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# MV1 SERIES

**QUASER MACHINE TOOLS,  
INC.**

Address: No. 3, Gong 6th Rd.,  
Youshih Industrial  
Park, Dajia Dist,  
Taichung City 437,  
Taiwan  
Tel: +886 4 26821277  
Fax: +886 4 26822045  
E-mail: sales@qmt.com.tw  
Web: www.quaser.com

**QUASER EUROPE TECHNIC  
CENTER - SWITZERLAND**

Address: Unterlettenstrasse  
16, CH- 9443 Widnau  
Switzerland  
Tel: +41 71 722 43 43  
Mobile phone: +41798229028  
E-mail: qe@qmt.com.tw

**KUNSHAN QUASER  
MACHINE TOOLS, INC.**

Address: (B) No. 287,  
Kangzhuang Road,  
Zhoushi Town,  
Kunshan City,  
Jiangsu,P.R. China  
Tel: 0512-82627139  
Fax: 0512-82627138  
E-mail: qmtc@qmt.com.tw

**QUASER AMERICA MACHINE  
TOOLS INC.**

Address: 3049 Southcross  
Boulevard,Rock Hill,  
SC, 29730, UNITED STATES  
Tel: +1 803-324-7123  
Fax: +1 888-459-8175  
E-mail: qa@qmt.com.tw

Fold here for filing!

17121901/MACHES, TEL: 04-2473326

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MV154 MV154L  
**Generation I** (2003~2007)



MV154 MV154L  
**Generation II** (2007~2010)



MV154 C / E / P / M MV184 C / D / E / P / M  
**Generation III** (2010~2017)

- C:** Cost effect
- E:** Standard
- P:** Performance
- M:** High precision
- D:** Mold processing

**New!**

## MV134C / E / P



- Enlarge the machining status observation window
- Advanced ergonomics operation panel and adjustable operator panel
- Maintenance door with improved accessibility, suitable for long work piece machining
- Ceiling wash down achieve better chip management(opt.)



**Generation IV**

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

# MV1 SERIES

## MV134 C / E / P

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



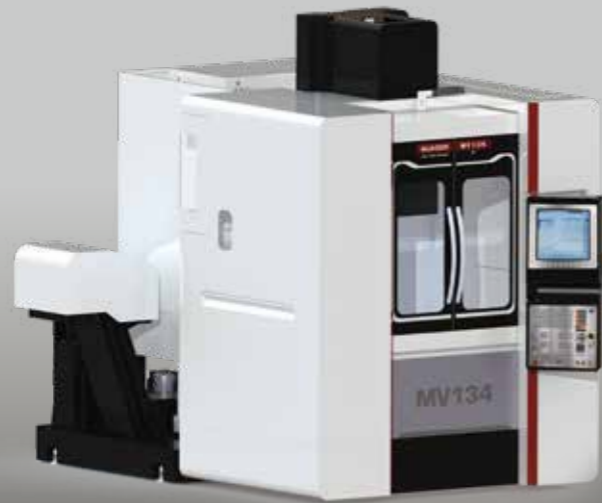
## MV154 C / E / P

Travel X / Y / Z: 762 / 530 / 560 (mm)



## MV154 M

Travel X / Y / Z: 700 / 530 / 560 (mm)



## MV184 C / D / E / P / M

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



## MV184 M

Travel X / Y / Z: 900 / 610 / 610 (mm)



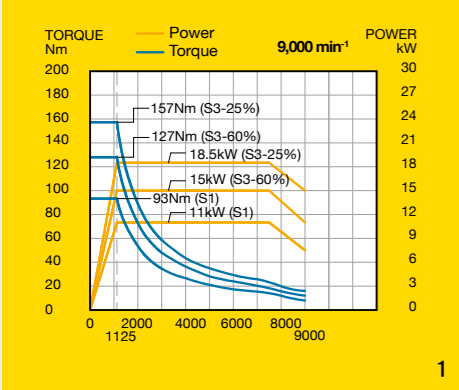
FANUC = **F** SIEMENS = **S** MITSUBISHI = **M** HEIDENHAIN = **T**

Motor	MV134C	MV134E	MV134P				MV154C & MV184C		MV154E & MV184E		MV154P & MV184P				MV154M & MV184M		MV184D				
Spindle code	12C	9B	12B	9B	12B	15C	20C	10C	12C	9B	12B	9B	12B	15C	20C	15C	20C	12C	15C	20C	
X / Y / Z (kW)	<b>F</b>	3 / 3 / 4				-	3 / 3 / 4	3 / 3 / 4	3 / 3 / 4				4 / 4 / 5.5		3 / 4 / 4						
	<b>S</b>	2.7 / 2.7 / 3.1	2.7 / 2.7 / 3.1	2.7 / 2.7 / 4.9		-	-	2.7 / 2.7 / 3.1	-	2.7 / 2.7 / 4.9				-	-	-	-	-	3.3 / 3.1 / 4.9	-	
	<b>M</b>	2.2 / 2.2 / 3	-	-		2.2 / 2.2 / 3		-	-	-				-	-	-	-	-	-	-	-
	<b>T</b>	-	3.1 / 3.1 / 4.5	4.5 / 4.5 / 5.1	4.5 / 4.5 / 5.4	-	-	-	3.1 / 3.1 / 4.5	4.5 / 4.5 / 5.1	4.5 / 4.5 / 5.4	-	5.1 / 5.4 / 5.4	-	-	-	-	-	-	-	

Belt 9K

FANUC

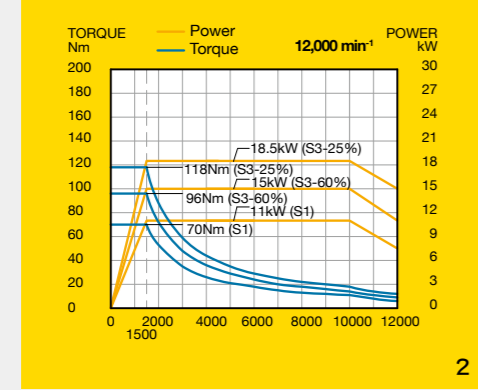
MB-4.0 Motor type:  $\alpha$ 112 / 12,000 ( $\beta$ SVSP-18-B)  
Belt



1

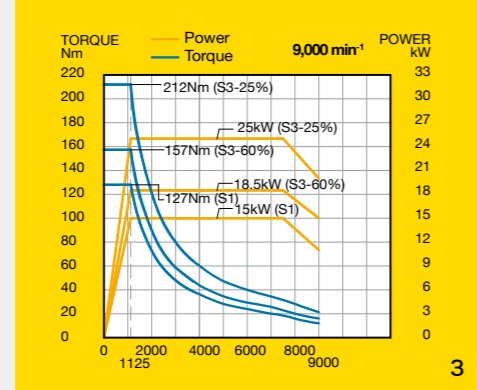
Belt 12K

MB-4.0 Motor type:  $\alpha$ 112 / 12,000 ( $\beta$ SVSP-18-B)  
Belt



2

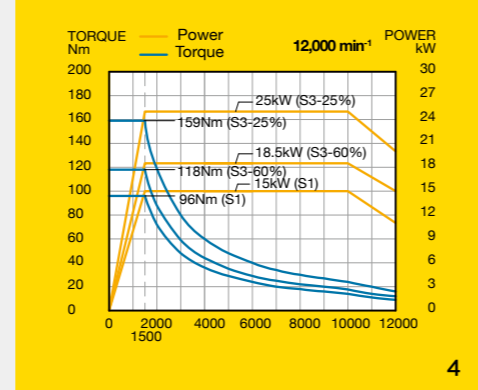
MB-4.0 Motor type:  $\alpha$ 115 / 12,000 (SPM22)  
Belt



3

Belt /Coupling 9K/12K

MB-4.0 Motor type:  $\alpha$ 115 / 12,000 (SPM22)  
Belt



4

Coupling 12K

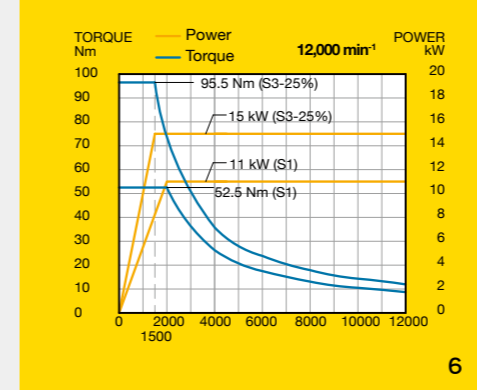
SC-4.2 Motor type:  $\alpha$ 112 / 12,000 ( $\beta$ SVSP-18-B)  
Coupling



5

Coupling 15K

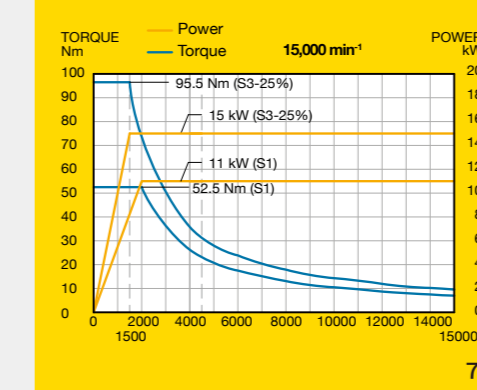
SC-4.2 Motor type:  $\alpha$ 118/15,000 ( $\beta$ SVSP-18-B)  
Coupling



