

TOSHIBA MACHINE'S  
NEW, HIGH SPEED SCARA ROBOT

# TH1050

## High-speed! Heavy-Duty! Duct-less design!

### Robot specifications



Model		TH1050
Type		Horizontal Multi-joint
Number of controlled axis		4
Arm length		1050mm (550mm+500mm)
Working envelope	Axis 1	±160°
	Axis 2	±145°
	Axis 3(Z-axis)	200mm(Option:400mm)
	Axis 4(Z-axis rotation)	±360°
Maximum speed	Axis 1	281°/s
	Axis 2	411°/s
	Axis 3(Z-axis)	2000mm/s
	Axis 4(Z-axis rotation)	1147°/s
	Composite	8.73m/s
Standard cycle time(with 2kg payload)		0.48s
Maximum payload mass		20kg
Allowable moment of inertia at end		0.2kgm <sup>2</sup>
Positioning repeatability	X-Y(Plane)	±0.03mm
	Z-axis (vertical)	±0.02mm
	Axis 4(Z-axis rotation)	±0.03°
Input/output signals for hand		5 inputs / 4 outputs
Air piping for hand		φ6 x 4 pcs.
Position detecting system		Absolute system
Robot-controller cable		5m (Optional length maximum 25m)
Mass		75kg

### Controller specifications



Model	TS2100
No. of axis	Maximum 5-axis simultaneous control
Operation mode	PTP, CP (linear, circular), Short-cut, Arch motion
Storage capacity	Total: Approx 6400 points + 12800 steps 1 program: Approx 2000point+3000steps
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 functions, self-diagnosis, I/O control and communications during motion, Coordinate calculations, etc.
Power supply	Three-phase AC190~250V 50/60Hz
Power capacity	4.4kVA
Outer dimensions and mass	420W×230H×300D(mm), 16kg
PC software (optional)	TSPC...Program editor, Teaching, remote operation, etc.
Options	I/O extension, field-network connection, Conveyor synchronization, etc.