

SCARA G Series

Experience the  
power in precision



**EPSON**<sup>®</sup>  
EXCEED YOUR VISION

# Compact, fast and extremely versatile

With over 300 variations, arm lengths from 175 mm to 1,000 mm, load capacities from 1 kg up to 20 kg and a range of installation types and protection classes, Epson's range of SCARA robots (Selective Compliance Assembly Robot Arm) provides the high performance and reliability that Epson robots are famous for. Designed for virtually any application and perfect for an economical automation solution.

## We are SCARA

Epson has been specialising in SCARA ever since these articulated robots first entered the market. Our robotic systems reflect decades of experience in high-precision micro-component assembly, and are globally recognised for their speed, accuracy, and ease of use. We are also committed to continuous development, such as right and left arm optimisation, ball bearing spindles, Smart Motion control and the invention of the Spider, a unique SCARA robot with no dead zone.

## The SCARA principle:

It's no coincidence that SCARA robots have become a success story in automation. They are quick and easy to set up, provide ultra high speeds, and offer the best in class cycle rates and motion range - making them ideal for high precision assembly.

SCARA robots have four easily programmable axes which enable manipulation in parallel planar surfaces. Their four degrees of freedom ensures greater freedom of movement, agility and the ability to position and to join heavy payload in each horizontal orientation.

## Varying arms lengths & load capacities



## Varying arms lengths & load capacities



## Varying Z-Axis lengths



## How to decode the G-series names

Below is an example to show you how to “read” the names: G6-553 SW.

Series	Max. Payload	Arm length arm 1+2	Length Z-stroke	Design	Mounting Option	Special design
G	1 3 6 10 20	17 22 25 30 35 45 55 65 85 A0	1 3 4	D S P C	- W R	3 L R I -

### Example

Payload up to 6kg,  
550 mm arm length,  
330 mm shaft length,  
standard design  
wall mounting  
G6-553SW

## Varying arms lengths & load capacities



## Range of installation types



## Range of protection classes



# The Epson principle: Make great even better

As a specialist in SCARA technology, we continuously optimise every detail for your benefit; offering speed, motion efficiency, high repeatability and ultra-precise path control to ensure maximum productivity in small spaces.

## User wiring

- Four air supply/vacuum lines
- 24 signal points
- Robust and durable
- Wide range of applications

## Integrated wiring harness

- Compact and space-saving with fewer interfering contours
- Reduced mechanical sensitivity
- Improved ESD shielding

## Harmonic Drive Gear

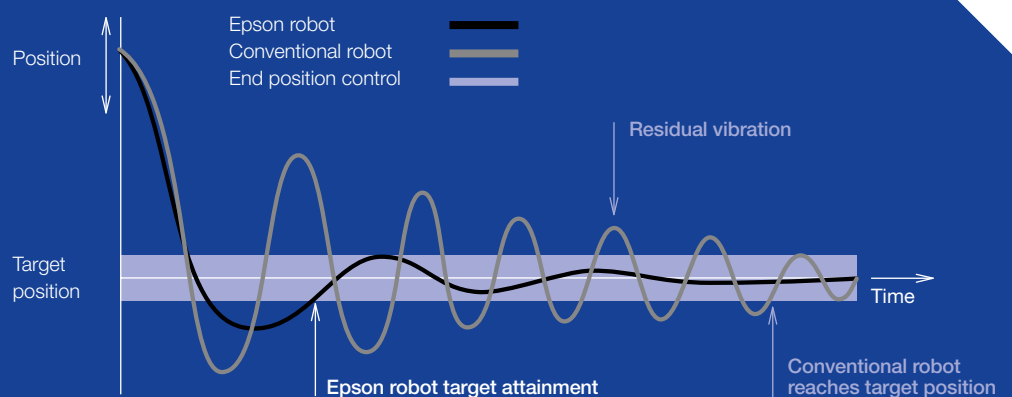
- Zero Backlash
- Improved positioning accuracy and repeatability
- Small size and light weight
- High reliability and long life

## Extended Z-axis for applications that require longer strokes



## Epson Smart Motion: Precision brought to the point

Smart Motion delivers greater precision and efficiency. It allows the robots to reach their end positions faster, with greater accuracy and with fewer vibrations. Whatever manufacturing challenges you face, Epson robots get to the point quicker, more precisely and with greater efficiency.





High-precision ball bearing spindle with optimised spindle pitch

Control and error status display light

**Absolute rotary encoder on all axes**

21 bit resolution on one motor revolution

Outstanding joining properties

Superior interpolation properties

High precision speed control

**Profile in monocoque design**

2.5 times as stiff as conventional cast aluminium arms

High insertion forces

Optimised joining properties

**Adjustable stops for limiting the motion range**

**Low vibration base**

Gentle on products

Improved repeatability and absolute accuracy

Optimised joining properties

**Optional:**

Vertical power/signal cable directly under the base:

Compact, clean and safe in cleanrooms

Safe in contaminated environments (IP65 applications)

**Compact, space-saving mounting base**

Tapped holes for improved reproducibility of the robot's position

# A new dimension in SCARA performance

Epson SCARA robots demonstrate strong performance and unsurpassed reliability across a diverse range of applications.

## **Loading and unloading of machines**

Epson SCARA G Series ensures even higher manufacturing quality, speed and precision with exclusive Smart Motion Control technology. Whether loading or unloading on pallets, carriers, conveyor belts, or fed manually, Epson SCARA robots can provide precision tracking for highly productive pick-and-place operation.

## **Assembly and placement**

Epson SCARA robots are ideal for assembly and placement tasks, even for small batches and components; with their excellent dynamics, high insertion force and agile balance of dead weight and payload.

