



# Add value to your products

Marel coating equipment



- Create attractive end products
- Add yield and value
- High flexibility



## Coating

A good coating adds value to your products, increases yield and improves bite, taste and presentation. It also strengthens and protects products during freezing. The number of possible coatings is abundant; be it wet or dry, or a combination of both. The Marel convenience line guarantees optimum coverage, highest possible pickup and maximum flexibility.

---





## Pre-dust

Pre-dust (or flouring) is a common first dry coating step. The fine layer of flour that is applied to your mass serves as an adhesive, allowing other coatings to adhere better. It also supports the juiciness of your product and adds yield. Marel's pre-dusting equipment is suitable for various capacities and requirements. Excess flour is blown off and can be reused where possible.

### Active Flour Applicator

- Uniform coverage
- Maintain a dust-free environment
- High capacity up to 25 meters per minute



### Uniform coverage

In the Active Flour Applicator, a loose underbed of flour is created. This enables products to sink into the flour bed. At the same time, the top side of the products are lightly sprinkled with flour, guaranteeing an optimum coverage of the top and bottom of the products. The machine's air knife removes excess flour evenly across the belt. An optional pressure roller or vibrating plate further improves this process.

### Dust free environment

The Active Flour Applicator applies a very precise amount of pre-dust, which reduces the level of excess flour on the product, limiting the dust level to a minimum. Additionally, due to an under pressure inside the machine, dust stays in the machine to keep the production environment clean. The dust cyclone's filter allows large amounts of air from the machine to be filtered. This helps maintain a clean, dust-free working environment.



# Wet coating

Dry breading will not adhere to a natural or formed product. A layer of batter, which is a liquid based on starch and proteins, will ensure that breading adheres properly to the product. Marel offers several wet coating machines. They ensure excellent distribution of batter, remove and reuse excess batter and are suitable for a wide range of capacities.

## Active Batter Applicator

The foundation for perfectly coated end products.

- Perfect top and bottom coverage
- Excellent pick-up control
- High line speed up to 25 meters per minute



## Perfect top and bottom coverage

The unique active bottom bed technology of the Active Batter Applicator ensures that products are placed directly in batter when entering the machine. This results in a perfect coverage of both the top and the bottom of the products. The Active Batter Applicator lays the ideal foundation for a flawless layer of coating, with virtually no voids or belt marks. It easily handles thick batters up to 3000 cP, at high speeds, up to 25 meters per minute.

## Improved pick-up control and consistency

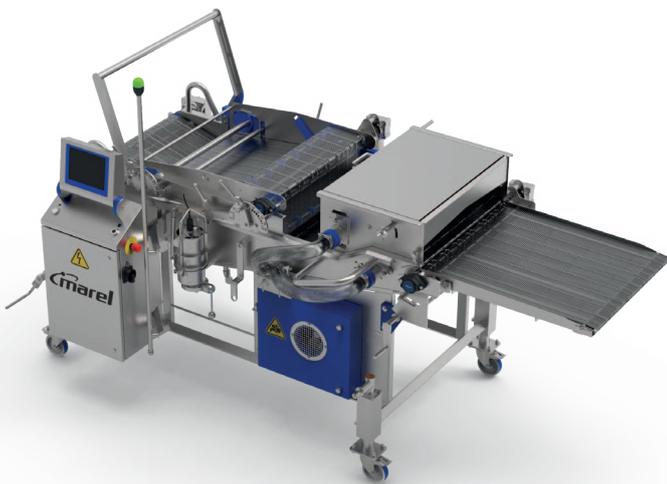
When the products exit the machine, an air-knife blows off excessive batter. The innovative model-based design of this air-knife guarantees an equal airflow across the belt. This ensures consistent batter coverage on all products and improves pick-up control. Maximum control over pick-up combined with the ability to handle thicker batter at high speeds result in high volumes of high quality products.



## Active Tempura Applicator

Optimal dipping technology to create perfect end products.

- Excellent pickup control
- Handles batters up to 4000 cP
- High speed up to 25 meters per minute



## Active Mixer

Semi-automatic mixer ensures consistent process.

- Recipe based controls
- Active process control
- Ergonomic design



## Perfect coverage

The Active Tempura Applicator is suited with an active application, which guarantees full product coverage of the top and bottom of the product. A conveyor belt transports products gently down through the tempura or batter, while a top belt makes sure the products are submerged. After they have been dipped, products are conveyed out of the bath. Before the coated products leave the Active Tempura Applicator, air knives blow off the excessive tempura.

