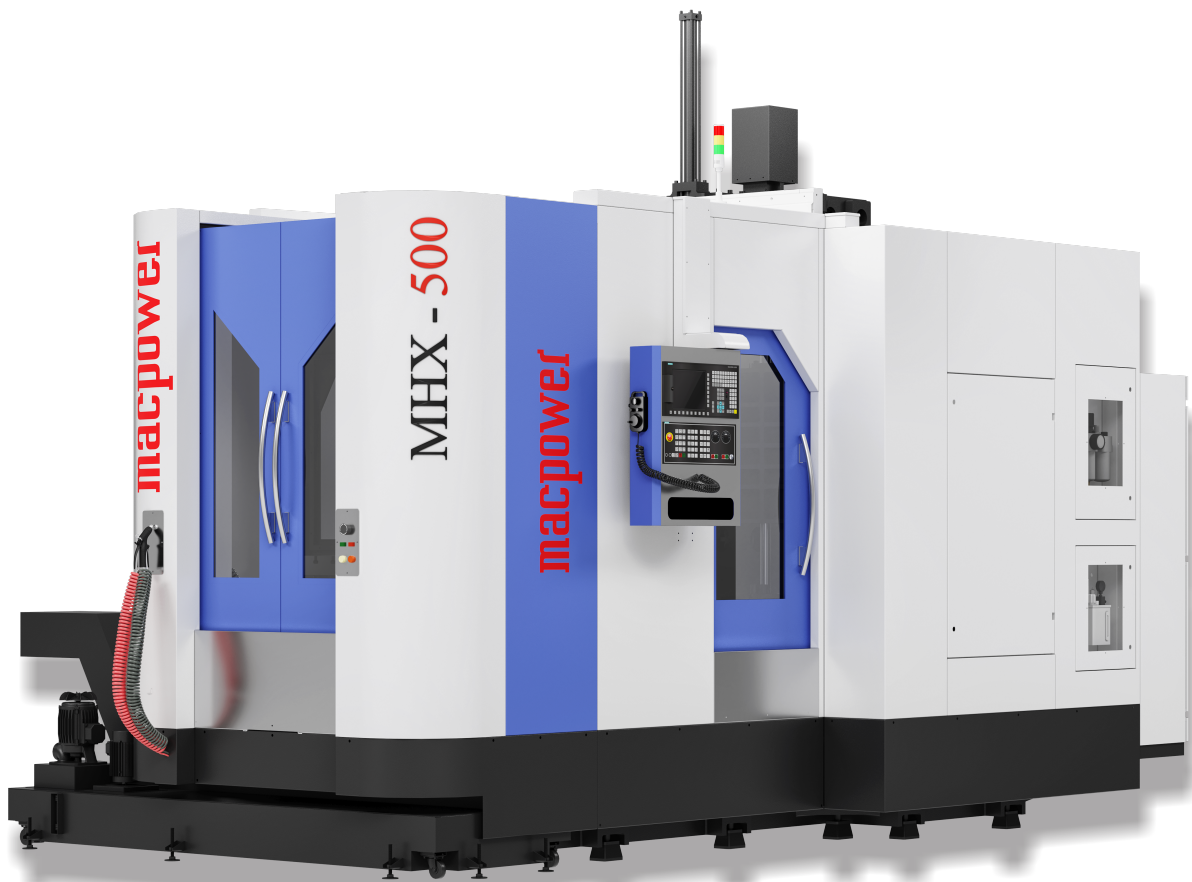


# HORIZONTAL MACHINING CENTER



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## 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.



