

ProSix VT6 series

Automation
made simple



EPSON[®]
EXCEED YOUR VISION

The cost-effective solution for repetitive tasks

Flexible and ready for action

Modern automation solutions don't necessarily have to involve significant investment. The best example of this is the VT6 series; a flexible, efficient and compact six-axis robot that is ready for action and extremely cost-effective to purchase and operate. It is the ideal solution for simple, repetitive tasks and processes that have not previously been automated.

A space-saving all-in-one concept that is easy to set up

Thanks to the integrated controller, the VT6 series does not need very much space. Setup times are significantly shorter than when connecting a robot with an external controller. The powerful Epson RC+ project management and development environment makes programming easy with its intuitive Windows user interface. Just plug and play!



Sustainable and cost-effective motor unit with no battery

With a range of 920mm and a payload of up to 6kg, the VT6 series 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.

The motor unit does not have a battery so it saves on downtime as there is no battery to change. You save energy and maintenance costs.

The VT6-L DC connects to the battery of Automated Guided Vehicles (AGV) to reduce the need for extra space. This also eliminates the need to purchase a separate DC/AC converter to power the robot.

In stock, available
to ship immediately

Optional camera brackets

For easy mobile camera mounting

Optional external cabling mounting plates

Flexible external cable routing

Cavity in the sixth axis

For quick and easy cabling

Name: VT6-L 6-axis robot

Reach: 920mm

Payload: 6kg



Smart design

Quick to set up - almost no programming knowledge required

Save space with built-in controller

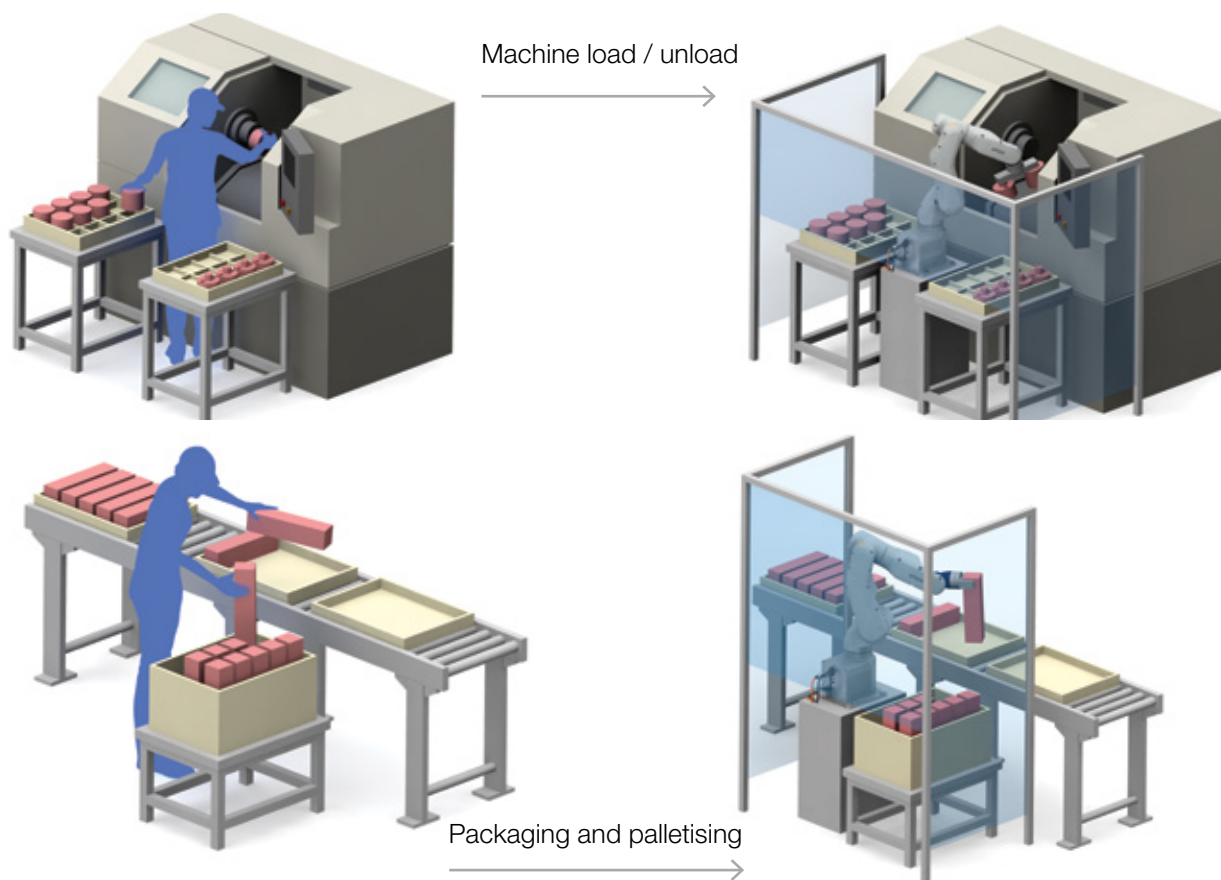
Reduce maintenance cost and machine downtime with a battery-less motor unit

