

# Starch Plant



Allbest Creative Development Ltd. (ALLBEST)

# Technology Portfolio for Starch Industry

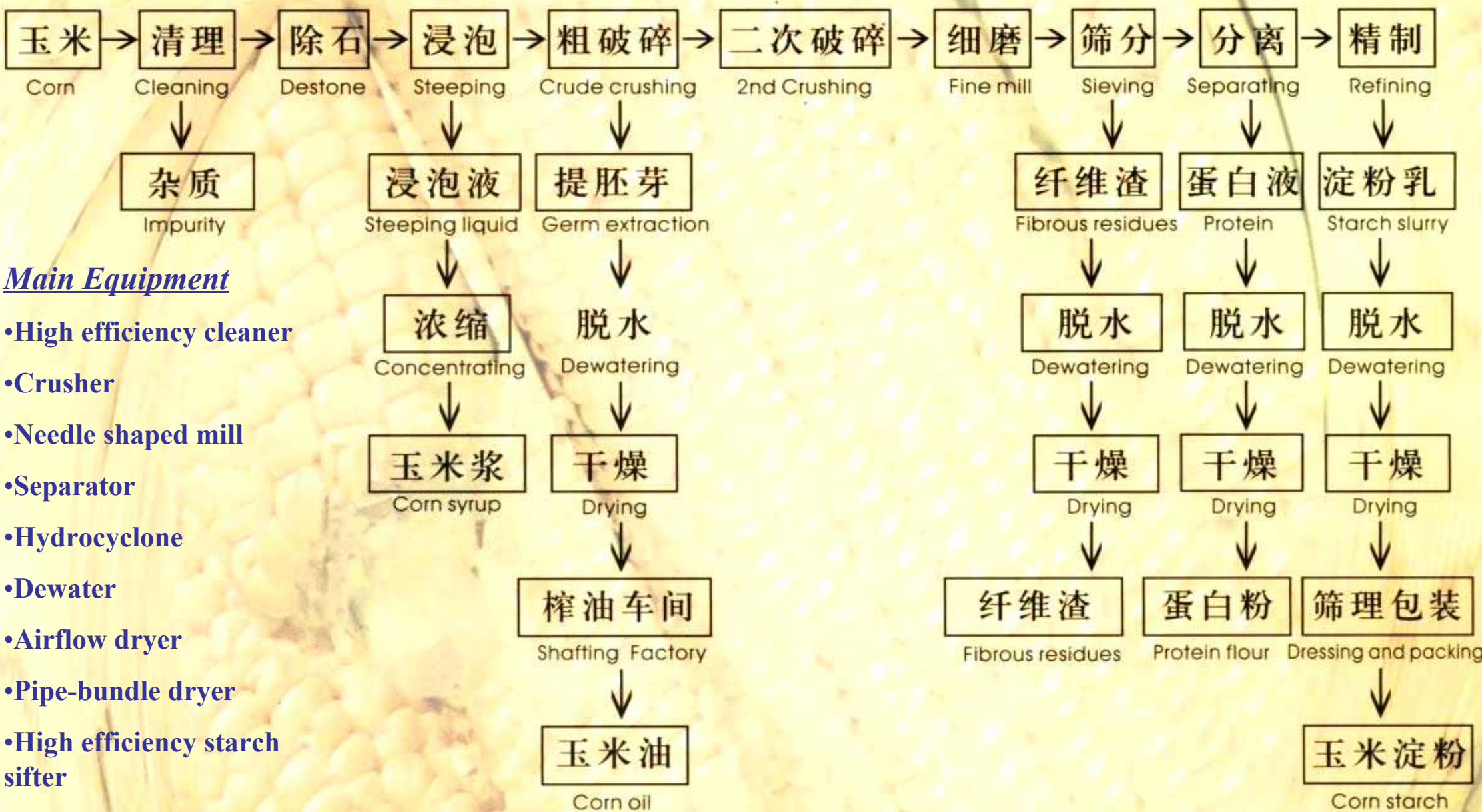


We provide the total technical solution and complete plant for the following starch production lines:

<b>Production Line</b>	<b>Processing Capacity</b>	<b>Output(Starch)</b>
<b>CORN STARCH</b>	<b>15,000-90,000 t/y</b>	<b>10,000-60,000 t/y</b>
<b>POTATO STARCH</b>	<b>10-40 t/h</b>	<b>1.6-6.6 t/h</b>
<b>WHEAT STARCH</b>	<b>3-5 t/h</b>	<b>0.6-1 t/h</b>
<b>SWEET POTATO STACH</b>	<b>10-40 t/h</b>	<b>1.6-6.6 t/h</b>
<b>CASSAVAS STARCH</b>	<b>5-30 t/h</b>	<b>1.2-7.5 t/h</b>
<b>DASHEEN STARCH, ACORN STARCH, BREEN BEAN AND PEA STARCH, MODIFIED STARCH, STARCH SUGAR</b>		

Remark: The output varies much depending on specification of the material as input. The figures of the above output is only for reference only.