## INFRASTRUCTURE



**MACHINE SHOP AREA**



**ASSEMBLY AREA**



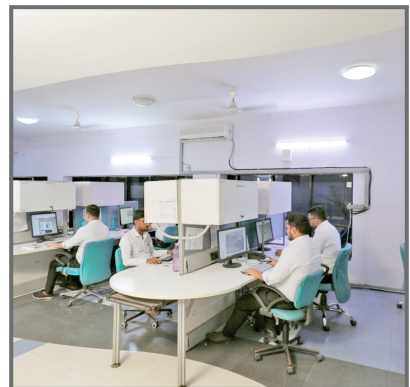
**POWDER COATING AREA**



**SHEET METAL AREA**

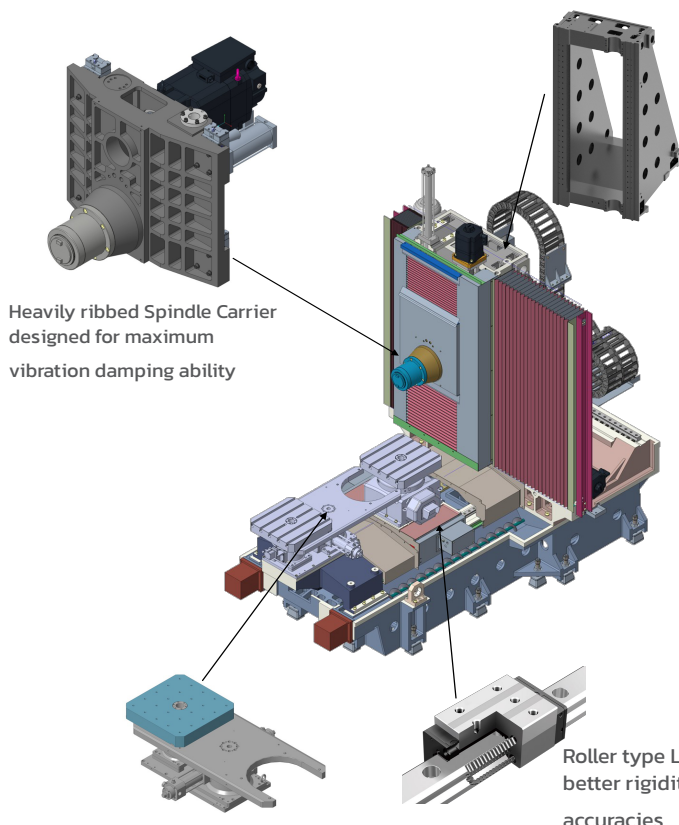


**SPINDLE ASSEMBLY AREA**



**RESEARCH AND DEVELOPMENT**

## Structure & Frame



Rigid, Thermo - symmetric Structures, designed for best strength to weight ratio

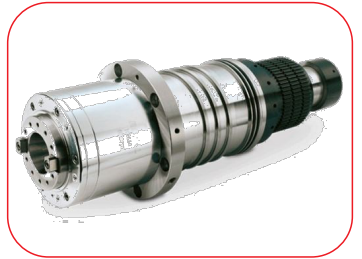
Heavily ribbed Spindle Carrier designed for maximum vibration damping ability

The rigid bed and step up structure are made out of FG260 grade cast iron for more stability. It is ribbed to provide more rigidity and less distortion during cuts and faster production, with virtually no vibration. A totally revamped ergonomic structure and frame helps stabilize different machining operations with requisite precision.

Roller type LM guide-ways for better rigidity & sustained accuracies

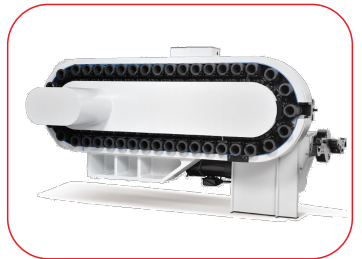
## **HEAVY DUTY SPINDLE**

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.



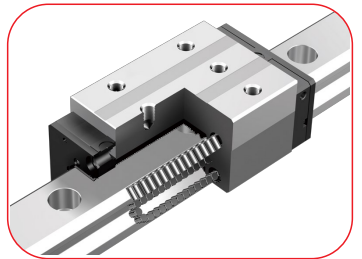
## **AUTO TOOL CHANGER**

A bi-directional magazine taking shortest path, ATC magazine is located separately from the machine area. Tool storage capacity to suit individual requirement 30, 40, 60 tools.



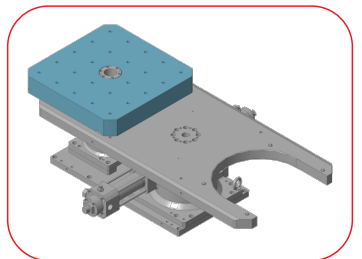
## **PRECISE ROLLER GUIDEWAYS**

All axes are furnished with precise and heavy load capacity recirculating roller guide ways for better rigidity & sustained accuracies.



## **AUTO PALLET CHANGER**

Machine consists of 180° rotary type Automatic Pallet changer. During pallet change cycle, strong jets of air are discharged from the taper cones which removes any chips & provides clean surface for location of pallet onto the machine ensuring high repeatability of pallet position.

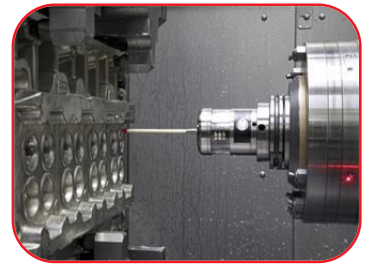




## **PRODUCTIVITY ENHANCEMENT OPTIONS**

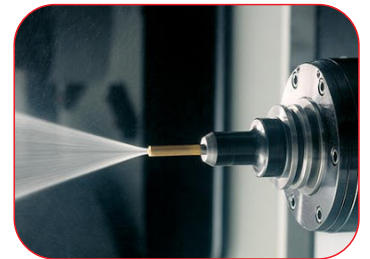
### **TOOL & JOB PROBE**

A wide choice of spindle and surface sensing probes as tool and job probes with infrared / radio /laser transmission technology are available for increased spindle utilization and reduce non productive time.



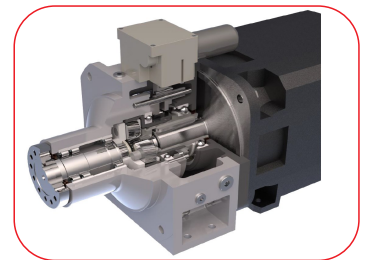
### **COOLANT THROUGH SPINDLE (CTS)**

Coolant through Spindle system provides high pressure coolant directly to cutting edge minimizing heat distortion, ensuring maximum productivity with today's high performance tooling. Highly recommend for jobs demanding deep hole drilling and tapping.



