

# SG400

## 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

3 kg payload

400 mm maximum reach

0.01 mm repeatability

### APPLICATION

Assembly

Dispensing

Inspection

Material Handling

Packing

Sorting

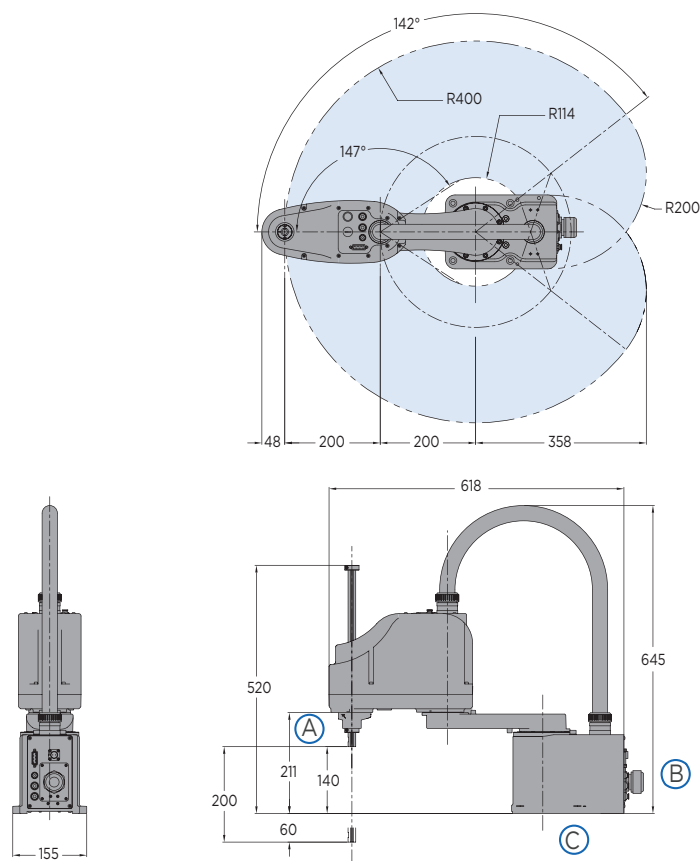
### CONTROLLER

YRC1000micro

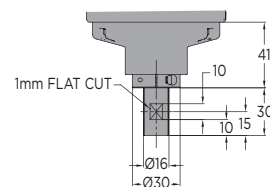


- Increase productivity with the fast and efficient 4-axis SCARA robot.
- Offers the highest operating performance in its class, enabling high-speed and high-precision operation.
- Ideal for assembly and sortation processes requiring short cycle times, as well as multi-process systems requiring pick-and-place capability.
- Easily integrates with existing robot applications to expand current automated processes.
- Compact design minimizes mounting space.
- Features a radial reach of 400 mm, long U-axis stroke (200 mm) and 3 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.
- Available with either the Standard Teach Pendant or the Smart Pendant.

# SG400 ROBOT



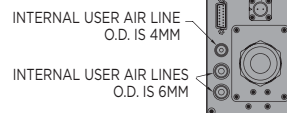
VIEW A



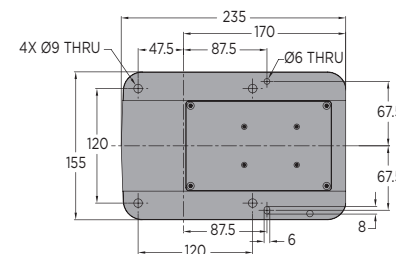
VIEW B

INTERNAL USER WIRING CONNECTOR TYPE IS DA-15PF-N MATING CONNECTOR IS NOT SUPPLIED, BUT COMPLETE CABLES ARE AVAILABLE AS AN OPTION.

BRAKE RELEASE 24V CONNECTOR TYPE IS CM10-R2P-D(D7)



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    | ±142                 | 740           | -                           | -              |
| L    | ±147                 | 800           | -                           | -              |
| U    | 200 mm               | 1,200 mm/s    | -                           | 150            |
| R    | ±360                 | 3,000         | 0.06                        | -              |

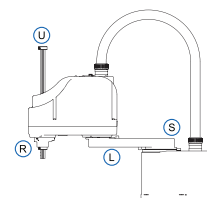
| Item                    | Unit | SG400                                          |
|-------------------------|------|------------------------------------------------|
| Controlled axes         |      | 4                                              |
| Maximum payload         | kg   | 3                                              |
| Repeatability [mm]      |      |                                                |
| S-Axis + L-Axis         | mm   | 0.01                                           |
| U-Axis                  |      | 0.01                                           |
| R-Axis                  |      | 0.004°                                         |
| Reach                   | mm   | 400                                            |
| Weight                  | kg   | 14                                             |
| 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                                              |

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.

## 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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