

CNC MILLING MACHINE
VERTICAL / HORIZONTAL

MX



FORCE ONE MACHINERY CO., LTD.

No.5, Ln. 272, Dalin Rd., Daya Dist.

Taichung City 428, Taiwan

Tel: +886-4-2560 2506

Fax: +886-4-2560 2460

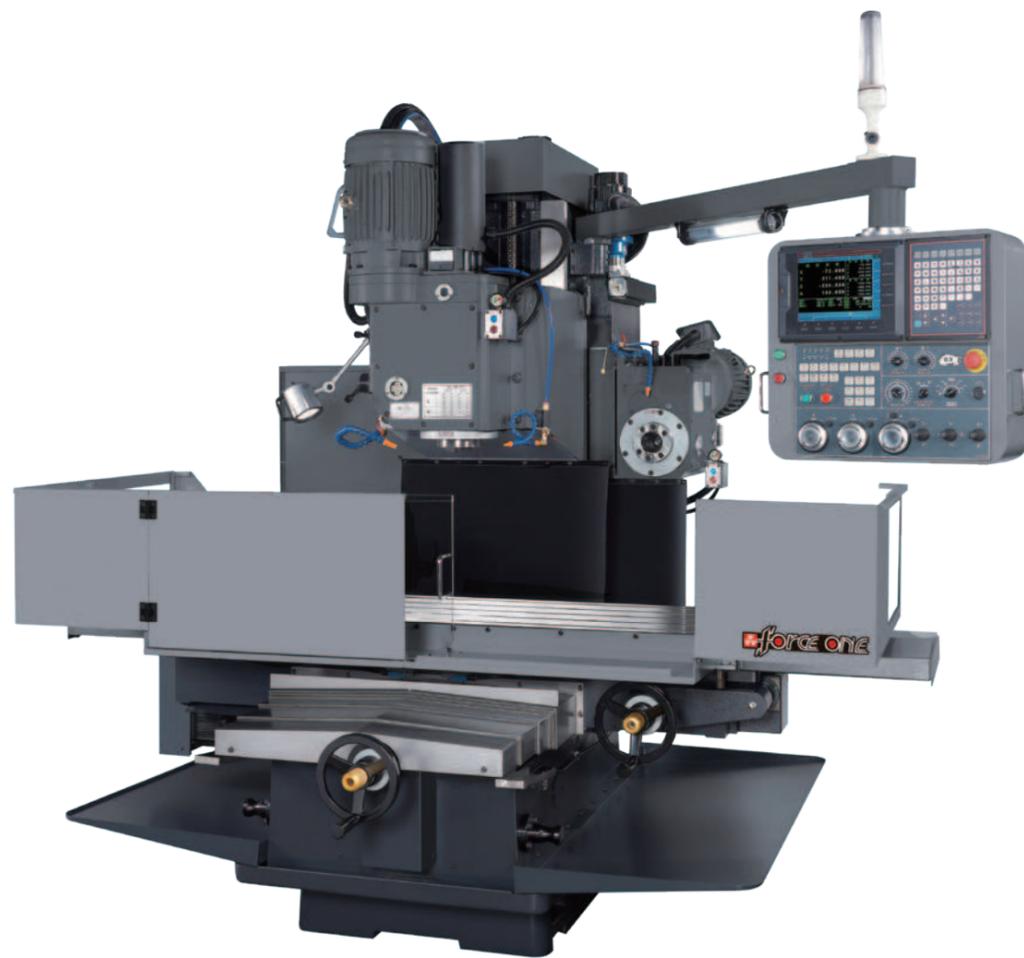
E-mail: sales@forceonecnc.com

www.forceone.com.tw



FORCE ONE HIGH PRECISION CNC MILLING MACHINE

CNC + INSTRUCTION + TRADITION



MX-3BG-50H

- Suitable for machining jigs, fixtures, molds and under-development pieces on a small-volume but variety basis and installing rotary table processing on polyhedral work-pieces.
- Reserves traditional operation functions. Easy, smart, and precision MPG hand wheel.



