



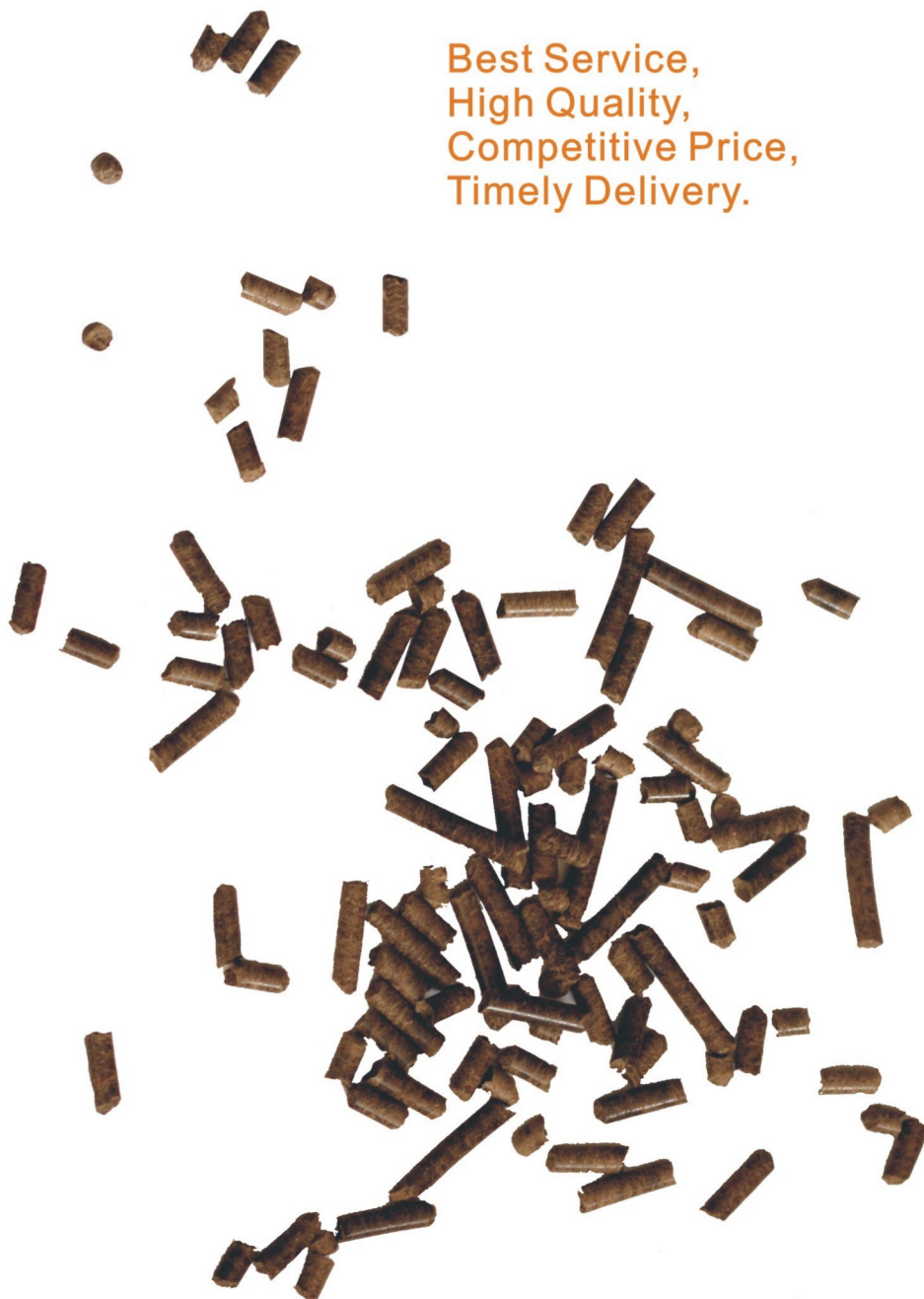
ANYANG GENERAL



Best Service,
High Quality,
Competitive Price,
Timely Delivery.

Pellet Mill

Anyang General International Co.,Ltd. is a manufacturing and exporting company with a global outlook, production and supply of quality machines of pellet mill machinery, flat die pellet press and allied equipment.



