

MV2 SERIES

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Note: The object might be different from the photos of catalogue if there is any specification update.

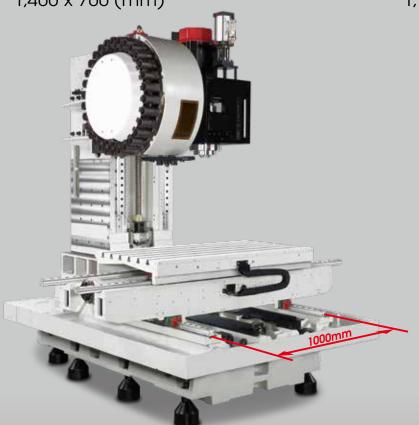


Travel X / Y / Z

MV204 & MV205: 1,270 / 700 / 610 (mm)

Table size

MV204 & MV205: 1,400 x 700 (mm)

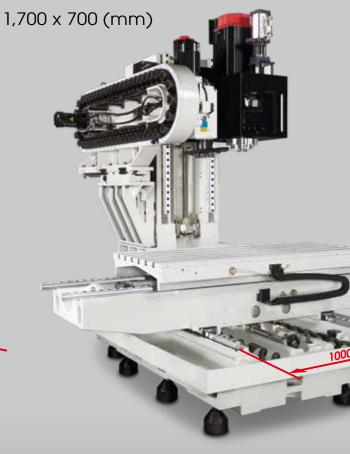


Travel X / Y / Z

MV214 & MV215: 1,524 / 700 / 610 (mm)

Table size

MV214 & MV215:



MV204 & MV205



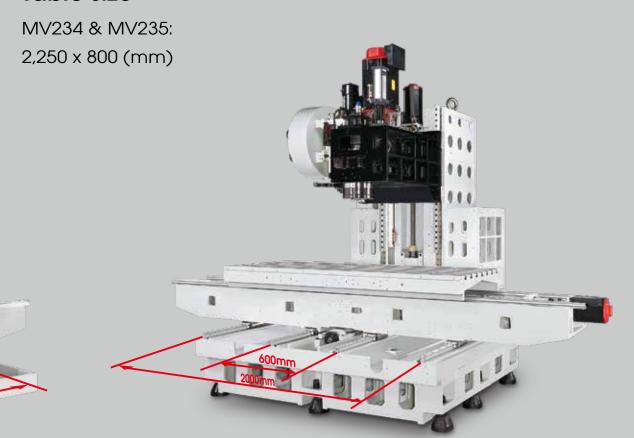


Travel X / Y / Z

MV234 & MV235:

2,040 / 800 / 661 (mm)

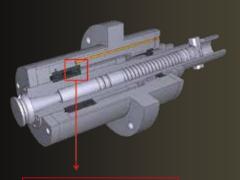
Table size

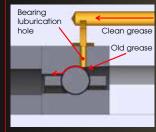




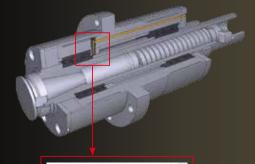
Unique spindle technology

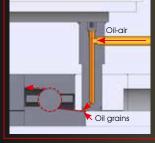
 Re-grease supply system is stable and eco-friendly by supplying new grease intermittently to bearings during high speed rotation.



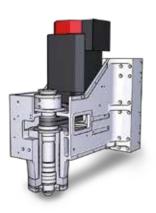


 Oil-Air lubrication system realizes stable operation on high speed rotation with large diameter spindles by utilizing compressed air to supply very little oil intermittently to the bearings.





40 Taper



| New spindle code | | |
|--------------------------|----------|-------|
| Shaft diameter | | |
| Spindle Taper | | |
| Bearing arrangement | | |
| Ball bearing type | | |
| Roller bearing type | | |
| Bearing lubrication | | |
| Transmission | | |
| Spindle Speed | | 9,000 |
| FANUC | | |
| Spindle base speed | | 1,125 |
| Spindle output kW | (S3-25%) | 25 |
| Spindle output torque Nm | (S3-25%) | 212 |
| HEIDENHAIN | | |
| Spindle base speed | | 1,125 |
| Spindle output power kW | (S6-25%) | 32 |
| Spindle output torque Nm | (S6-25%) | 272 |
| SIEMENS | | |
| Spindle base speed | | 1,125 |
| Spindle output power kW | (S6-25%) | 28.5 |
| Spindle output torque Nm | (S6-25%) | 242 |
| MITSUBISHI | | |
| Spindle base speed | | - |
| Spindle output power kW | (30min.) | - |
| Spindle output torque Nm | (30min.) | - |
| CTS Availability | | |
| Available NC | | |
| 40 Taper | | |
| MV204C | | - |
| MV204E | | |
| MV204V | | |
| MV204P / MV214P | | - |
| MV234E | | |
| MV234P | | - |
| 50 Taper | | |
| MV205E / MV215E | | - |
| MV205P / MV215P | | - |
| MV235E | | - |
| MV235P | | - |

