

FANUC Robot SR series



FEATURES

FANUC Robot SR-3*iA*, 6*iA*, 12*iA*, 20*iA* is SCARA robot whose payload is 3 to 20kg.

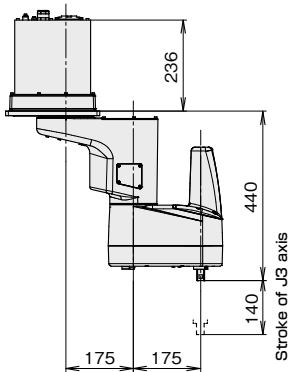
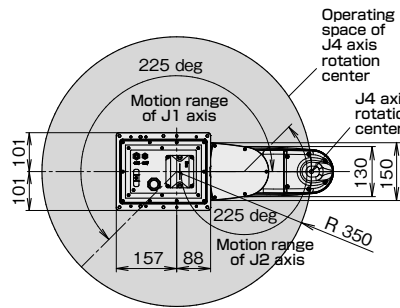
- Eleven models are available to meet a variety of payload, motion range and installation requirements.
- A lightweight arm and the most advanced servo technology enables superior accuracy and high duty performance, which improves productivity.
- The SR-3*iA*, 6*iA* and 12*iA* offer food grade options. The SR-12*iA* and 20*iA* offer environmental options including white epoxy coating, bellow covers, anti-rust bolts and seals, and IP65 rating to withstand dust and liquids.
- Internal cable routing in the J2 arm eliminates interference, and the hollow arm on the J4 rotation axis allows easy gripper installation.
- SR-3*iA*/U is a ceiling mount type robot. It can use its full 360° envelope to maximize work space, even in limited areas.
- SR-9*iA*/R is a robot that excels at working in areas below the installation surface. It is suitable for high-speed handling work between conveyors.
- The R-30*iB* Compact Plus controller is significantly smaller than previous controllers with the same functionality and power.
- Easy to use and intuitive robot setup and programming on a PC or Tablet
- Latest intelligent functions are available, such as *i*RVision (integrated vision) and *i*RPickTool.



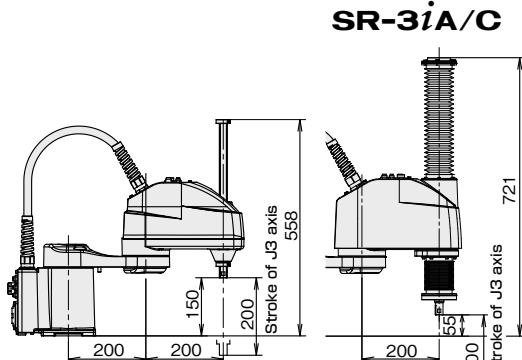
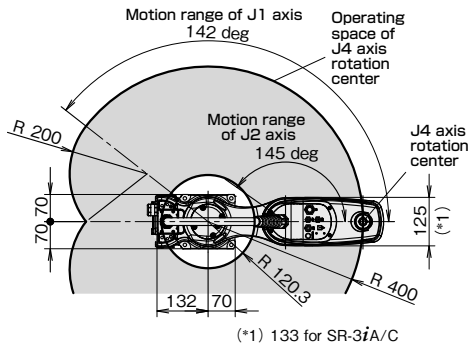
SR-9*iA*/R

Operating Space

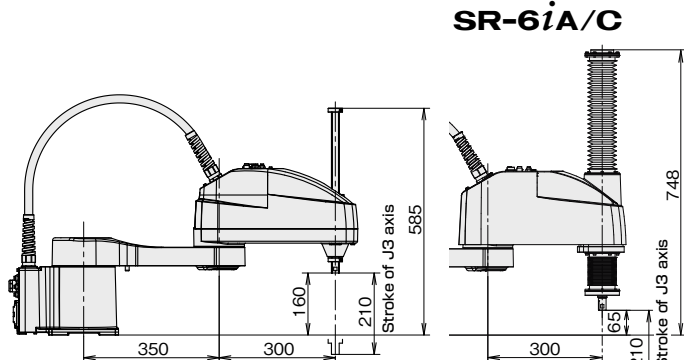
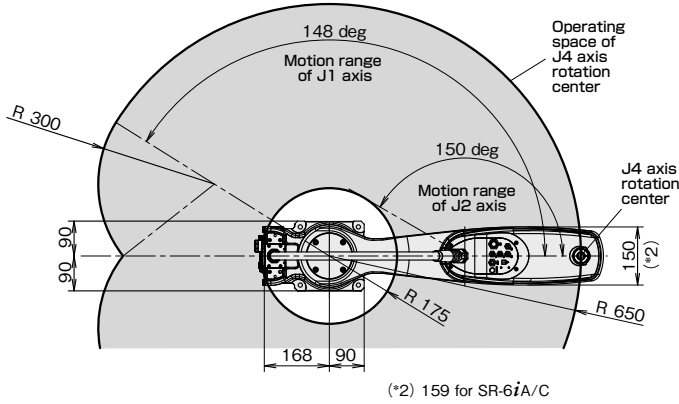
SR-3iA/U