### Smooth product handling at high speed

Smooth product guidance and the superior air knife design contribute to a better and very consistent product quality, with fewer rejects and doubles. The Active Tempura Applicator enables perfect end products with a fine and equal coverage on top and bottom side of your product. The machine runs up to 25 meters per minute, with the possibility of usage of thick tempura batters up to 4000 cP.

Correct mixing starts with the Active Mixer. After preparing a liquid mixture out of powder and water, the Active Mixer feeds this to a batter or tempura applicator. The system works intermittently, ensuring that the relevant applicator is filled in charges. A pressure pump can be used for heavier liquid mixtures, such as tempura.

## Active process control

The Active Mixer is fitted with recipe management settings. On the screen, the operator can see which actions are required from him, such as the amount of powder he needs to add and the optimal mixing time. The water supply is automated, which ensures a consistent batter. The Active Mixer gives real-time feedback on the batter's viscosity. When this does not match the recipe settings, the warning light will give a signal. This guarantees a very repeatable and reproducible process.

# Dry coating

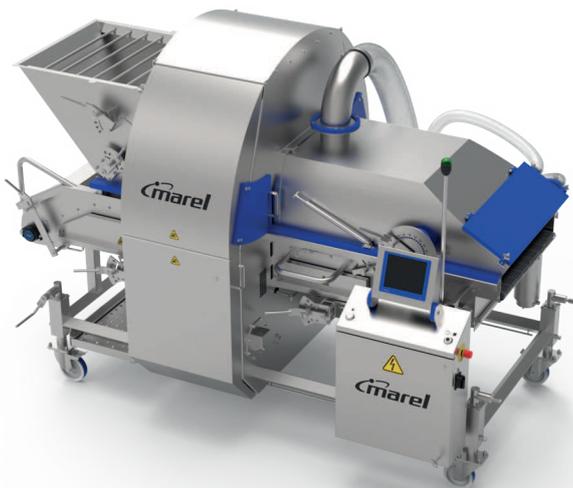
There is an endless variety of dry coating. It adds bite, flavor, color and texture to your product, as well as weight, stability and value. It also gives products their attractive and distinctive appearance.

The Marel dry coating portfolio is suitable for coating a very wide range of natural boneless, bone-in and formed or portioned products. The systems ensure a good pick up and uniform distribution of crumb/breading over the product. They can handle all kinds of dry coatings, even the very vulnerable ones. Excess coating is blown off and reused.

## RevoCrumb

Excellent product coverage thanks to innovative crumb management system.

- Optimal control of top and bottom coverage
- Suitable for vulnerable and coarse crumbs
- High line speeds, up to 25 meters per minute



The RevoCrumb produces perfectly coated products with optimum crumb distribution over all sides of the product. Due to the innovative crumb-management system, it is possible to control the flow of coarse and fine crumbs to the top or bottom bed. This ensures optimum coverage that always meets your requirements.

### Optimum product coverage

The RevoCrumb allows high line speeds, up to 25 meters per minute, while guaranteeing perfect coverage of the product on both upper and bottom side. The innovative crumb management system gives you control over the distribution of the crumb. The crumb can be distributed evenly or distinctively on top and bottom of the product. A model-based air-knife blows off excess crumb, improving product and consistency. Adding an optional pressure roll or vibrating plate can increase the adhesion even further.

### Minimize crumb breakdown

The RevoCrumb features a revolutionary transport mechanism consisting of a revolving water wheel that carefully transports the crumb. The structure of the crumb remains intact during processing, as the RevoCrumb does not grind or crush crumbs, which makes it particularly suitable for vulnerable crumbs such as coarse panko or cornflakes.

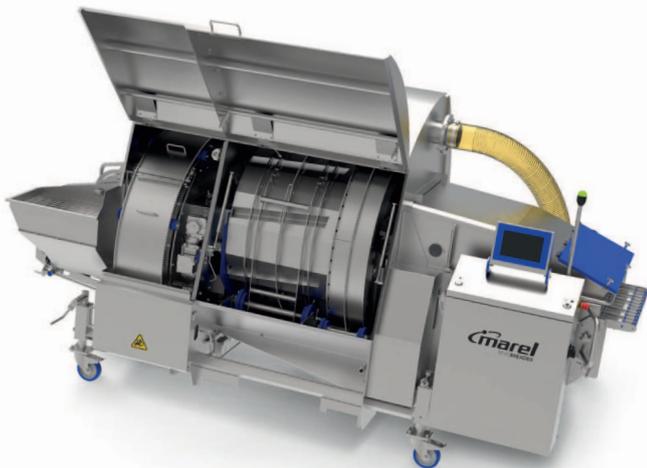




## RevoBreeder

Create high quality, home style and flatbed coated products.

