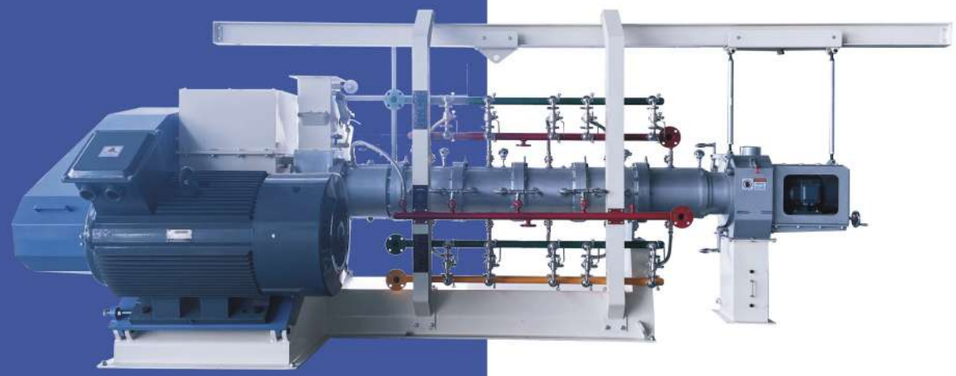
ADVANCED EXTRUDING FEED
PRODUCTION TECHNOLOGY
–Extruding/drying/coating



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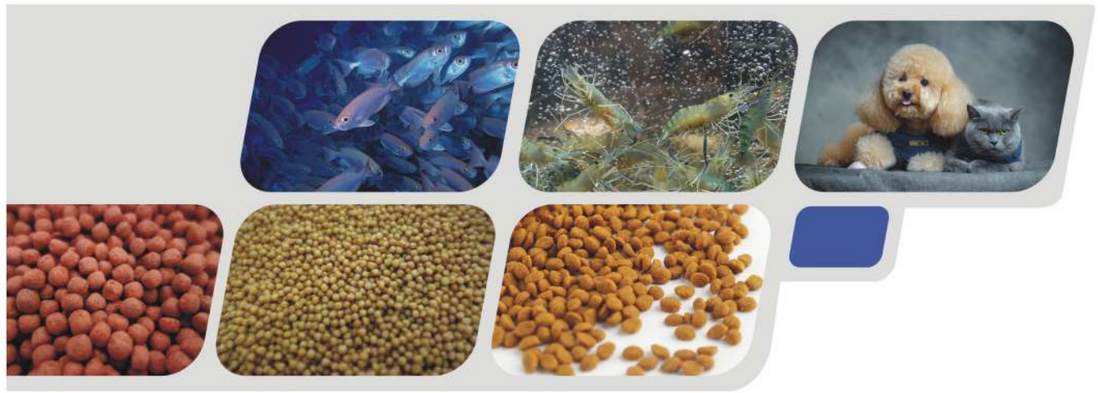
ADVANCED EXTRUDING FEED PRODUCTION TECHNOLOGY

Extruding/drying/coating



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ADVANCED EXTRUDING FEED PRODUCTION TECHNOLOGY

Advanced single screw and twin screw extruding technology

Hexie single screw extruder

Hexie single screw extruder machine is a classic extruding equipment, through the screw and cylinder friction on the material to form the material promotion, extrusion, simple structure, stable running, with the lowest running costs to produce high quality feed. The whole machine is composed of anti–arching accurate feeding system, DDC double–axis differential conditioning system, steam and liquid adding system, extruding system etc, which is one of the most stable extruding technology on the market.

Hexie twin-screw extruder

Twin–screw extruder screw section is "8" shape, the promotion and extruding of the material are completed between the two screws through the meshing and separation movement of the two screws, the material is not easy to bond, not easy to produce countercurrent, generally can be adjusted screw speed according to the characteristics of the material during processing. The twin–screw extruder has the advantages of strong adaptability, sliding transport and self–cleaning, It is generally used in the production of aquatic feed with high added value and high fat, also used in the production of pet food containing high meat pulp or fresh meat.

