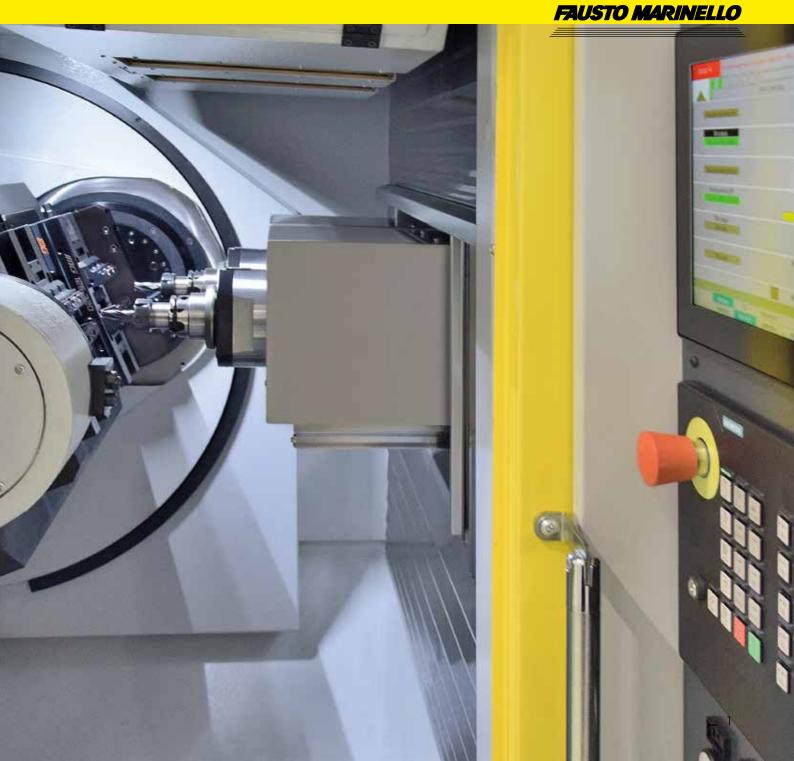
FM > 23 - 25 - 27

FM2 SERIES

4/5-axis twin spindle high flexibility, fast and compact





The perfect balance between technology and compactness

FM2 Series: super productive and customizable horizontal machining centers

The new FM 23, 25 and 27 horizontal machining centres are designed to offer maximum productivity and flexibility for medium and high production volumes, with the possibility of customization that fears no comparisons.

SUPER COMPACT

— MAXIMUM ADAPTABILITY

Each machine of the FM2 series is available with **pallet** change (FM232, FM252, FM272) or without pallet change (FM231, FM251, FM271).

— MAXIMUM PRECISION

The FM2 series is available with both single Z axis (RAM) and with double Z axis to guarantee its customers maximum reliability and precision.

— MAXIMUM ACCESSIBILITY

The FM2 series ensures an accessibility that has never been reached in machining centers before for any maintenance operation or calibration, mechanical, electrical or hydraulic.

IDEAL FOR THE MOST VARIED APPLICATIONS

FM2 is the ideal series of machining centres for many industrial sectors: automotive, machinery construction, precision mechanics, aerospace, hydraulic components, etc., and in all processes where it is essential to obtain high quality results at competitive costs. FAUSTO MARINELLO is the best technological partner for extremely productive results.

MAXIMUM SECURITY & ACCESSIBILITY FM 232 i **TOOL CHANGE IN 3s** (CHIP - CHIP) PREPARATION FOR LOADING AND UNLOADING SYSTEM PALLET EXCHANGER WITH C AND W AXES (5TH AXIS) OPTIONAL **FM2 SERIES APPLICATIONS**

FAUSTO MARINELLO

FAUSTO MARINELLO, part of the FAMAR group, is constantly looking for technological solutions for its customers' production needs.

The company designs and develops innovative solutions for machinery used for milling, in particular it offers horizontal single- or multi-spindle machining centres. The machines manufactured follow the production philosophy of the FAMAR group and are designed and built with a view to modularity, with a technology that can be customised according to the needs of the production process requested by the customer.