# Corn Starch

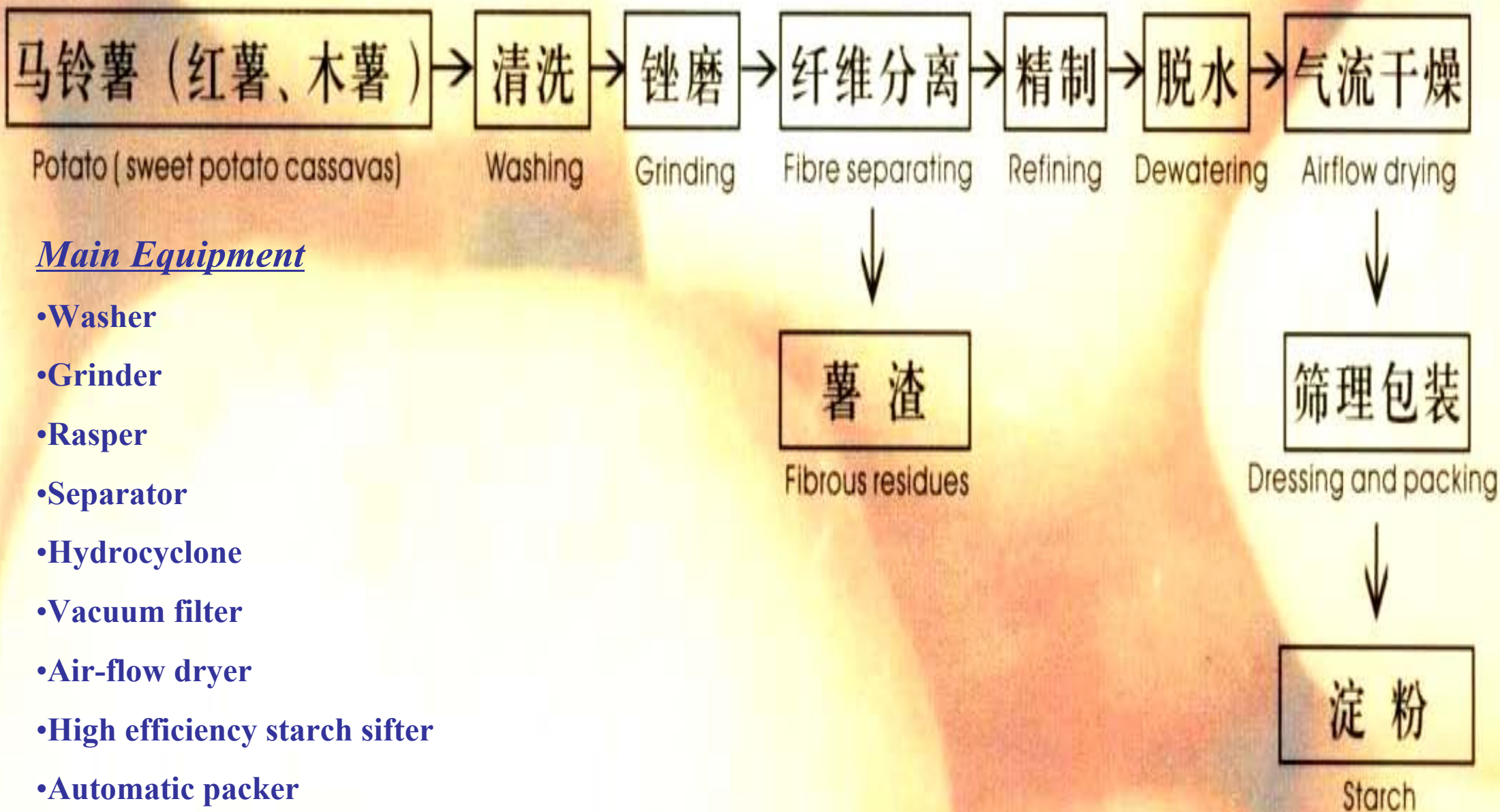


## Main Equipment

- High efficiency cleaner
- Crusher
- Needle shaped mill
- Separator
- Hydrocyclone
- Dewater
- Airflow dryer
- Pipe-bundle dryer
- High efficiency starch sifter
- Automatic packer



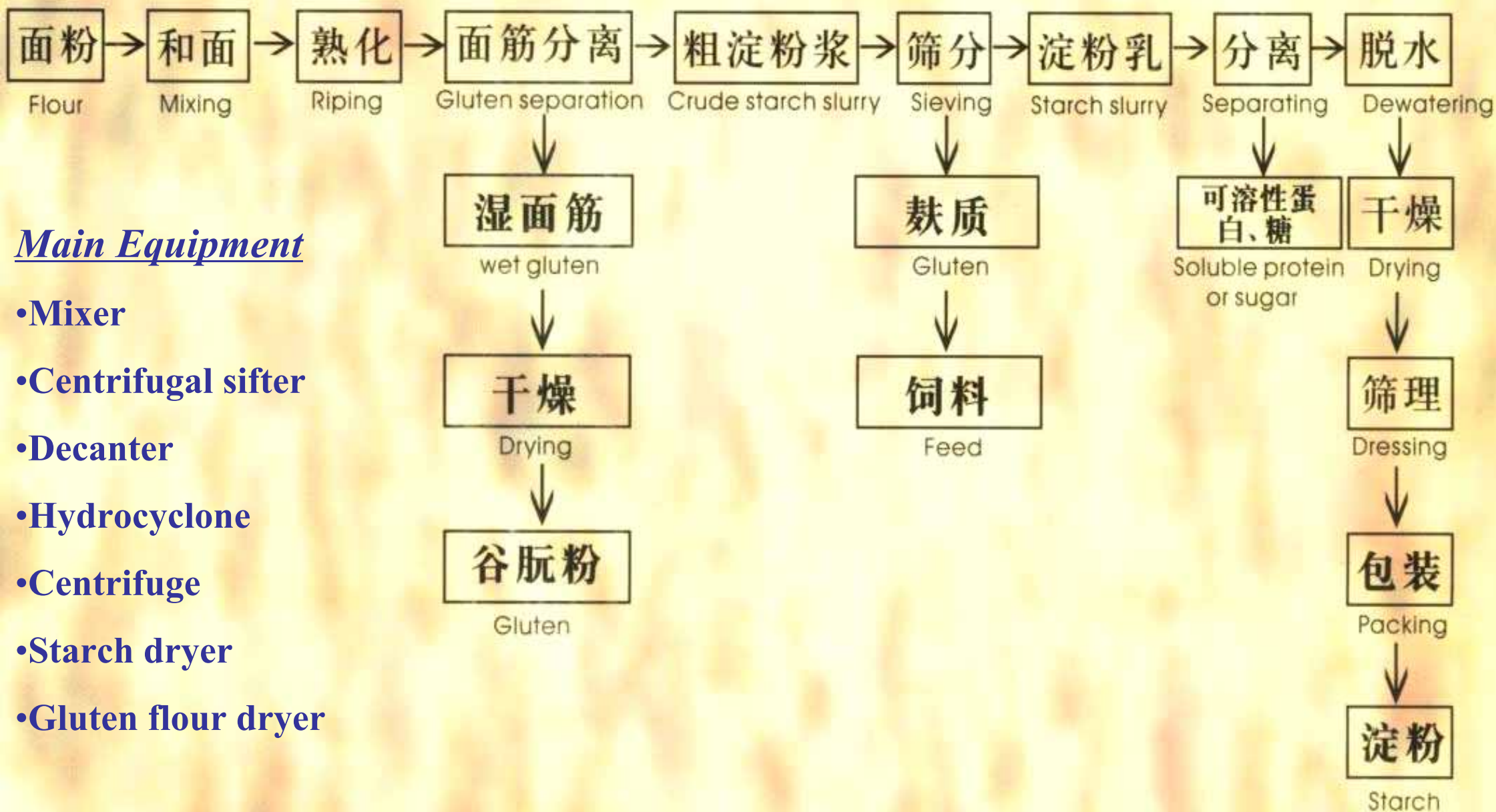
## Potato (Sweet Potato, Cassavas) Starch



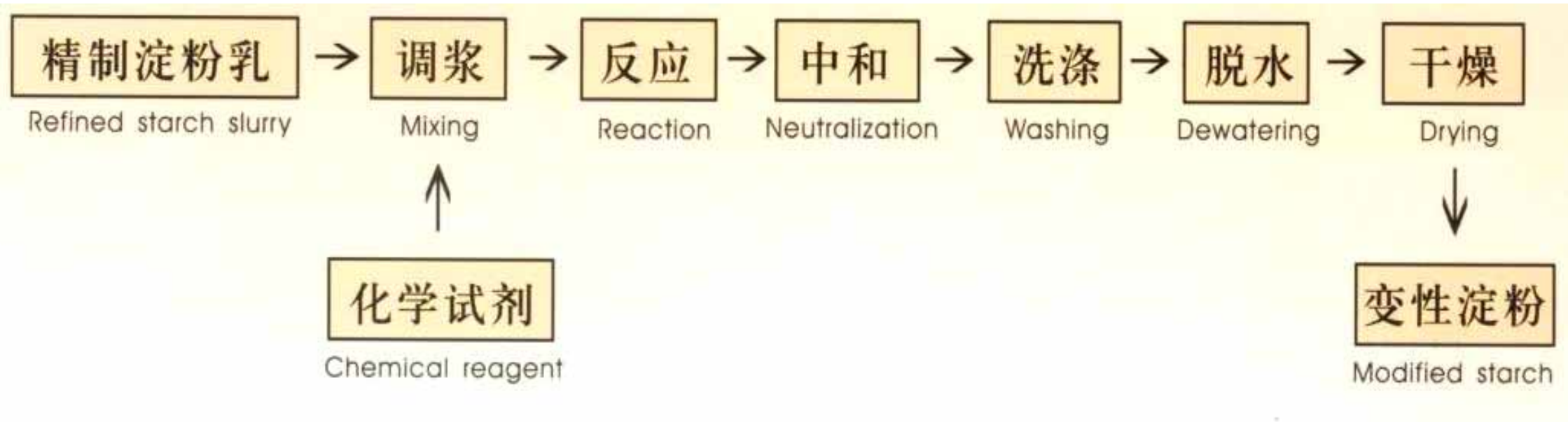
### Main Equipment

- Washer
- Grinder
- Rasper
- Separator
- Hydrocyclone
- Vacuum filter
- Air-flow dryer
- High efficiency starch sifter
- Automatic packer