Note: (1)\$3-60% (2)\$6-40% (3)\$3-40%

50 Taper









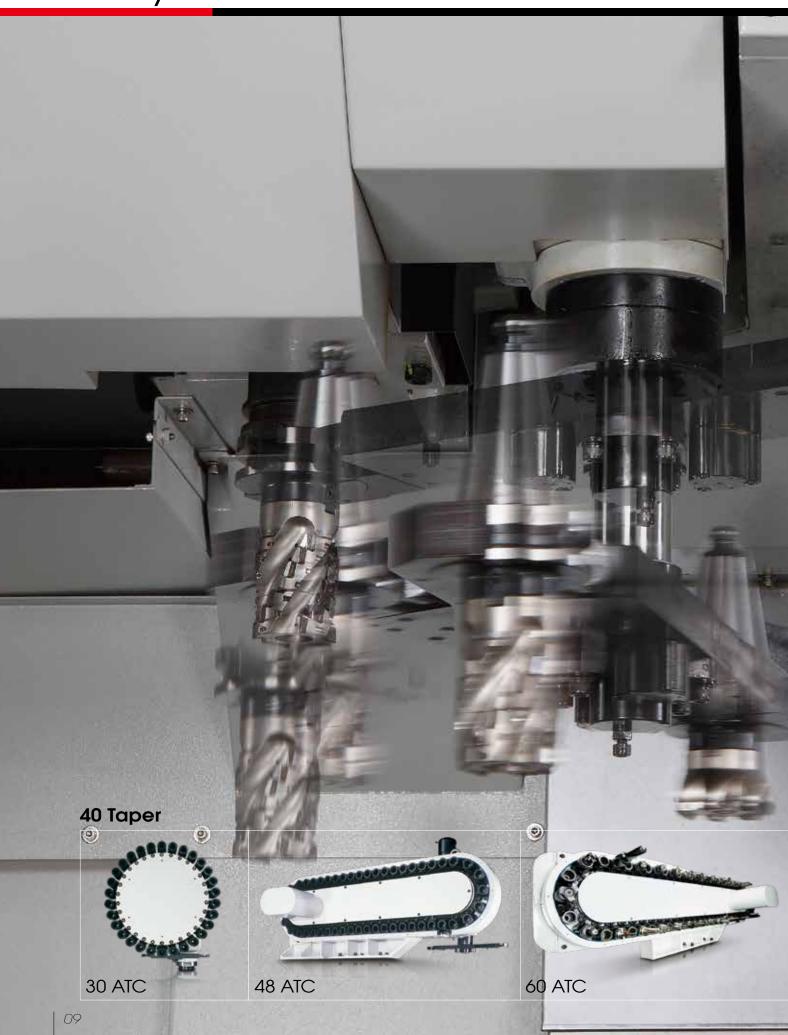
| MB- | -4.0 | | SC. | -4.2 | MC- | 4.1R | MC-4.0R | S | B-5.0A | MC-5.0A | | |
|--------|--------|--------|---------|---------------------|---------------|--------------------|----------------|---------|-----------------|--------------------|--|---------|
| Ø70 / | Ø65 | | Ø80 , | / Ø70 | Ø80 / | Ø65 | Ø70 / Ø60 | Ø۱ | 00 / Ø90 | Ø90 | | |
| ISO | -40 | | ISC | -40 | | 040 / HSK A | | | ISO-50 | ISO-50 / HSK-A100 | | |
| <> | > = | | << | >> | <> | > = | <>= | = | = << > = | <<>>> | | |
| Cerc | amic | | Cerd | amic | Cerc | Ceramic | | Ceramic | | Ceramic | | Ceramic |
| Ste | eel | | | _ | Ste | eel | Ceramic | | Steel | - | | |
| Grease | packed | | Grease | packed | | Re-Grease | | | Oil-Air | Oil-Air | | |
| Вє | elt | | Cou | pling | | Coupling | | Belt | Belt + Gear box | Coupling | | |
| 12,000 | 9,000 | 12,000 | 10,000 | 12,000 | 15,0 | 000 | 20,000 | 6,000 | 7,500 | 15,000 | | |
| | | | | | | | | | | | | |
| 1,500 | 1,125 | 1,500 | | - | 1,400 | 600 | 1,150 | 750 | 375 | 600 | | |
| 25 | 3 | 5 | | - | 26 | 30 ⁽¹⁾ | 15 | 35 | 35 | 30 ⁽¹⁾ | | |
| 159 | 297 | 223 | - | - | 177 | 350 ⁽³⁾ | 125 | 446 | 891 | 350 ⁽³⁾ | | |
| | | | | | | | | | | | | |
| 1,500 | 1,500 | 2,000 | - | - | 2,0 | 000 | - | - | 437.5 | - | | |
| 32 | 46 | | - | - | 46 | | - | - | 40.9 | - | | |
| 204 | 296 | 222 | - | - | 22 | 22 | - | - | 892 | - | | |
| | | | | | | | | | | | | |
| 1,500 | 1,500 | 2,000 | - | 1,500 | 2,0 | | - | - | 437.5 | - | | |
| 28.5 | 46 | | - | 17.6 ⁽²⁾ | 46 | | - | - | 40.9 | - | | |
| 182 | 296 | 222 | - | 112 ⁽²⁾ | 22 | 22 | - | - | 892 | - | | |
| | | | | | | | | | | | | |
| - | - | - | 1,500 | 1,400 | - | - | - | | - | - | | |
| - | - | - | 15 | 18.5 | - | - | - | | - | - | | |
| - | - | - | 96 | 102 | - | _ | - | | - | - | | |
| | | | Х | 0 | | | | | | | | |
| | | | FANUC = | HEIDENH | IAIN = O SIEI | MENS = N | AITSUBISHI = 🛑 | | | | | |
| | | | | | | | | | | | | |
| - | - | - | | • • | - | - | - | - | - | - | | |
| | - | - | - | - | - | - | - | - | - | - | | |
| • | | - | - | - | - | - | - | - | - | - | | |
| - | | | - | - | | | - | - | - | - | | |
| | - | - | - | - | - | - | - | - | - | - | | |
| - | | | - | - | | | | - | - | - | | |
| | | | | | | | , , | | | | | |
| - | - | - | - | - | - | - | - | - | | - | | |
| - | - | - | - | - | - | - | - | | | - | | |
| - | - | - | - | - | - | - | - | | - | - | | |
| - | = | = | - | - | - | - | - | - | | | | |





| Motor | | MV205E & MV215E MV205P & MV215P | | MV234E | | MV234P | | | MV235E | MV23 | 5P | | |
|--------------|---|---------------------------------|-----------------|--------|--------|--------|-------|-------------|--------|-------|----|-----------------|-----|
| Spindle code | | 7.5B | 7.5B | 15C | 9B 12B | | 9B | 12B | 15C | 20C | 6B | 7.5B | 15C |
| X/Y/Z(kW) | | 4/4/4 | 4/4/ | 4 | 4/7/7 | | 4/7/7 | | | 4/7/7 | | | |
| | T | - | 5.1 / 5.1 / 8.6 | - | | - | 8.0 | 6 / 8.6 / 8 | .6 | - | - | 8.6 / 8.6 / 8.6 | - |
| S | | - | - | | | - | 5. | 2 / 5.2 / 7 | '.7 | - | - | 5.2 / 5.2 / 7.7 | - |
| | • | - | - | | | - | | - | | - | - | - | |

ATC system





Coolant system & Chip management

| | | MV204C | MV204 MV205 | MV214 MV215 | MV234 MV235 |
|----------|----------------------------|---------|----------------|----------------|----------------|
| A | Chip slot | | 2 | 1 | |
| B | Augers plus chip conveyor | | 2 | | 6 |
| 0 | Wash gun | | 1 | 2 | 2 |
| D | Coolant through spindle* | - | | 20 Bar | |
| B | Nozzle coolant | | 3.5 | Bar | |
| B | Auto flushing on stainless | 3.5 Bar | | 4.5 Bar | |
| e | Coolant tank | | 600 L | | 710 L |
| 0 | External chip auger | std. | | - | |
| 0 | External chip conveyor | opt. | | std. | |

Note: * MV204C not available.

