



# MV2 SERIES

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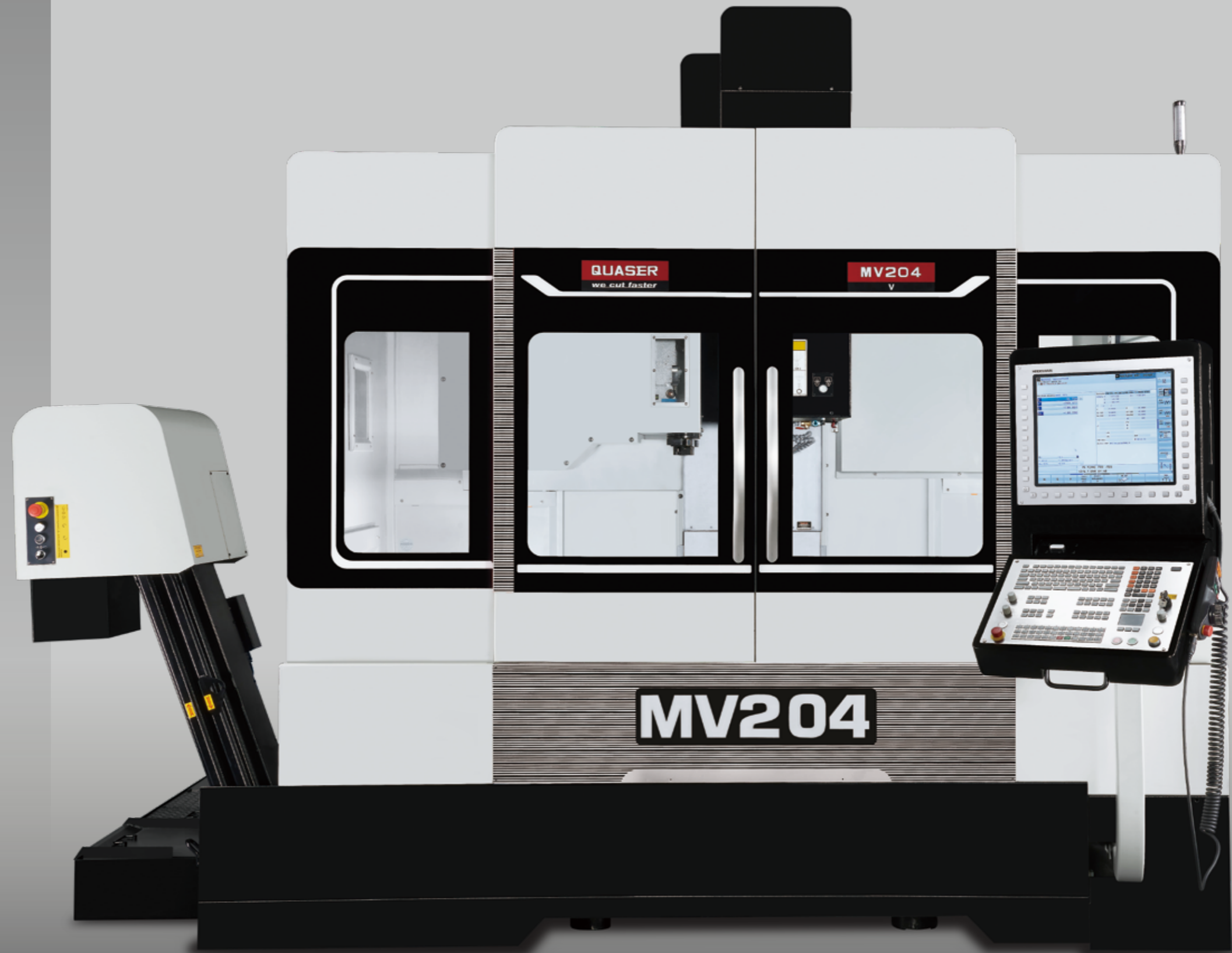
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## **MV2 SERIES:**

