



# **Biomass Pellet Machines**

——Zhengzhou lerford Machinery Equipment Co.,ltd.



# PART 01

## **Product Introduction**



# Capacity



**Flat Die Biomass Pellet Machine**



**Ring Die Biomass Pellet Machine**



# Type



WKL-230



WKL-250



WKL-300



WKL-350



WKL-400



WKL-450



# Size



	<b>Model</b>	<b>Capacity (kg/h)</b>	<b>Power (kw)</b>	<b>Weight(kg)</b>	<b>Dimension (mm)</b>
1	WKL-230	80-100	7.5	280	1100*400*980
2	WKL-250	150-200	15	400	1120*440*1060
3	WKL-300	200-300	22	800	1280*560*1220
4	WKL-350	350-400	30	900	1300*530*1220
5	WKL-400	400-600	37	1000	1390*650*1290
6	WKL-450	650-800	45	1500	1620*700*1600
7	WKL-550	700-1000	55	1800	1700*700*1600





# • Require of material

The flat die biomass pellet machine can not only handle woody materials but also easily process agricultural waste such as straw, hay, and other coarse fibers with low density, showing a higher tolerance for moisture content (up to 15%-20%).





# • Finished Product

The finished product produced by the flat die biomass pellet mill is a cylindrical solid fuel pellet, and its overall quality can meet the basic requirements for commercial and household use.

## Finished Pellets



sawdust pellets



corn cob pellets



straw pellets



rice husk pellets



peanut shell pellets



bagasse pellets



grass pellets



efb fiber pellets





# • Application

The application areas of biomass pellet machines are very wide, mainly used in the fuel field.

Replacing coal: Raw materials such as sawdust and straw are compressed into pellets for use in factory boilers, power plants, fireplaces, etc..

Residential heating: Pellets are made into fuel for biomass heating stoves used in homes and schools.



Electric Power Plant



Chemical Plant



Winery



Biomass Burning Plant



House Warmig



Hot Stove





# • Machine Details

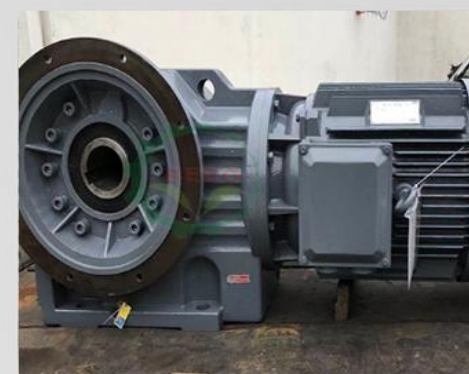


## **Roller & Mould**

Thickened high-strength abrasive tools, double pressure wheels, not easy to wear, high discharge efficiency.

## **Reducer**

The integrated design of motor reducer has stable performance and low failure rate.



## **Electric control system**

The star delta step-down start and frequency converter control system can accurately control the blanking speed and ensure the safety and stability of the motor.



## **Oil pump**

Grease free lubrication system, automatic oiling of oil pump.





# • Machine Advantages

- Suitable for granulation of **various biomass** raw materials.
- After fine grinding and processing, it **operates smoothly**, with low noise, high load capacity, low temperature rise, and long service life.
- Customized molds are available for various raw materials. The pressed granule diameter is between **2 to 8 millimeters**.





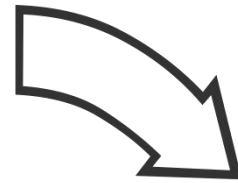
# Machines used in combination



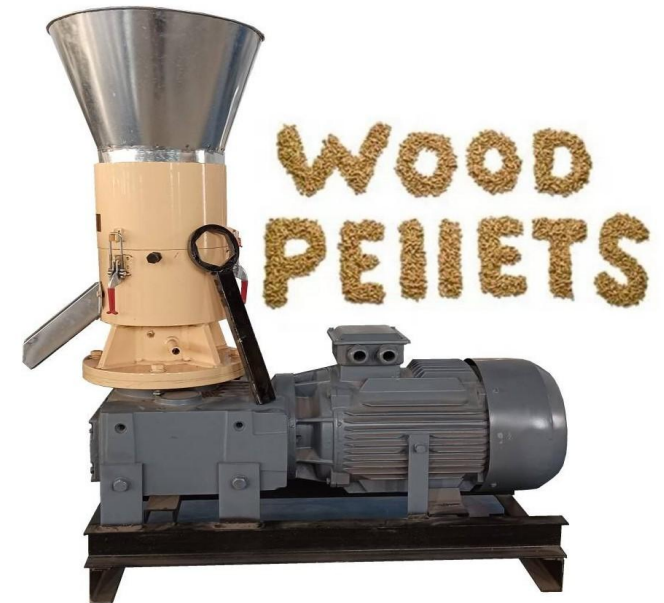
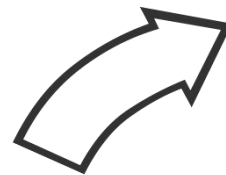
9FQ Grinder



