

## STANDARD MACHINE SERIES

Vertical Machining Centres

5-Axis Universal Machining Centres

Travelling Column 5-Axis Machining Centres

Gantry Centres



# MATEC VMC I VMC B

## Vertical Machining Centre

### Performance class HSK63 I HSK100

Designed for Single-Part and Series Production



When designing the compact 3-axis machining centres, MATEC did not make any compromises regarding quality and precision. This is why machine base, column and table have been made out of high-quality grey cast.

The machine structure has been calculated by means of Finite Elements Analysis (FEA). The basis consists of a box-frame structure which has been reinforced by precisely calculated rib profiles, thus absorbing vibrations to a maximum. At the same time, the box-frame and rib structures provide for a maximum in rigidity.

In all of its 3 axes, the machine is equipped with heavy-duty precision guides; X-, Y- and Z-axis with roller linear guides.

Tool change system with disc magazine and dual gripper. To change the tool, which is lying horizontally in the

disc magazine, it is being brought into vertical change position. At the same time, the dual gripper picks the new tool as well as the one sitting in the spindle and changes the tools by making a 180° turn.

The vertical Z-axis is mounted onto the column and, for some machine variants, equipped with a hydraulic counterbalance system.

The built-in high-power machine spindle in performance class HSK63 I SK40 with 8,000 1/min is being equipped with 6 bearings and guarantees a sound cutting performance in almost every material and this already for the basic model. The ball bearings are lifetime grease-lubricated.

## Standard Equipment in all Machines

### Standard Equipment

- Control unit HEIDENHAIN TNC 640 HSCI
- Heat exchanger for electric cabinet
- Preparation for 4th axis (without power module)
- Machine spindle SK40 with 8,000 1/min
- Tool change system (ATC)
- Tool change magazine with 24 tool pockets
- Vertical Z-axis with hydraulic counterbalance (from X = 1,600 mm onwards)
- Linear guides in X-, Y- and Z-axis
- Pre-clamped ball screws in all axes
- Work area enclosure with sliding doors and roof, designed according to CE standards
- 2 sets of interior lighting
- Telescopic covers in all axes
- Spindle air-blow system during tool change
- Coolant unit
- Flush pistol
- Rinsing nozzles in work area
- Removable chip tray
- Levelling elements
- Tool management
- Machine documentation

### Further Options

- Control unit SINUMERIK 828D sl
- Extension of tool magazine from 24 (standard) to 30 | 40 pockets
- Internal coolant supply through the tool 30 | 70 bar, incl. filter and coolant tank
- Path measurement system (standard: indirect system), direct path measurement system in X-, Y- and Z-axis
- Touch probe Renishaw | HEIDENHAIN
- Tool measurement and broken tool detection, mushroom button for length and diameter
- Chip conveyor (standard: with chip tray), screw conveyor, ejection height approx. 600 mm, belt conveyor, ejection height approx. 1,100 mm

### Optional Spindle

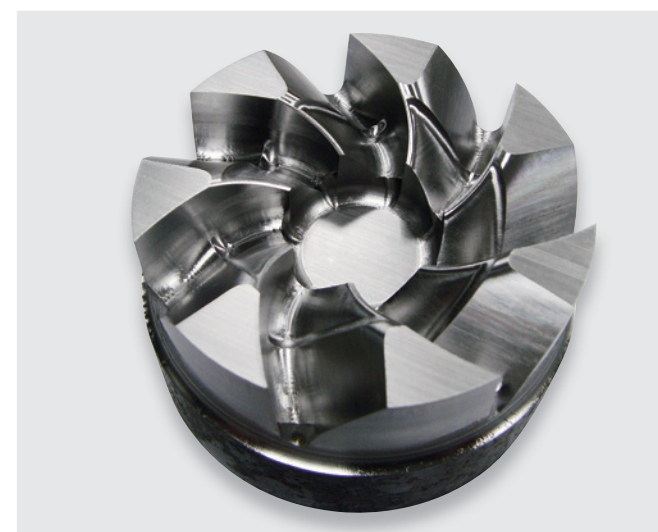
2-speed gearbox 365 Nm | 8,000 1/min

Tool holder HSK63  
Speed: 10,000 1/min – 15,000 1/min

Tool holder HSK100 I SK50  
Speed: max. 8,000 1/min

### Rotary Tables

CNC rotary tables with screw drive, Ø 240 | 350 mm with indirect | direct measuring system



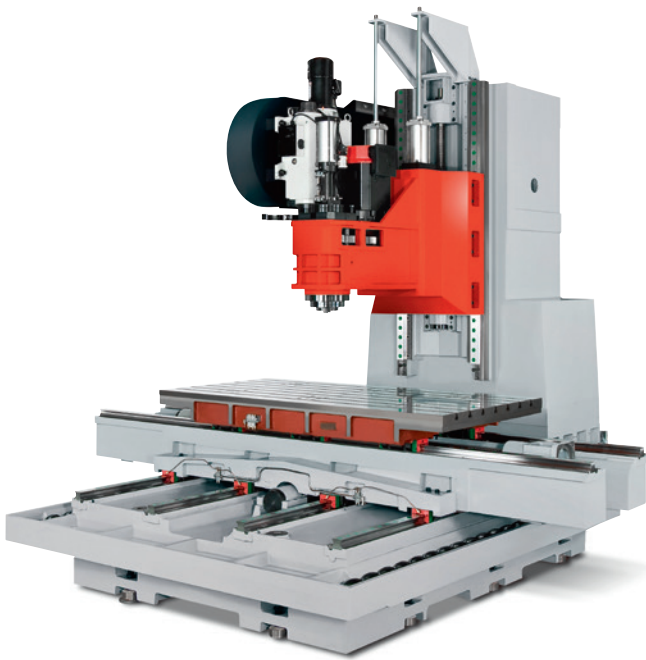
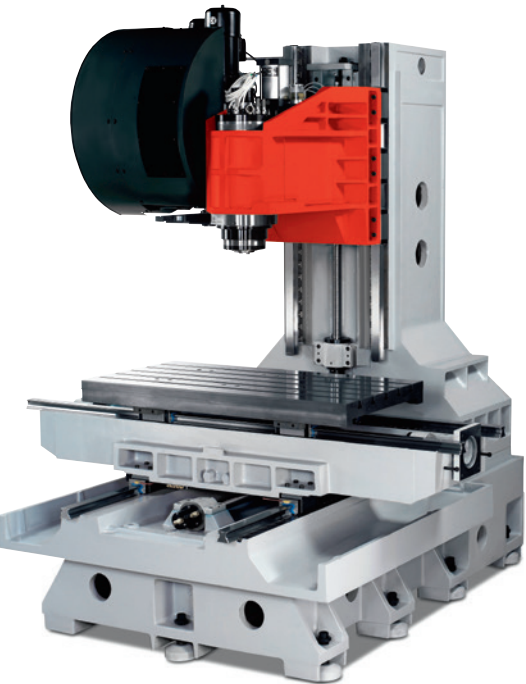