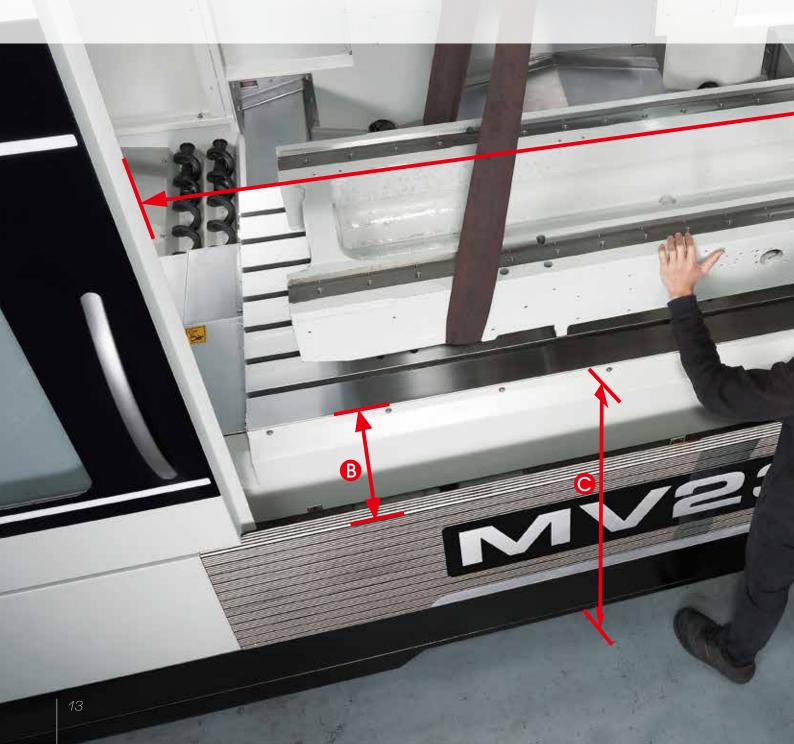




Easy operation

| | | MV204 MV205 | MV214 MV215 | MV234 MV235 |
|-----------|---|----------------|----------------|----------------|
| A | Max. size when operator door open, easy loading of large workpiece (mm) | 1,400 | 1,700 | 2,210 |
| B | Table to front door with easy accessibility (mm) | 195 | 195 | 200 |
| © | Table surface to floor* (mm) | 1,040 | 1,040 | 1,040 |
| D | Ergonomic operation panel with adjustable angle | | , X | 1×1× 6 |
| (3 | Documentation & hand tool shelf | | 113 | BIH, |
| B | Larger opening for service or exchange to auto door for robo | ot | | |

Note: * MV204C table surface to floor at 970 mm.





| Technical data | | | MV20 | MV204 MV214 | | | | | | |
|-------------------------------------|--------------------|-----------------|-------------------------------------|-------------------------|-------------------------|---------------|--|-------------------------|---------|--|
| | | | С | E/V | | | | Р | | |
| Spindle code | | 10C | 12C | 9B | 12B | 9B | 12B | 15C ⁽²⁾ | 20C (3) | |
| Work range | | | | | | | | | | |
| Table size (mm) | | | 1,400 x | 1,400 x 700 1,700 x 700 | | | | | | |
| Travel X / Y / Z (mm) | | | 1,270 / 700 / 610 (1) | | | | 1,270 / 700 / 610 ⁽¹⁾ 1,524 / 700 / 610 ⁽¹⁾ | | | |
| Spindle nose to table surface (mm) | | | 150 ~ 760 ⁽¹⁾ | | | | - | ~ 760 ⁽¹⁾ | | |
| Table load capacity (kg) | | | 1,000 |) | | 1,800 / 2,000 | | | | |
| Feed drive | | | | | | | | | | |
| Feed force X / Y / Z (N) | F | | - | 6,283 / 6,2 | 283 / 11,519 | | 11,519 / 11 | ,519 / 11,519 | | |
| | Ţ | 7170 / - | - | 9,268 / 9,2 | 268 / 11,310 | | 11,310 / 11 | ,310 / 19,897 | | |
| | M | 7,173 / 7 | 7,173 / 17,671 10,472 / 10,472 | | - | | | - | | |
| | S | - | | | | 14,137 / 14 | 1,137 / 14,137 | | | |
| Rapid movement X / Y / Z (m/min.) | | 24 / | 24 / 16 | 36 (F) / 3 | 6 (F) 32 (T) | | | 36 | | |
| *Acceleration X / Y / Z (m/s²) | F | | - | | 2.5 / 3 | | | / 3 / 4 | | |
| | M | 3 | - / 3 / 3 | 2.5 / | 2/4 | | 5/5/4 | 4/4/4 | | |
| | S | - | 2.5 / 2.5 / 3 | | - | | | 3 3/2.5/3 | | |
| Dia. & pitch of the ball screw | | | 12 / 12 / 8 (M) 12 / 12 / 12 (S) | | 12 / 12 / 12) (T) | | | 12 / 12 / 12 (T) (S) | | |
| Accuracy Positioning / Repeatab | ility | <u> </u> | 12 / 12 / 12 (0) | | <i>)</i> (1) | | (1) | (1) (0) | | |
| ISO 230-2 | | 0.008 / 0.004 | | | | | | | | |
| JIS 6338 (300mm) | | ±0.003 / ±0.002 | | | | | | | | |
| VDI 3441 | | 0.008 / 0.004 | | | | | | | | |
| Main spindle | | 0.0007 | | | | | | | | |
| Spindle taper | | 40 Taper | | | | | | | | |
| Tool changer | | | | | | | | | | |
| Tool selection | | | | | Rando | om | | | | |
| NA | Std. | | 30 | | | | 30 | / 48 | | |
| Magazine positions | Opt. | | - | 48 / 60 | | | 48 & | 60 / 60 | | |
| Max. tool diameter (mm) | | 76.2 | | | | | | | | |
| Max. tool dia. Due to neighbor pots | are | | | | 125 | | | | | |
| empty Max. tool length (mm) | | | | | | | | | | |
| Max. tool weight (kg) | | | | | 300 7 | | | | | |
| | | 40.00 | 4.2 (M) |] , | | | | 4.7 | | |
| CTC time-ISO 10791-9 (sec.)-60Hz | | 4.2 (M) | 4.7 (S) | | 5.2 | | | 4.7 | | |
| Coolant system | | | | | | | | | | |
| Coolant tank capacity (Liter) | | | | | 600 | | | | | |
| Pump capacity | | | | | | | | | | |
| - Nozzle coolant | | | I | 1 | 60L / min, | | | | | |
| - Coolant through spindle | | - | opt. | | | | nin, 20 bar | | | |
| - Wash down Machine size | | 60L / n | nin, 3.5 bar | | | | nin, 4.5 bar | 0.0 | 00 | |
| | | | 200 | 9. | 200 | | ,300 | | 000 | |
| Height (mm) | 20 ATC | | 3,300 | | 300 | <u> </u> | ,500 | | .00 | |
| Floor space W x D (mm) | (mm) 30 ATC 48 ATC | | 0 x 3,570 | | x 3,570 | | | (3,570 / - | 20 | |
| | | | | | | | | 1 / 4,520 x 3,78 | | |
| Woight (kg) | 60 ATC | | | | | | | | | |
| Weight (kg) Connections | | | 9,300 | Y,000 - | 10,000 | 9 | ,000 - 10,100 | / 10,100 - 11,0 | 00 | |
| | | | , | 2201/ 24 200 | 0\/ or 100\/ o | , A15\ / / E0 | Uz or 60Uz | | | |
| Main power | | | | 220V OF 38C | 0V or 400V o | · · | | 33 (F) | | |
| Power consumption (KVA) | | 20 (M) | 30 (M) 28 (S) | 28 (F) | 30 (T) | | 6 (F)) 42 (S) | 42 (T) | 31 (F) | |
| | | | 20 (0) | | | 72 (1 | , (0) | 42 (S) | | |

