Quaser

MV1 / MV3

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

Machine Structure 4

Design and Technology

Unique Spindle Technology 6
ATC System 8
Coolant system & Chip management 10
Thermal Management 12
Easy Operation 13

Detailed Info

Technical Data 14
Standard / Optional Accessories 18
Machine Dimensions 22
Carbon Reduction & Green Power 26
QUASER Group 27

Machine Structure

MV1

Travel X / Y / Z: 661 / 572 / 560 (mm)

Motor		MV1				
Spindle code		12C	15C	20C	18M	24M
X / Y / Z (kW)	F	3 / 3 / 4				
	T	3.1 / 3.1 / 4.5	4.5 / 4.5 / 5.4	-	4.5 / 4.5 / 5.4	
	S	3.55 / 4 / 4	3.55 / 4 / 5.5	-	3.55 / 4 / 5.5	

FANUC = F SIEMENS = S HEIDENHAIN = T

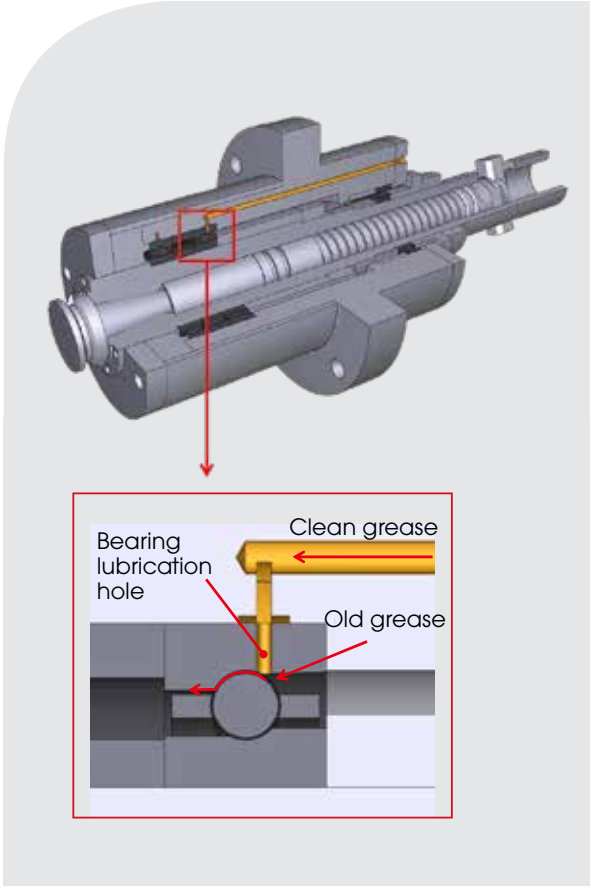
Note: The object might be different from the photo of catalogue if there is any specification update.

MV3

Travel X / Y / Z: 1,020 / 610 / 610 (mm)

	MV3				
	12C	15C	20C	18M	24M
	3 / 3 / 4				
	3.1 / 3.1 / 4.5	4.5 / 4.5 / 5.4	-	4.5 / 4.5 / 5.4	
	3.55 / 4 / 4	3.55 / 4 / 5.5	-	3.55 / 4 / 5.5	

Unique Spindle Technology

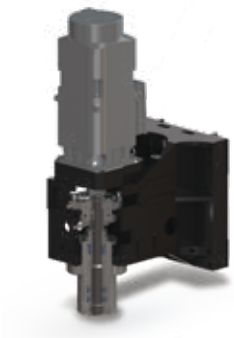


Re-grease supply system is stable and eco-friendly by supplying new grease intermittently to bearings during high speed rotation.

