

AUTOMATION MADE FRIENDUSTRIAL™

Cobots in Packaging

A quick guide to getting started with cobots





FANUC Robot CRX-30iA

Welcome to a new era of efficiency and innovation with the power of cobots. In today's industrial landscape, collaborative robots, commonly known as cobots, are rising in popularity across businesses of all sizes.

These versatile machines are not just enhancing productivity, but also reshaping how businesses around the globe are thinking about automation. For companies dealing in end-of-line packaging, cobots offer a way to do things better and faster.

In this ebook, we will encounter the world of cobots and help you determine whether these powerful tools would be a good fit for your operating line. Whether you're managing a large-scale operation or a small enterprise, understanding the potential of cobots is crucial for staying competitive and driving growth.

Join us on this journey to discover how cobots could be the key to new opportunities for your business.

Table of Contents

Welcome

Chapter 1 – The Cobot Revolution

Chapter 2 – The Cobot Advantage

Chapter 3 – How Can I Get Started?

Conclusion

The Cobot Revolution

The rise of collaborative robots

If you have never seen a cobot in action, you might imagine it like the robot maid from the classic television show, *The Jetsons*—efficiently performing a variety of tasks alongside humans with ease and precision.

Instead of a futuristic home, however, imagine it on a bustling factory floor, seamlessly handling repetitive and labor-intensive jobs like sorting, packing, and palletizing, all while ensuring safety with its human coworkers. Enter the world of cobots.

Quick definition : COBOT

A type of industrial robot designed with force, speed, and momentum limitations to safely work alongside humans (with appropriate risk assessment).

A cobot's design is meant to help operating lines run more effectively and get more done, with human safety in mind.

Timeline



How it all got started

Today's cobots feature advanced sensors, machine learning, and enhanced programming interfaces that have made them adaptable to complex tasks and environments.

Though we are still far from the idea of an independent robot laborer, cobots with robotic arms and specialized end-effectors have become increasingly prevalent, especially in the end-of-line packaging world, where labor shortages are rising.

The true cost of human labor

Though it might seem appealing to hire human workers for their flexibility, ability to rotate among various tasks and handle different products, the reality is that it is becoming harder and harder to recruit physical laborers.