Note: $^{(1)}$ For detailed specification of Z axis travel 800mm, please refer to page 22 ~ 24. $^{(2)}$ when MC-4.1 R equipped with option item α L26, its KVA would be 44 $^{(3)}$ Only for FANUC control.

^{*}Test condition: values are measured by half of the maximum table load capacity.

| | | | | | MV204 | MV214 | | | |
|----------|--|----------|-------|-----|-------|-------|-----|-------|-----|
| St | andard / Option accessories | (| C | E | / V | | | Р | |
| Sp | indle code | 10C | 12C | 9B | 12B | 9B | 12B | 15C | 20C |
| | QUASER mill i for MV204E only AICC | × | × | O/x | •/× | × | × | × | × |
| • | Mold machining pack (R660) AICC I (Look-ahead 200 blocks) | | | | | | | | |
| | Smooth tolerance control Jerk control Machining quality level adjust function FANUC - data server | × | × | O/X | O/X | × | × | × | × |
| × | FANUC 31iB | × | × | ×/0 | x/O | 0 | | 0 | 0 |
| | AICC (Look-ahead 200 blocks) | × | × | 0/0 | 0/0 | Ö | | Ö | Ö |
| | FANUC - data server | × | × | 0 | 0 | 0 | 0 | 0 | Ö |
| | FANUC - high speed processing (Look-ahead 600 blocks) | × | × | ×/0 | ×/O | 0 | 0 | 0 | 0 |
| - | HEIDENHAIN TNC640 HEIDENHAIN advanced function set2 | × | × | x/0 | x/O | 0 | 0 | 0 | × |
| Ξ | SIEMENS 828D | × | • | × | × | 0 | 0 | 0 | × |
| | MITSUBISHI M80 (package A) | 0 | 0 | × | × | × | × | × | × |
| \equiv | MITSUBISHI M830 | 0 | 0 | X | X | × | × | X | × |
| | Column raiser (150 mm) | 0 | 0 | 0 | 0 | 0/x | 0/X | 0/X | 0/x |
| ÷ | Tall column (one piece column) / Z axis travel 800mm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 를 | Oil chiller | • | • | • | • | • | • | • | • |
| ÷ | 4 th axis preparation | × | × | • | • | | | | |
| 5 | 40 Taper 30 position tool magazine | • | • | | • | •/× | •/× | •/× | •/X |
| ä | 40 Taper 48 position tool magazine | × | × | 0 | 0 | 0/• | 0/• | 0/• | 0/• |
| 5 | 40 Taper 60 position tool magazine | × | × | 0 | 0 | 0 | 0 | 0 | 0 |
| ä | ATC auto door Tooling - BT40 | ê | • | | • | _ | • | • | |
| - | - ISO40 & DIN40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | - HSK A63 | × | × | × | × | × | × | 0 | 0 |
| ī | Pull stud for BT tooling | ô | ô | | | - A | | • | • |
| | Balance tooling for spindle warm up | 0 | 0 | | • | • | | | • |
| Ŧ. | BBT spindle attachment (simultaneous contact) | • | • | • | • | | • | • | • |
| | Remote manual pulse generator | • | • | • | • | • | • | • | • |
| | Transformer (1) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Linear scale | × | × | 0 | 0 | 0 | 0 | 0 | 0 |
| | Thermal compensation | × | × | × | × | × | × | 0 | 0 |
| | Work probe receiver OMI-2T | × | × | 0 | 0 | 0 | 0 | 0 | 0 |
| Ξ | Work Probe | × | × | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tool length / breakage measurement | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ξ | Coolant system | • | • | • | • | • | • | • | • |
| | Coolant wash gun / wash down | • | • | • | • | • | • | • | • |
| ä | Air gun | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Coolant through spindle 20 bar | × | 0 | • | • | • | • | • | • |
| ä | Coolant through spindle 50 bar | × | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | Cutter air blast | • | | | • | • | • | | |
| ä | External chip auger External chip conveyor | 0 | 0 | × | × | × | × | × | × |
| H | Oil-mist collector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ä | Oil-Misi collector Oil skimmer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ā | Bag filtration | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ä | Filtration unit | × | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| f | Documentation (CD-ROM) (2) | <u>^</u> | • | • | • | • | • | • | • |
| Ē | Total Enclosure Guard (with Top side cover) | • | | | | | | | |
| Ē | Foundation bolts & blocks | • | | | | | | | |
| Ē | Work light | • | • | | • | | • | • | • |
| ī | Machine status light | • | • | • | • | • | • | • | • |
| | CE & EMC ⁽³⁾ / GB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Note: (1) Transformer as standard or option item will be varied according to control system and power supply condition.
(2) Paper documentation is option
(3) Standard for Eu area except C type.