Hexie single screw extruder ↑

Hexie twin–screw extruder ↑

ADVANCED EXTRUDING FEED PRODUCTION TECHNOLOGY

Technical Description

Single screw extruder ↑

↑ Twin–screw extruder

Number of screw	Single screw				Twin–screw	
Model	EX135	EX165	EX190	EX235	EX138 × 2	EX158 × 2
Screw diameter (mm)	135	165	190	235	138 × 2	158 × 2
Conditioning power (kw)	2.2 × 2	7.5	11	18.5	18.5 × 2	22 × 2
Main power (kw)	55/75	110	160	315	200	315
Cutter power (kw)	3	3	4	7.5	5.5	11
Capacity (t/h)	0.6–1	1.5–2.5	4–6	8–10	4–7	9–12

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DRYING TECHNOLOGY OF EXTRUDING FEED

Extruding feed drying technology refers to the extruded feed is placed in the drying equipment, through heating, dehumidification and other means to reduce its water content to a certain range, in order to meet the requirements of feed storage, transportation and use.

The drying technology of extruding feed mainly involves the process flow including heating, dehumidification, cooling and so on, different process flow and parameter settings will affect the effect and quality of feed drying.

The drying technology of extruding feed is an important link in feed production, which needs to save energy as much as possible under the premise of ensuring feed quality and nutritional content.

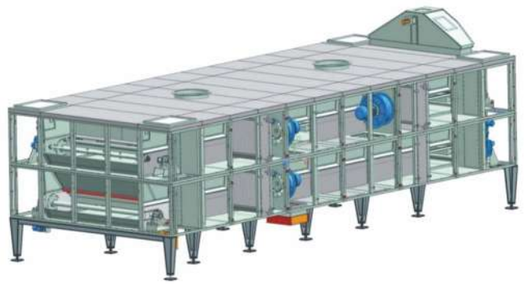
HXHZD series partition horizontal dryer is analyzed and compared by our technical staff on the drying equipment of many companies in the same industry from the aspects of production capacity, steam energy consumption, drying water uniformity, equipment operation stability etc, and on the premise of fully researching the actual production and operation of the equipment, the new generation of drying equipment is independently developed, which has the characteristics of compact structure, high thermal efficiency and uniform drying and dehydration.

DRYER CAPACITY TABLE ↓

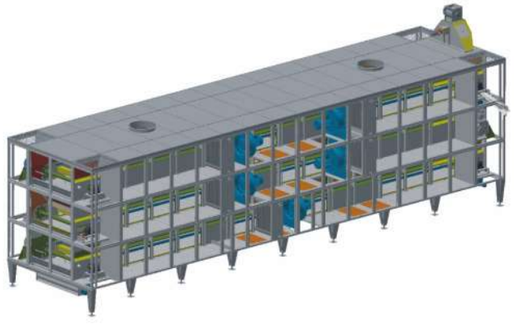
Model	Capacity of floating(t/h)	Capacity of sinking(t/h)
HXHZD4X10X2	3–5	2–3
HXHZD4X12X2	5–6	2–4
HXHZD4X14X2	6–8	3–5
HXHZD4X16X2	7–9	4–6
HXHZD4X18X2	8–10	5–7
HXHZD4.5X22X2	13–15	10–12
HXHZD5X12X2	8–10	5–7
HXHZD5X14X2	9–11	6–8
HXHZD5X16X2	10–12	7–9
HXHZD5X16X3	15–16	11–13

Modular design according to customer workshop conditions

↑ Division Horizontal dryer



↑ Double–layer dryer structure



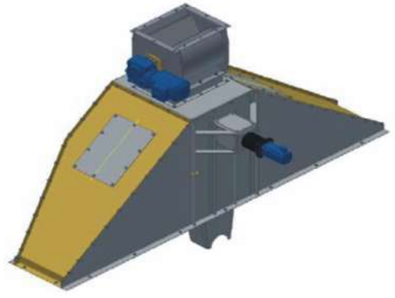
↑ Three–layer dryer structure

DRYING TECHNOLOGY OF EXTRUDING FEED

Technical Description

SERVO PENDULUM DISTRIBUTOR

The distributing device is controlled by Siemens controller and servo motor, which can freely set the width of the cloth and the speed of each point in the distributing process, effectively improve the uniformity of the material on the screen plate, avoid the short–circuit phenomenon in the air path, and affect the uniformity of drying water