H Horizontal Type Machining Structure NT40
H Horizontal Type Machining Structure NT50



H Horizontal Type Machining Structure (OPT):

- Horizontal type milling head specifications NT/BT#40(#50)
- Spindle motor NT#40 5HP/4P • NT#50 7.5HP/4P
- Vertical travel NT#40 : 370(op : 500)mm • NT#50 : 570mm
- NT#40 acme screw or ballscrews, NT#50 ballscrews
- Reducer non-step servo transmission moving speed 10~1200mm/min
- Spindle speed : NT#40 : 57~1227rpm • NT#50 : 62~1100 rpm(6-step speed)

HK Horizontal Turret Type Machining Structure (OPT):

- Horizontal type milling head specifications NT/BT#40(#50)
- Spindle motor 5HP/4P(60HZ)
- Automatic spindle feeding feature, with each round standing at 0.035/0.07/0.14mm.
- Vertical travel NT40 : 370(op : 500)mm • NT#50 : 570mm
- Reducer non-step servo transmission moving speed 10-1200 mm/min
- Spindle Speed : Low speed 57~432rpm • high speed 424~3600rpm • Frequency conversion and step-less
- Turret travel 140mm



OPTIMIZED STRUCTURE DESIGN

THE ULTIMATE IN RIGIDITY AND STABILITY



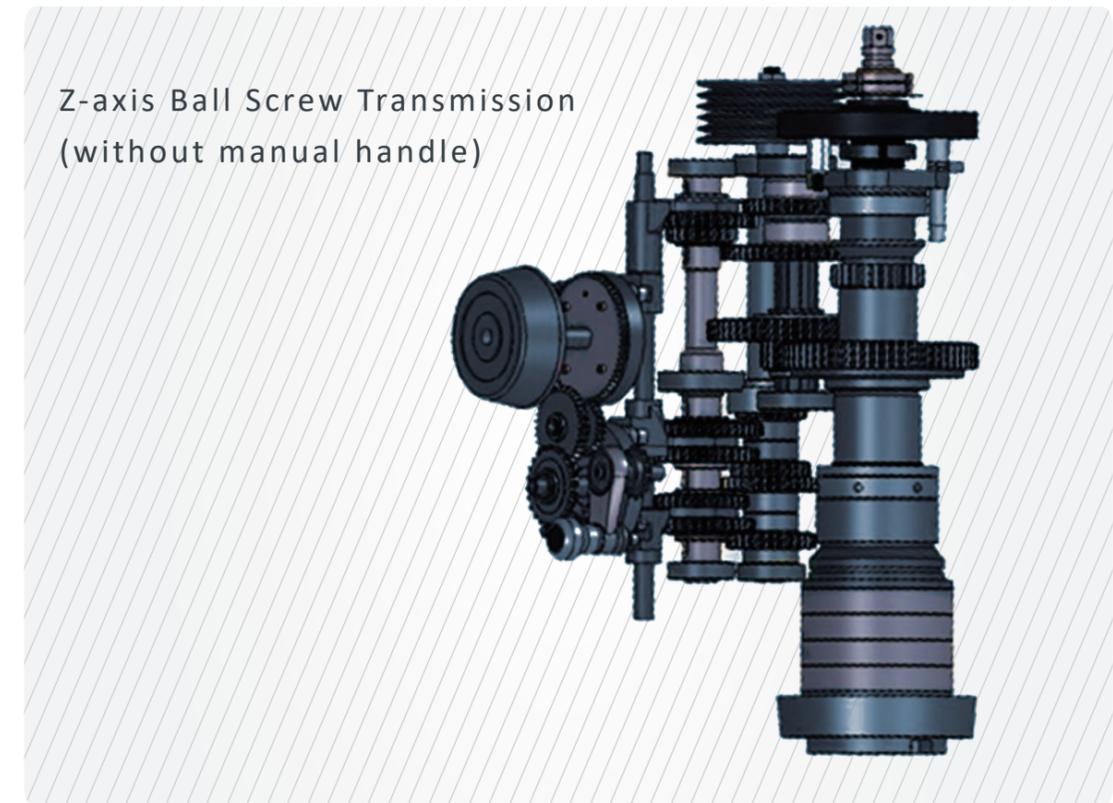
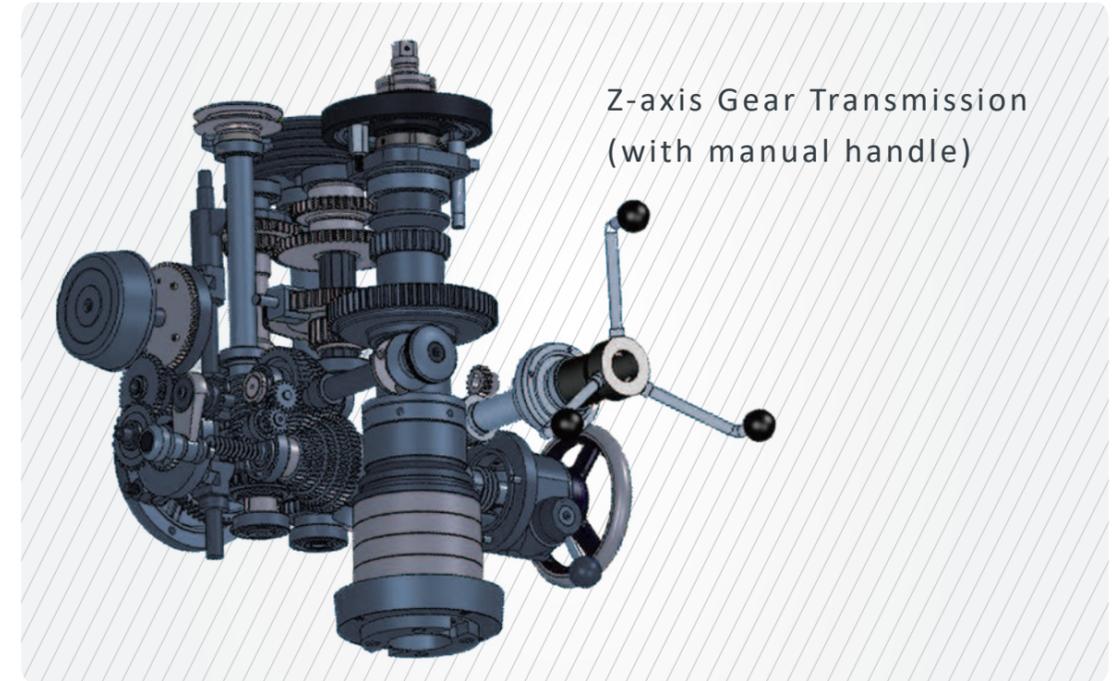
▲ LNC M668A Controller



