EPSON

- SCARA Robots
- 6-axis Robots
- Controllers
- Software
- Vision System
- Part Feeding
- Force Sensing
- Options

Epson Robots

*Market share based on unit sales of industrial SCARA robots, 2011-2022. (Source: Fuji Keizai "2012 - 2023 Reality and Future Outlook of Worldwide Robot Market").

Engineering Precision.
Innovating Sustainability.

Here at Epson, our technology is driven by our commitment to society and the environment. We focus on the essential and eliminate the unnecessary to create greater value. With this philosophy at our core, Epson has always strived to meet sustainability needs and will continue to do so.

Direct inquiries to

SEIKO EPSON CORPORATION

Manufacturing Solusions Division

Toyoshina Plant
6925 Toyoshinatazawa, Azumino-shi Nagano 399-8285

URL https://corporate.epson/en/products/robot-systems.html

Safety Precautions Please read associated manuals carefully before installing or using our robot products. Always use products properly per guidelines in the manuals.

Epson Robots

A proven reputation for precision and reliability at the leading edge of industrial robot design

Ever since we developed our first SCARA robots for wristwatch assembly over 40 years ago, Epson has been a leader in advanced robotics technology. Today, our long experience in energy-efficient, compact, high-precision technologies enables us to offer a wide range of slim, compact, and lightweight robots. And with the addition of original Epson force sensing and image processing technologies, we are achieving even higher levels of reliability, speed, precision, and productivity in process automation. Whatever challenges you face, Epson industrial robots are continuously evolving to meet the diversifying needs of manufacturers worldwide.

1983 — Epson mass-production assembly robot introduced

1986 — ISO Class 1 cleanroom compliance achieved

Multitasking introduced

1994 — Microsoft® Windows® OS support introduced

Variable arc motion introduced

1997 — Short-arm SCARA robot introduced

Antistatic system introduced

2001 — Wall/ceiling mount SCARA robots introduced

2009 — Compact high-speed 6-axis C3 robot introduced

Ceiling-mount RS3 SCARA robot with 360˚ rotation introduced

2016 — N2 6-axis robot with slim folding arm introduced

2017 — T3 SCARA robot with built-in controller

VT6 6-axis robot with built-in controller

2020 — LS series SCARA robots with high-cost performance

2023 — GX series SCARA robots with safety function

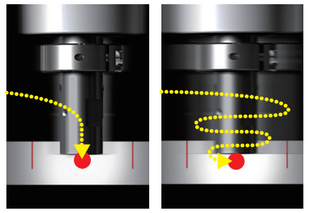
Why Epson Robots?

Epson, the global leader in robotics technology, offers you an impressive combination of high performance and operating ease. Backed by a worldwide reputation for reliability and outstanding customer support, Epson robots are bringing high-productivity automated manufacturing to an ever-expanding range of industries worldwide.

Low TCO and high reliability for the ultimate in automated productivity

High productivity

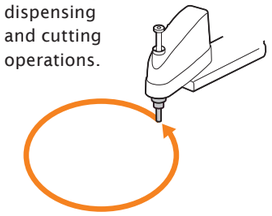
- Proprietary Epson technology reduces residual vibration to ensure high speed and precision for reduced takt time.
- Slim, lightweight body design reduces work cell space requirements while enabling higher productivity.



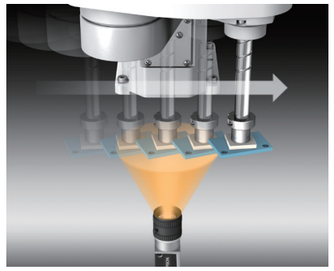
Epson robot　Conventional robot
*Image

High quality

- Extremely accurate toolhead positioning enables high-precision dispensing and cutting operations.

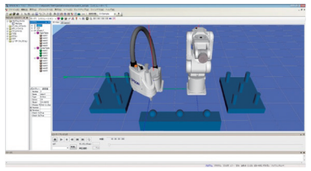


- Integrated machine vision systems boost setup ease and workpiece handling accuracy.



Easy operation

- Intuitive graphical interface makes programming easy even for first-time users.
- From program testing to full production, improved operating ease helps reduce cost and manpower requirements.



3D simulator for workcell layout and toolpath program testing

Software Integration

Vibration control technology
Epson Robots
Vision technology
Sensing technology

Global support

Epson supports robotics customers worldwide through an international network of sales and service offices, providing information about equipment configuration options and performing simulations of the tasks that customers want robots to perform. We are also partnered with systems integrators around the world, and can provide end-to-end turnkey solutions to meet virtually any process automation need.

Product lineup

	SCARA Robots													6-axis Robots						
	G/GX Series					LS Series				T Series		RS Series		C Series			N Series			VT6
	Top-class speed, repeatability, and low residual vibration					Proven reliability and functionality				Built-in controller for cost-efficient automation		Original space-saving design for high productivity		Slim, lightweight body for greater installation flexibility			Original compact design for greater freedom of movement in tight quarters			Compact, easy setup, low TCO
Publication page	▶ P.7	▶ P.9	▶ P.13	▶ P.17		▶ P.21	▶ P.23	▶ P.25	▶ P.27	▶ P.29	▶ P.31	▶ P.33	▶ P.35	▶ P.37	▶ P.39	▶ P.43	▶ P.45	▶ P.47	▶ P.49	▶ P.51
Model name	G1	GX4	GX8	GX10	GX20	LS3	LS6	LS10	LS20	T3	T6	RS3	RS4	C4	C8	C12	N2	N6-A850	N6-A1000	VT6L
Payload (kg)	4-axis 1 3-axis 1.5	Max 4	Max 8	Max 10	Max 20	Max 3	Max 6	Max 10	Max 20	Max 3	Max 6	Max 3	Max 4	Max 4	Max 8	Max 12	Max 2.5	Max 6	Max 6	Max 6
Arm length (mm)	175 225	250 300 350	450 550 650	650 850	850 1000	400	500 600 700	600 700 800	800 1000	400	600	350	550	600 900	700 900 1400	1400	450	850	1000	900
Environmental specifications	STD Class 3	STD ESD Class 3	STD ESD Class 3 IP65	STD *1 Class 3 IP65	STD *1 Class 3 IP65	STD Class 4	STD Class 4	STD Class 4	STD Class 4	STD *1	STD *1	STD Class 3	STD Class 3	STD Class 3	STD Class 3 C8, C8L Class 4 C8XL IP67	STD Class 4	STD	STD Class 5	STD Class 5	STD Class 4 IP67
Installation specifications	Table Top mount	Table Top mount Wall/ceiling multi-layout mount	Table Top mount Wall mount Ceiling mount	Table Top mount Wall mount Ceiling mount	Table Top mount Wall mount Ceiling mount	Table Top mount	Table Top mount	Table Top mount	Table Top mount	Table Top mount	Table Top mount	Ceiling mount	Ceiling mount	Table Top mount Ceiling mount	Table Top mount Wall mount Ceiling mount	Table Top mount	Table Top mount Ceiling mount	Ceiling mount	Table Top mount Ceiling mount	Table Top mount Wall mount *2 Ceiling mount *2
Compatible controller	RC700-A	RC700-E	RC700-E	RC700-E	RC700-E	RC90-B	RC90-B	RC90-B	RC90-B	Built-in controller	Built-in controller	RC700-A	RC700-A	RC700-A	RC700-A	RC700-A	RC700-A	RC700-A	RC700-A	Built-in controller

*1: IP20 *2: Standard model only

STD	Standard
Class 3	Cleanroom model ISO 03 (Class 10 equiv.) ESD suppression
Class 4	Cleanroom model ISO 04 (Class 100 equiv.)
Class 5	Cleanroom model ISO 05 (Class 100 equiv.)
IP65	Protection model IP65
IP67	Protection model IP67

Table Top mount

Wall mount

Ceiling mount

Wall/ceiling multi-layout mount

Controllers	▶ P.53
GYROPLUS Technology	▶ P.56
Software	▶ P.57
Epson RC+ Express	▶ P.62

Safety solution of Epson robot	▶ P.63
Vision system	▶ P.64
Part feeding	▶ P.67
Force sensing	▶ P.69

Software options	▶ P.73
Robot controller options	▶ P.77
Manipulator options	▶ P.78
Option quick-reference table	▶ P.79
Option setup example	▶ P.80

G1

Compact, high-rigidity body for precision assembly and press-fit applications

- Our lightest G series robot (8kg)
- Available with 175mm or 225mm arm
- 3-axis model available for screw-in, press-fit with hand offset, and dispensing tasks

Model Number: G1 - 17 1 S □ - UL

- Payload: 1: 1kg
- Arm length: 17: 175mm; 22: 225mm
- Joint #3 stroke: 1: 100mm (80mm: Cleanroom-model)
- Axis: □: 4-axis spec; Z: 3-axis spec
- Environment: S: Standard; C: Cleanroom & ESD
- UL specification: □: Non UL compliant; -UL: UL compliant

Specifications

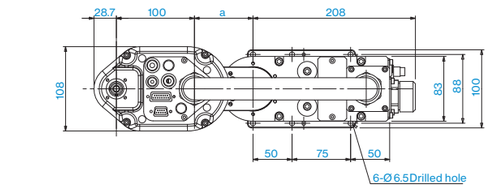
Model name		G1			
		4-axis		3- axis	
Model number		G1-171□	G1-221□	G1-171□Z	G1-221□Z
Arm length	Arm #1, #2	175 mm	225 mm	175 mm	225 mm
Payload	Rated	0.5 kg		0.5 kg	
	Maximum	1 kg		1.5 kg	
Repeatability	Joints #1, #2	±0.005 mm	±0.008 mm	±0.005 mm	±0.008 mm
	Joint #3	±0.01 mm		±0.01 mm	
	Joint #4	±0.01 deg		—	
Standard cycle time*1		0.29 sec	0.30 sec	0.29 sec	0.30 sec
Max. operating speed	Joints #1, #2	2630 mm/sec	3000 mm/sec	2630 mm/sec	3000 mm/sec
	Joint #3	1200 mm/sec		1200 mm/sec	
	Joint #4	3000 deg/sec		—	
Joint #4 allowable moment of	Rated	0.0003 kg•m²		—	
inertia*2	Maximum	0.004 kg•m²		—	
Joint #3 down force		50 N			
Installation environment		Standard/Cleanroom*3 &ESD			
Mounting type		Table Top		Table Top	
Weight (cables not included)		8 kg		8 kg	
Applicable Controller		RC700-A			
Installed wire for customer use		15 Pin D-Sub, 9 Pin D-Sub			
Installed pneumatic tube for customer use		Φ6 mm x 2, Φ4 mm x 1: 0.59 MPa (6 kgf/cm²)			
Power		AC200-240 V Single phase			
Power Consumption*4		0.5 kVA			
Cable length		3 m/5 m/10 m/15 m/20 m			
Safety standard		CE, KC, UL			

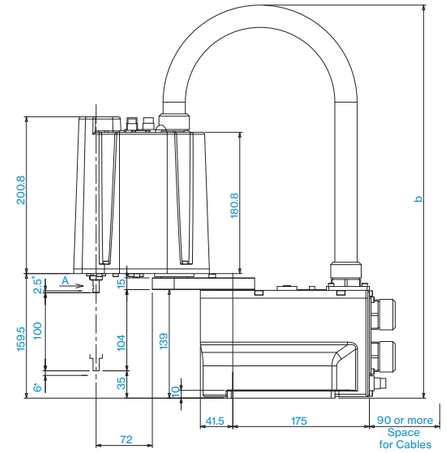
*1:Cycle time based on round-trip arch motion (100mm horizontal, 25mm vertical) with 0.5kg payload (path coordinates optimized for maximum speed) .
*2:When payload center of gravity is aligned with Joint #4 ; if not aligned with Joint #4, set parameters using INERTIA command.
*3:Complies with ISO Class 3 (ISO14644-1) and older Class 1 cleanroom standards.
*4: Varies according to operating environment and program.

Outer Dimensions (Table Top Mounting)

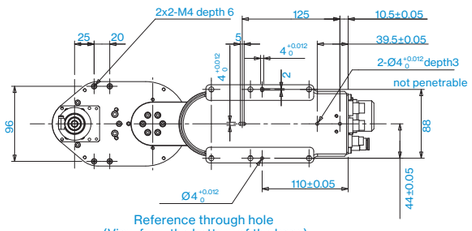
[Unit: mm]

Standard-model

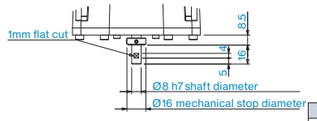




* indicates the stroke margin by mechanical stop.



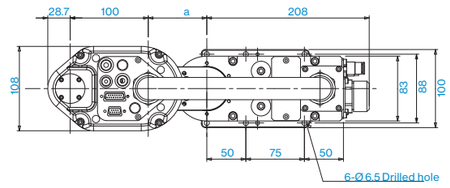
Reference through hole
(View from the bottom of the base)

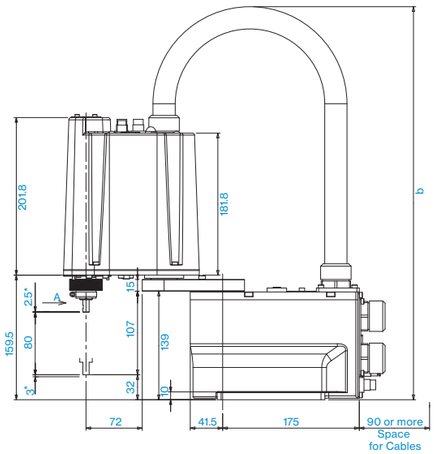


Detail of "A"
(Calibration point position of Joints #3 and #4)

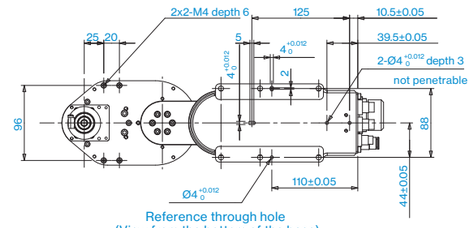
	G1_171S	G1_221S
a	75	125
b	Max.515	Max.545

Cleanroom-model

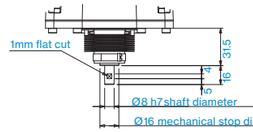




* indicates the stroke margin by mechanical stop.



Reference through hole
(View from the bottom of the base)

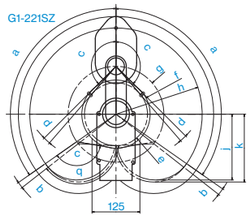


Detail of "A"
(Calibration point position of Joints #3 and #4)

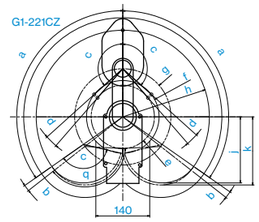
	G1_171C	G1_221C
a	75	125
b	Max.515	Max.545

Motion Range (Table Top Mounting)

G1-221SZ



G1-221CZ



Model	4-axis				3-axis			
	G1-171S	G1-171C	G1-221S	G1-221C	G1-171SZ	G1-171CZ	G1-221SZ	G1-221CZ
g Length of Arm #1 (mm)	75		125		75		125	
h-g Length of Arm #2 (mm)	100		100		100		100	
f Motion range	64.3		59.6	64.8	70.9	86.4	89.2	94.4
a Motion range of Joint #1 (°)	125		125		125			
c Motion range of Joint #2 (°)	140		152	149	135	123	135	132
e Mechanical stop area	60.4	62.6	52.8	56.2	69.2	82.5	82.2	
b Joint #1 angle to hit mechanical stop (°)	3		3		3			
d Joint #2 angle to hit mechanical stop (°)	3		4	5	1.3	3	4	7

GX4

GYROPLUS Technology

Compact body with rank-above technology for high speed and low vibration

- Handles small, heavy components and payloads up to 4kg
- Available with left- or right-curved arm for greater operating versatility
- A small robot with a long reach

Arm type

Straight arm

Curved arm

Model Number GX4 -□ 25 1 S □ □ □ □

Controller
- A : RC700-D
- B : RC700-E

Arm length
- 25 : 250mm
- 30 : 300mm
- 35 : 350mm

Joint #3 stroke
- 1 : 150mm Standard, ESD
- 1 : 120mm Cleanroom-model

Environment
- S : Standard
- E : ESD
- C : Cleanroom & ESD

Mounting type
- □ : Table Top Mounting
- M : Multiple Mounting

Cable mounting direction
- □ : Standard
- B : Bottom side (table top only)

Type
- □ : Standard
- R : Right-Curved
- L : Left-Curved

UL specification
- □ : Non UL compliant
- -UL : UL compliant

Specifications

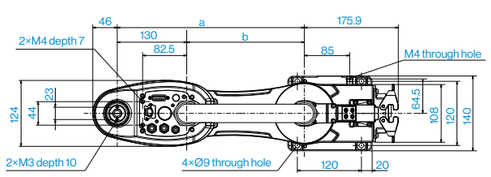
Model name		GX4		
Model number		**GX4-□251□□□**	**GX4-□301□□□**	**GX4-□351□□□**
Arm length	Arm #1, #2	250 mm	300mm	350 mm
Arm shape		Standard		Standard, Left-curved, Right-curved*1
Payload*2	Rated	2kg		
	Maximum	4kg		
Repeatability	Joints #1, #2	±0.008 mm	±0.01 mm	
	Joint #3	±0.01 mm		
	Joint #4	±0.005 deg		
Standard cycle time*3		0.33 sec	0.34 sec	0.35 sec
Max. operating speed	Joints #1, #2	3550 mm/sec	3950 mm/sec	4350 mm/sec
	Joint #3	1100 mm/sec		
	Joint #4	3000 deg/sec		
Joint #4 allowable moment of inertia*4	Rated	0.005 kg•m²		
	Maximum	0.05 kg•m²		
Joint #3 down force		150 N		
Installation environment		Standard (equivalent to IP20) , Cleanroom*5 & ESD*6 , ESD*6		
Mounting type		□ :Table top mounting, M:Multiple mounting		
Weight (cables not included)		Table top : 15 kg	Table top :15 kg Multiple 17 kg	Table top :16 kg Multiple 17 kg
Applicable Controller		A : RC700-D B : RC700-E		
Installed wire for customer use		15 Pin D-Sub x1, RJ45 8 pin x1		
Installed pneumatic tube for customer use		Φ4 mm x 2, Φ6 mm x 1 : 0.59 MPa (6 kgf/cm²)		
Power		AC200-240 Single phase		
Power Consumption*7		1.2 kVA		
Cable length		Standard : 3 m/5 m/10 m/15 m/20 m Flexible : 5 m/10 m/15 m/20 m		
Safety standard		CE, UKCA, KC, NRTL		

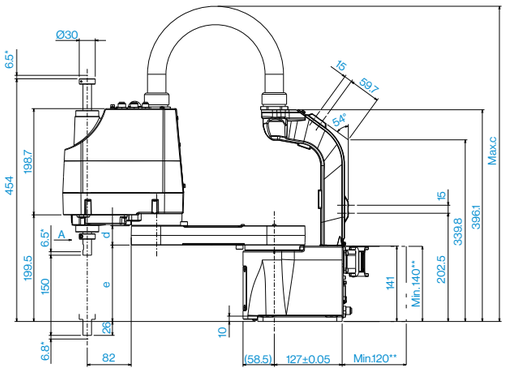
*1: The curved arm is only supported in 350mm arm table top model.
*2: Do not apply the load exceeding the maximum payload.
*3: Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical) at rated payload setting of table top model boost mode (path coordinates optimized for maximum speed)
*4: Set the parameters by the Inertia command according to the load and end effector status (refer to the instruction manual for the parameter calculation method).
*5: Complies with ISO Class 3 (ISO14644-1) and Fed-std209D Class 1 (less than 10 0.1 m particles per 28,317cm3:1cft) cleanroom standards.
*6: Main resin parts of the ESD model use conductive materials or apply plate processing. For the tip of the Manipulator (tool mounting part), we have confirmed that it is +/- 5 V or less even immediately after operating the measurement under our standard.
*7: Varies according to operating environment and program.

Outer Dimensions (Table Top Mounting)

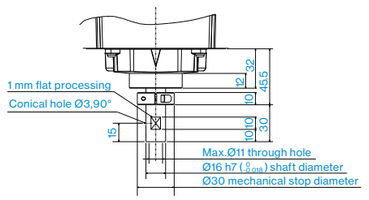
[Unit: mm]

Standard-model





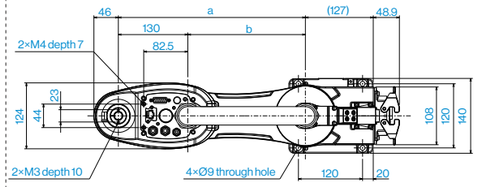
* indicates the stroke margin by mechanical stop.

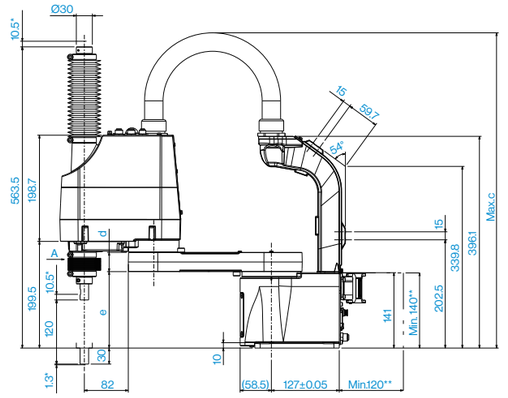


Detail of "A"
(Calibration point position of Joints #3 and #4)

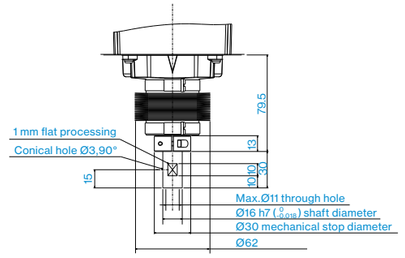
	GX4-□251S	GX4-□301S	GX4-□351S
a	250	300	350
b	120	170	220
C	560	585	610

Cleanroom-model





* indicates the stroke margin by mechanical stop.



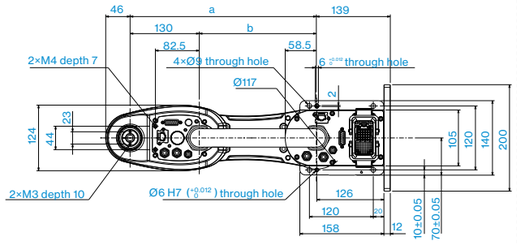
Detail of "A"
(Calibration point position of Joints #3 and #4)

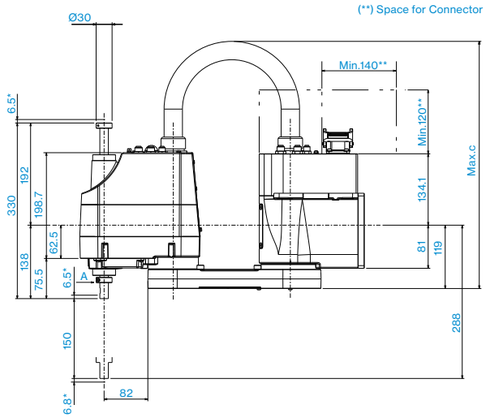
	GX4-□251C	GX4-□301C	GX4-□351C
a	250	300	350
b	120	170	220
C	560	585	610

Outer Dimensions (Multiple Mounting)

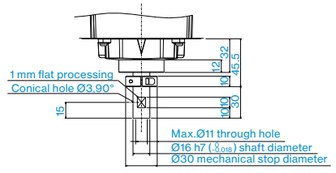
[Unit: mm]

Standard-model

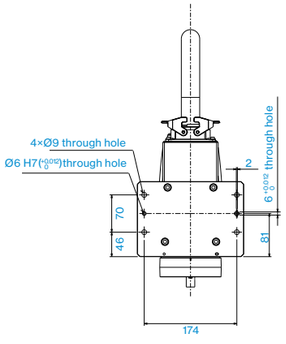




* indicates the stroke margin by mechanical stop.



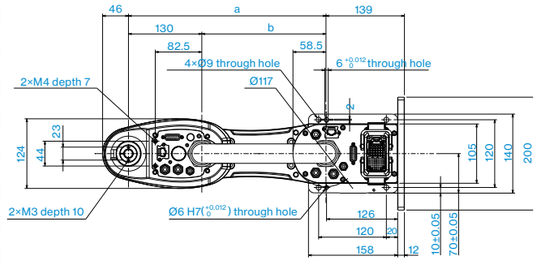
Detail of "A"
(Calibration point position of Joints #3 and #4)

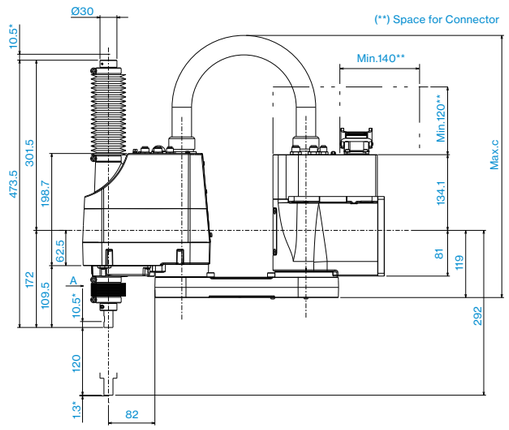


	GX4-□301SM	GX4-□351SM
a	300	350
b	170	220
C	475	500

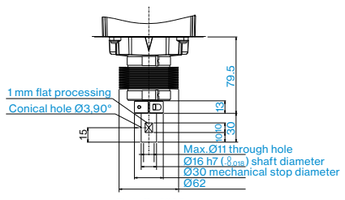
Reference through hole
(View from the bottom of the base)

Cleanroom-model

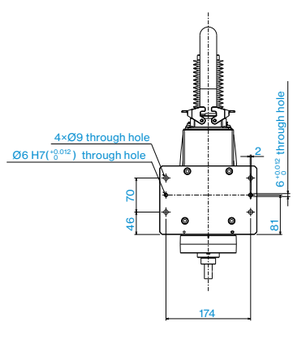




* indicates the stroke margin by mechanical stop.



Detail of "A"
(Calibration point position of Joints #3 and #4)



	GX4-□301CM	GX4-□351CM
a	300	350
b	170	220
C	475	500

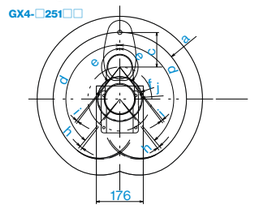
Reference through hole
(View from the bottom of the base)

Motion Range (Table Top Mounting)

[Unit: mm]

Straight Arm

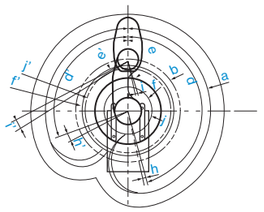
GX4-□251□□



Model		Straight Arm					
		GX4-□251S	GX4-□251C	GX4-□301S	GX4-□301C	GX4-□351S	GX4-□351S
a	Length of Arm #1 + Arm #2 (mm)	250		300		350	
c	Length of Arm #2 (mm)	130					
d	Motion range of Joint #1 (°)	140					
e	Motion range of Joint #2 (°)	141	137	142	141	142	
f	Motion range	87	95	105	107	142	
h	Joint #1 angle to hit mechanical stop (°)	2.5					
i	Joint #2 angle to hit mechanical stop (°)	1.5		2.4	1.6	2.5	
j	Mechanical stop area	84	92	99	103	137	

Left-Curved Arm

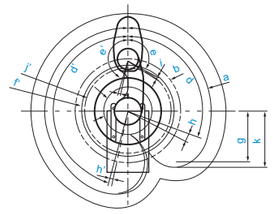
GX4-□351□□-L



Model		Left-Curved Arm	
		GX4-□351S-L	GX4-□351C-L
a	Length of Arm #1 + Arm #2 (mm)	350	
c	Length of Arm #2 (mm)	130	
d/d'	Motion range of Joint #1 (°)	165 / 110	
e/e'	Motion range of Joint #2 (°)	165 / 120	160 / 120
f/f'	Motion range	100 / 192	107 / 192
h/h'	Joint #1 angle to hit mechanical stop (°)	3.0 / 7.0	
i/i'	Joint #2 angle to hit mechanical stop (°)	2.8 / 3.8	3.5 / 3.8
j/j'	Mechanical stop area	97 / 183	102 / 183

Right-Curved Arm

GX4-□351□□-R



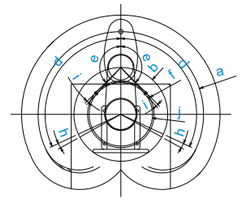
Model		Right-Curved Arm			
		GX4-□301S-R	GX4-□301C-R	GX4-□351S-R	GX4-□351C-R
a	Length of Arm #1 + Arm #2 (mm)	300		350	
c	Length of Arm #2 (mm)	130			
d	Motion range of Joint #1 (°)	115		120	
e	Motion range of Joint #2 (°)	135		142	
f	Motion range	121		142	
h	Joint #1 angle to hit mechanical stop (°)	4.0			
i	Joint #2 angle to hit mechanical stop (°)	2.5			
j	Mechanical stop area	115		137	

Motion Range (Multiple Mounting)

[Unit: mm]

Straight Arm

GX4-□301□M



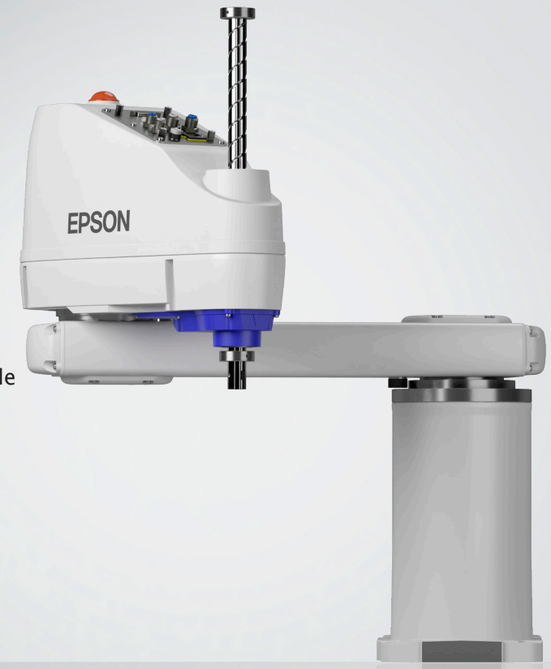
Model		Straight Arm	
		GX4-□301SM	GX4-□351CM
a	Length of Arm #1 + Arm #2 (mm)	350	
c	Length of Arm #2 (mm)	130	
d/d'	Motion range of Joint #1 (°)	110 / 165	
e/e'	Motion range of Joint #2 (°)	120 / 165	120 / 160
f/f'	Motion range	192 / 100	192 / 107
h/h'	Joint #1 angle to hit mechanical stop (°)	7.0 / 3.0	
i/i'	Joint #2 angle to hit mechanical stop (°)	3.8 / 2.8	3.8 / 3.5
j/j'	Mechanical stop area	183 / 97	183 / 102

GX8

GYROPLUS Technology

High speed and precision for small component assembly

- Handles payloads up to 8kg
- Available with 450mm, 550mm, or 650mm arm
- Internal cabling and ducting minimizes interference worries
- IP65 dust and water-resistant cleanroom models available
- Tabletop, ceiling, and wall mounting models available



Model Number **GX8-□ 45 2 S □ □**

Controller
- A : RC700-D
- B : RC700-E

Arm length
- 45 : 450mm
- 55 : 550mm
- 65 : 650mm

Joint #3 stroke
- 2 : 200mm: (Standard, ESD) / 170mm: (Cleanroom & ESD, Protection)
- 3 : 330mm: (Standard, ESD) / 300mm: (Cleanroom & ESD, Protection)

Environment
- S : Standard (equivalent to IP20)
- E : ESD (anti-static)
- C : Cleanroom & ESD (anti-static)
- P : Protection class: IP 65

Mounting type
- □ : Table Top Mounting
- W : Wall Mounting
- R : Ceiling Mounting

Cable mounting direction
- □ : Standard
- B : Bottom side (table top only)

Specifications

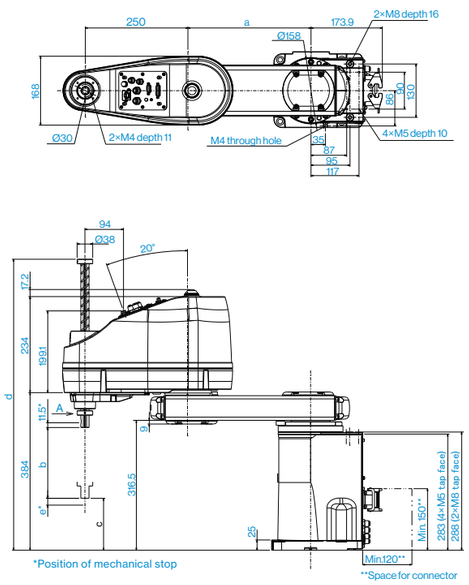
Model name		GX8		
Model number		**GX8-□45□□**	**GX8-□55□□**	**GX8-□65□□**
Arm length	Arm #1, #2	450 mm	550 mm	650 mm
Payload	Rated	4kg		
	Maximum	8kg		
Repeatability	Joints #1, #2	±0.015 mm		
	Joint #3	±0.01 mm		
	Joint #4	±0.005 deg		
Standard cycle time*1		0.28 sec	0.30 sec	0.33 sec
Max. operating speed	Joints #1, #2	7450 mm/sec	8450 mm/sec	9460 mm/sec
	Joint #3	2350 mm/sec		
	Joint #4	2800 deg		
Joint #4 allowable moment of inertia*2	Rated	0.01 kg•m²		
	Maximum	0.16 kg•m²		
Joint #3 down force		150 N		
Installation environment		Standard (equivalent to IP20), Cleanroom*3 & ESD*4, IP65, E: ESD*4		
Mounting type		Table top mounting, Wall mounting, Ceiling mounting		
Weight (cables not included)		Table top/Ceiling : 33, Wall : 35	Table top/Ceiling : 34, Wall : 36	Table top/Ceiling : 35, Wall : 37
Applicable Controller		A : RC700-D B : RC700-E		
Installed wire for customer use		D-sub 15 pin x1, 9 pin x1, 8 pin (RJ45) x1		
Installed pneumatic tube for customer use		Φ4 mm x 2, Φ6 mm x 2 : 0.59 MPa (6 kgf/cm²)		
Power		AC200-240 V Single phase		
Power Consumption*5		2.2 kVA		
Cable length		Standard: 3 / 5 / 10 / 15 / 20, Flexible: 5 / 10 / 15 / 20		
Safety standard		CE, UKCA, KC, NRTL		

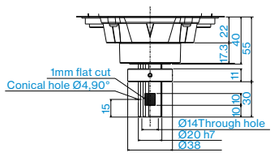
*1: Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical) at rated payload setting of table top model boost mode (path coordinates optimized for maximum speed).
*2: Set the parameters by the Inertia command according to the load and end effector status (refer to the instruction manual for the parameter calculation method).
*3: Complies with ISO Class 3 (ISO14644-1) and Fed-std209D Class 1 (less than 10 0.1 m particles per 28,317cm3:1cft) cleanroom standards.
*4: Main resin parts of the ESD model use conductive materials or apply plate processing. For the tip of the Manipulator (tool mounting part), we have confirmed that it is +/- 5 V or less even immediately after operating the measurement under our standard.
*5: Varies according to operating environment and program.

