Quaser

MV4/MV5/MV6

Vision Manufactured

At Quaser Group, we dedicate to

Creating a world where there is no gap between design concept and manufacturing to maximize the power of engineering. Whatever you design, we can make it to upgrade your competitive edge.

Series Overview

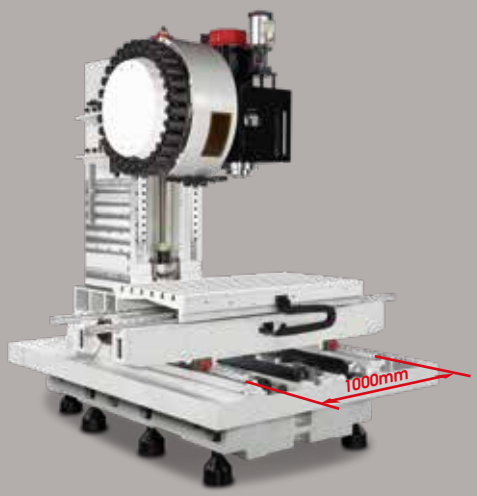
Design and Technology

Detailed Info

Machine Structure

MV4

Travel X / Y / Z: 1,270 / 700 / 610 (mm)
Table size: 1,400 x 700 (mm)

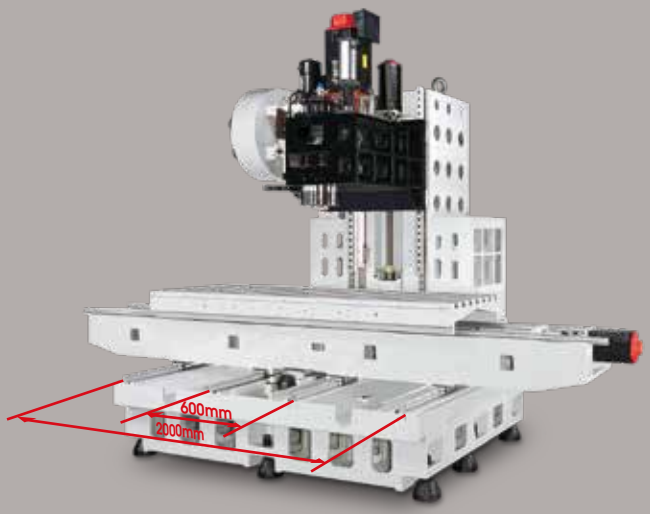


MV5

Travel X / Y / Z: 1,524 / 700 / 610 (mm)
Table size: 1,700 x 700 (mm)

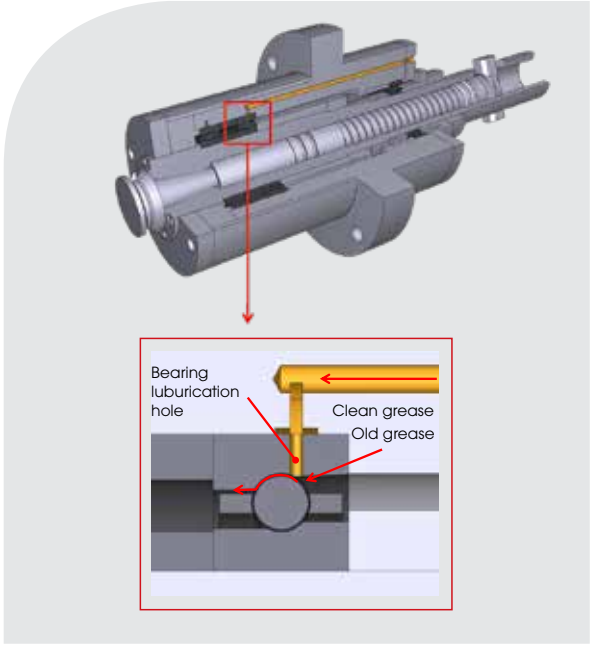
MV6

Travel X / Y / Z: 2,040 / 800 / 661 (mm)
Table size: 2,250 x 800 (mm)

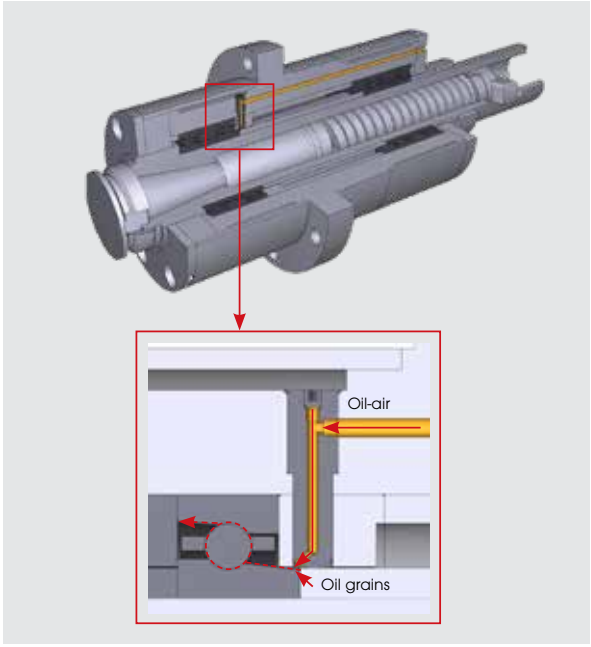


Note: The object might be different from the photos of catalogue if there is any specification update.

