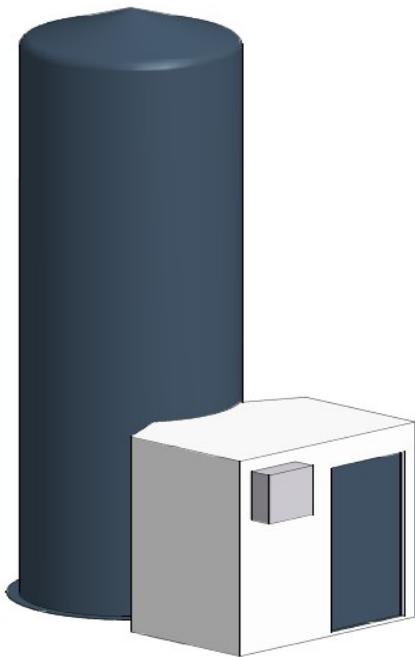


BIOLOGICAL DESULPHURISATION SYSTEM BDS



- Biological gas purification for H₂S elimination
- Fully automated system
- High efficiency at low operating costs
- Environment – friendly / no disposal costs
- Fulfils the quality requirements of VDI directive 3478
- No consumption of chemicals (NaOH, H₂O₂, Fe₃Cl)
- Simple operation and maintenance
- Container made from PP or FRP
- Optional gas analysis (CH₄, CO₂, H₂S, O₂)
- Optional integrated water heater
- Optional profibus connection – SIEMENS ET 200 S

ENVIRONTEC'S BIOLOGICAL GAS PURIFICATION

Biogas and landfill gas always contains hydrogen sulphide (H₂S). Usually, this is in the range of 1,000 to 6,000 ppm but may also reach 2% Vol or more. This H₂S frequently needs to be removed from the gas – either for reasons of environmental protection or because of the corrosion hazard. The EnvironTec desulphurisation process offers a cost-effective yet highly efficient solution for this task. At the core is a biological process requiring no chemicals and almost no consumables. When a limited amount of air (app. 10 - 15% in relation to the gas throughput) is added, special bacteria (e.g. Thiobacillus) convert the H₂S to elementary sulphur and sulphuric acid.

These bacteria only need:

- Oxygen
- Nutrients and trace elements (NPK886)
- Growing surfaces

Oxygen is added in the form of pressurised air. The automatic controller adjusts the amount of air to the current demand in correlation with the amount of gas.

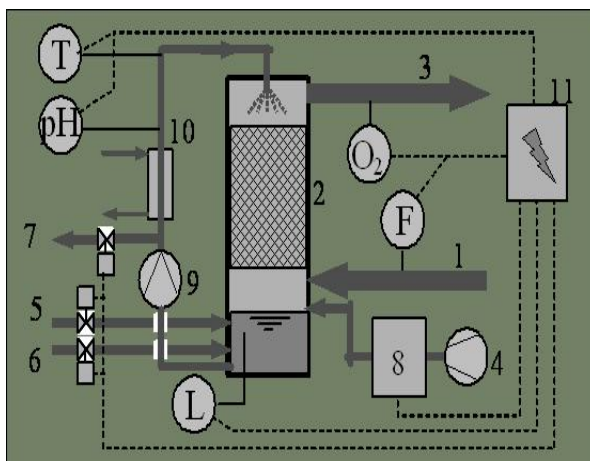
Synthetic fertiliser (NPK886), which is available in all countries around the world, is used to supply nutrients and trace elements. The system is built to VDI directive 3478 and the currently applicable ATEX regulations.

APPLICATION AREAS

- Communal or industrial sewage treatment plants
- Chemical industry
- Paper industry
- Landfill sites
- Food industry
- Agriculture

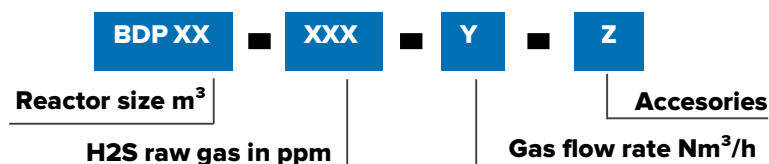
DESIGN PARAMETERS

- Gas flow rate: 10 – 5.000 m³/h
- H₂S raw gas concentration: up to 20,000 ppm (2.0 vol%)
- H₂S removal: > 95%
- Gas temperature at inlet: up to 45°C
- Gas pressure at installation site: up to 120 mbar
- Ambient temperature: -30°C to +50°C



1. Gas inlet
2. Tower with packings
3. Gas outlet
4. Air supply
5. Nutrient solution
6. Dilution water
7. Spent nutrient solution
8. Air regulator
9. Circulation pump
10. Heat exchanger
11. Switch cabinet

TYPE SPECIFICATION



Y Gas flow rate in Nm³/h or Bm³/h

Z 0_ with gas analysis
1_ with Profibus interface