

VT6-L 6-axis robot

Automate repetitive tasks



Compact, easy-to-use and affordable

Maximum usability for simple tasks

Automate your simple, repetitive material handling tasks and allow your team to concentrate on more creative work.

Engineered for maximum usability, with a low total cost of ownership (TCO), the VT6-L is ideal if you're looking for an affordable solution to non-automated tasks – especially within the automotive, medical and electronics sectors.



Simple to set up, easy to integrate

As the first model in the Epson VT series to offer the all-in-one concept, you can plug in and begin even if you have limited robot installation experience. Designed with simplicity and flexibility in mind, the VT6-L can be integrated easily into a variety of environments and scenarios – from machine tending to packing and placement.

With a range of 900mm and a payload of up to 6kg, the VT6-L can accommodate low volume production with a high mix of repetitive tasks. It's perfect if you're looking to take the first step towards automation or are looking to downsize existing machinery.

Stock available

Optional camera brackets

For easy mobile camera mounting

Optional external cabling mounting plates

Flexible external cable routing

Hollow end-of-arm design

Reduces the workload for the end-of-arm tooling

Name: VT6-L 6-axis robot

Reach: 900mm

Payload: 6kg



Set up and install the VT6-L quickly, with little programming knowledge required

Save space with built-in controller

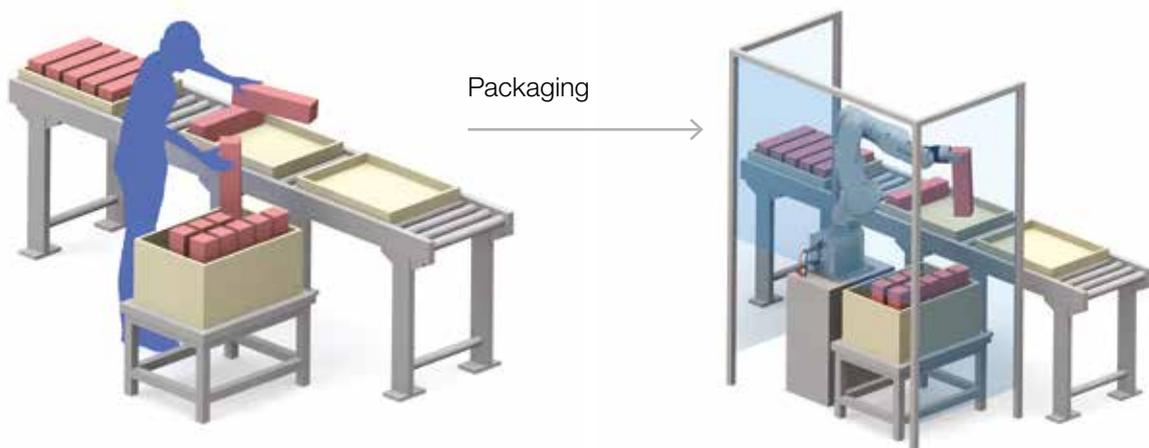
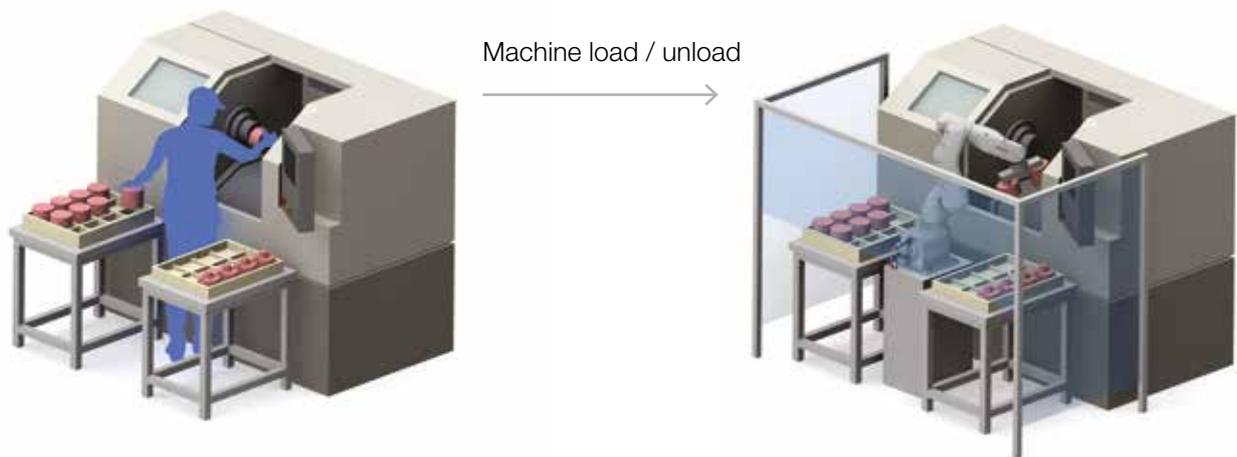
Highly economical design and low TCO