## **Packaging and palletising**

Modern packaging requires a high degree of flexibility, and short changeovers are vital. Epson SCARA robots can package and palletise highly sensitive parts at ultra fast speed. With Conveyor Tracking, parts on the conveyor belt can be gripped and removed directly by the robot – detected and guided by an integrated camera.

## **Testing, measuring and inspecting**

Epson SCARA robots, along with the integrated Epson image processing system enable quality inspections, accurate measurement and fast test runs prior to production with precise detection – even with short cycle times. If the product's predefined parameters deviate from the tolerance values, the product is detected as faulty at an early stage and can be safely removed.

# The high performance controller: Epson RC700-A controller

The Epson RC700A controller is the next generation high performance controller line with both power, open architecture and industry leading ease of use. Capable of standing alone or as an integrated system, the Epson RC700-A is designed to control multiple robots and various peripherals in complex environments. The flexible controller supports both conveyor tracking, as well as various bus protocols and interface extensions.

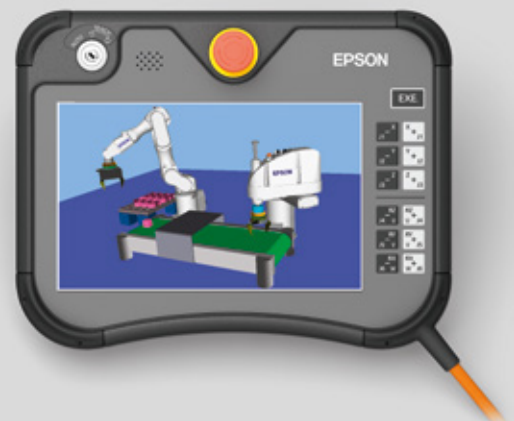
The integrated Epson Vision Guide 7.0 software enables parts to be reliably detected and positioned – even with manufacturing deviations, varying positions and poor light conditions.



## Everything in range, everything in view:

Convenient mobile control and high contrast 10" display with Teach Pendant TP3 ensures ease of use for both right-handed and left-handed operators.

Fast processors enable sophisticated visualisation and operating applications.



# Epson SCARA G1: Powerful yet compact

SCARA G1 robots are suitable for use in the smallest of spaces. They are designed for precision processes with tolerances of thousandths of a millimetre. Such as in electronics production or precision machining processes. Their high-strength aluminium structure makes them ultra-light.



Epson SCARA		G1-171S	G1-221S	G1-171SZ	G1-221SZ
Design		4-axis, outwardly oriented horizontal articulated arm		3-axis, outwardly oriented horizontal articulated	
Load capacity		0.5/1 kg nom./max.		0.5/1.5 kg nom./max.	
Range	Horizontal (J1+J2)	175 mm (75+100)	225 mm (125+100)	175 mm (75+100)	225 mm (125+100)
	Vertical (J3)	100/80 mm (cleanroom)	100/80 mm (cleanroom)	100/80 mm (cleanroom)	100/80 mm (cleanroom)
	Orientation (J4)	+/-360°	+/-360°	-	-
Repeatability	Horizontal (J1+J2)	+/-0.005 mm	+/-0.008 mm	+/-0.005 mm	+/-0.008 mm
	Vertical (J3)	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 mm
	Orientation (J4)	+/-0.01°	+/-0.01°	-	-
Moment of inertia		0.0003/0.004 kg m <sup>2</sup> nom./max.	0.0003/0.004 kg m <sup>2</sup> nom./max.	-	-
User cabling		Electrical: connections for 1x 15-pin and 1x 9-pin D-Sub connectors Pneumatic: connections for compressed air supply (1 x Ø 4 mm and 2 x Ø 6 mm)			
Z axis		Ø 8 mm, H 7 mm			
Insertion force		Permanent 50 (N)			
Weight		8 kg			
Controller		RC700-A			
Manipulator design		Mounting option for floor, cleanroom (ISO3) & ESD			
Available options		Extended power and signal cable (5 m / 10 m / 20 m), bellows			

## What's included:

- Epson robot and controller
- Epson RC+ program CD including simulator
- Mounting bracket for the robot controller
- 70g grease for Z axis
- 3m motor and signal cable
- Plug for emergency stop
- Plug for standard inputs and outputs
- Plug set for user cabling
- USB programming cable
- CD Manuals
- Installation/safety manual

## Manipulator options

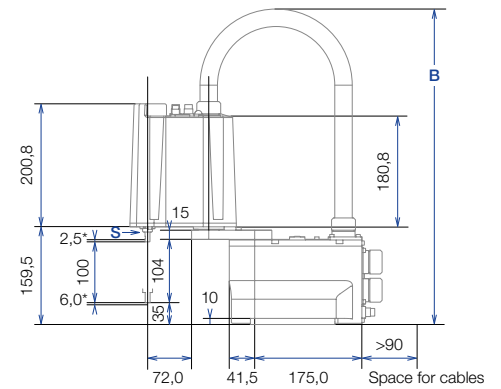
- Extended power and signal cable (5m/10m/20m)
- Bellows option for mounting on Z axis to protect the spindle and the environment from contamination



## Epson SCARA G1 dimensions

	G1-171S	G1-221S	G1-171SZ	G1-221SZ
	4-axis	4-axis	3-axis	3-axis
	Outwardly oriented horizontal articulated arm			
A	75 mm	125 mm	75 mm	125 mm
B	515 mm max.	545 mm max.	515 mm max.	545 mm max.

