

QUASER

we cut faster

MV1 SERIES



MV154



MV154L



MV154



MV154L

Generation I

Generation II

CONTENTS

| | |
|---|-------|
| <i>MV1 SERIES</i> | 03-04 |
| <i>Unique spindle technology</i> | 05-06 |
| <i>Power / Torque chart</i> | 07-08 |
| <i>ATC system</i> | 09-10 |
| <i>Coolant system & Chip management</i> | 11-12 |
| <i>Easy operation</i> | 13-14 |
| <i>Precision accuracy</i> | 15-18 |
| <i>Technical data</i> | 19-20 |
| <i>Standard / Option accessories</i> | 21-22 |
| <i>Layout</i> | 23-25 |
| <i>We build machines in a hybrid way</i> | 26 |



MV154 C / E / P / M



MV184 C / E / P / M

Generation III

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

MV1 SERIES



MV154 C / E / P

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

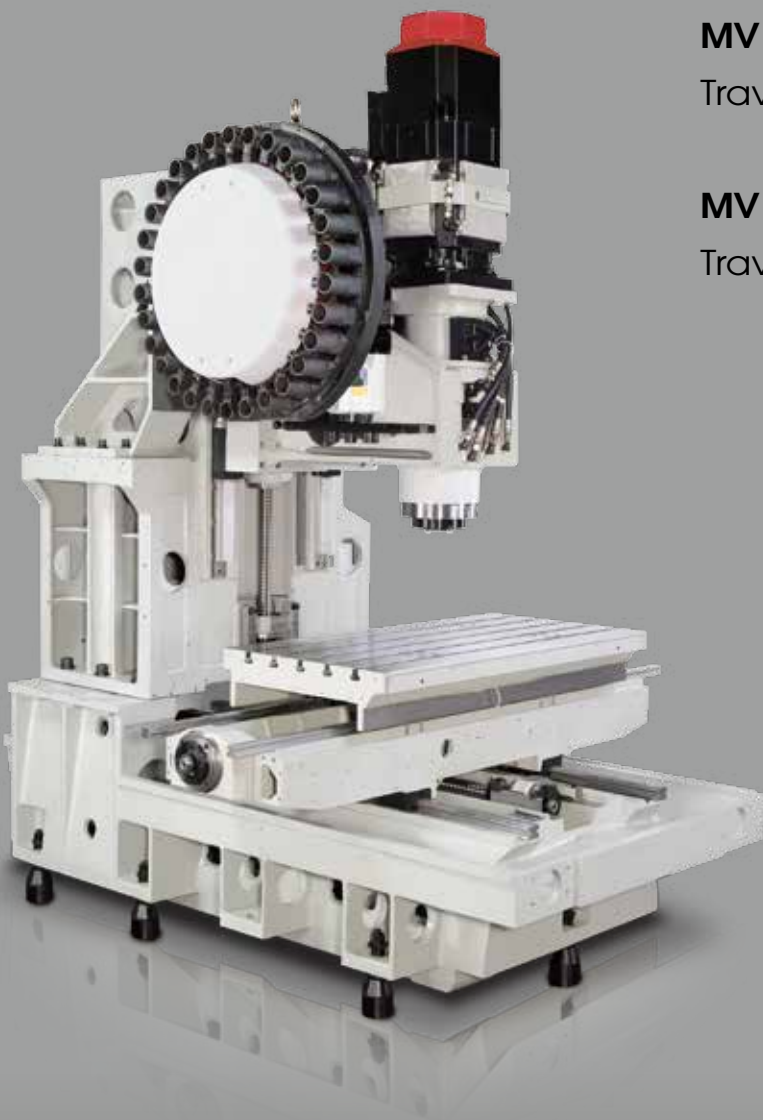
MV154 M

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



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

| Motor | MV154C & MV184C | | | MV154E & MV184E | |
|----------------|-----------------|-----------------|-----|-----------------|-----|
| | | 10B & 10C | 12C | 9B | 12B |
| Spindle code | | | | | |
| X / Y / Z (kW) | F | 1.8 / 1.8 / 2.5 | | 3 / 3 / 4 | |
| | S | 2.7 / 2.7 / 3.1 | | - | |
| | M | 2.2 / 2.2 / 3 | | - | |
| | T | - | | 3.1 / 3.1 / 4.5 | |



MV184 C / E / P

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

MV184 M

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



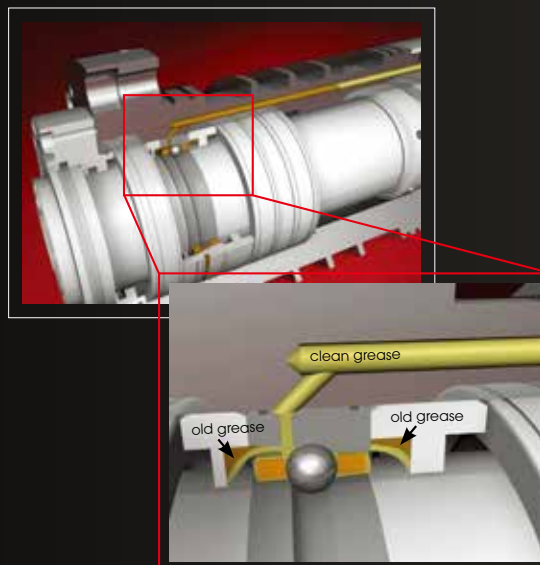
| MV154P & MV184P | | | | | | MV154M & MV184M | | | |
|-----------------|-----|-----------------|-----|-----------------|-----|-----------------|-----|-----------------|-----|
| 9B | 12B | 15C | 20C | 18A | 24A | 15C | 20C | 18A | 24A |
| 3 / 3 / 4 | | | | - | | 4 / 4 / 5.5 | | - | |
| 2.7 / 2.7 / 4.9 | | | - | 2.7 / 2.7 / 4.9 | | - | | - | |
| 4.5 / 4.5 / 5.1 | | 4.5 / 4.5 / 5.4 | - | 4.5 / 4.5 / 5.4 | | 5.1 / 5.4 / 5.4 | - | 5.1 / 5.4 / 5.4 | |


Unique spindle technology



Grease replenishing system

- Use car industry re-greasing principle to supply "clean grease" at 60~100 hr interval by 25~50 mm³ / shoot.



| Transmission | Lubrication | Spindle code |
|---|----------------------|------------------------------|
| <ul style="list-style-type: none"> • Belt driving  | Grease packed system | GB-4.1 |
| | Re-grease system | GB-4.1R |
| <ul style="list-style-type: none"> • Coupling  | Grease packed system | SC-4.1 |
| | Re-grease system | GC-4.0R GC-4.1R (2017-Q3) |
| | Oil-Air system | GC-4.1A (2017-Q3) |
| | Re-grease system | MC-4.1R MC-4.0R |
| <ul style="list-style-type: none"> • Motor spindle  | Oil-Air system | GM-4.0A GM-4.1A |



- The grease volume in 1st installation can support 30,000 hr or 3 years.