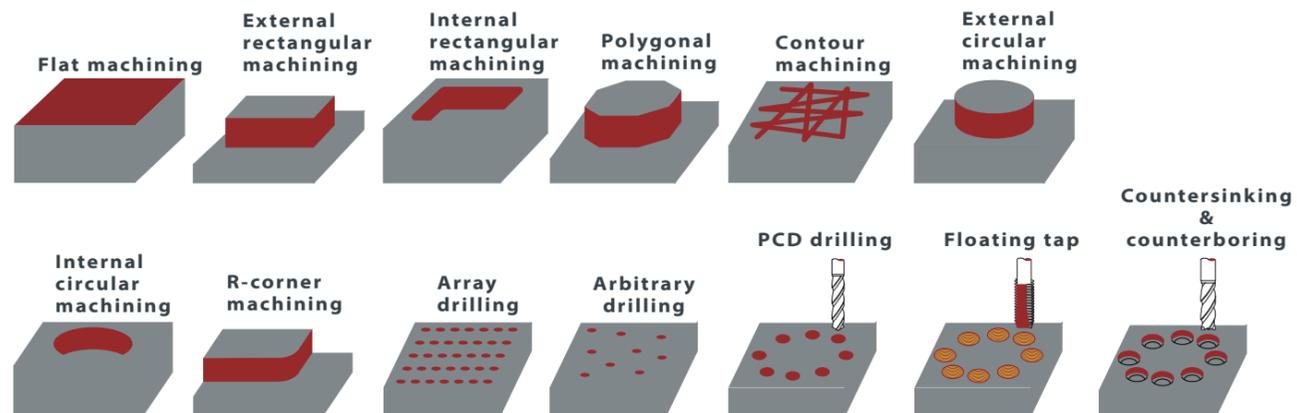
▲ BOSCH Rexroth Controller

FUNCTION:

