

Fluidization Quick IQF Freezer

Quick freezing of food pieces individually or I.Q.F. Freezing in mechanical freezers, of items such as cut broccoli and cauliflower, peas, diced vegetables, berries, etc. presents a variety of problems. The variety of products to be frozen requires selection of the proper freezing system for each category of products. The selection must be based upon the specific heat of the product, the size and shape, the water content and free water, as well as the entering temperature, and the pounds per hour the customer wants to freeze. In order to attain some degree of efficiency in mechanical freezers, a combination of three major processes is necessary to effect instant crust-freezing of the product, so that the articles will not stick together or stick to their conveyance. These processes are:

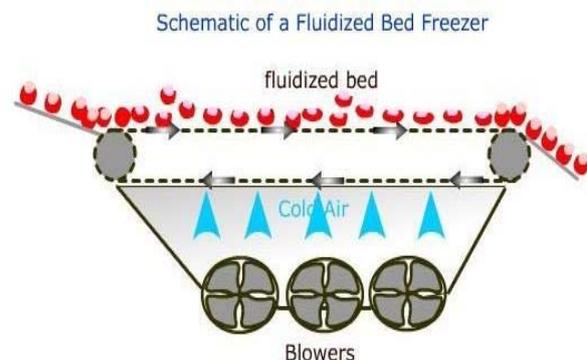
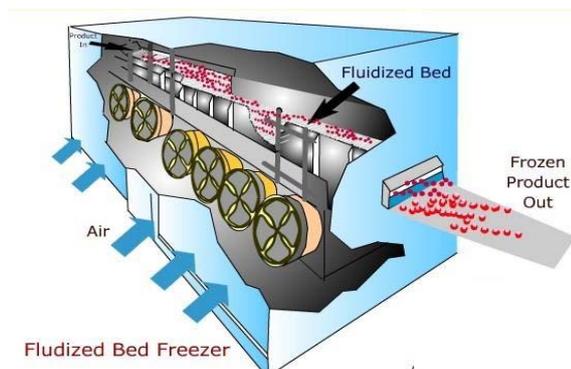
Controlled low temperature

An efficient air-blast pattern through the articles

A means of rotating or tumbling the product in the initial stage of freezing

These three processes are augmented and rendered more efficient by use of proper variable speed conveyance in even distribution across the in-feed conveyer, with shakers or other means, and de-watering devices to control free water content.

The purpose of these processes is to instantly crust-free the product as it enters in the initial freezing phase in a single layer. As this is accomplished (so that the articles do not stick), they are then conveyed to the second phase where they may be several inches thick, while still in a low temperature air-blast. The product is then in a state known a "deep fluidization." This final phase freezes the product totally, where it may be packaged, stick-free like "marbles in a sack."



Quick Freezing Vegetables and Fruits

Vegetables: sword bean, green bean, young soya bean, asparagus, bamboo, mushroom, lotus root, common calla, taro, Chinese yam, Dutch bean, cauliflower, maize, garlic bolt, edible fungus, potato, pumpkin, onion, etc..

Fruits: strawberry, orange, plum, apple (pieces), peach, cherry, etc.

Features of the Freezer

I It makes quick freezing by two ends and form crystal temperature on surface and guarantees frozen products non-agglomerating into deep freezing stage in ideal fluidized status under high-pressure cold wind and high-frequency chain pulse.

II With most advanced high pressure special for fluidized freezing, large blast centrifugal technology can make frozen products in suspension status and shortened freezing time by 30%

III Most advanced conversion infinite speed variation technology makes conveying speed to the standard of precision control procession to meet needs of advanced freezing.

IV Rational design of aluminum evaporator combining with high pressure centrifugal technology guarantees 12-hour efficient running of equipment under non-frost condition.

V The frame of freezing machine is made by stainless steel and each air blower is separated to ensure its normal running.

VI Insulating storehouse is made by double-surface stainless steel plate with polyamine core, which is quick in installation, good in insulating effect and nice and clean.

VII Conveying belt and all contact parts





with the belt are made by stainless steel and guarantees healthy standard of food.

VII It is equipped with most advanced belt auto frost-reducing, cleaning and drying devices, which is convenient and clean in use.