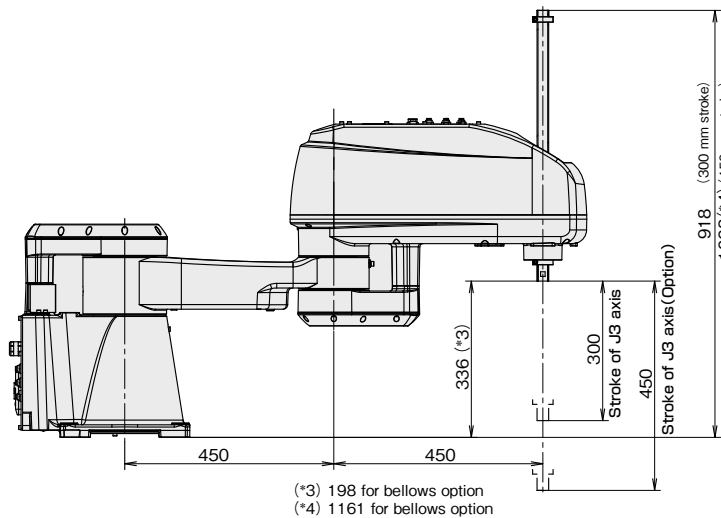
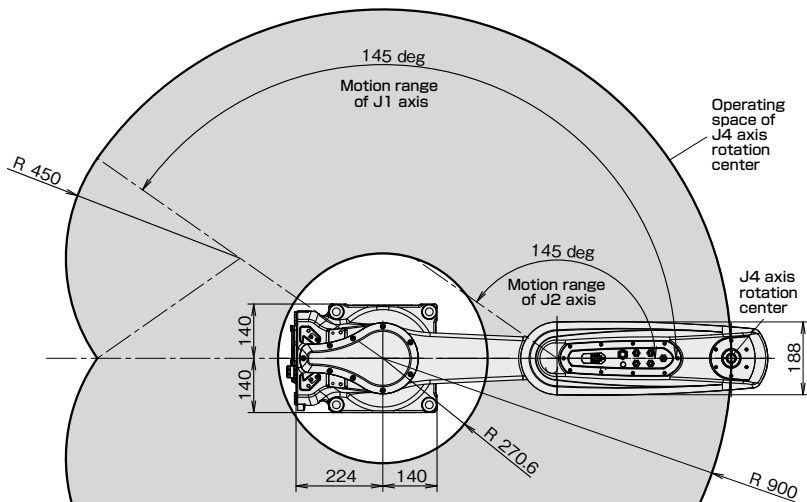
SR-3iA
SR-3iA/C
SR-3iA/H



