

TOSHIBA MACHINE

TOSHIBA MACHINE SCARA robot series
NEW LITE models THL Series

THL 700

Robot Specifications



- **Low cost**
Excellent performance at affordable prices.
- **Light weight**
Up to 50% lighter than our previous models.
Capable of reducing environmental impact.
- **Energy-efficient**
Up to 50% reduction in required power-supply capacity compared with our previous models.
Low-power consumption robots ideal for energy conservation era.

Model		THL700
Type		Horizontal multi-joint
No. of controlled axes		4
Arm length		700mm (400mm+300mm)
Working envelope	Axis 1	±125°
	Axis 2	±145°
	Axis 3 (Z-axis)	0~150mm [Option:300mm]
	Axis 4 (Z-axis rotation)	±360°
Maximum speed	Axis 1	450°/s
	Axis 2	450°/s
	Axis 3 (Z-axis)	2000mm/s
	Axis 4 (Z-axis rotation)	1700°/s
	Composite	7.9m/s
Cycle time (with 2kg load) *2		0.50s
Maximum payload mass		10kg [Ratings:2kg]
Allowable moment of inertia		0.2kg·m ²
Positioning repeatability *3	X-Y	±0.01mm
	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
Mass		24kg

*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 repeatable 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 provided by the customers.

Controller Specifications



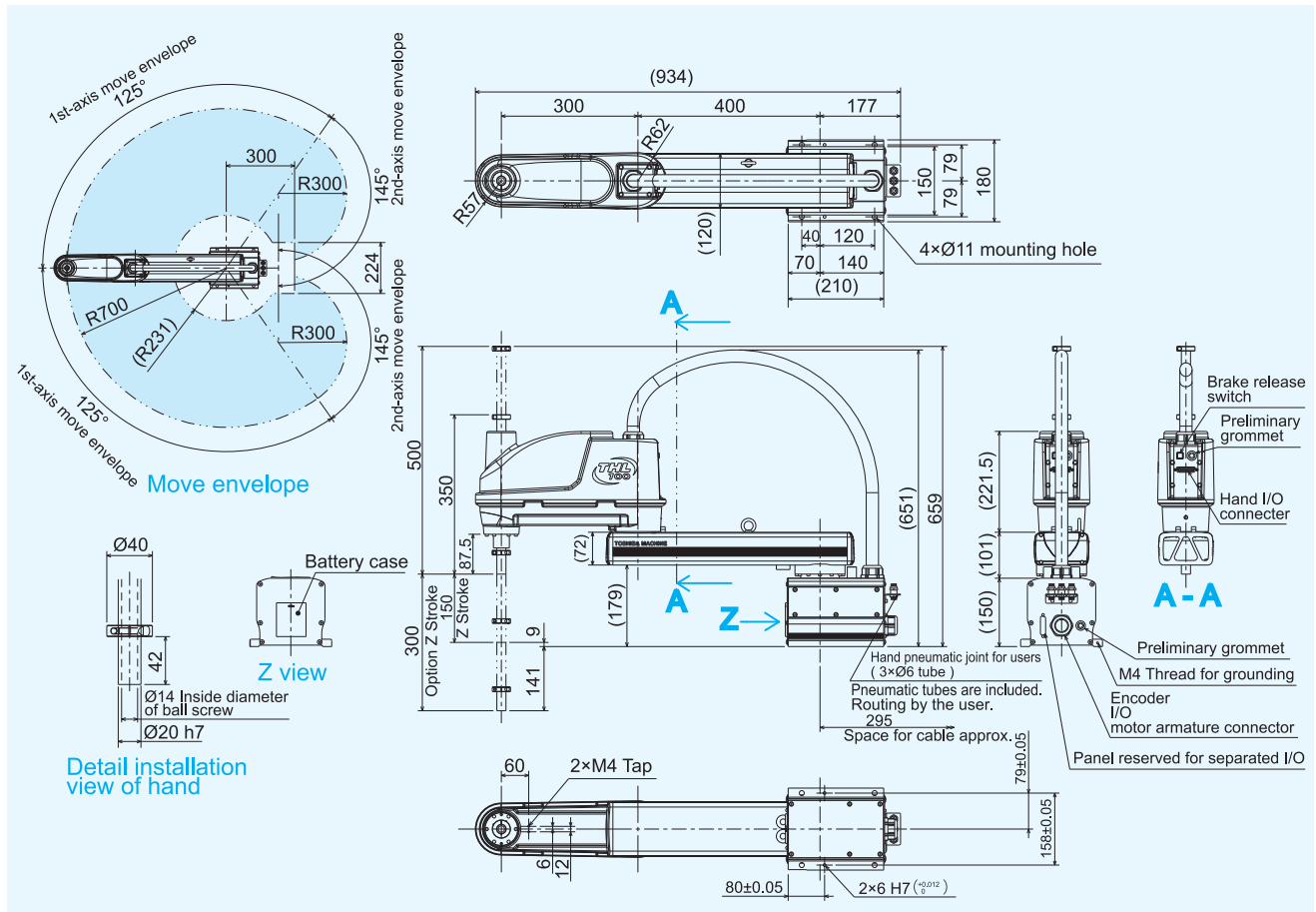
Controller
TS3000

TEACH PENDANT(OPTION)

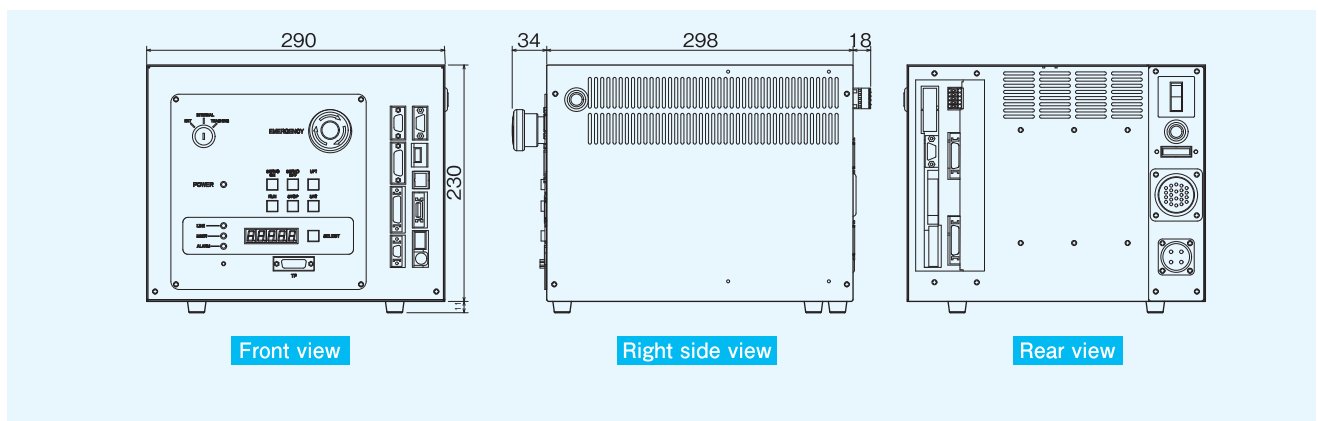
