

For TVM Series

TSL3200E

CE compliant



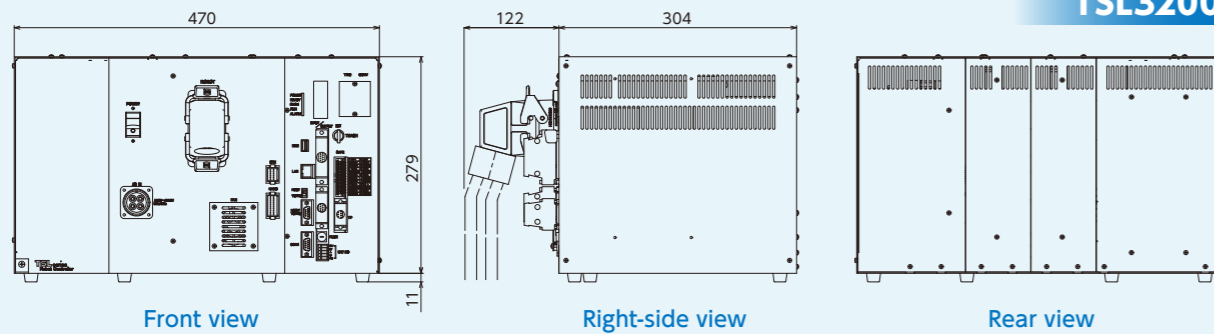
TSL3200E

Controller Specifications

Model	TSL3200E
Number of Control axes	Maximum 6 axes
Motion Modes	PTP,CP(Continuous Path; Linear, Circular), Short-cut
Storage Capacity	Approx. Total: 128,000 point data + 25,600 steps 1 program: 2,000point data + 3,000 steps
Number of Registrable Programs	Maximum 256
External Memory	USB memory
Programming Language	SCOL language (similar to Basic)
Teaching Pendant (Optional)	TP3000, TP1000-6ax, (Programs can also be written on PC)
I/O Signals	8 inputs / 8 outputs (Plus or minus common selectable)
Hand Control Signals	Maximum 8 inputs / 8 outputs
PLC function	Built-in PLC
Communication Ports	RS232C : 2 Ports, Ethernet : 1 Port, USB 1 Port (for external memory)
Functions	Interruptive functions, self-diagnosis, I/O Control and Communications during motion, Coordinate Calculations, Built-in PLC, Conveyor Synchronization (optional), etc.
Power Supply	Single phase AC 190 to 240V, 50/60 Hz
Outer Dimensions and Mass	470(W) x 290(H) x 304(D) mm, 19kg (including rubber feet)
PC software for Programming support (Optional)	TSAssist : Program editor, Teaching, Remote Operation, Simulation, etc.
Options	Additional Axes (max. 2 axes), I/O Extension, I/O Cables, Field Network (PROFIBUS, DeviceNet, CC-Link, EtherNet/IP, EtherCAT, PROFINET) Conformance to various industrial Standards.

*: 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 registered trademark of PROFIBUS User Organization. EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

TSL3200E



EASY INTRODUCTION OF BIN-PICKING AUTOMATION SYSTEM

Teach pendant Optional

TP1000-6ax

Standard Teach pendant



TP3000

Teach pendant equipped with graphic operation keys



SHIBAURA MACHINE CO., LTD.

- System Robot
- Servo System
- Programmable Controller



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

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VERTICAL ARTICULATED ROBOT
TVM Series



For TVM Series Controller

TSL3200E

VERTICAL ARTICULATED ROBOT TVM Series

Shibaura Machine's vertical articulated Robot TVM series achieves high inertia and strong payload capabilities up to 20 kg, while at the same time the robot body has a reduced weight. In addition to three variations in arm lengths, the operating range can be further expanded by mounting the robot on an optional linear actuator.

The Robot TVM series, in combination with its function-rich controller and software solutions such as programming-support PC software and 3D vision bin-picking package, is applicable to a wide range of automation needs and contribute to efficiency, and cost and labor saving.