# Wheat Starch



# Modified Starch

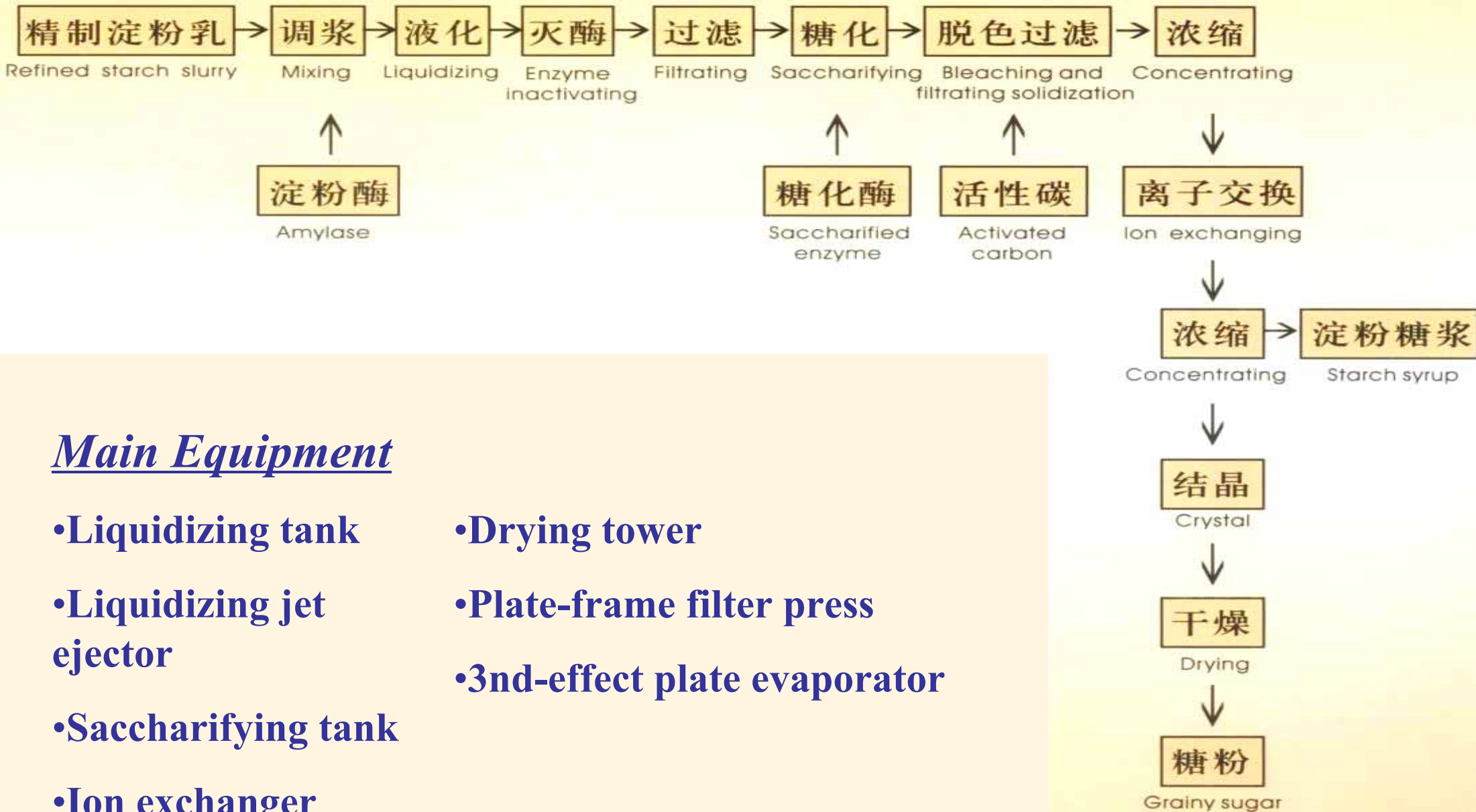


## Main Equipment

- Reaction tank
- Reagent tank
- hydrocyclone
- Centrifuge
- Dryer
- Packager



# Starch Sugar



## Main Equipment

- Liquidizing tank
- Liquidizing jet ejector
- Saccharifying tank
- Ion exchanger
- Drying tower
- Plate-frame filter press
- 3rd-effect plate evaporator

# 15 T/H Starch Plant, Changde, Chongqing



清洗车间模拟控制屏



人工除草机



高效滚筒清洗机与提升机



锉磨机



加工车间模拟控制屏



离心筛



淀粉旋流器



真空吸滤机



干燥车间模拟控制屏



喂料绞龙与扬升机



高效淀粉筛



自动包装机



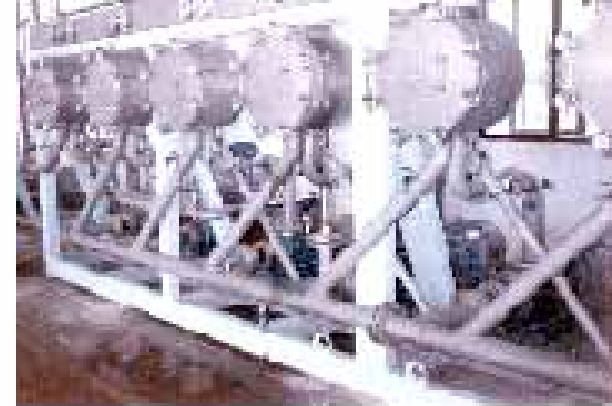
# 20 T/H Starch Plant, Feima Co., Neimeng