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

Spindle code	SC-4.2	
Shaft diameter	Ø80 / Ø70	
Spindle Taper	ISO-40	
Bearing arrangement	<< >>	
Ball bearing type	Ceramic	
Roller bearing type	-	
Bearing lubrication	Grease packed	
Transmission	Coupling	
Spindle Speed	12,000	
FANUC (S6-25%)		
Motor	αilT12/12,000 (βiSVSP-18-B)	αilT12/12,000 (SPM15)
Spindle base speed (min^{-1})	1,500	
Spindle power (kW)	18.5	
Spindle torque (Nm)	118	
HEIDENHAIN (S6-25%)		
Motor	QAN200UH (Compact inverter)	QAN200UH (Modular inverters)
Spindle base speed (min^{-1})	1,500	
Spindle power (kW)	17	
Spindle torque (Nm)	108	
SIEMENS (S6-25%)		
Motor	1PH8133-combi	1PH8131
Spindle base speed (min^{-1})	1,500	2,000
Spindle power (kW)	17.6 (S6-40%)	27.7
Spindle torque (Nm)	112 (S6-40%)	132
CTS Availability	●	●
Available NC adapting		

MV4	●●●	-
MV5	●	●●
MV6	-	●●●

● (F) = FANUC ● (T) = HEIDENHAIN ● (S) = SIEMENS

50 Taper

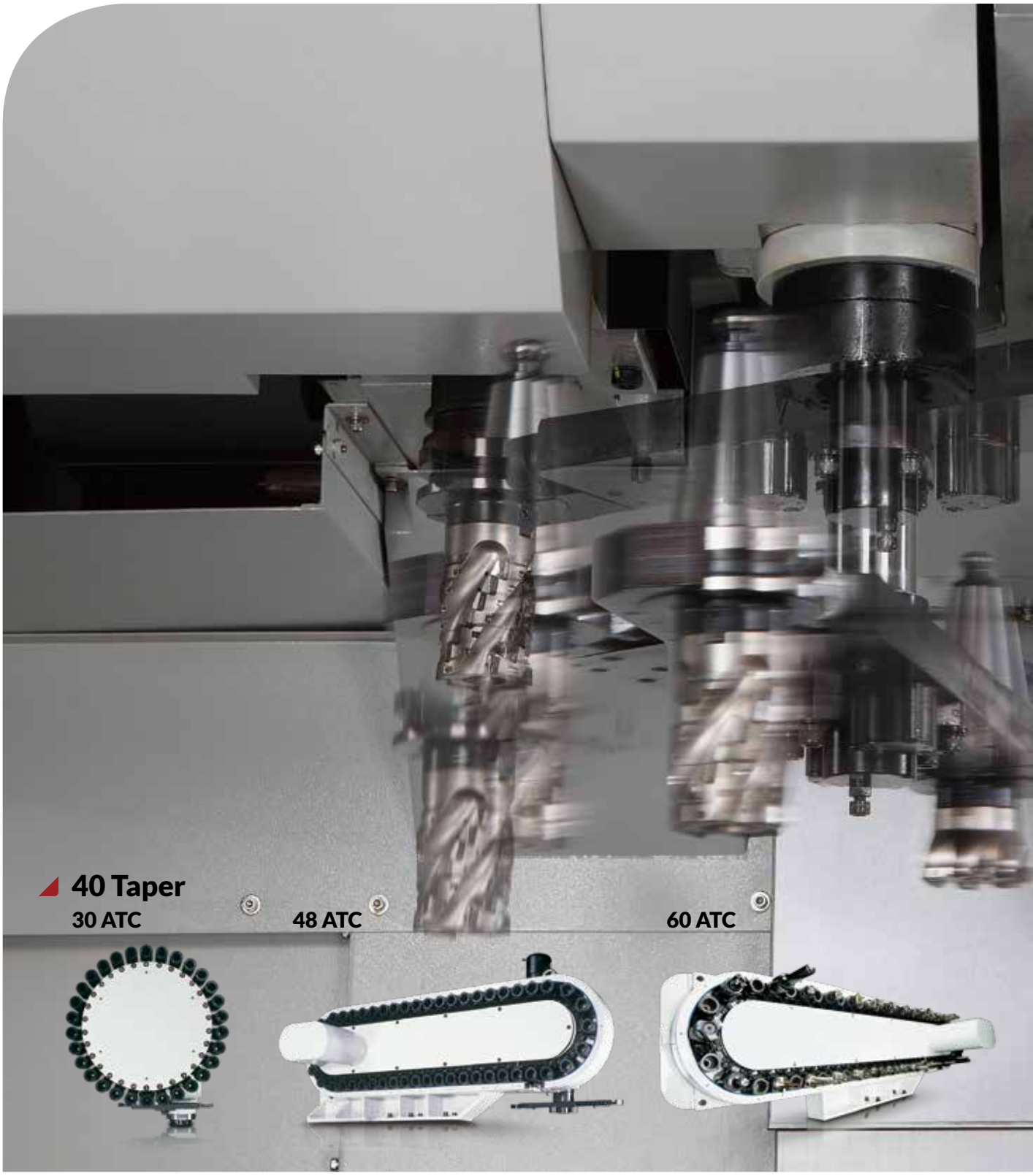
MC-4.1R	MC-4.0R	MS30-20	MS30-24	SB-5.0A	MC-5.0A
Ø80 / Ø65	Ø70 / Ø60	Ø80	Ø80	Ø100 / Ø90	Ø90
ISO-40 / HSK A63	ISO-40 / HSK A63	HSK A63	HSK A63	ISO-50	ISO-50
< >=	< >=	<<> >	<<> >	=<< >=	<<>>
Ceramic	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Steel	Ceramic	-	-	Steel	-
Re-grease	Oil air	Oil air	Oil air	Oil air	Oil air
Coupling	Coupling	Built-in	Built-in	Belt + Gear box	Coupling
15,000	20,000	18,000	24,000	7,500	15,000
αilT15/15,000 (SPM30)	αilL8/20,000 (SPM30)	-	-	αil22/8,000 (SPM26)	αilL26/15,000 (SPM30)
1,400	1,500	2,420	2,650	375	600
26	15	31.7	32.2	35	30
177	125	125	116	891	350
1PH8131	-	-	-	1PH8135	-
2,000	-	3,330	3,460	437.5	-
27.7	-	43.5	42	40.9	-
132		125	116	892	
1PH8131	-	-	-	1PH8135	-
2,000	-	3,330	3,460	437.5	-
27.7		43.5	42	40.9	-
132	-	125	116	892	-
●	●	●	●	●	●
(F) FANUC (T) HEIDENHAIN (S) SIEMENS					
○ ○ ○	○	○ ○ ○	○ ○ ○	○ ○ ○	○
○ ○ ○	○	○ ○ ○	○ ○ ○	○ ○ ○	○
○ ○ ○	○	○ ○ ○	○ ○ ○	○ ○ ○	○

