

Marinating the smart way

ValueSpray and ValueDrum



- Uniform distribution of additives
- Less product damage
- Savings in labor costs and product handling
- Easier tracking and tracing



ValueSpray - uniform inline wet marinating

The consumption of marinated meat is increasing rapidly; people eat more meat and ask for more versatile products. At the same time, time spent in the kitchen is decreasing and the popularity of convenience food grows. To enable food suppliers to meet the increasing demand for marinated meat, Marel offers the perfect solution for quick and easy marinating of large quantities of poultry meat products.

ValueSpray was specifically designed for the inline wet marinating of portioned and/or fragile meat and poultry products with an accurate pick up and uniform distribution of marinade and coarse pieces. It offers a perfect inline solution since it's compatible with the single lane slicing equipment of Marel. At the same time, the inline, automated solution saves considerable labor.

Uniform distribution

The ValueSpray is perfectly suitable for inline wet marinating of poultry meat.

The output capacity is up to 3.000 kg/hour and the result of the required pick up quantity.

ValueSpray ensures an accurate pick up. Compared to traditional marinating equipment (like dippers and tumblers), ValueSpray distributes marinade more uniformly over the products, including coarse pieces. Its ability to process all kinds of marinades, even those with high viscosity in low pick-up ranges, makes it a very versatile solution.

Advantageous properties such as low start-up quantities, high pick-up accuracy and less product handling, allow ValueSpray to reduce give-away of marinade to an absolute minimum.

Application

ValueSpray can be applied to a great variety of products, such as fillets, tenderloins, minute steaks (sliced horizontally), chicken burgers and other portioned chicken products. These products can be marinated frozen, chilled, bone-in or boneless.

Even fragile products, such as hamburgers, can be marinated, because ValueSpray's careful actions ultimately prevent any damage to products and marinade.

Changeover

Thanks to its quick changeover option, ValueSpray is able to achieve an improved effective production and a quicker response to demand of retail customers.

Once adjusted after a changeover, ValueSpray's consistent and reliable process results in an enhanced and constant quality of the end product.



ValueSpray's careful actions ultimately prevent any damage to products and marinade.

Working principle

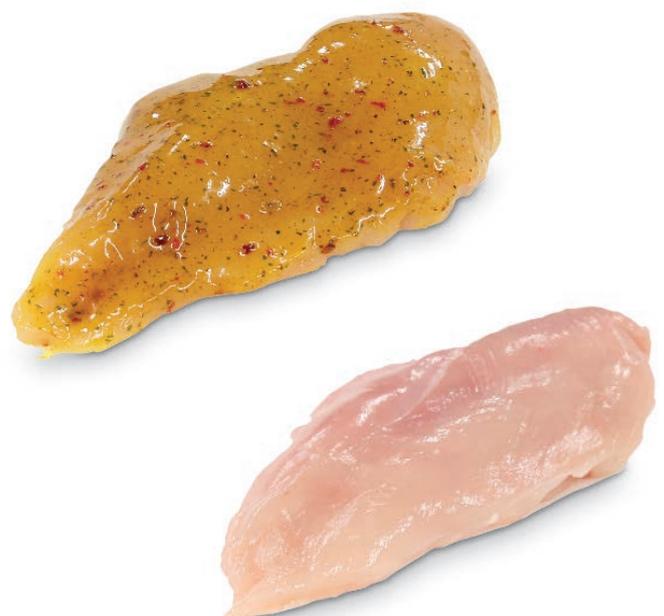
A conveyor belt transports products along a set of nozzles that spray the marinade on one or both sides of the products. This is why it is also possible to apply different pick-up settings for top and bottom of the product.

The overshoot during spraying of the products flows back to the reservoir and is reused, minimizing the loss of valuable marinade. The ValueSpray is controlled by means of a touchscreen which includes production, recipe, service and cleaning management.

Innova Recipe Manager

For every food producer, consistency and quality of the marinated product are essential. How to ensure that the recipe batches in ValueSpray uniformly contain the precise amount of ingredients?