SUSPENSIONS

MOTOR

SUPER COMPACT

GEARBOX



CUSTOMISATION THAT FEARS NO COMPARISONS

IDEAL FOR FERROUS AND NON-FERROUS MATERIALS

BOX IN THE BOX STRUCTURE







_ 3

FM2 Accessible and tailored technology

In standard versions, the FM2 series is equipped with a complete 4- or 5-axis module. All machining centres of the FM2 series have a "box in the box" structure that allows maximum rigidity, efficiency, precision and dynamics, allowing optimal chip removal and quality of the finished product.

MAXIMUM TECHNOLOGY

The FM2 series offers an axis travel speed up to 90 m/min* with accelerations up to 15 m/s^{2*}. The passive times between processes are therefore minimal.

The machining centres of the FM2 series are all equipped with a base with a closed cell structure to ensure maximum rigidity and the maximum possible dynamics to achieve the highest level of performance and quality. This structure also guarantees maximum thermal stability and the ability to absorb the vibrations generated by the processes.

Thanks to their high stability and dynamics, they are ideal for processing both steel and ferrous alloys and aluminium alloys.

Depending on the model and the need for electrospindles, the machines of the FM2 line can be equipped with tool attachment HSK-A63, HSK-A80, HSK-A100.

FM2 machining centres guarantee tool change times of less than

3 seconds, thus reducing the production time. The electrical opening (optional) of the loading/unloading doors allows for any part loading and unloading system (robotic, portal, etc.) to be used

MAXIMUM ACCESSIBILITY

Thanks to the rational and ergonomic design, the interventions of operators or maintenance technicians in any area of the machine are carried out with the utmost ease and safety.





FAUSTO MARINELLO ELECTROSPINDLE

The electrospindles of the FM2 series are designed by FAUSTO MARINELLO.

They are available in versions 10,000 and 17,500 rpm* with spindle attachment HSK-A63, HSK-A80, HSK-A100.





MAXIMUM FLEXIBILITY

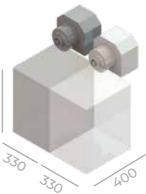
The FM2 series can be used for any type of process and is available with double 5th axis tables or special tables.

MAXIMUM STABILITY

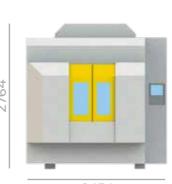
Thanks to the particular structure of the base filled with polymeric cements*, FM2 machines are ideal for extreme precision machining. They offer high rigidity, minimal thermal expansion and maximum vibration absorption.

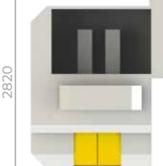
	FM	231i
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm]	33	50
Y-axis stroke [mm]	500 (+270)	
Z axis stroke [mm]	400	
Spindle spacing [mm]	32	20
A AXIS		
Maximum table dimensions [mm]	Ø620	x880
Drive unit	Motor	torque
Maximum weight of equipment and workpiece [kg]	400	
Maximum speed	50	
C/W axis	2 for OPTIC	ONAL AXIS
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63	143
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball s	crew
X axis acceleration [m/s²]	10	
X axis fast speed [m/min]	70	
Maximum X axis thrust [N]	8000	
Y axis acceleration [m/s²]	10	
Y axis fast speed [m/min]	75	
Maximum Y axis thrust [N]	8000	
Z axis acceleration [m/s²]	15	
Z axis fast speed [m/min]	80	
Maximum Z axis thrust [N]	2X5	500
MAGAZINE		
Tool change	Pick	(-up
Capacity	2X20	2X21
Optional capacity 1	2X40	2X30
Optional capacity 2	2X60	2X45
Optional capacity 3	2X	.81
Maximum tool diameter	Ø75	Ø100
Maximum tool diameter (adjacent free positions [mm])	ØI	60
Maximum tool length [mm]	32	20
Maximum tool weight [kg]	5	3
Tool change time (chip-to-chip) [s]	≤2	2.5
GENERAL DATA		
CNC	Sien	nens
OPTIONAL CNC	Fanuc	





