

# DORSET POLLO POULTRY MANURE DRYER

- Drying of poultry manure
- using poultry house air
- using external heat
- Compact and flexible
- Without pre drying
- High fine dust reduction
- Pellet production
- Sanitation
- Bag filling and weighing



Dorset Green Machines BV is a leading global designer, manufacturer and marketer of manure/sludge drying systems. These systems are extremely suitable for utilizing residual heat from (green) power plants. This type of heat as well as exhaust air heat from poultry houses can be used for drying poultry manure and turning it into a valuable organic fertiliser or fuel.

## Low on service and user friendly

Smoothly coated perforated steel plates are the basics of the Dorset Dryer. Its sturdy construction allows a thick layer of 15 – 18 cm of manure on the plates which guarantees a highly efficient drying process. It also allows a more compact design of the Dryer.

When farm air is used for drying, the size of the dryer depends on the number of hens in the house. The number of hens per m<sup>2</sup> drying surface is climate dependent: 400 – 600 hens per m<sup>2</sup>.

Only a small part of the farm air passes the dryer (0,8 or 2 m<sup>3</sup>/h/hen). The rest of the air (summer ventilation) leaving the house directly.

For example a dryer for 80.000 – 120.000 hens is 27 meters long, 2 meters wide and 3 meters high. The industrial quality of the dryer guarantees interference free use of the equipment. The system works fully automatic and unmonitored.



### Drying with the exhaust air from the farmhouse

In dried and pelleted form, poultry manure is a very good and popular fertiliser. Pre-drying in the farmhouse is no longer common practice. Skipping pre drying gives a big electricity cost reduction. Farm air of 20 degrees or more is normally sufficient to dry the produced daily quantity of manure. High temperature and low moisture gives the best drying results. The place of the drying system can be at the back or along the long side of the house.



## The Dorset Drying Design

**Gives a better environment (reduction of emission rates) and a better value organic fertiliser.**



**A dosing belt** delivers the manure carefully on the smooth perfoplates. Therefore the manure can be brought on the dryer in wet condition, without pre-drying. The manure will only be transported via belts. No pre-drying, therefore lower electricity costs.



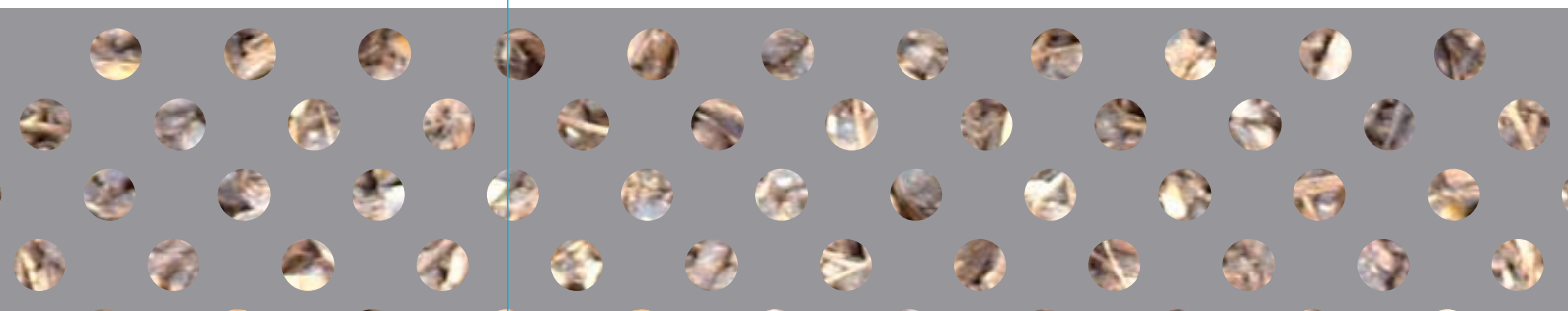
**The dryer** has 1 – 6 layers of perfoplates, drawn by a rolling chain. The drying starts at the top-layer, the manure drops down to the bottom-layer and is removed by an auger/screw system.