Reduce maintenance cost and machine downtime with a battery-less motor unit

Maximum usability for simple tasks

With a reach of 900mm and a payload of 6kg, the VT6-L is designed for a wide range of applications. Whether loading and unloading, packaging or assembling parts, this all-in-one robot offers the perfect solution for simple automation applications.

With unrivaled setup ease, space-saving design, and low TCO, the VT6-L lowers the cost barrier to simple manual task automation.



The VT6-L all-in-one 6-axis robot is extremely versatile, providing a wide range of automation possibilities including:

Assembly

Pick and place

Material handling

Packaging

Machine tending

- and more.

Benefits of VT6-L at a glance:

More stable, continuous work processes

Minimised error rate

Significantly lower space requirements due to the built-in controller

Seamless traceability in digitised processes

Shorter throughput times

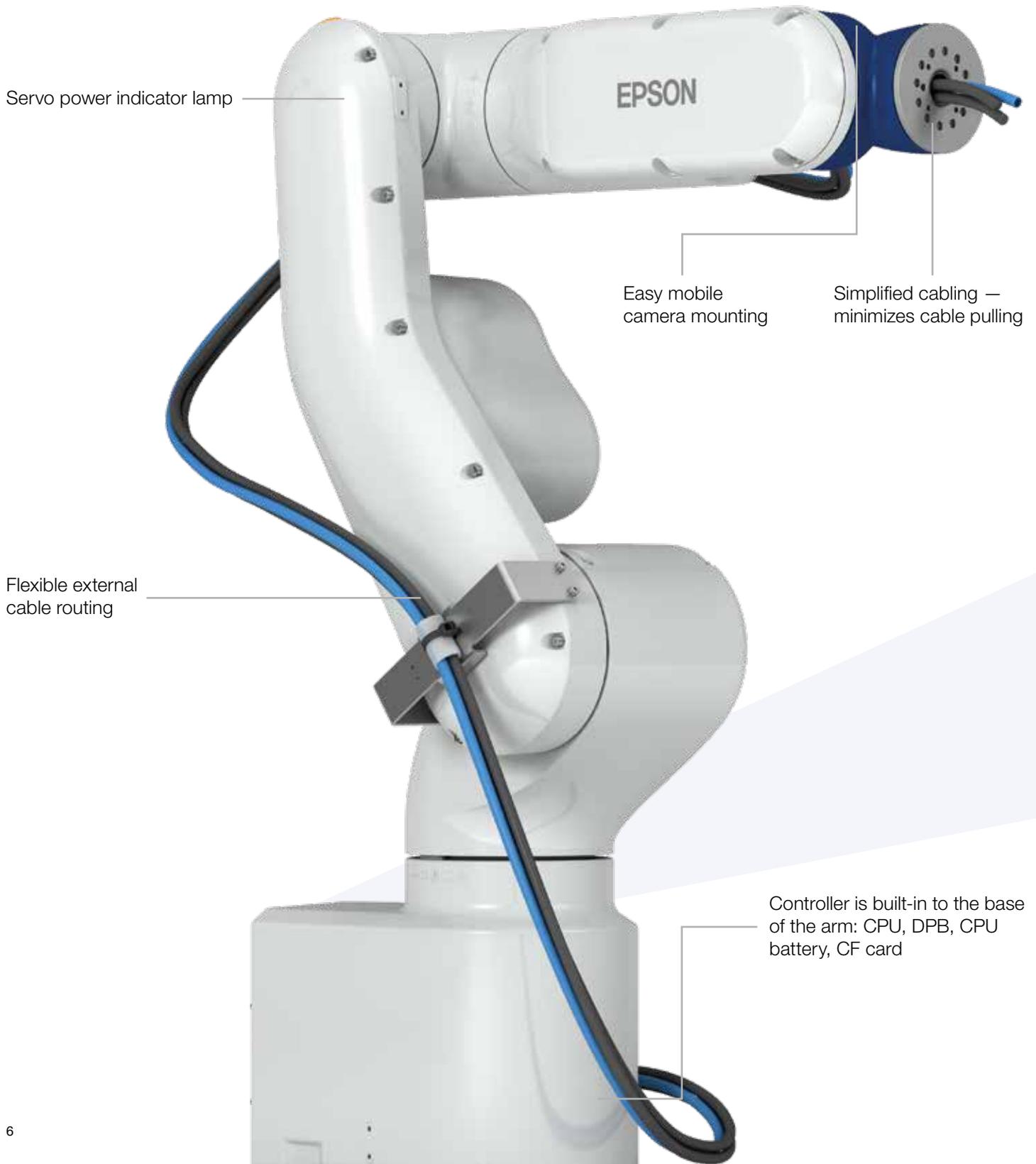


The low weight, easy installation, powerful and intuitive RC+ programming platform make the VT6-L robot a simple solution for many industrial applications.

This example shows the VT6-L robot performing a loading and unloading application, putting casted parts into a washer dryer to clean and remove any impurities for the assembly process.

Integrated concept, simple networking

Similar to our high-end Epson controller, the VT6-L built-in controller is designed for simple integration to the complete machine. The VT6-L built-in controller communicates with all conventional fieldbus systems.



Built-in controller

Connection for emergency stop switch

Connection for Teach Pendant TP2 and TP3

Connection for 24/16 standard I/O channels

Reset button

USB port for back-up

USB port for PC

RJ45 port for Ethernet

Display status and execution mode information

Slot for expansion card

Energy and cost-saving solution

Compared to conventional 6-axis robots, the power consumption of the VT6-L is reduced by up to 30%. The battery-less motor unit reduces operating costs and is environmentally friendly.

Intuitive and powerful development environment EPSON RC+7.0

The powerful Epson RC+7.0 project management and development environment is ideal for the straightforward programming of your applications with an intuitive windows interface, open structure and integrated image processing.

RC+ development environment



Factory controller

e.g. industry PC



Image processing



CV2

Extension Fieldbus Cards



Teaching pendant



TP2



TP3

Supported software options:

Vision Guide 7.0

Epson image processing software with support for high-resolution cameras and colour cameras

RC+ API 7.0

Convenient integration of external software and databases, development of custom user-interfaces

External control point (ECP)

For easy teaching of corners and curves

GUI Builder 7.0

To design your own user interface based on the simple Epson programming language SPEL +

Optical character recognition (OCR)