- General G/M Code Operation
- Background Editing
- Program Function
- Program Transmission Function
- Multi-national Languages
- Pattern Simulated Display
- Hardware Self-diagnosis Display
- MPG Execute Program



INSTRUCTION



Dual-guideway Base

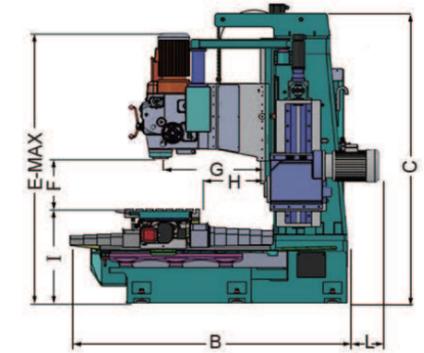
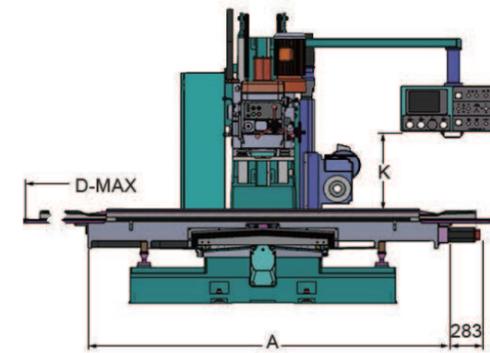


For X travel 1300mm



For X travel 1500mm

DIMENSIONAL DRAWINGS



| Model | MX-3(B) | MX-3BG-50 | MX-5(B)-50 | MX-6(B)-50 |
|---------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Specification | | | | |
| A X B X C X D | 2391x2229x 2400x3691mm | 2391x2229x 2400x3691mm | 3110x2489x 2504x4610mm | 3860x2489x 2504x6260mm |
| E | 2410mm | 2497mm | 2639 mm | 2639 mm |
| F | 100~700mm | 160~760 mm | 100~770mm | 100~770mm |
| G | 560mm | 550mm | 765 mm | 765 mm |
| H | 60~660mm | 60~660mm | 20~820 mm | 20~820 mm |
| I | 850mm | 850mm | 810 mm | 810 mm |
| K | 432mm | 432mm | 487mm | 487mm |
| L | 248mm(HK) | 248mm(HK) | 382mm(HK) | 382mm(HK) |

Four-guideway Base



For X travel 2400mm

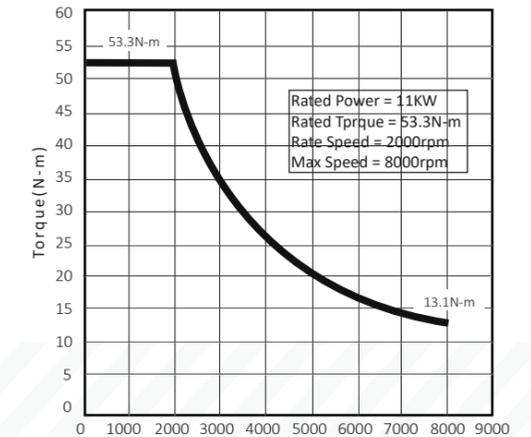
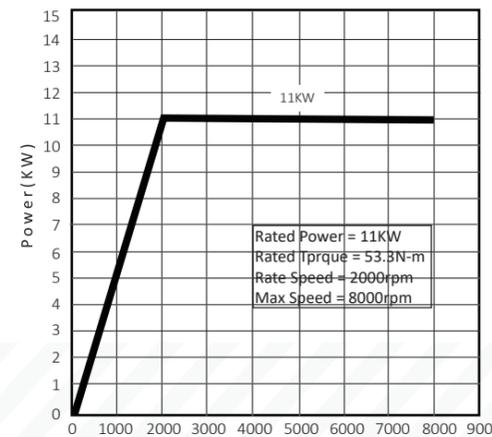
High Rigidity Base:

- The base features a high-rigidity square hardened rail, suitable for heavy-duty machining applications.
- The robust base casting incorporates a rib-reinforced structure, delivering optimal support rigidity.
- The four-track design eliminates the issue of the worktable being suspended, thereby enhancing load capacity and precision.

