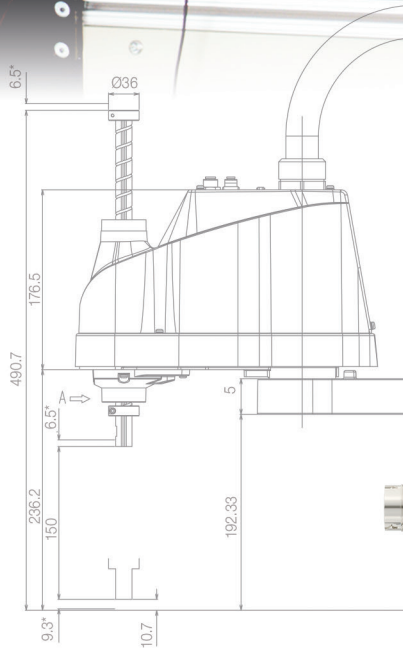


EPSON[®]
EXCEED YOUR VISION

SYNTHIS™ T-SERIES
ALL-IN-ONE
SCARA ROBOTS



SYNTHIS T-SERIES



Simplicity Redefined in a Compact All-in-One Solution

What about space constraints? The Synthis T-Series virtually eliminates that issue. With a built-in controller, plus built-in power for end-of-arm tooling, these space-saving all-in-ones have everything you need — and are designed to install in minutes¹. Plus, they include the same intuitive Epson RC+[®] software and powerful features found in Epson's high-end robots.

The Synthis T3 All-in-One SCARA robot with built-in controller provides fast integration at an ultra low cost

Feature-packed at an Amazing Price

- **Easy to install, fast integration** — unlike complex, expensive, linear-slide systems, Synthis T-Series robots are designed to install in minutes¹ and require less time and money for system integration
- **All-in-One solution** — built-in controller with power for end-of-arm tooling; takes up less space than linear-slide solutions
- **Full featured, ultra low cost** — includes same powerful feature set as Epson's high-end robot lineup at an incredibly affordable price
- **Built-in controller** — saves critical workspace with the controller conveniently housed in the robot's base
- **Easy to use** — intuitive and feature-packed Epson RC+ development software makes it easy to create powerful solutions
- **Comes standard with 110 V and 220 V power** — low wattage and power consumption (no special panel or plug required)

Advantage Epson

#1 SCARA robot manufacturer in the world

- **Commitment to excellence** — continual improvements in performance, ease of use and integrated options
- **Advanced Servo Technology** — no overshoot or ringing
- **Ease of use** — intuitive and feature-packed Epson RC+ development software makes it easy to create powerful solutions



Synthis T-Series Innovations

Providing a unique all-in-one solution, Synthis T-Series robots offer the perfect alternative to slide-based solutions, with all the features you need, right at your fingertips.

- **All-in-One design**
 - **Integrated controller** — saves critical workspace with the controller conveniently housed in the robot's base
 - **Built-in power for end-of-arm tooling** — eliminates the need for an external power source
- **No battery required for encoder** — helps minimize downtime and reduces the overall cost of ownership
- **High-performance, low cost²** — motors, amplifiers and other internal components are made by Epson



Built-in Controller

SYNTHIS T-SERIES

Award-winning Synthis T-Series Robots

With reach capability of 400 to 600 mm and a payload from 3 to 6 kg, all in a space-saving design, Synthis T-Series robots offer a truly groundbreaking solution. Add to that the ultra low cost, and you've got the perfect choice for fast, easy, affordable factory automation.



T3

- ▶ 3 kg max. payload
- ▶ 400 mm reach
- ▶ 0.54 sec cycle time
- ▶ 0.01 kg*m² J4 allowable moment of inertia
- ▶ Single-headed tooling



T6

- ▶ 6 kg max. payload
- ▶ 600 mm reach
- ▶ 0.49 sec cycle time
- ▶ 0.08 kg*m² J4 allowable moment of inertia
- ▶ Supports single- or dual-headed tooling



G6-55+S



* indicates the stroke margin by mechanical stop.

90 or more Space for Cables

REDUCED HEIGHT CABLE DUCT

Minimizes vibration

THROUGH-ARM CONNECTIONS

EOA I/O, air tubes and brake release

CONTROLLER STATUS LEDS

Displays error conditions

SELF-CONTAINED MOTOR ENCODER, AMP UNITS

J1, J2, J3, J4

BUILT-IN POWER MODULE

Power supply and distribution

J2 MOUNTING HOLES

For mounting camera brackets

EASY-ACCESS BACK PANEL CONNECTIONS

Ethernet, I/O, air and more

BUILT-IN CONTROLLER

CPU, DPB, CPU battery and CF card





Automation Applications

Synthis T-Series All-in-One SCARA robots are extremely versatile, providing a wide range of automation possibilities:

- Assembly
- Pick and place
- Material handling
- Packaging
- Kitting/Tray loading
- Machine tending
- Screw driving
- Dispensing
- Palletizing
- Lab analysis and testing
- Inspection and testing
- Finishing
- Grinding/Polishing

Options and Accessories

Integrated Vision Guidance

- **Highly regarded in the industry** as simple to use with a wide variety of powerful tools, Epson Vision Systems have provided integrated robot guidance for over 20 years. Our Vision Guide software features high performance tools in an intuitive point-and-click environment.