- Machine specification might be different from the catalog if there is any specification update.

| | | | | MV | 234 | | | | | |
|-------------------------------------|--------|-------------------------------|----------|-----------------|-----------------------|------------------------|--------------------|--|--|--|
| Technical data | | E P | | | | | | | | |
| Spindle code | | 9B | 12B | 9B | 12B | 15C ⁽²⁾ | 20C ⁽³⁾ | | | |
| Work range | | | | | | | | | | |
| Table size (mm) | | 2,250 x 800 | | | | | | | | |
| Travel X / Y / Z (mm) | | 2,040 / 800 / 661 (1) | | | | | | | | |
| Spindle nose to table surface (mm) | | 150 ~ 811 ⁽¹⁾ | | | | | | | | |
| Table load capacity (kg) | | 2,000 | | | | | | | | |
| Feed drive | | | | | | | | | | |
| Feed force X / Y / Z (N) | F | 11,519 / 15,708 | / 15,708 | | 11,519 / 15,708 , | / 15,708 | | | | |
| | Т | - | | 19, | 897 / 19,897 / 19,897 | | - | | | |
| | S | - | | 18,8 | 849 / 18,849 / 25,133 | | _ | | | |
| Rapid movement X / Y / Z (m/min.) | | | | | 20 / 16 | | | | | |
| *Acceleration X / Y / Z (m/s²) | F | | | 2/2 | | | | | | |
| T | | <u>-</u> | | | 3.5 / 3.5 / 3.5 | | _ | | | |
| | S | <u>-</u> | | | 3.5 / 3.5 / 3.5 | | | | | |
| Dia. & pitch of the ball screw | | | | Ø50 / P = | 12 / 12 / 12 | | | | | |
| Accuracy Positioning / Repeatabi | lity | | | 2007. | ,, | | | | | |
| ISO 230-2 | , | 0.008 / 0.004 | | | | | | | | |
| JIS 6338 (300mm) | | | | | / ±0.002 | | | | | |
| VDI 3441 | | | | 0.008 | | | | | | |
| Main spindle | | | | | | | | | | |
| Spindle taper | | | | 40 To | aper | | | | | |
| Tool changer | | | | | · | | | | | |
| Tool selection | | Random | | | | | | | | |
| Magazine positions | | 48 (std.) 60 (opt.) | | | | | | | | |
| Max. tool diameter (mm) | | 76.2 | | | | | | | | |
| Max. tool dia. Due to neighbor pots | are | | | | 25 | | | | | |
| empty Max. tool length (mm) | | | | | 00 | | | | | |
| Max. tool weight (kg) | | | | | | | | | | |
| CTC time-ISO 10791-9 (sec.)-60Hz | | 5.2 4.7 (F) 5.7 (T) 4.7 | | | | | | | | |
| Coolant system | | | | | 4.7 (1) 0.7 (1) | | 4.7 (F) | | | |
| Coolant tank capacity (Liter) | | | | 7 | 10 | | | | | |
| Pump capacity | | | | | | | | | | |
| - Nozzle coolant | | | | 60 L / mii | n, 3.5 bar | | | | | |
| - Coolant through spindle | | | | | n, 20 bar | | | | | |
| - Wash down | | | | 60 L / mi | n, 4.5 bar | | | | | |
| Machine size | | | | | | | | | | |
| Height (mm) | | 3,400 3,500 | | | | | 00 | | | |
| Floor space W x D (mm) | 48 ATC | | | 5,760 | x 4,260 | | | | | |
| | 60 ATC | | | 5,760 > | x 4,260 | | | | | |
| Weight (kg) | | 13,700 (48ATC) 13,800 (60ATC) | | | | | | | | |
| Connections | | | | | | | | | | |
| Main power | | | 220V | or 380V or 400V | or 415V / 50Hz or 60 | | | | | |
| Power consumption (KVA) | | 38 (F) | | 44 (F) 46 | (T) 47 (S) | 38 (F) 6 (T) 47 (S) | 38 (F) | | | |

Note: (1) For detailed specification of Z axis travel 800mm, please refer to page 22 ~ 24.

 $^{^{(2)}}$ when MC-4.1 R equipped with option item α L26, its KVA would be 48

⁽³⁾ Only for FANUC control.

¹⁷ *Test condition: values are measured by half of the maximum table load capacity.

| Standard / Option accessories | | MV234 | | | | | | | | |
|--|-----------------|----------|--------------|----|-----|-----|-----|--|--|--|
| Sidiladia / Opilon accessories | | | E | P | | | | | | |
| Spindle code | | 9B | 12B | 9B | 12B | 15C | 20C | | | |
| QUASER mill i | | 0 | • | × | × | × | × | | | |
| AICC I | | | | | | | • • | | | |
| Mold machining pack (R660) | | | | | | | | | | |
| AICC Look-ahead 200 blocks) | | | | | | | | | | |
| Smooth tolerance control | | 0 | 0 | × | × | × | × | | | |
| Jerk control | | O | | | | ^ | | | | |
| Machining quality level adjust function | | | | | | | | | | |
| FANUC - data server | | | | | | | | | | |
| FANUC 31iB | | . | \ <u>\</u> | | | 0 | _ | | | |
| AICC Look-ahead 200 blocks) | | × | × | 0 | | 0 | 0 | | | |
| FANUC - data server | | ., | \ \ <u>\</u> | | _ | | _ | | | |
| FANUC - high speed processing (Look-ah | ead 600 blocks) | × | × | 0 | 0 | 0 | 0 | | | |
| HEIDENHAIN TNC640 | | | | _ | | | | | | |
| HEIDENHAIN advanced function set2 | | × | × | 0 | 0 | 0 | × | | | |
| SIEMENS 828D | | × | × | 0 | 0 | 0 | × | | | |
| SIEMENS 840D | | × | × | 0 | 0 | 0 | × | | | |
| Z axis travel 800 mm (column raiser) | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Oil chiller | | • | • | • | • | • | • | | | |
| 4 th axis preparation | | • | • | • | • | • | • | | | |
| 40 Taper 48 position tool magazine | | • | • | • | • | • | • | | | |
| 40 Taper 60 position tool magazine | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| ATC auto door | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Tooling - BT40 | | • | • | • | • | • | • | | | |
| - ISO40 & DIN40 | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| - HSK A63 | | × | × | × | × | 0 | 0 | | | |
| Pull stud for BT tooling | | • | • | • | • | • | • | | | |
| Balance tooling for spindle warm up | | • | • | • | • | • | • | | | |
| BBT spindle attachment (simultaneous c | ontact) | • | | | | | | | | |
| Remote manual pulse generator Transformer (1) | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Linear scale | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Thermal compensation | | × | × | × | × | 0 | 0 | | | |
| Work probe receiver OMI-2T | | Ô | Ô | ô | Ô | 0 | 0 | | | |
| Work Probe | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Tool length / breakage measurement | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Coolant system | | • | • | • | • | • | • | | | |
| Coolant wash gun / wash down | | • | • | • | • | • | • | | | |
| ■ Air gun | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Coolant through spindle 20 bar | | • | • | • | • | • | • | | | |
| Coolant through spindle 50 bar | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Cutter air blast | | • | • | • | • | • | • | | | |
| External chip conveyor | | • | • | • | • | • | • | | | |
| Oil-mist collector | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Oil skimmerBag filtration | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Bag filtrationFiltration unit | | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Documentation (CD-ROM) (2) | | | | • | | | | | | |
| Total Enclosure Guard (with Top side cov | er) | | | | | | | | | |
| Foundation bolts & blocks | | | | | | | | | | |
| Work light | | | | | | | | | | |
| Machine status light | | | | | | | | | | |
| CE & EMC (3) / GB | | 0 | 0 | 0 | 0 | 0 | 0 | | | |