Direct Axes Transmission

Motor		MV4 MV5 MV6			
Spindle code		12C	15C	20C	18M
		40Taper			
X / Y / Z (kW)	F	3 / 3 / 4 4 / 4 / 4 4 / 7 / 7	4 / 4 / 4 4 / 4 / 4 4 / 7 / 7		
	T	4.5 / 4.5 / 5.4 5.1 / 5.1 / 8.6 8.6 / 8.6 / 8.6	5.1 / 5.1 / 8.6 5.1 / 5.1 / 8.6 8.6 / 8.6 / 8.6	-	5.1 / 5.1 / 8.6 5.1 / 5.1 / 8.6 8.6 / 8.6 / 8.6
	S	3.55 / 4 / 5.5 5.5 / 5.5 / 5.5 6.4 / 6.4 / 7.1	5.5 / 5.5 / 5.5 5.5 / 5.5 / 5.5 6.4 / 6.4 / 7.1	-	5.5 / 5.5 / 5.5 5.5 / 5.5 / 5.5 6.4 / 6.4 / 7.1

Motor		MV4 MV5 MV6		
Spindle code		24M	7.5B	15C
		40Taper	50Taper	
X / Y / Z (kW)	F	4 / 4 / 4 4 / 4 / 4 4 /7/ 7		
	T	5.1 / 5.1 / 8.6 5.1 / 5.1 / 8.6 8.6 / 8.6 / 8.6		-
	S	5.5 / 5.5 / 5.5 5.5 / 5.5 / 5.5 6.4 / 6.4 / 7.1		-

ATC System



50 Taper

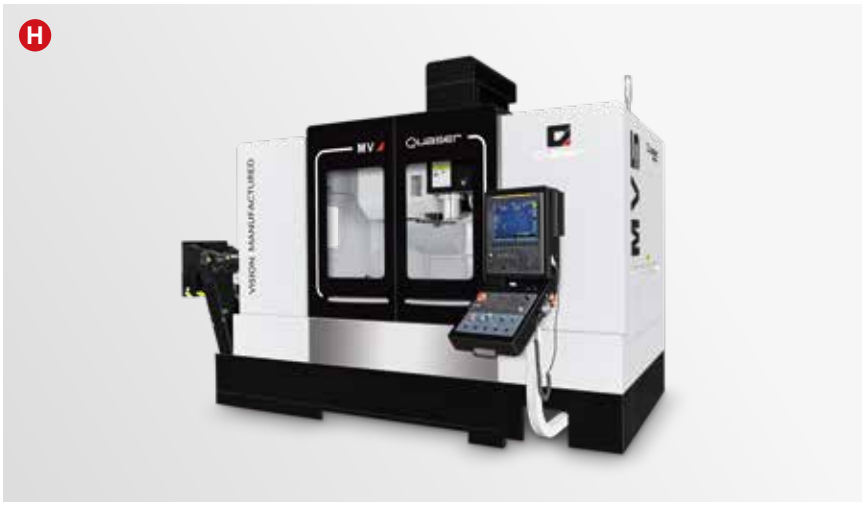
30 ATC / 40 ATC

Coolant system & Chip management

	MV4	MV5	MV6
A Chip slot	4		
B Augers plus chip conveyor	2		6
C Wash gun	1	2	2
D Coolant through spindle	20 Bar		
E Nozzle coolant	3.5 Bar		
F Auto flushing on stainless	3.5 Bar	4.5 Bar	
G Coolant tank	600 L		710 L
H External chip conveyor	std.		