6

Coupling 15K

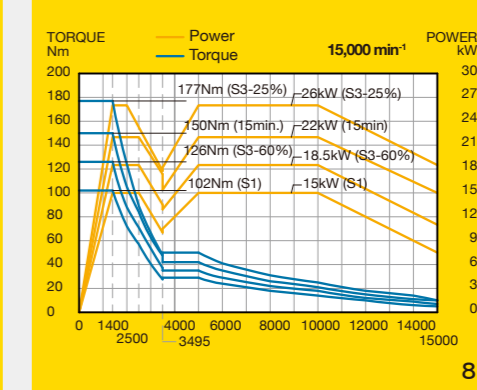
MC-4.1R Motor type:  $\alpha$ 118 / 15000 ( $\beta$ SVSP-18-B)  
Coupling



7

Coupling 15K

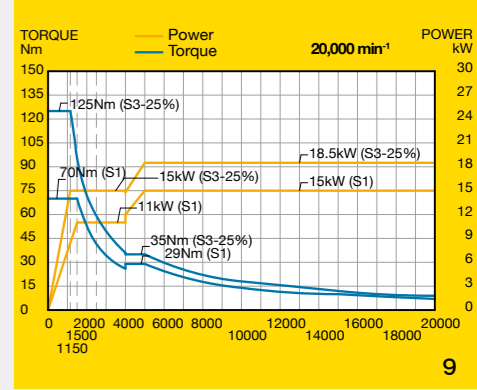
MC-4.1R Motor type:  $\alpha$ 115 / 15,000 (SPM30)  
Coupling



8

Coupling 20K

MC-4.0R Motor type:  $\alpha$ 118 / 20,000 (SPM30)  
Coupling

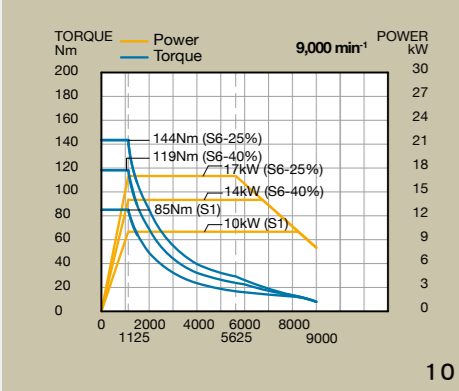


9



MB-4.0

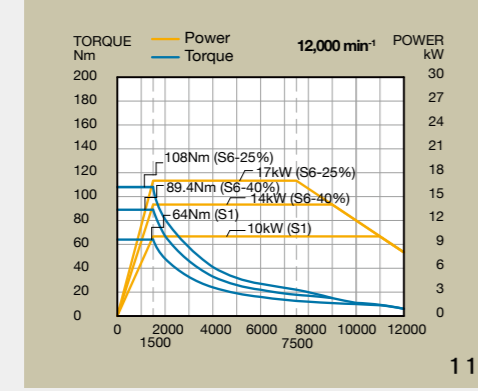
Belt Motor type: QAN200U



10

MB-4.0

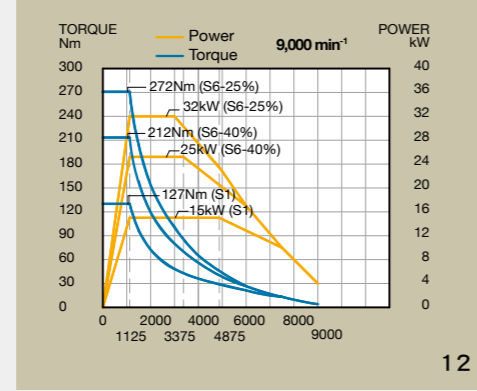
Belt Motor type: QAN200U



11

MB-4.0

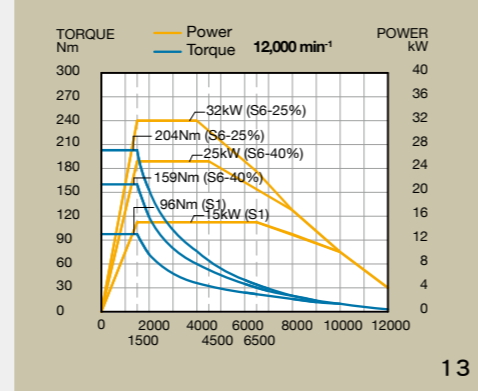
Belt Motor type: QAN260M



12

MB-4.0

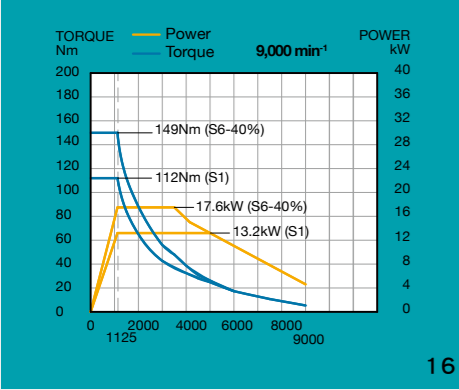
Belt Motor type: QAN260M



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SIEMENS

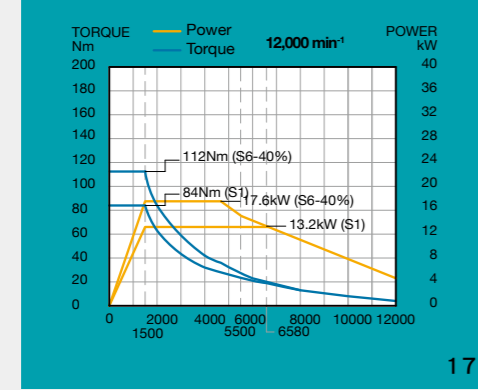
MB-4.0 Motor type: 1PH8133 (Combi 20kw + 18A)  
Belt



16

MB-4.0

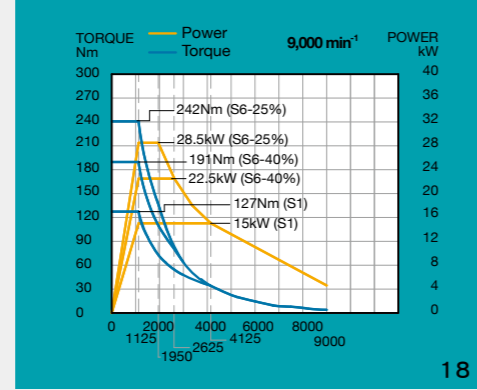
Belt Motor type: 1PH8133 (Combi 20kw + 18A)



17

MB-4.0

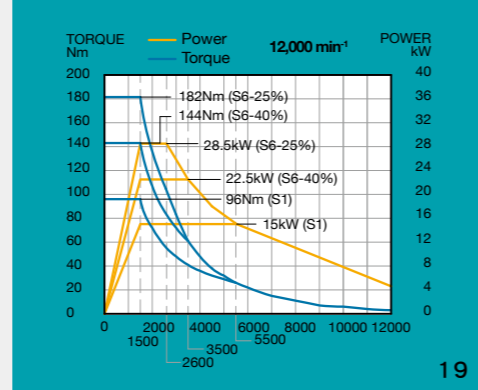
Belt Motor type: 1PH8133



18

MB-4.0

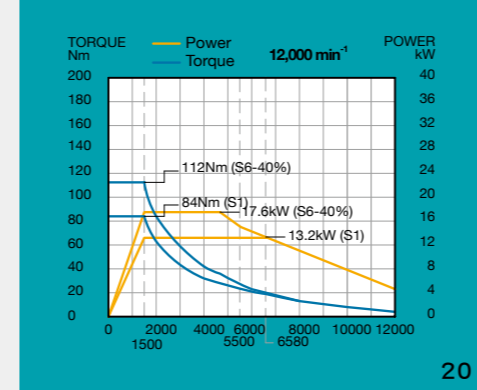
Belt Motor type: 1PH8133



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SC-4.2

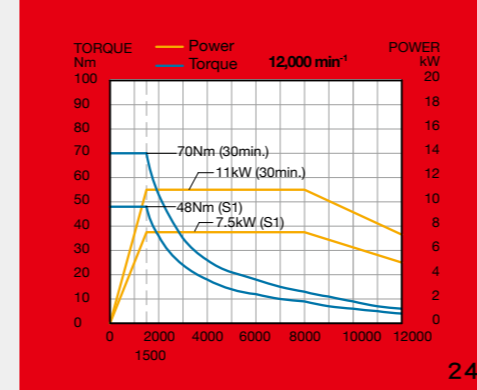
Coupling Motor type: 1PH8133 (combi)