Low purchasing and operating costs

Ideal for many various applications

Whether loading and unloading, machine tending, picking and placing, packaging and palletizing, the VT6-L can be programmed to do all and offers a whole host of benefits in many different applications. It replaces inefficient manual tasks and its six axes offer greater flexibility than linear systems.

Loading and unloading CNC, turning/milling, casting or woodworking machines is often still a manual and monotonous routine task. The VT6-L avoids unnecessary waiting times, for example during breaks, and enables a significant increase in production volumes.



Packaging is the business card of any manufacturer. Automating this manufacturing step with the VT6 series is a comparably low, but worthwhile investment. The robot guarantees high process reliability and thereby quality, even at high speed cycles, for all packaging and palletizing tasks. Valuable labor can therefore be used elsewhere more profitably.



Cleaning in the most automated process

The industrial cleaning machine for cast parts made by an automotive supplier is now being loaded fully automatically by the VT6-L. The VT6-L places the individual cast parts in the machine to precisely remove any traces of dirt. By adding this working step to the production cycle, it is possible and ensure seamless tracking in the process, which is now fully digitised.

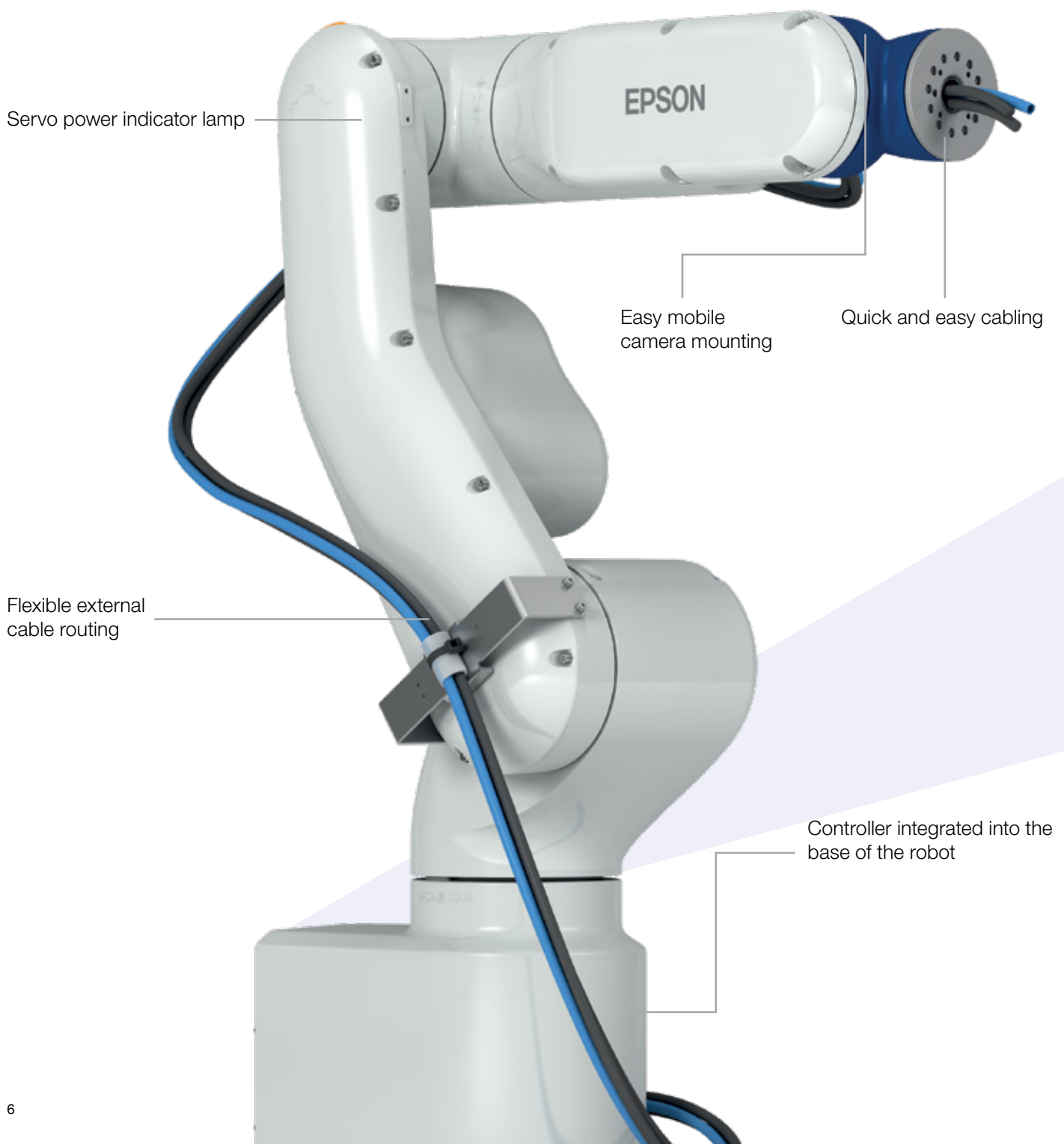
Optimise efficiency and productivity in warehouses

The VT6-DC is ideal for picking and sorting applications. It can be installed on top of an AGV to create an automated shuttle and courier solution. This will improve efficiency and productivity by speeding up searches and moving of parts. It would also free up workers to focus on more important and sensitive tasks.



Integrated concept, with simple networking

The VT6's integrated controller can communicate with all standard fieldbus systems and can be integrated easily into various production processes. Compared to conventional 6-axis robots, the power consumption of the VT6-L is up to 30% lower. The battery-less motor unit reduces operating costs and is environmentally friendly.



Built-in controller

Connection for emergency stop switch

Connection for Teach Pendant TP2 and TP3

Connection for 24/16 standard I/O channels

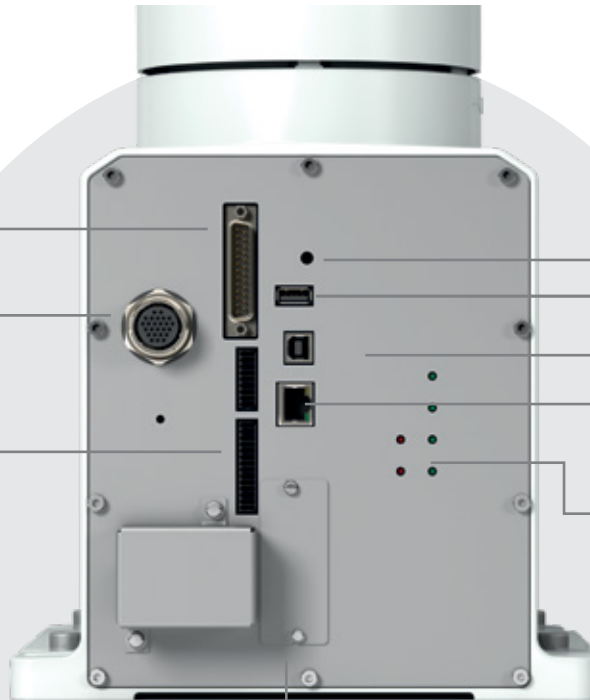
Reset button

USB port for back-up

USB port for PC

RJ45 port for Ethernet

Display status and execution mode information



Slot for expansion card

Built-in controller (VT6-IP67)



