Unlock The Secret To Perfect puffing production lin

A puffing production line Recipe Guide

Introdução detalhada :

Reference

What is puffed food?

Puffed food refers to food made from grains (such as corn, rice, wheat), potatoes, be
etc. as the main raw materials. After high temperature and high pressure treatment, t
water in the raw materials is instantly vaporized, causing the tissue structure to expar
loosen, and finally forming a porous and crispy texture.

Main characteristics of puffed food

1.Puffing process:

The volume of raw materials is significantly increased (expansion rate can reach sev
times) by extrusion puffing, frying puffing, air puffing or microwave puffing.
Typical process: The raw materials are suddenly decompressed under high temperat
high pressure, and the water evaporates rapidly to form a porous structure.

2.Texture characteristics:

Crispy and light: the interior is full of uniform pores and has a crispy taste.
Easy to dissolve: Some products (such as baby rice cereal) dissolve quickly in water.

3.Common forms:

Flakes (potato chips), balls (popcorn), strips (shrimp strips), granules (breakfast cere
etc.

Classification of puffed food

1.According to processing methods

Direct puffed food
Raw materials are directly puffed into shape, such as popcorn and puffed corn cobs.
Indirect puffed food
Puffing first and then secondary processing, such as spraying seasoning on the surfa
puffed rice cakes

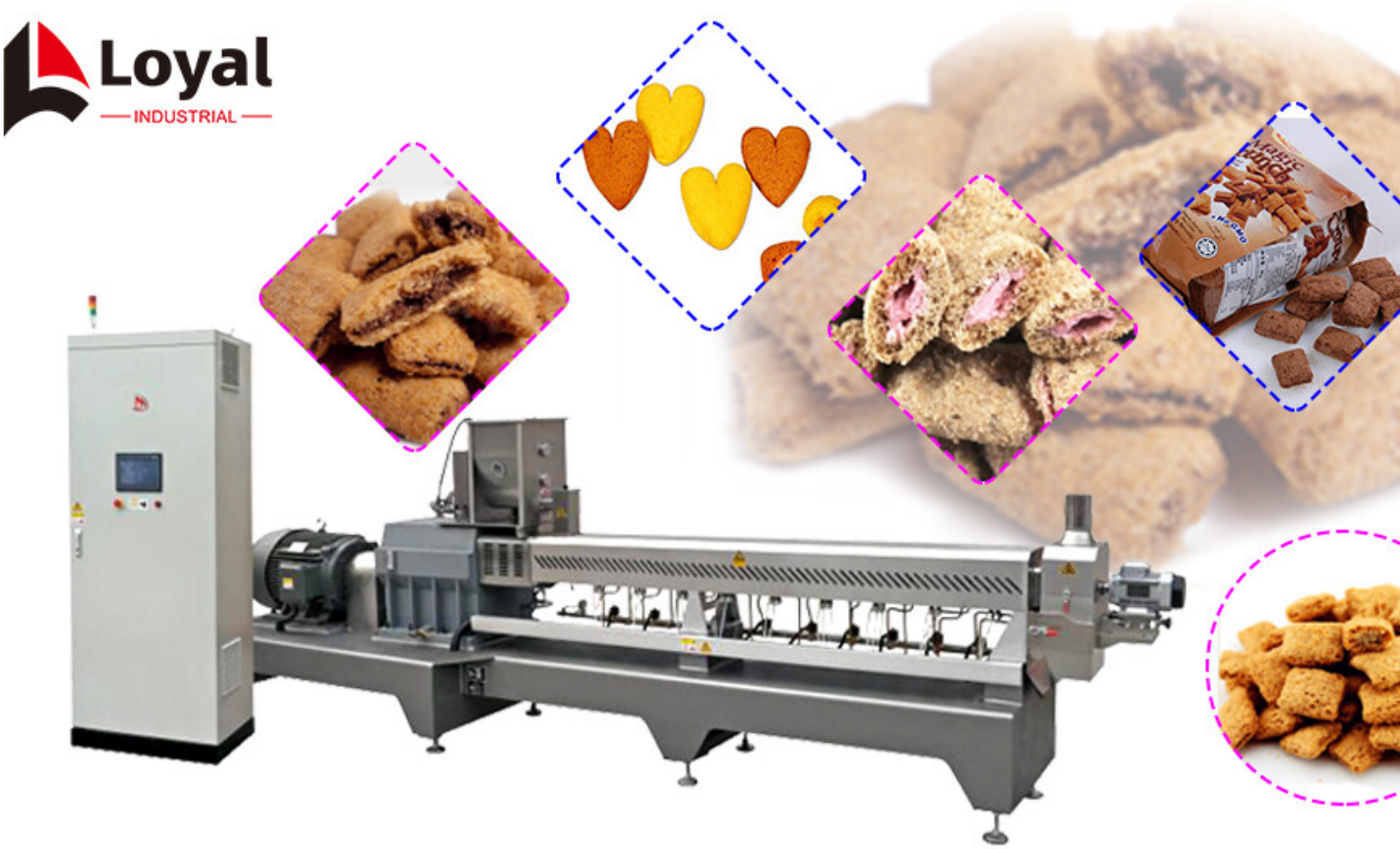
2.According to the puffing principle

Extrusion puffing (most common): high temperature and high pressure processing thr
screw extruder (such as cheese rings).

