



# SYSTEM 5

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## **VERTICAL MACHINING CENTERS**

VERSATILE | ROBUST | FLEXIBLE

1, 2 AND 4-SPINDLE OPTIONS



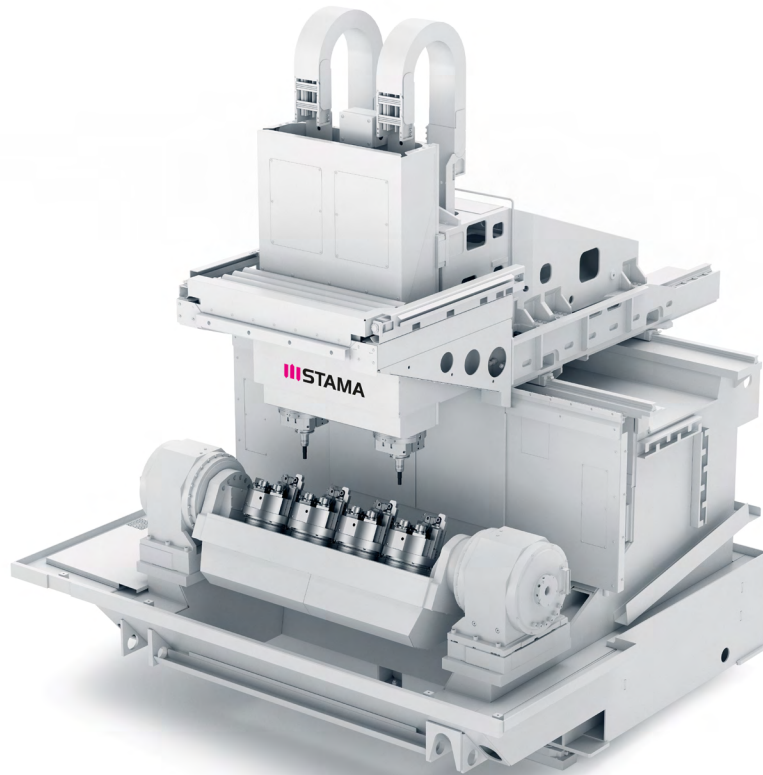
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## FLEXIBLE TURNKEY BASIS HIGH DYNAMIC CUTTING

### **Workpiece: Wheel carrier**

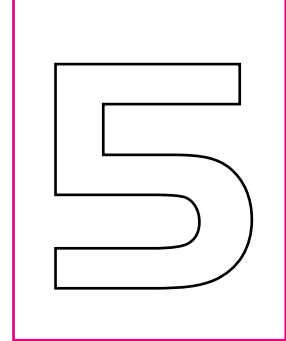
2 plus 4 concept with  
30% cost savings per part  
TWIN-spindle distance 600 mm  
4 finished parts pro cycle  
Material GGG 50  
22 tools

**MC 538 TWIN with HSK-A100**



# COMPLETE PROGRAM

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## HIGH FEATURE AND OPTION VERSATILITY EXECUTE FLEXIBLY THE OPTIMUM TURNKEY SOLUTION

System 5 centers provide the powerful and robust basis for most of the turnkey solutions STAMA delivers. These 1, 2 and 4-spindle machining centers can be flexibly configured to ensure a cost-per-part oriented execution of industry and workpiece-specific requirements.

They accommodate all versions of 3, 4 and 5-axis set-ups. Predefined interfaces paired with the gravity-oriented loading, facilitate workpiece automation processes with different loading and unloading systems.

High dynamics are among the outstanding benefits of our System 5 machines – a productivity advantage that is also evident when working with difficult to machine materials. Especially in the HSK-A100 class.





# ALL-ROUND TALENT

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THERE ARE MANY OPTIONS ...  
**AND ALWAYS A BEST SOLUTION**

Highly productive complete machining, fast change-over, flexible production of varied lot sizes and workpieces, highly precise heavy-duty cutting – the specifications that cutting processes have to meet are just as diverse as the cutting tasks demanding.

Produce every month well over 15,000 highly precise samples for notch bar tests in a tight process sequence while producing the best surface quality. Or sleeves for a hydraulics component that require particularly tight positional tolerances. Regardless of the application – to meet the productivity, precision, flexibility and process reliability standards, System 5 machines provide the stable and highly dynamic basis for light and heavy-duty cutting processes.



 **STAMA**

# TWIN x 2 – MAXIMUM PRODUCTIVITY

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## BOOST YOUR FOOTPRINT OUTPUT TO THE MAX

The investment in a second milling spindle equals about a quarter of the total machine cost. However, factoring in the cost-per-part advantage will put into perspective the addition of 25% of the original cost: Compared to a single-spindle system, the anticipated advantage is 30–40%.

