

Dry Cycle Fermenter

Circular Plug Flow Digestion Technology

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High Gas Yield from Dry Materials

No Need for Liquid Manure or Water Addition

The annular plug-flow digester generates a natural flow in the main digester which guarantees optimal substrate movement without needing agitators, hence reducing energy & maintenance costs.

Process....

Incoming substrate passes through the annular digester as a plug flow, allowing the different stages of bio-digestion (i.e. hydrolysis, acid and methane formation). At the end of the process, digestate is fed to an auger for separation into liquid and solid digestate.

Process optimisation is achieved through constant computerised monitoring of control parameters which can be remotely operated. Material is constantly moistened with its own percolation liquid, which is stored in the inner tank. Mesophilic fermentation temperatures are regulated through heated floors and walls.

Selected References

Name	Renewables (t/p.a.)	Electrical Power (kW)	In Operation since
Kusel	7,500	330	11/08
Schmölln	16,000	1000	11/09
Ostrhauderfehn	12,000	500	12/08
Melzingen	14,000	625	06/08
Göhren *	14,000	625	06/08

* Circular plug-flow digestion technology

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Economic Alternative to Conventional Wet Fermentation....

Power consumption is just 2-3% of the electricity generated by the plant.

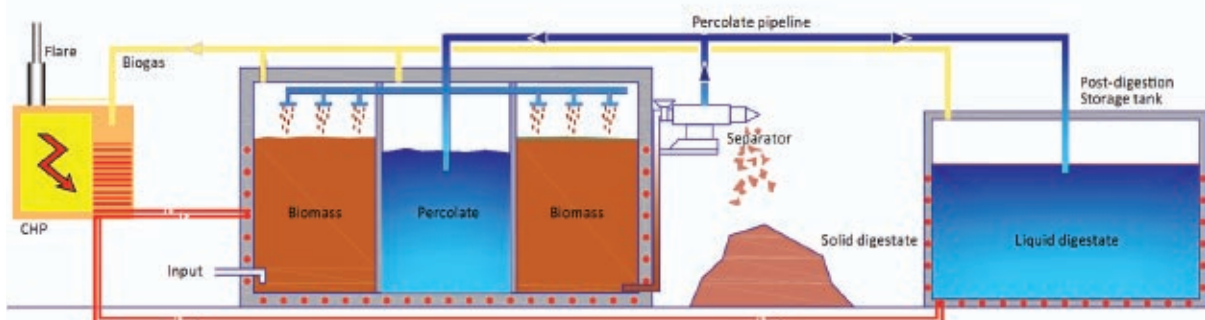
The system ensures less maintenance, repair and replacement than Wet Fermentation. The design and layout enables long retention times, ensuring consistent, high gas yields. Biogas produced is of a high quality and low sulphur content.

Features

Robust Technology

- < Maintenance Costs
- < Staff Costs
- < Operating Costs
- > Gas Yield
- > Gas Quality
- > Safety & Emissions Standards

Dry Cycle Fermenter Schematic



The percolate is stored in the inner tank and is used to keep the substrate moist, hence maintaining an optimum environment for anaerobic bacteria. Any excess percolate is pumped into the 'storage tank'.

The biogas is dried and small amounts of sulphur are removed prior to fuelling the CHP plant.