

5 WAYS TO EVEN GREATER EFFICIENCY



ENGINEERED
FOR BUSINESS

THE OPTIMAL FAMILY PACKAGE

DIFFERENT RANGES, VARIOUS LOAD CAPACITIES

You don't want a standard solution, you want the right one: A robot perfectly suited to your application. With the exact range you require, and the load capacity you need. And with only one thing as standard – its precision.

The Epson ProSix series C4 and C8 6 axis robots fulfil the demanding requirements of various industries. They impress with their extremely compact and slim design, and work with maximum precision even at high speeds thanks to Epson's QMEMS® sensor technology.

**EPSON PROSIX C4 AND C8 SERIES,
SUITABLE FOR THE FOLLOWING SEC-
TORS/INDUSTRIES, AMONG OTHERS:**

- Automotive
- Electronics
- Machine tools
- Medical devices
- Semiconductor
- Plastics & metal
- Foodstuffs

PROSIX C4 SERIES – WITH 4 KG PAYLOAD



EPSON PROSIX C4

Range: 600 mm
Applications include: Identification, assembly, soldering and welding, measurement, test and inspection



EPSON PROSIX C4L

Range: 900 mm
Applications include: Machine loading and unloading, packing and order picking, assembly, soldering and welding, palletizing

PROSIX C8 SERIES – WITH 8 KG PAYLOAD



EPSON PROSIX C8

Range: 710 mm
Applications include: Identification, packaging and order picking, assembly, soldering and welding, measurement, test and inspection



EPSON PROSIX C8L

Range: 900 mm
Applications include: Machine loading and unloading, identification, packaging and order picking, assembly, soldering and welding, palletizing



EPSON PROSIX C8XL

Range: 1,400 mm
Applications include: Machine loading and unloading, parts picking, packaging and order picking, soldering and welding, palletizing

THE NEW SYMBOL OF EFFICIENCY: C4 AND C8

FAST, SLEEK, PRECISE

**Confined workspaces? Multiple robots working together in one work cell?
Short cycle times, but high accuracy?**

With the Epson ProSix series C4 and C8, you can realize your system's full potential. The 6 axis machines are consistently designed for high working speeds, and characterized by precise path behavior, as well as an ultra slim design. Their various assembly options ensure the highest possible flexibility.

Impressive team player

Of course, you can combine your Epson 6 axis robot with other members of the family, with SCARA robots, and the Epson Spider, or peripheral devices. Because although the types vary greatly, they speak one language – via the Epson RC700-A control.



Increased freedom of movement thanks to special joint geometry, which enables a $\pm 135^\circ$ angle of rotation of axis 5.

Fewer interference contours, slim robot design, internal supply lines **for maximum system reliability, simple commissioning and reduced maintenance costs.**



Saves space and reduces cycle times:
Rollover possibilities of axes 2 and 3.

STRENGTH IN SILENCE

Epson QMEMS[®] sensor technology and Epson Smart Motion Motor Management

The special feature of these fast, powerful, 6 axis robots is the revolutionary Motor Management from Epson and the first time application of QMEMS[®] technology, based on high precision motion sensors.

QMEMS[®]-equipped robots enable exceptionally quiet and vibration free travel, even under load and at high speeds. The advantages: Improved production throughput and consistently stable quality in all assembly tasks.



ONE FOR ALL: EPSON RC700-A CONTROL

Extremely compact, outstandingly economical and powerful:
The Epson RC700-A control can communicate with fieldbus systems, and is open for connection of additional robots sensors, actuators, and conveyors.



SO YOUR ROBOTS ARE ALWAYS IN THE PICTURE

EPSON COMPACT VISION INTEGRATED IMAGE PROCESSING

Acceleration of production processes, reduction of errors to a minimum, lowering of costs – even the most demanding wishes come true with the integrated Epson image processing.

Single source kinematics, control and image processing

The Epson Vision Guide 7.0 software integrated within the Epson RC+ development environment.

This results not only in reduced set-up time, but also vision sequences that can be created in just a few clicks. Programming uses simple drag & drop with no need for additional editors.

Robot control and test tasks/positioning are interlinked with no interface problems. Moreover, robots and image processing communicate in milliseconds. The Epson image processing supports high-resolution cameras and color cameras.

Compact Vision from Epson, ideal for:

- Measurement
- Quality inspection/error detection
- Parts positioning even for manufacturing variations and varying locations
- Complex product tracking on conveyor

The Epson image processing is available in **various versions**.

EVERYTHING IN RANGE, EVERYTHING IN VIEW:

convenient mobile operating and display unit

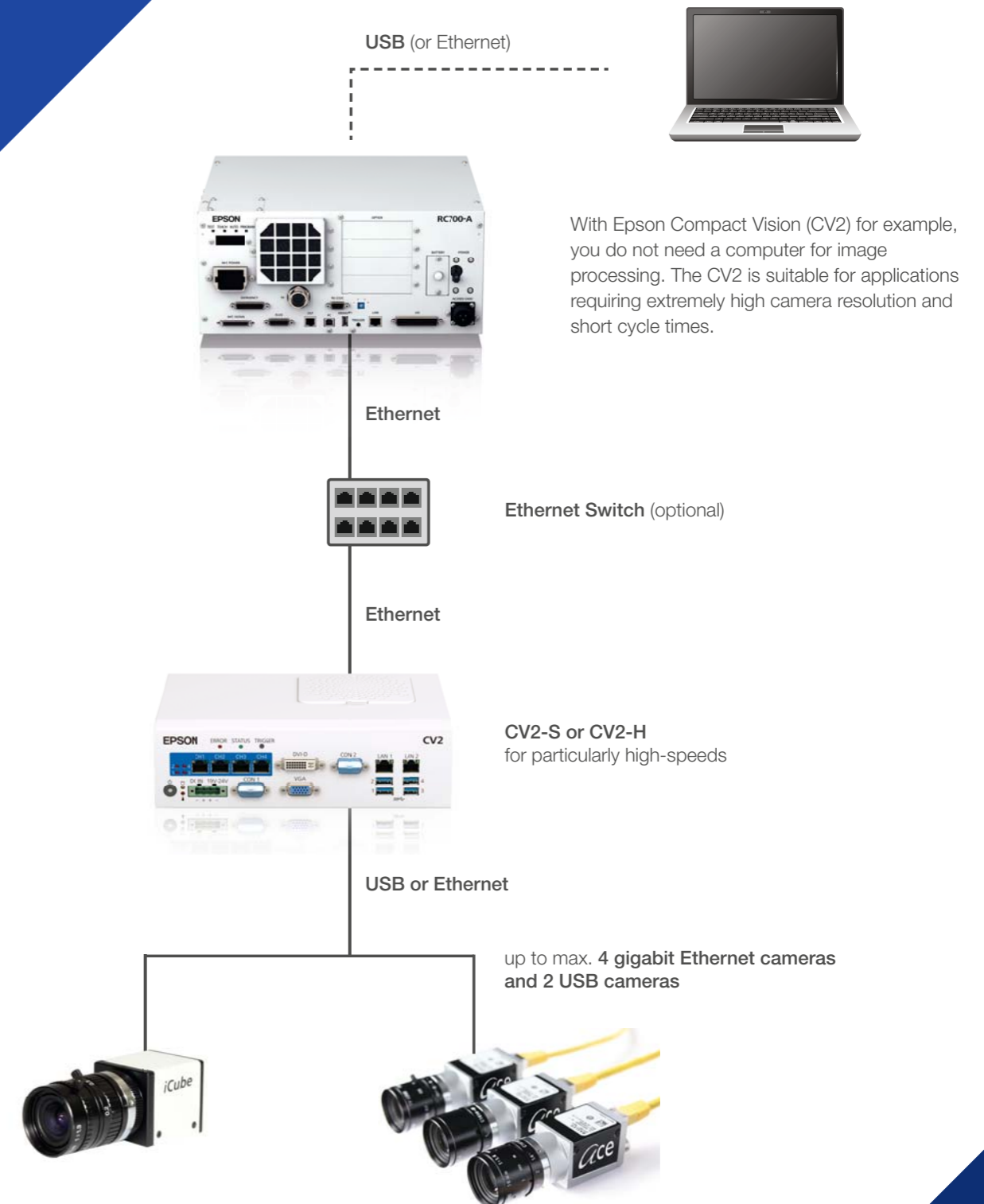
Teach pendant **TP3***

The mobile terminal has an ergonomic, flat housing with a brilliant and high contrast 10" TFT LCD display. Fast processors allow for sophisticated visualisation and operating applications.