20

SC-4.2

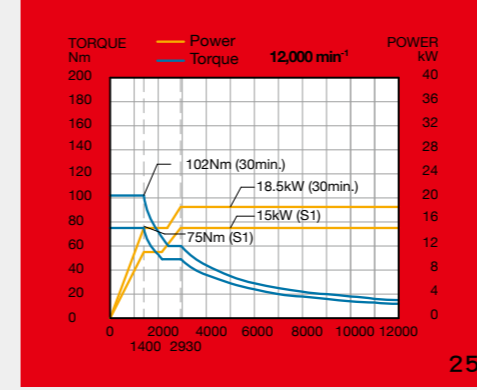
Coupling Motor type: SJ-V11-08ZT-S02



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SC-4.2

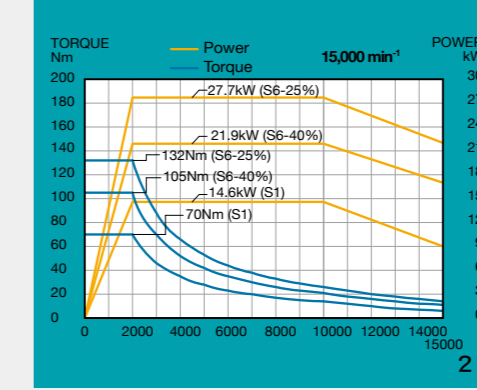
Coupling Motor type: SJ-VKS30-16ZT



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MC-4.1R

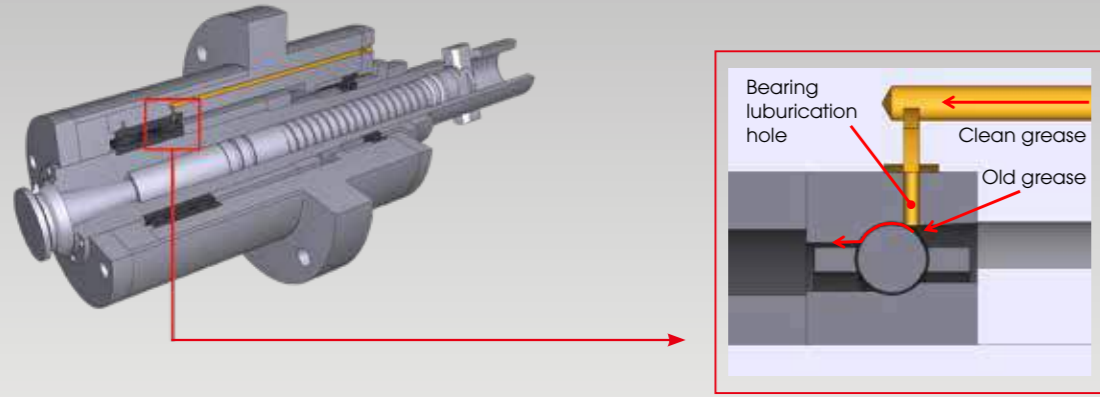
Coupling Motor type: 1PH8131



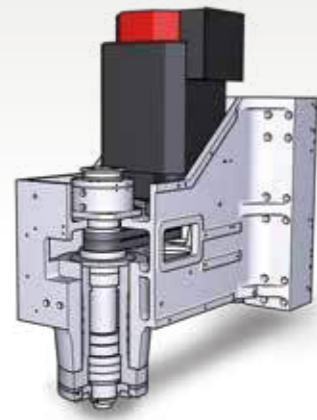
21

# Unique spindle technology

- Re-grease Supply system is designed for stable and Eco friendly by supplying new grease intermittently to the bearing during the high speed rotation.



- Standard on all models



New spindle code	MB-4.0				SC-4.2				MC-4.1R		MC-4.0R
Existing spindle	GB-4.1R				SC-4.1				GC-4.0R		-
Shaft diameter	Ø70 / Ø65				Ø80 / Ø70				Ø80 / Ø70		Ø70 / Ø65
Spindle Taper	ISO-40				ISO-40				ISO-40 / HSK A63		
Bearing arrangement	< > =				<< >>				< > =		< > =
Ball bearing type	Ceramic				Ceramic				Ceramic		Ceramic
Roller bearing type	Steel				-				Steel		Ceramic
Bearing lubrication	Grease packed				Grease packed				Re-Grease		
Transmission	Belt				Coupling				Coupling		
Spindle Speed	9,000	12,000	9,000	12,000	10,000	12,000		15,000		20,000	
<b>FANUC</b>											
Spindle base speed	1,125	1,500	1,125	1,500	-	1,500	1,500	1,500	1,400	1,150	
Spindle output power kW (S3-25%)	18.5		25		-	18.5	15	15	26	15	
Spindle output torque Nm (S3-25%)	157	118	212	159	-	118	95.5	96.5	177	125	
<b>HEIDENHAIN</b>											
Spindle base speed	1,125	1,500	1,125	1,500	-	-	-	2,000		-	
Spindle output power kW (S6-25%)	17		32		-	-	-	27.7		-	
Spindle output torque Nm (S6-25%)	144	108	272	204	-	-	-	132		-	
<b>SIEMENS</b>											
Spindle base speed	1,125	1,500	1,125	1,500	-	1,500		2,000		-	
Spindle output power kW (S6-25%)	17.6		28.5		-	17.6		27.7		-	
Spindle output torque Nm (S6-25%)	149 <sup>(1)</sup>	112 <sup>(1)</sup>	242	182	-	112		132		-	
<b>mitsubishi</b>											
Spindle base speed	-	-	-	-	1,500	1,500	1,500	1,500	-	-	
Spindle output power kW (30min.)	-	-	-	-	15	11	11	18.5	-	-	
Spindle output torque Nm (30min.)	-	-	-	-	96	70	70	102	-	-	
CTS Availability	●	●	●	●	X	X	Opt.		●	●	
Available NC adapting	FANUC = ● HEIDENHAIN = ●				SIEMENS = ● MITSUBISHI = ●						
MV134 C	-	-	-	-	-	5 20 22	6 20 22	-	-	-	
MV134 E	1 16	2 11	-	-	-	-	-	-	-	-	
MV134 P	1 16	2 17	12	13	-	-	6 20	7 14 21	-	9	
MV154C / MV184 C	-	-	-	-	23	5 20	-	6 20 25	-	-	
MV154E / MV184 E	1 16	2 11	-	-	-	-	-	-	-	-	
MV154P / MV184 P	-	-	3 12 18	4 13 19	-	-	-	-	8 14 21	9	
MV154M / MV184 M	-	-	-	-	-	-	-	-	8 14	9	
MV184D	-	-	-	-	-	5	6	-	8 21	9	

Note : <sup>(1)</sup>S6-40%

# ATC system



30 ATC (std.)

48 ATC (opt.)

60 ATC (opt.)

120 ATC (opt.)

ATC auto door (opt.)



# Coolant system & Chip management



		MV134			MV154 / MV184				MV184
		C	E	P	C	E	P	M	D
<b>A</b>	Coolant tank	350L			480L				480L
<b>B</b>	Coolant through spindle	-	8 bar		-	8 bar		20 bar	Opt.
<b>C</b>	Nozzle coolant	3 bar			3 bar				
<b>D</b>	Wash gun	Std.			Std.				
<b>E</b>	Chip augers	Std.			Std.				
<b>F</b>	Chip conveyor	Scraper type	Opt.	Std.	Opt.	Std.		Opt.	
<b>G</b>	Filtration unit	-	Opt.		-	Opt.			
<b>H</b>	High-angle telescopic cover design with excellent chip	Std.			-				
<b>I</b>	Wash down	1.1 bar			3 bar				



# Easy operation



**a** Front door open at  
 - MV134: 730 mm  
 - MV154: 821 mm  
 - MV184: 1,077 mm

**b** Larger opening for service or  
 exchange to auto door for robot

**c** Advanced ergonomics operation  
 panel and adjustable operator panel

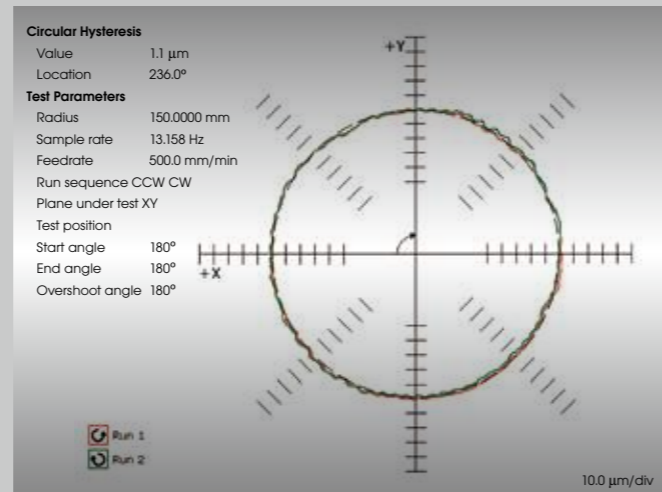
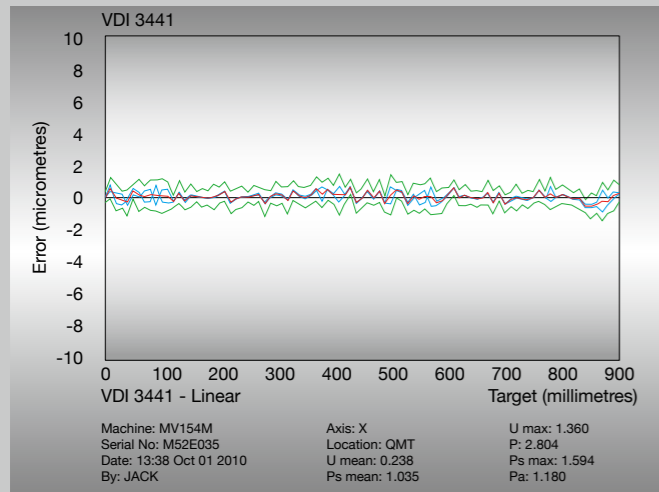
**d** Spindle to front at a convenient  
 - MV134: 715 mm  
 - MV154: 753 mm

**e** - MV184: 861 mm  
 Table to front-easy access  
 - MV134: 154 mm  
 - MV154: 168 mm  
 - MV184: 255 mm



# Precision accuracy

Positioning accuracy=1.180  $\mu\text{m}$  VDI 3441 Feed rate: 500 mm / min, Value: 1.1  $\mu\text{m}$



Note: The above data is sampled randomly selected from M-model machine.