Table 1-Freezing Capacity Ratio for Different Frozen Material of Same Model

Product material	Beans	Berries, cabbage	Pea	Potato, carrot	Corn Fruit piccec	Broccoli mushroom
freezing capacity ratio	1	0.8	1.1	0.94	0.86	0.9

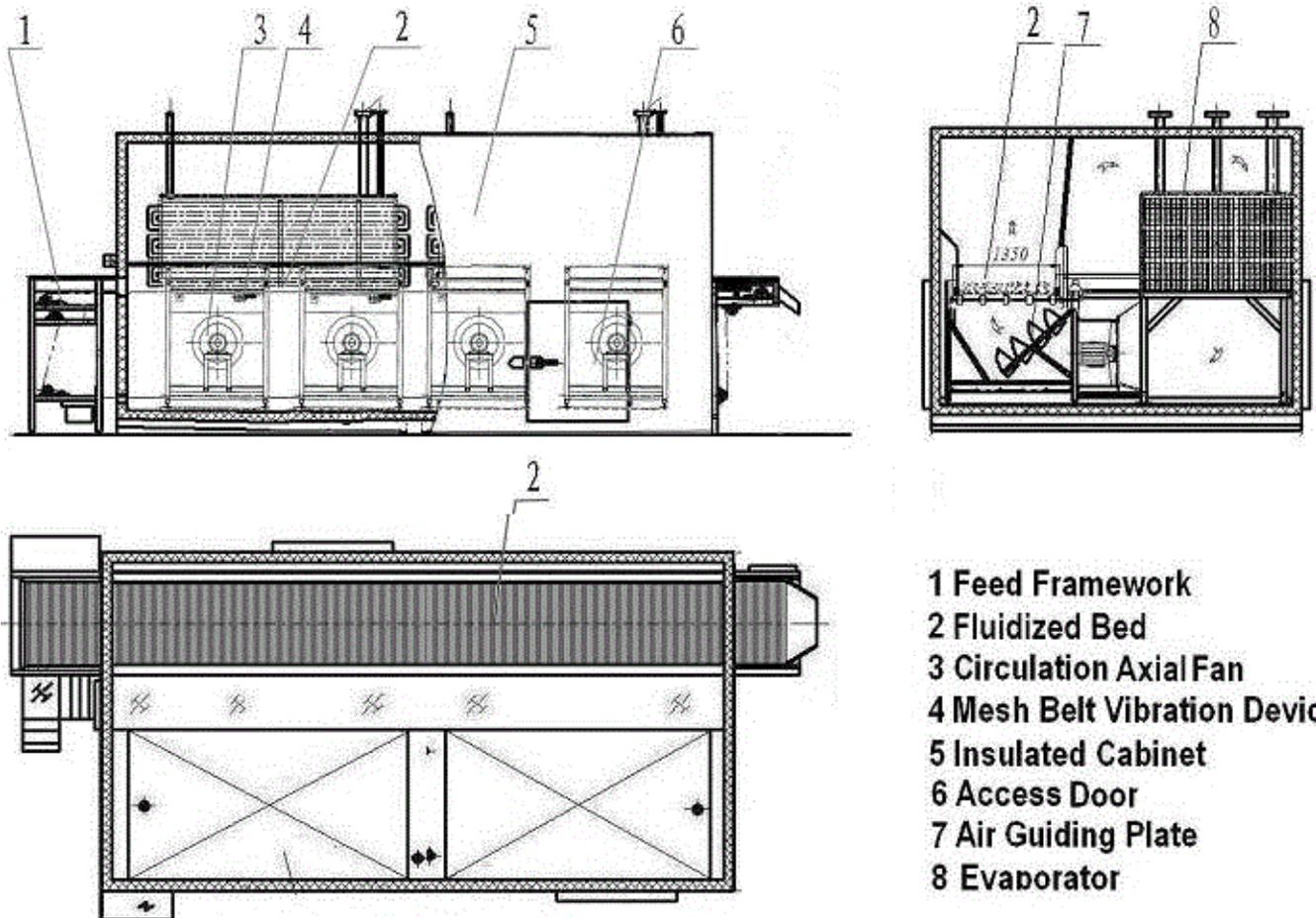
Table 2-Specification and Performance Data

Model Item	SLD-500	SLD-1000	SLD-1500	SLD-2000	SLD-2500	SLD-3000
Freezing capacity (KG/H, based on Green bean)	500	1000	1500	2000	2500	3000
Freezing Time Min	5-15					
Refrigeration consumption KW	130	186	256	326	460	500
Size of freezing room (LxWxH) M	6×4.2 ×3.6	8×4.2 ×3.6	9×4.2 ×3.6	12×4.2 ×3.6	13×4.2 ×3.6	15×4.2 ×3.6
Overall dimension M	7.5×4.9 ×3.6	9.5×4.9 ×3.6	10.5×4.9 ×3.6	13.5×4.9 ×3.6	14.5×4.9 ×3.6	16.5×4.9 ×3.6
Installed power KW	38	46	51	66	77	82





Configuration of Fluidization Quick Freezer



- 1 Feed Framework
- 2 Fluidized Bed
- 3 Circulation Axial Fan
- 4 Mesh Belt Vibration Device
- 5 Insulated Cabinet
- 6 Access Door
- 7 Air Guiding Plate
- 8 Evaporator

Technical Changes

The data and illustrations in this catalogue are not binding and only provide an approximate description. We reserve the right to make changes to the product delivered compared with the data and illustrations in this catalogue, e.g. in respect of technical data, design, fittings, material and external appearance.

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