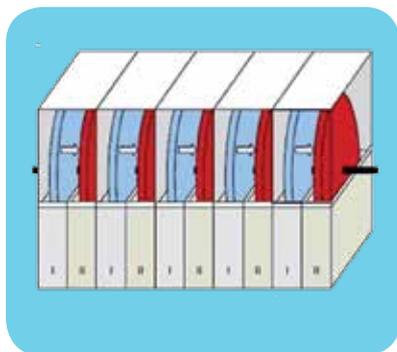


DORSET LGL AMMONIA STRIPPER

Unique technology

Removal of ammonia from
liquid manure or digistate

- NO ventilation system**
- NO air recirculation**
- NO steam**
- NO electric energy wasted**

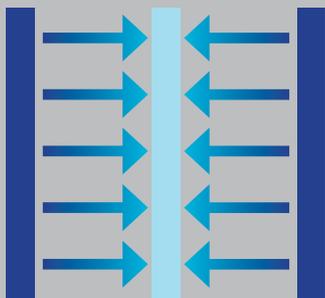


Working principal

- NO ventilation system**
- NO air recirculation**
- NO steam**
- NO electric energy wasted**

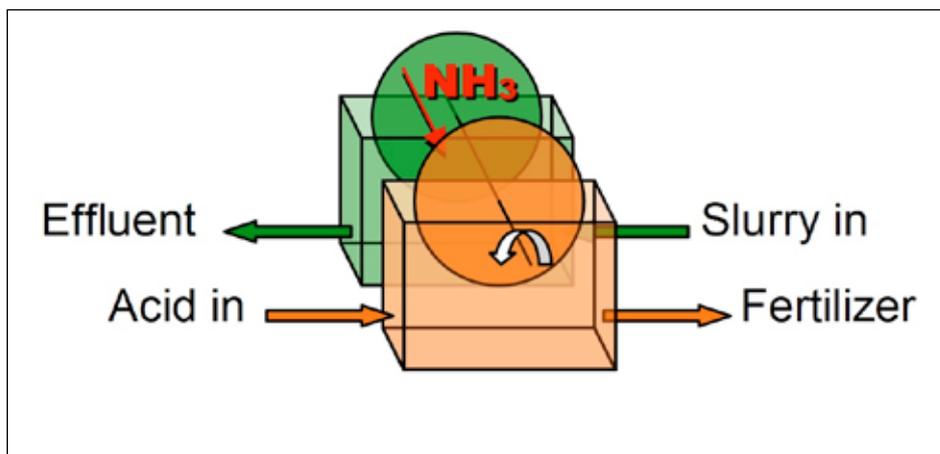
The development is a joint venture between Wageningen Agricultural University and Dorset Green Machines to have a robust, simple and low energy system for ammonia removal from liquid manure.

The LGL-Stripper is currently being tested at one of the university dairy farms, with a biogas plant, so both cattle manure and digestate can be stripped.



Serial production is planned to start in the first half of 2015.

Ammonia stripper without airflow so no energy wasted



In areas with intensive animal production, large amounts of nitrogen present in liquid manure or digestate can be a limiting factor when considering manure application rates on to arable land.

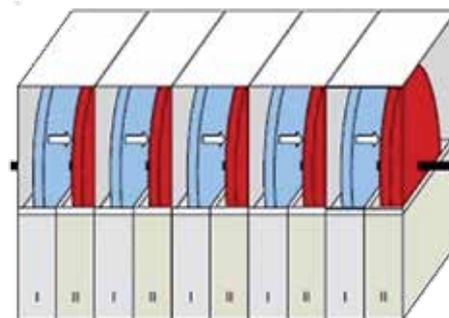
Recycling of excess ammonia-nitrogen from animal manure in

to a concentrated inorganic liquid concentrate is a desired outcome of a manure treatment system.

The nitrogen concentrate can supplement the application rate of nitrogen by animal manure, without resorting to chemical fertilisers to achieve optimum crop growth.

LGL : Liquid to Gas to Liquid

During the first stage, ammonia is evaporated from the liquid manure into a closed-off gas phase. During the second stage, ammonia is recaptured from the gas-phase with sulphuric acid. The end-product is a liquid manure with max. 80 % ammonia-reduction and ammonia sulphate, which is a liquid concentrated chemical fertiliser.



Unique construction

Through the unique construction, there are no emissions of ammonia to the environment. There is no airflow, so no electricity consumption by the fans; one rotating axis is consuming max. 1 KW.

Two storage tanks for the manure and the liquid sulphur acid, together with the pumps and control system make the system complete, easy and robust.