Results

Text island height

Q = 3.0  $\mu\text{m}$

U = 2.5  $\mu\text{m}$

A = 2.0  $\mu\text{m}$

S = 1.5  $\mu\text{m}$

E = 1.0  $\mu\text{m}$

R = 0.5  $\mu\text{m}$

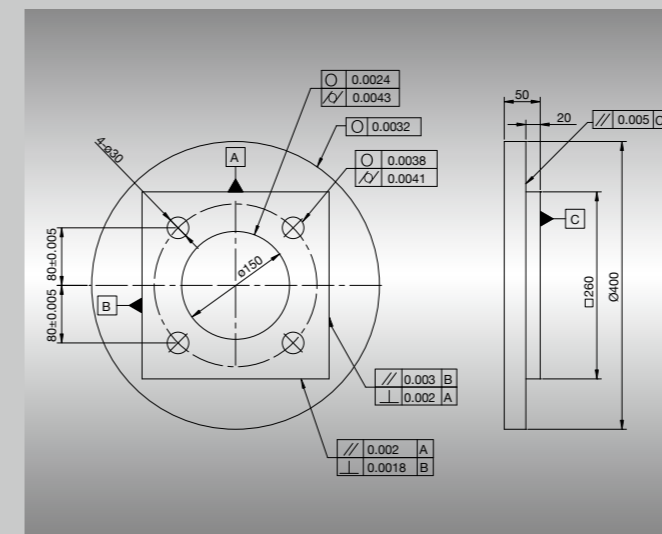


ISO 10791-1 / ISO 10791-4.2	ISO STANDARD	QUASER STANDARD		
		(MV134/C & /E & /P) (MV154/C & /E & /P) (MV184/C & /D & /E & /P)	(MV154M / MV184M)	
Straightness	X	0.015 / Full Stroke	0.010 / Full Stroke	0.005 / <b>0.008</b>
	Y	0.010 / Full Stroke	0.010 / Full Stroke	0.005 / <b>0.005</b>
	Z	0.010 / Full Stroke	0.010 / Full Stroke	0.005 / <b>0.005</b>
Perpendicularity	X-Y	0.02 / 500	0.01 / 500	0.006 / <b>0.006</b>
	Y-Z	0.02 / 500	0.01 / 500	0.006 / <b>0.006</b>
	Z-X	0.02 / 500	0.01 / 500	0.006 / <b>0.006</b>
Positioning accuracy (VDI 3441)	X	0.02	0.01	0.003 / <b>0.005</b>
	Y	0.016	0.008	0.003 / <b>0.003</b>
	Z	0.016	0.008	0.003 / <b>0.003</b>
Positioning repeatability (VDI 3441)	X	0.008	0.004	0.002 / <b>0.003</b>
	Y	0.006	0.004	0.002 / <b>0.002</b>
	Z	0.006	0.004	0.002 / <b>0.002</b>
Spindle run-out on table surface (for 300 mm distance)		0.02 / 300	0.01 / 300	0.005 / <b>0.005</b>
Spindle run-out (with a test bar mounted)	At base	0.01	0.004	0.003 / <b>0.003</b>
	At 300 mm	0.02	0.008	0.006 / <b>0.006</b>
Circularity ( $\varnothing 300$ mm, F5000 & F500)	CW	N.A	0.010	(0.003 / <b>0.003</b> )*
	CCW	N.A	0.010	(0.003 / <b>0.003</b> )*

Note: \*  $\varnothing 300$  mm, F500

Unit: mm

The measuring results indicated in this catalog are provided as an example by random selection.

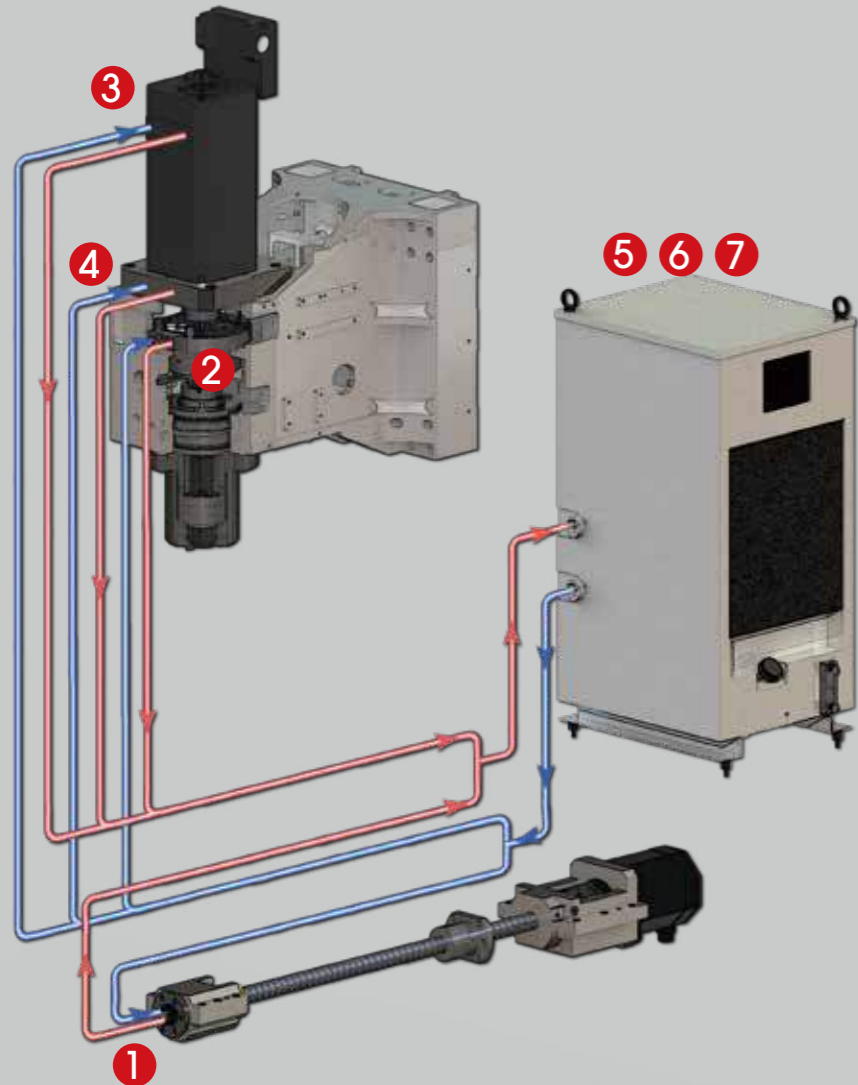


High accuracy machining part by **M model**, and measuring by (LEITZ) pmmc.



# Thermal Management

To meet more and more severe "WORKING ACCURACY" requirements, our "THERMAL MANAGEMENT":



- 1 Coolant through ball screw.
- 2 Spindle cooling circuit.
- 3 Motor cooling circuit.
- 4 Motor mounting block cooling circuit.
- 5 Oil chiller 6,000 BTU.
- 6 Oil chiller 12,000 BTU.
- 7 Oil chiller 24,000 BTU.

Heat generate from spindle and spindle motor are quick remove by cooling circuits on spindle housing, spindle motor, motor mounting plate and spindle head, the heat is exchange by large capacity oil chiller, plus thermal compensation function to reduce thermal impact to minimum.