### **GEAR BOX**

For application requiring high cutting torque 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 with-out disturbing precision.



### **CHIP CONVEYOR**

Efficient chip disposal with chip conveyor on front side of bed. Hinged Type Chip Conveyor to handle steel and aluminum chips. Ample shower wash facility to avoid chip accumulation.



### **OVER HEAD SHOWER**

Fully enclosed machining zone with overhead shower wash for most efficient chip evacuation

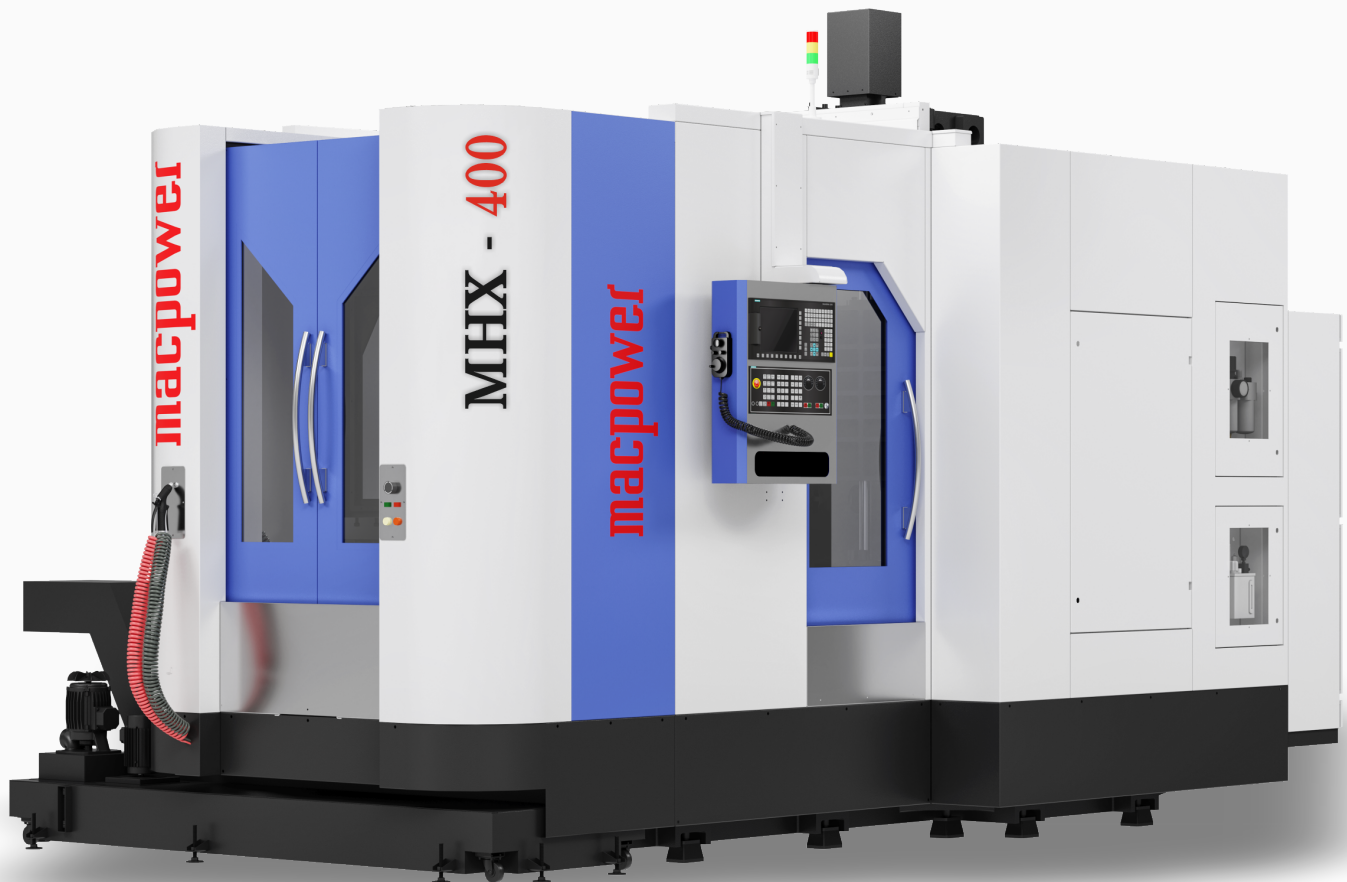


# MHX 400

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# MACHINE CONFIGURATIONS



## AXIS CAPACITY

|                              | UNIT   | MHX 400   |
|------------------------------|--------|-----------|
| Travel X                     | mm     | 600       |
| Travel Y                     | mm     | 600       |
| Travel Z                     | mm     | 600       |
| Rapid X/Y/Z                  | m/min. | 36(40)    |
| Table Top to Spindle Center  | mm     | 100 - 700 |
| Table Center to Spindle Face | mm     | 100 - 700 |