Fried puffing: dehydration and expansion through frying (such as potato chips).
Airflow puffing: instant puffing with hot air (such as some fruit and vegetable crisps).
Microwave puffing: microwave heating to vaporize water (such as microwave popcorn

3.According to the raw materials

Cereals (corn, rice), potatoes (potatoes, sweet potatoes), beans (soybeans, peas), et



Advantages and disadvantages of puffed foods

Advantages:

The taste is attractive and suitable for leisure consumption.
High digestion and absorption rate (puffing destroys anti-nutritional factors).
Can enhance nutrition (such as adding vitamins and proteins).

Disadvantages:

Some products are high in oil, salt, and sugar (such as fried puffed foods).
Excessive processing may lead to the loss of some nutrients (such as vitamin C).

Examples of typical puffed foods

Snacks	shrimp crackers, crispy corners.

Breakfast	puffed oatmeal rings, corn flakes.
Healthy food	non-additive puffed quinoa flakes, high-protein energy bars.

Puffed food has become an important category in the modern food industry due to its diverse shapes and tastes, but it is important to choose healthy products with low oil salt.

The history of puffed food: from ancient wisdom to modern innovation

1. Original sprouts (prehistoric period-18th century)

The earliest human puffing practice can be traced back to the Mesopotamian civilizat 3000 BC. Archaeological discoveries show that ancient people put grains on hot ston to burst and eat. The "rice frying" process recorded in China's "Qimin Yaoshu" (6th ce and the popcorn made by the indigenous people of Central and South America all sh early wisdom of puffing.

2. The Industrial Revolution (19th century)

• 1824: The first steam-powered popcorn machine was introduced

• 1891: American Charles Cretors invented a mobile popcorn cart
• 1895: The Kellogg brothers accidentally discovered the puffing of wheat, which gave corn flakes breakfast

3. Technological Revolution (20th century)

1930s: The birth of extrusion puffing technology
1936: The first commercial grain puffing machine
1946: Cheetos cheese bars were introduced
1950s-60s: Demand for space food drove development
NASA used puffing technology to make astronaut food
1970s: Japan developed rice cracker puffing technology
Brands such as Calbee emerged

4. Modern Innovation (21st century)

• Health transformation: non-fried, low-GI puffed foods
• Cross-border applications: 3D printed puffed foods, molecular cuisine
• Global market: The market size will exceed US$52 billion in 2023

Currently, puffing technology is developing towards precise nutritional control, clean l and sustainable production, continuing the modern vitality of this ancient food techno
Here we provide a full set of solutions from process guidance to equipment matching
So how are puffed foods made? What equipment does puffing production line include equipment in the puffing production line mentioned here are all the equipment neede puffed foods. Please discuss in detail the equipment that needs to be added for the s food you want to make.

Puffing production line flow chart

1.Mixer ---2.Screw conveyor ---3.Twin-screw extruder ---4.Air Conveyor ---5.Oven --- 6.Hoister ---7.Flavoring machine --- 8.Cooling Machine

The function ofpuffing making machine

1.Mixer: Mixer makes the raw material adding to water and other chemical additive fu mixed.
2.Screw Conveyor: Screw conveyor is advantage is suit for powder item that is bad fl In food processing industry, it is for conveying flour, powder additives, seasoning pow ect. Here is used to elevate the mixed raw materials to extruder.
3.Twin Screw Extruder: Extruding different shapes by placing different molds. The sc a self-cleaning function, and there is no need to disassemble the screw for cleaning w the machine is stopped
4.Air Conveyor: Usedto carry products to the next machine.
5.Oven: This machine is used to dry the snacks food. The heating temperature and th drying speed can be adjust. It can be used to bake and dry the food. The oven can ba kinds of the inflating food, pet food, TVP/TSP food, peanut, nut, chew nut and so on. temperature can be controlled willfully and designed according to the need.

6.Hoister: elevate products to flavoring machine
Flavoring Machine: Spray seasoning oil and powder onto the snacks so as to make th
snacks tasteful.It can mix liquid, such as oil, honey, syrup, with snack food, beans, pe
chips, teas and other food.
7.Cooling Machine: Cooling the product easy to pack or store.

