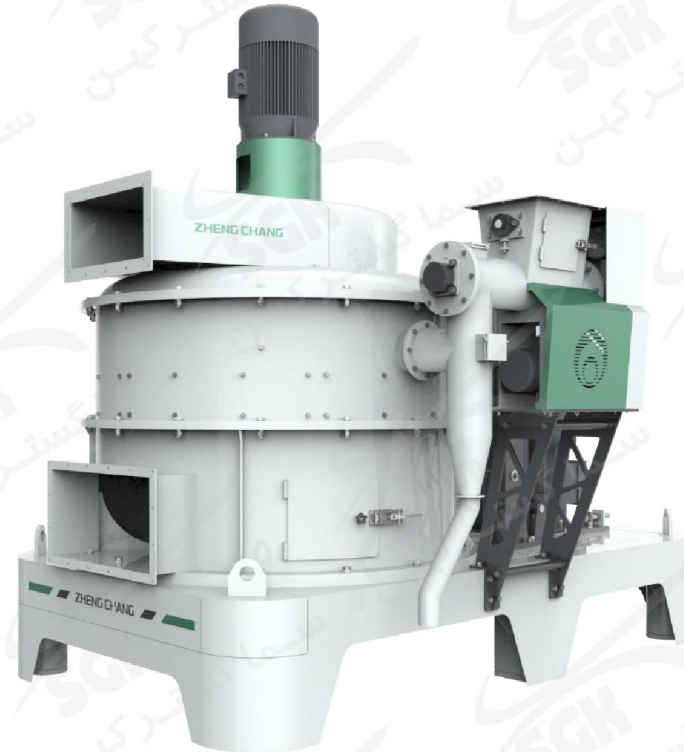
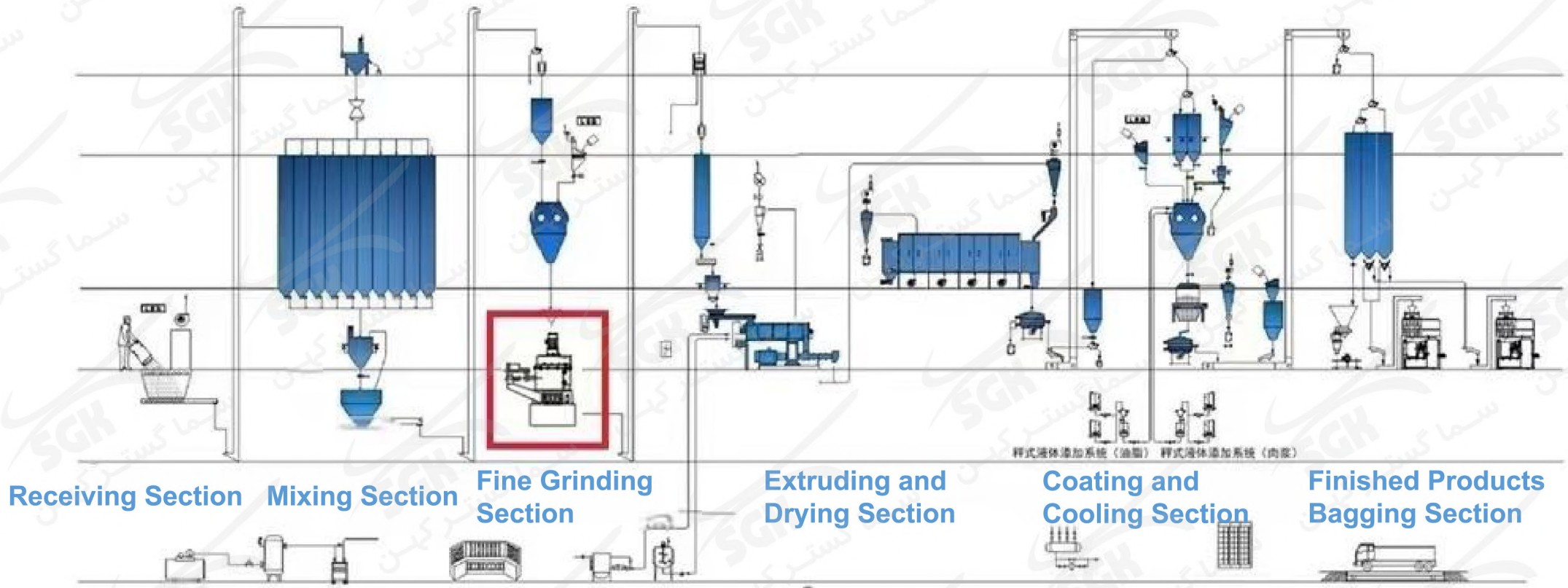