## Side view



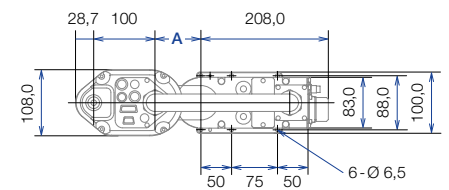
\*shows travel range via mechanical stoppers

## Working range Epson SCARA G1

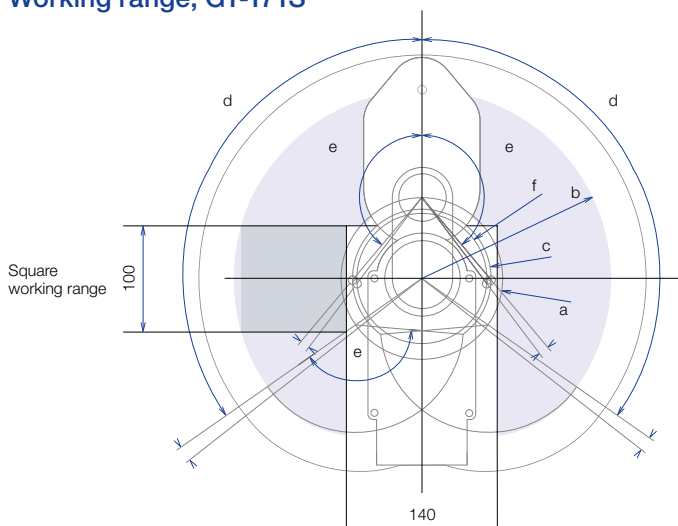
	G1-171S	G1-221S	G1-171SZ	G1-221SZ
	4-axis	4-axis	3-axis	3-axis
	Outwardly oriented horizontal articulated arm			
a	75 mm	125 mm	75 mm	125 mm
b-a	100 mm	100 mm	100 mm	100 mm
c	64,3 mm	59,6 mm	70,9 mm	89,2 mm
d	125°	125°	125°	125°
e	140°	152°	135°	135°
f	60,4 mm	52,8 mm	69,2 mm	82,2 mm

- a Length of the 1st arm
- b Length of the 2nd arm
- c Working range
- d Working range of the 1st axis
- e Working range of the 2nd axis
- f Range of the mechanical stopper

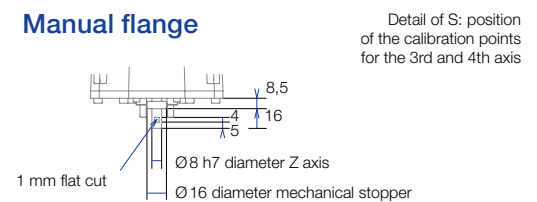
## Top view standard



## Working range, G1-171S



## Manual flange



More information, including CAD data can be found at: [www.epson.com/robots](http://www.epson.com/robots)

# Epson SCARA G3: It's all in the curve



The SCARA G3 has a small footprint with a large working area. And because many assembly tasks can only be performed in one arm orientation, we've developed the Epson G3 series with a curved arm to the left or right. This ergonomic feature allows the maximum square working area to be increased by up to 40%.

Epson SCARA		G3-251 S	G3-301S, G3-301S-L, G3-301S-R	G3-351S, G3-351S-L, G3-351S-R
Design		Outwardly oriented horizontal articulated arm		
Load capacity		1/3 kg nom./max.		1/3 kg nom./max.
Range	Horizontal (J1+J2)	250 mm (120+130)	300 mm (170+130)	350 mm (220+130)
	Vertical (J3) Orientation (J4)	150 or 120 mm (cleanroom) +/-360°	150 or 120 mm (cleanroom) +/-360°	150 or 120 mm (cleanroom) +/-360°
Repeatability	Horizontal (J1+J2)	+/-0.008 mm	+/-0.010 mm	+/-0.010 mm
	Vertical (J3) Orientation (J4)	+/-0.010 mm +/-0.005°	+/-0.010 mm +/-0.005°	+/-0.010 mm +/-0.005°
Moment of inertia		0.005/0.05 kg m <sup>2</sup> nom./max.	0.005/0.05 kg m <sup>2</sup> nom./max.	0.005/0.05 kg *m <sup>2</sup> nom./max.
User cabling		Electrical: connection for 1x 15-pin D-Sub connector Pneumatic: connections for compressed air supply (1 x Ø 4 mm and 2 x Ø 6 mm)		
Z axis		Ø 16 mm, H 7 mm/11 mm outer/inner		
Insertion force		Permanent 150 (N)		
Weight		14 kg		
Controller		RC700-A		
Manipulator design		Mounting option for floor cleanroom (ISO3) & ESD	Mounting option for floor, Multimount	
Available options		Extended power and signal cable (5 m/10 m/20 m), bellows, Force Sensor		

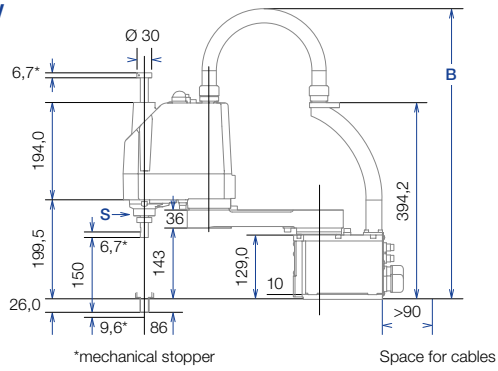
## What's included:

- Epson robot and controller
- Epson RC+ program CD including simulator
- Mounting bracket for the robot controller
- 70g grease for Z axis
- 3m motor and signal cable
- Plug for emergency stop
- Plug for standard inputs and outputs
- Plug set for user cabling
- USB programming cable
- CD manuals
- Installation/safety manual

