

PRECISE · DYNAMIC · RELIABLE























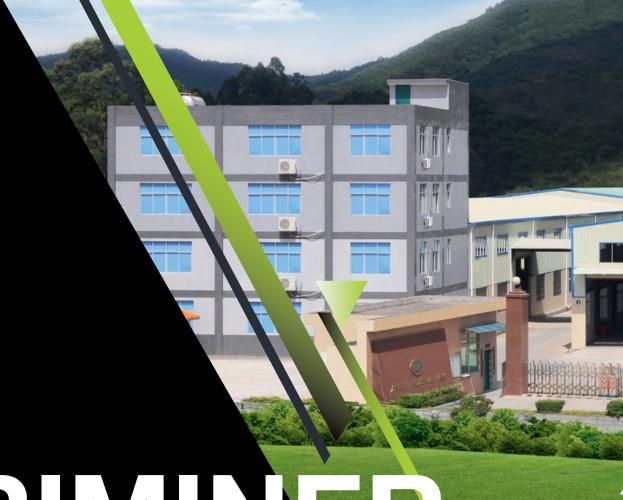












PRIMINER The Company







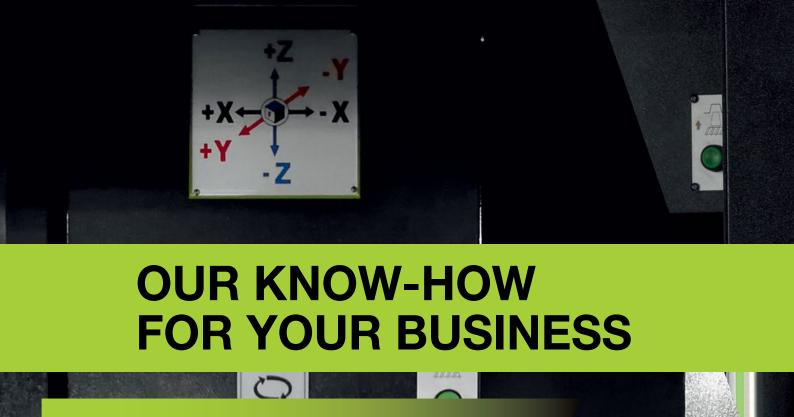


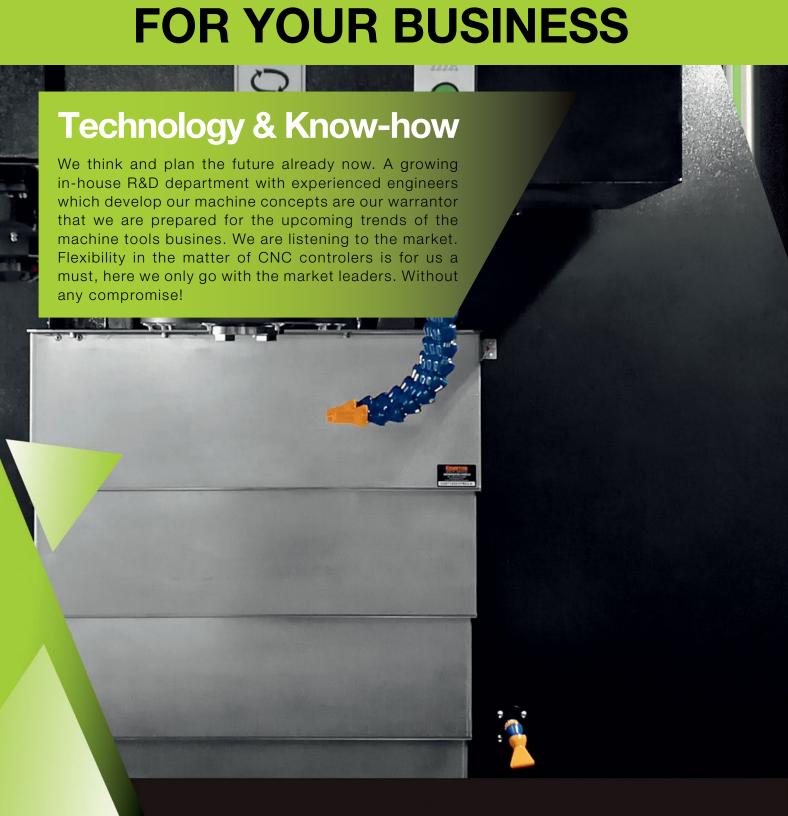
HOW WE DO IT

Consequent QC-management according to international norms, a higly motivated team of specialists, advantages of serial production and reliable top sub-suppliers with global leading positions are columns of our success. An open and result-oriented company culture through all levels is the basement for a permanent high level of our reliability and products.











GT18

Technical Specifications

- High speed and high precision machining, widely applied for big die & mold, electronics, defense, aerospace and medical industry
- Extra wide machine column and base design ensures the high rigidity
- Dual drive system with two ballscrews and three linear guideways on Y axis to ensure high accuracy of machining
- Extra wide door for easy loading and unloading
- Built-in type spindle, HSK A63, 24000rpm
- Oil cooled ballscrew
- Heidenhain linear scales on three axes
- 60 pockets chain type servo tool changer



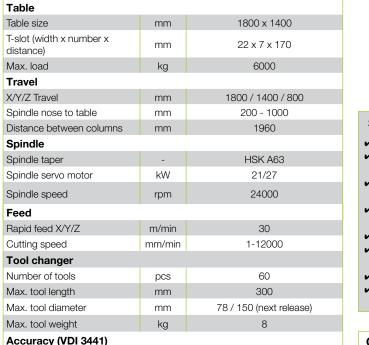
GT18

0.010 / Full travel

0.006 / Full travel

4965 x 6100 x 4380

22000



mm

mm

mm

kg



Standard configuration:

- ✓ Full enclosed splash guard
- ✓ Motor spindle HSK A63 24000 rpm
- ✓ 60 pockets chain type tool changer
- ✔ Chip conveyor (two screw type and one chain type)
- ✔ Air-conditioned electrical cabinet
- ✓ High precision spindle water cooler
- ✓ Linear scales
- Rigid tapping

- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✓ Coolant system
- ✓ Air blast during cutting
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG) ✓ Tool box
- ✓ Leveling bolts and blocks
- ✔ Coolant gun
- ✓ Air gun
- ✓ User Manual

Ontional configuration:

- Motor spindle HSK A100, 12000 rpm
- CTS Coolant through spindle + ATS
- Oil cooled ballscrew
- Tool probe

Optional	Comingui	auon.

- Oil skimmer
- Workpiece probe

Dimensions

Weigth

10

Positioning accuracy

(with linear encoder)

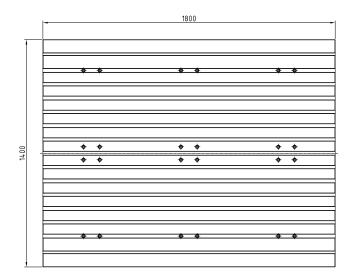
Repeatability accuracy

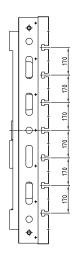
Dimensions & Weight

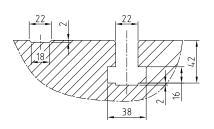
(with linear encoder)

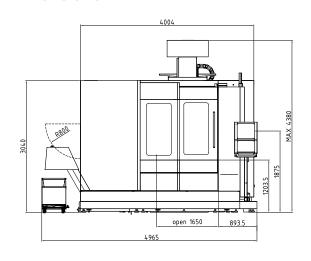
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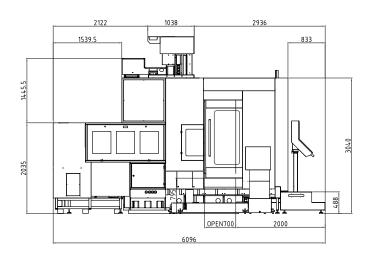


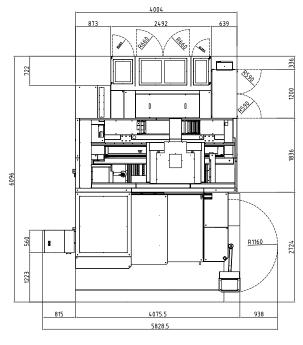














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GT18-5X



Technical Specifications		GT18-5X
Table		
Table size	mm	1800 x 1400
T-slot (width x number x distance)	mm	22 x 7 x 170
Max. load	kg	6000
A/C Axis Rotation	-	±110° / ±270°
Travel		
X/Y/Z Travel	mm	2000 / 1400 / 800
Spindle nose to table	mm	200 - 1000
Spindle		
Spindle taper	-	HSK A63
Spindle servo motor	kW	40 / 48
Spindle speed	rpm	24000
Max. speed A/C Axis	°/sec	180 / 180
Feed		
Rapid feed X/Y/Z	m/min	30
Cutting speed	mm/min	1-12000
Tool changer		
Number of tools	pcs	60
Max. tool length	mm	300
Max. tool diameter	mm	78 / 150 (next release)
Max. tool weight	kg	8
Accuracy (VDI 3441)		
Positioning accuracy (with linear encoder)	mm	0.010 / Full travel
Repeatability accuracy (with linear encoder)	mm	0.006 / Full travel
Dimensions & Weight		
Dimensions	mm	4965 x 6100 x 4830
Weigth	kg	24000

- Built-in type spindle, HSK A63, 24000 rpm
- 60 pockets chain type servo tool changer
- Heidenhain linear scales on three axes
- Oil cooled ballscrew
- Direct drive servo motor for A/C axes
- A axis travel: ±110°
- C axis travel: ±270°
- A axis clamping torque: 1800 Nm
- C axis clamping torque: 2000 Nm