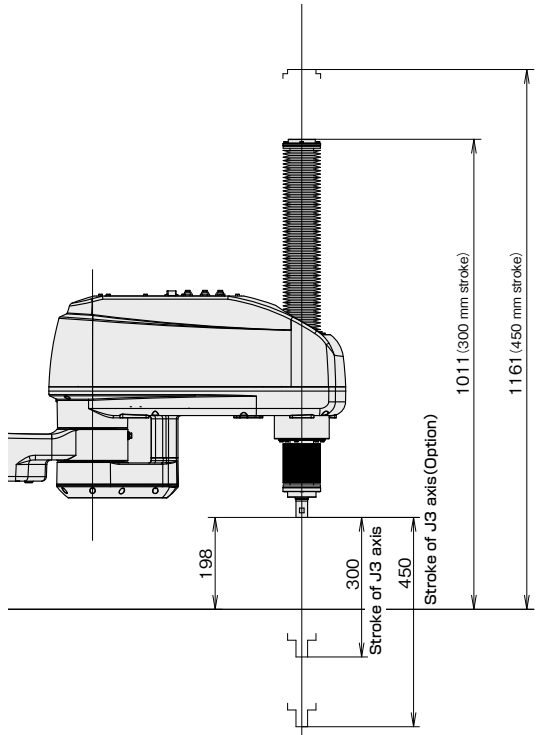
SR-6iA
SR-6iA/C
SR-6iA/H



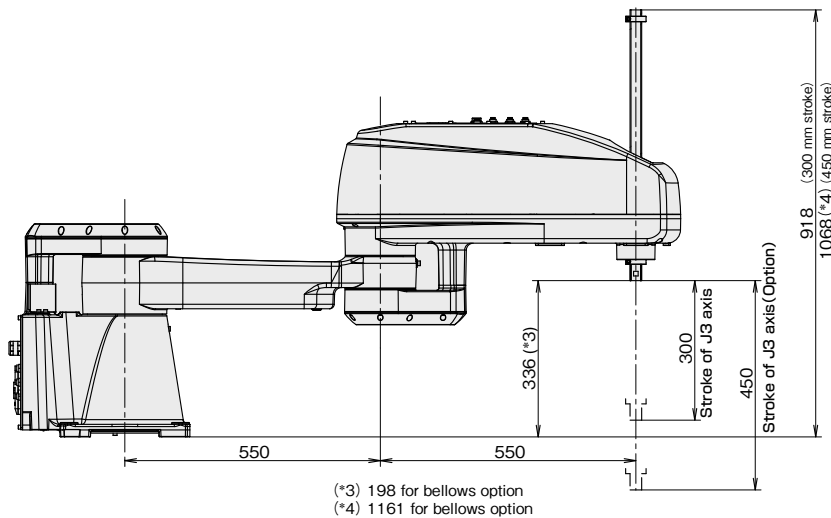
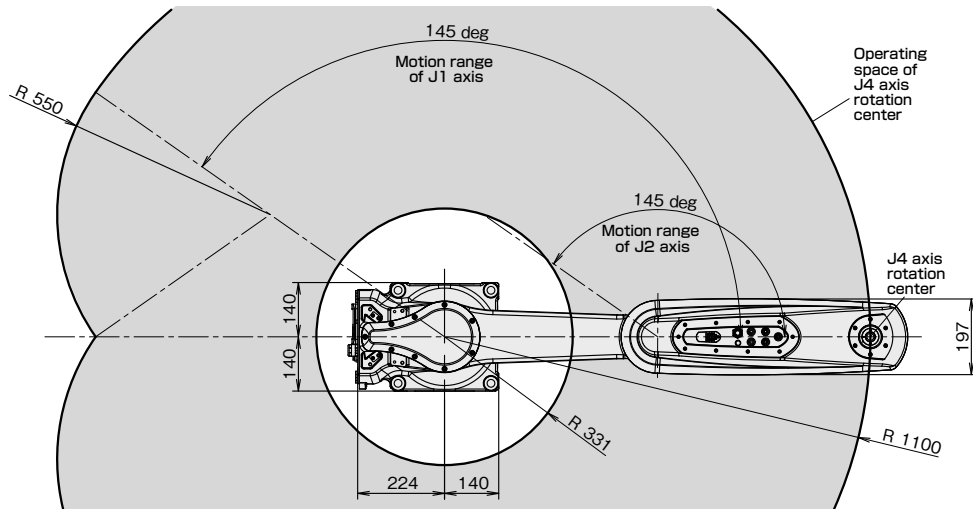
SR-12iA
SR-12iA/C