C


D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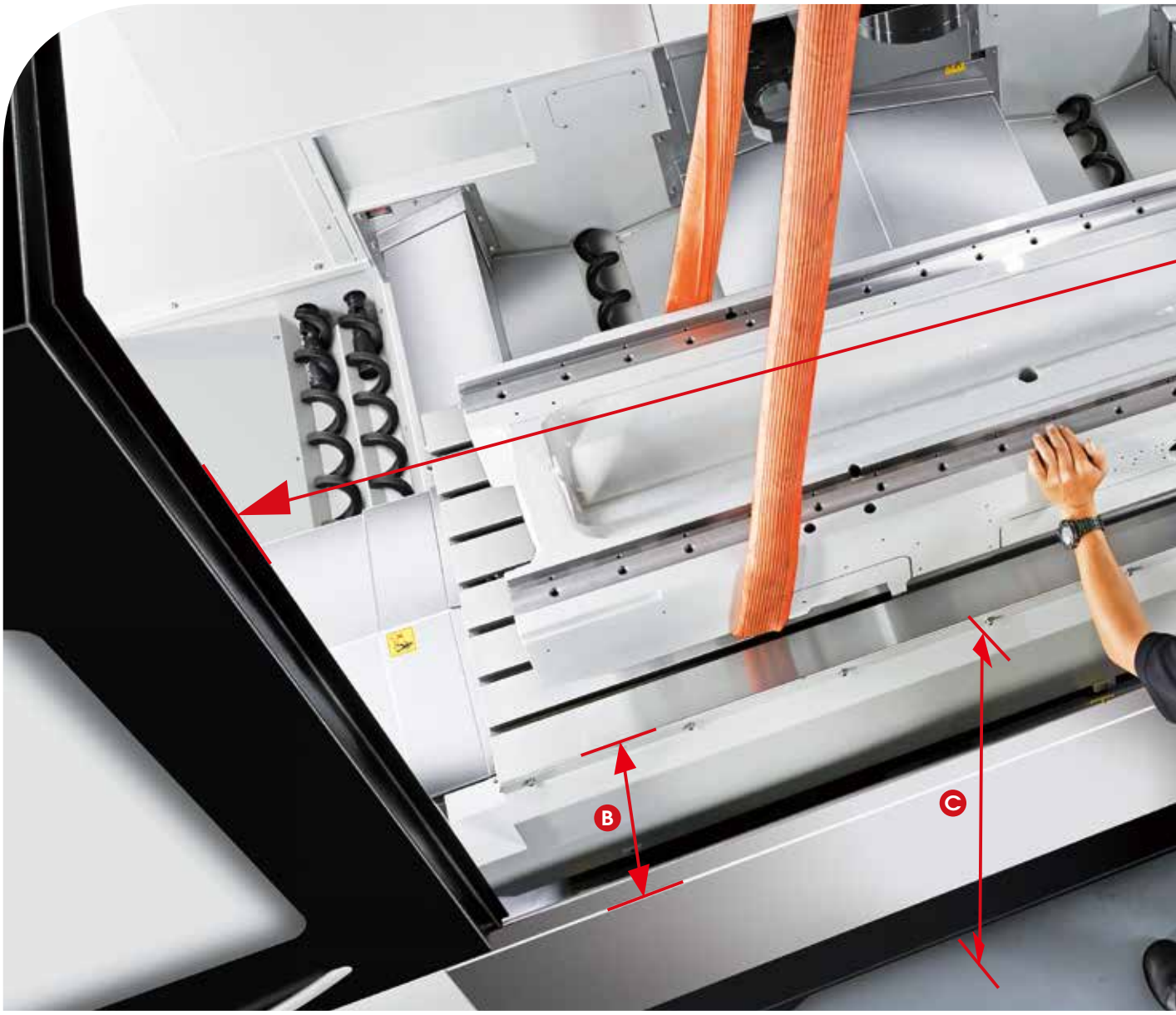
Easy operation



		MV4	MV5
A	Max. size when operator door open, easy loading of large workpiece (mm)	1,400	1,700
B	Table to front door with easy accessibility (mm)	195	195
C	Table surface to floor (mm)	970	1,030
D	Ergonomic operation panel with adjustable angle		
E	Documentation & hand tool shelf		

	MV6
	2,210
	200
	1,043

Technical Data

Technical Data		MV4 / MV5		
Spindle code		12C	15C	20C[2]
Main spindle				
Spindle taper		40 Taper		
Work range				
Table size (mm)		1,400 x 700 1,700 x 700		
Travel X / Y / Z (mm)		1,270 / 700 / 610[1] 1,524 / 700 / 610[1]		
Spindle nose to table surface (mm)		150~760[1]		
Table load capacity (kg)		1,000	1,800 2,000	
Feed drive				
Feed force X / Y / Z (N)	F	6,283 / 6,283 / 11,519 11,519 / 11,519 / 11,519	11,519 / 11,519 / 11,519	
	T	9,268 / 9,268 / 13,666 11,310 / 11,310 / 19,897	11,310 / 11,310 / 19,897	
	S	11,519 / 14,137 / 15,708 15,708 / 15,708 / 15,708	15,708 / 15,708 / 15,708	
Rapid movement X / Y / Z (m/min)		32 36	36 36	
*Acceleration X / Y / Z (m/s^2)	F	3 / 2.5 / 3 3.5 / 3 / 4	3.5 / 3 / 4 3.5 / 3 / 4	
	T	2.5 / 2 / 4 4 / 4 / 4	5 / 5 / 4 4 / 4 / 4	
	S	2.5 / 2.5 / 3 3 / 2.5 / 3	3.5 / 2.5 / 3 3 / 2.5 / 3	
Dia. & pitch of the ball screw (mm)		Ø45 / P = 12 / 12 / 12		
Tool changer				
Tool selection		Random		
Magazine positions		30 (std.) / 48 & 60 (opt.) 48 (std.) / 60 (opt.)		
Max. tool diameter (mm)		76.2		
Max. tool dia. Due to neighbor pots are empty (mm)		125		
Max. tool length (mm)		300		
Max. tool weight (kg)		7		
CTC time-ISO 10791.9(sec.)-60Hz		5.2±0.2 4.7±0.2	4.7±0.2	

