

# Unveiling the hard biscuit production line

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

Hard biscuits, a seemingly simple baked food, hide a series of sophisticated processes and scientific principles behind it. Its unique taste - neither too crispy nor too soft, but with the right hardness and layers - comes from the careful preparation of the dough, long mechanical kneading, and precisely controlled baking time.

The starting point of the [hard biscuit production line](#) is the precise ratio of flour, sugar, and water. The gluten protein in the flour forms a network structure during the mixing process, giving the biscuits a unique hardness; while the addition of sugar and oil regulates the ductility and flavor of the dough. The mixer runs at a specific speed, allowing the dough to gradually become smooth and uniform under the action of mechanical force, and then enters the static stage - the relaxed dough molecules are rearranged, waiting for the next stage of shaping.

The dough press machine stretches the dough into uniform thin sheets by multiple rollers. This process not only determines the final thickness of the biscuit, but also affects its internal structure. Then, the mold punches out a neat shape, the scraps are recycled, and the qualified biscuits are sent to the oven. Here, the precise coordination of temperature and time allows the water to evaporate slowly, the starch to gelatinize, and the sugar to caramelize, ultimately forming a golden, crispy shell and a slightly chewy core.

This hard biscuit production line is a perfect combination of food science and mechanical engineering, with each step rigorously calculated and optimized. The final product is

testament to this precise collaboration.

The reason why hard biscuits are so memorable is that they are chewy and have a rich wheat aroma when you bite them. Behind this taste is the precise control of details such as dough ratio, molding thickness, and temperature control. It is these seemingly simple but actually complex links that make industrial mass production extremely challenging.

In order to allow more consumers to enjoy this classic and authentic taste, we have developed a fully automatic hard biscuit production line customized for hard biscuits. From mixing ingredients to calendaring, to precise baking and cooling, each link has been optimized to ensure the traditional flavor of the product while taking into account the efficient and safe modern food production standards.



What are hard biscuits?

Hard biscuits are a classic type of biscuits that originated from traditional European biscuit culture. Its history can be traced back to the late 18th century and early 19th century, when people created this type of product with low moisture content and tough texture in order to keep the taste and chewiness of biscuits during long-term travel or storage. Because they are not easy to break and easy to store, hard biscuits were originally often used as military rations.

rations or long-distance transportation food.

With the advancement of the Industrial Revolution and the development of baking technology, hard biscuits have gradually evolved from functional foods to popular snacks and the taste has been continuously improved, from the initial rough and hard storage to today's chewy and flavorful daily biscuits. In many countries around the world, especially in the Asian and Middle Eastern markets, hard biscuits still occupy an important position and are deeply loved by consumers.

