

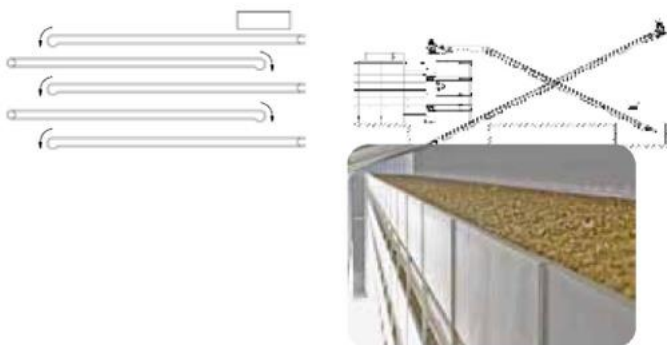
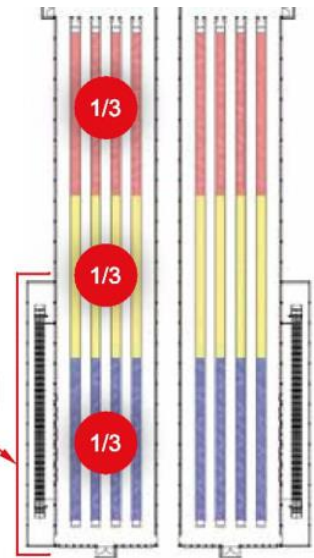
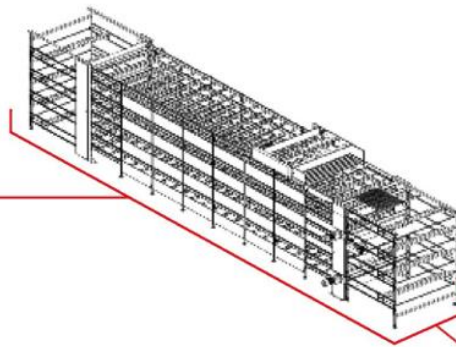


FMDS Manure Drying System

The MDS is a machine that solves all poultry manure-related management problems in a poultry plant. In fact, MDS eliminates odors and flies and the volume of poultry manure produced by the plant on a daily basis is greatly reduced.

The MDS is a drying system composed of a series of overlapping perforated belts where the poultry plant manure is evenly distributed. The poultry manure on the conveyors crosses an air flow that dries the poultry manure 24 hours a day. The energy used for drying is greatly reduced since the ventilation air is re-used exiting the plant.

The MDS ensures poultry manure drying well under the minimum humidity necessary to dry fermentation and therefore not only considerably reduces the volume of poultry manure produced, but also avoids odors, flies and sludge by maintaining all the organoleptic properties of the poultry manure unchanged.



MDS POSITIONING

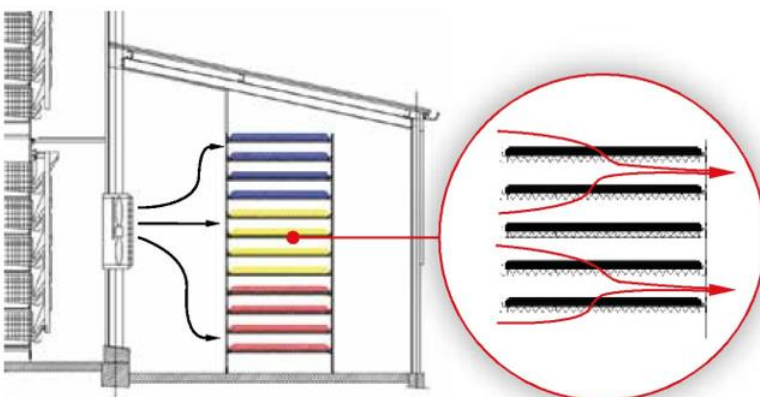
The MDS is usually positioned inside a premises (tunnel) placed beside the poultry plant. By doing so, a part of the poultry plant ventilation air can be sent inside the MDS tunnel and therefore through the MDS belts.