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

Extension Fieldbus Cards

Teaching pendant



CV2



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)

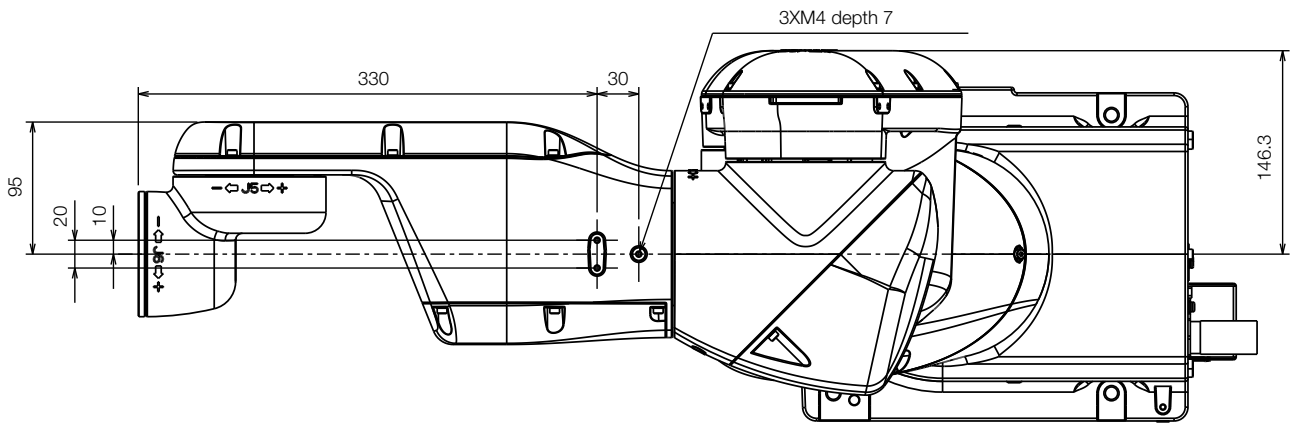
For safe detection and control of fonts and symbols