Synthis T-Series shown with mobile mounted camera as part of the Epson Vision Guide option

Fieldbus Interface Options

- **Fieldbus I/O interfaces** are used in factories worldwide to reduce cabling costs and setup time, and promote standard device usage. However, there is not one accepted Fieldbus I/O standard. That's why we offer a wide variety of options including:

- Ethernet/IP
- DeviceNet
- EtherCAT
- PROFINET
- PROFIBUS
- CC-Link

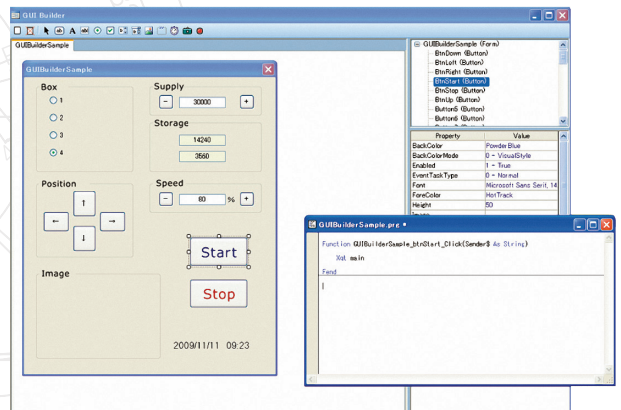
GUI Builder

- **Epson's GUI Builder provides** the tools necessary to create graphical user interfaces from within the Epson RC+ Development Environment. With the GUI Builder toolset built in, users can work from one development environment, which helps reduce overall development time.

- Create GUIs without Visual Studio or other third-party software tools
- Create and debug GUI forms from your Epson RC+ Project
- Form and control events are executed as SPEL+ tasks

- **SPECIALLY PRICED** Synthis T-Series All-in-One + vision guidance bundle available with PV1 Vision Guide.

See your local reseller for more information.



T3

SPECIFICATIONS

Mounting Type Tabletop

Arm Length (Joints #1 and #2) 400 mm

Payload

Rated: 1 kg

Max.: 3 kg

Repeatability

Joint #1 and 2: ± 0.02 mm

Joint #3: ± 0.02 mm

Joint #4: ± 0.02 deg

Standard Cycle Time³ 0.54 sec

Max. Motion Range

Joint #1: ± 132 deg

Joint #2: ± 141 deg

Joint #3: 150 mm

Joint #4: ± 360 deg

Weight (cables not included) 16 kg (35.3 lb)

Joint #4 Allowable Moment of Inertia

Rated: 0.003 kg-m²

Max.: 0.01 kg-m²

Joint #3 Downward Force 83 N

User Electric Lines

Hand I/O: IN6/OUT4 (D-sub 15-pin)

User I/O: IN18/OUT12

User Pneumatic Lines

$\phi 6$ mm x 2, $\phi 4$ mm x 1

OTHER

Power AC 100 – 240 V

Power Consumption 660 kVA

Power Cable Length 5 m

Controller Inside of manipulator

Safety Standard

CE Mark: EMC directive, machinery directive,

RoHS directive

ANSI/RIA R15.06-2012

NFPA 79 (2007 Edition)

WHAT'S IN THE BOX

Synthis T3 robot

Robot power cable

Epson RC+ software

USB cable

E-Stop unit with cable

Synthis T3 Robot System Safety & Installation Manual

Connector set (I/O, hand I/O and safety circuit connectors)

