



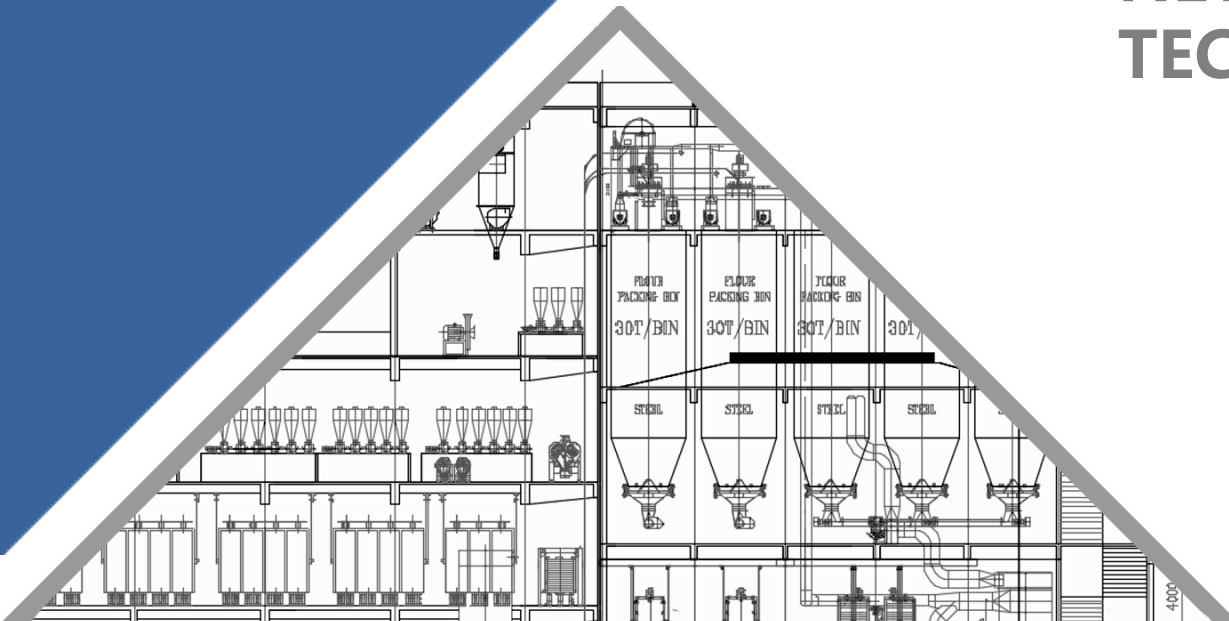
GOLDEN GRAIN

NEW DEVELOPMENTS OF MILLING TECHNOLOGY IN CHINA

IAOM Vietnam 2023

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ABOUT GGI

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CHINA FLOUR INDUSTRY OVERVIEW

WHEAT & FLOUR DATA IN CHINA

CHINA ANNUAL WHEAT CAPACITY

120 Million Tons



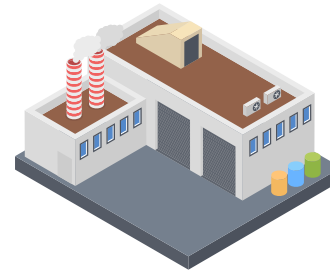
WHEAT CAPACITY FOR MILLING USE

86 Million Tons



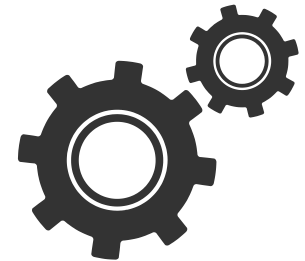
CHINA FLOUR MILL QUANTITY

1500 Factories



CHINA FLOUR MILLING LINES

3000 Lines





TOP 3 FLOUR MILL IN CHINA

WUDELI

85,000 Tons/Day



YIHAI (WILMAR CHINA)

55,000 Tons/Day



COFCO

40,000 Tons/Day



These three companies total capacity is 55,500,000 Tons Wheat/ Year.



FEATURES OF FLOUR IN CHINA

➤ **China's flour quality requirements:**

80% flour used for steamed, boiled foods and frozen flour food.

➤ **Requiring low ash content and bright color and lower damaged starch.**

➤ **Frozen flour food requires lower bacterial content.**

FEATURES OF FLOUR IN CHINA

**Wet noodle, frozen flour food (Noodle, boiled dumpling , stuffed bun),
flour requirement:**

- lower ash, lower damaged starch.
- Prevent discoloration, cracking and aging.
- Control bacterial content.





BASIC STEAM BREAD





STEAM STUFFED BREAD/BUN



DUMPLINGS



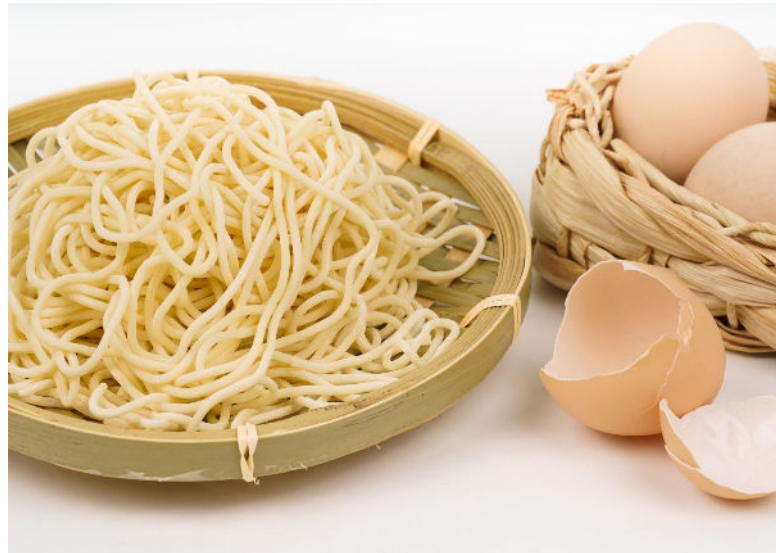


ARTISTIC STEAM BREAD





DRY NOODLE





WET NOODLE





BREAD





CAKE & COOKIES





PANCAKE/NANG BREAD





OTHERS



02

GGI MILLING TECHNOLOGY FEATURE AND FLOUR QUALITY



Figure 1 is a detailed schematic diagram of a flour production process. It illustrates the flow of wheat from reception to the final packaging of flour. The process is divided into several main stages:

