

OPTIMAL  
STRUCTURE DESIGN  
High Rigidity!  
Lifetime Stability!

The major structures are manufactured from Meehanite cast iron, stress relieved and combined with scientific rib reinforcement to ensure deformation-free operations. Increased width on the column bottom with box-type structure provides maximum stability especially when performing high speed cutting.

## SPINDLE CASTING IRON

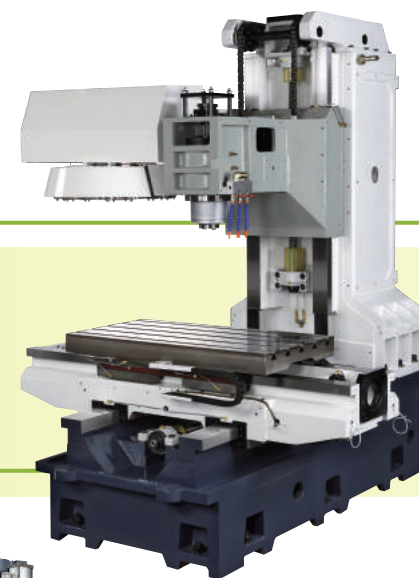
With Box-Like structure, P4 level spindle bearing. The spindle holder processed with SCM4 iron, high rigidity, and heavy-cutting.

## CONSTRUCTION

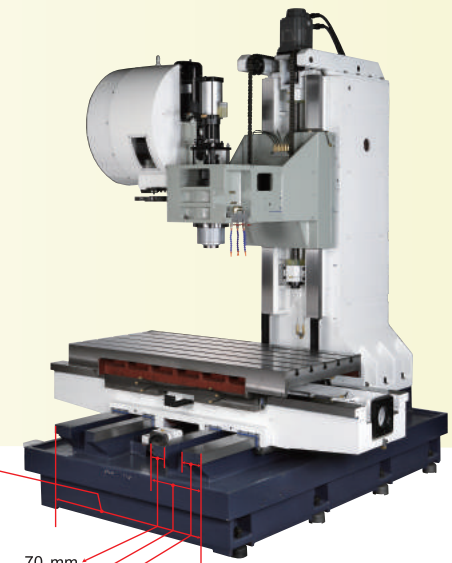
With the world certificated Meehanite casting iron, inner beam consolidated, all processing through tempered, high stability, no deformed. The hardness degree should reach  $HRC52^{\circ} \pm 3^{\circ}$ , less concussion.



