

TOSHIBA MACHINE SCARA robot series
NEW LITE models THL Series

THL 800

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		THL800
Type		Horizontal multi-joint
No. of controlled axes		4
Arm length		800mm (350mm+450mm)
Working envelope	Axis 1	±125°
	Axis 2	±145°
	Axis 3 (Z-axis)	0~300mm
	Axis 4 (Z-axis rotation)	±360°
Maximum speed	Axis 1	187.5°/s
	Axis 2	217.5°/s
	Axis 3 (Z-axis)	2000mm/s
	Axis 4 (Z-axis rotation)	1700°/s
	Composite	4.3m/s
Cycle time (with 2kg load) *2		0.47s
Maximum payload mass		10kg
Allowable moment of inertia		0.2kg·m ²
Positioning repeatability *3	X-Y	±0.02mm
	Z (Axis 3)	±0.015mm
	Axis θ (Z-axis rotation)	±0.007°
Hand wiring		8 inputs/8 outputs
Hand pneumatic joints *4		φ6 ×3 pcs
Position detection		Absolute
Robot controller cable		3.5m
Power capacity		1.4kVA
Mass		32kg

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

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

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

*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



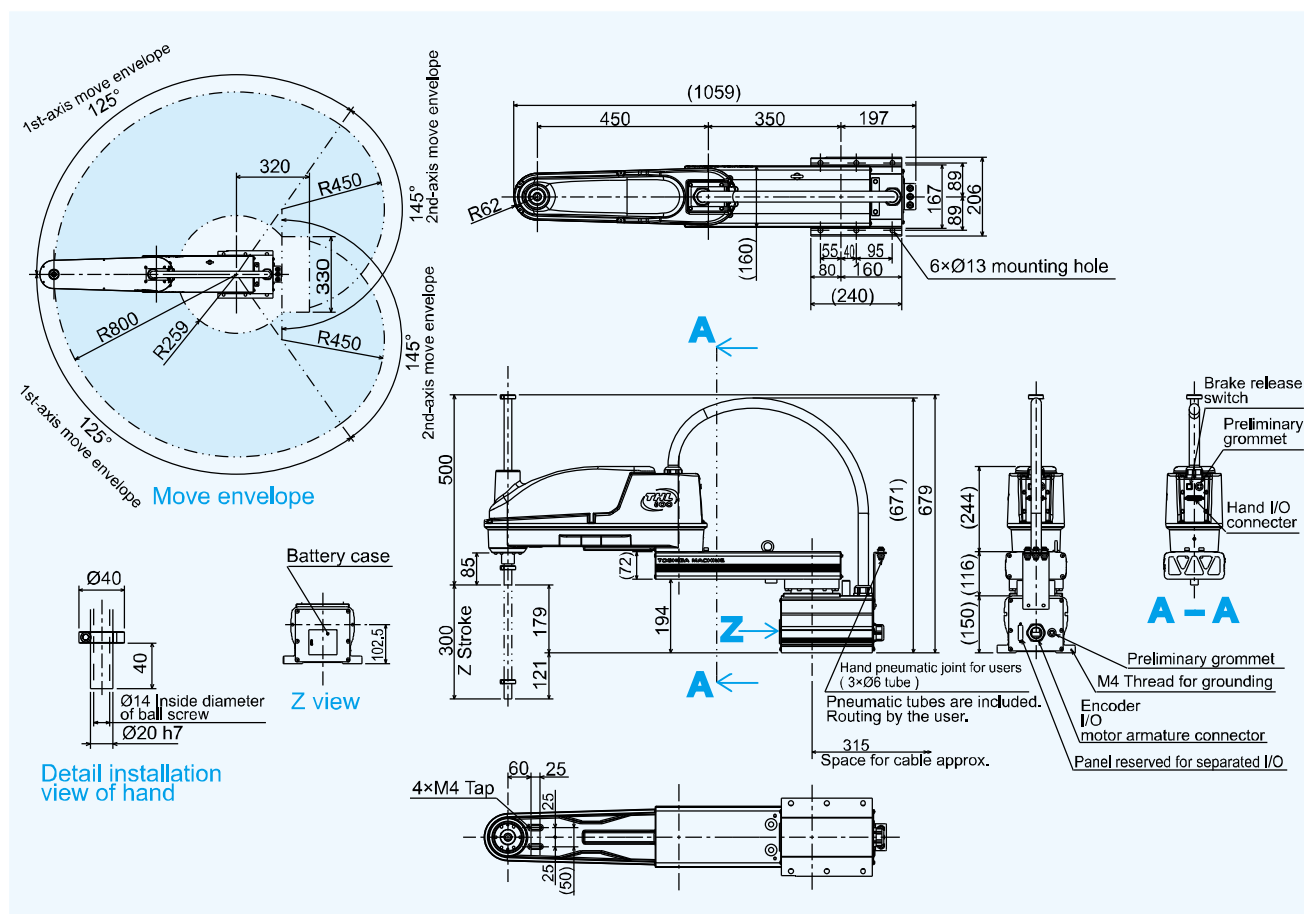
Controller
TSL3000

TEACH PENDANT(OPTION)

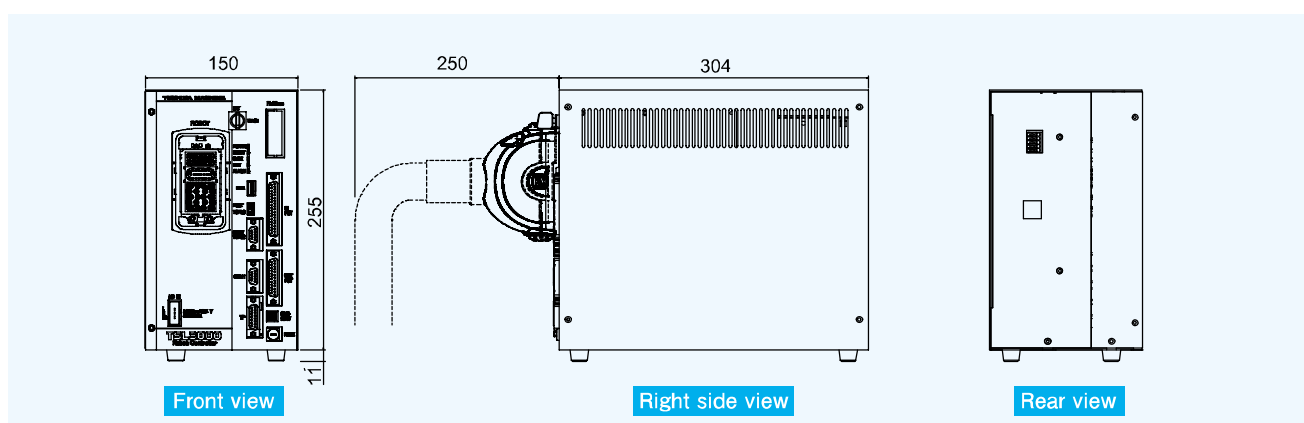
Model		TSL3000
No. of controlled axes		4 axes
Motion modes		PTP, CP(Continuous Path ; Linear, Circular), Short-Cut, Arch Motion
Storage capacity		Approx. Total: 6400 point + 12800 steps 1 program : 2000 point + 3000 steps
No. of registrable programs		Maximum 256
Programming language		SCOL(similar to BASIC)
Teaching unit (Option)		Teach pendant TP1000 (Cable length 5m, 3-point enable switch)
External I/O signals		8 inputs / 8 outputs(Plus or minus common selectable)
Hand control signals		8 inputs / 8 outputs
External operation signal		Input : cycle operation mode, start, stop, (13 signals) output : Servo ON, emergency stop, etc. (10 signals)
Serial communication ports		RS232C : 2 ports
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 AC190V~250V, 50/60Hz(±1Hz)
Outer Dimensions and Mass		150(W)×266(H)×304(D)[mm], 7kg
PC Software for Programming Support(Optional)		TSPC : Program editor, teaching, remote operation, etc.
Option		I/O extension, Field-network (CC-Link, Devine-Net, Profibus) *5

*5:CC-Link is a registered trademark of CC-Link Partner Association.
DeviceNet is registered trademark of ODVA.
Profibus is a registered trademark of Profibus User Organization.

THL800 [External View]



TSL3000 [External View]



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Caution

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.