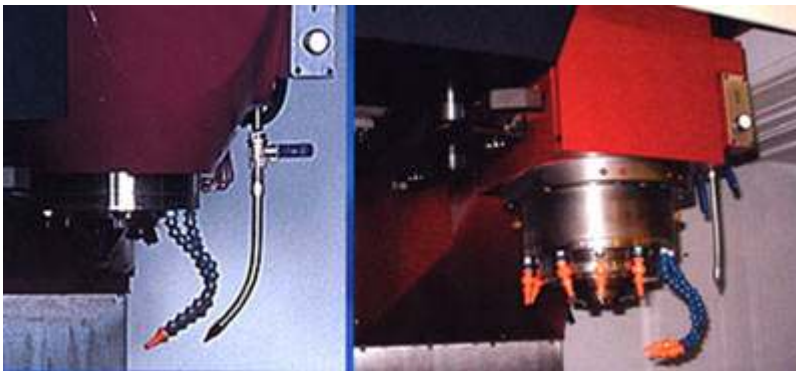
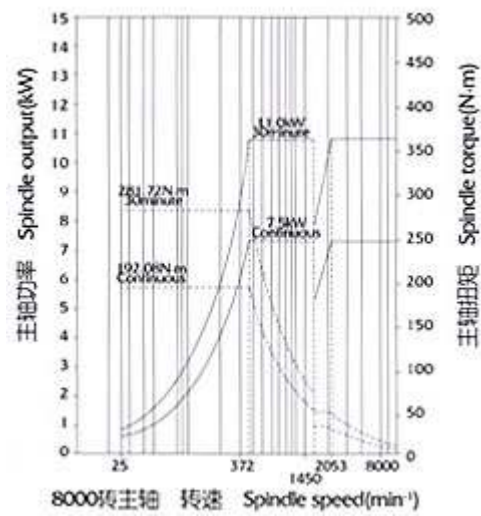
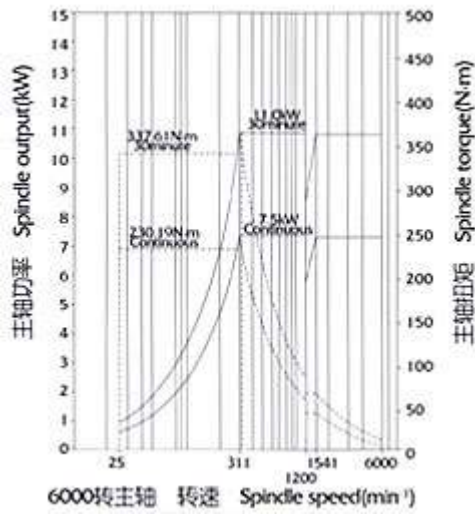




Horizontal Machining Centers

High speed and High power spindle

The two-steps speed changeable, high-speed, high power internal electric spindle is not only capable to low-speed high-torque cutting



Spindle specification

| | Spindle with gear | Electric spindle |
|-------|--|--|
| No.50 | 25~6000min ⁻¹ [11/7.5kW] | 35~13000min ⁻¹ [30/25kW] (opce) |
| | 25~6000min ⁻¹ [15/11kW](opce) | |
| | 25~8000min ⁻¹ [11/7.5kW](opce) | |
| | 25~8000min ⁻¹ [15/11kW](opce) | |

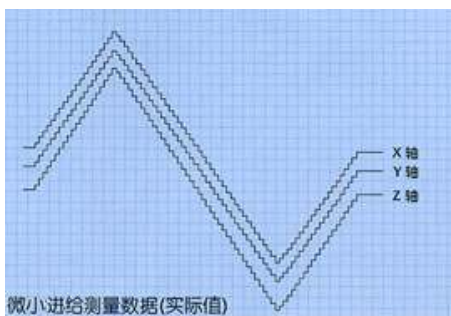
Compact and unrivaled rigidity configuration

Extremely rigid construction with box type and diagonal ribs, which are located in key parts of the body machine, substantially increasing the rigidity of the machine and its ability to dampen vibrations generated during machining. Massive linear guide surfaces allow smooth machining with a smooth surface.