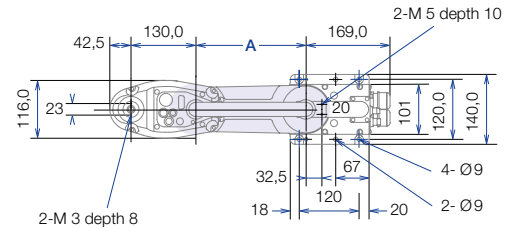
## Manipulator options

- Extended power and signal cable (5m/10m/20m)
- Tool adapter for easy installation of end effectors on Z axis
- Bellows option for mounting on Z axis to protect the spindle and the environment from contamination
- Epson Force Sensor for maximum precision in force-controlled applications

### Side view



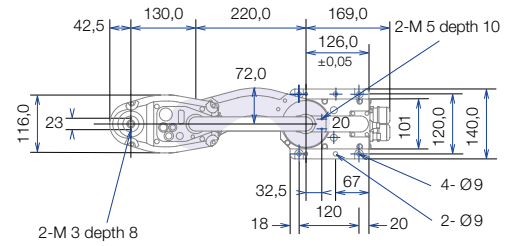
### Top view standard



### Epson SCARA G3 dimensions

	G3-251S	G3-301S	G3-351S
A	120 mm	170 mm	220 mm
B	545 mm max.	575 mm max.	595 mm max.

### Top view curved



### Working range, Epson SCARA G3

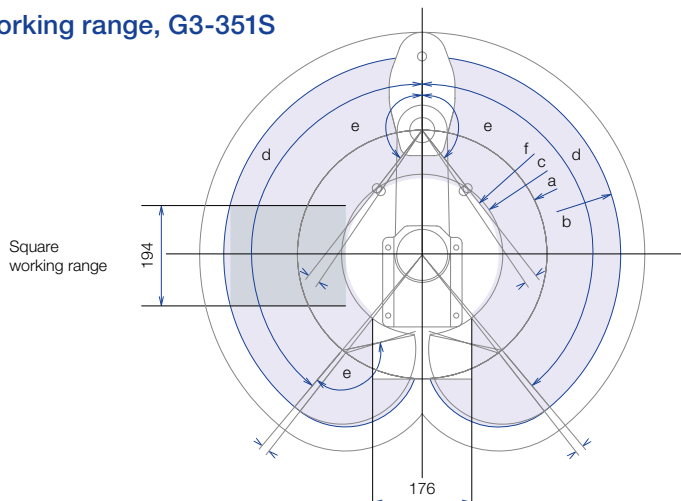
	G3-251S	G3-301S	G3-351S	G3-301S-L	G3-301S-R	G3-351S-L	G3-351S-R
a	120 mm	170 mm	220 mm	170 mm	170 mm	220 mm	220 mm
b-a	130 mm	130 mm	130 mm	130 mm	130 mm	130 mm	130 mm
c	84 mm	104.8 mm	142.3 mm	120.7 mm	120.7 mm	191.6 mm	191.6 mm
c1	-	-	-	86.8 mm	86.8 mm	100.3 mm	100.3 mm
d	140°	140°	140°	150°	125°	165°	110°
d1	-	-	-	125°	150°	110°	165°
e	141°	142°	142°	150°	135°	165°	120°
e1	-	-	-	135°	150°	120°	165°
f	79.3 mm	96.2 mm	134.2 mm	79.5 mm	79.5 mm	97 mm	97 mm
f1	-	-	-	113.2 mm	113.2 mm	183 mm	183 mm

- a Length of the 1st arm
- b Length of the 2nd arm

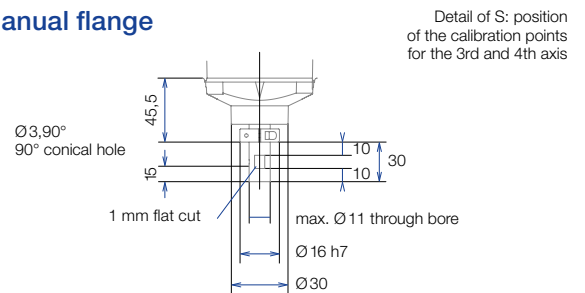
- c, c1 Working range
- d, d1 Working range of the 1st axis

- e, e1 Working range of the 2nd axis
- f, f1 Range of the mechanical stopper

### Working range, G3-351S



### Manual flange



This and other information, including CAD data can be found at: [www.epson.com/robots](http://www.epson.com/robots)

# Epson SCARA G6: The efficiency class

Thanks to its unique design, the SCARA G6 can perform tasks that usually require a 600mm arm length with an arm length of just 550mm. Ideally suited to applications in which high speed and maximum precision are required, such as mechanical production and electrical components, pick-and-place applications, small component placement, dosing and feeding.



Epson SCARA	G6-45xS	G6-55xS	G6-65xS
Design	Outwardly oriented horizontal articulated arm		
Load capacity	3/6 kg nom./max.		3/6 kg nom./max.
Range	Horizontal (J1+J2) 450 mm (200+250)	550 mm (300+250)	650 mm (400+250)
	Vertical (J3)	x=1 180 or 150 mm (cleanroom, IP54 and IP65) x=3 330 or 300 mm (cleanroom, IP54 and IP65)	
	Orientation (J4)	+/-360°	+/-360°
Repeatability	Horizontal (J1+J2) Vertical (J3) Orientation (J4)	+/-0.015 mm +/-0.010 mm +/-0.005°	+/-0.015 mm +/-0.010 mm +/-0.005°
Moment of inertia	0.01/0.12kg m <sup>2</sup> nom./max.	0.01/0.12kg m <sup>2</sup> nom./max.	0.01/0.12kg m <sup>2</sup> nom./max.
User cabling	Electrical: connections for 1x 15-pin and 1x 9-pin D-Sub connectors Pneumatic: connections for compressed air supply (1 x Ø 4 mm and 2 x Ø 6 mm)		
Z axis	Ø 20 mm, H 7 mm/14 mm outer/inner		
Insertion force	Permanent 150 (N)		
Weight	27 kg floor 27 kg ceiling 29 kg wall	27 kg floor 27 kg ceiling 29 kg wall	28 kg floor 28 kg ceiling 29.5 kg wall
Controller	RC700-A		
Manipulator design	Mounting option for floor, wall, ceiling, cleanroom (ISO3) & ESD, IP Protection class: Standard/IP54/IP65		
Available options	Extended power and signal cable (5m/10m/20m), tool adapter, for floor and ceiling mounting: cable outlet directly below or above the base (power/signal cable and user cabling), external wiring unit, bellows, Force Sensor		