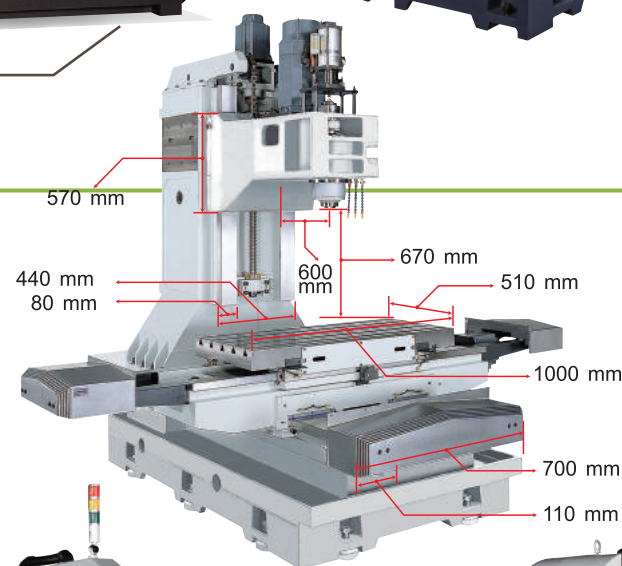
MVC-955



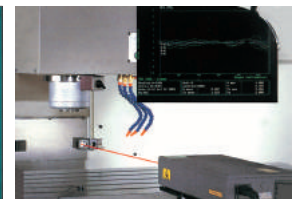
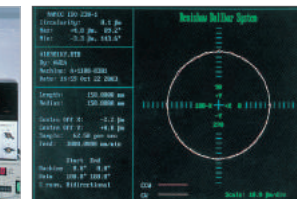
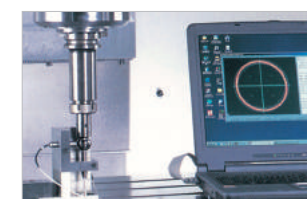
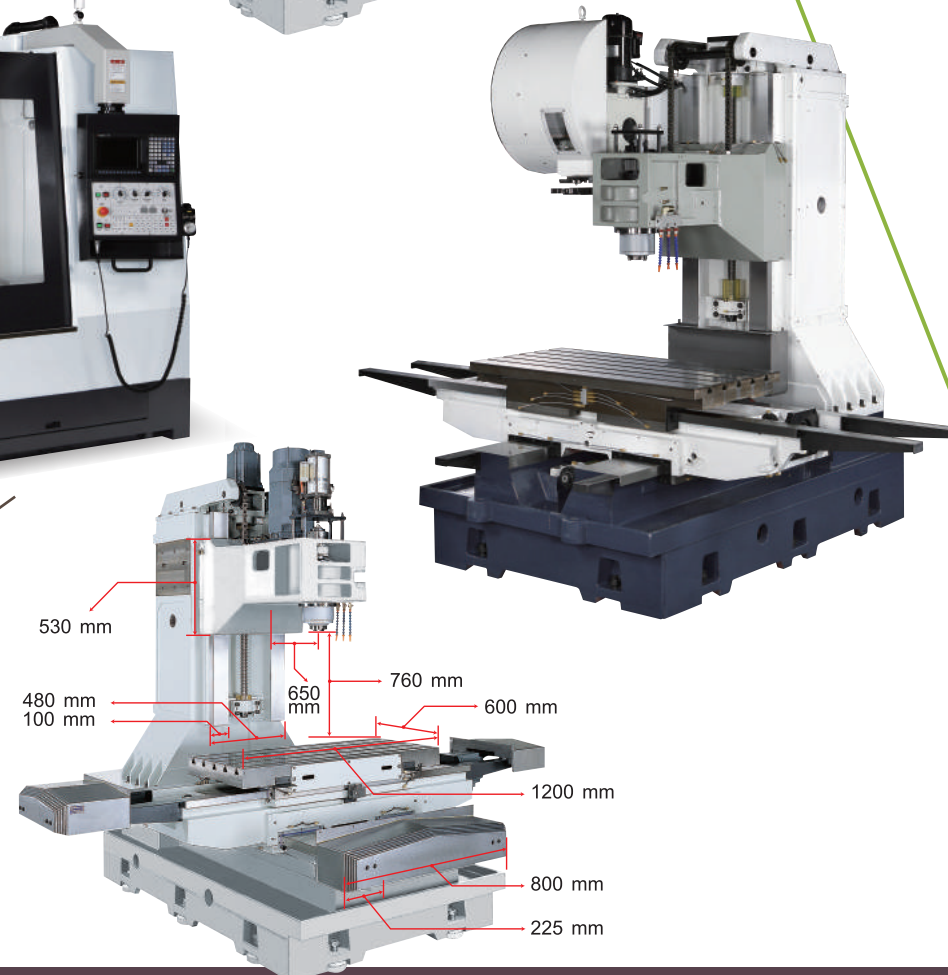
MVC-1370



1000 mm  
70 mm  
300 mm  
120 mm



MVC-1160

RIGOROUS QUALITY  
EXAMININGHIGH SPEED SPINDLE DYNAMIC  
CHARACTERISTIC TEST

To the dynamic characteristic of the high-speed spindle under different rotational speeds, test proving, including dynamic equilibrium, vibration, the noise, and precision of high-speed gyration that rotate, etc., guarantee that the high-speed spindle gives play to the excellent characteristic.

## BALL BAR TESTING

- Three-dimensional spaces follow the ball bar testing, and adjust in best.
- Adopt strict German VDI3441 inspection norm.

## LASER INSPECTION

- Adopt strict German VDI3441 inspection norm.

STANDARD MOLD  
CUTTING TEST

- Direct against customer's mold characteristic, each of products passes the standard mold setup cutting to guarantee that the goods quality.