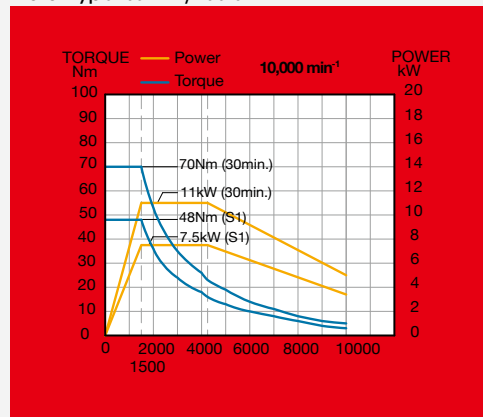
- Standard on all models



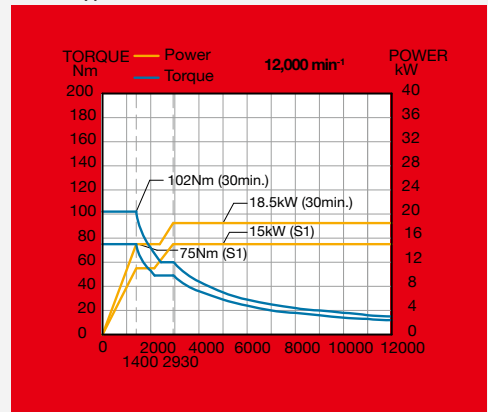
| Speed range | Model |
|-----------------------------------|--------------------------|
| | ISO40 |
| 8,000 / 10,000 min ⁻¹ | MV154C MV184C |
| 9,000 / 12,000 min ⁻¹ | MV154E / P MV184E / P |
| 10,000 / 12,000 min ⁻¹ | MV154C MV184C |
| 15,000 min ⁻¹ | MV154P / M MV184P / M |
| 15,000 min ⁻¹ | |
| 15,000 min ⁻¹ | |
| 20,000 min ⁻¹ | |
| 24,000 min ⁻¹ | MV154P / M MV184P / M |
| 18,000 min ⁻¹ | |



SC-4.1
Coupling
Motor type: SJ-D11/100-01

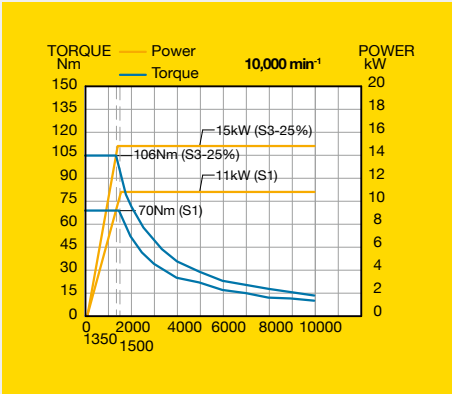


Coupling
Motor type: SJ-VKS30-16ZT



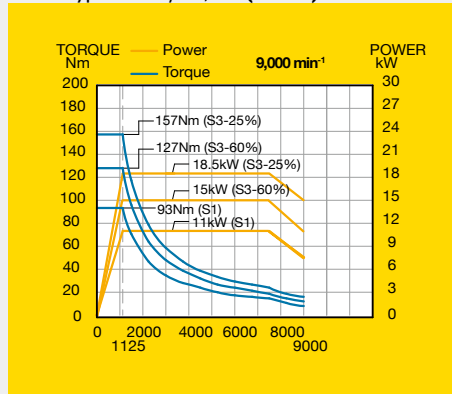
GB-4.1

Belt
Motor type: αi12 / 12,000 (βiISVSP-15)

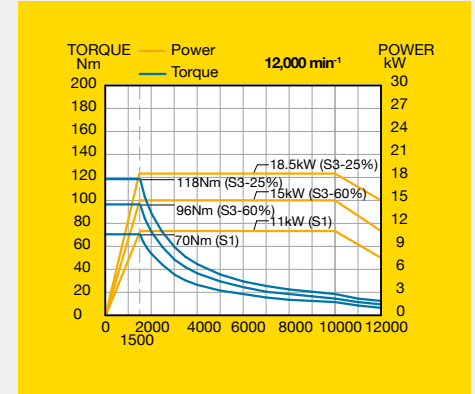


GB-4.0R

Belt
Motor type: αi12 / 12,000 (SPM15)

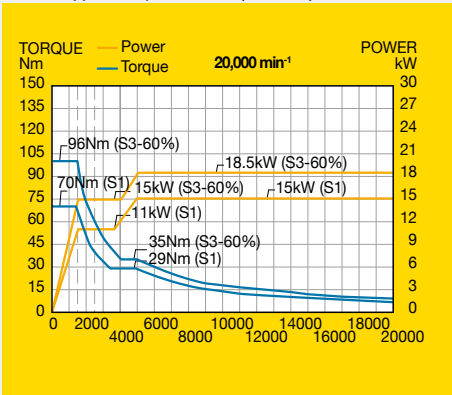


Belt
Motor type: αi12 / 12,000 (SPM15)



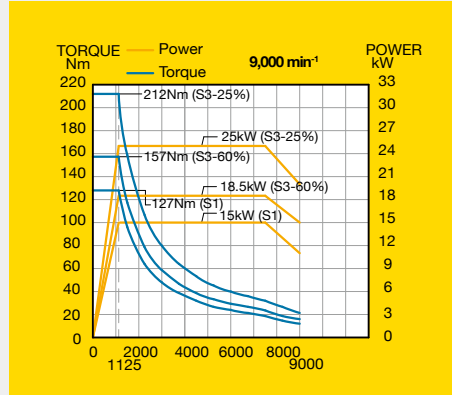
MC-4.0R

Coupling
Motor type: α8 / 20000iL (SPM30)

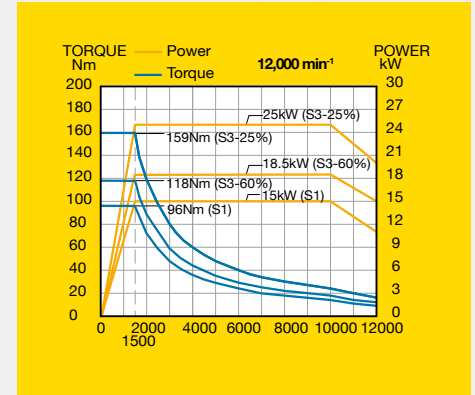


GB-4.0R

Belt
Motor type: αi15 / 12,000 (SPM22)

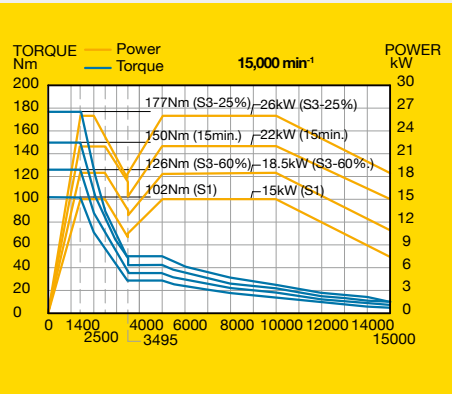


Belt
Motor type: αi15 / 12,000 (SPM22)



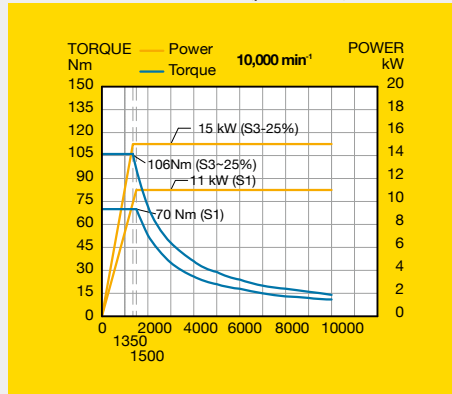
GC-4.1R/MC-4.1R

Coupling
Motor type: αi115 / 15,000 (SPM30)

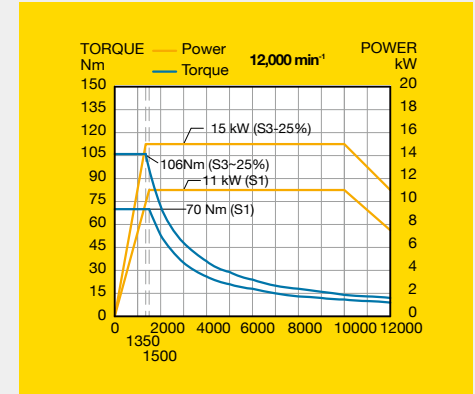


SC-4.1

Coupling
Motor type: αi12 / 12,000 (βiISVSP-15)