Standard on all models

Spindle	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)
Spindle base speed (min^{-1})	1,500
Spindle power (kW)	18.5
Spindle torque (Nm)	118
HEIDENHAIN (S6-25%)	
Motor	QAN200UH (Compact inverter)
Spindle base speed (min^{-1})	1,500
Spindle power (kW)	17
Spindle torque (Nm)	108
SIEMENS (S6-25%)	
Motor	1PH8133-combi
Spindle base speed (min^{-1})	1,500
Spindle power (kW)	17.6 (S6-40%)
Spindle torque (Nm)	112 (S6-40%)
CTS Availability	
Available NC Adapting	

MV1	● ● ●
MV3	● ● ●



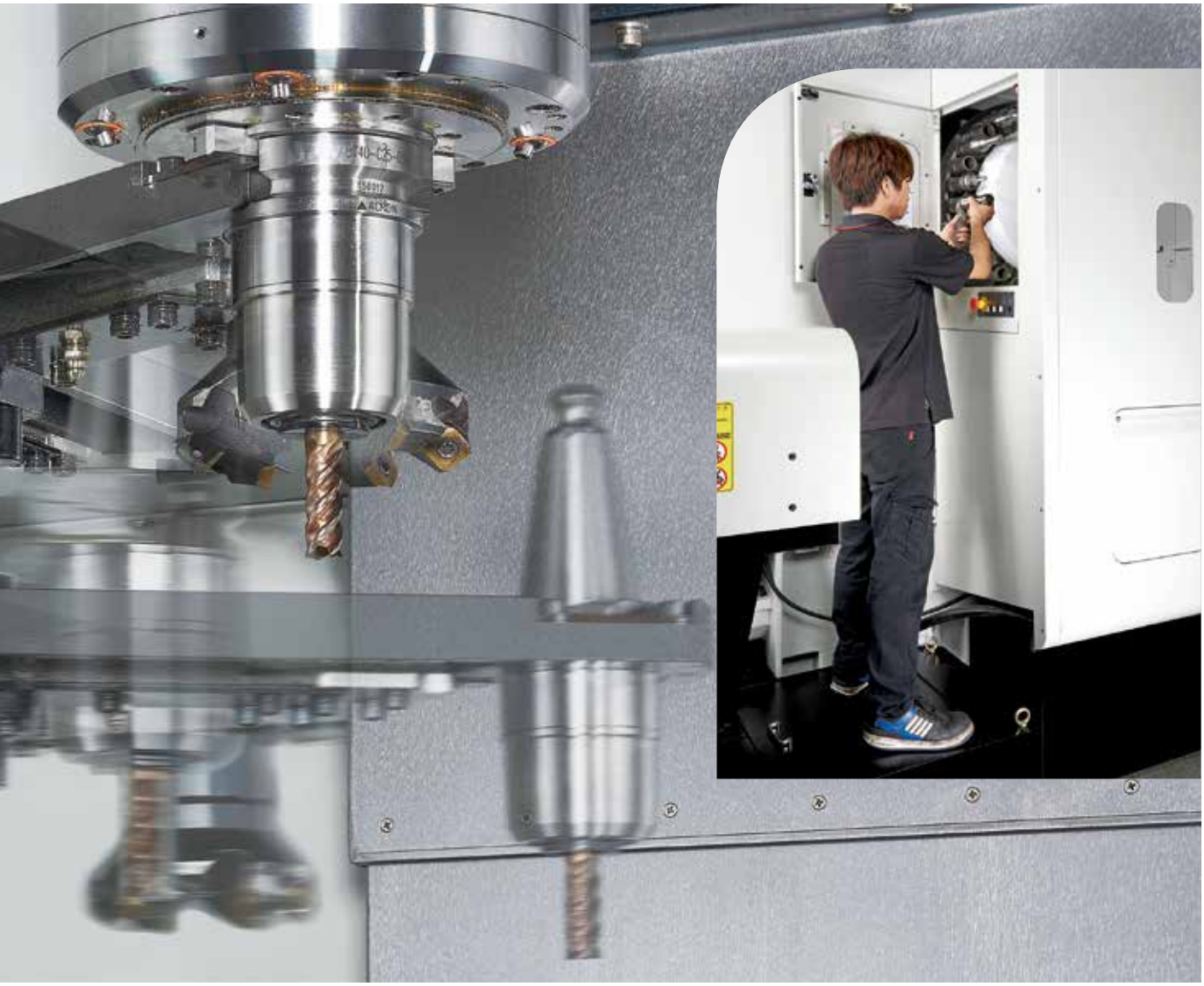
	MC-4.1R	MC-4.0R	MS30-20	MS30-24
	Ø80 / Ø65	Ø70 / Ø60	Ø80	Ø80
	ISO-40 / HSK A63	ISO-40 / HSK A63	HSK A63	HSK A63
	< >=	< >=	<<> >	<<> >
	Ceramic	Ceramic	Ceramic	Ceramic
	Steel	Ceramic	-	-
	Re-grease	Re-grease	Oil air	Oil air
	Coupling	Coupling	Built-in	Built-in
	15,000	20,000	18,000	24,000
	αiIT15/15,000 (SPM30)	αiIL8/20,000 (SPM30)	-	-
	1,400	1,500	2,420	2,650
	26	15	31.7	32.2
	177	125	125	116
	1PH8131	-	-	-
	2,000	-	3,330	3,460
	27.7	-	43.5	42
	132	-	125	116
	1PH8131	-	-	-
	2,000	-	3,330	3,460
	27.7	-	43.5	42
	132	-	125	116
	●			
	(F) FANUC (T) HEIDENHAIN (S) SIEMENS			
	○ ○ ○	○	○ ○ ○	○ ○ ○
	○ ○ ○	○	○ ○ ○	○ ○ ○