Wood crusher



Screw conveyor



Biomass pellet machine





# • The Ring Die Biomass Pellet Machine

Wood Pellet Machine



The ring die biomass pellet machine is a high-output molding device that uses a rotating ring-shaped mold and roller to press biomass raw materials into high-density pellets.



various raw material



crushed material



wood pellets



wood pellets for heating



# Size



	<b>Model</b>	<b>Capacity (kg/h)</b>	<b>Power (kw)</b>	<b>Product Diameter</b>
1	JL300-A	22KW	240-300	4-12mm
2	JL300-B	30KW	300-400	4-12mm
3	JL400-A	37KW	500-700	4-12mm
4	JL400-B	45KW	600-800	4-12mm





# • Applicable raw materials



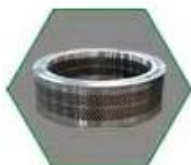
The raw materials have a wide range of applicability, and the Peace model granulator is roughly the same, but it is **more suitable for hard materials** such as wood chips and sawdust with a high lignin content.





# • Machine Details

Stainless steel  
carburizing die



Locknut  
closed roller



High strength  
transmission box



Siemens motor



Enclosed oil  
cooling system



High strength three-  
stage transmission gear



## AUTOMATIC CONTROL SYSTEM



In the process of operation, the control panel, tablet computer and mobile APP can be used to monitor the temperature of critical parts and the electric current of the equipment.

## MOTOR

- Motor brand: Simens well known brand
- Efficiency high overload capacity, low noise, small vibration, reliable structure, beautiful appearance
- Voltage: 380V, 50HZ, we also provide 400V, 415V, 440V and 60HZ etc. ac-



## BYPASS WATER COOLING SYSTEM

Reducer Lubricant with bypass water cooling system to avoid oil temperature is too high, greatly enhance the internal bearing life



## REDUCER STRENGTHEN



The gear box adopts the hardened surface helical gear, the tooth surface is widened, the modulus is increased, the gear coincidence degree is large, the load of each pair gears is reduced, and the bearing carrying capacity of the gear is improved, which is more 5-10 times than that of the traditional gearbox gear.



# • Wood Pellets Production Line

## Main Process to Press Wood Pellets

Chipping Section → Crushing Section → Drying Section → Pelletizing Section → Cooling Section → Packing Section



Raw Material



finished products:  
3-8cm wood chips



raw material:  
3-8cm wood chips



finished products:  
10mm sawdust



raw material: above 15%  
moisture content sawdust



raw material: below 15%  
moisture content sawdust



raw material: below 15% moisture  
content sawdust, rice husk...