500





WORK AREA
X axis stroke [mm]
Y-axis stroke [mm]
Z axis stroke [mm]
Spindle spacing [mm]
A AXIS

X axis acceleration [m/s²] X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s²] Y axis fast speed [m/min] Maximum Y axis thrust [N]

Z axis acceleration [m/s²] Z axis fast speed [m/min] Maximum Z axis thrust [N]

MAGAZINE

Tool change Capacity

Optional capacity 1

Optional capacity 2

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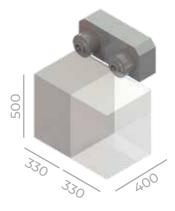
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2454			

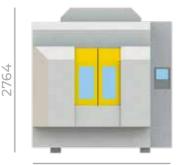
	Optional capacity 3
	Maximum tool diameter
	Maximum tool diameter (adjacent free positions [mm])
	Maximum tool length [mm]
	Maximum tool weight [kg]
1	Tool change time (chip-to-chip) [s]
	GENERAL DATA
	CNC
2	OPTIONAL CNC

	FM231	RAM
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm]	330	
Y-axis stroke [mm]	500 (+270)	
Z axis stroke [mm]	40	0
Spindle spacing [mm]	32	.0
A AXIS		
Maximum table dimensions [mm]	Ø620	x880
Drive unit	Motor t	orque
Maximum weight of equipment and workpiece [kg]	40	00
Maximum speed	50	
C/W axis	2 for OPTIC	ONAL AXIS
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63	143
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball screw	
X axis acceleration [m/s²]	10	
X axis fast speed [m/min]	70	
Maximum X axis thrust [N]	8000	

