

Dispelling Misconceptions of Collaborative Robots

By Sherri Long, content writer for RG Group

With expressive eyes and a quiet disposition, Rethink Robotics® Sawyer™ joins the workforce with a mission of helping workers with repetitive tasks while increasing a business's efficiency. So why do so many fear Sawyer and its fellow collaborative robots?

Conquering the job-stealing fear

One fear is that Sawyer and its collaborative robot ("cobot") friends are here to take their jobs. Patrick Gross of RG Group in York, Pennsylvania, wants to dispel this common misconception. "Sawyer doesn't take away jobs. It's more like a power tool. It's making the manufacturing environment more efficient. Sawyer is not necessarily there to take jobs, it's there to make people more effective in their jobs," said Gross during a phone interview on June 5.

Sawyer is a collaborative robot designed and manufactured by Rethink Robotics®. RG Group became the mid-Atlantic Rethink Robotics partner for Sawyer in September 2016. Gross leads the RG Group team of Sawyer representatives and new business development. Their territory covers Pennsylvania, New York, New Jersey, Delaware, Maryland, Virginia and West Virginia.

Jeff Green, social media and content strategist for Rethink Robotics, explained that cobots "take on the dull, repetitive tasks people just don't want to do. People are much better suited for higher skilled work, while cobots take on these boring, and often dangerous, types of manual labor," in his blog post [What is a Collaborative Robot?](#)

Stephanie Neil, senior editor for *Automation World* shared the concurred message from a panel discussion with industry experts during the 5th annual Automation Conference & Expo: "to set the record straight — cobots won't take jobs away from humans. They will augment working conditions," in her article [The Cobots are Calling.](#)



Patrick Gross with Sawyer.

Easy-going Sawyer

One of the features of working with collaborative robots like Sawyer is ease of use. Patrick Gross from RG Group explained, "I think that is a core selling point of collaborate robotics. An industrial robot may take a week or two to set up, but the intention of Sawyer is to be able to set it up in around four hours."

sawyer™

The set up and operation of Sawyer is best suited for "generally someone like a lead technician," said Gross. "It doesn't necessarily need to be someone with an engineering background, just moderate technical aptitude, and they should be fine."



According to [Rethink Robotics' Sawyer](#) web page, "Sawyer features a 7 degree of freedom robot arm with a 1260 mm reach that maneuvers into tight spaces and operates in work cells designed for humans. Built-in force sensing capabilities allow it to make adaptive decisions as tasks run, enabling Sawyer to work precisely (+/- .1 mm), while operating safely next to people."

Gross points out that Sawyer has "easy programming, fast setup and flexible deployment, which means it's easy to redeploy to multiple applications without changing a production layout."

Is it safe?

Another common fear and concern is whether or not a collaborative robot is safe. Unfortunately, many people miss the "collaborative" part of collaborative robot, and focus only on "robot." This can conjure up images of robotics that must be caged to protect human workers from being hurt by the robot. Collaborative robots, thankfully, are not like their monster-sized industrial robot cousins.

"The payload for Sawyer is 8.8 lbs. Anything above that is considered non-collaborative," said Gross. He shared that he is often asked, "Is it safe?"

"The answer is, Yes! There are ISO standards and OSHA standards associated with the robot that make it safe. Sawyer definitely does not have to be caged. Sawyer has 'force sensing.' There are titanium rings in the robot so that the robot can sense how hard it's pushing up against something. So if it engages with something that it's not supposed to engage with, it will actually just stop."

Rethink Robotics' safety compliance web page explains that "the collaborative robots from Rethink Robotics are designed to work effectively directly alongside people in a factory setting, making it possible to deploy in environments which have historically been off-limits to robotic automation." To review the safety compliance page and standards details, visit rethinkrobotics.com/safety-compliance.



Within reach of Sawyer

RG Group has sold a robot to one start-up. "The rest are large, well-established companies. Large, billion-dollar companies that are trying to find ways to become more efficient; to have better labor utilization," said Gross.