ValueSpray can be assisted by Marel's Innova Recipe Manager to organize and control which ingredients are combined to produce the marinated product. This enables a systematic tracking of what was made, when, where and by whom. Recipe Manager also simplifies modifying and creating new recipes with a straightforward implementation process. The built-in Innova Traceability engine ensures complete traceability of all ingredients throughout the production process.





By working inline with small batches, ValueDrum is more efficient than traditional tumblers.

ValueDrum - inline massaging and marinating

Marinating, dusting with herbs, coating... all classic methods to give meat extra taste and improve presentation. Although this often used to be done at home by hand, the modern consumer devotes less and less time to the preparation of meals. Products must be faster and easier to prepare. In anticipation of this trend, Marel has developed an advanced inline marinating and massaging system: ValueDrum.

Inline concept

Conventional tumblers and marinating systems mean a lot of product handling: loading product into crates or containers, interim cold storage, the creation of buffers and bringing product back in line for additional process steps or for packaging. This product handling costs time and money and also has a negative effect on the visual and bacteriological quality of the end product. Much of the value added by tumbling or marinating has therefore disappeared before product reaches the dispatch department.

ValueDrum, on the other hand, is an inline concept, which does away with the need for many of the product handling operations surrounding a traditional marinating and massaging process.

By adopting the principle of working inline with small batches, ValueDrum is more efficient than traditional tumblers. This has a positive effect on the distribution of additives and on the speed of the process. At the same time, product damage is virtually absent. An attractive additional benefit of working inline is that the chance of bacterial contamination is minimized.

Smart marination

With ValueDrum, meat producers and further processors can add lasting value to their products. In addition to better-quality products, savings in labor and product handling costs are significant. ValueDrum: the smart way to marinate and massage.



Developing new products

ValueDrum was designed for inline massaging and marination. Its unique design makes it possible to achieve the desired yield by first adding and massaging in brine in a single process step before adding flavor using a marinade. Finally, the product can be garnished or decorated with other material. Its extensive marination possibilities mean that ValueDrum is an excellent system for developing new products.

Simplified logistical environment

Because of the inline concept, the movement of products in crates or containers during the production process is no longer necessary. The interim cleaning of these internal means of transport and the use of temporary packaging materials are also not required. ValueDrum's first-in, first-out principle means a simplified logistical environment, whereby the tracking and tracing of products is reliable and easy.

Small batches

By making use of small batches of a maximum of 15 kg (33 lbs) in combination with a more efficient massaging technique, product contact is optimal without any product damage occurring. The mixing and massaging elements of ValueDrum ensure good distribution of the products during the adding of additives. This results in an even covering of additives.

Short process times

Because of ValueDrum's inline principle and its short process times, end products are quickly in their final packaging. The short process time means that marinated products are delivered almost as quickly as raw products, which miss out this process step. This benefits product shelf life in the packaging.



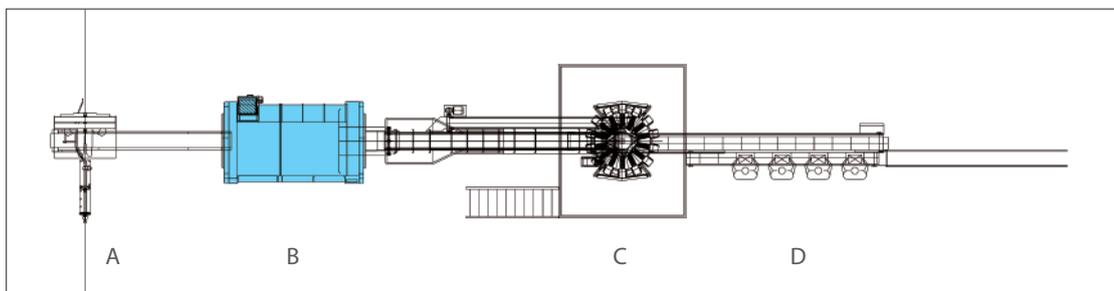


Flexible, modular configuration

An inline marinating and massaging system consists of product supply, possibly a batch weigher and a ValueDrum unit with an integrated discharge belt. Depending on customer wishes and process possibilities, the marination system can be directly linked to a cut-up line or a deboning line able to supply product in batches. ValueDrum's discharge belt can then be linked to a multihead weigher and packaging line (see example 1).

