

## **What is a large output biscuit production line**

With the continuous growth of the global biscuit consumption market, the demand for efficient and automated biscuit equipment by food processing companies has increased significantly. A modern [large output biscuit production line](#) needs to take into account production capacity, quality stability and flexibility to meet the production needs of different product types (such as crisp biscuits, tough biscuits, sandwich biscuits, etc.).



## What are biscuits?

Biscuits are a type of portable baked food made from wheat flour (or cereal flour) as the main raw material, with sugar, oil and other auxiliary materials added, and made through dough preparation, shaping, baking and other processes.

According to the Codex Alimentarius International (CODEX) standards, biscuits have the following main characteristics:

### **Physical properties:**

- (1) Moisture content is usually  $\leq 10\%$  (except for soft biscuits)
- (2) Texture is crispy, crunchy or hard and crunchy
- (3) Long shelf life (generally 6-12 months)

### **Process characteristics:**

- (1) Must undergo high-temperature baking process
- (2) Includes mechanical shaping process (roller cutting, etc.)
- (3) Can add fillings, coatings and other secondary processing

### **Taxonomic positioning:**

- (1) Belongs to non-fermented baked food (distinguished from bread)
- (2) Low fat characteristics different from pastry
- (3) Raw material composition different from confectionery

**Note:** Definitions vary from country to country. For example, the United States also classifies some soft pastries as cookies, while the British Biscuit refers specifically to hard biscuits. Modern food science classifies biscuits as "Durable Bakery Products".

## **The history of biscuits: from marching dry food to global snacks**

### **1. Ancient origin: portable and durable "hardtack"**

The history of biscuits can be traced back to ancient Egypt and Persia in 4000 BC. The earliest biscuits were not desserts in the modern sense, but unleavened hardtacks made by mixing wheat flour and water. Because of their durability and portability, they became essential dry food for soldiers and business travelers. The "Buccellatum" of the ancient Roman army was a hard biscuit that could be stored for months without rotting.

In China, biscuit-like foods appeared in the Tang Dynasty (7th century AD), called "Hu Bing" or "Nang", which were introduced from the Western Regions and later evolved into sesame cakes, sesame cakes, etc.

### **2. The Age of Discovery: Biscuits became the key to**

survival at sea

The Age of Discovery from the 15th to 17th centuries promoted the industrial production of biscuits. Due to the lack of fresh food on ocean voyages, European navigators relied on "Ship's Biscuit/Hardtack" - a very hard biscuit containing only flour, salt and water, which could be stored for several years. The British Navy even used it as a standard military ration, but long-term consumption led to vitamin deficiency (such as scurvy).

During this period, biscuit production was still mainly handmade, but large-scale baking workshops dedicated to supplying the army and merchant ships had appeared in Britain and the Netherlands, initially forming large-scale production.

### 3. Industrial Revolution: Mechanization and the Birth of Sweet Biscuits

In the 18th and 19th centuries, the Industrial Revolution completely changed the biscuit industry:

1791: British inventor John Pearson first added sugar and oil to the biscuit formula to make a more delicious "sweet biscuit", marking the prototype of modern biscuits.

1831: Dutchman G.H. Bent founded the Biscuit Factory, using steam-powered machinery to produce biscuits for the first time, increasing efficiency by dozens of times.

In the mid-19th century, companies such as Huntley & Palmers in the UK and National Biscuit Company (the predecessor of Nabisco) in the US emerged and launched innovative products such as sandwich biscuits and digestive biscuits, transforming biscuits from military rations to popular snacks.

#### 4. The 20th century: the wave of globalization and branding

In the early 20th century, the biscuit industry ushered in explosive growth:

In the 1920s: the popularization of automated production lines, the birth of classic brands such as Oreo and Ritz, and biscuits became the protagonists of supermarket shelves.

During World War II: compressed biscuits (such as K-ration in the United States) became military emergency food, and post-war technology fed back to the civilian market.