Juli Serew	
10	
70	
8000	
10	
75	
8000	
15	
80	
8000	







2454





2X20

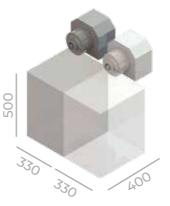
2X40

2X60

Ø75

	FM2	232i
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm]	33	
Y-axis stroke [mm]	500 (+270)	
Z axis stroke [mm]	400	
Spindle spacing [mm]	32	20
Q AXIS		
Oscillation time 180° [s]	7	5
A/U AXIS		
Maximum table dimensions [mm]	Ø620	x880
Drive unit	Motor torque	
Maximum weight of equipment and workpiece [kg]	40	00
Maximum speed	50	0
C/W axis	2 for OPTIC	ONAL AXIS
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63	143
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball screw	
	10	
X axis acceleration [m/s²]	10)
X axis acceleration [m/s²] X axis fast speed [m/min]](7)	
		0
X axis fast speed [m/min]	7	00
X axis fast speed [m/min] Maximum X axis thrust [N]	70 800	0 00 0
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s²]	70 800 10	0 00 0 5
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min]	70 800 10 75	0 00 0 5 00
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N]	70 800 10 72 800	0 00 5 00 5
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²]	74 80 10 7 80 19	0 00 0 5 00 5 0
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min]	7 80 10 7 80 11 80	0 00 0 5 00 5 0
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N]	7 80 10 7 80 11 80	0 00 5 5 00 5 0 500
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE	74 800 75 800 16 800 15 80 80 80 80 80 80 80 80 80 80 80 80 80	0 00 5 5 00 5 0 500
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change	74 80 10 72 80 11 80 11 80 2X51 80 2X51 90 2X51 90 2X51	0 00 5 00 5 0 500 500
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity	74 800 16 75 800 19 19 80 2X55 2X55 2X20	0 00 5 5 00 5 500 -up 2X21
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1	74 80 16 72 80 19 19 80 19 19 80 19 19 19 19 19 19 19 19 19 19 19 19 19	0 00 5 5 00 5 500 500 500 500 500 520 500 520 500 520 500 520 500 520 500 520 500 520 500 520 52
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2	74 800 10 75 800 11 80 12 80 2X55 2X55 2X55 2X50 2X40 2X60	0 00 5 5 00 5 500 500 500 500 500 520 500 520 500 520 500 520 500 520 500 520 500 520 500 520 52
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2 Optional capacity 3	74 80 75 80 75 80 15 80 15 80 15 80 2X55 2X55 2X55 2X55 2X55 2X55 2X55 2X5	0 00 5 5 00 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 500 5 5 0 5 5 0 5
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2 Optional capacity 3 Maximum tool diameter Maximum tool diameter	74 80 75 80 75 80 75 80 75	0 00 5 5 00 5 500 500 500 500 500 500 5
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2 Optional capacity 3 Maximum tool diameter (adjacent free positions [mm])	74 80 75 75 80 16 75 80 18 80 18 2X55 75 2X40 2X40 2X40 2X40 2X40 2X40 2X60 2X40 2X60	0 00 5 5 00 5 0 5 0 5 0 5 0 5 0 5 0 5 0
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2 Optional capacity 3 Maximum tool diameter (adjacent free positions [mm]) Maximum tool length [mm]	74 800 10 72 800 11 80 11 80 2X55 2X55 2X55 2X55 2X50 2X40 2X40 2X60 2X60 2X 075 010 32	0 00 5 00 5 00 5 5 0 5 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis acceleration [m/s ²] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2 Optional capacity 3 Maximum tool diameter (adjacent free positions [mm]) Maximum tool length [mm] Maximum tool weight [kg]	74 80 75 75 80 16 75 80 18 84 2X55 75 75 75 75 75 75 71 775	0 00 5 00 5 00 5 5 0 5 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5
X axis fast speed [m/min] Maximum X axis thrust [N] Y axis acceleration [m/s ²] Y axis fast speed [m/min] Maximum Y axis thrust [N] Z axis fast speed [m/min] Maximum Z axis thrust [N] MAGAZINE Tool change Capacity Optional capacity 1 Optional capacity 2 Optional capacity 3 Maximum tool diameter (adjacent free positions [mm]) Maximum tool length [mm] Maximum tool weight [kg] Tool change time (chip-to-chip) [s]	74 80 75 75 80 16 75 80 18 84 2X55 75 75 75 75 75 75 71 775	0 00 5 00 5 00 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5









	FM232	2 RAM
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm]	33	0
Y-axis stroke [mm]	500 (+270)	
Z axis stroke [mm]	40	0
Spindle spacing [mm]	32	.0
Q AXIS		
Oscillation time 180° [s]	3	;
A/U AXIS		
Maximum table dimensions [mm]	Ø620	x880
Drive unit	Motor 1	orque
Maximum weight of equipment and workpiece [kg]	40	0
Maximum speed	50	
C/W axis	2 for OPTIONAL AXIS	
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63	143
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball screw	
Drive unit	Ball s	crew
X axis acceleration [m/s ²]	Ball s	
)
X axis acceleration [m/s ²]	10))
X axis acceleration [m/s ²] X axis fast speed [m/min]	10))))
X axis acceleration [m/s ²] X axis fast speed [m/min] Maximum X axis thrust [N]	10 70 800))))))

Maximum Y axis thrust [N]	
Z axis acceleration [m/s ²]	
Z axis fast speed [m/min]	
Maximum Z axis thrust [N]	
MAGAZINE	
Tool change	
Capacity	2X20
Optional capacity 1	2X40
Optional capacity 2	2X60
Optional capacity 3	
Maximum tool diameter	Ø75
Maximum tool diameter (adjacent free positions [mm])	
Maximum tool length [mm]	
Maximum tool weight [kg]	
Tool change time (chip-to-chip) [s]	
GENERAL DATA	
CNC	
OPTIONAL CNC	

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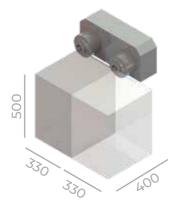
Pick-up

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)	2X21
)	2X30
)	2X45
2X	(81
	Ø100
Ø1	60
32	20
8	3
≤ 2	2.5
Sien	nens

