

**QUASER**

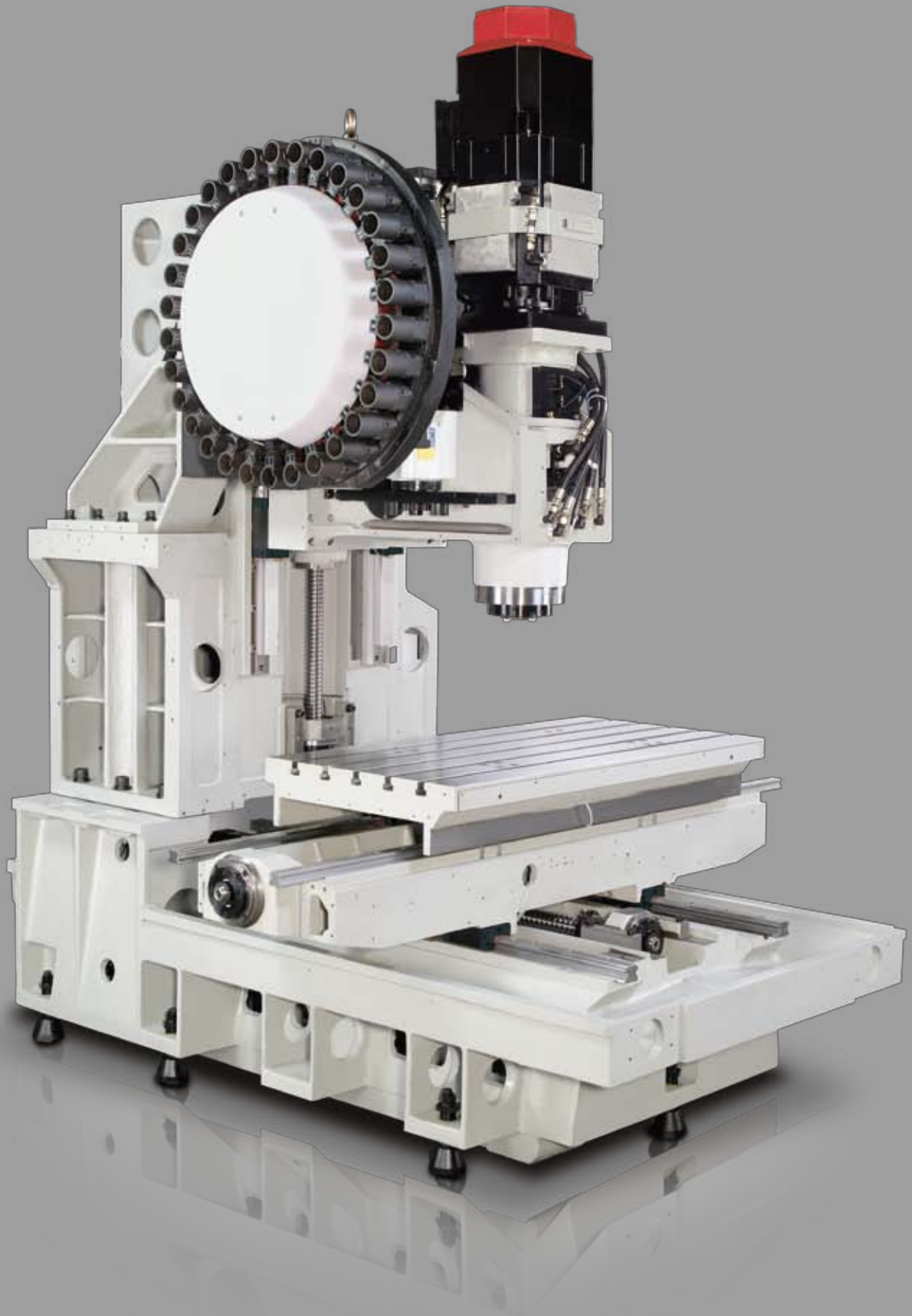
*we cut faster*

# MV184 SERIES

# MV184 SERIES



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





MV184P  
MV184E



MV184C

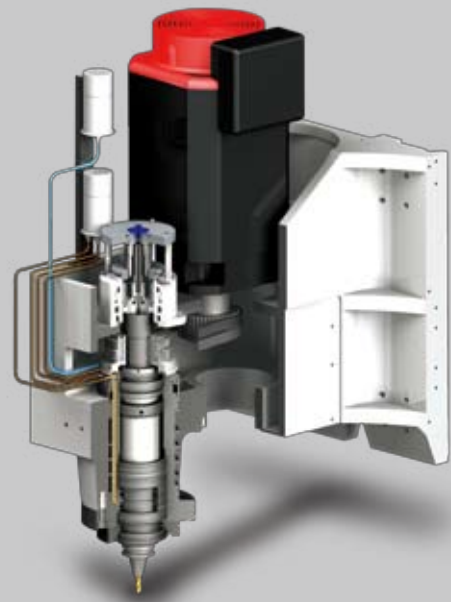
# Spindle system



## 1) Reliable belt driving spindle

Type WB40R (MV184E/MV184P)

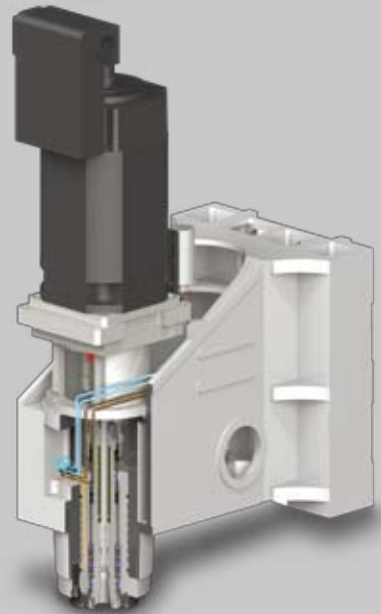
- The best (may be also the first) in the world.
- 15,000  $\text{min}^{-1}$ , vibration 1.5 $\mu\text{m}$  with low noise level plus very low maintenance cost.
- 4 hybrid angular bearing plus one roller bearing in rear.
- Spindle re-greasing system.



## 2) Performance coupling spindle

Type NC40R (MV184P)

