

TOSHIBA MACHINE SCARA robot series  
NEW LITE models THL Series

# THL 900

## Robot Specifications



- **Low cost**  
Excellent performance at affordable prices.
- **Improved weight capacity and allowable inertia**  
Expanded applicability of multi-hand with improved weight capacity and allowable inertia.
- **Energy-efficient**  
Up to 60% reduction in required power-supply capacity compared with our previous models. Low-power consumption robots ideal for energy conservation era.

Model	THL900	
Type	Horizontal multi-joint	
No. of controlled axes	4	
Arm length	900mm (450mm+450mm)	
Working envelope	Axis 1	±125°
	Axis 2	±145°
	Axis 3 (Z-axis)	0~300mm
	Axis 4 (Z-axis rotation)	±360°
Maximum speed <sup>*1</sup>	Axis 1	187.5°/s
	Axis 2	217.5°/s
	Axis 3 (Z-axis)	2000mm/s
	Axis 4 (Z-axis rotation)	1700°/s
	Composite	4.6m/s
Cycle time (with 2kg load) <sup>*2</sup>	0.48s	
Maximum payload mass	10kg	
Allowable moment of inertia	0.2kg·m <sup>2</sup>	
	Positioning <sup>*3</sup> X-Y	±0.02mm
	repeatability Z (Axis 3)	±0.015mm
	Axis θ (Z-axis rotation)	±0.007°
Hand wiring	8 inputs/8 outputs	
Hand pneumatic joints <sup>*4</sup>	φ6 ×3 pcs	
Position detection	Absolute	
Robot controller cable	3.5m	
Power capacity	1.4kVA	
Mass	34kg	

\*1 : Acceleration/deceleration rates may be limited according to the motion pattern, load mass and amount of offset.

\*2 : Horizontal 300mm, vertical 25mm, round-trip. Continuous operation is not possible beyond the effective load ratio.

\*3 : When the environment temperature is constant 20°C. Positioning repeatable accuracy in one-direction movement. Not absolute positioning accuracy.

\*4 : Pneumatic joints are provided on the base. Please refer to the drawings for the details of the pneumatic joints. Pipes to be are provided by the customers.

