

Product Name :
Ice Cream Processing Plant

Product Code :
EQUP-MC20089-0004



Description :

Ice Cream Processing Plant

Technical Specification :

-Reception and storage of raw materials:

Dry products used in comparatively small quantities, such as whey powder, stabilizers and emulsifiers, cocoa powder, etc., are usually delivered in bags. Sugar and milk powder can be delivered in containers. Liquid products such as milk, cream, condensed milk, liquid glucose and vegetable fats are delivered by tankers.

-Formulation:

The ingredients used in ice cream production line are: fat?milk solids-non-fat (MSNF)?sugar/non-sugar sweetener?emulsifiers/stabilizers?flavouring agents?colouring agents.

-Weighing, measuring and mixing:

Generally speaking, all dry ingredients are weighed, whereas liquid ingredients can be either weighed or proportioned by volumetric meters.

-Homogenization and pasteurization:

The ice cream mix flows through a filter to a balance tank and is pumped from there to a plate heat exchanger where it is preheated to 73 – 75C for homogenization at 140 – 200 bar, the mix is pasteurized at 83 – 85C for about 15 seconds then cooled down to 5C and transferred to an ageing tank.

-Ageing:

The mix must be aged for at least 4 hours at a temperature between 2 to 5C with continuous gentle agitation. Ageing allows time for the stabilizer to take effect and the fat to crystallize.

-Continuous freezing:

- to whip a controlled amount of air into the mix;
- to freeze the water content in the mix to a large number of small ice crystals.

-Filling in cups, cones and containers;

- Extrusion of sticks and stickless products;
- Moulding of bars
- Wrapping and packaging
- Hardening and cold storage

Figure shows ice cream products processing line.

1. Ice cream mix preparation module containing
2. Water heater
3. Mixing and processing tank
4. Homogeniser
5. Plate heat exchanger
6. Control panel
7. Cooling water unit
8. Ageing tanks
9. Discharge pumps
10. Continuous freezers
11. Ripple pump
12. Filler
13. Manual Can filler
14. Wash unit

ICE CREAM PLANT BENEFIT

1. Opportunity to realize products with customized recipes.
2. Opportunity to produce more than one product with the same processing line.
3. Accurate dosing of mixing and additional aromas.
4. Wide customization of the final product.
5. Maximum yield, minimum production waste.
6. Highest energy savings thanks to the most advanced technologies.
7. Complete line supervision system through monitoring of every process phase.
8. Recording, visualization and printing of all daily production data.

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| Working capacity | from 10 tons/d up to 500 tons/d |
| Products | - Soft ice cream |
| | - Ice cream with flavor |
| | - Ice cream with nut |
| | - Sherbet ice cream |
| | - Dessert ice |
| | - Water ice |
| | - Ice cream in varied package: |
| | Paper/plastic cups; paper/plastic carton; |
| | corn; ice bar |
| | |



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