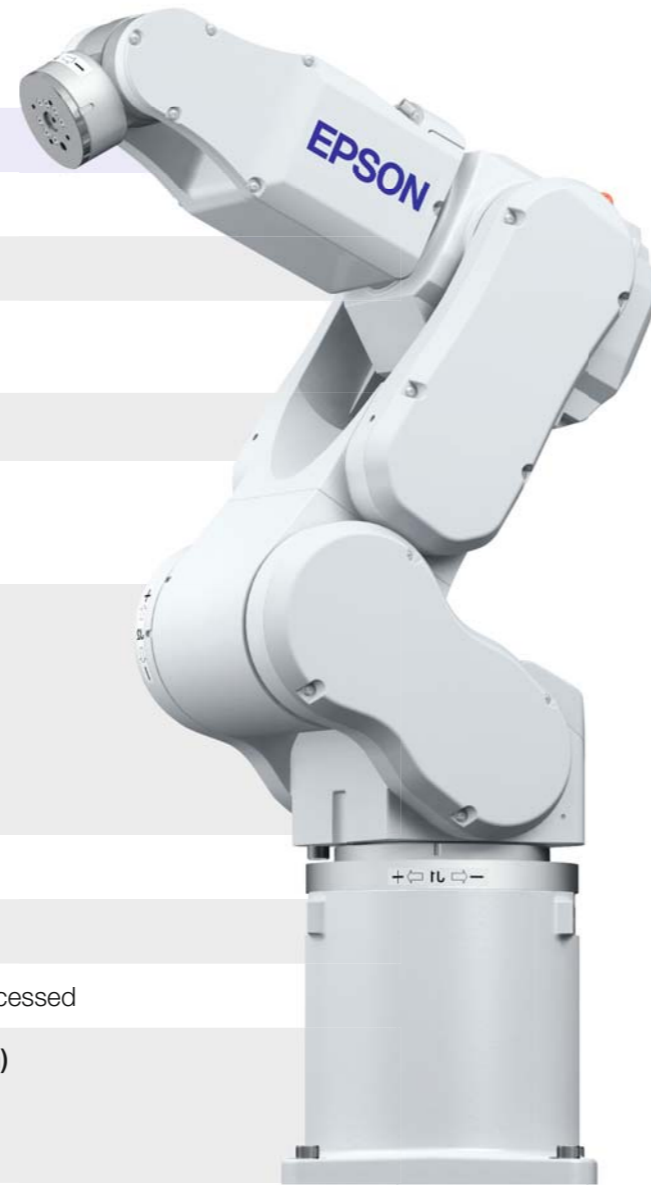
* Available from spring 2016

EPSON COMPACT VISION CV2 DESIGN EXAMPLE



DESIGNS OF THE EPSON PROSIX C4

C4-A601S



Design Vertical articulated arm

Load capacity 4/5*kg

Range **P point**** 600 mm
max. 665 mm

Repeatability +/-0.02 mm

Permissible moment of inertia
J4 0.15kg*m²
J5 0.15kg*m²
J6 0.10kg*m²

User cabling
electrical
D-Sub connector for
1 x 9-pin plug
pneumatic
connector for
compressed air supply
4 x Ø 4mm

Weight 27 kg

Control RC700-A, RC700DU-A

Installation **Floor/ceiling** each also recessed

Ambient condition
Clean room class (option)
ISO 3 & ESD
Protection class
IP40

J1 = Axis 1
J2 = Axis 2
J3 = Axis 3
J4 = Axis 4
J5 = Axis 5
J6 = Axis 6

* Possible under specific conditions
(see manual)

**P point: Intersection point of rotation centres of
axes 4, 5 and 6

Package

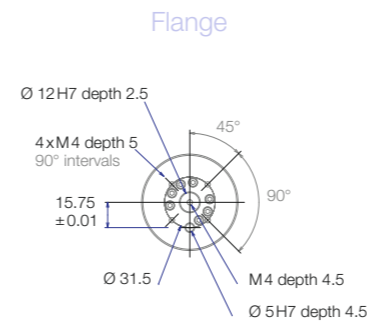
- Epson robots and control
- Epson RC+ program CD including simulation software
- 2 mounting bracket sets for the robot control
- 3 m motor and signal cable
- 3m motor cable for the robot control
- Emergency stop plug
- Plug for standard inputs and outputs
- Plug set for user cabling
- 2 air connection sets (each with 4 x straight and 4 x 90° angled)
- Manuals on CD
- Installation/safety manual

Manipulator options

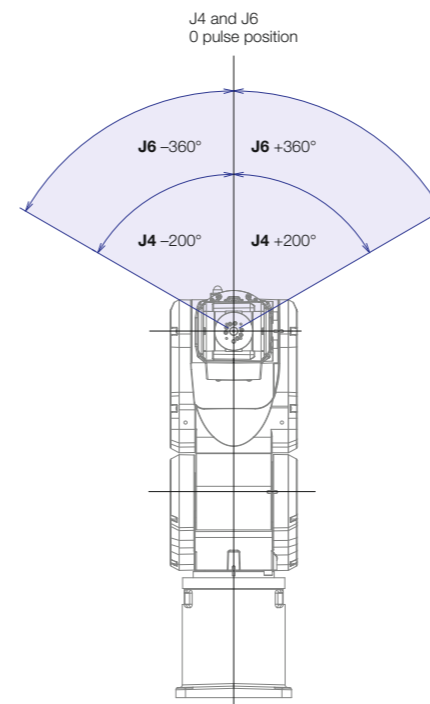
- Longer power and signal cable (5m/10m/20 m)
- Brake release unit
- Mounting bracket

Installation

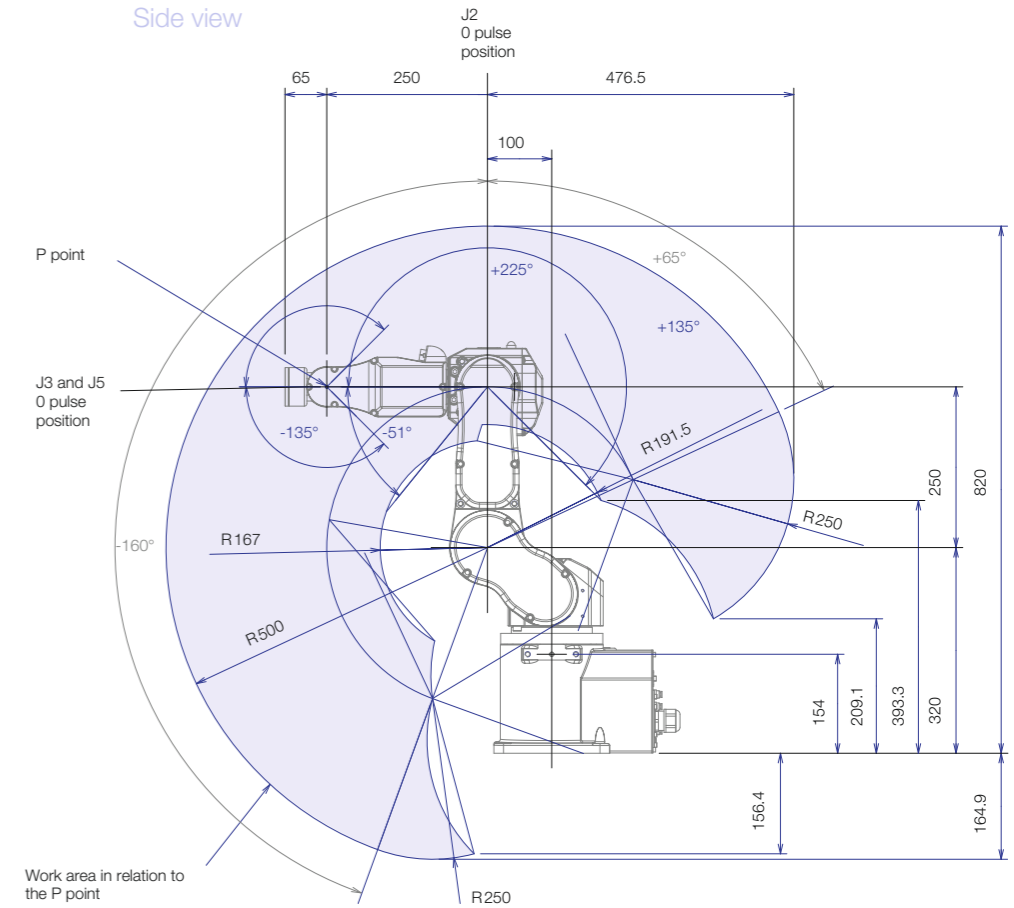
The Epson ProSix C4 and ProSix C4L 6 axis robots allow flexible installation according to application. In addition to floor and ceiling installation, recessed installation is also possible. As the base is not required, and the cable conduit is hidden, overall production cell height is reduced.