- Reception and Storage:** Wheat is received and stored in large bins (e.g., 301, 302, 303, 304, 305, 306, 307, 308). It is then conveyed to a primary grinding stage.
- Primary Grinding (一次磨麦仓):** This stage consists of 8-1 grinding units, each with a capacity of 80 tons, totaling 560 tons. The output is conveyed to a secondary grinding stage.
- Secondary Grinding (二次磨麦仓):** This stage consists of 4-1 grinding units, each with a capacity of 80 tons, totaling 240 tons. The output is conveyed to a purification stage.
- Purification (净麦柜):** A 15-ton purification unit that cleans the flour before packaging.
- Packaging:** The final stage where the purified flour is packaged into bags or containers.

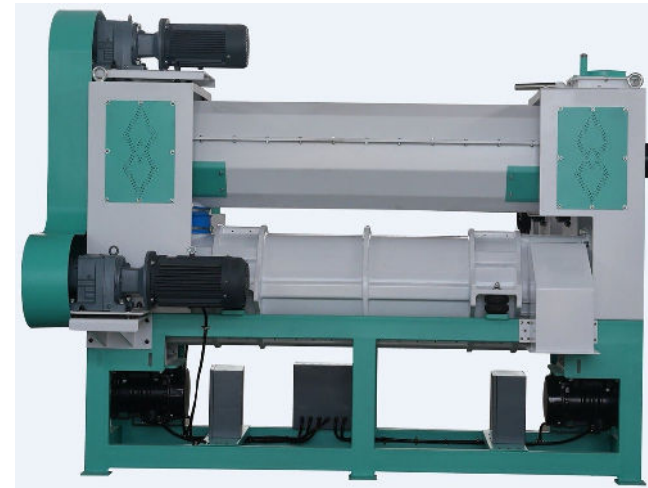
The diagram includes various equipment such as elevators, conveyors, and storage bins, with flow rates and capacities indicated. Red circles highlight specific equipment: a hopper, a grinder, and a storage bin.

MILLING TECHNOLOGY FEATURES OF GGI

High Dampening efficiency

China flour mill capacity is higher and higher, to save dampening bin investment and make dampening efficient higher, China has developed different kinds of dampener. Such as vibration dampener.

- Strong-Mixing Dampener with high pressure
- Water addition 3% - 7%.



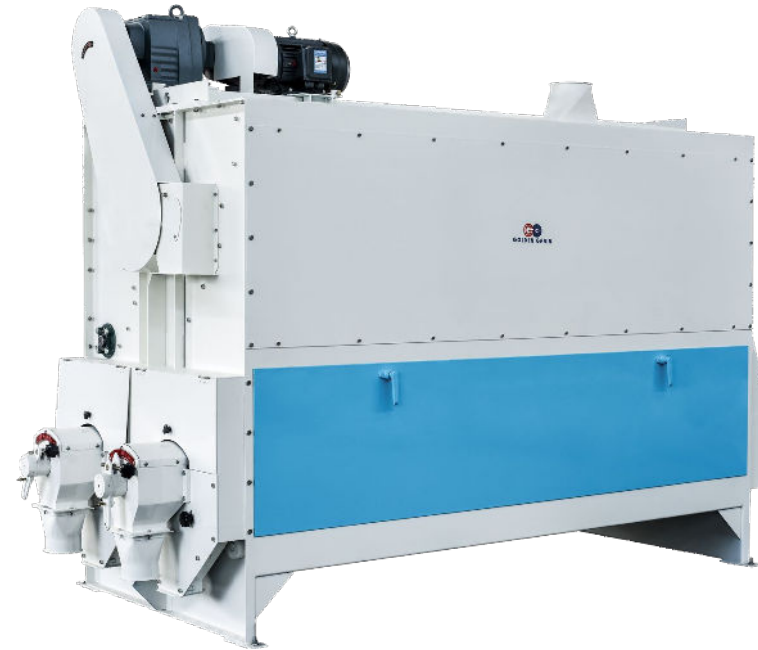


MILLING TECHNOLOGY FEATURES OF GGI

Color Sorter

Cylinder & disc separator

China domestic request better cleaning effect, and now there are more better choices.



MILLING TECHNOLOGY FEATURES OF GGI

Poor quality wheat, discolored wheat, its flour is easy to change color, high bacterial content

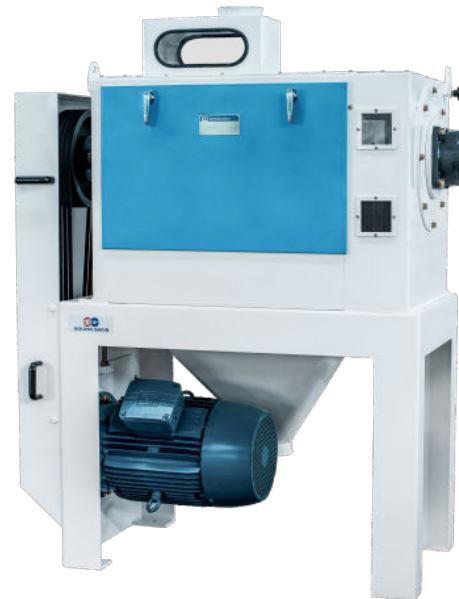


MILLING TECHNOLOGY FEATURES OF GGI

Good Surface Cleaning

China has developed different kinds of Scoure for surface treatment.