## What's included:

- Epson robot and controller
- Epson RC+ program CD including simulator
- Mounting bracket for the robot controller
- 70g grease for Z axis
- 3m motor and signal cable
- Plug for emergency stop
- Plug for standard inputs and outputs
- Plug set for user cabling
- USB programming cable
- CD manuals
- Installation/safety manual

## Manipulator options

- Extended power and signal cable (5m/10m/20m)
- Tool adapted for easy installation of end effectors on Z axis
- External wiring unit: the external empty conduit enables the clean supply of additional user media to each end effector (recommended for fluid lines)
- Downward cable to allow motor and signal lines to be fed through a hole in the mounting plate so cables are not visible in the robot cell (ideal for cleanroom applications)
- Bellows option for mounting on Z axis to protect the spindle and the environment from contamination
- Epson Force Sensor for maximum precision in force-controlled applications

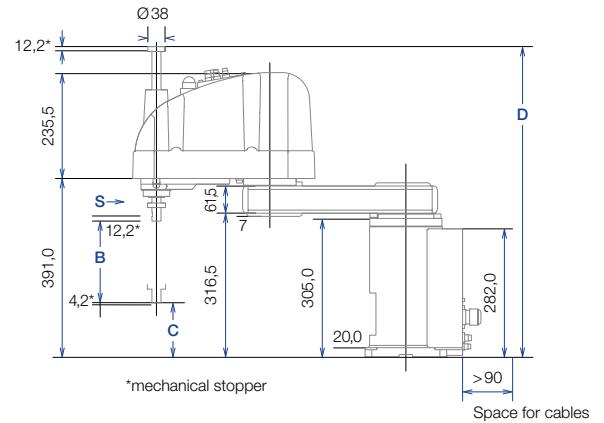
## Epson SCARA G6 dimensions

	G6-45xS	G6-55xS	G6-65xS
A	200 mm	300 mm	400 mm
B	-	300 mm	330 mm
C	-	119 mm	-31 mm
D	-	684 mm	834 mm

	G6-XX1S	G6-XX3+S
B	300 mm	330 mm
C	119 mm	-31 mm
D	684 mm	834 mm

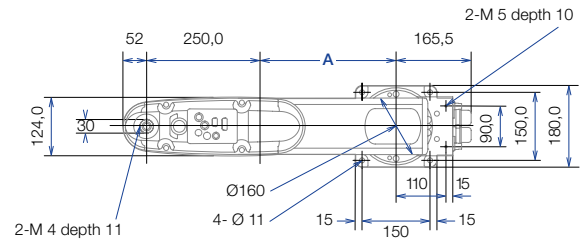
## Side view



## Working range, Epson SCARA G6

		G6-45xS	G6-55xS	G6-65xS
a	-	200 mm	300 mm	400 mm
b-a	-	250 mm	250 mm	250 mm
c	Z: 0 to -270	134.8 mm	161.2 mm	232 mm
	Z: -270 to -330	143.5 mm		
d	-	152°	152°	152°
e	Z: 0 to -270	147.5°	147.5°	147.5°
	Z: -270 to -330	145°		
f	-	124.4 mm	133.8 mm	207.5 mm

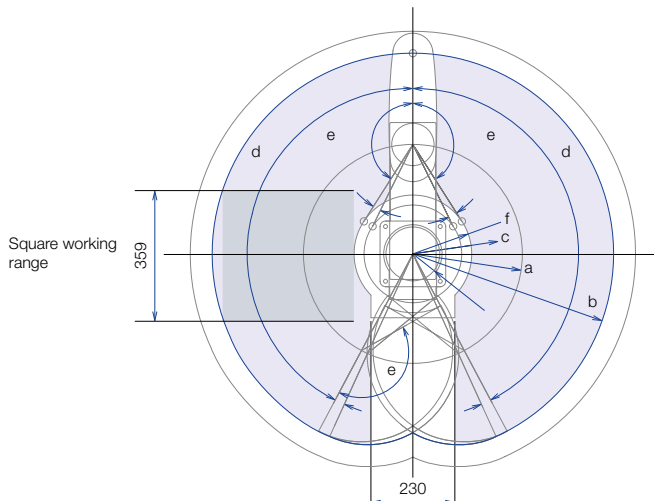
## Top view standard



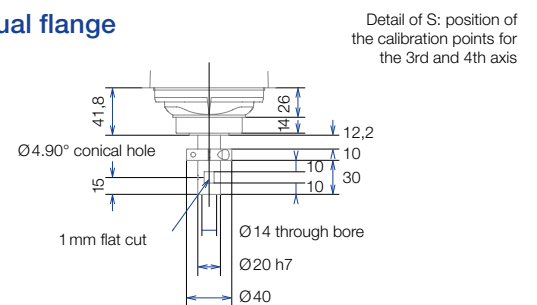
In the Z-range: 0 to -270 mm, the range is limited by the collision area of the manipulator body and the arm.