If an even more productive solution is needed, the available space is limited and the twin-spindle

machining process has been fully optimized – the next logical step in maximizing efficiency is to opt for a System 5 4-spindle machining center.













# LEFT – RIGHT – **FINISHED**

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## COMPLETE MACHINING – TECHNOLOGY ENGINEERING **IN TWO CLAMPING POSITIONS ON ONE MACHINE**

Machining in the left-hand work zone; during the process time load and unload in the right-hand zone, and vice-versa. As 2 and 4-spindle solutions, System 5 two-zone machining are synonymous with the highly productive series production of multi-clamping small and large workpieces. Thanks to the flexible set-up for both work zones, processes with different machining operation requirements can be implemented in a highly productive and cost effective manner on a single machining center.

Component-optimized fixtures and rotary tables featuring torque drive technology ensure stability and precision in 3, 4 and 5-axis machining. The positioning in the work zone enables an unobstructed chip flow.



 **STAMA**

# MC 531

1, 2, AND 4-SPINDLE | ONE-PLACE/TWO-PLACE CENTERS  
**WORKPIECE SIZES UP TO 600/1000 mm**



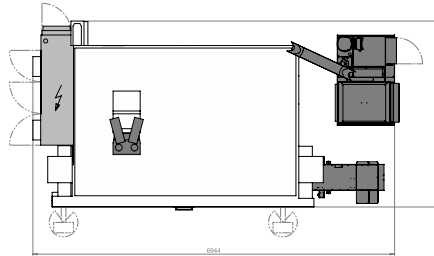
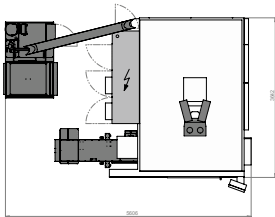
<b>Performance</b>		Single	TWIN	TWIN	TWIN	TWIN <sup>2</sup>
Spindle distance	mm	–	320	400	600	200
Milling spindles	kW	22/51	2 x 22/51	2 x 22/51	2 x 22	4 x 47
Torque	Nm	140/170	2 x 140/170	2 x 140/170	2 x 140	4 x 64
Spindle speeds	x 1000 r.p.m.	10/12/15**	10/12/15**	10/12/15**	10/12/15	10/12/15
<b>Tools</b>						
HSK-A63	Places	48/60/120***	2 x 32/68***	2 x 35	2 x 28	4 x 14/28***
Weight	kg	5/10	5/10	5/10	5/10	5/10
Diameter	mm	88/140	78/140	78/140	85/140	88/140
Length	mm	300	300	300	300	300
Chip-to-chip time	s	2.9	3.0	3.0	3.2	3.5

\*\*15000 r.p.m. with 22 kW and 140 Nm

\*\*\*120, 2 x 68 and 4 x 28 tools with one-place centers

Subject to technical changes.

Version July 2019.



**MC 531– the  
versatile  
machining center  
in the HSK-A63  
performance class**

<b>Traverse paths</b>		Single	TWIN	TWIN	TWIN	TWIN <sup>2</sup>	<b>Control</b>
Spindle distance	mm	–	320	400	600	200	Fanuc 31i-B5
X-axis one-place	mm	1000	1000	920	630	600	Siemens 840D sl
X-axis two-place	mm	2200/2 x 800	2 x 770	–	2 x 630	2 x 630	
Y-axis	mm	400/530*	400/530*	400	530*	400	
Z-axis	mm	400	400	400	370	360	
Rapid motion	m/min	75	75	75	75	75	
Acceleration	g	up to 1.8	up to 1.5	up to 1.5	up to 1.2	up to 1.2	

<b>Dimension/weight</b>		One-place	Two-place	<b>Data workpiece</b> TWIN 600, 5-axis machining	
Width	mm	3650	3570	Workpiece Ø	mm 510
Depth	mm	3240	3240	Height	mm 400
Height	mm	3330	5400	Weight	kg 250
Weight	kg	7300	9800		

\*Y-axis traverse path 500 mm with one-place centers and 530 mm with two-place centers





