



**POWER
COB** CLEAN
ENERGY

ENERGY FROM AN INNOVATIVE IDEA

**WE TURN BIOMASS
INTO CLEAN ENERGY
– WE SAVE MONEY
AND THE PLANET**



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Power Cob is an innovative system of combined technologies for obtaining and processing biomass. Many years of experience and innovative technology make it possible to use waste from corn production, as well as any other biomass, as a high-energy source of energy.



We obtain the grained corn cob using our own, patented selector.

Until now, corn cob cores were only an agricultural residue.

Now we make them fuel:

- natural**
- ecological**
- easily accessible**
- independent of external supplies.**



Our technology is zero emissive.

Line for biomass gasification

Gasification is a reactive process that uses the energy of organic matter (biomass) and converts it into hydrogen, carbon monoxide, methane, and other hydrocarbons.

Partial combustion of the material takes place under high temperature conditions ($<700^{\circ}\text{C}$) with a small amount of oxygen. After this process, we obtain a gas mixture called synthesis gas. This syngas is a kind of fuel for the generator. Finally, we get electricity and heat.



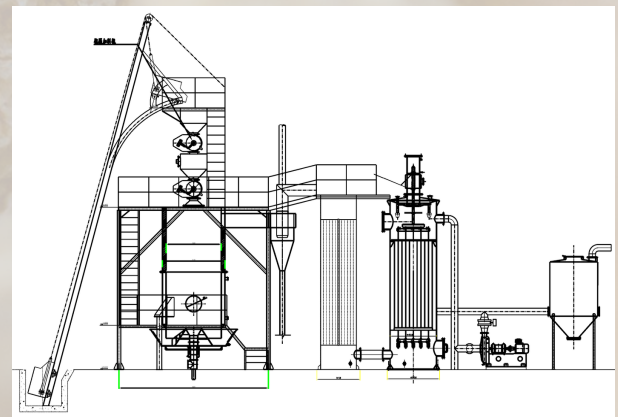
Process

The process of obtaining energy happens in three steps:

1. Gasification of biomass, i.e. conversion of biomass into syngas
2. Synthesis gas purification, this gas usually contains impurities such as dust, coke, tar etc. so they are removed by the purification system to ensure proper operation of the reactor engine.
3. Energy production in a gas engine - the syngas is converted into energy by the generator.

The installation works continuously and is easily regulated.

Installation power: from 200 kW to 50 MW



Biomass and biochar

The Power Cob cogeneration gas line can generate energy from almost any type of biomass.

A by-product of the process is biochar - a valuable substance that enhances the soil and contains a large amount of CO_2 binded with the atmosphere. Biochar improves soil properties. Supports water and air management, especially in degraded soil.





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