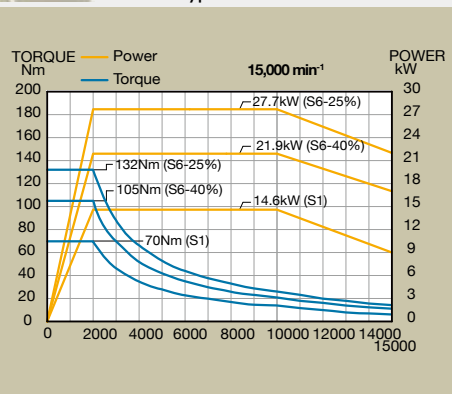


Coupling
Motor type: αi12 / 12,000 (βiISVSP-15)



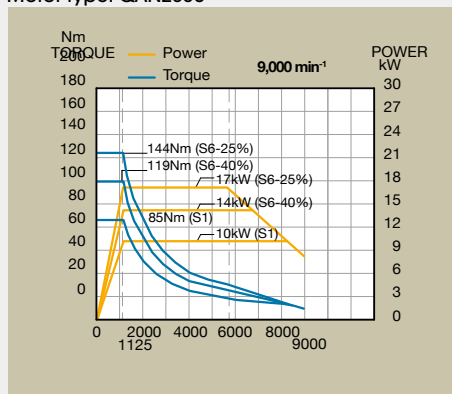
GC-4.1R/MC-4.1R

Coupling
Motor type: 1PH8131

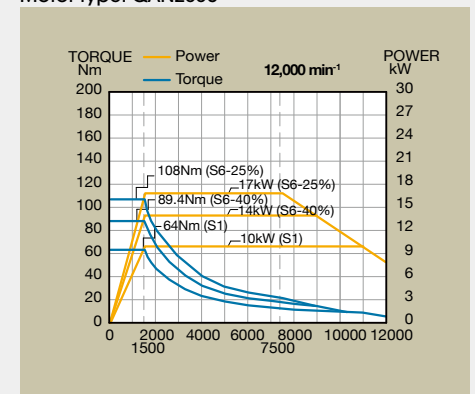


GB-4.0R

Belt
Motor type: QAN200U



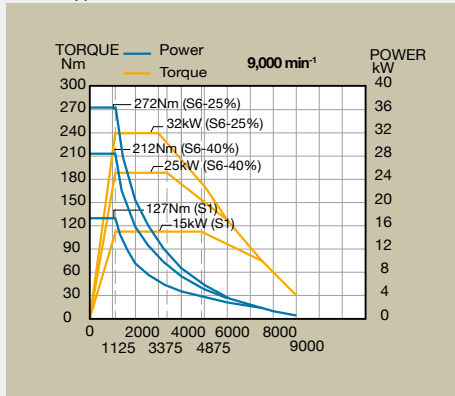
Belt
Motor type: QAN200U





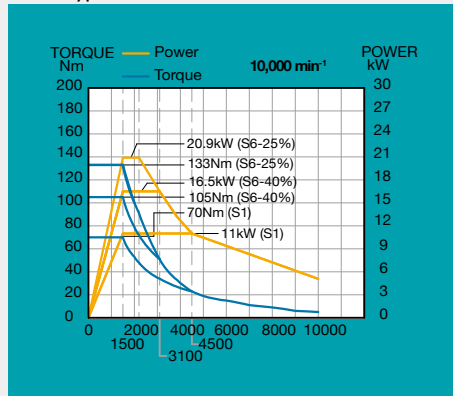
GB-4.0R

Belt
Motor type: QAN260M



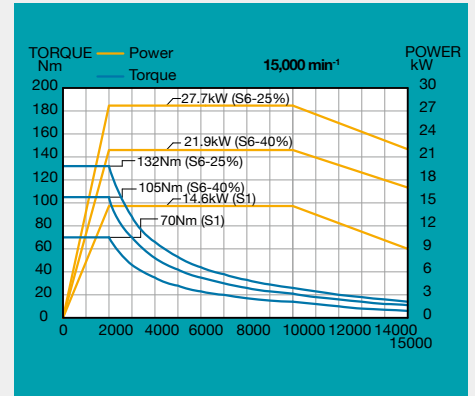
GB-4.1

Belt
Motor type: 1PH8131

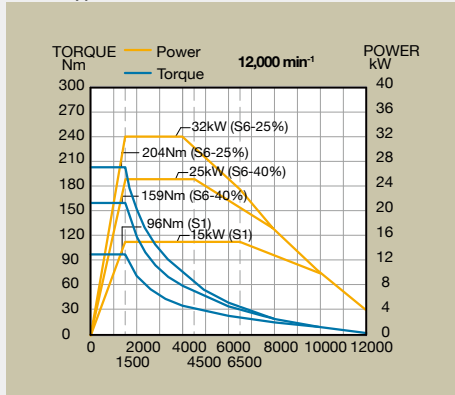


GC-4.1R/MC-4.1R

Coupling
Motor type: 1PH8131

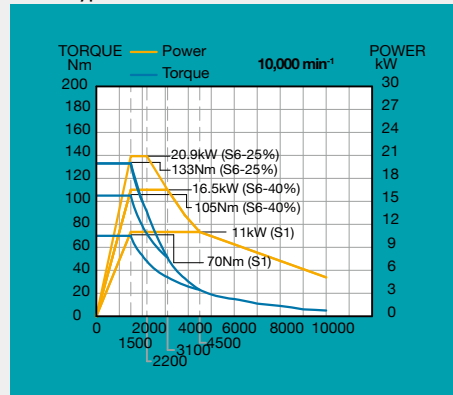


Belt
Motor type: QAN260M

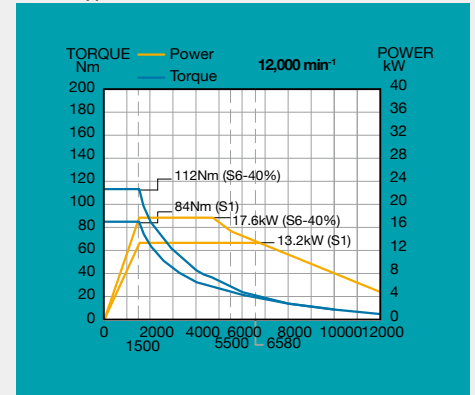


SC-4.1

Coupling
Motor type: 1PH8131

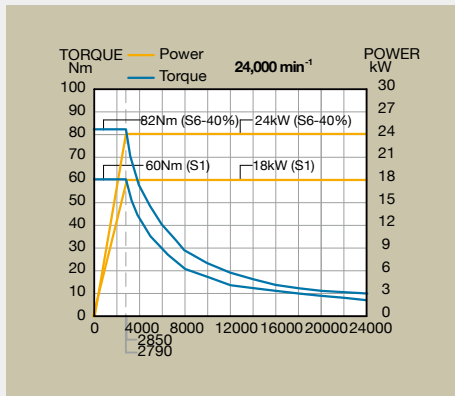


Coupling
Motor type: 1PH8133



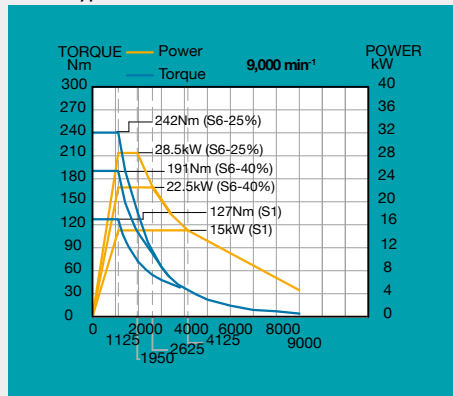
GM-4.0A

Motor spindle

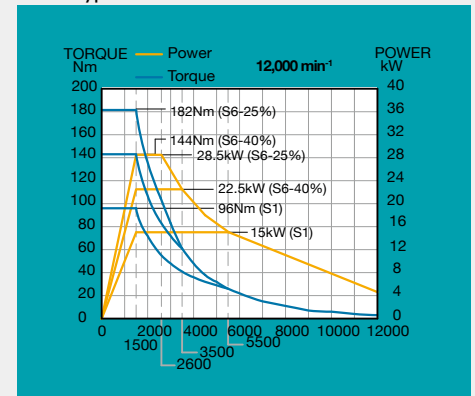


GB-4.0R

Belt
Motor type: 1PH8133