SWFL Vertical Pulverizer

Zhengchang Research Institute



Stability and Reliability Contribute to Long-term Development



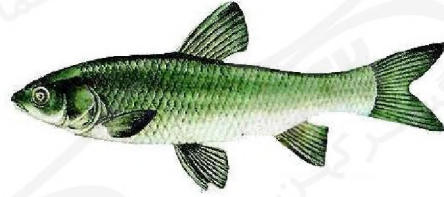
Fine grinding is one of the important sections in the production process of aquatic feeds. For aquatic feeds and special animal feeds, in order to obtain good manufacturability and ensure the high quality of the feeds in the production process, it is necessary to fine grind the materials. Therefore, the uniformity of grinding fineness and energy consumption of the pulverizer will have an important impact on the production performance, efficiency and physical and chemical quality of the subsequent pelleting and extruding processes.

Zhengchang Series Pulverizer

Zhengchang Vertical Pulverizer Classification

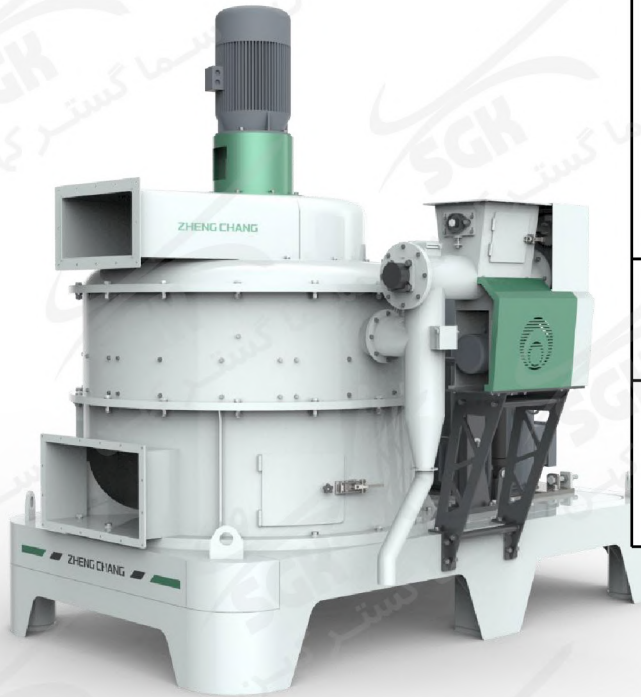
vertical pulverizer

SWFL102
SWFL130
SWFL150
SWFL170



Zhengchang vertical pulverizer is widely used in feed, food, chemical, pharmaceutical and other industries, especially the feed industry. Pulverizer is one of the most important equipment in special aquatic feed mill. As a feed processing equipment, it is especially suitable for fine grinding of raw materials for shrimp feed, eel feed, crab feed, and young animal feed.

