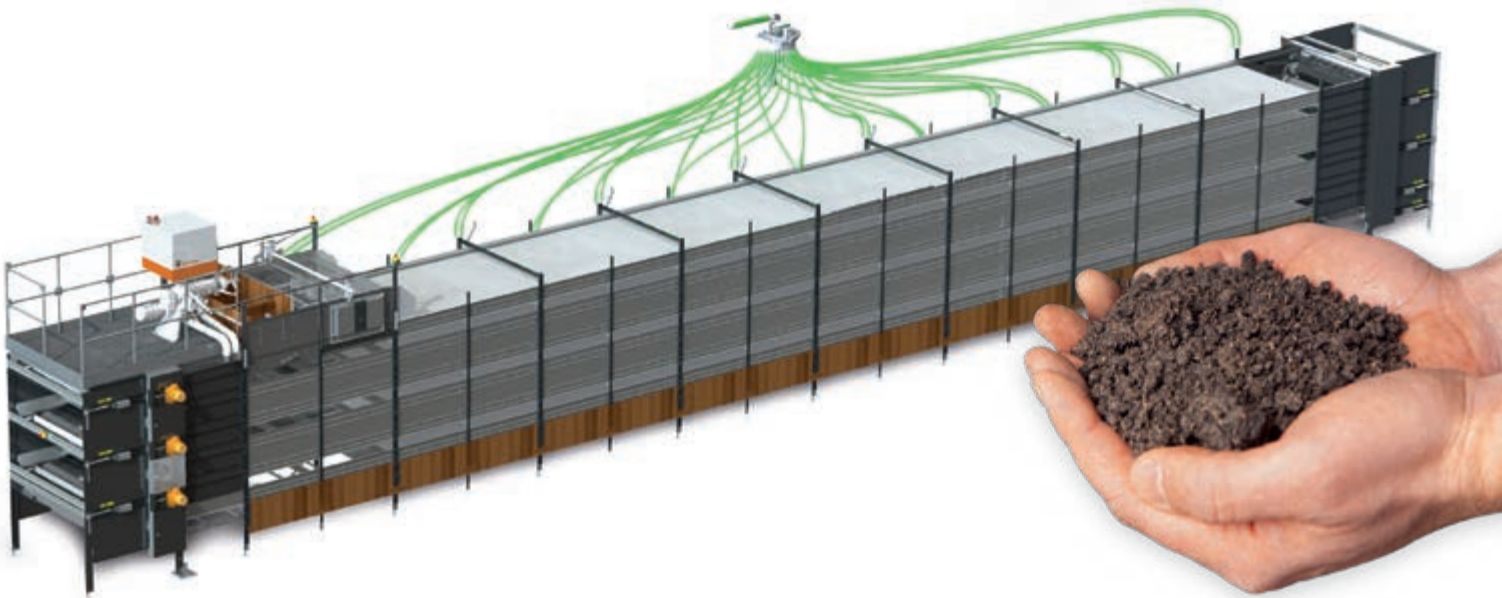


**NEW!**



**Big Dutchman**®



## **OptiSec** *Porco*

The innovative belt dryer  
for your pig or cattle slurry

# OptiSec *Porco* – slurry drying with the barn's exhaust air

Your goal is to reduce your amount of slurry and to make long-distance transport more cost-efficient? OptiSec *Porco* is your means of achieving this goal! With this innovative belt dryer, you will be able to evaporate 50 percent of the water in your slurry. The resulting solids

have a dry matter content of up to 85 percent and can be used as a high-quality fertiliser as needed, even outside of your region. As an alternative, install our BD PelletBox to produce marketable, pelletised fertiliser.

With the OptiSec *Porco* belt dryer, Big Dutchman

offers you an efficient solution. Let our experts advise you on how to find the best option for your individual needs.



OptiSec *Porco* in the gable for ideal utilisation of the barn's exhaust air

## How OptiSec *Porco* works

A well-proven screw press first separates the untreated slurry. The solids then drop into the filling station on the top tier of the drying tunnel. Using load cells, the belt speed can be controlled in such a way that two augers distribute the incoming slurry amount evenly. This is a main prerequisite for a uniform drying process.

The separated liquid is stored in a tank. In two tiers of the drying tunnel, the sediment from the liquids tank is added to the material to be dried. This procedure increases the nutrient concentration in the solids and reduces the amount of liquids.



A screw press separates the untreated slurry into a solid and a liquid proportion

During the drying process, the liquid proportion is transported to a distribution system via hose. Depending on the required dry matter content, a defined amount of liquid is sprayed onto the separated solids. The control system is fully automatic.



The liquid proportion is stored in a storage tank

## Manure belt drive

The OptiSec manure belt drive has proven its worth in more than 100 systems for a total of approx. 15 million animal places. It features a pressure unit which makes for an improved power transmission. Conveying the 1.78 m wide belts loaded with solids is therefore no problem. The manure belts are perforated and thus ensure optimal drying of the manure. An auger with two conveying directions is used as idler. This auger also transports dust as well as manure residues to the left and right onto the next tier, ensuring that the manure belt idler unit works reliably and precisely.



