



Live screw bottom with silo - 24390



Specifications

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- Material: Carbon steel, screw flights in Hardox-450
- No. of screw rotors in the bottom: 12 pcs.
- Diameter of screw rotors: Ø450
- Length of screw rotors: App. 6 meters
- Screw rotors assembled in the middle for easier installation
- The screw bottom is manufactured in 4 cassettes for easier installation on-site
- Volume of silo: App. 100 m³
- The silo manufactured in main elements to be installed finally on-site
- Delivered with instrumentation on-site

Additional Information:

Product type:	Process equipment, Screw conveyor
Industry:	Power plants
Transported material:	Biomass
Applied steel in product:	Carbon steel, Hardox plate
Surface treatment:	Carbon steel – painted, Carbon steel – untreated



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Short Description

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The live screw bottom has been delivered as a complete machine system for conversion of a boiler system from coal to wood chips. It is well known that wood chips can be problematic to handle when they are stored in a silo. The silo above the screw bottom bin is app. 100 m³.

What is the idea to use a live screw bottom for this application?

1. The screw bottom bin feeds directly 4 inlets to the boiler. It is important that the feeding rate is consistent and continuous. Each inlet is served by 3 screw rotors.
2. The live screw bottom takes out material from the silo in its hole area. This eliminates the risk of bridge building which is commonly seen when handling wood chips.
3. The bottom is flooded with bulk material, which means that the screw rotors act like dosing screw rotors and ensures the continuous flow rate. The silo is fed by a chain conveyor delivering the wood chips in the top of the silo

Which tasks have BEMA solved in this project?

- The engineers of BEMA has designed the complete system including capacity calculations of the screw bottom
- Designed the screw rotor with the necessary progressive pitch
- Calculated the size of the gear boxes
- Made the complete set of production drawings
- Manufactured the live screw bottom and silo parts in the workshop
- Delivered the solution on-site at the customer site
- Delivered a full documentation description with the product

Designing and manufacturing of a live screw bottom requires a comprehensive engineering task before it is ready to be manufactured. BEMA has the engineers to undertake such tasks, and we can assist in the earlier stage of the project.

Over the years BEMA has manufactured different types of live screw bottoms. See examples on these:

Live screw bottom for potatoes

Live screw bottom for ice flakes