finished products:  
φ8-10mm biomass pellets



raw material:  
60-70°C finished pellets



finished products: room  
temperature +5°C finished pellets



raw material:  
wood pellets in bulk

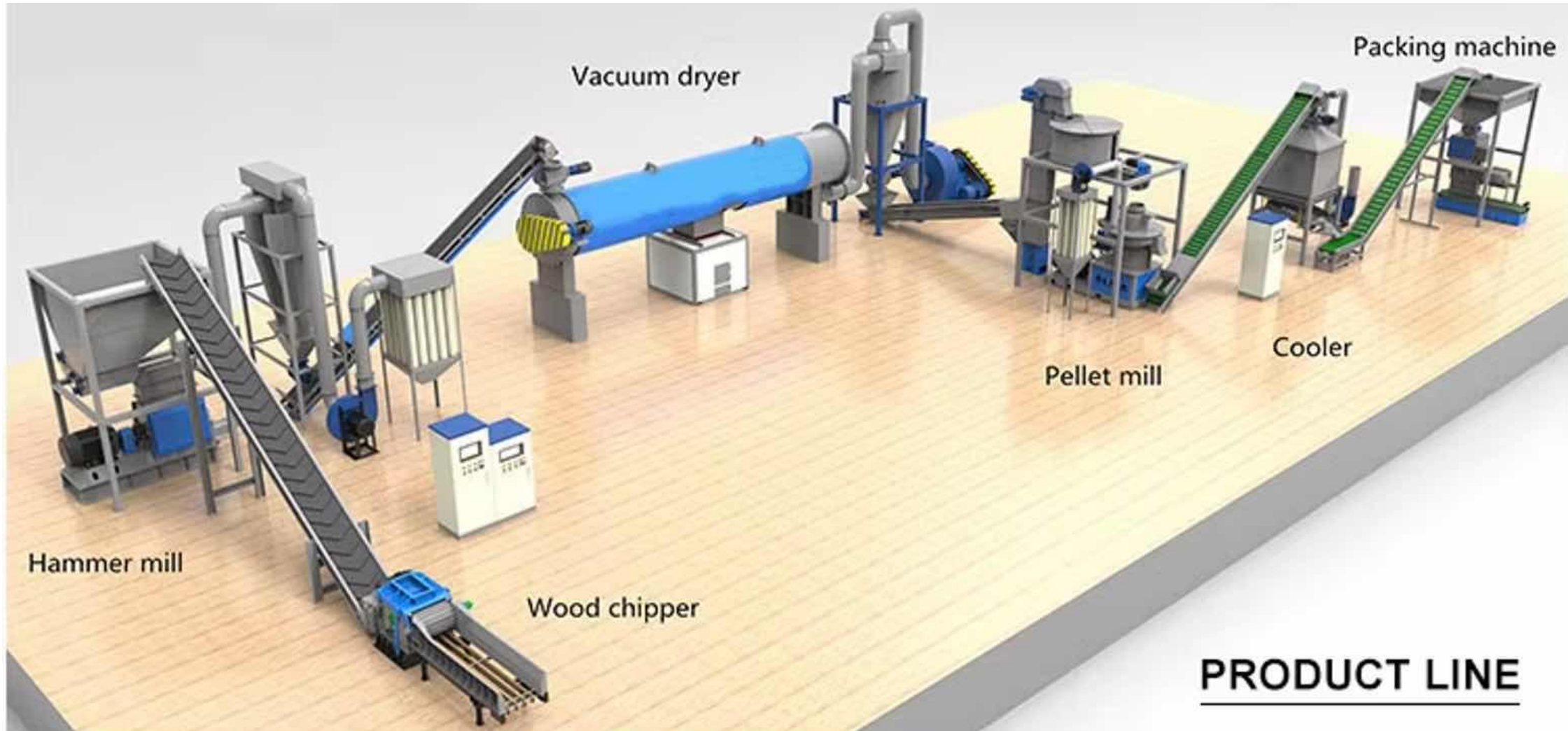


finished products:  
1 ton or 20-25kg/ bag pellets





# • Production Line Schematic





# • The Difference Between the Two Machines

	Ring die biomass pellet machine	Flat Die Biomass Pellet Machine
Production efficiency	<b>High.</b> Suitable for large-scale industrial continuous production.	<b>Relatively low.</b> More suitable for small to medium-sized production.
Molding Quality	<b>Excellent.</b> High particle density, great hardness, smooth surface. The product quality is stable and standardized.	<b>Good.</b> It can produce qualified pellets, but the density and hardness of the pellets are usually slightly lower than those from ring die machines.
Raw material adaptability	<b>Relatively broad, but picky.</b> Very suitable for hard raw materials such as high lignin content wood chips and sawdust.	<b>Very wide-ranging and not picky.</b> It can not only process wooden materials but also handle agricultural waste such as straw, rice straw, and grass.
Application scenarios	Pursue <b>high efficiency, high output,</b> and high quality in industrial continuous production.	<b>Small and medium-sized production,</b> with diverse and complex sources of raw materials.





# • How to Choose?

## Look at the materials:

If your main materials are wood chips, sawdust, etc., choose a ring die.  
If they are mainly straw, rice straw, grass, etc., choose a flat die.

## Look at the production volume:

If the demand is over ten thousand tons per year, choose a ring die.  
If the demand is a few thousand tons or less per year, choose a flat die.

## Look at the investment:

If the budget is sufficient and you have complete pretreatment equipment, choose a ring die.  
If the budget is limited and you want to recover costs quickly with flexible production, choose a flat die.

## Look at quality requirements:

If there are high demands for the density and durability of the pellets (such as for export or high-end boilers), prioritize choosing a ring die. If the quality requirement is 'satisfactory is enough', a flat die is more cost-effective.



木屑颗粒



橡木颗粒



稻壳颗粒



竹屑颗粒





# • Factory Display





# • Factory Display



# 5.Contact Information



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**THANK YOU  
FOR WATCHING**

——Zhengzhou lerford Machinery Equipment Co.,Ltd.

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