Dim Water Solutions
Environmentally Sustainable Solutions
dimasa grupo

Biogas Upgrading Plants

Processing plant from Biogas to Biomethane

Dim Water Solutions provides a special technology that allows purification of biogas to transform it into biomethane. Biomethane gas is an attractive alternative to fossil fuels. Its production is environmentally responsible, efficient and renewable. It can be mixed with natural gas and injected into the conventional gas pipeline.

Biogas Upgrading Plants

Increased quality of Biogas up to 98% purity.
(Quality of Natural Gas)

Application:

Sewage plant: Biogas produced in the digester sludge.

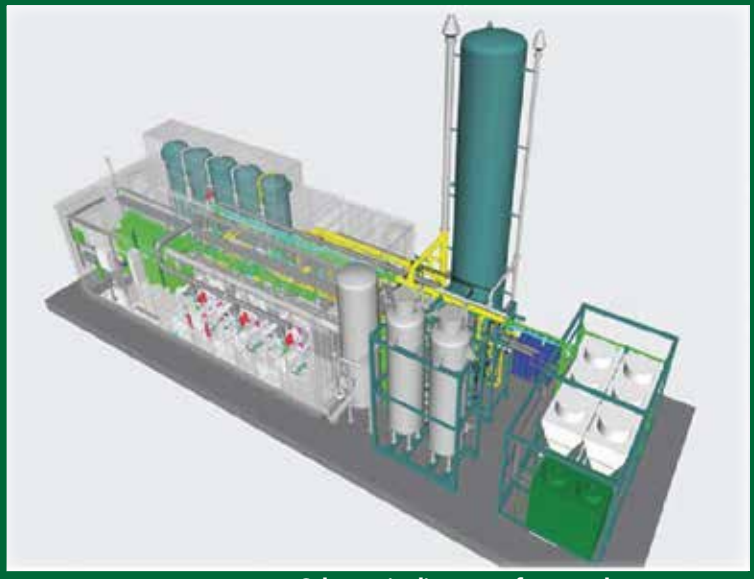
Farming: Organic solid waste digesters.

Ranching: Dung digesters and animal waste.

Landfills: Biogas production by sealing the landfill.

Benefits

- **The pressure swing adsorption (PSA) process is a dry biogasupgrading process with low operational costs:** No process water, no process water conditioning; no waste water, no waste water treatment; no chemicals and no off gas with toxic contaminants
- Mobile units for **easy transport and installation, reducing maintenance.**
- Mount modules **(container).**
- **Quick installation and commissioning.**



Schematic diagram of a complete system

Biogas can be produced from sustainable raw material and organic waste – locally, reliably, simply, efficiently and with environmental responsibility.

Biogas upgrading plants of Dim Water averagecosts are less than €0.01/kWh.

Patented process for upgrading biogas, free from emissions, that meets international environmental regulations.

The biogas upgrading process is a simple procedure:

1. COMPRESSION: The raw biogas is first compressed.

2. CONDENSATION: Following the condensation of water content through a temperature exchange system and finally trace elements, such as hydrogen sulphide (H_2S).

3. ELIMINATION: The conditioned biogas is finally channelled through the PSA filter which is filled with carbon molecular sieves, especially designed for adsorbing the typical elements found in biogas. CO_2, H_2O, residual H_2S, siloxane, NH_3 and odours are then removed. Furthermore, oxygen and nitrogen are partially removed. **The result is a highly enriched methane gas referred to as biomethane**

PLANT TYPES

	PSA250	PSA500	PSA750	PSA1000	PSA1200	PSA1400
Raw biogas (Nm3/h)	250	500	750	1000	1200	1400
Bio natural gas (Nm3/h)	125	260	390	520	624	728
Power consumption (kW)	60	120	180	240	290	340
Dimensions, length x width (m)	21x6	21x6	24x6	24x6	24x6	24x6

Integrating this technology increases the yield of methane and improves the overall efficiency of the plants. And obtain quality biomethane gas for a automotive or injection to the natural gas network.

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Interior view Biogas enrichment plant