Fanuc





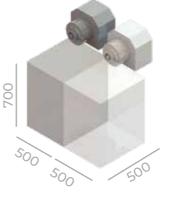




	FM2	251i
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm]	50	00
Y-axis stroke [mm]	700 (+270)	
Z axis stroke [mm]	500	
Spindle spacing [mm]	50	00
A AXIS		
Maximum table dimensions [mm]	Ø800	x1310
Drive unit	Motor	torque
Maximum weight of equipment and workpiece [kg]	700)
Maximum speed	50	0
C/W axis	2 for OPTIC	ONAL AXIS
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63	143
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball s	crew
X axis acceleration [m/s²]	10)
X axis fast speed [m/min]	6	0
Maximum X axis thrust [N]	15000	
Y axis acceleration [m/s²]	10)
Y axis fast speed [m/min]	7	5
Maximum Y axis thrust [N]	15000	
Z axis acceleration [m/s²]	15	
Z axis fast speed [m/min]	80	
Maximum Z axis thrust [N]	2X80	000
MAGAZINE		
Tool change	Pick	-up
Capacity	2X40	2X32
Optional capacity 1	2X70	2x56
Optional capacity 2	2X100	2X80
Maximum tool diameter	Ø80	Ø100
Maximum tool diameter (adjacent free positions [mm])	Ø160	
Maximum tool length [mm]	32	.0
Maximum tool weight [kg]	10	12
Tool change time (chip-to-chip) [s]	≤ 2.	.75
GENERAL DATA		
CNC	Siem	nens

OPTIONAL CNC







3000

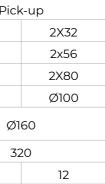
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Fanuc

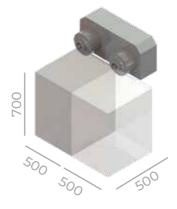
	FMZ	RAM	
WORK AREA	HSK - A63	HSK - A80	
X axis stroke [mm]	50	0	
Y-axis stroke [mm]	700 (+270)		
Z axis stroke [mm]	500		
Spindle spacing [mm]	50	0	
A AXIS			
Maximum table dimensions [mm]	Ø800	Ø800x1310	
Drive unit	Motor torque		
Maximum weight of equipment and workpiece [kg]	70	0	
Maximum speed	50	C	
C/W axis	2 for OPTIC	ONAL AXIS	
ELECTROSPINDLE			
Maximum speed [rpm]	10000	10000	
OPTIONAL maximum speed [rpm]	17500		
Rated power [kW]	28	33	
Power S6 (40%) [kW]	32	35	
Nominal torque [Nm]	63	143	
Torque S6 (40%) [Nm]	80	200	
Spindle bearing	80	90	
PERFORMANCE			
Drive unit	Ball s	crew	
X axis acceleration [m/s²]	10)	
X axis fast speed [m/min]	60	C	
Maximum X axis thrust [N]	15000		
Y axis acceleration [m/s ²]	10)	
Y axis fast speed [m/min]	75	5	
Maximum Y axis thrust [N]	150	00	
Z axis acceleration [m/s²]	15		
Z axis fast speed [m/min]	80		
Maximum Z axis thrust [N]	12000		
MAGAZINE			
Tool change	Pick	-up	
Capacity	2X40	2X32	
Optional capacity 1	2X70	2x56	
Optional capacity 2	2X100	2X80	
Maximum tool diameter	Ø80	Ø100	
Maximum tool diameter (adjacent free positions [mm])	Ø160		
Maximum tool length [mm]	32	.0	
Maximum tool weight [kg]	10	12	
Tool change time (chip-to-chip) [s]	≤ 2.75	≤ 2.75	
GENERAL DATA			
CNC	Siem	iens	
OPTIONAL CNC	Fanuc		