SERVO PENDULUM DISTRIBUTOR ↑

HEAT PRESERVATION TREATMENT

The HXHZD type dryer is covered with 50mm insulation layer around the body, and the top is covered with 100mm insulation layer, which effectively reduces the heat loss. The body of the dryer is higher 5–10 degrees than the ambient temperature, and the energy saving is 10%–30% compared with the old dryer without good insulation layer.

HEAT PRESERVATION TREATMENT ↑

SIEVE PLATE

The sieve plate is made of stainless steel plate punching long round holes and coated with stainless steel wire mesh. This process can produce all particles above 1.0mm, and increase the opening rate of the original screen plate by nearly 30%. Moreover, the screen plate is sprayed with sintered Teflon anti–stick material, which has the characteristics of non–stick material, which can effectively reduce the number of cleaning screen plates, reduce labor force and improve production efficiency.

SIEVE PLATE ↑

SIEVE MESH

Adopt high temperature polyester mesh belt imported from Germany, the effective diameter can reach 0.4mm, suitable for small particle size of extruding feed, with high porosity, uniform air distribution characteristics.

SIEVE MESH ↑

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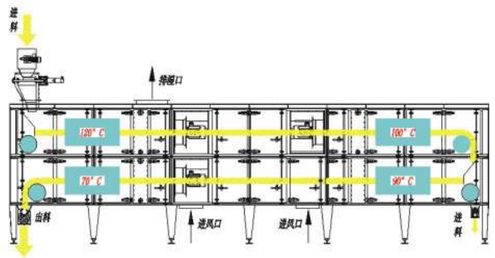
DRYING TECHNOLOGY OF EXTRUDING FEED

Technical Description

STRUCTURE

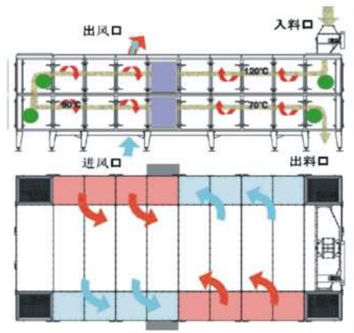
Horizontal forward zoning reflects the working mechanism of high moisture and high temperature drying and low moisture segregation drying, which can achieve low discharge temperature and retain more nutrients in feed while saving energy.



STRUCTURE ↑

WIND PATH

The single wet discharge port is used to effectively control the moisture discharge. And the use of upper and lower, left and right circulation air path, effectively improve the uniformity of drying water, drying uniformity is not higher than ± 0.75% water.



WIND PATH ↑

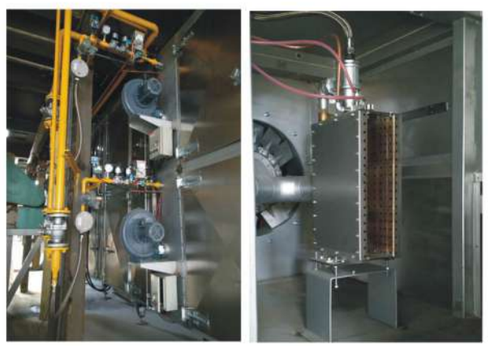
CONTROL

Automatic control system (automatic moisture removal, automatic temperature control, automatic adjustment of the size of the butterfly valve, formula record management function and remote detection function), simple operation, stable control, weakening human factors.

CONTROL ↑

HEAT SOURCE

Can choose to use a variety of heat sources, flexible and stable control oven temperature in 60~130℃ adjustable.