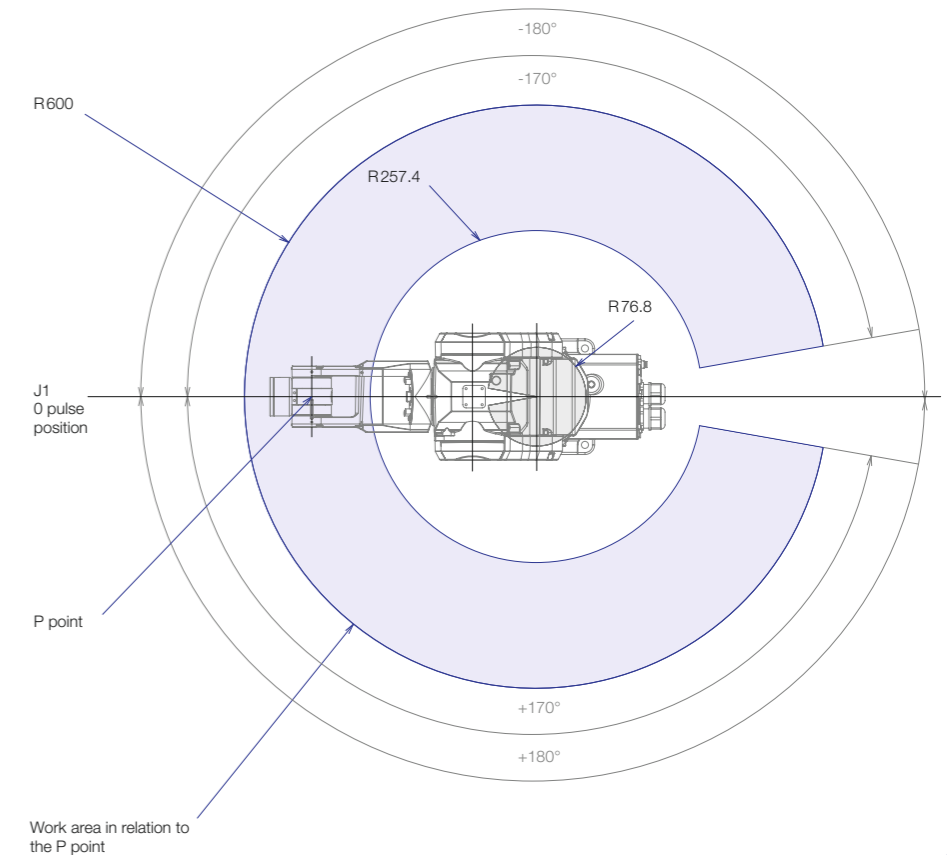
Front view



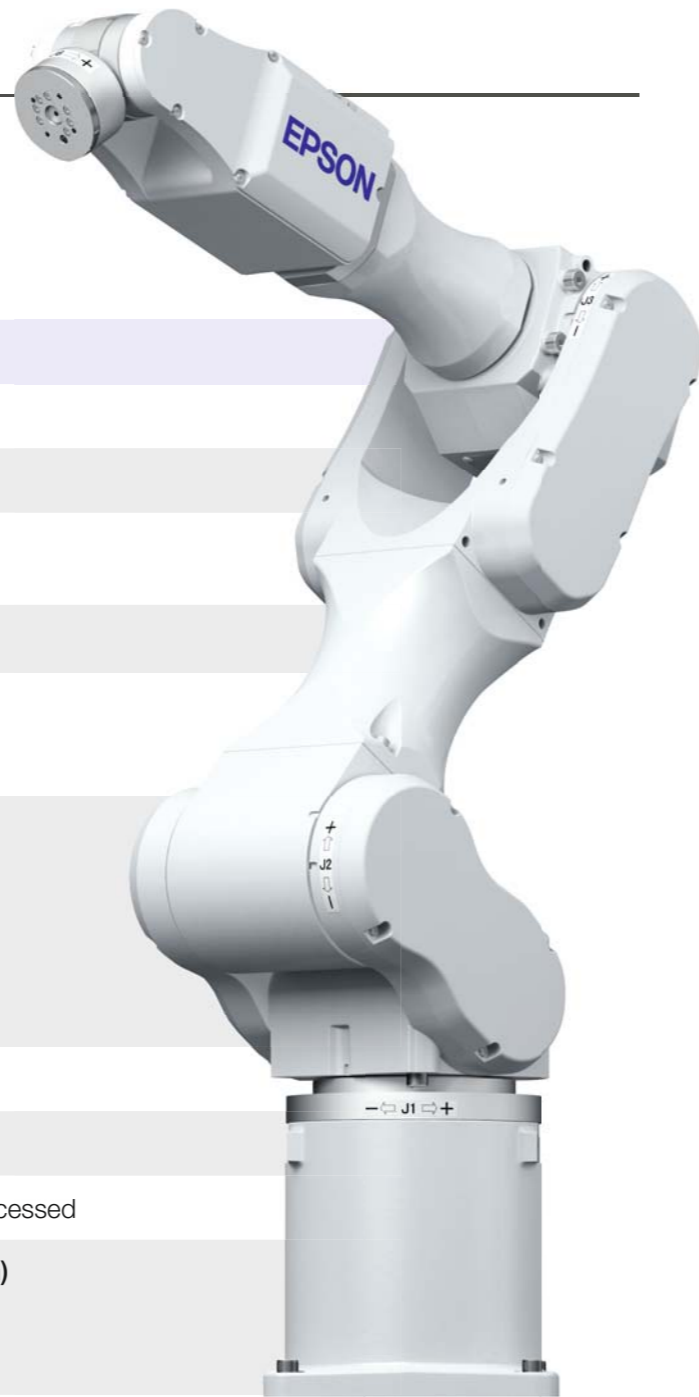
Side view



Top view



DESIGNS OF THE EPSON PROSIX C4L



	C4-A901S
Design	Vertical articulated arm
Load capacity	4/5*kg
Range	P point** 900 mm max. 965 mm
Repeatability	+/-0.03mm
Permissible moment of inertia	J4 0.15kg*m ² J5 0.15kg*m ² J6 0.10kg*m ²
User cabling	electrical D-Sub connector for 1 x 9-pin plug pneumatic connector for compressed air supply 4 x Ø 4mm
Weight	29kg
Control	RC700-A, RC700DU-A
Installation	Floor/ceiling each also recessed
Ambient condition	Clean room class (option) ISO 3 & ESD Protection class IP40

J1 = Axis 1
J2 = Axis 2
J3 = Axis 3
J4 = Axis 4
J5 = Axis 5
J6 = Axis 6

* Possible under specific conditions
(see manual)

