

Multi-functional Mechanical Briquetting Machine GC-MBP-1000

I Pictures

1. Picture of workshop (briquetting machine, screw conveyer control cabinet)



(Old model demonstration)

2. Pictures of the final products



a. \varnothing 8mm pellets

b. \varnothing 10mm pellets

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c. \varnothing 22mm pellets



d. \varnothing 30mm pellets



e. \varnothing 70mm briquettes

II Overview

Multi-functional mechanical briquetting machine GC-MBP-1000 is a pressing and forming equipment for compressing the wood chips, sawdust, crop straws and forest residual into solid fuel with a whole process including crushing, compressing, forming and etc..The feed material will be formed into the shape of blocks after compressing. With the advantages of smaller size and higher density, the fuel pellets / briquettes are easy to be stored and transported. It increases 10 times of the combustion value per unit area, and it makes the properties of heat producing and stability of wood pellets close to the fair average quality coal. A 2-stage compression technology is adopted:: screw

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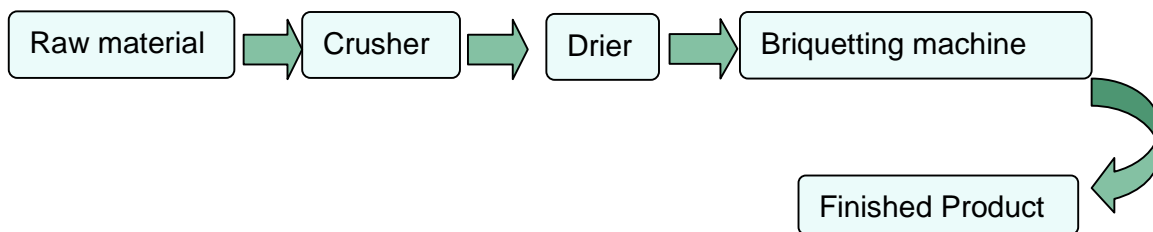
pre-pressing, and then piston stamping. Forced engine oil cooling ensures sufficient lubrication to the machine. It is perfect solution to the problem of strict moisture demand and fast wearing of the moulds in most forming machines. This machine is characterized by low power consumption, high production efficiency, long service life and low maintenance frequency. Sawdust briquette could substitute for conventional energy like coal and oil. It is widely used in the heating system, residential cooking, fireplace and flue-cured tobacco by industrial tobacco producing grower, governments, enterprises and domestic services. Also, it is a good feedstock used in biomass power plants.

III Applicable raw material

1. Raw material including plant straw, grain husk, peanut shell, cotton rod, wood chip, sawdust, branch, bark, bamboo powder, wood timbering, forest residual and household refuse, etc. could be made into briquettes after being crushed.

2. Keep the moisture of the feedstock at around 15% and size less than 20mm (peanut shell needs no crush, while the wood chips should be crushed into 3-5mm).

IV Technological process



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V Forming principle

Material enters into the feed chamber of briquetting machine through conveyor (belt or screw). There are two screw feeders respectively on both sides of the feed chamber, which press the material into press chamber. The material is hit at a frequency of 280 times per minute by reciprocating movement performed by the punch which is driven by an eccentric gear. The material begins to be heated up and softened. Due to and the tapered forming mould The repeated hit material become solid and hard and then discharged from the forming mould eventually. Since the forming process is influenced by pressure and temperature. this machine utilizes slider-crank mechanism on the feedstock under high frequency pressure temperature, which realizes a higher density of 1000~1300 kg/m³ as well as a better flexibility. In addition, forced lubricates to each part guarantee security and continuous operation.

VI Parameters

No.	item	Detail
1	Main parts	Briquetting machine
		Feeder
		Control cabinet
2	Briquette Specification	Dia.: 8mm, 10mm, 22mm, 30mm, 70mm
3	Capacity	0.8-1.2 t/hr
4	Density	1000-1300kg/m ³
5	Power of main engine	45KW
6	Weight	7000kg

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7	Overall dimension	Host machine: 3.4m*2m*1.8m Control cabinet: 1.2m*0.6m*1.2m.
8	Number of operator	2
9	Installation space	About 80 m ²
10	FOB price	USD32500 for the briquette machine and the cabinet;USD2000 for the screw conveyor

VII Characteristics

1. After repeated tests, different dies are designed to meet the requirement of different raw material. So that this device adapts to a wider range of raw material. (some pictures of materials are listed below)



Wood Chips



Tree Trimmings



Wood Shavings



Rice Husk



Peanut Shell



Sunflower Seed husk

2. The finished products are solid rod with moderate density (0.8-1.2). It is convenient for storage and transportation, and also beneficial for the anaerobic gasification reaction inside the fuel rod. It improves the calorific value of feedstock up to 3500-5000 kcal per Kg.

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3. The special material and heat treatment process are used in key components, extending their service life.
4. The spindle adopts 45 carbon steel under thermal refining and forged by machining operation. And then it is plated with Cr on the surface. Thus the device has good strength, toughness, and wearability.
5. This device adopts two-stage compression technology which includes screw feeder pre-pressing and piston stamping.
6. It ensures the producing operations by applying Germany-imported bearing. And the independent lubricating system keeps lubricating and cooling between each moving part.
7. Taking into account of different characteristics of the materials, the speed regulating motor or variable frequency motor is equipped to regulate feeding rate, which enables different material to be fed uniformly. Specific type of motor can be adjusted according to customer's demand.
8. The device has advantages of low power consumption (one ton of biomass rods production consumes 40 kWh), high production efficiency, long service life, and low maintenance frequency.
9. Rack section (shown as below) uses high strength steel plates welded together by advanced technology. Reasonable rib plate structure ensures the equipment to run smoothly with frequent impact loading.

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Internal structure of the rack

10. Produce biomass briquettes ($\phi 70\text{mm}/\phi 30\text{mm}$) and pellets ($\phi 8\text{mm}/\phi 10\text{mm}/\phi 22\text{mm}$) with different diameters through different molds, which are easy to be changed within 30min.



Briquetting machine after changing the pelleting mould

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VIII Volume of production with various moulds (3-5mm sawdust with moisture of 15% as the feedstock)

Mould	Dia. 8mm	Dia. 10mm	Dia. 22mm	Dia. 30mm	Dia. 70mm
Hole Numbers	61	37	7	4	1
Capacity (kg)	950	900	820	880	1200

Delivery time: 30 days after receiving down payment

Payment terms:

40% down payment by T/T, the balance 60% should be paid by T/T before shipment

Installation and onsite training:

The price in the offer doesn't include installation and commissioning in foreign countries.

we can send technicians to help you install the machine on customer's account. The cost related to installation is as follows:

- (1) Round-trip air tickets (international) for 2 technicians and 1 translator (translator can be arranged by buyer as well)
- (2) Food and accommodation for 2 technicians and 1 translator
- (3) Salary during commissioning: \$100 per day per person
- (4) Visa application charges

Validity of offer: 3 months

Hope we can enter into business relations with esteemed company soon!

Thank you!