



MACKMA®

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Briquetting machine overview

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Mackma briquetting machines – overview (1/2)

- Mackma briquetting machines allow to compact different materials: metals, noble metals, wood, some kind of plastic, paper and textiles.
- Such machines get a compact layout which includes all systems (mechanical, hydraulic and electrical ones).
- Depending on the material to be compacted, it's possible to choose the right pressure in order to get the best quality of the briquettes.
- Compression chamber can be replaced in 2 hours/man, reducing drastically machine downtime.



Mackma briquetting machines – overview (2/2)

- The machine can be connected to Internet. In this way, Mackma can give remote assistance at anytime.
- Briquetting machines can be coupled to shredders, that can be integrated to the briquetting machine itself, or be part of a complete line which includes shredder, conveyor belt and briquetting machine.
- Mackma briquetting machines are governed by a PC, instead of a microprocessor (PLC). This allows to manage the complete manufacturing process in the most efficient way.
- Control screen shows the manufacturing process in real time, pointing out the single operations required to make the briquettes.



Mackma briquetting machines – benefits (1/2)

- Saving due to the value of the briquettes vs metal swarf: +25-30%. The percentage of coolant inside the briquettes is no more than 2-3%, then such briquettes can be sold to foundries.
- Recovery of coolant. The % of coolant remaining with the metal swarf is approx. 15-20% of the total. About 98% of this coolant can be recovered during the briquetting operations and reused for CNC operations.



Mackma briquetting machines – benefits (2/2)

- Logistic saving. The volume occupied by swarf vs briquettes (at the same weight) is in a ratio 7:1 to 10:1. This volume reduction brings economic benefits about transportation costs and, more in general, about logistic costs.
- Briquettes are not considered scrap anymore, but so-called «secondary raw material». As a consequence, they are not subject to specific management within the plant (for example in relation to storage areas). It means optimization of internal logistic processes and relevant savings.



How Mackma works (1/3)

- 1) Customer sends basic information to Mackma: kind of material to be compacted, expected productivity (Kg/hour) and some picture of the metal swarf.
- 2) For complex projects, Mackma conducts a site inspection at the customer's plant to evaluate the current manufacturing process and how the briquetting machine could be part of this process (example: briquetting machine directly connected to a lathe/milling machine, or installed in a specific area collecting metal swarf coming from several CNC workstations).



How Mackma works (2/3)

- 3) Mackma makes a preliminary estimation about the kind of machine and relative price (both to be confirmed or modified after test on customer's swarf).
- 4) Customer sends samples for test (one sample of 3-4 Kg for each kind of material to be compacted). Test (for free) are necessary to define:
 - a. kind of machine to get good quality briquettes
 - b. productivity (Kg/hour) for a specific material
 - c. if a shredder is necessary or not upstream to the briquetting machine.
- 5) Following the test, Mackma sends a detailed offer, both technical and economical.



How Mackma works (3/3)

- 6) In case the customer signs the relevant order, Mackma starts the production of the specific model, asking some other samples (quantity for each material to be defined) in order to make extensive tests when the machine is ready to work.
- 7) Final testing of the machine is carried out in Mackma in the presence of the customer. Subject to positive result, the machine is ready for delivery.
- 8) With its own technicians, Mackma will make installation, start-up of the briquetting machine and training at customer's plant.





Thank you !