| MODEL     |                                     | MVC-955                      | MVC-1160                 | MVC-1370                   |                             |
|-----------|-------------------------------------|------------------------------|--------------------------|----------------------------|-----------------------------|
| TRAVEL    | X axis travel                       | 900 mm                       | 1100 mm                  | 1300 mm                    |                             |
|           | Y axis travel                       | 550 mm                       | 600 mm                   | 700 mm                     |                             |
|           | Z axis travel                       | 530 mm                       | 610 mm                   | 700 mm                     |                             |
| DISTANCE  | Spindle center to colum             | 600 mm                       | 650 mm                   | 760 mm                     |                             |
|           | Spindle nose to table surface       | 150 - 680 mm                 | 150 - 760 mm             | 150 - 850 mm               |                             |
| TABLE     | Table work area                     | 1000 x 510 mm                | 1200 x 600 mm            | 1400 x 700 mm              |                             |
|           | Dimension of T-slot                 | CD 100 x 18 x 5T mm          |                          |                            | CD 125 x 18 x 5T            |
|           | Max. Table load                     | 600 kg                       | 800 kg                   | 1200 kg                    |                             |
| SPINDLE   | Spindle taper / Bore diameter       | BT40                         | BT40 / BT50              |                            |                             |
|           | Driving method                      | Belt                         |                          |                            |                             |
|           | Spindle motor-cont / 30 min         | 15 HP (Mitsubishi or Fanuc)  |                          |                            | 20 HP (Mitsubishi or Fanuc) |
|           | Spindle speed                       | 8000 rpm                     | 8000 / 6000 rpm          |                            |                             |
| FEED RATE | Rapid feed rate - X x Y x Z         | 20 x 20 x 15 m/min           |                          |                            |                             |
|           | X x Y x Z ball screw                | 40 x 10B2 (dia. x pitch)     | 40 x 12B2 (dia. x pitch) | 50 x 12B2 (dia. x pitch)   |                             |
|           | Motor (XYZ)                         | 2.5 / 2.5 / 3.5 KW           |                          |                            | 3.5 / 3.5 / 3.5 KW          |
| TOOLS     | Max. tool lenth                     | 250 mm (9.8") x 89 mm (3.5") |                          |                            |                             |
|           | Max. tool weight                    | 6 kg / 13.2 lbs              |                          |                            |                             |
|           | Number of tools                     | 20 / 24 pcs                  |                          |                            |                             |
|           | Tool exchaning time                 | 10 / 4 sec.                  |                          |                            |                             |
|           | Tool selection method               | Bi-direction & Min Path      |                          |                            |                             |
| MACHINE   | Min. / Max. air pressure            | 4 kg / 6 cm <sup>2</sup>     |                          |                            |                             |
|           | Coolant tank capacity               | 250 ℓ                        | 380 ℓ                    | 450 ℓ                      |                             |
|           | Net weight                          | 7000 kg                      | 8000 kg                  | 10400 kg                   |                             |
|           | Gross weight                        | 7300 kg                      | 8300 kg                  | 11000 kg                   |                             |
|           | Floor space requirement (L x W x H) | 261 x 210 x 235 cm           | 300 x 219 x 246 cm       | 340 x 248 x 280 cm         |                             |
|           | Packing size (L x W x H)            | 265 x 228 x 245 cm           | 310 x 228 x 250 cm       | 700 x 228 x 250cm          | 385 x 310 x 315cm           |
|           | Container                           | 40" HQ                       | 40" HQ                   | 40"HQ split into 2 pallets | 20"FR                       |

\* Specification Subject to change without notice.

## STANDARD ACCESSORIES

- Alarm Light
- Flexible Cover
- Mitsubishi M70 Controller
- Full Enclosure
- Rail Auto Lube System
- Auto Power Off System
- Spindle Auto Air Blast Device
- Remote MPG
- BT40 Spindle
- Spindle Oil Cooler
- Rigid Tapping
- RS232 Interface
- Quartz Light
- Cutting Liquid Defector
- Level Adjusting Bolt and Pads
- Tool Box and Operating Manual
- Handle Air Blast Device
- Handle Flush Device
- Heat Exchanger
- Flood Coolant
- A.I.C.C (A I CONTOUR CONTROL)

## OPTIONAL ACCESSORIES for MVC-955 / 1160 / 1370

- Transformer
- Spindle (direct type)
- BT50 Spindle (1160 / 1370)
- 4th/5th Axis Rotary Table Tailstock and Chuck
- Tnesption Inspection Probe Kits
- A.T.C. (Arm Type) 24 Tools
- Coolant Thru Spindle
- Fanuc/Siemens/Fagor Controller
- Chip Conveyor
- A.T.C. (Armless Type) 20 Tools



### TOOL PROBE

- Adopt Japan METROL T24E brand.
- Auto-measure tool length and effectively set tools and test.



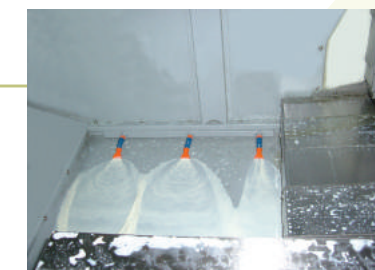
### SPINDLE SPLASH RING

- The spindle splash ring is available only for models with arm-type magazine. The device not only effectively removes chips on workpiece but also increases workpiece cooling efficiency.



### 4<sup>TH</sup> CNC ROTARY TABLE

- High positioning accuracy.
- Stability during cutting.



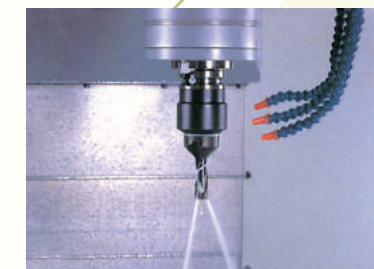
### COOLANT FLUSHING DEVICE

- Three coolant nozzles are provided on both sides of the table featuring high pressure flushing to remove chips from the table.