Typical size of the LGL-Stripper:

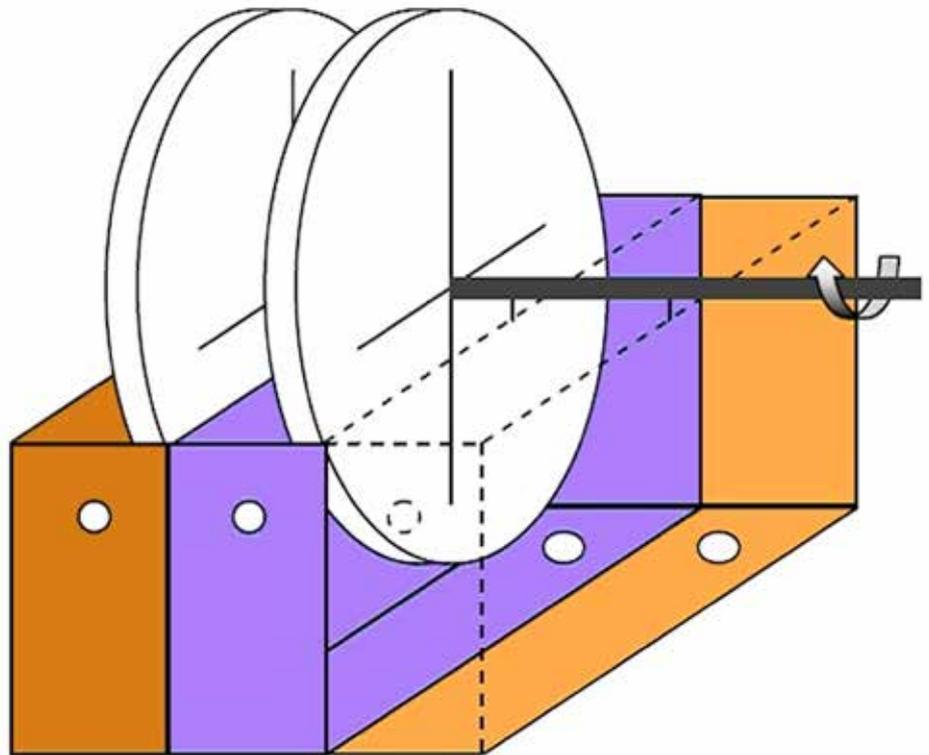
12 x 2,5 x 2,5 m.

The capacity of the LGL-Stripper is varies depending on:

- type of product
- ammonia content of the product
- temperature of the product
- pH value of the product
- ph value of the sulphur acid solution.

The above estimated capacity is therefore an approximation without guaranty of performance.

Removal of ammonia from liquid manure or digistate.



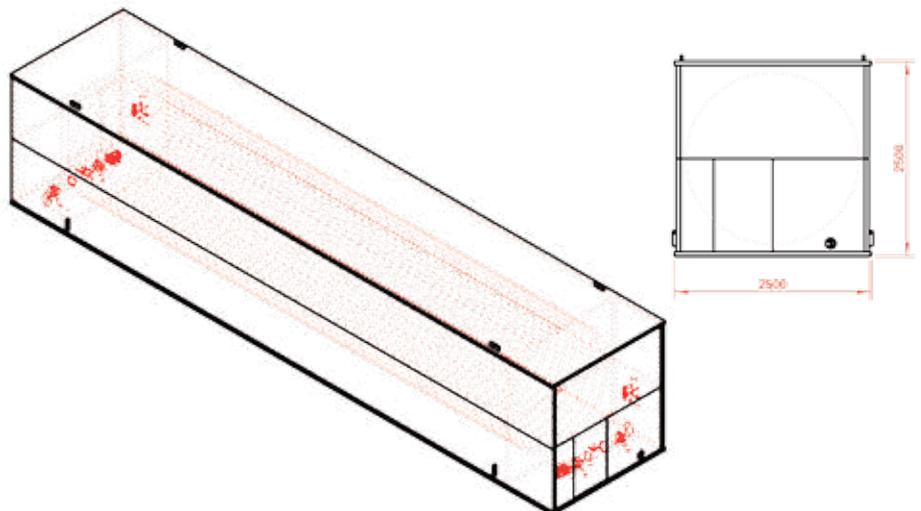
The system consists of rotating discs that are partly submerged in either the liquid manure or the receiving sulphur-acid solution.

The rotating discs are close to each other so the ammonia coming into the gasphase is immediately

absorbed at the other disc with the sulphur acid. To a certain level, there will be a continuous flow of ammonia from the manure disc to the sulphur acid disc.

The level and speed of the ammonia-travel depend on the PH value and the temperature of the manure.

	Temperature	PH	Ammonia in kg/m ³	Ammonia out kg/m ³	Capacity m ² /h
Manure of cattle and pigs	15°C	10	4,5	2,0	10
Digestate liquid phase	70°C	8,3	4,5	2,0	9



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Weverij 26 • 7122 MS Aalten • The Netherlands

Tel. +31 (0) 543 47 21 03 • Fax +31 (0) 543 47 53 55

gm@dorset.nu

WWW.DORSET.NU