FM251 RAM





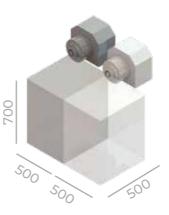


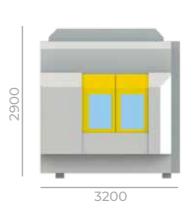


3000

	FM2	252i
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm]	50	00
Y-axis stroke [mm]	700 (+270)	
Z axis stroke [mm]	500	
Spindle spacing [mm]	50	00
Q AXIS		
Oscillation time 180° [s]	3	5
A/U AXIS		
Maximum table dimensions [mm]	Ø800	x1310
Drive unit	Motor	torque
Maximum weight of equipment and workpiece [kg]	70	00
Maximum speed	50	0
C/W axis	2 for OPTIC	ONAL AXIS
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63	143
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball s	crew
X axis acceleration [m/s²]	10	
X axis fast speed [m/min]	60	
Maximum X axis thrust [N]	150	00
Y axis acceleration [m/s²]	10)
Y axis fast speed [m/min]	7	5
Maximum Y axis thrust [N]	150	00
Z axis acceleration [m/s²]	15	5
Z axis fast speed [m/min]	8	0
Maximum Z axis thrust [N]	2x8000	
MAGAZINE		
Tool change	Pick	-up
Capacity	2X40	2X32
Optional capacity 1	2X70	2x56
Optional capacity 2	2X100	2X80
Maximum tool diameter	Ø80	Ø100
Maximum tool diameter (adjacent free positions [mm])	Ø160	
Maximum tool length [mm]		0
Maximum tool weight [kg]	320 10 12	
Tool change time (chip-to-chip) [s]	10 ≤ 2	
GENERAL DATA	22	., 5
CNC	Siem	nens
OPTIONAL CNC	Far	
	Far	iuc









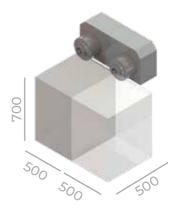
WORK AREA	HSK - A63	HSK - A80
X axis stroke [mm] 500		0
Y-axis stroke [mm]	700 (+270)	
Z axis stroke [mm]	500	
Spindle spacing [mm]	500	
Q AXIS		
Oscillation time 180° [s]	3	
A/U AXIS		
Maximum table dimensions [mm]	Ø800x1310	
Drive unit	Motor t	orque
Maximum weight of equipment and workpiece [kg]	70	0
Maximum speed	50)
C/W axis	2 for OPTIC	NAL AXIS
ELECTROSPINDLE		
Maximum speed [rpm]	10000	10000
OPTIONAL maximum speed [rpm]	17500	
Rated power [kW]	28	33
Power S6 (40%) [kW]	32	35
Nominal torque [Nm]	63 143	
Torque S6 (40%) [Nm]	80	200
Spindle bearing	80	90
PERFORMANCE		
Drive unit	Ball screw	
X axis acceleration [m/s²]	10)
X axis fast speed [m/min]	60)
Maximum X axis thrust [N]	15000	
Y axis acceleration [m/s²]	10)
Y axis fast speed [m/min]	75	5
Maximum Y axis thrust [N]	150	00
Z axis acceleration [m/s²]	15	
Z axis fast speed [m/min]	80	
Maximum Z axis thrust [N]	12000	
MAGAZINE		
Tool change	Pick	-up
Capacity	2X40	2X32
Optional capacity 1	2X70	2x56
Optional capacity 2	2X100	2X80
Maximum tool diameter	Ø80	Ø100
Maximum tool diameter (adjacent free positions [mm])	Ø160	
Maximum tool length [mm]	32	0
Maximum tool weight [kg] 10		12
Tool change time (chip-to-chip) [s]	≤ 2.75	
GENERAL DATA		
CNC	Siem	iens

OPTIONAL CNC

FM252 RAM

Fanuc





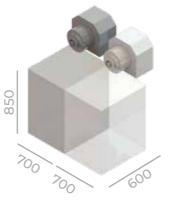


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FAUSTO MARINELLO constantly improves its machines. Technical data may vary without notice. _ 13