Outer Dimensions (Table Top Mounting)

[Unit: mm]

Standard-model

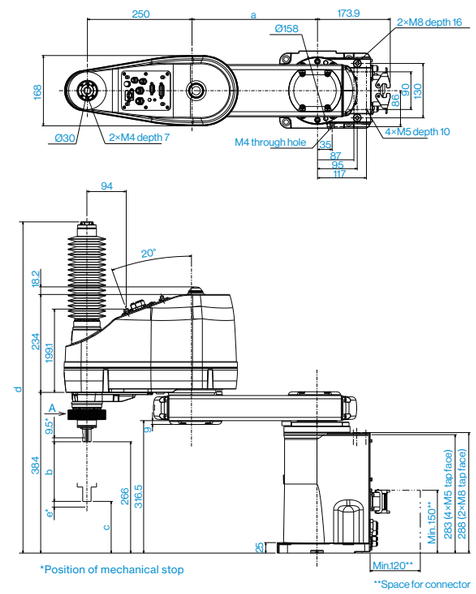


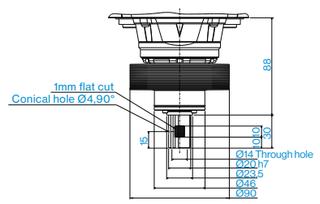


Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX8-□452S,E	GX8-□453S,E	GX8-□552S,E	GX8-□553S,E	GX8-□652S,E	GX8-□653S,E
a	200	200	300	300	400	400
b	200	330	200	330	200	330
c	99	-31	99	-31	99	-31
d	709	834	709	834	709	834
e	15.6	10.6	15.6	10.6	15.6	10.6

Cleanroom-model



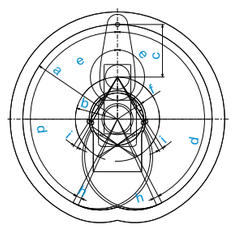


Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX8-□452C	GX8-□453C	GX8-□552C	GX8-□553S,E	GX8-□652C	GX8-□653C
a	200	200	300	300	400	400
b	170	300	170	330	170	300
c	96	-34	96	-34	96	-34
d	791.5	910.5	791.5	910.5	791.5	910.5
e	12.6	7.6	12.6	7.6	12.6	7.6

Motion Range (Table Top Mounting)

GX8-□45□□□

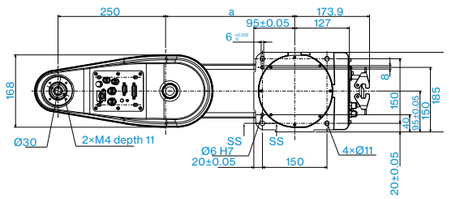


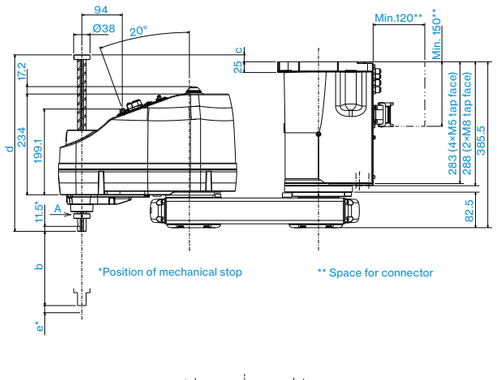
Model		GX8-□45□S□□		GX8-□45□E□□		GX8-□45□C□□		GX8-□45□P□□	
a	Length of Arm #1 + Arm #2 (mm)	450							
b	Length of Arm #1 (mm)	200							
c	Length of Arm #2 (mm)	250							
d	Motion range of Joint #1 (°)	152							
e	Motion range of Joint #2 (°)	0 ≥ Z ≥ -270	175			0 ≥ Z ≥ -240	147.5		
		-270 ≥ Z ≥ -330	145			-240 ≥ Z ≥ -300	137.5		
f	Motion range	0 ≥ Z ≥ -270	134.8			0 ≥ Z ≥ -240	134.8		
		-270 ≥ Z ≥ -330	145			-240 ≥ Z ≥ -300	137.5		
h	Joint #1 angle to hit mechanical stop (°)	1.4							
i	Joint #2 angle to hit mechanical stop (°)	0 ≥ Z ≥ -270	3.1			0 ≥ Z ≥ -240	3.1		
		-270 ≥ Z ≥ -330	5.6			-240 ≥ Z ≥ -300	13.1		
j	Mechanical stop area	0 ≥ Z ≥ -270	124			0 ≥ Z ≥ -240	124		
		-270 ≥ Z ≥ -330	124			-240 ≥ Z ≥ -300	121.6		

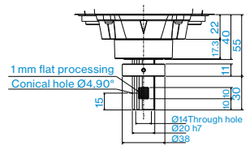
Outer Dimensions (Ceiling Mounting)

[Unit: mm]

Standard-model



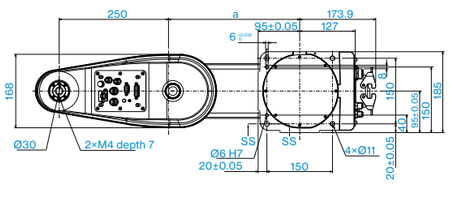


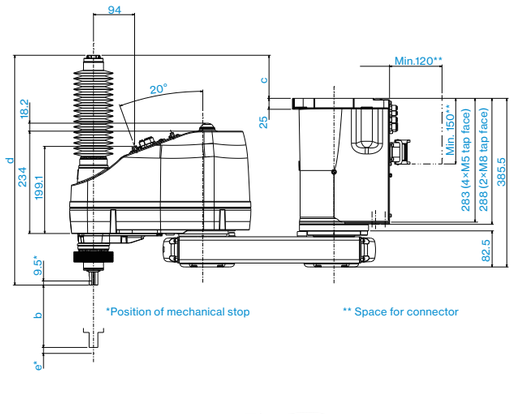


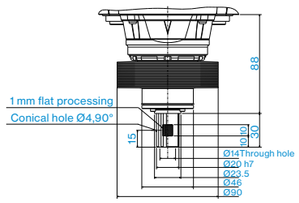
Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX8-□452SR,ER	GX8-□453SR,ER	GX8-□552SR,ER	GX8-□553SR,ER	GX8-□652SR,ER	GX8-□653SR,ER
a	200	200	300	300	400	400
b	200	330	200	330	200	330
C	16	141	16	141	16	141
d	410	535	410	535	410	535
e	15.6	10.6	15.6	10.6	15.6	10.6

Cleanroom-model





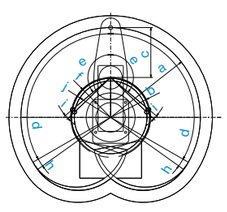


Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX8-□452CR	GX8-□453CR	GX8-□552CR	GX8-□553CR	GX8-□652CR	GX8-□653CR
a	200	200	300	300	400	400
b	170	300	170	300	170	300
C	98.5	223.5	98.5	223.5	98.5	223.5
d	525.5	650.5	525.5	650.5	525.5	650.5
e	12.6	7.6	12.6	7.6	12.6	7.6

Motion Range (Ceiling Mounting)

GX8-□45□□R

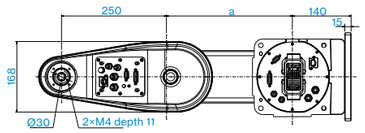


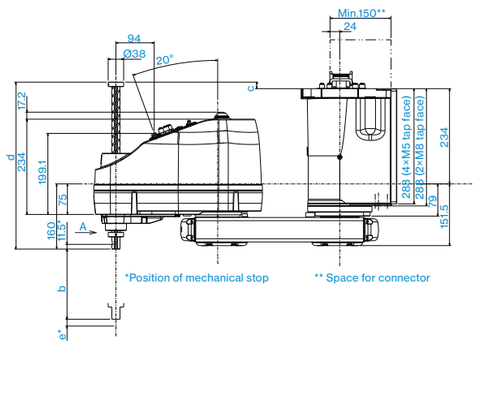
Model		GX8-□45□□R		GX8-□55□□R		GX8-□65□□R	
		S,E	C,P	S,E	C,P	S,E	C,P
a	Length of Arm #1+ Arm #2 (mm)	450		550		650	
b	Length of Arm #1 (mm)	200		300		400	
c	Length of Arm #2 (mm)	250					
d	Motion range of Joint #1 (°)	105		152			
e	Motion range of Joint #2 (°)	125		147.5	145	147.5	
f	Motion range	212.5		161.2	172.1	232	
h	Joint #1 angle to hit mechanical stop (°)	0.9		1.4			
i	Joint #2 angle to hit mechanical stop (°)	6.1		3.1	5.6	3.1	
j	Mechanical stop area	191.7		147.7		219.7	

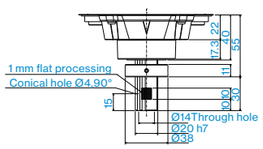
Outer Dimensions (Wall Mounting)

[Unit: mm]

Standard-model



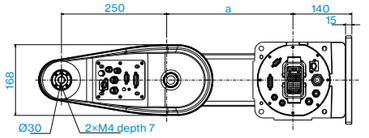


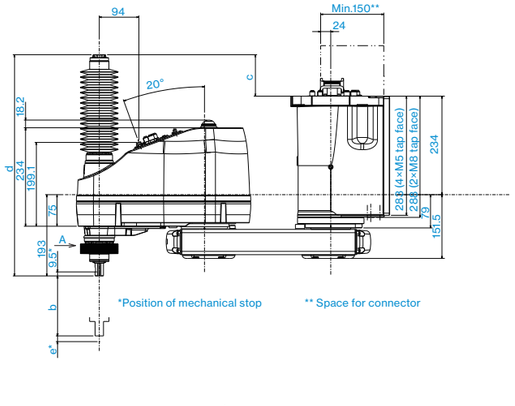


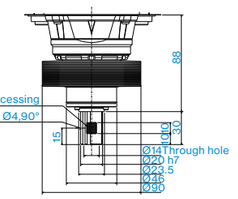
Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX8-□452SW,EW	GX8-□453SW,EW	GX8-□552SW,EW	GX8-□553SW,EW	GX8-□652SW,EW	GX8-□653SW,EW
a	200	200	300	300	400	400
b	200	330	200	330	200	330
C	16	141	16	141	16	141
d	410	535	410	535	410	535
e	15.6	10.6	15.6	10.6	15.6	10.6

Cleanroom-model





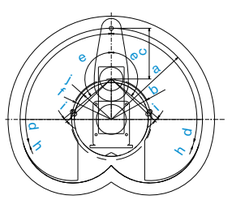


Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX8-□452CW	GX8-□453CW	GX8-□552CW	GX8-□553CW	GX8-□652CW	GX8-□653CW
a	200	200	300	300	400	400
b	170	300	170	300	170	300
C	98.5	223.5	98.5	223.5	98.5	223.5
d	525.5	650.5	525.5	650.5	525.5	650.5
e	12.6	7.6	12.6	7.6	12.6	7.6

Motion Range (Wall Mounting)

GX8-□45□□W



Model		GX8-□45□□W		GX8-□55□□W		GX8-□65□□W	
		S,E	C,P	S,E	C,P	S,E	C,P
a	Length of Arm #1+ Arm #2 (mm)	450		550		650	
b	Length of Arm #1 (mm)	200		300		400	
c	Length of Arm #2 (mm)	250					
d	Motion range of Joint #1 (°)	105		135		147.5	
e	Motion range of Joint #2 (°)	125		147.5	145	147.5	
f	Motion range	212.5		161.2	172.1	232	
h	Joint #1 angle to hit mechanical stop (°)	0.9		11.2		5.4	
i	Joint #2 angle to hit mechanical stop (°)	6.1		3.1	5.6	3.1	
j	Mechanical stop area	191.7		147.7		219.7	

GX10 GX20

GYROPLUS Technology

For high-speed, high-precision, multi-hand batch handling and packing of heavier loads

- Handles payloads of up to 10/20kg
- Choice of 650mm, 850mm, and 1000mm arm
- Internal cabling and ducting minimizes interference worries
- IP65 dust and water-resistant cleanroom models available
- Tabletop, ceiling, and wall mounting models available

Model Number GX□-B651S□

Payload
- 10 : 10 kg
- 20 : 20 kg

Arm length
- 65 : 650mm (GX10 series only)
- 85 : 850mm
- A0 : 1000mm (GX20 series only)

Joint #3 stroke
- 1 : 180mm: (Standard) / : 150mm: (Cleanroom & ESD, Protection)
- 4 : 420mm: (Standard) / : 390mm: (Cleanroom & ESD, Protection)

Environment
- S : Standard (equivalent to IP20)
- C : Cleanroom & ESD (anti-static)
- P : Protection class: IP 65

Mounting type
- □ : Table Top Mounting
- W : Wall Mounting
- R : Ceiling Mounting

Specifications

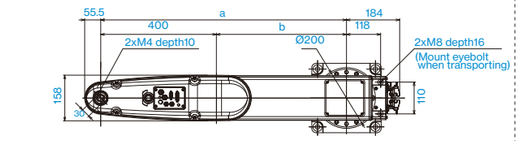
Model name		GX10 / 20			
Model number		GX10-B65□□□	G10-B85□□□	G20-B85□□□	G20-BA0□□□
Arm length	Arm #1, #2	650 mm	850 mm		1000 mm
Payload	Rated	5 kg		10 kg	
	Maximum	10 kg		20 kg	
Repeatability	Joints #1, #2	±0.025 mm			
	Joint #3	±0.01 mm			
	Joint #4	±0.005 deg			
Standard cycle time*1		0.338 sec	0.377 sec	0.365 sec	0.422 sec
Max. operating speed	Joints #1, #2	8800 mm/s	11000 mm/s	11000 mm/s	11500 mm/s
	Joint #3	2350 mm/s			
	Joint #4	2400 deg/s		1700 deg/s	
Joint #4 allowable moment of inertia*2	Rated	0.02 kg•m²		0.05 kg•m²	
	Maximum	0.25 kg•m²		0.45 kg•m²	
Joint #3 down force		250 N			
Installation environment		Standard (equivalent to IP20), Cleanroom*3 & ESD*4, IP65			
Mounting type		Table top mounting, Wall mounting, Ceiling mounting			
Weight (cables not included)		Table top/Ceiling : 46, Wall : 51	Table top/Ceiling : 49, Wall : 53		Table top/Ceiling : 50, Wall : 55
Applicable Controller		RC700-E			
Installed wire for customer use		D-sub 15 pin x1, 9 pin x1, 8 pin (RJ45) x1			
Installed pneumatic tube for customer use		Φ4 mm x 2, Φ6 mm x 2 : 0.59 MPa (6 kgf/cm²)			
Power		AC200-240 V Single phase			
Power Consumption*5		2.4 kVA			
Cable length		Standard: 3 / 5 / 10 / 15 / 20, Flexible: 5 / 10 / 15 / 20			
Safety standard		CE, UKCA, KC, NRTL			

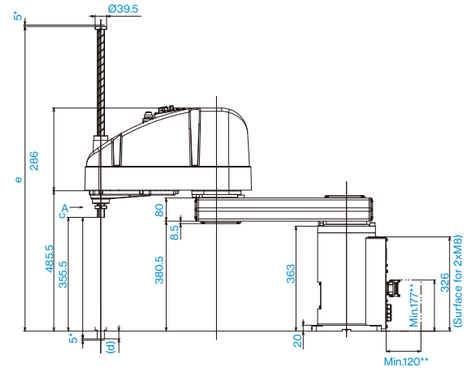
*1: Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with 2kg payload (path coordinates optimized for maximum speed) .
*2: Set the parameters by the Inertia command according to the load and end effector status (refer to the instruction manual for the parameter calculation method).
*3: Complies with ISO Class 3 (ISO14644-1) and Fed-std209D Class 1 (less than 10 0.1 m particles per 28,317cm3:1cft) cleanroom standards.
*4: Main resin parts of the ESD model use conductive materials or apply plate processing. For the tip of the Manipulator (tool mounting part), we have confirmed that it is +/- 5 V or less even immediately after operating the measurement under our standard.
*5: Varies according to operating environment and program.

Outer Dimensions (Table Top Mounting)

[Unit: mm]

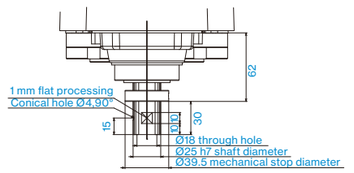
Standard-model





(*)Indicates mechanical stop position

(**)Space for Connector

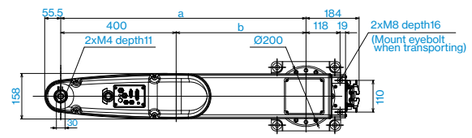


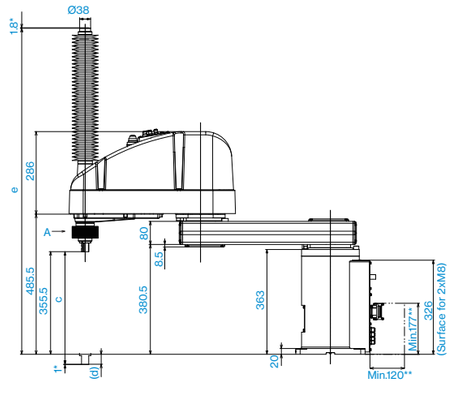
Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX10-□65□S	GX10-□85□S	GX20-□85□S	GX20-□A0□S
a	650	850	850	1000
b	250	450	450	600

	GX10/20-□□□1S	GX10/20-□□□4S
c	180	420
d	-213.5	26.5
e	813.5	1053.5

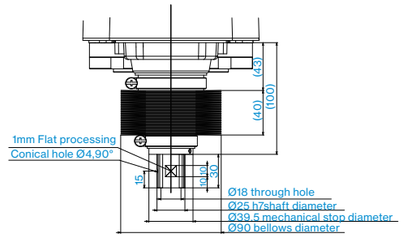
Cleanroom-model





(*)Indicates mechanical stop position

(**)Space for Connector



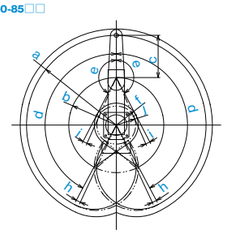
Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX10-□65□C	GX10-□85□C	GX20-□85□C	GX20-□A0□C
a	650	850	850	1000
b	250	450	450	600

	GX10/20-□□1C	GX10/20-□□4C
c	150	390
d	-205.5	34.5
e	870.5	1129.5

Motion Range (Table Top Mounting)

GX10/20-85□□

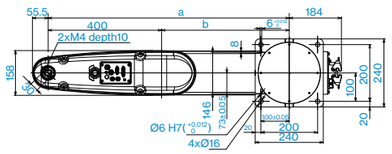


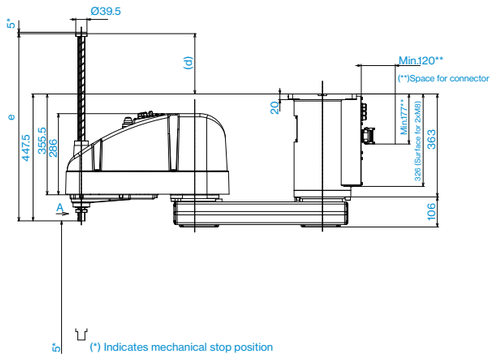
Model		GX10-□65□S GX10-□65□C GX10-□65□P	GX10-□85□S GX20-□85□S	GX10-□85□C GX20-□85□P		GX20-□A0□S GX20-□A0□C GX20-□A0□P
a	Length of Arm #1 + Arm #2 (mm)	650	850			1000
b	Length of Arm #1 (mm)	250	450			600
c	Length of Arm #2 (mm)	400				
d	Motion range of Joint #1 (°)	152				
e	Motion range of Joint #2 (°)	152.5	152.5	0 ≥ Z ≥ -360	152.5	152.5
				-360 ≥ Z ≥ -390	151	
f	Motion range	212.4	207.8	0 ≥ Z ≥ -360	207.8	307
				-360 ≥ Z ≥ -390	218.3	
h	Joint #1 angle to hit mechanical stop (°)	3				
i	Joint #2 angle to hit mechanical stop (°)	3.5	3.5	0 ≥ Z ≥ -360	3.5	3.5
				-360 ≥ Z ≥ -390	5	
j	Mechanical stop area	199.4	183.3			285.4

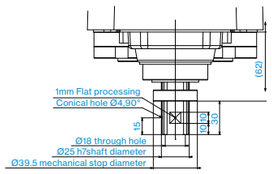
Outer Dimensions (Ceiling Mounting)

[Unit: mm]

Standard-model





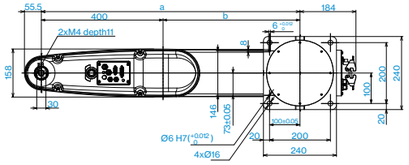


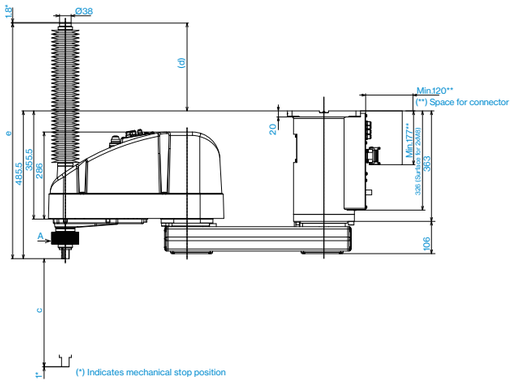
Detail of "A"
(Calibration point position of Joints #3 and #4)

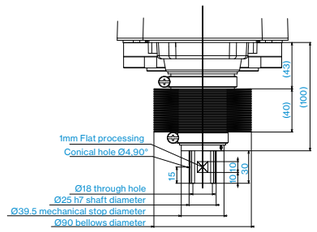
	GX10-□65□SR	GX10-□85□SR	GX20-□85□SR	GX20-□A0□SR
a	650	850	850	1000
b	250	450	450	600

	GX10/20-□□□1SR	GX10/20-□□□4SR
c	180	420
d	-27.5	212.5
e	420	660

Cleanroom-model







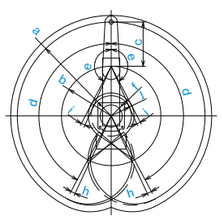
Detail of "A"
(Calibration point position of Joints #3 and #4)

	GX10-□65□CR	GX10-□85□CR	GX20-□85□CR	GX20-□A0□CR
a	650	850	850	1000
b	250	450	450	600

	GX10/20-□□□1CR	GX10/20-□□□4CR
c	150	390
d	29.5	288.5
e	51.5	774

Motion Range (Ceiling Mounting)

GX10/20-85□□R

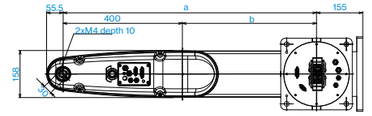


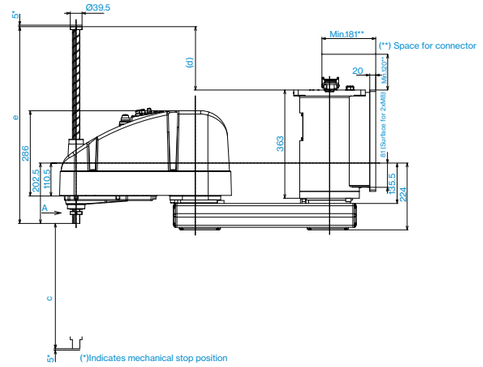
Model		GX10-□65□□R		GX10/20-□85□□R		GX20-□A05□□R	
		S	C, P	S	C, P	S	C, P
a	Length of Arm #1+Arm #2 (mm)	650		850		1000	
b	Length of Arm #1 (mm)	250		450		600	
c	Length of Arm #2 (mm)	400					
d	Motion range of Joint #1 (°)	107		152			
e	Motion range of Joint #2 (°)	130		152.5	151	152.5	
f	Motion range	306.5		207.8	218.3	307	
h	Joint #1 angle to hit mechanical stop (°)	3					
i	Joint #2 angle to hit mechanical stop (°)	3.5		3.5	5	3.5	
j	Mechanical stop area	291.2		183.3		285.4	

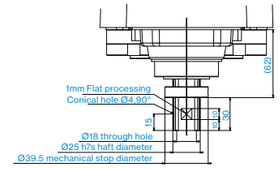
Outer Dimensions (Wall Mounting)

[Unit: mm]

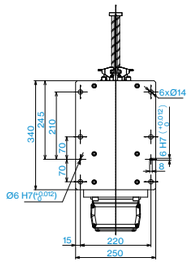
Standard-model





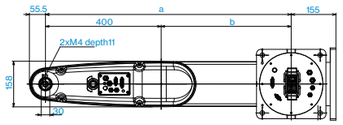


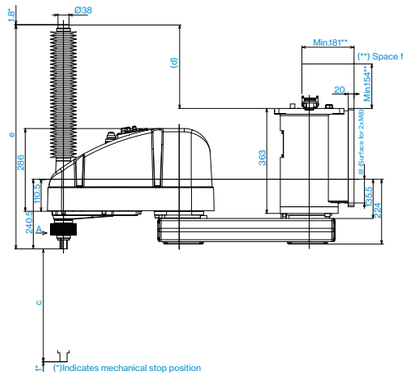
Detail of "A"
(Calibration point position of Joints #3 and #4)

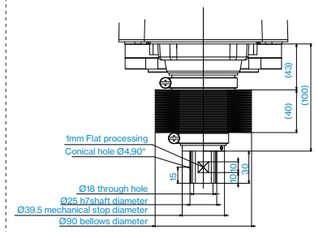


Reference through hole
(View from bottom of the base)

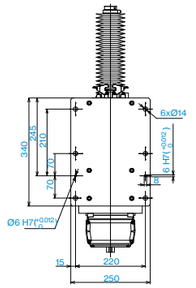
Cleanroom-model







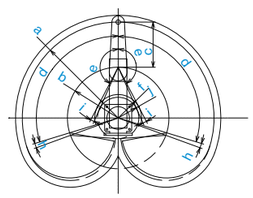
Detail of "A"
(Calibration point position of Joints #3 and #4)



Reference through hole
(View from bottom of the base)

Motion Range (Wall Mounting)

GX10/20-85□□W



Model		GX10-□65□□W		GX10/20-□85□□W		GX20-□A05□□W	
		S	C, P	S	C, P	S	C, P
a	Length of Arm #1+Arm #2 (mm)	650		850		1000	
b	Length of Arm #1 (mm)	250		450		600	
c	Length of Arm #2 (mm)	400					
d	Motion range of Joint #1 (°)	107		107			
e	Motion range of Joint #2 (°)	130		152.5	151	152.5	
f	Motion range	306.5		207.8	218.3	307	
h	Joint #1 angle to hit mechanical stop (°)	3					
i	Joint #2 angle to hit mechanical stop (°)	3.5		3.5	5	3.5	
j	Mechanical stop area	291.2		183.3		285.4	

LS3

GYROPLUS Technology

LS series reliability and performance with improved operating ease

- Built-in Ethernet port on arm for easier camera connectivity
- Batteryless motor unit for reduced maintenance
- Diagonally oriented rear ducting for a lower profile that helps reduce installation space requirements

Model Number **LS3 - B40 1 S**

Payload
3 : 3kg

Arm length
40 : 400mm

Joint #3 stroke
1 : 150mm: Standard-model
: 120mm: Cleanroom-model (with bellows)

Environment
S : Standard
C : Cleanroom

Specifications

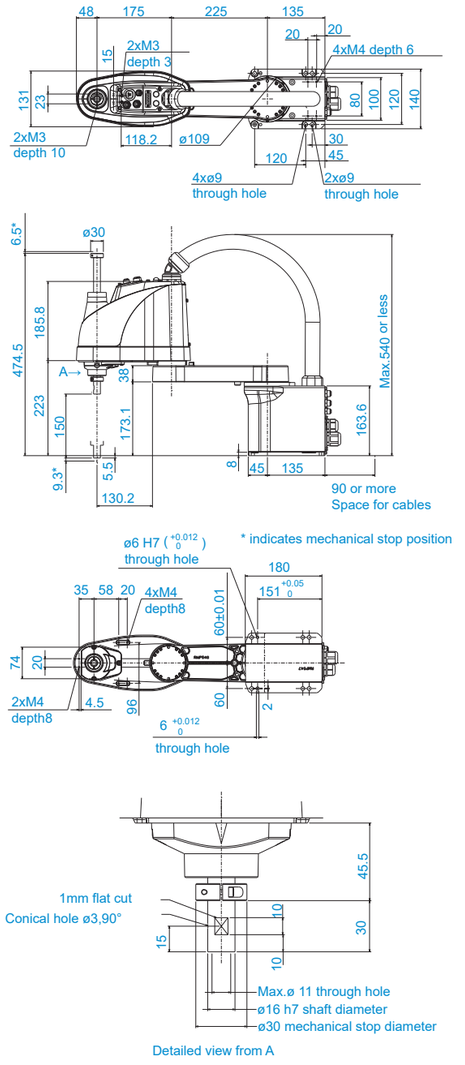
Model name		LS3-B
Model number		LS3-B401S/C
Arm length	Arm #1, #2	400 mm
Payload*1	Rated	1 kg
	Maximum	3 kg
Repeatability	Joints #1, #2	±0.01 mm
	Joint #3	±0.01 mm
	Joint #4	±0.01 deg
Standard cycle time*2		0.42 sec
Max. operating speed	Joints #1, #2	7200 mm/sec
	Joint #3	1100 mm/sec
	Joint #4	2600 deg/sec
Joint #4 allowable moment of inertia*3	Rated	0.005 kg·m²
	Maximum	0.05 kg·m²
Joint #3 down force		100 N
Installation environment		Standerd or Clean*4
Mounting type		Table Top Mounting
Weight(cables not included)		14 kg
Applicable Controller		RC90-B
Installed wire for customer use		D-sub 15 pin x1, RJ45 8 pin (CAT 5e) x1
Installed pneumatic tube for customer use		Φ6 mm × 2, Φ4 mm × 1: 0.59 MPa (6 kgf / cm²)
Power		AC200-240 V Single phase
Power Consumption*5		1.0 kVA
Cable length		3 m / 5 m / 10 m
Safety standard		CE, KC

*1 : Do not apply the load exceeding the maximum payload.
*2 : Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical) with Accel 120% and 2 kg payload (path coordinates optimized for maximum speed).
*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 : Complies with ISO Class 4 cleanroom standards.
*5 : It depends on environment and motion program.

