

# BIOSOLIDS PLATE BELT DRYER



**HOLES  
TO CUT YOUR  
COSTS**



## Holes to cut your costs

The Dorset beltdryer uses a belt of perforated steel plates instead of a woven belt.

Due to the perforation, the belt has significant lower air resistance, which results in the lowest electric energy consumption of the ventilators. Low energy use means low operational costs.



## Dorset dryer is designed to use waste heat at the lowest electricity consumption

The Dorset plate belt dryer is moving the product on the perforated plates through the dryer while being dried with heated air.

The drying process can be continuous but is mostly batch on fully automatic operation 24/7 without direct supervision.

The sludge will be dried to a dry matter content of 85-90%.

This results in:

- Volume reduction
- Weight reduction
- Easy storage
- Good properties for transport, export or further processing

## Reference systems worldwide in operation

Dorset has constructed more than 800 dryers worldwide for various input products.

Multiple of our sludge dryers are currently operational in Europe, drying sewage sludge 24/7, 8000 hours or more per year creating value from waste heat.

# Sludge drying the easy way Running all the time at lowest costs



### Large pasta dosing head

The dosing of sludge starts with a solids pump, which presses the sludge through a dosing head. Including built-in cleaning system and fast ( 2 min.) replacement of dies.



### Steel plate belt

The drying belt consists of perforated steel plates. The plates have been galvanized and powder-coated, in order to provide sufficient protection against aggressive substances, can carry a high layer of product on top. Because of the wide holes the belt does not need cleaning.



### Heat recovery

This unit increases the heat-efficiency of the drying process.

Heat recovery uses the temperature of the saturated air going out of the dryer to heat up the fresh air going into the dryer.



### Homogeneous qualities in the end product

During the drying process, features ensure that the end products have continuous homogeneous qualities.

The drying process is relatively easy and therefore reliable.

## Using hygienisation to meet government regulations

This module is used to ensure/validate that the product has been kept at a certain temperature for a period of time, in order to remove any of bacteria.

This is often required to meet regulations for use or export, for example the USA Class A Biosolids regulations. According to charter 3 of the European Commission regulation no. 1774/2002.



## Improving marketing and transport

Dorset has various bagging and/or pelletizing equipment available for easy transport and better marketing possibilities.

## Air and waste water treatment



### Air treatment

More than 20 years has Dorset been producing air treatment systems: biological and chemical.

Several references plant with sludge drying show a stable clean process without odor.

Dorset's design for sludge drying releases only a low level of emissions to the air and therefore the air is easy to clean.

Biological air cleaning is a simple process and very easy in maintenance. It can be combined with heat recovery.

The wastewater can be treated and even zero waste systems can be constructed which can avoid any water disposal.

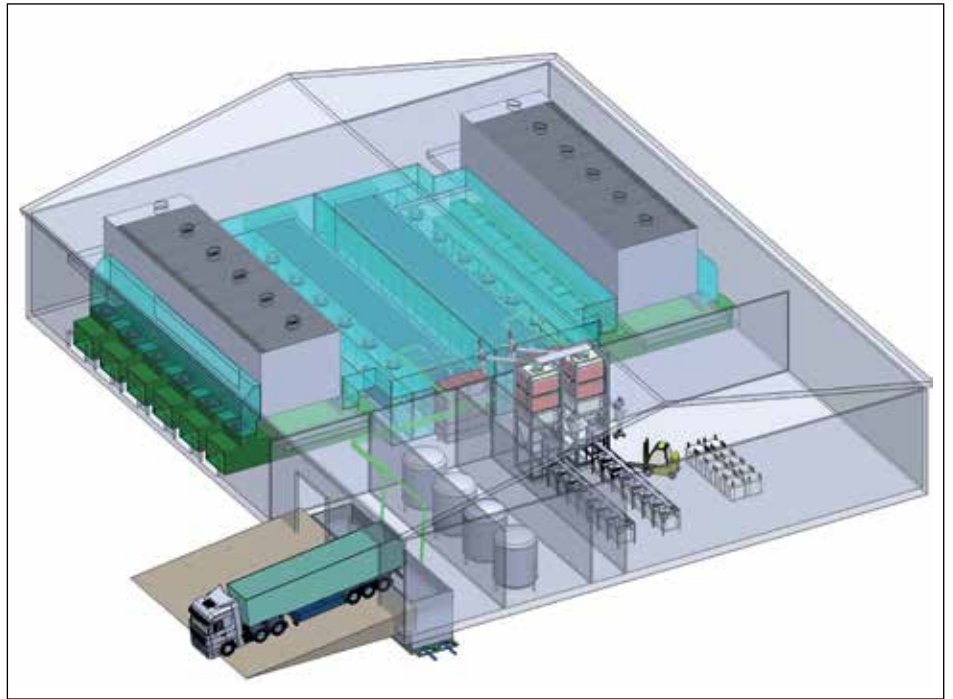
### No waste water

Waste water from the air treatment can be treated as well and even zero waste systems can be constructed which can avoid any water disposal.

The dorset denitrification plant processes the waste water from the air treatment system. The denitrification system functions like a tiny waste water treatment plant. The process is fully biological. No chemicals are used the process.

The treated water can be returned to the air treatment system to be reused for cleaning air.

## Complete plant design



### Total turn-key solutions from a single company

Dorset usually provides turn-key solution for its customers. We can engineer and produce a total turn-key solution for it's customers based on our own product line. Afterwards we provide service and after sales from our service department.

#### Holes to cut your costs

- 80% less electricity costs during operation
- Simple design, therefore reliable performance
- A 'no chemicals' option for the air cleaner
- A 'no waste water' option for the air cleaner

The example sludge processing plant above would include the following modules:

- Input bunker for accepting the dewatered sludge
- Dryers for drying up to 85-90% dry matter content
- Heat recovery for recovering heat from outgoing air
- Air cleaning for removing ammonia, dust and smell from outgoing air
- Hygienisation for meeting goverment regulations for use or export
- Bagging system for easy storage, transport and marketing

Dorset distinguishes itself by providing the best price/quality ratio to its customers.



**Dorset Green Machines is developer and producer of drying equipment, air cleaning systems and control panels.**

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RFID-Technology,  
electronic identification



Drying equipment to  
make use of residual heat



Air cleaning, and  
sorting systems