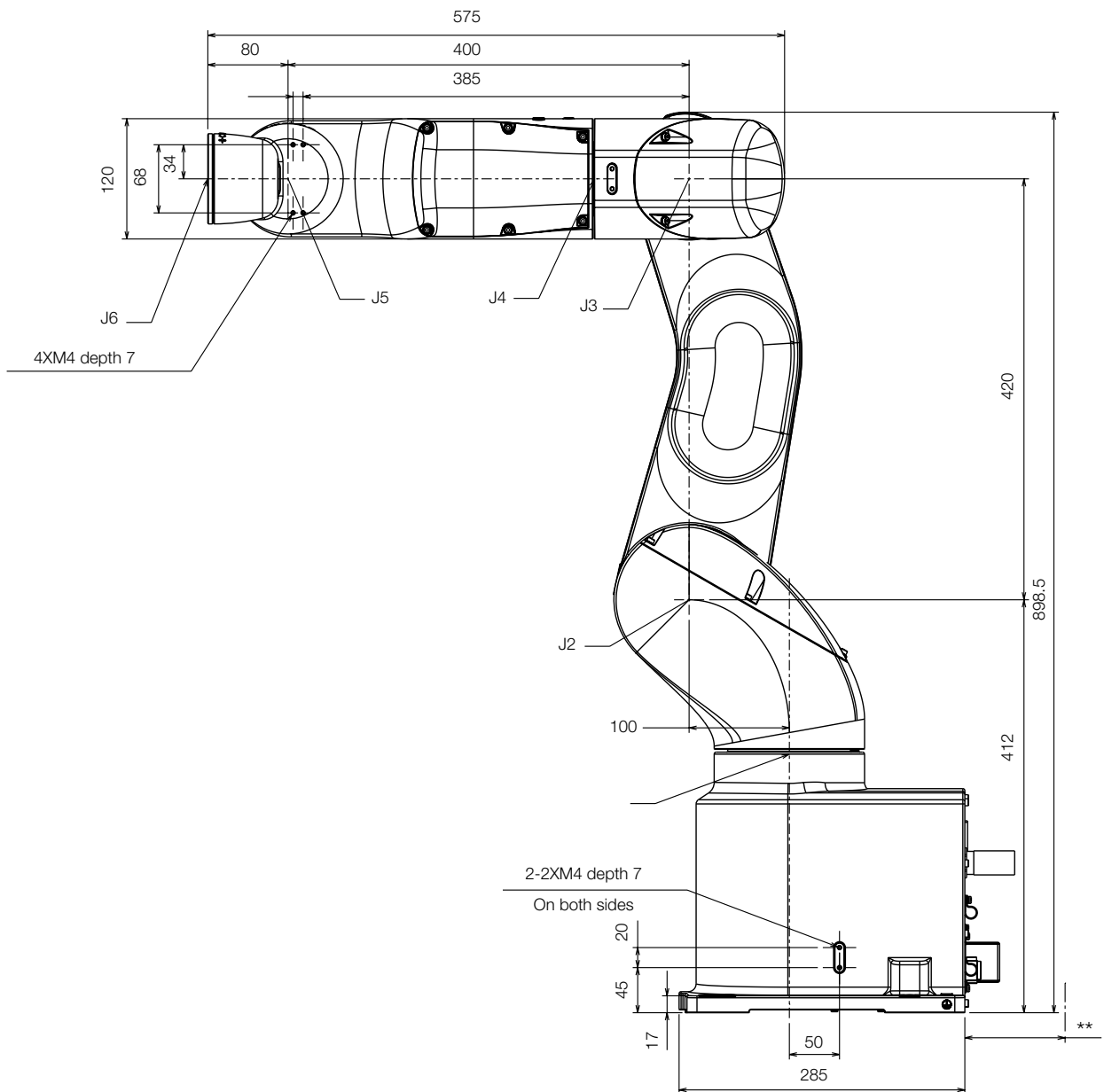
VT6 series

		VT6-A901S	VT6-A901C	VT6-A901P	VT6-A901S-DC
Power Source / Power cable length ¹		100-240VAC single phase / 5m			48V-DC
Environment spec		Standard	Cleanroom ISO Class 4	Protected IP67	Standard
Payload (load) ²	Rated	3kg			
	Max.	6kg			
Max. reach	P point:	920mm			
	Max.	1000mm			
Repeatability		± 0.1mm			
Maximum working range	Joint#1	±170° (±30° for the wall version)	±170°		
	Joint#2	-160° to +65°			
	Joint#3	-51° to +190°			
	Joint#4	±200°			
	Joint#5	±125°			
	Joint#6	±360°			
Maximum operating speed	Joint#1	166.2/s			
	Joint#2	122.5/s			
	Joint#3	141.2/s			
	Joint#4	268.7/s	188.1/s		
	Joint#5	296.8/s			
	Joint#6	293.2/s	234.5/s		
Moment of inertia ³	Joint#4	0.3 kg·m ³			
	Joint#5	0.3 kg·m ³			
	Joint#6	0.1 kg·m ³			
Mounting type ⁴		Table top / Ceiling / Wall	Table top		
Robot installation screw hole and interval		200×200 [mm] 9[mm]			
Brake		All Axes			
Weight (cables not included)		40kg	42kg	40kg	
Applicable Controller		Built-in controller			
Power capacity ⁵		1.2 kVA			
Installed wire for customer use		None (External Wiring Option available)			
Installed pneumatic tube for customer use		None (External Wiring Option available)			
Inputs/outputs		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		CE marking, EMC Directive, Machinery Directive, RoHS Directive KC Marking / KCs Marking			

Top view



Side view



Easily manage and stay in control of your whole robot fleet

Epson's Robot Management System (RMS) helps you configure and monitor up to 200 robot controllers from one central location. Whether via local network or intranet, you can track and save the operating status, carry out firmware updates simultaneously for all controllers and display the lifetime values of the motor, gearbox and toothed belt of the robots.

