

## Massage plant

- 500, 800, 1000 litres



MA 1000 T

### Process description

Massaging is one of the most important processes in the preparation of processed meat products in relation to colouring and absorption of additives. The key words are: Time consumption, yield and appearance of the meat product. The massage plants have been designed to ensure efficiency, reliability, economy, flexibility, hygiene and foodstuffs guarantee.

The massage drum is intended for operation up to 95% vacuum. The drum can be connected to continuous vacuum, if required.

The massage plant consists of a machine frame with four supporting wheels on which the massage drum is placed. The supporting wheels are driven by a geared motor, chain or toothed belt. The friction between the massage drum and supporting wheels enables the massage drum to rotate.

In this type of massage plant additional drums are often used to increase the overall capacity, making it an economical and rational system. This means a minor investment compared to the process capacity.

The massage drums can be taken out of the plant and placed in cooling rooms while the products are still under vacuum. The massage drums have wheels and

may therefore be used as storage and/or transport containers, in which the meat is stored under vacuum until emptying can take place. Improved product quality is obtained by avoiding contamination from the surroundings.

### The massage plants are available in three different versions:

1. As an isolated plant **Type S**, the massage drum is tilted from vertical filling position to horizontal massage position with subsequent rotation. After completion of the massaging process the massage drum is returned to vertical position and now it can be manually taken to the cooling room for maturing or to a filling station. The swivel movement of the massage drum is carried out by the hydraulic system built into the machine. Emptying of the massage drum is done by a swing loader.
2. As an isolated plant **Type T**, the massage drum is tilted from vertical filling position to horizontal massaging position with subsequent rotation. After completion of the massage process the massage drum is returned to vertical position, and now it can be manually taken to the cooling room for maturing or to a filling station. As an alternative, when placing the massage drum vertically it is possible to...

...remove the lid and swing the massage drum to emptying position allowing the meat to be emptied into a meat truck. The swivel movement of the massage drum is carried out by means of the hydraulic system built into the machine.

3. A cassette system **Type C** can have up to five layers. The massage drum is placed in the massage plant in horizontal position and is withdrawn from the massage plant by a robot or forklift equipped with special forks for massage drums. A swing loader assists in emptying the massage drum.

### Working process

1. The massage drum is filled with meat, filling degree max. 80%. This can take place directly from the tenderizer or via a conveyor from the brine injector.
2. During the filling process the massage drum can be placed on a floor scale.
3. After completion of the filling process, brine may be dosed directly into the massage drum.
4. The lid, which is equipped with "quick-lock" locking system, is shut.
5. 95% vacuum is drawn.
6. The massage drum is placed in the massage system.
7. The recipe is chosen and the process is started.
8. The massage plant has been equipped with carriers for hard and gentle massaging. The carriers are designed in a way that there is a minimum of meat and fat residue on the carriers after each completed cycle.
9. Release the vacuum and remove the lid.
10. Emptying of the S model and the C model is done by a swing loader. The T model drum is emptied directly from the massage plant.

### Optimalization

Besides using the drums for massaging, it is possible to use the drums for storage or maturing of meat products. Furthermore, the C model allows for storage of the massage drums in up to 5 layers, ensuring optimum space-saving.

### Machine advantages

- Programmable micro processor for entering data of recipes and for controlling the plant. As a standard the plant is made with a drum speed of 6 and 12 rotations/minute.
- Variable speed of the massage plant is optional.
- Specially designed carriers (gentle / hard) offer the possibility of combining hard and gentle massaging of the product in the various recipe stages by changing the rotation direction of the drum.
- The emptying function enables you to empty the massage drum directly into a 210 litre standard truck, hopper or at the filling station without whipping air directly into the meat.
- For large plants we offer a walking-beam system for transport of the massage drums and robots for operating and removing the lid. For Type C plants we offer robots for feeding/discharging the massage drum into the cassette frame, and placing the massage drums in stations for vacuum or maturing.

### Hygiene

- The machine conforms to the strictest hygiene demands by providing easy access for effective cleaning.
- The shape of the carriers enables you to visually check if the drum is completely clean.
- Purchase of automatic drum washing machines is optional.

### Safety

The massage plant conforms to the strictest rules regarding health and safety.

### Preconditions

No preconditions.

### Legal preconditions

The massage plant is CE marked and complies with the HACCP regulations.

*Technical data subject to alteration*