

Toshiba Machine's New SCARA robot

# THL1200

1200mm arm length addition to the THL series.

Wider working envelope providing a greater operational area.

### Robot Specifications

Model		THL1200
Type		Horizontal multi-joint
No. of controlled axes		4
Arm length		1,200 mm (750 mm+450 mm)
Working envelope	Axis 1	±125 deg
	Axis 2	±155 deg
	Axis 3 (Z-axis)	0~300 mm
	Axis 4 (Z-axis rotation)	±360 deg
Maximum speed	Axis 1	187.5 deg/sec
	Axis 2	217.5 deg/sec
	Axis 3 (Z-axis)	2,000 mm/sec
	Axis 4 (Z-axis rotation)	1,700 deg/sec
	Composite (Axis 1 and 2 composite)	5.7 m/sec
Maximum payload mass *1		10 kg
Standard cycle time (with 2 kg load) *2		0.58 sec
Allowable moment of inertia *1		0.2 kgm <sup>2</sup>
Positioning repeatability *3	X-Y	±0.05 mm
	Z (axis 3)	±0.03 mm
	C (axis 4, rotation)	±0.014 deg
Hand wiring		8 inputs and 8 outputs
Hand pneumatic joint *4		φ6×3 pcs
Position detection		Absolute
Robot controller cable		3.5 m
Power supply		1.4 kVA
Mass		40 kg

\*1: Speed and acceleration/deceleration rates may be limited depending on the motion pattern, load mass and amount of offset.  
 \*2: Horizontal 300 mm, vertical 25 mm, round-trip with coarse positioning. Continuous operation is not possible beyond the effective load ratio.  
 \*3: Positioning repeatable accuracy in one-direction movement, when the environmental temperature is constant 20°C., not absolute positioning accuracy. Positioning repeatability for X-Y and C are for when Z-axis is at the upper-most position. Trajectory accuracy is not ensured.  
 \*4: Pneumatic joints are provided on the base. Pipes are to be provided by the customers.

### Controller Specifications

Model		TSL3000
No. of Controlled Axes		4
Motion Mode		PTP (point-to-point), CP (continuous path; Linear, Circular), Short-Cut, Arch Motion
Storage capacity		Total: Approx. 6,400 points + 12,800 steps 1 program: Approx. 2,000 points + 3,000 steps
No. of registrable Programs		Max. 256 (247 User files, 9 System files)
Teaching Unit (Optional)		Teach Pendant TP1000, TP3000 Programming by PC Software TSAassist
External input/output signals		8 inputs and 8 outputs
Hand control signal		8 inputs and 8 outputs
External operation signals	Input	Program selection, start, stop, program reset, etc.
	Output	Servo ON, operation ready, fault, cycle stop, etc.
Communication port		RS232C 1 port (HOST or TCPRG) RS232C 1 port (General-purpose "COM1") RS4285 1 port (for I/O expansion) RS422 1 port (for TP1000) Ethernet
Other functions		Torque control, Interruptive functions, self-diagnosis, I/O control and communications during motion, Coordinate calculations, Built-in PLC, etc.
Power supply		Single-phase, 190 to 240V AC, 50/60 Hz
Outer dimensions and mass *5		150(W)×266(H)×304(D) cm, 7 (kg)
PC Software (Optional)		TSAassist: Robot Programming assist tool High-performance 3D simulation, program editor, teaching function, etc., TSPC TCPRGOS: PLC programming
Optional specifications *6		I/O signal polarity ("N-type" or "P-type"), I/O extension, Field network (PROFIBUS, DeviceNet, CC-Link, EtherNet/IP, EtherCAT, PROFINET)

### Optional Controller Specifications

Model		TSL3000E
Storage capacity		Total: Approx. 12, 800 points + 25,600 steps 1 program: Approx. 2,000 points + 3,000 steps
Outer dimensions and mass *5		320(W)×266(H)×304(D) cm, 13 (kg)
Optional specifications for TSL3000E		High-speed input signal, conveyor synchronization, CE compliance

\*5: Height values include rubber feet. Space clearance is required for cable routing etc. Please contact us for the full details of dimensions.  
 \*6: Ethernet is a registered trademark of XEROX Corp. in the U.S.A. CC-Link is a registered trademark of CC-Link Partner Association. DeviceNet and EtherNet/IP are registered trademarks of ODVA. Profibus and PROFINET are a registered trademark of PROFIBUS User Organization. EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.



