

TOSHIBA MACHINE'S
NEW, HIGH SPEED SCARA ROBOT

TH450

High-speed! Powerful! Compact!



Robot specifications

Model	TH450	
Type	Horizontal Multi-joint	
Number of controlled axis	4	
Arm length	450mm(200mm+250mm)	
Working envelope	Axis 1	±120°
	Axis 2	±145°
	Axis 3(Z-axis)	150mm(Option:300mm)
	Axis 4(Z-axis rotation)	±360°
Maximum speed	Axis 1	600°/s
	Axis 2	600°/s
	Axis 3(Z-axis)	2000mm/s
	Axis 4(Z-axis rotation)	2000°/s
	Composite	7.33m/s
Standard cycle time(with 2kg payload)	0.33s	
Maximum payload mass	5kg	
Allowable moment of inertia at end	0.05kgm ²	
Positioning repeatability	X-Y(Plane)	±0.015mm
	Z-axis(Vertical)	±0.01mm
	Axis 4(Z-axis rotation)	±0.015°
Input/output signals for hand	5 inputs / 4 outputs	
Air piping for hand	φ4 x 4	
Position detecting system	Absolute system	
Robot-Controller cable	5m(Option length maximum 25m)	
Mass	27kg	



Controller specifications

Model	TS2000
No. of axis	Maximum five-axis simultaneous control
Operation mode	PTP,CP(linear,circular),Short-cut,Arch motion
Storage capacity	Total : Approx. 6400 points+12800 steps 1 program : Approx. 2000 points+3000 steps
No. of programs	Max. 256(247 user files+9 system files)
Programming language	SCOL (proprietary, similar to BASIC)
Teaching unit	Teach pendant TP1000,with 5-meter cable (Program can be written on PC)
External Inputs/outputs(general)	31+7 inputs / 22+10 outputs (7/10 can be switchable with system)
Hand control signals	5 inputs / 4 outputs
External operation signals(exclusive)	Inputs:Cycle operation start,stop,reset,etc. Outputs:Servo-On,status,emergency stop,ready for operation,malfunction alarm,etc.
Serial communication port	RS-232C : 2ports
Other functions	Torque control,Interruptive function, self-diagnosis, I/O control and communications during motion, coordinate calculations, etc.
Power supply	Single-phase AC 190V~250V 50/60Hz
Power capacity	2.3kVA
Outer dimensions and mass	290W×230H×280D(mm), 12kg
PC software(optional)	TSPC...Program editor,Teaching,remote operation,etc.
Options	I/O extension,field-network connection, Conveyor synchronization,etc.