For safe detection and control of fonts and symbols

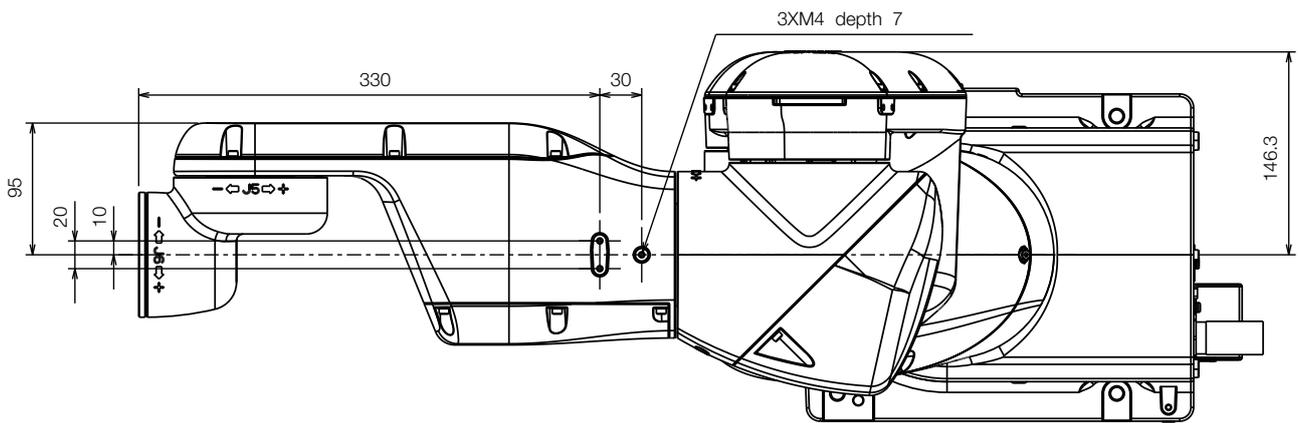


Technical specifications

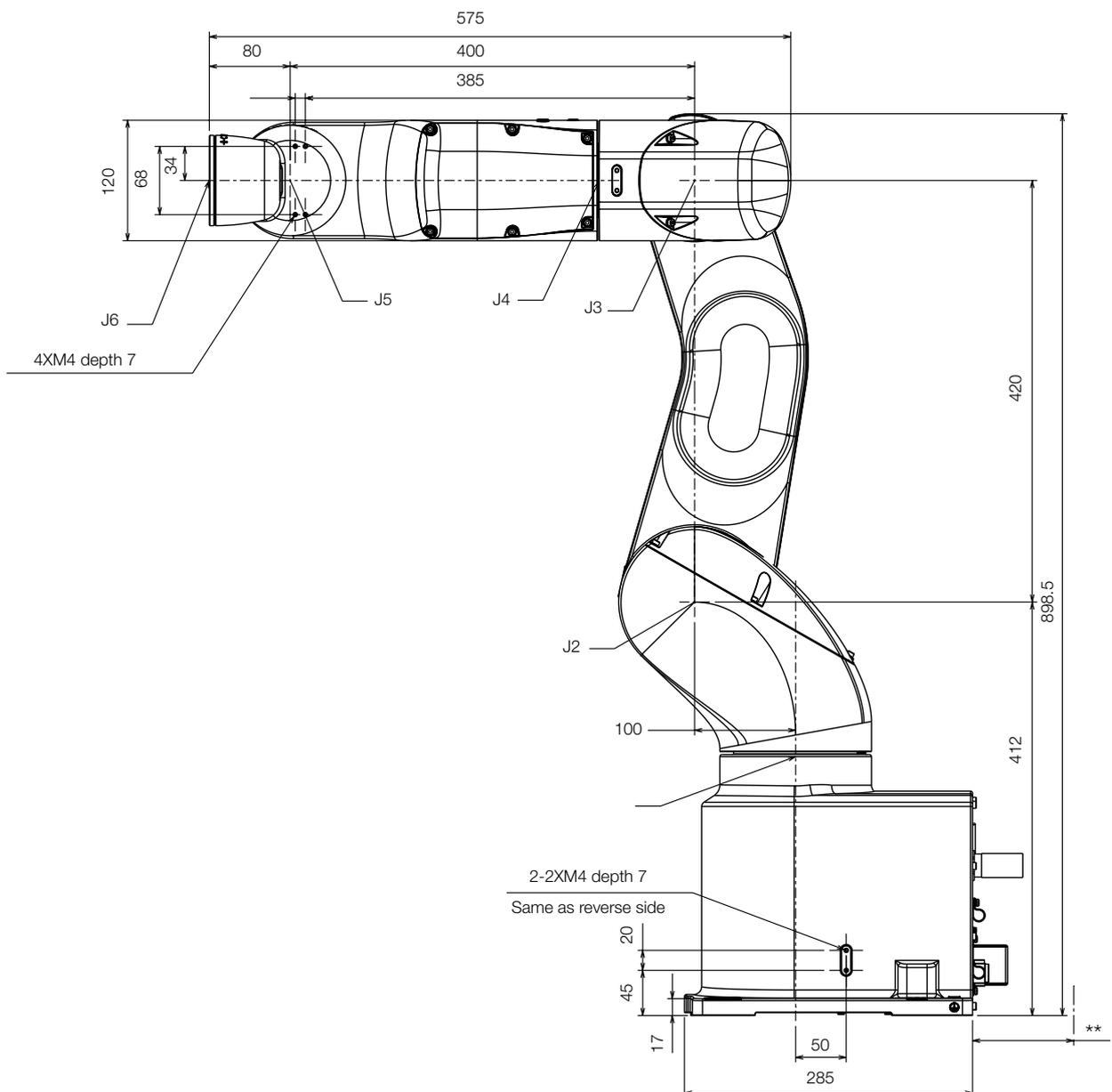
Technical specifications VT6-L

Payload (load) ¹	Rated	3kg
	Max.	6kg
Max. reach	P point: Joint#1-5 center	920mm
	Joint#1-6 flange surface	1000mm
Repeatability	Joint#1-6	± 0.1mm
Max. motion range	Joint#1	±170°
	Joint#2	-160° ~ +65° (225°)
	Joint#3	-51° ~ +190° (241°)
	Joint#4	±200°
	Joint#5	±125°
	Joint#6	±360°
Max. operating speed	Joint#1	183.7°/s
	Joint#2	122.5°/s
	Joint#3	118.8°/s
	Joint#4	271.4°/s
	Joint#5	296.8°/s
	Joint#6	296.8°/s
Allowable moment of inertia ²	Joint#4	0.3 kg·m ²
	Joint#5	0.3 kg·m ²
	Joint#6	0.1 kg·m ²
Mounting type ³	Table top / Ceiling	
Robot installation screw hole and interval	200×200 [mm] Φ9[mm]	
Brake	All Axes	
Environment spec	Standard	
Weight (cables not included)	Less than 40kg	
Applicable Controller	Built-in controller	
Power Source / Power cable length	AC100-240V single phase / 5m	
Power capacity ⁴	1.25kVA	
Installed wire for customer use	None (External Wiring Option available)	
Installed pneumatic tube for customer use	None (External Wiring Option available)	
I/O	Standard I/O	In 24, Out 16 (Non polarity)
	Remote I/O	In 8, Out 8 (Remote function assigned to standard I/O)
Safety Standard	EU Directive complied	
	KC KCs (Scheduled to be on sale 3 months after standard spec launch)	

Top view



Side view



Ensure your production line hits top gear

Epson robot systems: Precise, fast and reliable

Our robots pallet, saw, mill, drill, grind, assemble, move and build together. They work precisely and at a breathtaking speed in all these and many other applications – often for up to 24 hours a day.

Our product portfolio includes one of the most extensive SCARA model ranges worldwide, 6-axis robots, controllers and software.



Epson Spider robots

The economic miracle. Thanks to its unique design, the Epson Spider can reach every corner of its workspace while achieving unmatched cycle times.



Epson SCARA robots

Precise working even at high speeds. Compact and powerful, Epson has the world's largest range of SCARA robots – with over 300 models.

Discover the full potential of your Epson robot systems

As a service, we offer a comprehensive pre and after-sales support program, including:

Feasibility studies for maximum planning and project security

Support for planning and implementation

Introductory seminars, programming/maintenance courses, operator training

Inspection and individual maintenance concepts

Hotline service, on-site repair service

Central spare part stocking



Epson controllers

Strong performance in a small space. Epson controllers are based on a robust, integrated system and can control manipulators and peripherals.



Epson 6-axis robot

Flexibility through rotating axes. Unrivalled point and track accuracy enable complex work processes to be precisely executed.

Simulation of robot cells

Good preparation is everything. Plan and visualise all procedures in your production, validate your program offline initially and carry out troubleshooting and editing work easily from your desk. With the Epson RC+ Simulator – included in the software package – you save time and money through all phases of your project.