Standard configuration:

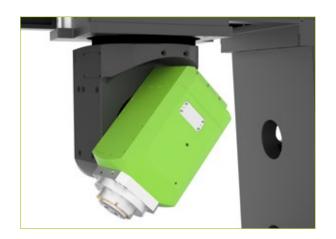
- ✓ Full enclosed splash guard
- ✓ Motor spindle HSK A63 24000 rpm
- ✓ 60 pockets chain type tool changer
- ✓ Chip conveyor (two screw type and one chain type)
- ✔ Air-conditioned electrical cabinet
- ✔ High precision spindle water cooler
- ✓ Linear scales
- ✔ Rigid tapping

- ✓ Ethernet, CF card and USB interface
- ✔ Automatic lubrication system
- ✔ Coolant system
- ✓ Air blast during cutting
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✔ Coolant gun
- ✓ Air gun
- ✓ User Manual

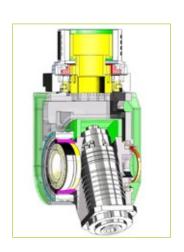
- CTS Coolant through spindle + ATS
- Oil cooled ballscrew
- Oil skimmer
- Workpiece probe
- Tool probe

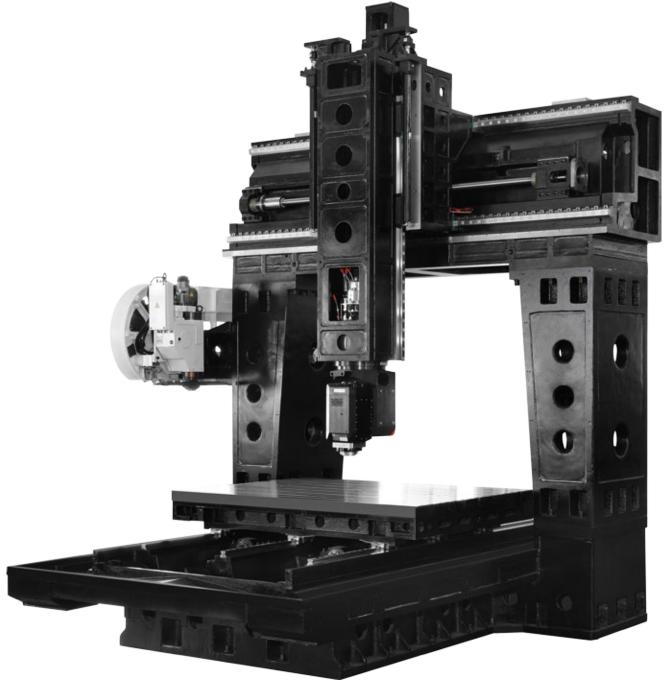
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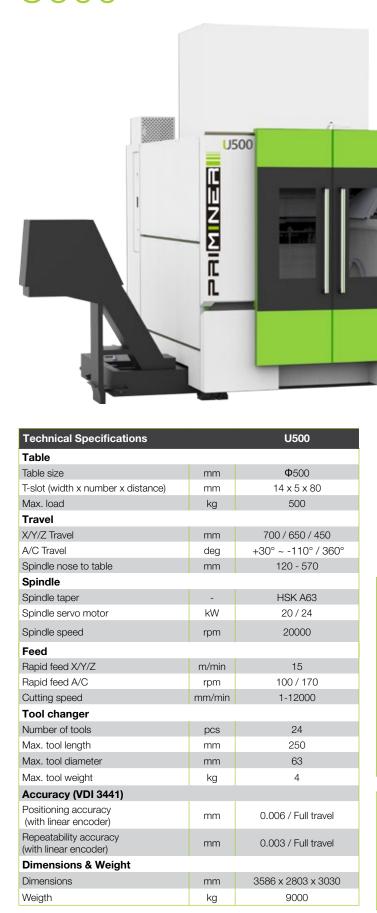






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U500



- Gantry design
- Direct Drive rotary table
- Dual drive system with two ballscrews on Y axis to ensure the best dynamic.
- · Compact design with mini.floor plan area
- Built-in spindle 20000 rpm, HSK A63

Standard configuration:

- ✓ Full enclosed splash guard
- ✓ Motor spindle HSK A63 20000 rpm
- ✓ 24 pockets chain type tool
- ✔ Chain type chip conveyor
- ✔ Air-conditioned electrical cabinet
- ✓ High precision spindle water cooler
- ✓ Linear scales
- ✔ Rigid tapping
- ✓ Ethernet ,CF card and USB interface

- ✔ Automatic lubrication system
- ✓ Coolant system
- ✓ Air blast during cutting
- ✓ LED working lamp ✓ End of program light
- ✔ Electronic handwheel(MPG) ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✓ Air gun
- ✓ User Manual

Optional configuration:

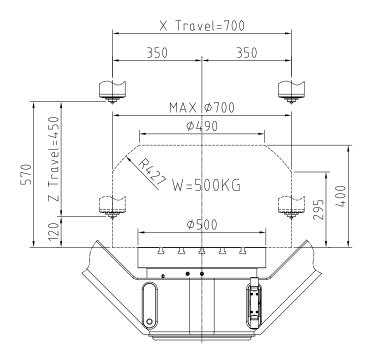
- Motor spindle HSK E40 30000 rpm with 40 pockets chain type tool changer
- CTS Coolant through spindle + ATS
- Oil cooled ballscrew
- Oil skimmer
- Workpiece probe
- Tool probe

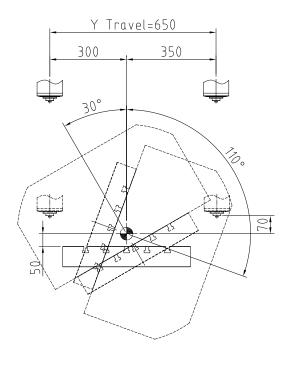
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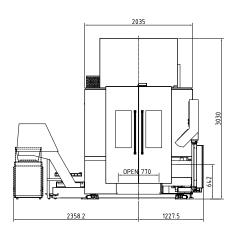
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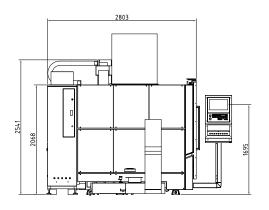


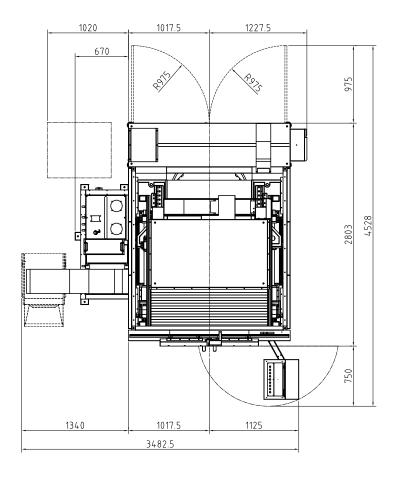
Cutting Area and Interference Area











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GT7



Travel 700 / 600 / 450 X/Y/Z Travel mm 145 - 595 Spindle nose to table mm Distance between columns mm Spindle HSK E32 Spindle taper Spindle servo motor kW 6.3 / 9.45 Spindle speed rpm 40000 Feed Rapid feed X/Y/Z m/min 15 Cutting speed mm/min 1-12000 **Tool changer** Number of tools 32 pcs Max. tool length 250 mm Max. tool diameter mm 12 Max. tool weight kg 2 Accuracy (VDI 3441) Positioning accuracy 0.006 / Full travel mm (with linear encoder) Repeatability accuracy 0.003 / Full travel mm (with linear encoder) **Dimensions & Weight** 3586 x 2803 x 3030 Dimensions mm Weigth kg 8000

Standard configuration:

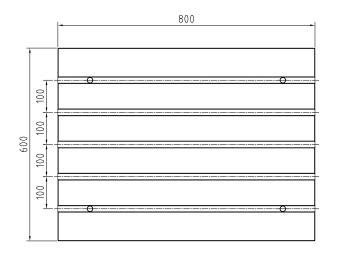
- ✓ Full enclosed splash guard
- ✓ Motor spindle HSK E32 40000 rpm
- ✓ 48 pockets chain type tool changer
- ✔ Chain type chip conveyor
- ✔ Air-conditioned electrical cabinet
- High precision spindle water cooler
- ✓ Linear scales
- ✔ Rigid tapping
- ✓ Ethernet, CF card and USB interface

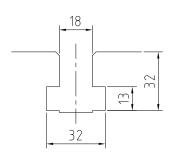
- ✓ Automatic lubrication system
- ✔ Coolant system
- ✔ Air blast during cutting
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✔ Coolant gun
- ✔ Air gun
- ✓ User Manual

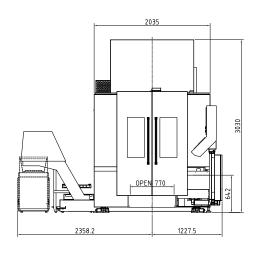
- HSK E40 30000 rpm with 40 pockets chain type tool changer
- HSK A63 20000 rpm with 24 pockets chain type tool changer
- CTS Coolant through spindle + ATS
- Oil cooled ballscrew
- Oil skimmer
- Workpiece probe
- Tool probe