Note: (1) Transformer as standard or option item will be varied according to control system and power supply condition.
(2) Paper documentation is option
(3) As standard for Europe area.

⁻ Machine specification might be different from the catalog if there is any specification update.

| Tachniag data | | | MV205 MV21 | 5 | | MV235 | | | | |
|--------------------------------------|-----------|---|--|----------------|-----------------------------|---|----------------------------|--|--|--|
| Technical data | | E | | P | E | F |) | | | |
| Spindle code | | 7.5B | 7.5B | 15C | 6B | 7.5B | 15C | | | |
| Work range | | | | | | | | | | |
| Table size (mm) | | | 1,400 x 700 1,700 x 700 | ·1) | 2,250 x 800 | | | | | |
| Travel X / Y / Z (mm) | | | 1,270 / 700 / 610 ⁽ 1,524 / 700 / 610 | | | 2,040 / 800 / 661 (1 |) | | | |
| Spindle nose to table surface (r | mm) | | 190 ~ 800 (1) | | | 150 ~ 811 (1) | | | | |
| Table load capacity (kg) | | | 1,800 / 2,000 | | | 2,000 | | | | |
| Feed drive | | | | | | | | | | |
| Feed force X / Y / Z (N) | F | 11,519 / 11, | 11,519 / 11, | | 11,519 / 15,708 / 15,708 | 11,519 / 15,708 / 15,708 | 11,519 / 15,708 / 15,70 | | | |
| | Т | - | 11,310 / 19,897 | - | - | 19,897 / 19,897 / 19,897 18,849 / | - | | | |
| \$ | | | - | - | - | 18,849 / 25,133 | - | | | |
| Rapid movement X / Y / Z (m/n | nin.) | | 36 | | | 20 / 20 / 16 | | | | |
| *Acceleration X / Y / Z (m/s²) | F | | 3.5 / 3 / 2 | | | 2/2/2 | | | | |
| | Т | - | , | 5 / 4 4 / 4 | - | 3.5 / 3. | 5 / 3.5 | | | |
| | S | | - | | - | 3.5 / 3. | 5 / 3.5 | | | |
| Dia. & pitch of the ball screw | | Q | 45 / P = 12 / 12 / | 12 | Q | Ø50 / P = 12 / 12 / | 12 | | | |
| Accuracy Positioning / Reped | ıtability | | | | <u>'</u> | | | | | |
| ISO 230-2 | | | | 0.008 | / 0.004 | | | | | |
| JIS 6338 (300mm) | | | | ±0.003 | / ±0.002 | | | | | |
| VDI 3441 | | | | 0.008 | / 0.004 | | | | | |
| Main spindle | | | | | | | | | | |
| Spindle taper | | | | 50 | Taper | | | | | |
| Tool changer | | | | | | | | | | |
| Tool selection | | | | Rar | ndom | | | | | |
| Magazine positions | | | | 30 (std.) | 40 (opt.) | | | | | |
| Max. tool diameter (mm) | | | | | 125 | | | | | |
| Max. tool dia. Due to neighbor empty | pots are | | | 2 | 200 | | | | | |
| Max. tool length (mm) | | | | | 350 | | | | | |
| Max. tool weight (kg) | | | | | 15 | | | | | |
| CTC time-ISO 10791-9 (sec.)-60H | z | | 9 | | | 10 | | | | |
| Coolant system | | | | | | | | | | |
| Coolant tank capacity (Liter) | | | 600 | | | 710 | | | | |
| Pump capacity | | | | | | | | | | |
| - Nozzle coolant | | | | 60 L / m | in, 3.5 bar | | | | | |
| - Coolant through spindle | | | | 25 L / m | nin, 20 bar | | | | | |
| - Wash down | | | | 60 L / m | in, 4.5 bar | | | | | |
| Machine size | | 3,0 | 550 | 3,350 | | | | | | |
| Height (mm) | | 3,8 | 300 | 3,400 | 3, | 500 | 3,400 | | | |
| Floor space W x D (mm) | 30 ATC | 3,700 |) x 3,900 / 4,520 x | 3,930 | | 5,745 x 4,260 | | | | |
| 40 ATC | | |) x 4,450 / 4,520 x | | | 5,745 x 4,430 | | | | |
| Weight (kg) | | 10,000 - 10,600 / 11,000 - 12,000 14,000 (30 ATC) 14,500 (40 ATC) | | | | | | | | |
| Connections | | | | | | | | | | |
| Main power | | 220V or 380V or 400V or 415V / 50Hz or 60Hz | | | | | | | | |
| Power consumption (KVA) | | 40 (F) | 40 (F) 47 (T) | 45 (F) | 44 (F) | 44 (F) | 49 (F) | | | |

Note: $^{(1)}$ For detailed specification of Z axis travel 800mm, please refer to page 22 \sim 24. *Test condition: values are measured by half of the maximum table load capacity.

