

Smart, collaborative robot

Meet Sawyer™ – the industry's fastest-to-deploy collaborative robot, designed to give manufacturers the high performance and adaptability needed to automate a wide variety of tasks. Sawyer is a completely integrated solution that includes Intera™ software, embedded vision, Intera Insights, and the ClickSmart™ family of gripper kits.



Our Smart, Collaborative Difference

Intera Software

The Intera software platform gives Sawyer its unique user experience that lets you create a task through train-by-demonstration on the robot's arm or use Intera Studio on your laptop. Intera's highly graphical interface can be used by anyone - from non-programmers with no experience to automation experts. And Intera Insights provides Key Performance Indicators directly on the robot, making them accessible on the factory floor in real time.

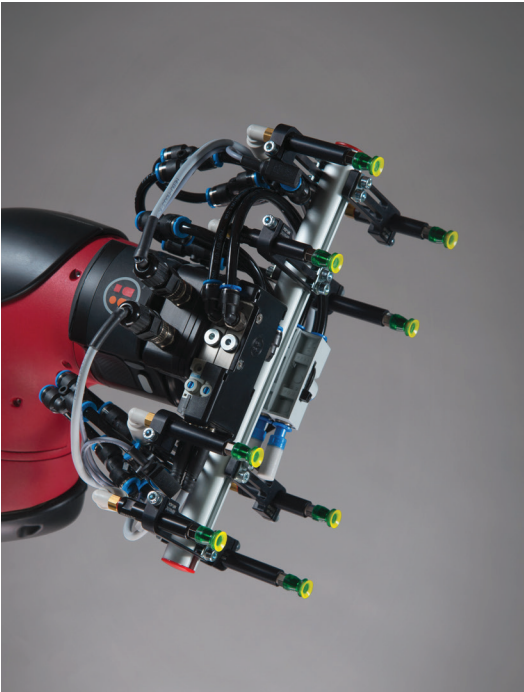
Embedded and external vision

Sawyer is equipped with an embedded vision system in its arm that allows the robot to locate objects or inspect for part presence. This vision system enables the Robot Positioning System (RPS) that looks for changes in the robot's environment and automatically responds to work-cell variation. External cameras can also be seamlessly integrated in minutes, drastically reducing typical machine vision integration costs.

High Resolution Force Control

Unlike most industrial robots that are position controlled, Sawyer is constantly controlling joint torque and position simultaneously. By controlling both, Sawyer continuously controls the amount of force it applies in different directions, similar to the way people do when performing tasks, reducing the need to add additional sensors, hardware, or expensive fixturing.

With Intera, Sawyer realizes the full potential of unique titanium flexures in each of its seven joints, providing advanced control of how it interacts with its work cell, and allowing Sawyer to adapt to changes in its environment. Sawyer's force sensing behaviors make deployments easier and faster since it can be inserted into work-spaces and use fixtures designed for humans.



Target Applications

- CNC machining
- PCB handling and ICT
- Metal fabrication
- Molding operations
- Packaging
- Line loading and unloading
- Test and inspection

Integrated Collaborative Robot Solution

- Intera software – revolutionary software platform
- Embedded Cognex vision system
- Intera Insights – real time production data
- Robot Positioning System - dynamic re-orientation using embedded camera
- ClickSmart family of gripper kits
- Rethink's global support team

Sawyer with ClickSmart™ Vacuum Small Gripper

Sawyer with Intera™ Insights

Basic Specifications

Pay Load	4 kg
Max Reach	1260 mm
Gantry Reach	900 mm
Task Repeatability	±0.1 mm
Typical Tool Speed	1.5 m/s
Degrees of Freedom	7
Operating Temperature	0°C - 40°C, 80% Relative Humidity
Joint Ranges	J0 - J3 = 350 degrees, J4 - J5 = 340 degrees, J6 = 540 degrees

Basic Specifications

Robot Weight	19 kg
Power Requirements	100-240 VAC, 47-63 Hz, 4A Max
I/O Ports (Controller)	8 digital in / 8 digital out
Communication	Modbus TCP, TCP/IP
Safety Circuit	PLd Category 3
IP Class	54
Collaborative Standards	ISO 10218-1:2011
I/O End of Arm	4 digital in / 4 digital out / 2 analog in / 24 VDC 2A, ClickSmart Plate Required