## TABLE

|                         |      |                |
|-------------------------|------|----------------|
| Size                    | mm   | 400X400        |
| Index Resolution        | Deg. | 360X0.001°(1°) |
| Max. Job Dia X Height   | -    | Ø 600X700      |
| T Slot                  | mm   | 18             |
| Max. Safe Load on Table | Kg   | 350            |

## SPINDLE

|                                 |         |                     |
|---------------------------------|---------|---------------------|
| Taper                           | -       | BT - 40 (BT-50)     |
| Speed                           | RPM     | 80 - 8000 (60-6000) |
| Cutting Feed Rate               | mm/min. | 1 - 10000           |
| Spindle Motor Continuous Rating | Kw      | 11                  |
| Spindle Motor 15 min. Rating    | Kw      | 15                  |

## AUTOMATIC TOOL CHANGER

|                                    |    |         |
|------------------------------------|----|---------|
| ATC Make                           | -  | Pragati |
| No. of Tools (Std/Opt)             | -  | 24(30)  |
| Max. Tool Dia. (All pocket full)   | mm | 80      |
| Max. Tool Dia. (Adj. pocket empty) | mm | 125     |
| Tool Length Max.                   | mm | 250     |
| Tool Weight Max.                   | Kg | 7       |

## AUTOMATIC PALLET CHANGER

|              |   |        |
|--------------|---|--------|
| Types Of APC | - | Rotary |
|--------------|---|--------|

## ACCURACY

|                     |    |       |
|---------------------|----|-------|
| Positional Accuracy | mm | 0.010 |
| Repeatability       | mm | 0.007 |

## CHIP REMOVAL

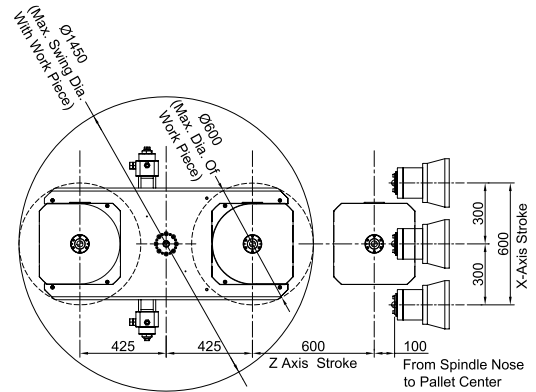
|              |   |            |
|--------------|---|------------|
| Chip Removal | - | Front side |
|--------------|---|------------|

## SYSTEMS

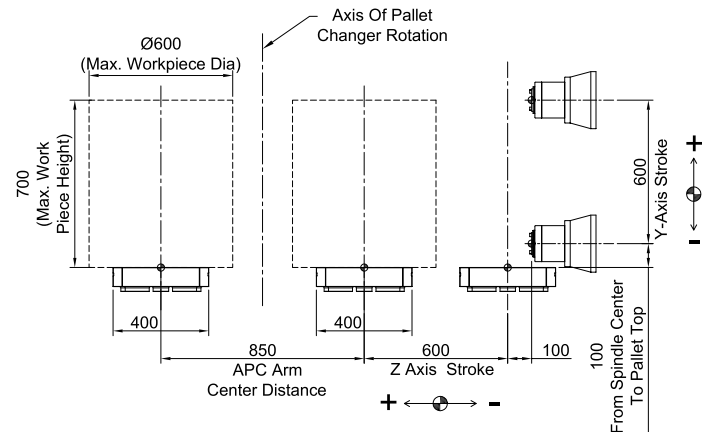
|            |   |            |
|------------|---|------------|
| Fanuc      | - | Oi MF Plus |
| Siemens    | - | 828D       |
| Mitsubishi | - | M80V       |

**\*Note:- No Counter Balance In MHX 400**

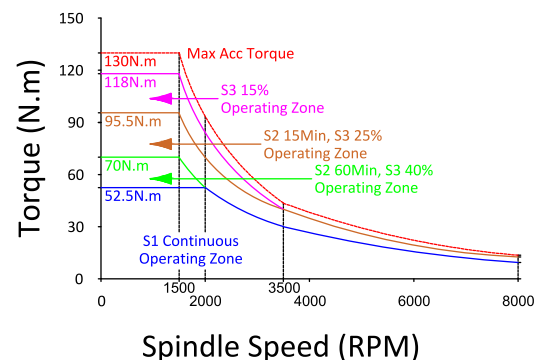
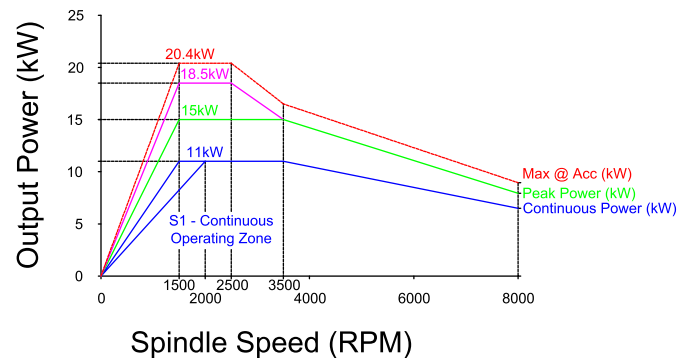
## TOOL INTERFERENCE DIAGRAM