A distribution system sprays the liquid proportion evenly onto the material that is to be dried

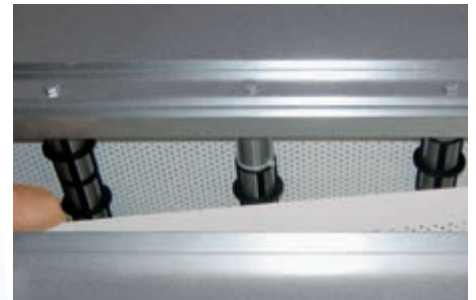


Six-tier manure drying tunnel

## Patented roller bearer

The patented roller bearer consists of a tube onto which plastic rolls are fitted. The rolls are formed in such a way that the manure belt rests on the roller in certain places only. The manure belt perforations are therefore not covered by the bearers, which ensures very

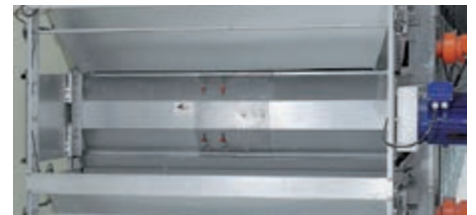
good circulation of the air even in this area, and which makes moving the belt easy.



## Chopper

After approximately two thirds of the drying time, the material runs through the chain chopper. The chopper consists of a quickly rotating shaft to which chain links with a length of around 20 cm are attached. These chain links break up any chunks, promoting a good mixing of the manure and therefore an even drying process.

- ✓ The drive unit is installed on the outside, which makes maintenance easier and protects the drive from dirt.
- ✓ Two easy-to-open doors facilitate cleaning and maintenance.



## Ventilation concept

For the drying process, fans push the warm exhaust air from the barn into the pressure corridor. Inside, the air passes through all tiers of the drying tunnel from one side to the other along its entire length. The perforated manure belts ensure that the warm air passes not only over the material but through it, which increases the drying efficiency considerably. The result is separated solids with a dry matter content of up to 85 percent!



## Exhaust air treatment

The drying process releases ammonia. We therefore recommend using a two-stage biological-chemical exhaust air cleaner to reduce ammonia, odour and dust emissions significantly. The cleaner's intelligent modular design means that installation is simple and assembly costs are easily planned. Additional advantages are:

- ✓ permanently high separation rates;
- ✓ easy handling;
- ✓ low demand for fresh water due to the high humidity caused by evaporation of the liquid proportion;
- ✓ easy-to-understand process monitoring.



An exhaust air cleaner is used to clean the ammonia from the OptiSec Porco exhaust air

## Control

The control system, supplied in a separate control cabinet, ensures the functional and operational reliability of the entire system. The farm manager can view and monitor the operating data on the full graphic display. If a network has been established, all data can also optionally be transferred to an external PC. A convenient remote enquiry is thus always possible. All recorded data can be saved on a long-term basis. The following parameters can be controlled:

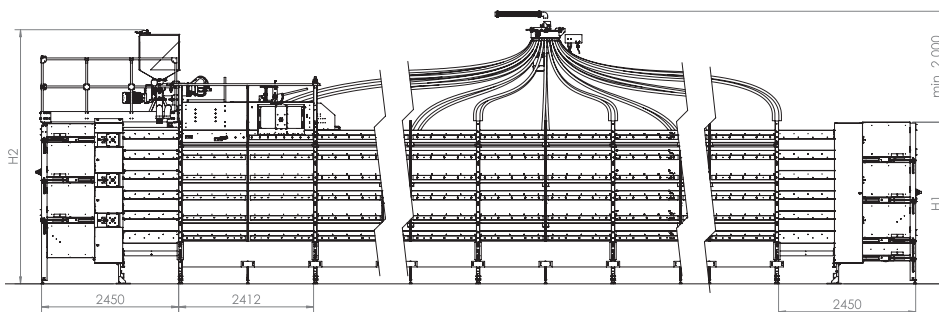
- ✓ tunnel belts in up to 10 tiers;
- ✓ separation and return flow of the liquid proportion;
- ✓ individual speed monitoring by means of a sensor in each tier.

## The advantages at a glance

- ✓ up to 50 percent of the water in the slurry can be evaporated every year;
- ✓ a dry matter content of up to 85 percent can be reached for the solids;
- ✓ the heat produced in the barn is used efficiently;
- ✓ suitable for pig and cattle slurry;
- ✓ no more expensive transportation of untreated slurry;
- ✓ the separated and dried solids have a much higher nutrient content;
- ✓ the solids can be spread on the fields as a valuable biological fertiliser, used for biogas plants or made into pellets;
- ✓ the system is operated fully automatically;
- ✓ proven technology is used.

## Technical specifications

Tiers	4	6	8	10
Section height H1 (mm)	1811	2531	3251	3971
Total height H2 (mm)	2666	3386	4106	4826



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