SMALL PELLETT MILL

Brief introduction

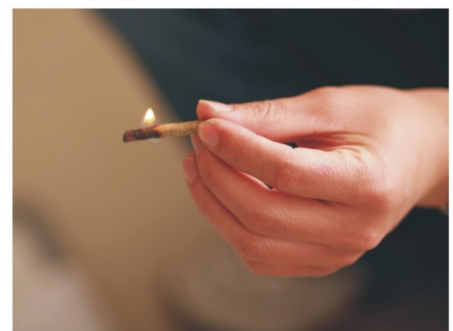
With the fast development of feeding animals industry and biomass energy saving project, this kind of Flat Die Pellet Press machine become very popular. Since it not only can process the feedstuff for animals, such as feed for fish, chicken, pig etc, but also can process the waste biomass material to wood pellet. This machine has a history for more than 10 years. At the beginning, it mainly used to process the pellet as feedstuff. But recent years, people change the machine through improving the quality of main parts in the machine, in order to make it to process the waste biomass material such as sawdust, straw etc. The final wood pellet can be burned as green fuel in pellet stove or boiler.

Benefits of wood pellets

One way to improve the energy density of wood fuel is to convert it into wood pellets. Ideally this is undertaken at the material processing facility.

Wood pellets have several distinct advantages when compared to wood chips:

- Greater energy density
- Relatively clean
- Better flow
- Low moisture and ash content
- Consistency
- Less volume to transport and store
- Smaller and cheaper boiler systems



Raw material to make pellet:

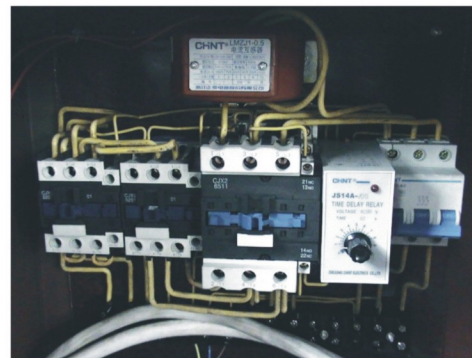
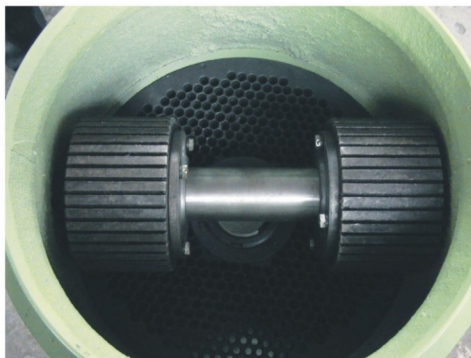
Any type of Agro-Forestry waste can be used. But the Moisture Content Should be Less than 12%, grain size is below 5×5mm.

Groundnut-shell • Sugarcane residue • Caster Shells/Stalk • Saw dust • Coffee Husk • Paddy Straw • Sunflower Stalk • Cotton Stalks • Tobacco waste Mustard Stalk • Jute waste • Bamboo Dust • Tea waste • Wheat Straw • Palm husk • Soybeans husk • Rice Husks • Forestry wastes • Wood Chips and many other Agro wastes.

Final product



Key parts



Sharing our experiences:

For using this flat die pellet press, we got some feedback from our customers. They obtained some experiences when they were using this machine to produce wood pellet. Hope it is helpful for you:

- 1) Best moisture is 15% for all materials.
- 2) The temperature is constant about 90-95°C, you have to take over the pellet just coming out from this pellet press and cooling it before touching it by hand.

Modifies on the machines:

Furthermore, we improved our machine more suitable to produce wood pellet after absorbing & digesting the feedback from our customers. In general, they're:

- 1) Special raw material on the main parts such as roller, template, matrix.
Prolonging the life than other similar products in China when process wood pellet after this modification.
- 2) Modify the whole in the matrix to improve performance of the machines. It's more easy to make pellet.
- 3) We got the CE Certificate to meet EU client's requirement on the safe and electricity implements.

Pellet production process

Pellet production is ideally suited for processing of dry material with low moisture content of less than 12% and for material which is not suitable to be made into wood chips. Typically the pellet production process consists of the following stages:

Modifies on the machines

Milling - raw material is reduced to a particle size of about 3mm and heavy woody elements are removed.

Conditioning - material is prepared to the right moisture content and temperature.

Pressing - the woody material is fed into the pellet press. Pellets are formed by forcing the material through a die to achieve compaction.

Cooling - the wood pellets need to be cooled after leaving the press. By cooling the pellets this ensures that they harden, making them more robust during storage and handling.

Screening - pellets are passed over a vibratory screen to separate fines.

Storage - Pellets need to be protected against rain. Storage time is unlimited.