- Highest rigidity 15,000  $\text{min}^{-1}$  spindle.
- Roller bearing in the front & rear.
- Spindle re-greasing system.



## 3) Economic coupling spindle

Type NC40 (MV184C)

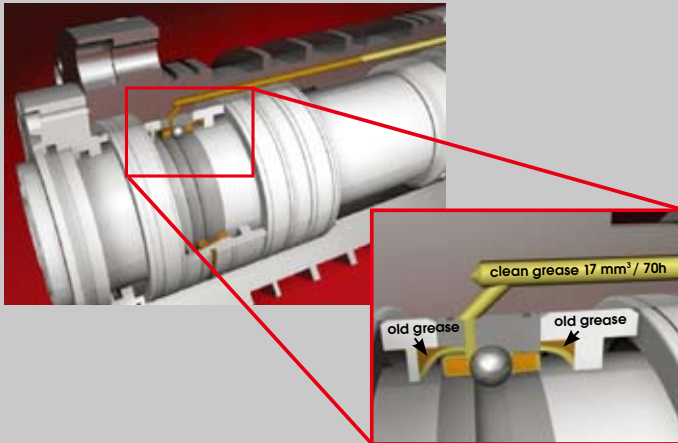
- 8,000  $\text{min}^{-1}$  spindle.
- 10,000  $\text{min}^{-1}$  spindle (opt. on HEIDENHAIN)
- Grease packed system.





## Unique spindle technology-re-greasing system available 1) & 2)

- Use car industry re-greasing principle to supply “clean grease” at 70 hr interval by 17 mm<sup>3</sup> / shoot.
- The grease chamber volume at 7.5 cm<sup>3</sup> can support 28,840 hr.
- This LUBCON unit service life at 3 years as minimum is guaranteed.



