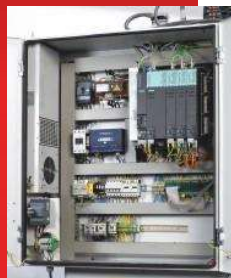


RAISSYSTEM M400

The vertical machining centers M400 and M450 RAIS are designed to perform various machining operations on small-size workpieces and shapes in high cutting speed conditions, with high precision positioning and excellent reliability.



Optimum construction; minimum heat deformation; absence of vibrations in working process; high geometry accuracy.

Directly driven spindle assembly and high precision bearings: minimum run out of the spindle taper; improved smoothness of operation under high-speed machining conditions; increased tool durability.

Telescopic guards along the three axes: long life of the ball screws and the linear guide ways.

RAISSYSTEM M450



Linear guideways along the three axes - size 25, 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, Ø32 mm OD, with a double nut, pre-loaded to control backlash. High precision of positioning and smooth operation.

Automated air blow during tool change ensures cleaning of the spindle taper and holder.

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

Fully enclosed splash guard. Swivel panel of the CNC control. Maximum convenience for adjusting and operation purposes.

High-quality housing castings of gray cast iron. Optimum ribbed base, column and spindle casing; guaranteed maximum rigidity and minimum bending under applied load conditions.



TECHNICAL PARAMETERS	UNIT	M400	M450
CAPACITY			
X axis travel	mm	500	600
Y axis travel	mm	400	450
Z axis travel	mm	500	500
Spindle nose to table	mm	150 - 650	150 - 650
Table size	mm	760 x 400	760 x 450
T - slots: number x size x pitch	mm	3 x 18 x 93	3 x 18 x 93
Max workpiece weight	kg	350	350
Guideways		Linear	Linear
Floor to table	mm	870	870
SPINDLE			
Spindle speed range	rpm	8 000 / 12 000* / 15 000**	8 000 / 12 000* / 15 000**
Main motor power (100% ED / 30 min.)	kW	7.5 / 11	7.5 / 11
Main motor torque (100% ED / 30 min.)	Nm	35.8 / 70	35.8 / 70
Spindle taper		SK40 / ISO40 / BT40	SK40 / ISO40 / BT40
ATC			
Tool capacity		16 / 24***	16 / 24***
Max tool diameter	mm	90	90
Max tool diameter (adjacent pockets empty)	mm	110	110
Max tool length	mm	250	250
Max tool weight	kg	6	6
FEED			
Rapid traverse X / Y / Z	m/min	30 / 30 / 20	30 / 30 / 20
Max cutting feedrate	m/min	10	10
Z axis motor: type / power (100% ED)	kW	Fanuc βi S 22/2000 / 2.5 kW	Fanuc βi 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 βi S 12/3000 / 1.8 kW	Fanuc βi S 12/3000 / 1.8 kW
X / Y axes motor torque (100% ED)	Nm	11	11
SIZE			
Machine weight	kg	3 100	3 200
Machine dimensions (approx.): L x B x H	mm	2230 x 2000 x 2400	2230 x 2000 x 2400
CNC CONTROL			
Fanuc 0i (Fanuc 32i / Siemens 828D / Siemens 840D / Heidenhain iTNC620)****			
ACCURACY OF THE MACHINE		DIN8605-8607	DIN8605-8607

(*) with direct drive
 (**) with motor spindle
 (***) option
 (****) on customer request

OPTIONAL ACCESSORIES

- ✓ 4-th axis, table diameter 125 / 170 mm
- ✓ Tool magazine 24 tools with arm
- ✓ Chip conveyor
- ✓ Tool setter
- ✓ 4-th & 5-th axes, table diameter 125 mm
- ✓ Direct drive spindle 15 000 rpm
- ✓ Coolant trough spindle with pump 20 Bar
- ✓ Touch probe with infra-red connection