**MV204 / MV205**

**MV214 / MV215**

**MV234 / MV235**

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

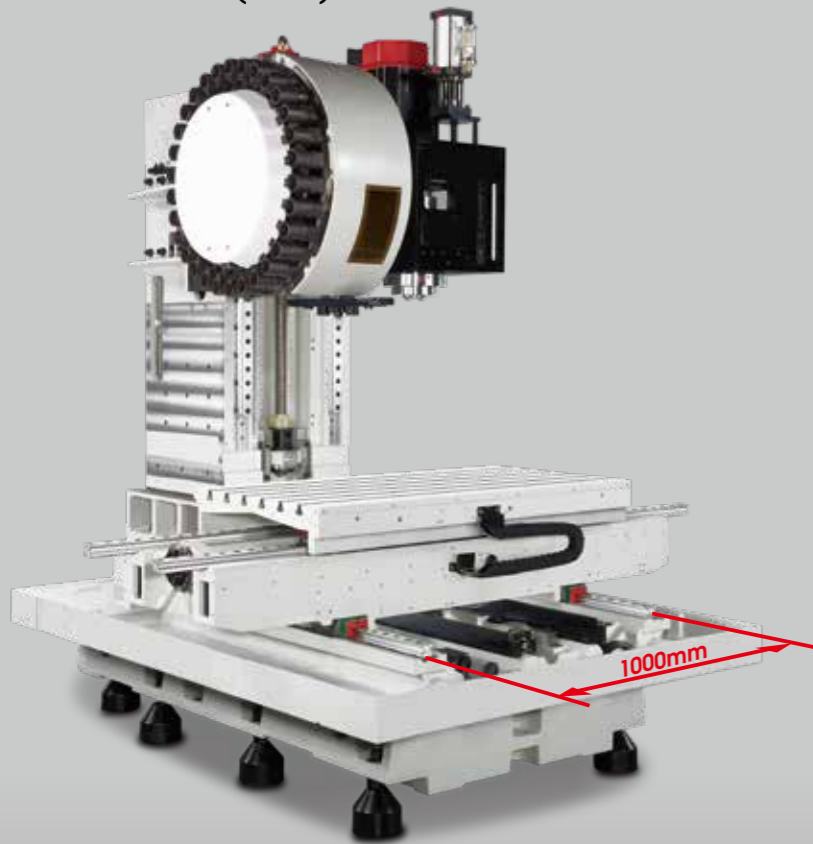
# MV2 SERIES

## Travel X / Y / Z

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

## Table size

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

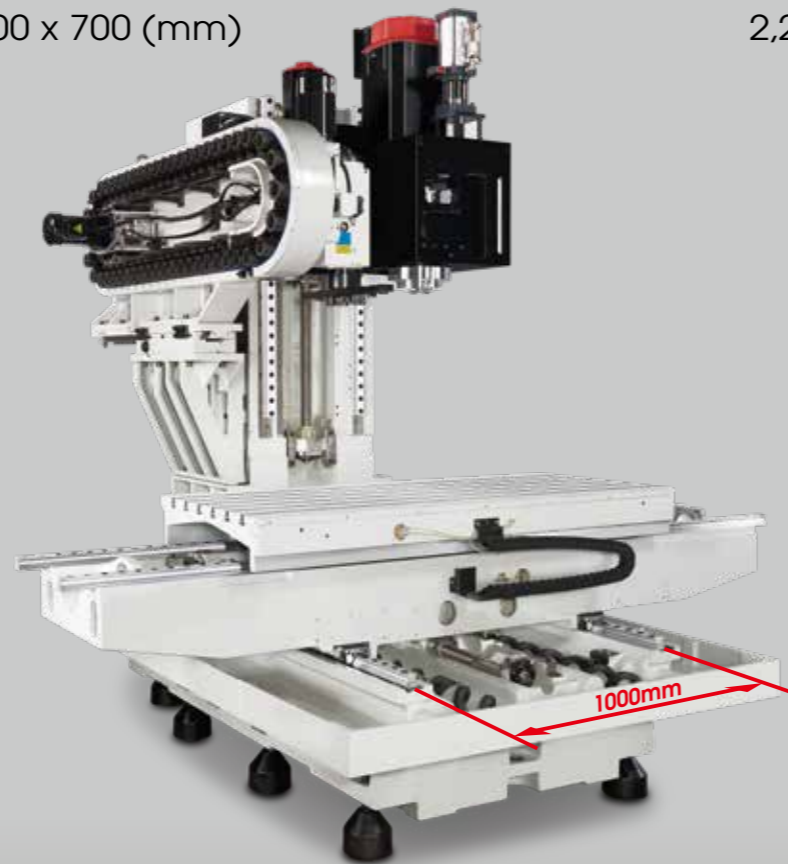


## Travel X / Y / Z

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

## Table size

MV214 & MV215:  
1,700 x 700 (mm)

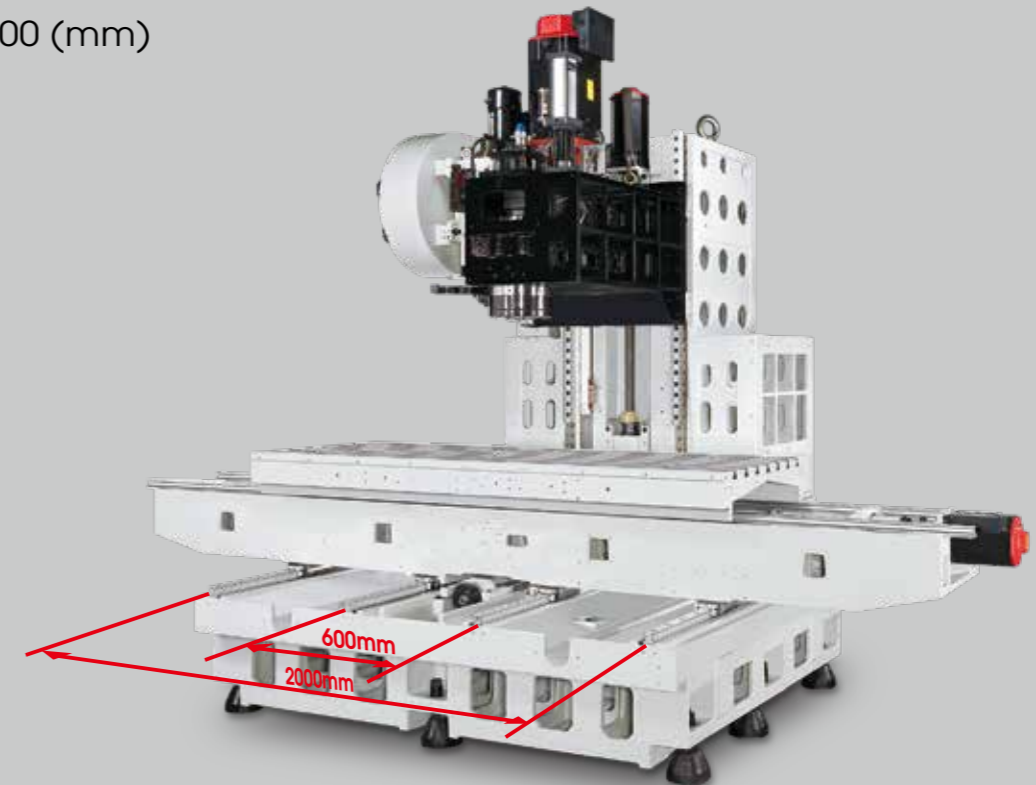


## Travel X / Y / Z

MV234 & MV235:  
2,040 / 800 / 661 (mm)

## Table size

MV234 & MV235:  
2,250 x 800 (mm)



MV204 & MV205



MV214 & MV215

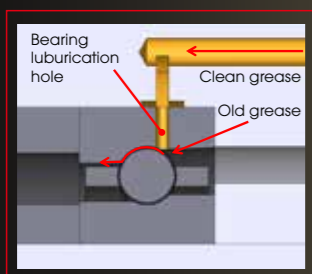
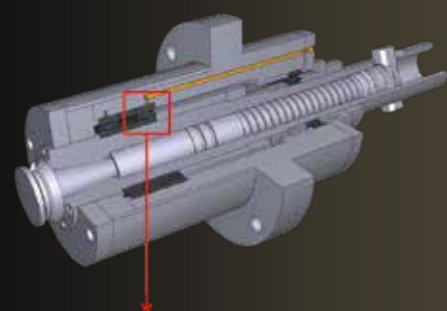


MV234 & MV235

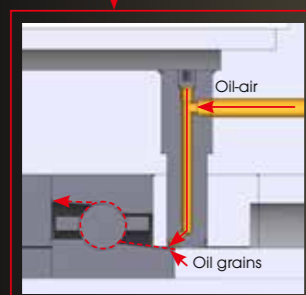
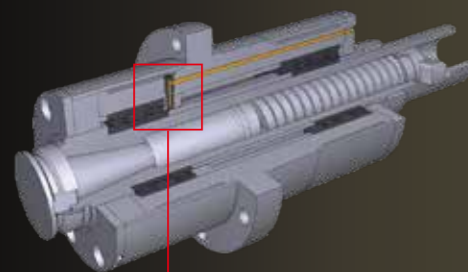


# Unique spindle technology

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

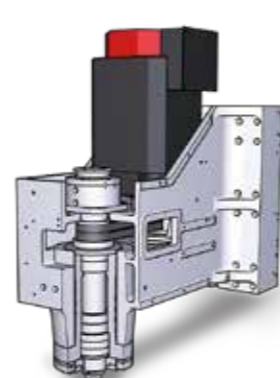


- Oil-Air lubrication system realizes stable operation on high speed rotation with large diameter spindles by utilizing compressed air to supply very little oil intermittently to the bearings.