- Can reduce the ash content significantly.

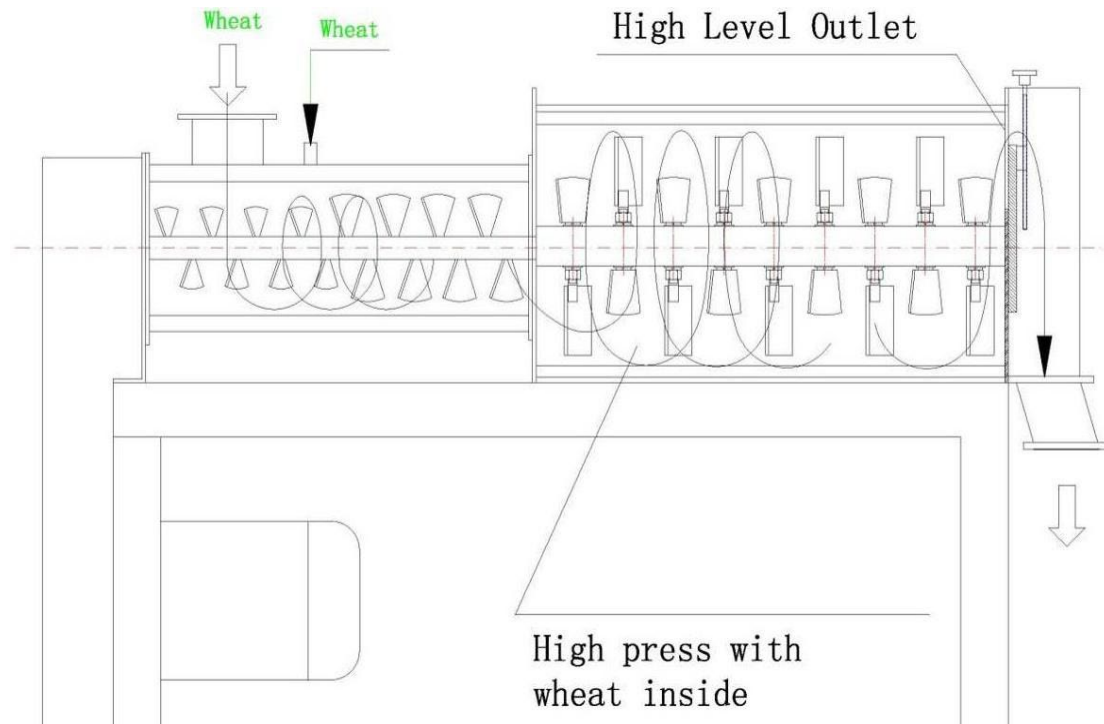


MILLING TECHNOLOGY FEATURES OF GGI

Strengthen the surface cleaning of wheat:

Using semi-wet cleaning technology.

Lower ash and bacterial content.





MILLING TECHNOLOGY FEATURES OF GGI

Strengthen the surface cleaning, using rub friction of scourer.

Lower ash and bacterial content.