MATEC VMC I VMC B  
Vertical Machining Centre  
Performance class HSK63 I HSK100



Technical Data

Work Area	Dim.	VMC				VMC B	
X-axis	mm	860	1,170	1,350	1,676	2,000	860 – 2,000
Y-axis	mm	600	700	700	760	1,000	600 – 1,000
Z-axis	mm	600	650	640	720	800	600 – 800
Distance spindle nose   machine table	mm	120 – 720		120 – 760	140 – 860	200 – 1,000	
Main Spindle Motor Spindle (Standard)							
Tool holder		HSK63   SK40					HSK100   SK50
Speed	1/min	8,000 (10,000, 12,000, 15,000)					6,000 (8,000, 10,000)
Power at 40   100 % DC	kW	14   11					18.5   15
Torque at 40   100 % DC	Nm	130   90					160   90
2-speed gearbox optional		8,000 U/min with 365 Nm					
Tool Magazine (Travelling)							
Tool pockets	pcs.	24 (30, 36)			24 (30, 40)	24 (32, 40)	
Tool length max.	mm	300					350
Tool Ø	mm	75					350
Tool weight max.	kg	7					15
Axis Drives							
Ball screw drive (standard)		Ball screw drive					
Rapid traverse	m/min	36   36   30			24   24   24	20   20   15	
Machine Table							
Table length	mm	910	1,160	1,350	1,700	2,100	
Table width	mm	560	700	700	760	1,000	
T-slots according to DIN 650	mm	18 <sup>H7</sup>					
Table load max.	kg   m²	800	1,000	1,200	1,800	3,000	
Space Requirement							
Length	mm	2,960	3,660	3,960	4,610	5,440	
Width	mm	3,570	3,300	3,400	3,470	4,750	
Height	mm	3,110	3,080	3,080	3,190	3,470	
Weight	kg	6,000	7,300	7,400	11,000	20,000	





## MATEC FUV620 | FUV720

### 5-Axis Universal Machining Centres

### Performance class HSK63

Perfectly Suitable for Manufacturing Intricate Parts and Moulds



The new 5-axis machining centres MATEC FUV 620 | 720 have been designed to produce intricate parts and moulds in 5 axes. The machine design provides for a high rigidity and concentration of accelerated mass resulting in an excellent dynamic conception. AC motors being state-of-the-art in high-dynamic machine tool building are incorporated into the rotation and swivel axes.

The machine base consists of tightly ribbed „Meehanite“ cast iron. The whole structure stands out by its high thermostability allowing dynamic loading of the machine and guaranteeing low vibration run, optimum accessibility with a big working area and compact floor space requirement.

Based on the machine design simultaneous 5-axis machining of workpieces as well as 5-sided machining are possible when using the integrated hydraulic axial brakes (axis clamping momentums up to 4,410 Nm). The diameters of the face plates of the work tables are Ø 650 mm resp. Ø 720 x 540 mm. The swivel bridge, incorporated into the counterbearing, and the perfectly integrated axis rotation points of the table, allow machining of workpieces up to a total weight of 500 kg.

The rotation axis allows a full 360° turn. The swivel axis allows machining of intricate parts as the table can swivel up to -50° | +110°. Directly connected rotation encoders provide for a maximum contour accuracy.

## Standard Equipment in all Machines

### Standard Equipment

- Control unit HEIDENHAIN TNC 640 HSCI
- Machine spindle SK40 with 8,000 1/min
- Fully interpolable 5-axis version, handwheel HR 510 (HEIDENHAIN)
- Roller linear guides in all axes
- M30 Power Off: automatic machine power off
- Glass scales HEIDENHAIN in all linear axes
- Direct encoders HEIDENHAIN in all rotation axes
- Temperature compensation
- Digital axis drives
- Digital spindle drive
- Chip conveyor, scraper-type
- Chip trolley
- Coolant system, external
- Rinsing of the work area by hand by means of a flush pistol
- Air pistol
- Spindle cooling
- Radiator-type cooling for spindle motor
- Full work area enclosure (without roof)
- Housing with big double door, windows in the front and on the right side
- Data interfaces: V.24 | RS232-C + USB + Fast-Ethernet - HEIDENHAIN USB + Fast-Ethernet - SIEMENS
- Magazine feeding from outside
- Levelling elements
- Adjusting screws
- Work area lighting
- Spindle air-blow system
- Operation manual and circuit diagram, programming manual (CD-ROM)
- Operator tools