# MC 533

WORKPIECE SIZES SINGLE UP TO 600 mm  
**WORKPIECE SIZES TWIN UP TO 320 mm**

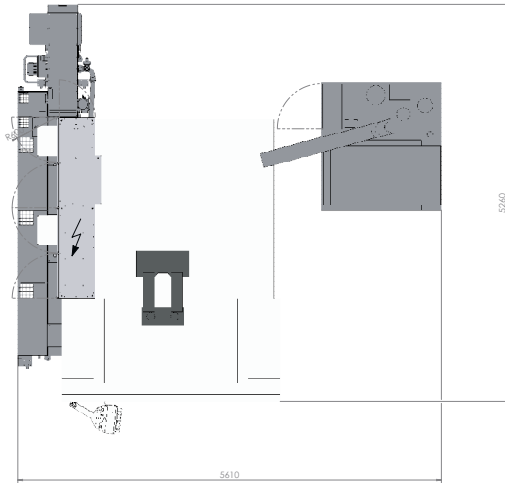


<b>Performance</b>		Single	TWIN
Spindle distance	mm	–	320
Milling spindles	kW	31/48/55	2 x 31/48
Torque	Nm	115/154/54	2 x 115/154
Spindle speeds	x 1000 r.p.m.	16/12/28	16/12

<b>Traversal paths</b>		
X-axis	mm	640
Y-axis	mm	400
Z-axis	mm	400
Rapid motion	m/min	60
Acceleration	g	up to 1.4

<b>Tools</b>		Single	TWIN
HSK-A63/Capto C5	Places	80	2 x 40
Weight	kg	5	5
Diameter	mm	78/160	78/160
Length	mm	300	300
Chip-to-chip time	s	2,9	2,9

<b>Control</b>	
Fanuc 31i-B5/Siemens 840D sl	



**MC 533 – pallet storage unit can be placed to the left or right of the machine**

<b>Dimension/weight</b>		
Width	mm	3210
Depth	mm	3740
Height	mm	3350
Weight single	kg	16000
Weight TWIN	kg	16100

<b>Data workpiece</b> TWIN 320, 5-axis machining		
Workpiece Ø	mm	315
Height	mm	350
Weight	kg	250

Subject to technical changes.  
Version July 2019.



# MC 537 | MC 538

WORKPIECE SIZES SINGLE UP TO 800 mm  
**WORKPIECE SIZES TWIN UP TO 600 mm**

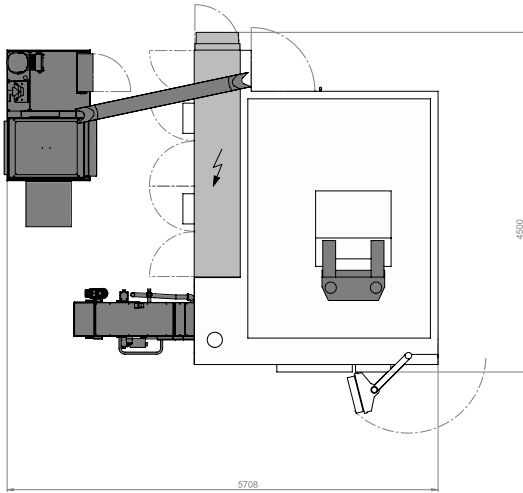


		MC 537		MC 538	
		Single	TWIN	Single	TWIN
<b>Performance</b>					
Spindle distance	mm	–	600	–	600
Milling spindles	kW	31	2 x 31	65	2 x 65
Torque	Nm	115	2 x 115	400	2 x 400
Spindle speeds	x 1000 r.p.m.	16	16	10	10
<b>Tools</b>					
HSK-A63	Places	60/96	2 x 30/48	–	–
HSK-A100	Places	–	–	40/64	2 x 20/32
Weight	kg	10	10	18	18
Diameter	mm	98/200	98/200	148/250	148/250
Length	mm	400	400	400	400
Chip-to-chip time	s	3.3	3.4	3.3	3.4

<b>Traversal paths</b>		
X-axis	mm	800
Y-axis	mm	550
Z-axis	mm	550
Rapid motion	m/min	65
Acceleration	g	up to 1

**Control**  
 Fanuc 31i-B5/Siemens 840D sl





**MC 538**  
with HSK-A100 for  
heavy cuty cutting

<b>Dimension/weight</b>		MC 537	MC 538
Width	mm	4500	4500
Depth	mm	3620	3620
Height	mm	3380	3380
Weight single	kg	9100	9200
Weight TWIN	kg	9200	9300

<b>Data workpiece</b> TWIN 600, 5-axis machining		
Workpiece Ø	mm	590
Height	mm	400
Weight	kg	350

Subject to technical changes.  
Version July 2019.



