

High-Speed and High-Precision SCARA Robot

TH450A

Robot Specifications



| Model | THP450A | |
|------------------------------------|--|----------|
| Type | Horizontal multi-joint | |
| Number of axis | 4 | |
| Arm length | 450mm(200mm+250mm) | |
| Working envelope | Axis 1 | ±120° |
| | Axis 2 | ±145° |
| | Axis 3(Z-axis) | 0~150mm |
| | Axis 4(Z-axis rotation) | ±360° |
| Maximum speed | Axis 1 | 600°/s |
| | Axis 2 | 600°/s |
| | Axis 3(Z-axis) | 2000mm/s |
| | Axis 4(Z-axis rotation) | 2000°/s |
| | Composite | 7.3m/s |
| Standard cycle time(with 1kg load) | 0.30sec. | |
| Maximum payload mass | 5kg | |
| Allowable moment of inertia | 0.06kg·m ² | |
| Positioning repeatability | X-Y | ±0.01mm |
| | Axis 3(Z-axis) | ±0.01mm |
| | Axis 4(Z-axis rotation) | ±0.005° |
| Hand wiring | 8 inputs/8 outputs | |
| Hand piping | φ4×4pcs | |
| Position Detection | Absolute Encoders | |
| Robot controller cable | 5m (optional:Max. 25m) | |
| Mass | 26kg | |
| Noise level | <72dB(A) | |
| Options | Wash-down Design(IP65), Ceiling-mount type, Cleanroom Design, Z-axis long stroke,Z-axis Cap | |