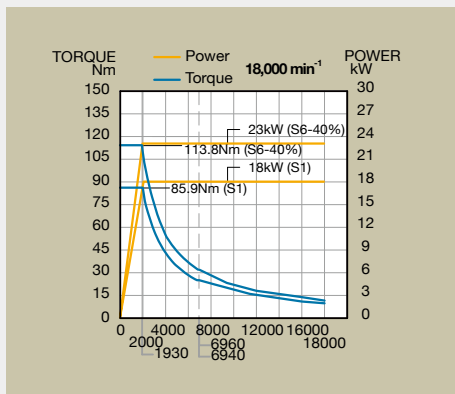


Belt
Motor type: 1PH8133



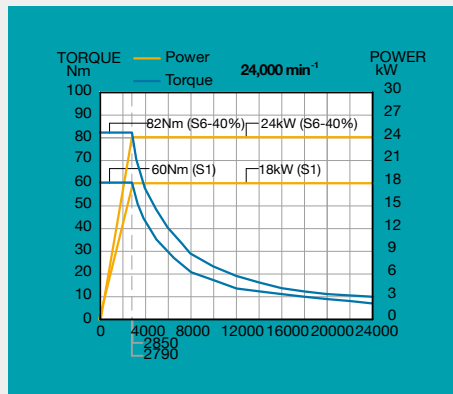
GM-4.1A

Motor spindle



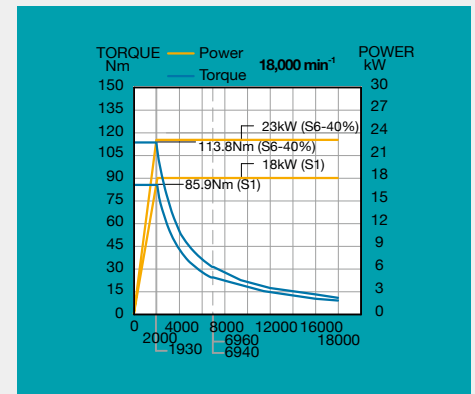
GM-4.0A

Motor spindle

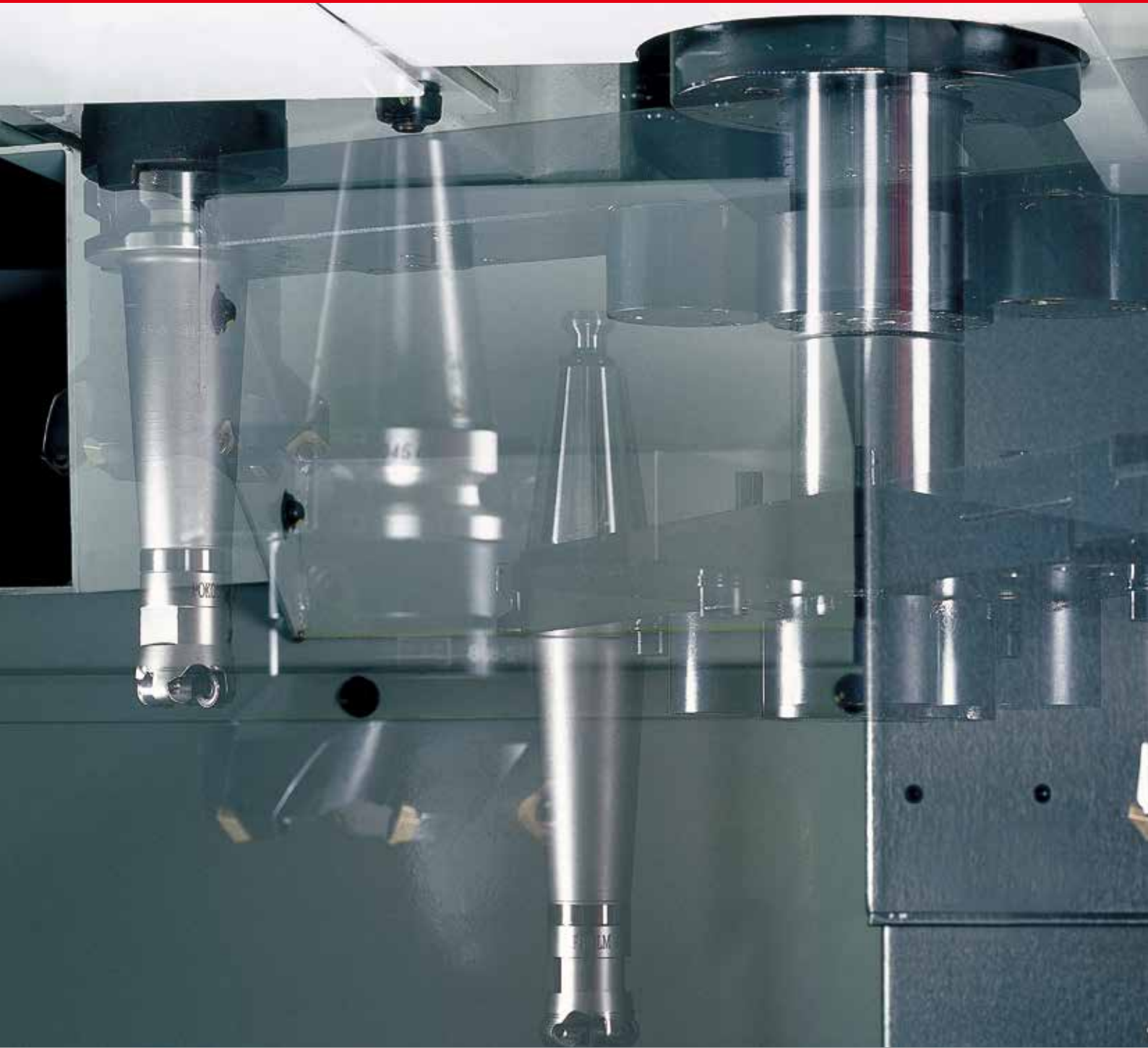


GM-4.1A

Motor spindle



ATC system



30 ATC (std.)



48 ATC (opt.)





60 ATC (opt.)

ATC auto door (opt.)

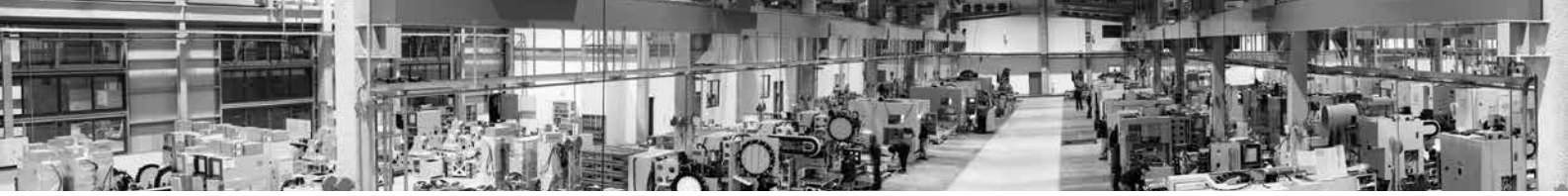


Coolant system & Chip management



| | | MV154C MV184C | MV154E MV184E | MV154P MV184P | MV154M MV184M |
|----------|-------------------------|------------------|------------------|------------------|------------------|
| A | Coolant tank | 300 Liter | | | |
| B | Coolant through spindle | - | 8 bar | 20 bar | |
| C | Nozzle coolant | 3 bar | | | |
| D | Wash gun | Std. | | | |
| E | Chip augers | Std. | | | |
| F | Chip conveyor | Scraper type | Opt. | Std. | |
| G | Filtration unit | - | Opt. | | |
| H | Wash down | 3 bar | | | |