### Further Options

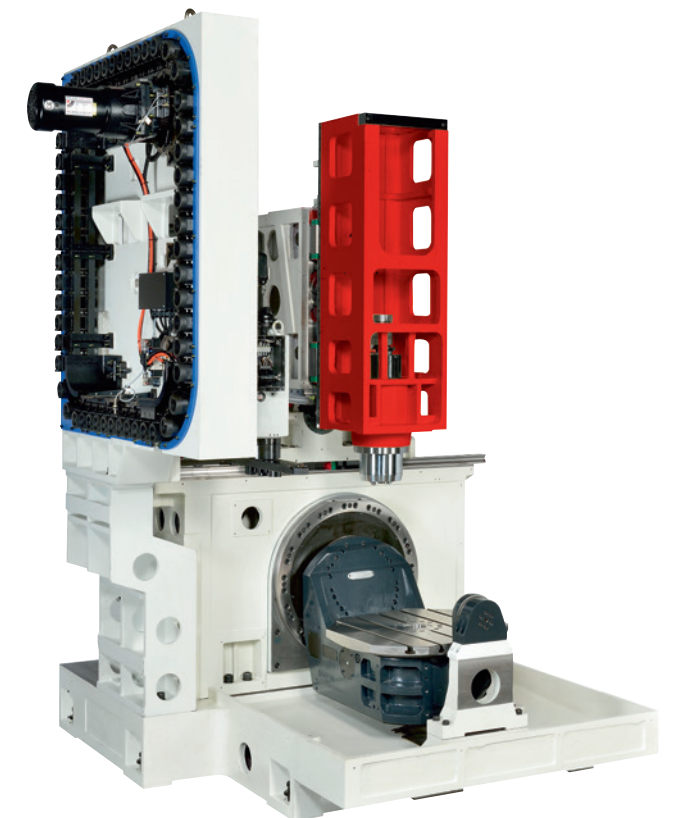
- Control unit SIEMENS ONE
- Kinematic Opt
- Internal tool cooling 30 | 70 bar
- Band filter installation
- Oil mist extraction system
- Oil skimmer
- Air cooling through coolant nozzles
- 3D workpiece measuring touch probe
- Laser tool measurement
- Rotoclear spinning window
- Tool magazine 60 | 120 pockets
- Automation

### Optional Spindle

Speed:	up to 15,000 1/min
Speed:	up to 18,000 1/min
Speed:	up to 24,000 1/min

Tool holder: HSK63

### Direct Drive for 2-Axis Rotary Table





# MATEC FUV620 | FUV720

## 5-Axis Universal Machining Centres

### Performance class HSK63

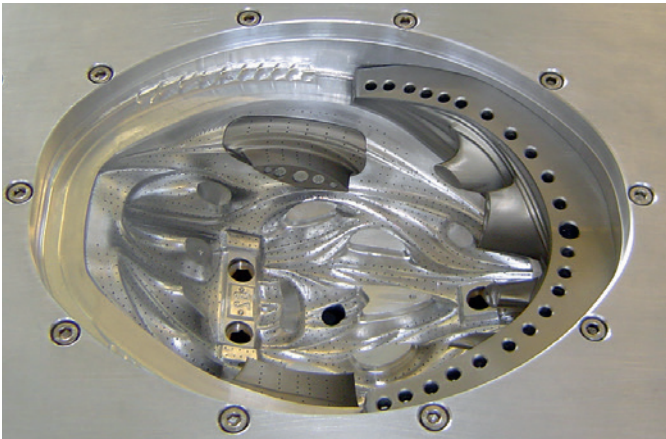


Right from the planning stage, when the basic design has been developed, an integration of automatic loading systems and a pallet changer has been considered.

Such systems can subsequently be added to the machining centres MATEC FUV620 | FUV720 with minimum effort. There are systems available such as reasonably priced rotary indexing pallet systems as well as rack-type pallet systems for up to 128 pallets. The total number of pallets depends on the size of the pallets, whereas multiple clamping per pallet is equally possible.

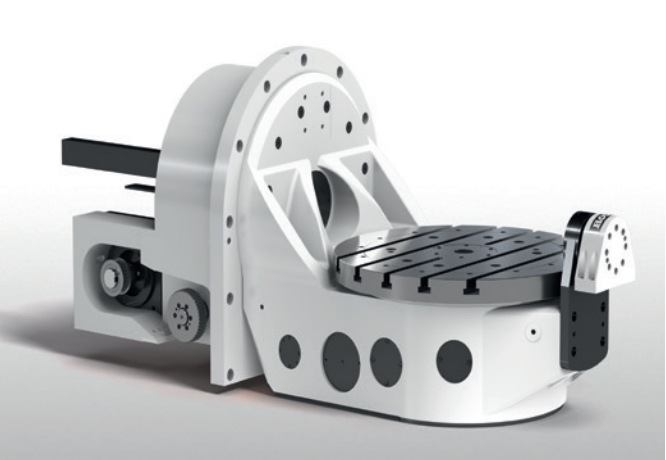
The direct drive system has been selected as main spindle design. This system combines the advantages of high acceleration dynamics at optimal costs. Smooth operation, a low noise level and the absence of a reverse backlash are additional convincing features for this technology. Due to the compact spindle design, the spindle head could be designed in a space-saving way

which has a considerable impact on the collision safety of the machine. Depending on the application, through-spindle coolant systems up to 70 bar are available (option). The standard spindle is equipped with a tool system SK40, a maximum speed of 12,000 U/min and a max. torque of 180 Nm. Following spindle options are available, depending on the model: 15,000 – 18,000 – 24,000 U/min.



## Technical Data

Work Area	Dim.	FUV620		FUV720
X-axis	mm	620		720
Y-axis	mm	520		600
Z-axis	mm	460		520
C-axis		360°		
B-axis		-50°   +110°		
Distance spindle nose	mm	200 – 660		150 – 670
Main Spindle Motor Spindle (Standard)		FUV620   FUV720		
Tool holder		HSK63   SK40		HSK63   SK40
Speed	1/min	12,000	15,000	18,000
Power	kW	15.5 (14)   33.0	18.0   55.5	18.0   55.5
Tool Magazine				
Tool pockets	pcs.	48 (60   120)		
Tool length max.	mm	250		
Tool Ø	mm	75   127		
Tool weight max.	kg	7		
Axis Drives				
Rapid traverse	m/min	48		
Speed max. B-   C-axis	m/min	12.5   25		110   170
Machine Table				
Clamping surface	mm	Ø 650		Ø 720
T-slots	mm	5 x 14 <sup>H7</sup> x 100		5 x 14 <sup>H7</sup> x 100
Table load max.	kg   m²	300		
Space Requirement				
Length	mm	4,200		4,300
Width	mm	4,250		4,250
Height	mm	3,000		3,060
Weight	kg	8,500		10,320