What are the advantages of the puffing production lin

1. Continuous operation, efficient production, and greatly increased production capac
2. Stable product quality and high consistency
3. here are many types of food that can be made with a twin-screw extruder.
4. Our equipment adopts advanced frequency conversion control technology, which g
reduces the consumption of electricity and labor.
5. We have well-known partners such as Siemens.
6. Our equipment is made of food-grade stainless steel, carbon steel, etc.
7. The control system of the twin screw extruder has three frequency converters, and
speed of rotary cutting, screw speed and feeding speed can be adjusted. It can save
adjust speed, protect, improve process level and quality, and extend the service life o
equipment. The power of the motor can be adjusted by converting the power supply
frequency, and the motor can be operated at a variable speed.
Above we talked about the meaning, history and puffing equipment of puffed food, et
are interested, I will recommend a company to you, please continue reading.

Recommended Company

Shandong Loyal Industrial Co.,Ltd. Is a Manufacturer Of Snacks Extruder Machine , Industrial Microwave Oven , Corn Flakes Production Line , And a Standing Director C Food And Drying Equipment Industry Association.

The Self-developed Twin-screw Extruder And Single-screw Equipment of Shandong Machinery Have Been Used In Production: Puffed Snack Food, Breakfast Cereal Cor Flakes, Fried Pasta, Bread Crumbs, Fruit Chips, Baby Food, Textured Soy Protein (ts Food, Fish Feed And Pet Food. a Variety of Snack Production Line Supporting Produ The Same Time, The Batching, Drying, Flaking, Baking, Frying And Spraying Equipm Matching The Twin-screw Extrusion System Have All Achieved Independent Design A Production.

Our Extrusion System Is Widely Used In: Puffed Snack Foods, Breakfast Cereals, Ve Protein Meat Products, Soy Based Nutrition Bars, Reconstituted Rice, Grain Nutrition Powder, Modified Starch, Starch-based Sticky Music Children's Educational Toys, Degradable Starch-based Packaging Filling Materials, Bread Crumbs And Other Foo Additives, Pet Food, Aquatic Feed, Biology And Chemical Industries.

Customer-specific Food Processing Plant Project Solutions

As one of the leading manufacturers of food processing equipment, we are always se for new solutions that benefit our snack food customers. Our experienced frying engi always find the optimal solution for your industrial batch and continuous frying system application. That's why we also develop, design and produce custom fried snack prod line.

Close collaboration with our customer is important to us even in the early developme phase. No matter what the special requirements of instant noodles production line, sn food extruder machine, pasta production line application, we can develop a custom m food processing equipment to match your needs.

Loyal have a unique and efficient industrial continuous frying equipment for snack foo extruder machine that provides the right crunch and desired moisture level.

The Industrial Microwave Sterilization Defrosting Drying Machine can be designed as powder dosing system and a wet slurry dosing system as required.

Some snacks can also be fried according to taste requirements, and we also provide Snack Production Line for the processing and packaging of fried extruded snacks.

Loyal Food Production Line meet the needs of customers to obtain snack food that m needs.

In ovens or drying units, electric or gas can be used as heating sources.

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About packaging and after-sales service

Packing: Plastic Film Suitable For Ocean Carriage

Technical Support: The customer can inform machine related problems to us via tele
email or fax. All information will be recorded and will be reported to the After-sale Ser
team. Meanwhile, the sales person will be tracking the case until problem solved.

Service Team:We have a professional After-
sale Service team including10 professional engineers with at least 6 years working ex

After-sale Service available :1.Check & test before delivery 2.Instruction for installati
 3.On site commissioning 4.Repair & maintenance

After the receipt the advanced payment, we will provide allocation chart at the buyer's
request. When effect the shipment, we'll provide operation manual, etc. in English.

Puffed food, a modern food processing achievement that combines technology and
deliciousness, not only meets people's multiple needs for convenience, fun and nutrit
also demonstrates the innovative power of the food industry.

From traditional popcorn and corn flakes to innovative pet puffed food, puffing techno
constantly breaking through the application boundaries and developing in a healthier
more functional direction.

In the future, with the popularization of low-oil, low-salt, and high-fiber formulas, and t
depth application of puffing technology in special feeds, industrial raw materials and
fields, puffed food will not only be a snack, but also a food solution that takes into acc

nutrition, function and sustainable development.
When enjoying the diverse experience brought by puffed food, we must not only taste
unique taste, but also make rational choices, so that technology and health can jointly
a better future for diet.

Reference

The following are five authoritative foreign literature websites in the field of Industrial
machinery:
1. Food Engineering Magazine

Website: https://www.foodengineeringmag.com/
2.Food Processing Magazine

Website: https://www.foodprocessing.com/
3.Journal of Food Engineering

Website:https://www.journals.elsevier.com/journal-of-food-engineering
4. Food Manufacturing Magazine

Website:https://www.foodmanufacturing.com/
5. International Journal of Food Science & Technology

Website:https://onlinelibrary.wiley.com/