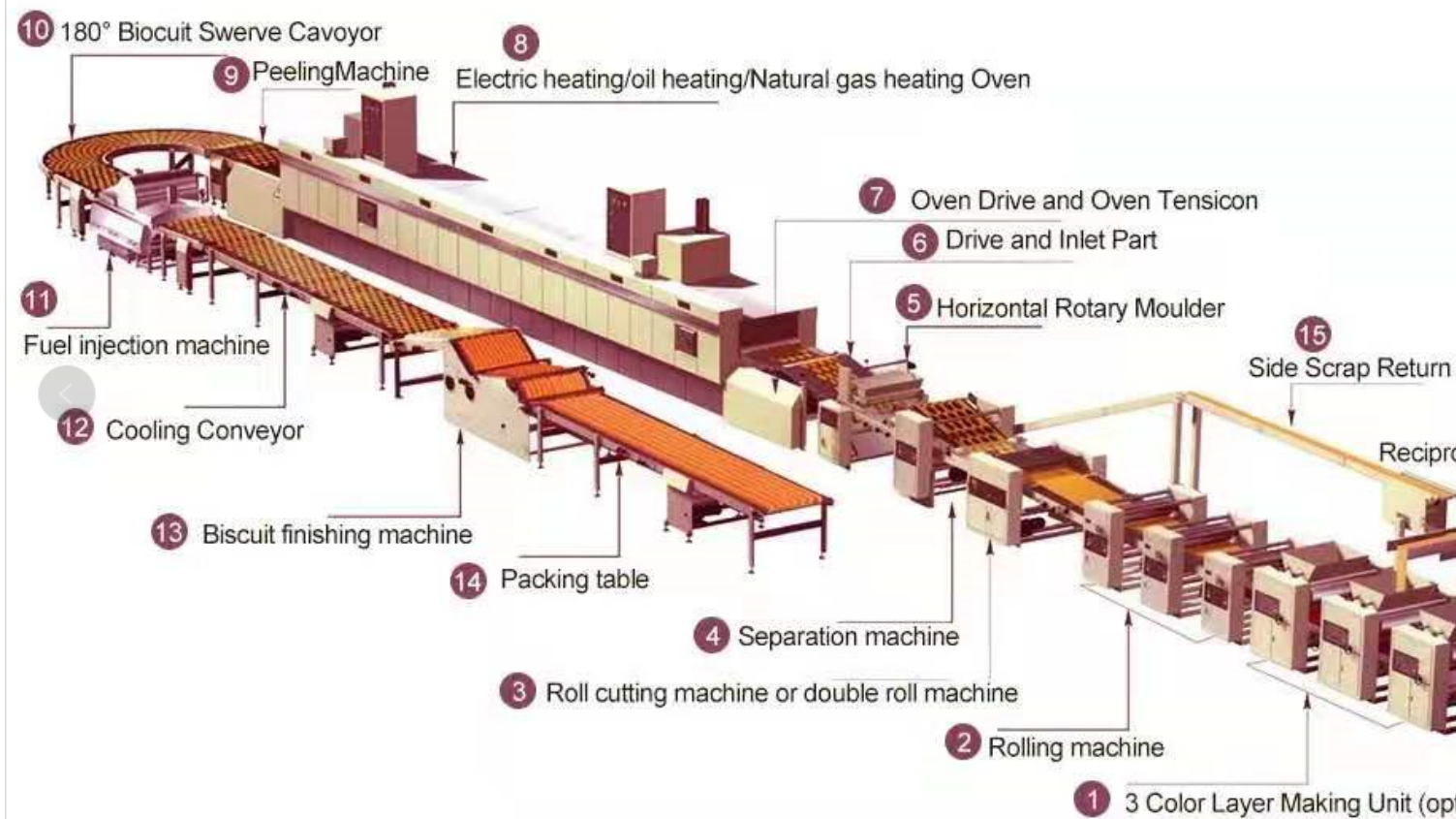


### Hard biscuit production line flow chart

It is the same as mentioned in the previous article, except that its mold is a hard biscuit mold, which is rolled and formed.

Flour Mixing---Hard Biscuit Forming machine---Oven---Oil Spraying ---Cooling Conveyor---Biscuit Stacking ---Biscuit Packing

Regarding biscuit making machine, We have small and large biscuit machines for you to choose from. If you need a packaging machine, we also provide it.