## Thermal management

To meet more and more severe “WORKING ACCURACY” requirements our “THERMAL MANAGEMENT”:

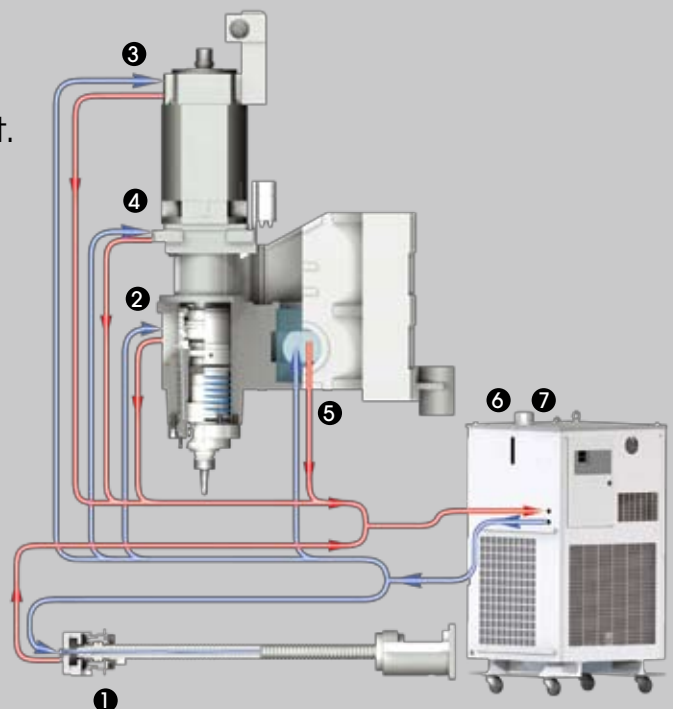
- 1 Coolant through ball screw.
- 2 Spindle cooling circuit.
- 3 Motor cooling circuit.
- 4 Motor mounting block cooling circuit.
- 5 Head stock cooling chamber.
- 6 Oil cooler.
- 7 ECO Cooler.

● = Standard ○ = Option ✕ = N / A

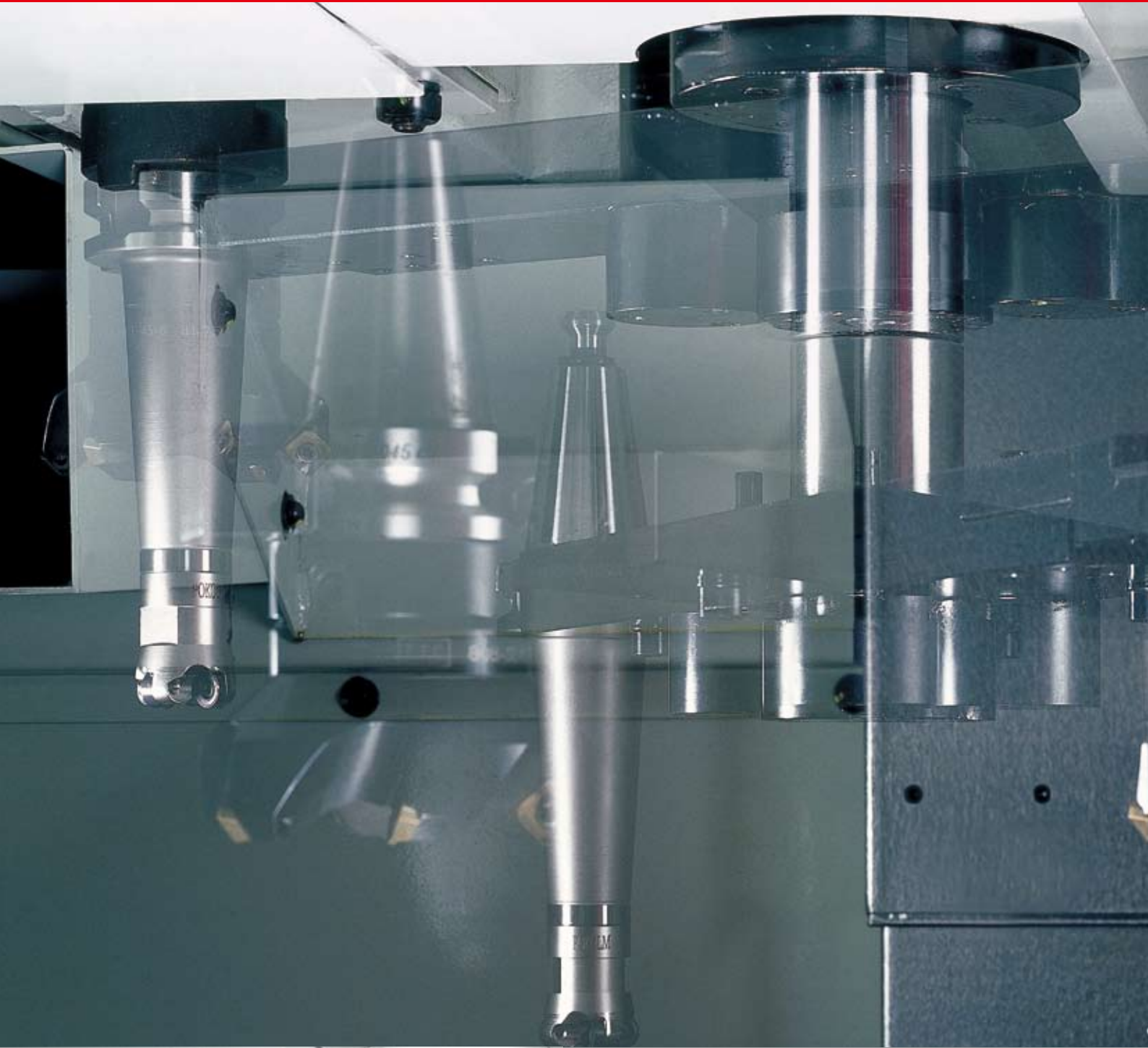
	Belt spindle			Coupling spindle		
	9B	12B	15B	8C	10C	15C
1	○	○	○	✕	✕	○
2	●	●	●	○	●	●
3	✕	✕	✕	✕	✕	●
4	✕	✕	✕	✕	✕	●
5	✕	✕	✕	✕	✕	●
6	○	○	●	○	○	●
7	●	●	✕	○	●	✕