车间全景



车间外景



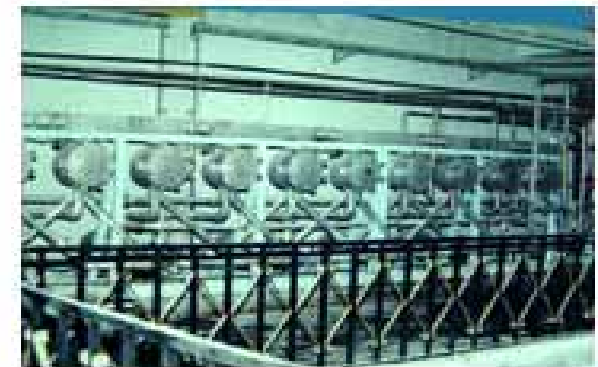
旋流器组1



MCC1



MCC2



旋流器组2

# 30 T/H Starch Plant, Korea



人工除莖机



高效滚筒清洗机



升降机



辊磨机



离心机



除砂器



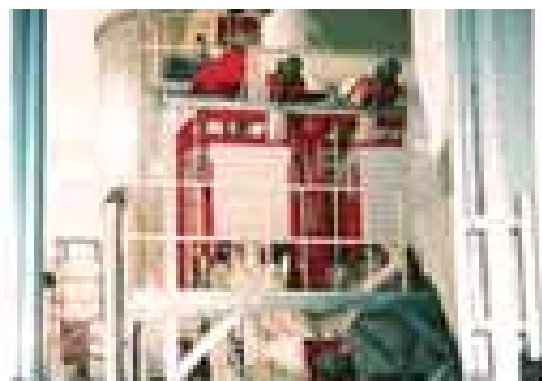
淀粉旋流器



淀粉乳罐



干燥系统



双仓高效淀粉筛



真空吸滤机与皮带输送机



螺旋输送机

# 30 T/H Starch Plant, Xuanwei, Yunnan



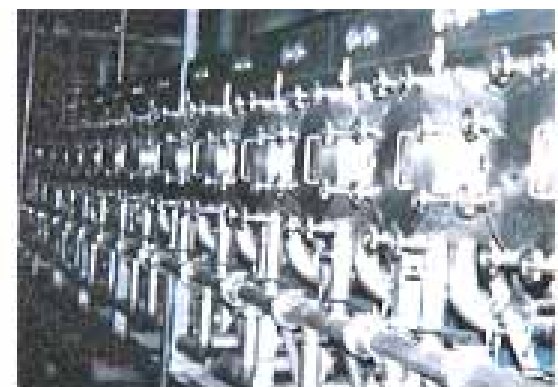
高效滚筒清洗机



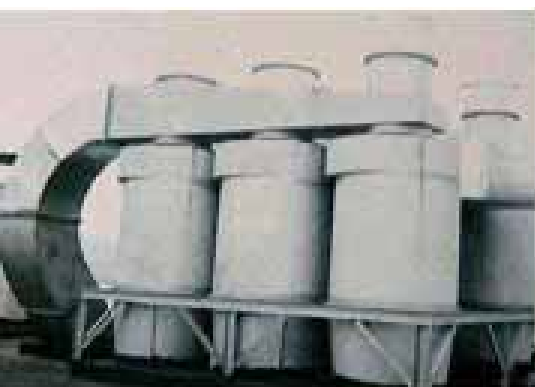
铤磨机



离心筛



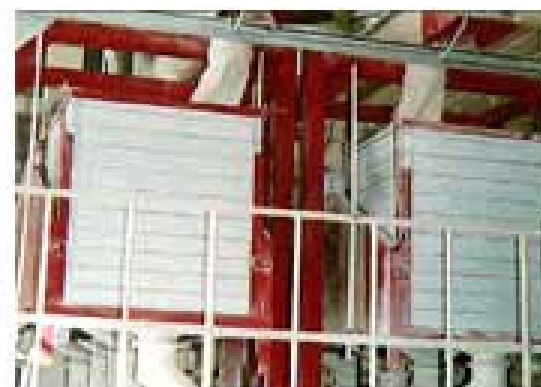
淀粉旋流器



气流干燥机



输送蛟龙与闭风器



双仓高效淀粉筛



自动包装系统



# 30 T/H Starch Plant, Xinda, Gansu



去石机



高效滚筒清洗机



锉磨机



除砂器



ZXS850型离心筛



淀粉旋流器



加工车间模拟控制屏



真空吸滤机



气流干燥机



淀粉螺旋输送机



高效淀粉筛



自动包装机

# 30 T/H Starch Plant, Zhangxian, Gansu



车间全景1



车间全景2



MCC



锉磨机

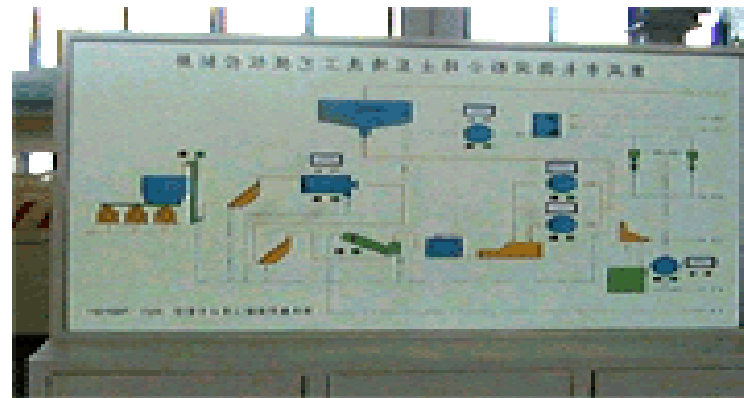


离心筛



清洗机

# Automation







## Description of Main Equipment

We developed a great deal of equipment for starch industry according to our long-term experience and practice.

The key equipment is made based on the introduced technology from Holland and other countries.

## High Efficiency Cleaner

High efficiency cleaner belongs to superior cleaning machinery, which is designed with combination of multi-ways in order to ensure both high efficiency and capacity, and with feeding roll, recycling air, multi-layer sieve board, sieving body hanged, plan rotary movement, convenient operating and repairing. It's widely used to separate the light, large, medium, small impurities from cereal such as wheat, corn and so on, with 90% of the cleaning efficiency.

**Cleaning Efficiency: over 90%**

**Power: 7.1—7.5 kW**

**Capacity: 50-100 T/H**



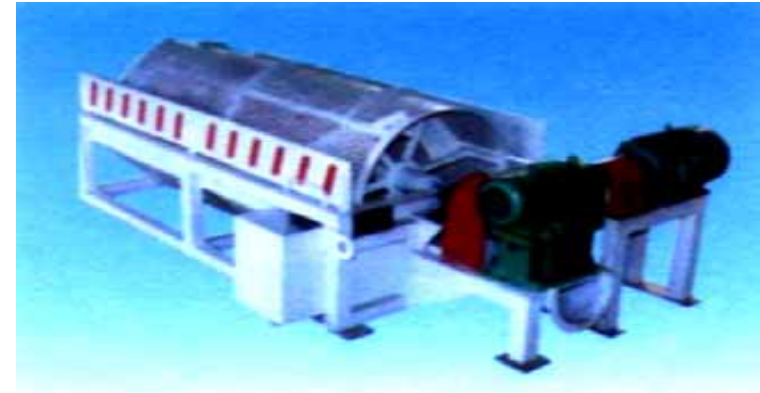
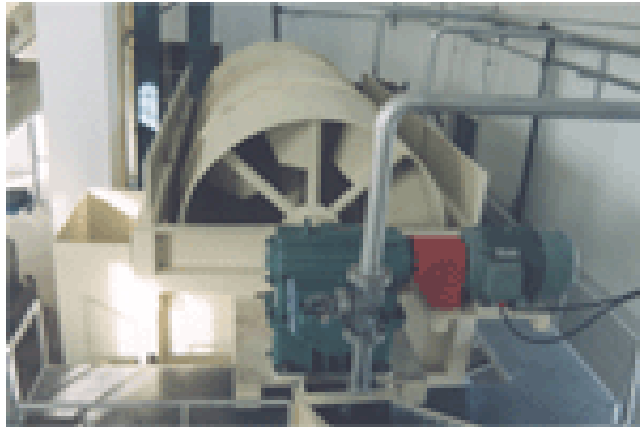
# Stone Remover