Vertical Pulverizer (SWFL Series)

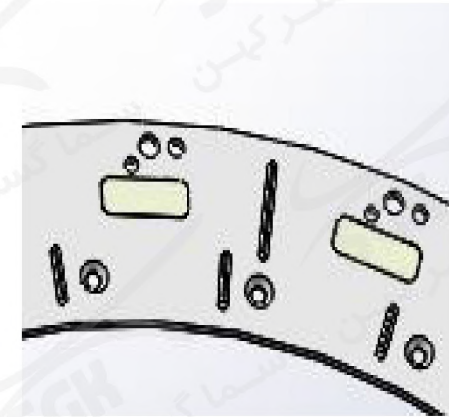
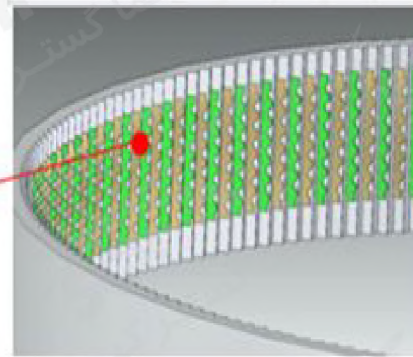
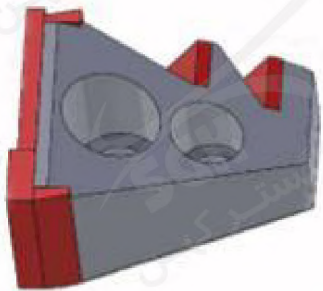


Item		SWFL102	SWFL130	SWFL150	SWFL170
Power	Main Motor (KW)	75/90	132/160	160/200	220/250
	Grading Wheel Motor(KW)	15	15	18.5	18.5
	Feeding Motor (KW)	1.1	1.5	1.5	1.5
Grinding Cutterhead Diameter (mm)		1020	1300	1500	1700
Capacity	95% pass through 80 mesh	2-3t	4-6t	6-8t	7-9t

The above capacity is achieved when the following conditions are met:

- secondary grinding process
- Pre-grinder screen hole size $\leq \phi 1.5\text{mm}$
- fat content $\leq 8\%$
- water content $\leq 10.5\%$
- Common feed formula of Vannamei

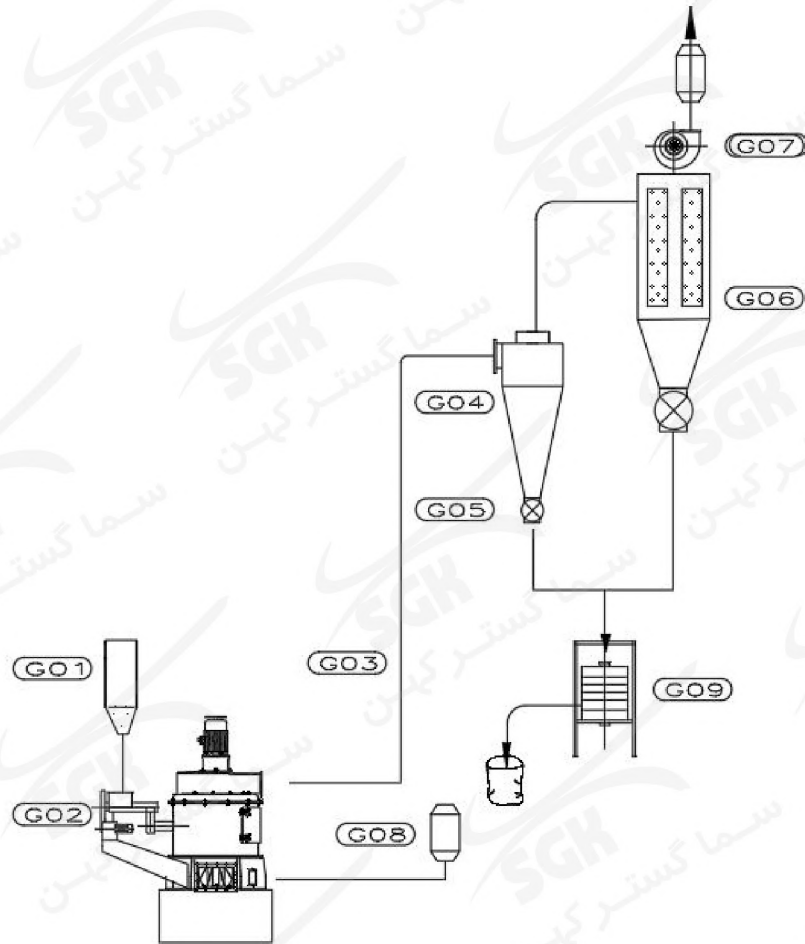
- The alloy sheet protection on the easily worn part of the hammer head improves the grinding efficiency and increases the service life. The service life of the hammer head is 4000-5000 tons.
- The position of the alloy sheet is reasonably arranged for the wear-resistant plate, and the material of the matrix and the alloy sheet is upgraded. The service life of the wear-resistant plate is 4000-5000 tons.
- The wave-shaped alloy sheet is used in the ring gear to increase the length of the cutting edge, and the staggered installation destroys the circulation layer and improves the strike efficiency. The service life of the ring gear is 10,000-15,000 tons. According to different application occasions, helical tooth form is adopted to further improve the discharge efficiency.