## MACHINING RANGE



## POWER & TORQUE DIAGRAM

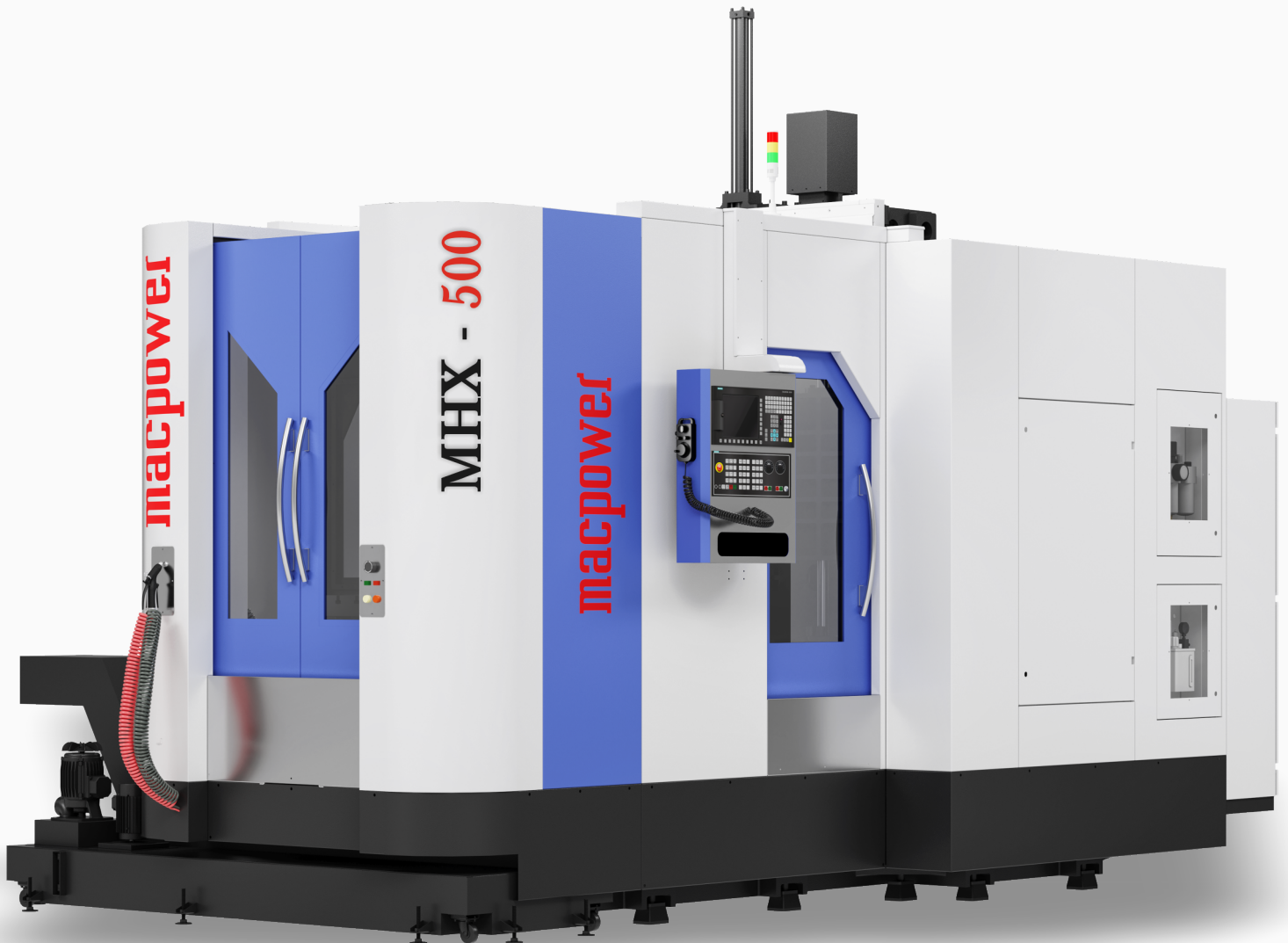


# MHX 500

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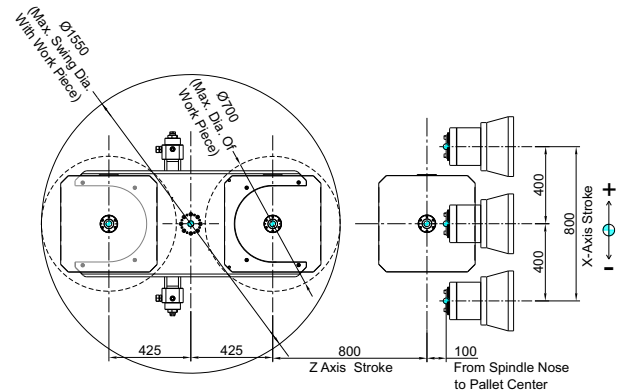
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# MACHINE CONFIGURATIONS