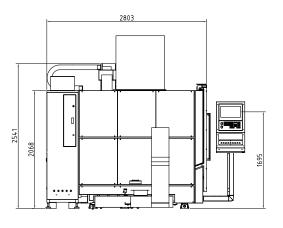
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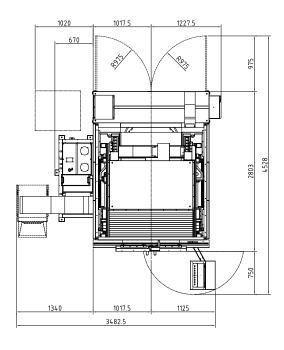


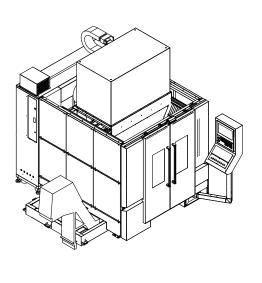












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VF900 · 1100 · 1300 · 1500



- VF series ultra high performance center is specially designed for high speed and high efficiency machining applications
- Advanced design with reinforced body structure through FEM analysis. VF series offers superb cutting performance and reduced vibration to meet the highest machining demands
- Extra wide machine column and base design ensures the high rigidity during high speed movement
- Motor seat cooling circuit (VF1100 & VF1300)
- Coolant through ballscrew for VF1100 & VF1300 & VF1500 (option)
- Linear scales (option)

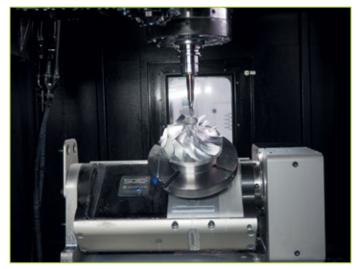


Standard configuration:

- ✓ Fully enclosed splash guard
- ✔ Direct drive spindle 12000 rpm
- ✓ 24 pockets arm tool changer
- ✓ Two screw type and one chain type (VF 1100, VF1300, VF1500)
- ✔ Chain type chip conveyor (VF900)
- ✓ Spindle cooling system
- ✔ Air-conditioned electrical cabinet
- ✓ Motor seat cooling circuit (VF1100, VF1300, VF1500)
- ✔ Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✓ Coolant system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks✓ Coolant gun
- ✓ Air gun
- ✔ Air blast during cutting



- Direct drive spindle 6000 rpm, BBT50 (VF1100, VF1300, VF1500)
- Direct drive spindle 18000/24000 rpm, BBT40
- Motor spindle 18000 rpm, HSK A63
- CTS coolant through spindle + ATS
- Oil cooled ballscrew
- Oil skimmer
- Linear scales
- 4th axis
- 4/5th axis
- Workpiece probe
- Tool probe



Lehmann 4th & 5th axis

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Cast iron tempered for stress relief to ensure structural stability without deformation



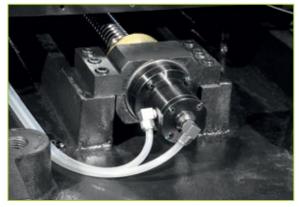
Two screw type chip conveyors in Y-axis (VF1100 & VF1300 & VF1500)



External tool cooling



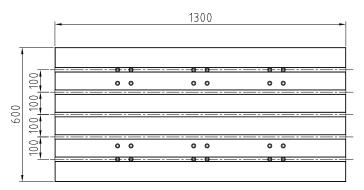
Roller type linear guideway

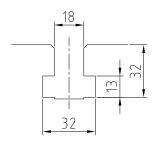


Oil cooled ballscrews (VF1100 & VF1300 & VF1500)

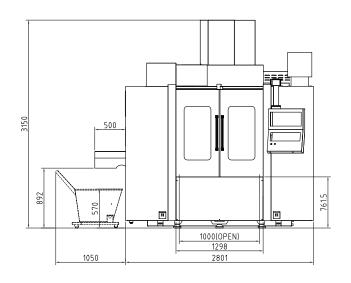
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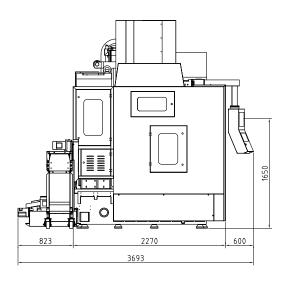
Worktable (VF1100)

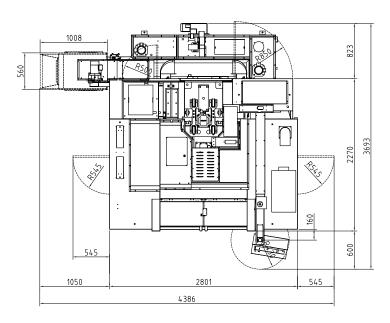




Dimensions (VF1100)







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Technical Specifications

Technical Specifications		VF900 VF1100		VF1300 VF1500		
Table						
Table size	mm	1060 x 600	1300 x 600	1500 x 650	1700 x 700	
T-slot (width x number x distance)	mm		18 x 5 x 100		18 x 6 x 100	
Max. load	kg	650	800	1000	1200	
Travel						
X/Y/Z Travel	mm	900 / 600 / 600	1100 / 650 / 600	1300 / 650 / 600	1500/760/700	
SpinIde nose to table	mm		150 - 750	130 - 830		
Spindle center to column	mm	652	69	97 802		
Spindle						
Spindle taper	-		SK40 / BBT	40 / CAT 40		
Spindle servo motor	kW	9 / 22 Siemens, 11 / 18.5 Fanuc	2	20 / 53 Siemens, 15 / 30 Fanu	c	
Spindle speed	rpm	12000		15000		
Feed						
Rapid feed X/Y/Z	m/min		36 24			
Cutting feed	mm/min	1 - 12000				
Tool changer						
Number of tools	pcs	24				
Max. tool length	mm	300				
Max. tool diameter	mm	78 (125)				
Max. tool weight	kg	8				
Accuracy (VDI 3441)						
Positioning accuracy (without linear encoder)	mm	0.010 / F	Full travel	0.012 / Full travel		
Positioning repeatability (without Linear encoder)	mm	0.006 / F	- ull travel	0.008 / Full travel		
Positioning accuracy (with linear encoder)	mm	0.006 / F	ull travel	0.008 / Full travel		
Positioning repeatability (with linear encoder)	mm	0.004 / F	- ull travel	0.006 / Full travel		
Dimensions & Weight						
Dimensions	mm	3850 x 2335 x 3000	3850 x 3093 x 3150	4025 x 3693 x 3250	4025 x 3693 x 3250	
Weight	kg	6800 8000		8500	10000	



Cooling unit with chip conveyor



Keyarrow telescopic covers in all axes

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VF760



Standard configuration:

- ✓ Fully enclosed splash guard
- ✔ Direct drive spindle 12000 rpm
- ✓ Spindle cooling system
- ✓ 24 pockets arm tool changer
- ✓ Air-conditioned electrical cabinet
- ✔ Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✔ Coolant system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✔ Air gun
- ✓ Air blast during cutting
- ✔ Chain type chip conveyor
- ✓ User Manual

- CTS coolant through spindle + ATS
- Motor spindle 20000 rpm, HSK A63
- 4th axis
- 4/5th axis
- Workpiece probe
- Tool probe
- Linear scales
- Oil skimmer

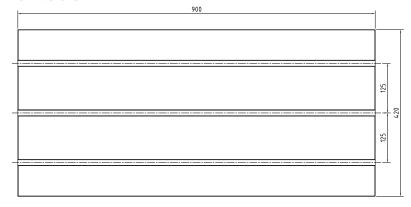
- Cast iron is tempered for stress relief to ensure structural stability without deformation
- C3 class ballscrews ensures the highest accuracy and durability
- Pre-tension on all axis minimizes thermal distortion

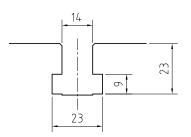


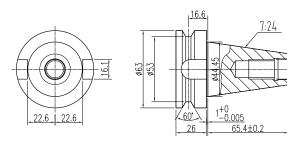
Technical Specifications Table		VF760		
Toblo		VF700		
rable				
Table size	mm	900 x 420		
T-slot (width x number x distance)	mm	14 x 3 x 125		
Max. load	kg	350		
Travel				
X/Y/Z Travel	mm	760 / 450 / 520		
Spindle nose to table	mm	100 - 620		
Spindle center to column	mm	517		
Spindle				
Spindle taper	-	SK 40 / BBT 40 / CAT 40		
Spindle servo motor	kW	9 / 22 Siemens; 11 / 18.5 Fanuc		
Spindle speed	rpm	12000		
Feed				
Rapid feed X/Y/Z	m/min	48 (24 opt.)		
Cutting feed	mm/ min	1-12000		
Tool changer				
Number of tools	pcs	24		
Max. tool length	mm	300		
Max. tool diameter	mm	78 (125)		
Max. tool weight	kg	8		
Accuracy (VDI 3441)				
Positioning accuracy (without linear encoder)	mm	0.010 / Full travel		
Positioning repeatability (without linear encoder)	mm	0.006 / Full travel		
Positioning accuracy (with linear encoder)	mm	0.006 / Full travel		
Positioning repeatability (with linear enoder)	mm	0.004 / Full travel		
Dimesions & Weight				
Dimensions	mm	3250 x 2710 x 2900		
Weight	kg	4500		

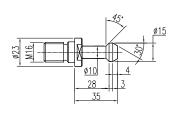
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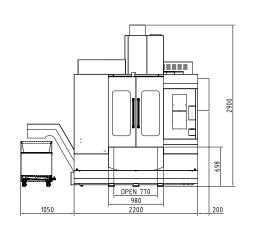