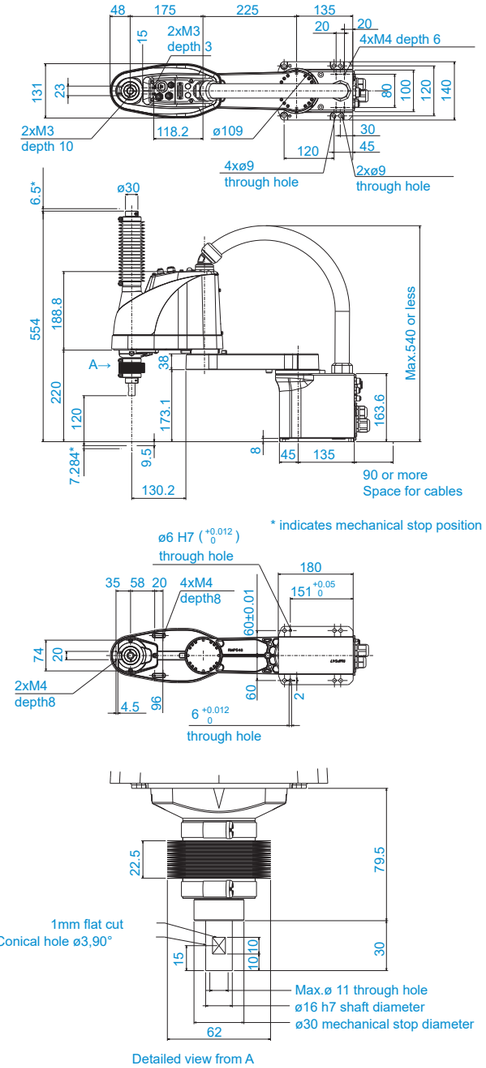
Outer Dimensions (Table Top Mounting)

[Unit: mm]

Standard-model

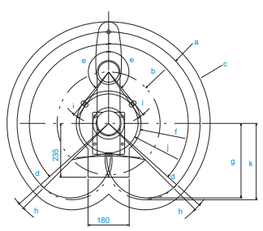


Cleanroom-model

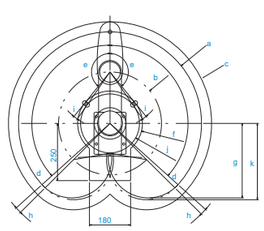


Motion Range (Table Top Mounting)

LS3-B401S



LS3-B401C



Model		LS3-B401□	
		Standard-model	Cleanroom-model
a	Arm #1 + Arm #2 length (mm)	400	
b	Arm #1 length (mm)	175	
c	Max. motion range (mm)	449	
d	Joint #1 motion angle (°)	132	
e	Joint #2 motion angle (°)	141	
f	Motion range (mm)	141.6	
g	Motion range at the rear (mm)	325.5	
h	Angle of the Joint #1 mechanical stop (°)	2.8	
i	Angle of the Joint #2 mechanical stop (°)	4.2	
j	Mechanical stop area (mm)	128.8	
k	Mechanical stop area at the rear (mm)	333.5	

LS6

GYROPLUS Technology

LS series reliability and performance with improved operating ease

- Built-in Ethernet port on arm for easier camera connectivity
- Batteryless motor unit for reduced maintenance
- Diagonally oriented rear ducting for a lower profile that helps reduce installation space requirements

Model Number **LS6 - B60 2 S**

Payload
- 6 : 6kg

Arm length
- 50 : 500mm
- 60 : 600mm
- 70 : 700mm

Joint #3 stroke
- 2 : 200mm: Standard-model
  : 170mm: Cleanroom-model (with bellows)

Environment
- S : Standard
- C : Cleanroom

Specifications

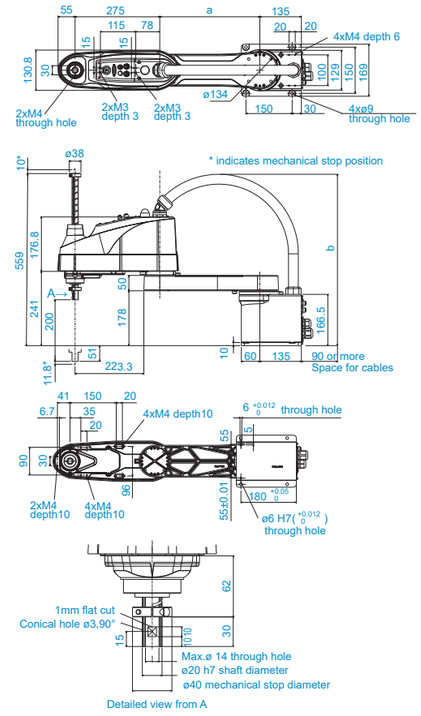
Model name		LS6-B		
Model number		LS6-B502S/C	LS6-B602S/C	LS6-B702S/C
Arm length	Arm #1, #2	500 mm	600 mm	700 mm
Payload*1	Rated	2 kg		
	Maximum	6 kg		
Repeatability	Joints #1, #2	±0.02 mm		
	Joint #3	±0.01 mm		
	Joint #4	±0.01 deg		
Standard cycle time*2		0.39 sec	0.40 sec	0.42 sec
Max. operating speed	Joints #1, #2	7120 mm/sec	7850 mm/sec	8590 mm/sec
	Joint #3	1100 mm/sec		
	Joint #4	2000 deg/sec		
Joint #4 allowable moment of inertia*3	Rated	0.01 kg•m²		
	Maximum	0.12 kg•m²		
Joint #3 down force		100 N		
Installation environment		Standerd or Clean*4		
Mounting type		Table Top Mounting		
Weight(cables not included)		17 kg		18 kg
Applicable Controller		RC90-B		
Installed wire for customer use		D-sub 15 pin x1, RJ45 8 pin (Cat 5e Class) x1		
Installed pneumatic tube for customer use		Φ4 mm × 1, Φ6 mm × 2		
Power		AC200-240 V Single phase		
Power Consumption*5		1.1 kVA		
Cable length		3 m/5 m/10 m		
Safety standard		CE, KC		

*1 : Do not apply the load exceeding the maximum payload.
*2 : Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with Accel 120% and 2 kg payload (path coordinates optimized for maximum speed). Rounded down to the third decimal place.
*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 : Complies with ISO Class 4 cleanroom standards.
*5 : It depends on environment and motion program.

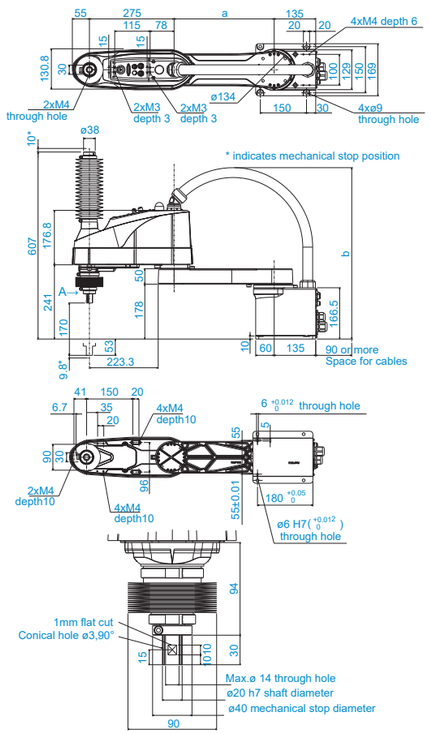
Outer Dimensions (Table Top Mounting)

[Unit: mm]

Standard-model



Cleanroom-model

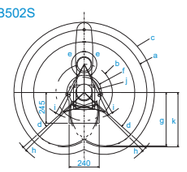


	LS6-B502S	LS6-B602S	LS6-B702S
a	225	325	425
b	529	559	589

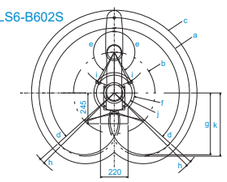
	LS6-B502C	LS6-B602C	LS6-B702C
a	225	325	425
b	529	559	589

Motion Range (Table Top Mounting)

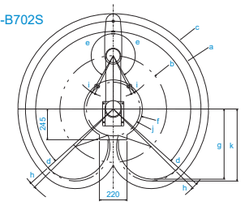
LS6-B502S



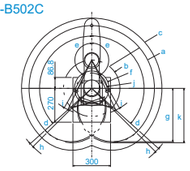
LS6-B602S



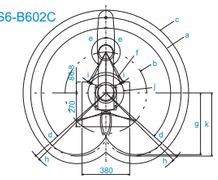
LS6-B702S



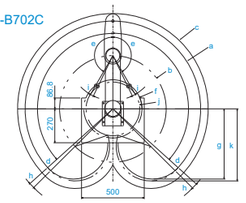
LS6-B502C



LS6-B602C



LS6-B702C



Model	LS6-B502□	LS6-B602□	LS6-B702□
a Arm #1 + Arm #2 length (mm)	500	600	700
b Arm #1 length (mm)	225	325	425
c Max. motion range (mm)	556	656	756
d Joint #1 motion angle (°)	132		
e Joint #2 motion angle (°)	150		
f Motion range (mm)	138.1	162.6	232
g Motion range at the rear (mm)	425.6	492.5	559.4
h Angle of the Joint #1 mechanical stop (°)	2.8		
i Angle of the Joint #2 mechanical stop (°)	4.2		
j Mechanical stop area (mm)	121.8	142.5	214
k Mechanical stop area at the rear (mm)	433.5	504	574.5

LS10

GYROPLUS Technology

A versatile new addition to the proven reliability and performance of the LS series

- 10kg payload for applications requiring high inertia or the use of complex effectors
- A choice of three arm lengths and two ball screw lengths for high configurability to suit a variety of application requirements
- Built-in Ethernet port for easy camera connectivity
- Batteryless motor unit for reduced maintenance

Model Number **LS10 - B□ □ □**

Payload
10 : 10kg

Arm length
60 : 600mm
70 : 700mm
80 : 800mm

Joint #3 stroke
2 : 200mm: Standard-model
: 170mm: Cleanroom-model (with bellows)
3 : 300mm: Standard-model
: 270mm: Cleanroom-model (with bellows)

Environment
S : Standard
C : Cleanroom

Specifications

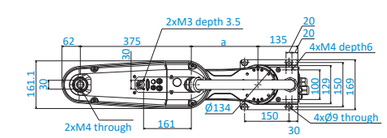
Model name		LS10		
Model number		LS10-B60□S/C	LS10-B70□S/C	LS10-B80□S/C
Arm length	Arm #1, #2	600 mm	700 mm	800 mm
Payload*1	Rated	5 kg		
	Maximum	10 kg		
Repeatability	Joints #1, #2	±0.02 mm		±0.025 mm
	Joint #3	±0.01 mm		
	Joint #4	±0.01 deg		
Standard cycle time*2		0.39 sec	0.41 sec	0.44 sec
Max. operating speed	Joints #1, #2	9100 mm/sec	9800 mm/sec	10500 mm/sec
	Joint #3	1100 mm/sec		
	Joint #4	2700 deg/sec		
Joint #4 allowable moment of inertia*3	Rated	0.02 kg•m²		
	Maximum	0.3 kg•m²		
Joint #3 down force		200 N		
Installation environment		Standerd or Clean*4		
Mounting type		Table Top		
Weight(cables not included)		22 kg		23 kg
Applicable Controller		RC90-B		
Installed wire for customer use		D-sub 15 pin x1, RJ45 8 pin (Cat 5e equivalent) x1		
Installed pneumatic tube for customer use		Φ6 mm × 2, Φ4 mm × 1		
Power		AC200-240 V Single phase		
Power Consumption*5		1.8 kVA		
Cable length		3 m/5 m/10 m		
Safety standard		CE, KC		

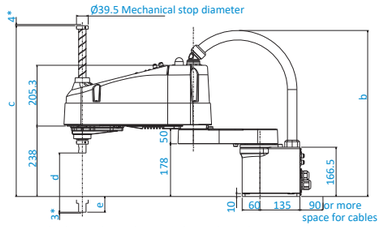
*1 : Do not apply the load exceeding the maximum payload.
*2 : Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with Accel 120% and 2 kg payload (path coordinates optimized for maximum speed).
*3 : If the center of gravity is at the center of each arm. If the center of gravity is not at the center of each arm, set the eccentric quantity using INERTIA command.
*4 : Complies with ISO Class 4 cleanroom standards.
*5: It depends on operating environment and operation program.

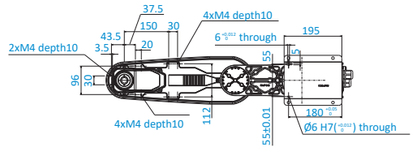
Outer Dimensions (Table Top Mounting)

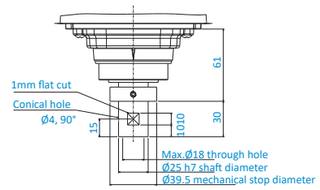
[Unit: mm]

Standard-model



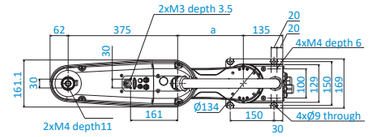


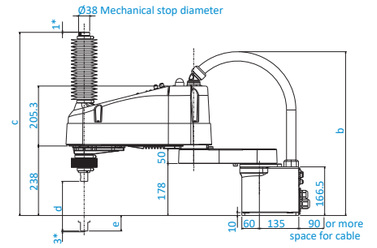


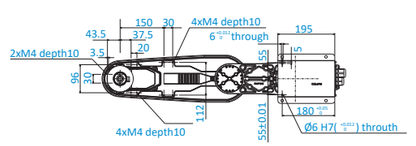


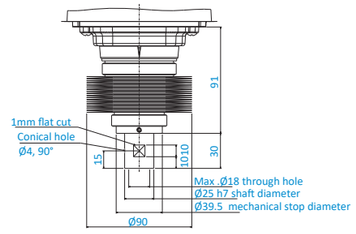
	LS10-B602S	LS10-B603S	LS10-B702S	LS10-B703S	LS10-B802S	LS10-B803S
a	225	225	325	325	425	425
b	Max.565	Max.565	Max.580	Max.580	Max.580	Max.580
c	577	677	577	677	577	677
d	200	300	200	300	200	300
e	53	153	53	153	53	153

Cleanroom-model





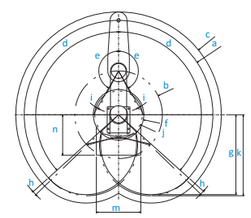




	LS10-B602C	LS10-B603C	LS10-B702C	LS10-B703C	LS10-B802C	LS10-B803C
a	225	225	325	325	425	425
b	Max.565	Max.565	Max.580	Max.580	Max.580	Max.580
c	627	727	627	727	627	727
d	170	270	170	270	170	270
e	53	153	53	153	53	153

Motion Range (Table Top Mounting)

Standard-model / Cleanroom-model



Model	Standard			Cleanroom		
	LS10-B602S/B603S	LS10-B702S/B703S	LS10-B802S/B803S	LS10-B602C/B603C	LS10-B702C/B703C	LS10-B802C/B803C
a Length of Arm #1+Arm #2 (mm)	600	700	800	600	700	800
b Length of Arm #1 (mm)	225	325	425	225	325	425
c Max. motion range (mm)	663	763	863	663	763	863
d Motion range of Joint #1 (°)	132			132		
e Motion range of Joint #2 (°)	150			150		
f Motion range (mm)	212	188	213	212	188	213
g Motion range at the rear (mm)	526	592	659	526	592	659
h Joint #1 angle to hit mechanical stop (°)	2			2		
i Joint #2 angle to hit mechanical stop (°)	2			2		
j Mechanical stop area (mm)	206	176	200	206	176	200
k Mechanical stop area at the rear (mm)	531	601	670	531	601	670
m Motion range (mm)	420	330	320	420	400	480
n Motion range (mm)	300			320		

LS20

GYROPLUS Technology

LS series reliability and performance with improved operating ease

- Higher allowable moment of inertia for improved performance when using large end effectors to perform multi-item pick-and-place operations
- Built-in Ethernet port on arm for easy camera connectivity
- Batteryless motor unit for reduced maintenance
- Improved duct design for low vibration during operation and easy cable installation

Model Number: LS20 - B80 4 S

Payload
- 20 : 20kg

Arm length
- 80 : 800mm
- A0 : 1000mm

Joint #3 stroke
- 4 : 420mm: Standard-model / 390mm: Cleanroom-model (with bellows)

Environment
- S : Standard
- C : Cleanroom

Specifications

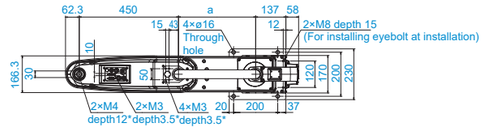
Model name		LS20	
Model number		LS20-B804S/C	LS20-BA04S/C
Arm length	Arm #1, #2	800 mm	1000 mm
Payload*1	Rated	10 kg	
	Maximum	20 kg	
Repeatability	Joints #1, #2	±0.025 mm	
	Joint #3	±0.01 mm	
	Joint #4	±0.01 deg	
Standard cycle time*2		0.39 sec	0.43 sec
Max. operating speed	Joints #1, #2	9940 mm/sec	11250 mm/sec
	Joint #3	2300 mm/sec	
	Joint #4	1400 deg/sec	
Joint #4 allowable moment of inertia*3	Rated	0.05 kg•m²	
	Maximum	1.00 kg•m²	
Joint #3 down force		250 N	
Installation environment		Standerd or Clean*4	
Mounting type		Table Top Mounting	
Weight(cables not included)		48 kg	51 kg
Applicable Controller		RC90-B	
Installed wire for customer use		D-sub 15 pin x1, D-sub 9 pin x1, RJ45 8 pin (CAT 5e) x1	
Installed pneumatic tube for customer use		Φ8 mm × 2, Φ6 mm × 2 : 0.59 MPa (6 kgf / cm²)	
Power		AC200-240 V Single phase	
Power Consumption*5		2.4 kVA	
Cable length		3 m / 5 m / 10 m	
Safety standard		CE, KC	

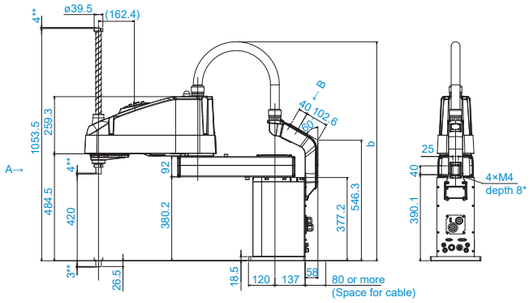
*1 : Do not apply the load exceeding the maximum payload.
*2 : Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical) with Accel 120% and 2 kg payload (path coordinates optimized for maximum speed).
*3 : If the center of gravity is at the center of each arm. If the center of gravity is not at the center of each arm, set the eccentric quantity using INERTIA command.
*4 : Complies with ISO Class 4 cleanroom standards.
*5 : It depends on operating enviroment and operation program.

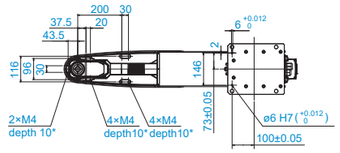
Outer Dimensions (Table Top Mounting)

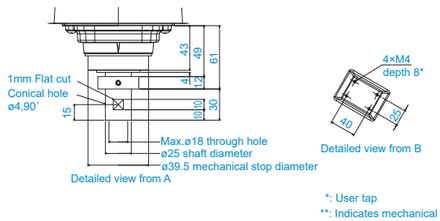
[Unit: mm]

Standard-model





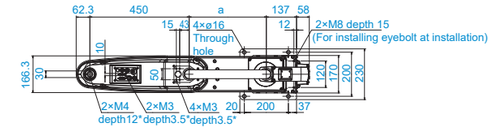


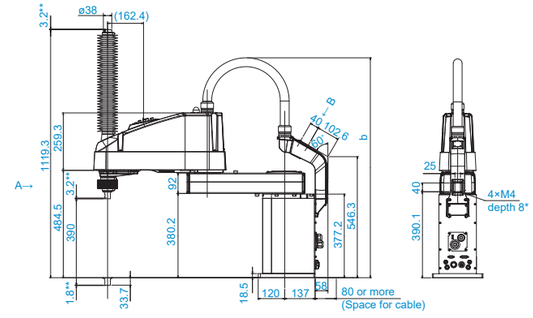


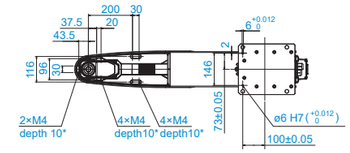
*: User tap
**: Indicates mechanical stop position

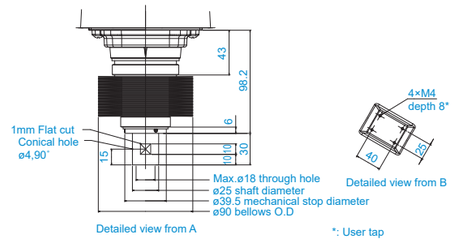
	LS20-B804S	LS20-BA04S
a	350	550
b	Max.1000	Max.1100

Cleanroom-model







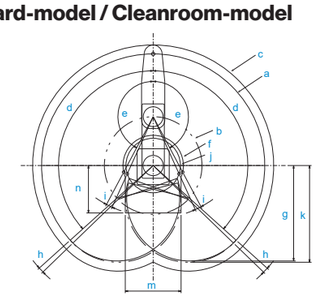


*: User tap
**: Indicates mechanical stop position

	LS20-B804C	LS20-BA04C
a	350	550
b	Max.1000	Max.1100

Motion Range (Table Top Mounting)

Standard-model / Cleanroom-model



Model	Standard		Cleanroom	
	LS20-B804S	LS20-A04S	LS20-B804C	LS20-A04C
a Length of Arm #1+Arm #2 (mm)	800	1000	800	1000
b Length of Arm #1 (mm)	350	550	350	550
c Length of Arm #2 (mm)	864	1064	864	1064
d Motion range of Joint #1 (°)	132			
e Motion range of Joint #2 (°)	152			
f Motion range (mm)	216.5	260.7	216.5	260.7
g Motion range at the rear (mm)	684.2	818	684.2	818
h Joint #1 angle to hit mechanical stop (°)	2			
i Joint #2 angle to hit mechanical stop (°)	3.6			
j Mechanical stop area (mm)	195.3	232.8	195.3	232.8
k Mechanical stop area at the rear (mm)	693.1	832.1	693.1	832.1
m Motion range (mm)	400	290	400	330
n Motion range (mm)	340	265	340	265

T3

Outstanding cost-efficiency and ease of use for significantly lower total operating cost

- Built-in controller reduces installation space and cabling requirements
- Convenient I/O ports located close to effector (including 24V power supply)
- Batteryless motor unit for reduced maintenance
- Operates on AC100V~240V power
- Superior energy-saving performance

Model Number **T3 - B40 1 S**

- Payload: 3 : 3kg
- Arm length: 40 : 400mm
- Joint #3 stroke: 1 : 150mm
- Environment: S : Standard

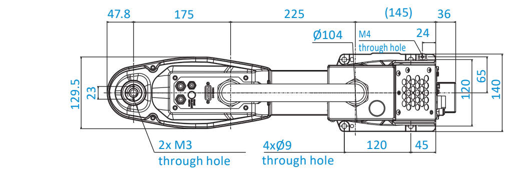
Specifications

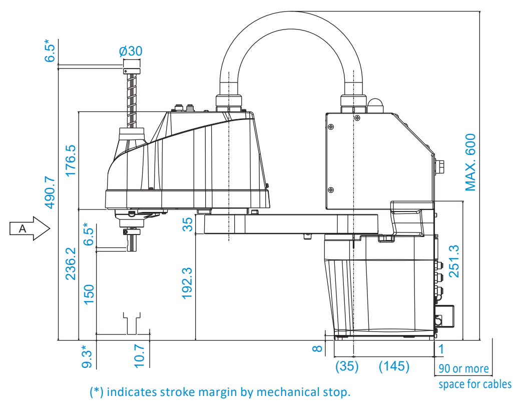
Model name		T3
Model number		T3-B401S
Arm length	Arm #1, #2	400 mm
Payload (Load) *1	Rated	1 kg
	Max.	3 kg
Repeatability	Joints #1-2	± 0.02 mm
	Joint #3	± 0.02 mm
	Joint #4	± 0.02 deg
Standard cycle time*2		0.54 sec
Max. operating speed	Joints #1-2	3700 mm/sec
	Joint #3	1000 mm/sec
	Joint #4	2600 deg/sec
Joint #4 allowable moment of inertia*3	Rated	0.003 kg•m2
	Max.	0.01 kg·m2
Joint #3 down force		83 N
Installation Environment		Standard (IP20)
Mounting type		Table Top
Weight (cables not included)		16 kg
Applicable Controller		Built in controller
Installed wire for customer use		Hand I/O: IN6/OUT4 (D-sub 15 pin) , 24 V User I/O:IN18/OUT12
Installed pneumatic tube for customer use		Φ6 mm x 2, Φ4 mm x 1 : 0.59 MPa (6 kgf/cm²)
Power		AC100-240 V
Power Consumption*4		0.66 kVA
Cable length		5 m
Safety standard		CE, KC

*1: Do not apply the load exceeding the maximum payload.
*2: Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with 1 kg payload (path coordinates optimized for maximum speed) .
*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: Varies according to operating environment and program.

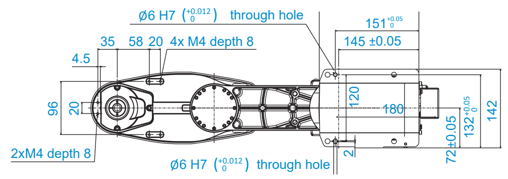
Outer Dimensions (Table Top Mounting)

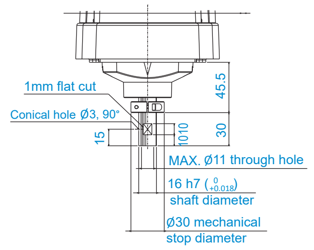
[Unit: mm]





(*) indicates stroke margin by mechanical stop.

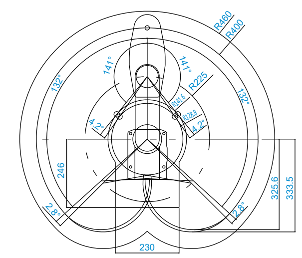




Detail view from "A"
(Calibration point position of joints #3 and #4)

Motion Range (Table Top Mounting)

T3-401S



T6

Outstanding cost-efficiency and ease of use for significantly lower total operating cost

- Handles up to 6kg with 600mm arm length
- Built-in controller reduces installation space and cabling requirements
- Convenient I/O ports located close to effector (including 24V power supply)
- Batteryless motor unit for reduced maintenance
- Operates on AC100V–240V power

Model Number T6 - B60 1 S

Payload
6 : 6kg

Arm length
60 : 600mm

Joint #3 stroke
2 : 200mm

Environment
S : Standard

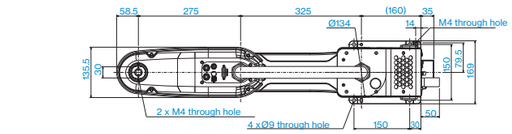
Specifications

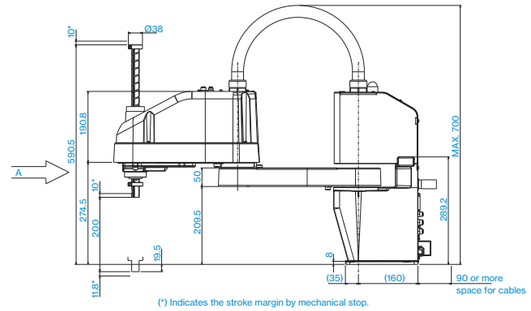
Model name		T6
Model number		**T6-B602S**
Arm length	Arm #1, #2	600 mm
Payload (Load) *1	Rated	2 kg
	Max.	6 kg
Repeatability	Joints #1-2	± 0.04 mm
	Joint #3	± 0.02 mm
	Joint #4	± 0.02 deg
Standard cycle time*2		0.49 sec
Max. operating speed	Joints #1-2	4180 mm/sec
	Joint #3	1000 mm/sec
	Joint #4	1800 deg/sec
Joint #4 allowable moment of inertia*3	Rated	0.01 kg·m²
	Max.	0.08 kg·m²
Joint #3 down force		83 N
Installation Environment		Standard (IP20)
Mounting type		Table Top
Weight (cables not included)		22 kg
Applicable Controller		Built in controller
Installed wire for customer use		Hand I/O: IN6/OUT4 (D-sub 15 pin) , 24 V User I/O:IN18/OUT12
Installed pneumatic tube for customer use		Φ6 mm x 2, Φ4 mm x 1 : 0.59 MPa (6 kgf/cm²)
Power		AC100-240 V
Power Consumption*4		1.2 kVA
Cable length		5 m
Safety standard		CE, KC

*1: Do not apply the load exceeding the maximum payload.
*2: Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with 2 kg payload (path coordinates optimized for maximum speed) .
*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: Varies according to operating environment and program.

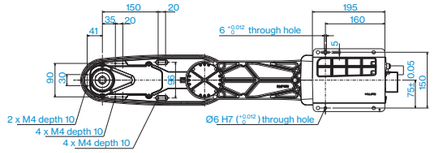
Outer Dimensions (Table Top Mounting)

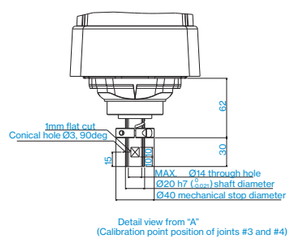
[Unit: mm]



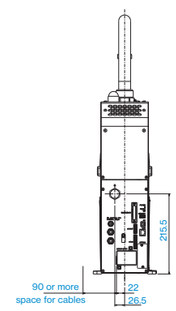


(*) Indicates the stroke margin by mechanical stop.



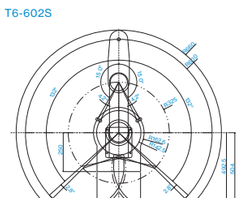


Detail view from "A"
(Calibration point position of joints #3 and #4)



Motion Range (Table Top Mounting)

T6-602S



RS3

Folding rotating arm enables large working area in limited space

- 350mm arm has effective reach of 494mm in four directions
- All-direction access for greater freedom in workcell layout
- Enables use of large pallets without requiring large robot installation footprint

Model Number: RS3 - 35 1 S - UL

Payload
3 : 3kg

Arm length
35 : 350mm

Joint #3 stroke
1 : 130mm
: 100mm: Cleanroom-model

Environment
S : Standard
C : Cleanroom & ESD (Anti-static)

UL specification
□ : Non UL compliant
-UL : UL compliant

Specifications

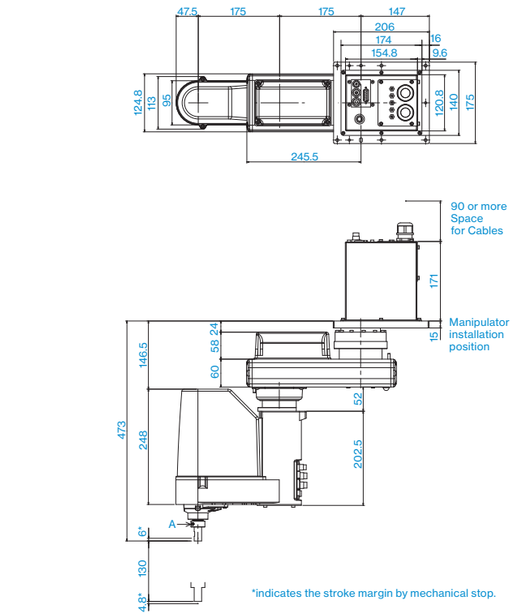
Model name		RS3
Model number		RS3-351□
Arm length	Arm #1, #2	350 mm
Payload	Rated	1 kg
	Maximum	3 kg
Repeatability	Joints #1, #2	±0.01 mm
	Joint #3	±0.01 mm
	Joint #4	±0.01 deg
Standard cycle time*1		0.34 sec
Max. operating speed	Joints #1, #2	6237 mm/sec
	Joint #3	1100 mm/sec
	Joint #4	2600 deg/sec
Joint #4 allowable moment of inertia*2	Rated	0.005 kg·m²
	Maximum	0.05 kg·m²
Joint #3 down force		150 N
Installation environment		Standard/Cleanroom*3 &ESD
Mounting type		Ceiling
Weight (cables not included)		17 kg
Applicable Controller		RC700-A
Installed wire for customer use		15 Pin D-Sub
Installed pneumatic tube for customer use		Φ6 mm x 2, Φ4 mm x 1: 0.59 MPa (6 kgf/cm²)
Power		AC200-240 V Single phase
Power Consumption*4		1.2 kVA
Cable length		3 m/5 m/10 m/15 m/20 m
Safety standard		CE, KC, UL

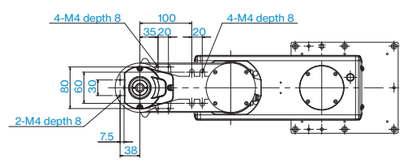
*1: Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with 1kg payload (path coordinates optimized for maximum speed) .
*2: When payload center of gravity is aligned with Joint #4 ; if not aligned with Joint #4, set parameters using INERTIA command.
*3: Complies with ISO Class 3 (ISO14644-1) and older Class 1 (less than 10 0.1 m particles per 28,317cm3:1cft) cleanroom standards.
*4: Varies according to operating environment and program.