With RMS, you have your Epson robot fleet under control and increase productivity in your manufacturing and quality inspection processes.

Good to know: You can use the management system free of charge for up to three Epson robot controllers.

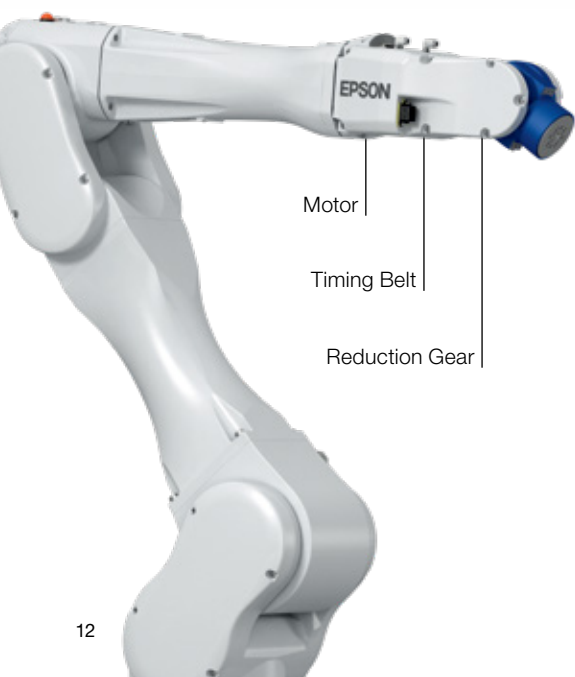
Epson SCARA LS-B-Series
Payload: 3 to 20 kg
Reach: 400 to 1.000 mm

Epson SCARA G-Series
Payload: 1 to 20 kg
Reach: 175 to 1.000 mm

Epson SCARA RS-Series
Payload: 3 to 4 kg
Reach: 350/550 mm

Epson ProSix-C-Series
Payload: 4 to 12 kg
Reach: 600 to 1.400 mm

Epson ProSix-N-Series
Payload: 2,5 to 6 kg
Reach: 450 to 1.000 mm



Motor

Timing Belt

Reduction Gear

Robot status monitoring

Based on the lifetime values of various components of the robots connected to the network, you can create a solid maintenance plan - and avoid unplanned downtime.

Lifetime prediction for:

- Motor
- Timing belt
- Reduction Gear

Controller Monitoring

Check the overall operating status or the status of individual components of multiple Epson robots, including:

- Aggregated status display for each group
- Event protocol of errors or warnings that have occurred in the controller
- Clear overview of the scheduled backups with version management

Save costs and time

- Almost 100 % availability of your robot fleet, no unplanned maintenance or downtime
- Time-saving single-spot monitoring (PC or tablet) for up to up to 200 robot controllers
- More security through regular backups
- Precise and solid maintenance schedule thanks to Lifetime Prediction

Configuration. Management. Monitoring.

Whether PC or tablet - via the dashboard with graphical elements or list display, the management of your Epson robot fleet is convenient and simple.

Epson SCARA T-Series
Payload: 3 to 6 kg
Reach: 400/600 mm

Epson ProSix-VT6-Series
Payload: 6 kg
Reach: 920 mm



Ethernet-Switch

Controller configuration

For multiple controllers on the network, you can configure controller environment settings in a batch, time adjustment operation programs and settings, firmware updates, etc.