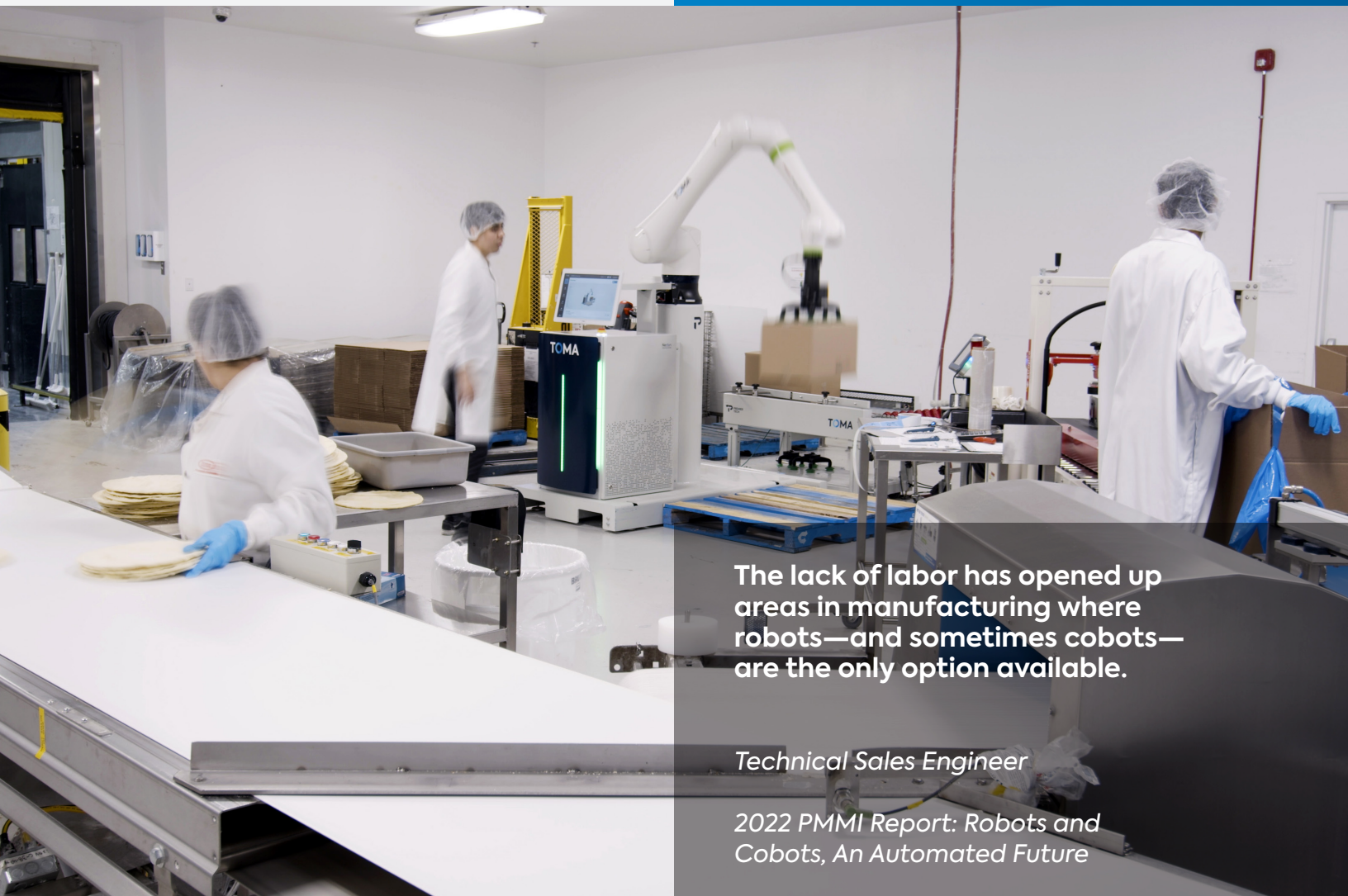
In end-of-line packaging in particular, you may find yourself dealing with:

- Health and safety issues associated with strenuous manual tasks
- High turnover rates
- Challenging skill and training requirements
- Low job satisfaction

The repetitive and physically demanding nature of packaging work leaves many business owners looking for alternatives.

In light of these challenges, cobots offer a smart and effective alternative. By taking over the monotonous tasks, cobots can become a helpful team member.

We'll look at more of the benefits in the next chapter.



The lack of labor has opened up areas in manufacturing where robots—and sometimes cobots—are the only option available.

Technical Sales Engineer

2022 PMMI Report: Robots and Cobots, An Automated Future

What's the difference between robots and cobots?

While it's true that both robots and cobots can present some compelling benefits as you consider automation, they differ in important ways.

INDUSTRIAL ROBOT

Generally isolated from human workers

Requires external safety devices (e.g., fences, light curtains, etc.)

Higher initial cost due to complexity and scale

Deployment can be complex and require comprehensive programming

Best suited for large operations that handle big batches with minimal variability

Higher footprint due to safety requirements



INDUSTRIAL COBOT

Designed to operate alongside human workers

Includes built-in safety functions that can replace external safety devices (in accordance with risk assessment)

Generally lower initial cost

Deployment is generally streamlined, meaning minimal downtime for installation

Good for small volume, high-mix applications

Lower footprint due to contained safety features



The Cobot Advantage

How cobots improve end-of-line packaging

Cobots do not simply function as an extension of your workforce. It's better to think of them as a skilled partner in your production line.

Unlike traditional automated robots, cobots are designed to be user-friendly and adaptable. They free human workers to focus on more complex activities that require problem-solving and creativity.

Enhanced Workplace Safety

Cobots are built with advanced sensors that allow them to detect and respond to their environment with safety at the forefront.

For example, a human worker can manage inventory, while a cobot handles the repetitive and strenuous tasks of sorting, packing, and stacking.