H

Easy operation





- a** Swiveling operator panel.
- b** Single door design open at
 - MV154: 900 (mm)
 - MV184: 1,150 (mm)
- c** Spindle to front at a convenient
 - MV154: 753 (mm)
 - MV184: 870 (mm)
- d** Table to front-easy access
 - MV154: 168 (mm)
 - MV184: 265 (mm)

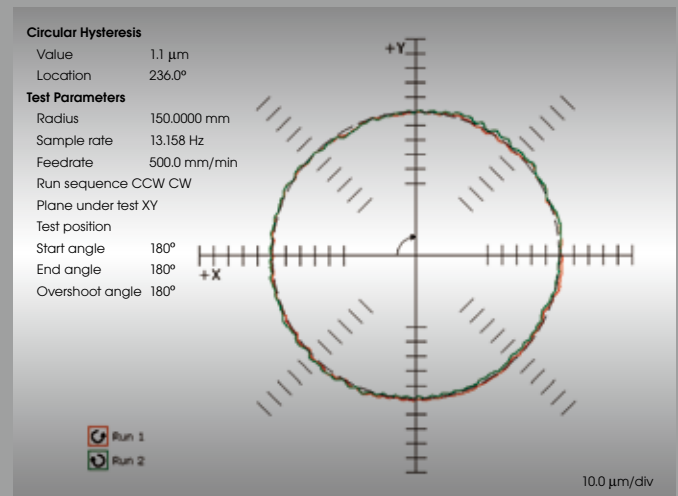
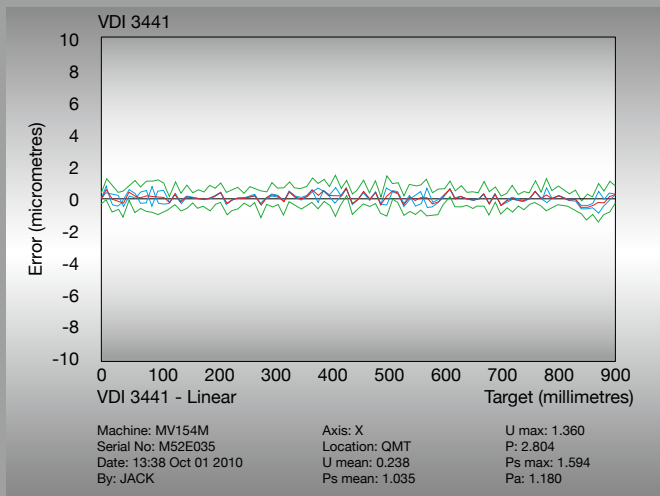


Precision accuracy



Positioning accuracy=1.180 μm VDI 3441

Feed rate: 500 mm / min, Value: 1.1 μm



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

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

Note: * \varnothing 300 mm, F500

Unit: mm

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



Results

Text island height

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

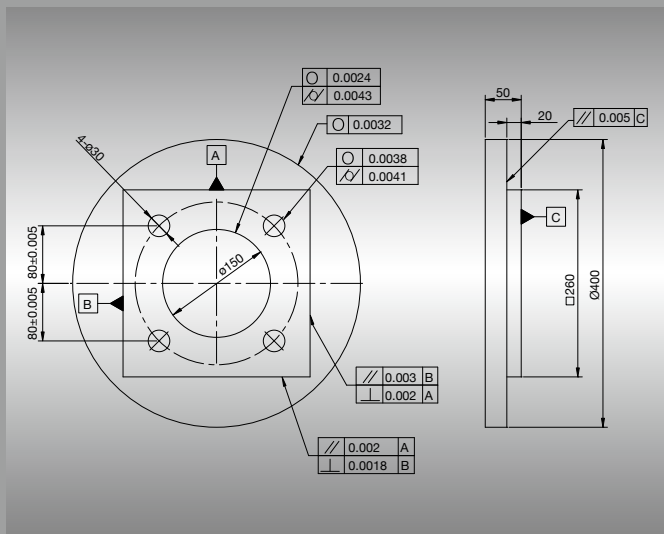
$U = 2.5 \mu\text{m}$

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

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

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

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



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

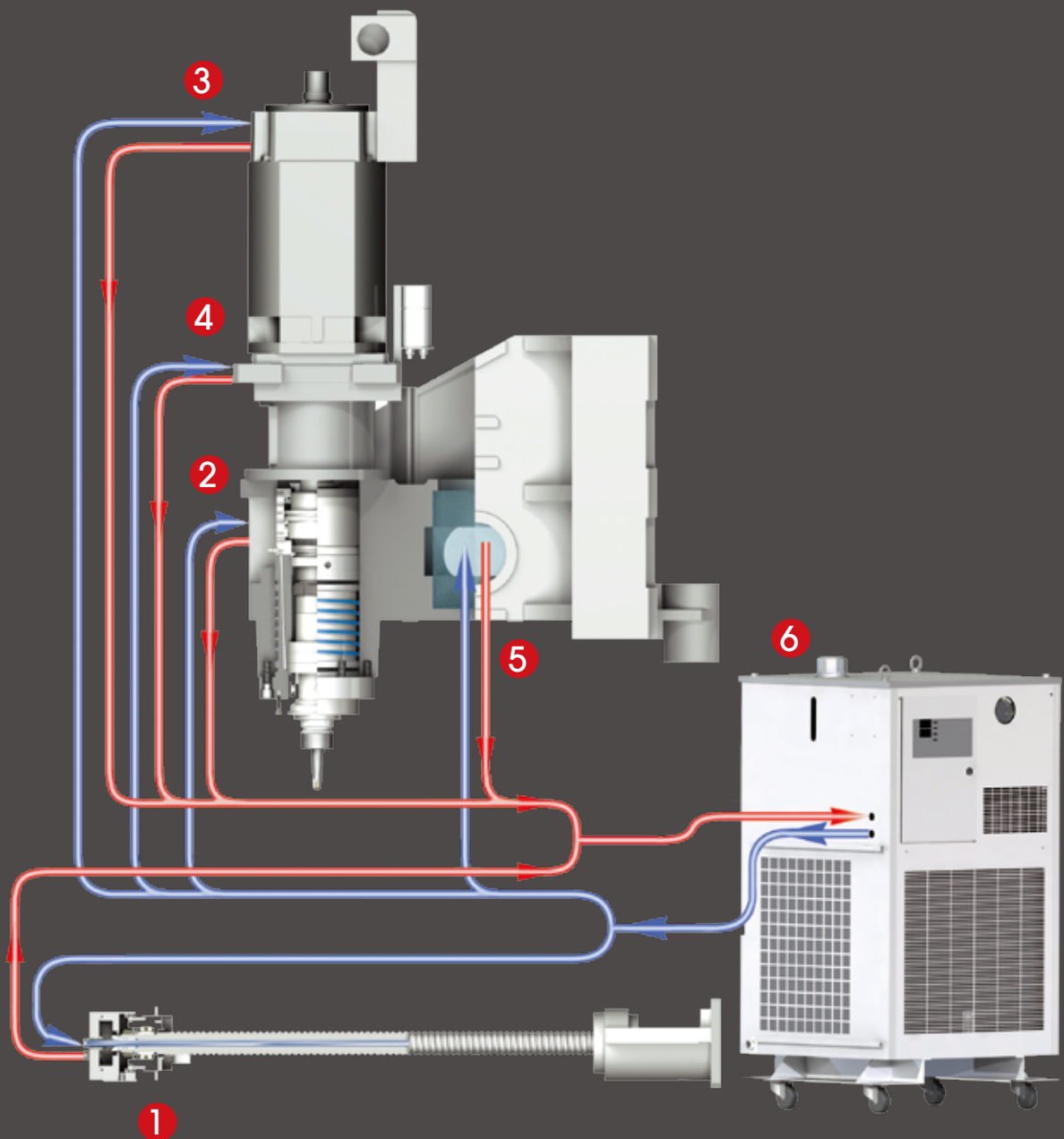


Precision accuracy



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 Head stock cooling chamber. (Only GC-4.0R)
- 6 Oil chiller.