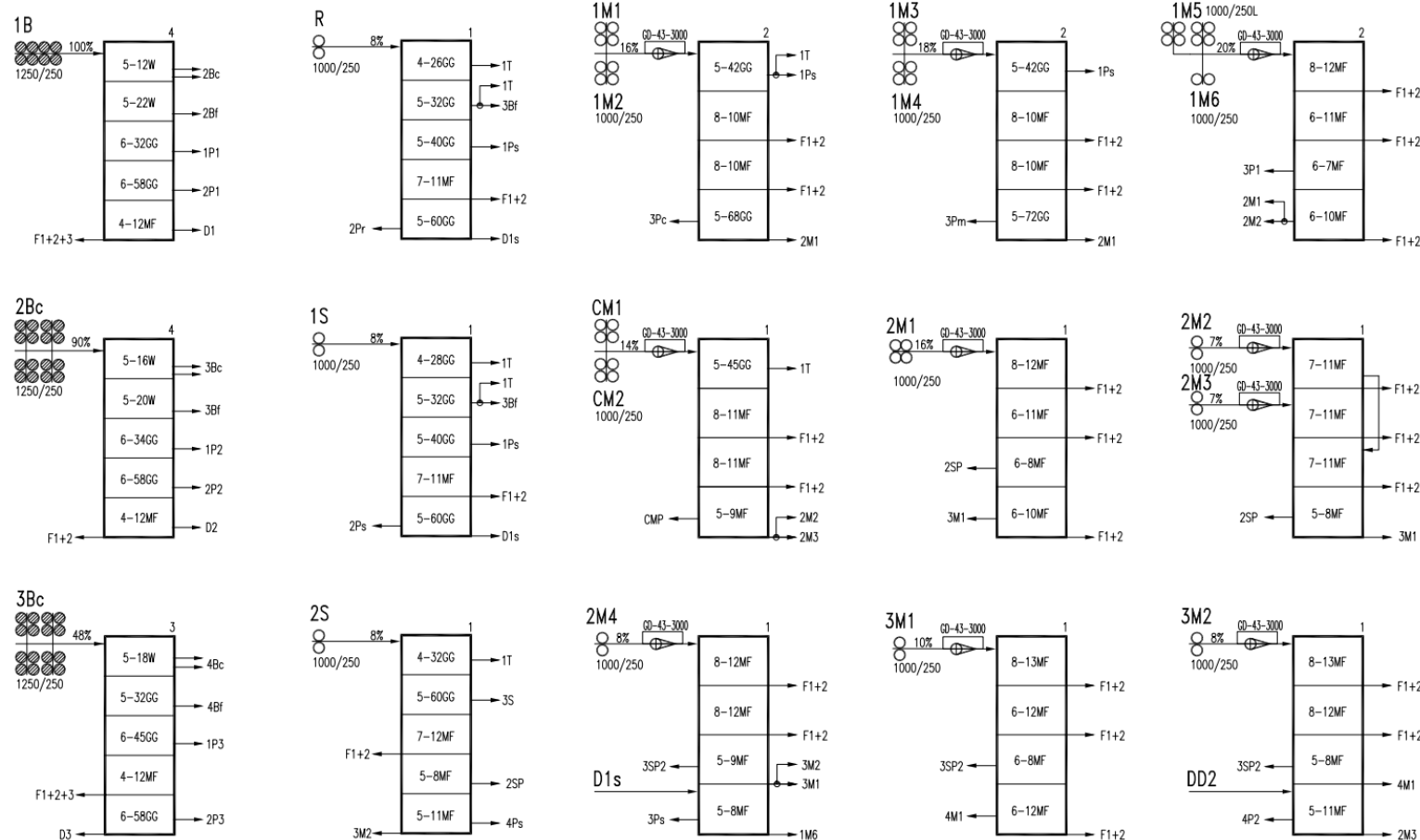


MILLING TECHNOLOGY FEATURES OF GGI

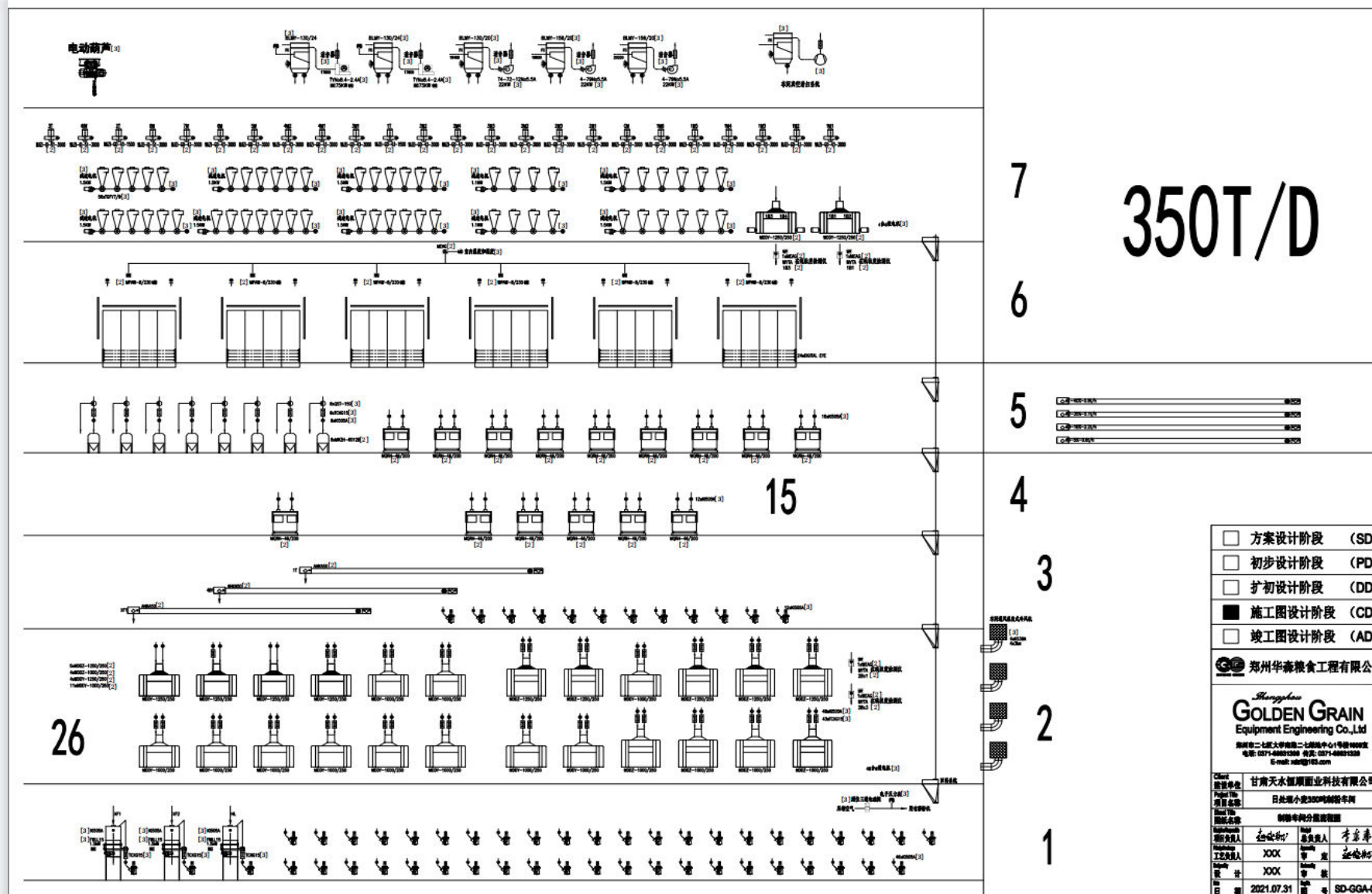
- **The roll length is longer and more purifiers are used. Adopt light grinding, and strengthen the classification and purification.**
- **Roller length $\geq 16\text{mm}/100\text{kg}$ wheat/24 hours. Normally 16-17 mm/100kg wheat/24 hours;**
- **The sifting area of plansifter is $0.1\text{-}0.12\text{ m}^2/100\text{ kg}$ wheat/24 hours;**
- **The purifier, 3.5-4 purifiers/100 tons of wheat. The sieve width of the purifier: 3.22-3.68mm/100kg/24h.**
- **Milling section with 7 floor of the mill building, easy to arrange more purifiers;**

MILLING TECHNOLOGY FEATURES OF GGI

350T/D flour mill: 26 roller mills, 16.43 mm/100kg/24h, gentle grinding, easy to control flour particle size and damaged starch, lower temperature, keeping gluten good extensibility and nature wheat flavor. **Lower 10% power.**



MILLING TECHNOLOGY FEATURES OF GGI



Pay attention to the control of flour particle size and damaged starch.