- a Length of the 1st arm
- b Length of the 2nd arm
- c Working range
- d Working range of the 1st axis
- e Working range of the 2nd axis
- f Range of the mechanical stopper

## Working range, Epson SCARA G6



## Manual flange



This and other information, including CAD data can be found at: [www.epson.com/robots](http://www.epson.com/robots)

# Epson SCARA G10: Fast and powerful

Featuring a solid, stiff arm, the Epson SCARA G10 impresses with ultra-fast speeds and high load capacities. The compact G10 is designed for applications such as the assembly of heavy components, packaging, palletising, loading and unloading.



Epson SCARA		G10-65xS	G10-85xS
Design		Outwardly oriented horizontal articulated arm	
Load capacity		5/10 kg nom./max.	
Range	Horizontal (J1+J2)	650 mm (250+400)	850 mm (450+400)
	Vertical (J3)	x=1 180 or 150 mm (cleanroom, IP54 and IP65) x=4 420 or 390 mm (cleanroom, IP54 and IP65)	
	Orientation (J4)	+/- 360°	+/- 360°
Repeatability	Horizontal (J1+J2)	+/- 0.025 mm	+/- 0.025 mm
	Vertical (J3)	+/- 0.010 mm	+/- 0.010 mm
	Orientation (J4)	+/- 0.005°	+/- 0.005°
Moment of inertia		0.02/0.25 kg m <sup>2</sup> nom./max.	
User cabling		Electrical: connections for 1x 15-pin and 1x 9-pin D-Sub connectors Pneumatic: connections for compressed air supply (1 x Ø 4 mm and 2 x Ø 6 mm)	
Z axis		Ø 25 mm, H 7 mm/18 mm outer/inner	
Insertion force		Permanent 250 (N)	
Weight		46 kg floor	48 kg floor
		46 kg ceiling	48 kg ceiling
		51 kg wall	53 kg wall
Controller		RC700-A	
Manipulator design		Mounting option for floor, wall, ceiling, cleanroom (ISO3) & ESD, IP Protection class: Standard/IP54/IP65	
Available options		Extended power and signal cable (5 m/10 m/20 m), tool adapter, for floor and ceiling mounting: cable outlet directly below or above the base (power/signal cable and user cabling), external wiring unit, bellows, Force Sensor	

## What's included:

- Epson robot and controller
- Epson RC+ program CD including simulator
- Mounting bracket for the robot controller
- 70g grease for Z axis
- 3m motor and signal cable
- Plug for emergency stop
- Plug for standard inputs and outputs
- Plug set for user cabling
- USB programming cable
- CD manuals
- Installation/safety manual

## Manipulator options

- Extended power and signal cable (5m/10m/20m)
- Tool adapted for easy installation of end effectors on Z axis
- External wiring unit: the external empty conduit enables the clean supply of additional user media to each end effector (recommended for fluid lines)
- Downward cable to allow motor and signal lines to be fed through a hole in the mounting plate so cables are not visible in the robot cell (ideal for cleanroom applications)
- Bellows option for mounting on Z axis to protect the spindle and the environment from contamination
- Epson Force Sensor for maximum precision in force-controlled applications

## Epson SCARA G10 dimensions

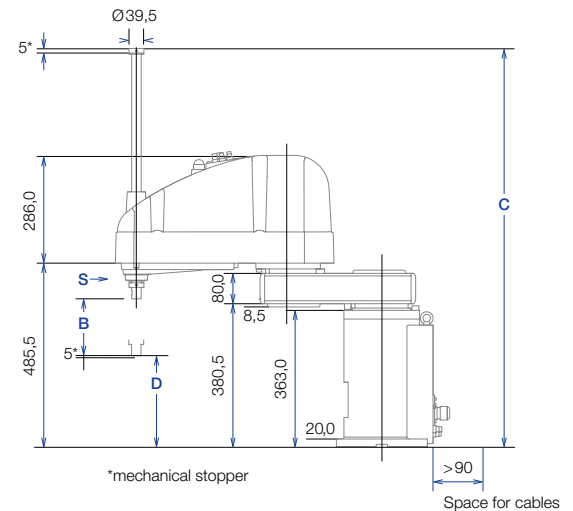
	G10-65xS	G10-85xS	G10-XX1S	G10-XX4S
A	250 mm	450 mm	–	–
B	–	–	180 mm	420 mm
C	–	–	813.5 mm	1053.5 mm
D	–	–	213.5 mm	-26.5 mm

## Working range, Epson SCARA G10

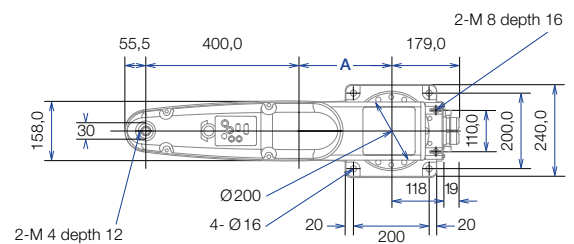
	G10-65xS	G10-85xS
a	250 mm	450 mm
b-a	400 mm	400 mm
c	212.4 mm	207.8 mm
d	152°	152°
e	152.5°	152.5°
f	199.4 mm	183.3 mm

- a Length of the 1st arm
- b Length of the 2nd arm
- c Working range
- d Working range of the 1st axis
- e Working range of the 2nd axis
- f Range of the mechanical stopper

