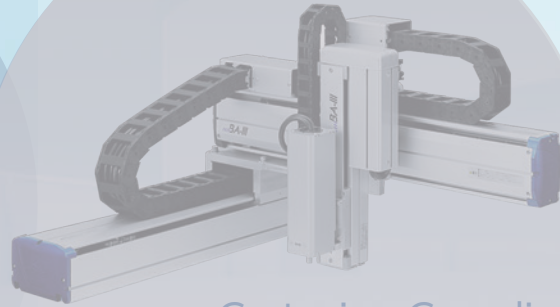


# INDUSTRIAL ROBOTS



## SCARA Robots

THE series TH series  
THP series THL series



## Cartesian Coordinate Robots

COMPO ARM ARM ROBOT **BA-III** SERIES  
COMPO ARM ARM ROBOT **BA-C** SERIES



## Vertical Articulate Robots

TVM series TV series  
TVL series

The close integration and synergy of mechanical engineering and electronic control technologies gave birth to our industrial robots. All the experience in design and production technologies acquired over its long history as a machine builder is reflected in its high-class machines and the controllers that drive them.

A line-up of three categories of robots each ranging from compact to large has been established.

They help to provide the optimized industrial automation solutions, resulting in increased productivity, and labor and cost reduction.

# SCARA Robot THE Series

# THE600 / THE400

## New standard in SCARA robot High performance to meet automation needs

- Accurate movement trajectory, high-speed operation and high load capacity are achieved at the same time
- High-performance, high rigidity SCARA robots with a thoroughly redesigned mechanism and control functions
- Suitable for the assembly and inspection process of electronics equipment and automobile components where precision is crucial

THE400 and THE600 to meet the automation needs of faster cycle time. Suitable for the assembly and inspection process of electronics equipment and automobile components where precision is crucial. The THE600 is a new addition to the THE series. Combines with the newly developed TS5000 controller with its cutting-edge control performance and network functionalities and the newly developed TP5000 teach pendant, it contributes to improving efficiency, quality and the early return on investment in automation facilities.



THE400 ceiling mount (optional)



### SCARA Robot THE600

Arm length 600 mm, standard cycle time is at 0.3 seconds level (at 2 kg load), allowable moment of inertia 0.25 (kgm<sup>2</sup>); fast motions and heavy load are achieved at the same time.

Key specifications	THE600
Arm length	600 (325 + 275) mm
Maximum load mass	12 kg
Standard cycle time	0.31 sec
Allowable moment of inertia	0.25 kgm <sup>2</sup>
Positioning repeatability	X-Y ±0.01 mm Z (axis 3) ±0.01 mm C (axis 4, rotation) ±0.005 deg
Controller	TS5000



### SCARA Robot THE400

Arm length 400 mm, standard cycle time is at 0.39 seconds (at 2 kg load), allowable moment of inertia 0.06 (kgm<sup>2</sup>); accurate movement trajectory, fast motions and heavy load are achieved at the same time. THE400 is a high rigidity robot with thoroughly redesigned mechanism and control functions.

Key specifications	THE400
Arm length	400 (225+175) mm
Maximum load mass	5 kg
Standard cycle time	0.39 sec
Allowable moment of inertia	0.06 kgm <sup>2</sup>
Positioning repeatability	X-Y ±0.01 mm Z (axis 3) ±0.01 mm C (axis 4, rotation) ±0.007 deg
Controller	TSL3000, TSL3000E

### Robot controller **TS5000**



**Improvement in synchronized control and tracking precision by better servo performances. Improved communication performances, and IoT-ready fast data communication.**

Faster control cycle (three times faster than the previous model) results in improved synchronized control and tracking precision. Enhanced CPU and Ethernet facilitate fast transmission of internal data.

### Teach pendant **TP5000**



#### Improved operability

With 7-inch, widescreen color touch-sensitive panel, intuitive operation is realized. In the larger display area, programs and position data can be checked in one glance. With split-screen display, two sets of data can be displayed side-by-side, for example the current position display and program monitor.

#### Designed for ease of handling and operation

Fast boot-up, ready in 30 seconds from power on. Multiple languages switchable in the settings, (Japanese, English, Chinese and Korean planned). AUTO/MANUAL master mode switching with the key switch on the teach pendant.