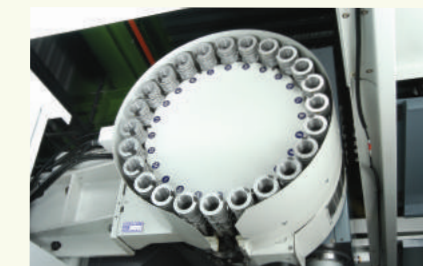
### OIL SKIMMER

- Assembled upon cutting fluid tank.
- It can separate slick of cutting fluid.



### COOLANT THRU SPINDLE

- Effectively clean chips while deep bore processed.
- Effectively improve the process efficiently.



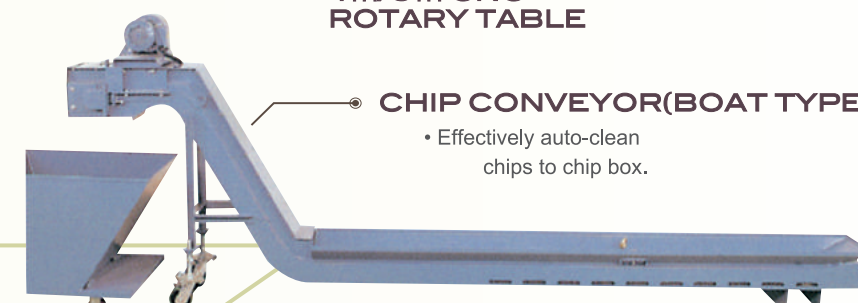
### ARM TYPE MAGAZINE

- The magazine is driven by a precision cam for rapid and stable tool change motion. Tool loading capacity provides 20 or 24 tools to choose from. Bi-directional random tool selection provides quick tool changing that reduces non-cutting time.



### 4<sup>TH</sup>/5<sup>TH</sup> CNC ROTARY TABLE

- The 4th/5th CNC rotary table features high positioning accuracy and maximum stability during cutting. It is ideal for various types of workpiece machining.



### CHIP CONVEYOR(BOAT TYPE)

- Effectively auto-clean chips to chip box.



### CAROUSEL TYPE MAGAZINE

- The carousel type magazine is standard equipment. It carries 16 tools for various types of machining applications. Fixed type tool selection for quick tool changing that reduces non-cutting time.