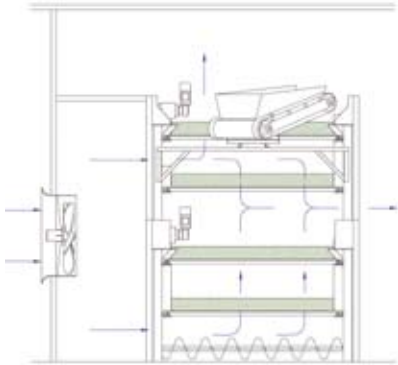


**The manure** is removed from the farmhouse every day. Then dried on the dryer for two days. This limits the turnover to ammonia and optimises the nitrogen content in the end product. Less ammonia in the air and a higher value end product.



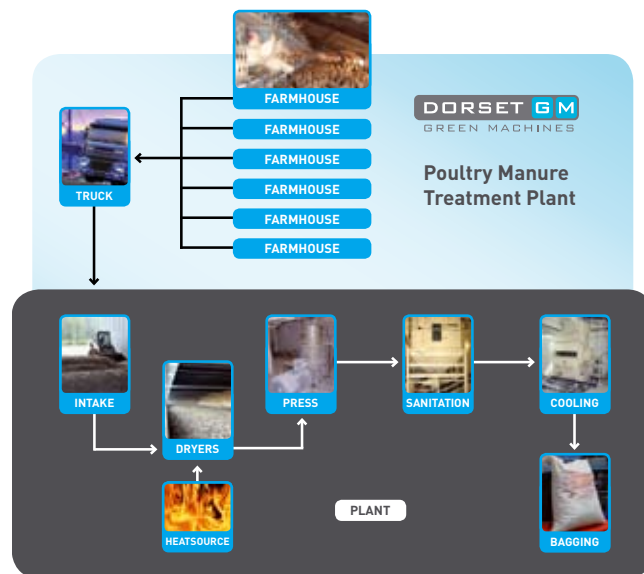
**The Dorset drying system** is accepted by the Dutch government as a system that reduces ammonia emissions of poultry houses. Also dust and specially fine-dust is filtered from the farm air by the manure layer (reduction appr. 70-80 %).



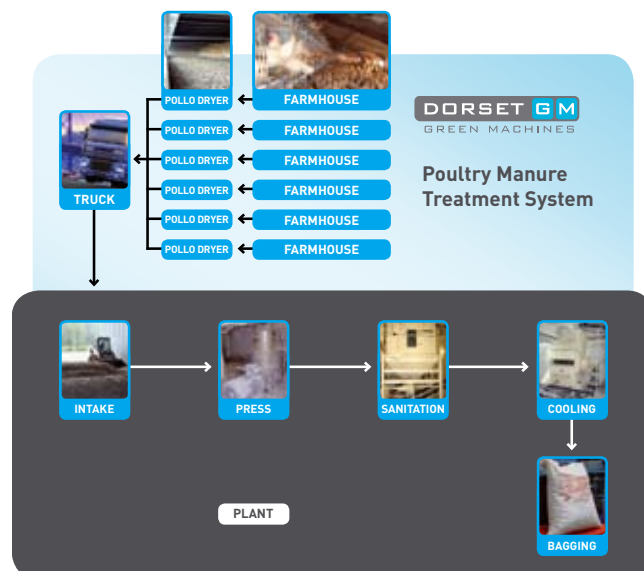


- Farm house air is blown through the manure, 0,8 – 2 m<sup>3</sup>/h/hen
- The manure is daily removed from the house by belts and is normally dry within two days
- Therefore no pre drying is necessary and ammonia emission in and outside the farmhouse is minimised, reduction more than 80 grams of ammonia per hen per year
- The dust from the farm exhaust air is filtered by the manure layer. Reduction of (fine) dust is more than 70 %