●=Standard ○=Option x=N/A

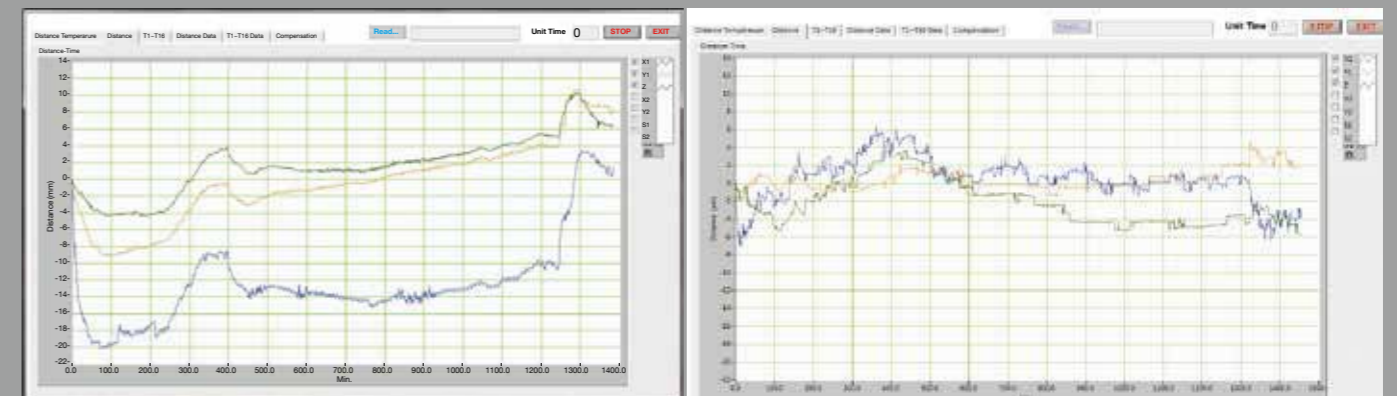
	MV134C	MV134E	MV134P		MV154C/ MV184C		MV154E/ MV184E	MV154P/ MV184P		MV154M/ MV184M	MV184D
	Coupling	Belt	Belt	Coupling	Belt	Coupling	Belt	Belt	Coupling	Coupling	Coupling
1	x	x	○	○	x	x	x	○	○	●	○
2	●	●	●	●	●	●	●	●	●	●	●
3	x	x	x	● Note1	x	x	x	x	● Note3	● Note3	● Note3
4	●	x	x	●	x	●	●	x	●	●	●
5	●	●	●	x	●	●	●	●	x	x	●
6	x	x	x	● Note2	x	x	x	x	● Note2	● Note2	○
7	x	x	x	● Note3	x	x	x	x	● Note1、3	● Note1、3	x

5 Oil chiller: 6,000 BTU    6 Oil chiller: 12,000 BTU    7 Oil chiller: 24,000 BTU  
 Note1: 20,000 rpm / ●    Note2: 15,000 rpm / ●    Note3: 20,000 rpm / ●

## Thermal compensatin on X, Y & Z

Before

After



Control: (F)=FANUC (T)=HEIDENHAIN (M)=MITSUBISHI (S)=SIEMENS

Technical data		MV134		
		C	E	
Spindle code		12C	9B	12B
<b>Work range</b>				
Table size (mm)		940 x 550		
Travel X / Y / Z (mm)		661 / 572 / 560		
Spindle nose to table surface (mm)		100 ~ 660		
Table load capacity (kg)		500		
<b>Feed drive</b>				
Feed force	X / Y / Z (N)	6,283 / 6,283 / 11,519 (F) 6,283 / 6,283 / 10,472 (S) 6,283 / 6,283 / 11,781 (M)	6,283 / 6,283 / 11,519 (F) 6,807 / 6,807 / 9,268 (T)	
Rapid movement	X / Y / Z (m/min)	36 / 36 / 36		
Acceleration	X / Y / Z (m/s <sup>2</sup> )	6 / 5 / 4 (F)(M) 4.6 / 4.4 / 5.7 (S)	6 / 5 / 4 (F) 2.5 / 2.5 / 2.5 (T)	
Dia & pitch of the ball screw		∅40 / P= 12		
<b>Accuracy Positioning / Repeatability</b>				
ISO 230-2		0.008 / 0.004		
JIS 6338 (300 mm)		±0.003 / ±0.002		
VDI 3441		0.008 / 0.004		
<b>Main spindle</b>				
Spindle Taper		BBT40		
Max. spindle speed		12,000	9,000	12,000
<b>Tool changer</b>				
Tool selection		Random		
Magazine positions		30 (std.)	30 (std.) 48 / 60 (opt.)	
Max. tool diameter (mm)		∅76.2		
Max. tool dia. Due to neighbor pots are empty		∅150		
Max. tool length (mm)		300		
Max. tool weight (kg)		10		
T to T time-ISO 10791-9 (sec.) <sup>(1)</sup>		1.7		
C to C time-ISO 10791-9 (sec.) <sup>(1)</sup>		4.1		
<b>Coolant system</b>				
Coolant tank capacity (Liter)		350L		
Pump capacity		75L / min., 3 bar		
- Nozzle capacity		75L / min., 3 bar		
- Coolant through spindle		-	25 L / min., 8 bar	
- Wash down		75L / min., 1.1 bar		
<b>Machine size</b>				
Height (mm)		3,000		
Floor space W x D (mm)		30 ATC	2,050 x 3,141	
		48 / 60ATC	-	2,050 x 3,141
Weight (kg)		6,000 (30ATC)	6,000(30ATC) 6,400(48ATC) 6,600(60ATC)	
<b>Connections</b>				
Main power		220V / 60Hz or 400V / 50Hz		
Power consumption (KVA)		23 (F) 23 (S) 20.6 (M)	23 (F) 24.8 (T)	

Note: <sup>(1)</sup> At 60Hz, and w/o option ATC door. <sup>(2)</sup> Only for FANUC control  
 - Machine specification might be different from the catalogue if there is any specification update.

Main spindle: (B) Belt spindle (C) Coupling spindle

MV134				
P				
9B	12B	15C	20C <sup>(2)</sup>	
940 x 550				
661 / 572 / 560				
100 ~ 660				
500				
4,712 / 4,712 / 8,639 (F) 6,951 / 6,951 / 8,482 (T) 4,712 / 4,712 / 10,603 (S)		4,712 / 4,712 / 8,639 (F) 6,951 / 6,951 / 10,249 (T) 4,712 / 4,712 / 10,603 (S)		4,712 / 4,712 / 8,639 (F)
48 / 48 / 48				
8 / 6 / 4 (F) 4.5 / 3.5 / 5.5 (T) 5.3 / 4.7 / 5.7 (S)		8 / 6 / 4 (F) 4.5 / 3.5 / 5.5 (T) 8 / 5.3 / 5.7 (S)		8 / 6 / 4 (F)
∅40 / P= 16				
0.008 / 0.004				
±0.003 / ±0.002				
0.008 / 0.004				
BBT40				
9,000	12,000	15,000	20,000	
Random				
30 (std.) 48 / 60 (opt.)				
∅76.2				
∅150				
300				
10				
1.7				
4.1				
350L				
75L / min., 3 bar				
25 L / min., 8 bar				
75L / min., 1.1 bar				
3,000				
2,050 x 3,141				
2,050 x 3,141				
6,000(30ATC) 6,400(48ATC) 6,600(60ATC)				
220V / 60Hz or 400V / 50Hz				
23 (F) 31.4 (T) 29.3 (S)		23 (F) 29 (T) 27 (S)		29(F)

●=Standard ○=Option ×=N/A

Standard / Option accessories	MV134						
	C	E	P				
Spindle code	12C	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							
■ HEIDENHAIN TNC620	×	○	○	×	×	×	×
■ SIEMENS 828D	○	×	×	○	○	○	×
■ MITSUBISHI M80 (package A)	○	×	×	×	×	×	×
■ 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 (Double contact)	●	●	●	●	●	●	●
■ Oil chiller	●	●	●	●	●	●	●
■ 4 <sup>th</sup> axis preparation	×	●	●	●	●	●	●
■ Ø255mm rotary table & tail stock	×	○	○	○	○	○	○
■ Remote MPG <sup>(1)</sup>	○	○	○	○	○	○	○
■ Transformer <sup>(2)</sup>	×	○	○	○	○	○	○
■ Linear scale	×	○	○	○	○	○	○
■ Thermal compensation	×	×	×	×	×	○	○
■ Work probe receive OMI-2T	×	○	○	○	○	○	○
■ Work probe	×	○	○	○	○	○	○
■ Tool length / breakage measurement	○	○	○	○	○	○	○
■ Coolant system	●	●	●	●	●	●	●
■ Coolant wash down / wash gun	●	●	●	●	●	●	●
■ Air 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	●	●	●	●	●	●	●
■ External chip conveyor (Scraper type)	○	●	●	●	●	●	●
■ External chip conveyor (Hinge type)	○	○	○	○	○	○	○
■ External chip conveyor (Scraper type drum)	○	○	○	○	○	○	○
■ External chip conveyor (Hinge type drum)	○	○	○	○	○	○	○
■ Oil-mist collector	○	○	○	○	○	○	○
■ Bag filtration	×	○	○	○	○	○	○
■ Filtration unit	×	○	○	○	○	○	○
■ Documentation (paper) <sup>(3)</sup>	○	○	○	○	○	○	○
■ Total Enclosure Guard (with Top side cover)	●	●	●	●	●	●	●
■ Foundation bolts & blocks	●	●	●	●	●	●	●
■ Work light	●	●	●	●	●	●	●
■ Machine status light	●	●	●	●	●	●	●
■ CE & EMC <sup>(4)</sup> / GB	○	○	○	○	○	○	○

Note: <sup>(1)</sup> HEIDENHAIN as standard.

