

## RAISSYSTEM M500

The vertical machining centers M500 and M550 RAIS are designed to perform various machining operations on medium-size workpieces in high cutting speed and feed conditions.



Cartridge type spindle, without need of maintenance. High precision bearings (P4 class). The increased axial tightening force eliminates vibrations at heavy cutting conditions.

Linear guide ways along the three axes - size 35, zero clearance. Stable cutting under full load conditions. Minimum friction when in motion. High precision and high speed with no need for adjustment during operational life.

All ball screws - high precision, class P3, Ø40 mm OD, with a double nut, pre-loaded to control backlash. High precision of positioning and smooth operation.

Directly coupled to the ball screws AC servo motors along all axes: guaranteed excellent interpolation accuracy.

Telescopic guards along the three axes: long life of the ball screws and the linear guideways; fast and efficient flushing of chips by means of coolant liquid.

24 ATC fast tool change magazine - 2.8 sec. Automated air blow during tool change ensures cleaning of the spindle cone and holder.

High-quality housing castings of grey cast iron. Optimum ribbed base, column, spindle casing and table. Ensured for maximum rigidity and minimum bending under applied load conditions.

Fully enclosed electrical cabinet with heat exchanger, accordance to CE requirements.

Ability to implement with Automatic Pallette Changer.

Optimum construction: minimum heat deformation; absence of vibrations in working process; high geometry accuracy and smoothness; of finished surfaces.

## RAISSYSTEM M550



TECHNICAL PARAMETERS	UNIT	M500	M550
<b>CAPACITY</b>			
X axis travel	mm	850	1200
Y axis travel	mm	510	610
Z axis travel	mm	560	610
Spindle nose to table	mm	150 - 710	150 - 760
Table size	mm	1000 x 500	1300 x 600
T - slots: number x size x pitch	mm	5 x 18 x 100	5 x 18 x 100
Max workpiece weight	kg	500	1000
Guideways		Linear	Linear
Floor to table	mm	870	870

<b>SPINDLE</b>			
Spindle speed range	rpm	8 000 / 10 000* / 12 000* / 15 000**	8 000 / 10 000* / 12 000* / 15 000**
Main motor power (100% ED / 30 min.)	kW	11 / 15	11 / 15
Main motor torque (100% ED / 30 min.)	Nm	52,5 / 95,5	52,5 / 95,5
Spindle taper		SK40 / ISO40 / BT40	SK40 / ISO40 / BT40

<b>ATC</b>			
Tool capacity		24 (16 / 30 / 40)***	24 (16 / 30 / 40)***
Max tool diameter	mm	80	80
Max tool diameter (adjacent pockets empty)	mm	150	150
Max tool length	mm	300	300
Max tool weight	kg	6	6

<b>FEED</b>			
Rapid traverse X / Y / Z	m/min	30 / 30 / 20	20 / 20 / 20
Max cutting feedrate	m/min	10	10
Z axis motor: type / power (100% ED)	kW	Fanuc $\beta$ i S 22/2000 / 2,5 kW	Fanuc $\beta$ i S 22/2000 / 2,5 kW
Z axis motor torque (100% ED)	Nm	20	20
X / Y axes motor: type / power (100% ED)	kW	Fanuc $\beta$ i S 12/3000 / 1,8 kW	Fanuc $\beta$ i S 22/2000 / 2,5 kW
X / Y axes motor torque (100% ED)	Nm	11	20

<b>SIZE</b>			
Machine weight	kg	5 000	6 800
Machine dimensions (approx.): L x B x H	mm	2900 x 2420 x 2850	3450 x 2805 x 2950

<b>CNC CONTROL</b>			
Fanuc 0i (Fanuc 32i / Siemens 828D / Siemens 840D / Heidenhain iTNC620)****			

<b>ACCURACY OF THE MACHINE</b>		DIN8605-8607	DIN8605-8607
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(\*) with direct drive  
 (\*\*) with motor spindle  
 (\*\*\*) option  
 (\*\*\*\*) on customer request

### OPTIONAL ACCESSORIES

- ✓ 4-th axis, table diameter 250 / 320 mm
- ✓ 4-th & 5-th axes, table diameter 200 / 250 / 320 mm
- ✓ Direct drive spindle 15 000 rpm
- ✓ Tool magazine 30 or 40 tools with arm
- ✓ Tool setter
- ✓ Touch probe with infra-red connection
- ✓ Coolant trough spindle 20 or 70 Bar
- ✓ Chip conveyor