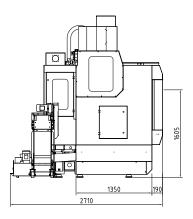


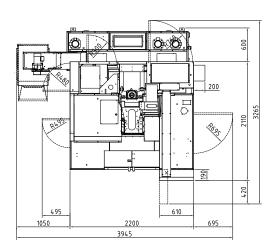
MAS403 BBT40

MAS403P40T-1(45°)

BBT40 tool holder and pull stud (optional SK40)













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MINI Center



Technical Specifications		Mini Center		
Table				
Table size	mm	650 x 300		
T-slot (width x number x distance)	mm	14 x 3 x 100		
Max. load	kg	200		
Travel				
X/Y/Z Travel	mm	500 / 300 / 400		
SpinIde nose to table	mm	120 - 520		
Spindle center to column	mm	340		
Spindle				
Spindle taper	-	SK 40 / BT 40 / CAT 40		
Spindle servo motor	kW	4.8 / 19 Siemens; 3.7 / 13 Fanuc		
Spindle speed	rpm	10000		
Feed				
Rapid speed	m/min	X/Y: 20, Z: 12		
Cutting speed	mm/min	1-10000		
Tool changer				
Number of tools	pcs	12		
Max. tool length	mm	300		
Max. tool diameter	mm	90 / 125		
Max. tool weight	kg	8		
Accuracy (VDI 3441)				
Positioning accuracy	mm	0.012 / Full travel		
Positioning repeatability	mm	0.008 / Full travel		
Dimensions & Weight				
Dimensions	mm	1660 x 2000 x 2500		
Weight	kg	1800		

- Training
- Tool room workshop
- Metal parts machining
- Model making
- R&D
- Cast iron is tempered for stress relief to ensure machine stability without deformation



Standard configuration:

- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 10000 rpm
- ✓ 12 position umbrella tool changer
- ✔ Heat exchanger for electrical cabinet
- ✓ Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✓ Coolant system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✔ Coolant gun
- ✔ Air gun
- ✓ Chip flushing system
- ✓ User Manual

- Spindle cooling system
- Workpiece probe
- Tool probe
- Rotary table
- Oil skimmer

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12 station umbrella tool changer



LED Internal lamp



Chip flushing system



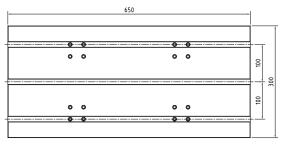
4th axis optional

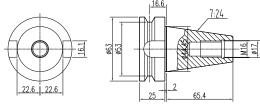


Tool probe (optional)

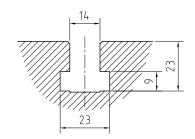


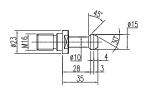
Chip collector & Coolant tank





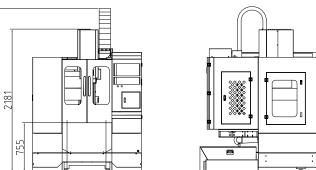
MAS403 BT40

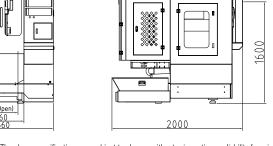


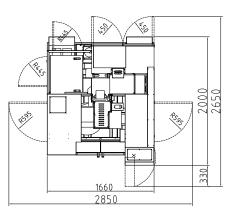


MAS403P40T-1(45°)

Dimensions







^{*} The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

BT40 tool holder and pull stud (optional SK40)

Τ7



Technical specifications Table Table 900 x 420 mm 14 x 3 x 125 T-slot (width x number x distance) mm 350 Max. load kg Travel X/Y/ZTravel 760 / 450 / 420 mm Spindle nose to table mm 150 - 450 Spindle center to column mm 517 Spindle Spindle taper **BBT 30** 4.8 / 19 Siemens Spindel servo motor kW 3.7 / 13 Fanuc Spindle speed 12000 rpm Feed Rapid feed X/Y/Z 48 m/min mm/min 1-12000 Cutting feed **Tool changer** Number of tools pcs 21 Max. tool length 200 mm Max. tool diameter 60 (80) mm 2 Max. tool weight kg Accuracy (VDI 3441) Positioning accuracy 0.010 / Full travel mm Positioning repeatability 0.006 / Full travel mm **Dimensions & Weight** Dimensions 2200x2460x2400 mm Weight kg 3700

- Highly rigid machine frame for high acceleration
- High speed and low noise ballscrew and linear guideways on three axes
- Direct drive spindle with standard speed 12000 rpm
- Rapid feed 48 m/min to reduce non-machining time



Standard configuration:

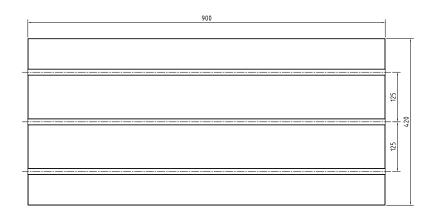
- ✓ Fully enclosed splash guard
- ✓ Direct drive spindle with 12000 rpm
- \checkmark 21 pockets servo type tool changer
- ✔ Heat exchanger for electrical cabinet
- ✔ Rigid tapping
- ✓ Ethernet and CF card and USB interface
- ✓ Automatic lubrication system
- ✔ Coolant system

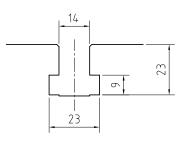
- ✓ LED working lamp
- ✓ End of program light
- ✓ Spindle cooling system
- ✔ Electronic handwheel (MPG)
- ✔ Tool box
- $\ensuremath{\checkmark}$ Leveling bolts and blocks
- ✔ Coolant gun
- ✓ Air gun
- ✔ Chip flushing system
- ✓ User Manual

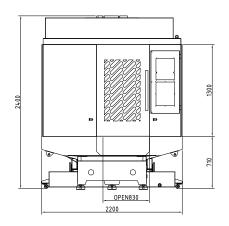
- Spindle speed 20000 rpm
- 4th axis
- Workpiece probe
- Tool probe
- CTS Coolant through spindle + ATS
- Oil skimmer

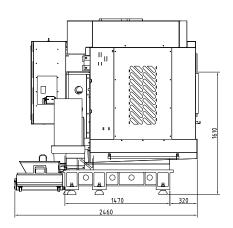
^{*} The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

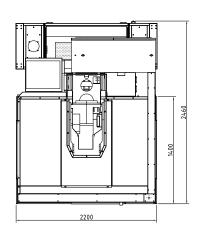
















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V6L



- Toolroom workshop
- Metal parts machining
- Mold making, R&D
- Cast iron is tempered for stress relief to ensure machine stability without deformation
- C3 class ballscrews ensures the highest accuracy and durability
- Pre-tension on all axes minimizes thermal distortion



Technical Specifications		Delta Center V6L			
Table					
Table size	mm	750 x 400			
T-slot (width x number x distance)	mm	14 x 3 x 125			
Max. load	kg	350			
Travel					
X/Y/Z Travel	mm	600 / 400 / 450			
Spindle nose to table	mm	110 - 560			
Spindle center to column	mm	434			
Spindle					
Spibdle taper	-	SK 40 / BT 40 / CAT 40			
Spindle speed	rpm	10000			
Spindle servo motor	kW	4.8 / 19 Siemens; 3.7 / 13 Fanuc			
Feed					
Rapid feed X/Y/Z	m/min	48			
Cutting speed	mm/min	1-12000			
Tool changer					
Number of tools	pcs	24			
Max. tool length	mm	220			
Max. tool diameter	mm	78 (125)			
Max. tool weight	kg	8			
Accuracy (VDI 3441)					
Positioning accuracy	mm	0.010 / Full travel			
Positioning repeatability	mm	0.006 / Full travel			
Dimensions & Weight					
Dimensions	mm	1800 × 2530 × 2700			
Weight	kg	3500			

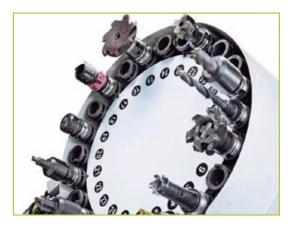
Standard configuration:

- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 10000 rpm
- ✓ 24 pockets arm tool changer
- ✓ Heat exchanger for electrical cabinet
- ✔ Rigid tapping
- ✓ Ethernet CF card and USB interface
- ✓ Automatic lubrication system
- ✓ Coolant system
- ✓ LED working lamp
- \checkmark End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✓ Air gun
- ✔ Chip flushing system
- ✓ User Manual

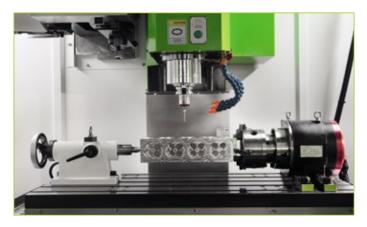
- Spindle speed 12000 rpm, direct drive
- Spindle cooling system
- CTS Coolant through spindle + ATS
- 4th axis
- Workpiece probe
- Tool probe
- Oil skimmer

^{*} The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

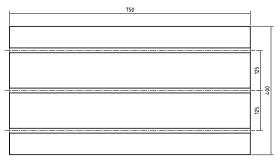


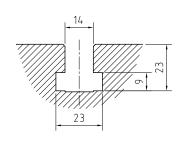


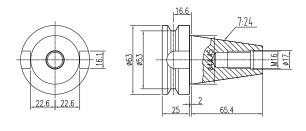
24 pocket arm tool changer

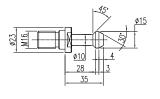


4th axis (optional)