SR-12iA/C



SR-20iA



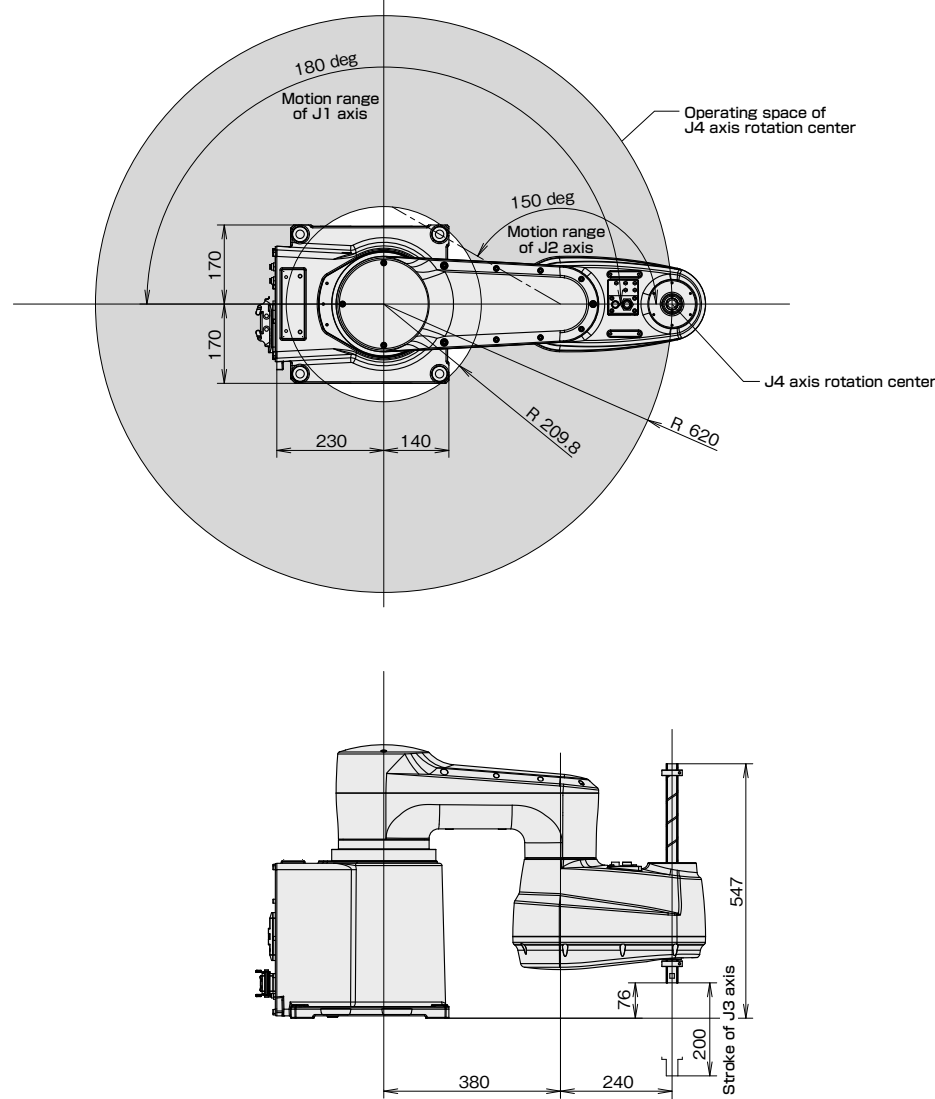
Specifications

Model		SR-3iA/U	SR-3iA	SR-3iA/C	SR-3iA/H	SR-6iA	SR-6iA/C	SR-6iA/H	SR-12iA	SR-12iA/C	SR-20iA
Type						SCARA Type					
Controlled axes		4 axes (J1, J2, J3, J4)				3 axes (J1, J2, J3)		4 axes (J1, J2, J3, J4)		3 axes (J1, J2, J3)	
Reach		350 mm	400 mm			650 mm		900 mm		1100 mm	
Installation		Ceiling					Floor, Wall				
Motion range (Maximum speed) (Note 1)	J1 axis	± 225 deg (610 deg/s) ± 3.93 rad (10.65 rad/s)	± 142 deg (720 deg/s) ± 2.48 rad (12.57 rad/s)			± 148 deg (440 deg/s) ± 2.58 rad (7.68 rad/s)			± 145 deg (440 deg/s) ± 2.53 rad (7.68 rad/s)		
	J2 axis	± 225 deg (840 deg/s) ± 3.93 rad (14.66 rad/s)	± 145 deg (780 deg/s) ± 2.53 rad (13.61 rad/s)			± 150 deg (700 deg/s) ± 2.62 rad (12.22 rad/s)			± 145 deg (510 deg/s) ± 2.53 rad (8.90 rad/s)		± 145 deg (500 deg/s) ± 2.53 rad (8.73 rad/s)
	J3 stroke	140 mm (1500 mm/s)	200 mm (1800 mm/s)			210 mm (2000 mm/s)			300 mm (2800 mm/s) 450 mm (Option) (2800 mm/s)		
	J4 axis	± 720 deg (3000 deg/s) ± 12.57 rad (52.36 rad/s)			± 720 deg (2500 deg/s) ± 12.57 rad (43.63 rad/s)		± 720 deg (2500 deg/s) ± 12.57 rad (43.63 rad/s)		± 720 deg (1700 deg/s) ± 12.57 rad (29.67 rad/s)		± 720 deg (1700 deg/s) ± 12.57 rad (29.67 rad/s)
