

Built on 25 years of innovation, numerous versions and trusted worldwide

RevoPortioner: Market leader in low-pressure rotational forming

- Unbeatable product quality and consistency
- Endless variety of 2D, 2,5D and 3D product shapes
- Up to 4% of raw material savings
- Preserved structure and texture
- Belt widths to fit any food production line
- Speeds up to 670 strokes/min





Market demands are transforming as urban lifestyles expand, premiumization accelerates, and convenience foods—especially ready-to-cook and heat-and-eat formats—gain traction.

Consumer demand for convenience products continues to increase. In addition to traditional products such as nuggets, burgers and schnitzels, there is a focus on innovative, new products with a more modern style and international flavors that follow the latest trends in global cuisine. The influence of healthier, more sustainable lifestyles also means that new and alternative products are becoming more and more popular. In response, retailers, restaurants and QSRs are all expanding the width and depth of their convenience product range. To respond to this market demand, convenience food processors worldwide can benefit every day from the innovative RevoPortioner forming solutions that JBT Marel has been developing for more than 25 years.



Inventor. Innovator. Leader in rotational forming

The JBT Marel RevoPortioner is the industry leading rotational portioning system that enables the production of a consistent flow of high quality products. The RevoPortioner will guarantee the same uniform shape, weight and size of the products created. The system retains the whole muscle meat structure and texture as much as possible, with virtually no waste of raw material saving up to 4% of raw materials.

Over 25 years of research and knowledge, based on the wishes and requirements of a loyal customer base, form the foundation of the success of the RevoPortioner. Some examples of the products that can be made with the RevoPortioner are burgers, nuggets, schnitzels and 2,5D and 3D products such as tenderloins, steaks, fillets and even 3D products such as balls and skinless sausages.

Laying the foundation for quality

Forming is the base upon which product quality is built. A repeatable process is key to achieving the three elements that are essential to forming quality products.

- Uniform appearance
- Accurate weight
- Texture, bite and juiciness

Establishing efficient, cost-effective processing

Four key elements will help ensure high-quality products are produced at the most economical cost and the lowest cost per product achieved.

- Increasing flexibility and capacity
- Maximizing uptime
- Up to 4% more yield
- Minimizing resources such as labor and utilities



A unique and patented distribution design

Pressure controlled forming

The forming process starts with a positive displacement pump, which transports the meat mass through the RevoPortioner's manifold. The manifold has a unique constant surface design, which ensures optimum flow of meat to the mold. A pressure sensor is strategically positioned to regulate the pump and, together with the patented „Helix drum“ design, secure a consistent pressure. This results in optimum filling of the individual molds in the drum.

The RevoPortioner 1000

Can be a replacement for its first versions, with a Y-belt supplying a 1000mm/40" line. The first RevoPortioners were introduced in the early years of this millennium and immediately set a new benchmark in forming technology. Today, with speeds increased to up to 40 m/min and significantly improved robustness and control systems, the solution can deliver a return on investment within as little as one year.

Shoe plate functionality

The latest RevoPortioner series has a unique patented shoe plate design with multiple air bellows that give

precise control over the stability of the meat going into the forming drum. It allows the weight and the shape of the final product to be determined with great accuracy, avoiding air-holes, lips and overfilling of the molds.

The unique design of the side air bellows and shoe plate helps to always keep leakage below 0.3%. This, and because there's no water usage during production, means that almost every kilo/pound of the product mass in the hopper ends up as products on the belt, without spoilage or leakage.

✚ **The level of control this RevoPortioner technology gives over the filling of the forming drum results in a higher quality product and financial gains through the reduced giveaway. In addition, waste can be virtually eliminated, ensuring enormous savings on raw material.**

✚ Produce any shape in any suitable mass, including whole muscle

The unique shoe plate technology, combined with the pressure-controlled meat flow, allows the RevoPortioner to work with a wide variety of masses in a wide range of temperatures, reflecting the viscosity of the meat mass to be formed. Our experience shows that the RevoPortioner can handle the softest masses available on the market. This reduces the need for cooling agents during mass preparation and can generate savings of up to €0.25 per kilo of end product. As a result, blend preparation time is reduced, leading to less degradation and better preservation of the meat mass integrity.