- Flexible solution
- Optimum coverage and high pick-up
- Minimum crumb breakdown



## Flexible solution

The RevoBreeder is a flexible machine that offers a flatbed position and drum position. This makes it the ultimate solution for applying high quality coating, both to home-style and flatbed coated products.

Thanks to the large drum size, changing between flatbed and drum position does not require the removal of any machine parts, as the belt can be extended through the drum. Therefore, the changeover time between both positions is less than two minutes.

## High quality end products

In the drum position, the large drum size ensures a high control over the level of mechanical impact on home-style products. This guarantees a high pickup of crumb and optimum coverage of the product, as well as high retention of crumb to the product during the frying process. The RevoBreeder's outfeed system in the drum position ensures optimum product distribution over the width of the belt, improving the products' transition into the next machines in-line.



In flatbed position, products are guided through a bottom bed of crumb, while the top layer is created by crumb gently falling on the product. This results in high quality, uniformly coated products.

## Minimum breakdown to the crumb

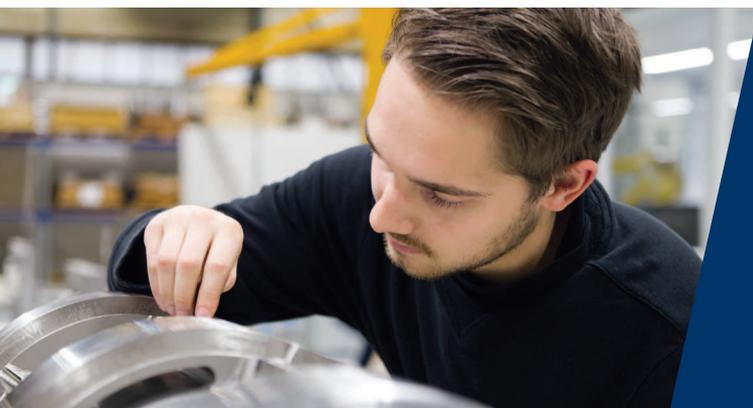
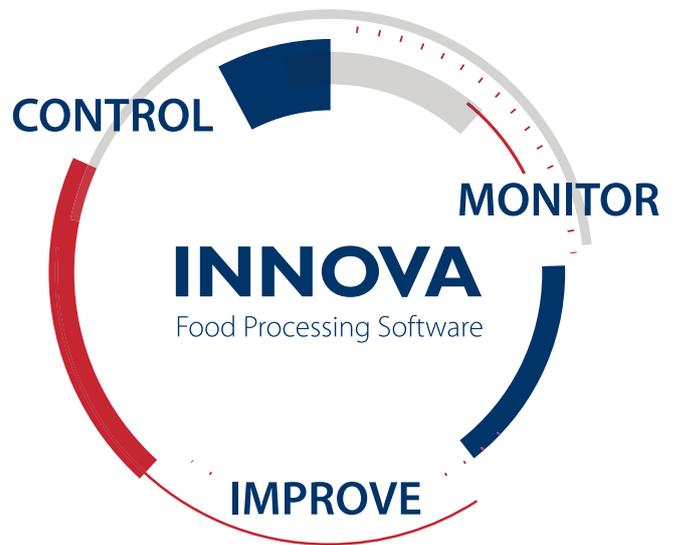
Once the products have been coated, excess crumb is removed in two steps; firstly by a vibrating mechanism and secondly by air knives. The excess crumb is carefully transported back into to machine. The RevoBreeder is equipped with a water wheel that gently handles the crumb, which guarantees minimum crumb breakdown.





# Innova

All Marel coating equipment can be equipped with Innova, the Marel Food Processing Software that enables processors to maximize yield and throughput, while complying with quality standards and ensuring food safety. Innova ensures the most effective processing control available for individual machinery or processing lines and provides real-time data for performance monitoring, enabling processors to maximize their profitability.



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