Max. load capacity at wrist		3 kg				6 kg		12 kg		20 kg	
Allowable load inertia at wrist		J4 axis 0.06 kg·m²			0.12 kg·m²		0.30 kg·m²		0.45 kg·m²		
Repeatability	J1 + J2 axis					± 0.01 mm				± 0.02 mm	
	J3 axis					± 0.01 mm					
	J4 axis	± 0.004 deg			± 0.004 deg				± 0.005 deg		
J3 axis maximum push down force (Note 2)		150 N				200 N		250 N			
Cables and air for user		Standard RI × 4 / RO × 4, Φ6 mm × 1, Φ4 mm × 2				Option RI × 4, Φ6 mm × 1, Solenoid valve × 2		RI × 4 / RO × 4, Φ6 mm × 3			
Mass (Note 3)		27 kg	19 kg	21 kg	17 kg	30 kg	32 kg	28 kg	53 kg	56 kg	64 kg
Installation environment						Ambient temperature : 0 to 45 °C Ambient humidity : Normally 75 %RH or less (No dew nor frost allowed) Short term 95 %RH or less (within one month) Vibration acceleration : 4.9 m/s² (0.5 G) or less					
Matching controller R-30iB Compact Plus	Rated Voltage	200-240V AC Single phase +10 % - 15 %, 50/60 Hz ±1 Hz									
	Mass of controller	9 kg									
	Dimensions (W×D×H)	440 × 260 × 85.5 mm									
	Degree of protection	Conforming to IP20									

Note 1) In case of short distance motion, the axis speed may not reach the maximum value stated.
Note 2) Alarms may be occurred if push down for a long time.
Note 3) Without controller.