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

ATC System

30 ATC (std.)

48 ATC (opt.)



60 ATC (opt.)

ATC auto door (std.)

Coolant system & Chip management

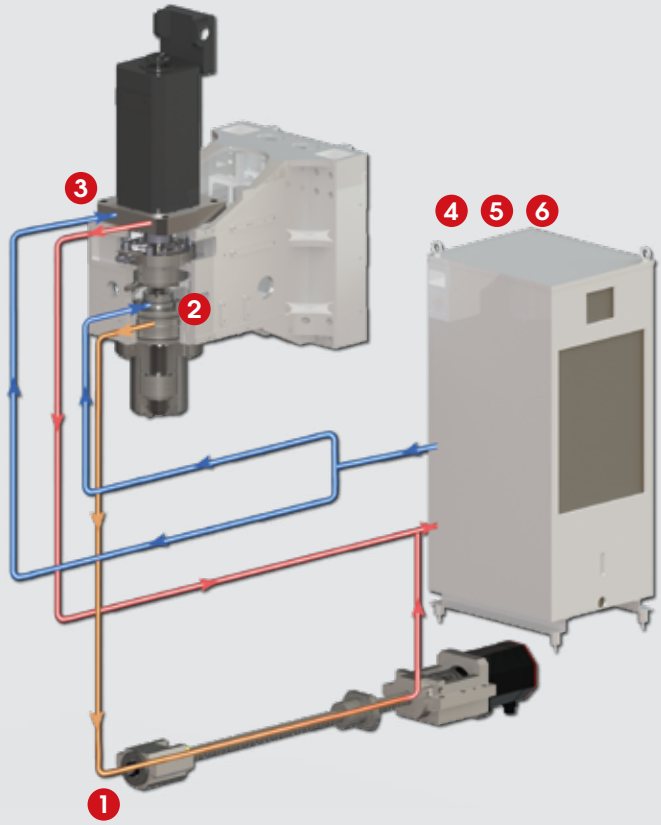
		MV1	MV3
A	Coolant tank	350L	480L
B	Coolant through spindle	8 bar	8 bar
C	Nozzle coolant	3 bar	3 bar
D	Wash gun	Std.	Std.
E	Chip augers	Std.	Std.
F	Chip conveyor – Scraper type	Std.	Std.
G	Filtration unit	Opt.	Opt.
H	High-angle telescopic cover design with excellent chip	Std.	-
I	Wash down	1.1 bar	3 bar

H
I

Thermal Management

To meet the rigorous requirements of working accuracy, here are the Thermal Management.

1. Coolant through ball screw.
2. Spindle cooling circuit.
3. Motor mounting block cooling circuit.
4. Oil chiller 6,000 BTU.
5. Oil chiller 12,000 BTU.
6. Oil chiller 18,000 BTU.



