Ice Cream Wafer Cone Machine.

Compact, Easy to Clean, High Performance & Free Standing

The "ZE" Series of semi-automatic machines are used for baking ice-cream cones, sugar cones and cups. These machines are easy to use and robust. Electrical heaters are preferably used in order to optimize energy use and thermal distribution. It is flexible enough for high production on a non-stop basis.

"ZE" Semi-automatic Ice Cream Cone Baking Machine

Q) Can a single machine make different kinds (sizes) of cones?
A) One machine produces only one type of cone. However, machines are modular and can accept another dye set.

Q) Will people be trained in working, maintenance and recipe know-how?
A) Yes, training is provided at the factory in Hyderabad.

Q) What are the numbers of cones that can be made at a time?
A) The number of cones depends on the size and weight of the cones to be produced. The baking cycle will also influence the output.

Q) What are the requirements of the plant?
A) One operator, one packing person, electricity connected load of 10 KW and above 200 sq ft for production operation.

Q) What is the warranty period of the machine?
A) The warranty period is one year excluding electrical.

Q) What are the supporting equipments required to run the plant successfully?
A) The supporting equipment required is the batter mixer, to produce the liquid batter.

Q) Is procurement of raw material required for the manufacture of cones?
A) Yes, the raw material required is easily available in any city, town or state, where a bakery operates. The main ingredients are wheat flour, vegetable fat, baking powder and maize starch.

Q) Can the machine make molded sugar cones?
A) Yes, the machine can make molded sugar cones .The design of the cone will decide the percentage of sugar that should be added for the batter.

Recipes

Batter for Ice Cream Cone

Sl.No.	Ingredients	Weight
1	Wheat Flour	7.5 Kg
2	Maize Starch	150 gms
3	Powdered Sugar	100 gms
4	Fat	180 ml
5	Soya Lecithin Liquid	20 gms
6	Sodium Bicarbonate and Ammonium Bi-Carbonate (3:1)	40 gms
7	Sodium Meta-bisulphide	2 gms
8	Salt	20 gms
9	Water	12 Litres
10	Colour	Q.S

Procedure

- Put the water in a "TM" Series Mixer.
- Add 5, 6 & 8
- Start the mixer, add the starch and then slowly add small quantity of flour in intervals
- After the wheat flour is fully mixed, add the fat and lecithin emulsion (preferably pre-warmed)
- Mix for a couple of minutes (approx. 3-4 minutes) till smooth.
- Strain through a sieve wire mesh to remove lumps.
- The ready mix will KEEP good for about 2-3 hours, so just prepare sufficient quantity.

Notes on batter dough preparation

Dough Preparation:

The wafer quality depends on the accuracy of the dough, particularly as far as weighing and mixing are concerned. In the course of the whole mixing process, the consistency changes due to material dissolving and swelling processes, gluten development and reactions with other raw material, including air. When a certain consistency is reached, the mixing process is finished, particularly when a uniform mixing of all ingredients allows for a smooth flow of the dough on the baking plates/cone baking dies.

We recommend to leave the dough for 5 minutes, and to pass it through a sieve afterwards in order to hold back the particles, which have not dissolved completely. The dough will swell again. If flour with higher level of coarsely ground grain is used, the dough should be left for about 10 minutes. The longer the dough can rest, the better will be its flow. This is referred to as natural slackening of the dough. After the optimum recipe has been found out, it should be modified by the master baker, only after previous check.

Mixing of the dough:

For beating the wafer dough, High Speed Mixers are best suited. Depending on the type of machine and the charge volume, the mixing period is between 3 and 10 minutes. Sufficient beating is also important for a gleaming surface of the wafer sheet without any pores. For the type of mixing procedure, different requirements have to be met.

One-stage procedure:

All components, including water are portioned directly into the mixer.

Multi-stage procedure: First, mix the whole dry matter with about half of the liquid. Add the remaining liquid afterwards at your own discretion, until the suspension shows adequate flow. All raw material and additives except the flour are beaten together with the remaining amount of liquid, until they are mixed thoroughly. After that, the flour is mixed in together with the remaining liquid.

Temperature:

The dough should have a temperature of 20-25°C. while being prepared warmer dough tends to turn sour due to the addition of soda, if it is stored intermediately. The temperature of the pouring wafer is adjusted according to the temperature of the flour and the mixer.

Material processes during mixing: The important process during mixing is dissolving and swelling of the flour components. This is decisive for the quality of the baking process and the wafer sheet and for the energy demand during baking, the water added during dough preparation has to be vaporized again during baking.

Important advice for the preparation of the wafer batter :

- Use smooth wheat flour with medium content of gluten.
- Depending on the quality of the flour, the amount of water should be increased or decreased, as every type of flour has different soaking characteristics.
- In order to get a wafer sheet of good quality, the batter should not be too dilute.

Preparation of the oil/fat - lecithin emulsion: Oil / Fat should be heated lukewarm. Lecithin should be added slowly and stirred until it dissolves completely. The quality of the emulsion should correspond to the batter recipe used. Then it is poured into the readily prepared wafer batter and stirred

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