<sup>(2)</sup> Transformer as standard or option item will be varied according to control system and power supply condition.

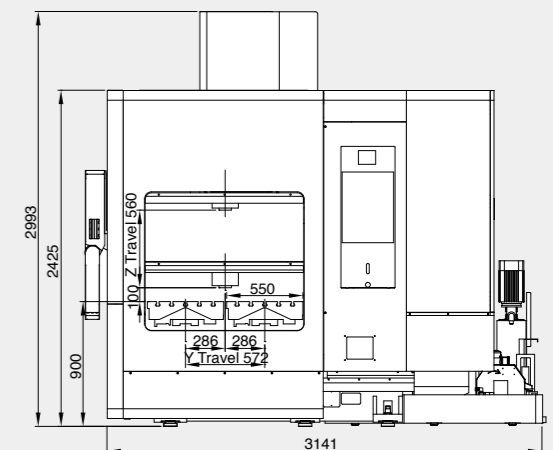
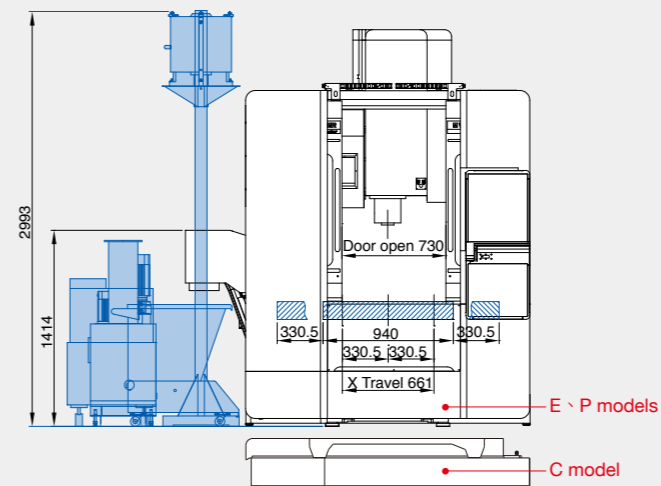
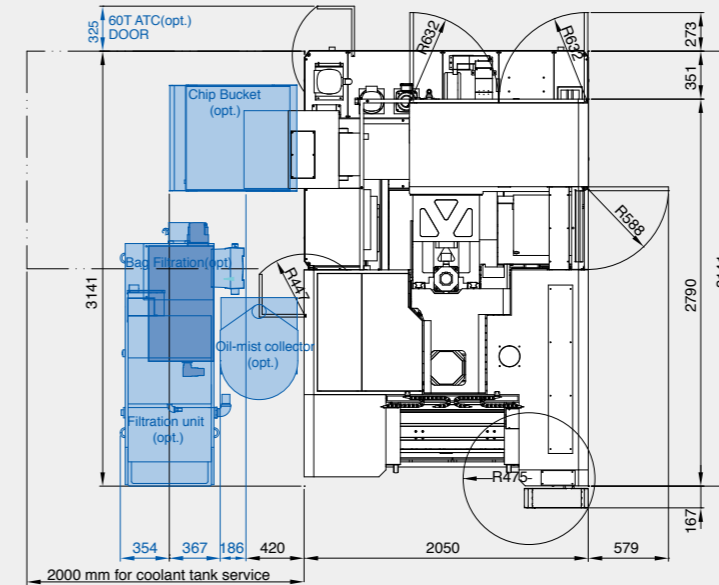
<sup>(3)</sup> By CD-ROM <sup>(4)</sup> Standard for EU area except C type.

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

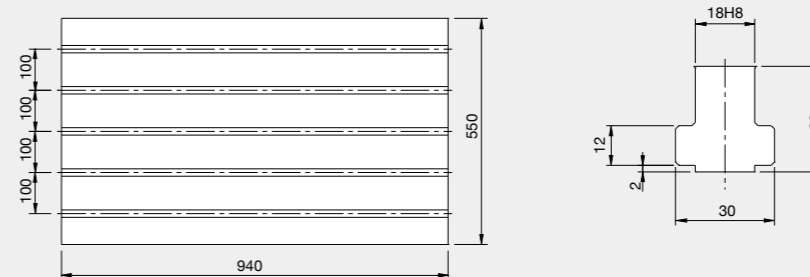
# Machine Dimensions

## MV134

### Installation dimension



### Table dimension



Control: (F)=FANUC (T)=HEIDENHAIN (M)=MITSUBISHI (S)=SIEMENS

Main spindle: (B) Belt spindle (C) Coupling spindle

Technical data	MV154 / MV184			
	C		E	
Spindle code	10C	12C	9B	12B
<b>Work range</b>				
Table size (mm)	900 x 500 1,200 x 600			
Travel X / Y / Z (mm)	762 / 530 / 560 1,020 / 610 / 610			
Spindle nose to table surface (mm)	150 ~ 710 100 ~ 710			
Table load capacity (kg)	500			
<b>Feed drive</b>				
Feed force X / Y / Z (N)	F	-	6,283 / 6,283 / 11,519	4,712 / 4,712 / 11,519
	T	-	-	6,807 / 6,807 / 13,902
	M	6,283 / 6,283 / 17,671	-	-
	S	-	4,712 / 4,712 / 15,708	-
Rapid movement X / Y / Z (m/min)	32 / 32 / 24 (F) (M) (S)		40 / 40 / 36 (F) 32 / 32 / 24 (T)	
Acceleration X / Y / Z (m/s <sup>2</sup> )	F	-	4 / 4 / 3	5 / 4 / 4
	T	-	-	2 / 2 / 2
	M	2.9 / 2.9 / 2.8	-	-
	S	-	4 / 3 / 2	-
Dia. & pitch of the ball screw	Ø45 / P = 12 / 12 / 12 (F) Ø45 / P = 12 / 12 / 8 (M) Ø45 / P = 16 / 16 / 8 (S)		Ø45 / P = 16 / 16 / 12 (F) Ø45 / P = 12 / 12 / 8 (T)	
<b>Accuracy Positioning / Repeatability</b>				
ISO 230-2	0.008 / 0.004			
JIS 6338 (300 mm)	±0.003 / ±0.002			
VDI 3441	0.008 / 0.004			
<b>Main spindle</b>				
Spindle model	40 Taper			
Max. spindle speed	10,000	12,000	9,000	12,000
<b>Tool changer</b>				
Tool selection	Random			
Magazine positions	30		30 (std.) 48 & 60 (opt.)	
Max. tool diameter	76.2			
w/o adjacent tool	125			
Max. tool length	280			
Max. tool weight	7			
CTC time -ISO 10791-9 (sec.) <sup>(1)</sup>	5 (F) 4 (M) 5.5 (S)		4 (F) 5 (T)	
<b>Coolant system</b>				
Coolant tank capacity (Liter)	480L			
Pump capacity <sup>(1)</sup>	75 L / min., 3 bar			
- Nozzle coolant	75 L / min., 3 bar			
- Through spindle coolant	-	25 L / min., 8 bar		
- Wash down	75 L / min., 3 bar			
<b>Machine size</b>				
Height (mm)	3,025 / 3,070		2,860	
Floor space W x D (mm)	30 ATC	2,100 x 3,036 / 2,548 x 3,240		2,663 x 3,135 / 2,912 x 3,339
	48 / 60ATC	-		2,663 x 3,135 / 2,663 x 3,240 2,912 x 3,339 / 2,912 x 3,349
Weight (kg)	6,000-6,300 / 6,990		6,100-6,400 / 7,090	
<b>Connections</b>				
Main power	200V / 60Hz or 400V / 50Hz			
Power consumption (KVA)	20 (M)	16 (F) 20 (M) 29 (S)	20 (F) 21 (T)	