- Convenient and fast download of firmware updates
- Problem-free restoration of robot programming data and settings thanks to backup copy
- Version comparison for error analysis

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

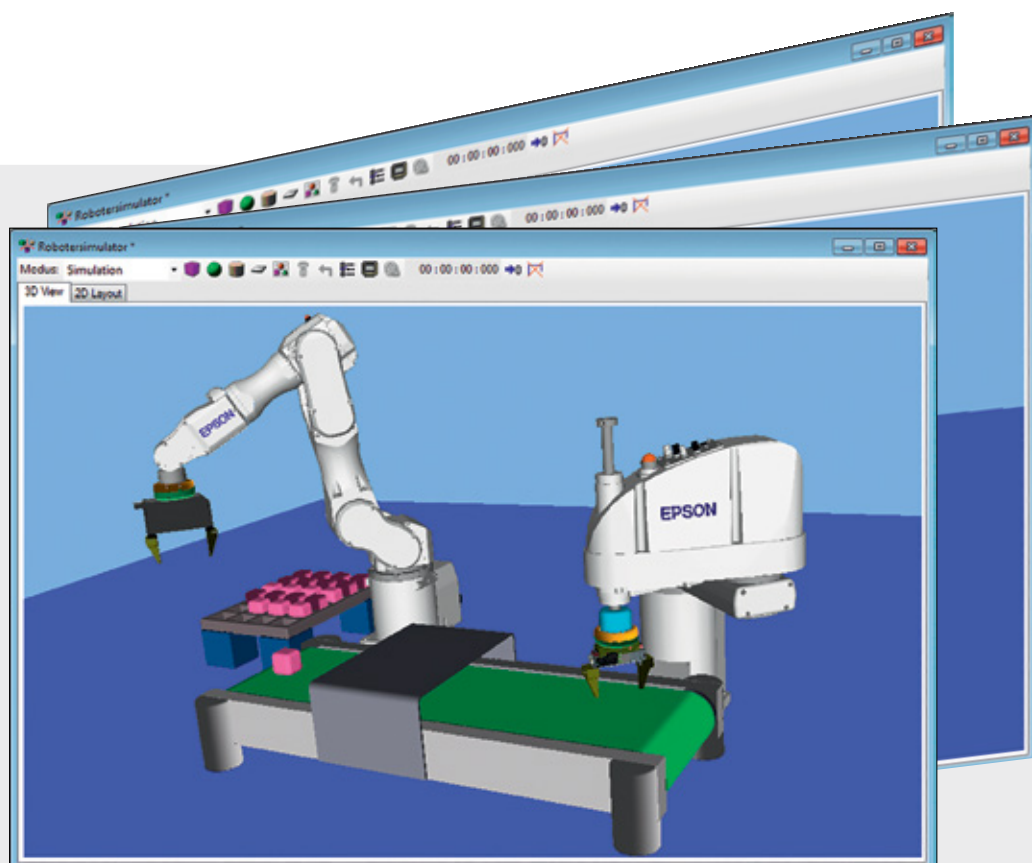
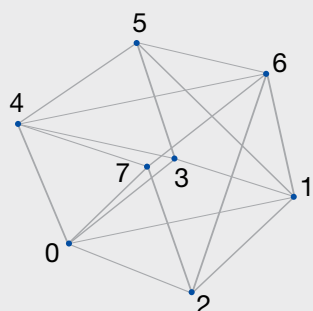
Plan your robot cell at full size in advance and work out the expected cycle time for your application to check feasibility before a single part for the system has been made. Plan future system expansions in the simulation system to keep downtime to a minimum.

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.



Pioneering global robotic solutions for intelligent automation

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 six-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 six-axis kinematics vibrations

2014

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

2016

Epson N2 series: World's first six-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

2019

Market launch of entry-level robot models T series and VT series with integrated controller

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 Available voltage is 43-60V DC and the absolute maximum rating is 72V DC.
² Do not apply the load exceeding the maximum payload.
³ 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.
⁴ 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.
⁵ Actual required capacity depends on the robot motion.

For further information please contact your local Epson office or visit www.epson.eu/contact-us

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