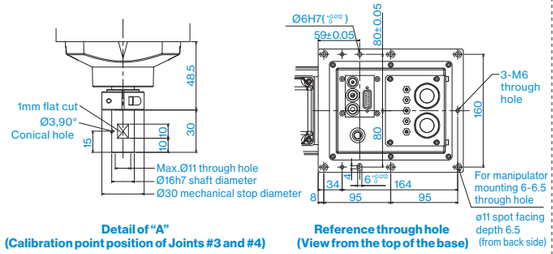
Outer Dimensions (Ceiling Mounting)

[Unit: mm]

Standard-model



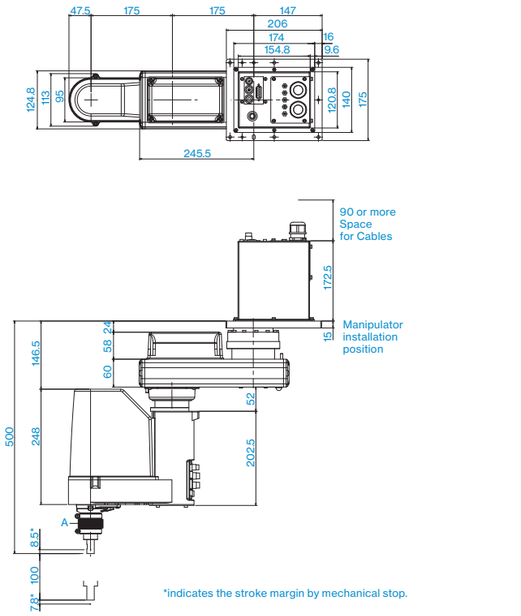


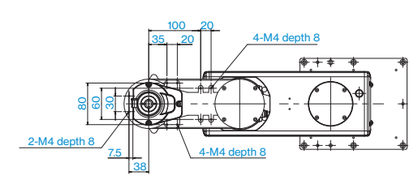


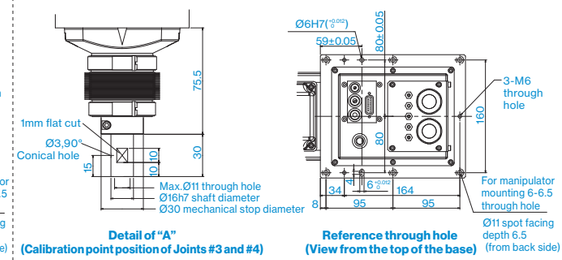
Detail of "A" (Calibration point position of Joints #3 and #4)

Reference through hole (View from the top of the base)

Cleanroom-model



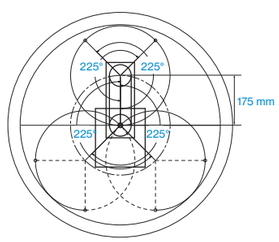




Detail of "A" (Calibration point position of Joints #3 and #4)

Reference through hole (View from the top of the base)

Motion Range (Ceiling Mounting)



Model	RS3-351□
Arm #1 Length (mm)	175
Arm #2 Length (mm)	175
Joint #1 Motion range (°)	±225
Joint #2 Motion range (°)	±225

RS4

Folding rotating arm enables large working area in limited space

- 550mm arm has effective reach of 777mm in four directions
- All-direction access for greater freedom in workcell layout
- Enables use of large pallets without requiring large robot installation footprint

Model Number RS4 - 55 1 S - UL

Payload
4 : 4kg

Arm length
55 : 550mm

Joint #3 stroke
1 : 130mm
: 100mm: Cleanroom-model

Environment
S : Standard
C : Cleanroom & ESD (Anti-static)

UL specification
□ : Non UL compliant
-UL : UL compliant

Specifications

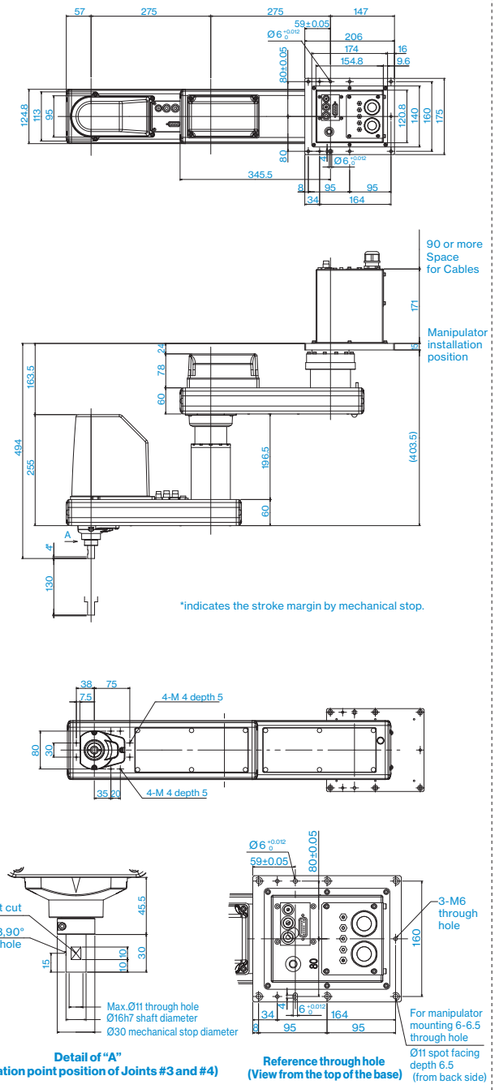
Model name		RS4
Model number		RS4-551□
Arm length	Arm #1, #2	550 mm
Payload	Rated	1 kg
	Maximum	4 kg
Repeatability	Joints #1, #2	±0.015 mm
	Joint #3	±0.01 mm
	Joint #4	±0.01 deg
Standard cycle time*1		0.39 sec
Max. operating speed	Joints #1, #2	7400 mm/sec
	Joint #3	1100 mm/sec
	Joint #4	2600 deg/sec
Joint #4 allowable moment of inertia*2	Rated	0.005 kg·m²
	Maximum	0.05 kg·m²
Joint #3 down force		150 N
Installation environment		Standard/Cleanroom*3 &ESD
Mounting type		Ceiling
Weight (cables not included)		19 kg
Applicable Controller		RC700-A
Installed wire for customer use		15 Pin D-Sub
Installed pneumatic tube for customer use		Φ6 mm x 2, Φ4 mm x 1: 0.59 MPa (6 kgf/cm²)
Power		AC200-240 V Single phase
Power Consumption*4		1.4 kVA
Cable length		3 m/5 m/10 m/15 m/20 m
Safety standard		CE, KC, UL

*1: Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with 1kg payload (path coordinates optimized for maximum speed) .
*2: When payload center of gravity is aligned with Joint #4 ; if not aligned with Joint #4, set parameters using INERTIA command.
*3: Complies with ISO Class 3 (ISO14644-1) and older Class 1 (less than 10 0.1 m particles per 28,317cm3:1cft) cleanroom standards.
*4: Varies according to operating environment and program.

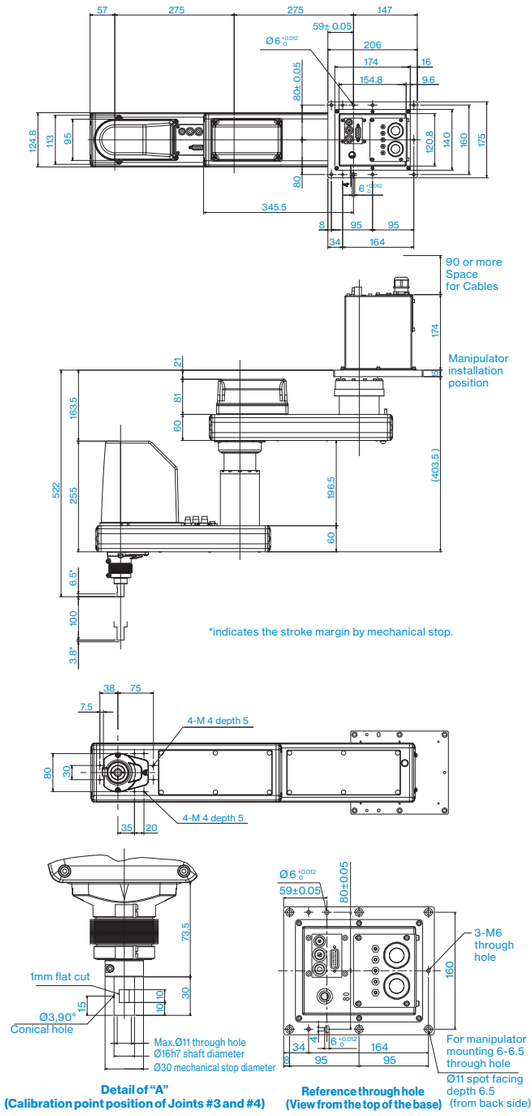
Outer Dimensions (Ceiling Mounting)

[Unit: mm]

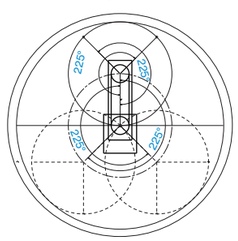
Standard-model



Cleanroom-model



Motion Range (Ceiling Mounting)



Model	RS4-551□
Arm #1 Length (mm)	275
Arm #2 Length (mm)	275
Joint #1 Motion range (°)	±225
Joint #2 Motion range (°)	±225

C4

GYROPLUS Technology

Speed and flexibility for machine tending operation in confined workspaces

- High speed and repeatability for maximum productivity
- Compact design for enhanced configuration flexibility
- C4-A901 long arm model also available

Model Number C4 - A 6 0 1 S □ - UL

Payload
4 : 4kg

Arm length
6 : 600mm
9 : 900mm

Brake equipment
1 : Brakes on all joints

Environment
S : Standard model
C : Cleanroom & ESD (electrostatic discharge) model

UL specification
□ : Non UL compliant
-UL : UL compliant

Mounting type
□ : Table Top Mounting

Specifications

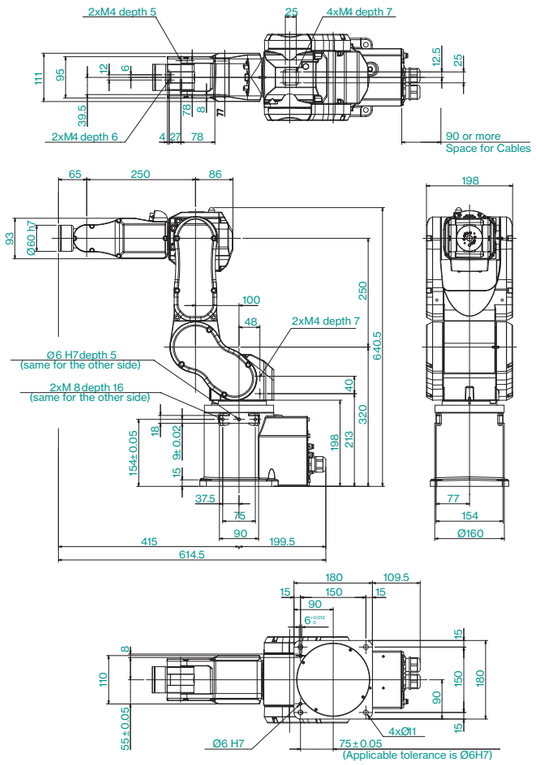
Model name		C4	C4L
Model number		C4-A601□	C4-A901□
Max. motion range	P point:through the center of J4/J5/J6	600 mm	900 mm
	Wrist flange surface	665 mm	965 mm
Payload	Rated	1kg	
	Maximum	4 kg (5 kg with arm downward positioning)	
Repeatability	Joints #1-#6	±0.02 mm	±0.03 mm
Standard cycle time*1		0.37 sec	0.47 sec
Max. operating speed	Joint #1	450 deg/sec	275 deg/sec
	Joint#2	450 deg/sec	275 deg/sec
	Joint #3	514 deg/sec	289 deg/sec
	Joint #4	555 deg/sec	
	Joint #5	555 deg/sec	
	Joint #6	720 deg/sec	
Allowable moment of inertia*2	Joint #4	0.15 kg·m²	
	Joint #5	0.15 kg·m²	
	Joint #6	0.1 kg·m²	
Installation environment		Standard/Cleanroom*3 & ESD	
Mounting type		Table Top/Ceiling*4	
Weight (cable not included)		27 kg	29 kg
Applicable Controller		RC700-A	
Installed wire for customer use		9 Pin D-Sub	
Installed pneumatic tube for customer		Φ4mm x 4 : 0.59 MPa (6 kgf/cm²)	
Power		AC200-240 V Single phase	
Power Consumption*5		1.7 kVA	
Cable length		3 m/5 m/10 m/15 m/20 m	
Safety standard		CE, KC, UL	

*1: Cycle time based on round-trip arch motion (300mm horizontal, 25 mm vertical) with 1kg payload (path coordinates optimized for maximum speed) . *2: When payload center of gravity is aligned with Joint #4 ; if not aligned with Joint #4, set parameters using INERTIA command. *3: Complies with ISO Class 3 (ISO14644-1) and older Class 1 (less than 10 0.1 m particles per 28,317cm3:1cft) cleanroom standards. *4: Manipulators are set to "Table Top mounting" at shipment. To use the Manipulators as "Ceiling mounting", you need to change the model settings. For details on how to change the model settings, refer to "C4 Manipulator 5.5 Changing the Robot", and "EPSON RC+ User's Guide Robot Configuration".
*5: Varies according to operating environment and program.

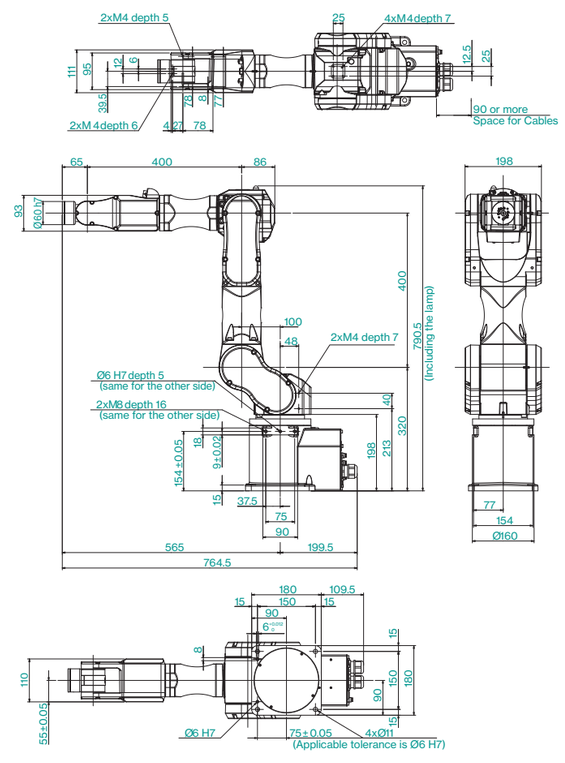
Outer Dimensions

[Unit: mm]

A601

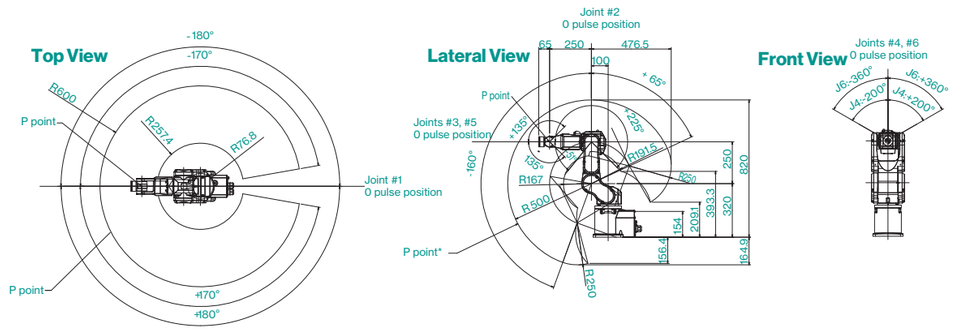


A901

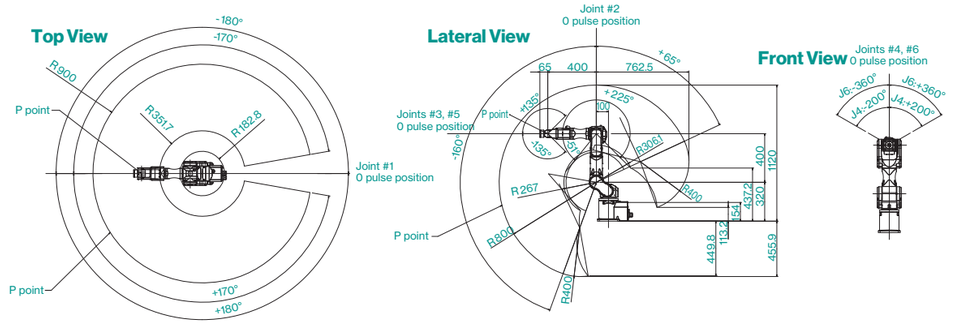


Motion Range

A601



A901



C8

GYROPLUS Technology

C8/C8L

Exclusive Epson technology ensures high speed and low vibration with heavy payloads

- Ideal for multi-effector pick-and-place with multiple workpieces, and for handling and assembly tasks with heavy payloads

C8XL

Long, slim, 1400mm arm for machine tending operation

- Long, slim arm minimizes interference with nearby machinery and can reach into narrow spaces
- Low weight and compact design greatly increase configuration flexibility

Model Number: C8 - A 14 0 1 S □ □ - UL

Payload
- 8 : 8kg

Arm length
- 7 : 710mm
- 9 : 900mm
- 14 : 1400mm

Brake equipment
- 1 : Brakes on all joints

Environment
- S : Standard model
- C : Cleanroom & ESD (electrostatic discharge) model
- P : Protection model (IP67)

M/C cable exit direction
- □ : Rearward
- B : Downward

Mounting type
- □ : Table Top Mounting
- R : Ceiling Mounting
- W : Wall Mounting

UL specification
- □ : Non UL compliant
- -UL : UL compliant

Specifications

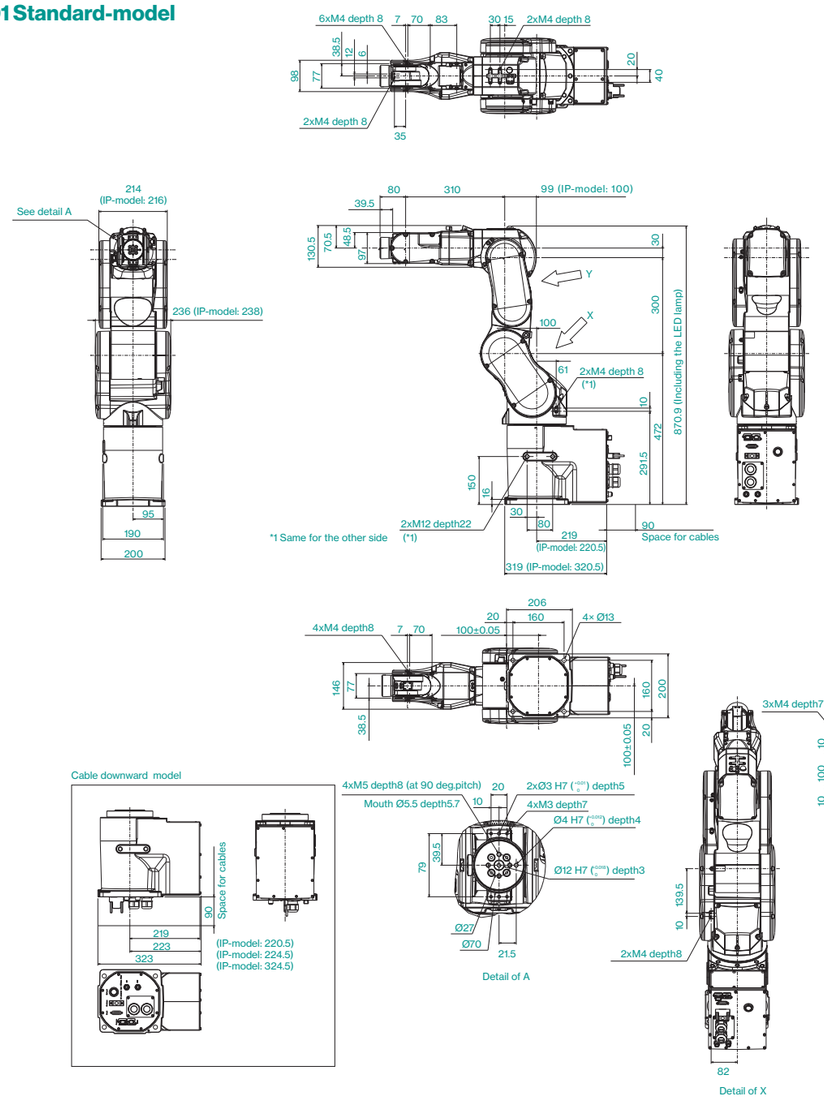
Model name		C8	C8L	C8XL
Model number		C8-A701□□□	C8-A901□□□	C8-A1401□□□
Max. motion range	P point:through the center of J4/J5/J6	711 mm	901 mm	1400 mm
	Wrist flange surface	791 mm	981 mm	1480 mm
Payload*1	Rated	3 kg		
	Maximum	8 kg		
Repeatability	Joints #1-#6	±0.02 mm	±0.03 mm	±0.05 mm
Standard cycle time*1		0.31 sec	0.35 sec	0.53 sec
Max. operating speed	Joint #1	331 deg/sec	294 deg/sec	200 deg/sec
	Joint #2	332 deg/sec	300 deg/sec	167 deg/sec
	Joint #3	450 deg/sec	360 deg/sec	200 deg/sec
	Joint #4	450 deg/sec		
	Joint #5	450 deg/sec		
	Joint #6	720 deg/sec		
Allowable moment of inertia*2	Joint #4	0.47 kg·m²		
	Joint #5	0.47 kg·m²		
	Joint #6	0.15 kg·m²		
Installation environment		Standard/Cleanroom*3 &ESD		
Mounting type		Table Top/Ceiling*4/Wall*4/Protection(IP67)		
Weight (cable not included)		49 kg (IP:53 kg)	52 kg (IP:56 kg)	62 kg (IP:66 kg)
Applicable Controller		RC700-A		
Installed wire for customer use		15 pin (D-sub) , 8 pin (RJ45) , 6pin (for force sensor)		
Installed pneumatic tube for customer		Φ6 mm x 2/Allowable pressure: 0.59 Mpa (6 kgf/cm²)		
Power		AC200-240 V Single phase		
Power Consumption*5		2.5 kVA		
Cable length		3 m/5 m/10 m/15 m/20 m		
Safety standard		CE, KC, UL		

*1: Cycle time based on round-trip arch motion (300 mm horizontal, 25 mm vertical) at each payload setting (path coordinates optimized for maximum speed) *2: When payload center of gravity is aligned with Joint #4 ; if not aligned with Joint #4, set parameters using INERTIA command. *3: C8 and C8L comply with ISO Class 3 (ISO14644-1) cleanroom standards (comparable to previous Clean Class 1: fewer than 10 particles with a diameter grea5ter than 0.1 µm per 28317cm3:1cft in operating area air sample) C8XL complies with ISO Class 4 (ISO14644-1) cleanroom standards (comparable to previous Clean Class 10: fewer than 100 particles with a diameter greater than 0.1 µm per 28317cm3:1cft in operating area air sample) *4: Ceiling- and wall-mounted robots should be programmed using the EPSON RC+ software ceiling- or wall-mount settings. *5: Varies according to operating environment and program.

Outer Dimensions

[Unit: mm]

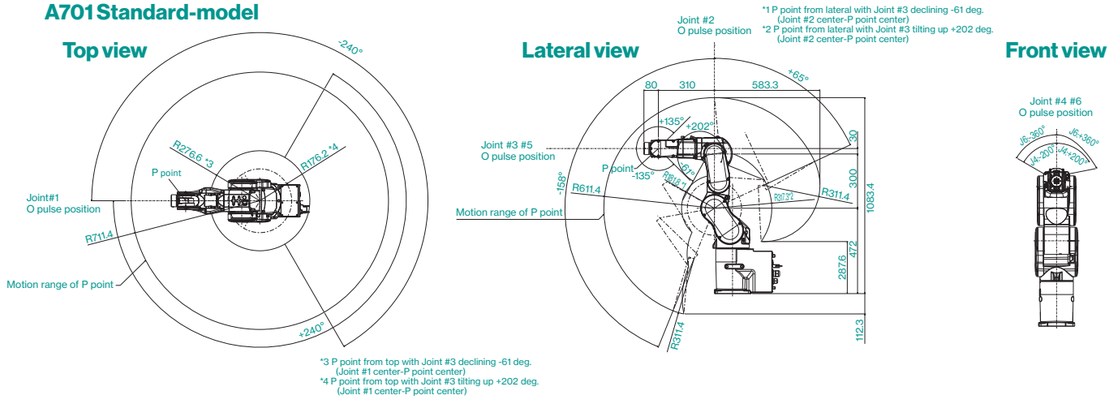
A701 Standard-model



Motion Range

[Unit: mm]

A701 Standard-model

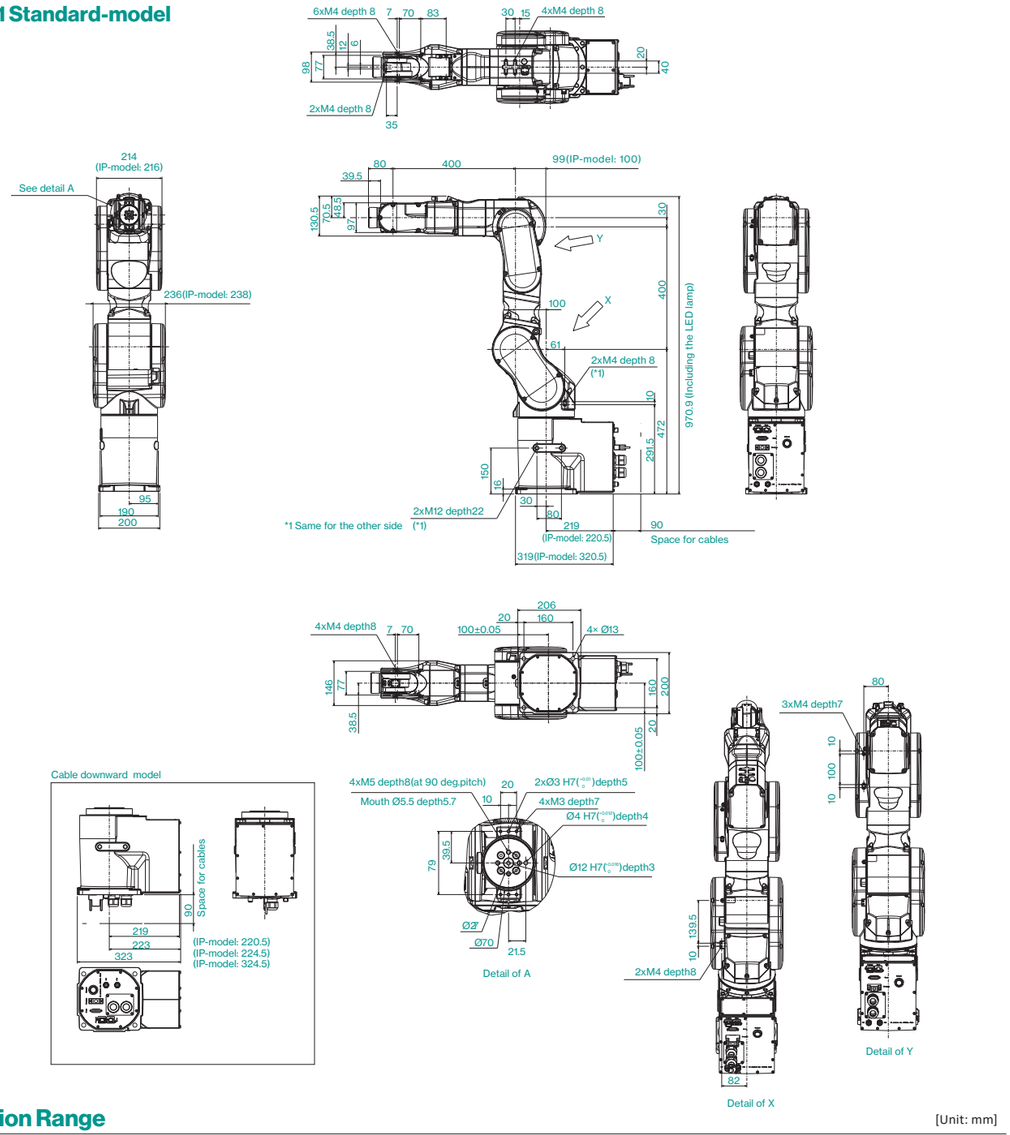


*3 P point from top with Joint #3 declining -61 deg.
(Joint #1 center-P point center)
*4 P point from top with Joint #3 tilting up +202 deg.
(Joint #1 center-P point center)

Outer Dimensions

[Unit: mm]

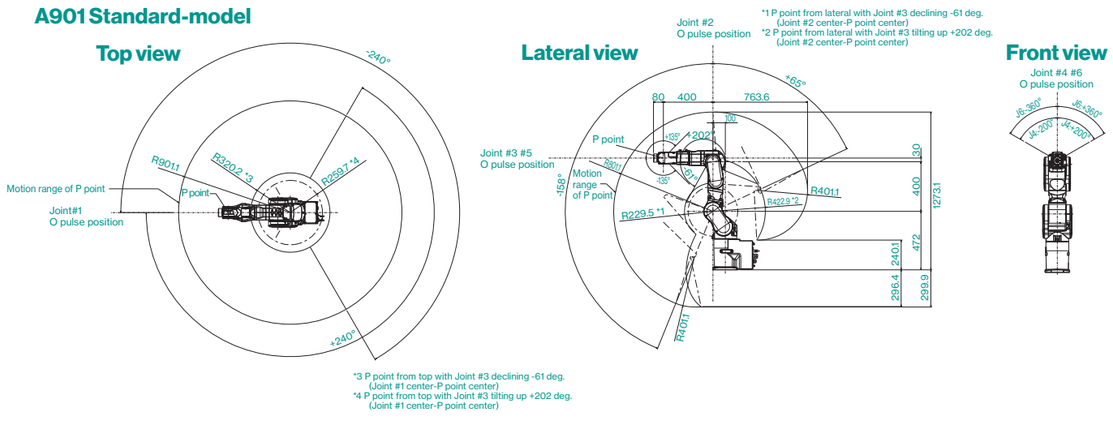
A901 Standard-model



Motion Range

[Unit: mm]

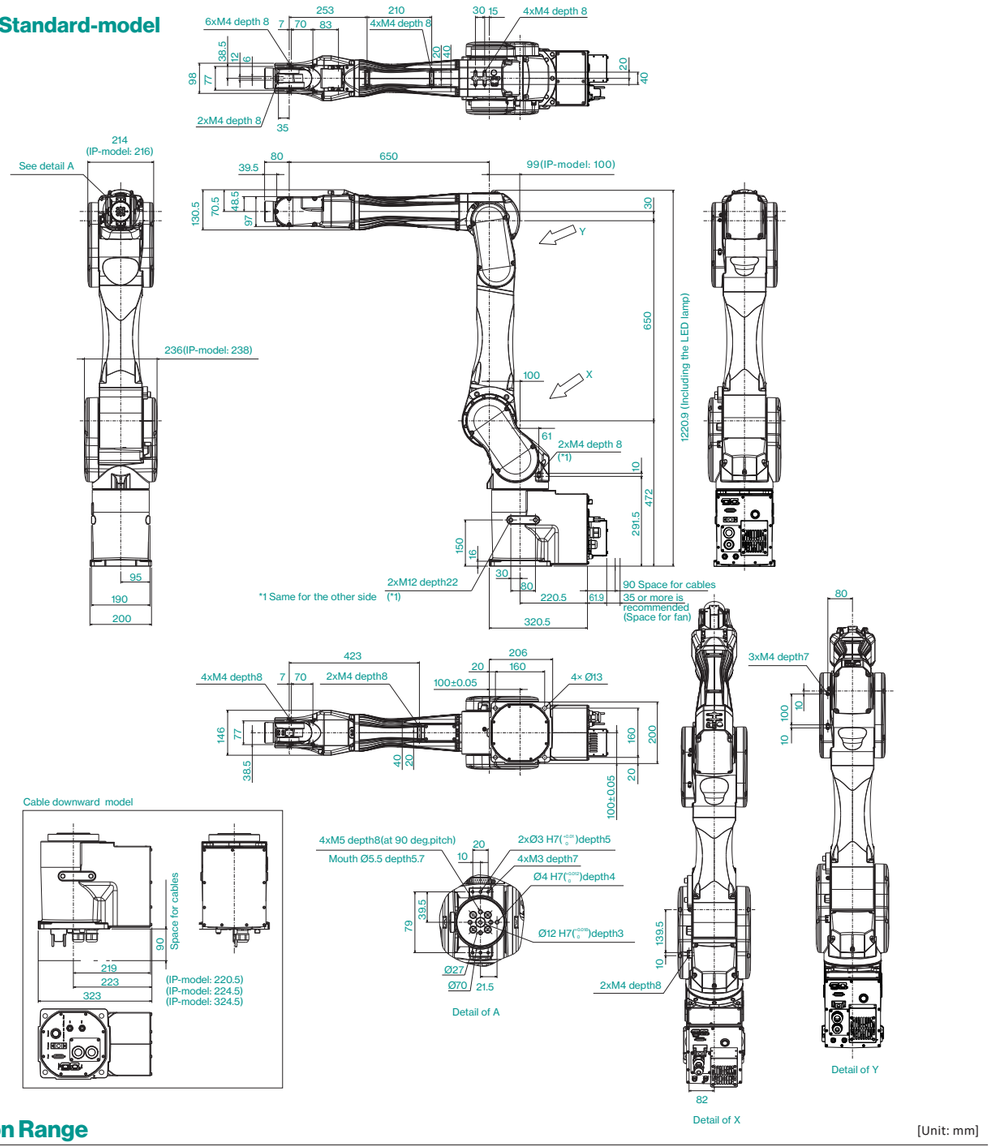
A901 Standard-model



Outer Dimensions

[Unit: mm]

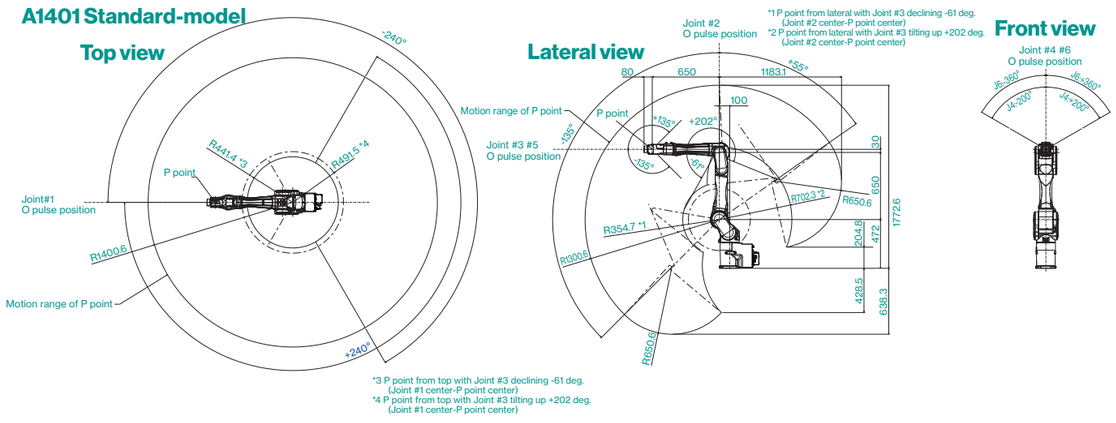
A1401 Standard-model



Motion Range

[Unit: mm]

A1401 Standard-model



C12

GYROPLUS Technology

Space saving, slim but highly payload

- Lightweight slim arm of 1400mm suitable for machine tending and transfer between processes
- The payload capacity has been increased to 12kg and can be used for a wide range of applications

