

New High-Speed, High-Precision G Series SCARA Robots

The new series employs EPSON's original smart **motion control** technology to achieve **high speed, ultrahigh precision** and **low vibration**.

The robots in this series feature

- significant speed
- models, ability to carry out high-speed operation
- move short and long distances
- transport light and heavy loads in every condition.



By incorporating the RC170 controller, even first-time users can easily manufacture compact robot equipment that offers outstanding cost performance.

Key features of the products in this series are:

- 1 The neat and agile movement of the robot makes it possible to shorten the time required for operation (employs high-rigidity, lightweight mechanism and smart motion control technology)
- 2 Allows the attachment of large-size multihands capable of grasping different types of products or a plurality of items (increase transportable weight and permissible inertia moment)
- 3 Although compact in size, it has a wide range of movement (the area of movement possible at the rear of the robot has widened because the robot is built without a cable duct)
- 4 Comprehensive lineup of models addresses with various environments (standard lineup includes IP54/IP64 specifications and clean specifications, which include ESD countermeasures)
- 5 Optimal layout makes possible reduction in size of equipment (can be installed on the wall or ceiling)
- 6 Ability to produce smooth and highly precise straight line and circular arc movements can vastly improve the quality of coating work (employs smart motion control technology)

The G Series is divided into three series based on the transportable weight:

G6 series - Suitable for high-speed, high-precision assembling of a wide variety of small-size components. Maximum transportable weight: 6kg; Robot arm length: 450, 550, 650mm

G10 series - Multiple hands are suitable for high-speed assembling involving multiple processes and work involving lining up things. Maximum transportable weight: 10kg; Robot arm length: 650, 850mm

G20 series - Suitable for work involving transporting heavy loads in a spacious work area, such as packing boxes. Maximum transportable weight: 20kg; Robot arm length: 850, 1000mm

The targeted markets for this series of products cover a wide range of fields, including the electrical and electronics industries, as well as the automobile, food, pharmaceutical and medical industries.



Main specifications G Series

Model		G6 Series	G10 Series	G20 Series
Motion range	J1+J2 arm [mm]	450 / 550 / 650	650 / 850	850 / 1000
	J3 [mm]	180 / 330	180 / 420	180 / 420
	J4 [°]	±360	±360	±360
Maximum operating speed	J1+J2 [mm/s]	6440 / 7170 / 7900	8800 / 11000	11000 / 11500
	J3 [mm/s]	1100 / 2350	1100 / 2350	1100 / 2350
	J4 [°]	2400	2400	1600
Repetitive precision	J1+J2 arm [mm]	±0.015	±0.025	±0.025
	J3 [mm]	±0.010	±0.010	±0.010
	J4 [°]	±0.005	±0.005	±0.005
Transportable weight	Rated [kg]	3	5	10
	Max. [kg]	6	10	20
Permissible inertia moment	Max. [kg/m ²]	0.12	0.25	0.45
Drive method		AC servo motor	AC servo motor	AC servo motor
Weight [kg]		Approx. 27	Approx. 43 / Approx. 45	Approx. 47 / Approx. 50
Installation		Floor, wall, ceiling mounting	Floor, wall, ceiling mounting	Floor, wall, ceiling mounting
Clean specification ^{*6}		Class 10	Class 10	Class 10
Protective enclosure rating		IP54·IP65	IP54·IP65	IP54·IP65
User's wiring		24 wires	24 wires	24 wires
User's piping		4 pipes (2 pipes of 6mm dia.; 2 pipes of 4mm dia.)	4 pipes (2 pipes of 6mm dia.; 2 pipes of 4mm dia.)	4 pipes (2 pipes of 6mm dia.; 2 pipes of 4mm dia.)
Compatible controller		RC170	RC170	RC170

*6 Includes electrostatic discharge countermeasure.

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