Phase 1 Design

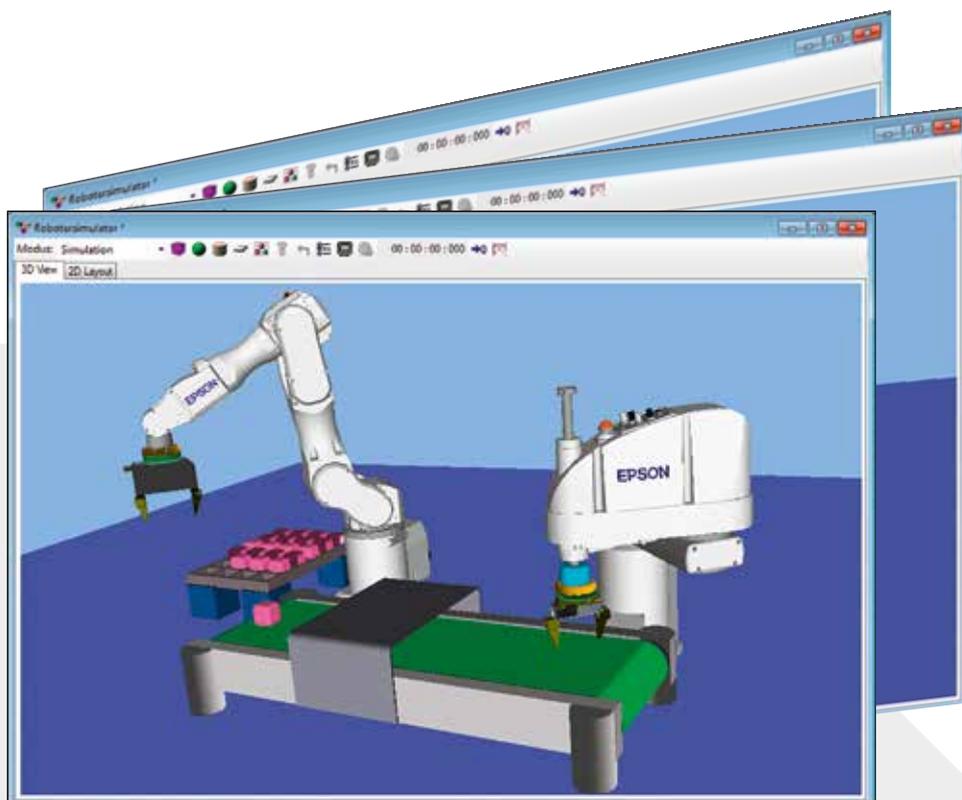
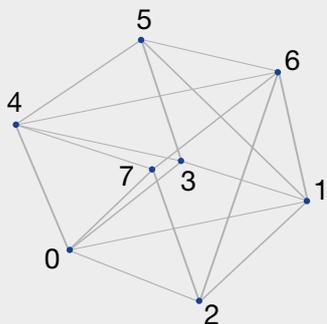
Plan your robot cell at full size in advance and work out the expected cycle time for your application to check feasibility before a single part for the system has been made. Plan future system expansions in the simulation system to keep downtime to a minimum.

Phase 2 Integration

Completing the program validation process before the robots are delivered enables you to create programs at the same time, with the system capable of displaying and evaluating even complex motions. Collision risks are identified, and equipment damage is prevented.

Phase 3 Operation and maintenance

Troubleshoot and modify programs from your desk. Use the 3D layout to visualise collision detection, reachability checks and robot motions.



About Epson

Epson Robotic Solutions is one of the leading suppliers of high-tech robot systems that are renowned worldwide for their reliability. The product range includes 6-axis robots, SCARA robots, the SCARA entry-level LS and T models, the special Epson-developed Spider and N robots types, as well as the pioneering Dual Arm robot. Added to this are image processing controls and the Epson Force Sensor for force-controlled applications.

This gives Epson Robotic Solutions one of the most comprehensive ranges of high-precision industrial robots in the world, making them a technological pioneer for intelligently controlled automation processes.

Technological pioneer

1982

Epson SCARA robots freely available in Japan for the first time

1986

First cleanroom robot class 1

1997

First PC-based controller

2008

Inventor of the right or left arm-optimised G3 SCARA robot

2009

Inventor of the spider – a unique SCARA robot with no dead zones

2013

First application of Epson QMEMS® sensors in robotics, reducing 6-axis kinematics vibrations

2014

Epson Compact Vision CV2: Epson's own ultra-fast image processing computer

2016

Epson N2 series: World's first 6-axis robot with folding arm – extremely compact and space-saving

2017

Epson Dual Arm robot with an arm geometry inspired by human physiology, as well as integrated sensors such as cameras, force sensors, and accelerometers

Pre and after-sales support

Feasibility studies for maximum planning and project security

Support for planning and implementation

Introductory seminars, programming/maintenance courses, operator training

Inspection and individual maintenance concepts

Hotline service, on-site repair service

Central spare part stocking

Epson Industrial Solutions Center – find your solution



Experience all our Epson robots in action. Build, simulate and improve your automation application in a workshop cell, with help from our experts. The cell can be controlled and networked using all conventional fieldbus systems. In addition, we can supply you with modern peripherals such as a vision and conveyor tracking system.

Make an appointment

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Epson China Co, Ltd.
www.epson.com.cn/robots/

¹ Do not apply the load exceeding the maximum payload.

² If the center of gravity is at the center of each arm. If the center of gravity is not at the center of each arm, set the eccentric quantity using INERTIA command.

³ Manipulators are set to "Table Top mounting" at shipment. To use the manipulators by other installation coordination, need to change the model settings on RC+ software.

⁴ Actual required capacity depends on the robot motion.

For further information please contact your local Epson office or visit www.epson-europe.com

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