MV4 / MV5			
18M	24M	7.5B	15C[2]
40 Taper		50 Taper	
1,400 x 700 1,700 x 700 1,270 / 700 / 610[1] 1,524 / 700 / 610[1]			
150 ~760[1]		190 ~800[1]	
1,800 2,000			
11,519 / 11,519 / 11,519			
11,310 / 11,310 / 19,897			-
15,708 / 15,708 / 15,708		-	
36			
3.5 / 3 / 4		3.5 / 3 / 2	
5 / 5 / 4 4 / 4 / 4			
3.5 / 2.5 / 3 3 / 2.5 / 3		-	
Ø45 / P = 12 / 12 / 12			
Random			
30 (std.) / 48 & 60 (opt.) 48 (std.) / 60 (opt.) 76.2 125 300 7		30 (std.) / 40 (opt.) 125 200 350 15	
4.7±0.2		9±0.2	

Technical Data

Technical Data		MV4 / MV5		
Spindle code		12C	15C	20C[2]
Main spindle				
Spindle taper		40 Taper		
Coolant system				
Coolant tank capacity (Liter)		600		
Pump capacity				
- Nozzle coolant		60L / min, 3.5bar		
- Coolant through spindle		25L/min, 20bar		
- Wash down		60L / min, 3.5bar	60L / min, 4.5bar	
Machine Size				
Height (mm)		3,300 / 3,400		
Floor space W x D (mm)	30 ATC	3,700 x 3,285 / -		
	40 ATC	-		
	48 ATC	3,700 x 3,750 / 4,555 x 3,780		
	60 ATC	3,700 x 4,050 / 4,555 x 4,080		
Weight (kg)		9,500 - 10,100 / 10,100 - 11,000		
Connections				
Main power		220~230V / 50~60 Hz, 380~415V/50~60Hz		
Power consumption (KVA)		30(F)(T) 35(S) 30(F) 35(T)(S)	35(F)(S) 40(T)	35 (F)

Note: [1] For detailed specification of Z axis travel 800mm, please refer to page 27 ~ 29.
[2] Only for FANUC control.
*Test condition: values are measured by half of the maximum table load capacity.

MV4 / MV5			
18M	24M	7.5B	15C[2]
40 Taper		50 Taper	
600 60L / min, 3.5bar 25L/min, 20bar			
60L / min, 4.5bar			
3,300 / 3,400		3,650 / 3,800	3,350 / 3,400
3,700 x 3,285 / - - 3,700 x 3,750 / 4,555 x 3,780 3,700 x 4,050 / 4,555 x 4,080		3,700 x 3,900 / 4,555 x 3,930 3,700 x 4,450 / 4,555 x 4,480 - -	
9,500 - 10,100 / 10,100 - 11,000		10,000-10,600 / 11,000-12,000	
220~230V / 50~60 Hz, 380~415V/50~60Hz			
40(F) 50(T)(S)		40(F) 45(T)(S)	45(F)

Control: (F): FANUC (T): HEIDENHAIN (S): SIEMENS

Technical Data

Technical Data		MV6		
Spindle code		12C	15C	20C[2]
Main spindle				
Spindle taper		40 Taper		
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		
	T	19,897 / 19,897 / 19,897		-
	S	20,944 / 20,944 / 26,180		-
Rapid movement X / Y / Z (m/min)		20 / 20 / 16		
*Acceleration X / Y / Z (m/s^2)	F	2 / 2 / 2		
	T	3.5 / 3.5 / 3.5		-
	S	3.5 / 3.5 / 3.5		-
Dia. & pitch of the ball screw (mm)		Ø50 / P = 12 / 12 / 12		
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 empty (mm)		125		
Max. tool length (mm)		300		
Max. tool weight (kg)		7		
CTC time-ISO 10791.9(sec.)-60Hz		6±0.2		

MV6			
18M	24M	7.5B	15C[2]
40 Taper		50 Taper	
2,250 x 800 2,040 / 800 / 661[1] 150~811[1] 2,000			
11,519 / 15,708 / 15,708			
19,897 / 19,897 / 19,897 20,944 / 20,944 / 26,180			- -
20 / 20 / 16			
2 / 2 / 2			
3.5 / 3.5 / 3.5 3.5 / 3.5 / 3.5			- -
Ø50 / P = 12 / 12 / 12			
Random			
48 (std.) / 60 (opt.) 76.2 125 300 7 6±0.2		30 (std.) / 40 (opt.) 125 200 350 15 10±0.2	

Technical Data

Technical Data		MV6		
Spindle code		12C	15C	20C[2]
Main spindle				
Spindle taper		40 Taper		
Coolant system				
Coolant tank capacity (Liter)		710		
Pump capacity				
- Nozzle coolant		60L / min, 3.5bar		
- Coolant through spindle		25L/min, 20bar		
- Wash down		60L / min, 4.5bar		
Machine Size				
Height (mm)		3,500		
Floor space W x D (mm)	30 ATC	-		
	40 ATC	-		
	48 ATC	5,755 x 3,720		
	60 ATC	5,755 x 4,120		
Weight (kg)		13,700 (48ATC) 13,800(60ATC)		
Connections				
Main power		220~230V / 50~60 Hz, 380~415V/50~60Hz		
Power consumption (KVA)		35(F)(T) 40(S)	40(F)(T)(S)	40(F)

Note: [1] For detailed specification of Z axis travel 800mm, please refer to page 27 ~ 29.
[2] Only for FANUC control.
*Test condition: values are measured by half of the maximum table load capacity.