High rigidity & High Accuracy

Ball screws are firmly anchored at both ends and their parallelism is controlled with a linear guide. When rotating the ball screws and heat dilate, which can lead to inaccuracies in machining. Advanced temperature compensation system, this phenomenon is completely reduced, which ensures a stable machining accuracy.



Advanced HQ Funkce

Pre-interpolation acceleration / deceleration:

When cutting circles is to reduce the error contours of the workpiece and prevents the reduction of the radius.

Optimized slowdown in the corners:

Vector monitor command program automatically reduces the travel speed in the corner of the workpiece. This ensures high precision machining of the edges

Feed control:

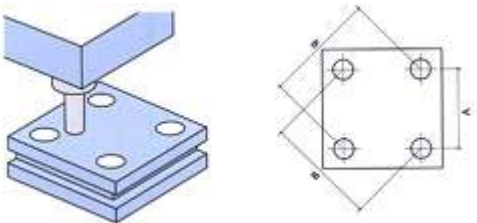
Precision motion control with minimal error servomotor. Optional Hyper HQ control ensures high speed and high precision operation in any part of the program, even when machining complex shapes. This is especially useful when machining contours forms



Japanese sense of accuracy

Positioning accuracy

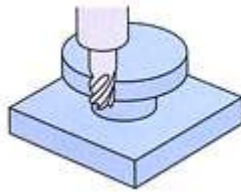
| | MDV55 | MDV75 |
|-----------------------|---------------------|------------------------|
| Positioning accuracy | ±0.003/full lenght | ±0.005mm/X,±0.003mm/YZ |
| Repeataility accuracy | ±0.002/ full lenght | ±0.002mm/ full lenght |



| | MDV55 | MDV75 |
|---|---------|---------|
| A | 150 | 200 |
| B | 212.132 | 282.843 |

Working accuracy

| Item | MDV55 | | MDV75 | |
|-----------------------|--------------|-----------|--------------|-----------|
| | JIS Standard | Tolerance | JIS Standard | Tolerance |
| Axis direction | 0.025 | 0.015 | 0.025 | 0.015 |
| Diagonal direction | 0.035 | 0.015 | 0.035 | 0.015 |
| Deviation of hole dia | 0.02 | 0.01 | 0.02 | 0.01 |



Circular cutting accuracy

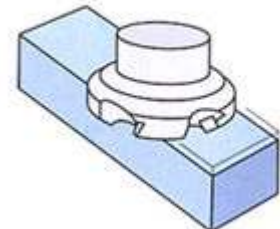
| Item | MDV55 | | MDV75 | |
|-------------|--------------|-----------|--------------|-----------|
| | JIS Standard | Tolerance | JIS Standard | Tolerance |
| Circularity | 0.040 | 0.015 | 0.040 | 0.015 |

Machining capability

Milling(φ100×5T)

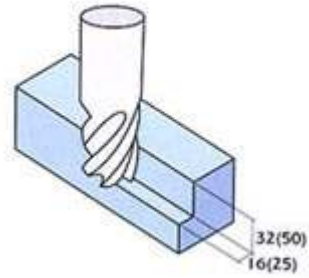
| MDV55 | | | |
|---------------|----------------------|----------------|-------------------------|
| Spindle speed | 600min ⁻¹ | Feed | 0.3mm/tooth |
| Cutting feed | 188m/min | Cutting amount | 432cm ³ /min |
| Cutting width | 80mm | Motor loading | 113% |
| Cutting depth | 6mm | Material | 45(S43C) |
| Feed rate | 900mm/min | | |

| MDV75 | | | |
|---------------|----------------------|----------------|-------------------------|
| Spindle speed | 600min ⁻¹ | Feed | 0.3mm/ zub |
| Cutting feed | 188m/min | Cutting amount | 432cm ³ /min |
| Cutting width | 80mm | Motor loading | 104% |
| Cutting depth | 6mm | Material | 45(S43C) |
| Feed rate | 900mm/min | | |



| MDV55(end-milling Ø32×6T) | | | |
|---------------------------|----------------------|----------------|-------------------------|
| Spindle speed | 250min ⁻¹ | Feed rate | 300mm/min |
| Cutting feed | 25m/min | Feed | 0.20mm/ zub |
| Cutting width | 16mm | Cutting amount | 165cm ³ /min |
| Cutting depth | 32mm | Motor loading | 95% |
| Material | 45(S43C) | | |