Model number C12-A1401□□□

Payload
12 : 12kg

Arm length
14 : 1400mm

Blake equipment
1 : Brakes on all joints

Mounting type
□ : Table Top

M/C cable installation direction
□ : Cable backward
B : Cable downward

Environment
S : Standard model
C : Cleanroom model

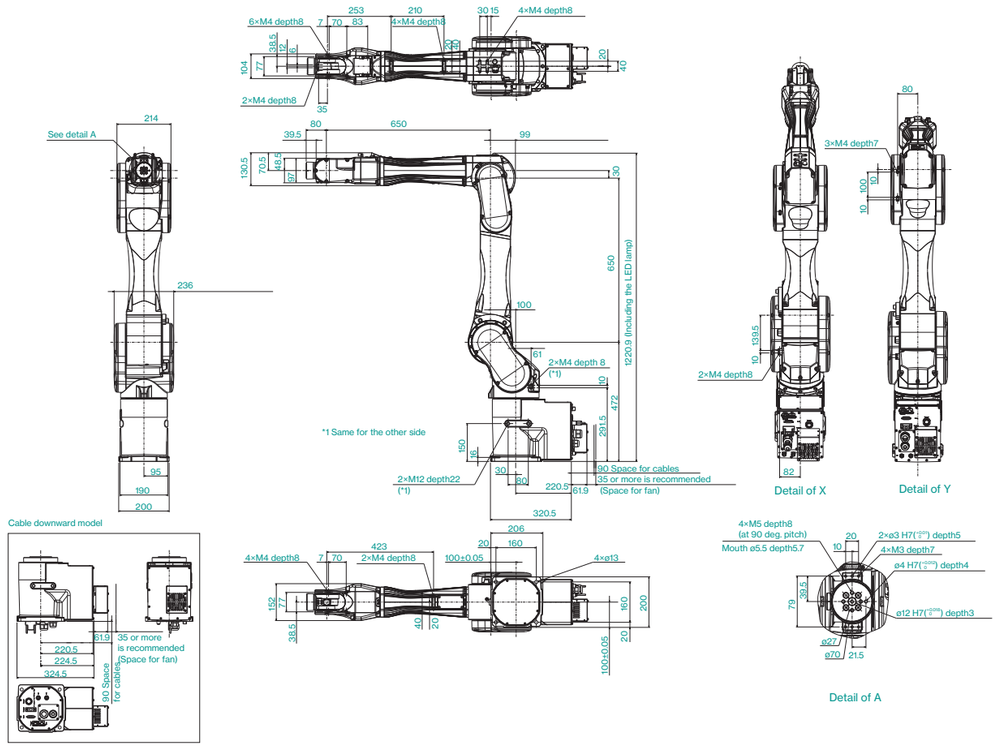
Specifications

Model name		C12XL
Model number		C12-A1401□□□
Arm length	Point P : J1-J5 center	1400 mm
	J1-J6 Flange surface	1480 mm
Payload	Rated	3 kg
	Max.	12 kg
Repeatability	Joint#1-6	± 0.05 mm
Standard cycle time *1		0.50 sec
Max. operation speed	Joint#1	200 deg/sec
	Joint#2	167 deg/sec
	Joint#3	200 deg/sec
	Joint#4	300 deg/sec
	Joint#5	360 deg/sec
	Joint#6	720 deg/sec
Allowable moment of inertia *2	Joint#4	0.70 kg·m2
	Joint#5	0.70 kg·m2
	Joint#6	0.20 kg·m2
Installation Environment		Standard / Clean & ESD*3
Mounting type		Table Top*4
Weight (cables not included)		63 kg
Applicable Controller		RC700-A
Installed wire for customer use		15 pin D-Sub , 8 pin(RJ45)CAT 5e
Installed pneumatic tube for customer use		ø6 mm x 2 Pressure resistance : 0.59 MPa (6 kgf / cm²) (86psi)AC200-240 V
Power *5		2.5 kVA
Power Consumption		3 / 5 / 10 / 15 / 20 m
Cable length		CE , KC
Safety standard		

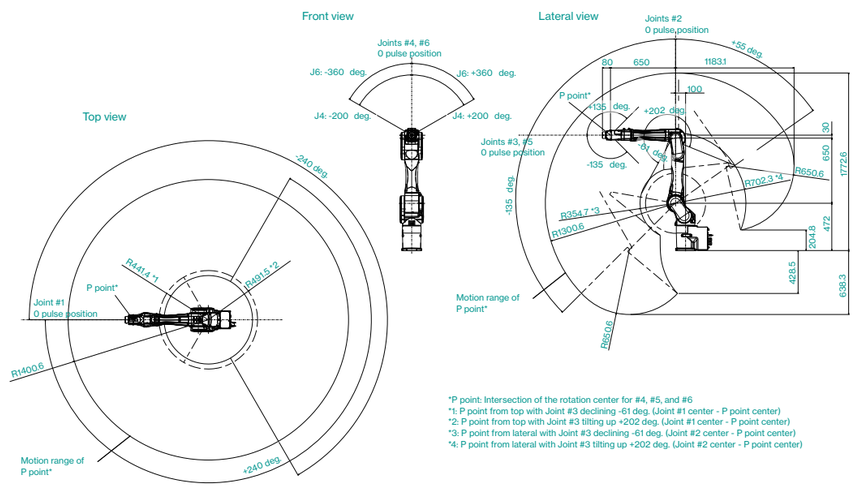
*1 : Cycle time based on round-trip arch motion (300mm horizontal, 25mm vertical) with Accel 120% and 1 kg payload (path coordinates optimized for maximum speed). *2 : If the center of gravity is at the center of each arm. If the center of gravity is not at the center of each arm, set the eccentric quantity using INERTIA command. *3 : Clean level: ISO class 4 (ISO14644-1) *4 : Mounting type other than table top are out of specification.If you wish, please contact the distributor.
*5: It depends on operating enviroment and operation program.

Outer Dimensions

[Unit: mm]



Motion Range



*P point: Intersection of the rotation center for #4, #5, and #6
*1: P point from top with Joint #3 declining -61 deg. (Joint #1 center - P point center)
*2: P point from top with Joint #3 tilting up +202 deg. (Joint #1 center - P point center)
*3: P point from lateral with Joint #3 declining -61 deg. (Joint #2 center - P point center)
*4: P point from lateral with Joint #3 tilting up +202 deg. (Joint #2 center - P point center)

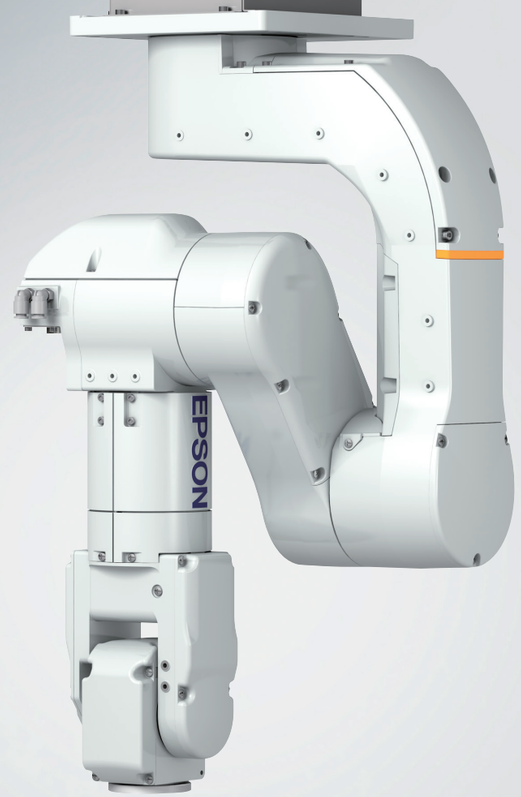
N2

GYROPLUS Technology

Unique folding arm design provides the motion flexibility of a 6-axis robot in the space-saving compact size

- Slim folding arm design
- Requires only 600mm x 600mm installation space — 40% less than a C4 robot*
- Arm rotation enables shortcut access to workpiece from any direction

*C4: ø660 mm → N2: ø460 mm (Epson data as of October 2018)



Model Number **N2 - A 45 0 S R**

- Payload
  - 2 : 2.5kg
- Arm length
  - 45 : 450mm
- Brake equipment
  - 0 : Brakes on the Joints #2 to #6
- Environment
  - S : Standard model
- Mounting type
  - □ : Table Top Mounting
  - R : Ceiling Mounting

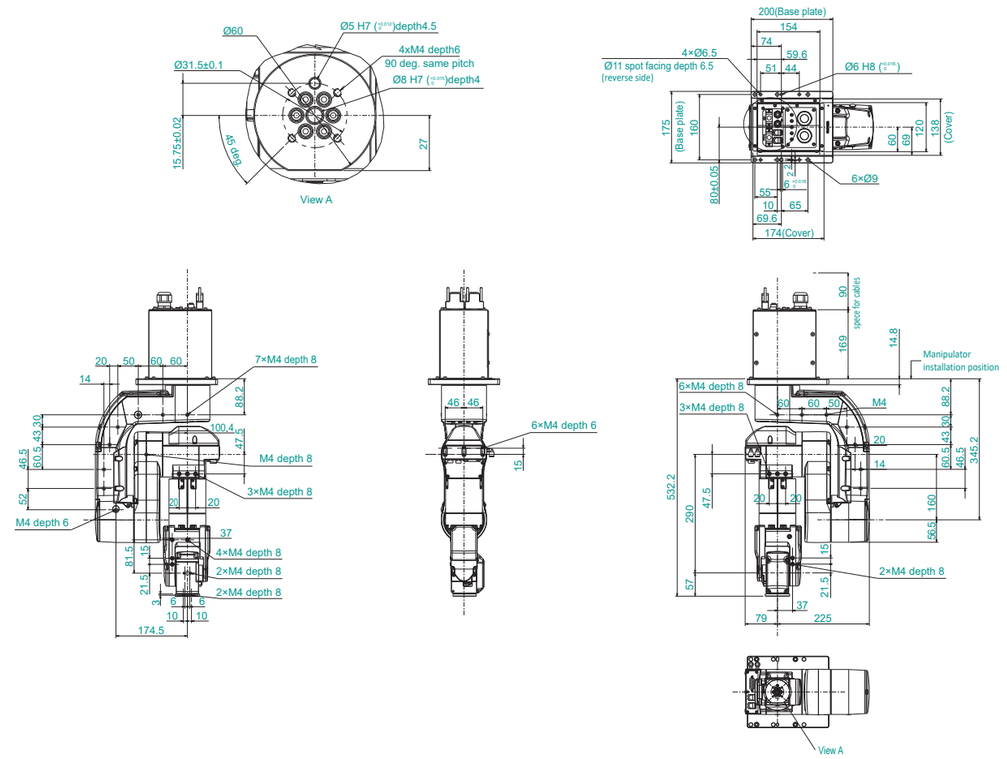
Specifications

Model name		N2
Model number		N2-A450SR
Max. motion range	P point:through the center of J4/J5/J6	450mm
	Wrist flange surface	532.2mm
Payload*1	Rated	1.0kg
	Maximum	2.5kg
Repeatability		±0.02mm
Max. motion range	J1	297 deg/sec
	J2	297 deg/sec
	J3	356 deg/sec
	J4	356 deg/sec
	J5	360 deg/sec
	J6	360 deg/sec
Allowable moment of inertia*2	Joint #1-#6	0.2kg·m²
	Joint #4	0.2kg·m²
	Joint #5	0.08kg·m²
Installation environment	Joint #6	Standard
Mounting type		Ceiling / Table top *3
Weight (cable not included)		19kg
Applicable Controller		RC-700A
Installed wire for customer use		15 pin (D-sub) 8 pin (RJ45) Cat 5e or equivalent (2 cables) (also used for Force Sensor)
Installed pneumatic tube for customer		Φ6 mm x 2 : 0.59 MPa (6 kgf/cm²)
Power		AC200-240 V Single phase
Power Consumption*4		0.6 kVA
Cable length		3 m/ 5 m/ 10 m/ 15 m/ 20 m
Safety standard		CE, KC

*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: Robots are set up for ceiling-mount use at shipment. For tabletop use, robots should be programmed using the EPSON RC+ software tabletop-mount settings.
*4: Varies according to operating environment and program.

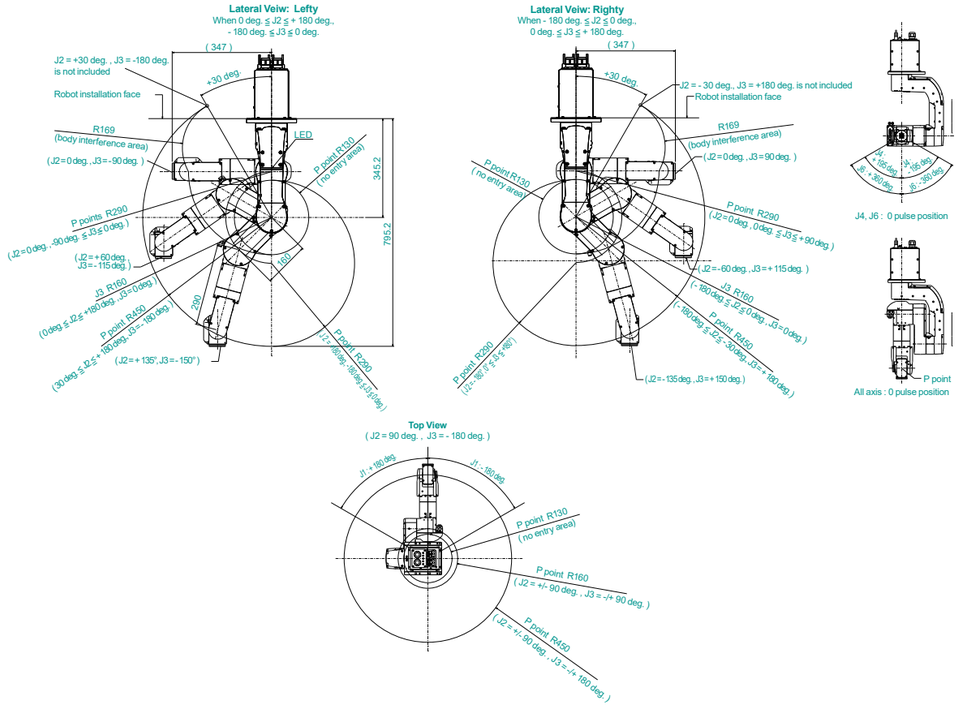
Outer Dimensions

[Unit: mm]



Motion Range

[Unit: mm]

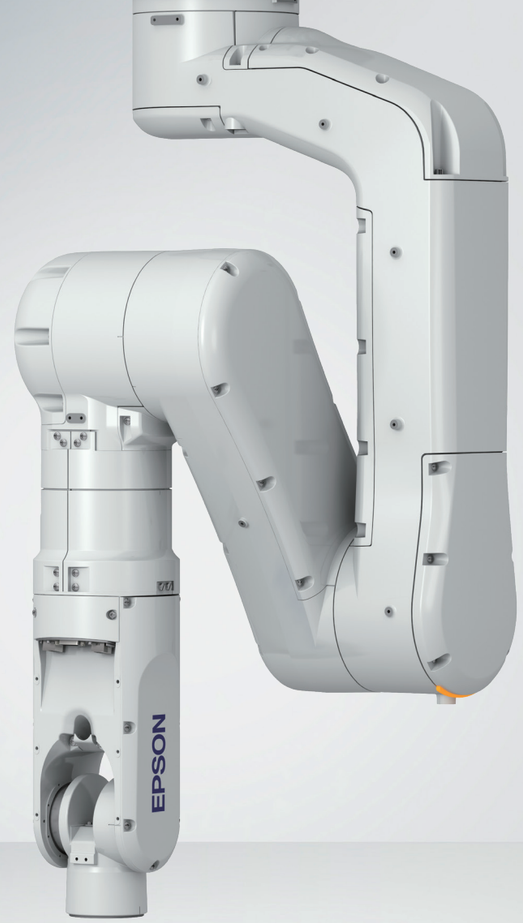


N6-A850

GYROPLUS Technology

Ceiling mounted 6-axis robot with unique folding arm design

- 6-axis flexibility and SCARA-like arch motion enables shortcut access to work-piece from any direction in limited space
- 6kg payload ideal for automotive component handling
- Hollow arm construction for easy cabling setup and teaching



Model Number: N6 - A 85 0 □ □ R

- Payload: 6 : 6kg
- Arm length: 85 : 860mm
- Brake equipment: 0 : Brakes on the Joints #2 to #6
- Environment: S : Standard; C : Cleanroom & ESD (Anti-static)
- Cable exit direction: □ : Standard (side); B : Upward
- Mounting type: □ : Table Top Mounting

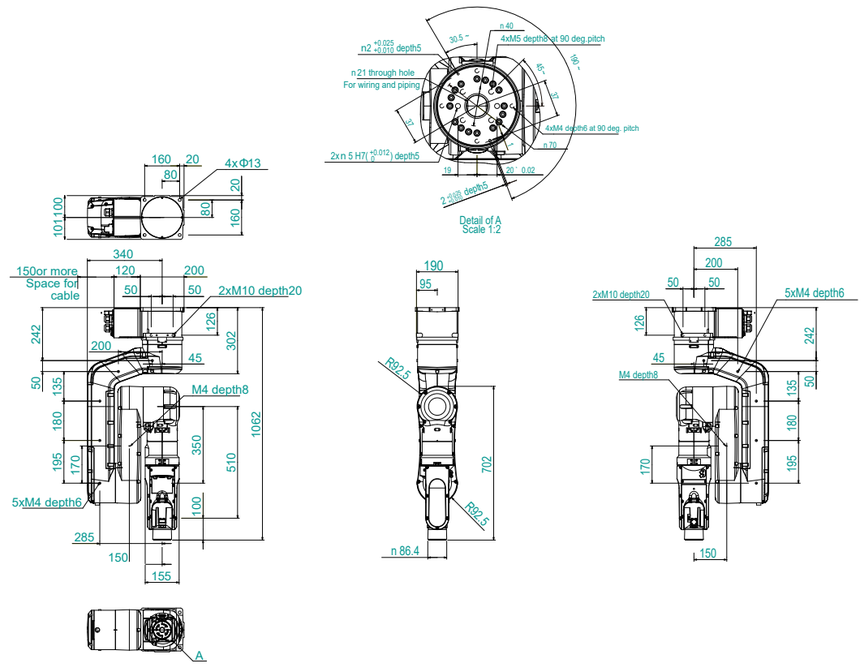
Specifications

Model name		N6
Model number		N6-A850□□R
Max. motion range	P point: through the center of J4/J5/J6	860 mm
	Wrist flange surface	960 mm
Payload*1	Rated	3.0 kg
	Maximum	6.0 kg
Repeatability	Joints #1-#6	±0.03 mm
Max. motion range	J1	326 deg/sec
	J2	326 deg/sec
	J3	444 deg/sec
	J4	444 deg/sec
	J5	450 deg/sec
	J6	537 deg/sec
Allowable moment of inertia*2	Joint #4	0.42 kg·m²
	Joint #5	0.42 kg·m²
	Joint #6	0.14 kg·m²
Installation environment		Standard, Cleanroom & ESD*3
Mounting type		Ceiling
Weight (cable not included)		64 kg
Applicable Controller		RC700-A
Installed wire for customer use		D-sub 15 pin, RJ45 8 pin x2 (Cat 5e, for Vision and Force sensor)
Installed pneumatic tube for customer		Φ6 mm x 2 : 0.59 MPa (6 kgf/cm²)
Power		AC200-240 V Single phase
Power Consumption*4		2.2 kVA
Cable length		3 m/5 m/10 m/15 m/20 m
Safety standard		CE, KC

*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 : Complies with ISO Class 5 (ISO14644-1) and older Class 1 cleanroom standards.
*4 : Varies according to operating environment and program.

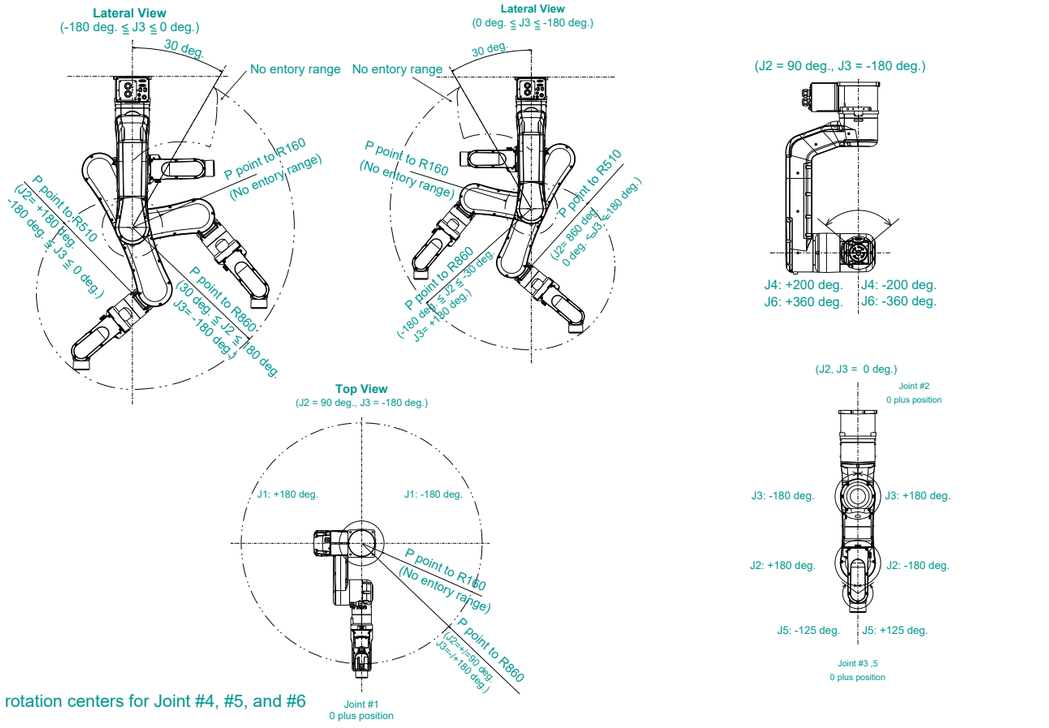
Outer Dimensions

[Unit:mm]



Motion Range

[Unit:mm]



P point :
Intersection of the rotation centers for Joint #4, #5, and #6

N6-A1000

GYROPLUS Technology

Original folding arm mechanism reduces 6-axis robot installation space requirements

- High space utilization efficiency
  - Extended reach for tall workpieces and high shelving
  - Folding arm design enables installation in limited space
- Hollow arm construction for easy cabling setup

Model Number: N6 - A 100 0 □ □ □

- Payload
  - 6 : 6kg
- Arm length
  - 100 : 1010mm
- Brake equipment
  - 0 : Brakes on the Joints #2 to #6
- Mounting type
  - □ : Table Top Mounting
  - R : Ceiling Mounting
- Cable exit direction
  - □ : Standard (side)
  - B : Upward/downward
- Environment
  - S : Standard
  - C : Cleanroom & ESD (Anti-static)

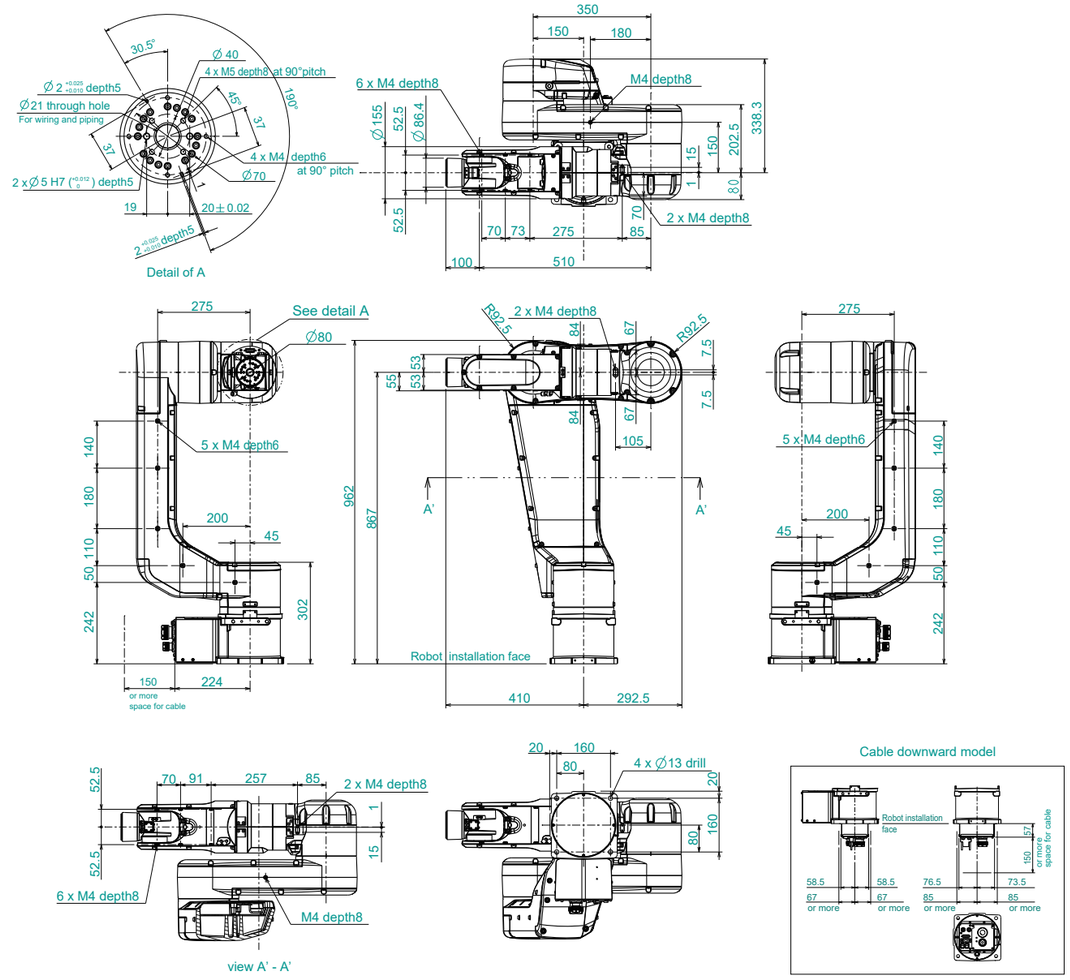
Specifications

Model name		N6
Model number		N6-A1000□□□
Max. motion range	P point:through the center of J4/J5/J6	1010 mm
	Wrist flange surface	1110 mm
Payload*1	Rated	3.0kg
	Maximum	6.0kg
Repeatability	Joints #1-#6	±0.04mm
Max. motion range	J1	326 deg/sec
	J2	326 deg/sec
	J3	444 deg/sec
	J4	444 deg/sec
	J5	450 deg/sec
	J6	537 deg/sec
Allowable moment of inertia*2	Joint #4	0.42kg·m²
	Joint #5	0.42kg·m²
	Joint #6	0.14kg·m²
Installation environment		Standard, Cleanroom*3 &ESD
Mounting type		Table top / Ceiling *4
Weight (cable not included)		69 kg
Applicable Controller		RC-700A
Installed wire for customer use		D-sub 15 pin, RJ45 8 pin x 2 (Cat 5e, for Vision and Force sensor)
Installed pneumatic tube for customer		Φ6 mm x 2 : 0.59 MPa (6 kgf/cm²)
Power		AC200-240 V Single phase
Power Consumption*5		2.2 kVA
cable length		3 m/5 m/10 m/15 m/20 m
Safety standard		CE, KC

*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 : Complies with ISO Class 5 (ISO14644-1) and older Class 1 cleanroom standards. *4 : Ceiling-mounted robots should be programmed using the EPSON RC+ software ceiling-mount settings. *5 : Varies according to operating environment and program.

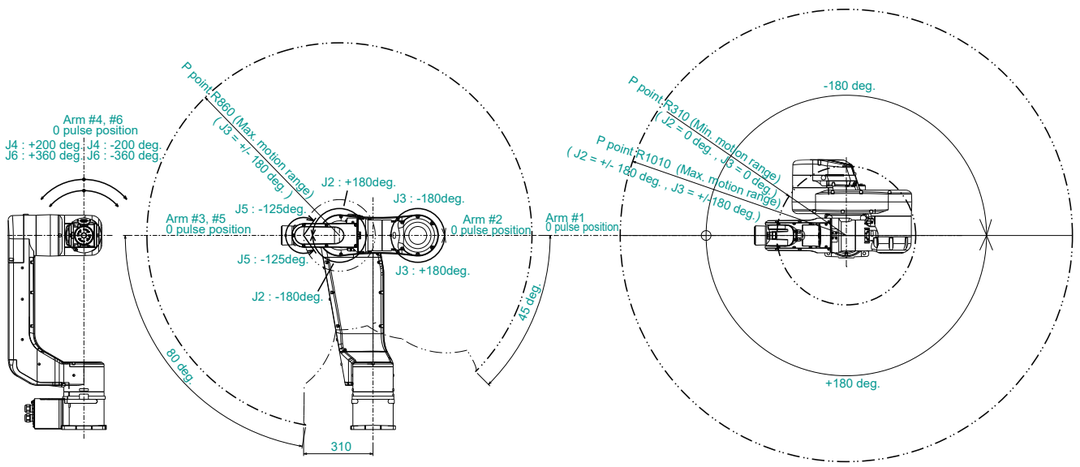
Outer Dimensions

[Unit: mm]



Motion Range

[Unit: mm]



VT6L

Simple setup and high cost-performance for easy and affordable automation

- Space-saving design with built-in controller
- 6-axis versatility without complicated setup
- 100V–240V power source compatibility
- Hollow wrist construction for internal cabling
- Batteryless motor unit for reduced maintenance

Model Number VT6 - A90 1 □ □ - □

Payload
6 : 6kg

Arm length
90 : 920mm

Brake equipment
1 : Brakes on all joints

Environment
S : Standard model
C : Cleanroom model
P : Protection model (IP67)

Mounting type
□ : Table Top Mounting
R : Ceiling Mounting
W : Wall Mounting

Power Supply
□ : AC specification Manipulator
DC : DC specification Manipulator

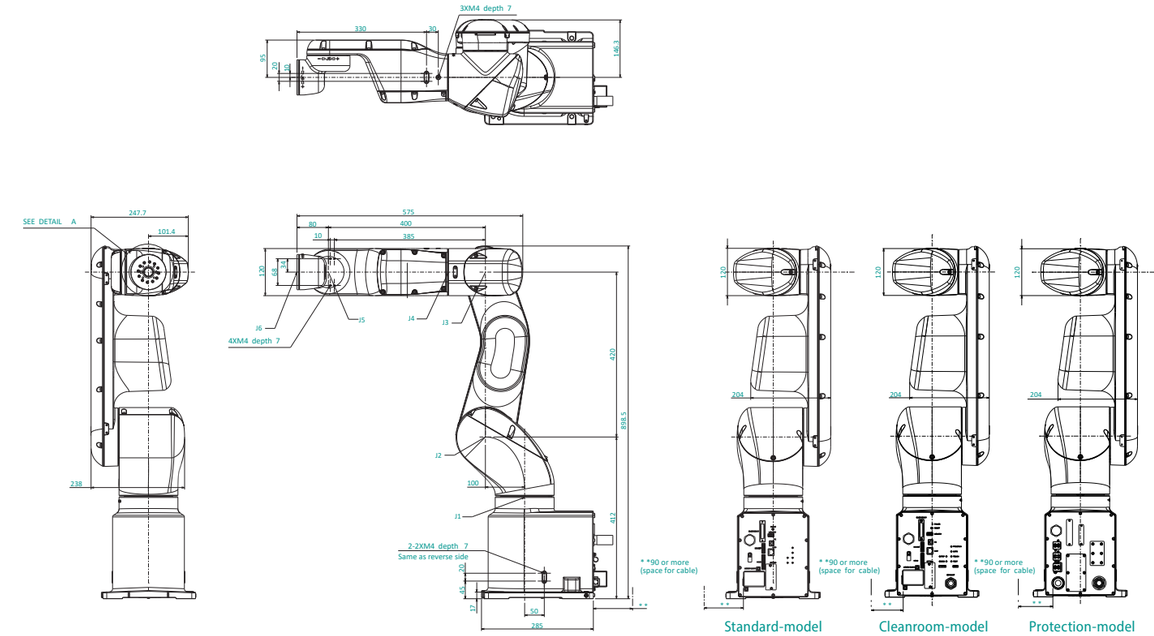
Specifications

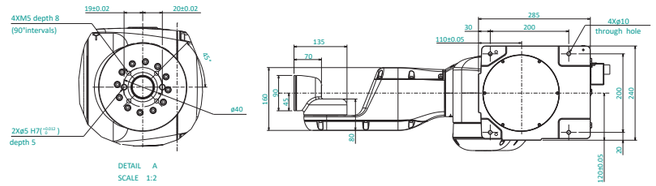
Model name		VT6L
Model number		VT6-A901□□-□
Payload (Load)*1	Rated	3 kg
	Max.	6 kg
Max. reach	P point : Joint#1-5 center	920 mm
	Joint#1-5 flange surface	1000 mm
Repeatability	Joint#1-6	± 0.1 mm
Max. motion range*2	J1	166.2 deg/sec
	J2	122.5 deg/sec
	J3	141.2 deg/sec
	J4	Standard, Cleanroom 268.7 deg / sec, Protection, DC 188.1 deg/sec
	J5	296.8 deg/sec
	J6	Standard, Cleanroom 293.2 deg/sec, Protection, DC 234.5 deg/sec
Allowable moment of inertia*3	Joint#4	0.3 kg·m²
	Joint#5	0.3 kg·m²
	Joint#6	0.1 kg·m²
Mounting type*4		Table top / Ceiling / Wall mounting
Environment spec		Standard, Cleanroom*5 / Protection-model (IP67)
Weight (cables not included)		40 kg
Applicable Controller		Built-in controller
Installed wire for customer use		None (External Wiring Option availabe)
Installed pneumatic tube for customer use		None (External Wiring Option availabe)
Power		□, AC100-240 V single phase / DC, 43-60V*6
Power Consumption*7		1.2 kVA
Cable length		□, 5 m / DC, 2m
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		CE, KC

*1 : Do not apply the load exceeding the maximum payload. *2 : In case of PTP control *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. (Clean room & Protection models require table top mounting) *5 : Complies with ISO Class 5 (ISO14644-1) and older Class 1 cleanroom standards. *6 : When sharing the battery power source with AGV etc., a voltage higher than the stated value may be applied to the robot, depending on the operation of AGV etc. Take measures such as overcurrent protection. *7 : It depends on operating environment and operation program.