**P point: Intersection point of rotation centres of
axes 4, 5 and 6

Package

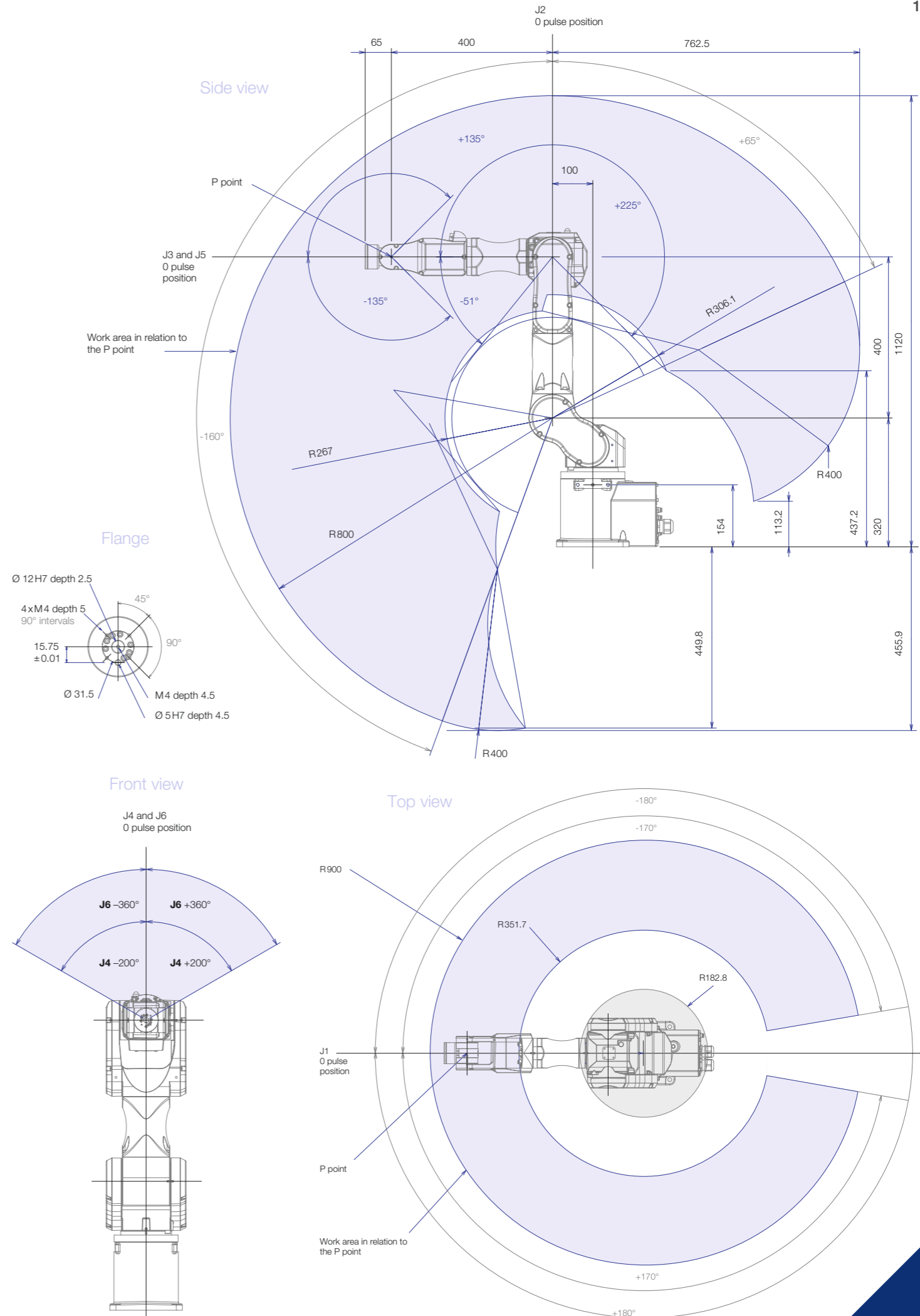
- Epson robots and control
- Epson RC+ program CD including simulation software
- 2 mounting bracket sets for the robot control
- 3 m motor and signal cable
- 3m motor cable for the robot control
- Emergency stop plug
- Plug for standard inputs and outputs
- Plug set for user cabling
- 2 air connection sets (each with 4 x straight and 4 x 90° angled)
- Manuals on CD
- Installation/safety manual

Manipulator options

- Longer power and signal cable (5m/10m/20 m)
- Brake release unit
- Mounting bracket

Installation

The Epson ProSix C4 and ProSix C4L 6 axis robots allow flexible installation according to application. In addition to floor and ceiling installation, recessed installation is also possible. As the base is not required, and the cable conduit is hidden, overall production cell height is reduced.



DESIGNS OF THE EPSON PROSIX C8



	C8-A701S
Design	Vertical articulated arm
Load capacity	8 kg
Range	P point* 710mm max. 790mm
Repeatability	+/-0.02mm
Permissible moment of inertia	J4 0.47kg*m ² J5 0.47kg*m ² J6 0.15kg*m ²
User cabling	electrical D-Sub connector for 1 x 15-pin plug RJ45 connector for 1 x 8-pin plug (Ethernet) Connector for 1 x 8-pin plug (Force Sensor) pneumatic connectors for compressed air supply 2 x Ø 6mm
Weight	49kg (IP67: 53kg)
Control	RC700-A, RC700DU-A
Installation	Floor/ceiling
Ambient condition	Clean room class (option) ISO 3 & ESD Protection class IP40 (standard)/IP67 (option)

J1 = Axis 1 **J4** = Axis 4
J2 = Axis 2 **J5** = Axis 5
J3 = Axis 3 **J6** = Axis 6