LINEAR WAY

VERTICAL  
MACHINING CENTER



LVC-755



LVC-860



LVC-1160

| MODEL         |                                     | LVC-755                     | LVC-860                     | LVC-1160                    | LVC-1370                            |
|---------------|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------------|
| TRAVEL        | X axis travel                       | 700 mm                      | 800 mm                      | 1100 mm                     | 1300 mm                             |
|               | Y axis travel                       | 510 mm                      | 600 mm                      | 600 mm                      | 700mm (/650mm)                      |
|               | Z axis travel                       | 550 mm                      | 600 mm                      | 600 mm                      | 700 mm                              |
| DISTANCE      | Spindle nose to table surface       | 130 ~ 630 mm                | 150 ~ 750 mm                | 150 ~ 750 mm                | 150 ~ 850 mm                        |
|               | Spindle center nose to colum        | 600 mm                      | 600 mm                      | 600 mm                      | 700 mm                              |
| LINEAR WAY    | X axis                              | RGW30                       | RGW35                       | RGW35                       | RGW45                               |
|               | Y axis                              | RGW30                       | RGW45                       | RGW45                       | RGW45                               |
|               | Z axis                              | RGW35                       | RGW45                       | RGW45                       | RGW45                               |
| BALL SCREW    | X axis                              | R32XP12                     | R40XP12                     | R40XP12                     | R50XP12                             |
|               | Y axis                              | R32XP12                     | R40XP12                     | R40XP12                     | R50XP12                             |
|               | Z axis                              | R32XP12                     | R40XP12                     | R40XP12                     | R50XP12                             |
| TABLE         | Table work area                     | 700 x 500 mm                | 1000 x 600 mm               | 1200 x 600 mm               | 1500 x 700 mm                       |
|               | Max. Table load                     | 350 kg                      | 400 kg                      | 600 kg                      | 700 kg                              |
|               | Dimension of T-slot                 | CD100 x 16 x 5T             | CD100 x 18 x 5T             | CD100 x 18 x 5T             | CD100 x 18 x 7T                     |
| SPINDLE       | Bore diameter                       | BT40                        |                             |                             |                                     |
|               | Spindle taper                       | ISO40                       |                             |                             |                                     |
|               | Spindle motor                       | 10 HP (Mitsubishi or Fanuc) | 15 HP (Mitsubishi or Fanuc) | 15 HP (Mitsubishi or Fanuc) | 15 HP (Mitsubishi or Fanuc)         |
|               | Spindle diameter                    | Ø65 mm                      | Ø70 mm                      | Ø70 mm                      | Ø70 mm                              |
| SPINDLE SPEED | Belt                                | 10000 RPM                   |                             |                             |                                     |
|               | Directly (OP)                       | 10000/12000/15000RPM        |                             |                             |                                     |
| FEED RATE     | Rapid feed rate (X / Y / Z)         | 36 / 36 / 24                |                             |                             |                                     |
|               | Motor (X / Y / Z)                   | 2.0 / 2.0 / 3.0 KW          | 2.5 / 2.5 / 3.5 KW          | 2.5 / 2.5 / 3.5 KW          | 3.5 / 3.5 / 3.5 KW                  |
| TOOLS         | Max. tool lenth                     | 250                         |                             |                             |                                     |
|               | Max. tool weight                    | 6 kg / 13.2 lbs             |                             |                             |                                     |
|               | Number of tools                     | 24 pcs                      |                             |                             |                                     |
|               | Tool exchanging time                | 10 / 4 sec.                 |                             |                             |                                     |
|               | Min / Max. air pressure             | 4 kg / 6 cm <sup>2</sup>    |                             |                             |                                     |
| MACHINE       | Coolant tank capacity               | 150 L                       | 250 L                       | 300 L                       | 300 L                               |
|               | Net weight                          | 4200 kg                     | 5200 kg                     | 6200 kg                     | 8500 kg                             |
|               | Gross weight                        | 4500 kg                     | 5500 kg                     | 6500 kg                     | 9000 kg                             |
|               | Floor space requirement (L x W x H) | 210 x 228 x 235 cm          | 261 x 210 x 235 cm          | 300 x 219 x 246 cm          | 300 x 219 x 246 cm                  |
|               | Packing size (L x W x H)            | 240 x 228 x 245 cm          | 265 x 228 x 245 cm          | 345 x 228 x 250 cm          | 700 x 228 x 250cm 385 x 310 x 315cm |
|               | Container                           | 40" HQ                      | 40" HQ                      | 40" HQ                      | 40"HQ split into 2 pallets 20"FR    |

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STANDARD ACCESSORIES

- Alarm Light

Flexible Cover

Mitsubishi M70 Controller

Full Enclosure

Rail Auto Lube System

Auto Power Off System
- Spindle Auto Air Blast Device

Remote MPG

BT40 Spindle

Spindle Oil Cooler

Rigid Tapping

RS232 Interface
- Handle Air Blast Device

Handle Flush Device

Heat Exchanger

Flood Coolant

A.I.C.C

(A I CONTOUR CONTROL)
- Cutting Liquid Defector

Tool Box and Operating Manual

Level Adjusting Bolt and Pads

OPTIONAL ACCESSORIES

- Transformer

Spindle (direct type)