- Application of high-quality sensors, main bearing temperature measuring device, body vibration detection device, grading wheel speed detection device, inspection door safety interlock device, real-time monitoring of equipment operating parameters and status, safer, and precise control of finished products.
- The cutter body is adjusted by a high-precision balancer, and the vibration amplitude of the whole equipment is less than 12mm/s.
- The heavy-duty frame can be equipped with shock absorbers to reduce vibration, increase reliability and stability and prolong service life.
- Hydraulic cover lifting device, convenient and fast maintenance.



Zhengchang Fine Grinding System



G01 Pre-fine grinding Bin

G02 Pulverizer

G03 Suction Duct

G04 Cyclone

G05 Airlock

G06 Cylinder Pulse Dust Collector

G07 High Pressure Fan

G08 Silencer

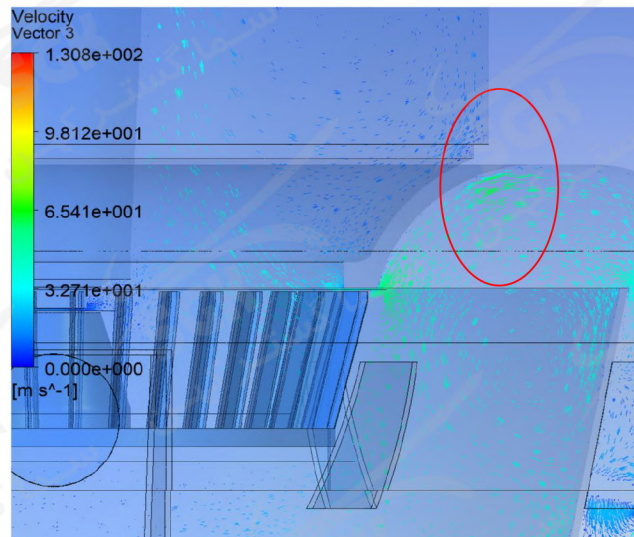
G09 Drawer Type Powder Sieve

Standard Process Flow Chart of Fine Grinding System

CFD Airflow Simulation

The analysis of the internal flow field of the pulverizer is very important. By studying the influence of each component on the flow field of the material inside the pulverizer, targeted improvements are made to further improve the pulverizer's grinding ability and screening effect on materials.

