

# SG650

## HORIZONTAL ARTICULATED SCARA ROBOT

### KEY BENEFITS

Uses the same YRC1000micro controller as 6-axis Yaskawa robots

Easy vision integration with MotoSight™ 2D, a Cognex In-Sight® based vision system

Yields extraordinary production results, while requiring minimal capital investment

High work envelope to mounting surface ratio

Flexible asset; easily re-deployable as production needs change

### SPECIFICATIONS

6 kg payload

650 mm maximum reach

0.01 mm repeatability

### APPLICATION

Assembly

Dispensing

Inspection

Material Handling

Packing

Sorting

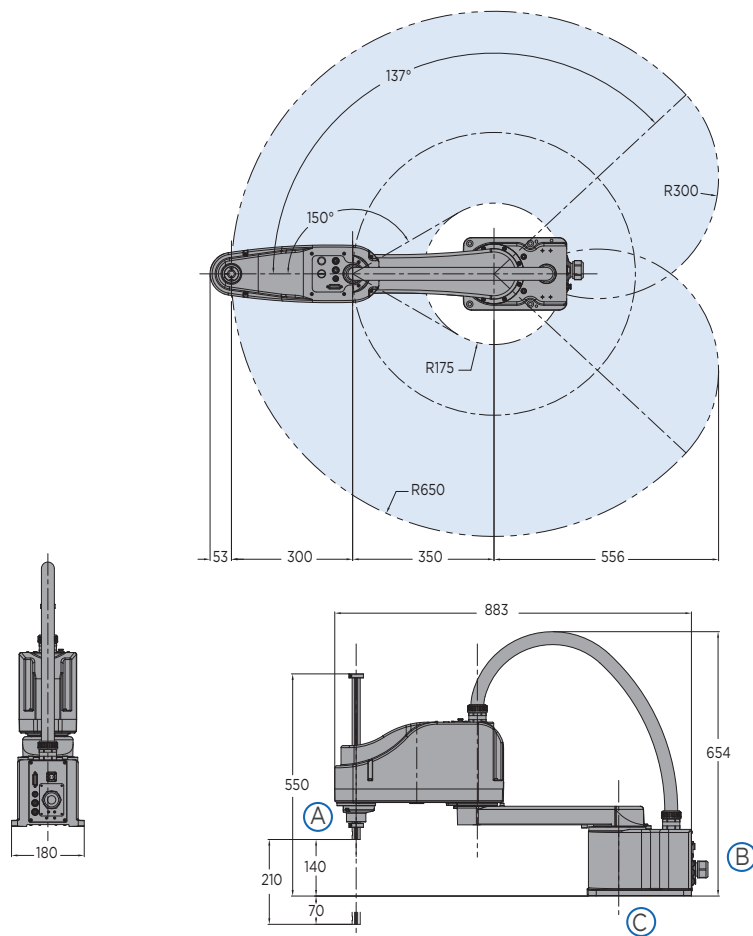
### CONTROLLER

YRC1000micro

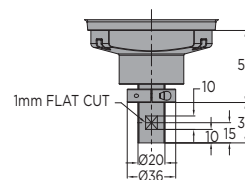


- Increase productivity with the fast and efficient 4-axis SCARA robot.
- Offers the highest operating performance in its class, enabling high-speed and high-precision operation.
- Ideal for assembly and sortation processes requiring short cycle times, as well as multi-process systems requiring pick-and-place capability.
- Easily integrates with existing robot applications to expand current automated processes.
- Compact design minimizes mounting space.
- Features a radial reach of 650 mm, long U-axis stroke (210 mm) and 6 kg maximum payload.
- High repeatability in all axes.
- Wide variety of fieldbus connectivity options available.
- Built-in airlines, user I/O wiring and a hollow tool shaft for simplified tool integration.
- Single power and control cable reduces wiring time and increases work efficiency.
- Modular robot harness design for improved diagnostics and maintenance.
- Home position data can be saved without battery connection for easy maintenance.
- Compact YRC1000micro controller utilizes a lightweight standard teach pendant with intuitive programming.

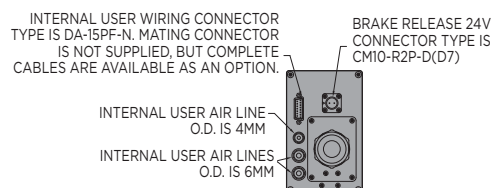
# SG650 ROBOT



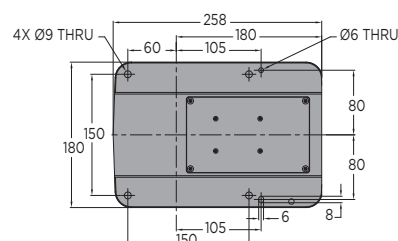
VIEW A



VIEW B



VIEW C



All dimensions are metric (mm) and for reference only.  
Request detailed drawings for all design/engineering requirements.

## SPECIFICATIONS

Axes	Maximum motion range	Maximum speed	Allowable moment of inertia	Pressing force
	degrees	°/sec	kg·m <sup>2</sup>	N
S	±137	450	-	-
L	±150	730	-	-
U	210 mm	1,300 mm/s	-	150
R	±360	2,500	0.12	-

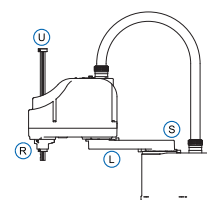
Mounting Options: Floor

\* The MLX300 software option is not available for use with arc or spot welding applications.  
MLX300 fieldbus cards, I/O cards and vision equipment must be purchased separately from the supplier. All peripherals are programmed using a PLC.

Item	Unit	SG650
Controlled axes		4
Maximum payload	kg	6
Repeatability [mm]		
S-Axis + L-Axis	mm	0.01
U-Axis		0.01
R-Axis		0.004°
Reach	mm	650
Weight	kg	19
Internal user I/O cable		15 conductors w/ ground
Internal user air line		(2) 6 mm connections; (1) 4 mm connection
Power requirements		Single-phase or three-phase 200-230VAC 50/60Hz
Power rating	kVA	1

## OPTIONS

- Extended length manipulator cables
- Wide variety of fieldbus options
- Conveyor tracking
- Functional Safety Unit (FSU)
- MotoSight™ 2D vision
- PLC integration via MLX300 software option\*



### AXES LEGEND

S-Axis: First Arm  
L-Axis: Second Arm  
U-Axis: Upper/Lower  
R-Axis: Rotation

# YASKAWA

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