## TOOL INTERFERENCE DIAGRAM



### AXIS CAPACITY

|                              | UNIT   | MHX 500   |
|------------------------------|--------|-----------|
| Travel X                     | mm     | 800       |
| Travel Y                     | mm     | 700       |
| Travel Z                     | mm     | 800       |
| Rapid X/Y/Z                  | m/min. | 30(40)    |
| Table Top to Spindle Center  | mm     | 100 - 800 |
| Table Center to Spindle Face | mm     | 100 - 900 |

### TABLE

|                         |      |                |
|-------------------------|------|----------------|
| Size                    | mm   | 500X500        |
| Index Resolution        | Deg. | 360X0.001°(1°) |
| Max. Job Dia X Height   | -    | Ø 700X800      |
| T Slot                  | mm   | 18             |
| Max. Safe Load on Table | Kg   | 500            |

### SPINDLE

|                                 |         |           |
|---------------------------------|---------|-----------|
| Taper                           | -       | BT - 50   |
| Speed                           | RPM     | 60 - 6000 |
| Cutting Feed Rate               | mm/min. | 1 - 10000 |
| Spindle Motor Continuous Rating | Kw      | 15        |
| Spindle Motor 15 min. Rating    | Kw      | 18.5 (P)  |

### AUTOMATIC TOOL CHANGER

|                                    |    |         |
|------------------------------------|----|---------|
| ATC Make                           | -  | Pragati |
| No. of Tools (Std/Opt)             | -  | 30(40)  |
| Max. Tool Dia. (All pocket full)   | mm | 125     |
| Max. Tool Dia. (Adj. pocket empty) | mm | 225     |
| Tool Length Max.                   | mm | 400     |
| Tool Weight Max.                   | Kg | 20      |

### AUTOMATIC PALLET CHANGER

|              |   |        |
|--------------|---|--------|
| Types Of APC | - | Rotary |
|--------------|---|--------|

### ACCURACY

|                     |    |       |
|---------------------|----|-------|
| Positional Accuracy | mm | 0.010 |
| Repeatability       | mm | 0.007 |

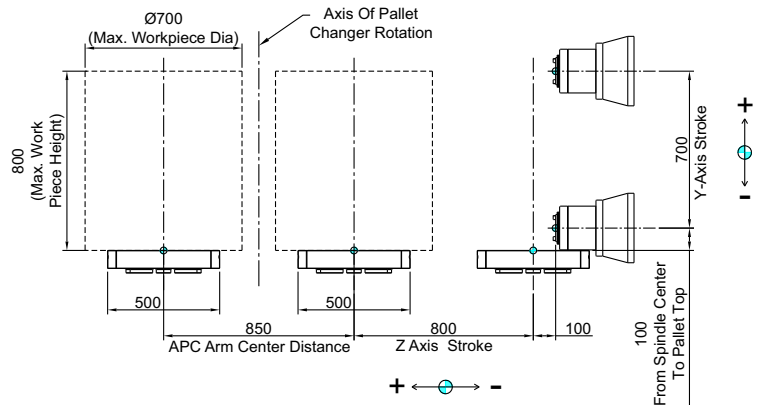
### CHIP REMOVAL

|              |   |            |
|--------------|---|------------|
| Chip Removal | - | Front side |
|--------------|---|------------|

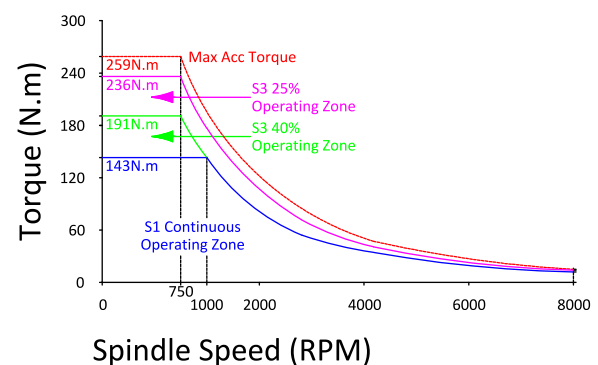
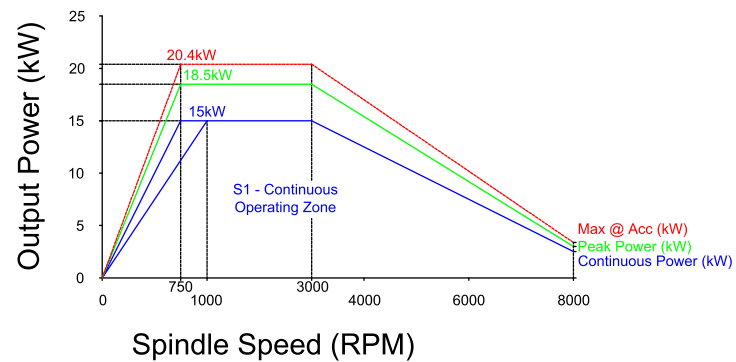
### SYSTEMS

|            |   |            |
|------------|---|------------|
| Fanuc      | - | Oi MF Plus |
| Siemens    | - | 828D       |
| Mitsubishi | - | M80V       |

