

ValueDrum

Marinating the smart way

STORK
POULTRY PROCESSING

marel



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

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ValueDrum, marinating the smart way

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, Stork Poultry Processing has developed an advanced in-line marinating and massaging system: ValueDrum.

In-line 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 in-line 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 in-line with small batches, ValueDrum works more efficiently 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 less. An attractive additional benefit of working in-line is that the chance of bacterial contamination is reduced.

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.



The benefits

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

In-line marination in practice

ValueDrum was designed for in-line 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 in-line 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 in-line 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.



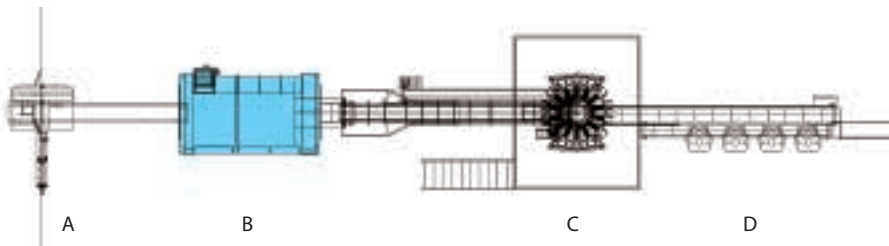
Flexible set-up possibilities

An in-line 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, for example, 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).

Batches can of course be supplied manually. If desired, an injector can, for example, 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).

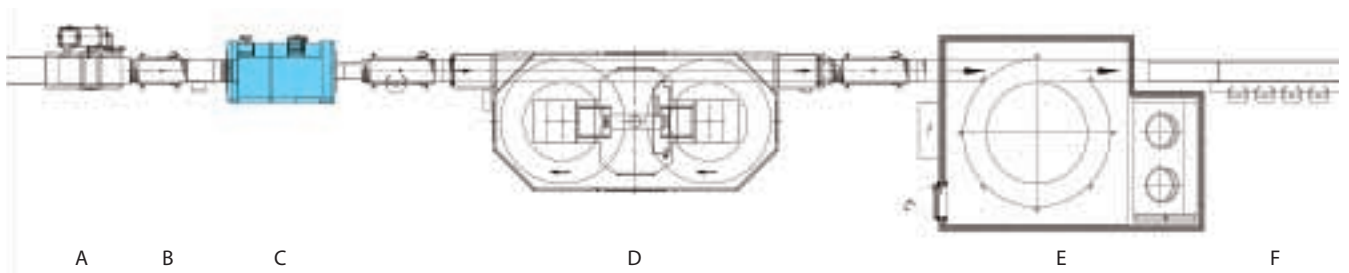
Example 1: In-line marination linked to a poultry cut-up line

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



Example 2: In-line 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).



ValueDrum operation

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 through the whole machine and deposited on the discharge belt.



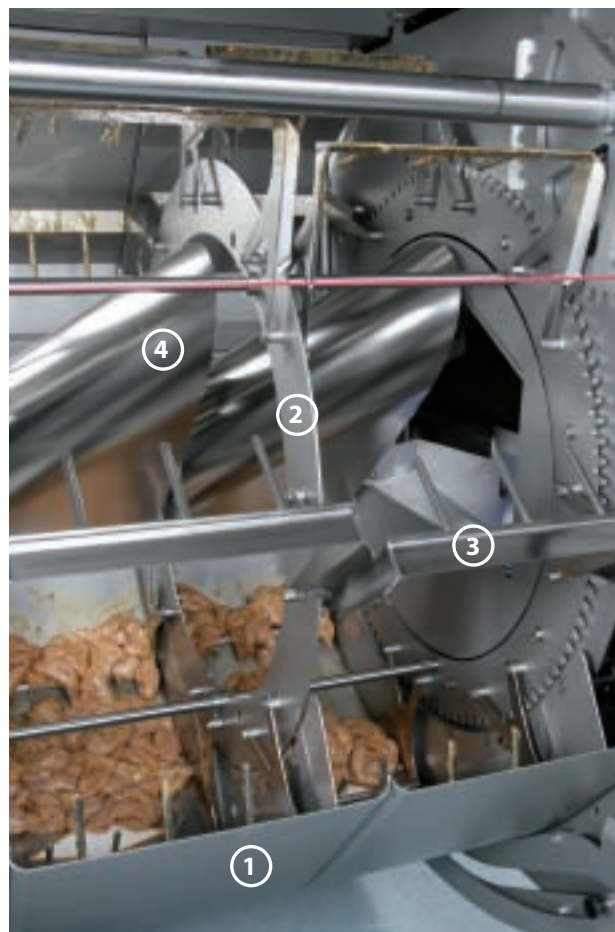
Input side with small batches.

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.



ValueDrum interior.

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.



Integrated output belt with end products.



Touchscreen control with a user-friendly recipe module.

More 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.



Powder and liquid dosage unit underneath one another fitted to one segment.

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.

ValueDrum specifications

- Capacity: from 250 to 3,600 kg (550 to 7900 lbs) per hour depending on additives, product type and the ValueDrum model
- Batch size: about 5 to 15 kg (11 to 33 lbs) depending on product type
- Model: The basic model has 3 segments and can be expanded by 2 segments at a time to 5, 7 or 9 segments.

The control system has touchscreen control which comprises a recipe module, a service module, a fault analysis module and a reporting module.

ValueDrum is made of durable and corrosion-resistant materials.

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