Operating Space

SR-9iA/R

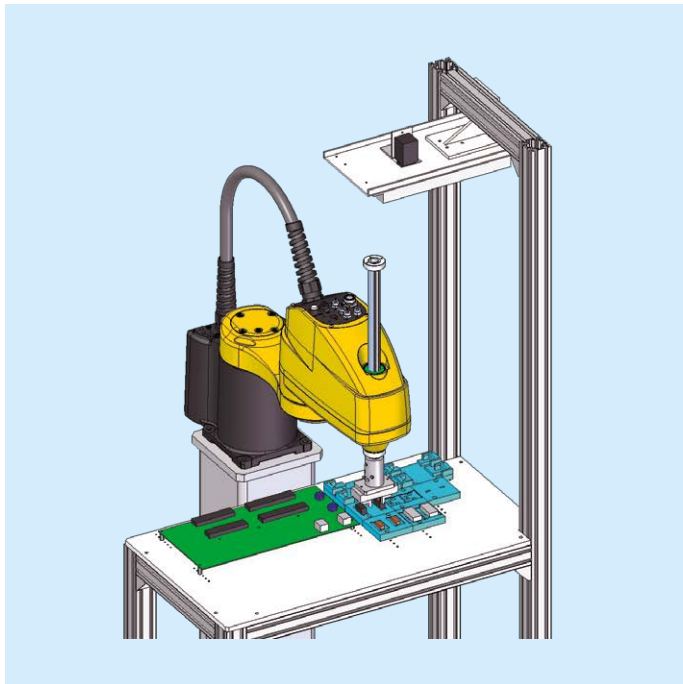


Specifications

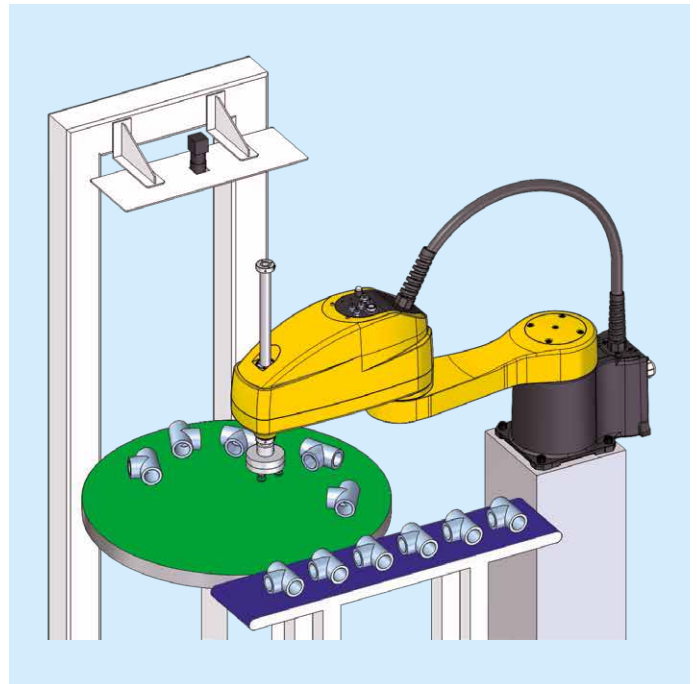
Model		SR-9iA/R
Type		SCARA Type
Controlled axes		4 axes (J1, J2, J3, J4)
Reach		620 mm
Installation		Rack
Motion range (Maximum speed) (Note 1)	J1 axis	± 180 deg (560 deg/s) ± 3.14 rad (9.77 rad/s)
	J2 axis	± 150 deg (480 deg/s) ± 2.62 rad (8.38 rad/s)
	J3 stroke	200 mm (2800 mm/s)
	J4 axis	± 720 deg (2500 deg/s) ± 12.57 rad (43.63 rad/s)
Max. load capacity at wrist		9 kg
Allowable load inertia at wrist		0.12 kg·m ²
Repeatability	J1 + J2 axis	± 0.01 mm
	J3 axis	± 0.01 mm
	J4 axis	± 0.004 deg
Cables and air for user	Standard	RI $\times$ 4 / RO $\times$ 4, Φ 6 mm $\times$ 3
	Option	RI $\times$ 4, Φ 6 mm $\times$ 1, Solenoid valve $\times$ 2
Mass (Note 2)		76 kg
Installation environment		Ambient temperature : 0 to 45 °C Ambient humidity : Normally 75 %RH or less (No dew nor frost allowed) Short term 95 %RH or less (within one month) Vibration acceleration : 4.9 m/s ² (0.5 G) or less
Matching controller R-30iB Mate Plus	Rated Voltage	200-230V AC Three phase +10 % - 15 %, 50/60 Hz $\pm$ 1 Hz
	Mass of controller	40 kg
	Dimensions (W×D×H)	470 $\times$ 400 $\times$ 400 mm
	Degree of protection	IP54

Note 1) In case of short distance motion, the axis speed may not reach the maximum value stated.
Note 2) Without controller.

Application Examples



Circuit board assembly by SR-3iA

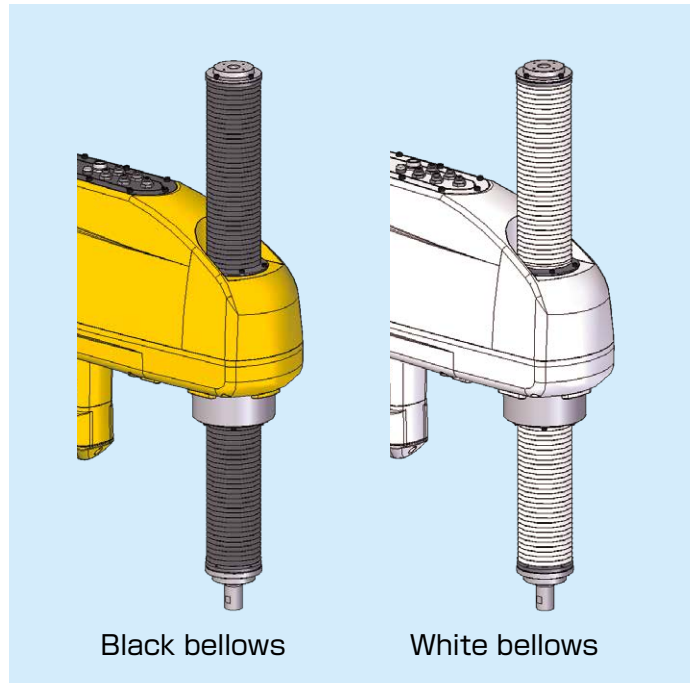


Visual circular tracking by SR-6iA

Option



SR-12iA water proof



Black bellows

White bellows

Example of bellows option

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