Controller TSL3000

Controller TSL3000E

### Teach Pendant (Optional)

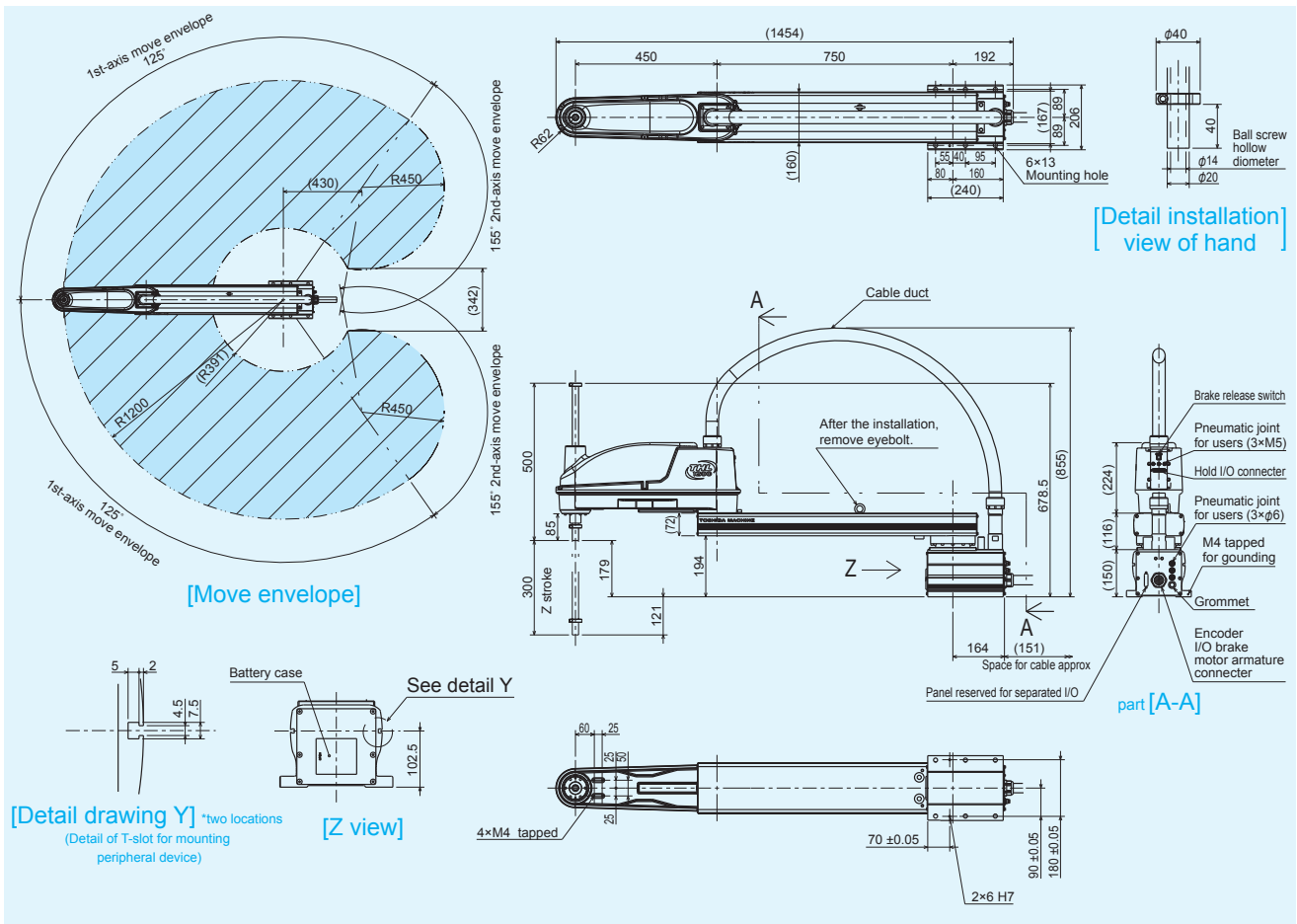


TP1000



TP3000

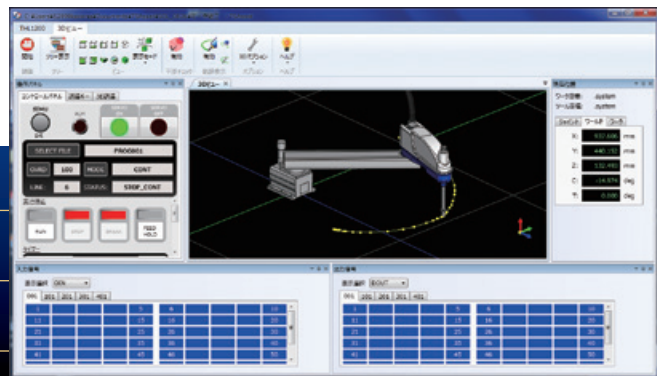
## THL1200 [External View]



## Toshiba Machine's New Generation Robot Programming Tool



- High Performance 3D Simulation
- Highly Functional Program Editor
- Easy Operation



Powerful assistance to all phases of automation facilities, from planning, installation to enhancement

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