# Automation

## The way towards a successful future

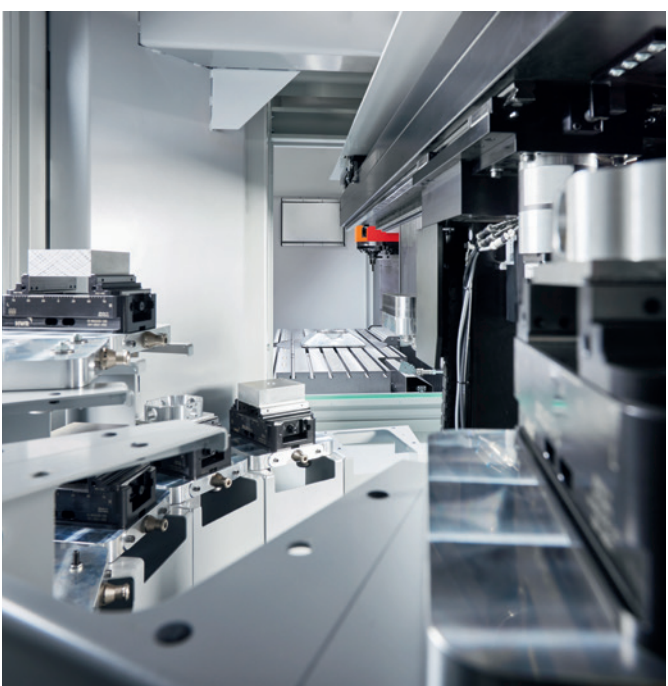


**Workpiece Automation**  
High-flexibility automation solutions.  
6-axis robots with automatic gripper change open up entirely new process cycles for automated workpiece handling. Easy implementation of secondary and additional processes.  
Design based on workpiece size and weight as well as storage capacity.



- Pallet Changer with Round Storage Unit**  
(Example: customized solution)
- Space-saving round pallet storage unit with 6 storage places
  - Pallet size 400 x 400 mm
  - MATEC FUV620 machining centre with CNC rotary turntable Ø 650 mm
  - 5-sided machining with a total of 236 tool pockets
  - Rotary table with fixture quick-change system
  - Rotary distributor for media transfer
  - Automation module

**High Flexibility**  
A zero-point clamping system is used as the basic pallet clamping system on the rotary table. Quick change from automated to manual production thus making the entire work area available.



Round Pallet Storage Unit with Pallet Handling Feature.





# MATEC FUV800 I FUV800 B

## 5-Axis Gantry Machining Centre

### Performance class HSK63 I HSK100

Perfectly Suitable for Manufacturing Intricate Parts and Moulds



The model FUV800 I FUV800 B has been designed for an elaborate production of intricate parts and moulds in 5 axes. The gantry design provides for a high rigidity and concentration of accelerated mass resulting in an excellent dynamic conception.

The machine base consists of tightly ribbed cast. Prior to mechanical processing, the whole column structure is being stress-relieved.

The whole structure stands out by its high thermo-stability allowing precise simultaneous 5-axis machining of workpieces.

The swivel bridge incorporated into the side walls and the perfectly integrated axis rotation points of the table allow machining of workpieces up to a total weight of 1,200 kg.

The machine table has a diameter of 800 mm, allowing to process workpieces with a max. diameter of 900 mm and a height of 550 mm.

The rotation axis allows a full 360° turn. The swivel axis has a swivel range of +120° I -120°. All axes are equipped with direct path measuring systems.

Loading of workpieces can be done in a highly efficient way due to the max. distance of 720 mm between door edge and centre of the machine table.

The machine can be equipped with max. 120 tools in HSK63 I SK40 and 60 tools in HSK100 I SK50. The standard version is equipped with 32 tools each.

## Standard Equipment in all Machines

### Standard Equipment

- Control unit HEIDENHAIN TNC 640 HSCI
- Machine spindle SK40 with 8,000 1/min
- Fully interpolable 5-axis version, handwheel HR 510 (HEIDENHAIN)
- Roller linear guides in all axes
- M30 Power Off: automatic machine power off
- Glass scales HEIDENHAIN in all linear axes
- Direct encoders HEIDENHAIN in all rotation axes
- Temperature compensation
- Digital axis drives
- Digital spindle drive
- Chip conveyor, scraper-type
- Chip trolley
- Coolant system, external
- Rinsing of the work area by hand by means of a flush pistol
- Air pistol
- Spindle cooling
- Radiator-type cooling for spindle motor
- Full work area enclosure (without roof)
- Housing with big double door, windows in the front and on the right side
- Data interfaces: V.24 | RS232-C + USB + Fast-Ethernet - HEIDENHAIN USB + Fast-Ethernet - SIEMENS
- Magazine feeding from outside
- Levelling elements
- Adjusting screws
- Work area lighting
- Spindle air-blow system
- Operation manual and circuit diagram, programming manual (CD-ROM)
- Operator tools

### Further Options

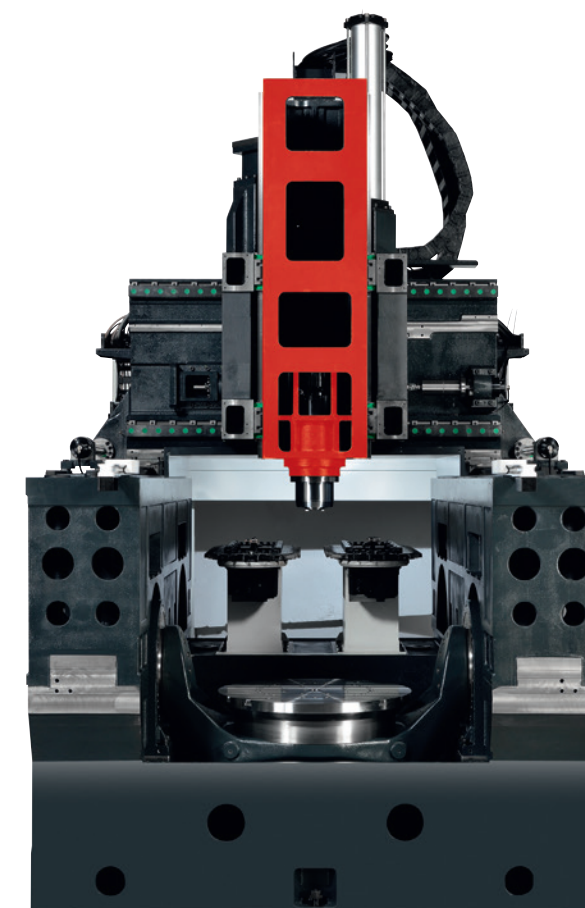
- Control unit SIEMENS ONE
- Kinematic Opt
- Internal tool cooling 30 I 70 bar
- Band filter installation
- Oil mist extraction system
- Oil skimmer
- Air cooling through coolant nozzles
- 3D workpiece measuring touch probe
- Laser tool measurement
- Rotoclear spinning window
- Tool magazine 60 | 120 pockets
- Automation