## The function of hard biscuit production line

**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.

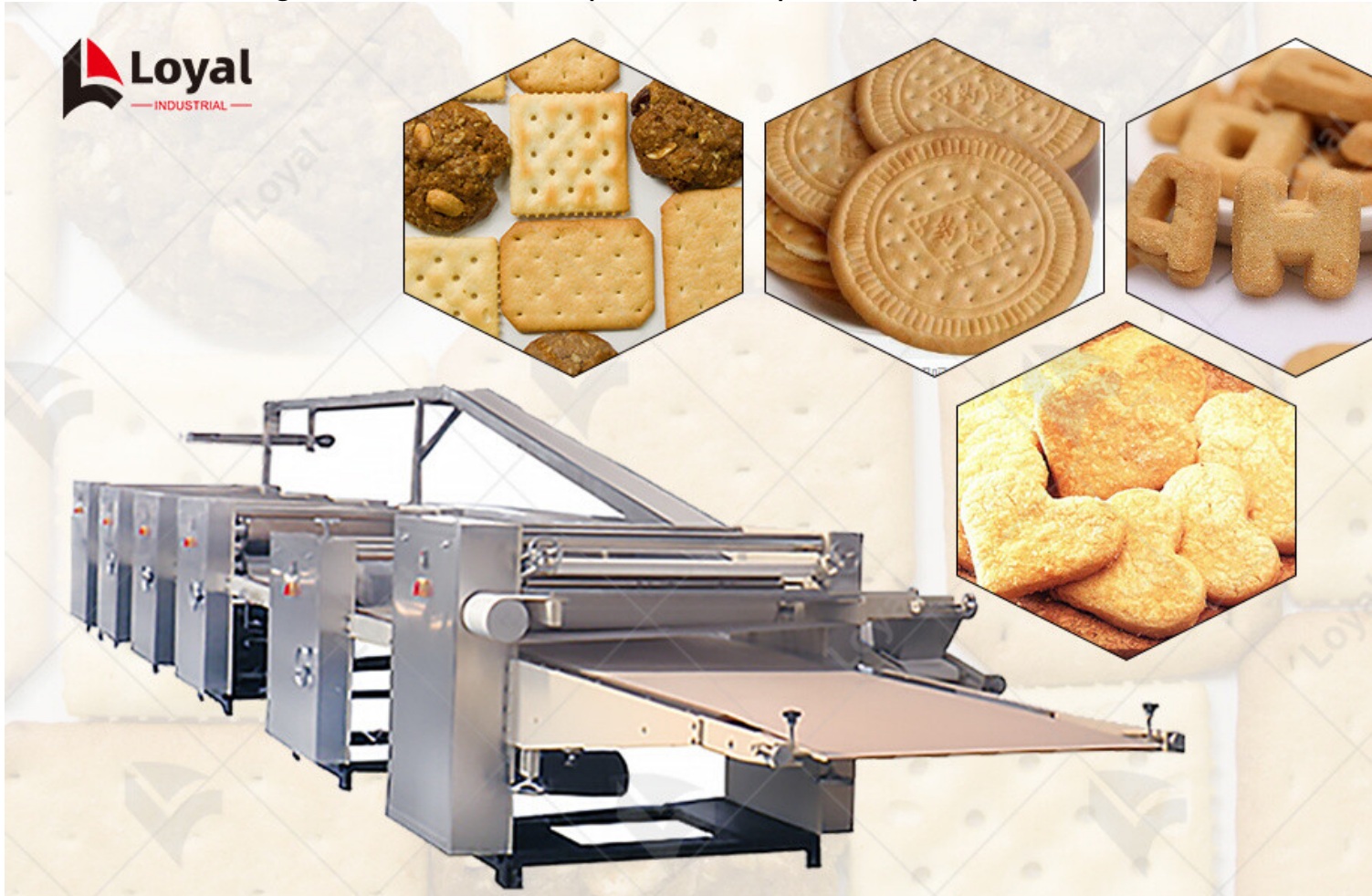
**Hard Biscuit Forming machine:** Hardness molding: put the mixed dough into this machine, press the skin through three rollers, and then roll it into biscuit embryos through the rolling cutting mold, and put it into the oven to bake medium and high-end hard biscuits.

**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.

**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.

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 their shelf life.

6. Biscuit Stacking: sort biscuits and pick out unqualified products.



## Advantages of hard biscuits

### 1. Provide lasting energy

(1) Mainly complex carbohydrates: hard biscuits are mostly made of whole grains such as whole wheat and oats, which are slowly digested and absorbed, and blood sugar rises slowly, making them suitable as energy supplements between meals.

(2) Low in fat and sugar (some products): Compared with crispy biscuits (such as cookies), traditional hard biscuits have lower oil and sugar content and are more suitable for people who control calorie intake.

### 2. Promote digestive health

(1) Rich in dietary fiber: hard biscuits made from whole wheat or cereals are rich in dietary fiber, which can stimulate intestinal peristalsis and prevent constipation (for example, British "digestive biscuits" are called this, but they actually rely on fiber to aid digestion).

(2) Advantages of fermentation technology: Fermented hard biscuits such as soda crackers contain a small amount of probiotic metabolites, which may slightly improve the gastrointestinal environment.

### 3. Easy to digest, reducing the burden on the stomach

#### (1) Alkalinity neutralizes stomach acid:

Soda crackers contain sodium bicarbonate (baking soda), which can temporarily neutralize stomach acid and relieve stomach discomfort (such as morning sickness and hunger stomach pain), but long-term dependence may disrupt stomach acid balance.