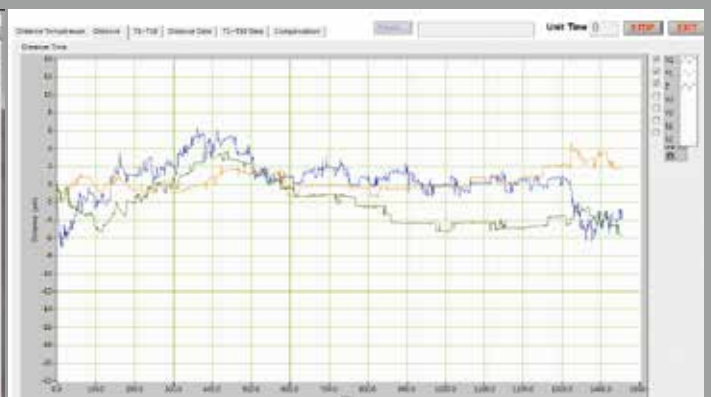
Heat generated from spindle and spindle motor are quickly removed by cooling circuits on spindle housing, spindle motor, motor mounting plate and spindle head, the heat is exchanged by large capacity oil chiller, plus thermal compensation function to reduce thermal impact to minimum.



Thermal compensation on X, Y & Z

Before

After



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

| Technical data | | MV154 / MV184 | | | | |
|---|---------------------|---|------------------------|-------------------------|--|--------------|
| | | C | | | E | |
| Spindle code | | 10B | 10C | 12C | 9B | 12B |
| Work range | | | | | | |
| 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 | | | | |
| Feed drive | | | | | | |
| Feed force X / Y / Z (N) | F | 5,760 / 5,760 / 10,472 | | | 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 ²) | 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) | |
| Accuracy Positioning / Repeatability | | | | | | |
| ISO 230-2 | | 0.008 / 0.004 | | | | |
| JIS 6338 (300 mm) | | ±0.003 / ±0.002 | | | | |
| VDI 3441 | | 0.008 / 0.004 | | | | |
| Main spindle | | | | | | |
| Spindle model | | 40 Taper | | | | |
| Max. spindle speed | | 10,000 | | | 12,000 | 9,000 12,000 |
| Spindle base speed | F/M | 1,350 / - | 1,350 / 1,500 | 1,350 / 1,400 | 1,125 / - | 1,500 / - |
| | T/S | - / 1,500 | - / 1,500 | - / 1,500 | 1,125 / - | 1,500 / - |
| Spindle power output kW | (S3-25%)/30min. F/M | 15 / - | 15 / 11 | 15 / 18.5 | 18.5 / - | |
| | (S6-25%) T/S | - / 20.9 | - / 20.9 | - / 17.6 ⁽¹⁾ | 17 / - | |
| Spindle torque output Nm | (S3-25%)/30min. F/M | 106 / - | 106 / 70 | 106 / 102 | 157 / - | 118 / - |
| | (S6-25%) T/S | - / 133 | - / 133 | - / 112 ⁽¹⁾ | 144 / - | 108 / - |
| Spindle transmission | | Belt | Coupling | | Belt | |
| Spindle diameter (mm) | | Ø70 | | | | |
| Tool changer | | | | | | |
| Tool selection | | Random | | | | |
| Magazine positions | | 30 | | | 30 (std.) 48 & 60 (opt.) | |
| Max. tool diameter (mm) | | 76.2 | | | | |
| Max. tool dia. Due to neighbor pots are empty | | 125 | | | | |
| Max. tool length (mm) | | 280 | | | | |
| Max. tool weight (kg) | | 7 | | | | |
| CTC time-ISO 10791-9 (sec.)-60Hz | | 5 (F) 4 (M) 5.5 (S) | | | 4 (F) 5 (T) | |
| Coolant system | | | | | | |
| Coolant tank capacity (Liter) | | 300 | | | | |
| Pump capacity ⁽⁴⁾ | | | | | | |
| -Nozzle coolant | | 75 L / min., 3 bar | | | | |
| -Through spindle coolant | | - | | | 25 L / min., 8 bar | |
| -Wash down | | 75 L / min., 3 bar | | | | |
| Machine size | | | | | | |
| Height (mm) | | 2,955 / 2,860 | 3,060 / 3,070 | | 2,955 / 2,860 | |
| ⁽³⁾ Floor space W x D (mm) | 30 ATC | 2,100 x 2,600 2,515 x 2,800 | | | 2,540 x 2,600 / 2,760 x 2,800 | |
| | 48 / 60ATC | - | | | 2,540 x 2,625 / 2,540 x 3,005 2,760 x 2,835 / 2,760 x 3,210 | |
| Weight (kg) | | 6,300 / 7,290 | | | 6,400 / 7,390 | |
| Connections | | | | | | |
| Main power | | 200V / 60Hz or 400V / 50Hz | | | | |
| Power consumption (KVA) | | 16 (F) 17.5 (M) 25 (S) | 16 (F) 20 (M) 29 (S) | 20 (F) 21 (T) | | |

Note: ⁽¹⁾ (S6-40%) ⁽²⁾ (S3-60%) ⁽³⁾ Without oil chiller please ref. page23. ⁽⁴⁾ At 60 Hz ⁽⁵⁾ Only for FANUC control