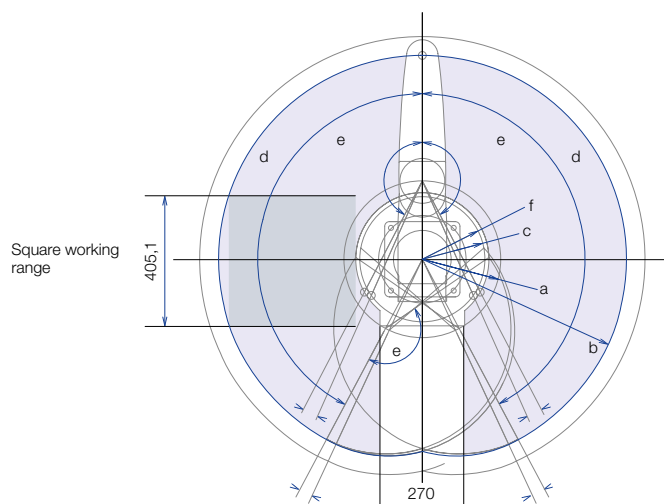
## Side view



## Top view standard

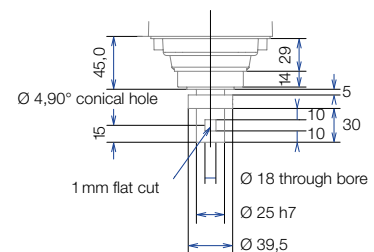


## Working range, G10-65 x S



## Manual flange

Detail of S: position of the calibration points for the 3rd and 4th axis



More information, including CAD data can be found at:  
[www.epson.com/robots](http://www.epson.com/robots)

# Epson SCARA G20: Extended arm with mighty strength



The Epson SCARA G20 is suitable for very high loads with a weight of up to 20kg. An arm length of 1,000 or 850mm ensures that a large working area is covered. Due to the high moment of inertia of the U axis, heavy loads can be moved quickly and reliably – without vibrations of the robot's arm that is often found with many competing models with a similar arm length.

Epson SCARA	G20-85xS	G20-A0xS
Design	Outwardly oriented horizontal articulated arm	
Load capacity	10/20 kg nom./max.	
Range	Horizontal (J1+J2) 850 mm (450+400)	1000 mm (600+400)
	Vertical (J3) x=1 180 or 150 mm (cleanroom, IP54 and IP65) x=4 420 or 390 mm (cleanroom, IP54 and IP65)	
	Orientation (J4) +/- 360°	+/- 360°
Repeatability	Horizontal (J1+J2) +/- 0.025 mm	+/- 0.025 mm
	Vertical (J3) +/- 0.010 mm	+/- 0.010 mm
	Orientation (J4) +/- 0.005°	+/- 0.005°
Moment of inertia	0.05/0.45 kg * m <sup>2</sup> nom./max.	
User cabling	Electrical: connections for 1x 15-pin and 1x 9-pin D-Sub connectors Pneumatic: connections for compressed air supply (1 x Ø 4 mm and 2 x Ø 6 mm)	
Z axis	Ø 25 mm, H 7 mm/18 mm outer/inner	
Insertion force	Permanent 250 (N)	
Weight	48 kg floor 48 kg ceiling 53 kg wall	50 kg floor 50 kg ceiling 55 kg wall
Controller	RC700-A	
Manipulator design	Mounting option for floor, wall, ceiling, cleanroom (ISO3) & ESD, IP Protection class: Standard/IP54/IP65	
Available options	Extended power and signal cable (5 m/10 m/20 m), tool adapter, for floor and ceiling mounting: cable outlet directly below or above the base (power/signal cable and user cabling), external wiring unit, bellows, Force Sensor	

## What's included:

- Epson robot and controller
- Epson RC+ program CD including simulator
- Mounting bracket for the robot controller
- 70g grease for Z axis
- 3m motor and signal cable
- Plug for emergency stop
- Plug for standard inputs and outputs
- Plug set for user cabling
- USB programming cable
- CD Manuals
- Installation/safety manual

## Manipulator options

- Extended power and signal cable (5m/10m/20m)
- Tool adapted for easy installation of end effectors on Z axis
- External wiring unit: the external empty conduit enables the clean supply of additional user media to each end effector (recommended for fluid lines)
- Downward cable to allow motor and signal lines to be fed through a hole in the mounting plate so cables are not visible in the robot cell (ideal for cleanroom applications)
- Bellows option for mounting on Z axis to protect the spindle and the environment from contamination
- Epson Force Sensor for maximum precision in force-controlled applications



## Epson SCARA G20 dimensions

	G20-85xS	G20-A0xS	G20-XX1S	G20-XX4S
A	450 mm	600 mm	–	–
B	–	–	180 mm	420 mm
C	–	–	813.5 mm	1053.5 mm
D	–	–	213.5 mm	-26.5 mm

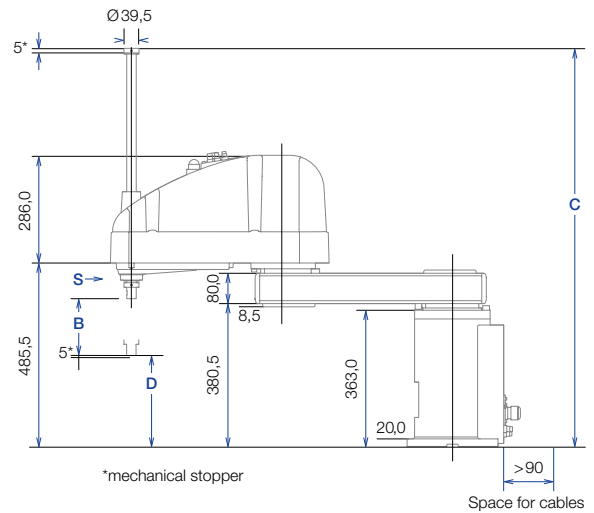
## Working range, Epson SCARA G20

	G20-85xS	G20-A0xS
a	450 mm	600 mm
b-a	400 mm	400 mm
c	207.8 mm	307 mm
d	152°	152°
e	152.5°	152.5°
f	183.3 mm	285.4 mm