	FM	271i		
WORK AREA	HSK - A63	HSK - A100		
X axis stroke [mm]	700			
Y-axis stroke [mm]	850 (+400)			
Z axis stroke [mm]	60	600		
Spindle spacing [mm]	70	00		
A AXIS				
Maximum table dimensions [mm]	Ø1000)x1760		
Drive unit	Motor	torque		
Maximum weight of equipment and workpiece [kg]	10	00		
Maximum speed	5	0		
C/W axis	2 for OPTIC	ONAL AXIS		
ELECTROSPINDLE				
Maximum speed [rpm]	10000	10000		
OPTIONAL maximum speed [rpm]	17500			
Rated power [kW]	28	20		
Power S6 (40%) [kW]	32	26		
Nominal torque [Nm]	63	262		
Torque S6 (40%) [Nm]	80	340		
Spindle bearing	80	100		
PERFORMANCE				
Drive unit	Balls	Ball screw		
X axis acceleration [m/s²]	9	9		
X axis fast speed [m/min]	60			
Maximum X axis thrust [N]	160	000		
Y axis acceleration [m/s²]		9		
Y axis fast speed [m/min]	6	0		
Maximum Y axis thrust [N]	18000			
Z axis acceleration [m/s²]	13			
Z axis fast speed [m/min]	80			
Maximum Z axis thrust [N]	2x10000			
MAGAZINE				
Tool change	Pick	(-up		
Capacity	2X42	2X30		
Optional capacity 1	2x70	2x50		
Optional capacity 2	2x105	2x75		
Maximum tool diameter	Ø80	Ø110		
Maximum tool diameter (adjacent free positions [mm])	Ø250			
Maximum tool length [mm]	450			
Maximum tool weight [kg]	8 20			
Tool change time (chip-to-chip) [s]	≤3.5			
GENERAL DATA				
CNC	Sien	nens		
	Ear			





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Fanuc

OPTIONAL CNC

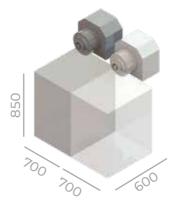
	• • • • = 7 = •			
WORK AREA	HSK - A63	HSK - A100		
X axis stroke [mm]	700			
Y-axis stroke [mm]	850 (+400)			
Z axis stroke [mm]	600			
Spindle spacing [mm]	700			
Q AXIS				
Oscillation time 180° [s]	3	5		
A/U AXIS				
Maximum table dimensions [mm]	Ø1000x1760			
Drive unit	Motor torque			
Maximum weight of equipment and workpiece [kg]	100	00		
Maximum speed	50	C		
C/W axis	2 for OPTIC	ONAL AXIS		
ELECTROSPINDLE				
Maximum speed [rpm]	10000	10000		
OPTIONAL maximum speed [rpm]	17500			
Rated power [kW]	28	20		
Power S6 (40%) [kW]	32	26		
Nominal torque [Nm]	63	262		
Torque S6 (40%) [Nm]	80	340		
Spindle bearing	80	100		
PERFORMANCE				
Drive unit	Ball s	crew		
X axis acceleration [m/s²]				
X axis fast speed [m/min]	60			
Maximum X axis thrust [N]	16000			
Y axis acceleration [m/s ²]	ç)		
Y axis fast speed [m/min]	60			
Maximum Y axis thrust [N]	180	00		
Z axis acceleration [m/s ²]	13			
Z axis fast speed [m/min]	8	0		
Maximum Z axis thrust [N]	2x10000			
MAGAZINE				
Tool change	Pick	-up		
Capacity	2X42	2X30		
Optional capacity 1	2x70	2x50		
Optional capacity 2	2x105	2x75		
Maximum tool diameter	Ø80	Ø110		
Maximum tool diameter (adjacent free positions [mm])	Ø250			
Maximum tool length [mm]				
Maximum tool weight [kg]	8 20			
Tool change time (chip-to-chip) [s]	≤3.5			
GENERAL DATA				
CNC	Siem	nens		

OPTIONAL CNC

FM272i

Fanuc







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FAUSTO MARINELLO constantly improves its machines. Technical data may vary without notice. _ 15



Overall dimensions **work**space

The FM2 series is available with single or double 5th axis table, a dual possibility that makes the FM2 series extremely flexible. In addition to this, thanks to the great experience and professionalism of our design department, it is possible to have special 5th-axis tables, customizable according to the customer's needs.