## 40 Taper

## 50 Taper



New spindle code	MB-4.0				SC-4.2		MC-4.1R	MC-4.0R	SB-5.0A		MC-5.0A	
Shaft diameter	Ø70 / Ø65				Ø80 / Ø70		Ø80 / Ø65	Ø70 / Ø60	Ø100 / Ø90		Ø90	
Spindle Taper	ISO-40				ISO-40		ISO40 / HSK A63		ISO-50		ISO-50 / HSK-A100	
Bearing arrangement	< > =				<< >>		< > =	< > =	= << > =		<< >>	
Ball bearing type	Ceramic				Ceramic		Ceramic	Ceramic	Ceramic		Ceramic	
Roller bearing type	Steel				-		Steel	Ceramic	Steel		-	
Bearing lubrication	Grease packed				Grease packed		Re-Grease		Oil-Air		Oil-Air	
Transmission	Belt				Coupling		Coupling		Belt	Belt + Gear box	Coupling	
Spindle Speed	9,000	12,000	9,000	12,000	10,000	12,000	15,000	20,000	6,000	7,500	15,000	
<b>FANUC</b>												
Spindle base speed	1,125	1,500	1,125	1,500	-	-	1,400	600	1,150	750	375	600
Spindle output kW (S3-25%)	25	25	35	-	-	26	30 <sup>(1)</sup>	15	35	35	30 <sup>(1)</sup>	
Spindle output torque Nm (S3-25%)	212	159	297	223	-	-	177	350 <sup>(3)</sup>	125	446	891	350 <sup>(3)</sup>
<b>HEIDENHAIN</b>												
Spindle base speed	1,125	1,500	1,500	2,000	-	-	2,000	-	-	-	437.5	-
Spindle output power kW (S6-25%)	32	32	46.5	-	-	46.5	-	-	-	-	40.9	-
Spindle output torque Nm (S6-25%)	272	204	296	222	-	-	222	-	-	-	892	-
<b>SIEMENS</b>												
Spindle base speed	1,125	1,500	1,500	2,000	-	1,500	2,000	-	-	-	437.5	-
Spindle output power kW (S6-25%)	28.5	28.5	46.5	-	-	17.6 <sup>(2)</sup>	46.5	-	-	-	40.9	-
Spindle output torque Nm (S6-25%)	242	182	296	222	-	112 <sup>(2)</sup>	222	-	-	-	892	-
<b>MITSUBISHI</b>												
Spindle base speed	-	-	-	-	1,500	1,400	-	-	-	-	-	-
Spindle output power kW (30min.)	-	-	-	-	15	18.5	-	-	-	-	-	-
Spindle output torque Nm (30min.)	-	-	-	-	96	102	-	-	-	-	-	-
<b>CTS Availability</b>	●	●	●	●	X	○	●	●	●	●	●	●
<b>Available NC</b>	FANUC = ● HEIDENHAIN = ● SIEMENS = ● MITSUBISHI = ●											
<b>40 Taper</b>												
MV204C	-	-	-	-	●	●	-	-	-	-	-	-
MV204E	●	●	-	-	-	-	-	-	-	-	-	-
MV204V	●	●	-	-	-	-	-	-	-	-	-	-
MV204P / MV214P	-	-	●	●	-	-	●	●	●	●	-	-
MV234E	●	●	-	-	-	-	-	-	-	-	-	-
MV234P	-	-	●	●	-	-	●	●	●	●	-	-
<b>50 Taper</b>												
MV205E / MV215E	-	-	-	-	-	-	-	-	-	-	●	-
MV205P / MV215P	-	-	-	-	-	-	-	-	-	-	●	●
MV235E	-	-	-	-	-	-	-	-	-	●	-	-
MV235P	-	-	-	-	-	-	-	-	-	-	●	●

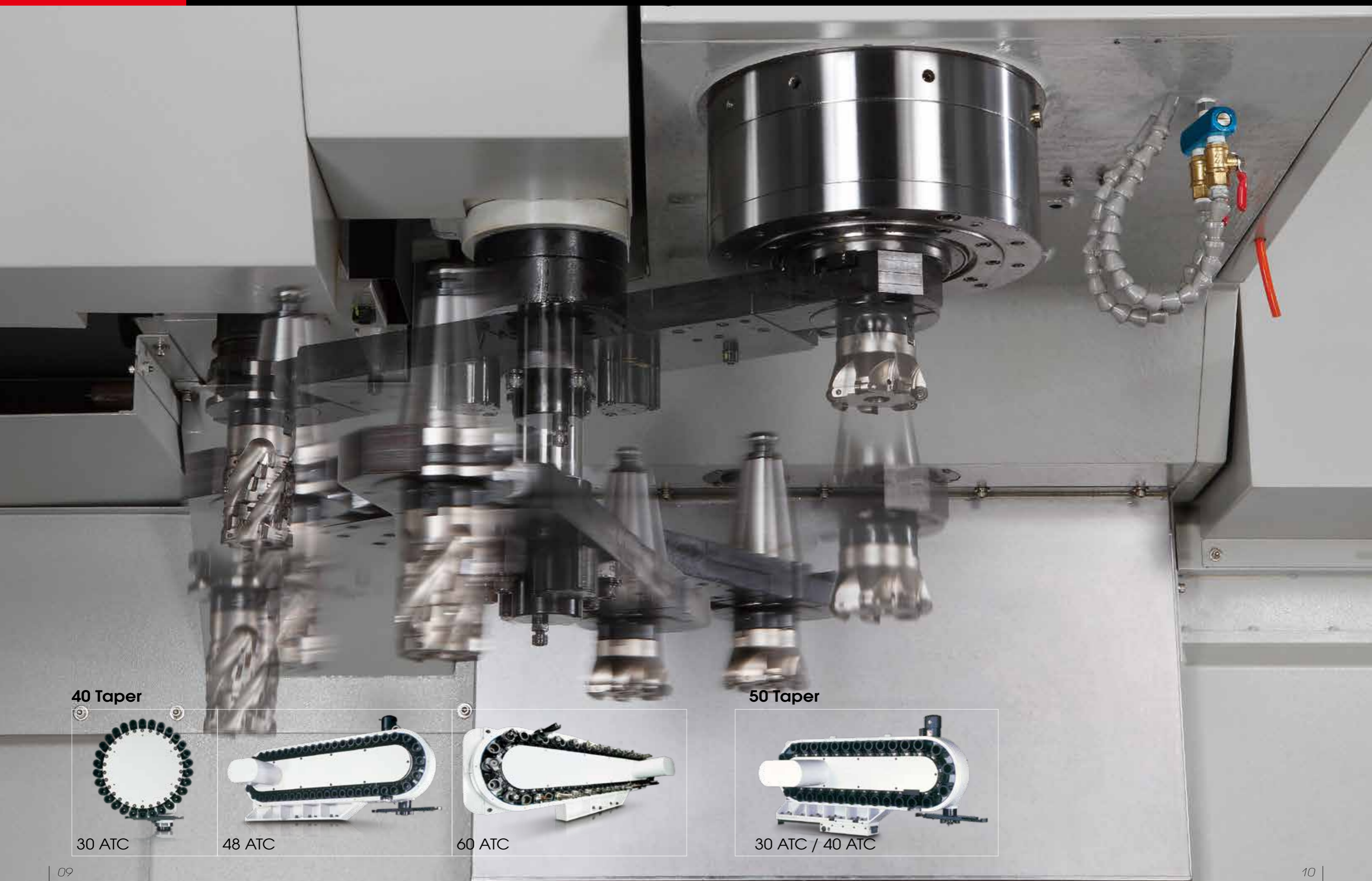
Note : <sup>(1)</sup>S3-60% <sup>(2)</sup>S6-40% <sup>(3)</sup>S3-40%



F = FANUC M = MITSUBISHI S = SIEMENS T = HEIDENHAIN

Motor	MV204C		MV204E		MV204V		MV204P & MV214P			
Spindle code	10C	12C	9B	12B	9B	12B	9B	12B	15C	20C
X / Y / Z (kW)	F	-	3 / 3 / 4		3 / 3 / 4		4 / 4 / 4			
	T	-	-		4.5 / 4.5 / 5.1		5.1 / 5.1 / 8.6			
	S	-	3.1 / 3.1 / 4.3	-	-		4.9 / 4.9 / 4.9			
	M	2 / 2 / 3		-		-		-		

Motor	MV205E & MV215E		MV205P & MV215P		MV234E		MV234P				MV235E	MV235P	
Spindle code	7.5B		7.5B	15C	9B	12B	9B	12B	15C	20C	6B	7.5B	15C
X / Y / Z (kW)	F	4 / 4 / 4		4 / 4 / 4		4 / 7 / 7		4 / 7 / 7				4 / 7 / 7	
	T	-		5.1 / 5.1 / 8.6	-	-		8.6 / 8.6 / 8.6		-	-	8.6 / 8.6 / 8.6	-
	S	-		-		-		5.2 / 5.2 / 7.7		-	-	5.2 / 5.2 / 7.7	-
	M	-		-		-		-		-	-	-	-