HEAT SOURCE ↑

EXTRUDED FEED PRODUCTION SITE

Division Horizontal dryer ↑

Aquatic extruder ↑

COATING TECHNOLOGY

Hexie vacuum coating technology

Hexie vacuum coating technology

Coater model	PTZL1000
Capacity	3000L
Material filling	2000L
Density = 500 g/L	1000KG
Batch	12
Spray volume	12000kg

Structural features

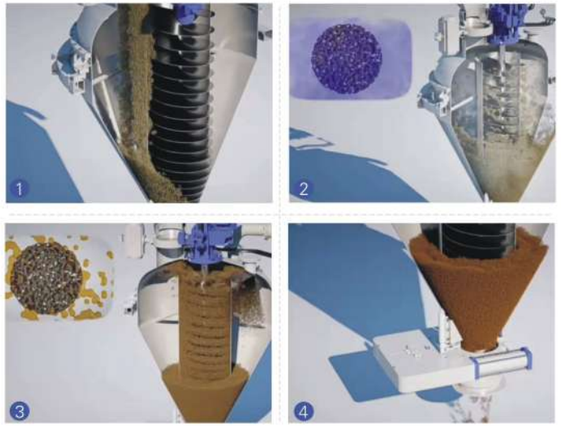
Centralized Liquid distributor
Six nozzle output of liquid
Spirit easy operationcheck window
Cip nozzle
There is no leakage of imported
Valves and exit slips
Hybrid spiral soft design
Vacuum connection
Compensation valve

COATING TECHNOLOGY

Hexie vacuum coating technology

INTELLIGENT CONTROL

Process control of vacuum coater
Interact with factory controls
Formula information interface
Consumption report
Alerts and events
Traceability
Easy to operate

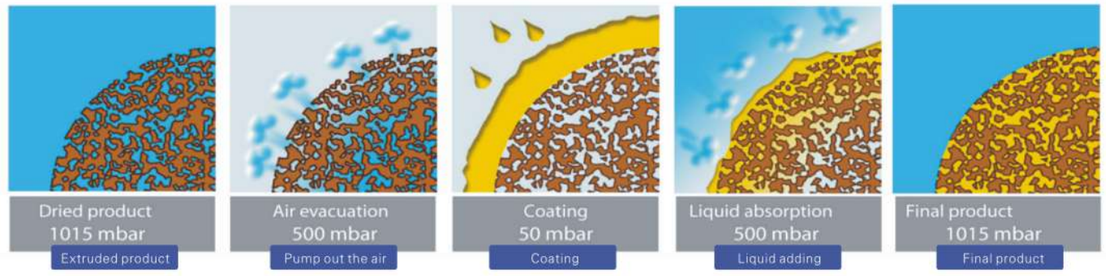


COATING TECHNOLOGY

1. Sprayer starts to loading
2. Pump to 80Mbar
3. The amount of jets is as high as 45%
4. Separate fabric

COATING PROCESSING

Vacuum pressure/liquid adding/cycle time, generate flexibility and repeatability in absorption and penetration



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COATING TECHNOLOGY

Drum coater

Drum coater apply oils, fats and other nutritional additives to pellet and extruding feed by coating the finished pellet surface to make it tastier, improve feed conversion and ultimately increase growth rates, this special coating technology provides controlled atomization and precise volume control to achieve different feed formulations to meet various nutritional needs.

↓Main characteristic

Particles enter the inclined drum continuously through the entrance, and when the drum rotates, the entered particles roll, thus forming a particle layer on the inner wall. Each particle comes into contact with the spray from the nozzle as it falls. When the particles roll towards the outlet, the particles have been fully soaked in the liquid. General oil coating capacity from 1%–7%.

Model	Power(kw)	Capacity(t/h)	Oil coating capacity
SYLV80	1.5+2.2	1–3	1%–7%
SYLV100	1.5+2.2	3–8	
SYLV120	1.5+3.0	10–15	

OTHER PRODUCTS

SFSP series Hammer Mill ↑

HHDJ Double–Layer Convection Paddle Mixer ↑

PMV Pellet feed pellet machine ↑

SWDJ series feed stabilizer ↑

SKLN series counter flow cooler ↑

SSLG series roller crumbler ↑

SFJZ series vibration grading screener ↑

TDTG Bucket Elevator ↑

DCS Automatic Packing Machine ↑