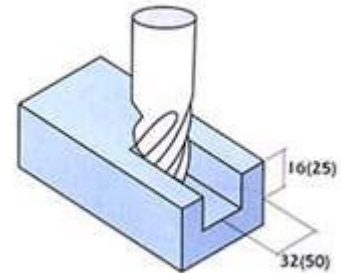
| MDV75 end-milling Ø3250×6T) | | | |
|-----------------------------|----------------------|----------------|-------------------------|
| Spindle speed | 160min ⁻¹ | Feed rate | 130mm/min |
| Cutting feed | 25m/min | Feed | 0.14mm/ zub |
| Cutting width | 25mm | Cutting amount | 163cm ³ /min |
| Cutting depth | 50mm | Motor loading | 100% |
| Material | 45(S43C) | | |



Grooving

| MDV55(Millingφ32×6T) | | | |
|----------------------|----------------------|----------------|-------------------------|
| Spindle speed | 250min ⁻¹ | Feed rate | 300mm/min |
| Cutting feed | 25m/min | Feed | 0.2mm/ zub |
| Cutting width | 16mm | Cutting amount | 165cm ³ /min |
| Cutting depth | 32mm | Motor loading | 92% |
| Material | 45(S43C) | | |

| MDV75(Millingφ50×6T) | | | |
|----------------------|----------------------|----------------|-------------------------|
| Spindle speed | 160min ⁻¹ | Feed rate | 120mm/min |
| Cutting feed | 25m/min | Feed | 0.125mm/zub |
| Cutting width | 25mm | Cutting amount | 150cm ³ /min |
| Cutting depth | 50mm | Motor loading | 85% |
| Material | 45(S43C) | | |



Technical specification:

| Model | Unit | MDH 65 | MDH 80 | MDH 80 |
|---|---------|----------------------------|----------------------|------------|
| Travel X axe (column left/right) | mm | 1050 | 1400 | 1400 |
| Travel Y axe (spindlebox up/down) | mm | 900 | 1100 | 1100 |
| Travel Z axe (table forward/backward)) | mm | 900 | 1050 | 1000 |
| Distance table surface to spindle | mm | 80-980 | 80-1180 | 80-1180 |
| Distance table center to spindle nose | mm | 200-1100 | 200-1250 | 200-1250 |
| Table surface (pallet) | mm | 630 x 630 | 800x800 | 1000x1000 |
| Max workpiece weight | kgs | 1300 | | |
| Table indexing time | sec | 1,7 (90°) | 4,5 (90°) | 4,5 (90°) |
| Spindle speeds | rpm | 35-8000 (35-12000 option) | | |
| Number of spindle steps | | 2 steps | | |
| Spindle taper | | 7/24 No. 50 | | |
| Rapidfeed | mm /min | 45 000 (54 000 opce) | 36 000 (45 000 opce) | |
| Pracovní posuv | mm /min | 1- 20000 | | |
| ATC capacity | | 40 (60,80,120,160 option) | | |
| Weight of machine | kgs | 18000 | 24500 | 25000 |

| High-speed horizontal machining center HDR 50 | |
|---|------------|
| Travel X axe | 680 mm |
| Travel Y axe | 680 mm |
| Travel Z axe | 680 mm |
| Table dimension | 500x500 mm |
| Max workpiece weight | 600 kgs |
| Table rotation speed | 20 r/min |
| Weight of machine | 10.500 kgs |
| Spindle speed | 10.000 rpm |
| Spindle taper | MAS-1 BT40 |
| ATC capacity | 60 |