#### (2) Low irritation:

Hard crackers are dry and less greasy, suitable for people with sensitive stomachs to eat in small amounts.

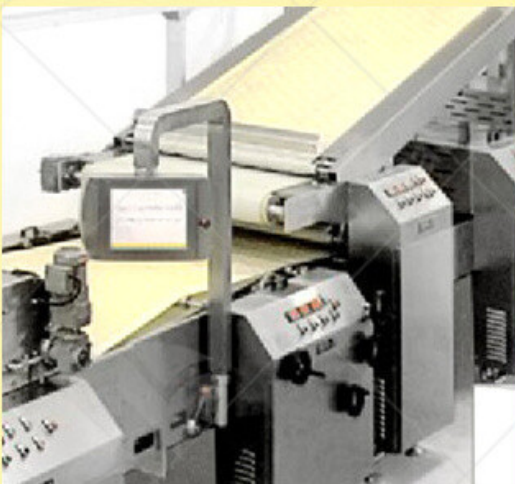
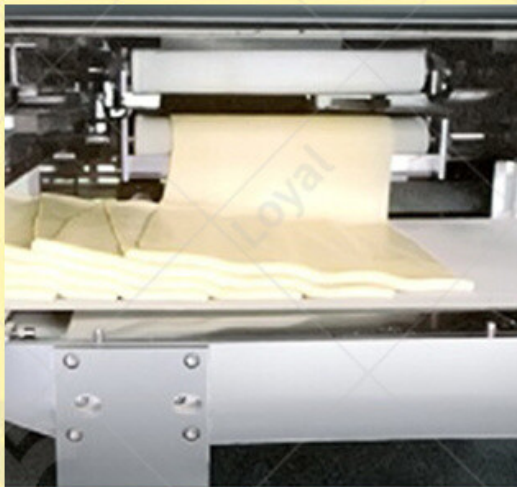
### 4. Partial nutritional fortification

#### (1) B vitamins and minerals:

Whole wheat tough crackers retain nutrients such as B1, B2, and iron in wheat germ, some products will additionally fortify calcium, iron, etc. (please check the ingredient list).

#### (2) Gluten-free options:

Some tough crackers use gluten-free ingredients such as brown rice and quinoa, which are suitable for patients with celiac disease.



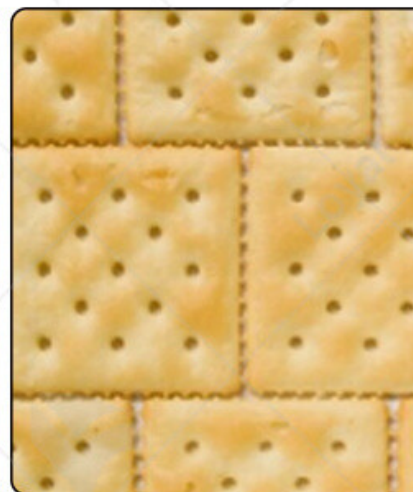
## Technical specifications of hard biscuit production line