Sawyer isn't just for billion-dollar companies, though. It can be deployed in small businesses and large businesses. "I think for what Sawyer does, it's extremely affordable," said Gross. "Generally, in our industry, people look for a two- to three-year payback. But in the right application, Sawyer's payback

is six months. It's safe and it is the fastest payback robot in the industry."

Sawyer has a multitude of applications for machine tending and material testing, such as CNC machining, PCB handling and ICT, packaging, and test and inspection. Visit [RG Group's Rethink Robotics](#) web page for details on all the applications of Sawyer.



New uses, improvements to the grip accessories and updates to software are always happening at Rethink Robotics for Sawyer. Some of the features are already built into Sawyer; the software just needs to catch up.

“They (Rethink Robotics) were smart in how they designed and manufactured Sawyer in the sense that they put things in the robot that would be used at a later date. For example, right now there is a camera in the head of Sawyer, and the camera isn’t being utilized because the software isn’t utilizing it – yet,” said Gross.



RG Group and Rethink Robotics – the collaboration

Gross explained that Rethink Robotics “is constantly iterating the software, so there are always updates, which is good. It continues to improve.”

RG Group selected Rethink Robotics as a partner in collaborative robotics partly because Gross attended graduate school at Babson College with Ann Whitaker, co-founder of Rethink Robotics. Another big reason was “they are a U.S.-based company. All the robots are manufactured in the United States, in or around the Boston area. They were also kind of the first mover in this space. They introduced the first collaborative robot, so we felt they would be more capable in the long term.”

Gross and his team keep up-to-date with the changes, improvements and training through their regular visits to Rethink Robotics headquarters, located in Boston. “We get up there about every three months to meet with them, to figure out what we are doing right and where we

can improve. We revisit existing Sawyer customers to make sure they have it deployed correctly,” said Gross. “Our first customer, [Acorn Stamping](#), is featured on Rethink Robotics’ YouTube channel.”

Sawyer deployed

Sawyer comes with a Dell Optiplex computer that can be mounted onto Sawyer’s mobile pedestal. Software updates are easy to download and implement. “The operating life of Sawyer is 35,000 working hours. It’s like a five-year life. There’s not much maintenance to it either,” shared Gross.

Sawyer is equipped with an embedded vision system – a Cognex camera in its wrist that enables the Robot Positioning System and other complex vision tasks. The Cognex cameras are “designed to be mounted on the end of a robot so you have a complete solution that is capable of part picking and inspection. Both of these are tasks that are often hard to fill and results can vary widely as operators tire through long shifts,” wrote Michael Lindley in his post for *Automation World*, [The Remarkable Future of Industrial Robotics](#). Lindley is vice president of business development and marketing at Concept Systems.

RG Group and Sawyer want to help your business grow and thrive by continuing to offer more options, and test more products through the use and application of Sawyer. Sawyer can adapt to real-world variability and is agile enough to change applications quickly. This automation has the flexibility and precision to boost productivity and profitability for you and your business.





Want to meet Sawyer?

RG Group can bring Sawyer to you for a demonstration. Just contact RG Group to set up a time, and decide what would be the best type of application demonstration for your business. RG Group's team of experts provide a full range of automation solutions and can create prototypes, assemble products and test custom work in-house which means you get your robot, or your entire automated system, out of our technology center and integrated faster.

If you have questions, comments or want to schedule a demonstration, please contact [RG Group](#) at **877-870-2692** or customer.service@rg-group.com. See Sawyer in action on RG Group's website at rg-group.com, and read more about the benefits of a winning collaboration with RG Group's Automation Team, Sawyer and you.

Sources:

Patrick Gross, director of new business development, RG Group

Rethink Robotics Safety Compliance: <http://www.rethinkrobotics.com/safety-compliance/>

Rethink Robotics' Sawyer page: <http://www.rethinkrobotics.com/sawyer/>

Stephanie Neil, senior editor for Automation World, May 24, 2016. "The Co-bots are Calling." <https://www.automationworld.com/article/food-and-beverage/co-bots-are-calling>

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