	MV1		MV3	
	Coupling	Built-in	Coupling	Built-in
1	○	○	○	○
2	● Note2	●	● Note2	●
3	●	×	●	×
4	● Note1	×	● Note1	×
5	● Note2	×	● Note2	×
6	×	● Note3	×	● Note3

Note1: 15,000 rpm / ● Note2: 15,000 rpm / ● Note3: 18,000 / 24,000 rpm / ●

Easy Operation

a **Front door opening at**
- MV1: 710 mm
- MV3: 1,050 mm

b **Ergonomic operation panel with adjustable angle**

c **Convenient distance from operator to the spindle**
- MV1: 715 mm
- MV3: 861 mm

d **Table to front door with easy accessibility**
- MV1: 154 mm
- MV3: 255 mm

Technical Data

Technical Data		MV1 / MV3
Spindle code		12C
Main spindle		
Spindle taper		40 Taper
Work range		
Table size (mm)		940 x 550 1,200 x 600
Travel X / Y / Z (mm)		661 / 572 / 560 1,020 / 610 / 610
Spindle nose to table surface (mm)		100 ~ 660 100 ~ 710
Table load capacity (kg)		500
Feed drive		
Feed force X / Y / Z (N)	F	6,283 / 6,283 / 11,519
	T	6,807 / 6,807 / 9,268
	S	11,519 / 14,137 / 14,137
Rapid movement X / Y / Z (m/min)		36 / 36 / 36 32 / 32 / 32
[(1)] Acceleration X / Y / Z (m/s^2)	F	6 / 5 / 4 3.5 / 3.5 / 3
	T	3 / 3 / 2.5 2 / 2 / 2
	S	4.5/ 4 / 5.5 3.5 / 2.5 / 2
Dia. & pitch of the ball screw (mm)		Ø40 / P = 12 / 12 / 12 Ø45 / P = 12 / 12 / 12
Tool changer		
Tool selection		Random
Magazine positions		30 (std.) 48 / 60 (opt.)
Max. tool diameter (mm)		Ø 76.2
w/o adjacent tool (mm)		Ø 150 Ø125
Max. tool length (mm)		300 280
Max. tool weight (kg)		10 7
T to T time-ISO 10791-9 (sec.)-60Hz		1.7±0.2
C to C time-ISO 10791-9 (sec.)-60Hz		4.7±0.2

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

MV1 / MV3			
15C	20C[2]	18M	24M
40 Taper			
940 x 550 1,200 x 600 661 / 572 / 560 1,020 / 610 / 610 100~660 100 ~ 710 500			
4,712 / 4,712 / 8,639 4,712 / 4,712 / 11,519 6,951 / 6,951 /10,249 6,951 / 6,951 /13,666 8,639 / 10,603 / 11,781 48 / 48 / 48 40 / 40 / 36 4.5 / 4 / 4 4 / 4 / 4 4.5 / 3.5 / 5.5 3.5 / 2.5 / 5 5 / 4.5 / 5.5 4 / 2.5 / 5 Ø40 / P = 16 / 16 / 16 Ø45 / P = 16 / 16 / 12			
Random 30 (std.) 48 / 60 (opt.) Ø 76.2 Ø 150 Ø125 300 280 10 7 1.7±0.2 4.7±0.2			

Technical Data

Technical Data	MV1 / MV3
Spindle code	12C
Main spindle	
Spindle taper	40 Taper
Coolant system	
Coolant tank capacity (Liter)	350L 480L
Pump capacity	
-Nozzle coolant	75L / min, 3bar
-Coolant through spindle	25L/min, 8bar
-Wash down	75L / min, 1.1bar 75L / min, 3bar
Machine size	
Height (mm)	3,005 3,030
Floor space W x D (mm)	
30ATC / 48ATC	2,470 x 3,305 2,800 x 3,430
60ATC	2,470 x 3,305 2,800 x 3,450
Weight (kg)	6,000 (30ATC) 6,400 (48ATC) 6,600 (60ATC) 7,090
Connections	
Main power	220~230V / 50~60 Hz, 380~415V/50~60Hz
Power consumption (KVA)	30(F)(T)(S)

Note: (1)Test condition: values are measured by half of the maximum table load capacity.
(2)Only for FANUC control.
- Machine specification might be different from the catalogue if there is any specification update.

