

# i4-350L/450L/550L

## New i4L robot for precision machining, assembly, and material handling

- High payload, inertia, and repeatability in a compact size for use in digital assembly applications.
- Compact, easy to install design. Mountable on table or wall without additional HW. Available with bottom or rear interface panel orientations.
- Easy to service with high visibility, multi-colored LED light dome provides convenient indication of the robot status.
- Reach Options: 350mm, 450mm, 550mm
- Maximum payload: 5kg
- Weight 350/450: 15kg; 550 (180mm): 16.38kg; 550 (350mm): 16.52kg



## Specifications

| Product                       |                                    | i4-350L   |              | i4-450L     |              | i4-550L     |              |             |              |
|-------------------------------|------------------------------------|---|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
| Type                          |                                    | Standard  |              | Standard    |              | Standard    |              | Long-Quill  |              |
| Interface Panel Orientation   |                                    | Rear Panel  | Bottom Panel | Rear Panel  | Bottom Panel | Rear Panel  | Bottom Panel | Rear Panel  | Bottom Panel |
| Part Number                   |                                    | RS4-2053002   | RS4-2053102  | RS4-2054002 | RS4-2054102  | RS4-2055002 | RS4-2055102  | RS4-2055004 | RS4-2055104  |
| Number of axes                |                                    | 4   |              |             |              |             |              |             |              |
| Reach (mm)                    |                                    | 350   |              | 450         |              | 550         |              |             |              |
| Maximum Payload (kg)          |                                    | 5   |              |             |              |             |              |             |              |
| Quill Length (mm)             |                                    | 180   |              |             |              | 350         |              |             |              |
| Repeatability                 | XY (mm)                            | ±0.01   | ±0.01        | ±0.01       | ±0.01        | ±0.01       | ±0.01        | ±0.01       | ±0.01        |
|                               | Z (mm)                             | ±0.01   | ±0.01        | ±0.01       | ±0.01        | ±0.01       | ±0.01        | ±0.01       | ±0.01        |
|                               | Theta (deg)                        | ±0.01   | ±0.01        | ±0.01       | ±0.01        | ±0.01       | ±0.01        | ±0.01       | ±0.01        |
| Joint Range                   | Joint 1 (deg)                      | ±135  |              |             |              |             |              |             |              |
|                               | Joint 2 (deg)                      | ±135  |              | ±148        |              |             |              |             |              |
|                               | Joint 3 (mm)                       | 180   |              |             |              | 350         |              |             |              |
|                               | Joint 4 (deg)                      | ±360  |              |             |              |             |              |             |              |
| Inertia Moment (Max.)         | Joint 4 (kg m2)                    |   | 0.05         |             |              |             |              |             |              |
| Maximum push force - vertical | Joint 3 (N)                        |   | 150          |             |              |             |              |             |              |
| Joint Speeds                  | Joint 1 (deg/s)                    | 456   |              |             |              |             |              |             |              |
|                               | Joint 2 (deg/s)                    | 456   |              |             |              |             |              |             |              |
|                               | Joint 3 (mm/s)                     | 800   |              |             |              |             |              |             |              |
|                               | Joint 4 (deg/s)                    | 6000  |              |             |              |             |              |             |              |
| Cycle times *1                | Burst (s)                          | 0.54  |              | 0.48        |              |             |              |             |              |
|                               | Sustained (s)                      | 0.57  |              | 0.57        |              | 0.54        |              |             |              |
|                               | Blended Burst (s) *2               | 0.45  |              | 0.42        |              | 0.38        |              |             |              |
| Power Requirements            |                                    | 24VDC: 5A<br>48VDC:15A  |              |             |              |             |              |             |              |
| Protection                    |                                    | IP20 / NEMA Type 1  |              |             |              |             |              |             |              |
| Environment Requirements      | Ambient Temperature                | 5-40C   |              |             |              |             |              |             |              |
|                               | Humidity Range                     | 5-90% non-condensing  |              |             |              |             |              |             |              |
| Weight (kg)                   |                                    | 15.08   |              | 15.9        |              | 16.38       |              | 16.52       |              |
| Basic Configuration           | Controller                         | iCS-ENET  |              |             |              |             |              |             |              |
|                               | On-board I/O                       | 8 outputs / 12 inputs (Primary Interface Panel)<br>4 outputs / 5 inputs (Secondary Interface Panel) |              |             |              |             |              |             |              |
|                               | Pneumatic pass-through connections | 3   |              |             |              |             |              |             |              |
|                               | Conveyor tracking input            | 2   |              |             |              |             |              |             |              |
|                               | RS-232C serial comm port           | 1   |              |             |              |             |              |             |              |
|                               | Programming Environment            | ACE   |              |             |              |             |              |             |              |
|                               | Vision Manager                     | Yes   |              |             |              |             |              |             |              |
| Pack Manager                  | Yes                                |   |              |             |              |             |              |             |              |
| Connectable Controller        |                                    | IPC Application Controller  |              |             |              |             |              |             |              |

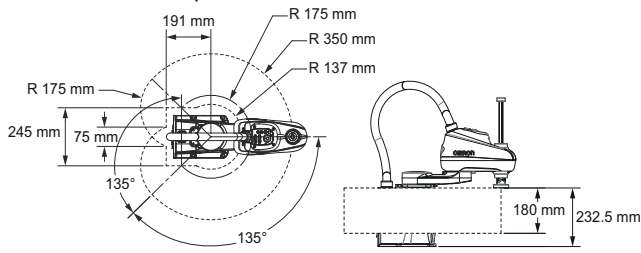
\*1. Adept cycle, in mm 25/305/25 (seconds, at 20C ambient) with 2.0kg payload