Note: 1 Only MV184P

\*For higher ambient temperature area, the oil chiller is recommend



# ATC system

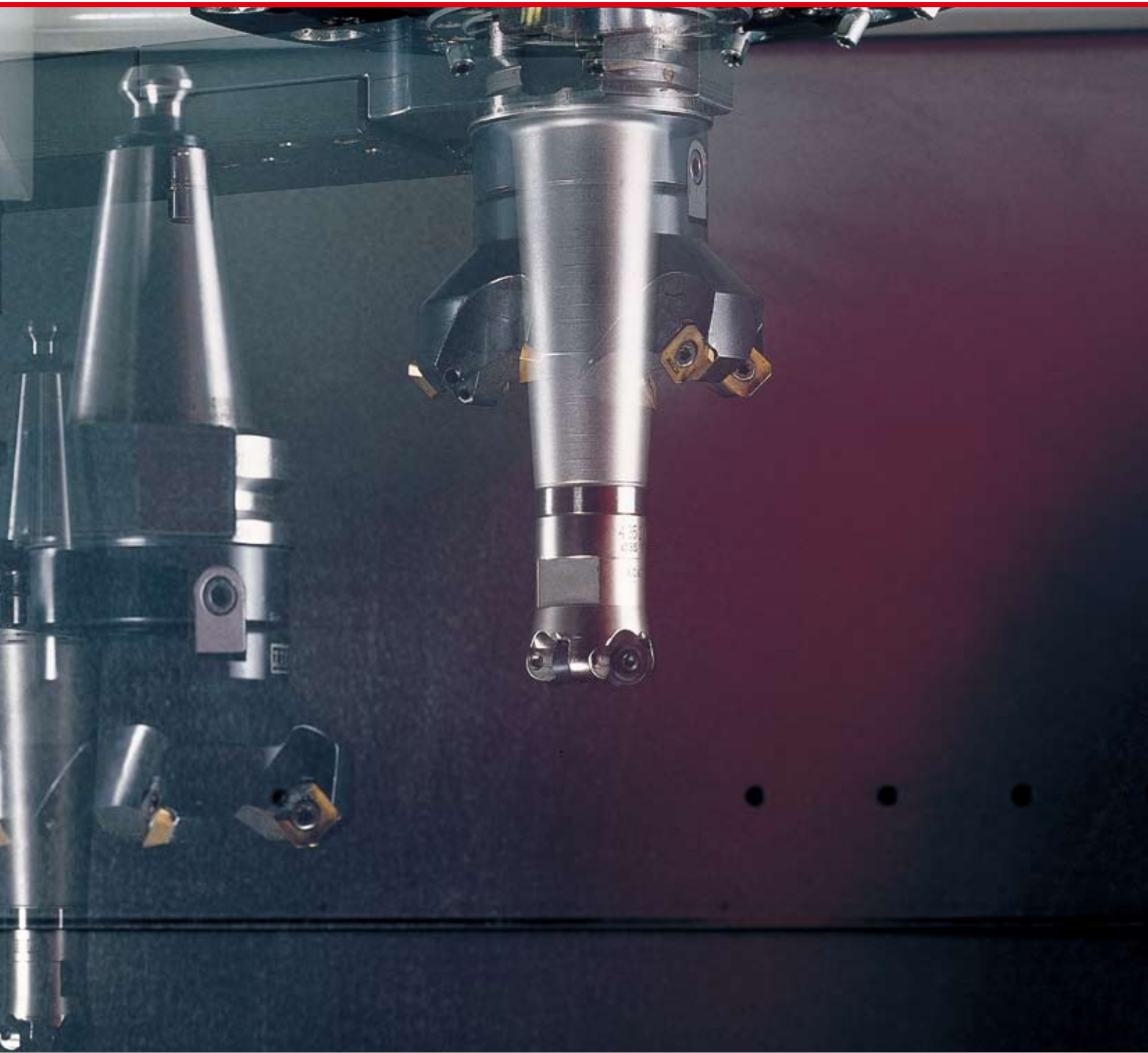


ATC auto door (opt.)



60 ATC (opt.)





48 ATC (opt.)

30 ATC (std.)



# Coolant system & Easy operation

**A**



MV184C



MV184E  
MV184P



		MV184C	MV184E MV184P
<b>A</b>	Coolant tank	300 Liter	
<b>B</b>	Coolant through spindle	-	8 bar
<b>C</b>	Nozzle coolant	3.5 bar	
<b>D</b>	Wash down	3.5 bar	
<b>E</b>	Chip conveyyor	Scraper type	Opt. Std.
		Hinge type	Opt.
<b>F</b>	Filtration unit	-	Opt.







- G** Swiveling operator panel
- H** Single door design open at 1,150 (mm)
- I** Spindle to front at a convenient 870 (mm)
- J** Table to front-easy access 265 (mm)



Technical data		MV184								
		C		E			P			
		8C	9B	12B	15B	9B	12B	15B	15C	
<b>Work range</b>										
Table size (mm)		1,200 x 600								
Travel X / Y / Z (mm)		1,020 / 610 / 610								
Spindle nose to table surface (mm)		100 ~ 710								
Table load capacity (kg)		500								
<b>Feed drive</b>										
Feed force	X (N)	5,760 (F)	4,712 (F)			4,712 (F)				
		6,807 (T)	6,807 (T)			6,951 (T)				
		6,283 (M)								
	Y (N)	5,760 (F)	4,712 (F)			4,712 (F)				
		6,807 (T)	6,807 (T)			6,951 (T)				
		6,283 (M)								
	Z (N)	10,472 (F)	11,519 (F)			11,519 (F)				
		13,902 (T)	13,902 (T)			11,310 (T)				
		17,671 (M)								