Precision Hand Scraping for Finishing:

- All structural mating surfaces are superior scraped to ensure geometric accuracy and loading balance.
- The machine adopts the non-TURCITE-B, coupled with a special oil groove design, ensuring a longer lifespan.

SPINDLE OUTPUT



SPECIFICATIONS

| MODEL | | UNIT | MX-3BTS | MX-3 | MX-3BHK | MX-3BTH | MX-3BG-50 | MX-5BT(HIGHER) | MX-5-50H | MX-5B-50H | MX-6BG-40HK | MX-6B-50H |
|-----------------|-------------------|--------|-----------|-----------|-------------|-------------|-----------|----------------|--------------|--------------|---------------|---------------|
| Size | Table size (L*W) | mm | 1515x470 | 1515x470 | 1515x470 | 1515x470 | 1515x470 | 1850x650 | 1850x650 | 1850x650 | 2600x650(800) | 2600x650(800) |
| Travel | X axis travel | mm | 1300 | 1300 | 1300 | 1300 | 1300 | 1500 | 1500 | 1500 | 2400 | 2400 |
| | Y axis travel | mm | 600 | 600 | 600 | 600 | 600 | 800 | 800 | 800 | 800 | 800 |
| | Z axis travel | mm | 600 | 600 | 600 | 600 | 600 | 670 | 670 | 670 | 670 | 670 |
| | A axis travel | mm | | | 370(OP:500) | 370(OP:500) | | | 570 | 570 | 570 | 570 |
| Slide way width | Y slide way width | mm | 720 | 720 | 720 | 720 | 720 | 1000 | 1000 | 1000 | 1000 | 1000 |
| | Z slide way width | mm | 420 | 420 | 420 | 420 | 420 | 500 | 500 | 500 | 500 | 500 |
| Spindle | Spindle taper | | NT#40(BT) | NT#40(BT) | NT#40(BT) | NT#40(BT) | NT#50(BT) | NT#40(BT) | NT#50(BT) | NT#50(BT) | NT#40(BT) | NT#50(BT) |
| | Spindle motor | HP/P | 5/4 | 5/4 | 5/4 | 5/4 | 7.5/4 | 5/4 | 7.5/4 | 7.5/4 | 7.5/4 | 7.5/4 |
| | Spindle speed | rpm | 70-3600 | 70-3600 | 70-3600 | 75-3600 | 62-1100 | 75-3600 | 40-3000 | 40-3000 | 62-1100 | 40-3000 |
| | Feeding speed | mm/min | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 |
| | Hori.Spindle | rpm | | | 75-3600 | 57-1227 | | | 62-1100 | 62-1100 | 75-3600 | 62-1100 |
| Others | Ballscrew | | φ32mm C3 | φ32mm C7 | φ32mm C3 | φ32mm C3 | φ32mm C3 | φ40mm P=8 C5 | φ40mm P=8 C5 | φ40mm P=8 C5 | φ40mm P=8 C5 | φ40mm P=8 C5 |
| | Net weight | kgs | 3500 | 3200 | 3500 | 3500 | 3200 | 5200 | 5500 | 5500 | 6800 | 6800 |
| | Swivele angle | | R30° L60° | | | | | | | | | |

·All specification, design and characteristics shown on this catalogue are subject to change without prior notice.