Technical Parameter

1. Pellet press with electric motor



Type	Power (Kw)	Capacity	Dimension (mm)	NW/GW(kg)	Motor
ZLSP200B	3-phases 7.5kW	200-300	1000×430×950	200/230	w
ZLSP200B		200-300	900×430×950		w/o
ZLSP230B	3 phases 11kw	300-400	1140×470×970	290/320	w
ZLSP230B		300-400	980×470×870		w/o
ZLSP260B	3 phases 15kw	400-600	1200×500×1070	330/360	w
ZLSP260B		400-600	1120×490×1070		w/o
ZLSP300B	3 phases, 22kW	700-800	1270×520×1070	410/450	w
ZLSP300B		700-800	1170×520×1070		w/o
ZLSP360	3-phases 22kW		1270×520×1070	470/500	w
ZLSP360			1270×520×1070		w/o
ZLSP400	3 phases, 30KW	900-1100	1470×600×1150	550/585	w
ZLSP400		900-1100	1470×600×1150		w/o

2. Pellet press with diesel motor



Type	Power (Kw)	Capacity	Dimension (mm)	NW/GW(kg)	Motor
ZLSP200A	15hp diesel	200-300	1000×460×900	210/240	w
ZLSP200A		200-300	1000×460×900		w/o
ZLSP230A	22Hp diesel	300-400	1180×560×1020	280/310	w
ZLSP230A		300-400	1090×520×820		w/o

3. Smallest pellet press

All models above can process both animal feedstuff and wood pellet from sawdust. If you only use the machine to produce feedstuff, there are four smaller models for your reference as follows:



Type	Power (Kw)	Capacity	Dimension (mm)	NW/GW(kg)	Motor
ZLSP120	3kw 3-phases or 2.2 kw single phase	75-100	710×390×910	80/100	w
ZLSP120		75-100	670×390×910		w/o
ZLSP120A	8hp diesel	75-100	730×320×670		w
ZLSP120A		75-100	900×440×730	120/140	w/o
ZLSP150	4kw 3-phase	90-120	750×350×650	95/115	w
ZLSP150		90-120	700×350×650		w/o

4. CE Series Pellet Press

Type	Power (Kw)	Capacity	Dimension (mm)	NW/GW(kg)	Motor
GC-9PK200	3-phases 7.5kW	200-300	1000x430x950	200/230	w
GC-9PK200		200-300	900x430x950		w/o
GC-9PK300	3phases,22kW	700-800	1270x520x1070	410/450	w
GC-9PK300		700-800	1170x520x1070		w/o

5. Different color machines made according to customer's requirements.



6. Auxiliary Machines

Hammer Mill/Wood chipper



TFS420 Type Hammer Mill with Cyclone

TFS420 Type Hammer Mill without Cyclone

Type	Specification	Capacity	Dimension (mm)
TFS158 Hammer mill	1.5kw motor 4 pcs sieves with 1.5mm,2.8mm,4mm and 6mm	700	
TFS 420 hammer mill With cyclone	7.5/11kw and 2 pcs sieves with 2mm and 4mm	1000	1090×820×1100
TFS 420 hammer mill With cyclone	22hp Diesel and 2 pcs sieves with 2mm and 4mm	1000	1090×820×1100
TFS500 hammer mill With cyclone	22hp Diesel and 2 pcs sieves with 2mm and 4mm	1000	1090×820×1100

FAQ (Frequently Asked Questions.)

1. What is a Pellet Press?

Pellet presses, also known as Pellet mills are used for the compression of dusty materials into solid pellets. These pellets, sometimes known as bio-pellets or fuel pellets, can be used as fuel for heating.

2. How big is a pellet press?

Pellets presses / pellet mills are available in from 7.5 kW to 30 kW.

3. What can the pellets used for?

Pellets can be used in the production of animal feeds, or as fuel pellets for use in a pellet stove or boiler.

4. What are the pellets made from?

Pellets can be made from wood / sawdust/ plastic / foam / wheat / barley / cotton and fibre waste. They also need a wet ingredient, such as steam or molasses.

5. How are the pellets made?

The pellets are made by compacting the mash or meal into many small holes in a die. The die is usually round and the pellets are pushed from the inside out or opposite.

6. What size pellets are produced?

The length and diameter of the pellets are adjustable according to the size of the die in the pellet press.

7. What is the cost of a pellet press?

Different capacity, different price.

8. How do you deliver the pellet presses?

Transport and worldwide shipping is available.