MV154 / MV184						MV184		
P			M			D		
9B	12B	15C	20C <sup>(2)</sup>	15C	20C <sup>(2)</sup>	12C	15C	20C <sup>(2)</sup>
900 x 500 1,200 x 600						1,200 x 600		
762 / 530 / 560 1,020 / 610 / 610			700 / 530 / 560 900 / 610 / 610			1,020 / 610 / 610		
150 ~ 710 100 ~ 710						100 ~ 710		
500						500		
4,712 / 4,712 / 11,519			17,279 / 17,279 / 23,562			9,425 / 17,279 / 17,279		
6,951 / 6,951 / 11,310		6,951 / 6,951 / 13,666		16,965 / 20,499 / 20,499		-		
-						-		
4,712 / 4,712 / 14,137			-			-	12,566 / 15,708 / 21,206	-
40 / 40 / 36 (F) (T) (S)			24 (F) (T)			24 / 24 / 24		
6 / 5 / 4			10 / 10 / 8.5			3 / 3 / 3		
5 / 4 / 5			10 / 10 / 8.5			-		
-						-		
6 / 5 / 5			-			-	2.2 / 2.2 / 3	-
Ø45 / P = 16 / 16 / 12			Ø45 / P = 8 / 8 / 8			Ø45 / P = 8 / 8 / 8		
0.008 / 0.004						0.008 / 0.004		
±0.003 / ±0.002						±0.003 / ±0.002		
0.008 / 0.004						0.008 / 0.004		
40 Taper						40 Taper		
9,000	12,000	15,000	20,000	15,000	20,000	12,000	15,000	20,000
Random						Random		
30 (std.) 48 & 60 (opt.)						30 (std.) 48 & 60 (opt.)		
76.2			76.2			76.2		
125			125			125		
280			280			280		
7			7			7		
4 (F) 4.5 (T) 5.5 (S)			4 (F) 5 (T)			4		
480L						480L		
75 L / min., 3 bar						75 L / min., 3 bar		
25 L / min., 8 bar			25 L / min., 20 bar			-		
75 L / min., 3 bar						75 L / min., 3 bar		
2,860		3,025 / 3,070		3,025 / 3,070		3,070		
2,663 x 3,135 2,912 x 3,339						2,912 x 3,339		
2,663 x 3,135 / 2,663 x 3,240 2,912 x 3,339 / 2,912 x 3,349						2,912 x 3,339 / 2,912 x 3,349		
6,100-6,400 / 7,090						6,890		
200V / 60Hz or 400V / 50Hz						200V / 60Hz or 400V / 50Hz		
25 (F) (T) 29 (S)		33 (F) (T) 38 (S)		33 (F) (T)		23 (F)	33 (F) 29 (S)	33 (F)

Note: <sup>(1)</sup> At 60Hz. <sup>(2)</sup> Only for FANUC control.

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

●=Standard ○=Option x=N/A

Standard / Option accessories	MV154 / MV184			
	C		E	
Spindle code	10C	12C	9B	12B
■ 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	×	×	×	×
■ HEIDENHAIN TNC620	×	×	○	○
■ SIEMENS 828D	×	○	×	×
■ MITSUBISHI M80 (package A)	○	○	×	×
■ MITSUBISHI M830	○	○	×	×
■ 40 Taper 30 position tool magazine	●	●	●	●
■ 40 Taper 48 position tool magazine	×	×	○	○
■ 40 Taper 60 position tool magazine	×	×	○	○
■ 40 Taper 120 position tool magazine <sup>(5)</sup>	×	×	×	×
■ 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)	●	●	●	●
■ Oil chiller	●	●	●	●
■ 4 <sup>th</sup> axis preparation	×	×	●	●
■ Ø255mm rotary table & tail stock	×	×	○	○
■ Remote MPG <sup>(1)</sup>	○	○	○	○
■ Transformer <sup>(2)</sup>	○	○	○	○
■ Linear scale	×	×	○	○
■ Thermal compensation	×	×	×	×
■ Work probe receive OMI-2T	×	×	○	○
■ Work probe	×	×	○	○
■ Tool length / breakage measurement	○	○	○	○
■ Coolant system	●	●	●	●
■ Coolant wash down / wash gun	●	●	●	●
■ Air 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	●	●	●	●
■ External chip conveyor (Scraper type)	○	○	●	●
■ External chip conveyor (Hinge type)	○	○	○	○
■ External chip conveyor (Scraper type drum)	○	○	○	○
■ External chip conveyor (Hinge type drum)	○	○	○	○
■ Oil-mist collector	○	○	○	○
■ Bag filtration	×	×	○	○
■ Filtration unit	×	×	○	○
■ Documentation (paper) <sup>(3)</sup>	○	○	○	○
■ Total Enclosure Guard (with Top side cover)	●	●	●	●
■ Foundation bolts & blocks	●	●	●	●
■ Work light	●	●	●	●
■ Machine status light	●	●	●	●
■ CE & EMC <sup>(4)</sup> / GB	○	○	○	○

MV154 / MV184						MV184		
P				M		D		
9B	12B	15C	20C	15C	20C	12C	15C	20C
×	×	×	×	×	×	●	○	○
×	×	×	×	×	×	●	●	●
○	●	○	○	●	○	×	×	×
○	○	○	○	○	○	×	×	×
○	○	○	×	○	×	×	×	×
×	×	×	×	×	×	×	×	×
○	○	○	×	×	×	×	○	×
×	×	×	×	×	×	×	×	×
×	×	×	×	×	×	×	×	×
●	●	●	●	●	●	●	●	●
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	×	×	×
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
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○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○

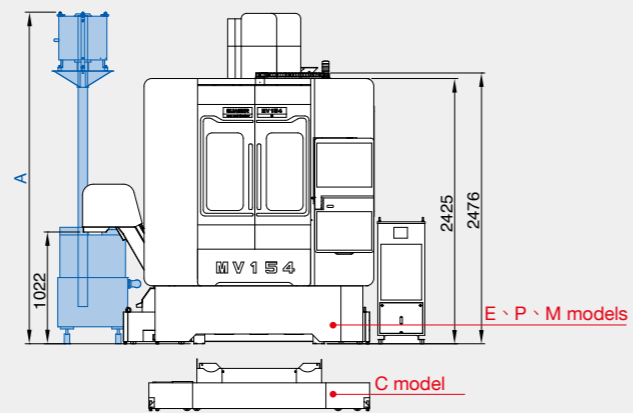
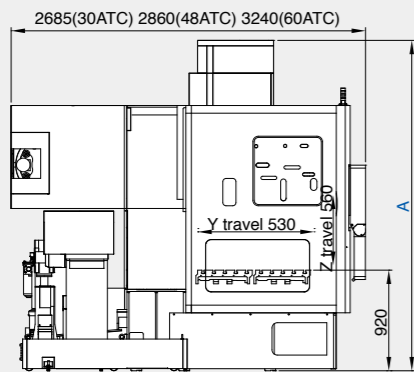
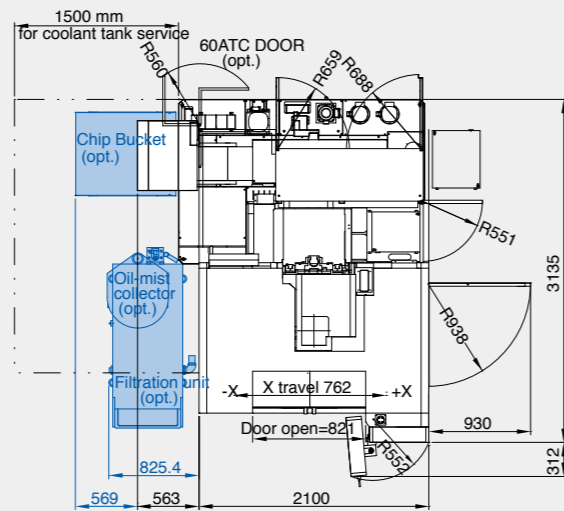
Note: <sup>(1)</sup> HEIDENHAIN as standard.  
<sup>(2)</sup> Transformer as standard or option item will be varied according to control system and power supply condition.  
<sup>(3)</sup> By CD-ROM <sup>(4)</sup> Standard for EU area except C type. <sup>(5)</sup> Only for MV184 coupling spindle  
 - Machine specification might be different from the catalog if there is any specification update.

# Machine Dimensions

## MV154

### Installation dimension

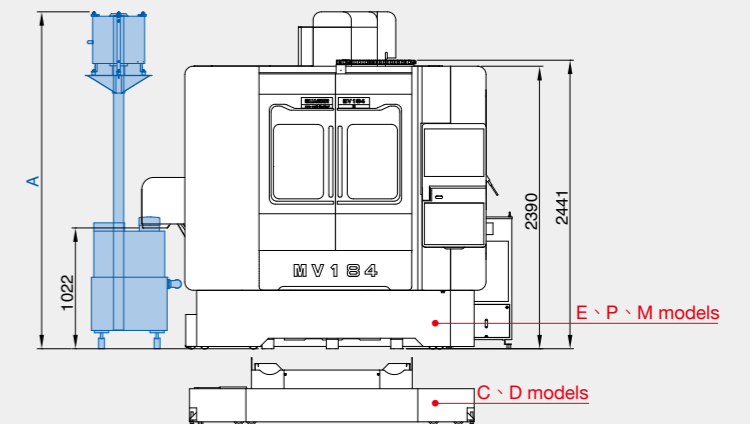
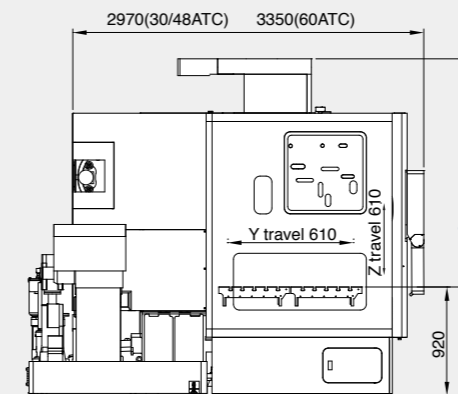
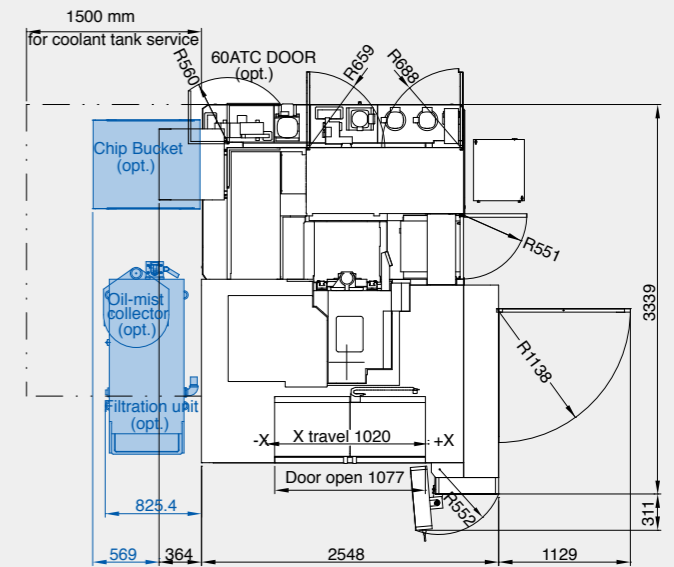
A	10C/12C/15C/20C	3,025
	9B / 12B	2,860