DAILY POULTRY MANURE

COLLECTION

On a daily basis, the MDS automatically collects a third of the poultry manure in the poultry plant and, using specific conveyor belts, distributes it on one third of the MDS belts.

Collecting one third of the poultry-manure in the poultry system on a daily basis, the poultry manure stays within the plant for three days and subsequently remains three days inside the MDS system. In these 6 days, the poultry manure passes from a water content of 80% to a minimum of 20%.



DRYING EFFECT

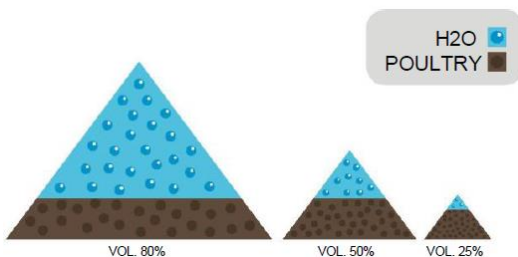
Poultry manure drying inside the MDS is ensured by the air coming from the ventilation system. The pressurized air is made pass through the perforated belts of the MDS and through the poultry manure distributed on the belts. The air necessary to correctly dry the poultry manure is equal to approximate 4m³/h per head in the poultry plant. The MDS belts also act as a filter for dust and feathers.



END PRODUCT HUMIDITY

If correctly dimensioned, the MDS system reduces humidity in the poultry manure from an initial 80% (80% water and 20% solid substance) to a level of final humidity which can reach 10%.

The final humidity of the product depends on the external environmental conditions (humidity and temperature). In any case, we can consider an average humidity during the year less than 20%.



ADVANTAGES AND PERFORMANCE

Poultry manure drying:

- Average drying of poultry manure 20% (20% Water and 80% solid substance);
- Low energy consumption for poultry manure drying (Plant ventilation);
- Reduced dust emissions from the poultry plant.

Storage and Transport:

- 4 times volume reduction;
- Poultry manure transport savings;
- Reduced storage area for poultry manure on the farm.

End product:

- Non-fermented poultry manure;
- Flies eliminated;
- Odors eliminated;
- Conditioner to maintain all the organoleptic characteristics of the poultry manure.

MDS SYSTEM AUTOMATION

The system is completely managed automatically by a control panel. All the parts are excellent quality and the software managing the plant was designed based on the characteristics of the system (customized).

The system allows automatic collection of the poultry manure by adjusting the flow of poultry manure to obtain excellent distribution and therefore its adequate drying.



The polypropylene belts are supported by mobile coils that reduce friction and at the same time create a self-cleaning system to guarantee drying efficiency is maintained over time.

In detail:

- Rollers with bearings: The mobile coiled rollers are equipped with bearings to reduce friction due to conveyor movement.
- Mobile Coils: the mobile coils create a space between the belts and the rollers. This space enables the air to keep the contact surfaces clean, guaranteeing drying efficiency over time.
- Mobile Coils: movement of the coils creates a roller self-cleaning system, avoiding build-up of poultry manure and thereby reducing maintenance and adjustment times of the system.

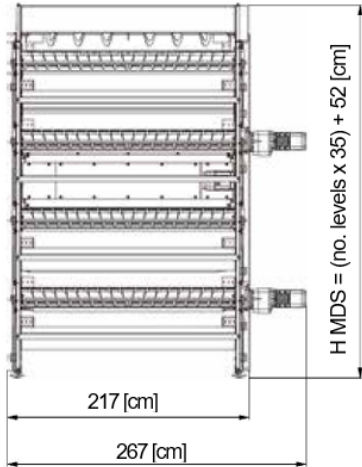


All the buffer panels are easily removed and were designed to encourage inspection and cleaning operations.

The coiled return roller promotes cleaning of the belt. Furthermore, its diameter and the absence of sharp edges guarantee the right adherence to the polypropylene belt, in particular in the welding zone.

The safety system which is assembled on each surface of the machine enables immediate stoppage of the system in the event of problems on the polypropylene belts.





"MDS190"

MAX CAPACITY	240 heads m / linear
MAX BELT SPEED	4 m / minute
BELT WIDTH	190 cm