Model		TS3000
Number of axis		Standard 4 axis (Maximum 5 axis)
Operation mode		PTP, CP (linear, Circular), Short-cut, Arch motion
Storage capacity		Approx. Total:12800points+25600steps 1 program:2000points+3000steps
Number of programs		Maximum 256 (247 user files+9 system files)
Programming language		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 *5
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/Oextension, I/Ocables, Field-Network (CC-Link, DeviceNet, PROFIBUS) *5
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.

THL700 [External View]



TS3000 [External View]



TOSHIBA MACHINE CO.,LTD. HEAD OFFICE
Control Systems Sales Department, Control Systems Division
2068-3, Ooka, Numazu-shi, Shizuoka-ken 410-8510, Japan
TEL:[81]-(0)55-926-5032 FAX:[81]-(0)55-925-6527

TOSHIBA MACHINE CO.,AMERICA.
755 Greenleaf Avenue, Elk Grove Village, IL 60007, U.S.A.
TEL:[1]-847-709-7308 FAX:[1]-847-709-7358

TM ROBOTICS (EUROPE) LTD.
Unit 2, Bridge Gate Centre, Martinfield,
Welwyn Garden City, Herts AL7 1JG, UK
TEL [44]-(0)1707-290370 FAX [44]-(0)1707-376662

URL:<http://www.toshiba-machine.co.jp/en/product/robot/index.html>
<http://www.toshiba-machine.com>
<http://www.tmrobotics.co.uk>
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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.