

FOR IMMEDIATE RELEASE

PBC Linear expands their Applied Cobotics product line with their Cobot Feeder for manufacturing automation

Roscoe, Illinois, USA – May 1, 2022 – PBC Linear, a Pacific Bearing Company and a global leader in linear motion solutions, continues to strengthen their Applied Cobotics brand with the latest product offering, the Cobot Feeder. This essential automation tool will help small- to medium-sized companies boost their robot production without significant increases in labor, and ultimately see a higher return on their investments.

Cobot Feeder

The Cobot Feeder from Applied Cobotics assists cobots and other robotic applications by providing a continuous arsenal of machinable parts over a much longer time frame. It achieves this by consistently loading and unloading up to 17 consecutive dunnage trays onto the cobot accessible work area, eliminating the need to manually replace each one. The Cobot Feeder acclimates to many industrial applications including CNC lathes and mills, material handling, assembly, and more!

Benefits of a Cobot Feeder from Applied Cobotics

The Cobot Feeder, in tandem with robots, helps drive a complete automation system, offering substantial benefits to company leaders that includes:

- **Higher efficiency:** The Cobot Feeder allows shop floors to maximize their robot output by decreasing changeovers and robot downtimes.
- **Increased Productivity:** The Cobot Feeder offers a substantial boost in robot production that's up to 16-times greater than single tray applications.
- **Cost containment:** As labor costs continue to rise, the Cobot Feeder will help mitigate impacts. For example, with the Cobot Feeder, one operator can potentially oversee five separate stations, focusing their attention on production flow and quality control.



VERTICAL-PRECISION AUTOMATED TABLE

- **Greater Flexibility:** The Cobot Feeder allows shop floors to be more responsive to dynamic markets with multiple parts runs, lights-out automation, and ultimately shorter lead times.
- **Recruitment, Retainment:** Operating an Cobot Feeder alongside a robot offers your workforce a more engaging, fulfilling, and safer work environment. This makes the profession more attractive to younger recruits, and helps to retain more seasoned journeymen who wish to expand their skill sets and improve the quality of their workplace environment.
- **Higher ROI:** Cobot costs can be recouped within roughly six months when running 8-hours/shift. A package deal that includes the Cobot Feeder with a cobot and accessories will pay for itself in that same amount of time, or closer to two months if running 24/7! [Access the online ROI Calculator.](#)

Features

The Cobot Feeder from Applied Cobotics features a vertical lead screw-driven table, and a horizontal tray loader/unloader that provides accurate and repeatable motion. Cobot Feeder base packages come complete with the following features:

- **Dunnage tray rack tower** engineered to securely lock in place with the Cobot Feeder. It is capable of holding up to 17 trays, eliminating the need for a worker to periodically remove and reload material from the cobot work zone. It also offers open-spaced shelving that accommodates various part sizes up to 18-inches in height, and offers station-to-station mobility. The result is a significant boost in robot productivity up to 16-times that of a standard single tray design.
- **Standard fixed robot mount** offers 45-degrees of adjustment and a custom bolt pattern that is compatible with any cobot/robot. The robot mount can be upgraded to a more flexible swivel stand that offers 4-times the amount of adjustments over the standard model. This means a robot can be moved to different angles quickly and accurately.



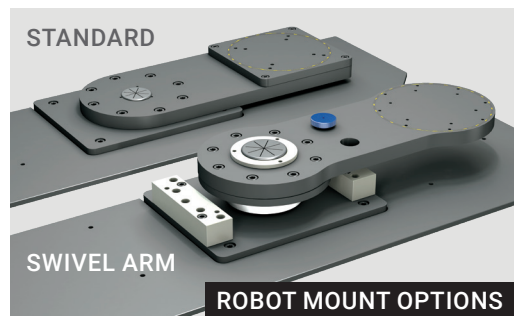
TRAY LOADER/UNLOADER



CUSTOM TRAY INSERTS



DUNNAGE TRAY RACK TOWER



ROBOT MOUNT OPTIONS



EASY-TO-USE INTERFACE

Additional Features and Benefits

- Compatible with pallet jacks
- Easy setup/Plug and play solution
- Compatible with most cobots
- HMI touch screen display for easy lift control
- SICK Safety floor scanner (optional)
- Camera and monitor screen for convenient production viewing (optional)

Cobot Feeder Specifications:

- Overall dimensions: 55" x 41" x 76"
 - Standard aluminum or stainless tray dimensions: 18" x 26"
 - Weight: 1200 lb
 - Power Required: 220V Single Phase
 - Tray Tower capacity: 17 Trays
 - Max tray capacity: Base model = 50 lb, Upgraded model = 150 lb
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Case Study: Providing Productivity Gains without Increasing Labor

When first implementing cobots, the engineers at Applied Cobotics quickly realized that the vision systems for picking parts from a bin lacked the sophistication to consistently complete tasks and the affordability for further expansion. Without some sort of automated loading and unloading system, cobots were sitting idle and falling far short of their potential.