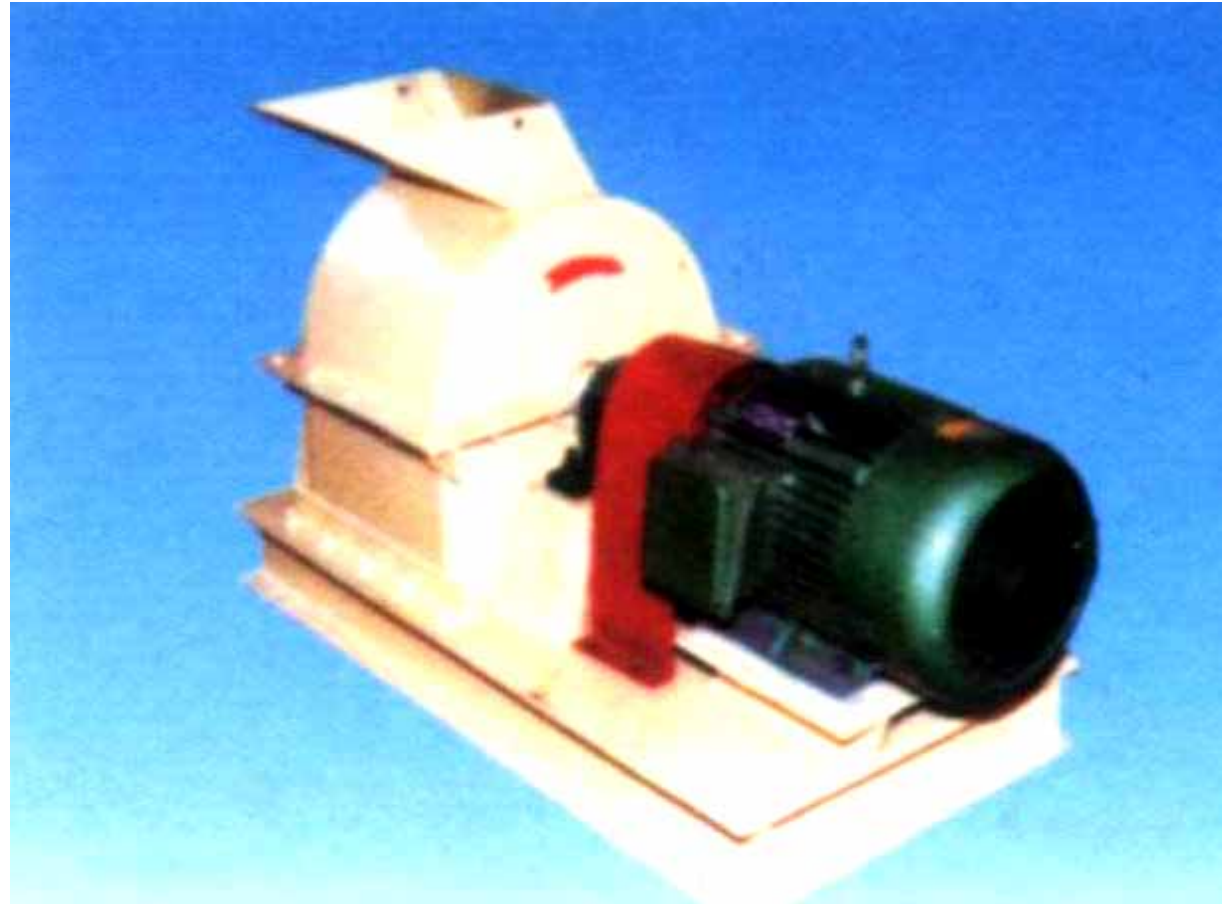
# Washer

The washer is manufactured based on the technology from Netherlands with washing capacity of 15-60 t/h potato, and with countercurrent cylinder, and they are the best machine for the potato starch plant.



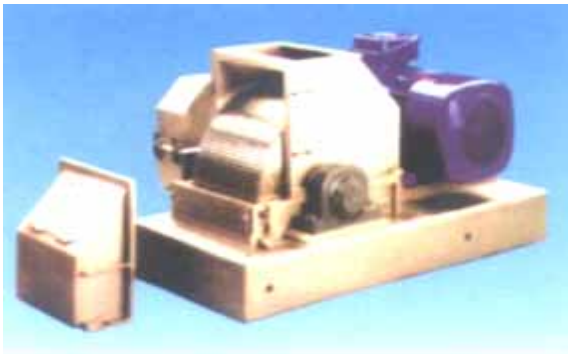
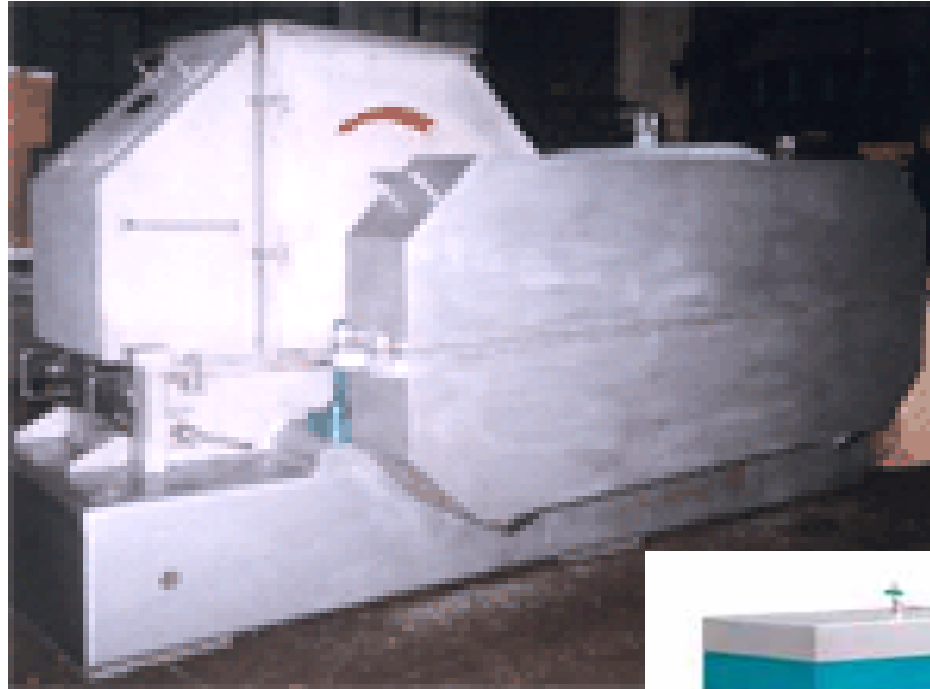
## Hammer Crusher

The hammer crusher has three different kinds of specification. The capacity of 5-15 t/h potato with the materials of carbon steel and stainless steel. It is used in starching processing of potato, sweet potato and cassavas with better grinding efficiency.



# Rasper

The rasper with high speed rotor is composed of over 30—100 saw blades, provides the highest grinding disintegration efficiency for potato, cassavas, sweet potato, which does better to starch cell breaking and separating and can raise higher starch recovery rate.