MV6			
18M	24M	7.5B	15C[(2)]
40 Taper		50 Taper	
710 60L / min, 3.5bar 25L/min, 20bar 60L / min, 4.5bar			
3,500		3,500	3,400
- - 5,755 x 3,720 5,755 x 4,120		5,755 x 3,820 5,755 x 4,420 - -	
13,700 (48ATC) 13,800(60ATC)		14,000 (30ATC) 14,500 (40ATC)	
220~230V / 50~60 Hz, 380~415V/50~60Hz			
45(F) 55(T) 50(S)		50(F)(T) 45(S)	50(F)

Control: (F): FANUC (T): HEIDENHAIN (S): SIEMENS

Standard / Optional Accessories

Standard / Optional Accessories		MV4 / MV5 / MV6				
Spindle code		12C	15C	20C	18M	24M
FANUC				○		
HEIDENHAIN		○	○	×	○	○
SIEMENS		○	○	×	○	○
Column raiser (150 mm)				○ / × / ×		
Tall column (one piece column) / Z axis travel 800mm				○ / ○ / ○		
Z axis travel 800mm (column raiser)				× / × / ○		
4th 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	×	○	○	●	●
Balance tooling for spindle warm up				●		
Transformer[(1)]				○		
Linear scale				○		
Work probe				○		
Tool length / breakage measurement				○		
Coolant system				●		
Coolant wash down / wash gun				●		
Coolant through spindle 20 bar				●		
Coolant through spindle 50 bar				○		
Cutter air blast				●		
External chip conveyor				●		
Oil-mist collector				○		
Filtration unit				○		
Documentation (USB) [(2)]				●		
Total Enclosure Guard (with Top side cover)				●		
Work light				●		
Machine status light				●		
CE				●		

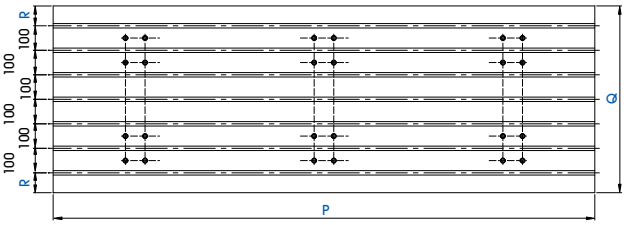
Standard / Optional Accessories	MV4 / MV5 / MV6	
Spindle code	7.5B	15C
FANUC	○	
HEIDENHAIN	○	×
SIEMENS	○	×
Tall column (one piece column) / Z axis travel 800mm	○ / ○ / ×	
Z axis travel 800mm (column raiser)	× / × / ○	
4th axis preparation	●	
50 Taper 30 position tool magazine	●	
50 Taper 40 position tool magazine	○	
ATC auto door	○	
Tooling - BT50	●	
- ISO50 & DIN50	○	
Balance tooling for spindle warm up	●	
Transformer(1)	○	
Linear scale	○	
Work probe	○	
Tool length / breakage measurement	○	
Coolant system	●	
Coolant wash down / wash gun	●	
Coolant through spindle 20 bar	●	
Coolant through spindle 50 bar	○	
Cutter air blast	●	
External chip conveyor	●	
Oil-mist collector	○	
Filtration unit	○	
Documentation (USB) (2)	●	
Total Enclosure Guard (with Top side cover)	●	
Work light	●	
Machine status light	●	
CE	●	

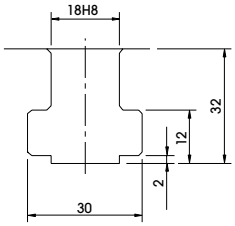
●=Standard ○=Option X=N/A

Note: (1) Transformer as standard or option item will be varied according to control system and power supply condition.
(2) Paper documentation is option.
- Machine specification might be different from the catalog if there is any specification update.

Layout & Dimension

Table dimension



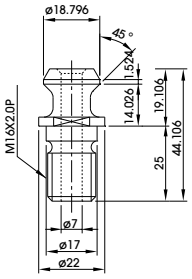


	MV4	MV5	MV6
P	1,400	1,700	2,250
Q	700	700	800
R	100	100	100
T-Slots No.	6	6	7

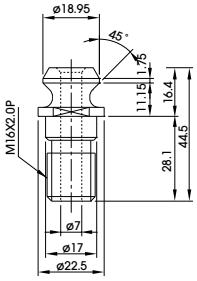
Pull stud and applicable tools

40 Taper

BT 40



ISO (7388-B)



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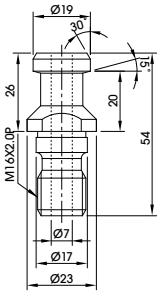
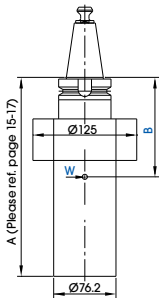
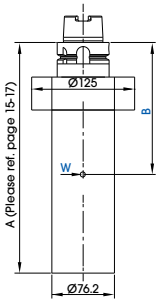


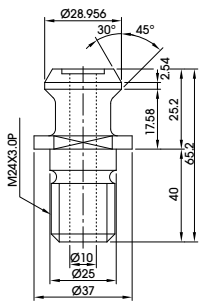




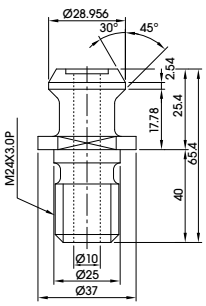
B	tool median point distance	tool middle point distance
W	tool weight	tool weight
MOMENT=W*B(≦ 10.29N-m)		MOMENT=W*B(≦ 9.85N-m)

50 Taper

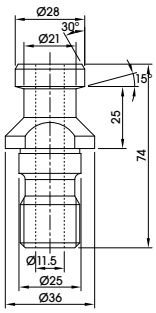
BT 50

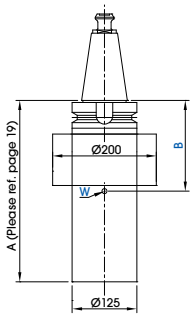


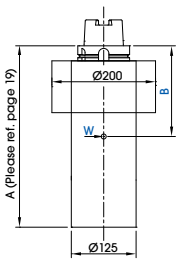
ISO (7388-B)