After the 1960s: the health trend emerged, and whole wheat and sugar-free biscuits appeared; at the same time, Japan launched high-end gift biscuits such as "White Lover" to expand consumption scenarios.

## 5. Contemporary trends: health and intelligent production

The biscuit industry in the 21st century presents two major directions:

Health upgrade: low GI biscuits, high protein biscuits, and plant-based (dairy-free) biscuits meet the needs of modern consumers.

This process, from manual production to mechanical production, from experience-based control to digital regulation, constitutes the complete narrative chain of modern biscuit industrialization.



## Importance of large output production lines in the food industry

In the food industry, especially in the field of biscuit manufacturing, large output production lines have become the key to corporate competitiveness. First, it can meet the



needs of the global market. With the expansion of e-commerce and chain retail, brand owners need a stable supply of large quantities of products, which traditional small production lines are difficult to support. Secondly, high-volume production lines can significantly reduce unit costs. Through large-scale production, power consumption, labor and raw material waste are greatly reduced. In addition, high-volume equipment usually has higher process stability and avoids batch differences, which is crucial for chain brands to maintain taste consistency.

## **Large output biscuit production line flow chart**

Flour Mixing---Biscuit Forming machine---Inlet Oven machine---Tunnel Oven---Outlet Oven machine---Oil Spraying ---Cooling Conveyor---Biscuit Stacking ---Biscuit Packing

If the factory is not long enough, we can also provide turning machines. The production capacity of biscuit making machines is hot in the market. The production capacity is divided into large production and small production based on 150kg/h. In this article, we discuss [large output biscuit production lines](#).

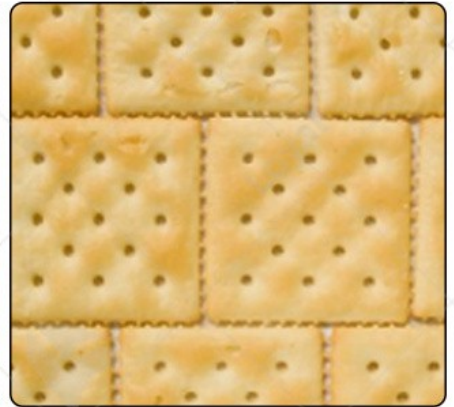
## **The function of biscuit equipment**

1. Mixer: Dough mixer is a machine that mixes flour with water or other ingredients into dough. It is widely used in making dough for various pastries, biscuits, bread, steamed buns, etc.
2. Biscuit Forming machine: (1) Crispness molding: put the mixed flour into this machine, and it can be formed into biscuit embryos through roller printing, and then put into the oven to make various medium and high-end biscuits.(2) Toughness molding: put the mixed dough into this machine, press the skin through three rollers, and then roll it into biscuit embryos through the roller cutting mold, and put it into the oven to bake medium and high-end tough biscuits.
3. Inlet Oven machine: The machine is a drive device that connects the molded biscuits or other baked goods to the oven, and the biscuits attached to the wire mesh are continuously fed into the furnace by a large drum for baking.
4. Tunnel Oven: Suitable for baking all kinds of biscuits. Use electric heating, temperature zone control, temperature of each temperature zone can be set in advance, uniform temperature in the temperature zone, use high-quality insulation materials, good insulation performance, high thermal efficiency. Temperature control system, automatic temperature control and constant temperature, flexible operation, high safety performance.
5. Outlet Oven machine: Used To Bring The Biscuits Or Other Baked Food Baked In The Oven Out Of The

Oven, Then Into Oil Spray Machine, And At The Same Time, It Can Drive The Mesh Belt In The Furnace And Tighten The Mesh Belt.

6. Oil Spraying: Spray oil on the surface of biscuits coming out of the baking oven to make the color, aroma and taste of the biscuits more distinctive and improve the grade of the biscuits.
7. Cooling Conveyor: This equipment fully cools the biscuits before they are conveyed to the packaging machine to ensure the quality of the biscuits after packaging and extend the shelf life.
8. Biscuit Stacking: sort biscuits and pick out unqualified products

If you want to make sandwich biscuits, there are sandwich machines waiting for you to choose. If there is not enough space, you can also choose a turning machine.