Here are some more benefits of choosing cobots as a valuable partner on the production line:





Increased Quality and Consistency

Cobots perform repetitive tasks easily yet with high quality results.

This translates well into the packaging world: a cobot can be assigned to pick products from a conveyor and place them onto pallets in a specific stacking pattern with perfect accuracy.

Adaptability and Moveability

Unlike traditional robots, cobots generally do not need to be anchored, depending on their desired speed and the overall weight.

In this way, teams can easily reconfigure cobots to address shifting priorities. Cobots can move from line to line to accomplish jobs where human laborers are missing.

No Language Barriers

Cobots can be particularly advantageous for a business with a diverse workforce, where language might be a challenge for the operation line manager.


For one, cobots perform tasks with high consistency, reducing errors that might arise from miscommunication or misunderstandings. Plus, cobots mean less direct supervision and communication, freeing the manager to focus on other aspects of operations.

How Can I Get Started?

Integrating cobots into your assembly line

Getting started with a cobot on your assembly line can significantly enhance productivity and streamline operations. However, rather than searching for one right away, it can be helpful to assess the needs of your plant.

The next page has a helpful checklist of questions you can ask yourself as you consider cobots for your automation needs.



“Palletizing is one of the most physical tasks we have to automate. Cobot technology has allowed us to shift workers to other jobs and also raise the productivity of our whole facility.”

- Pascal Gagne Director of Operations, Groupe TAQ

Are cobots a good fit for you?

Here are some key questions to consider.

What is the size and weight of the products you need to handle?	<i>Though cobot technology is always evolving, cobots are generally suited for lighter, smaller tasks (payload up to 30kg).</i>
What are your workspace constraints?	<i>Cobots are usually suitable for tighter spaces and can work more closely alongside human operators, with an appropriate risk assessment.</i>
What is the level of speed required for your tasks?	<i>As an example, in a palletizing application, a cobot can reach 8 picks per minute. If your application requires high speed, you might consider an industrial robot instead.</i>
What is your budget for automation?	<i>Cobots are generally less costly as compared to industrial robots, as they do not require a complex safety infrastructure.</i>
How often will you need to reconfigure and adjust the robot's tasks?	<i>Commonly smaller and more lightweight, cobots offer greater flexibility and ease of reconfiguration compared to their industrial robot counterparts.</i>
What level of technical expertise do you have for maintenance and programming?	<i>Most cobots are controlled using user-friendly interfaces and require less technical know-how compared to industrial robots.</i>

Interested in a cobot for your end-of-line packaging setup?

You're in the right place.

With 35 years of experience, Premier Tech knows the end-of-line packaging industry inside and out. With an ambition to make automation friendlier than ever, we're excited to introduce you to TOMA.

TOMA represents a seamless integration of Premier Tech's robust industrial knowledge with brand-new advancements in user experience.

With TOMA, you get:

- Accessible cobot technology that anyone can operate
- Equipment provided by FANUC to deliver the highest picks per minute available on the market
- An out-of-the-box solution, so that you can get up and running in minutes
- 24/7 client support, giving you complete peace of mind and access to support anytime

Get started with cobots from an industry leader you can trust.

[Learn more about TOMA](#)



PT Systems and Automation

This material is provided by Premier Tech Ltd. and its affiliated companies as a service to its customers and may be used for informational purposes only. The reader is free to use the content for non-commercial purposes, provided that it is not modified and all copyrights and proprietary notices are kept intact.

The information in this document was up-to-date and consistent with the information available at the time of printing. Because of its continuous improvement policy, Premier Tech Ltd. and its affiliated companies reserve the right to change, and/or discontinue the manufacture of any product and/or modify technical data, for any reason whatsoever and at its sole discretion, without further notice and without liability to anyone in this regard. PREMIER TECH®, PREMIER TECH & DESIGN™ and TOMA™ are trademarks of Premier Tech Ltd.



[TOMAROBOTS.COM](https://www.tomarobots.com)

© Premier Tech Ltd, 2024