MV1 / MV3			
15C	20C[2]	18M	24M
40 Taper			
350L 480L			
75L / min, 3bar			
25L/min, 8bar			
25L/min, 1.1bar 75L / min, 3bar			
3,005 3,030			
2,470 x 3,305 2,800 x 3,430			
2,470 x 3,305 2,800 x 3,450			
6,000 (30ATC) 6,400 (48ATC) 6,600 (60ATC) 7,090			
220~230V / 50~60 Hz, 380~415V/50~60Hz			
30(F) 35(T)(S)	30(F)	40(F) 50(T) 45(S)	

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

Standard / Optional Accessories

Standard / Optional Accessories		MV1				
Spindle code		12C	15C	20C	18M	24M
FANUC 0iMF Plus		○	○	○	○	○
FANUC 31iB Plus		○	○	○	○	○
HEIDENHAIN TNC640		○	○	×	○	○
SIEMENS 828D		○	○	×	○	○
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		●	●	●	●	●
4th axis preparation		●	●	●	●	●
Ø255mm rotary table & tail stock		○	○	○	○	○
Transformer (1)		○	○	○	○	○
Linear scale		○	○	○	○	○
Work probe		○	○	○	○	○
Tool length / breakage measurement		○	○	○	○	○

●=Standard ○=Option X=N/A

Standard / Optional Accessories	MV1				
Spindle code	12C	15C	20C	18M	24M
Coolant system	●	●	●	●	●
Coolant wash down / wash gun	●	●	●	●	●
Coolant through ball screw	○	○	○	○	○
Coolant through spindle 8 bar	●	●	●	●	●
Coolant through spindle 20 bar	○	○	○	○	○
Coolant through spindle 50 bar	○	○	○	○	○
Cutter air blast	●	●	●	●	●
Chip auger	●	●	●	●	●
Scraper external lift-up conveyor	●	●	●	●	●
Oil-mist collector	○	○	○	○	○
Filtration unit	○	○	○	○	○
Documentation (USB) [2]	●	●	●	●	●
Total Enclosure Guard (with Top side cover)	●	●	●	●	●
Work light	●	●	●	●	●
Machine status light	●	●	●	●	●
CE	●	●	●	●	●

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

Standard / Optional Accessories

Standard / Optional Accessories	MV3				
Spindle code	12C	15C	20C	18M	24M
FANUC 0iMF Plus	○	○	○	○	○
FANUC 31iB Plus	○	○	○	○	○
HEIDENHAIN TNC640	○	○	×	○	○
SIEMENS 828D	○	○	×	○	○
40 Taper 30 position tool magazine	●	●	●	●	●
40 Taper 48 position tool magazine	○	○	○	○	○
40 Taper 60 position tool magazine	○	○	○	○	○
ATC auto door	●	●	●	●	●
Tooling – BT40	●	●	○	×	×
Tooling - ISO40 & DIN40	○	○	○	×	×
Tooling - HSK A63	×	○	○	●	●
Balance tooling for spindle warm up	●	●	●	●	●
4th axis preparation	●	●	●	●	●
Ø255mm rotary table & tail stock	○	○	○	○	○
Transformer[(1)]	○	○	○	○	○
Linear scale	○	○	○	○	○
Work probe	○	○	○	○	○
Tool length / breakage measurement	○	○	○	○	○