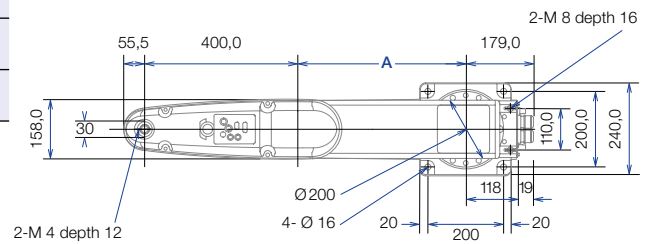
- a Length of the 1st arm  
b Length of the 2nd arm  
c Working range

- d Working range of the 1st axis  
e Working range of the 2nd axis  
f Range of the mechanical stopper

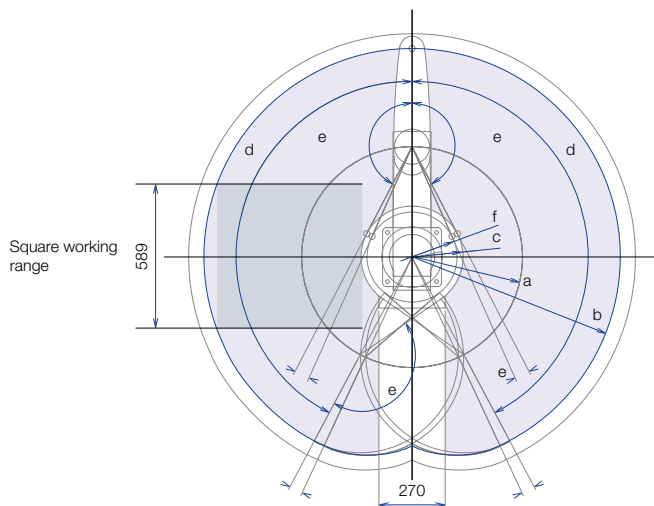
## Front view



## Top view standard

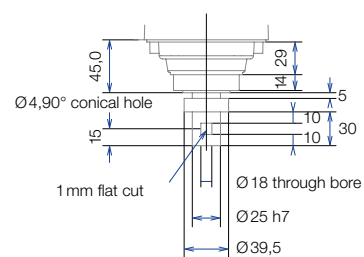


## Working range, G20-85 x S



## Manual flange

Detail of S: position of the calibration points for the 3rd and 4th axis



More information, including CAD data can be found at:  
[www.epson.com/robots](http://www.epson.com/robots)

# 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

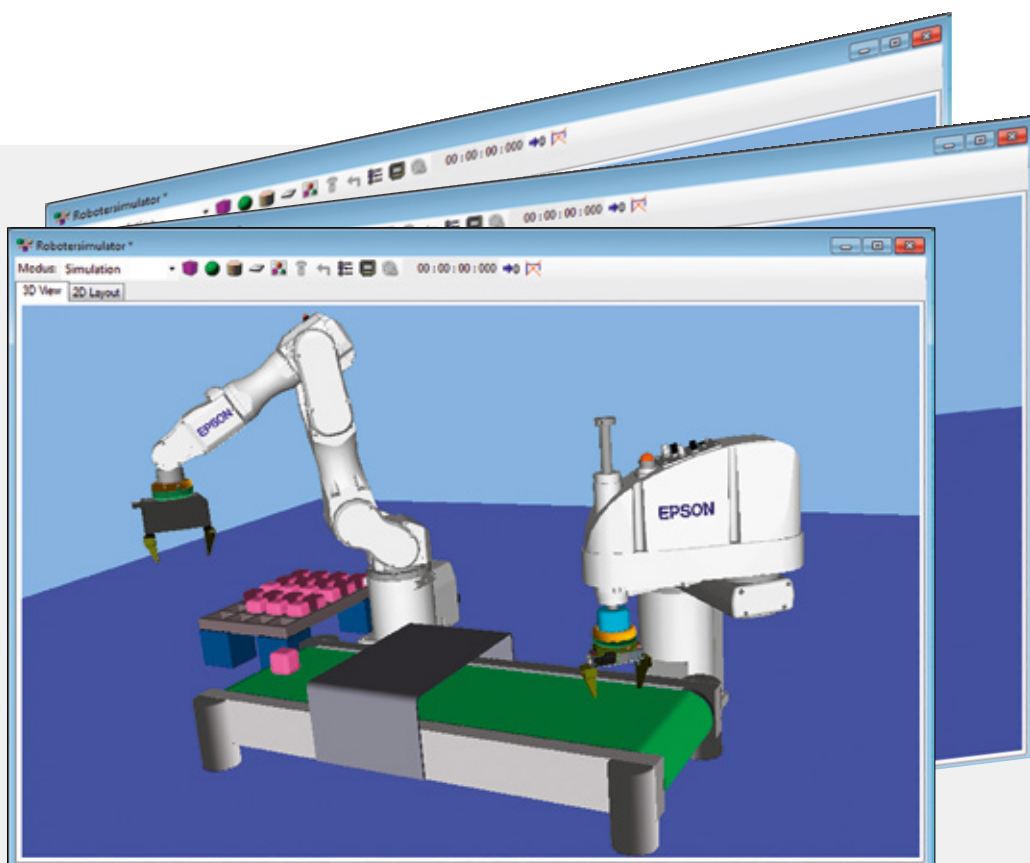
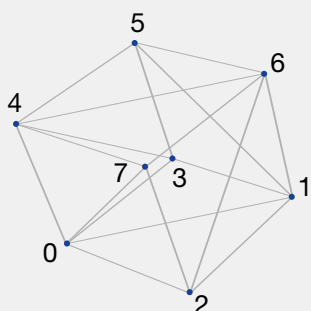
Completing the program validation process before the robots are delivered enables you to create programs at the same time, with the system capable of displaying and evaluating even complex motions. Collision risks are identified and equipment damage is prevented.

## 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.

## 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 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 N2 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 class 1 cleanroom robot

### 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 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

Call us on  
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