



## Chilling chamber ZKM

### ❖ Chamber use:

- The chilling chamber enables the intensive chilling of smoked and similar products after thermal processing
- The working process of chilling is controlled with the microprocessor control unit and is carried out in several program phases:
  - Chilling by means of water shower with intensive air flow. This phase is in progress up to the core temperature of the product of 35°C to 30°C. The shower can work in intervals.
  - Chilling by means of air flow with temperature of 0°C to 5°C. The product is cooled down on the required temperature which can drop below +8°C and then it is surface-dried.

### ❖ Main advantages and assets:

- Easy and fast reduction of the process duration by chilling down and thereby the possibility of immediate package and delivery which can save refrigerated and storage space.
- Reduction of time between thermal processing and dispatch
- Reduction of weight loss as compared to a conventional chilling
- Fast transition over the thermal critical point +40 °C to +15 °C when the highest grow of germs occur
- Prolongation of shelf-life and preservation capacity of products.
- Possibility of prompt dispatch – saving of refrigerated and storage space
- Up to date control system.
- The chamber is manufactured from stainless material which satisfies the requirements for food industry.
- Mauting Net programming tool for recording and storing important data which this way are available for the possible checking. Further it enables the remote control and maintenance of equipment or updating of programs.

### ❖ Dividing of chamber:

#### According to the:

##### Size of smoking trolley:

- ZKM 200x, where x is number of trolleys 1m x 1 m – 2m
- ZKM1701 0,9 m x 1m – 1,7 m
- ZKM1501 0,9 m x 0,9 m – 1,5 m

##### Arrangement of trolleys:

- **In a single row:** ZKM2001, ZKM2002, ZKM2003, ZKM2004, ZKM2005, ZKM2006, ZKM2007
- **In two rows:** ZKM20012, ZKM20022, ZKM20032, ZKM20042, ZKM20052, ZKM20062

##### Door mounting:

- From one side
- From both sides (drive-through, tunnel)

##### According to the used cooling agent:

- Freon – R22, R404
- ammoniac – NH<sub>3</sub>
- Glycol
- Coolstar

### ❖ Control of chamber:

- The microprocessor control unit – regulator Mauting M2015 or M2016 with touch screen enables 100 programs each of them can have 20 steps. The required chamber temperature, product core temperature, humidity, ventilator speed, cooking according to the „Delta-T“ method and step duration may be programmed for each step when making up the own program.
- Piercing sensor for recording the product core temperature.
- Temperature indicator for recording the temperature

#### Microprocessor control unit regulates :

- Shower time
- Shower interval
- Air flow temperature
- Program writing depending on product core temperature
- Program writing depending on time

### ❖ Funcion:

- The products in the chilling chamber have to be cooled down at the soonest to minimize the unwished risk of germs grow, prolong the shelf life and low the product weight loss after a thermal processing.
- The working medium is water, refrigerating medium and circulating air.

### ❖ Unit parameters:

- Chamber temperature during cooling-down by means of water shower with intensive flow of cold air of 12 - 20 °C.
- Chamber temperature during combined cooling-down by means of water shower with intensive flow of cold air of 5-20 °C.
- Chamber temperature during cooling-down by means of air flow of 0-5 °C.
- Refrigerating capacity: 17,5 kW per trolley.