### Optional Spindle

Tool holder:	HSK63
Speed:	up to 15,000 1/min
Speed:	up to 18,000 1/min
Speed:	up to 24,000 1/min

Tool holder: HSK100 | SK50

### Direct Drive for 2-Axis Rotary Table

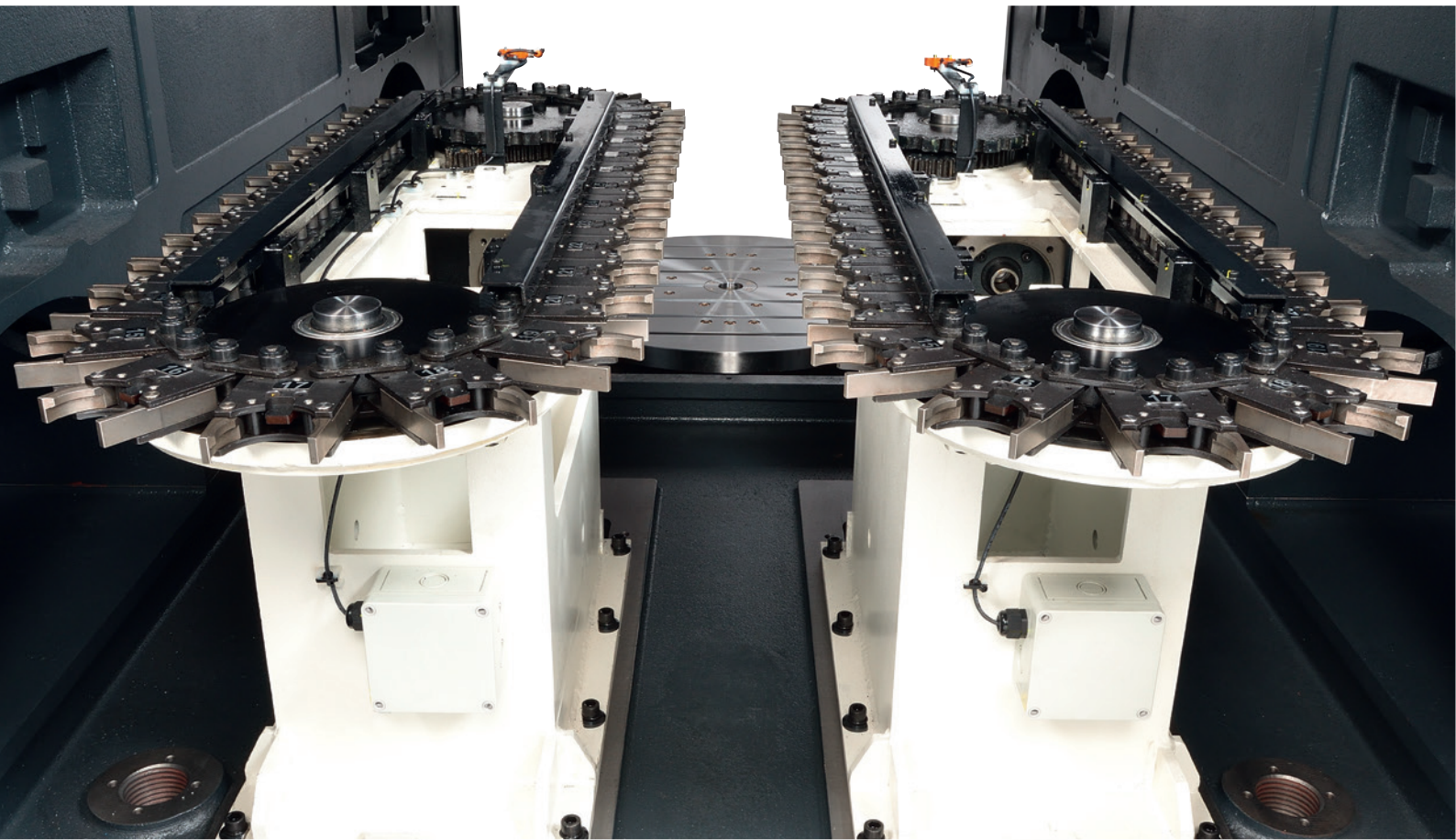




MATEC FUV800 | FUV800 B

5-Axis Gantry Machining Centre

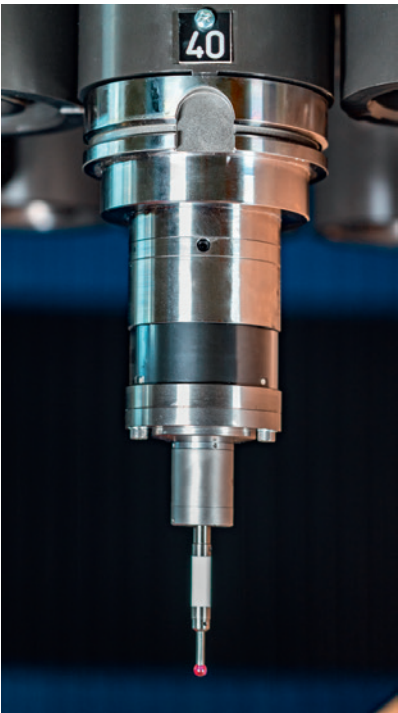
Performance class HSK63 | HSK100



The direct drive system has been selected as main spindle design. This system combines the advantages of high acceleration dynamics at optimal costs. Smooth operation, a low noise level and the absence of a reverse backlash are additional convincing features for this technology.