Rapid movement	X / Y / Z (m/min.)	32 / 32 / 24	40 / 40 / 36 (F) 32 / 32 / 24 (T)			40 / 40 / 36				
Acceleration	X / Y / Z (m/s <sup>2</sup> )	F	4 / 4 / 3	7 / 6 / 5						
		T	3 / 3 / 3	3 / 3 / 3			6 / 5 / 5			
		M	3 / 3 / 3	-			-			
Dia. & pitch of the ball screw		Ø45/P=12/12/12(F) Ø45/P=12/12/8(T/M)	Ø45 / P = 16 / 16 / 12 (F) Ø45 / P = 12 / 12 / 8 (T)			Ø45 / P = 16 / 16 / 12				
<b>Accuracy</b> Positioning / Repeatability										
ISO 230-2		0.008 / 0.004								
JIS 6338 (300 mm)		0.003 / ±0.002								
VDI3441		0.008 / 0.004								
<b>Main spindle</b>										
Spindle model		40 Taper								
Max. spindle speed		8,000*	9,000	12,000	15,000	9,000	12,000	15,000	15,000	
Spindle base speed	F/M	1,500	938/-	1,250/-	1,563/-	1,125/-	1,500/-	1,875/-	1,400/-	
	T	1,500	1,125	1,500	1,875	1,125	1,500	1,875	1,500	
Spindle output KW (S6-40%)	F/M	15 <sup>(1)</sup>	15 <sup>(1)</sup> /-			22 <sup>(1)</sup> /-			22/-	
	T	17 <sup>(2)</sup>	17 <sup>(2)</sup>			25			25	
Spindle output torque Nm (S6-40%)	F/M	96 <sup>(1)</sup>	153 <sup>(1)</sup> /-	115 <sup>(1)</sup> /-	92 <sup>(1)</sup> /-	187 <sup>(1)</sup> /-	140 <sup>(1)</sup> /-	112 <sup>(1)</sup> /-	150/-	
	T	108 <sup>(2)</sup>	144 <sup>(2)</sup>	108 <sup>(2)</sup>	87 <sup>(2)</sup>	212	159	127	159	
Spindle transmission		Coupling			Belt				Coupling	
Spindle diameter (mm)		Ø70								
<b>Tool changer</b>										
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	4(F) / 5(T)			4				