***P point:** Intersection point of rotation centres of axes 4, 5 and 6

Package

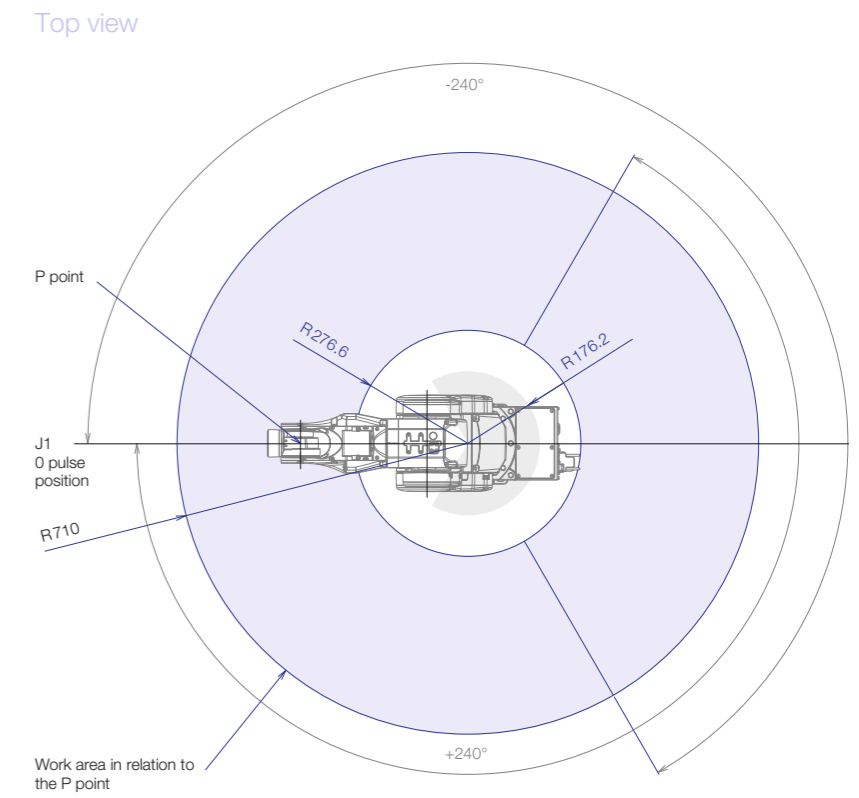
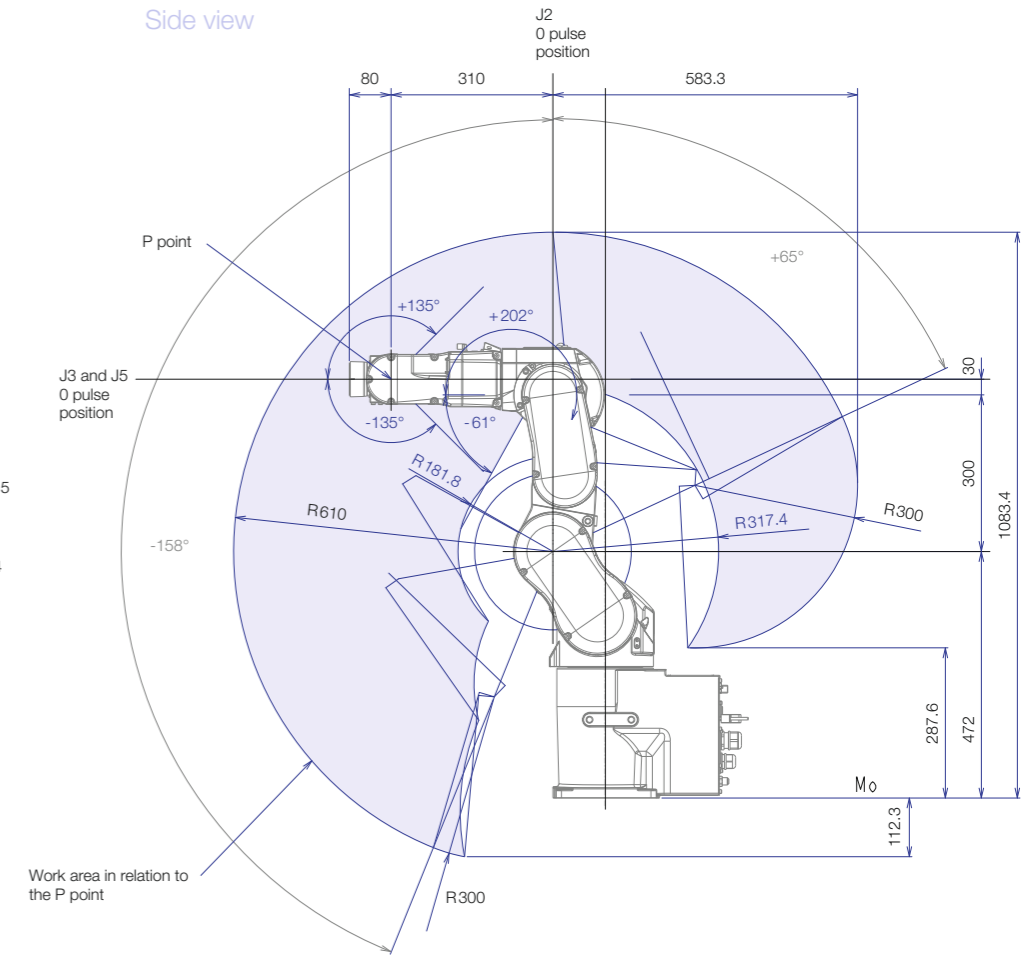
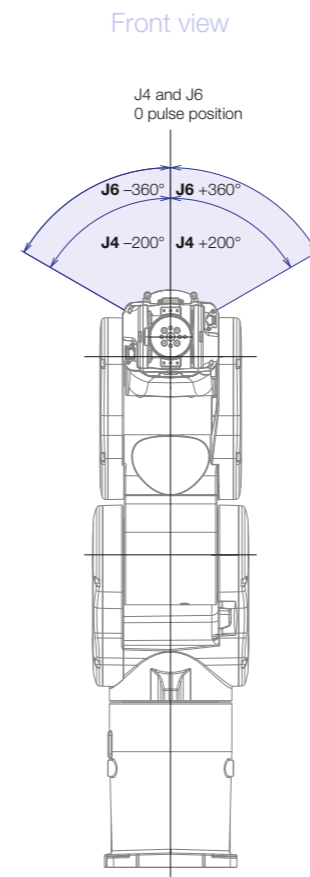
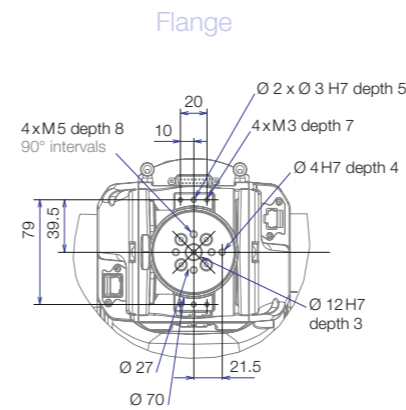
- Epson robots and control
- Epson RC+ program CD including simulation software
- 2 mounting bracket sets for the robot control
- 3 m motor and signal cable
- 3m motor cable for the robot control
- Emergency stop plug
- Plug for standard inputs/outputs
- Plug set for user cabling
- 2 air connection sets (each with 2 x straight and 2 x 90° angled)
- Manuals on CD
- Installation/safety manual

Manipulator options

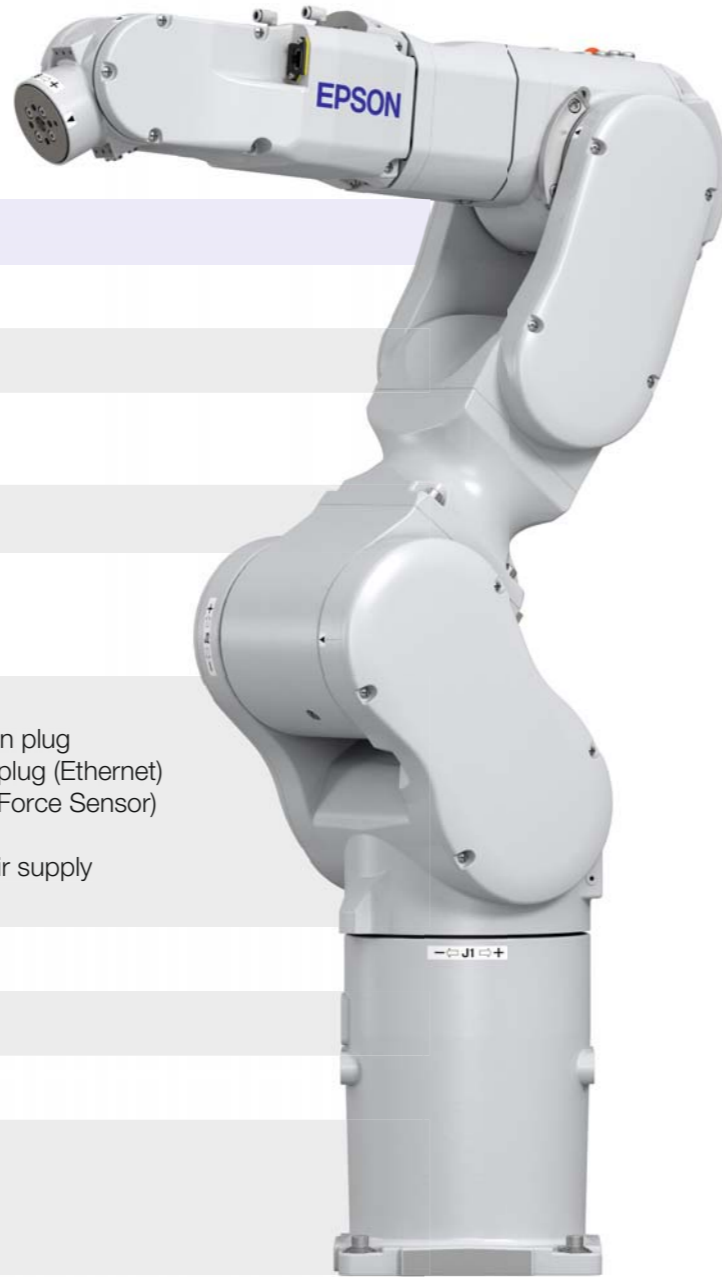
- Longer power and signal cable (5m/10m/20 m)
- Brake release unit

Installation

The Epson ProSix C8, ProSix C8L and ProSix C8XL 6 axis robots allow flexible installation according to application. Floor and ceiling installation are available.