| MODEL | | UNIT | MX-1360 | MX-1575 |
|-------------|-----------------------------------|--------|-------------------------|-------------------------|
| Travel | X/Y/Z Axis | mm | 1300/600/550 | 1500/750/600 |
| | Spindle nose to table surface | mm | 150-700 | 170-800 |
| | Spindle center to column surface | mm | 606 | 770 |
| Table | Table size(L*W) | mm | 1515*470 | 1850*650 |
| | T-slots(Width*No.) | mm | 18*5 | 18*5 |
| | Table load | kg | 800 | 1000 |
| Spindle | Spindle taper | | BT-40 | BT-40(BT-50) |
| | Spindle speed(Belt) | rpm | 8000 | 8000(6000) |
| Motor | Spindle motor | kw | 11 | 11 |
| | X/Y/Z(A)Servo motormotor | kw | 1/1/1(1) | 2/2/2(1) |
| Feed | X/Z(A) Servo motormotor | m/min | 6/6/6/(1.2) | 6/6/6/(1.2) |
| | X/Y/Z(A)Cutting feed rate | m/min | 5/5/5/(1) | 5/5/5/(1) |
| | X/Y/Z(A) JOG feed rate | m/min | 4/4/4/(1) | 4/4/4/(1) |
| Magazine | Max.tool dia./ with adjacent tool | mm | φ78/φ150 (side milling) | φ78/φ150 (side milling) |
| | Max.tool weight | kgs | 8 | 8 |
| | Max.tool length | mm | 250 | 250 |
| | Tool Capacity | T | 24 | 24 |
| Others | Position accuracy | mm | ±0.008/300 | ±0.008/300 |
| | Repeatability accuracy | mm | ±0.005 | ±0.005 |
| | Pneumatic unit | kg/cm2 | 6 | 6 |
| | Power | kva | 20 | 25 |
| Weight/Size | Floor space(LxWxH) | mm | Max 3565*2504*2630 | Max 4610*2658*2781 |
| | Packing size(LxWxH) | mm | 1882x2400x2450 | 2250x2700x2520 |
| | N.W/G.W | kgs | 4000/4150 | 5780/6000 |

Standarrd Accessories :

- MPG Hand Wheel
- Auto Lubricitation Pump
- Table Enclosed Guard
- Coollant Pump System
- Spindle Blast
- Spindle Oil Coolant(MX-1360 、MX-1575)
- Electrical Cabinet Air Conditioner(MX-1360 、MX-1575)

- Auto Power Off
- AlarmLights
- LED Working ligh*2
- Level Pads And Level Bolts
- USB
- Tool Box & Tools
- Operayion Manual

Optional Equipment:

- H Horizontal Type Machining Structure
- HK Horizontal Type Machining Styucture
- Manual Hand Wheel*2(X,Y)
- Coolant Spear
- CNC Rotary Table

- Interface For CNC Rotary Table
- Tranformer
- Stainle Belt Type Oil Skimmer
- Half Cover Enclosed Guard
- Full Cover Emclosed Guard

| MODEL | | UNIT | MX-3BTS | MX-3 | MX-3BHK | MX-3BTH | MX-3BG-50 | MX-5BT(HIGHER) | MX-5-50H | MX-5B-50H | MX-6BG-40HK | MX-6B-50H |
|-----------------|-------------------|--------|-----------|-----------|-------------|-------------|-----------|----------------|--------------|--------------|---------------|---------------|
| Size | Table size (L*W) | mm | 1515x470 | 1515x470 | 1515x470 | 1515x470 | 1515x470 | 1850x650 | 1850x650 | 1850x650 | 2600x650(800) | 2600x650(800) |
| Travel | X axis travel | mm | 1300 | 1300 | 1300 | 1300 | 1300 | 1500 | 1500 | 1500 | 2400 | 2400 |
| | Y axis travel | mm | 600 | 600 | 600 | 600 | 600 | 800 | 800 | 800 | 800 | 800 |
| | Z axis travel | mm | 600 | 600 | 600 | 600 | 600 | 670 | 670 | 670 | 670 | 670 |
| | A axis travel | mm | | | 370(OP:500) | 370(OP:500) | | | 570 | 570 | 570 | 570 |
| Slide way width | Y slide way width | mm | 720 | 720 | 720 | 720 | 720 | 1000 | 1000 | 1000 | 1000 | 1000 |
| | Z slide way width | mm | 420 | 420 | 420 | 420 | 420 | 500 | 500 | 500 | 500 | 500 |
| Spindle | Spindle taper | | NT#40(BT) | NT#40(BT) | NT#40(BT) | NT#40(BT) | NT#50(BT) | NT#40(BT) | NT#50(BT) | NT#50(BT) | NT#40(BT) | NT#50(BT) |
| | Spindle motor | HP/P | 5/4 | 5/4 | 5/4 | 5/4 | 7.5/4 | 5/4 | 7.5/4 | 7.5/4 | 7.5/4 | 7.5/4 |
| | Spindle speed | rpm | 70-3600 | 70-3600 | 70-3600 | 75-3600 | 62-1100 | 75-3600 | 40-3000 | 40-3000 | 62-1100 | 40-3000 |
| | Feeding speed | mm/min | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 | 10-6000 |
| | Hori.Spindle | rpm | | | 75-3600 | 57-1227 | | | 62-1100 | 62-1100 | 75-3600 | 62-1100 |
| Others | Ballscrew | | ø32mm C3 | ø32mm C7 | ø32mm C3 | ø32mm C3 | ø32mm C3 | ø40mm P=8 C5 | ø40mm P=8 C5 | ø40mm P=8 C5 | ø40mm P=8 C5 | ø40mm P=8 C5 |
| | Net weight | kgs | 3500 | 3200 | 3500 | 3500 | 3200 | 5200 | 5500 | 5500 | 6800 | 6800 |
| | Swivele angle | | R30° L60° | | | | | | | | | |