1. Flour particle size control:

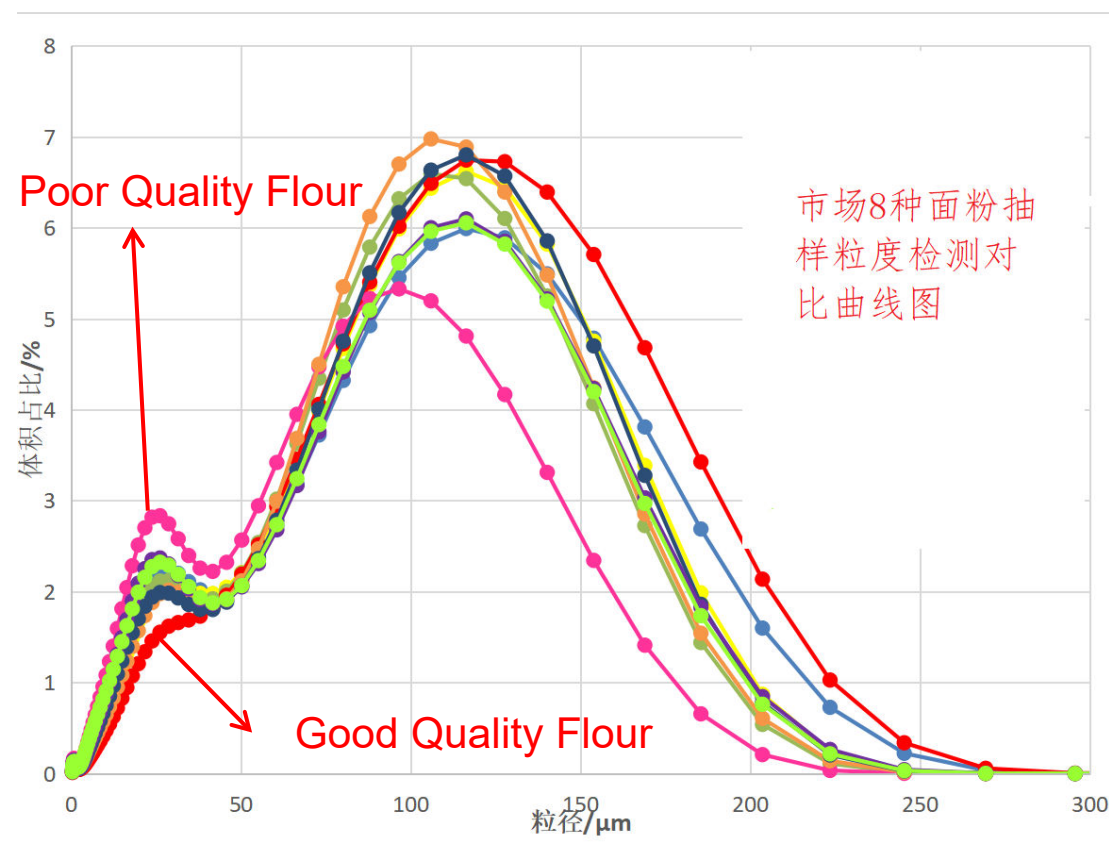
The particle size of flour should not be too coarse or too fine.

2. Damaged starch control:

Damaged starch is not as high as possible, depending on the quality of wheat and flour quality requirements.

3. Less heating, keeping more nature wheat flavor.

For any flour food, not only in China.



03

ABOUT US



ABOUT US

200+ Employees

500+ Projects

- GG was established in the 1990's by Mr. Li Dongsan, professor of Henan University of Technology.
- GG focus on grain handling & processing projects.
- Now the factory occupied more than 70,000m² land.
- The Grain Processing Research Center has been set.





