

The Clock 800 has a 800 x 800 x 800mm XYZ working capacity. With pallet dimensions of 500 x 500mm & 500 x 630mm with a 800kg load. Available as a bi-pallet, multi-pallet or FMS models.

SPECIFICATION

MCM Clock 800 4/5 Axis

Work Area

X-axis stroke	800mm
Y-axis stroke	800mm
Z-axis stroke	800mm
X/Y/Z axes thrust	800 daN
X/Y/Z rapid feed speed	75 / 60 / 75m/min
X/Y/Z axes acceleration	7 / 6 / 7 m/sec ²

Pallet and Rotary Table (4th Continuous Axis)

Pallet dimensions	500 x 500 x / 500 x 630mm
Max. load allowed on pallet	800kg
Max. fixture height	900mm
Max. fixture rotation diameter	900mm
Max. table rotation speed	50rpm
90 degree rotation time	1,2 sec
Min. resolution	0,0001 degrees

Accuracy (As per ISO 230-2 Standards)

Accuracy of positioning - linear axis (A)	4 µm
Systematic positional deviation - linear axis (M)	3 µm
Repeatability - linear axis (R)	3 µm
Accuracy of positioning - circular axis (A)	4 arc sec
Systematic positioning deviation - circular axis (M)	2 arc sec
Repeatability - circular axis (R)	3 arc sec

Spindle

Tool taper	HSK 100 / ISO 50
Max. speed (standard version)	10,000rpm (HSK 100) 10,000rpm (ISO 50)

Max. power (standard version)	60kW
Max. torque (standard version)	300Nm
Accessories included	Variable preloading bearings
Optional Versions	HSK 63 / ISO 40 / HSK 100 / ISO50
Max. speed upto	30,000rpm (HSK 63) / 18,000rpm (HSK 100)
Max. power upto	74kW (for HSK 63 spindle at 30,000rpm) 68kW (for HSK 100 spindle at 18,000rpm)
Max. torque upto	55Nm (for HSK 63 spindle at 30,000rpm) 388Nm (for ISO50 spindle at 10,000rpm)

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Tool Magazine

Type	Modular rack with tool movement system and exchange arm	
Tool taper	HSK 63/ISO40	HSK 100/ISO50
Number of tools (standard version)	140	80
Number of tools (optional version - upto)	250 - 500	160 - 320
Tool mass	10kg	25kg
Max. length	400mm	500mm
Max. diameter	200mm	300mm
Tool changing time	1,5 sec (HSK 63) 2 sec (ISO40)	2 sec (HSK 100) 2,5 sec (ISO50)

Rototilting Table Unit (4th + 5th Continuous Axes)

Option as an alternative to the Rotary Table Unit

Pallet dimensions	500 x 500mm / 500 x 630mm
Max. load allowed on the pallet	400kg

Max. equipment height	765mm
Max. tool rotation diameter	750mm
A-axis tilting angle	140 degrees (+35 / - 105)
Max. A axis (tilting) speed	40rpm
A-axis 90 Degrees rotation time	1,5 sec
A-axis min. resolution	0,0001 degrees
Max. B axis (Table) speed	60rpm
B-axis 90 Degrees rotation time	1,2sec
B-axis min. resolution	0,0001 degrees

Coolant Treatment Unit (Basic Version)

Chip conveyor type	Scraping type
Total tank capacity	900 litres
Filter type	Self cleaning (40 microns)
Standard low pressure system	
Flow rate	200 litres/min (to be divided into the various machine functions with PLC managed solenoid valves)
Pressure	2 bar
Standard high pressure system	
Flow rate	28 litres/min
Pressure	20 bar
CNC Controls	Fanuc 31iB5 Siemens 840D SL

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