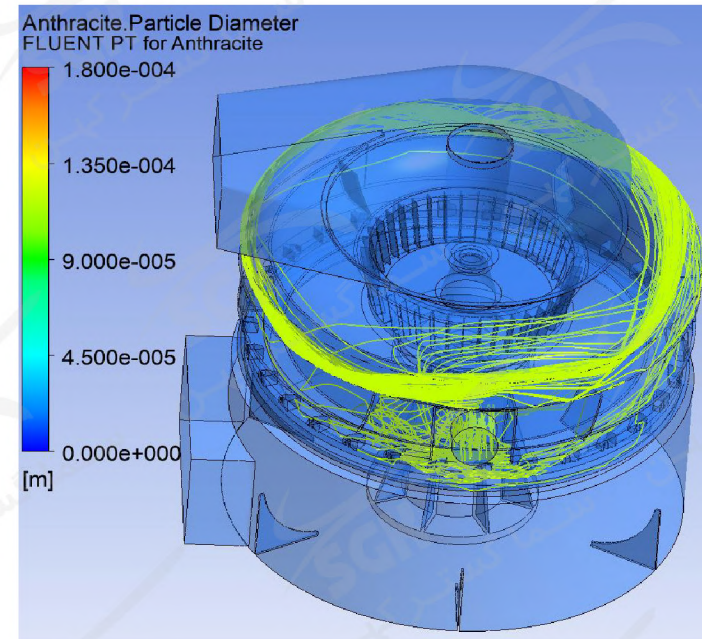
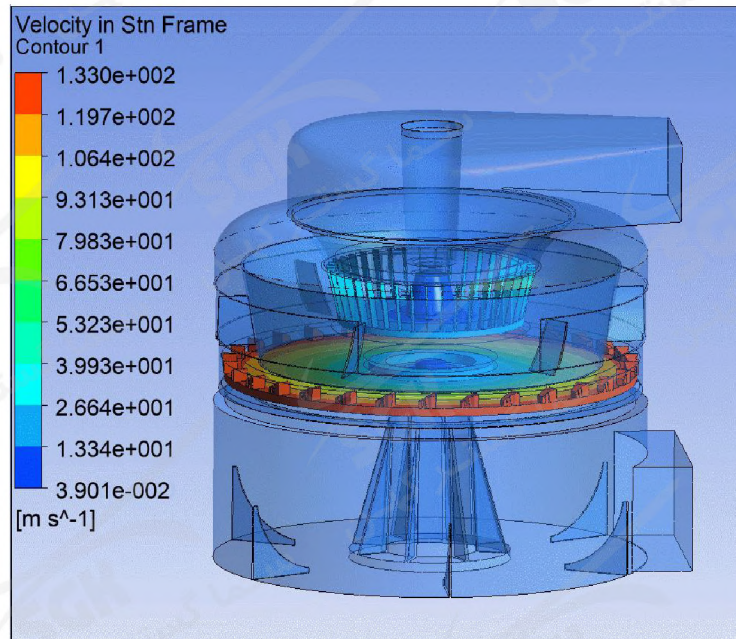
For the screening section above the pulverizer: convex cover, grading wheel, ring gear guide ring and other structures, the influence of this area on the screening is studied.



From the perspective of the velocity field, in the original structure, the space between the ring gear guide ring and the classifying wheel is too large, resulting in a vortex in the area, which is not conducive to powder entering the grading wheel area for screening. Some of the subdivided materials that could have been sieved failed to reach the effective screening area, but fall to the grinding disc, and go through the grinding section again. This will exacerbate the over-grinding phenomenon and also weaken the output performance. Therefore, we have made targeted improvements to the ring gear guide ring to solve this problem.

CFD Airflow Simulation

Study the influence of the swirling air flow formed by the rotation of the grinding disc.