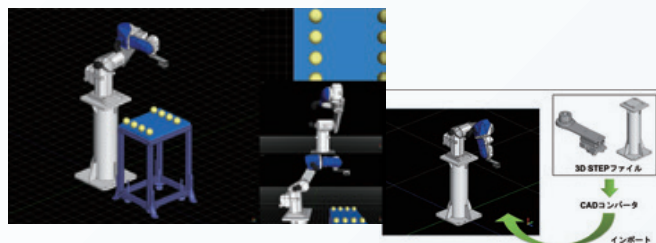
Powerful assistance to all phases of automation facilities, from planning, installation to enhancement



Applicable robots:



### ● High Performance 3D Simulation



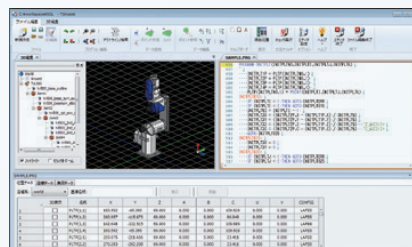
- Simulation Accurate simulation with interference check, locus display, timer (cycle time measurement)
- Placing simple workpieces and model shapes
- Loading 3D CAD data, saving 3D simulation to a video file
- Multi-angle view

#### Key Features

### ● Easy Operation

Easy-to-understand, intuitive screen design, ribbon interface, window-dock function for customize-able operator panels. Beginners will find it easy to understand and can quickly learn robot programming skills. For experienced robot users, TSAssist helps making robot programs efficiently by customization.

### ● Highly Functional Program Editor



- Language input support (keyword suggestions)
- Outline display, Split display
- Point data (taught position information) editor with, sort, search, filter functions
- In 3D Editor Mode, the robot can be guided by dragging the mouse or clicking on the surfaces of the object models.

### ● Solution Function

A simulation environment for a production line including multiple robots can be archived into a folder.

### ● Multiple Language Support

Switch-able between English, Chinese (Traditional and Simplified) and Japanese. TSAssist allows smooth collaboration with overseas installations.

## Easy Introduction of Bin-picking Automation System

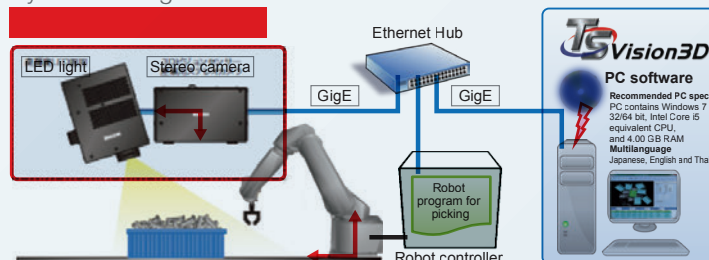


Applicable robots: Vertical Articulated Robots

### POINT 1 Package consists of stereo camera, PC software and LED lighting

- Real-time and highly accurate 3D measurement by stereo camera
- Random pattern projection by high luminosity LED
- High speed (30 fps) and high accuracy image processing
- With larger depth, more workpieces can be included per one box

#### System Configurations



### POINT 2 Software functions

- Easy model registration
- Easy calibration (registration of robot and camera coordinates)
- Box position registration and interference avoidance function
- Checking for arm working envelope

Please visit our website for details.

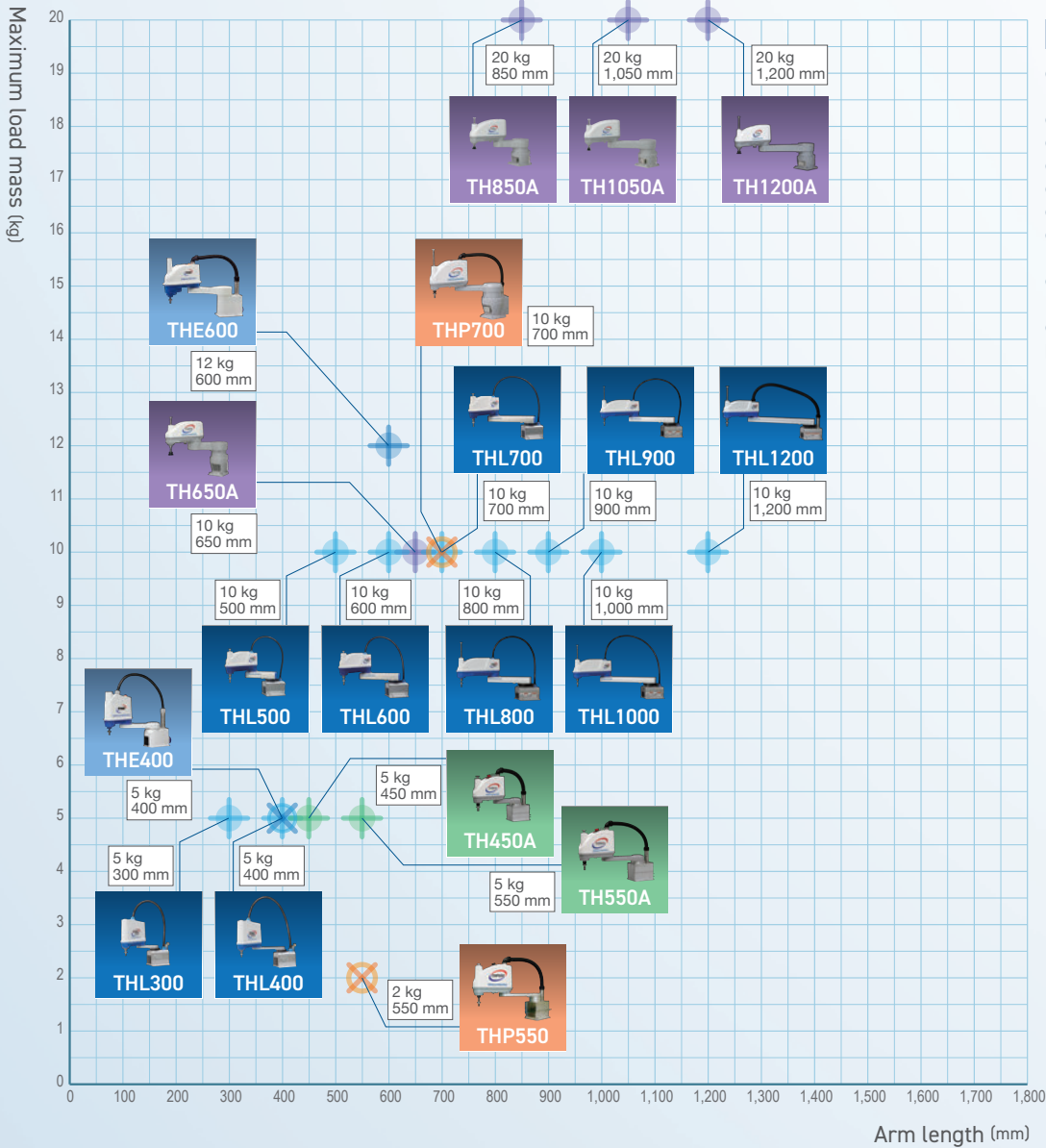
Please watch robot videos  
<https://www.youtube.com/watch?reload=9&v=DK9rtdZRat0>