SUPPORT

Customer Service (562) 290-5920,
service@robots.epson.com

Applications Support (562) 290-5930,
applications@robots.epson.com

Sales Inquiries (562) 290-5997,
info@robots.epson.com

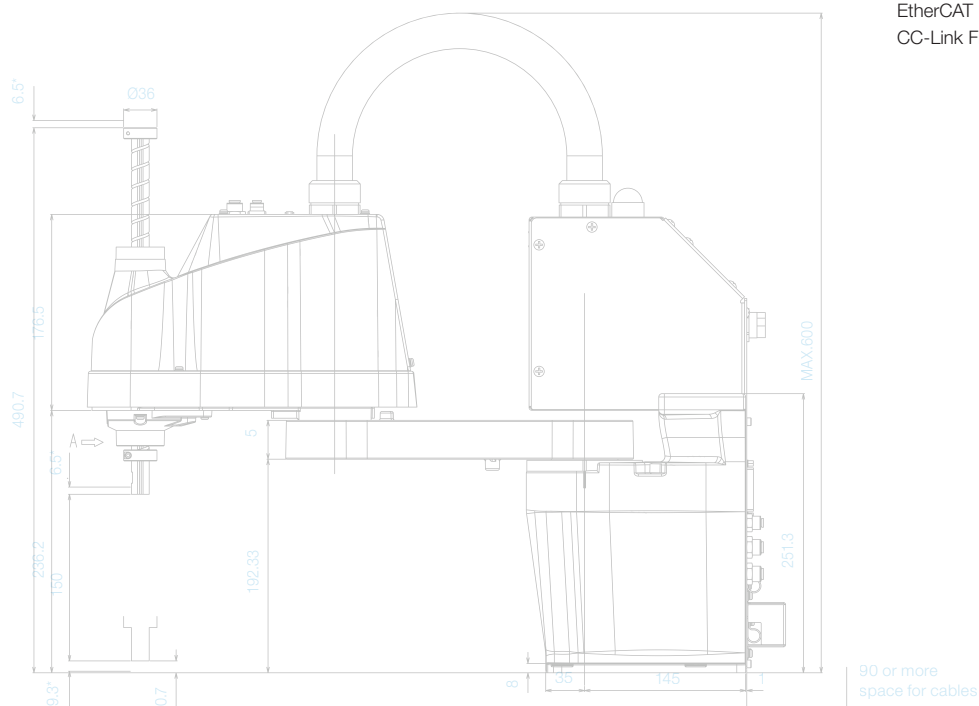


ORDERING INFORMATION

Product Name	Product Code
Synthis T3 All-in-One SCARA Robot	RT3-401SS

Options

Integrated Vision Guidance	Contact Epson
OCR (for use with Vision Guide)	R12NZ920H3
Epson RC+ 7.0 API	R12NZ900AE
GUI Builder 7.0	R12NZ900AH
External Control Point (ECP) Option	R12NZ900AF
TP3 – Teach Pendant	R12NZ900N3
TP2 – Teach Pendant	R12NZ900L9
Ethernet/IP Fieldbus I/O (Slave)	R12NZ900TH
Ethernet/IP Fieldbus I/O (Master)	R12NZ900NZ
DeviceNet Fieldbus I/O (Slave)	R12NZ900TE
DeviceNet Fieldbus I/O (Master)	R12NZ900NX
PROFINET Fieldbus I/O (Slave)	R12NZ900TG
PROFIBUS Fieldbus I/O (Slave)	R12NZ900TF
PROFIBUS Fieldbus I/O (Master)	R12NZ900NY
EtherCAT Fieldbus I/O (Slave)	R12NZ900TX
CC-Link Fieldbus I/O (Slave)	R12NZ900TD



1 Actual installation time may vary depending on experience, environment and set up.

2 Compared to current Epson Robots using third party components.

3 Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical).

T6

SPECIFICATIONS

Mounting Type Tabletop
Arm Length (Joints #1 and #2) 600 mm

Payload
 Rated: 2 kg
 Max.: 6 kg

Repeatability
 Joint #1 and 2: ±0.04 mm
 Joint #3: ±0.02 mm
 Joint #4: ±0.02 deg

Standard Cycle Time³ 0.49 sec

Max. Motion Range

Joint #1: ±132 deg
 Joint #2: ±150 deg
 Joint #3: 200 mm
 Joint #4: ±360 deg

Weight (cables not included) 22 kg (48.5 lb)

Joint #4 Allowable Moment of Inertia

Rated: 0.01 kg·m²
 Max.: 0.08 kg·m²

Joint #3 Downward Force 83 N

User Electric Lines

Hand I/O: IN6/OUT4 (D-sub 15-pin)
 User I/O: IN18/OUT12

User Pneumatic Lines

ø6 mm x 2, ø4 mm x 1

OTHER

Power AC 100 – 240 V
Power Consumption 1.2 kVA
Power Cable Length 5 m
Controller Inside of manipulator
Safety Standard
 CE Mark: EMC directive, machinery directive,
 RoHS directive
 ANSI/RIA R15.06-2012
 NFPA 79 (2007 Edition)



WHAT'S IN THE BOX

Synthis T6 robot
 Robot power cable
 Epson RC+ software
 USB cable
 E-Stop unit with cable
 Synthis T6 Robot System Safety & Installation Manual
 Connector set (I/O, hand I/O and safety circuit connectors)