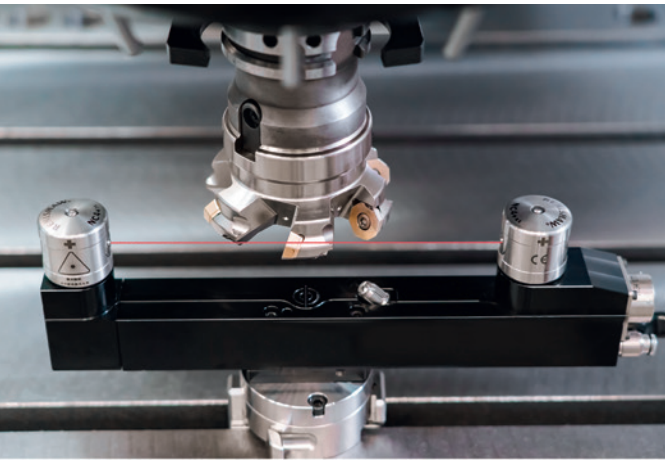
For the machine spindles, you can choose among 2 directly driven spindles with 12,000 | 15,000 U/min or 2 Kessler motor spindles with 15,000 | 20,000 U/min.

Due to the compact spindle design, the spindle head could be designed in a space-saving way which has a considerable impact on the collision safety of the machine. Depending on the application, through-spindle coolant systems up to 70 bar are available (option).



Technical Data

Work Area	Dim.	FUV800	FUV800 B
X-axis	mm	800	800
Y-axis	mm	920	920
Z-axis	mm	650	650
C-axis		360°	360°
A-axis		-120°   +120°	-120°   +120°
Distance spindle nose	mm	100 – 750	100 – 750
Main Spindle Motor Spindle (Standard)			
Tool holder		HSK63   SK40	HSK100   SK50
Speed	1/min	12,000 (15,000   18,000   20,000)	
Power	kW	14	18   25
Tool Magazine			
Tool pockets	pcs.	32 (40   60   64   80   120)	32 (40   60)
Tool length max.	mm	300	300
Tool weight max.	kg	7	15
Axis Drives			
Rapid traverse	m/min.	36 (48)	
Speed max. A-   C-axis	m/min.	60   90	
Machine Table			
Clamping surface	mm	800	
T-slots	mm	14 <sup>H7</sup>	
Table load max.	kg   m²	1,200	
Space Requirement			
Length	mm	3,450	
Width	mm	5,310	
Height	mm	3,600	
Weight	kg	21,000	





## MATEC FUV170T | FUV190T

### Travelling Column 5-Axis Machining Centres Performance class HSK63

Perfectly Suitable for Manufacturing Intricate Parts and Moulds in Pendulum Operation



The FUV170T | 190T is a low-cost starter machine which allows 5-axis, pendulum and long bed machining.

The machine base consists of tightly ribbed cast iron. The whole structure stands out by its high thermo-stability allowing dynamic loading of the machine and guaranteeing low vibration run, optimum accessibility with a big working area and compact floor space requirement.

Based on the machine design simultaneous 5-axis machining of workpieces as well as 3-axis machining of long components are possible. The face plate of the swivel turntable has a diameter of Ø 650 mm and the rigid machine table has a clamping surface of 700 x 500 mm resp. 900 x 500 mm.

The swivel bridge incorporated into the counterbearing allows machining of workpieces up to a total weight of 300 kg. A weight of 1,200 resp. 1,600 kg can be clamped on the rigid table.

The rotation axis allows a full 360° turn. The swivel axis allows machining of intricate parts as the table can swivel up to -50° | +110°. Glass scales and direct rotation encoders in all axes provide for a maximum accuracy.

## Standard Equipment in all Machines

### Standard Equipment

- Control unit HEIDENHAIN TNC 640 HSCI
- Machine spindle SK40 with 8,000 1/min
- Fully interpolable 5-axis version, handwheel HR 510 (HEIDENHAIN)
- Roller linear guides in all axes
- M30 Power Off: automatic machine power off
- Glass scales HEIDENHAIN in all linear axes
- Direct encoders HEIDENHAIN in all rotation axes
- Temperature compensation
- Digital axis drives
- Digital spindle drive
- Chip conveyor, scraper-type
- Chip trolley
- Coolant system, external
- Rinsing of the work area by hand by means of an additional pistol
- Air pistol
- Spindle cooling
- Radiator-type cooling for spindle motor
- Full work area enclosure (without roof)
- Housing with big double door, windows in the front and on the right side
- Data interfaces: V.24 | RS232-C + USB + Fast-Ethernet - HEIDENHAIN USB + Fast-Ethernet - SIEMENS
- Magazine feeding from outside
- Levelling elements
- Adjusting screws
- Work area lighting
- Spindle air-blow system
- Operation manual and circuit diagram, programming manual (CD-ROM)
- Operator tools

### Further Options

- Control unit SIEMENS ONE
- Kinematic Opt
- Internal tool cooling 30 | 70 bar
- Band filter installation
- Oil mist extraction system
- Oil skimmer
- Roof
- Air cooling through coolant nozzles
- 3D workpiece measuring touch probe
- Laser tool measurement
- Rotoclear spinning window
- Tool magazine 60 | 120 pockets
- Automation