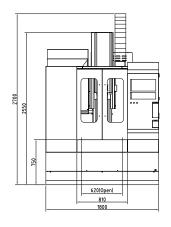


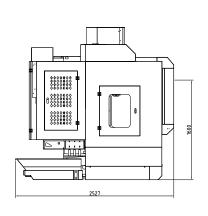


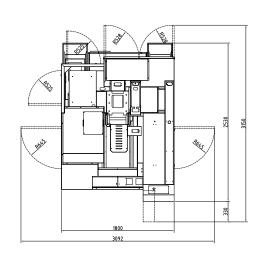
MAS403 BT40

MAS403P40T-1(45°)

BT40 tool holder and pull stud (optional SK40)







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V10L



- Cast iron is tempered for stress relief to ensure structural stability without deformation
- Pre-tension on all axes minimizes thermal distortion
- C3 class ballscrews ensures the highest accuracy and durability



Technical Spesifications Delta Center V10L						
Table						
Table size	mm	1100 x 500				
T-slot (width x number x distance)	mm	18 x 5 x 100				
Max. load	kg	600				
Travel						
X/Y/Z Travel	mm	1020 / 520 / 550				
Spindle nose to table	mm	120 - 670				
Spindle center to column	mm	566				
Spindle						
Spindle taper	-	SK 40 / BT 40 / CAT 40				
Spindle speed	rpm	10000				
Spindle servo motor	kW	9 / 22 Siemens; 7.5 / 15 Fanuc				
Tool changer						
Number of tools	pcs	24				
Max. tool diameter	mm	78 (125)				
Max. tool length	mm	300				
Max. tool weight	kg	8				
Feed						
Rapid feed X/Y/Z	m/min	48 (opt. 30)				
Cutting speed	mm/min	1-12000				
Accuracy (VDI 3441)						
Positioning accuracy	mm	0.010 / Full travel				
Positioning repeatability	mm	0.006 / Full travel				
Dimensions & Weight						
Dimensions	mm	3870 x 2175 x 2850				
Weight	kg	5000				

Standard configuration:

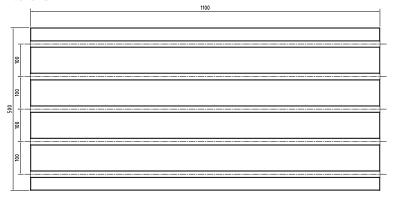
- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 10000 rpm
- ✓ 24 pockets arm tool changer
- ✔ Chain type chip conveyor
- ✓ Air-conditioned electrical cabinet
- ✓ Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✔ Coolant system

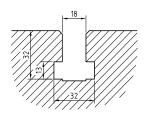
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✓ Air gun
- ✓ Chip flushing system
- ✓ User Manual

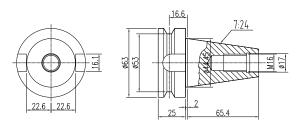
- Spindle speed 12000 rpm, direct drive
- Spindle cooling system
- CTS Coolant through spindle + ATS
- Oil skimmer
- Workpiece probe
- Tool probe
- 4th axis
- 4/5th axis

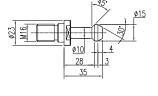
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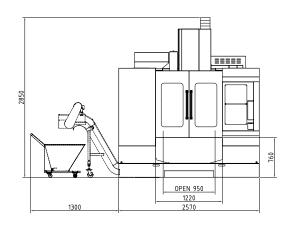


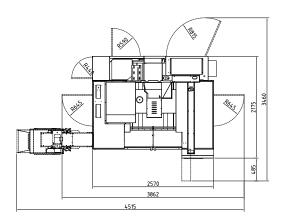


MAS403 BT40

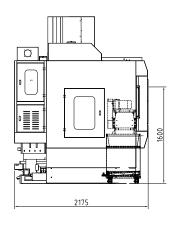
MAS403P40T-1(45°)

BT40 tool holder and pull stud (optional SK40)









4th axis, different sizes

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V7L





Technical Specifications	Alpha Center V7L			
Table				
Table size	mm	900 x 420		
T-slot (width x number x distance)	mm	14 x 3 x 125		
Max. load	kg	350		
Travel				
X/Y/Z Travel	mm	760 / 450 / 520		
Spindle nose to table	mm	100 - 620		
Spindle center to column	mm	517		
Spindle				
Spibdle taper	-	SK 40 / BT 40 / CAT 40		
Spindle speed	rpm	10000		
Spindle servo motor	kW	9 / 22 Siemens; 7.5 / 15 Fanuc		
Feed				
Rapid feed X/Y/Z	m/min	48		
Cutting speed	mm/min	1-12000		
Tool changer				
Number of tools	pcs	24		
Max. tool length	mm	300		
Max. tool diameter	mm	78 (125)		
Max. tool weight	kg	8		
Accuracy (VDI 3441)				
Positioning accuracy	mm	0.010 / Full travel		
Positioning repeatability	mm 0.006 / Full travel			
Dimensions & Weight				
Dimensions	mm	3450 x 2710 x 2900		
Weight	kg	4500		

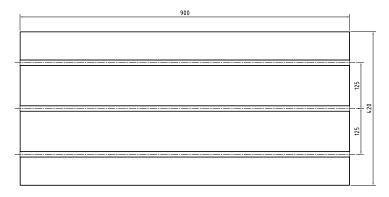
Standard configuration:

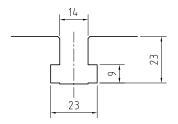
- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 10000 rpm
- ✓ 24 pockets arm tool changer
- ✔ Chain type chip conveyor
- ✔ Air-conditioned electrical cabinet
- ✔ Rigid tapping
- ✓ Ethernet CF card and USB interface
- ✓ Automatic lubrication system
- ✔ Coolant system
- ✓ LED working lamp
- ✓ End of program light
- ✓ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✔ Coolant gun
- ✔ Air gun
- ✔ Chip flushing system
- ✓ User Manual

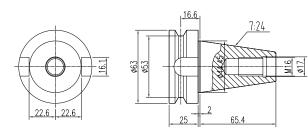
- Spindle speed 12000 rpm, direct drive
- Spindle cooling system
- CTS Coolant through spindle + ATS
- Oil skimmer
- Workpiece probe
- Tool probe
- 4th axis
- 4/5th axis

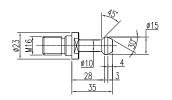
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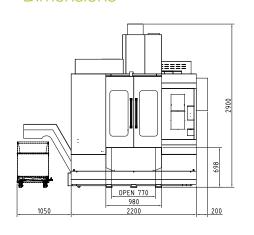


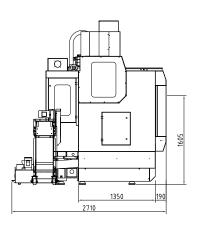


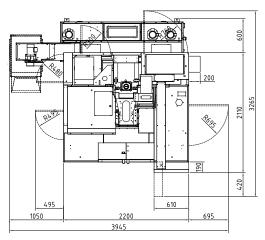
MAS403 BT40

MAS403P40T-1(45°)

BT40 tool holder and pull stud (optional SK40)











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V9L • V11L



Technical Specifications Table Table size 1060 x 600 1200 x 600 mm T-slots 18 x 5 x 100 mm (width x number x distance) Max. load kg 650 800 Travel X/Y/Z Travel 900 / 600 / 600 | 1100 / 600 / 600 mm 150 - 750 Spindle nose to table mm Spindle center to column 652 mm Spindle SK 40 / BT 40 / CAT 40 Spindle taper 9 / 22 Siemens: kW Spindle servo motor 11 / 18.5 Fanuc Spindle speed rpm 10000 Feed Rapid feed X/Y/Z 36 m/min 1-12000 Cutting speed mm/min Tool changer Number of tools pcs 24 Max. tool length mm 300 Max. tool diameter mm 78 (125) Max. weigth kg 8 Accuracy (VDI 3441) 0.010 / Full travel Positioning accuracy mm Positioning repeatability 0.006 / Full travel mm **Dimensions & Weight** Dimensions mm 3850 x 2336 x 3000

6300

kg

- Cast iron is tempered for stress relief to ensure structural stability without deformation
- C3 class ballscrews ensures the highest accuracy and durability
- Pre-tension on all axis minimizes thermal distortion



Standard configuration:

- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 10000 rpm
- ✓ 24 pockets arm tool changer
- ✔ Chain type chip conveyor
- ✓ Air-conditioned for electrical cabinet
- ✔ Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✔ Automatic lubrication system
- ✓ Coolant system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✔ Air gun
- ✔ Chip flushing system
- ✓ User Manual

Optional configuration:

- Spindle speed 12000 rpm, direct drive
- Spindle cooling system
- CTS Coolant through spindle + ATS
- Oil skimmer
- Workpiece probe
- Tool probe
- 4th axis
- 4/5th axis

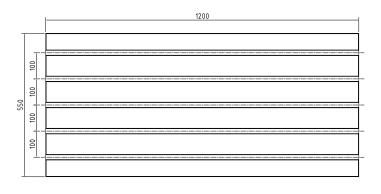
Weight

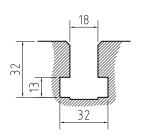
6500

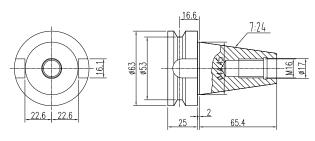
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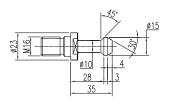


Worktable (V11L)