## MACHINING RANGE



## POWER & TORQUE DIAGRAM



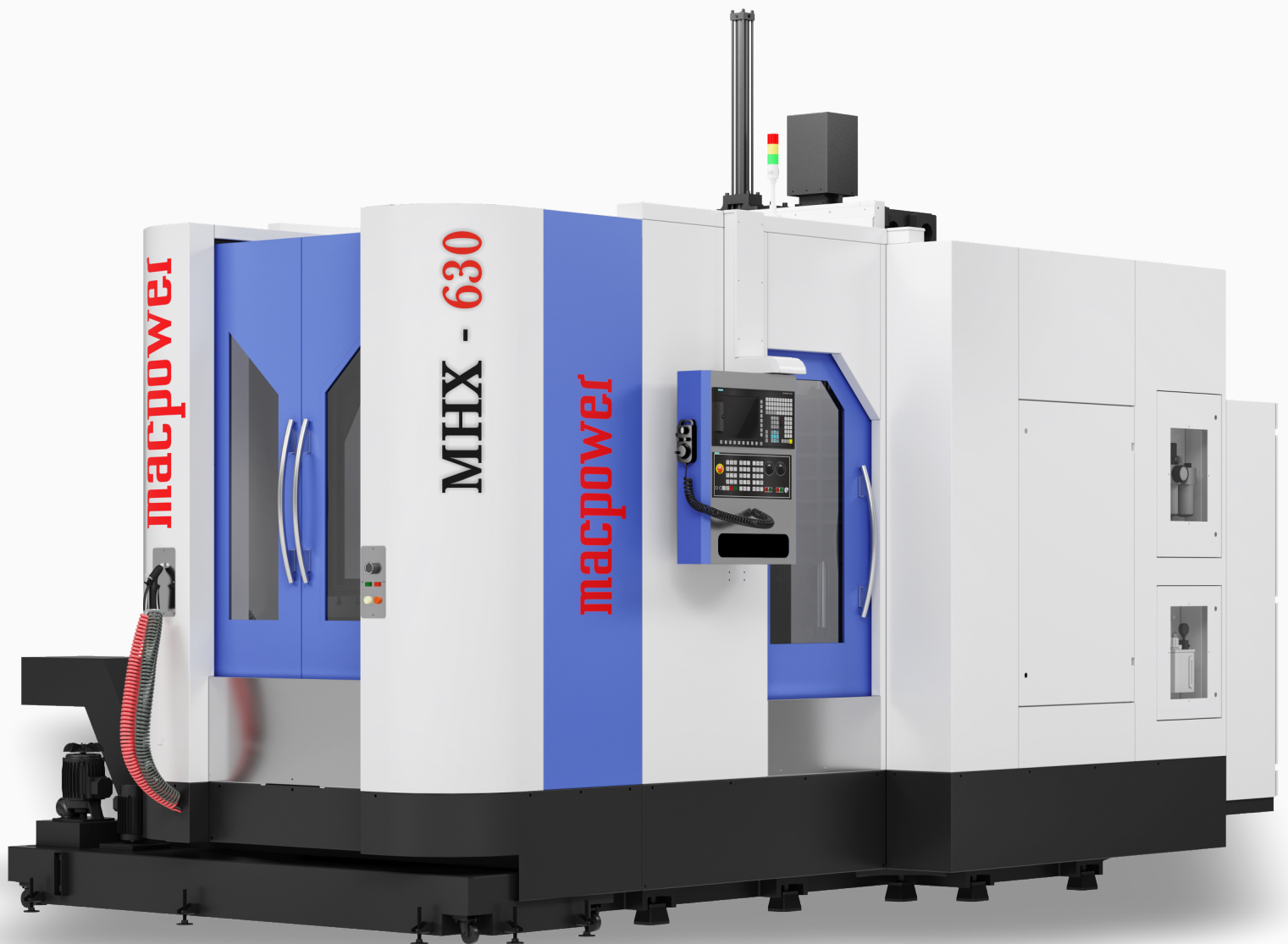


# MHX 630

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# MACHINE CONFIGURATIONS



## AXIS CAPACITY

|                              | UNIT   | MHX 630   |
|------------------------------|--------|-----------|
| Travel X                     | mm     | 1000      |
| Travel Y                     | mm     | 800       |
| Travel Z                     | mm     | 850       |
| Rapid X/Y/Z                  | m/min. | 30(40)    |
| Table Top to Spindle Center  | mm     | 125 - 925 |
| Table Center to Spindle Face | mm     | 100 - 950 |

## TABLE

|                         |      |                |
|-------------------------|------|----------------|
| Size                    | mm   | 630X630        |
| Index Resolution        | Deg. | 360X0.001°(1°) |
| Max. Job Dia X Height   | -    | Ø 850X1000     |
| T Slot                  | mm   | 18             |
| Max. Safe Load on Table | Kg   | 1000           |