## Controller Specifications



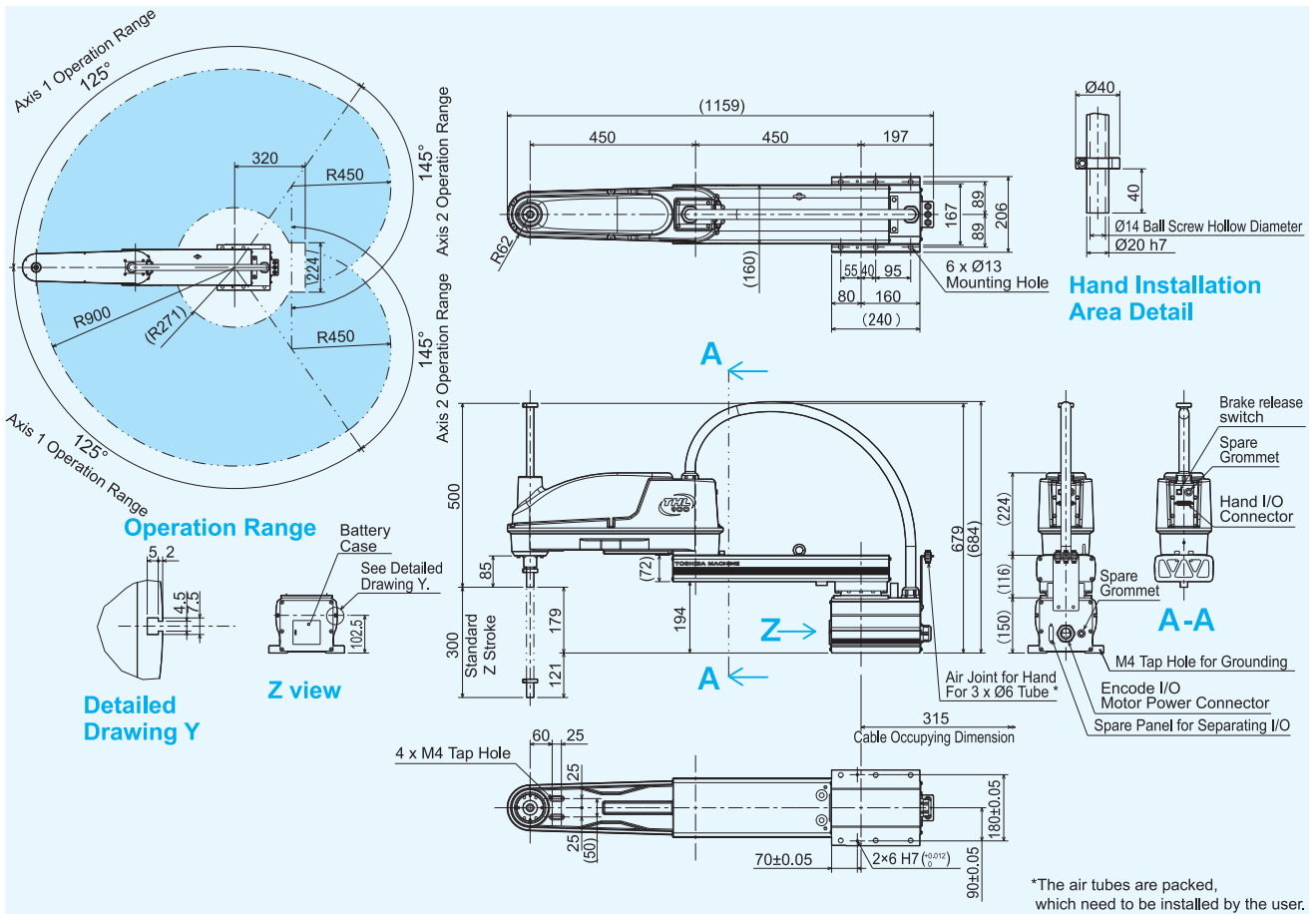
Controller  
TS3000

Teach Pendant(Optional)

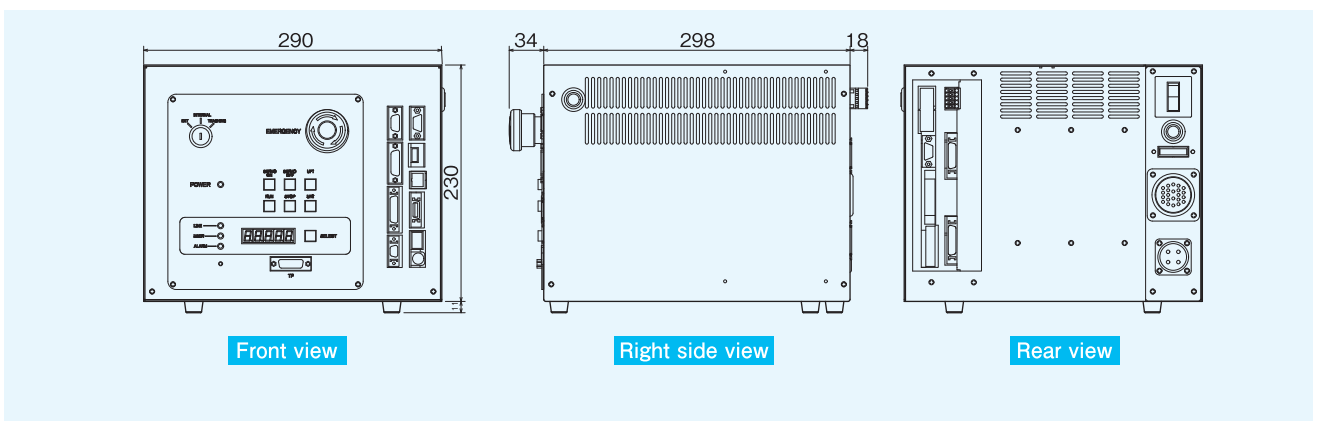
Model	TS3000	
Number of axis	Standard 4 axis (Maximum 5 axis)	
Operation mode	PTP, CP (linear, Circular), Short-cut, Arch motion	
Storage capacity	Approx. Total:12800points+25600steps	
	1 program:2000points+3000steps	
Number of programs	Maximum 256 (247 user files+9 system files)	
Programming language	SCOL (similar to BASIC)	
Teaching unit	Teach pendant TP1000: Cable length 5m (Programming support PC software TSPC also available)	
External I/O signals	32 inputs/32 outputs	
Hand control signals	8/8 can be assigned to system signals.	
External operation signal	Input: cycle operation mode, start, stop, program reset, etc Output: Servo ON, operation ready, fault, etc	
Serial communication port	RS232C: 2ports (HOST, COM1), Ethernet 1port <sup>*5</sup>	
Other functions	Torque control, interrupt function, self diagnosis, I/O control, communication during motion, coordinate calculations, built-in PLC, conveyor synchronisation etc.	
Power supply	Single phase, AC200V~240V 50/60Hz	
Power capacity	1.4kVA	
Outer dimensions and mass	290 (W) × 230 (H) × 298 (D) [mm], 13kg	
PC Software for programming support (option)	TSPC: Program editor, teaching, remote operation TCPRGOS: PLC sequence program creation	
Options	I/O extension, I/O cables, Field-Network (CC-Link, DeviceNet, PROFIBUS) <sup>*5</sup>	
External memory	USB memory stick	

\*5: 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 is a registered trademark of ODVA.  
PROFIBUS is a registered trademark of Profibus User Organization.

## THL900 [External View]



## TSL3000 [External View]



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Before operating the industrial robot, read through and completely understand the instruction manuals.

■ The contents included in this catalog are subject to change without prior notice to reflect improvements.