



Rotadisc Drying Plant Vapo Oy, Turenki, Finland

The Rotadisc Dryer from Haarslev Industries solves pollution problems and increases energy efficiency in biofuel plants

Pellet production from sawdust has traditionally been based on drying in drum driers. Increasing focus on environmental protection, new safety requirements and the implementation of the ATEX regulation have made the traditional drum dryer outdated.

The indirect steam heated Rotadisc dryer from Haarslev Industries is an alternative to a direct fired drum dryer. The steam supply pressure can be between 2 - 10 bar. The Rotadisc dryer does not use fluid as heat transfer medium.

The result is very pure water vapour. Up to 80% of the steam energy input can be recovered for district heating by the condensing of vapours. Both air exhaust as well as the condensate waste water are very clean, which minimises cleaning and maintenance of the condenser.

The absence of air in the vapours secures a non-explosive atmosphere inside the dryer, which makes this installation one of the safest ways of drying biomass. The biomass, which can be processed, covers almost all types from the finest sawdust to course bark.



Haarslev Industries

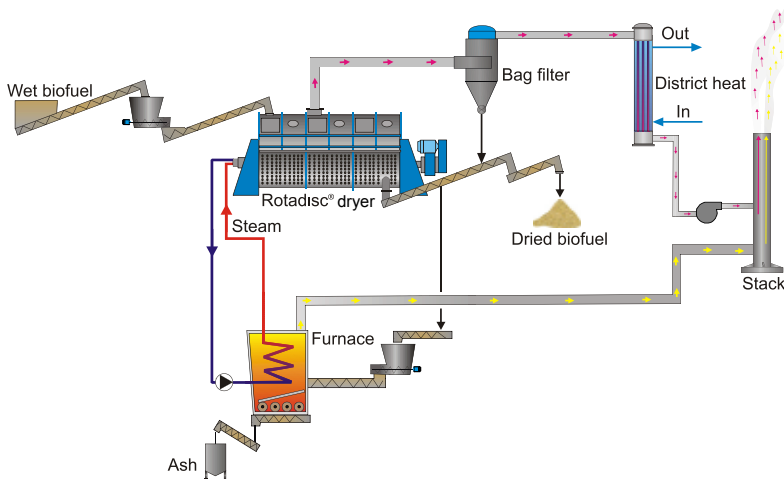
Atlas Stord and Haarslev merged to Haarslev industries in 2006. Over 50 years' experience as a supplier of industrial thermal drying units makes us to a competent partner.

The applications can be found in the range of the fish meal industries, in the handling of animal by-products and for the drying process of industrial and municipal sludge. In addition they find an application in the drying process of biomass and in breweries and distilleries.

The steam supply for the Rotadisc dryer is normally generated in a traditional biomass boiler where peat, bark or other low cost biofuel can be used, but the feed for the drier can also be high valuable premium saw dust.

Wet biomass fuel for the boiler can also be predried in order to reduce the fuel consumption and to reduce the flue gas volume from the boiler. Hereby the energy efficiency can be increased by 10-15%.

Rotadisc® for Drying of Biofuel



Advantages

The Rotadisc dryer combined with a heat recovery condenser gives the following advantages:

- Energy efficiency is increased as up to 80% of the energy input can be recovered for district heating.
- Environmental impact is reduced to a minimum.
- Risk of dust explosions is minimised.
- Availability is maximised due to simple operation and low maintenance cost.

Plant Data, Vapo Oy, Turenki, Pellet Plant

Start-up year:	2008
Operating period:	>8,000 h/year
• Plant capacity	40,000 t/year pellets
• Evaporation	5,000 kg/h
• District heat	3.3 MW
• Steam consumption	4.4 MW (~7700 kg/h)
Biomass drying	
• Haarslev Industries disc dryer:	TSH 2878
• Installed driving power:	160 kW
• Heating surface:	720 m ²
• Throughput capacity:	5,000 kg/h dried saw dust
• Dry substance content before dryer:	45 %
• Dry substance content after dryer:	90 %

We reserve the right to alter the specifications at any time without prior notice.



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