

Potato Processing Solutions



- High volume, high throughput
- High product consistency and quality
- Multiple forming options
- Hygienic and easy to clean



Marel offers various efficient, low-pressure portioning systems for the production of quality potato products.

Marel offers a wide range of potato processing solutions, including complete lines for turning potatoes into appetizing, profitable, value added products. Potato processing machines for various process steps and capacities are available. Whether you need a system for forming, extrusion, coating, heat treatment, freezing or fixed weight batching, Marel has them all. A low-pressure portioning range that offers unique product possibilities is also available. With that, you can produce the famous pommes duchesse and different fantasy shapes for a variety of products.

Marel systems meet the high standards of the food processing industry. Designed with hygiene and efficiency in mind, all the equipment is easy to clean and maintain. The company's high-capacity machines are reliable, consistent and deliver a high quality production output that is consistent in form, color and taste.

Portioning

A perfectly portioned product is the right start for an attractive snack, a tasty meal component or a ready-made meal.

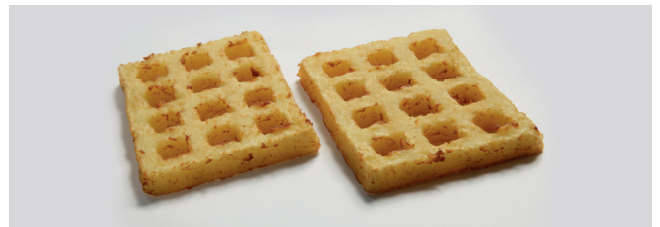
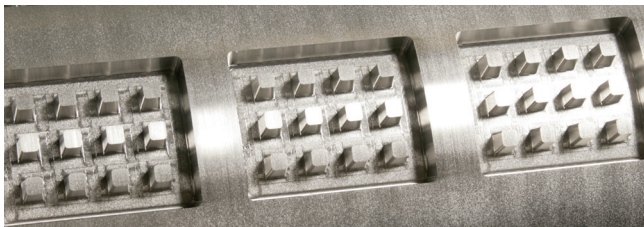
TEX-10 Low-pressure pump

The TEX-10 Low-pressure pump is designed for the portioning and forming of mashed potatoes with a consistent structure. It can be equipped as an intermittently or continuously operating pump. Various forming units such as a diaphragm, an extruder, a pommes duchesse unit or the RevoPortioner can be fitted to the machine. These specific units can be used to make a wide range of products such as pommes noisettes, croquettes, figures, triangles, pommes duchesse, etc.

It is very simple to connect the forming units to the TEX-10. The machine 'recognizes' the coupled forming unit and automatically displays its menu on the machine's touch screen.

Benefits

- Easy to change forming units
- Automatic recognition of forming units
- PLC/touch screen recipe control
- Minimum mechanical parts
- Hygienic and easy to clean



Units

Using the TEX-10 as a master, several units can be attached to it to make a wide variety of products.

Pommes Duchesse - 12 head piping unit

Pommes Duchesse consists of a seasoned purée of mashed potato, which is piped into a round, peaked shape through a forming machine with 12 heads. The twisted topside can be provided in a left or right-hand turn but also with a variable number of ripples. The unit is extremely easy to operate and clean.

Croquettes - extruder

The extruder can be used to make croquettes. A continuous flow of mashed potato is produced and a specially designed elliptical cutting mechanism sees to a precisely straight cut for each croquette. Many different combinations of length and diameter are possible, producing a variety of flat-ended croquettes.

Spherical products - diaphragm

In order to make spherical products, the diaphragm unit can be coupled with the TEX-10 with 6 or 14 heads. By simply programming different curves in the software, different forms can be made such as balls and pear-shapes. A separate rolling machine is available with two moving plates, between which balls can be rolled out to form round-ended croquettes that look homemade.

RevoPortioner - low-pressure portioner

The RevoPortioner can be connected to the TEX-10 pump. It is an excellent solution for low-pressure portioning of high volumes. The RevoPortioner is a very flexible system that can portion almost all masses into virtually any shape, creating perfectly portioned products at low pressure. Each product will always have the same shape, weight, size and be of uniform quality. The system can release products using only air or limited water. There is virtually no leakage of the potato mass. The use of low pressure preserves the structure and texture of the raw material.

How it works

Mass is brought into the distributor housing at low pressure. The cavities on the continuously rotating portioning drum are filled with product mass. At the blow-off position, the portioned products are blown from the portioning drum using a limited amount of water.

Benefits

- **Suitable for all kinds of potato mass**
- **Consistent, highly accurate shape and weight**
- **High process capacity, minimal leakage**
- **Limited water needed for sticky products**
- **Very low maintenance costs**

Coating

Marel offers a range of coating equipment; from flour, tempura and batter applicators to breading machines.

Coating adds value to product, enhances taste and texture and increases yield.

It also protects products from damage during freezing. Marel's coating applications deliver the exact process sequences needed with efficiency and ease.

Designed to enhance taste and texture, Marel's coating systems can supply the appropriate application for virtually any type of coating. The number of possible coatings is abundant; be it wet or dry, or a combination of both. The process sequence will depend on the desired end product.