DESIGNS OF THE EPSON PROSIX C8L



	C8-A901S
Design	Vertical articulated arm
Load capacity	8 kg
Range	P point* 900mm max. 980mm
Repeatability	+/-0.03mm
Permissible moment of inertia	J4 0.47kg*m ² J5 0.47kg*m ² J6 0.15kg*m ²
User cabling	electrical D-Sub connector for 1 x 15-pin plug RJ45 connector for 1 x 8-pin plug (Ethernet) Connector for 1 x 8-pin plug (Force Sensor) pneumatic connectors for compressed air supply 2 x Ø 6mm
Weight	52kg (IP67: 56kg)
Control	RC700-A, RC700DU-A
Installation	Floor/ceiling
Ambient condition	Clean room class (option) ISO 3 & ESD Protection class IP40 (standard)/IP67 (option)

J1 = Axis 1
J2 = Axis 2
J3 = Axis 3
J4 = Axis 4
J5 = Axis 5
J6 = Axis 6

***P point:** Intersection point of rotation centres of axes 4, 5 and 6

Package

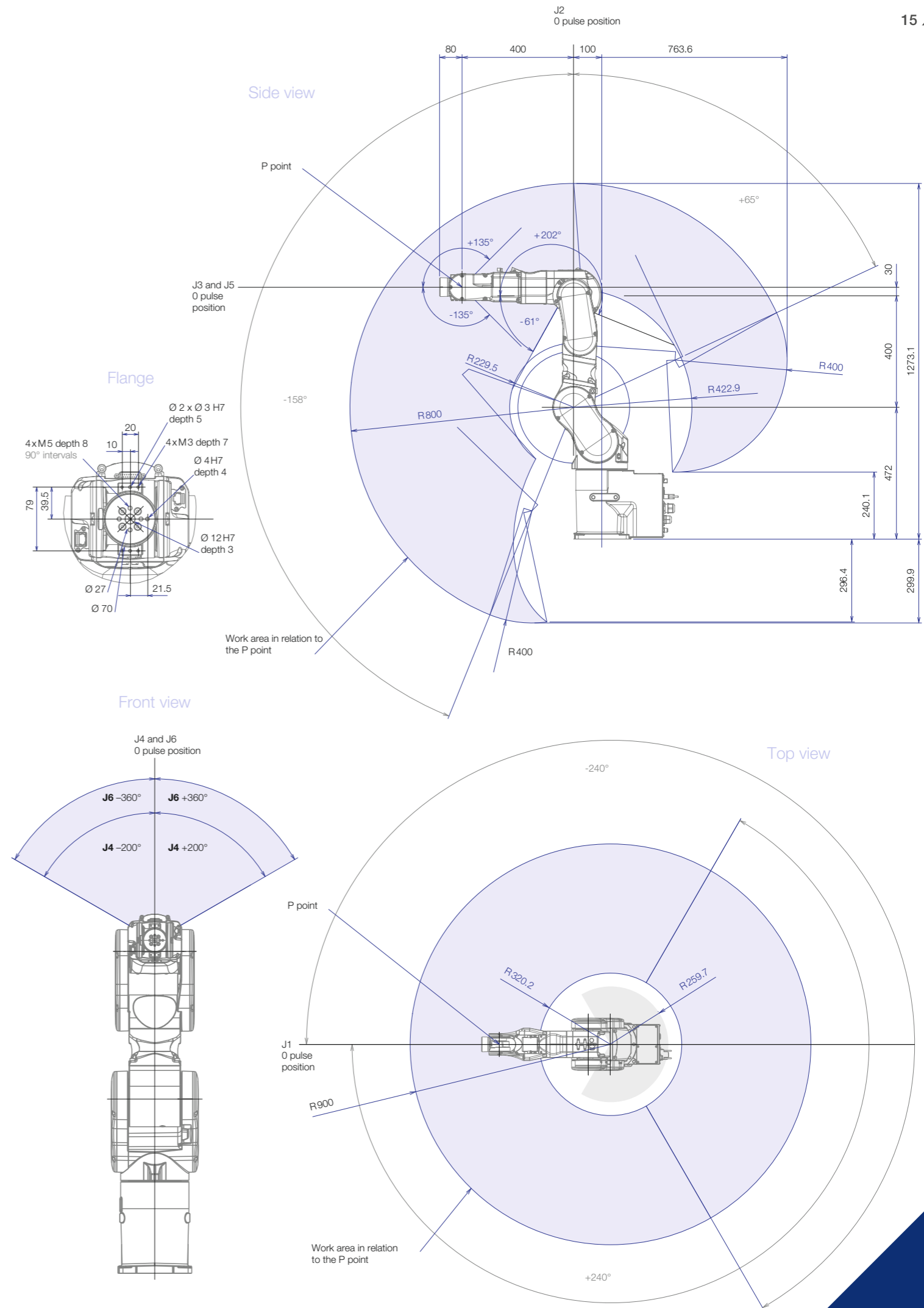
- Epson robots and control
- Epson RC+ program CD including simulation software
- 2 mounting bracket sets for the robot control
- 3 m motor and signal cable
- 3m motor cable for the robot control
- Emergency stop plug
- Plug for standard inputs/outputs
- Plug set for user cabling
- 2 air connection sets (each with 2 x straight and 2 x 90° angled)
- Manuals on CD
- Installation/safety manual

Manipulator options

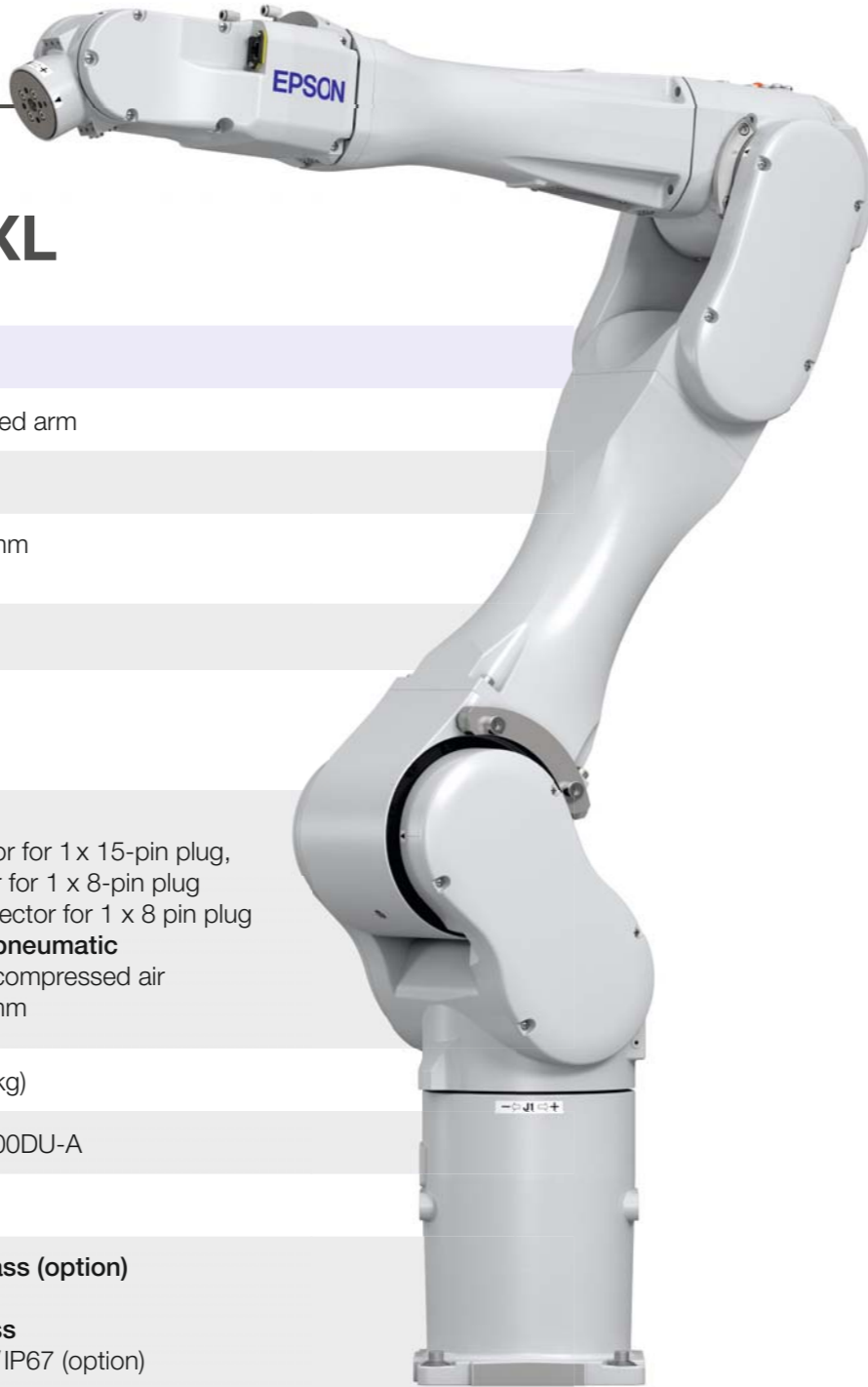
- Longer power and signal cable (5m/10m/20 m)
- Brake release unit

Installation

The Epson ProSix C8, ProSix C8L and ProSix C8XL 6 axis robots allow flexible installation according to application. Floor and ceiling installation are available.