Controller Specifications

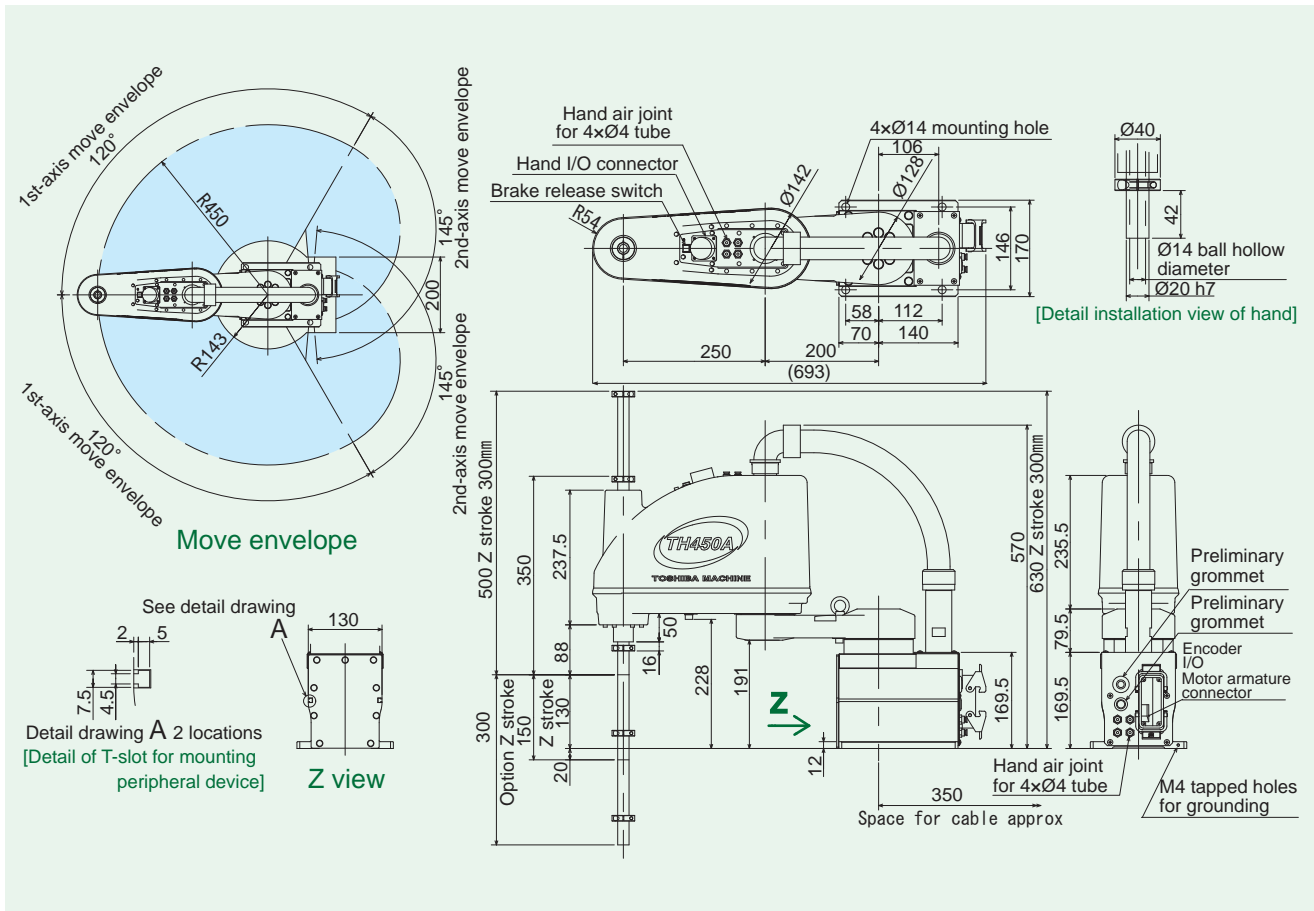


Controller
TS3000

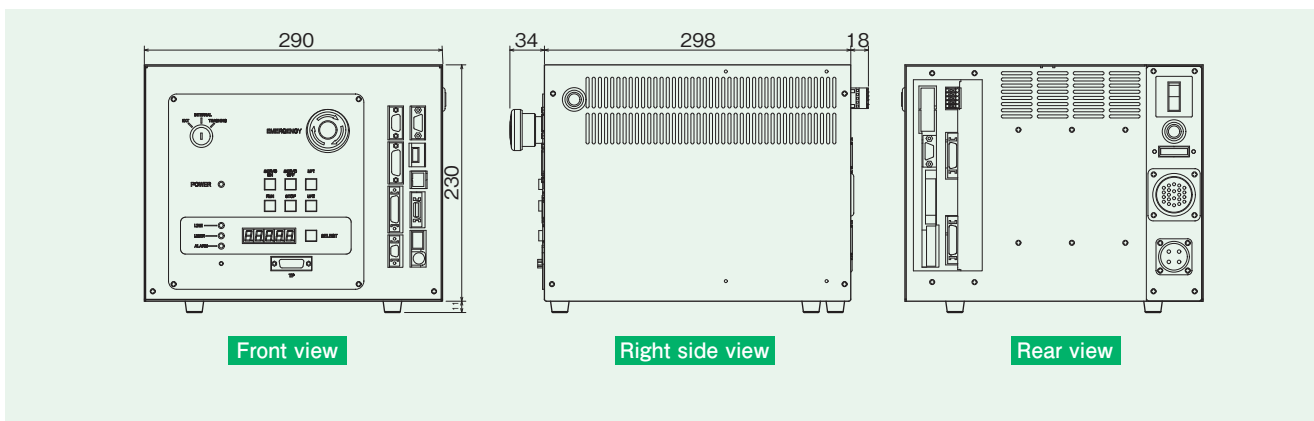
| Model | TS3000 | |
|---|---|--|
| Number of axis | Standard 4 axis(Maximum 5 axes) | |
| Operation mode | PTP,CP (linear,Circular),Short-cut,Arch motion | |
| Storage Capacity | Approx. Total:12800points+25600steps | |
| | 1 program:2000points+3000steps | |
| Number of programs | Maximum256(247 user files+9 system files) | |
| Programming Language | SCOL(similar to BASIC) | |
| Teaching Unit | Teach pendant TP1000:Cable length 5m (Programing 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 | |
| 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 | 2.3kVA | |
| Outer Dimensions and Mass | 290 (W) ×230 (H) ×298 (D) [mm], 13kg | |
| PC Software for Programming Support(Optional) | TSPC:Program editor,teaching,remote operation TCPRGOS:PLC sequence program creation | |
| Options | I/Oextension,I/Ocables, Field-Network(CC-Link,DeviceNet,Profibus) | |
| Memory | USB memory | |

TEACH PENDANT(OPTION)

TH450A [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, EIK Grove Village, IL 60007, U.S.A.
 TEL:[1]-847-593-1616 FAX:[1]-847-593-0897

TM ROBOTICS(EUROPE) LTD.
 Unit 2, Bridge Gate Center, 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/seiji/prod/sr>
http://www.toshiba-machine.com/robotics/SR_homepagef.htm
<http://www.tmrobotics.co.uk>



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.