4TH-AXIS TABLE

5TH-AXIS TABLE

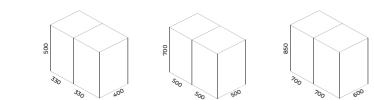




FM25X FM23X **FM27X**

C AXIS			
	2x	2x	2x
Maximum table dimensions [mm]	Ø319x360	Ø499x535	Ø699x650
Maximum weight of equipment and workpiece [kg]	100	200	350









From the idea to the full process A set of skills

ASSESSMENT OF OVERALL DIMENSIONS ACCORDING TO THE CUSTOMER'S NEEDS

Thanks to the cooperation between the companies of the FAMAR group, such as FAUSTO MARINELLO, FAMAR and FAMAR Automations, we are able to develop complete production processes, from the raw piece to the finished and assembled product, combining drilling, milling, turning, grinding, assembly and automation operations.

- CUSTOMIZATION

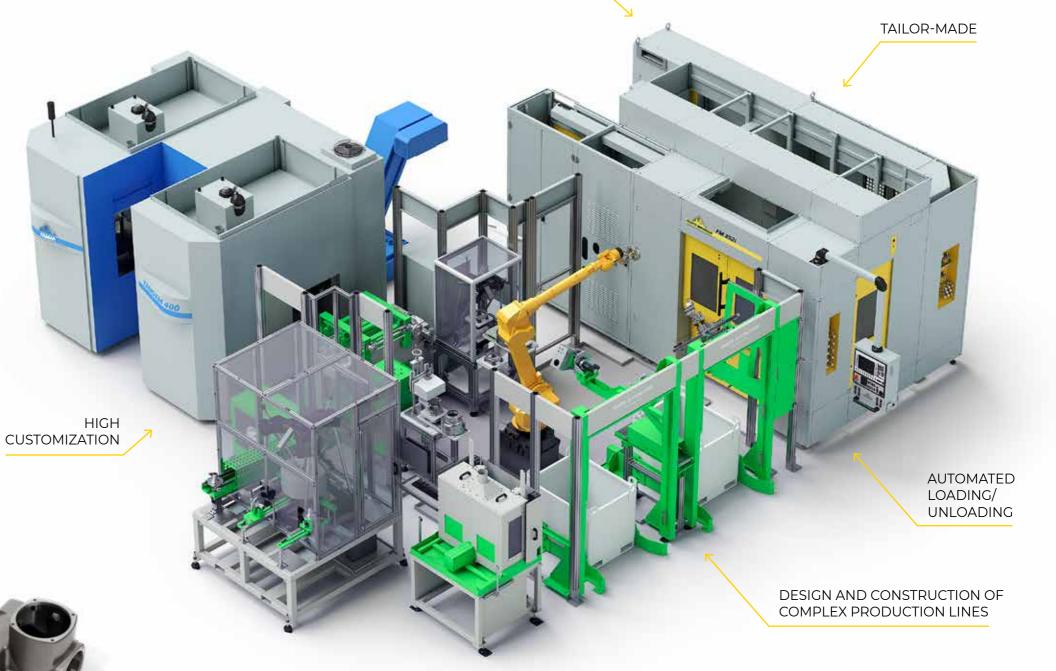
The machines of the FM2 series can be completely customised to meet the customer's needs. Customization is one of the strengths of the FAMAR group.

- AUTOMATION

Thanks to the experience of our FAMAR Automation department, we are able to develop robotic islands for the automatic loading/unloading of parts, assessing the customer's needs in terms of production and layout.

— DESIGN AND PRODUCTION PROCESSES

The collaboration with FAMAR, a company of the Group that produces vertical pickup lathes, allows for the design and construction of complex production lines that integrate the skills of the 3 companies, satisfying the customer's needs.













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