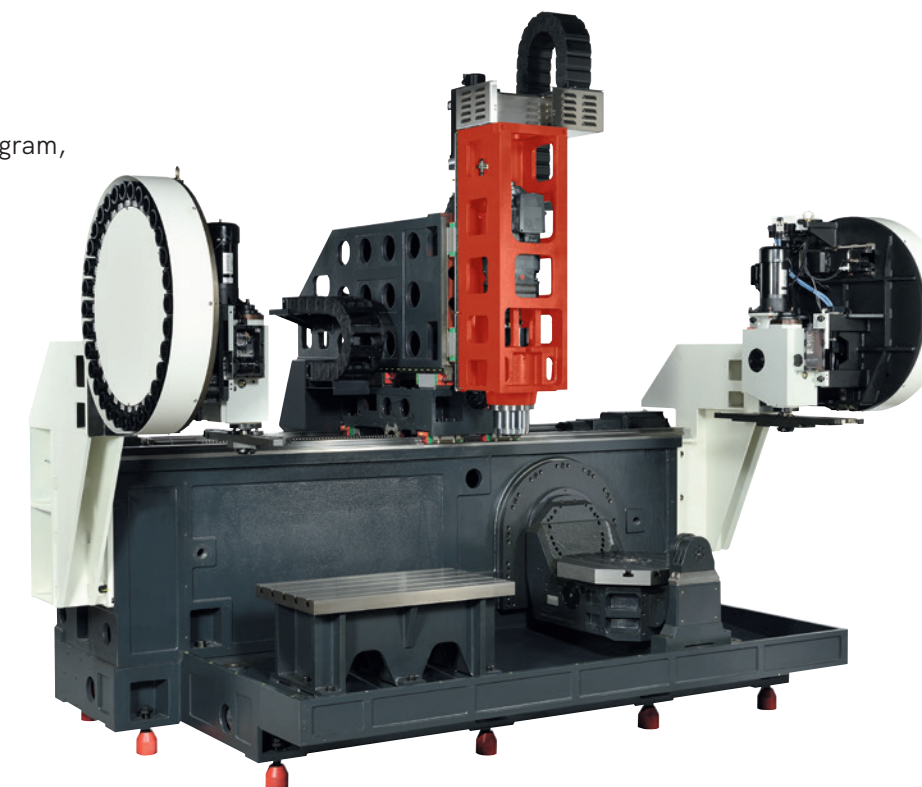
### Optional Spindle

Speed: up to 15,000 1/min

Speed: up to 18,000 1/min

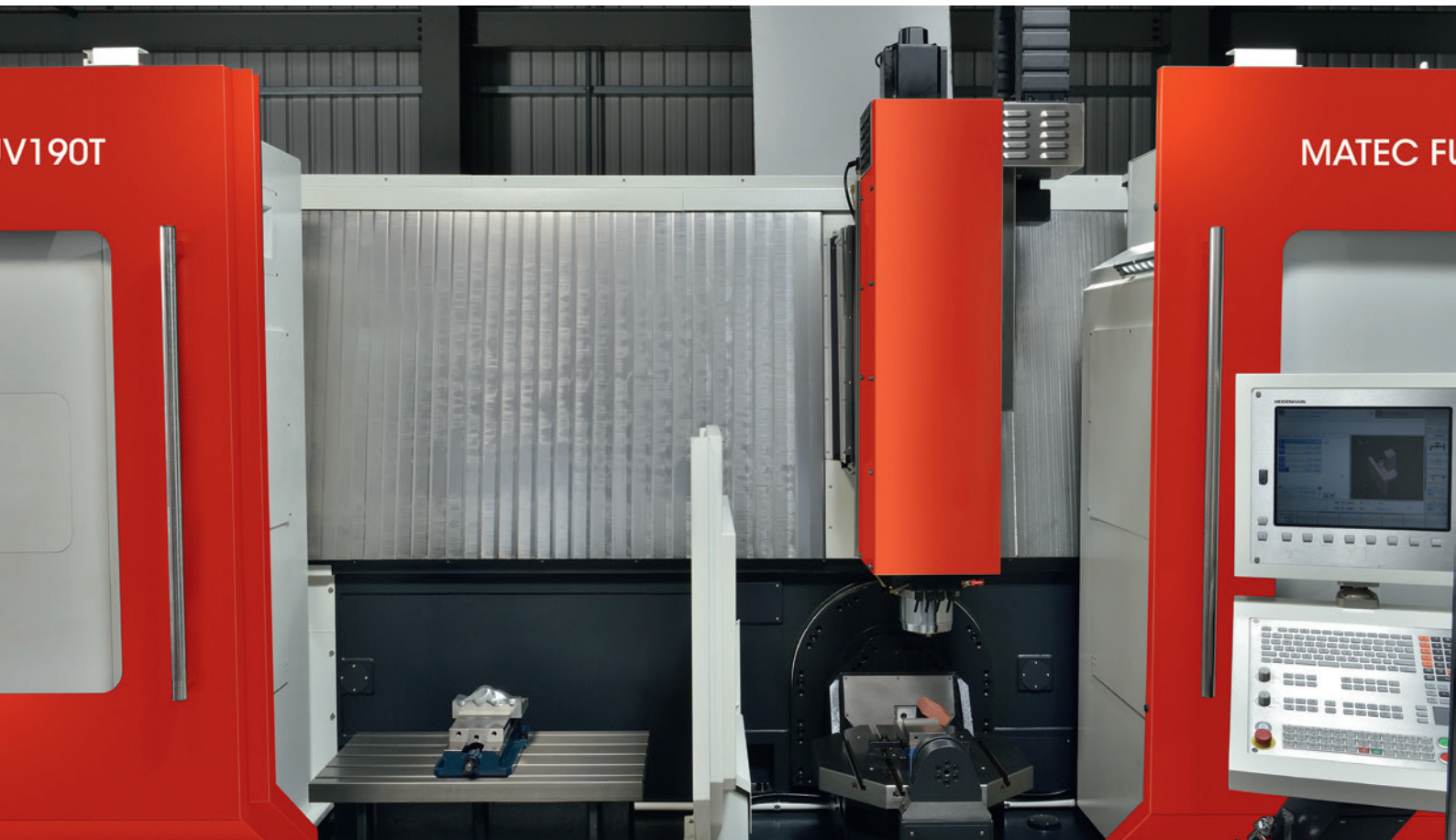
Speed: up to 24,000 1/min

Tool holder: HSK63





MATEC FUV170T | FUV190T  
5-Axis Universal Machining Centres  
Performance class HSK63



Also for this type of machine, the direct drive system has been selected as main spindle design. This system combines the advantages of high acceleration dynamics at optimal costs. Smooth operation, a low noise level and the absence of a reverse backlash are additional convincing features for this technology.

In addition, due to the compact spindle design, the spindle head could be designed in a space-saving way which has a considerable impact on the collision safety of the machine. Depending on the application, through-spindle coolant systems up to 70 bar are available (option).

The standard spindle is equipped with a tool system SK40 and has a maximum speed of 12,000 U/min. Following spindle options are available, depending on the model: 15,000 - 18,000 - 24,000 U/min.