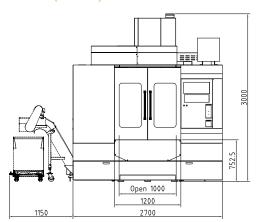


MAS403 BT40

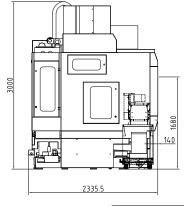
MAS403P40T-1(45°)

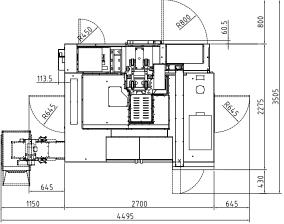
BT40 tool holder and pull stud (optional SK40)

Dimensions (V11L)









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V13L · V15L



- Cast iron is tempered for stress relief to ensure structural stability without deformation
- C3 class ballscrews ensures the highest accuracy and durability
- Pre-tension on all axis minimizes thermal distortion

Technical Specifications		V13L V15L				
Table						
Table size	mm	1400 x 600	1700 x 700			
T-slot (width x number x distance)	mm	18 x 5 x 100	18 x 6 x 100			
Max. load	kg	1000	1500			
Travel						
X/Y/Z Travel	mm	1300 / 760 / 670	1500 / 760 / 700			
Spindle nose to table	mm	100 - 770	130 - 830			
Spindle center to column	mm	797	802			
Spindle						
Spindle taper	-	SK 40 / BT 40 / CAT 40				
Spindle speed	rpm	10000				
Spindle servo motor	kW	15 / 38 Siemens; 11 / 18.5 Fanuc				
Tool changer						
Number of tools	pcs	24				
Max. tool length	mm	300				
Max. tool diameter	mm	78 (125)				
Max. tool weigth	kg	8				
Feed						
Rapid feed X/Y/Z	m/min	24				
Cutting speed	mm/min	1-12000				
Accuracy (VDI 3441)						
Positioning accuracy	mm	0.012 / F	Full travel			
Positioning repeatability	mm	0.008 / Full travel				
Dimnesions & Weight						
Dimensions	mm	5000 x 2432 x 3100				
Weight	kg	8000	10000			

Standard configuration:

- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 10000 rpm
- ✓ 24 pockets arm tool changer
- ✔ Chain type chip conveyor
- \checkmark Air-conditioned electrical cabinet
- Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✔ Automatic lubrication system
- ✓ Coolant system

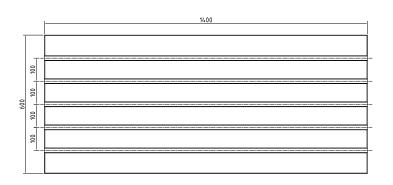
- ${\color{red} \checkmark} \; \text{LED working lamp}$
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- $\ensuremath{ \checkmark}$ Leveling bolts and blocks
- ✔ Coolant gun
- ✔ Air gun
- ✓ Air blast during cutting
- ✓ User Manual

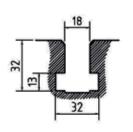
- Belt drive spindle 6000 rpm BT50
- Spindle speed 12000 rpm, direct drive
- Spindle cooling system
- CTS Coolant through spindle + ATS
- Oil skimmer
- Workpiece probe
- Tool probe
- 4th axis
- 4/5th axis

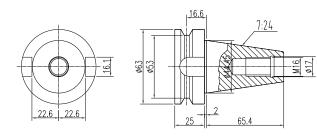
^{*} The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

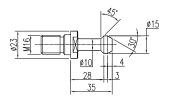


Worktable (V15L)





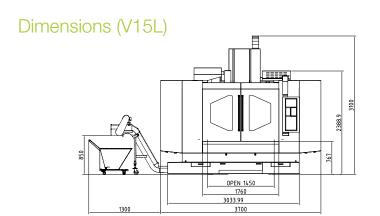


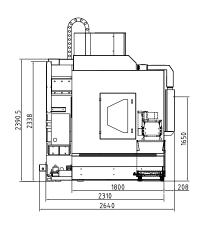


MAS403 BT40

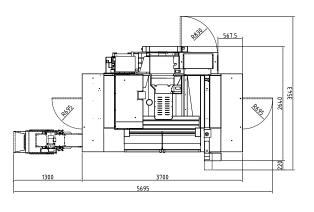
MAS403P40T-1(45°)

BT40 tool holder and pull stud (optional SK40)









5th axis, different sizes

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C3 class ballscrews ensures the highest accuracy and durability

Pre-tension on all axis minimizes thermal distortion

 Best choice for super heavy duty cutting with large workpiece

Technical Specifications		Power Center V18		
Table				
Table size	mm	1900 x 900		
T-slot (width x number x distance)	mm	18 x 7 x 120		
Max. load	kg	2000		
Travel				
X/Y/ZTravel	mm	1800 / 900 / 700		
Spindle nose to table	mm	200 - 900		
Spindle center to column	mm	1000		
Spindle				
Spindle taper	-	SK 50 / BT 50 / CAT 50		
Spindle servo motor	kW	22 / 60 Siemens 22 / 26 Fanuc		
Spindle speed	rpm	6000		
Feed				
Rapid speed X/Y/Z	m/min	24/24/15		
Cutting speed	mm/min	1-12000		
Tool changer				
Number of tools	pcs	24		
Max. tool length	mm	400		
Max. tool diameter	mm	125 / 245 (next release)		
Max. tool weight	kg	15		
Accuracy (VDI 3441)				
Positioning accuracy	mm	0.020 / Full travel		
Positioning repeatability	mm	0.010 / Full travel		
Dimensions & Weight				
Dimensions	mm	6060 x 3270 x 3650		
Weight	kg	17500		

Standard configuration:

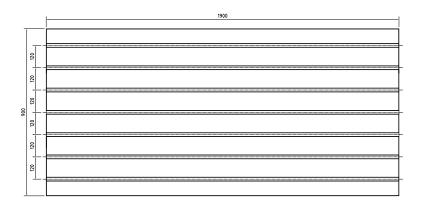
- ✓ Fully enclosed splash guard
- ✔ Belt drive spindle 6000 rpm
- ✓ 24 pockets arm tool changer
- ✔ Chain type chip conveyor
- ✔ Chip conveyor (4 screw type and 1 chain type)
- ✔ Air-conditioned electrical cabinet
- ✔ Rigid tapping
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✔ Coolant system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✓ Air gun
- ✓ Air blast during cutting
- ✓ User Manual

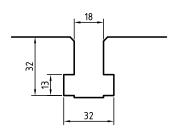
- Spindle cooling system
- Gear box spindle 6000 rpm with transmission ratio 1:4
- CTS Coolant through spindle + ATS
- Oil skimmer
- Workpiece probe
- Tool probe
- 4th axis
- 4/5th axis

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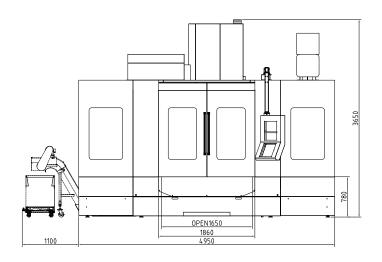


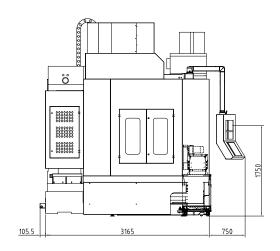
Worktable

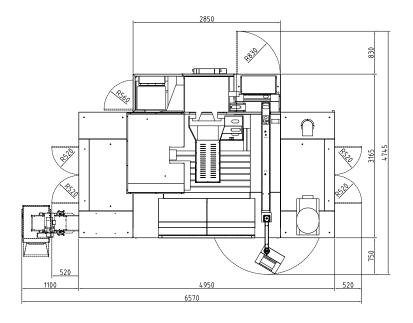


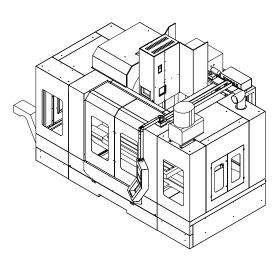


Dimensions









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V1613HS · V2013HS



Standard configuration:

- ✓ Fully enclosed splash guard
- ✓ Air-conditioned electrical cabinet
- ✔ Rigid tapping
- ✔ Chain type chip conveyor
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✔ Coolant system
- ✓ Spindle cooling system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blots
- ✔ Coolant gun
- ✔ Air gun
- ✓ User Manual

- Direct drive spindle 15000 rpm
- Motor spindle 20000 rpm, HSK A63
- 32 pockets arm tool changer
- Chip conveyor (two screw type and one chain type)
- CTS coolant through spindle +ATS
- Linear scales
- Oil skimmer

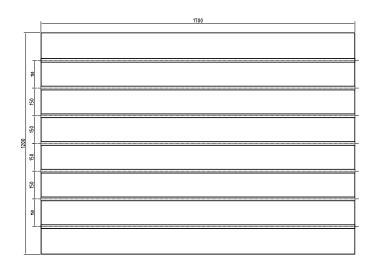
Technical Specifications		V1613HS	V2013HS
Table			
Table size	mm	1700 x 1200	2100 x 1200
T-slot (width x number x distance)	mm	18 × 7 × 150	
Max. load	kg	3.000	4.000
Travel			
X/Y/Z Travel	mm	1600 / 1300 / 600	2000 / 1300 / 600
Spindle nose to table	mm	200 - 800	
Distance between columns	mm	1380	
Spindle			
Spindle taper	-	SK40 / BT40 / CAT40	
Spindle servo motor	kW	9/22 Siemens; 11/18.5 Fanuc	
Spindle speed	rpm	12000	
Spindle transmission	-	direct drive	

