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Packaging. Environment. Logistics. Forestry
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PELLET PRODUCTION: GUIDELINES for purchasing of a process line

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Recovery of wood waste and dust with pellet production lines is economically attractive and has a beneficial effect on the transition to renewable energy sources, but requires careful analysis of indirect costs: cost-effectiveness is determined by the quality of the pellet production equipment. Otherwise, there is a risk not only to reduce to zero a profitability, but also to make a loss.

WHAT IS TCO?

Before evaluating the purchase of production equipment, you should be familiar with the concept of total cost of ownership (TCO).

It indicates the total operating costs of the line and should be considered at two levels:

- the first is the Capital expenditures CAPEX (cost of investment and start-up of a new production),
- as well as operating costs - OPEX (a set of costs that inevitably arise during the life cycle of the line and can be reduced when the equipment supplier becomes your partner).

A pellet mill by definition produces pellets, but under what conditions? What's its production efficiency? How much do pellets cost in the end? Will they be competitive in the market? It is also preferable to acquire management skills directly from those who manufacture the equipment.

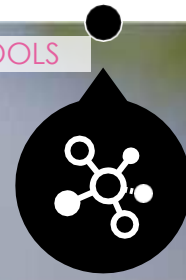
EVERYTHING STARTS WITH THE RAW MATERIAL

For example, P System Automazione from Cremona (Italy) offers its pelletizing equipment, dryers and complete lines, explaining to potential customers the "pitfalls" of the technology's low price, from unmarketable quality to lower than expected production volumes, from excessive maintenance costs to underestimated characteristics of the line itself.

The first starting point is the ability of the equipment to adapt to the raw materials that will be fed into the line: different types of wood and biomass from mixed agricultural waste result in different output products and different wear and tear of equipment components.

The Cremona-based Italian company uses hydraulic technology that automatically adapts to the raw material, preventing damage to both the die itself and the roller.





COMPLEX LINE OR SINGULAR GRANULATOR?

The modular nature of the line also determines its profitability: if the entire process chain and previously installed equipment must be replaced in order to increase the productivity of an existing production, the initial investment is lost, so the factor of modularity must be taken into account as a priority in the selection criteria.

The completeness of the line saves time: for example, the automation of the bagging unit is a delicate step, since the shape and format of the packaging will determine the identity of the product itself and its attractiveness in the market, from household stores to e-commerce.

Another important success factor is the line's ability to create a product that meets international technical quality standards that will immediately take a leading position in the market compared to products that boast only average or low specifications.

Energy consumption in terms of electricity is another cost factor to consider, as is the quality of technical assistance: in addition to the cost itself, the speed of support is important, as long equipment downtime costs much more than the inexpensive hourly or flat rate that often is preferred in order to save money.

Finally, choosing a supplier who can offer variable capacity lines allows the project to be implemented in stages.

Another factor that should be taken into account is the professionalism of the manufacturer at all stages of production: granulation, drying, packaging.

The speed of implementation of the individual line is also critical.

Finally, the decisive factor is the compliance of the equipment with the ISO 9001 standard and the technical requirements of the industry development concept Industry 4.0.

TEN COMMANDMENTS WHEN CHOOSING A LINE

The distinctive features of the production lines implemented by P System Automazione represent the latest achievement in the industry and serve as a guide to familiarize yourself with the equipment characteristics suitable for each pellet project.

The following 10 points will give you an idea on what a top quality production line is.

- 1) Hydraulic control unit for the automation of the entire process chain;
- 2) Automated control of the roller pressure on the die, depending on the processed raw materials;

- 3) Automated start of the production run and automatic cleaning of the die after each working cycle;

- 4) A wide range of modules with a productivity from 150 to 1500 kg / h, for small woodworking companies and large industries.

- 5) Easy installation PLUG and PLAY and quick start.

- 6) Lower energy consumption and operating costs saving compared to mechanical pellet mills.

- 7) Fast return on investment.

- 8) Automation of the production cycle and remote control of operating parameters via PLC in accordance with the principles of Industry 4.0.

- 9) Innovative closed-loop drying system, which eliminates the risk of fire and change of color (darkening) of the outlet raw material.

- 10) Personalization of the production line.

HIDDEN EXPENSES IN LOW PRICE OFFERS MAY REDUCE YOUR PROFITABILITY OR EVEN LEAD TO A LOSS OF INVESTMENT CAPITAL