

Biogas Desulfurizer DBC Series

EQUIPMENT TYPE

For biogas desulphurization with a counter current scrubber and a soda recovery vessel.

APPLICATION

High efficiency hydrogen sulphide (H₂S) removal from biogas or from the air or from other gases..

OPERATING PRINCIPLE

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).

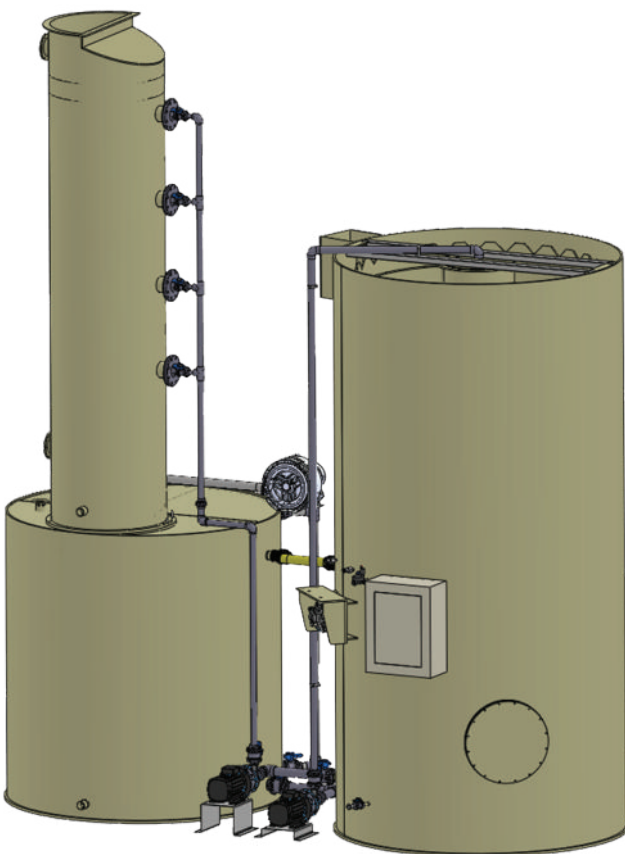
airdep has designed New Innovative technology with very low investment cost and a low operating cost.

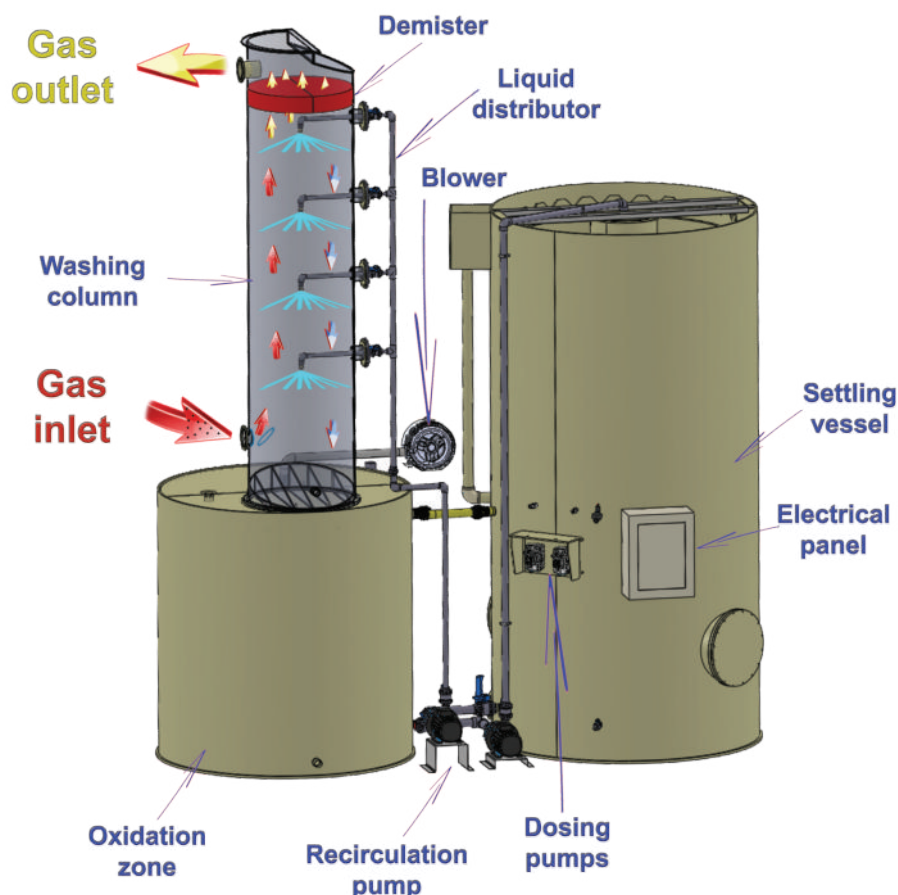
The plant is composed of a tower and a separate vessel, the biogas flows up from the bottom of the column and is washed with liquid which is fed from the top of the tower. After the liquid has passed through the contact bed in the scrubber, it reaches the oxidation vessel through a connecting pipe, in 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.

THE MAIN ADVANTAGES

The DBC is designed for the desulfurization of biogas with H₂S concentration from 2 to 20,000 ppm.

- Low investment cost
- Low operating cost
- Non Hazardous Liquid Waste





Liquid flow rate (m3/h)	From : 50	To: 5.000
Dimensions	Are determined according to the flow rate, to the contaminant Concentration, to the available space and to the customer request.	
H2S IN	From 2 to 20000 ppm	
Random packing	According to the column diameter	
Liquid distributor	Anti-clogging nozzles are used	
Demister	With a high efficiency alveolar demister made in PP or inox mesh type.	

CONSTRUCTION

The desulfurizer can be made of polypropylene or fiberglass, on the tower inside are installed: spray nozzles, random packing and portholes. It's equipped with one or more horizontal pumps, and two dosing pumps are used for chemical reagents feed. We also provide an electronic level control, one water valve loading and one unloading washing liquid valve.

OPTIONAL

- Structure in fiberglass instead of PP
- Electrical panel;
- Antifreeze protection Systems;
- Random packing automatic cleaning system;
- Separate additional sedimentation tank;