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
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.

**Ammonia stripper without airflow so no energy wasted**
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 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 digestate.

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.

<table>
<thead>
<tr>
<th>Manure of cattle and pigs</th>
<th>Temperature</th>
<th>PH</th>
<th>Ammonia in kg/m³</th>
<th>Ammonia out kg/m³</th>
<th>Capacity m³/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°C</td>
<td>10</td>
<td>4,5</td>
<td>2,0</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

| Digestate liquid phase    | 70°C        | 8,3| 4,5              | 2,0              | 9            |
RFID-Technology, electronic identification

Drying installations to make use of residual heat

Air cleaning, and sorting systems