Note: <sup>(1)</sup> (S3-25%)

<sup>(2)</sup> (S6-25%)

\* 10,000 Coupling also available on model C, HEIDENHAIN & MITSUBISHI package.

Control: (F) FANUC (T) HEIDENHAIN (M) MITSUBISHI

Technical data	MV184							
	C	E			P			
	8C	9B	12B	15B	9B	12B	15B	15C
<b>Coolant system</b>								
Coolant tank capacity (Liter)	300							
Pump capacity								
- Nozzle coolant	60 L / min., 3.5 bar							
- Through spindle coolant	-	25 L / min., 8 bar						
- Wash down	60 L / min., 3.5 bar							
<b>Machine size</b>								
Height (mm)	2,860							3,060 (F) 2,860 (T)
Floor space W x D (mm)	30 ATC	2,515 x 2,820	2,920 x 2,820					
	48/60 ATC	-	2,920 x 2,830 / 2,920 x 3,210					
Weight (kg)	6,870		6,970					
<b>Connections</b>								
Main power	200V / 60Hz or 400V / 50Hz							
Power consumption (KVA)	16(F)/19(T)/17.5(M)		20(F) / 21(T)			25(F/T)		30(F/T)

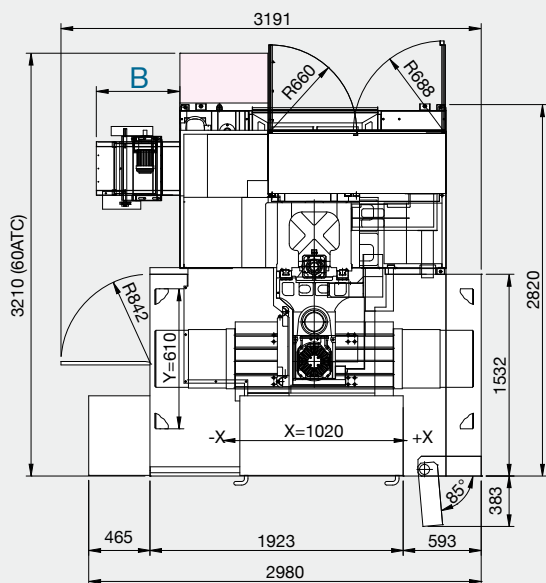
● = Standard ○ = Option × = N / A

Standard / option accessories	MV184							
	C	E			P			
	8C	9B	12B	15B	9B	12B	15B	15C
■ QUASER mill i	●	●	●	●	×	×	×	×
■ FANUC 18IM-B	×	×	×	×	●	●	●	●
■ FANUC 3 "O" package (RISC, data servo, AL nano HPCC)	×	×	×	×	○	○	○	○
■ HEIDENHAIN iTNC530	×	×	×	×	●	●	●	●
■ HEIDENHAIN TNC620	●	●	●	●	×	×	×	×
■ HEIDENHAIN Option2	×	×	×	×	○	○	○	○
■ MITSUBISHI M70 (package A)	●	×	×	×	×	×	×	×
■ Tooling								
- BT40	●	●	●	●	●	●	●	●
- ISO40 & DIN	○	○	○	○	○	○	○	○