SUPPORT

Customer Service (562) 290-5920,
 service@robots.epson.com

Applications Support (562) 290-5930,
 applications@robots.epson.com

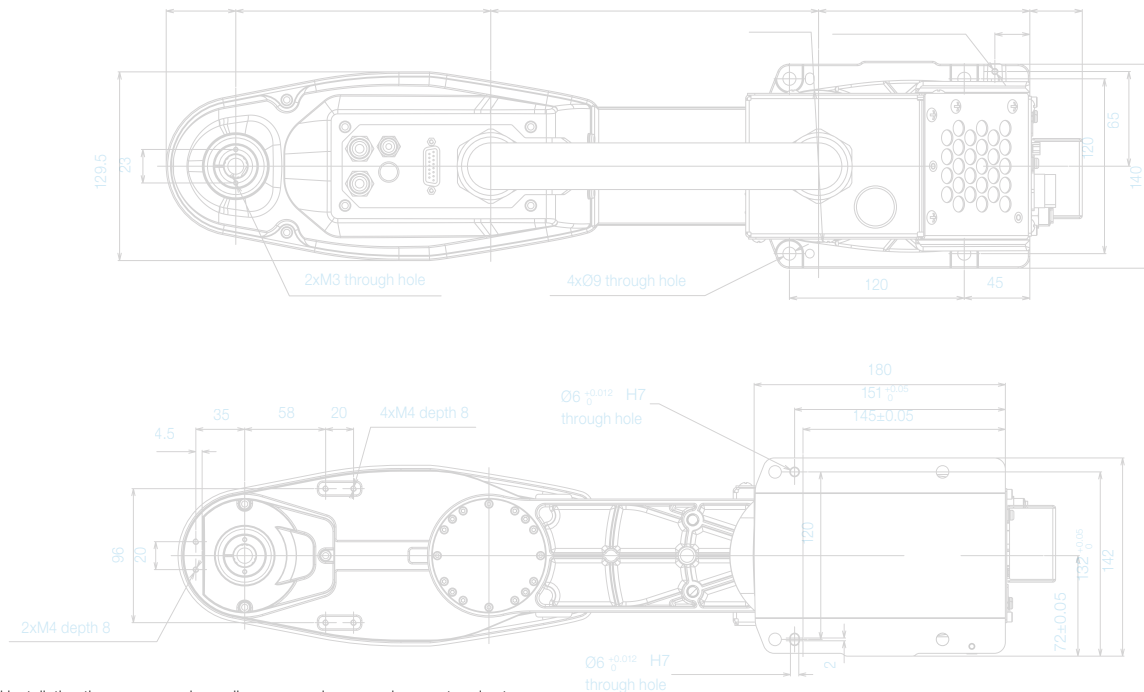
Sales Inquiries (562) 290-5997,
 info@robots.epson.com

ORDERING INFORMATION

Product Name	Product Code
Synthis T6 All-in-One SCARA Robot	RT6-602SS

Options

Integrated Vision Guidance	Contact Epson
OCR (for use with Vision Guide)	R12NZ920H3
Epson RC+ 7.0 API	R12NZ900AE
GUI Builder 7.0	R12NZ900AH
External Control Point (ECP) Option	R12NZ900AF
TP3 – Teach Pendant	R12NZ900N3
TP2 – Teach Pendant	R12NZ900L9
Ethernet/IP Fieldbus I/O (Slave)	R12NZ900TH
Ethernet/IP Fieldbus I/O (Master)	R12NZ900NZ
DeviceNet Fieldbus I/O (Slave)	R12NZ900TE
DeviceNet Fieldbus I/O (Master)	R12NZ900NX
PROFINET Fieldbus I/O (Slave)	R12NZ900TG
PROFIBUS Fieldbus I/O (Slave)	R12NZ900TF
PROFIBUS Fieldbus I/O (Master)	R12NZ900NY
EtherCAT Fieldbus I/O (Slave)	R12NZ900TX
CC-Link Fieldbus I/O (Slave)	R12NZ900TD



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2 Compared to current Epson Robots using third party components.

3 Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical).



Epson Business Solutions

Epson is a leading provider of innovative technology solutions that help businesses succeed. We partner with you to best meet your specific needs, focusing on:

- Improved productivity
- World-class customer service and support
- Cost-effective, high-quality solutions
- A commitment to the environment

Discover how Epson can help you work toward the future. www.epson.com/forbusiness

Epson America, Inc.
3840 Kilroy Airport Way, Long Beach, CA 90806

Epson Canada Limited
185 Renfrew Drive, Markham, Ontario L3R 6G3

www.epson.com
www.epson.ca
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