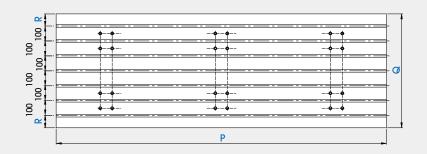
| | | M | V205 MV2 | 215 | | MV235 | |
|--------------------|---|------|----------|-----|-----|-------|--------------|
| Stando | ard / Option accessories | E | | P | E | F |) |
| Spindle of | code | 7.5B | 7.5B | 15C | 6B | 7.5B | 15C |
| ■ QUAS | SER mill I | | ., | ., | | ., | ., |
| ■ AICC | | | × | × | | × | × |
| ■ Mold | machining pack (R660) | | | | | | |
| | CII (Look-ahead 200 blocks) | | | | | | |
| | oth tolerance control | | | | | | |
| | control | 0 | | × | 0 | > | < |
| | hining quality level adjust function | | | | | | |
| | JC - data server | | | | | | |
| | | | | 0 | | | 0 |
| | JC 31iB | × | | 0 | × | | 0 |
| | CII (Look-ahead 200 blocks) JC - data server | × | 0 | 0 | × | 0 | 0 |
| | JC - daid server JC - high speed processing | | | | | | |
| | k-ahead 600 blocks) | × | 0 | 0 | × | 0 | 0 |
| ■ HEIDI | ENHAIN TNC640 | | 0 | | | 0 | ~ |
| HEIDI | ENHAIN advanced function set2 | × | | × | × | | × |
| ■ SIEMI | ENS 828D | × | × | × | × | 0 | × |
| ■ SIEMI | ENS 840D | × | × | × | × | 0 | × |
| ■ Tall c | column (one piece column)/Z axis travel 800mm | 0 | 0 | 0 | × | X | × |
| Z axis | s travel 800 mm (column raiser) | × | × | × | 0 | 0 | 0 |
| Oil cl | hiller | • | • | • | • | • | • |
| 4 th ax | xis preparation | • | • | • | • | • | • |
| ■ 50 Ta | per 30 position tool magazine | • | • | • | • | • | • |
| ■ 50 Ta | per 40 position tool magazine | 0 | 0 | 0 | 0 | 0 | 0 |
| ■ ATC o | auto door | 0 | 0 | 0 | 0 | 0 | 0 |
| Toolir | ng - BT50 | • | • | • | • | | • |
| | - ISO50 & DIN50 | 0 | 0 | 0 | 0 | 0 | 0 |
| | tud for BT tooling | • | • | • | • | | • |
| | nce tooling for spindle warm up | • | • | • | • | • | • |
| | spindle attachment (simultaneous contact) | • | • | • | • | • | • |
| | ote manual pulse generator | • | • | • | • | • | • |
| | sformer (1) | 0 | 0 | 0 | 0 | 0 | 0 |
| | ar scale | 0 | 0 | 0 | 0 | 0 | 0 |
| | mal compensation | × 0 | X | 0 | X 0 | × | 0 |
| | c probe receiver OMI-2T c Probe | 0 | 0 | 0 | 0 | 0 | 0 |
| | length / breakage measurement | 0 | 0 | 0 | 0 | 0 | 0 |
| | ant system | • | • | • | • | • | • |
| | ant wash gun / wash down | | | | | | • |
| ■ Air g | | 0 | 0 | 0 | 0 | 0 | 0 |
| | ant through spindle 20 bar | | • | • | • | • | • |
| | ant through spindle 50 bar | 0 | 0 | 0 | 0 | 0 | 0 |
| | er air blast | • | • | • | • | • | • |
| ■ Exteri | nal chip conveyor | • | • | • | • | • | • |
| | nist collector | 0 | 0 | 0 | 0 | 0 | 0 |
| ■ Oil sk | kimmer | 0 | 0 | 0 | 0 | 0 | 0 |
| ■ Bag t | filtration | 0 | 0 | 0 | 0 | 0 | 0 |
| Filtrat | tion unit | 0 | 0 | 0 | 0 | 0 | 0 |
| Docu | umentation (CD-ROM) ⁽²⁾ | • | • | • | • | • | • |
| ■ Total | Enclosure Guard (with Top side cover) | • | • | • | • | • | • |
| Foun | dation bolts & blocks | • | • | • | • | • | • |
| ■ Work | light | • | • | • | • | • | • |
| | hine status light | • | • | • | • | • | • |
| CE & | EMC ⁽³⁾ / GB | 0 | 0 | 0 | 0 | 0 | 0 |

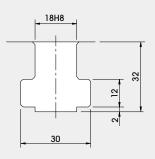
Note: (1) Transformer as standard or option item will be varied according to control system and power supply condition.
(2) Paper documentation is option
(3) Standard for Eu area.

⁻ Machine specification might be different from the catalog if there is any specification update.

Table dimension

| | MV204C | MV204/205 | MV214/215 | MV234/235 |
|-------------|--------|-----------|-----------|-----------|
| Р | 1,400 | 1,400 | 1,700 | 2,250 |
| Q | 700 | 700 | 700 | 800 |
| R | 100 | 100 | 100 | 100 |
| T-Slots No. | 6 | 6 | 6 | 7 |

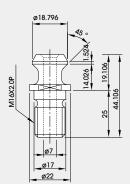




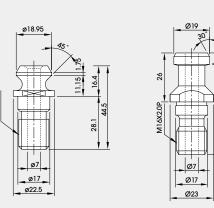
Pull stud and applicable tools ISO-40

| В | tool median point distance | tool middle point distance | | | | |
|---|----------------------------|----------------------------|--|--|--|--|
| W | tool weight | tool weight | | | | |
| N | MOMENT=W*B(≤10.29N-m) | MOMENT=W*B(≦9.85N-m) | | | | |

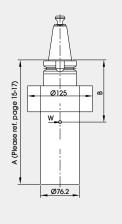
BT 40

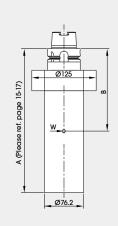


ISO (7388-B)



DIN (69872-A)



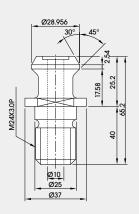


Pull stud and applicable tools

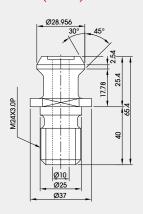
ISO-50

| В | tool median point distance | | | | | | | |
|---|----------------------------|--|--|--|--|--|--|--|
| W | N tool weight | | | | | | | |
| | MOMENT=W*B(≦25.72N-m) | | | | | | | |

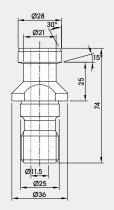
BT 50

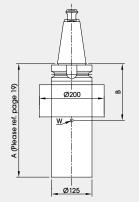


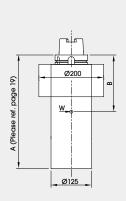
ISO (7388-B)



DIN (69872-A)

