



Cannabis



Custom Eriez® Feeder Plays Integral Role in Automated Pre-Roll Cannabis Unit

The legal cannabis market is forecasted to reach \$41.6 billion by 2025, as more than 36 states have already made recreational or medical cannabis legal, and additional legalization efforts are underway across the nation.

Accelerant Manufacturing co-founder Grant Schuster and his team looked at the cannabis pre-roll cone joints market and noticed that pre-rolled marijuana products are outperforming overall market growth. The Maryland-based company saw an opportunity to use automation to meet demand.

“We observed that pre-rolled product sales grew 47% year-over-year in established markets in 2020,” said Schuster. “The problem is that operators cannot hire, train and retain labor to keep up with demand. In response, our early research and development efforts proved that automation could produce somewhere between 2,000 and 3,000 pre-rolls per hour and eliminate the 15 to 20 people needed to produce the same output.”

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Co-Founder, Accelerant Manufacturing

Accelerant contacted Cutting Edge Automation to help move the effort forward. Together, they developed Accelerant’s Pro Modular System. Inclusion of an Eriez® 6C electromagnetic vibratory feeder was critical to the success of pre-rolling and reducing waste.

The Eriez feeder handles 500 to 2,000 pre-rolls per hour. The weigh filling system is accurate to .01 g. and is never underweight.

This light capacity feeder enhances compacting and serves as an ideal component within this demanding operation where small quantities of cannabis is required, and consistent shape and uniform density is crucial.

The 6C electromagnetic feeder--ideally suited for precise material metering applications--features a stainless-steel tray. The enclosed vibratory feeder drive is designed to operate in dusty and wet environments. When paired with the Unicon solid-state feeder control, superior feed rate control is achievable. The Eriez 6C electromagnetic vibratory feeder meets United States Department of Agriculture (USDA) requirements.

“If you do a deep dive on our Pro Modular System, you will see many other features that provide our customers state-of-the-art technology at a price-point that is

attractive,” Schuster noted. “We have a cloud-based platform that is meeting and exceeding customer expectations.”

The Accelerant modular system allows for capacity expansion as the producer’s market grows. It is an easy-to-load cone magazine that adapts to all cone sizes and brands.

With the machine’s recipe approach, operators easily adjust specs to different flower mixes through compacting (vibration and rod) and twisting (turn and depth) to produce consistent shape with uniform density. The durable design includes a stainless-steel frame and contact parts, a sophisticated scale, quality motors and a modular method that allows swap-outs.

Remote monitoring enables ready data to be sent to Accelerant’s cloud platform for every 10 units. Recipes, weights, configurations, quantities and cycle times are adjusted by station. Real-time remote visuals are integrated using in-line cameras.

Key data insights allow Accelerant’s engineers to assist operators in improving productivity and quality. Maintaining an ideal environment is possible through monitoring humidity and temperature. Production count monitoring ensures compliance. Exception-based weight conformity and key issue alarms act in real-time to address root causes and reduce downtime.

The stigma attached to cannabis-related businesses makes funding difficult for many start-ups, according to Accelerant. These fledgling companies seek partnerships and financial considerations in new and creative forms. Accelerant offers a perfect solution: high-performance equipment under a lease that is based on cost per unit and includes maintenance.

“Ours is the first ‘production as a service’ (PaaS) pre-roll machine,” Schuster said. “Because most cannabis operations are start-ups, we provide the machine, maintenance and scale for upfront costs. We charge on a per unit produced basis at a price that declines based on production levels. We call it a ‘plug, play and prosper’ solution.”

He added, “We are proud that we are helping United States companies satisfy the market for safe medical and recreational cannabis while contributing financially to their local economies.”

According to Eric Confer, Eriez Light Industry Market Manager, “Pre-rolls are hard to manufacture. The value of a pre-roll is 80 times as valuable as the cannabis itself. Every gram is costly. Labor is difficult and weight inaccuracy is common. Our 6C feeder fits this application and eliminates waste. He noted, “Cycle times that were 30-40 seconds prior to installation are now five seconds.”

Schuster wrapped up the Eriez story, “We needed a reliable vibratory feeder. Eriez provided us a partnership—the kind we want with our clients. Eriez responded right from the start with a prototype product and support to help us produce 10 units immediately. We reduced cycle times and solved other issues with Eriez. We are impressed with the willingness of Eriez to work in the industry and partner with Accelerant.”

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According to a recent study by Cutting Edge Automation, the pre-roll market continues to grow, especially in California, Colorado, Michigan and Arizona. The innovators at Accelerant Manufacturing are truly blazing a path to the future.



Eriez is recognized as the world authority in separation technologies. The company’s magnetic separation, metal detection, material handling, fluid recycling and advanced flotation technologies have application in the mining, processing, packaging, food, recycling, aggregate, plastics and metalworking industries. Eriez designs, manufactures and markets these products through 13 international subsidiaries located on six continents.

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