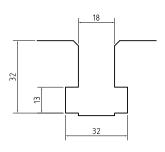
Technical Specifications		V1613HS	V2013HS	
Feed				
Rapid feed X/Y/Z	m/min	20	20	
Cutting speed	mm/min	1-12000	1-10000	
Tool changer				
Number of tools	pcs	32 (option)		
Max. tool length	mm	300		
Max. tool diameter	mm	78 (125)		
Max. tool weight	kg	8		
Accuracy				
Positioning accuracy	mm	0.015 / Full travel		
Positioning repeatability	mm	0.012 / Full travel		
Dimensions & Weight				
Dimensions	mm	5881x4110x3650	7090x5010x4250	
Weight	kg	15000	16000	

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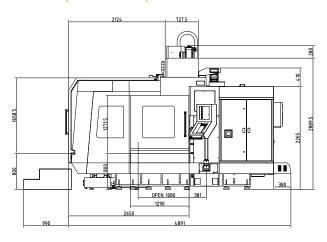


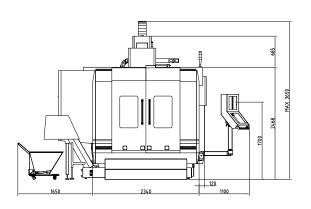
Worktable

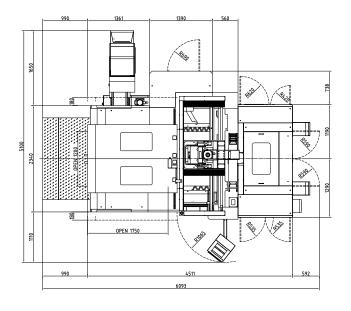


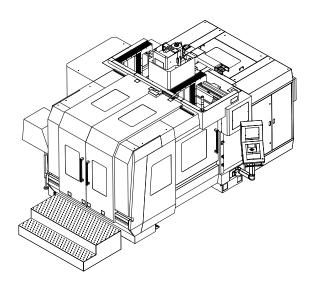


Dimensions (V1613HS)









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V2013

- Best choice for super heavy duty cutting with large workpiece
- X and Y axis with roller type linear guideways and Z axis with boxway guideways
- 50 taper spindle with belt drive 6000 rpm as standard, and optional with



Technical Specifications		V2013	
Table			
Table size	mm	2100 x 1200	
T-slot (width x number x distance)	mm	18 × 7 × 150	
Max. load	kg	4.000	
Travel			
X/Y/Z Travel	mm	2000 / 1300 / 800	
Spindle nose to table	mm	200 - 1000	
Distance between columns	mm	1380	
Spindle			
Spindle taper	-	SK50 / BT50 / CAT50	
Spindle servo motor	kW	22/60 Siemens; 15/18.5 Fanuc	
Spindle speed	rpm	6000	
Spindle transmission	-	belt drive	
Feed			
Rapid feed X/Y/Z	m/min	15 / 15 / 12	
Cutting speed	mm/min	1 - 10000	
Tool changer			
Number of tools	pcs	24 (option)	
Max. tool length	mm	400	
Max. tool diameter	mm	120/250 (next release)	
Max. tool weight	kg	15	
Accuracy (VDI 3441)			
Positioning accuracy	mm	0.015 / Full travel	
Positioning repeatability	mm	0.012 / Full travel	
Dimensions & Weight			
Dimensions	mm	7090 x 4120 x 4250	
Weight	kg	18000	

Standard configuration:

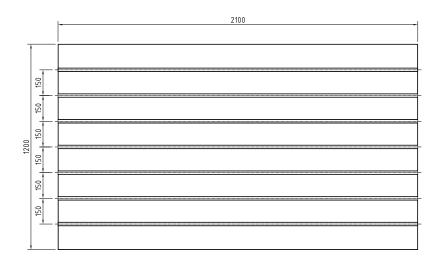
- ✓ Fully enclosed splash guard
- ✓ Air-conditioned electrical cabinet
- ✔ Rigid tapping
- ✔ Chain type chip conveyor
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✓ Coolant system
- ✓ Spindle cooling system
- ✓ LED working lamp
- ✓ End of program light ✔ Electronic handwheel (MPG)
- ✔ Tool box
- ✓ Leveling bolts and blocks
- ✔ Coolant gun
- ✔ Air gun
- ✓ User Manual

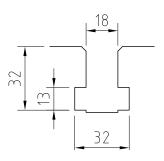
- 24 pockets arm tool changer
- 40 pockets chain type tool changer
- Chip conveyor (two screw type and one chain type)
- CTS coolant through spindle +ATS
- Manual 90 degree milling head
- Gear box
- Linear scales

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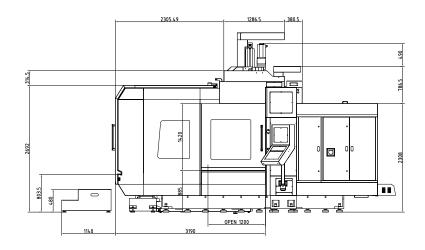


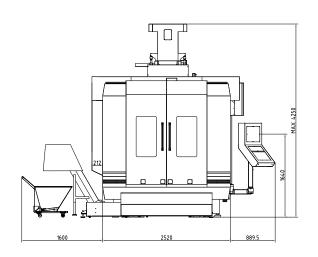
Worktable

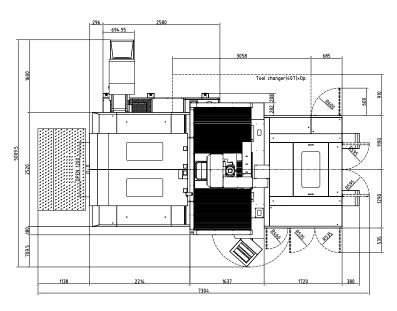




Dimensions







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V2317 · V3317 · V3025 · V4025



Standard configuration:

- ✓ Half enclosed splash guard
- ✓ Air-conditioned electrical cabinet
- ✔ Rigid tapping
- ✔ Chain type chip conveyor
- ✓ Ethernet, CF card and USB interface
- ✓ Automatic lubrication system
- ✓ Coolant system
- ✓ Spindle cooling system
- ✓ LED working lamp
- ✓ End of program light
- ✔ Electronic handwheel (MPG)
- ✓ Tool box
- ✓ Leveling bolts and blocks
- ✓ Coolant gun
- ✓ Air gun
- ✓ User Manual

- 24 pockets arm tool changer
- 40 pockets chain type tool changer
- Chip conveyor (two screw type and one chain type)
- CTS coolant through spindle +ATS
- Manual 90 degree milling head
- Gear box
- Linear scales

Technical Specifications		V2317	V 3317	
Table				
Table size	mm	2300 x 1500	3300 x 1500	
T-slot (width x number x distance)	mm	22 x 8 x 170		
Max. load	kg	8000	10000	
Travel				
X/Y/Z Travel	mm	2300 / 1600 / 800	3300 / 1600 / 800	
Spindle nose to table	mm	240 - 1040		
Distance between columns	mm	1680		
Spindle				
Spindle taper	-	SK50 / BT50 / CAT 50		
Spindle servo motor	kW	22 / 60 Siemens, 22 / 45 Fanuc		
Spindle speed	rpm	6000		
Spindle transmission		belt drive		

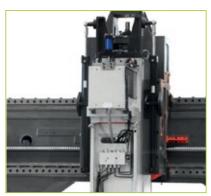
Technical Specifications		V2317	V3317		
Feed					
Rapid feed X/Y/Z	m/min	15 / 15 / 12			
Cutting speed	mm/min	1-10000			
Tool changer					
Number of tools	pcs	24 (option)			
Max. tool length	mm	400			
Max. tool diameter	mm	120 / 250 (next release)			
Max. tool weight	kg	15			
Accuracy (VDI 3441)					
Positioning accuracy	mm	0.016 / Full travel	0.019 / Full travel		
Positioning repeatability	mm	0.013 / Full travel	0.015 / Full travel		
Dimensions & Weight					
Dimensions	mm	6700x4700x4550	8700x4700x4550		
Weight	kg	24000	26000		

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- Extra wide column to increase to connection surface with the crossbeam to avoid vibration during cutting
- All axes are moved by high quality precision gear box to ensure high torque and rigidity during movement (V2317 and V3317 on all axes and V3025 / V4025 on X axis)
- Roller type linear guideway, which offers super high rigidity and loading capacity
- Hydraulic balancing system on Z axis





Hydraulic balancing system in Z axis



Gear drive in X axis



Chip conveyor

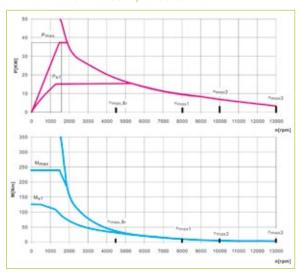
Technical Specifications		V3025	V4025		
Table					
Table size	mm	3000 x 2100	4000 x 2100		
T-slot (width x number x distance)	mm	28 x 9 x 220			
Max. load	kg	8000	10000		
Travel					
X/Y/Z Travel	mm	3000 / 2500 / 1000	4000 / 2500 / 1000		
Spindle nose to table	mm	105 - 1105			
Distance between columns	mm	2480			
Spindle	Spindle				
Spindle taper	-	SK50 / BT50 / CAT 50			
Spindle servo motor	kW	22 / 60 Siemens, 22 / 45 Fanuc			
Spindle speed	rpm	6000			
Spindle transmission		belt drive			