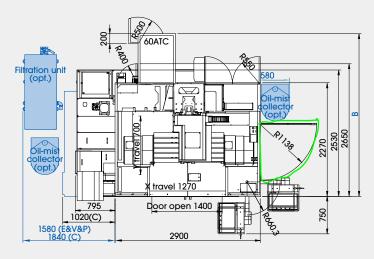


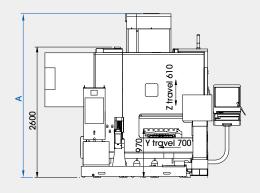


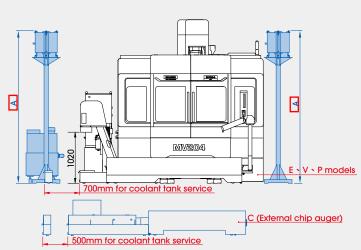


MV204 / MV205 Layout

| May Machine Height | | | | MV204 | | | MV205 | | |
|---|--|-----------|--|-----------|----------------------------|----------------|----------------|-------------------------|--|
| Max. Machine Height | | С | | E & V & P | Р | E&P | | Р | |
| Spindle code | | 10C / 12C | | 9B / 12B | 15C / 20C | 7.5B | | 15C | |
| A Standard column 1. Z axis travel 610mm 2. Spindle nose to table st 150~760 mm (#40) 190~800 mm (#50) | 1. Z axis travel 610mm 2. Spindle nose to table surface 150~760 mm (#40) | | | 3,300 | 3,300 | 3,650 | | 3,350 | |
| A Column raiser (150mm) 1. Z axis travel 610 mm 2. Spindle nose to table surface 300~910 mm (#40) 340~950 mm (#50) | | 3,450 | | 3,450 | 3,450 | - | | - | |
| A Tall column (one piece column) 1. Z axis travel 800 mm 2. Spindle nose to table surface 150~950 mm (#40) 190~990 mm (#50) *Container shipment is not possible | | 3,500 | | 3,500 | 3,500 | 3,850 * | | 3,550* | |
| MV204 B MV205 | | | | 40 Taper | 30 ATC 48 ATC 60 ATC | | | 2,550 3,000 3,300 | |
| | | | | 50 Taper | 30 ATC 40 ATC | | 3,150 3,700 | | |



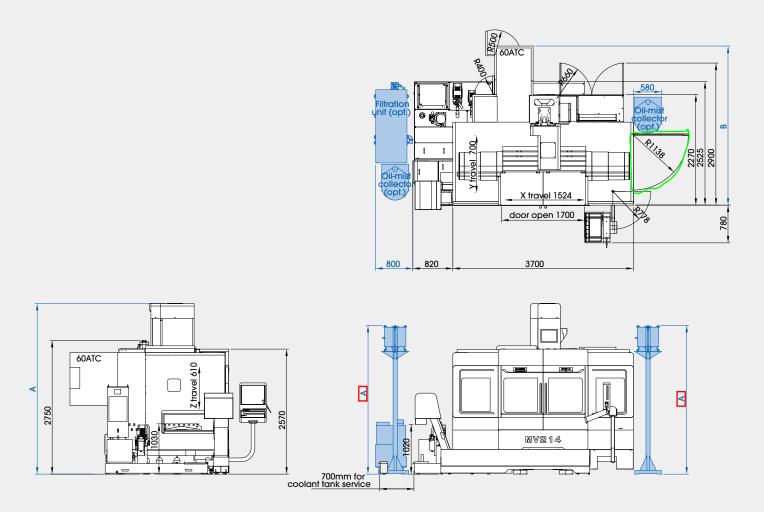




MV214 & MV215 Layout

Installation dimension

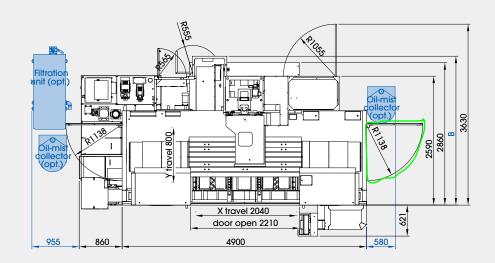
| Max. Machine Height | | MV214 | | | | MV215 | | |
|--|----------|--------|----------|-----------|--|--------|--------|--|
| | | Р | | | | E&P | Р | |
| Spindle code | | 9B / | 12B | 15C / 20C | | 7.5B | 15C | |
| A Standard column 1. Z axis travel 610 mm | | 3,500 | | 3,400 | | | | |
| 2. Spindle nose to table surface 150~760 mm (#40) 190~800 mm (#50) | | | | | | 3,800 | 3,400 | |
| A Tall column (one piece column) 1. Z axis travel 800 mm 2. Spindle nose to table surface 150~950 mm (#40) 190~990 mm (#50) *Container shipment is not possible | | 3,700* | | 3,600* | | 4,000* | 3,600* | |
| MV214 | | | | 0 Taper | | 48 ATC | 3,000 | |
| | | | | | | 60 ATC | 3,300 | |
| N/V215 | B 10/015 | | E | 2 T | | 30 ATC | 3,150 | |
| MV215 | | | 50 Taper | | | 40 ATC | 3 700 | |

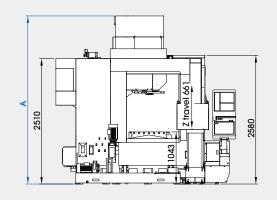


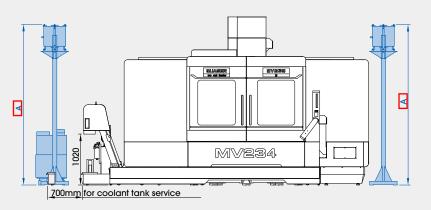
MV234 / MV235 Layout

Installation dimension

| May Machine Heigh | | MV234 | | | MV235 | | | |
|---|---|----------|----------|-----------|-------|------------------|--------|--|
| Max. Machine Height | | E&P | | Р | | E&P | Р | |
| Spindle code | | 9B / 12B | | 15C / 20C | | 6B / 7.5B | 15C | |
| A Standard column 1. Z axis travel 661 mm 2. Spindle nose to table surface 150~811 mm (#40 & #50) | | 3,400 | | 3,500 | | 3,500 | 3,400 | |
| A Tall column (column raiser) 1. Z axis travel 800 mm 2. Spindle nose to table surface 150~950 mm (#40 & #50) *Container shipment is not possible | | 3,600* | | 3,650* | | 3,700* | 3,600* | |
| MV234 | В | | 40 Taper | | | 48 ATC 60 ATC | 3,100 | |
| MV235 | | | | | | 30 ATC | 3,200 | |
| IVIVZSS | | | |) Taper | | 40 ATC | 3,800 | |







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