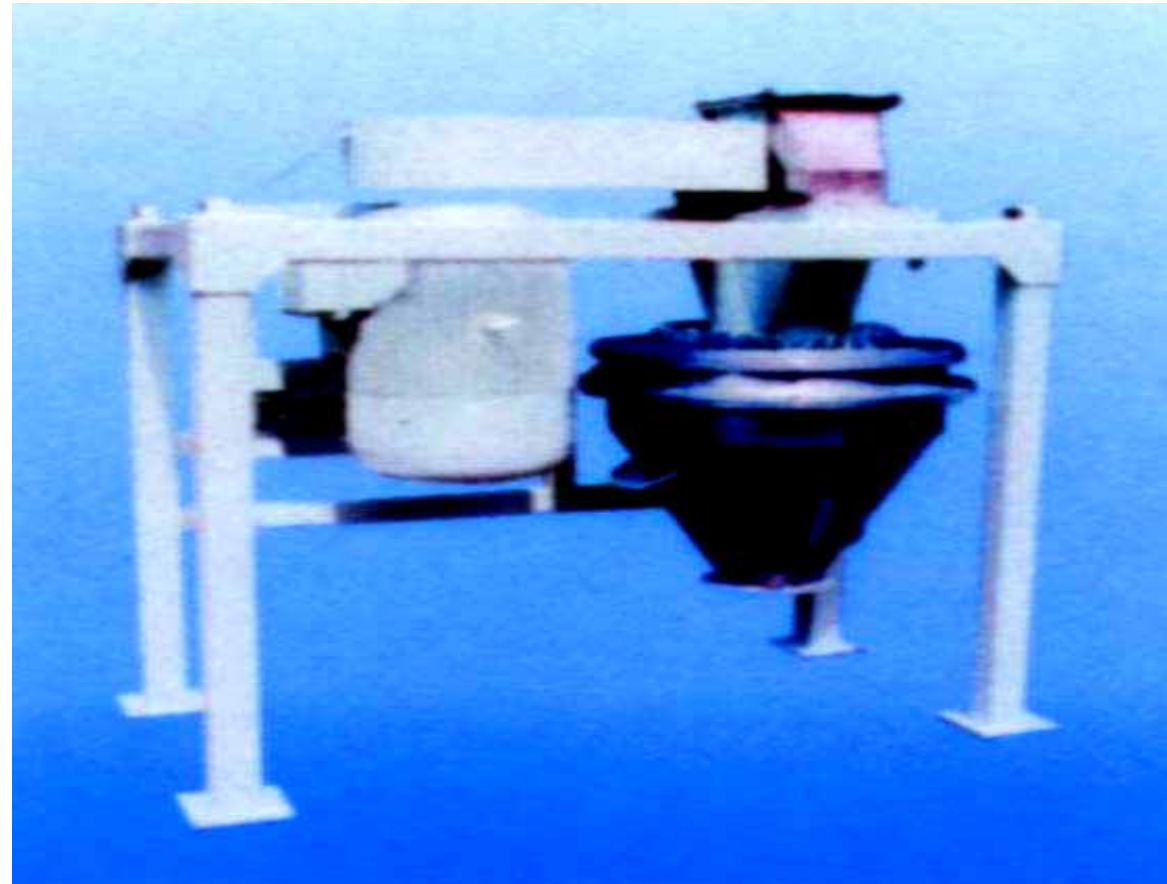


Capacity: 15-30 t/h



## Needle Shaped Mill

Needle shaped mill is high grinding efficiency fine mill, the principle is to loosen the combination action between the fiber and starch by stronger centrifugal crushing action and lower shearing action to keep bran suitable broken and form larger bran pieces, and easy bran separation from starch. It is used in grinding for corn, potato and others which is being crushed primarily.



Fineness: 50-100 mesh

Capacity: 3-5 t/h

## Centrifugal Sieve

Centrifugal sieve unit is used to separate the fibre, crystal or other solid from liquidized slurry with CIP online washing way to ensure producing continuance. It is widely used in starch industry because of the function of multi-grade erection without intermediate equipment.



## Pressure Crank Sieve

Pressure crank sieve is used to carry out the separating of liquid and solid by pressure, dewatering before fine grinding and other large amount of low solid content slurry.

Arc radius: 762 mm

Center wrap angle: 120

Sieve slit width: 0.03-0.15

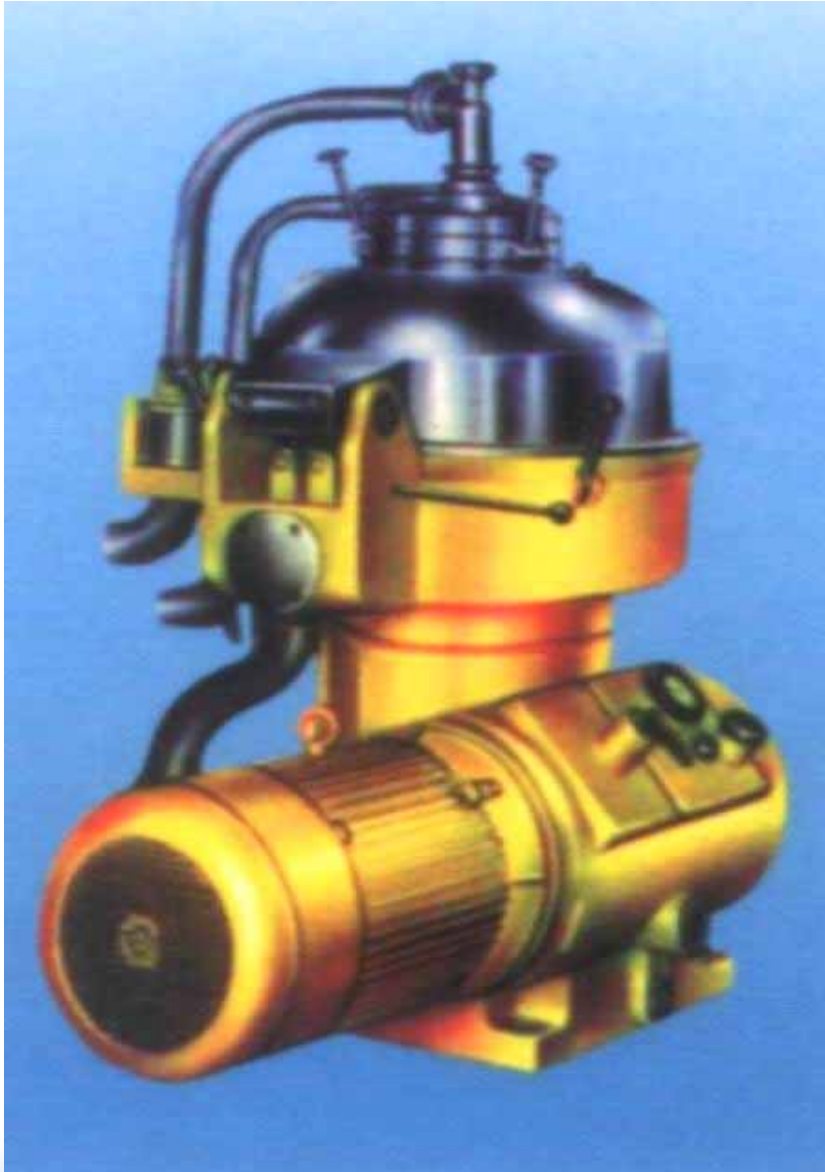
Feeding pressure: 0.2-0.4 MPa

Fiber remain content: 0.08 g/L

Capacity: 34—36 cubic M/H



## Separator



The separator can discharge continuously by nozzles, as result of higher separating factor, it has better efficient to separate the starch slurry with lower starch content, which is widely used to separate protein soluble matter from starch slurry.

Bowl Diameter: 445 mm

Speed: 4450 r/min

Separating factor: 4935

Processing Capacity: 30 cubic M/H



## Starch Hydrocyclone



Starch hydrocyclone is used to completely separate the fiber, fine bran and soluble matter from starch slurry to carry out the concentrating, washing and separating of starch slurry.

## Blade Centrifuge



Blade centrifuge is a kind of filtrating centrifuge with auto-recycling, blade discharging system, which can carry out nest washing stock in separating starch washing and dewatering and discharging, and be used in dewatering of corn, potato, cassavas and modified starches.