40 Taper

50 Taper



30 ATC



48 ATC



60 ATC

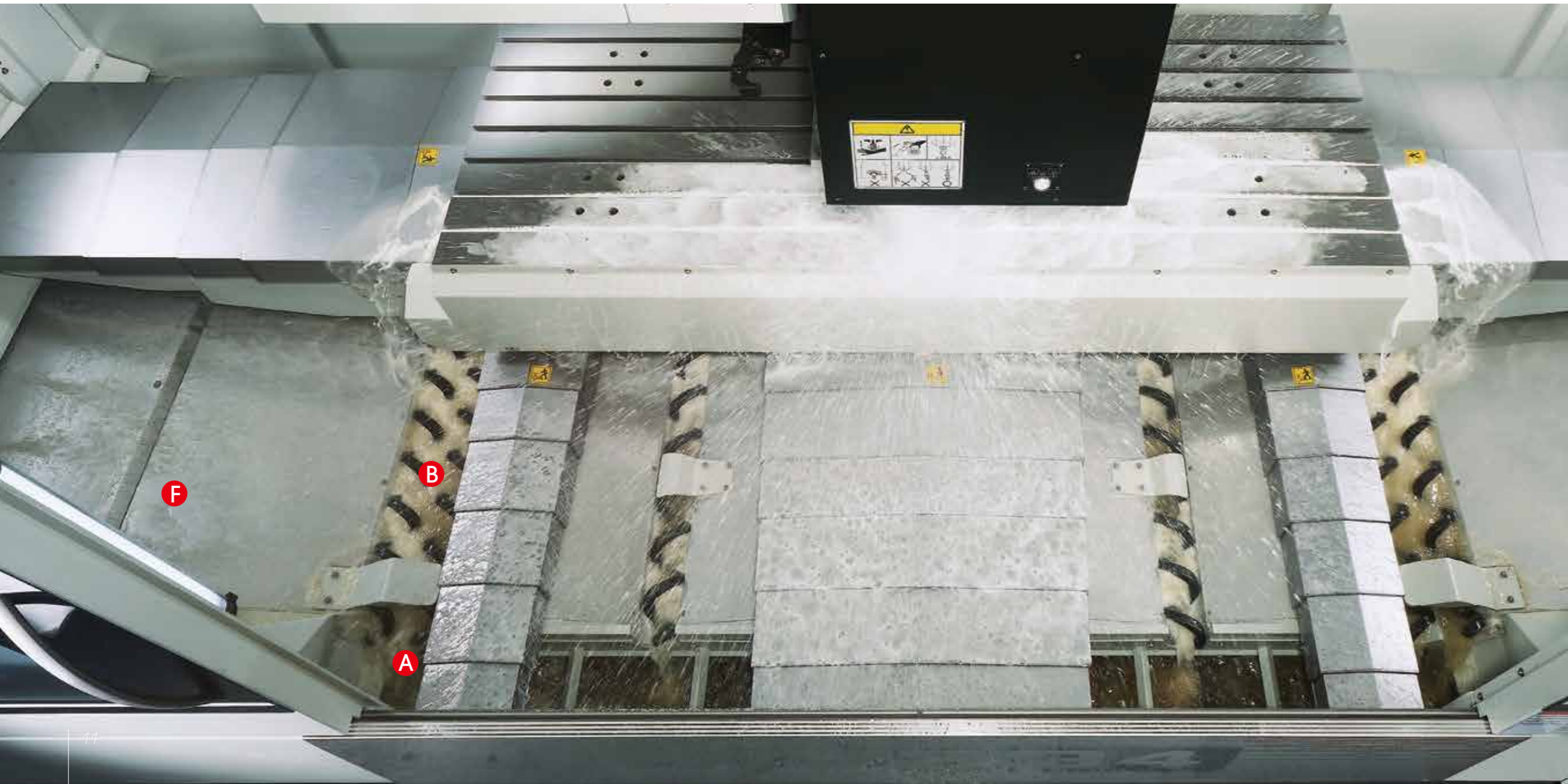


30 ATC / 40 ATC

# Coolant system & Chip management

	MV204C	MV204 MV205	MV214 MV215	MV234 MV235
<b>A</b> Chip slot		4		
<b>B</b> Augers plus chip conveyor		2		6
<b>C</b> Wash gun		1	2	2
<b>D</b> Coolant through spindle*	-	20 Bar		
<b>E</b> Nozzle coolant		3.5 Bar		
<b>F</b> Auto flushing on stainless	3.5 Bar	4.5 Bar		
<b>G</b> Coolant tank		600 L		710 L
<b>H</b> External chip auger	std.	-		
<b>I</b> External chip conveyor	opt.	std.		

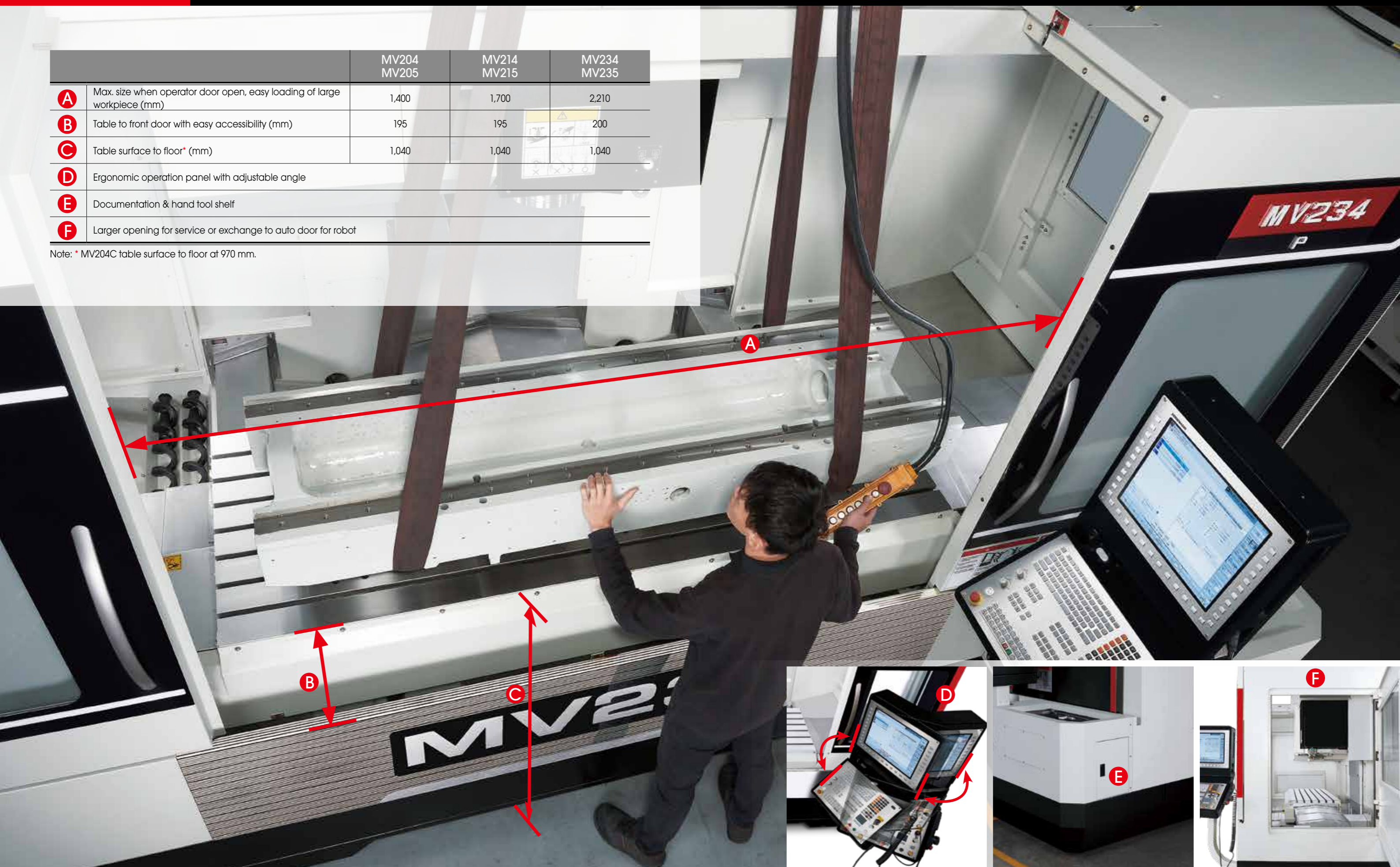
Note: \* MV204C not available.