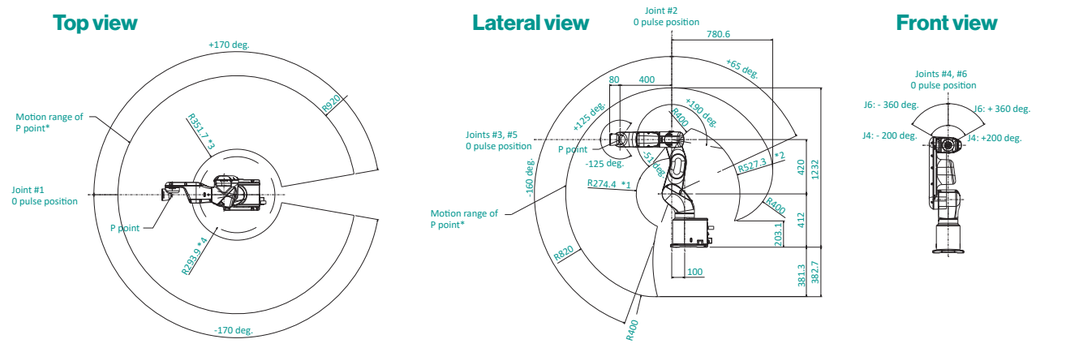
Outer Dimensions (Table Top Mounting)

[Unit: mm]





Motion Range (Table Top Mounting)

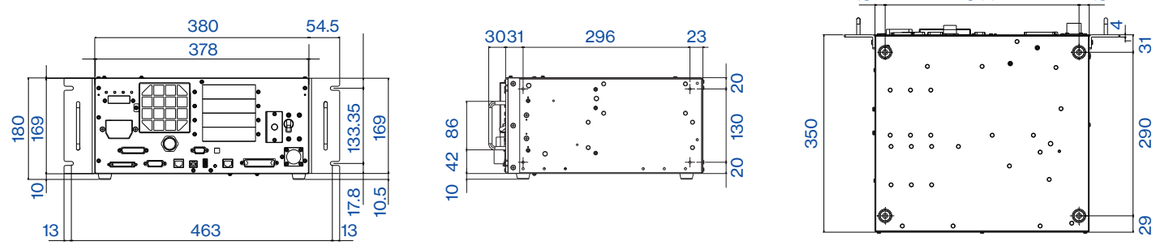


01 RC700-A — Multi-function Controller

■USB connectivity; easy setup ■Drive units can be added for multi-robot control

RC700-A software/Manipulator support			
Software		Epson RC+7.0	●
Manipulator	SCARA robots	G series	●
		LS series	–
		RS series	●
		T series	–
	6-axis robots	C series	●
		N series	●
		VT series	–

Outer Dimensions [Unit: mm]

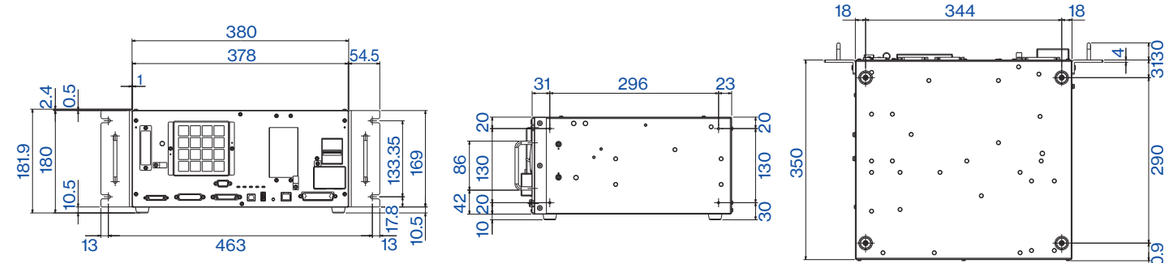


01 RC90-B — Dedicated LS series Controller

■USB connectivity; easy setup

RC90-B software/Manipulator support			
Software		Epson RC+7.0	●
Manipulator	SCARA robots	G series	—
		LS series	●
		RS series	—
		T series	—
	6-axis robots	C series	—
		N series	—
		VT series	—

Outer Dimensions [Unit: mm]



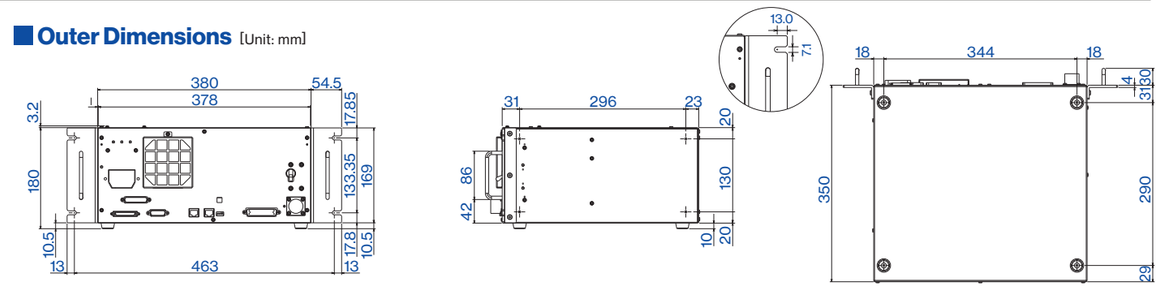
01 RC700DU-A — Controller for Multi-Effector Control

■Connected to RC700-A controllers for multi-robot control.

RC700DU-A software/Manipulator support			
Manipulator	SCARA robots	G series	●
		LS series	–
		RS series	●
		T series	–
	6-axis robots	C series	●
		N series	●
		VT series	–

*N2 is not supported

Outer Dimensions [Unit: mm]

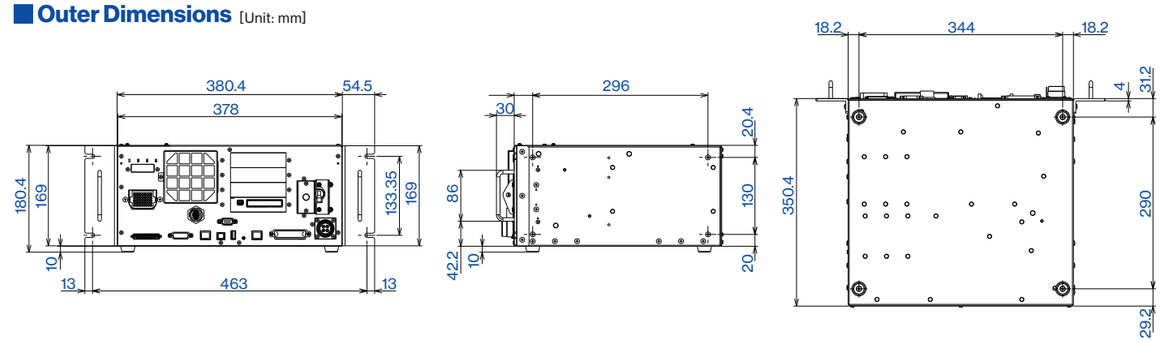


01 RC700-E — Multi-function Controller with Enhanced Safety

■Safety board for flexible machine design

RC700-E software/Manipulator support			
Software		Epson RC+7.0	●
Manipulator	SCARA robots	GX series	●
		LS series	—
		RS series	—
		T series	—
	6-axis robots	C series	—
		N series	—
		VT series	—

Outer Dimensions [Unit: mm]



Specifications

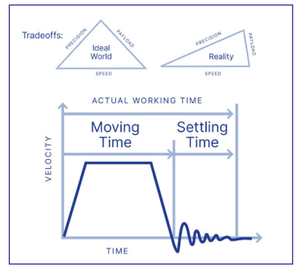
	RC700-A	RC90-B	Drive units RC700DU-A	RC700-E
Controllable axes				
	Max. 6 AC servo motors	Max. 4 AC servo motors	Max. 6 AC servo motors	Max. 4 AC servo motors
Robot manipulator control				
Programming language and Robot control software	Epson RC+7.0			
Joint control	Max. 6 axes simultaneous	Max. 4 axes simultaneous	Max. 6 axes simultaneous	Max. 4 axes simultaneous
	Software AC servo control			
Speed control	PTP control: 1-100% / CP control: real speed setting			
	PTP control: 1-100% (auto acceleration) / CP control: real speed setting			
Positioning control				
	PTP (Point-To-Point control) CP (Continuous Path control)			
Storage capacity				
	Max. object size: 4 MB Point data area: 1000 points/file Backup variable area: Max. 100 KB (incl. control table) Approx. 1,000 variables are available. The number varies depending on the size of array variables		—	Max. 100 kB (including management table area) About 1,000 variables can be used However, this varies depending on the size of array variables and other factors
External input/output signals (standard)				
Standard I/O	Input: 24 Output: 16			
Communication interface (standard)				
Ethernet	1 channel		—	1 channel
RS-232C	1 port		—	1 port
Safety function				
	STO / Emergency Stop / Safeguard(SG)/Safety Door(Protective Stop) / Enable / "Speed monitoring in low-speed program verification function(T1 test mode) (250mm/sec or less)"			Soft Axis Limiting Safety Outputs / SLS /SLP *In addition to that of left cell
Protective function				
	Low power mode / Dynamic braking / Overload detection / Torque error detection / Speed error detection / Position deviation overflow detection / CPU error detection / Speed deviation overflow detection / Overheat detection /Memory error detection / Fan error detection / Relay melting detection Overvoltage detection / AC power voltage detection / Temperature error detection			
Power source				
	AC200-240 V Single phase 50/60 Hz			
Weight (max.)*1				
	11 kg	7.5 kg or 10 kg (depending on effector in use)	9 kg	12 kg
Mounting method				
	Flat, Vertical, Rack, Wall (option)	Flat, Vertical, Rack	Flat, Vertical, Rack, Wall (option)	Flat, Vertical, Rack

*1: The Controller body is labeled with the weight. When transporting or relocating the Controller, check the weight and be careful not to hurt your back when lifting it.
Also, be careful not to pinch or injure your hands, feet, or other body part due to dropping it.

Taking Robot Performance to the Next Level

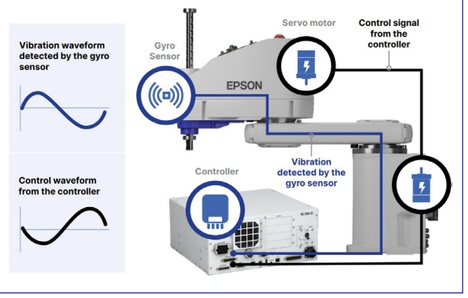
GYROPLUS Technology

Innovations in robotic automation have allowed manufacturers in countless industries to achieve higher throughput, improved quality, and safer working environments. But choosing a robot for an automation task often involves balancing tradeoffs between three key performance criteria: speed, payload, and precision.
The underlying cause of these performance tradeoffs is vibration of the robot arm. Manufacturing processes increasingly demand shorter cycle times for improved throughput, which in turn, requires higher speed and acceleration rates from the robot.
But as speed and acceleration increase, so does vibration in the robot arm.



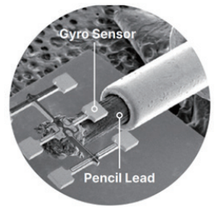
As a result, the ratio of settling time to the overall cycle time increases, reducing throughput and precision. And the common workarounds to these problems, such as increasing the rigidity of the robot arm, result in different performance tradeoffs.
Innovations in robotic automation have allowed manufacturers in countless industries to achieve higher throughput, improved quality, and safer working environments. But choosing a robot for an automation task often involves balancing tradeoffs between three key performance criteria: speed, payload, and precision.
The underlying cause of these performance tradeoffs is vibration of the robot arm. Manufacturing processes increasingly demand shorter cycle times for improved throughput, which in turn, requires higher speed and acceleration rates from the robot.
But as speed and acceleration increase, so does vibration in the robot arm. As a result, the ratio of settling time to the overall cycle time increases, reducing throughput and precision. And the common workarounds to these problems, such as increasing the rigidity of the robot arm, result in different performance tradeoffs.

Competing Performance Criteria	Improving This Specification →	Worsens This Specification	Impact On Performance
Speed vs. Precision	Speed	Vibration	Settling Time is Increased
Cycle Time vs. Vibration Damping	Cycle Time	Settling Time	Tact Time is Increased
Vibration Damping vs. Cost	Arm Rigidity	Robot Size and Weight	Robot Cost is Increased
Vibration Damping vs. Cost	Arm Rigidity	Robot Size and Weight	Energy Consumption is Increased
Vibration Damping vs. Ease of Install	Arm Rigidity	Robot Size and Weight	Robot Footprint is Increased



For decades, these performance tradeoffs have been accepted as an inevitable part of robot selection and operation — the laws of physics haven't changed. But thanks to GYROPLUS Technology from Epson, the compromises between a robot's speed, payload, and precision are finally being addressed.

Epson's GYROPLUS Technology was born out of the company's experience as a leading manufacturer of high-quality quartz crystal materials.
We've applied this quartz crystal technology - along with proprietary MEMS (microelectromechanical systems) processing technology - to sensing devices, producing an extremely compact, high-performance, quartz-based gyro sensor.
The gyro sensor is configured as a "double-T" type crystal oscillator, which provides a very high signal-to-noise ratio, excellent resistance to vibration and shock, and high-temperature stability.
Traditional robot controls use angular velocity feedback located on the robot's motor. But the true angular velocity at the end of the robot arm often differs from the motor's angular velocity, due to mechanical tolerances, friction, and the influence of the attached load and peripherals such as end effectors and wiring.
Now, with Epson's GYROPLUS Technology mounted at the end of the robot arm, the robot controller receives information about the behavior directly at the end of the arm, so it can deliver motion commands to address the exact movement and position of the arm, rather than an estimate based on the motor's angle and velocity. This means more precise control of positioning, along with significant vibration reduction.



Mitigating Tradeoffs in Robot Performance – GYROPLUS Technology –

Epson RC+ program development software

Epson RC+ software makes it easy to develop control programs for setup, operation, and regular maintenance. With an easy-to-understand graphic user interface, it helps you achieve maximum productivity with minimum programming overhead.

Epson RC+

For all-in-one management of program development, teaching, machine vision, force-sensing, simulation, and the graphic user interface.

Epson RC+ 7.0 functions

Robot programming functions
- SPEL+ language
- Approach check area / Approach check plane
- Pallet handling
- Payload and effector eccentricity
- High-speed, high-precision 3D path accuracy
- Multitasking
- Positioning completion timing
- Arch motion
- Parallel processing
- Singularity point avoidance
- Remote control expansion I/O
- Operating speed and acceleration settings

Simple teaching functions
- Jog & teach / Tool settings
- Local coordinate settings

Maintenance and management functions
- Consumables management
- Controller settings backup

Simulator functions
- Layout review / interference checking
- Programming/debugging functions, etc.

Options

Software options
- RC+ API 7.0
- GUI Builder
- ECP
- VRT

Force-sensing systems / GUI
- Force Guide

Image processing systems / GUI
- Vision Guide
- Catch-On-Fly
- OCR

SPEL+ language

Easy-to-learn SPEL+ programming is similar to BASIC, and provides full support for multitasking, motion control, I/O control, and a wide range of other functions.

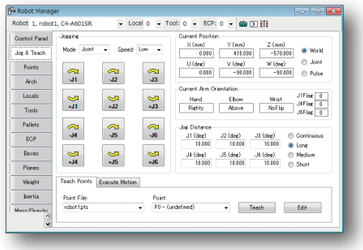
Example program

```
Function main
    Motor On            Example program
    Power High          Set power mode to High
    Speed 100           Set speed to 100%
    Accel 100, 100      Set acceleration speed to 100%

    If Sw(0) = On Then  Is I/O input bit 0 On?
        Jump P0         Move robot arm to Point 0
    Else
        Jump P1         Move robot arm to Point 1
    EndIf
Fend
```

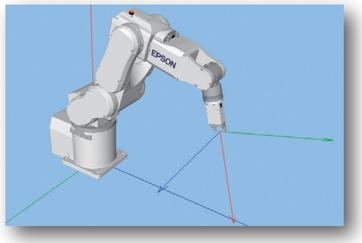
Jog & teach

All teaching commands are accessible from a single window for efficient programming.



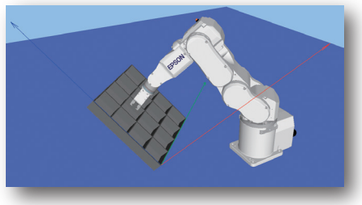
Tool settings

The offset from the rotational axis to the effector tip can be preset to move the toolhead to a specified point without complex programming.



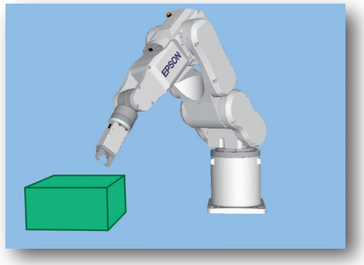
Local coordinate settings

A local coordinate system can be defined relative to the base coordinate system, enabling you to define workspaces based on angled coordinate systems or CAD point data.



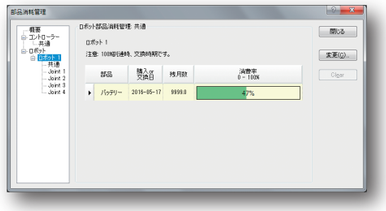
Approach check area / Approach check plane settings

Enables you to check effector approach within an arbitrarily defined area or plane to prevent interference with other robots or peripheral equipment, and to restore effector position after an error occurs.



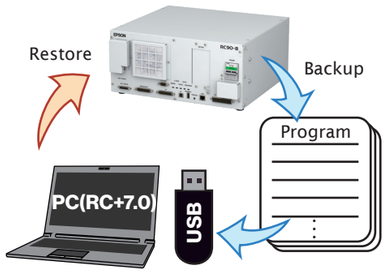
Consumables management

Enables you to set recommended maintenance alarms based on operating time or distance for batteries, grease, timing belts motors, brakes, and ball screw splines.



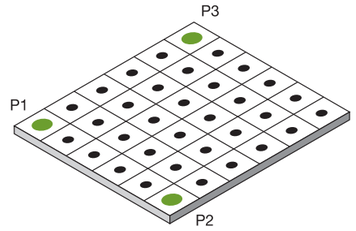
Controller settings backup

Controller settings and programs can be backed up to a PC or USB memory to facilitate offline analysis and enable quick restoration when needed.



Easy alignment with palletized parts

If parts are arranged in a square layout, spaced at regular intervals, the PALLET command can be used to quickly and precisely position the end effector.



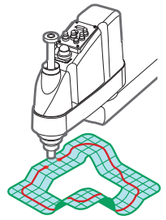
Simply set points P1, P2, and P3 — all other points ● are set automatically.

High repeatability with varying payloads and effector orientation

Once the operator has set workpiece and effector weight, weight range, and effector orientation, acceleration is automatically adjusted to reduce residual vibration and ensure high repeatability.

High-speed, high-precision, 3D continuous path control

All Epson robot systems offer the fast, precise, three-dimensional continuous path (CP) control needed for high-productivity coating and sealant application processes. Advanced linear interpolation, arch interpolation, and free curve motion enable precise effector control, and simple PASS commands can be used to evade obstacles within the workcell space. Programmed paths can reference either a tool-centered control point or an external control point.



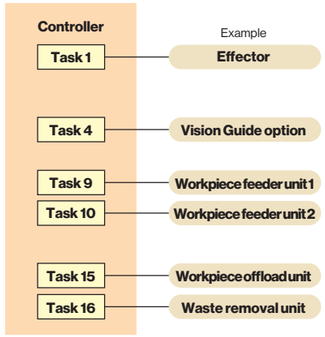
Continuous path (CP) control

Positioning completion time control for maximum efficiency

A time limit can be set for the completion of effector positioning to enable the next instruction to be executed even if the target point has not been reached. This allows you to maximize your yield by prioritizing takt (cycle) time over precision, or vice versa, according to the nature of the work to be done.

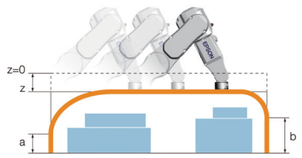
Multitasking function

With Epson's programming language, even complex multitask processes can be automated with ease. Up to 32 individual tasks can be seamlessly executed and controlled by a single program. Vision Guide machine vision, and pulse generator control of peripheral equipment can all be utilized to achieve full process automation.



3D jump with variable arch for ultra-precise short-distance movement

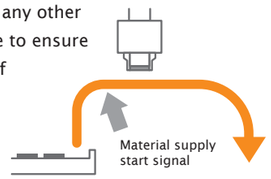
EPSON SCARA and ProSix robots all support JUMP command movements in three-dimensional space, and the arch described by the approaching and departing effector can be set to suit the work environment. Deceleration/acceleration of the approaching or departing head can be regulated without interrupting operation, ensuring smooth, precise, short-distance motion that helps improve takt time and product quality stability.



a: Z-axis vertical ascent (mm; departing)
b: Z-axis vertical descent (mm; approaching)
z: Horizontal travel (mm)

Parallel processing for higher speed and efficiency

Parallel processing enables you to control peripheral devices while the robot arm is in motion. Commands can be sent via RS-232C or any other supported I/O interface to ensure synchronized control of multi-device processes for maximum throughput efficiency.



Configuration singularity avoidance function

Continuous path operations that contain robot arm configuration singularities can cause joint-speed overrun. If the arm approaches such a configuration, the singularity avoidance function prevents overrun errors by maintaining joint speed until the arm has moved past the point of singularity.

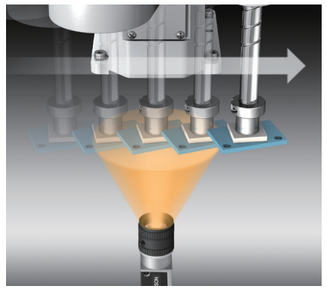
Remote control expansion I/O

Using the remote control expansion I/O, the robot can be controlled simply by entering I/O commands — there's no need for complex program development.

On-the-fly pickup

Workpiece pickup, alignment, and kitting can be carried out on-the-fly without pausing robot movement. Combined with an imaging system, it makes an ideal solution for high-speed alignment and handling of randomly arranged workpieces.

* RC700 controllers only.



Operating speed and acceleration/deceleration settings

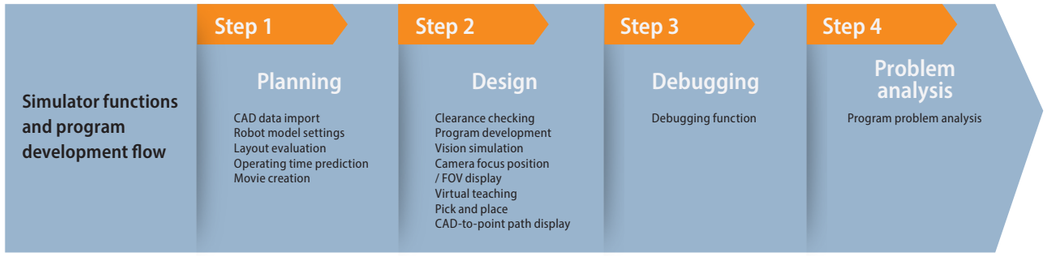
Operating speed and acceleration/deceleration of the arm can be set in 100 steps.

PTP motion Maximum point-to-point speed is set as a percentage relative to the maximum acceleration speed. Ascent and descent speeds can also be set.

CP motion For continuous path motion, maximum effector speed and acceleration/deceleration speed can be set in mm/sec² increments.

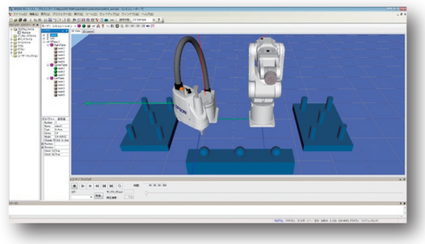
Simulator

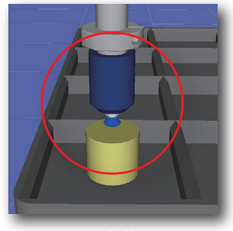
The simulator displays a 3D view of the robot that enables you to thoroughly test programs and confirm robot motion and operating clearances in a virtual environment before putting them into use on the factory floor.



Layout evaluation

3D simulation of robot operation enables you to determine workcell space requirements and necessary clearances.





Enlarged view of effector

CAD data import

CAD data points for peripheral equipment and the effector can be imported directly to the simulator.

Supported CAD data formats for 3D display

- **VRML 2.0**
  Limitations: VRML 2.0 prototypes are not supported.
- **STEP (AP203/AP214)**
  Limitations: Only ASCII code files are supported. Face colors can be displayed only when specified in the imported data.
- **IGES**
- **DXF**
  AutoCAD® DXF formats (DXF R13, DXF R14, DXF 2000/2000i, DXF 2002)

Robot model settings

Workcell layout are easy because 3D data is built into the software.

Robot operating time prediction

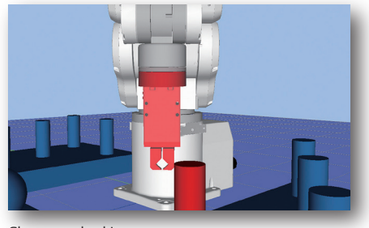
Robot operating time can be predicted based on motion speed and acceleration settings.

Still image / movie creation

Simulation results can be displayed as movies or still images that can be used as tools for evaluation, debugging, and information sharing.

Clearance checking

Clearances can be checked to ensure that the effector and arm do not interfere with the robot body or nearby equipment.

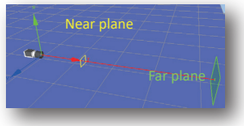


Clearance checking

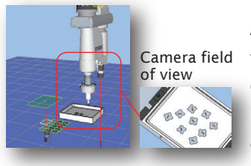
Program development

Programs can be written in SPEL+ and executed within the simulator.

Camera and field of view positioning



The simulator displays the position and angle of view for the selected camera and lens, making it easy to check camera positioning.

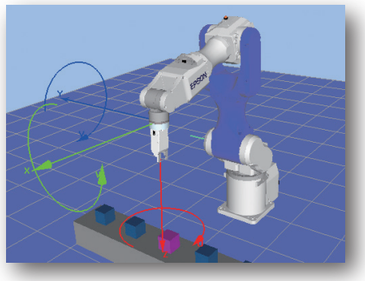


An image of the camera's field of view can also be displayed to facilitate positioning of workpieces and nearby equipment.

*Please note that live camera image display and Vision Guide connectivity are not supported, and displayed images cannot be image processed.

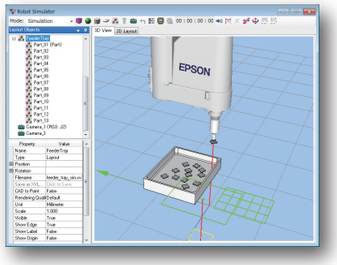
Virtual teaching

Teaching can be carried out within the simulator by positioning the robot with CAD data.



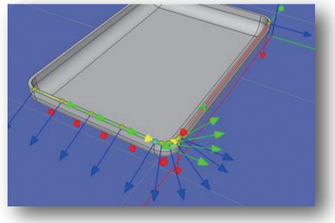
Pick and place

Pick and place program CAD data can be evaluated in the simulator to ensure nearby equipment does not interfere with arm movement.



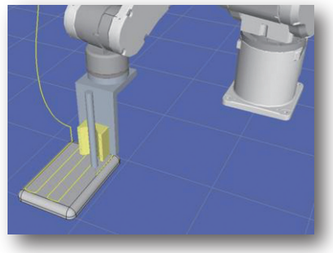
CAD-to-Point teaching

Teaching points can be set using imported CAD data.



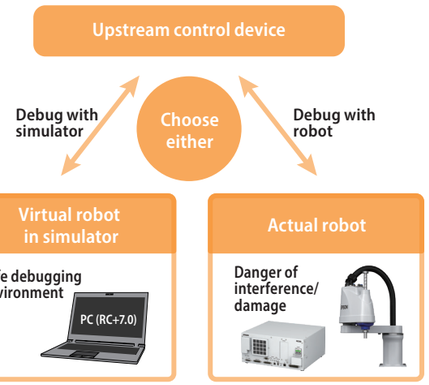
Path display

Robot motion paths can be displayed to confirm teaching points and programs.



Debugging function

Programs can be run within the simulator, allowing full debugging without a robot. Virtual I/O control can be effected by entering values from a PC via RS-232C or TCP/IP.



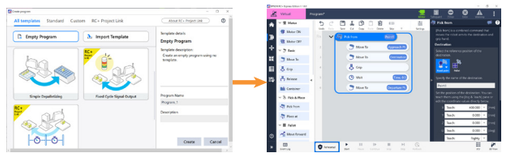
Program problem analysis

Saved robot position data can be imported into the simulator to enable problem analysis and program revision.

Easy to Use Software Epson RC+ Express Edition

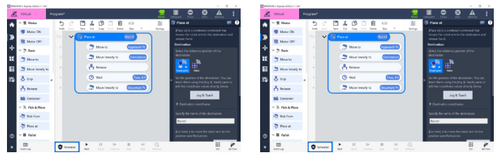
Program Template

- Premade template to create the simple program quickly.
  Pick-and-place, Palletizing, Depalletizing
- Complete the program simply by adding the location information for each command.



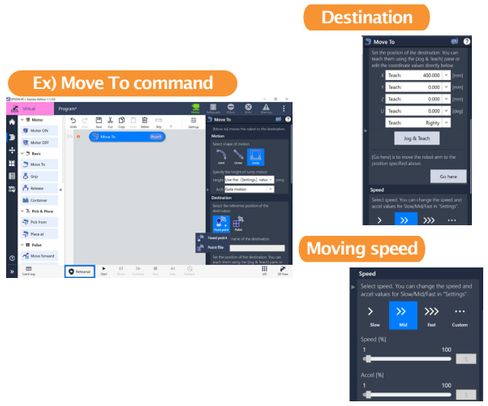
Visual Programing

- Block-style low code programming language.
  User friendly GUI operatable from the tablet PC with drag-and-drop.
- No need to program with SPEL+, Epson's standard robot programming command.



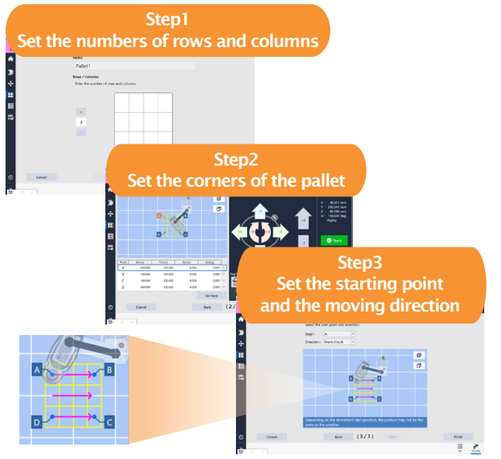
User Guidance

- When selecting a command, required setting items are displayed automatically
- Optimal preset parameters to minimize the items to set.



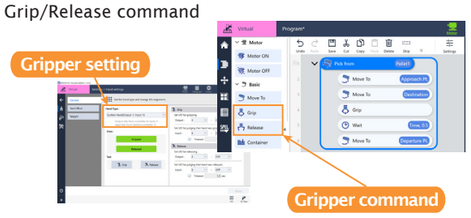
Pallet Wizard

- Possible to create a pallet in 3 steps.
- Easy to understand start point and direction.



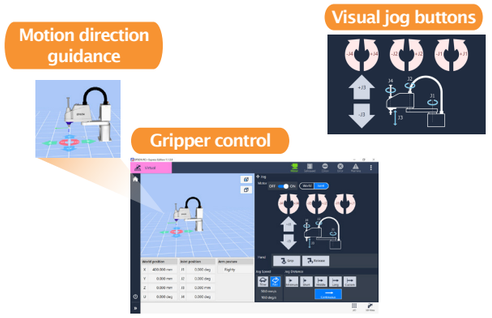
Gripper Setting

- Template and guidance for setting gripper motion in a short time.
  Suction pad, mechanical chuck
- Gripper operation is available from the program without being aware of I/O control
  Grip/Release command



Visualized Jog & Teach

- Intuitive GUI helps to reduce teaching difficulty and time.
  Visual jog buttons
  Gripper control
  Motion direction guidance

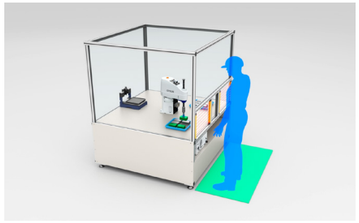


Safety Solution of Epson Robot

Epson's new RC700-E controller enhanced the safety of Epson robots.(*1)
By activating Safety Function 7.0 License(SLS/SLP), it becomes possible to utilize the optional safety functions which can contribute to realize more flexible layout system which allows robot and human to work in the shared space.(*2

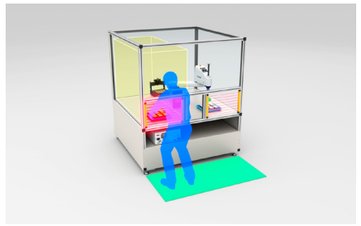
Safety Limited Speed (SLS)

Safety Limited Speed(SLS) is a function to monitor the speed of the robot to prevent the robot from exceeding the preset speed limitation.
By using this function together with external safety devices like safety mat, It is possible to decrease the speed and keep in motion when the human's approach is detected.