●=Standard ○=Option X=N/A

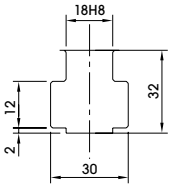
Standard / Optional Accessories	MV3				
Spindle code	12C	15C	20C	18M	24M
Coolant system	●	●	●	●	●
Coolant wash down / wash gun	●	●	●	●	●
Coolant through ball screw	○	○	○	○	○
Coolant through spindle 8 bar	●	●	●	●	●
Coolant through spindle 20 bar	○	○	○	○	○
Coolant through spindle 50 bar	○	○	○	○	○
Cutter air blast	●	●	●	●	●
Chip auger	●	●	●	●	●
Scraper external lift-up conveyor	●	●	●	●	●
Oil-mist collector	○	○	○	○	○
Filtration unit	○	○	○	○	○
Documentation (USB) [2]	●	●	●	●	●
Total Enclosure Guard (with Top side cover)	●	●	●	●	●
Work light	●	●	●	●	●
Machine status light	●	●	●	●	●
CE	●	●	●	●	●

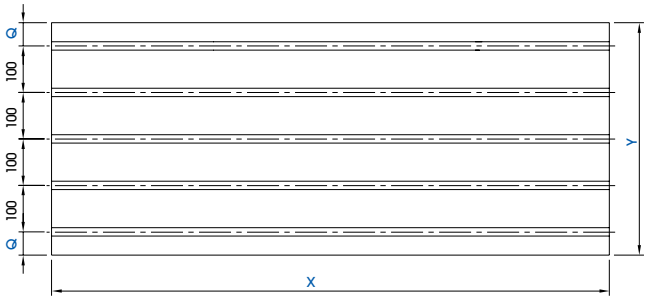
Note: [1] Transformer will be varied according to control system and power supply condition.
[2] Paper documentation is optional.
- Machine specification might be different from the catalog if there is any specification update.

Machine Dimensions

Table dimension

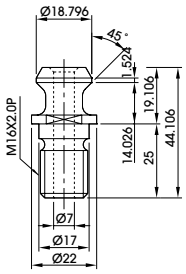
	MV1	MV3
X	940	1200
Y	550	600
Q	75	100



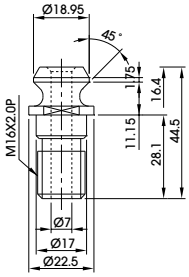


Pull stud and applicable tools

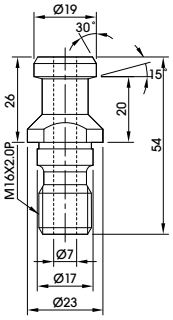
BT 40



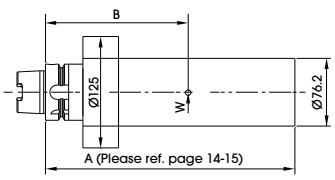
ISO (7388-B)

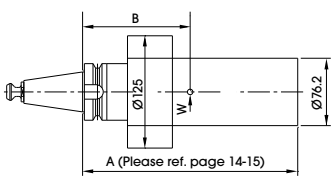


DIN (69872-A)



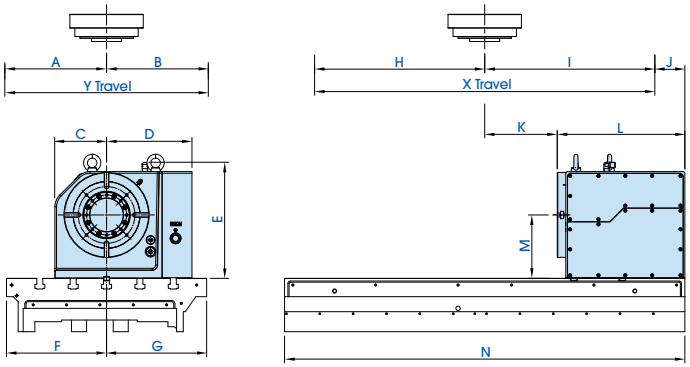
B	tool median point distance
W	tool weight
MOMENT=W*B(≦ 10.29N-m)	MOMENT=W*B(≦ 9.85N-m)



