

Technical Data				
Model			MC 20	
Work area	Cross stroke (X-Axis)	mm	800	
	Vertical (Y-Axis)	mm	750	
	Longitudinal stroke (Z-Axis)	mm	800 (+ 200 for loading)	
Feed forces	X, Y and Z axis with ED S3 - 40%	N	10,000	
Speeds	Rapid traverse rate X / Y / Z	mm/min	60,000	
	Acceleration X / Y / Z	m/s²	7 / 8 / 6 (8)	
Machining Unit	Tool holding fixture	HSK-A	HSK-A 63	HSK-A 100
PowerCutting HSK-A 63	Drive power/torque (max) for ED S6 - 40%	kW/Nm	40 / 175	38 / 242
	Speed range	rpm	5 – 10,000	5 – 10,000
	Spindle diameter in front bearin	mm	70	80
SpeedCutting HSK-A 63	Drive power/torque (max) for ED S6 - 40%	kW/Nm	34 / 85	40 / 95
	Speed range	rpm	5 – 16,000	5-16,000
	Spindle diameter in front bearing	mm	70	80
EcoCutting HSK-A100	Drive power/torque (max) for ED S6 - 40%	kW/Nm	40 / 175	38 / 242
	Speed range	rpm	5 – 10,000	5 – 10,000
	Spindle diameter in front bearing	mm	100	100
PowerCutting HSK-A100	Drive power/torque (max) for ED S6 - 40%	kW/Nm	38 / 378	
	Speed range	rpm	5 – 10,000	
	Spindle diameter in front bearing	mm	100	
PowerSpeed-Cutting HSK-A100	Drive power/torque (max) for ED S6 - 40%	kW/Nm	52 / 500	
	Speed range	rpm	5-10,000	
	Spindle diameter in front bearing	mm	100	
Tool management	Max. tool weight	kg	12	25
	Max. tool weight with all pockets occupied	kg	6	10
	Max. tool weight moment	Nm	10	22
	Minimum chip-to-chip time according to VDI	s	3.3 - 4.4	3.8 - 5.6
	Magazine	places	20 / 44 / 88	14 / 25 / 52
	Maximum tool length	mm	550	
	Max tool diameter with all pocket occupied	mm	120 / 80 / 80	200 / 115 / 115
	Max tool diameter with free adjacent pockets	mm	150	280
Work piece rotary axes A, B, AB	Interference circle diameter A-Axis	mm	1260	
	Interference circle diameter AB-Axis / B-Axis	mm	800 / 900	
	Rotary table diameter B-Axis, A-Axis	mm	520	
	Speed A-Axis	min ⁻¹	17	
	Speed B-Axis / AB-Axis	min ⁻¹	40 / 50	
	Indexing A-Axis		360,000 x 0,001°	
	Indexing B-Axis		360,000 x 0,001°	
	Indexing accuracy A-Axis of TP (according to VDI/DGQ 3441)	arc s	12	
	Indexing accuracy B-Axis TP (according to VDI/DGQ 3441)	arc s	10	
	Media	supply	8	
	Position measuring system	Direct, absolute linear scales		
Installation data	Length/width/height	mm	5,300 x 2,150 x 4,000	
	Total power machine kVA approx.	kVA approx.	27 - 30	
	Power supply	V/Hz	400/50 / 480/60	
	Compressed air	bar	4,5 – 6	
Machine control	Mass of machine	approx. kg	13,000	
			Siemens 840D sl / Fanuc 31i B	

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Machining Centers

The New MC 20
Designed For Best Cost Per Piece



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Knowing how it's done.

High Value – Minimum Cost Per Piece



Machine and drive concept: Class Leader in robust dynamic design

- High rigidity of cast machine bed and gantry column
- High-performance in all axis drives
- Travel speeds in all axes 60 m/min
- Work-piece table feed as Z-axis
- X = 800 mm
- Z = 800 mm
- Y = 750 mm



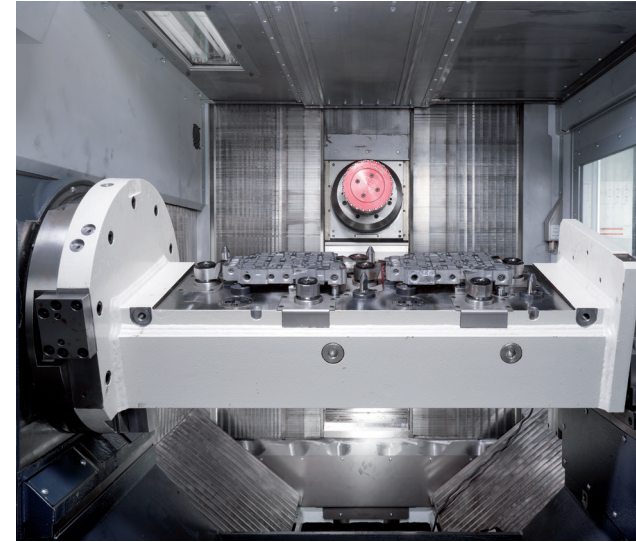
Precise and reliable high volume production with the MC 20

Whether as a stand-alone module or as an integral part of a flexible manufacturing system - the MC 20 is precisely tailored to the requirements of the automotive industry. Providing robust, precise, absolutely reliable and above all flexible results. The MC 20 is designed for frequent product changes and strives for ever

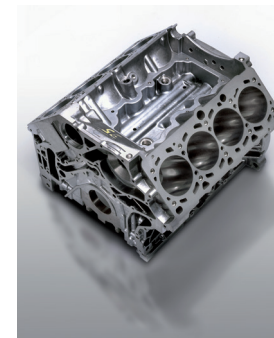


Spindles: Flexible options for power and speed for every task and any material

- HSK-A 63:
PowerCutting unit with 175 or 242 Nm
SpeedCutting unit with 85 or 95 Nm
- HSK A100:
EcoCutting unit with 175 or 242 Nm
PowerCutting unit with 378 Nm
PowerSpeedCutting unit with 500 Nm



shorter innovation cycles. In its third generation, the MC 20 is equipped with four axes; a 5th axis under the workpiece is available as an option. With a work area of 800 x 750 x 800 mm³ it is ideal for machining tasks in the modern automotive industries.



Tool management: Low chip to chip times, flexible options for taper size and tool quantities

- Automatic tool changer
- Chain-type magazine for all tool sizes:
Tool length: up to 550 mm HSK 63 / HSK 100
Tool diameter: up to 150 mm for HSK 63, 280 mm for HSK 100
- Chain magazines for up to 88 tools for HSK 63 and up to 52 tools for HSK 100
- Lifting and rotating drives of the tool changer by Servo motor
- Optional tool coding system
- Tool cleaning for wet or dry machining
- Optical tool breakage detection in parallel to machining time
- Optimized tool loading management



Chip Disposal: Flexible options for chip removal and coolant media

- Free chip flow without the need of coolant
- Dry, wet and minimal quantity lubrication machining possible
- Chips and coolant disposal either from the front or rear
- Chip removal from the front via system chip conveyors, from the rear via chip cart or pumpback unit

Workpiece management: Optimal accessi- bility for any processing and part loading

- Equipped with A, B, or AB-Axis
- Thanks to the modular design as an option the A-Axis can be equipped with a second bearing for heavy and high-precision machining
- 8 media ports through table or bridge for hydraulic and pneumatic fixture operation
- Automatic direct loading from above or from the front
- Alternatively manual direct loading from the front is possible