Technical Specifications		V3025	V4025			
Feed						
Rapid feed X/Y/Z	m/min	12/12/10	10/12/10			
Cutting speed	mm/min	1-10000				
Tool changer	Tool changer					
Number of tools	pcs	24 (option)				
Max. tool length	mm	400				
Max. tool diameter	mm	120 / 250 (next release)				
Max. tool weight	kg	15				
Accuracy (VDI 3441)						
Positioning accuracy	mm	0.018 / Full travel	0.025 / Full travel			
Positioning repeatability	mm	0.015 / Full travel	0.020 / Full travel			
Dimensions & Weight						
Dimensions	mm	7800x5300x4950	9800x5300x4950			
Weight	kg	29000	33000			

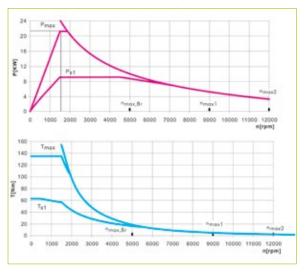
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Torque diagram / Standard Siemens

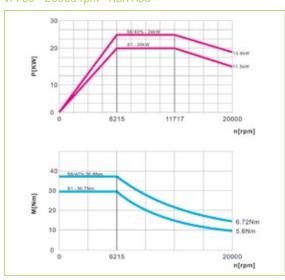
VF1100 · 1300 · 1500 / Alpha Center V13L · V15L



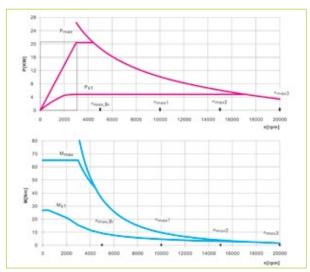
VF760 · 900 / Delta Center V10L / Alpha Center V7L · V9L · V11L



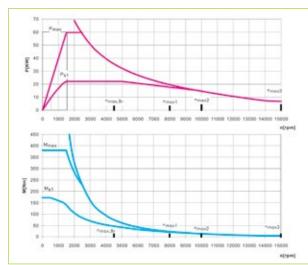
VF760 · 20000 rpm · HSK A63



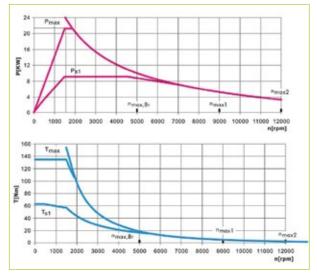
Mini Center / Delta Center V6L · T7



Double Column Center V2013 · V2317 · V3317 · V3025 · V4025 / V18



High Speed Double Column Center V1613HS · V2013HS

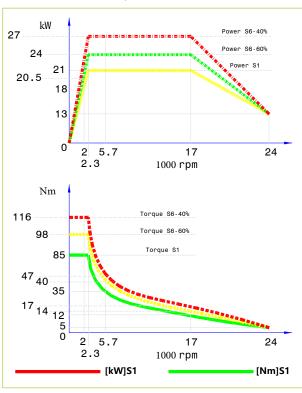


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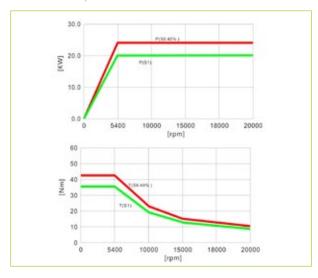


Torque diagram / Standard Siemens

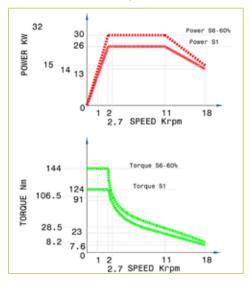
GT18 · VF1100 · 24000 rpm · HSK A63



U500 · 20000 rpm · HSK A63



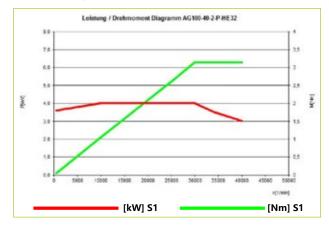
GT18 · VF1100 · 18000 rpm · HSK A63



GT18-5X · 24000 rpm · HSK A63

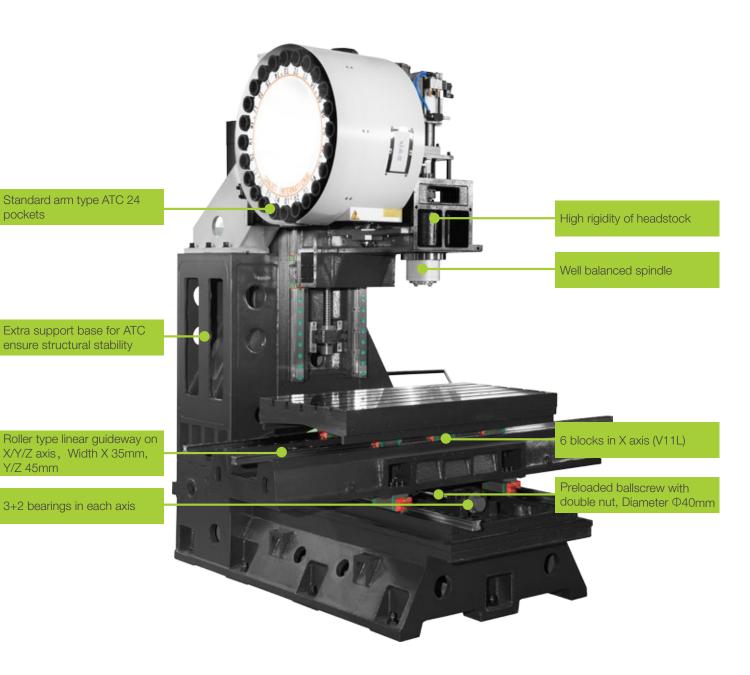


GT7 · 40000 rpm · HSK E32



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High rigidity, good performance



High quality machine components



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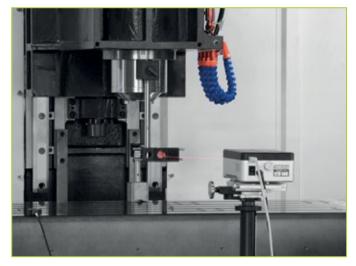


Measurements control during the production



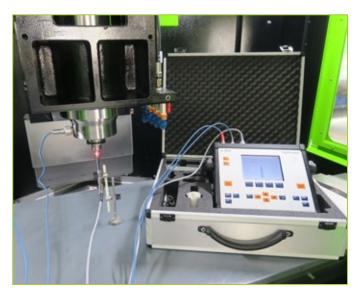








Spindle unit final unbalancing inspection



Hand scraping





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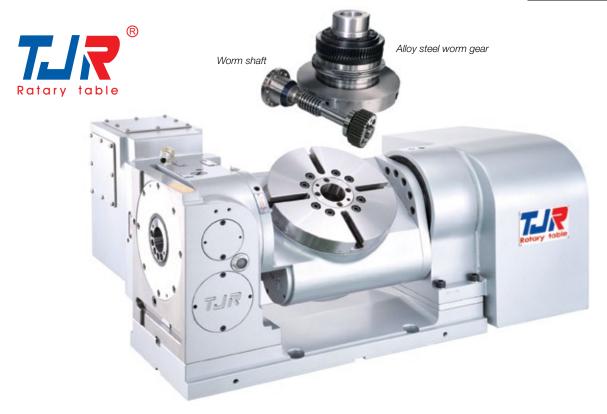






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SIEMENS



FANUC



HEIDENHAIN





FAGOR

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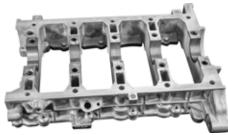






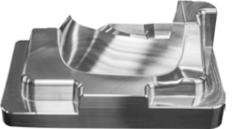




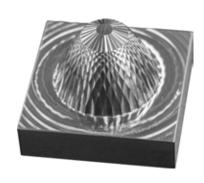




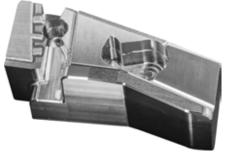












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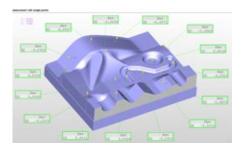
^{*} The above specifications are subject to change without prior notice, no liability for mistakes. Machines may be shown with optional equipment.

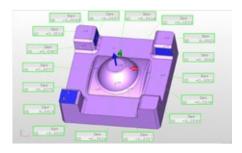






Workpiece measuring by CMM

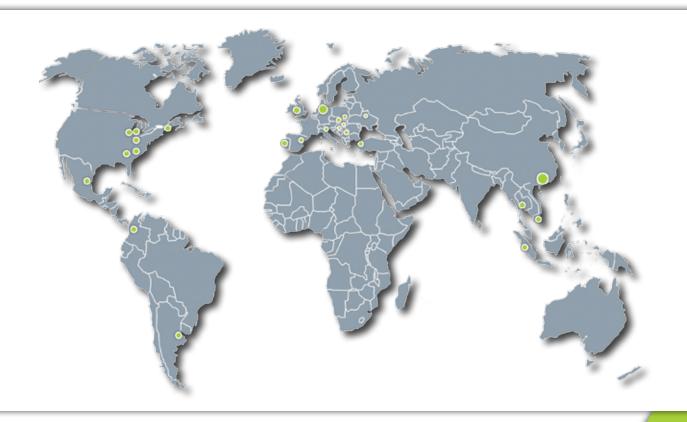






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