9. Are the pellet presses new or used?

All machines are used with warranty available, advice is free.

MOBILE BIOMASS PELLETTIZING SYSTEM

Anyang General International Co.,Ltd produces biomass fuel machinery,and has developed portable biomass pellet plant that is workable for different raw materials in different areas.

BIOY-C22 MICRO PELLETTIZING PLANT

Removable biomass pellet plant (BIOY-C22) consists of screw conveyor,300 type pellet mill, drying&cooling system,vibrating sieve,air driven conveying system, dust collector,etc.It can be removed near to raw material and reduce transportation cost of raw material.It's excellent to be owned by a farm.Dimension the plant:4200mm*2150mm*4300mm.

Key parameters:

Capacity:	200~300 kg/h Dia.6 mm pellet
Pellet density:	=1.1 g/cm ³
Raw material moisture:	12%~18%
Pelletizing rate:	=90%

Equipment list

Equipments that need engines:

1.Pelletizing mill	1set	22KW
2.Secondary crushing machine	1set	11KW
3.Feeder of pelletizing mill	1set	1.5KW
4.Material inlet screw conveyor	1set	1.5KW
5.Cooler	1set	3KW
6.Fan	1set	3KW
7.Air lock	2set	0.75KW/set
8.Vibrating sieve	1set	0.75KW
9.Electrical control cabinet	1 set	
10.Wind pipes	1 unit	
11.Steel plate base	1 sets	
12.Dust Collector	1 set	



Pellet fuel

Total power: 43.5KW

Total Weight: 3.5 Metric Ton

To collect all dusts from hammer mill and cooler into one final exhaust gate, which is up to EU emission standard.

Photoes of plant



BIOY-C22 Mobile Biomass Pelletizing System

BIO-C55 BIOMASS PELLETIZING SYSTEM

BIO-C55 Biomass Pelletizing System is developed by Anyang General International Co.,Ltd the system is used to produce pellet fuel from various kinds of biomass material such as sawdust and agricultural residues. Biomass pellet fuel is easy to be produced and transported. With the advantages of lower price and lower pollution emission, biomass pellet fuel can be an ideal substitute of fossil fuel such as coal and oil, and its prospect is promising.

Main specification:

Productivity:	700~900 kg/h
Energy Consumption :	≤70 kWh/t
Available Moisture content for feedstock:	12%~18%
Density of pellet:	1.1~1.3g/cm ³



BIOMASS GASIFICATION FOR COOKING GAS & POWER SYSTEM

The technology stems from Sino-Italy S&T cooperation and Chinese National Key Technologies R&D Program, with agricultural & forestry residues as feedstock, Biomass Gasification for Cooking Gas & Power System produces clean fuel gas through thermal chemical process, the fuel gas can be used as cooking gas or as fuel for internal combustion engine for power generation. The gasification rate is over 70% and the power generation efficiency is over 20%. For single unit, the gas supplying capacity is 1,000 households, the power generation capacity is 500kWe, and customized equipments according to different scales and requirements are also available.



COMPLETE PROJECT OF WOOD PELLET PLANT

General Introduction

Wood Pelletizing is the process of making waste materials into solid fuel. The objects are used for burning purposes. Wood Pellet is one of the most commonly used pelletized materials. Wood Pellet can be made from any type of Agro-Forestry waste: Groundnut-shell Sugarcane Biogases Caster Shells/Stalk Saw dust Coffee Husk Paddy Straw Sunflower Stalk Cotton Stalks Tobacco waste Mustard Stalk Jute waste Bamboo Dust Tea waste Wheat Straw Palm husk Soybeans husk Coir Pitch Barks/Straws Rice Husks Forestry wastes Wood Chips and many other Agro wastes. But the Moisture Content Should be Less than 12%, size is below 5×5mm.

Description of every section

(1). Raw material feeding:

Wood chips will be feed by loader to belt conveyor.
Sawdust will enter the project through silo.

(2). Crushing section:

When the thickness of raw wood material is >10mm and >50 x 50mm(L×W), we need use the Crusher to chip them into small pieces, then crush the small pieces into wood powder with diameter less 3mm by Hammer Mill. Fine sawdust will be delivered to drying process.

(3). Drying section:

To dry the crushed saw dust to the right condition to pelletize. It can be finished by air flow dryer or rotary dryer; We use hot-blast furnace as hot air source, the fuel can be saw dust, coal or others.