- HSK A63	×	×	×	×	×	×	×	○
■ Spindle re-greasing system	×	●	●	●	●	●	●	●
■ BBT spindle attachment	×	●	●	●	●	●	●	●
■ Spindle ECO cooler	○	●	●	×	●	●	×	×
■ Spindle oil chiller	○	○	○	●	○	○	●	●
■ 30 position tool magazine	●	●	●	●	●	●	●	●
■ 48 / 60 position tool magazine	×	○	○	○	○	○	○	○
■ ATC auto door	×	○	○	○	○	○	○	○
■ 4th axis preparation	×	●	●	●	●	●	●	●
■ Ø255 mm rotary table & tailstock	×	○	○	○	○	○	○	○
■ Linear encoder 0.05 µm	×	○	○	○	○	○	○	○
■ Coolant through ball screw	×	×	×	×	○	○	○	○
■ Spindle nose thermal compensation package (Z direction <15 µm)	×	×	×	×	○	○	○	○
■ Work probe	×	○	○	○	○	○	○	○
■ Tool length / breakage measurement	○	○	○	○	○	○	○	○
■ Coolant wash down & wash gun	●	●	●	●	●	●	●	●
■ 20 bar through spindle coolant	×	○	○	○	○	○	○	○
■ 50 bar through spindle coolant	×	○	○	○	○	○	○	○
■ Stainless steel chip pan	●	●	●	●	●	●	●	●
■ Cutter air blast	●	●	●	●	●	●	●	●
■ Chip conveyor	○	●	●	●	●	●	●	●
	○	○	○	○	○	○	○	○
	○	○	○	○	○	○	○	○
■ Mist collector	○	○	○	○	○	○	○	○
■ Documentation	●	●	●	●	●	●	●	●
■ Foundation bolts & blocks	●	●	●	●	●	●	●	●
■ Work light	●	●	●	●	●	●	●	●
■ Machine status light	●	●	●	●	●	●	●	●
■ CE & EMC	×	●	●	●	●	●	●	●

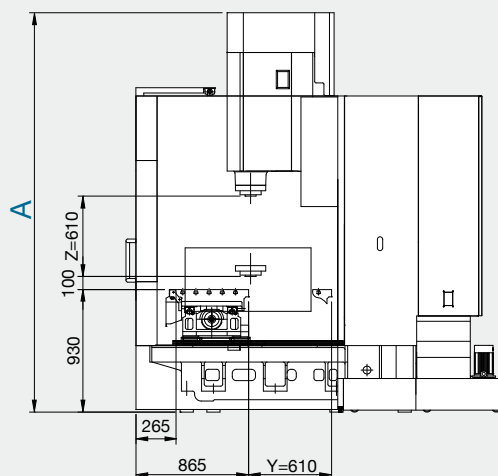
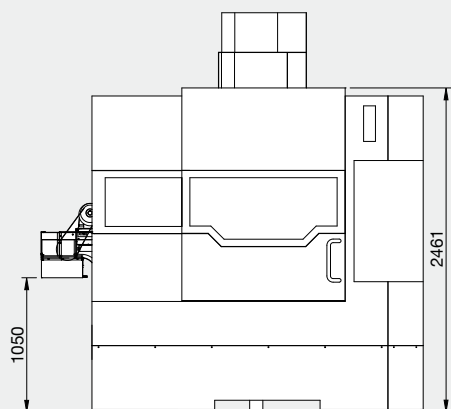
# Layout



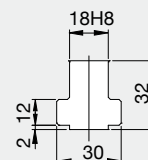
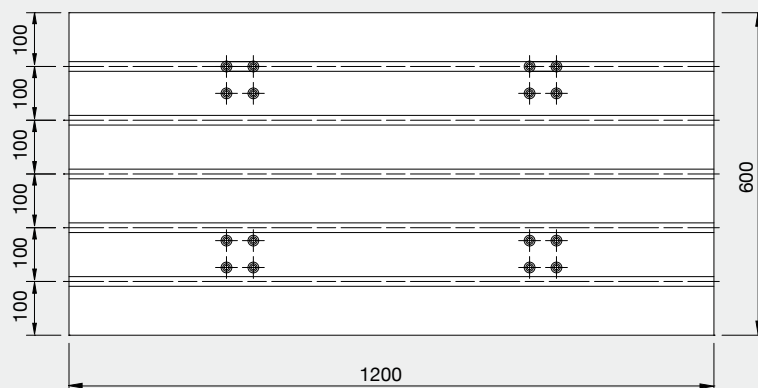
## Installation dimension