DESIGNS OF THE EPSON PROSIX C8XL



C8-A1401S

Design	Vertical articulated arm
Load capacity	8 kg
Range	P point* 1400mm max. 1480mm
Repeatability	+/-0.05mm
Permissible moment of inertia	J4 0.47kg*m ² J5 0.47kg*m ² J6 0.15kg*m ²
User cabling	electrical D-Sub connector for 1 x 15-pin plug, RJ45 connector for 1 x 8-pin plug (Ethernet), connector for 1 x 8 pin plug (Force Sensor) pneumatic connectors for compressed air supply 2x Ø 6mm
Weight	62 kg (IP67: 66kg)
Control	RC700-A, RC700DU-A
Installation	Floor/ceiling
Ambient condition	Clean room class (option) ISO 3 & ESD Protection class IP40 (standard)/IP67 (option)

J1 = Axis 1 **J4** = Axis 4
J2 = Axis 2 **J5** = Axis 5
J3 = Axis 3 **J6** = Axis 6

***P point:** Intersection point of rotation centres of axes 4, 5 and 6

Package

- Epson robots and control
- Epson RC+ program CD including simulation software
- 2 mounting bracket sets for the robot control
- 3 m motor and signal cable
- 3m motor cable for the robot control
- Emergency stop plug
- Plug for standard inputs/outputs
- Plug set for user cabling
- 2 air connection sets (each with 2 x straight and 2 x 90° angled)
- Manuals on CD
- Installation/safety manual

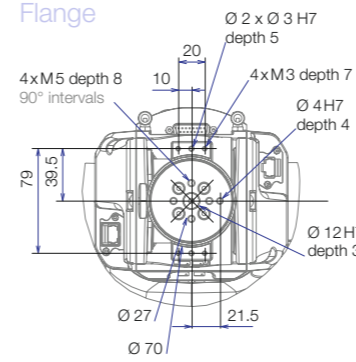
Manipulator options

- Longer power and signal cable (5m/10m/20 m)
- Brake release unit

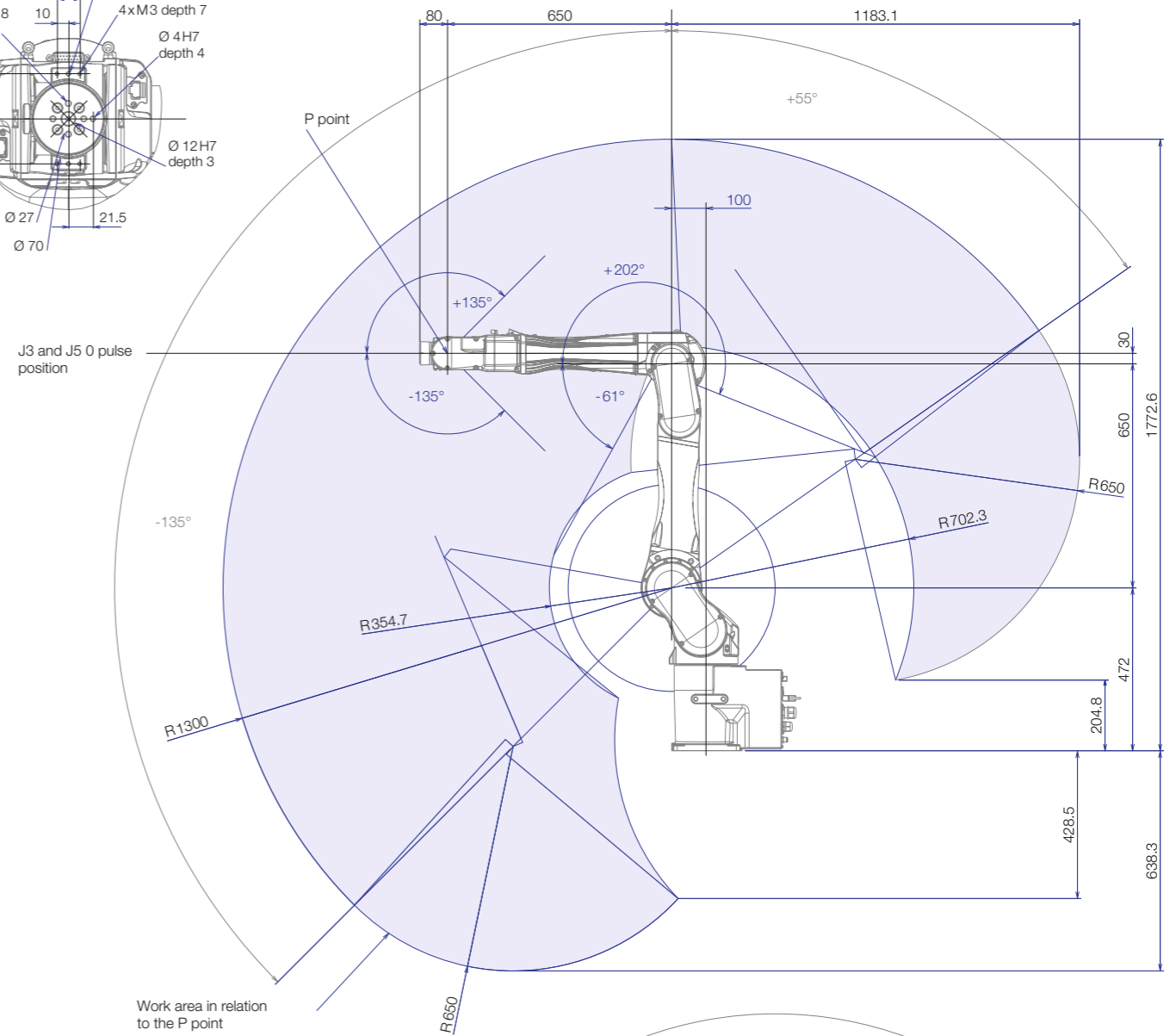
Installation

The Epson ProSix C8, ProSix C8L and ProSix C8XL 6 axis robots allow flexible installation according to application. Floor and ceiling installation are available.