1. Zhengzhou city, China
4. Manila, Philippines
7. Bogota city, Colombia

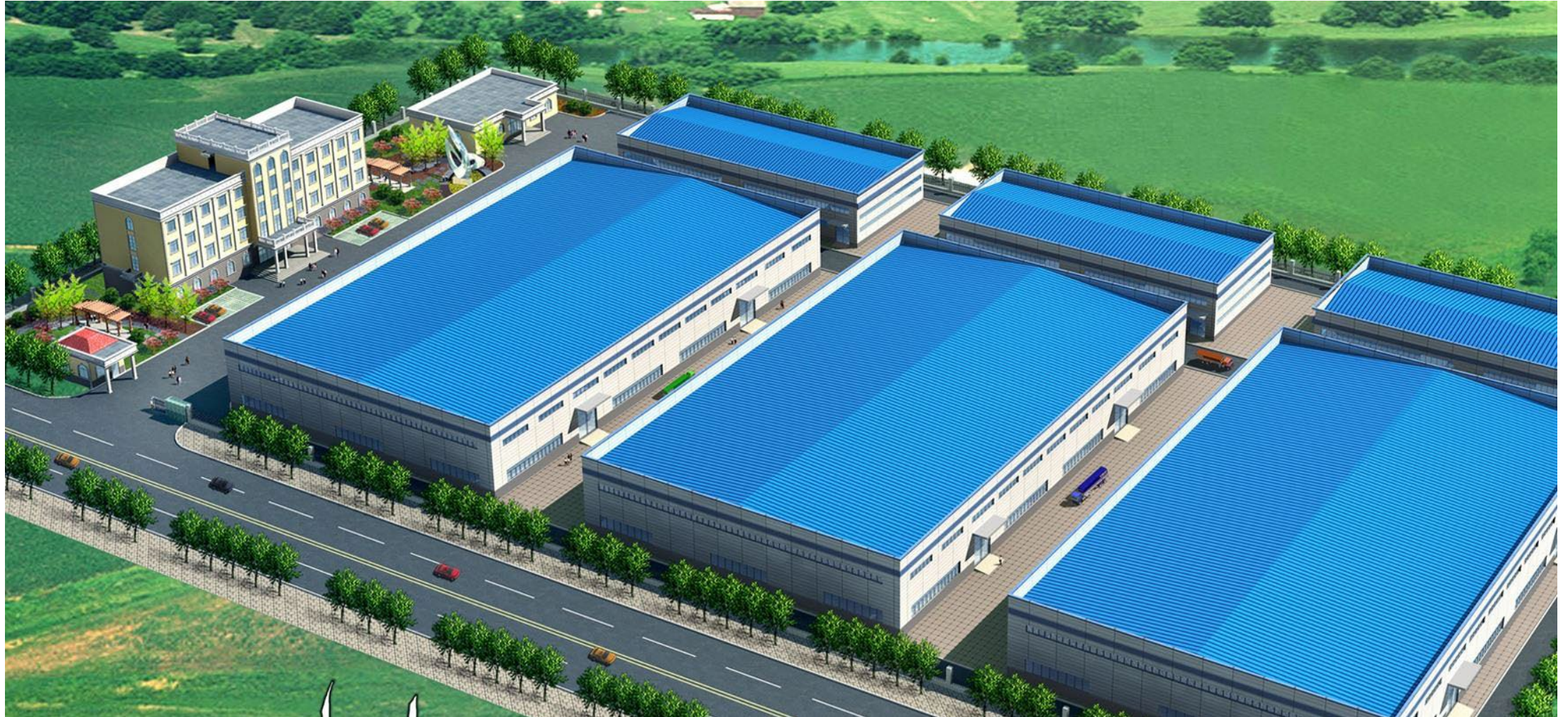
2. Hongkong, China
5. Dubai city, UAE

3. Jakarta, Indonesia
6. San Salvador city - El Salvador



FACTORY

1. GGI 1st factory in Zhengzhou City, Henan Province, China.



FACTORY

2. GGI Headquarters Factory (No.2) in Zhengzhou City, Henan Province, China.
3. GGI Joint Venture Factory in Yangzhou City, Jiangsu Province, China





FACTORY

GG New Office Building



GG New work shop 1







OPTIMIZED MAIN MACHINE

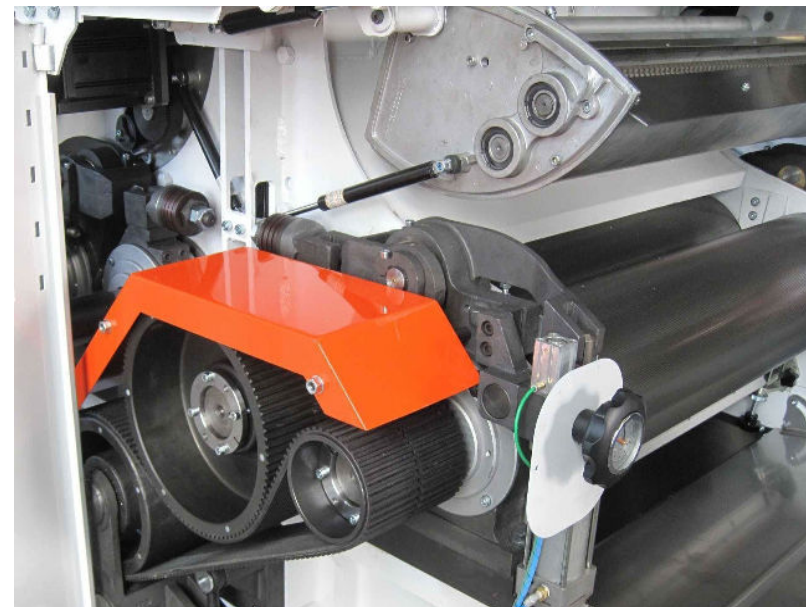
China flour mill request easiest maintenance, and

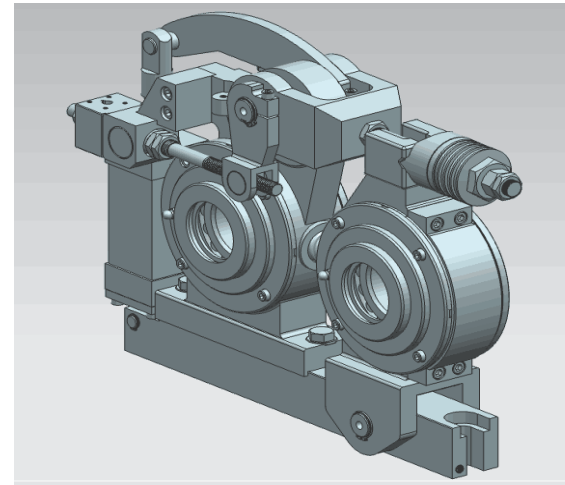
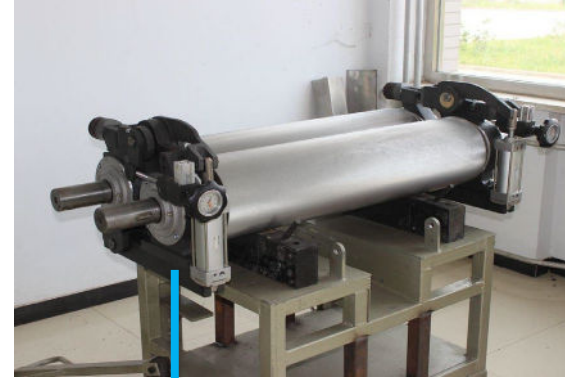
- ROLLER MILL: Stable with cast iron base, and the two rolls can be removed as a whole pack during maintenance.
- PLANSIFTER: Sieve frame with bigger net area.
- PURIFIER: Air easy adjustable.