# Easy operation

	MV204 MV205	MV214 MV215	MV234 MV235	
<b>A</b>	Max. size when operator door open, easy loading of large workpiece (mm)	1,400	1,700	2,210
<b>B</b>	Table to front door with easy accessibility (mm)	195	195	200
<b>C</b>	Table surface to floor* (mm)	1,040	1,040	1,040
<b>D</b>	Ergonomic operation panel with adjustable angle			
<b>E</b>	Documentation & hand tool shelf			
<b>F</b>	Larger opening for service or exchange to auto door for robot			

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





Technical data	MV204				MV204 MV214				
	C		E / V		P				
Spindle code	10C	12C	9B	12B	9B	12B	15C (2)	20C (3)	
<b>Work range</b>									
Table size (mm)	1,400 x 700				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)				150 ~ 760 (1)				
Table load capacity (kg)	1,000				1,800 / 2,000				
<b>Feed drive</b>									
Feed force X / Y / Z (N)	F	-	6,283 / 6,283 / 11,519		11,519 / 11,519 / 11,519				
	T	-	9,268 / 9,268 / 11,310		11,310 / 11,310 / 19,897				
	M	7,173 / 7,173 / 11,781		-		-			
	S	-	10,472 / 10,472 / 14,137		14,137 / 14,137 / 14,137				
Rapid movement X / Y / Z (m/min.)	24 / 24 / 16		36 (F) / 36 (F) 32 (T)		36				
*Acceleration X / Y / Z (m/s <sup>2</sup> )	F	-	3 / 2.5 / 3		3.5 / 3 / 4				
	T	-	2.5 / 2 / 4		5 / 5 / 4 4 / 4 / 4				
	M	3 / 3 / 3		-		-			
	S	-	2.5 / 2.5 / 3		3.5 / 2.5 / 3 3 / 2.5 / 3				
Dia. & pitch of the ball screw	∅45 / P = 12 / 12 / 12 (M) ∅45 / P = 12 / 12 / 12 (S)		∅45 / P = 12 / 12 / 12 (F) (T)		∅45 / P = 12 / 12 / 12 (F) (T) (S)				
<b>Accuracy Positioning / Repeatability</b>									
ISO 230-2					0.008 / 0.004				
JIS 6338 (300mm)					±0.003 / ±0.002				
VDI 3441					0.008 / 0.004				
<b>Main spindle</b>									
Spindle taper					40 Taper				
<b>Tool changer</b>									
Tool selection					Random				
Magazine positions	Std.	30		30 / 48					
	Opt.	-	48 / 60		48 & 60 / 60				
Max. tool diameter (mm)					76.2				
Max. tool dia. Due to neighbor pots are empty					125				
Max. tool length (mm)					300				
Max. tool weight (kg)					7				
CTC time-ISO 10791-9 (sec.)-60Hz	4.2 (M)	4.2 (M) 4.7 (S)	5.2		4.7				
<b>Coolant system</b>									
Coolant tank capacity (Liter)					600				
Pump capacity					60L / min, 3.5 bar				
- Nozzle coolant					60L / min, 3.5 bar				
- Coolant through spindle	-	opt.	25L / min, 20 bar						
- Wash down	60L / min, 3.5 bar		60L / min, 4.5 bar						
<b>Machine size</b>									
Height (mm)	3,300		3,300		3,300		3,300		
Floor space W x D (mm)	30 ATC	3,920 x 3,570		3,700 x 3,570		3,700 x 3,570 / -			
	48 ATC	-		3,700 x 3,750		3,700 x 3,750 / 4,520 x 3,780			
	60 ATC	-		3,700 x 4,050		3,700 x 4,050 / 4,520 x 4,080			
Weight (kg)	9,300		9,500 - 10,000		9,500 - 10,100 / 10,100 - 11,000				
<b>Connections</b>									
Main power					220V or 380V or 400V or 415V / 50Hz or 60Hz				
Power consumption (KVA)	20 (M)	30 (M) 28 (S)	28 (F) 30 (T)		36 (F) 42 (T) 42 (S)		33 (F) 42 (T) 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.

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

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.

Technical data	MV234					
	E		P			
Spindle code	9B	12B	9B	12B	15C <sup>(2)</sup>	20C <sup>(3)</sup>
<b>Work range</b>						
Table size (mm)	2,250 x 800					
Travel X / Y / Z (mm)	2,040 / 800 / 661 <sup>(1)</sup>					
Spindle nose to table surface (mm)	150 ~ 811 <sup>(1)</sup>					
Table load capacity (kg)	2,000					
<b>Feed drive</b>						
Feed force X / Y / Z (N)	F	11,519 / 15,708 / 15,708	11,519 / 15,708 / 15,708			
	T	-	19,897 / 19,897 / 19,897		-	
	S	-	18,849 / 18,849 / 25,133		-	
Rapid movement X / Y / Z (m/min.)	20 / 20 / 16					
*Acceleration X / Y / Z (m/s <sup>2</sup> )	F	2 / 2 / 2				
	T	-	3.5 / 3.5 / 3.5		-	
	S	-	3.5 / 3.5 / 3.5		-	
Dia. & pitch of the ball screw	Ø50 / P = 12 / 12 / 12					
<b>Accuracy Positioning / Repeatability</b>						
ISO 230-2	0.008 / 0.004					
JIS 6338 (300mm)	±0.003 / ±0.002					
VDI 3441	0.008 / 0.004					
<b>Main spindle</b>						
Spindle taper	40 Taper					
<b>Tool changer</b>						
Tool selection	Random					
Magazine positions	48 (std.) 60 (opt.)					
Max. tool diameter (mm)	76.2					
Max. tool dia. Due to neighbor pots are empty	125					
Max. tool length (mm)	300					
Max. tool weight (kg)	7					
CTC time-ISO 10791-9 (sec.)-60Hz	5.2	4.7 (F) 5.7 (T)			4.7 (F)	
<b>Coolant system</b>						
Coolant tank capacity (Liter)	710					
Pump capacity						
- Nozzle coolant	60 L / min, 3.5 bar					
- Coolant through spindle	25 L / min, 20 bar					
- Wash down	60 L / min, 4.5 bar					
<b>Machine size</b>						
Height (mm)	3,400			3,500		
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)					
<b>Connections</b>						
Main power	220V or 380V or 400V or 415V / 50Hz or 60Hz					
Power consumption (KVA)	38 (F)	44 (F) 46 (T) 47 (S)		38 (F) 46 (T) 47 (S)		38 (F)

Note: <sup>(1)</sup> For detailed specification of Z axis travel 800mm, please refer to page 22 ~ 24.<sup>(2)</sup> when MC-4.1 R equipped with option item α L26, its KVA would be 48<sup>(3)</sup> Only for FANUC control.