## Technical specifications of large output biscuit production line

Model	Output
LY-400	150-200kg/h
LY-600	400-500kg/h
LY-800	600-800kg/h

LY-1000	1000kg/h
LY-1200	2000kg/h

## **Layout for the large output biscuit production line**

Our machines can be flexibly arranged according to the size and dimensions of the factory. We can also customize the size of the machine according to the data you provide.

## **Sample of biscuit making machine**



## Advantages of large output biscuit production line

Improve efficiency	Large output biscuit production lines are designed to streamline the entire production process, thereby
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	<p>increasing productivity. Automated machines and continuous processes enable high output with minimal manual labor.</p>
Stable quality	<p>The production line follows standardized processes and precise metering to ensure consistent quality of each batch of biscuits. This is essential for building customer trust and maintaining brand reputation.</p>
Cost-effectiveness	<p>Compared with manual production methods, the production line requires fewer workers, which helps reduce labor costs. In addition, the equipment used in the production line is specially designed to be durable and have a longer service life, thereby minimizing</p>

	<p>maintenance and replacement costs.</p>
<p>Improve food safety</p>	<p>With appropriate quality control measures and automated systems, the production line can minimize the risk of contamination and ensure food safety. Strict hygiene regulations can be implemented throughout the production line, including regular cleaning and disinfection of machinery and processing areas.</p>
<p>Forming system</p>	<p>Choose different molds to make crispy or tough biscuits. You can also choose the shape. Change the roller pressure to adjust the thickness.</p>
<p>Baking system</p>	<p>Multi-zone intelligent temperature control. Gas, gas, electric</p>



heating optional.
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We sincerely invite industry partners to explore the infinite possibilities of biscuit manufacturing and work together to create a new era of smart baking.

## **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 Of China Food And Drying Equipment Industry Association.

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

Our Extrusion System Is Widely Used In: Puffed Snack

Foods, Breakfast Cereals, Vegetable 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 Food 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 searching for new solutions that benefit our snack food customers. Our experienced frying engineers always find the optimal solution for your industrial batch and continuous frying system line application. That's why we also develop, design and produce custom fried snack production line.

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

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

The Industrial Microwave Sterilization Defrosting Drying

Machine can be designed as a dry 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 Fried Snack Production Line for the processing and packaging of fried extruded snacks.

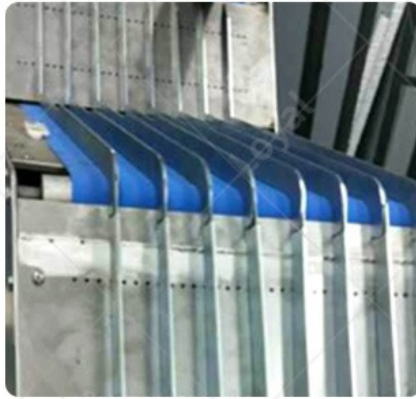
Loyal Food Production Line meet the needs of customers to obtain snack food that meet the needs.

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 telephone, email or fax. All information will be recorded and will be reported to the After-sale Service team. Meanwhile, the sales person will be tracking the case until problem solved.

**Service Team:** We have a professional After-sale Service team including 10 professional engineers with at least 6 years working experience. They can handle technical consultation about manufacturing process, maintenance, fault diagnosis and troubleshooting, etc.

After-sale Service available : 1. Check & test before delivery  
2. Instruction for installation 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.

Whether it is the adherence to traditional recipes or the integration of cutting-edge technology, biscuits, an ancient and vibrant food, will continue to accompany mankind towards a more delicious future. Next time you pick up a biscuit, you might as well taste it carefully - this small piece condenses thousands of years of wisdom and innovation.

If you are interested in biscuit production line, please feel free to contact us for consultation.

For more information, please visit the Facebook page:

<https://www.facebook.com/Foodextruderfactory>