Main spindle: (B) Belt spindle (C) Coupling spindle (A) Oil air motor spindle

| MV154 / MV184 | | | | | | | | | |
|---|-----------|------------------------|-----------------------|----------------------|--------------------------|---------------|-----------------------|--------------------------|-----------------------|
| P | | | | | M | | | | |
| 9B | 12B | 15C | 20C ⁽⁵⁾ | 18A | 24A | 15C | 20C ⁽⁵⁾ | 18A | 24A |
| 900 x 500 | | | | | 1,200 x 600 | | | | |
| 762 / 530 / 560 | | | | | 1,020 / 610 / 610 | | | | |
| 150 ~ 710 | | | | | 100 ~ 710 | | | | |
| 500 | | | | | | | | | |
| 4,712 / 4,712 / 11,519 | | | | | - | | | | |
| 6,951 / 6,951 / 11,310 | | 6,951 / 6,951 / 13,666 | | | 17,279 / 17,279 / 23,562 | | | - | |
| - | | | | | - | | | | |
| 4,712 / 4,712 / 14,137 | | | | | - | | | | |
| 40 / 40 / 36 (F) (T) (S) | | | | | 24 (F) (T) | | 24 (T) | | |
| 6 / 5 / 4 | | | | | - | | | | |
| 5 / 4 / 5 | | | | | 10 / 10 / 8.5 | | | | |
| - | | | | | - | | | | |
| 6 / 5 / 5 | | | | | - | | | | |
| Ø45 / P = 16 / 16 / 12 | | | | | Ø45 / P = 8 / 8 / 8 | | | | |
| 0.008 / 0.004 | | | | | | | | | |
| ±0.003 / ±0.002 | | | | | | | | | |
| 0.008 / 0.004 | | | | | | | | | |
| 40 Taper | | | | | | | | | |
| 9,000 | 12,000 | 15,000 | 20,000 | 18,000 | 24,000 | 15,000 | 20,000 | 18,000 | 24,000 |
| 1,125 / - | 1,500 / - | 1,400 / - | 1,500 / - | - | - | 1,400 / - | 1,500 / - | - | - |
| 1,125 | 1,500 | 2,000 | - | 2,000 | 2,850 | 2,000 / - | - | 2,000 / - | 2,850 / - |
| 25 / - | 26 / - | 15 ⁽²⁾ / - | - | - | - | 26 / - | 15 ⁽²⁾ / - | - | - |
| 32 / 28.5 | 27.7 | - | 23 ⁽¹⁾ | 24 ⁽¹⁾ | 27.7 / - | - | 23 ⁽¹⁾ / - | 24 ⁽¹⁾ / - | - |
| 212 / - | 159 / - | 177 / - | 96 ⁽²⁾ / - | - | - | 177 / - | 96 ⁽²⁾ / - | - | - |
| 272 / 242 | 204 / 182 | 132 | - | 113.8 ⁽¹⁾ | 82 ⁽¹⁾ | 132 / - | - | 113.8 ⁽¹⁾ / - | 82 ⁽¹⁾ / - |
| Belt | | Coupling | | Motor spindle | | Coupling | | Motor spindle | |
| Ø70 | | Ø70(Ø80) | | Ø70 | | Ø70(Ø80) | | Ø70 | |
| Random | | | | | | | | | |
| 30 (std.) 48 & 60 (opt.) | | | | | | | | | |
| 76.2 | | | | | - | | | | |
| 125 | | | | | 76.2 | | | | |
| 280 | | | | | 200 | | | | |
| 7 | | | | | 4.5 | | | | |
| 4 (F) 4.5 (T) 5.5 (S) | | | | | 4.5 (T) 5.5 (S) | | | | |
| 4 (F) 5 (T) | | | | | 5 (T) | | | | |
| 300 | | | | | | | | | |
| 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 | | | | |
| 2,955 / 2,860 | | 3,055 / 3,065 | | 3,020 / 2,870 | | 3,055 / 3,065 | | 3,020 / 2,870 | |
| 2,540 x 2,600 2,760 x 2,800 | | | | | | | | | |
| 2,540 x 2,625 / 2,540 x 3,005 2,760 x 2,835 / 2,760 x 3,210 | | | | | | | | | |
| 6,400 7,390 | | | | | | | | | |
| 200V / 60Hz or 400V / 50Hz | | | | | | | | | |
| 25 (F) (T) 29 (S) | | 33 (F) (T) 38 (S) | | 42 (T) 35 (S) | | 33 (F) (T) | | 43 (T) | |

Note: Machine specification might be different from the catalogue if there is any specification update.

●=Standard ○=Option ×=N/A

| Standard / Option accessories | MV154 / MV184 | | | | |
|--|---------------|-----|------------------|----|-----|
| | C | | | E | |
| Spindle code | 10B | 10C | 12C | 9B | 12B |
| ■ QUASER mill i | ○ | ○ | ○ | ○ | ○ |
| ■ FANUC 31iB | × | × | × | × | × |
| AICC II (Look-ahead 200 blocks) | ○ | ○ | ○ | ○ | ○ |
| FANUC - data server | ○ | ○ | ○ | ○ | ○ |
| FANUC - high speed processing (Look-ahead 600 blocks) | × | × | × | × | × |
| ■ HEIDENHAIN TNC640 | × | × | × | × | × |
| HEIDENHAIN Option2 | × | × | × | × | × |
| ■ HEIDENHAIN TNC620 | × | × | × | ○ | ○ |
| ■ SIEMENS 828D | ○ | ○ | ○ | × | × |
| ■ MITSUBISHI M80 (package A) | × | ○ | ○ | × | × |
| ■ MITSUBISHI M830 | × | ○ | ○ | × | × |
| ■ Tooling | ● | ● | ● | ● | ● |
| - BT40 | ○ | ○ | ○ | ○ | ○ |
| - ISO40 & DIN | × | × | × | × | × |
| - HSK A63 | ○ | ○ | ○ | ● | ● |
| ■ Pull stud for BT tooling | ○ | ○ | ○ | ● | ● |
| ■ Balance tooling for spindle warm up | ○ | ○ | ○ | ● | ● |
| ■ Spindle re-greasing system | × | × | × | ● | ● |
| ■ BBT spindle attachment (simultaneous contact) | ● | ● | ● | ● | ● |
| ■ Spindle ECO cooler | ● | ● | × | ● | ● |
| ■ Spindle oil chiller ⁽¹⁾ | ○ | ○ | ● | ○ | ○ |
| ■ 30 position tool magazine | ● | ● | ● | ● | ● |
| ■ 48 position tool magazine | × | × | × | ○ | ○ |
| ■ 60 position tool magazine | × | × | × | ○ | ○ |
| ■ ATC auto door | × | × | × | ○ | ○ |
| ■ 4 th axis preparation | × | × | × | ● | ● |
| ■ Ø255 mm rotary table & tail stock | × | × | × | ○ | ○ |
| ■ Remote MPG* | ○ | ○ | ○ | ○ | ○ |
| ■ Transformer | ○ | ○ | ○ | ● | ● |
| ■ Linear encoder | × | × | × | ○ | ○ |
| ■ Coolant through ball screw | × | × | × | × | × |
| ■ Thermal compensation | × | × | × | × | × |
| ■ Spindle nose thermal compensation package (Z direction < 15µm) | × | × | × | × | × |
| ■ Work probe | × | × | × | ○ | ○ |
| ■ Tool length / breakage measurement | ○ | ○ | ○ | ○ | ○ |
| ■ Coolant wash down & wash gun | ● | ● | ● | ● | ● |
| ■ 8 bar through spindle coolant | × | × | ○ ⁽²⁾ | ● | ● |
| ■ 20 bar through spindle coolant | ○ | × | ○ ⁽²⁾ | ○ | ○ |
| ■ 50 bar through spindle coolant | × | × | ○ ⁽²⁾ | ○ | ○ |
| ■ Stainless steel chip pan | ● | ● | ● | ● | ● |
| ■ Cutter air blast | ● | ● | ● | ● | ● |
| ■ Chip conveyor | ○ | ○ | ○ | ● | ● |
| ■ Oil-mist collector | ○ | ○ | ○ | ○ | ○ |
| ■ Bag filtration | ○ | ○ | ○ | ○ | ○ |
| ■ Filtration unit | ○ | ○ | ○ | ○ | ○ |
| ■ Documentation (paper) | ○ | ○ | ○ | ○ | ○ |
| ■ Foundation bolts & blocks | ● | ● | ● | ● | ● |
| ■ Work light | ● | ● | ● | ● | ● |
| ■ Machine status light | ● | ● | ● | ● | ● |
| ■ CE & EMC ⁽³⁾ / GB | ○ | ○ | ○ | ○ | ○ |

Note: ⁽¹⁾ The chiller cooling capacity are different depends on models. ⁽²⁾ Not available on Fanuc model.
⁽³⁾ Standard for Eu area except C type. * HEIDENHAIN standard



Installation dimension

| MV184 C / E / P / M | | |
|---------------------|----------------|-------|
| A | 10C / 12C | 3,070 |
| | 9B / 10B / 12B | 2,860 |
| | 15C / 20C | 3,065 |
| | 18A / 24A | 2,870 |
| B | Chip conveyor | 465 |
| C | M720 | 95 |