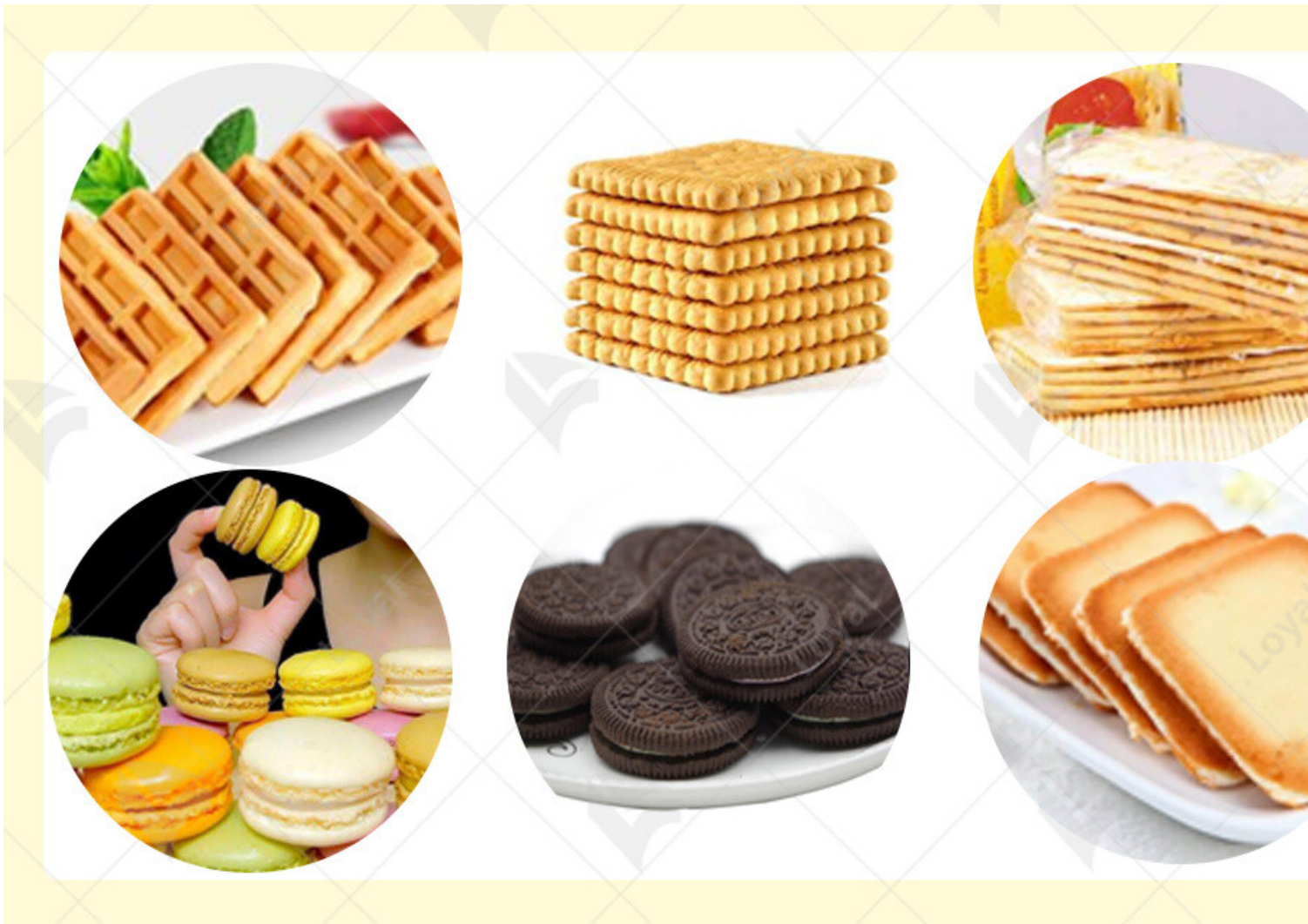
| Model   | Output      |
|---------|-------------|
| LY-320  | 100-150kg/h |
| LY-400  | 150-200kg/h |
| LY-600  | 400-500kg/h |
| LY-800  | 600-800kg/h |
| LY-1000 | 1000kg/h    |
| LY-1200 | 2000kg/h    |

## Layout for the hard 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 hard biscuit equipment





If you 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 Of 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 Corn Flakes, Fried Pasta, Bread Crumbs, Fruit Chips, Baby Food, Textured Soy Protein (toys), Food, Fish Feed And Pet Food. a Variety of Snack Production Line Supporting Production. 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 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 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 meets their 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.

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.

The food industry is changing with each passing day, but the pursuit of pure taste and quality remains unchanged. We know that the hard biscuit production line is not only a

equipment, but also a commitment - a commitment to quality, a commitment to efficiency and a commitment to customer success. Every process and every component is a result of our strict requirements for details, just to help you produce products that satisfy the market and consumers love.

We always believe that a stable and long-term partnership comes from trust, and trust comes from reliable technology and sincere service. Whether you are preparing to build a new production line or upgrade existing production capacity, we will provide you with professional technical support and personalized solutions to help you develop steadily and take the initiative in the market.

As your global partner in the field of biscuit production, we are willing to work with you to grasp the pulse of the times, grasp the changes in consumer tastes, innovate in inheritance and develop in innovation. Let us work together to not only produce hard biscuits, but also create your brand and future.

If you are interested in this hard biscuit production line, please feel free to contact us. Looking forward to creating brilliance with you!