A	8C / 10C	2860
	9B	
	12B	
	15B	
B	15C	3060 (F) 2860(T)
	Scrape type	635
	Hinge type	635



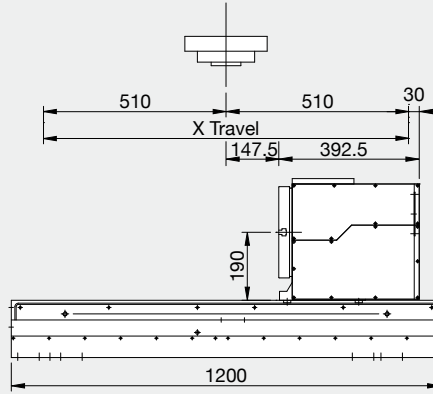
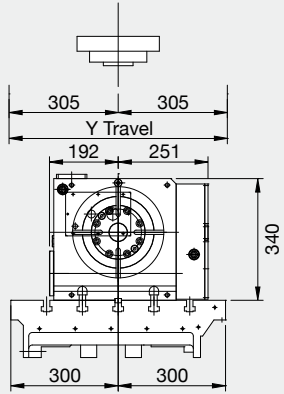
## Table dimension



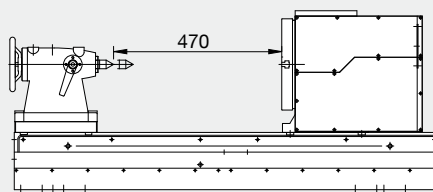
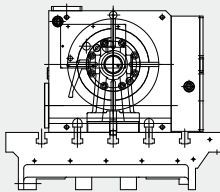


## 4th axes

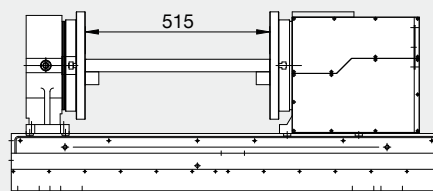
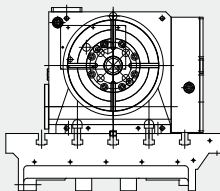
MV184/GV255HB



MV184/GV255HB+ST255

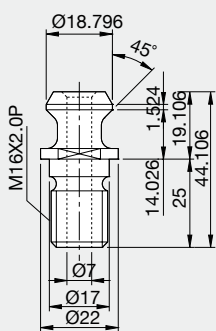


MV184/GV255HB+Fixture 2

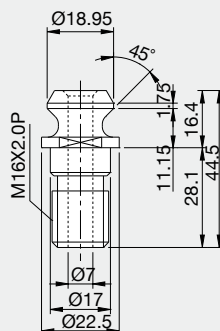


## Pull stud and applicable tools

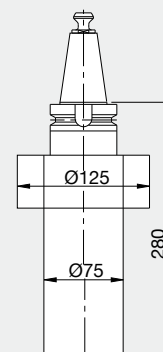
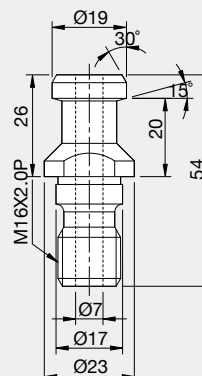
BT 40 (QUASER SUPPLY)



ISO (7388-B)



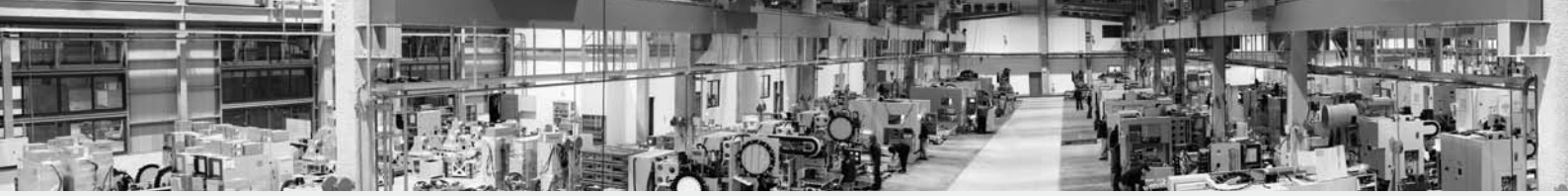
DIN (69872-A)



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