4th/5th Axis Rotary Table Tailstock and Chuck
- FANUC Controller

Chip Conveyor

Coolant Thru Spindle
- Tnesption Inspection Probe Kits

A.T.C. (Armless Type) 20 Tools

A.T.C. (Arm Type) 24 Tools

| MODEL     |                                     | MVC-1160G                   | MVC-1370G                              | MVC-1690G                    | MVC-1890G                    |
|-----------|-------------------------------------|-----------------------------|----------------------------------------|------------------------------|------------------------------|
| TRAVEL    | X axis travel                       | 1100 mm                     | 1300 mm                                | 1600 mm                      | 1800 mm                      |
|           | Y axis travel                       | 600 mm                      | 700 mm                                 | 900 mm                       | 900 mm                       |
|           | Z axis travel                       | 610 mm                      | 700 mm                                 | 800 mm                       | 800 mm                       |
| DISTANCE  | Spindle nose to table surface       | 650 mm                      | 760 mm                                 | 880 mm                       | 880 mm                       |
|           | Spindle center nose to colum        | 150 - 760 mm                | 150 - 850 mm                           | 150 - 950 mm                 | 150 - 950 mm                 |
| TABLE     | Table work area                     | 1200 x 600 mm               | 1400 x 700 mm                          | 1800 x 810 mm                | 2200 x 810 mm                |
|           | Dimension of T-slot                 | CD 100 x 18 x 5T            | CD 125 x 18 x 5T                       | CD 125 x 18 x 7T             | CD 125 x 18 x 7T             |
|           | Max. Table load                     | 800 kg                      | 1200 kg                                | 2000 kg                      | 2000 kg                      |
| SPINDLE   | Spindle taper / Bore diameter       | BT50                        |                                        |                              |                              |
|           | Driving method                      | Gear Head                   |                                        |                              |                              |
|           | Spindle motor-cont / 30 min         | 20 HP (Mitsubishi or Fanuc) | 20 HP (Mitsubishi or Fanuc)            | 25 HP (Mitsubishi or Fanuc)  | 25 HP (Mitsubishi or Fanuc)  |
|           | Spindle speed                       | 6000 rpm                    | 6000 rpm                               | 6000 rpm                     | 6000 rpm                     |
| FEED RATE | Rapid feed rate - X / Y / Z         | 20 x 20 x 18 m/min          | 20 x 20 x 18 m/min                     | 20 x 20 x 15 m/min           | 20 x 20 x 15 m/min           |
|           | X / Y / Z ball screw                | 40 x 12B2 (dia. x pitch)    | 50 x 12B2 (dia. x pitch)               | 50 x 12B2 (dia. x pitch)     | 50 x 12B2 (dia. x pitch)     |
| TOOLS     | Max. tool lenth                     | 350 x 114.8 mm              | 350 x 114.8 mm                         | 250 mm (9.8") x 89 mm (3.5") | 250 mm (9.8") x 89 mm (3.5") |
|           | Max. tool weight                    | 15 kg / 33 lbs              |                                        |                              |                              |
|           | Number of tools                     | 24 pcs                      |                                        |                              |                              |
|           | Tool exchanging time                | Bi-direction & Min Path     |                                        |                              |                              |
| GEAR HEAD | Gear ratio                          | 1 : 4.2                     |                                        |                              |                              |
|           | Bearings front                      | NN3018 (Ø90)                |                                        |                              |                              |
|           | Bearings rear                       | NN3012 (Ø60)                | NN3012 (Ø60)                           | NN3016 (Ø80)                 | NN3016 (Ø80)                 |
|           | Bearings lubrication                | Grease                      |                                        |                              |                              |
|           | Preload                             | Rigid                       |                                        |                              |                              |
|           | Clamping force                      | 2000 kg                     | 2000 kg                                | 2400 kg                      | 2400 kg                      |
|           | Coolant                             | Oil                         |                                        |                              |                              |
|           | Coolant requirement                 | 1500 keal/h                 |                                        |                              |                              |
| MACHINE   | Min / Max. air pressure             | 4 kg / 6 cm <sup>2</sup>    |                                        |                              |                              |
|           | Coolant tank capacity               | 380 ℓ                       | 450 ℓ                                  | 520 ℓ                        | 520 ℓ                        |
|           | Net weight                          | 8500 kg                     | 11000 kg                               | 18000 kg                     | 18200 kg                     |
|           | Gross weight                        | 8900 kg                     | 12000 kg                               | 18500 kg                     | 18700 kg                     |
|           | Floor space requirement (L x W x H) | 300 x 219 x 246 cm          | 340 x 248 x 280 cm                     | 420 x 270 x 320 cm           | 420 x 270 x 320 cm           |
|           | Packing size (L x W x H)            | 310 x 228 x 250 cm          | 700 x 228 x 250cm<br>385 x 310 x 315cm | 538 x 391 x 375 cm           | 570 x 391 x 375 cm           |
|           | Container                           | 40" HQ                      | 40"HQ split<br>into 2 pallets          | 20"FR                        | 1 x 20" FR                   |

\* Specification Subject to change without notice.