Example 1: Inline marination linked to a poultry cut-up line

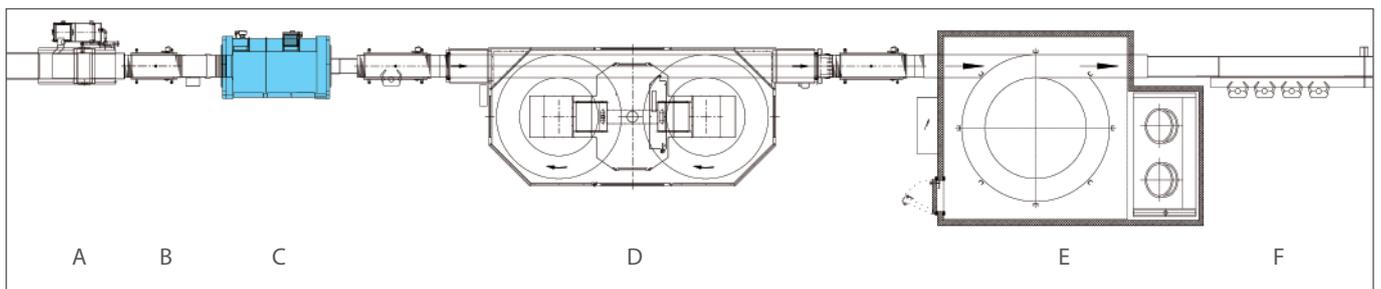
Cut-up line with batch functionality (A) – ValueDrum (B) – multihead weigher (C) – packaging unit (D).



Batches can be supplied manually. If desired, an injector can be positioned in front of ValueDrum. After massaging the injected liquid in and application of the desired additives, the batch can be directed to an oven or directly to the packaging line. After the oven, end products can be chilled and/or frozen and packed (see example 2).

Example 2: Inline marination for further processing line

(Manual) supply – optional injector (A) – batch weigher (B) – ValueDrum (C) – oven (D) – chiller and/or freezer (E) – packaging unit (F).





Controlled transfer of batches

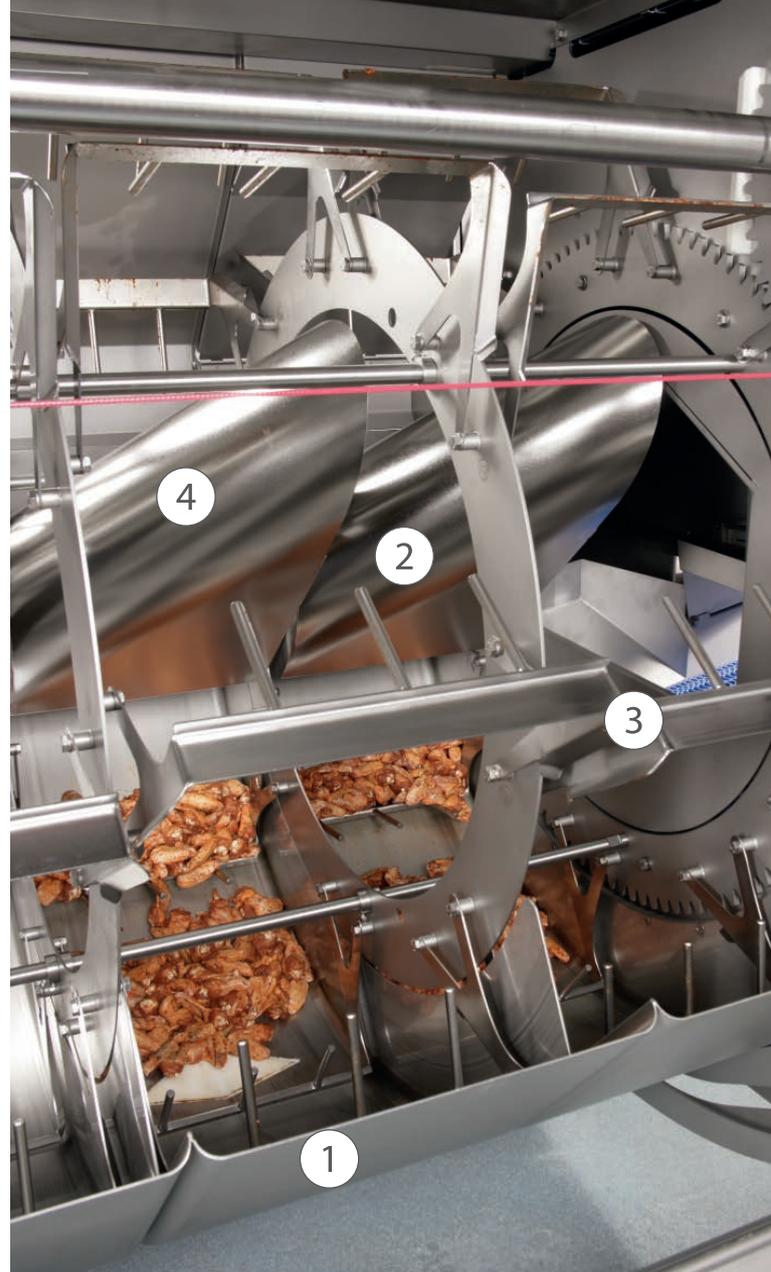
ValueDrum consists of a number of segments, which are linked together. Rotating elements in each segment provide the massaging and mixing action. A unique transfer system ensures that each product batch including additives is passed from the first segment to the next segment until the batch has been transported entirely through the machine and deposited on the discharge belt.