Technical Data

Work Area	Dim.	FUV170T	FUV190T
X-axis	mm	1,700	1,900
Y-axis	mm	540	540
Z-axis	mm	460	460
C-axis		360°	
B-axis		-50°   +110°	
Distance spindle nose	mm	150 – 610	
Main Spindle Motor Spindle (Standard)			
Tool holder		HSK63   SK40	
Speed	1/min	12,000	
Power	kW	15	
Tool Magazine			
Tool pockets	pcs.	48 (60   120)	
Tool length max.	mm	250	
Tool weight max.	kg	7	
Axis Drives			
Rapid traverse	m/min	30	
Speed max. B-   C-axis	m/min	12.5   25	
Machine Table			
Table length	mm	700	900
Table width	mm	500	500
Clamping surface	mm	Ø 650	
T-slots	mm	18 <sup>H7</sup>	
Table load rigid table max.	kg   m²	1,200	1,600
Table load swivel table max.	kg   m²	300	
Space Requirement			
Length	mm	4,400	4,600
Width	mm	2,600	2,600
Height	mm	3,000	3,000
Weight	kg	17,000	18,000





MATEC GPC  
Gantry Centre  
Performance class HSK100

Cost-Effective Production of Big-Size Parts



Vertical gantry machining centre with fixed gantry and moving machine table as X-axis. Y- and Z-axis are built on the gantry girder. All base structures of the machine consist of high-quality heat treated cast iron. The machine structure having been calculated by means of Finite Elements Analysis (FEA) is perfectly ribbed and guarantees extreme rigidity.

The gantry girder and the two vertical columns are made out of one piece (Y = 1,600 mm). The machine is equipped with precise and high-capacity linear guides in all three axes.

The axes are driven by ball screws.  
All moving parts of the machine are lubricated by an automatic central lubrication system.

The tool magazine and tool changer are mounted in parallel in the X-axis and are detached in the work area. Tools are being changed in a fixed X-position in the top-most Z-axis position.

Tool change system with chain magazine and dual gripper. To change the tool which is lying horizontally in the chain magazine it is being brought into vertical position. At the same time, the dual gripper picks the new tool as well as the one sitting in the spindle and changes the tools by making a 180° turn.

High cutting performances in almost every material can be achieved by means of the built-in high-power spindle with 2-speed gearbox.

The ball bearings are lifetime grease-lubricated. Additional equipment such as full work area enclosure with roof, telescopic covers in all axes, coolant unit with rinsing nozzles and bed rinsing as well as a chip removal, perfectly adapted to the performance class, are completing the machine.

Due to the numerous options, the machine can perfectly be customized.

Standard Equipment in all Machines

Standard Equipment

- Control unit HEIDENHAIN TNC 640 HSCI
- Heat exchanger for electric cabinet
- Preparation for 4th axis (without power module)
- Machine spindle SK50 with 8,000 1/min, 2-speed gearbox
- Tool change system (ATC)
- Tool change magazine with 24 tool pockets
- Vertical Z-axis with counterbalance
- Linear guides in X- and Y-axis, sliding guide in Z-axis
- Pre-clamped ball screws in all axes
- Central lubrication system
- Work area enclosure with sliding doors (option: roof), designed according to CE standards
- 2 sets of interior lighting
- Telescopic covers in all axes
- Spindle air-blow system during tool change
- Low-pressure coolant unit
- Flush pistol
- Rinsing nozzles inside work area
- Screw conveyor on both sides in the X-axis
- Transverse conveying by hinged belt conveyor
- Levelling elements
- Tool management
- Machine documentation

Further Options

- Control unit SINUMERIK 828D sl
- Extension of tool magazine from 24 (standard) to 32 pockets
- Internal coolant supply through the tool 20 | 70 bar, incl. filter and coolant tank
- Path measurement system (standard: indirect system), direct path measurement system in X-, Y- and Z-axis
- Touch probe Renishaw | HEIDENHAIN
- Tool measurement and broken tool detection, mushroom button for length and diameter
- Full work area enclosure with sliding roof

Motor Spindle

SK50 DIN 69871 A  
Speed: up to 10,000 1/min  
2-speed gearbox  
Speed: up to 8,000 1/min  
Tool holder: SK50 DIN 69871 A

Rotary Tables

CNC rotary tables with screw drive  
(sizes on request)

Angular Heads

- 90° angular head, automatically indexable in 5° increments, with hydraulic clamping, speed max. 3,500 1/min.
- Spindle extension for immersion into housings
- 2-axis head, with manual adjustment and clamping, speed max. 3,500 1/min





MATEC GPC

Gantry Centre

Performance class HSK100



Right from the planning stage, an integration of angular heads and a spindle extension have been considered.

They allow lateral machining of workpieces and immersion into housings.

The machine also allows to subsequently add a machine roof in order to prevent coolant mist from uncontrollably diffusing into the workshop.



Technical Data

Work Area		Dim.						
X-axis	mm	2,200	3,200	4,200	3,200	4,200	3,200	4,200
Y-axis	mm	1,700	1,700	1,700	1,900	1,900	2,100	2,100
Z-axis	mm	900	900	900	900	900	900	900
Distance spindle nose I machine table	mm	200 - 1,110						
Gantry clearance	mm	1,900 x 1,100					2,100 x 1,100	
Main Spindle Motor Spindle (Standard)								
Tool holder		HSK100 I SK50						
Speed	1/min	8,000						
2-speed gearbox	1/min	0 - 1,500 I 1,501 - 8,000						
Power at 40   100 % DC	kW	34   20						
Torque at 40   100 % DC	Nm	600 I 400						
Tool Magazine								
Tool pockets	pcs.	24 (32)						
Tool length	mm	350						
Tool Ø	mm	115 I 127						
Tool weight max.	kg	20						
Axis Drives								
Ball screw drive (standard)		Ball screw drive						
Rapid traverse X, Y, Z	m/min	16 (12 I 10) I 16 I 20						
Machine Table								
Table length	mm	2,200	3,200	4,200	3,200	4,200	3,200	3,200
Table width	mm	1,500			1,700			
T-slots according to DIN 650	mm	22 <sup>H7</sup>						
Table load max.	kg   m²	8,000	10,000	12,000	10,000	12,000	10,000	12,000
Space Requirement								
Length	mm	6,490	8,440	10,480	8,440	10,480	8,440	10,480
Width	mm	5,150					5,320	
Height	mm	4,440						
Weight	kg	21,000	22,500	24,000	23,500	25,000	24,000	25,500



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Subject to technical changes. Illustrations may contain options.