The RevoPortioner can mimic full-muscle products, producing portions of muscle meat with no visible emulsion in between. Similar to sliced muscle products,

but with the lowest relative standard deviation in weight ever seen on the market. This capability allows the RevoPortioner to process virtually any mass—protein or non-protein, including cheese, vegetables, insects, pet food, and many more.

Endless shape possibilities

Forming product masses at higher temperatures allows for better preservation of the initial structure. The air permeable stainless steel forming drums provide the flexibility to produce a wide variety of unique shapes that vary from sharp edges to homestyle appearance. The permeable material allows the mold design to incorporate extremely fine details in the shape, as far as incorporating a company logo on a burger and even 3D forms are possible.



Continuous forming – continuously performing



Leader in rotational forming

Products such as nuggets and tenders are formed with an ultimate shoe-plate control, ensuring that every product has a uniform shape and lowest relative standard deviation on weight, while still retaining the structure and texture.



Increased capacity and quality

Forming drums are available with innovative Helix Drum technology to increase production capacity, and decrease wear and tear. They also ensure a more controlled filling pressure with a more constant flow of raw material.



A RevoPortioner for any capacity

With belt widths of 400, 500, 600, 700 and 1000 mm, there's always a RevoPortioner to fit any food processing production line, from the smallest family-owned business to the largest processors supplying the world's leading QSR chains. From small-scale production to high-volume output, the RevoPortioner delivers capacities from a few hundred kilograms up to 8,000 kg of formed raw material per hour.



Preserved structure and texture

Unique air-release function ensures production runs up to the next shop floor cleaning cycle. This ensures long runs without production stops, further increasing OEE.



Production insight

AXIN Solutions connects your machine, your process, and your business data so you can see what's happening and act on it. Making faster data-driven decisions that boost control and profits and keep your further processing lines running at their best from receiving to dispatch.

With a subscription-based licensing model it is easier, more affordable, and offers a lower-risk for your business to adopt and grow with our software solutions.

Turn your equipment into a connected, smarter line: AXIN Machine Solutions provides insights into the technical health and performance of your machine and enables Connected Services, where you get proactive assistance, to optimize machine health.

AXIN Process Solutions are an integral part of future-ready further processing lines, capturing processing data to monitor KPIs, enhance operational efficiency, and increase traceability, at a machine level to an entire line. Explore software specific to further processing:

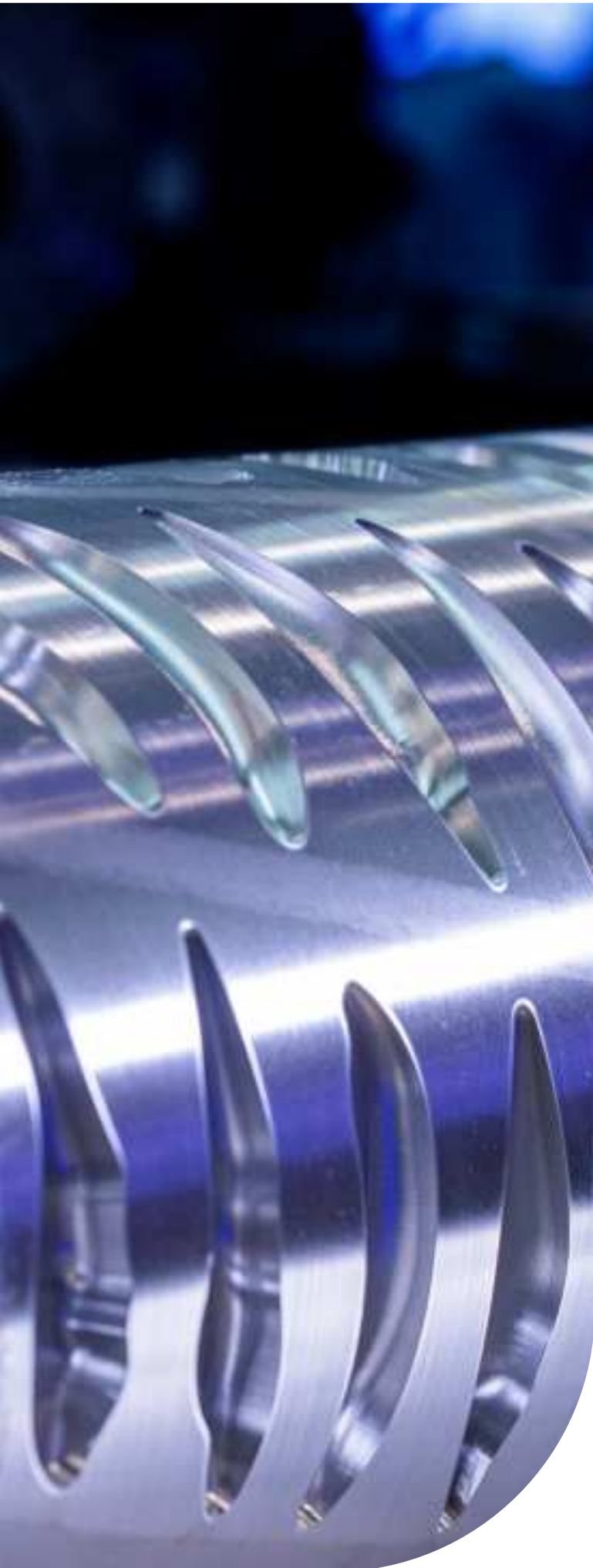
- AXIN Receiving Process Solution
- AXIN Preparation Process Solution
- AXIN Convenience Line Process Solution
- AXIN Packing & Labeling Process Solution