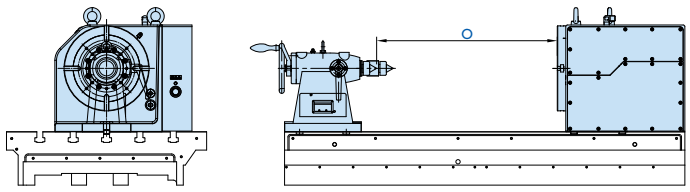


	MV1	MV3
A	286	305
B	286	305
C	155	155
D	256	256
E	348	348
F	375	300
G	175	300
H	330.5	510
I	330.5	510
J	139.5	90
K	87.5	217.5
L	382.5	382.5
M	190	190
N	940	1200
O	281.5	541.5
P	340	550
Q	391	346
R	35	35

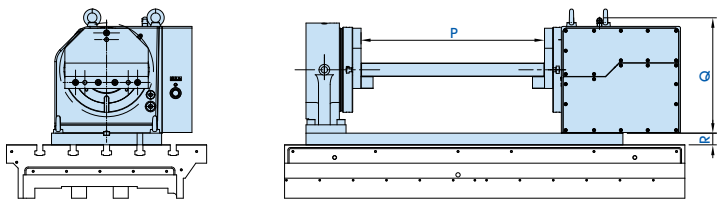
GVA255HBII



GVA255HBII+ST255



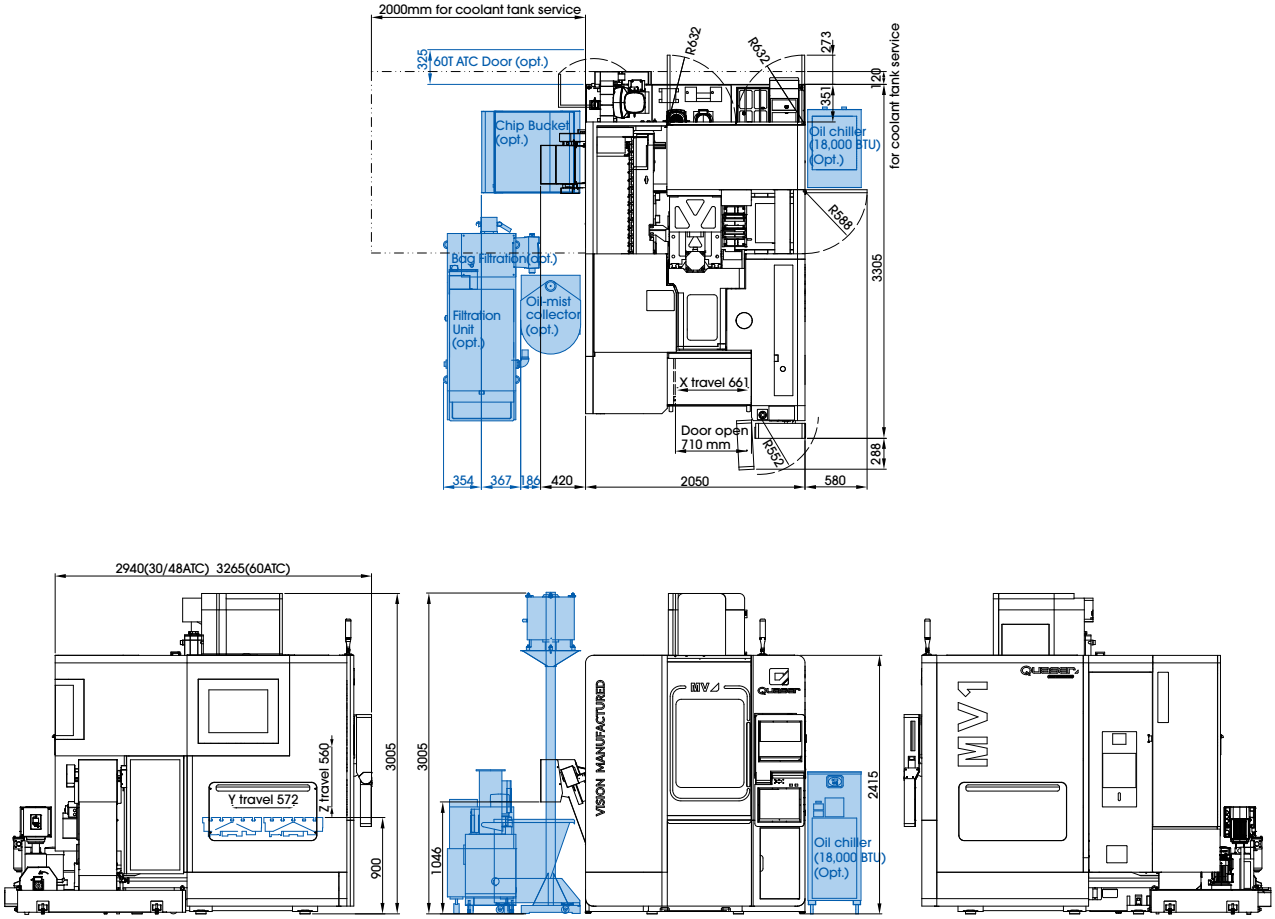
GVA255HBII-Flxture 2



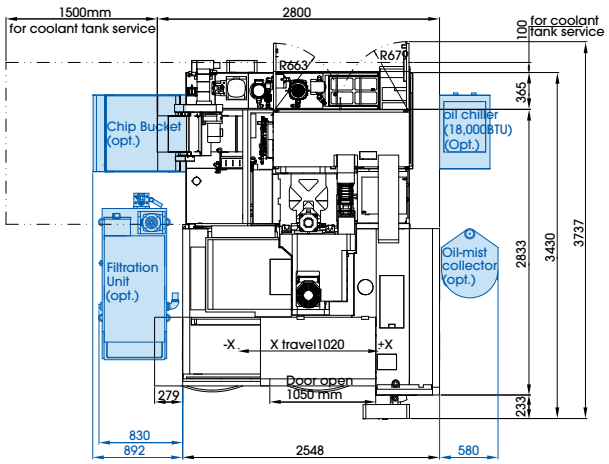
Machine Dimensions

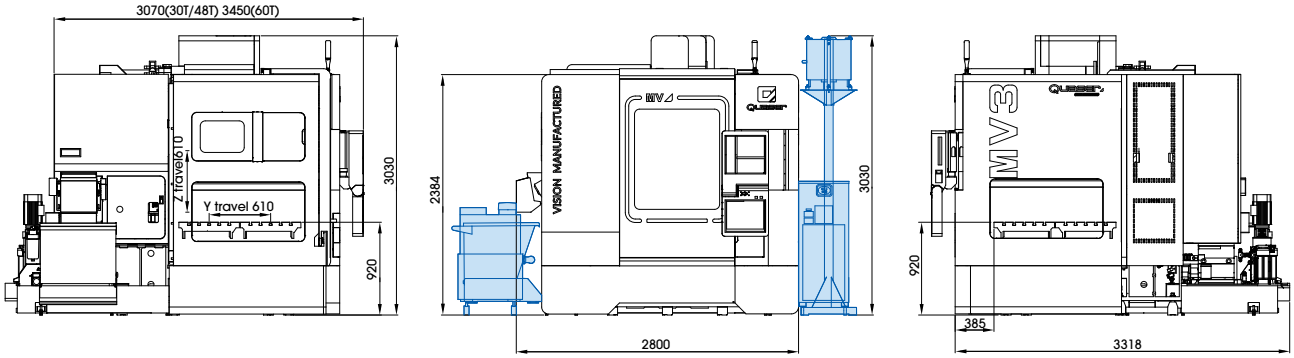
Dimension installation

MV1



MV3


1500mm
for coolant tank service
2800
100
for coolant tank service
R663
R670
365
Chip Bucket (opt.)
oil chiller (18,000BTU) (Opt.)
Filtration Unit (opt.)
Oil-mist collector (opt.)
2833
3430
3737
-X
X travel1020
+X
Door open 1050 mm
279
233
830
892
2548
580


3070(30T/48T) 3450(60T)
Z travel610
Y travel 610
3030
920
2384
VISION MANUFACTURED
3030
2800
MV3
920
385
3318

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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