## SPINDLE

|                                 |         |           |
|---------------------------------|---------|-----------|
| Taper                           | -       | BT - 50   |
| Speed                           | RPM     | 60 - 6000 |
| Cutting Feed Rate               | mm/min. | 1 - 10000 |
| Spindle Motor Continuous Rating | Kw      | 15        |
| Spindle Motor 15 min. Rating    | Kw      | 18.5 (P)  |

## AUTOMATIC TOOL CHANGER

|                                    |    |         |
|------------------------------------|----|---------|
| ATC Make                           | -  | Pragati |
| No. of Tools (Std/Opt)             | -  | 30(40)  |
| Max. Tool Dia. (All pocket full)   | mm | 125     |
| Max. Tool Dia. (Adj. pocket empty) | mm | 225     |
| Tool Length Max.                   | mm | 400     |
| Tool Weight Max.                   | Kg | 20      |

## AUTOMATIC PALLET CHANGER

|              |   |        |
|--------------|---|--------|
| Types Of APC | - | Rotary |
|--------------|---|--------|

## ACCURACY

|                     |    |       |
|---------------------|----|-------|
| Positional Accuracy | mm | 0.010 |
| Repeatability       | mm | 0.007 |

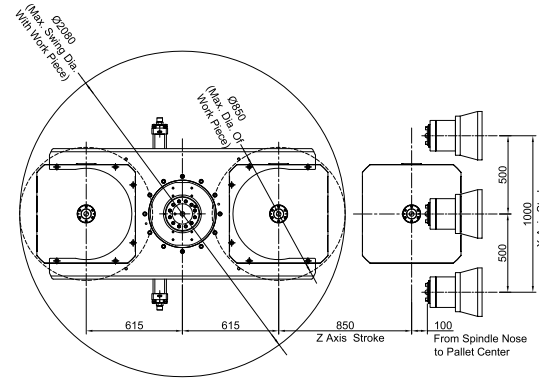
## CHIP REMOVAL

|              |   |            |
|--------------|---|------------|
| Chip Removal | - | Front side |
|--------------|---|------------|

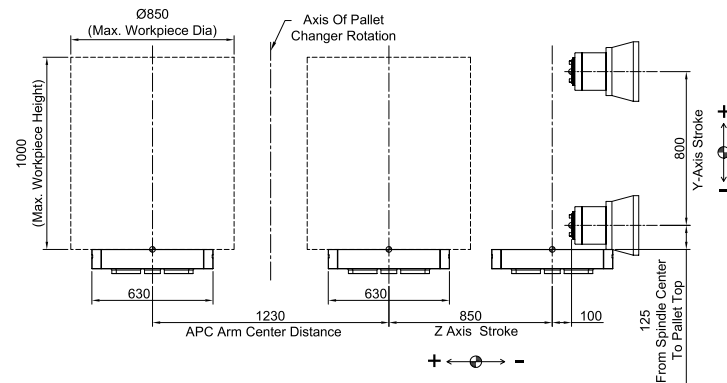
## SYSTEMS

|            |   |            |
|------------|---|------------|
| Fanuc      | - | Oi MF Plus |
| Siemens    | - | 828D       |
| Mitsubishi | - | M80V       |

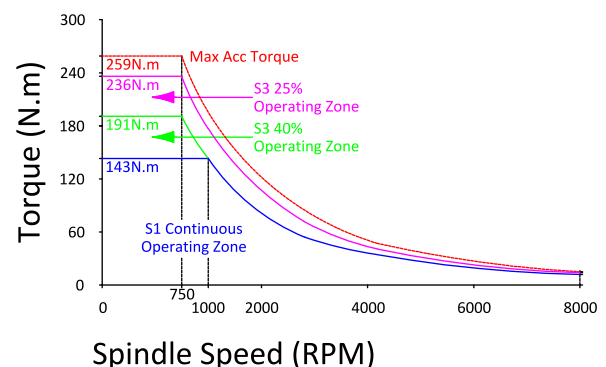
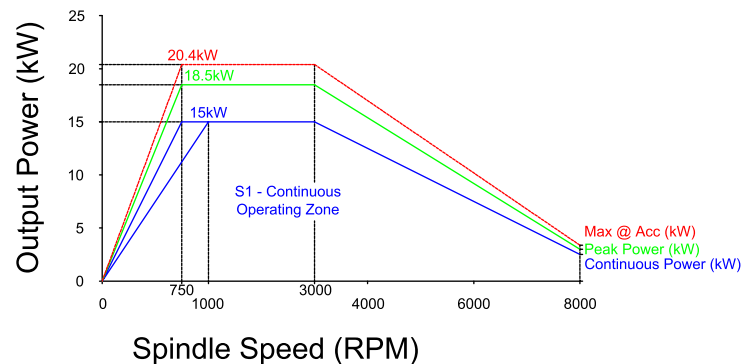
## TOOL INTERFERENCE DIAGRAM



## MACHINING RANGE



## POWER & TORQUE DIAGRAM



# 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 |

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