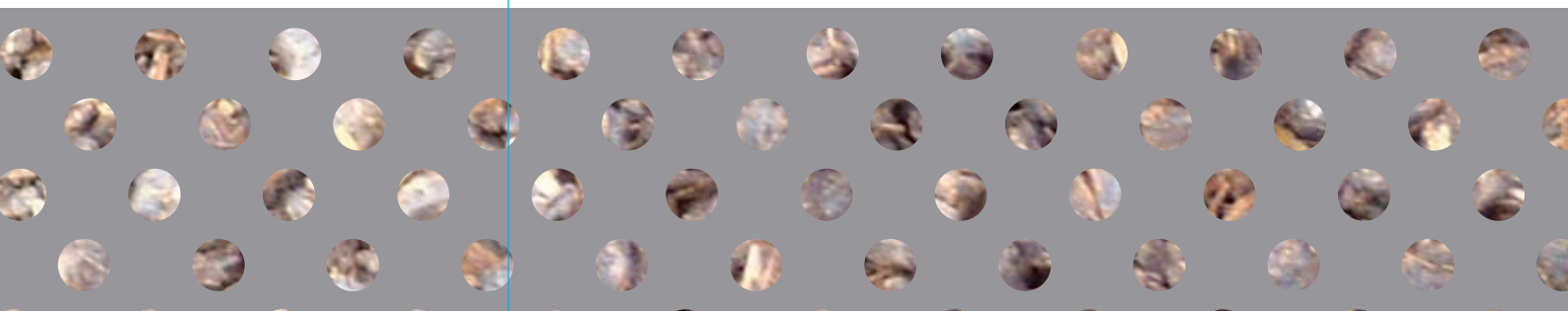
## Two systems for the production of organic fertiliser



Central drying



Drying at the farmhouse





## Sanitised organic fertiliser ready for export



### Sanitised

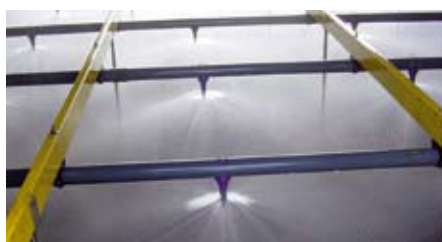
The dried manure is pelletised and then kept at 70°C for one hour. The pellets are then free of germs. Therefore suitable for export.



### Transport

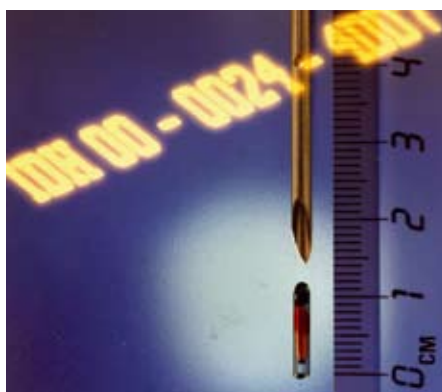
Pelletising turns poultry-manure into a suitable product for long distance transport. Dorset supplies weighing and packaging systems for weighing and packing big bags as well as complete installations for weighing and filling small buckets and bags.

## The Dorset program includes



### Air cleaning

Dorset has 15 years of experience with Air Cleaning and is accepted and certified in many countries. For poultry farming biological as well as chemical air cleaning systems are available.



### Electronic Identification

For over 20 years, Dorset has produced reading equipment for electronic ID, the chip for animal access control or monitoring. It is often used for study of animals in nature or laboratory. Dorset ID equipment also includes identification systems for hen behaviour research and illegal entry of farm houses.

**DORSET GP**  
DORSET GROUP

RFID-Technology,  
electronic identification

**DORSET ID**  
IDENTIFICATION

Drying installations to  
make use of residual heat

**DORSET GM**  
GREEN MACHINES

Air cleaning, feeding systems  
and sorting systems

**DORSET FS**  
FARM SYSTEMS

**Dorset Green Machines B.V.**

Weverij 26 • 7122 MS Aalten • The Netherlands  
Tel. +31 (0) 543 47 21 03 • Fax +31 (0) 543 47 53 55  
email gm@dorset.nu

**WWW.DORSET.NU**