DATA SHEET

HAARSLEV INDUSTRIES

The Atlas-Stord Rotary Universal Drum Dryer, type RUDD

Design and operation

The most important part of a rotary dryer is the drum and the drying principle it applies.

The RUDD dryer is engineered with an advanced single-pass, free-flow system. The design of the rotating drum ensures a correct exposure time to hot gas for all particle sizes in the raw material.

Light particles lose their moisture content quickly after entering the initial hot zone of the drum and are immediately carried through the centre of the drum to the outlet without any further exposure to hot air (gas).

Large and heavy particles do not evaporate their moisture as quickly and may therefore be retained in the last part of the drum by specially designed flighting. The low temperature in this part of the drum provides a more gentle drying process and less damage to the product.

When drying products with sticky or paste-like structure with high viscosity the RUDD dryer employs a feedback system for product to be mixed into the raw material thus avoiding the building-up of product in the drum.

Benefits

The main advantages of the RUDD drying principles may be summarised:

- The minimum airflow resistance in the drum reduces power consumption to the induced draft fan to a minimum.
- The correct exposure time to hot gas for all product particles ensure optimum protein digestibility in the feedstuff.
- The exhaust gas recycling reduces the specific heat consumption per kg water evaporated to a minimum.

• The fast passage of nearly dry material from the hot front end zone of the drum to the cooler rear end minimises fire hazards.

• The internal design of the drum offers versatility and ability to process a wide range of material with varying particle sizes, weight-to-volume ratios, moisture contents, drying characteristics, etc.

• The features of adjustable speed for drum rotation, large turndown ratio for fuel combustion and free-flow drum design make the RUDD dryer flexible to process a range of raw materials.

- Fish meal

- DDGS

- Meat and bone meal

The RUDD dryer can work with different types of fuel:

• Gas, light or heavy oil

• Coal

• Biomass

• Steam Air Heater

• Oil or gas-fired air heater

Waste Heat Recovery

The exhaust gases being discharged from the RUDD dryer contain a large amount of latent heat.

Additional installation of gas scrubbers and heat exchange equipment makes a recovery of more than 50% of the energy input to the dryer possible. This may be used for duties as:

• Heating of air

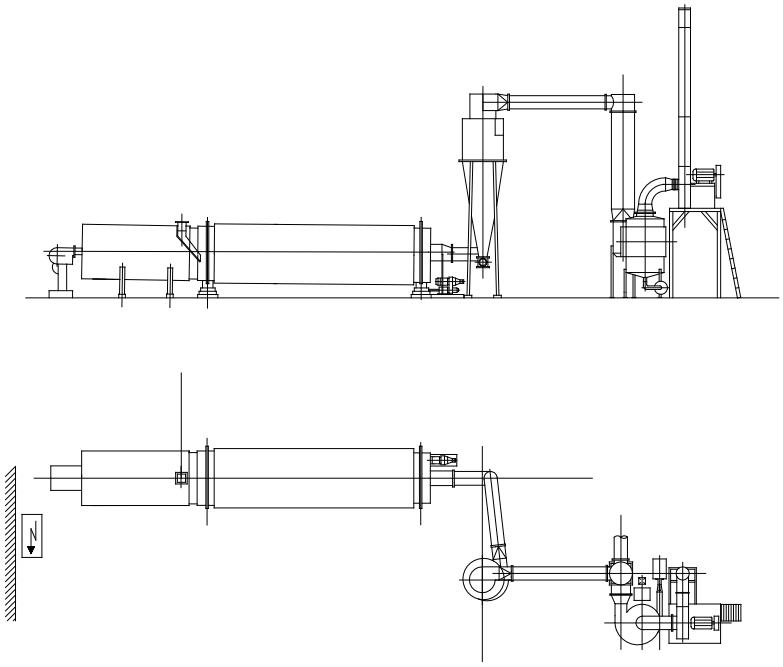
• Heating of water

• Concentration of liquids in vacuum evaporators

For separation of product from the gas at the outlet end of the drier several designs are available to suit your specific product:

• Bag filter, high efficient jet-bag filter for highly concentrated dust air streams.

• Separation systems with high separation efficiency and with negative pressure system including a rotary discharge valve.



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

HAARSLEV INDUSTRIES

Haarslev Industries A/S • Bogensevej 85
DK-5471 Sonderso • Denmark
Telephone: +45 63 83 11 00
E-mail: info@haarslev.com
www.haarslev.com

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