Bowl diameter: 800—1250 mm

Bowl volume: 95-225 L

Bowl speed: 1200—1420 r/min

Separating factor: 900--1000

# Vacuum Filter



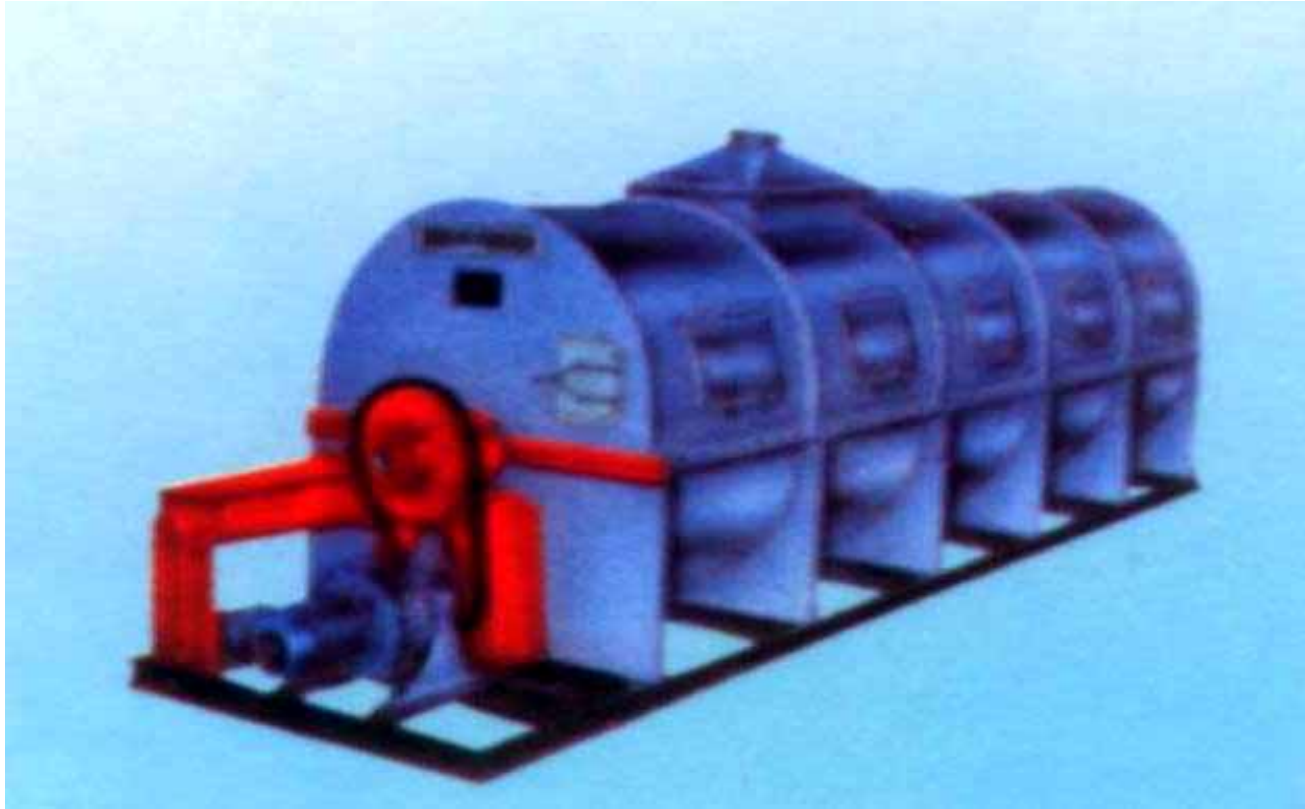
Filter area: 10-20 m; Output:2-7 t/h; 6-8 rpm

Vacuum filter is composed of rotary drum, starch storage tank, mixing device, scraping device, dynamic drive, adjustable washing device, gas-liquid separating tank and vacuum pump etc..

Compared with other dewatering equipment, vacuum filter has the following feature:

- Stable and continuously working, high vacuum degree, strong ability to dewatering, big output, non-noise, convenient maintenance, easily washing.
- The whole machine is made of stainless steel.
- High manufacturing precision, smooth and level surface, stainless steel sieve net, material even adhering, automatic advancing and retreating of blade.

## Pipe-Bundle Dryer



Speed: 3-7 r/min

Heat exchange area: 50—600 square meter

Drying strength 3-4.8 kg/square M

Pipe-bundle dryer is used in starch industry for the drying of germ, fiber and fibrous residues, which has higher drying efficiency through heat exchanging and radiation when wet matter comes into dryer by screw conveying, it moves ahead from inlet point to end point with blades stirring action, and keeps in negative pressure and the drying material runs in opposite direction to the steam.



## Airflow Dryer

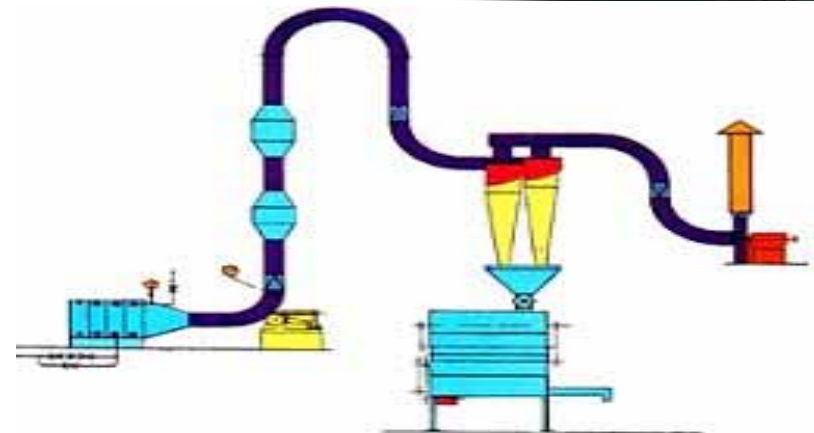
One grade negative air pressure dryer belongs to the advanced dryer internationally, which is widely used in corn starch, potato starch drying with features of reasonable structure, convenient erection, lower energy consumption and better suitability



Moisture of wet starch: less 40%

Moisture of dry starch: 12-18%

Capacity: 2.6-6.0 T/H



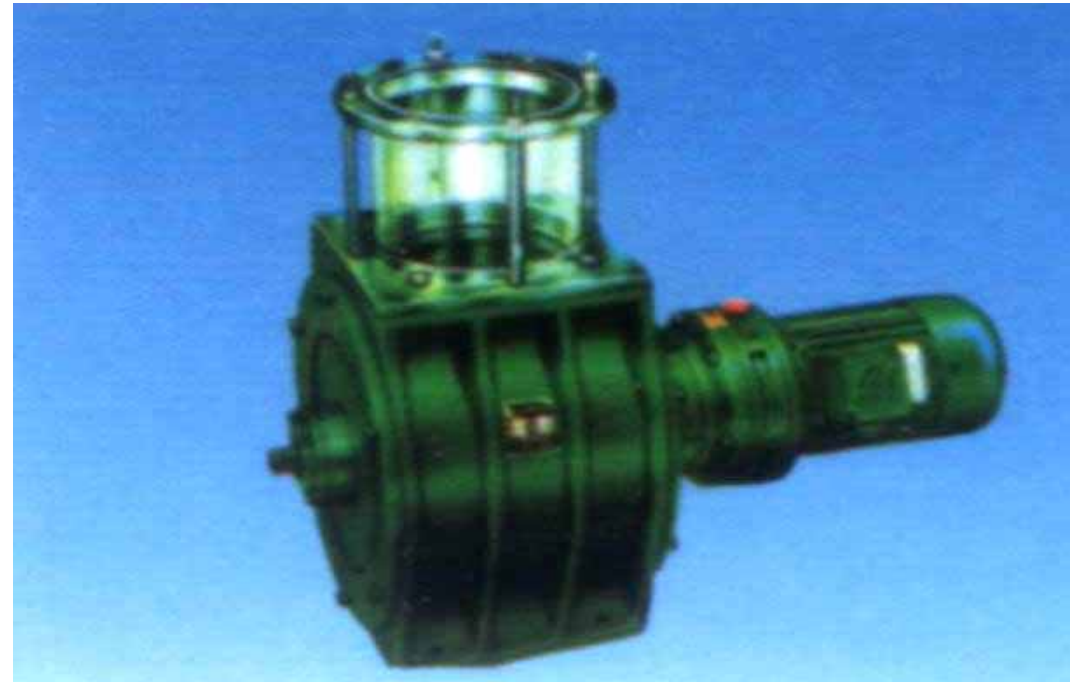
## Anti-Congestion Airlock

Anti-congestion airlock is a new type of specified starch equipment, which is designed, according to starch properties, to meet stock transportation requirement and anti-congestion as well.

