Mission

Since the beginning of its activity our company has decided as its main objective: clean air from pollutants harmful to the environment and to human health.
For over 30 years we have acquired experience in installations of industrial air pollution control systems, by designed systems in compliance with atmospheric emission limits imposed by the law
Our systems are optimized in energy, water and reagents consumption.

AirDep is specialized in the design and the latest generation, relying on a highly qualified and experienced team.
Our objective is to give to our customers a full service "Turnkey" stating from initial design until the installation and final test.
AirDep experience in air pollution control allows to offer to its customers custom-made solutions

air dep

Air depuration plants

Innovative cutting-edge technologies

Biogas plants components

- Biogas plants components
- Waste water treatment plants
- Solid waste treatment plants
- Industrial sector

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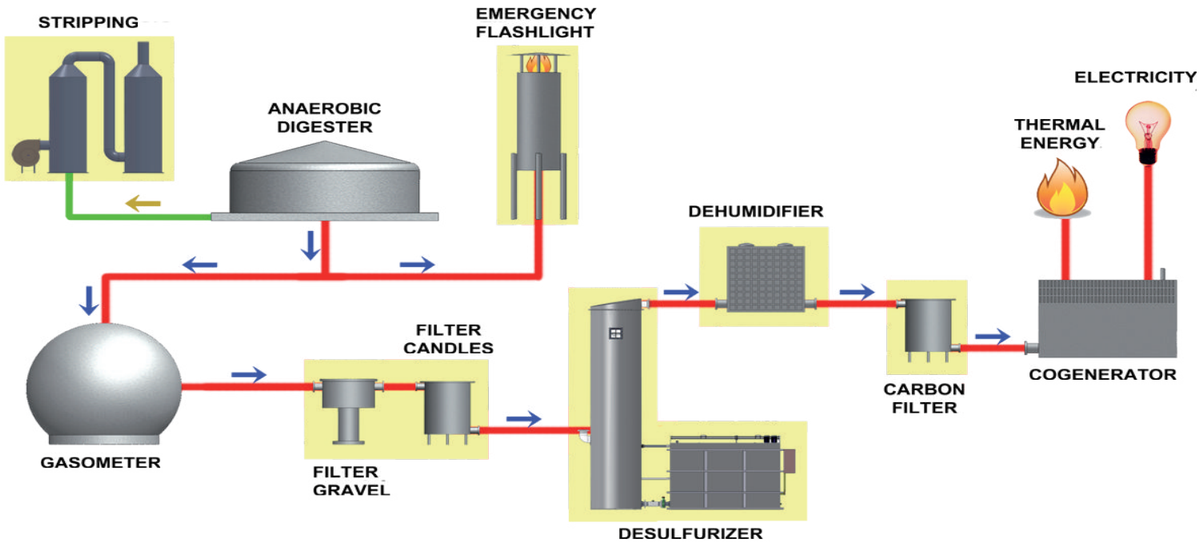
We design and build the latest generation of biogas plants



Emergency biogas flare

Gas Flares are designed to work in case of emergency or when there is an excess of biogas production.
They can be divided into two categories:
- Open flare type - visible flame
- Closed flare type - invisible flame

We build and supply the two Emergency biogas flare categories
Emergency biogas Closed flare TC series has a combustion chamber, at about 1000/1200 ° C, is able to oxidize all pollutants.
Emergency biogas Open flare TA series has a free flame at about 800 ° C and can oxidize most of the polluting substances present in the biogas.

Ceramic Candles filters and Gravel Filters

The ceramic Candles filters and gravel filters are usually installed in the biogas production line. They are used to remove condensate drops and fine particles dragged by the biogas flow.
Our gravel filters FG series are usually installed immediately at the outlet of the digester to remove condensate drops and coarse particles from the biogas.
Our ceramic Candles filters FCC series are installed downstream a gravel filter and are composed of ceramic hollow candles with porosity between 10 and 30 micron to separate the finer particles from the biogas.

Our objective is to minimize the operating cost

A New Innovative Biogas Desulfurizer DBC Series

In biogas production plants one of the main problems is due to the high concentration of H2S in the biogas. The technologies used are essentially: addition of iron oxides powder in the digester (with a high operating costs); Biological scrubbers (with a very high investment cost); Chemical scrubbers (with very high operating costs and more frequent maintenance) and static filters using activated carbon or iron oxides (with very high operating costs).
The plant is composed of a tower and a separate vessel, the biogas flows up from the bottom of the column and is washed with liquid which is fed from the top of the tower.
After the liquid has passed through the contact bed in the scrubber, it reaches the oxidation vessel through a connecting pipe, in this tank the liquid undergoes an oxidation through air blown from the bottom by a blower.
From the oxidation tank the liquid is pumped back to the scrubber through a recirculation pump that draws from the bottom of the tank and sends it to the top of the scrubber bed.

Stripping plant

Our stripping plant is designed to reduce the ammoniacal nitrogen in an liquid effluent using air as carrier gas phase. the ammonia is transferred from the liquid phase to the gas phase.
In our stripping Plants, TS series, The optimal air flow rate is calculated, the optimal operating temperature in the stripping column and the optimal pH of the effluent to be treated are determined.
Then the diameter and the height of the column are calculated in order to create all the necessary conditions for the transfer of ammonia from the effluent liquid to the air during their contact along the stripping column.
The air exiting from the stripping column is polluted by ammonia in the gaseous phase, it will be treated in a second column with a chemical washing, using the sulphuric acid to get a salt (solution of ammonium sulphate, which has a commercial value in the production of fertilizer industries.

Biogas dehumidification

Water vapor and condensate present in the biogas may cause malfunction or damage to the Power Generation machines.
To resolve this problem we design and build the dehumidifier DU series, it performs many functions: remove all liquid Droplets, reduce the absolute humidity and adjust the gas temperature to the injection requirements.
We performed a very compact Skid, essentially composed of a heat exchanger and chiller group, the refrigerant liquid is usually water with glycol.
All of the system components and piping is skid mounted for an easy transport and installation.
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