Robot Specifications

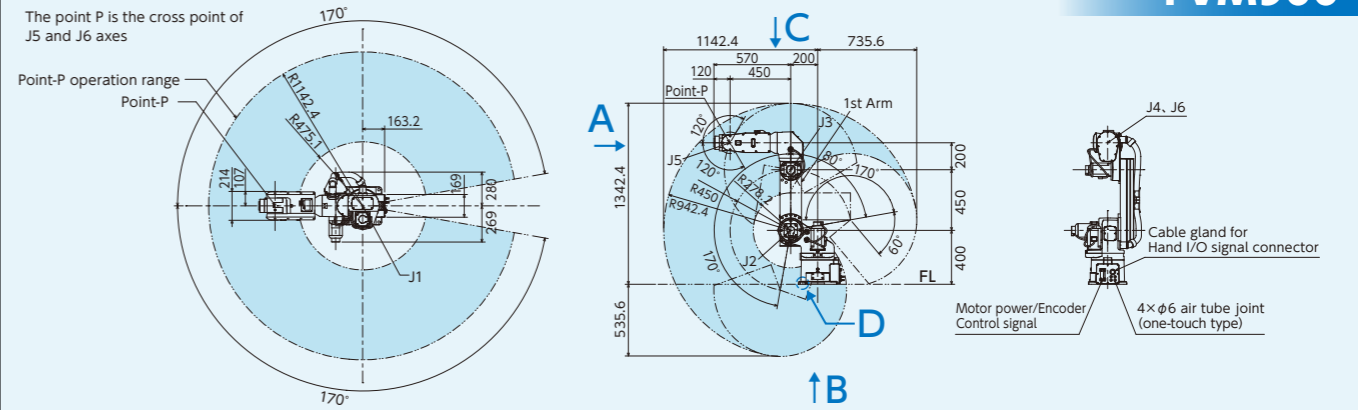
Models	TVM900	TVM1200	TVM1500
Number of Controlled Axes		6 Axes	
Arm Length (mm)			
Total	900	1,200	1,500
1st Arm	450	600	750
2nd Arm	450	600	750
Reach (mm)	1,142	1,432	1,726
Rated Load Mass (kg)		5	
Maximum Load Mass (kg)	20	15	10
Working Envelope (deg)			
Axis 1 (J1)		±170	
Axis 2 (J2)		+170~-80	
Axis 3 (J3)		+170~-60	
Axis 4 (J4)		±190	
Axis 5 (J5)		±120	
Axis 6 (J6)		±360	
Maximum Speed (deg/s)*1			
Axis 1 (J1)		223	
Axis 2 (J2)		191	165
Axis 3 (J3)		270	
Axis 4 (J4)		412	
Axis 5 (J5)		336	
Axis 6 (J6)		720	
Composite (m/s)	8.7	10.7	12.0
Allowable Moment of Inertia (kgm ²)			
Axis 4 (J4)		1.80	
Axis 5 (J5)		1.80	
Axis 6 (J6)		0.30	
Positioning repeatability	X-Y-Z	±0.05 (mm) for each component*2	
Robot Body Mass (kg)	122	125	131
Power Supply		6.9 kVA	
Protection Grade		IP65	
Hand Control Signals and Pipes		8 inputs, 8 outputs $\phi 6 \times 4$ lines	
Optional Specifications	Hollow 3rd Arm, I/O panel with built-in three-way solenoid valves, I/O panel Ethernet port, Ceiling mount, Cleanroom design		

*1: Speed and acceleration rates are limited depending on motion patterns, load mass and load offset values.
*2: One way positioning repeatability when the environment temperature is constant at 20 degrees Celsius. Absolute position accuracy is not ensured.

TVM Series External view

External dimensions and operation range

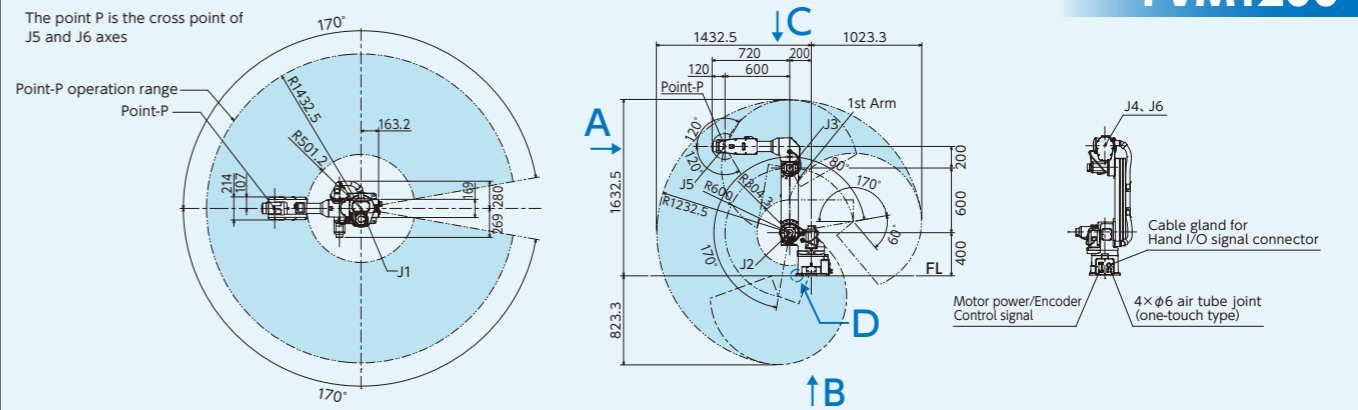
The point P is the cross point of J5 and J6 axes