JBT Marel Software experts work with you from concept through installation and on-going support, ensuring you maximize your software investment and position your business for future success in food processing.



Helix Drum technology for higher volume

On the RevoPortioner's Helix Drum, product molds are aligned diagonally behind a rectangle product flow to enable a continuous product-flow in the drum that minimizes the frequent starts and stops associated with conventional drums. There are no 'dead zones' on the drum, resulting in a much more fluid production process. This minimizes variations across the width of the belt and ensures optimal use of the belt surface, and pump capacity. The exceptionally constant meat flow of the helical system not only improves the consistent and smoother filling process, but also boosts capacity, enabling higher production volumes. The Helix drum offers both financial and technological advantages, significantly reducing maintenance costs while enhancing performance and robustness. The continuous pump operation filling the molds maintains a more constant pressure in the system, reducing wear and tear on the pump and the RevoPortioner system as a whole.



Fast and efficient drum changeover

Due to a simplified design, changing from one product to another is effortless. It takes just a matter of minutes and involves opening the shoe frame, together with the manifold, at the touch of a button. A dedicated lifting device is then used to remove the drum after use and safely transport it to the cleaning unit.

Now, another drum can take its place in the RevoPortioner. Mechanical adjustments are not needed during changeovers, just minor fine-tuning of pressure, depending on the actual viscosity of the meat mass. A storage unit is available to store the drums securely.

Increase output and quality

Whether you're forming chicken nuggets, burgers, whole-muscle tenderloins or products made with alternative protein, the RevoPortioner offers the highest levels of throughput with unrivaled product quality.

- Superior uniformity in shape
- Highest weight accuracy
- Low pressure for texture and structure preservation
- Unlimited 2D, 2,5D and 3D shape possibilities
- Increased capacity due to accurate product positioning
- Virtually no leakage of raw product and no smearing
- High capacities possible
- Very low maintenance costs
- Only air needed for product release, no water
- Optimal product variety with exchangeable drums
- Very low noise emission
- Simple to operate and clean
- New product development drum available for cost reduction



Your partner for convenience food processing

Every day, we help convenience food processors worldwide excel with our innovative forming solutions and gain a competitive advantage. From standalone equipment to complete processing lines, we can provide all the support you need to get the best possible results from your raw material and ensure the highest quality products every time.

Water and energy-saving drum cleaning



69% less water consumption



53% less energy consumption

The new RevoPortioner Drum Washer ensures robust cleaning with significantly reduced water and energy consumption, compared to the previous model, making it a highly sustainable and profitable solution. Its automated process meets top hygiene standards, guaranteeing optimal RevoPortioner performance with minimized downtime and maximized productivity. With up to 69% less water and 53% less energy usage, this new version achieves consistent cleanliness with the lowest water usage in drum washing technology. Backed by intelligent software that recognizes each stage of the cleaning cycle and seamlessly resumes after a pause, the intuitive HMI ensures simple and reliable program control. It provides real-time visibility into the washing process and clearly demonstrates the consistent performance of smart water and energy management.