## MV184

### Installation dimension

A	10C/12C/15C/20C	3,070
	9B / 12B	2,860



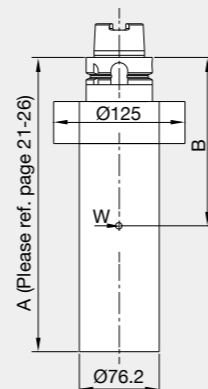
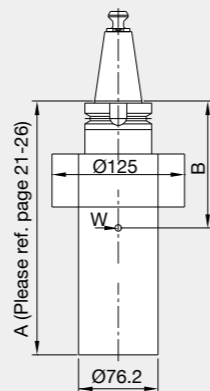
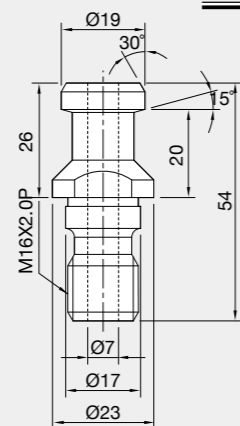
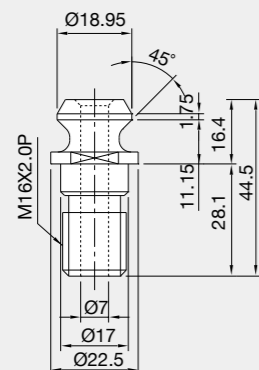
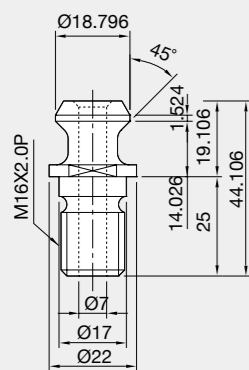
### Pull stud and applicable tools

BT 40

ISO (7388-B)

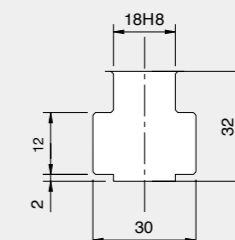
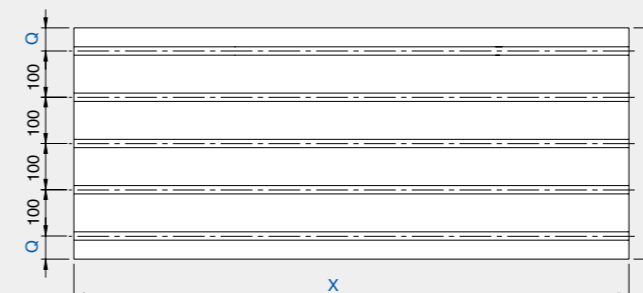
DIN (69872-A)

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



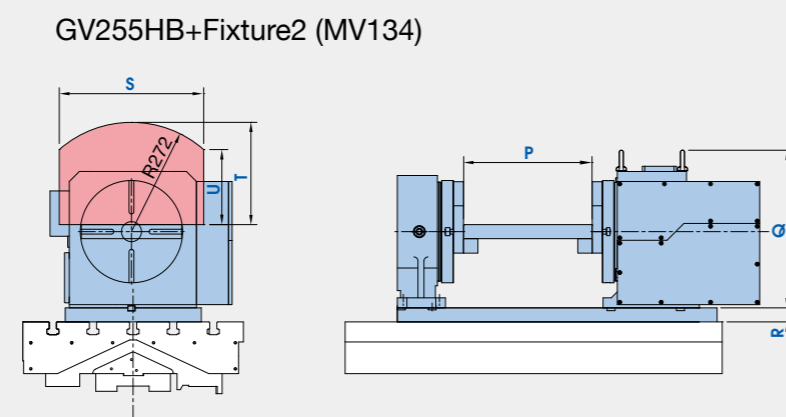
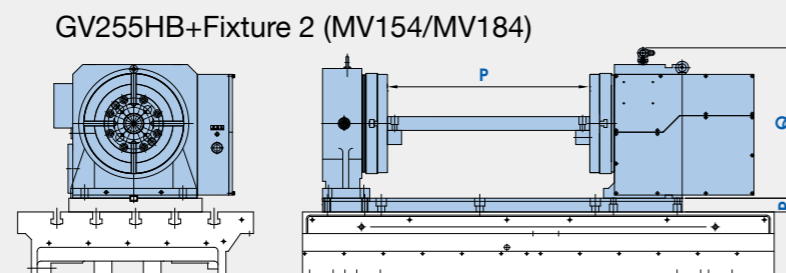
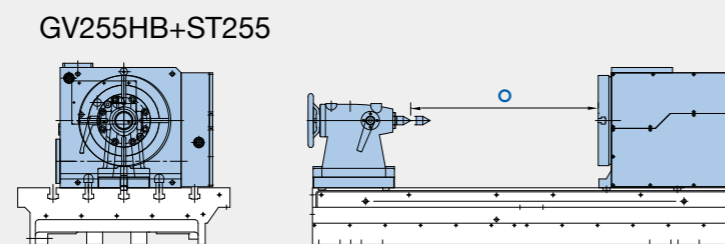
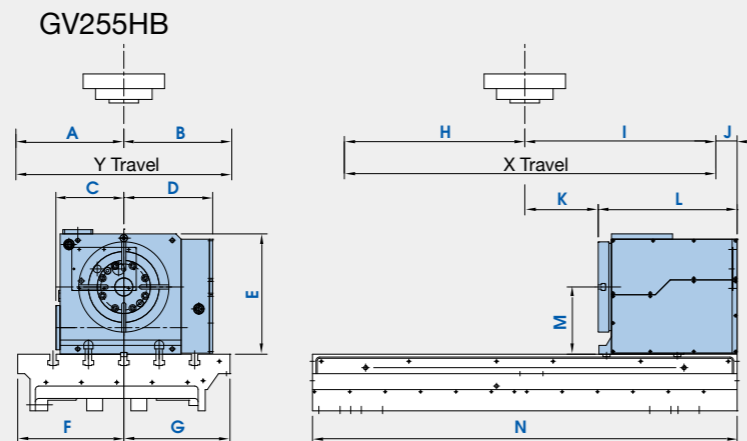
### Table dimension

	MV154	MV184
X	900	1200
Y	500	600
Q	50	100



- Very classic craftsmanship combined with most advanced modern equipments in a clean environment...

	MV134	MV154	MV184
A	286	265	305
B	286	265	305
C	192	192	192
D	251	251	251
E	352	352	352
F	375	265	300
G	175	250	300
H	330.5	381	510
I	330.5	381	510
J	232	98	30
K	170	55.5	147.5
L	392.5	392.5	392.5
M	190	190	190
N	940	900	1200
O	364	230	470
P	340	300	515
Q	391	391	391
R	35	35	35
S	360	-	-



## QUASER MACHINE TOOLS, INC.

Address: No. 3, Gong 6th Rd., Youshih  
Industrial Park, Dajia Dist,  
Taichung City 437, Taiwan  
Tel: +886 4 26821277  
Fax: +886 4 26822045  
E-mail: sales@qmt.com.tw  
Web: www.quaser.com



## QUASER EUROPE TECHNIC CENTER - SWITZERLAND

Address: Unterlettenstrasse 16, CH- 9443  
Widnau Switzerland  
Tel: +41 71 722 43 43  
Mobile phone: +41798229028  
E-mail: qe@qmt.com.tw



## KUNSHAN QUASER MACHINE TOOLS, INC.

Address: (B) No. 287, Kangzhuang Road,  
Zhoushi Town, Kunshan City,  
Jiangsu, P.R. China  
Tel: 0512-82627139  
Fax: 0512-82627138  
E-mail: qmtc@qmt.com.tw



## QUASER AMERICA MACHINE TOOLS INC.

Address: 3049 Southcross Boulevard, Rock Hill,  
SC, 29730, UNITED STATES  
Tel: +1 803-324-7123  
Fax: +1 888-459-8175  
E-mail: qa@qmt.com.tw