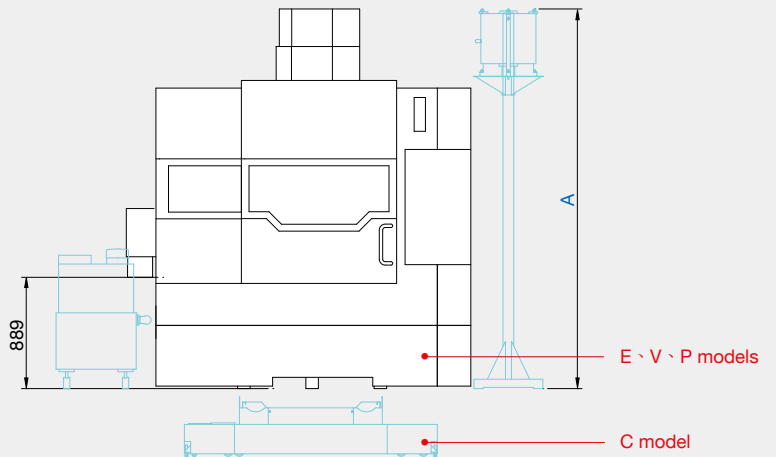
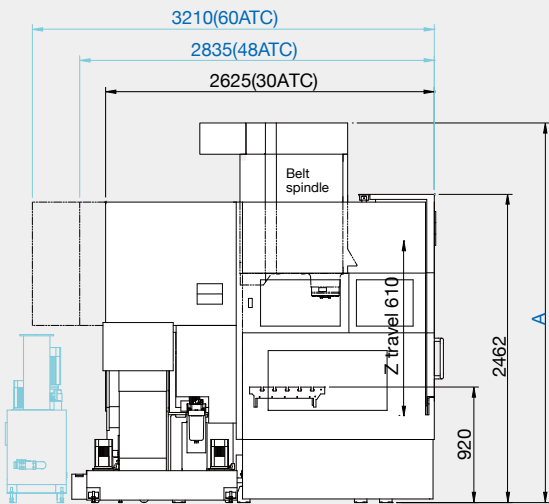
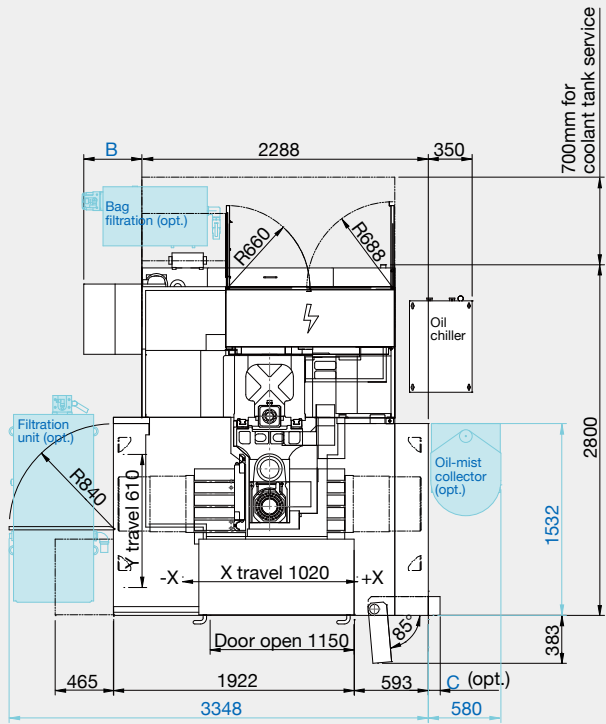
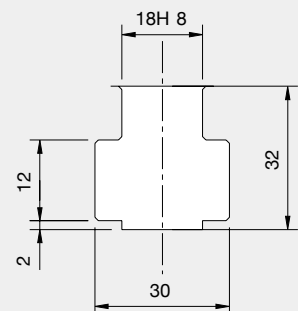
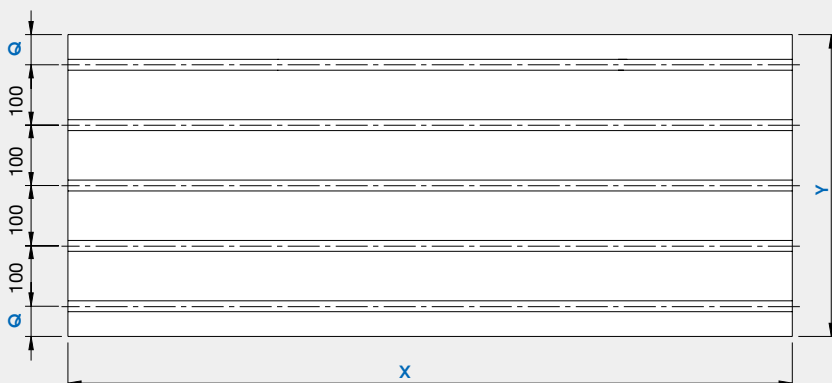


Table dimension

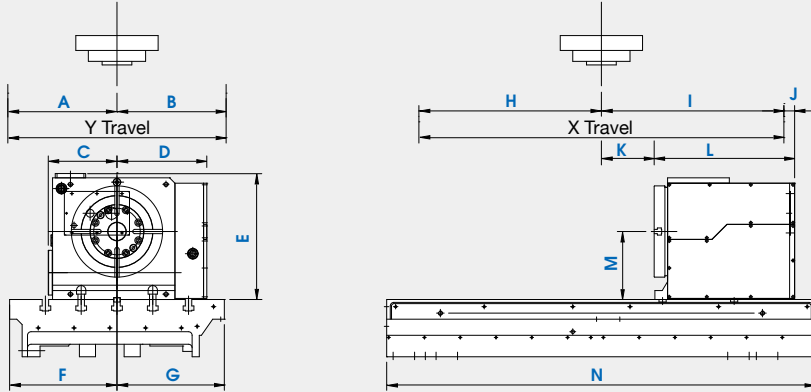
| | MV154 | MV184 |
|----------|-------|-------|
| X | 900 | 1200 |
| Y | 500 | 600 |
| Q | 50 | 100 |



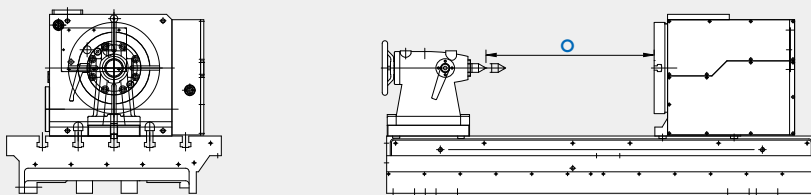
Layout

4th axes

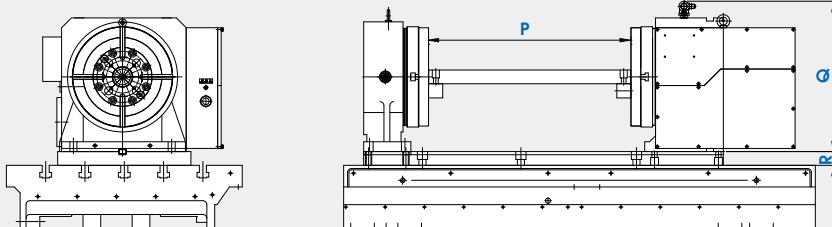
GV255HB



GV255HB+ST255



GV255HB+Fixture 2



| | MV154 | MV184 |
|----------|-------|-------|
| A | 265 | 305 |
| B | 265 | 305 |
| C | 192 | 192 |
| D | 251 | 251 |
| E | 352 | 352 |
| F | 265 | 300 |
| G | 250 | 300 |
| H | 381 | 510 |
| I | 381 | 510 |
| J | 98 | 30 |
| K | 55.5 | 147.5 |
| L | 392.5 | 392.5 |
| M | 190 | 190 |
| N | 900 | 1200 |
| O | 230 | 470 |
| P | 300 | 515 |
| Q | 385 | 385 |
| R | 35 | 35 |

We build machines in a hybrid way

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

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 Postfach
162 CH-9443 Widnau
Switzerland

Tel: +41 71 722 43 43
Fax: +41 71 722 43 08
Mobile phone: +41798229028



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





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 Postfach
162 CH-9443 Widnau Switzerland
Tel: +41 71 722 43 43
Fax: +41 71 722 43 08
Mobile phone: +41798229028

**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

Fold here for filing!