Safety Limited Position (SLP)

Safety Limited Position(SLP) is a function to monitor the robot's position and the joint angles to prevent the robot from entering in the preset restricted area.
By using this function together with external safety devices like light curtain, it is possible to set the area where the human exists as a restricted area for the robot.

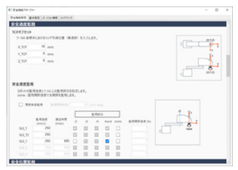


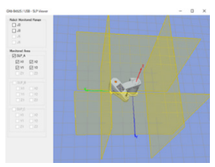
Example of Productivity Improvement and Cost Reduction by utilizing SLS and SLP

Make the manual work in the robot's motion area possible while the robot is kept operating
In the application that robot assembles the parts in the robot cell and human sometimes enter in the cell to load or unload the parts, if you used the robot without SLS and SLP function, the productivity of the system would be low because the robot must stop its operation during the human is working in the cell to keep his or her safety.
It is possible to improve the productivity by adding load/unload unit, but the cost of the system becomes higher, and the system size becomes bigger,
By utilizing SLS and SLP, it is possible to keep the productivity and safety at the same time without using special load/unload unit. When a human come close to the cell, the SLS is activated to slow down the robot speed. And when the human enters in the cell to do load/unload work, SLP is activated to set the human's working area as a restricted area for the robot.

Software Tool for Safety Function

Safety function setting tool called "Safety Function Manager" is provided as a standard tool of Epson RC+
It is possible to assign safety I/O port and set SLS/SLP parameters with this tool.





Certification Provided by 3rd Party Testing Institute

Epson's GX-B series manipulators and RC700-E controller acquire the 3rd party certification by TÜV SÜD, international certification authority, for international standards of product safety such as ISO10218-1 and ISO13849-1(PLd, Cat3) and NRTL certification, which is the safety standard in North America.

*1 The supported model: SCARA robot "GX-B series"
*2 Epson's safety function is not "collaborative" function.
When building the system, please implement the risk assessment for your system, and consider the necessary safety measures

Vision system

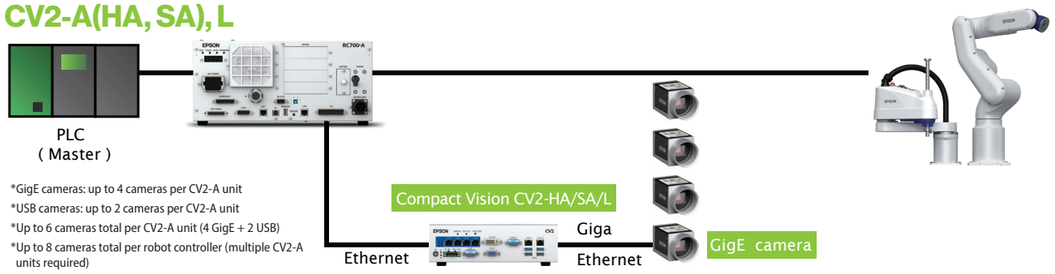
02 Vision Guide

Get advanced machine vision and image processing systems up and running fast with easy-to-use Epson Vision Guide software

- Built-in image processing engine assists vision-to-robot calibration, making it easy to align the robot's coordinate system with the camera's field of view.
- Workpiece position can be determined relative to robot coordinates without complex calculations.
- Image processing sequences can be created simply by entering a few parameters and pointing and clicking with a mouse.
- Advanced pattern matching and geometric search tools enable easy solution program development without writing a single line of code.

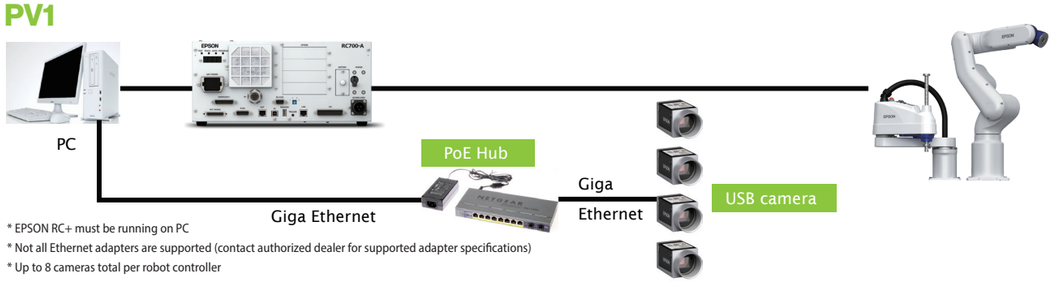
System configuration examples

CV2-A(HA, SA), L



*GigE cameras: up to 4 cameras per CV2-A unit
*USB cameras: up to 2 cameras per CV2-A unit
*Up to 6 cameras total per CV2-A unit (4 GigE + 2 USB)
*Up to 8 cameras total per robot controller (multiple CV2-A units required)

PV1



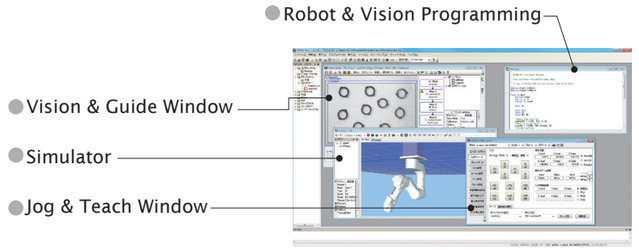
* EPSON RC+ must be running on PC
* Not all Ethernet adapters are supported (contact authorized dealer for supported adapter specifications)
* Up to 8 cameras total per robot controller

Features

Convenience

EPSON RC+ software can be used for both robot and machine vision program development.

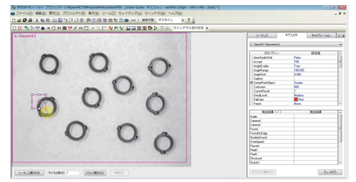
- Other machine vision systems are more complicated to set up because different software must be used for machine vision and robot program development.



Ease of use

Easy registration of vision objects (positioning coordinates, etc.) enables rapid system setup and deployment.

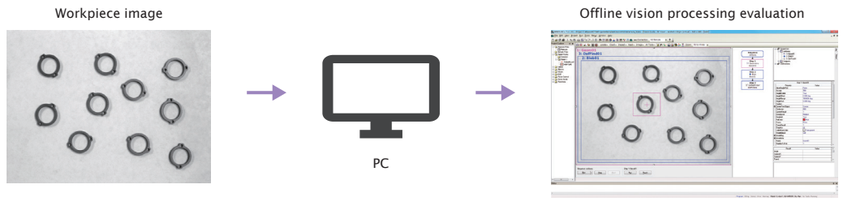
- Vision objects can be registered via simple drag & drop operation.
- Intuitive interface makes operation easy even for first-time users.



Vision simulation

Epson Vision software includes a simulator that lets you visualize robot operation and workflow before equipment is actually installed. This makes it easy to plan and configure the system for maximum productivity, and allow program development to proceed while the system is being constructed.

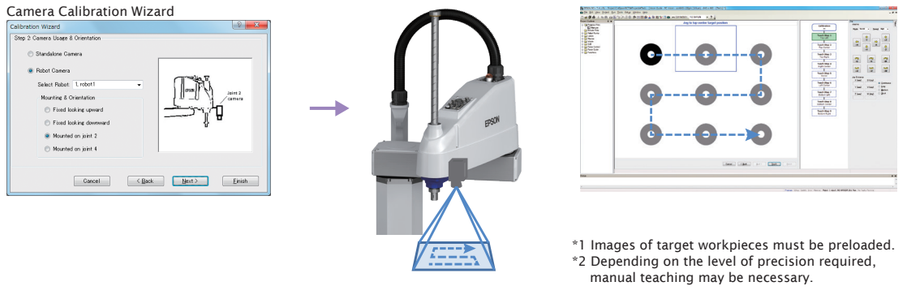
- Vision and process sequencing can be prepared in advance, before system is installed.
- Programs that include image processing sequences can be tested off line.
- If workpiece images are available. image processing can be tested off line.



Easy calibration

A built-in image processing engine makes it easy to align the camera's field of view with the robot's coordinate system, eliminating the need for complex programming when performing vision-to-robot calibration.

The robot automatically*1 follows the steps in the Calibration Wizard to complete the calibra-tion.*2



*1 Images of target workpieces must be preloaded.
*2 Depending on the level of precision required, manual teaching may be necessary.

One-stop service

Whether you need help with initial setup or active production lines, Epson gives you one-stop service convenience for both robot and machine vision systems. With only one service call instead of two to coordinate, your production line will be back up and running in no time.

CV2 series

Item	CV2-L	CV2-SA	CV2-HA
Image processing speed	Entry	Standard	High speed
Connected cameras	up to 4 GigE cameras and 2 USB cameras (6 cameras total per CV2 unit) (all cameras must be compatible with Vision Guide)		
Interface	Ethernet (for robot controller: 2 RJ45 selectable ports [10 / 100 / 1000 Mbps]) (for GigE cameras: 4 RJ45 selectable ports [1000 Mbps])		
Dimensions (mm)	232 (W) x 175 (D) x 70 (H) (excluding rubber feet)		
Operating environment	5~40°C, 20~80%RH (no condensation)		
Installation direction	horizontal or vertical		
Voltage	DC 19~24 V		
Current	11.57 A (at DC 19 V) ~ 9.16 A (at 24 V)		
Weight	2.1 kg		

GigE cameras

Camera resolution	1.3 megapixels	2 megapixels	5 megapixels	10 megapixels	20 megapixels
Vision Guide resolution	1280 x 1080	1600 x 1200	2560 x 1920	3664 x 2748	5472 x 3648
B&W / Color	B&W	B&W / Color	B&W / Color	B&W / Color	B&W / Color
Dimensions (mm)	housing dimensions: 29 x 29 x 42 (total dimensions: 29 x 29 x 60.3)				
Weight	90 g (excluding lens)				
Ambient temperature	0~40°C (external surface temperature below 50°C)				
Ambient humidity	20~80% (no condensation)				
Lens mount	C mount				
Interface	PoE (Power Over Ethernet)				
Camera cable length	5 m /10 m				

Camera performance by CV2 system

Item	Resolution	CV2-L	CV2-HA, CV2-SA	PV1
GigE cameras	1.3 megapixels	B&W		
	2 megapixels	B&W / Color		
	5 megapixels	B&W / Color*1		
	10 megapixels	–	B&W / Color*1	
	20 megapixels*2	–	B&W / Color	

*1: CV2-L 5M camera supports rolling shutter only (no global shutter)
*2 Requires RC+ 7.4.5 or later and CV2 firmware 3.1.1.0 or later
*3 10M color imaging requires RC+ 7.4.4 or later and CV2 firmware 3.1.0.5 or later

Megapixel lenses

Item	Megapixel lenses					Megapixel lenses (HF)					1-inch lenses					
Focal length (mm)	8	12	16	25	50	8	12	16	25	35	8	12	16	25	35	50
Minimum focus distance (mm)	0.1	0.15	0.3		0.5	0.1				0.2	0.2	0.3				0.5
Mass (g)	62.6	61.9	60	71.2	85	95	85	90	85		164.8	102.8	94.4	78.6	103.0	107.0
Filter diameter (mm)	M30.5 × P0.5					M30.5 × P0.5					–	M40.5 × P0.5	M34.0 × P0.5			
External dimensions* (mm)	ø 33.5 × 28.2			ø 33.5 × 36.0	ø 33.5 × 38.2	ø 33.0 × 48.5	ø 33.0 × 52.5		ø 33.0 × 53.1		ø 57.5 × 53.2	ø 42.0 × 36.1	ø 39.5 × 35.2	ø 39.5 × 34.0	ø 39.5 × 45.2	

* As lenses are larger than camera bodies, protrusions on camera attachment surface may interfere with lens operation. In such case, use the optional camera bracket to ensure that protrusions do not affect lens operation.
* Lens support varies according to camera type. Contact your local Epson dealer for details.

Other Options

Extension tube set	Can be inserted between the camera and lens to adjust focusing distance and field of view. Set includes 0.5, 1, 5, 10, 20, and 40 mm tubes (1 each). Tubes can be used singly or in combination to obtain the desired focusing distance.
High-flex GigE camera cable (5 m / 10m)	Cable for connecting GigE cameras to CV2, GigE camera PoE injector, or switching hub.
High-flex GigE camera trigger cable (5 m / 10 m)	Camera triggering cable for connecting GigE cameras to robot controller.
CAT5e Ethernet cable (5 m / 10 m)	Cable for connecting robot controller to CV2, GigE camera PoE injector, or switching hub.
GigE camera PoE injector	Power supply unit to provide power to 1 GigE camera via LAN port.
GigE camera PoE switching hub	Power supply switching hub to provide power to multiple GigE cameras via LAN port.
Power cable (for PoE injector or switching hub)	Power supply cable for GigE camera PoE injector and switching hub.
GigE camera tripod adapter	1/4-inch threaded adapter for attaching a GigE camera to a tripod.

**Epson part feeding delivers a powerful solution to accomodate a wide variety of parts.
Simply setup, improve flexibility.**

System Configuration

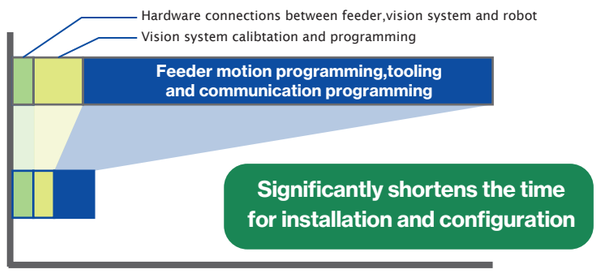
Epson Robot | Vision System | High Performance Feeder | Part Feeding System

Reduce Installation and Configulation Time

The high-performance feeder and Epson RC+ offers easy setup and configuration.

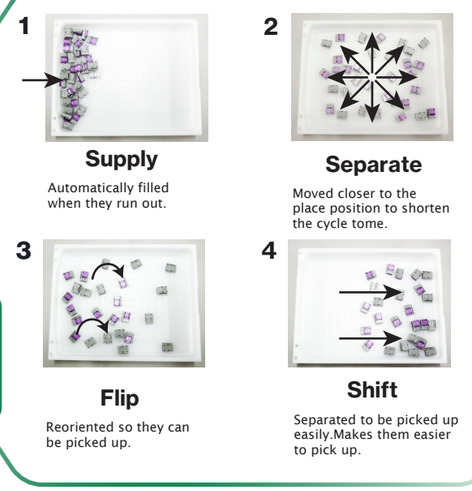
Typical Individual Setting

Epson Part feeding



Easy optimize for complete parts control

Automatically determines and executes four actions according to the parts position

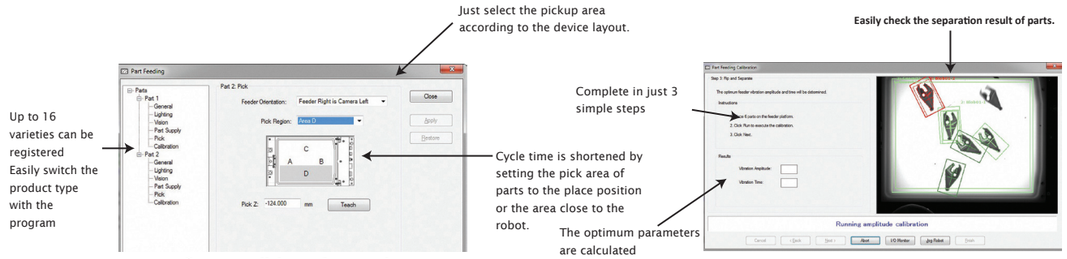


Epson Part Feeding uses a vision system and feeder to control parts for efficient picking by the robot.

In the past, skilled robot engineers created programs to select the optimum operation through trial and error according to the image processing results.

This solution performs the four preset actions on the left as appropriate according to the situation, enabling highly efficient pick-and-place work.

Epson RC+ makes it easy to set and adjust the optimum pick conditions

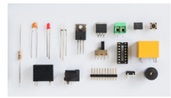


With an easy-to-use wizard and GUI, you can intuitively and automatically set and change parameter settings for efficiently picking and placing parts.
In the past, skilled robot engineers searched for vibration parameters by trial and error for individual workpieces.
Epson part feeding allows you to register a large number of parts and easily switch settings, so you can respond smartly to variable production.

※Specifications are subject to change without notice for the purpose of improving functions.

Supports a wide variety of parts up to 16 types can be registered

Epson part feeding can precisely control the amplitude, time, and timing of vibration, and can handle parts of a wide range of materials and shapes.
In the past, it was necessary to prepare a dedicated feeder for each part or to perform special processing on the feeder container.
This solution can handle various parts without modifying the hardware, improving model switching and reducing running costs.



Parts feeding system configuration list	
Item	Specification
Applicable robot controller	RC700, RC700-A, RC700-E, RC90, RC90-B (Depends on the manipulator)
Applicable manipulator	RS series, G series, GX series, LS series , T series, C series, N series, VT series
Applicable vision	PV1, CV2
Applicable feeder	IF-80, IF-240, IF-380, IF-530 (See table below)
Safety standard	CE

Feeder specification				
Item/Specification	IF-80	IF-240	IF-380	IF-530
Part size	3~8 mm	5~40 mm	15~60 mm	30~150 mm
Vibration surface（LxW）	65 x 52 mm	195 x 150 mm	325 x 254 mm	427x370mm
Footprint（LxWxH）	320 x 65 x 140 mm	300 x 171 x132 mm	499 x 257 x 308 mm	600 x 374 x 328 mm
Power	DC24V, 6A	DC24V、8A	DC24V、20A	
Communication	Ethernet (100Base-T)、TCP/IP			
External device control	Hopper control terminal			
Backlight (selected when ordering and built into the main unit)	None, white, red, blue, green, infrared			
Vibration plate	Anti-rolling（Lattice groove, rolling prevention）、Anti-stick（Circular groove, rolling prevention） Plane＋ESD（anti-static measures）、Anti-rolling＋ESD（Lattice groove, anti-static measures）			

IF-80 | IF-240 | IF-380 | IF-530

High-rigidity, high-sensitivity S250 Series force sensors are specifically designed for use with Epson robots, enabling extremely precise force control for high-precision assembly tasks.

03 force sensors

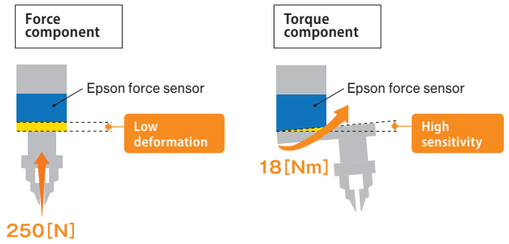
S250 Series force sensors incorporate exclusive Epson crystal piezoelectric technology that ensures a higher level of rigidity and sensitivity than conventional force sensors.

Advantage 1 high rigidity

S250 Series sensors are extremely rigid and resistant to deformation under heavy loads. They have a rated load of 250[N] on the X, Y, and Z axes, and a moment of force of 18[Nm] that makes them particularly sensitive to axial stress.

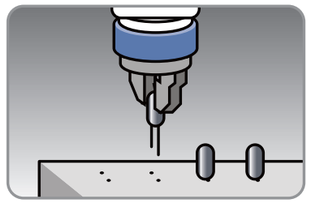
Advantage 2 high sensitivity

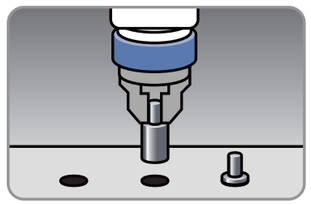
S250 Series sensors also ensure excellent sensitivity and quick response with high resolution of 0.1[N] and a low noise level of 0.035[N] on the X, Y, and Z axes.

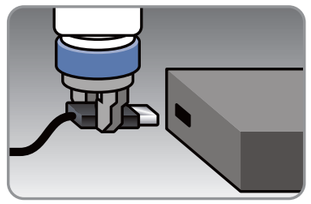


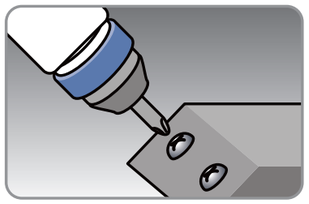
Force-sensing system applications

Robots equipped with an Epson S250 Series force sensing system can handle high-precision tasks that cannot be safely automated with teaching or machine vision systems alone. As a result, even production processes that previously required experienced workers to handle delicate and easily damaged workpieces can be fully automated.


Delicate Component Assembly


Precision Mating


Connector Insertion


Screw Tightening


Fine Polishing

One-stop Epson support

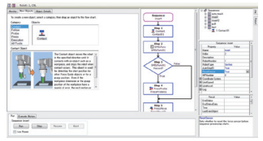
From initial planning and procurement, to setup, adjustment, ongoing maintenance and re-pair, Epson provides one-stop support for all your force-sensing system and automation needs.

Epson Support	STEP 1	STEP 2	STEP 3
	•Planning & procurement consulting	•Robot installation & setup •Force sensor adjustment training	•Maintenance & repair

High-rigidity, high-sensitivity S250 Series force sensors are specifically designed for use with Epson robots, enabling extremely precise force control for high-precision assembly tasks.

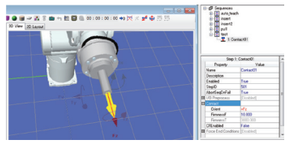
Easy force sensing program development

The new Force Guide interface makes it easy to develop force sensor operating programs simply by dragging Force Guide object icons into a flow chart. In addition, simulator motion display and force waveform monitoring make debugging easier than ever before.



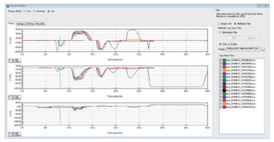
Force Guide GUI

The Force Guide interface provides a clear explanation of what each programming object does, as well as a flow chart view for easy confirmation of program sequence ordering.



Simulator

The simulator enables quick confirmation of the direction of robot arm movement and axis coordinates.



Force waveform display & recording

The force waveform display allows realtime waveforms to be compared with previously recorded waveforms, enabling users to identify operating anomalies and understand how various conditions affect performance.

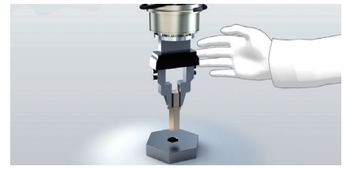
Direct teaching function

6-axis robots equipped with force sensors can be taught using the Epson TP2/TP3 teaching pendant. Operators can manually move the robot arm and manipulator to the desired position and use the teaching pendant to confirm hardness/softness of the workpiece and the force to be applied.*

Touch-jog function*

In addition to the standard button-operated jog and teaching modes, the TP2 teaching pendant now has a direct teaching mode with a touch-jog function that makes 6-axis robot teaching much easier. During direct teaching operations, you can simply tap the effector to make small, incremental adjustments to the effector's position. There's no need to manually switch input modes because the system can automatically recognize the amount of force being applied to the effector.

* Supported by TP2 teaching pendant and C4, C8, N2, and N6 robots (controller firmware v7.4.6 or newer required)



Push/pull → **Direct teaching**

Beat → **Touch-jog**

■ Product photos

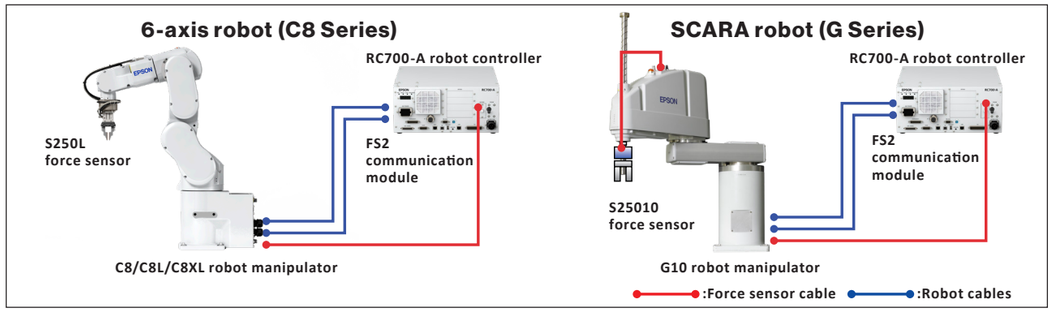
03 S250 Series force sensor

03 FS2 communication module

FS2 system requirements

Supported controller	RC700-A One FS2 module per controller (inserted in option slot)
No. of supported force sensors	One sensor per module
Power supply	Via option slot

■ System setup examples

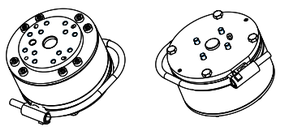


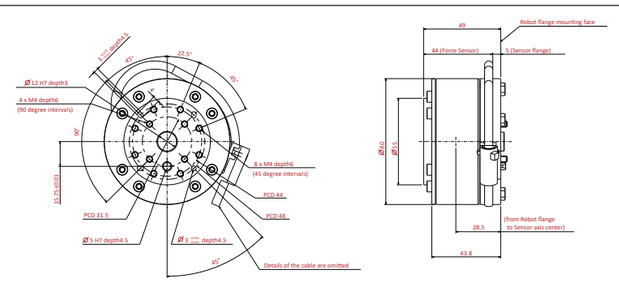
Force sensor specifications

Sensor model		S250N	S250L	S250P	S250H	S2503/S2506/S25010	SH250LH*4
Applicable robot		C4	C8 / C12*1		N2	GX / G Series*3 RS Series	N6
			Standard/Cleanroom*2	Protection			
Dimensions		Ø80 x H49mm	Ø88 x H49mm	Ø88 x H66mm	Ø80 x H49mm	Ø80 x H52mm	Ø84.5 x H48mm
Weight*5		460g	520g	680g	460g	640g	460g
Supported controller		RC700-A / RC700-D / RC700-E					
Measurement freedom		6-axis: Force Fx, Fy, Fz; Moment Tx, Ty, Tz					
Rated load		Fx, Fy, Fz: 250N, Tx, Ty, Tz: 18 N·m					
Static load capacity		Fx, Fy, Fz: 1000N, Tx, Ty, Tz: 36N·m					
Measurement resolution		Fx, Fy, Fz: ±0.1N less, Tx, Ty, Tz: ±0.003N·m					
Measurement precision		less than ±5% R.O.					
Operating environment	Temperature	-10 to 40 °C					
	Humidity	10 to 80%Rh (no condensation)					
Cable length (between robot and cable box)		3m/5m/10m/20m			3m/5m/10m		3m/5m/10m/20m
Protection class		IP67 (S250P), IP20 (S250N, S250L, S2503, S2506, S2510)					IP20
Included items		FS2 communication module, communication cable, mounting flange					

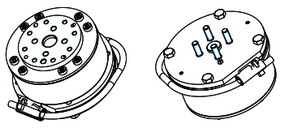
***1: After Epson RC+ 7.0 Ver.7.5.2 *2Dimensions/weight exclude vertical clearance for user-installed cabling *3: Except shielded and G1 robots**
***4: Supports pass-through cable connection *5: Including sensor and mounting flange, but excluding cable**

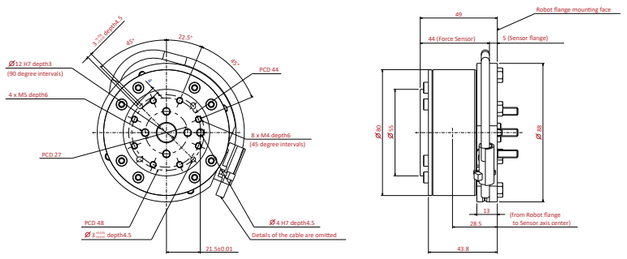
S250N
for C4



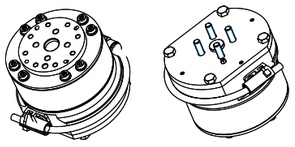


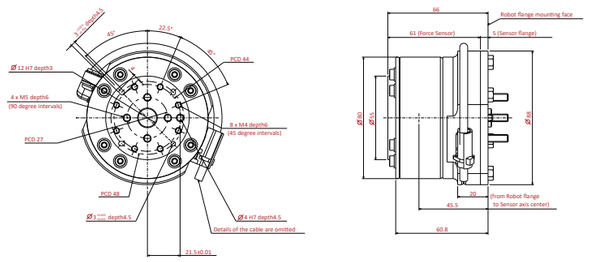
S250L
for C8 / C12 (standard & cleanroom)



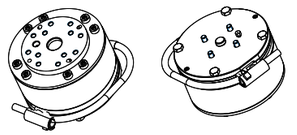


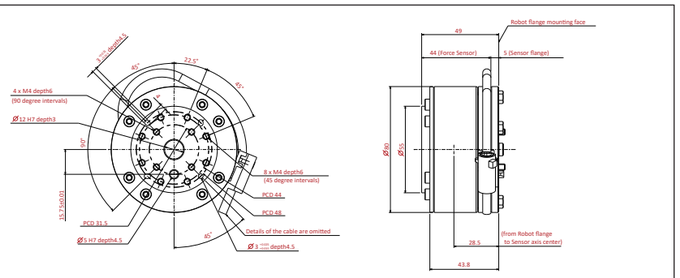
S250P
for C8 / C12 (washdown)



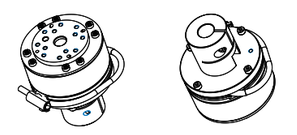


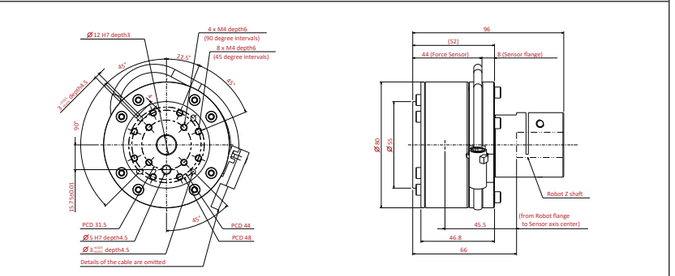
S250H
for N2



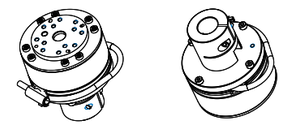


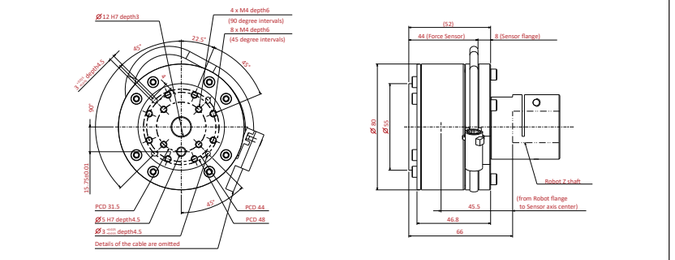
S2503
for RS3, RS4 and GX4, GX8



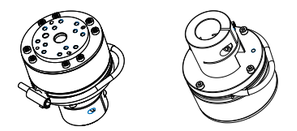


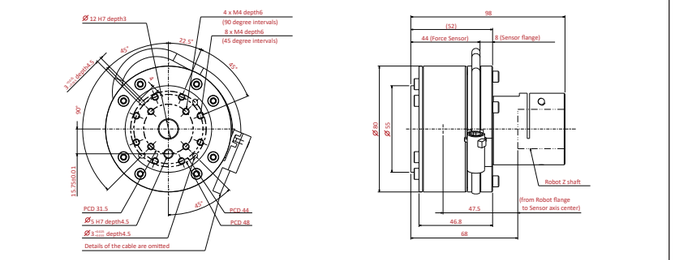
S2506
for GX8



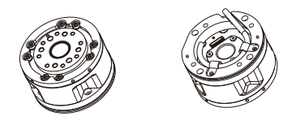


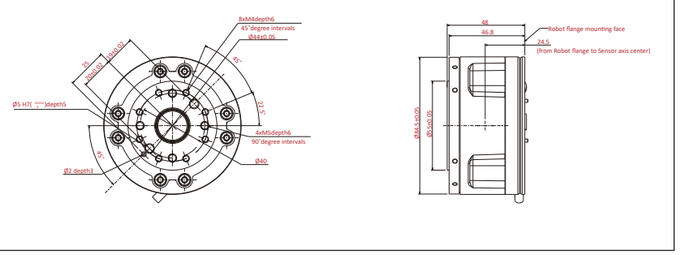
S25010
for GX10 and GX20





SH250LH
for N6





Software options

Epson's long experience in the development of industrial robots and control technologies enables us to offer a wide range of software options.

RC+ API 7.0

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Program and execute robot applications in a familiar Windows® OS environment

■ Robots can be controlled using Visual Basic®, Visual C®, LabVIEW™, and other third-party programming languages.

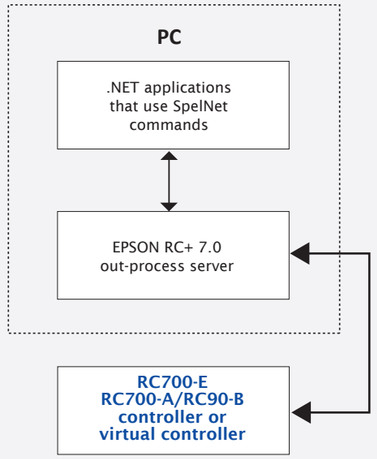
Robot status and variable values can be captured.

Third-party Visual Basic interface and database design tools can also be used for program development.

The following EPSON RC+ windows and dialogs can be called from within a Visual

Basic application:
- Robot Manager
- I/O Monitor
- Task Manager
- Maintenance Dialog
- Simulator
- Pressure Monitor

■RC+API 7.0 basic system



GUI Builder

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

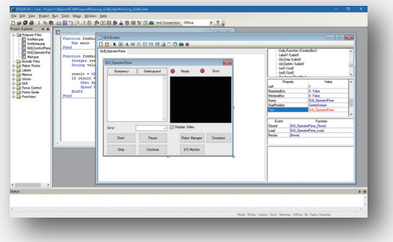
Easily create custom interfaces for your control programs at the leading edge of industrial robot design

■ Quickly and easily create control program custom interfaces that can take the place of dedicated PLCs and display devices.