DIN (69872-A)

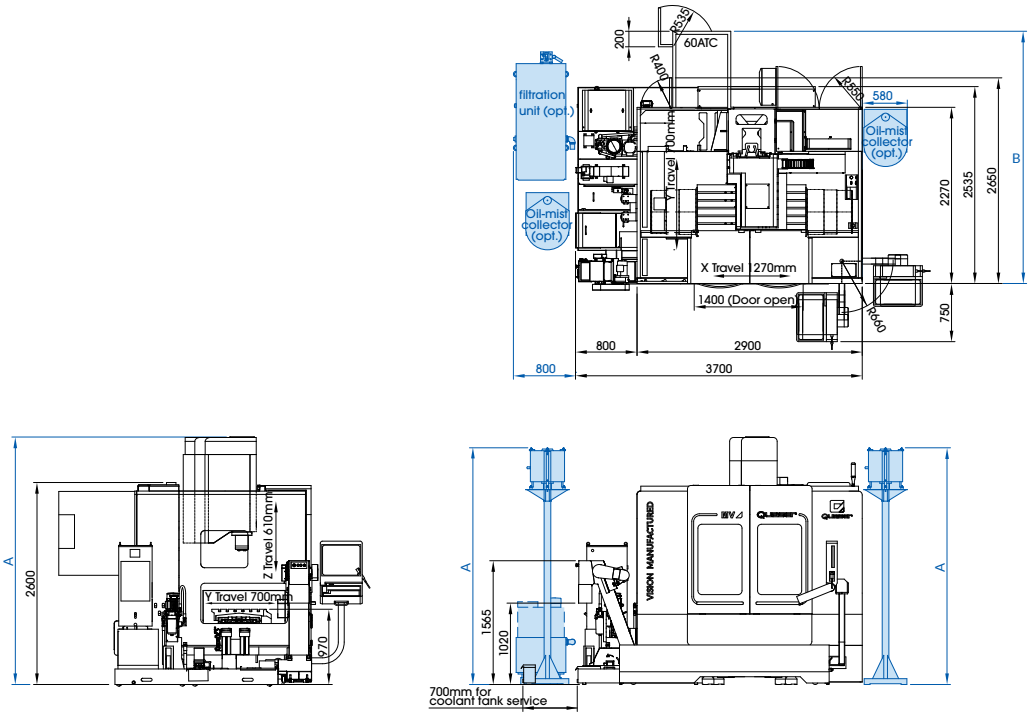






B	tool median point distance
W	tool weight
MOMENT=W*B(≦ 25.72N-m)	

MV4



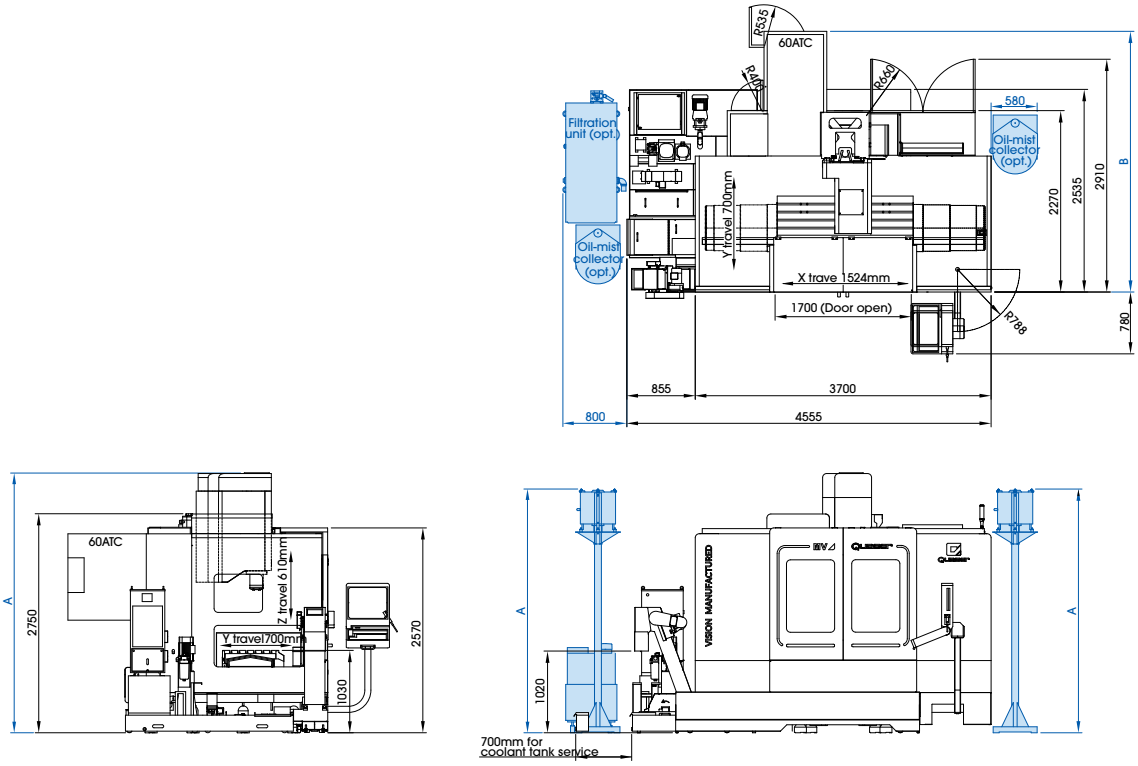
Max. Machine Height	MV4			
Spindle taper	40 Taper		50 Taper	
Spindle code	12C	15C / 20C	7.5B	15C
A Standard column 1. Z axis travel 610mm 2. Spindle nose to table surface 150~760 mm (#40) 190~800 mm (#50)	3,300	3,300	3,650	3,350
A Column raiser (150mm) 1. Z axis travel 610mm 2. Spindle nose to table surface 300~910 mm (#40) 340~950 mm (#50)	3,450	3,450	-	-
A Tall column (one piece column) 1. Z axis travel 800mm 2. Spindle nose to table surface 150~950 mm (#40) 190~990 mm (#50)	3,500	3,500	3,850*	3,550*