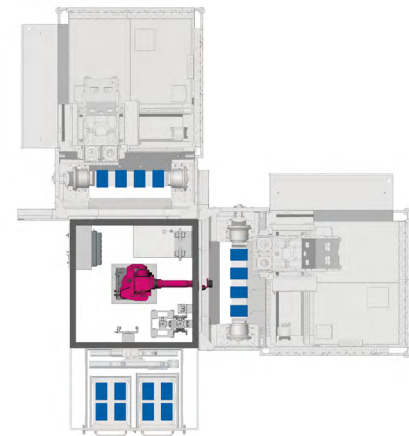
# WORKPIECE HANDLING

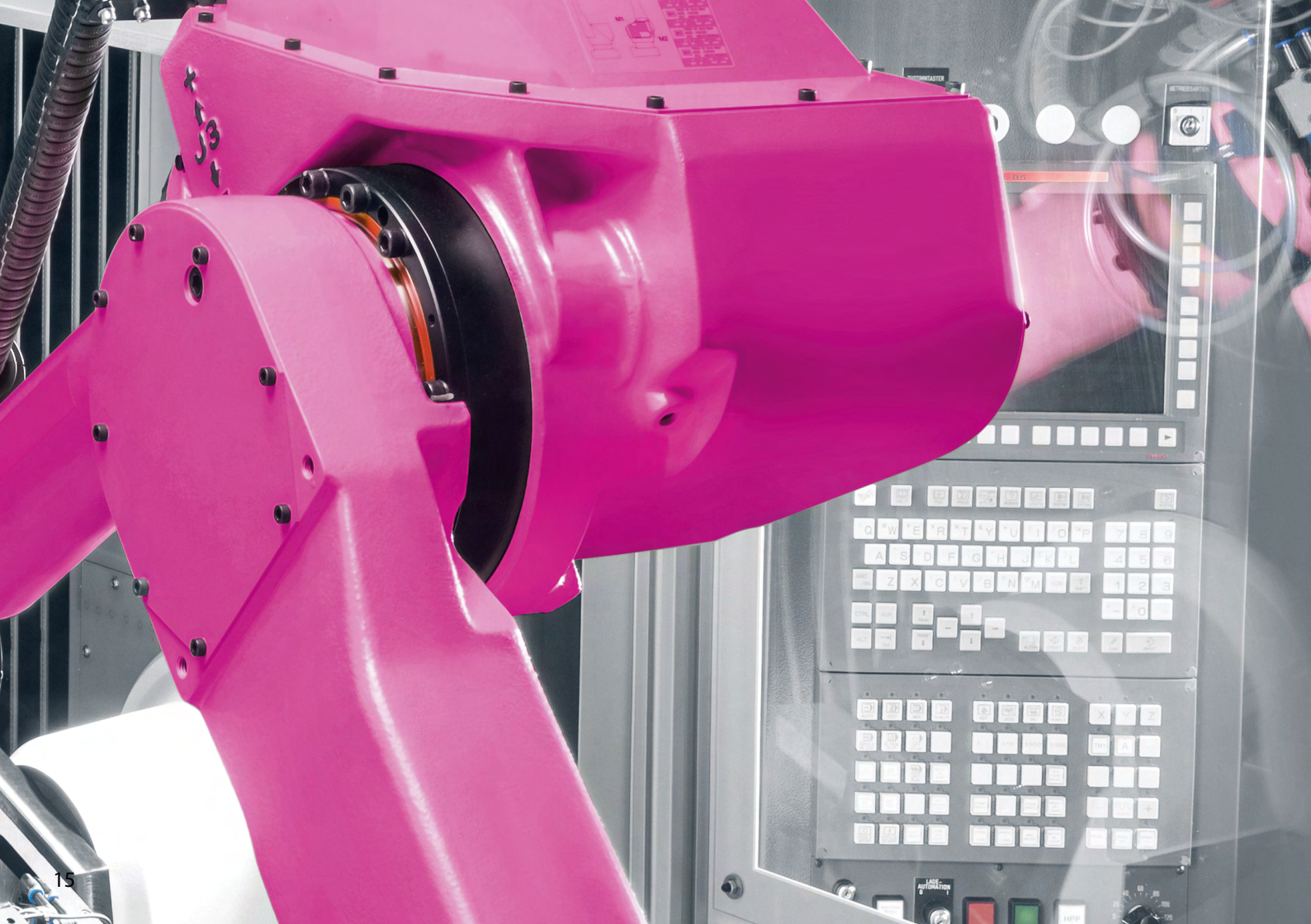
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HIGHLY PRODUCTIVE MANUFACTURING. **WHETHER  
AUTOMATED OR MANUAL LOADING**

The decision to use manual or automated workpiece handling is made on the basis of cost effectiveness and technical criteria.

The focus is always on the best process reliability and the lowest possible costs per part. Specific digitization to monitor or control the manufacturing process increases the level of autonomy.







# SYSTEM 5

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## VERTICAL MACHINING CENTERS

VERSATILE | ROBUST | FLEXIBLE | 1, 2 AND 4-SPINDLE OPTIONS



**MC 531**



**MC 533**



**MC 537 | MC 538**



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STAMA

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