# SCARA Robots

Fast motion and high load capacity contribute to improved automation productivity



### Optional robot specifications

- Tool flange for end effectors mounting
  - Z-axis long stroke (-Z)
  - Ceiling-mount type (-T)
  - Z-axis cap (-C)
  - Protective bellows for Z-axis (-B)
  - Support of safety category 3
  - Additional axes (traverse axis, wrist axis, etc.)
  - Dust-proof and splash-proof design (-IP)
  - Cleanroom design (-CR, -CRB)
  - Etc.
- \*For details such as availability of an option specification for each robot model, please review brochures and specification sheets. Or contact us.

### High-speed and High-precision SCARA Robots Arm length: 650 to 1,200 mm



Model	TH650A	TH850A	TH1050A	TH1200A
Arm length (1st arm + 2nd arm)	650 mm (300+350)	850 mm (350+500)	1,050 mm (550+500)	1,200 mm (700+500)
Max. load mass	10 kg	20 kg	20 kg	20 kg

### Lightweight SCARA Robots Arm length: 800 to 1,200 mm



Model	THL800	THL900	THL1000	THL1200
Arm length (1st arm + 2nd arm)	800 mm (350+450)	900 mm (450+450)	1,000 mm (550+450)	1,200 mm (750+450)
Max. load mass	10 kg	10 kg	10 kg	10 kg

### High-speed and High-precision SCARA Robots Arm length: 450, 550 mm



Model	TH450A	TH550A
Arm length (1st arm + 2nd arm)	450 mm (200+250)	550 mm (300+250)
Max. load mass	5 kg	5 kg

### High-speed and High-cycle SCARA Robots Arm length: 550, 700 mm



Model	THP550	THP700
Arm length (1st arm + 2nd arm)	550 mm (300+250)	700 mm (350+350)
Max. load mass	2 kg	10 kg

### Lightweight SCARA Robots Arm length: 300 to 700 mm



Model	THL300	THL400	THL500	THL600	THL700
Arm length (1st arm + 2nd arm)	300 mm (125+175)	400 mm (225+175)	500 mm (200+300)	600 mm (300+300)	700 mm (400+300)
Max. load mass	5 kg	5 kg	10 kg	10 kg	10 kg

Controller	TS3000	TS3100	TSL3000	TSL3000E
Model	TS3000	TS3100	TSL3000	TSL3000E
Robot models	TH450A TH550A THP500	TH650A TH850A TH1050A	THL300 THL400 THL500	THL600 THL700 THL800 THL900 THL1000 THL1200

### Main controller options

- Additional axes
- I/O signal polarity
  - N-type
  - P-type
- Additional I/O signals
- Conveyor synchronization
- I/O cables
- Position date latch function
- Smooth (constant speed control) function
- Field network connectivity
  - PROFIBUS
  - CC-Link
  - EtherCAT
  - DeviceNet
  - Ethernet/IP
  - PROFINET
- Separated operation panel
- CE marked and KCs marked control) function