*Container shipment is not possible

MV4	B	40 Taper	30 ATC	2,535
			48 ATC	3,000
			60 ATC	3,300
		50 Taper	30 ATC	3,150
			40 ATC	3,700

Layout & Dimension

MV5

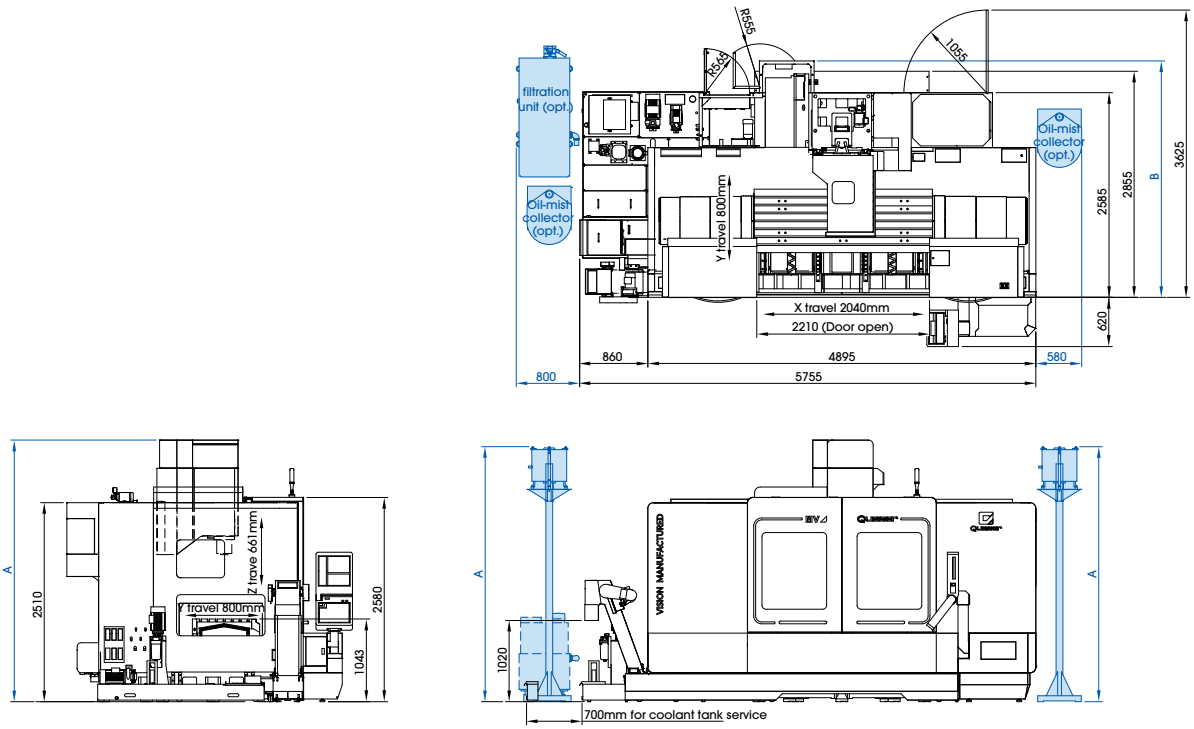


Max. Machine Height	MV5		
Spindle taper	40 Taper	50 Taper	
Spindle code	15C / 20C	7.5B	15C
A Standard column 1. Z axis travel 610mm 2. Spindle nose to table surface 150~760 mm (#40) 190~800 mm (#50)	3,400	3,800	3,400
A Tall column (one piece column) 1. Z axis travel 800mm 2. Spindle nose to table surface 150 ~ 950 mm (#40) 190 ~ 990 mm (#50)	3,600*	4,000*	3,600*

*Container shipment is not possible

MV5	B	40 Taper	48 ATC	3,000
			60 ATC	3,300
		50 Taper	30 ATC	3,150
			40 ATC	3,700

MV6



Max. Machine Height	MV6		
Spindle taper	40 Taper	50 Taper	
Spindle code	15C / 20C	7.5B	15C
A Standard column 1. Z axis travel 661mm 2. Spindle nose to table surface 150~811 mm (#40 & #50)	3,500	3,500	3,400
A Tall column (column raiser) 1. Z axis travel 800mm 2. Spindle nose to table surface 150~950 mm (#40 & #50)	3,650*	3,700*	3,600*

*Container shipment is not possible

MV6	B	40 Taper	48 ATC	3,100
			60 ATC	3,500
		50 Taper	30 ATC	3,200
			40 ATC	3,800

Carbon Reduction & Green Power

Quaser in the future will not only dedicate to technology in new field, but also contribute to escalating Cooperate Social Responsibility, such as obtain carbon neutral within 5 years. Instead of urging, we will lead stakeholders to reach the goal together.

We are trying to implement a sustainable economy, build healthy cities with the world, and create a prosperous future.
Business or Citizens, everyone is accountable to save the world.
We would never achieve it without your support.
Let's create a green future and start it from today, everyday!

ISO 9001 / ISO 14001 / ISO 14952-1

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MV4~6-E-16/12/2024