Composition of the digestate

1) Digestate from digester
2) Solids obtained by separation
3) Liquid phase after separation
4) Distillate: The water removed from the digestate for discharge, evaporation or use as process water
5) Concentrated digestate
6) Ammonium sulphate solution (ASS)

CONTACT

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BIOGASTECHNIK SÜD

VAPOGANT

Energy-efficient, tried and tested digestate reduction with nitrogen recovery

The digestate Evaporation

VAPOGANT

Our plant processes the digestate from the biogas plant to such an extent that a usable, concentrated fertilizer is produced. We remove the water content from the digestate by vacuum evaporation with the waste heat of the CHP.

The advantages

Storage

- The thickened fermentation residue has considerably less volume and saves up to 70 % of the fermentation residue storage capacity
- Digestate evaporation as an alternative to the construction of additional digestate storage
- No further fermentation residue storage problem due to amendment of the wastewater and fertiliser ordinances

Transport

- Less volume means fewer trips (relief for roads and population)
- Fewer crossings in the field due to nutrients in concentrated form
- The weather risk is reduced and the power of impact during spreading is increased

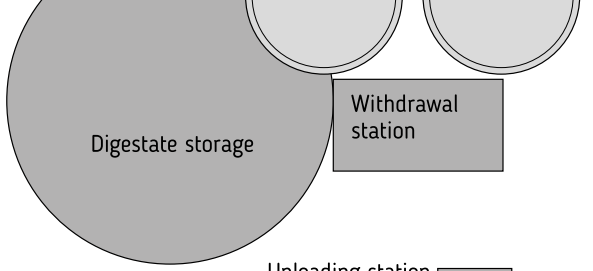
Heat utilisation

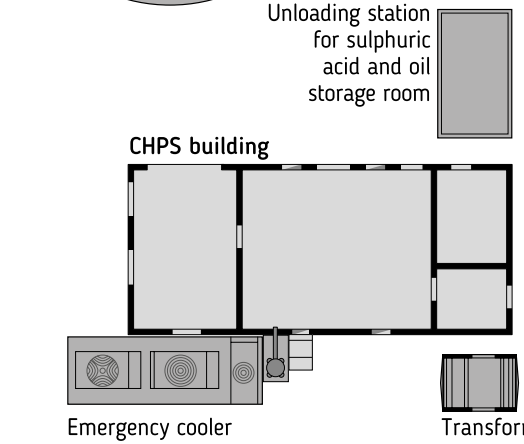
- Efficient and sensible use of heat all year round
- Secure CHP bonus through efficient fertilizer production
- Easy integration with existing systems (also with partial heat utilisation)

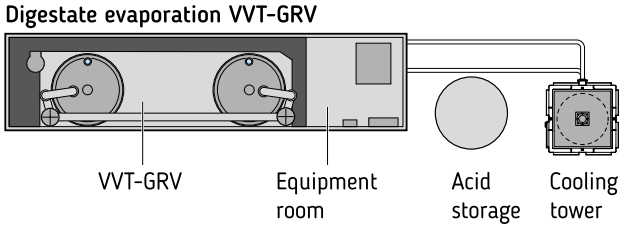
Nutrient management

- upgrading of the digestate to transportable ASS and concentrated fertilizer
- Less nitrogen loss through ammonia emissions in the field, thus saving on nitrogen purchases
- Better nutrient management: nutrients can be used much more effectively and specifically due to the separated nutrient fraction

fig. Digestate Evaporation Vapogant







SITE PLAN

The system is set up in a frost-proof container fully pre-assembled from factory. The cooling tower is located outside of the container: See illustration. The digestate evaporator is installed next to the CHP building.