STANDARD ACCESSORIES

- Alarm Light

Flexible Cover

Full Enclosure

Rail Auto Lube System

Auto Power Off System

Spindle Auto Air
- Blast Device

Remote MPG

BT50 Spindle

Spindle Oil Cooler

Rigid Tapping
- RS232 Interface

Quartz Light

Cutting Liquid Defector

Tool Box and Operating Manual

Level Adjusting Bolt and Pads
- Handle Air Blast Device

Handle Flush Device

Heat Exchanger

Flood Coolant

OPTIONAL ACCESSORIES

- Transformer

Coolant Thru Spindle

FANUC α12 Controller
- Chip Conveyor

Tnespction Inspection Probe Kits

Chain type 30/32 tools for 1690G or 1890G

4th/5th Axis Rotary Table Tailstock and Chuck



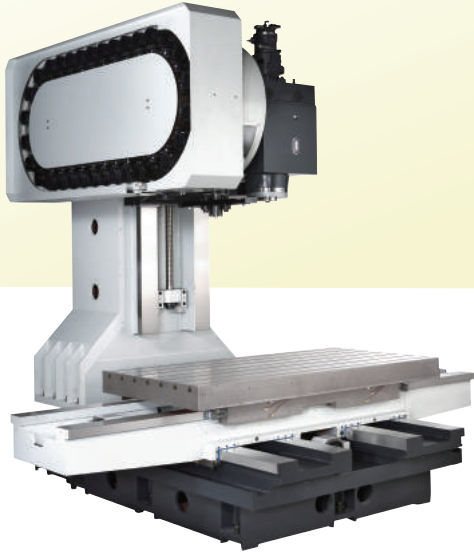
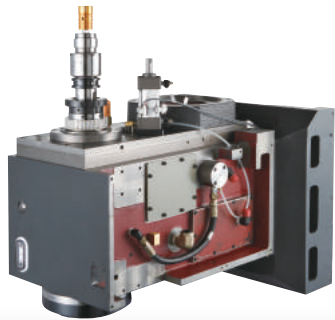
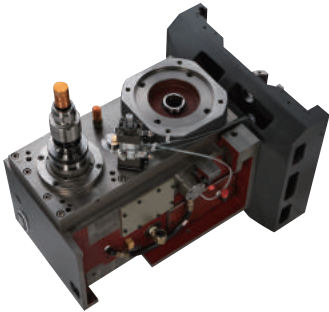
MVC-1160G

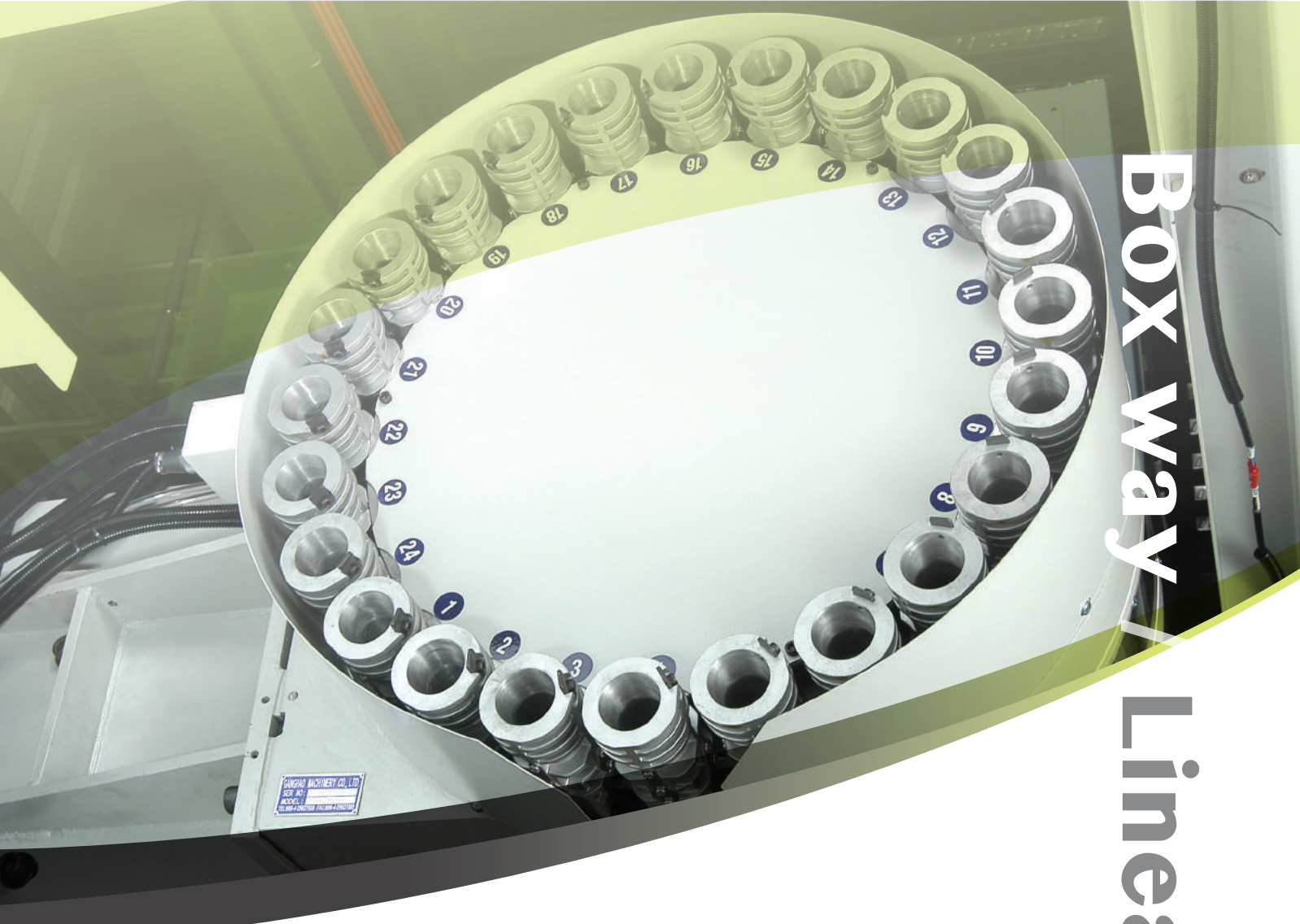
HEAVY DUTY SPINDLE

The spindle is supported with heavy duty roller bearings with large contact areas that easily handle large axial and radial loads, while computer modeling helps determine bearing locations for maximum spindle stiffness.The 2-speed gearbox coupled with powerful spindle motor offers unrivaled metal removal rates Oil cooling to the spindle and gearbox maintain low bearing temperature for extended spindle life.