■ Full-featured toolset is easy to understand and use.

■ Enables simple GUI creation without using Visual Studio® or other third-party software tools.

■ Makes it easy to build a graphical user interface, even if you've never built one before.

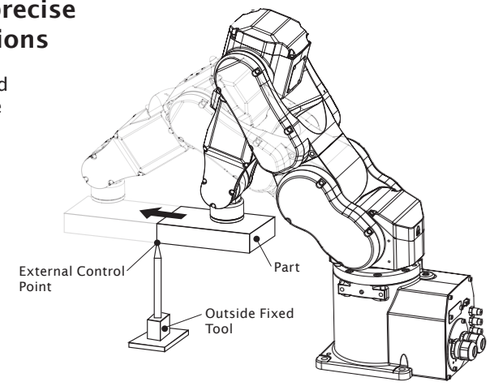


ECP

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

External control point operation for precise positioning without complex calculations

■ For processes requiring the workpiece to be moved against a fixed tool, external control points can be used to ensure precise positioning.
■ Up to 15 external control points can be set.



OCR

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Optical character recognition of text on parts and labels

■ For use with optional Vision Guide software.
■ Recognizes characters in images and converts them to text data.
■ Images of characters can be registered as text target models.

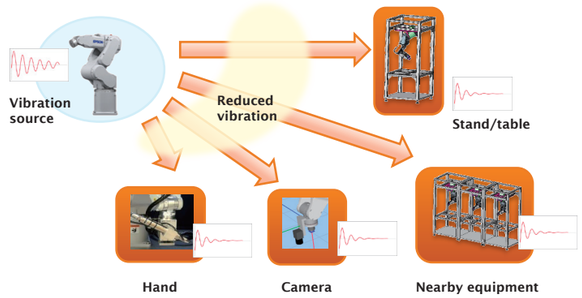
VRT

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Reduced residual vibration for higher productivity

■ Advanced vibration reduction technology (VRT) helps reduce residual vibration* in the robot hand and mounting stand that is generated by robot motion, enabling faster acceleration for reduced cycle time and higher yield.

* Residual vibration must be pre-measured using the optional VR unit.



OPC UA

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Easy configuration using the dedicated software "OPC UA Configurator" reduces the total cost of building a core system.

■ Easily create a system for analyzing communication data.
■ It becomes possible to accurately reproduce defects that occur in remote locations on the IT system.
■ Traceability data can be obtained from the robot's serial number.

A wide range of controller options are offered to expand the range of tasks and processes that can be automated.

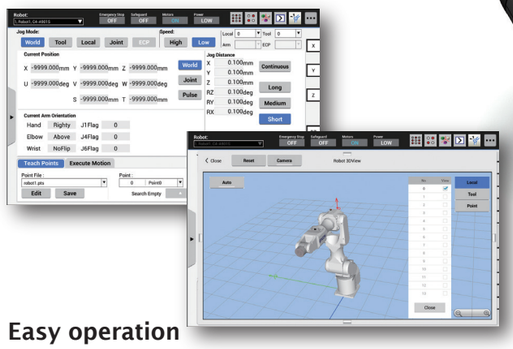
04 Teach Pendant (TP3)

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Tablet-type teach pendant with 10.1-inch color touchscreen for intuitive operation, also fast and easier teaching 6-axis robot

Easy-to-view screen

- 10.1-inch TFT LCD (w/ LED backlight)
- 1280 x 800 resolution
- Color display



Easy operation

- Simple screen layout, fast response
- Standard RC+ program interface

Advanced features

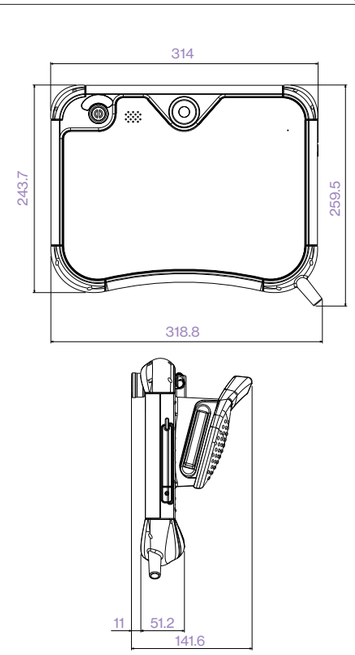
- 3D robot graphics, programming functions and parameter settings
- High-speed test mode
  Programs can be started/stopped from oparation panel

Main specifications

Dimensions (mm)	314(W) x 244(H) x 142(D)
Weight	1.5kg (excluding cable)
Body color	Black
Connectivity	Wired
Display	10.1-inch TFT LCD (w/ LED backlight)
	Resolution: 1280 x 800
Controls	Touchscreen controls
	Emergency stop button
	Enable switch
	Mode switch
	Control keys (JOG, EXE buttons)
	USB port
Cable length	5m (10m, 15m extension cables available)
Interface languages	English, Japanese, German, French, Chinese (simplified, traditional)
Ingress protection	IP65
Operating temperature range	0–40°C (stable temperature)
Operating humidity range	5–95% (relative humidity)
Operating environment	Low levels of dust, oil mist, salt, iron particles and other contaminants
	No flammable or caustic liquids or gases nearby

External dimensions

[Unit: mm]



04 Teach Pendant (TP2)

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Easy-to-use pendant for teaching

- Universal design ensures ease of use for both right-handed and left-handed operators.
- Connects directly to operator unit or controller interface card.

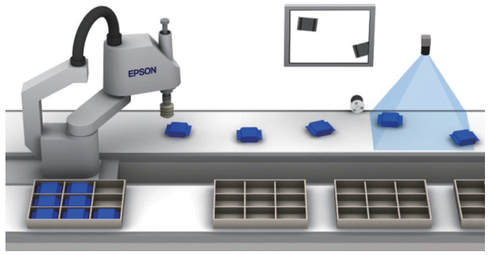
05 Conveyor tracking

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Precision tracking for high-productivity pick-and-place operation

- Enables pick-and-place handling of items on a high-speed conveyor.
- Uses machine vision/sensors to detect workpiece and effect robot handling.
- Can automate manual kitting/packaging tasks and help maintain productivity regardless of continuous/intermittent conveyor operation. Can also be used for workpiece assembly.
- Simple start/stop program execution.

*Vision Guide software required.



05 PG motion system

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Control peripheral robots for fully integrated process automation

- EPSON RC+ software and pulse generator (PG) cards enable control of multiple third-party drives and motors.
- PG robots and standard EPSON RC+ system robots can be operated simultaneously, and controlled using the same commands.
- PG cards can be used to control X/Y tables, sliders, turrets, and a wide range of other production/inspection line peripherals.
- Each PG card has 4 channels, and can support from 1 to 4 robots. Up to 4 cards can be mounted.

*PG motion system requires optional EPSON RC+ software and at least one optional PG output board. Drivers and motors for third-party devices are not included.

06 Emergency stop switch

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Helps prevent injuries and damage

- Immediately stops robot operation in emergency situations.

E-Stop Box-B (for RC700-E)

07 RS-232C cards

Compatible controllers
RC700-E | RC700-A | RC90-B | T series | VT series

Expanded serial port connectivity

- 2-port RS-232C cards to connect serial interface devices.

08 I/O expansion cards

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

Expanded input/output flexibility

- 24-input/16-output expansion cards.

09 Fieldbus I/O (slave)

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

High-speed peripheral connectivity

- 2048-point I/O support for DeviceNet™, Ethernet/IP™, PROFIBUS®, and PROFINET® networked peripherals, and 384-point I/O support for CC-Link® networked peripherals.

10 Fieldbus I/O (master)

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

Bidirectional high-speed peripheral connectivity

- Support for DeviceNet™, PROFIBUS®, and Ethernet/IP™ networked peripherals (1024-point I/O).

11 Analog I/O card

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

For analog control of voltage and current I/O

- Analog control of input and output current and voltage allows regulation of secondary equipment such as paint sprayers to match the speed of robot arm motion. Available in 1 channel and 4 channel models.

12 EUROMAP 67 card

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

For use with thermoplastic injection molding machines

- EUROMAP 67 compliant electrical interface with 15-point input and 16-point output.

13 I/O cable kit

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

Cables and connectors for easy connectivity with no soldering required

- A wide range of I/O cables and connectors are available.

14 Hot plug kit

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

Easy Teach Pendant connection/ disconnection

- Allows Teach Pendant to be connected or disconnected without an emergency stop.

*Conversion cable required for use with TP2.

15 Wall mount option

Compatible controllers: RC700-E | RC700-A | RC90-B | T series | VT series

Optional wall mounting box

- Allows controller to be mounted on a wall.

Epson robot manipulator options provide the enhanced functionality and configuration flexibility you need for full-process automation.

16 External wiring units

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

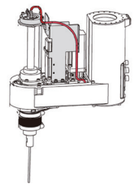
Simplifies wiring when mounting manipulator options

- Enables easy, on-site connection of external wiring by users.
- Ideal for connecting Vision Guide system camera cables or other wiring.

17 Internal wiring unit

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

Enables wiring and conduits for the hand to be enclosed within the robot arm assembly.



18 SCARA tool adapters

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

Enhances handling/processing versatility and simplifies effector changes

19 ISO flanges

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

For easy attachment of effectors to 6-axis robot arms

* Flange configuration varies according to robot model. Please specify model when ordering flanges.

20 Brake release units

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

Enables brake release so robot arm can be moved by hand when power is switched off at the leading edge of industrial robot design

21 Power and signal cables

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

Standard 3m cables, or optional 5m and 10m cables for greater freedom in controller and robot placement

22 Power cable connectors

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

Power cables are available with straight or L-shaped angle connectors*

* Controller-end connectors only

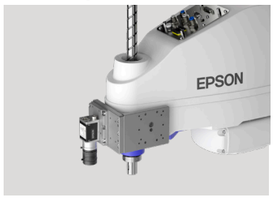
Straight type

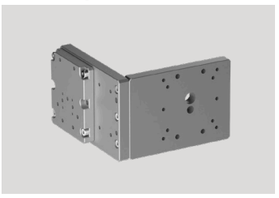
L-shaped angle type

23 Camera mounting bracket

Compatible manipulators: G1 | GX4 | GX8 | GX10 | GX20 | LS3 | LS6 | LS10 | LS20 | T3 | T6 | VT6 | RS3 | RS4 | C4 | C8 | C12 | N2 | N6

Securely mount machine vision system camera to robot arm





Bracket design varies according to robot,Please specify model when ordering.

Option quick-reference table

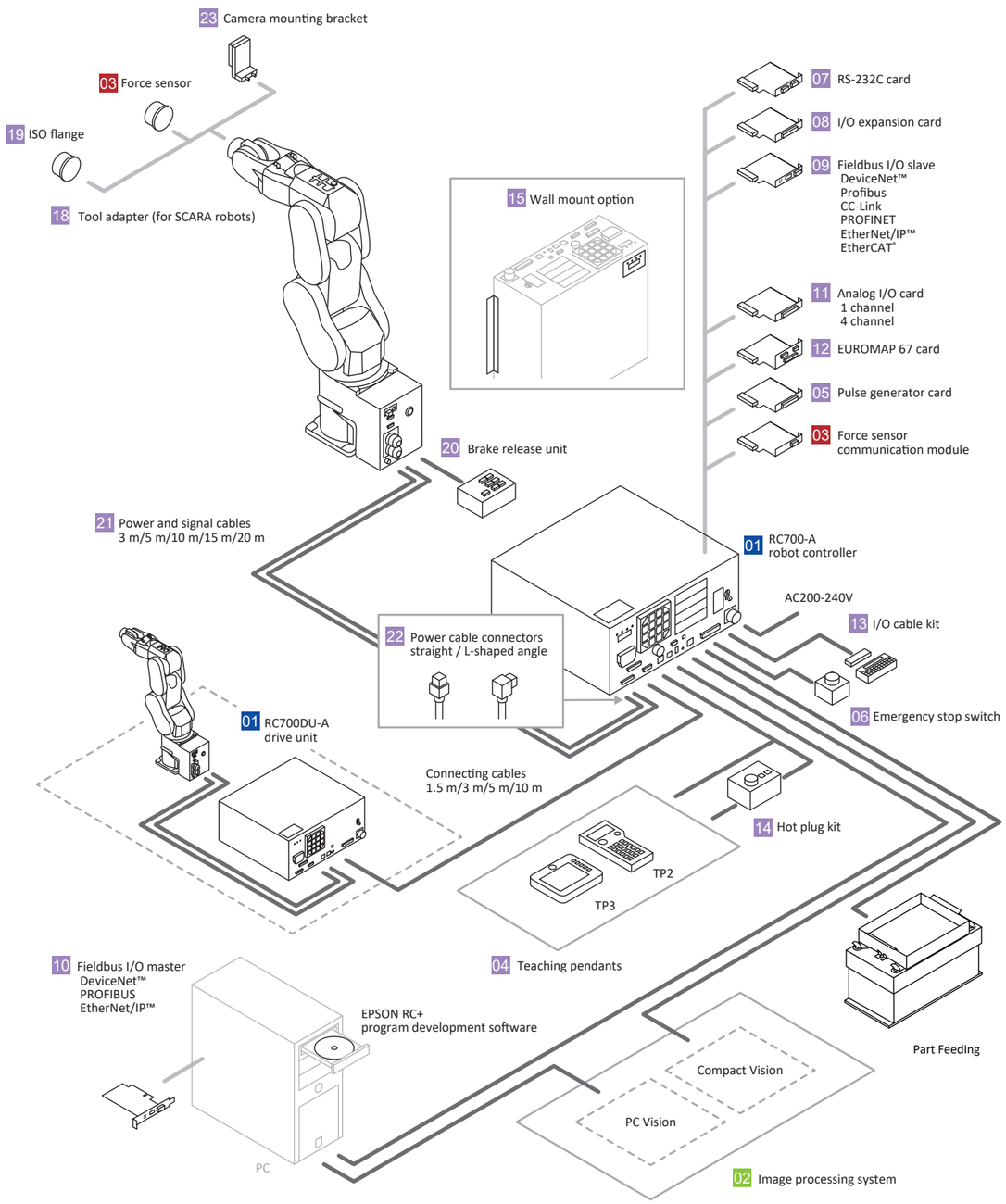
Software options	RC700-A	RC700-E	RC90-B	T series	VT
02 Vision Guide 7.0	●	●	●	●	●
03 Force Guide 7.0	●	–	–	–	–
RC+ API 7.0	●	●	●	●	●
ECP	●	●	●	●	●
GUI Builder 7.0	●	●	●	●	●
OCR	●	●	●	●	●
VRT	●	●	●	●	●

Controller options	RC700-A	RC700-E	RC90-B	T series	VT
04 Teaching Pendant (TP2)	●	●	●	●	●
04 Teaching Pendant (TP3)	●	–	–	●	●
05 Conveyor tracking	●	●	●	–	–
05 PG motion system	●	●	●	–	–
06 Emergency stop switch	●	●	●	●	●
07 RS-232C cards	●	●	●	–	–
08 I/O expansion cards	●	●	●	–	–
09 Fieldbus I/O (Slave)	●	●	●	●	●
10 Fieldbus I/O (Master)	●	●	●	●	●
11 Analog I/O card	●	●	●	–	–
12 EUROMAP 67 card	●	●	●	–	–
13 I/O cable kit	●	●	●	–	–
14 Hot plug kit	●	–	–	●	●
15 Wall mount option	●	–	–	–	–

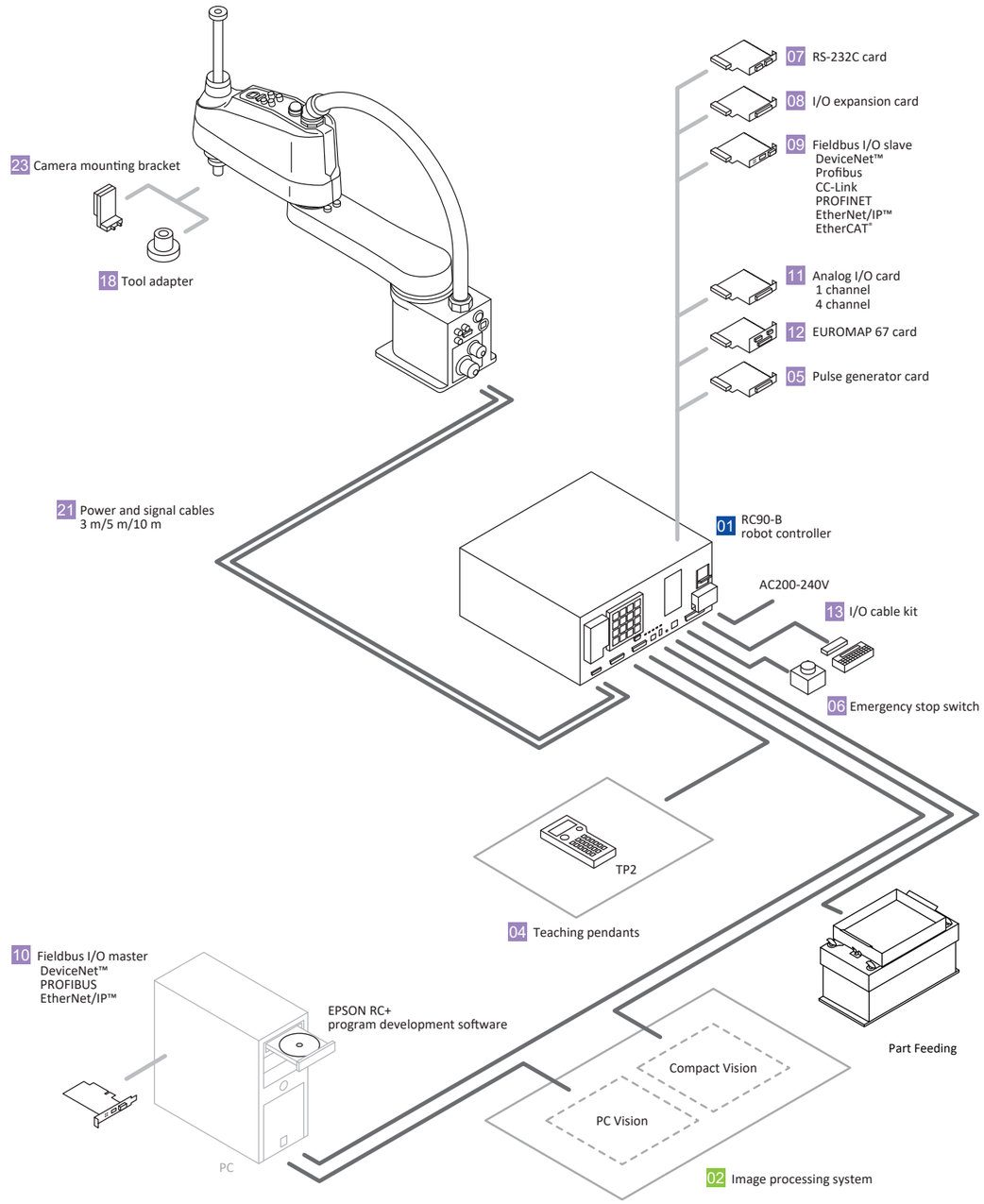
Manipulator options	G1	GX4	GX8 GX10/GX20	LS3/LS6 LS10/LS20	T3/T6	RS3 RS4	C4	C8	C12	N2	N6	VT6
16 External wiring units	–	–	●	–	–	–	–	–	–	–	–	●
17 Internal wiring unit	–	–	–	–	–	●	–	–	–	–	–	–
18 19 Tool adapters/ISO flanges	–	●	●	●	●	●	–	●	●	●	●	●
20 Brake release units	–	–	–	–	–	–	●	●	●	●	●	–
21 Power and signal cables	●	●	●	●	(built-in controller)	●	●	●	●	●	●	(built-in controller)
Cable length (m)	3,5,10,15,20			3,5,10		3,5,10,15,20						
Cable type (Standard/High-flex)	Standard					Standard		Standard/High-flex		Standard	Standard/ High-flex	
22 Power cable connectors (Straight/L-type)	Straight/L-type			Standard		Straight/L-type						
23 Camera mounting bracket	–	●	●	●	●	●	●	●	●	●	●	●
RC700DU-A (Drive unit)	●	●	●	–	–	●	●	●	–	–	●	–

Option setup example

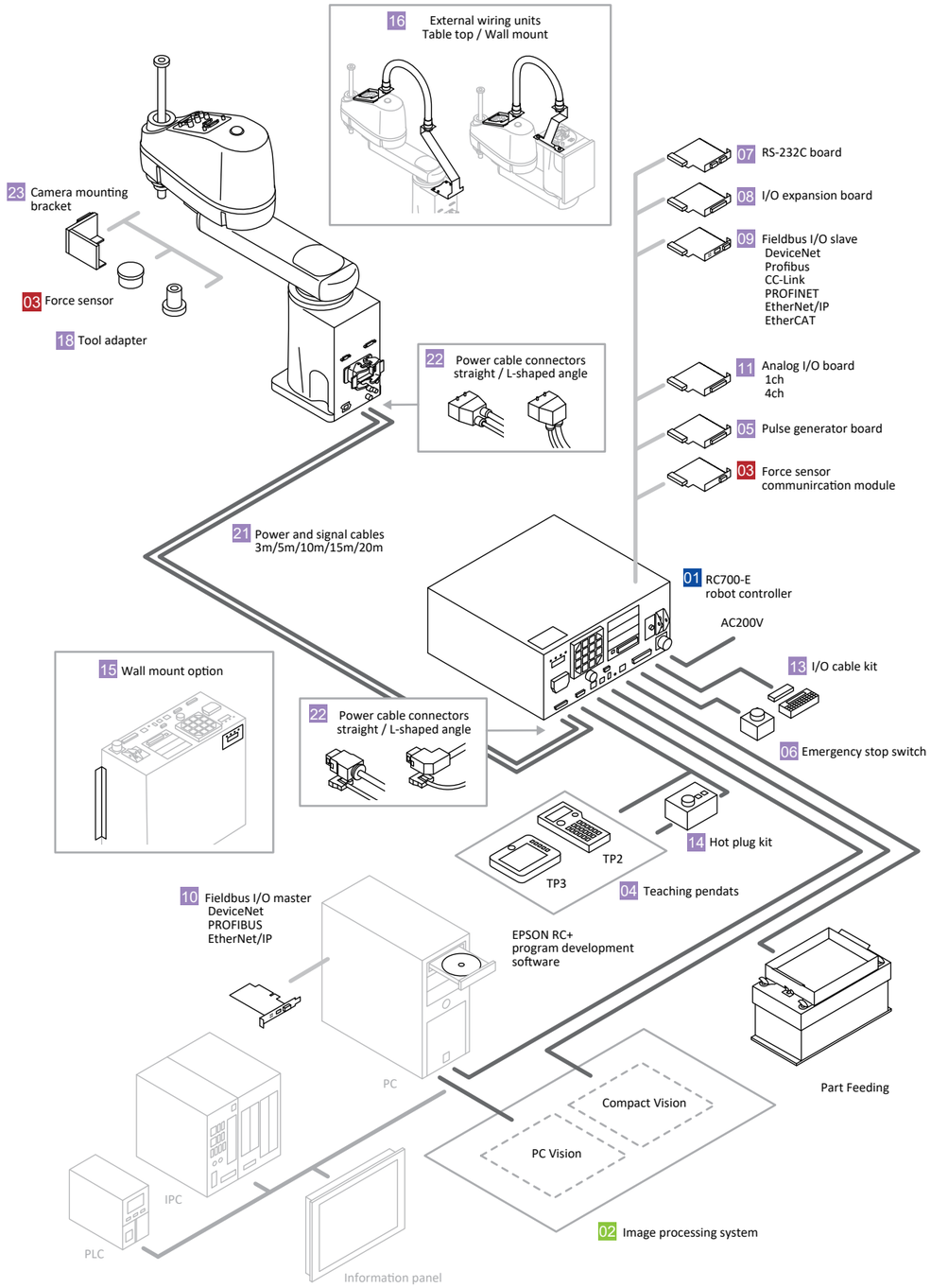
RC700-A controller with C series robots



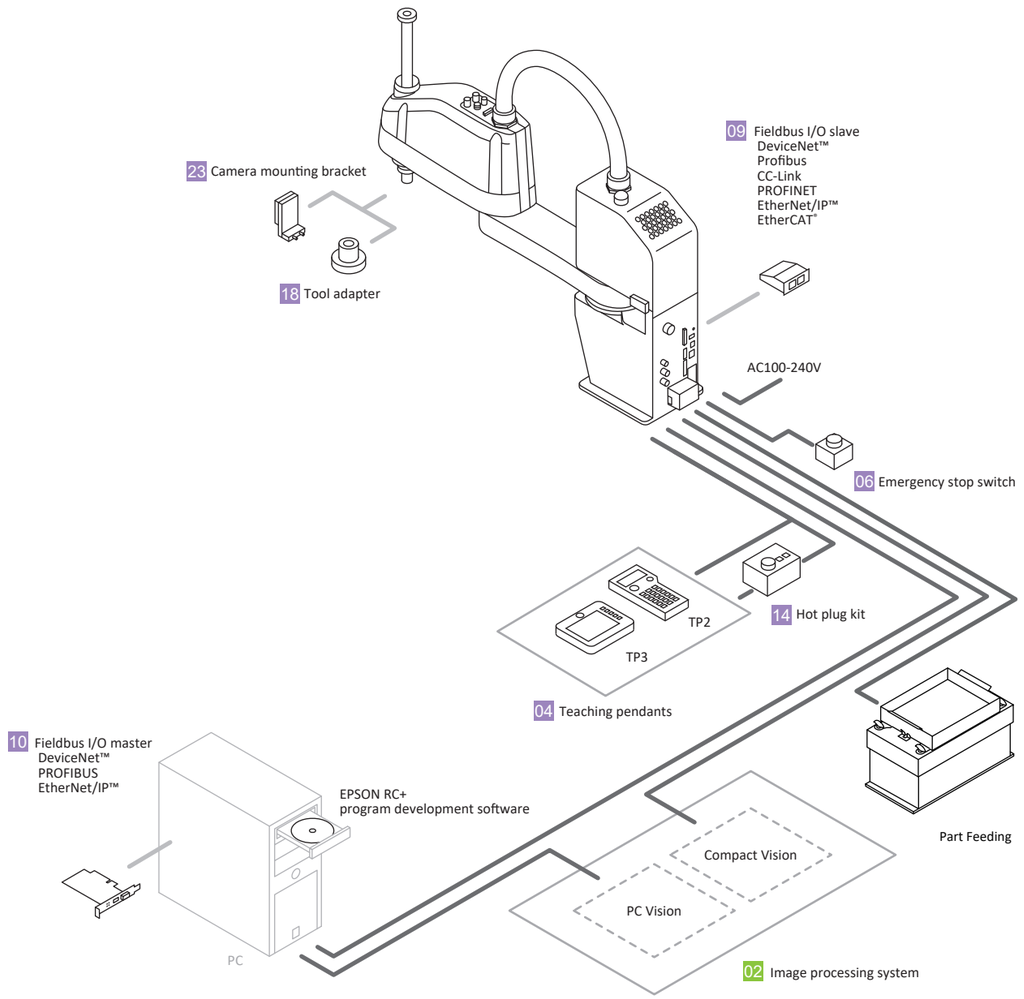
RC90-B controller



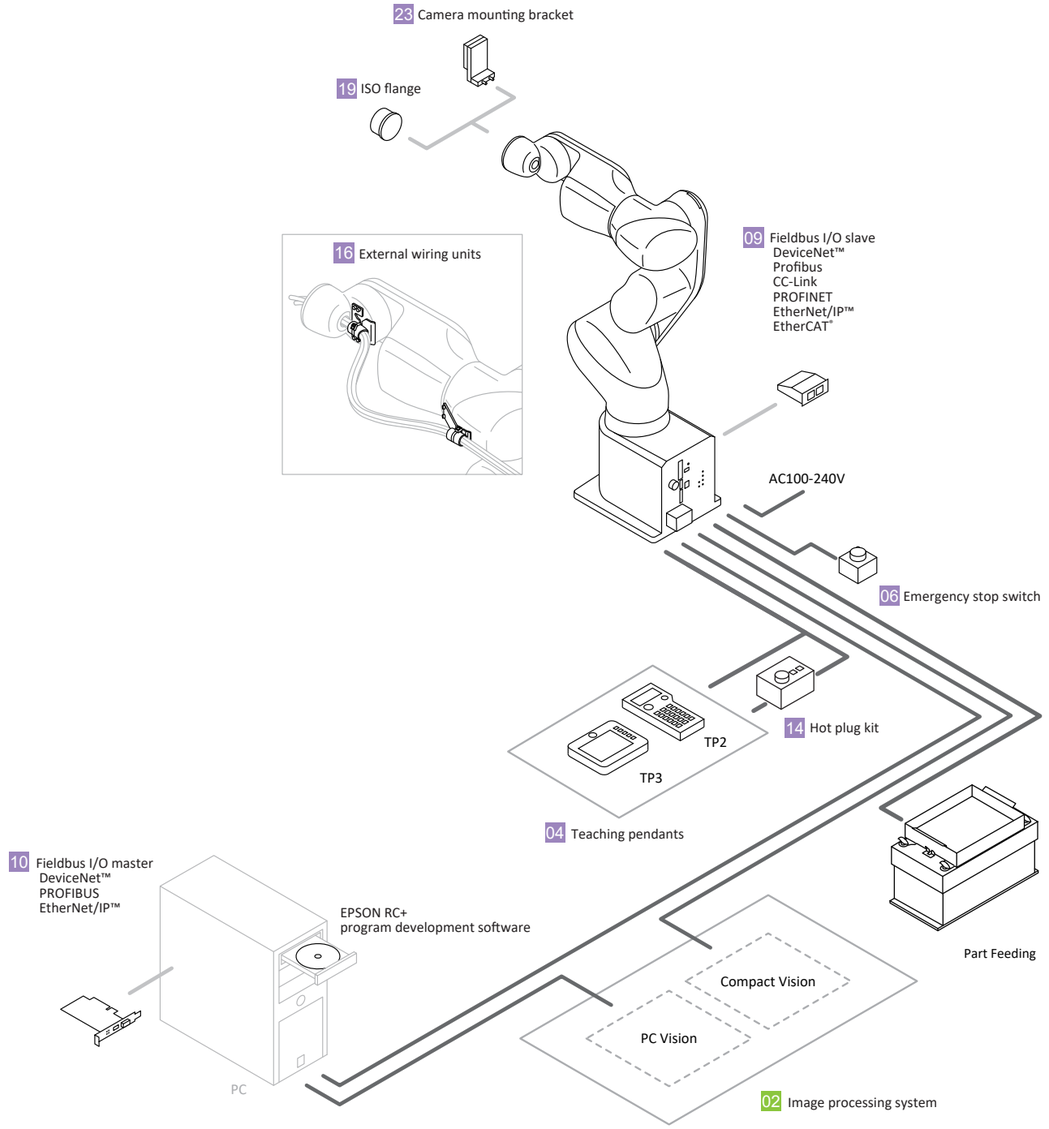
RC700-E controller



T series robot



VT series robot



With Epson industrial robots,
you get the highest standards of safety and reliability
and the support of a global sales and service network

At Epson, we continue to draw on the strengths of our global network to provide customers with the tools they need to automate manufacturing processes and achieve higher productivity. By creating the world's most trusted and reliable industrial robots, we pledge to deliver the true customer value that is the hallmark of every Epson product.

Top-quality service and support worldwide

Our global network of sales and service centers is firmly dedicated to maintaining a consistently high level of product and service quality in every region. For products under warranty, we offer on-site assistance to deal with any malfunctions or problems*1, and through our authorized sales and service representatives we offer warranty coverage for machines that are later moved to other locations*2, assuring top-quality support wherever you are.

*1 Standard warranty limitations apply.
*2 Contact local sales and service representatives for details.

Epson Global Support Network

Manufacturing/Development: Seiko Epson Corporation 6925 Tazawa, Toyoshina, Azumino-shi, Nagano
Sales/Support

Japan	Epson Sales Japan Corporation	JR Shinjuku Miraina Tower, 4-1-6 Shinjuku, Shinjuku-ku, Tokyo
Japan	EPSON TcFORM CORPORATION	1-1-43 Suehiro-cho, Tsurumi-Ku, Yokohama-shi, Kanagawa
North America	Epson America, Inc.	3131 Katella Ave., Los Alamitos, CA 90720, U.S.A
South America	Epson Do Brasil Industria e Comercio LTDA.	Av.Tucunare,720 Tambore Barueri, Sao Paulo -SP 06460-020, Brazil
Europe	Epson Deutschland GmbH	Schiessstrasse 49, 40549 Dusseldorf, Germany
Mainland China	Epson (China) Co., Ltd	4F, Tower 1, China Central Place, 81 Jianguo Road, Chaoyang District, Beijing, 100025, China
Taiwan region	Epson Taiwan Technology & Trading Ltd.	15F., No.100, Songren Rd, Xinyi Dist., Taipei City 11073 ,Taiwan
Southeast Asia	Epson Singapore Pte. Ltd.	438B Alexandra Road, Block B Alexandra TechnoPark, #04-01/04, Singapore
Republic of Korea	Epson Korea Co., Ltd.	10F Posco Tower Yeoksam, Teheranro 134 Gangnam-gu, Seoul, 06235, Korea
India	Epson India Pvt. Ltd.	12th Floor, The Millenia, Tower A No.1, Murphy Road, Ulsoor, Bangalore, 560008 ,India