

MARSHMALLOW LINES



Highly aerated products,
smooth and fluffy



TANIS FOOD TEC

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About us

New product development and trends

As leading manufacturer of mallow processing lines our application specialists at our Technology Center continuously develop new types of products together with our customers. New developments such as sugar free, no sugar added, vegan, halal and kosher type of mallow are the result of a partnership between our customers, ingredient suppliers and Tanis Food Tec. Main focus is obtaining the highest quality in consistency, taste, shape and shelf life.

Latest trend in the food industry is healthier food without compromising taste and product appearance, in combination with the carbon foot print reduction and cost price awareness. Working together with our customers and ingredient suppliers creates the best conditions to achieve your goal, a perfect product for everyone.

Technology Center, let's make it better together!

Our Technology Center is equipped for you to develop and test new recipes as well as different types of equipment. Our food technologists and engineers are at your service to share their process knowledge and practical experience on product development.

They are your solid sparringpartner to help you innovate and try out future products for your home market.



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Your products

Marshmallow processing

This highly aerated confectionery product is delicately smooth and luxuriously fluffy. You can colour it, flavour it and shape it. According to your specific requests we design and build a fully automated production line for your extruded or deposited marshmallows. Ingredient weighing and - dosing all the way to cleaning of the finished candy. Our specialist team is constantly available to support your (new) business.

Fun shaped

These fun shaped marshmallows are a big hit at celebrations: hearts, flowers, ducks, Smurfs, cables, etc. After making a base marshmallow in the TFT Marshmallow Kitchen we can produce almost every required shape, size, colour and taste. With the addition of a depositor with its own specific software incorporated into the line, it is possible to produce nearly any imaginable 3D shape.



Our solutions

MARSHMALLOW LINES

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01. Ingredient handling and dosing

Ingredient handling and dosing starts with dry and liquid ingredients; water, sugar, glucose syrup, gelatin and additional olouring/flavouring. Gelatin is the whipping agent as well as the gelling agent, giving it the special chewable texture. Our well-equipped Technology Center can provide recommendations for the best ingredients and develop your recipes for your specific type of mallow.

Key Features:

- Labour reduction
- Reducing human error to a minimum
- Reducing risk of foreign bodies in product
- Easy to link to a ERP-software environment
- Guaranteed (measured) recipe control



02. Cooking skid

Water, sugar and glucose are automatically weighed and mixed together. The mixed mass is then transferred to the cooker by vacuum and cooked to the correct solids. The design of the cooker creates a high turbulence flow inside the cooker. This flow prevents the sugar from burning on the coils. After cooking the syrup is vacuumized to quickly cool down preventing browning of the syrup. If the level in the buffer tank under the cooker is low enough, the outlet valve under the cooker opens and the cooked slurry is dumped into the buffer tank.

Key Features:

- Fully automated system where the syrup is cooked to the exact correct solid content. The cooking temperature is stored in the recipe as a set point.
- No human interference, so no cooking errors
- Operator safety guaranteed since the complete system is closed
- The same cooker is usable for many types of products



03. Gelatin, cooling and aeration

The gelatin dosing system consists of 2 dissolving tanks and a dosing pump. Hot water is dosed by means of a flowmeter and a full bag of gelatin is added to each tank. The gelatin is then fully dissolved in 20 minutes, after which it will be dosed to the first scraped surface heat exchanger via a pump with flowmeter. Here it is mixed together with the cooked syrup; an all inline process. The slurry is further cooled to around 42 °C and aerated to a density of 0.28 kg/l. After the aerator the slurry flows through the second heat exchanger to cool the aerated mallow to 38-40 °C, depending on the product. This second cooling step achieves a low extrusion temperature which gives a higher capacity on our TFT lines.

Key Features:

- Gelatin preparation simultaneous in 2 tanks, no waiting time
- Exact gelatin preparation, easy to handle and accurate
- Two cooling steps by the TFT scraped surface heat exchanger (SSHE)
- First cooling step before aeration for optimal control
- After aeration second cooling step for low extrusion temperature
- Perfect product treatment for the highest quality of mallow product



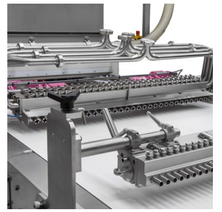
04. Colour and flavour skid

In the colour/flavour injection skid the main stream of white marshmallow is divided into 4 streams. A flavour and a colour are injected into each stream and mixed into the mallow by static mixers, which are installed in the piping. When the mallow exits the static mixers it flows to the marshmallow extruders on the finishing line.

Key Features:

- 4 colour tanks and 4 aroma dosing tanks available
- Precise dosage of colour / aroma, no spilage
- Integrated static mixer for dedicated mixing
- Compact build, hygienic design and easy cleanable





05. Extruders

The aerated mallow will be sent directly to the extruders; this can be a static or dynamic (rotating) type. The extruders are positioned immediately behind the bottom duster and produce mallow ropes into the starch lanes. With the unique TFT rotating extruder it is possible to have 36 lanes across of up to 32 mm diameter mallow, resulting in a capacity of over 1000 kg/hr. Besides the regular, existing shapes also tailormade designs are possible.

Key Features:

- Completely built out of stainless steel components
- Up to four colours and flavours simultaneously
- Adjustable marshmallow feeding per channel



06. Depositor

Unique, dedicated shapes can be produced with the YZ-depositor, servo-driven with independent horizontal and vertical movement. All coordinates are free programmable and can be modified by customer. Other additional features to create a higher value product is to fill the mallow with a pectin/jelly or cream or add (chocolate) inclusions or toppings. This will give even a higher margin product and creates unique possibilities in the market.

Key Features:

- Designed for customized shapes
- Higher value product easy to make
- Easy accessible and cleanable execution
- Full automatic control by PLC/HMI
- Integration of module in later stage possible





07. Finishing, polishing and aging

The system consists of a conveyor with a variable width x 22 m. long onto which first a layer of starch is dusted. After that the mallow ropes are extruded, after which the mallow is covered with starch again. The mallow is ambiently cooled and cut on the same conveyor at the end. This cutting will be done with a guillotine knife cutter to make perfectly shaped mallow. After cutting the product drops into a shaker to remove most of the excess starch and separate the mallow pieces. The removed starch is automatically returned to the starch dusters at the beginning of the finishing line. The products are collected in trays to be stored for final aging, or aged on multiple conveyors on top of each other to create gelling (setting) time prior to packaging.

Key Features:

- Full stainless steel construction, strong and robust design
- Easy accessible for cleaning
- Minimal starch spilage due to hygienic construction
- Starch collection and integrated return
- Special designed cutting device for delicate portioning
- Polishing drum for removing starch integrated
- Full automatic aging possible without handling

Global expertise,
Local experts





ORANGEWORKS TFT | B&L Chocolate | S&S

Orangeworks
Bronsweg 3
5342 NZ Oss | The Netherlands
T +31 (0)412 78 20 00
www.orangeworks.nl

Tanis Food Tec
Zuiveringweg 26
8243 PZ Lelystad | The Netherlands
T +31 (0)320 28 12 13
www.tanisfoodtec.com

B&L Chocolate
Bronsweg 3
5342 NZ Oss | The Netherlands
T +31 (0)412 78 20 00
www.blchocolate.com

S&S Baking Solutions
Zuiveringweg 26
8243 PZ Lelystad | The Netherlands
T +31 (0)320 28 12 13
www.ssbakingsolutions.com