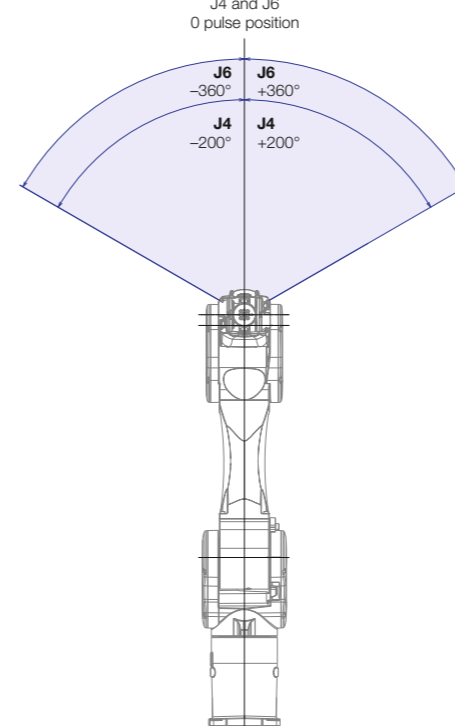
Flange



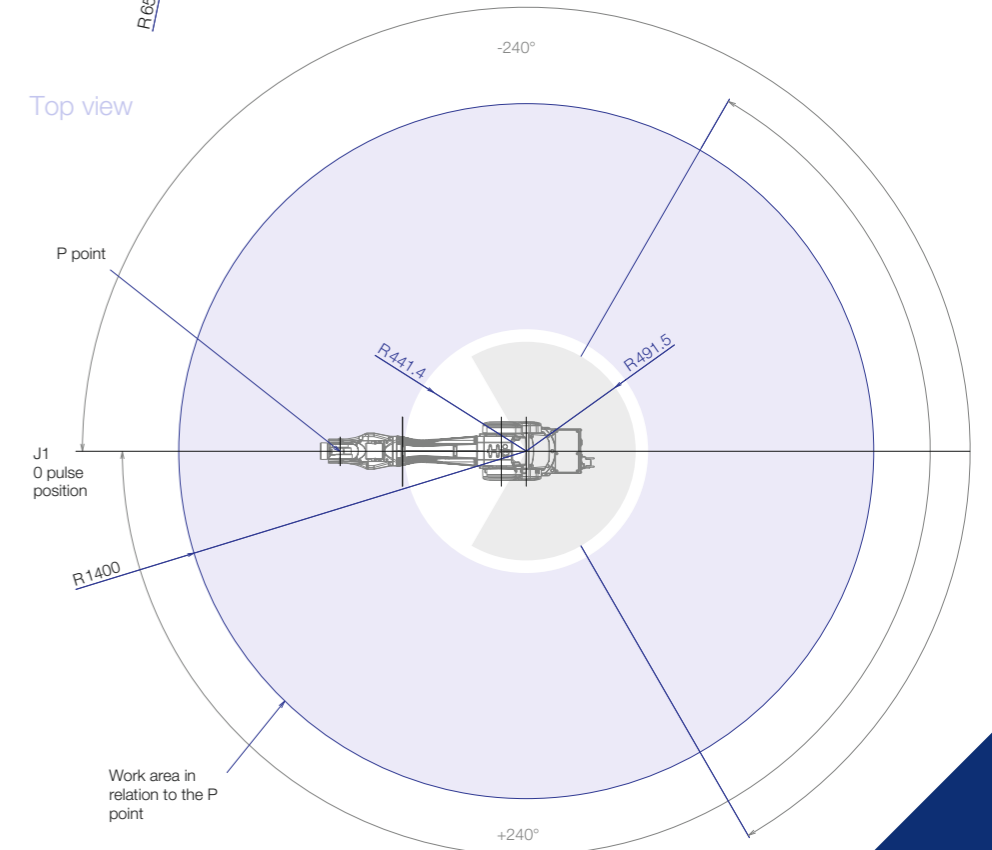
Side view



Front view



Top view



SIMULATION OF ROBOT CELLS

Good preparation is everything. Plan and visualize 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 – throughout all phases.

PHASE 1 DESIGN

You can plan your robot cell in full size in advance and assess the expected cycle time for your application. This verifies feasibility before a single part for the system has been made. Later system expansions can be prepared in the simulation system so as to reduce down times to the bare minimum.

PHASE 2 INTEGRATION

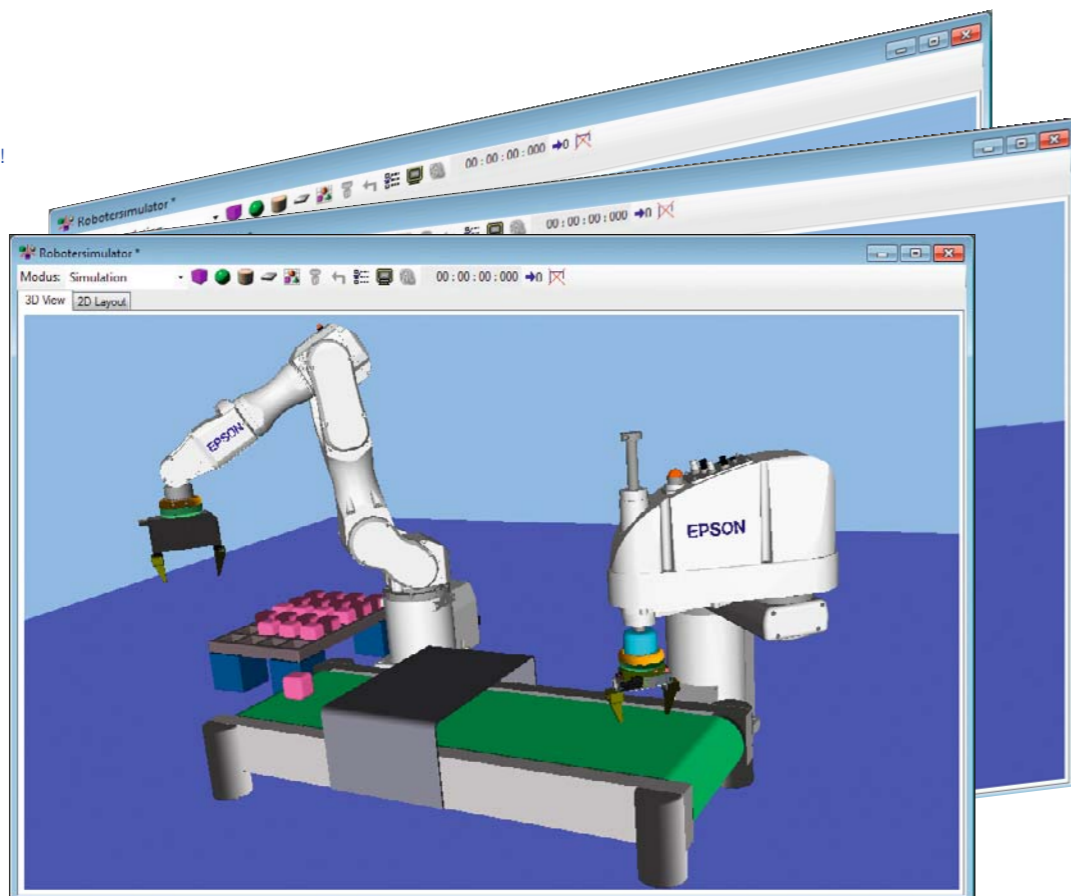
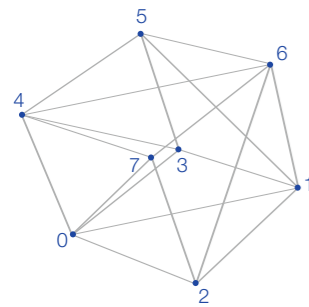
The program validation process is completed offline before the robots are delivered. This enables you to create programs at the same time with the system capable of displaying and evaluating even complex motions. Collision risks are identified and equipment damage prevented.

PHASE 3 OPERATION AND MAINTENANCE

Troubleshooting or program modifications can be carried out conveniently from your desk. Collision detection, reachability checks and robot motions can be visualized in a 3D layout.

EVEN SIMPLER DESIGNS: USING THE CAD-TO-POINT FUNCTION!

The CAD-to-Point function allows CAD data to be converted into robot points.



ABOUT EPSON

Epson Factory Automation is one of the leading suppliers of high tech robot systems that are renowned worldwide for their reliability. The product range includes, in addition to the Epson 6 axis robots, SCARA robots, the Epson-developed Spider, the entry-level SCARA robots Epson LS, as well as image processing and controls.

Technological pioneer

- In-house research and development department for automation processes
- One of the most comprehensive model ranges of high precision industrial robots in the world
- **1982**
Epson SCARA robots freely available in Japan for the first time
- **1986**
First class 1 clean room robot
- **1997**
First PC-based control
- **2008**
Inventor of the right or left arm-optimized 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, thus reducing 6 axis kinematics vibrations
- **2014**
Epson Compact Vision CV2: Epson's own ultra-fast image processing computer

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 INDUSTRY SOLUTIONS CENTER – WE'LL FIND YOUR SOLUTION!



Epson
Industry
Solutions
Center

Experience all our Epson robots in action. In a workshop cell you can build, simulate and improve your automation application 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.

WOULD YOU LIKE TO ARRANGE
AN APPOINTMENT?

CALL US ON
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OR SEND AN EMAIL TO
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