\*2. Fast cycle, in mm (25/305/25) (seconds, at 20C ambient) with 2.0kg payload but with arc motion

# Dimensions

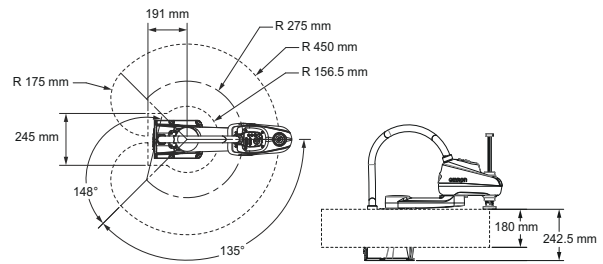
## i4-350L Dimensions

### i4 350L Work Envelope



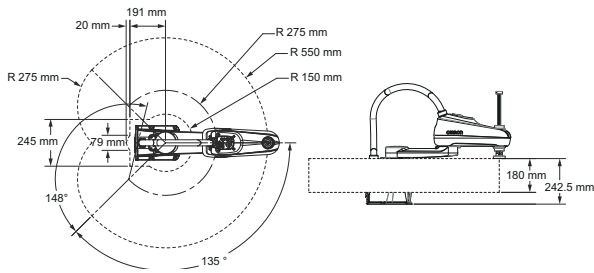
## i4 450L Dimensions

### i4 450L Work Envelope



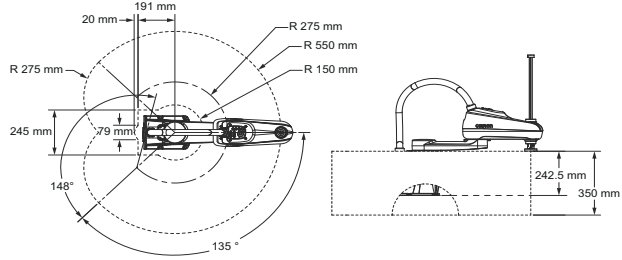
## i4-550L Dimensions

### i4 550L Work Envelope



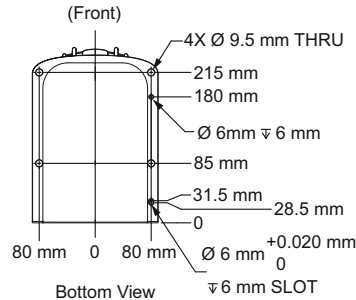
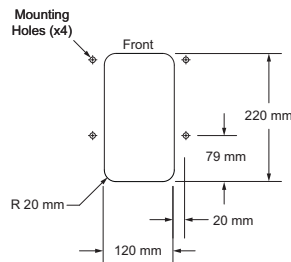
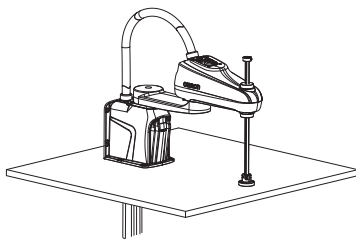
## i4-550L Long Guill Dimensions

### i4 550L Long Guill Work Envelope

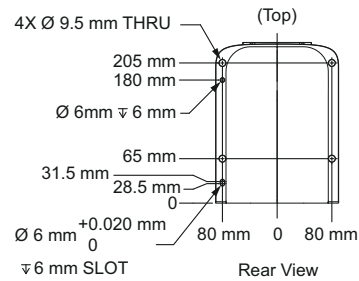
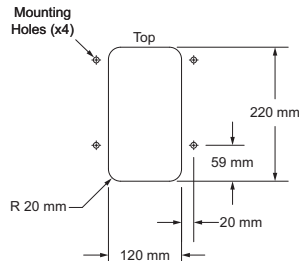
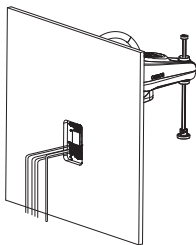


## Mounting Options

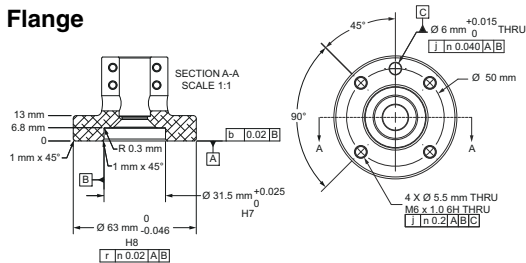
### Fable Cable Exit Cut-Out Dimensions



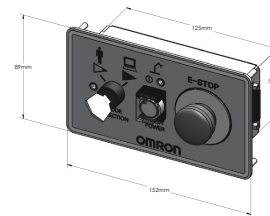
### Wall Cable Exit Cut-Out Dimensions



## Flange



## Front Panel



# Robot Parts Code and Bundled Accessories

| Product                     | i4-350L   |              | i4-450L     |              | i4-550L     |              |             |              |
|-----------------------------|---|--------------|-------------|--------------|-------------|--------------|-------------|--------------|
|                             | Standard  |              | Standard    |              | Standard    |              | Long-Quill  |              |
| Interface Panel Orientation | Rear Panel  | Bottom Panel | Rear Panel  | Bottom Panel | Rear Panel  | Bottom Panel | Rear Panel  | Bottom Panel |
| Part Number                 | RS4-2053002   | RS4-2053102  | RS4-2054002 | RS4-2054102  | RS4-2055002 | RS4-2055102  | RS4-2055004 | RS4-2055104  |
| Overview                    | SCARA Robot Arm + Integrated iCS ENET Controller                                  |              |             |              |             |              |             |              |
| Bundled Accessories         | XSYSTEM cable with jumpers, 1.8m/6ft (13323-100)<br>Front Panel Kit (92546-10358) |              |             |              |             |              |             |              |