Volume: 2.8—16 L

Lock diameter: 210—350 mm

Speed: 25-45 (with motor)



## Automatic Packager

Automatic packager has weighing, packing and conveying systems, which has been improved for long time according to the starch properties. It can be produced with given type and series, and it has higher weighing accuracy when self-self-sealed packing bag is used. Without weight-less, it is suitable for automatic packing of starch.

**Capacity: 100-320 Bags/H**

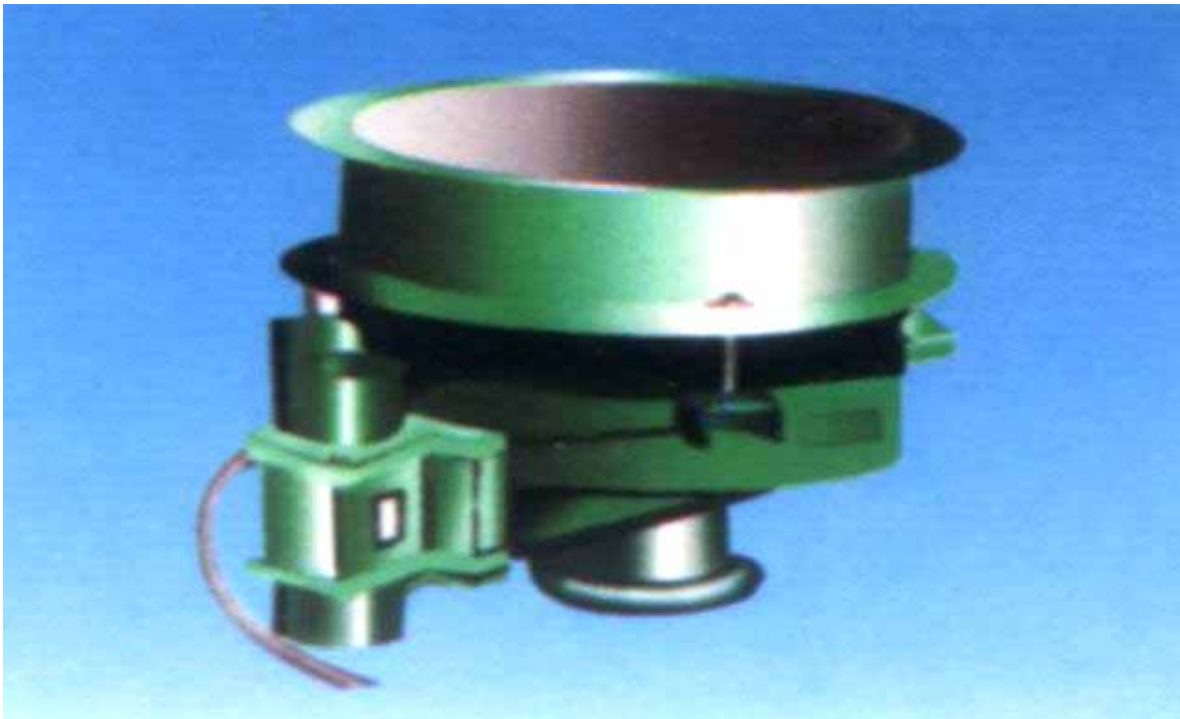
**Scale Range: 5-25 Kg, 25-50 Kg**

**Gas Consumption: 0.2 Cubic M/H, 0.4 MPa**



## Vibrating Feeder

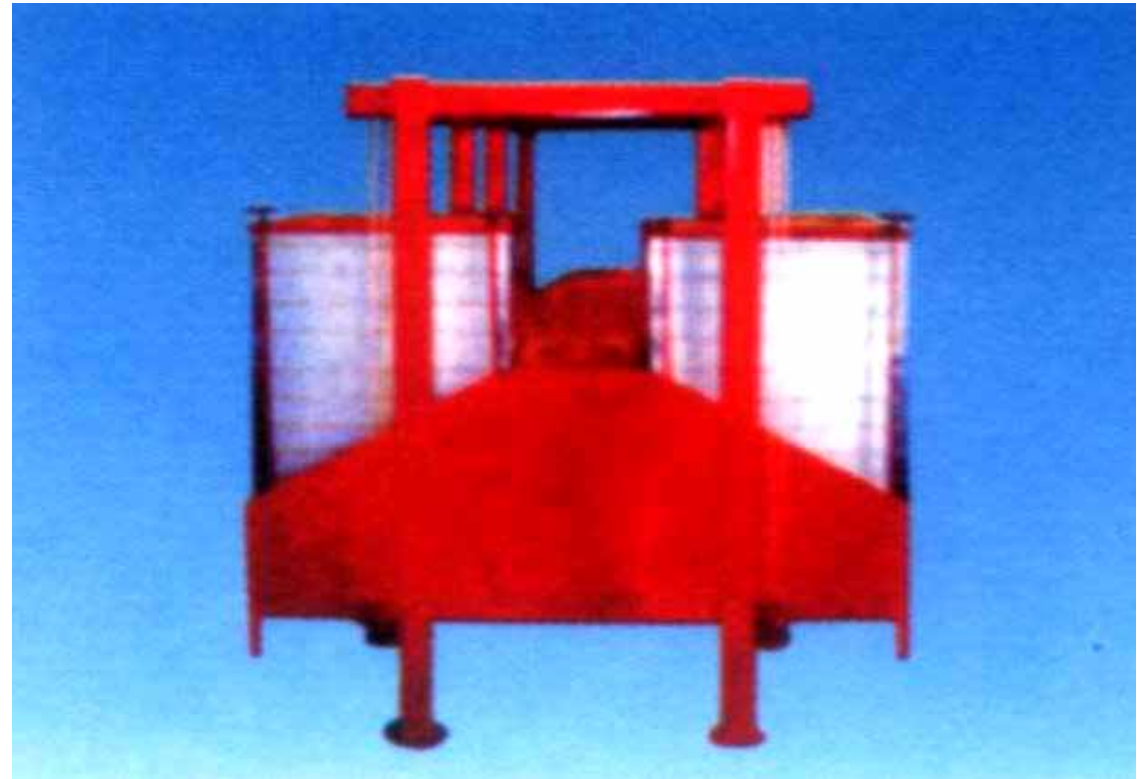
The vibrating feeder is used for continuous and uniform supply of grainy or floury stocked in bin to receiver with high vibrating frequency, and of higher measuring accuracy, lower energy consumption, better adjustability and no stock rushing.



Capacity: 0.5—10 t/h

## High Efficiency Starch Sifter

Starch sifter is designed and produced after a great deal of improvement according to starch properties and based on the technical absorption from BULER, OCRIM, which is suitable for the sieving of final starch and other floury materials, such as protein flour, fiber, grainy sugar, gluten and so on, with the features of longer sieving road, large area, low space occupation, high efficiency, low noisy and energy consumption, running stability, etc.



Bin Number: 1-2

Frame Number: 6-10

Sieve Area: 4.2-10 Square Meter

Capacity: 0.5-8 T/H



# Service

- **Advanced and reliable technology & engineering**
- **Procurement, manufacture, and delivery of the goods**
- **Project management**
- **Construction, installation, and commissioning**
- **Technical service**
- **Training program**
- **Service after completion of the project**
- **Financing assistance and export credit**
- **Other services and functions upon request**

**CREATE THE FUTURE**



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