·All specification, design and characteristics shown on this catalogue are subject to change without prior notice.

| MODEL | | UNIT | MX-1360 | MX-1575 |
|-------------|-----------------------------------|--------|-------------------------|-------------------------|
| Travel | X/Y/Z Axis | mm | 1300/600/550 | 1500/750/600 |
| | Spindle nose to table surface | mm | 150-700 | 170-800 |
| | Spindle center to column surface | mm | 606 | 770 |
| Table | Table size(L*W) | mm | 1515*470 | 1850*650 |
| | T-slots(Width*No.) | mm | 18*5 | 18*5 |
| | Table load | kg | 800 | 1000 |
| Spindle | Spindle taper | | BT-40 | BT-40(BT-50) |
| | Spindle speed(Belt) | rpm | 8000 | 8000(6000) |
| Motor | Spindle motor | kw | 11 | 11 |
| | X/Y/Z/(A)Servo motormotor | kw | 1/1/1/(1) | 2/2/2/(1) |
| Feed | X/Z/(A) Servo motormotor | m/min | 6/6/6/(1.2) | 6/6/6/(1.2) |
| | X/Y/Z/(A)Cutting feed rate | m/min | 5/5/5/(1) | 5/5/5/(1) |
| | X/Y/Z/(A) JOG feed rate | m/min | 4/4/4/(1) | 4/4/4/(1) |
| Magazine | Max.tool dia./ with adjacent tool | mm | ø78/ø150 (side milling) | ø78/ø150 (side milling) |
| | Max.tool weight | kgs | 8 | 8 |
| | Max.tool length | mm | 250 | 250 |
| | Tool Capacity | T | 24 | 24 |
| Others | Position accuracy | mm | ±0.008/300 | ±0.008/300 |
| | Repeatability accuracy | mm | ±0.005 | ±0.005 |
| | Pneumatic unit | kg/cm2 | 6 | 6 |
| | Power | kva | 20 | 25 |
| Weight/Size | Floor space(LxWxH) | mm | Max 3565*2504*2630 | Max 4610*2658*2781 |
| | Packing size(LxWxH) | mm | 1882x2400x2450 | 2250x2700x2520 |

Standarrd Accessories :

- MPG Hand Wheel
- Auto Lubricitation Pump
- Table Enclosed Guard
- Coollant Pump System
- Spindle Blast
- Spindle Oil Coolant(MX-1360、MX-1575)
- Electrical Cabinet Air Conditioner(MX-1360、MX-1575)
- Auto Power Off
- AlarmLights
- LED Working ligh*2
- Level Pads And Level Bolts
- USB
- Tool Box & Tools
- Operayion Manual

Optional Equipment:

- H Horizontal Type Machining Structure
- HK Horizontal Type Machining Styucture
- Manual Hand Wheel*2(X,Y)
- Coolant Spear
- CNC Rotary Table
- Interface For CNC Rotary Table
- Tranformer
- Stainle Belt Type Oil Skimmer
- Half Cover Enclosed Guard
- Full Cover Emclosed Guard