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

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

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

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

Technical data	MV205 MV215			MV235		
	E	P		E	P	
Spindle code	7.5B	7.5B	15C	6B	7.5B	15C
<b>Work range</b>						
Table size (mm)	1,400 x 700 1,700 x 700			2,250 x 800		
Travel X / Y / Z (mm)	1,270 / 700 / 610 <sup>(1)</sup> 1,524 / 700 / 610 <sup>(1)</sup>			2,040 / 800 / 661 <sup>(1)</sup>		
Spindle nose to table surface (mm)	190 ~ 800 <sup>(1)</sup>			150 ~ 811 <sup>(1)</sup>		
Table load capacity (kg)	1,800 / 2,000			2,000		
<b>Feed drive</b>						
Feed force X / Y / Z (N)	F	11,519 / 11,519 / 11,519		11,519 / 11,519 / 11,519	11,519 / 15,708 / 15,708	11,519 / 15,708 / 15,708
	T	-	11,310 / 11,310 / 19,897	-	19,897 / 19,897 / 19,897	-
	S	-	-	-	18,849 / 18,849 / 25,133	-
Rapid movement X / Y / Z (m/min.)	36			20 / 20 / 16		
*Acceleration X / Y / Z (m/s <sup>2</sup> )	F	3.5 / 3 / 2		2 / 2 / 2		
	T	-	5 / 5 / 4 4 / 4 / 4	-	3.5 / 3.5 / 3.5	
	S	-	-	-	3.5 / 3.5 / 3.5	
Dia. & pitch of the ball screw	Ø45 / P = 12 / 12 / 12			Ø50 / P = 12 / 12 / 12		
<b>Accuracy Positioning / Repeatability</b>						
ISO 230-2	0.008 / 0.004			0.008 / 0.004		
JIS 6338 (300mm)	±0.003 / ±0.002			±0.003 / ±0.002		
VDI 3441	0.008 / 0.004			0.008 / 0.004		
<b>Main spindle</b>						
Spindle taper	50 Taper			50 Taper		
<b>Tool changer</b>						
Tool selection	Random			Random		
Magazine positions	30 (std.) 40 (opt.)			30 (std.) 40 (opt.)		
Max. tool diameter (mm)	125			125		
Max. tool dia. Due to neighbor pots are empty	200			200		
Max. tool length (mm)	350			350		
Max. tool weight (kg)	15			15		
CTC time-ISO 10791-9 (sec.)-60Hz	9			10		
<b>Coolant system</b>						
Coolant tank capacity (Liter)	600			710		
Pump capacity						
- Nozzle coolant	60 L / min, 3.5 bar			60 L / min, 3.5 bar		
- Coolant through spindle	25 L / min, 20 bar			25 L / min, 20 bar		
- Wash down	60 L / min, 4.5 bar			60 L / min, 4.5 bar		
<b>Machine size</b>						
Height (mm)	3,650		3,350	3,500		3,400
	3,800		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	3,700 x 4,450 / 4,520 x 4,480		5,745 x 4,430		
Weight (kg)	10,000 - 10,600 / 11,000 - 12,000			14,000 (30 ATC) 14,500 (40 ATC)		
<b>Connections</b>						
Main power	220V or 380V or 400V or 415V / 50Hz or 60Hz			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) 52 (T) 47 (S)	49 (F)

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

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

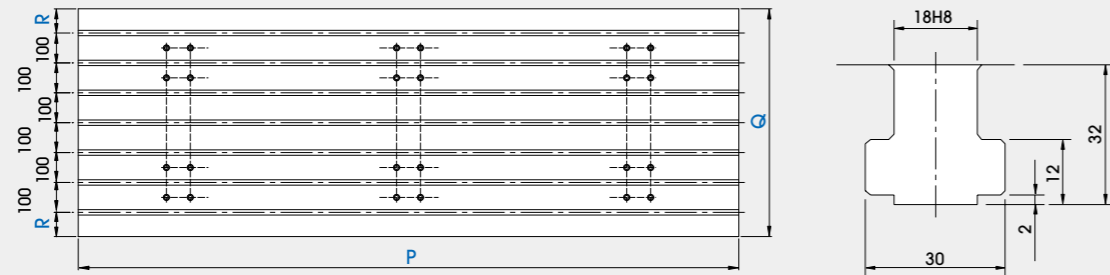
Standard / Option accessories	MV205 MV215			MV235		
	E	P		E	P	
Spindle code	7.5B	7.5B	15C	6B	7.5B	15C
■ QUASER mill I	●	×	×	●	×	×
■ AICC I						
■ Mold machining pack (R660)						
■ AICC II (Look-ahead 200 blocks)						
■ Smooth tolerance control	○	×		○	×	
■ Jerk control						
■ Machining quality level adjust function						
■ FANUC - data server						
■ FANUC 31IB	×	●	○	×	●	○
■ AICC II (Look-ahead 200 blocks)	×	●	○	×	●	○
■ FANUC - data server	×	○	○	×	○	○
■ FANUC - high speed processing (Look-ahead 600 blocks)	×	○	○	×	○	○
■ HEIDENHAIN TNC640	×	○	×	×	○	×
■ HEIDENHAIN advanced function set2						
■ SIEMENS 828D	×	×	×	×	○	×
■ SIEMENS 840D	×	×	×	×	○	×
■ Tall column (one piece column)/Z axis travel 800mm	○	○	○	×	×	×
■ Z axis travel 800 mm (column raiser)	×	×	×	○	○	○
■ Oil chiller	●	●	●	●	●	●
■ 4 <sup>th</sup> axis preparation	●	●	●	●	●	●
■ 50 Taper 30 position tool magazine	●	●	●	●	●	●
■ 50 Taper 40 position tool magazine	○	○	○	○	○	○
■ ATC auto door	○	○	○	○	○	○
■ Tooling - BT50	●	●	●	●	●	●
■ - ISO50 & DIN50	○	○	○	○	○	○
■ Pull stud for BT tooling	●	●	●	●	●	●
■ Balance tooling for spindle warm up	●	●	●	●	●	●
■ BBT spindle attachment (simultaneous contact)	●	●	●	●	●	●
■ Remote manual pulse generator	●	●	●	●	●	●
■ Transformer <sup>(1)</sup>	○	○	○	○	○	○
■ Linear scale	○	○	○	○	○	○
■ Thermal compensation	×	×	○	×	×	○
■ Work probe receiver OMI-2T	○	○	○	○	○	○
■ Work Probe	○	○	○	○	○	○
■ Tool length / breakage measurement	○	○	○	○	○	○
■ Coolant system	●	●	●	●	●	●
■ Coolant wash gun / wash down	●	●	●	●	●	●
■ Air gun	○	○	○	○	○	○
■ Coolant through spindle 20 bar	●	●	●	●	●	●
■ Coolant through spindle 50 bar	○	○	○	○	○	○
■ Cutter air blast	●	●	●	●	●	●
■ External chip conveyor	●	●	●	●	●	●
■ Oil-mist collector	○	○	○	○	○	○
■ Oil skimmer	○	○	○	○	○	○
■ Bag filtration	○	○	○	○	○	○
■ Filtration unit	○	○	○	○	○	○
■ Documentation (CD-ROM) <sup>(2)</sup>	●	●	●	●	●	●
■ Total Enclosure Guard (with Top side cover)	●	●	●	●	●	●
■ Foundation bolts & blocks	●	●	●	●	●	●
■ Work light	●	●	●	●	●	●
■ Machine status light	●	●	●	●	●	●
■ CE & EMC <sup>(3)</sup> / GB	○	○	○	○	○	○