EQUIPMENT





FEATURES

Quick-change Roll Pack.

The two rolls can be changed as a whole pack including the air cylinder. It greatly improves the maintenance efficiency.



EQUIPMENT





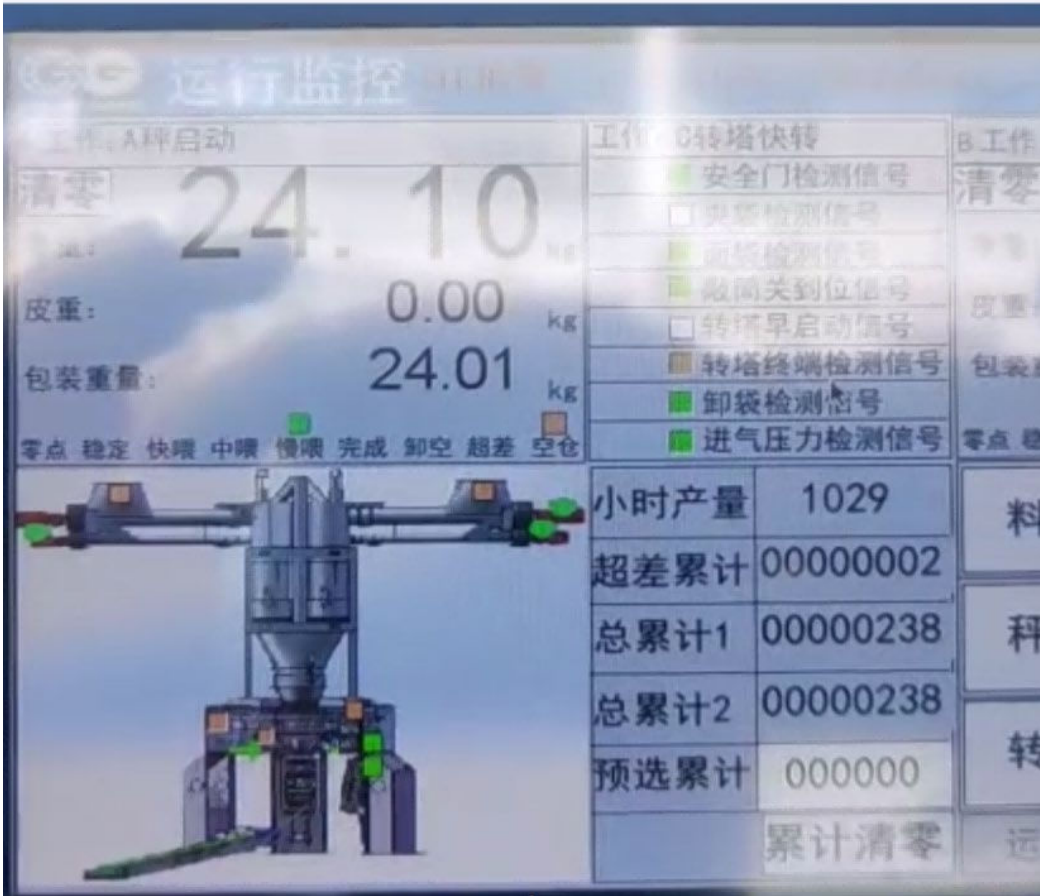
EQUIPMENT





EQUIPMENT

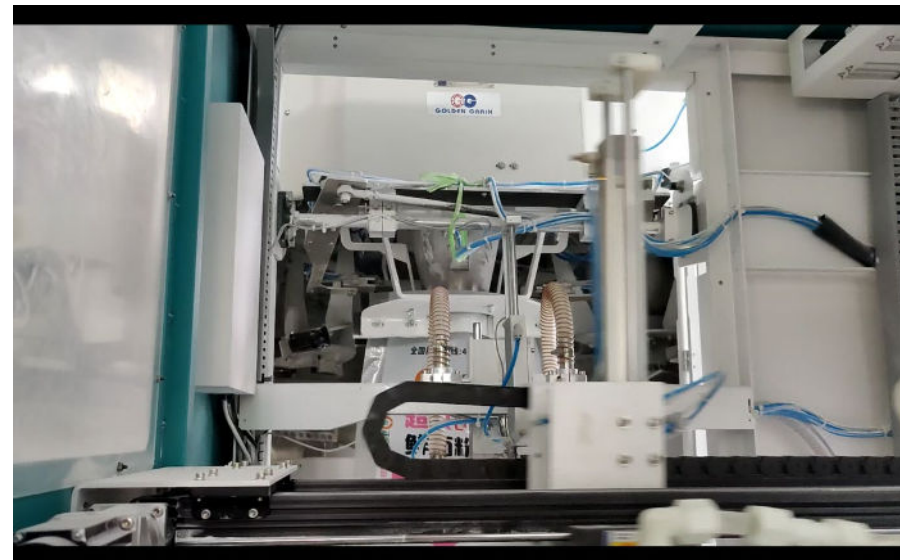
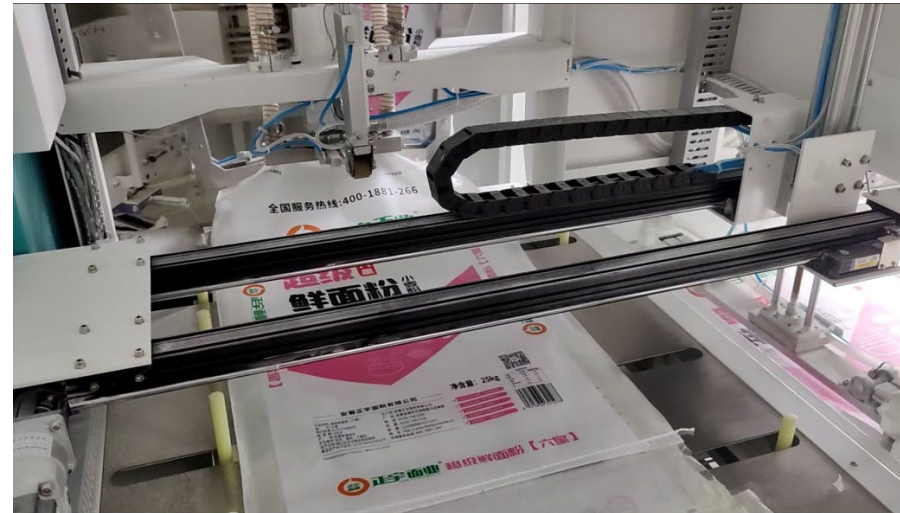
Semi-Auto Packer