Batch input

Product is supplied to ValueDrum in small batches. When the batch is ready for processing, a conveyor belt transports product into the first segment. If there is no batch ready, a new cycle still starts. The first segment remains empty and no additives are fed. This guarantees a constant pass time, which is independent of product supply.

Massaging and marination

Product is massaged and mixed in the various segments, which are positioned one behind the other. Each segment consists of a semi-circular bin (1), a rotating interior (2) with mixing and massaging elements (3) and, optionally, a powder and/or liquid dosage unit. Once the pre-set process time has elapsed, the transfer channels (4) are activated. A complete batch is collected in each segment and passed via the transfer channel to the next segment. At the same time, the empty first segment is now free to receive a new batch.



Output

ValueDrum is fitted as standard with an integral discharge belt. When the transfer channels pass batches to the next segment, the batch from the last segment is deposited on the discharge belt.

Accurate dosage

Each segment can contain a powder and/or liquid dosage unit. The choice of the type of dosage unit, their number and the segment where they will be placed will depend on the end product required. Using the recipe menu in the control program, additives are added to the batch at the desired moment and in the correct quantity.

Modular set-up

ValueDrum's basic model consists of three segments which, depending on the desired massaging and marinating process and the production capacity, may be expanded by two segments at a time to a maximum of nine segments. Even if the massaging and marinating process is modified after some time or if extra capacity is required, ValueDrum can be easily expanded on site with extra segments or extra powder and/or liquid dosage units.



ValueSpray's advantages at a glance...

- Labor saving thanks to inline solution
- Less product handling and logistics needed
- Improved and consistent quality of the product thanks to constant process
- Uniform distribution of marinade and coarse pieces
- Possibility to marinate bone in, frozen and fragile products (such as hamburgers)
- Preventing damage to products or marinade
- Different pick-up settings for top and bottom possible
- Easy-to-operate control panel
- Compact design makes the machine easy to handle

ValueDrum's advantages at a glance...

- Uniform distribution of additives
- Less product damage
- Savings in labor costs and product handling
- Improved product shelf life
- Reliable and easy tracking and tracing
- Inline process minimizes risk of bacterial contamination
- First-in, first-out principle means a simplified logistical environment
- Modular set-up with three to nine segments, allowing for future growth of capacities
- Controlled transfer of batches through the entire machine

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

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