Application in Engineering Site



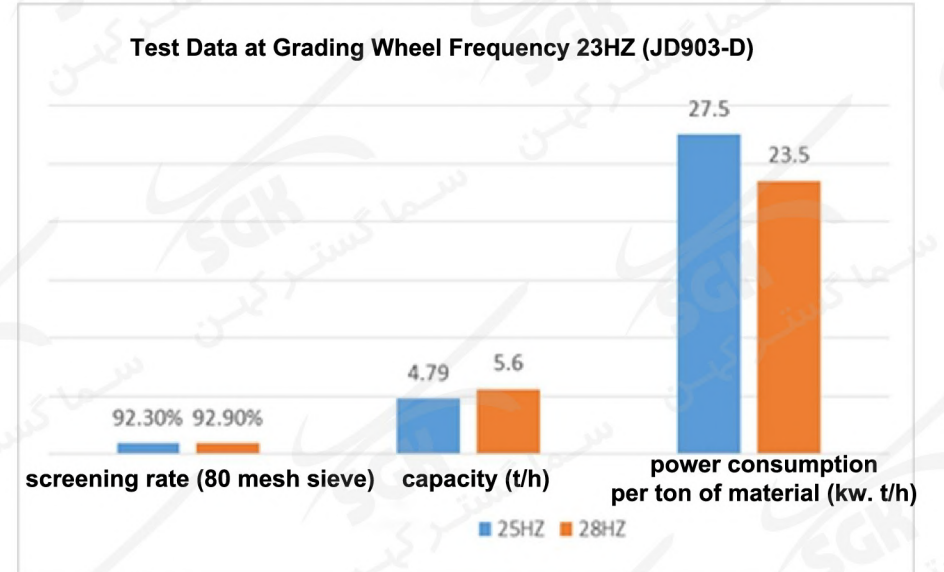
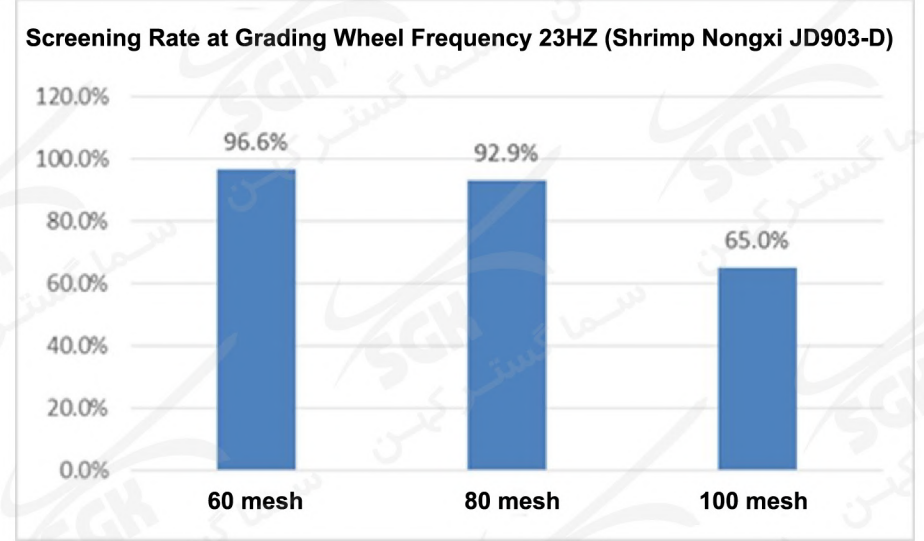
SWFL128 Vertical Pulverizer

Grinding protein, 99% pass through 100 mesh, stable operation since 2016.

The equipment is stable and reliable.

Application in Engineering Site

Raw material: Shrimp Nongxi JD903-D		Room temperature: 12°C	
Fan damper opening: 100%		pulverizer air intake opening: 70%	
Measurement Content		Measured Data	Remark
No Load	Voltage (V)	380	
	Main Motor Current (A)	101	
	Main Motor Power (KW)	132	
	Grading Motor Power (KW)	15	
	Feeding Motor Power (KW)	1.5	
	No-load Noise dB (A)	93	
Load	Voltage(V)	380	
	Main Motor Current (A)	210	
	Load Noise dB(A)	85	
	Feeding Motor Frequency (HZ)	25	
	Grading Wheel Frequency (HZ)	23	



SWFL128 Vertical Pulverizer
grinding the crayfish feed

First-class Brand Outsourcing Parts Suppliers



The outsourcing parts of the whole set of vertical pulverizer adopt first-class brands, and the quality is stable and reliable.



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