EQUIPMENT

FUL AUTO PACKER





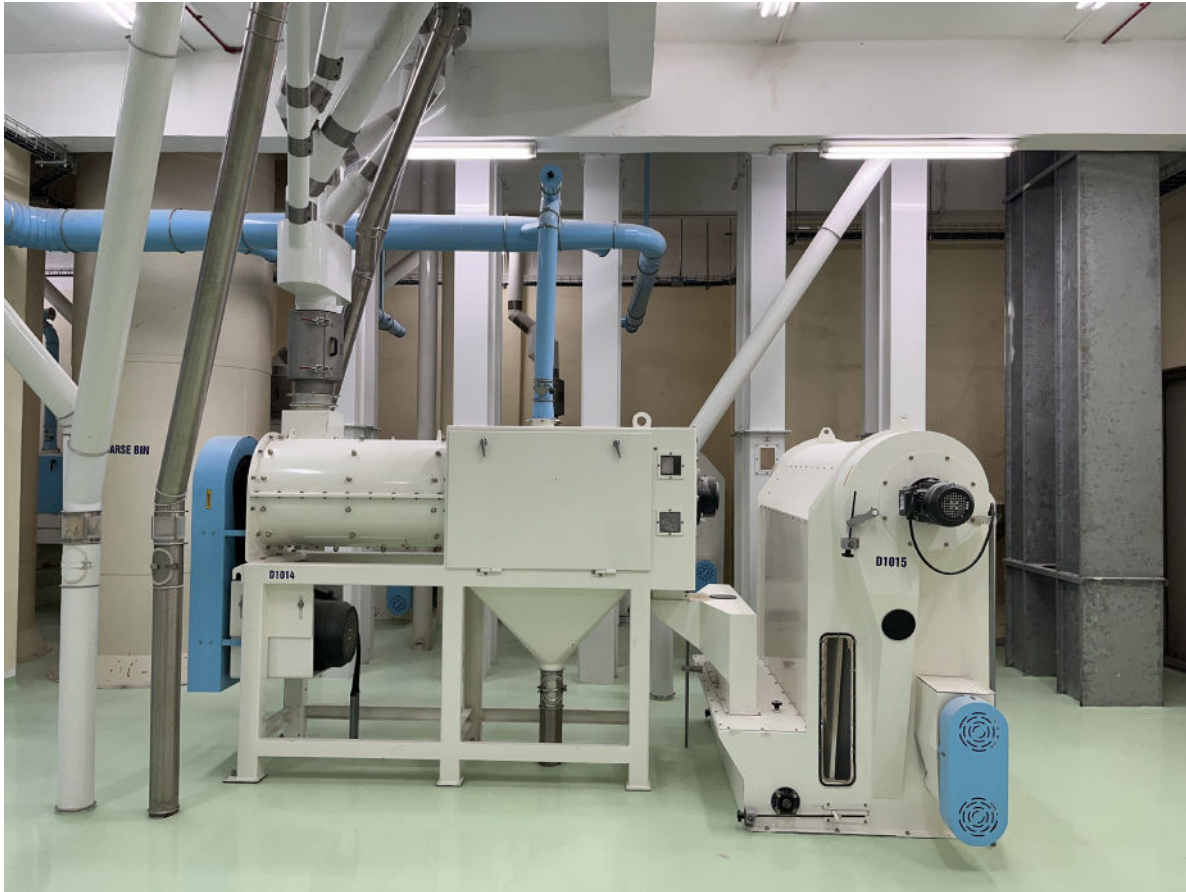


PROJECT





PROJECT





PROJECT





PROJECT



The Indonesia Cilegon Project

The Cilegon 6x500 ton complete flour processing line in Indonesia is one of the most modern flour factories in Indonesia, capable of producing a variety of customized and highly competitive flour products. The company has grown rapidly and is now one of the top 5 players in the Indonesian flour industry.



The Indonesia Medan Project

The Medan 3x500 ton + 2x150 ton complete flour processing line in Indonesia is highly automated, saving labor costs and improving competitiveness. The client is forward-looking and is also the first flour factory in Indonesia to use solar power generation.



The Philippines Project

The 2x500 ton complete flour processing line in the Philippines was designed by GGI, starting from the overall planning stage, providing modern design concepts for customers. Currently, this flour factory has become a benchmark project in the Philippines.



The COFCO Lihua Jinghai Project

The project covers an area of 140 acres, with 4 flour production lines, processing 600,000 tons of wheat annually (2000 tons of wheat processed per day, producing 1400 tons of flour per day).





COFCO Shenyang Project



Anyang Hualong Village Project



Jinan Mintian Project



Jiangsu Sanling Hai'an Project



Hebei Hualong Farmstead Project



Keming Flour Suiping Project



Shandong Luhua Flour Yanjin Project



Xinjiang Tianshan Flour Changji Project



COFCO Zhengzhou Project



Yihai Jiali Chaozhou Project



Qianwei Central Kitchen Xinxiang Project



COFCO Weinan Project

THANK YOU

www.g-grain.com