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

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

### Table dimension

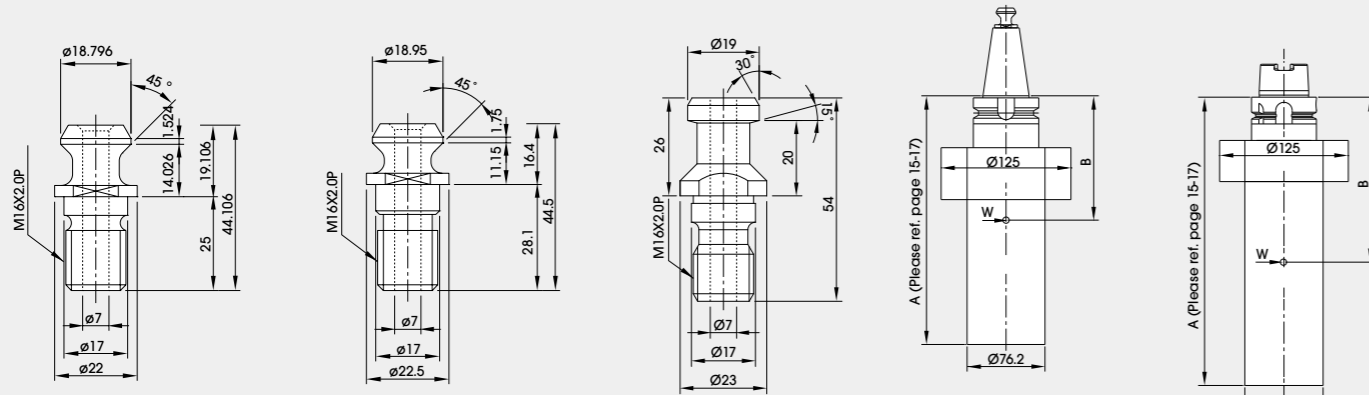
	MV204C	MV204/205	MV214/215	MV234/235
P	1,400	1,400	1,700	2,250
Q	700	700	700	800
R	100	100	100	100
T-Slots No.	6	6	6	7



### Pull stud and applicable tools ISO-40

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

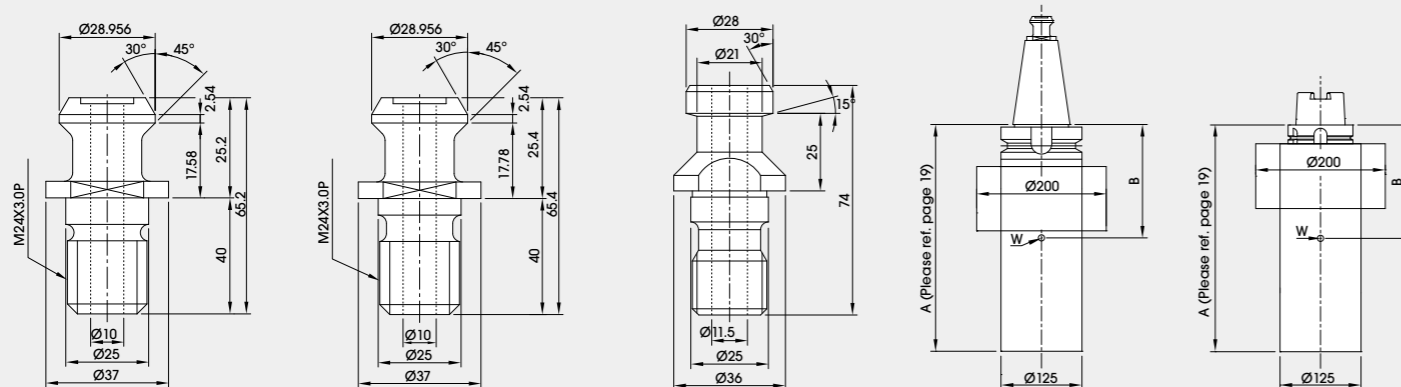
BT 40      ISO (7388-B)      DIN (69872-A)



### Pull stud and applicable tools ISO-50

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

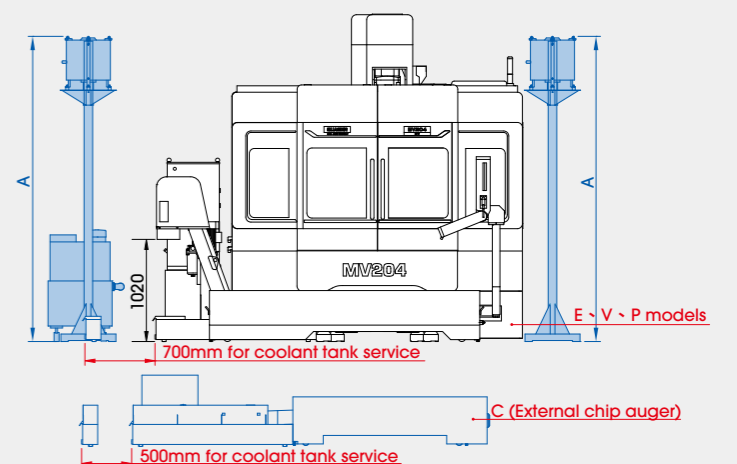
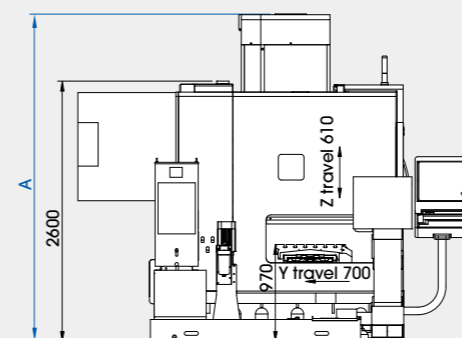
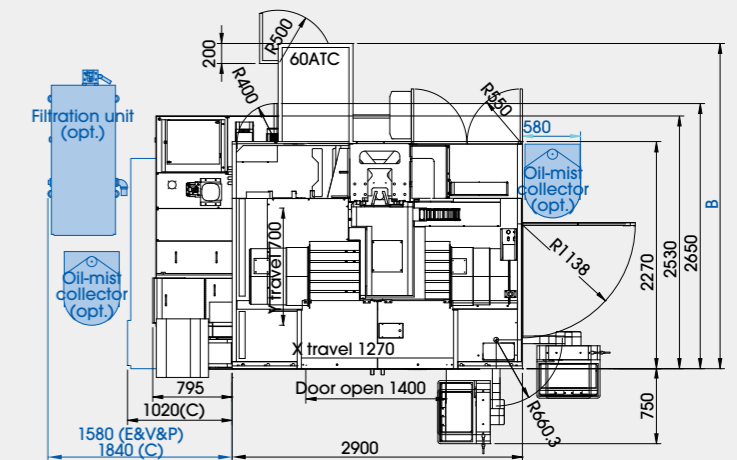
BT 50      ISO (7388-B)      DIN (69872-A)



Max. Machine Height	MV204			MV205	
	C	E & V & P	P	E & P	P
Spindle code	10C / 12C	9B / 12B	15C / 20C	7.5B	15C
<b>A Standard column</b> 1. Z axis travel 610mm 2. Spindle nose to table surface 150~760 mm (#40) 190~800 mm (#50)	3,300	3,300	3,300	3,650	3,350
<b>A Column raiser (150mm)</b> 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	-	-
<b>A Tall column (one piece column)</b> 1. Z axis travel 800 mm 2. Spindle nose to table surface 150~950 mm (#40) 190~990 mm (#50)	3,500	3,500	3,500	3,850*	3,550*