A close-up photograph of a single breaded nugget resting on a metal conveyor belt. The nugget is covered in a thick, golden-brown coating of breadcrumbs. The metal bars of the conveyor belt are visible in the foreground and background, creating a sense of depth and movement.

Enhance taste and texture and increase yield with Marel's effective coating, marinating and frying equipment.



Marinating

Marinating adds extra flavor or intensifies the natural flavor of the products while locking in moisture. It also gives products a different appearance and increases food safety by slowing the growth of harmful bacteria.

ValueDrum – marinating the smart way

The ValueDrum utilizes an in-line concept that does away with the need for many of the product handling operations surrounding a traditional marinating and massaging process. End products are quickly in their final packaging thanks to the in-line principle and short process times. Although high capacities can be reached, ValueDrum has the smallest footprint of all in-line marinating system available on the market.

How it works

The ValueDrum makes it possible to achieve the desired yield by first adding and massaging brine into the product in a single process step before adding flavor using a marinade. Modules for the automatic dosage of dry or wet additives can be chosen per segment and products can be garnished with other material. The machine can be configured in various numbers of segments to match production capacity. The ValueDrum can also marinate frozen products right before packaging, without the need to defrost them first.

Benefits

- **Uniform distribution of additives**
- **Improved product handling**
- **Improved product shelf life**
- **Easier tracking and tracing**
- **Savings in labor costs and product handling**

Marel fryers enable a perfect controllable, oil and energy efficient process. The result: uniform and consistent high quality end products.



Frying

Frying is an important step in the production process. It fixes any applied coating and gives your products their attractive, golden crispy finish and taste. Marel offers fryers with a frying capacity for high production volumes. A uniform supply and flow of oil helps produce continuous top quality products.



How it works

A conveyor transports the products through the frying oil. An optional upper belt keeps them continuously immersed in the oil. The machine heats up the frying oil electrically or using thermal oil. An oil management system ensures that oil temperature remains constant throughout the whole frying process and together with an energy management system, lowers the cost of operation.

The GoldFryer produces a beautifully fried end product with an attractive color, perfect coating adhesion and enhanced taste and texture. Marel has used all its innovative knowledge of frying in the GoldFryer for the production of low and high volumes of consistent top quality products.

Benefits

- High capacity – high quality
- Superior oil management
- Uniform and consistent fried products
- Safe and easy operation, cleaning and maintenance

Cooking

Cooking is another way of adding value to end products. To meet increasing demand for healthy products, more and more processors choose a combination of deep-frying and/or oven cooking for their products.



SpiralOven

The SpiralOven is a unique hot air system with a capacity of 500 to 3,000 kg per hour. It can steam and cook a wide range of potato products at the same time with controlled dew-point.

How it works

The SpiralOven is a system that makes for extremely accurate regulation and control of airflow and air velocity. Heat transfer yield to the products is particularly high. Each production tier has flow and counter flow. A hood encloses the conveyors in the best possible way to prevent blind spots. This creates an ideal environment around the product, satisfying requirements for core temperature and yield.

Benefits

- Product of a consistently quality
- Uniform temperature and air speed distribution
- Improved yield as a result of optimum air flow
- Hygienic and easy to clean
- Minimum heat up time
- Efficient energy use

Batching

Marel offers smart design and greater automation in its batching equipment. Gentle product handling ensures quality. The systems weigh raw material into sub-weights, which are then selectively combined to form the optimum batch weight – fully automatic from input to delivery. High-speed precision keeps giveaway as low as possible, while ensuring the exact target weight.



Multihead Weigher

The Marel Multihead Weigher deals with all infeed, mixing and weighing requirements. It automatically portions and packs potato products into virtually any kind of tray, pack, bag, can, glass or box. This accurate weighing and batching machine delivers reliable, precise packs at a high throughput.

How it works

The infeed transports the product to the top of the Multihead Weigher, where vibrating feeders dispense it gently into the

weighing hoppers. The hoppers create exact portions by combination and then release them into the packaging.

Benefits

- Suitable for a wide range of products
- Extremely low giveaway
- Easy to operate - low maintenance
- Very hygienic and easy to clean



Service & support

A global reach with a local focus

The Marel service organization operates under the principle of a global reach with a local focus. With offices and subsidiaries in some 30 countries, and a network of more than 100 agents and distributors, Marel is in a unique position to serve its customers wherever they may be located. Regional teams take the company closer to its customers, facilitating faster on-site response times while the international online support team offers remote technical support directly to the site or even the equipment where possible.

Maintain maximum uptime

Marel's comprehensive preventive maintenance program offers a structured way to reduce the risk of unexpected breakdowns and helps maintain maximum performance. Maintenance costs become more predictable and routine tune ups are scheduled to fit into the production cycle.

Spare parts services

Marel offers flexible spare parts packages tailored to different needs. Customers can choose to maintain a full range of common use replacements tailored to on site equipment, keep spare parts kits for planned maintenance of individual items, or get individual parts as and when required. All Marel's parts are manufactured from high quality materials and provide optimal performance for the equipment.



Marel is the leading global provider of advanced equipment and systems for the fish, meat and poultry industries.