TVM900

External dimensions and operation range

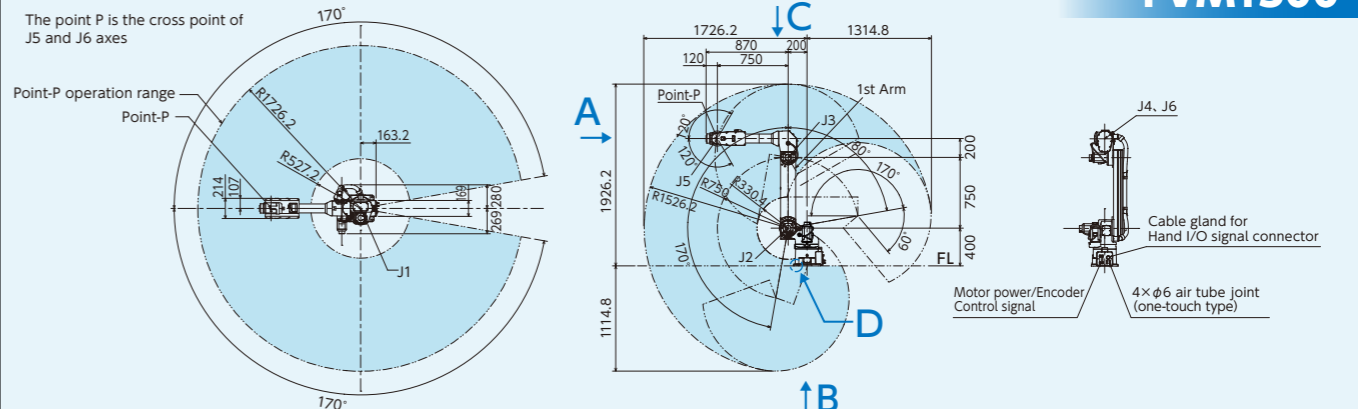
The point P is the cross point of J5 and J6 axes



TVM1200

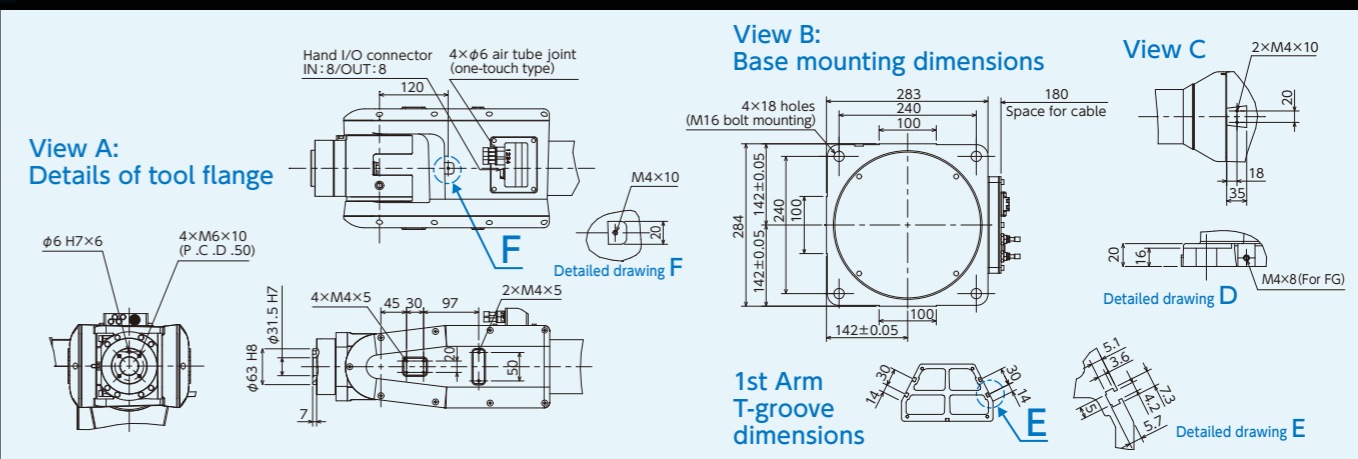
External dimensions and operation range

The point P is the cross point of J5 and J6 axes



TVM1500

For all TVM Series External view



TVM1200