MVC-1690G





Box way /

Linear way



Elaboration / Pinpoint / Excellence



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**JS EDM** 2015.07

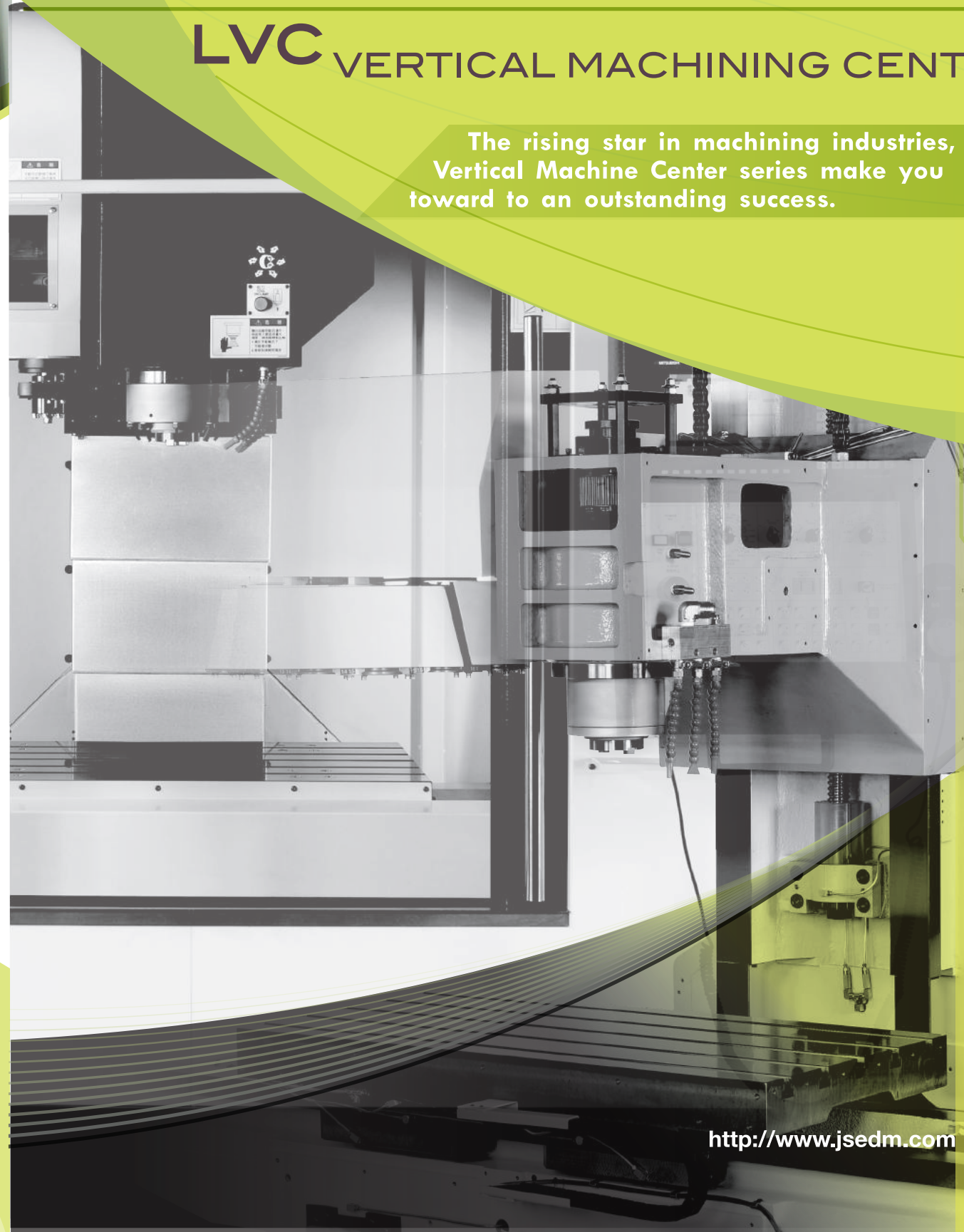


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Vertical Machine Center series make you  
toward to an outstanding success.



MVC / LVC

Box way

Linear way

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