(4). Pelletizing section:

ZLMH Wood Pellet Mill is the key equipment, which have the following features:

1. Driving Gear adopts the high precision gear transmission structure. The wear bearing is SKF from Sweden. The ring die adopts the hoop fastening method, which is increasing the speed of discharge comparing with the past bolt fastening method. As a result, the capacity is 10-15% higher than the belt transmission structure.

2. As per the ring die and roller of the wood pellet mill, we have the fine machining with the alloyed steel. And our heating treatment is also different from other domestic manufacturers, our carburizing treatment make the depth of hard facing to 2mm, which improve the anti-abrasion of the ring die and roller more than 10 times, it can save the production cost heavily.

(5). Cooling section:

After the pelletizing process, the temperature of the wood pellet is about 60-80 degree, and the moisture content of the wood pellet is about 15%, so we have to use Counter-flow Cooler to reduce about 3-4% moisture, so that the wood pellet is easy to store. Please note do not to touch the pellet before drying avoid to be scalded.

(6). Packing section:

After cooling, the wood pellet will not directly enter into the fuel process, avoiding the wood pellet affected with damp. The packing process is necessary. In this process, we assemble our domestic best Semi-Auto Packing Machine to you.

Generally, most clients needs one small weight range scale with auto sealing packing machine and one large weight range scale with semi-auto packing machine. For the first one, the weight range will be 5-25kgs per bag and for large scale, it will be 1000kgs per bag or 800kgs per bag, up to different clients needs.

Flowchart of complete wood pellet mill of 1TPH

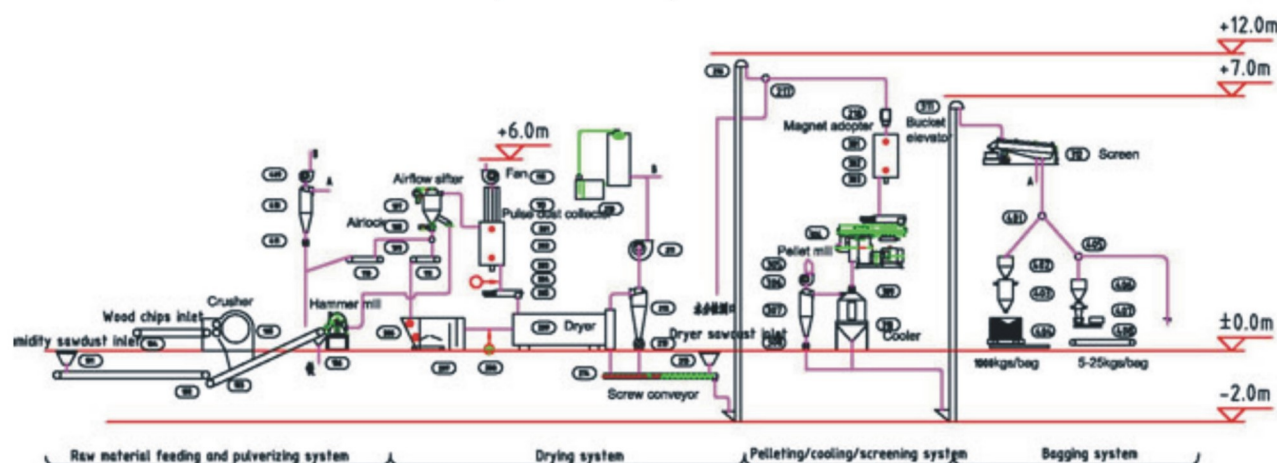
This technology is designed based on customer's raw material below:

- Hard wood sawdust (30%), soft wood sawdust (70%)
- Wood chips, in dimension: 2-3m length, 5-10cm width, 2-3 cm height

Moisture of raw material: around 40%

Production capacity: 1000kgs per hour

Complete wood pellet mill 1TPH



Electricity control center



Pressure system



Steam supply system

— This symbol stands for safety warning detector

— This symbol stands for better suspension control instrument

Important:

This design belongs to the property of AGICO ENGINEERING Department. All information and proprietary know-how contained therein are confidential, and shall not be copied, duplicated, changed or altered, submitted or disclosed to any third party without the prior written permission of AGICO.

Note:

During the complete wood pellet plant, the Dust Filtering is one heavy and important task. We assemble the Common Dust Collector (known as cyclone) and Impulse Dust Filter. For the exhausting air, we use Water Film Dust Collector to get to the free dust situation in the process of Drying and Cooling in which generates plenty of dust in the working time.

Photos of projects we have made