\*Container shipment is not possible

MV204	B	40 Taper	30 ATC	2,550
			60 ATC	3,300
MV205		50 Taper	30 ATC	3,150
			40 ATC	3,700

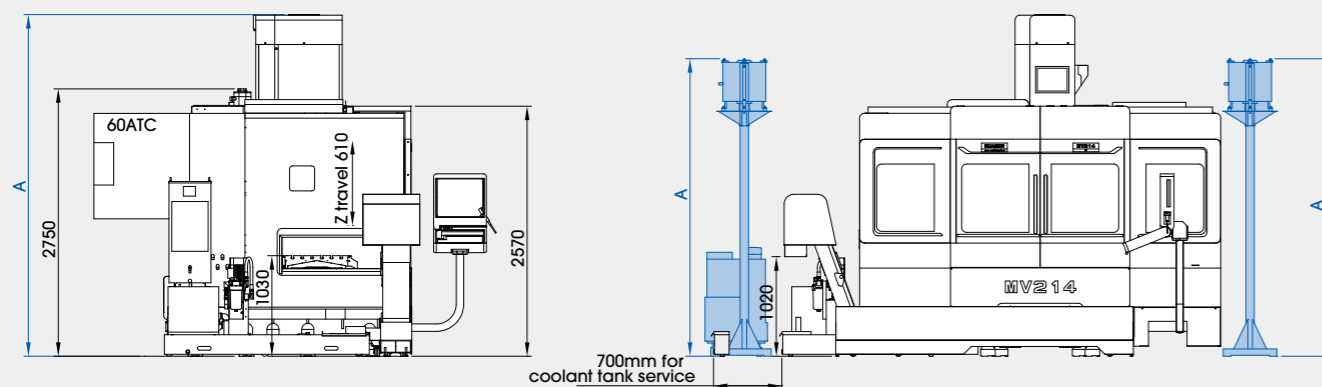
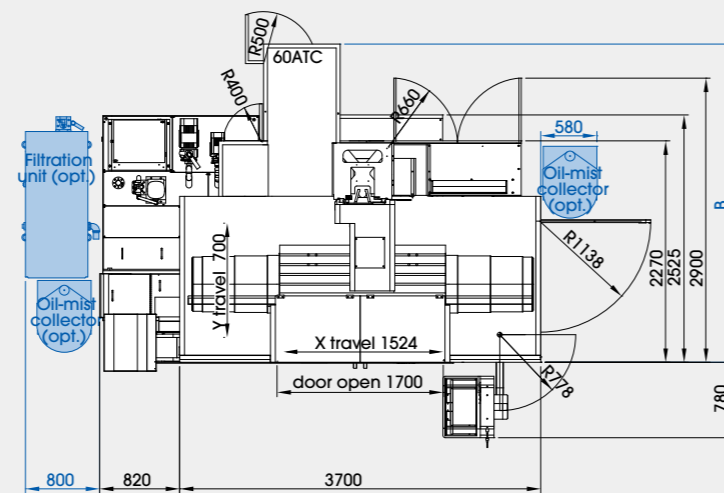


# MV214 & MV215 Layout

## Installation dimension

Max. Machine Height	MV214		MV215	
	P		E & P	P
Spindle code	9B / 12B	15C / 20C	7.5B	15C
<b>A Standard column</b> 1. Z axis travel 610 mm 2. Spindle nose to table surface 150~760 mm (#40) 190~800 mm (#50)	3,500	3,400	3,800	3,400
<b>A Tall column (one piece column)</b> 1. Z axis travel 800 mm 2. Spindle nose to table surface 150~950 mm (#40) 190~990 mm (#50)	3,700*	3,600*	4,000*	3,600*

MV214	B	40 Taper	48 ATC	3,000
			60 ATC	3,300
MV215		50 Taper	30 ATC	3,150
			40 ATC	3,700

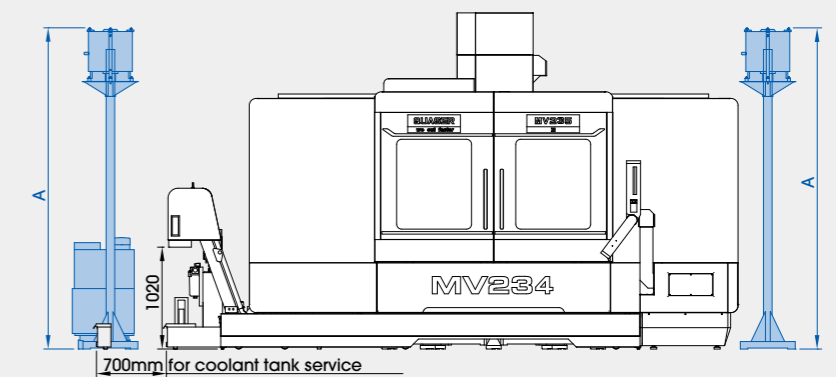
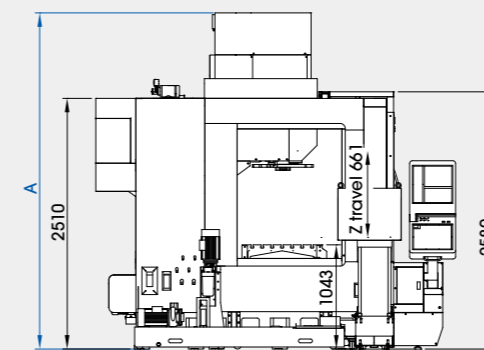
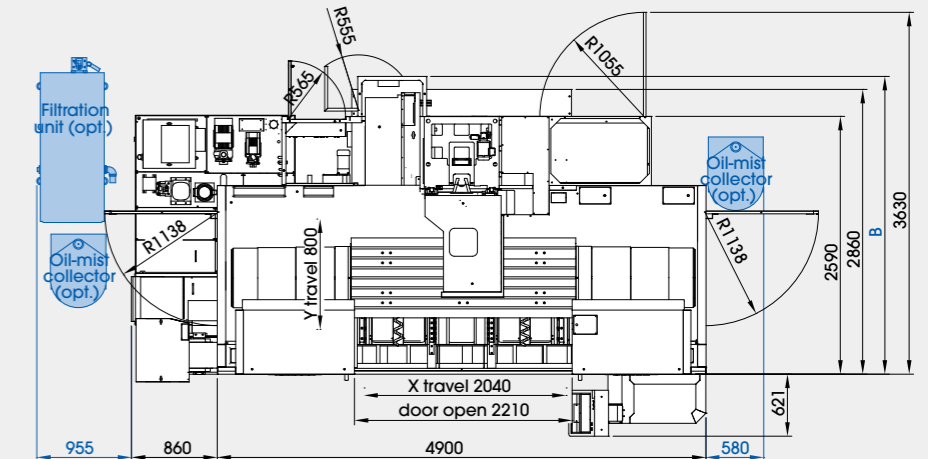


# MV234 / MV235 Layout

## Installation dimension

Max. Machine Height	MV234		MV235	
	E & P	P	E & P	P
Spindle code	9B / 12B	15C / 20C	6B / 7.5B	15C
<b>A Standard column</b> 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
<b>A Tall column (column raiser)</b> 1. Z axis travel 800 mm 2. Spindle nose to table surface 150~950 mm (#40 & #50)	3,600*	3,650*	3,700*	3,600*

MV234	B	40 Taper	48 ATC	3,100
			60 ATC	3,500
MV235		50 Taper	30 ATC	3,200
			40 ATC	3,800



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