Their solution was to build the Cobot Feeder around dunnage trays and then combine that with a parts tray rack to continuously feed the robot. This automation package provided solutions to common core challenges:

- Provide the correct orientation for cobot grippers
- Offer organized and repeatable placement of parts
- Allow for easier programming of cobots
- Increase the overall efficiency of cobots

The experience of PBC Linear and their efforts to automate with cobots illustrates how essential it is to have a unique machine like the Cobot Feeder. This is especially poignant when considering how the pandemic has amplified the shortage of skilled workers and exposed a supply chain fraught with severe backlogs and delays.



What started as a reconnaissance effort into possible solutions quickly turned into a must-need imperative for PBC Linear due to the pandemic. With CEO Bob Schroeder's backing, seasoned engineers, alongside a group of enthusiastic interns at Applied Cobotics, began designing and building prototypes while investigating different materials and linear motion systems. The highly repetitive tasks that were targeted for the initial automation were the CNC mills and lathes used to produce many of their signature bearings. With roughly 80 CNC machines in the PBC Linear shop and 15 cobot stations in operation, there was plenty of room to experiment.

Case Study Results

The combination of cobot and Cobot Feeder have been game changing for PBC Linear. Over a recent span of twelve months, they were able to **increase their sales by 33%**. In contrast, their **labor has only increased by a mere 3%**. This is represented anecdotally in several examples:

- **Project schedules:** Often, lot sizes are gauged for a single shift of work. The reality is that a job rarely finishes within the allotted time. In essence, a five-day job can often really take eight or nine days to complete. The Cobot Feeder allows those jobs to finish overnight, so that every day is a fresh set-up, and each job stays in step with the production schedule.
- **Parts organization:** The reliance on custom dunnage parts trays replaces the old tedious process of a worker stacking/restacking parts to and from a bin or machine, and then repeating that process multiple times throughout that project's timeline. In addition, quality-sensitive parts can be compromised using part bins. The Cobot Feeder model avoids quality issues, needless down-time, and potential costs.
- **Multiple parts processing:** The options for multiple configurations of parts trays on the rack means that different parts can be run during the same job run. This greatly reduces the amount of setup and changeover time required, offering greater efficiency on the shop floor.

An additional benefit is that their workforce has full buy-in to this new manufacturing model, which in turn supports a higher degree of job satisfaction, skill sets, and potentially higher wages. Workers now act more as managers of multiple stations. They can load several machines and then either check on the quality of parts or go to lunch while the cobot and Cobot Feeder continue to operate without a break.



In terms of ROI, our complete Cobot Feeder solution offers the ability to increase the efficiency of cobots and other types of robots up to 1600%. Generally, a cobot can pay for itself within six months. A cobot with a Cobot Feeder from Applied Cobotics can pay for itself in roughly two months on the power of the productivity boost that comes with added lights-out manufacturing. To see more on calculating the ROI of a Cobot Feeder and Cobot, PBC has set up an online calculator option on the Cobot Feeder product page.

Quotes:

The Cobot Feeder is crucial at a time when no one can hire – especially with the manufacturing labor shortage. – Beau Wileman, Applied Cobotics Product Manager

Repeatability is the number one killer for cobot efficiency. Without it, the system cannot run without supervision. The Cobot Feeder provides that repeatability. – Derek Neises, Manufacturing Engineer at PBC Linear/Applied Cobotics



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PBC Linear® has been a trusted source for the engineering, manufacturing, and assembly of a wide range of linear motion products, along with custom engineering services. They offer a core group of high-performance linear components and sophisticated mechatronics systems.



AppliedCobotics.com

Applied Cobotics provides automation solutions by integrating collaborative robots (cobots) systems into manufacturing systems. The results include improved workforce skills through augmented reality training, improved safety and output, and a strong foundation for the next generation of labor professionals.

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