



# Sorpt.X SB

## Landfill and wastewater biogas upgrading/purification systems

Dürr provides solutions for treatment of gases to meet your needs. Solutions include:

- Gas upgrading equipment for renewable natural gas (RNG)
- Tail gas treatment
- Waste heat power generation (ORC)
- Low concentration landfill gas direct treatment

With increased interest in the renewable fuels industry, companies are looking to turn their waste stream into a revenue stream by recovering methane.

### SORPT.X SB - BIOGAS PURIFICATION

Designed to capture more than 98.5% of the methane and purify it to pipeline quality renewable natural gas (RNG), Sorpt.X SB biogas upgrading/purification systems remove  $H_2S$ ,  $CO_2$ , and light siloxanes from the digester gas produced at agricultural and animal waste (manure) facilities, wastewater treatment plants, and landfill sites.

Depending on the characteristics of the biogas stream, Dürr offers both water scrubbing and membrane separation solutions for biogas upgrading/purification.

### HIGHLIGHTS



Reliable operation

Minimal methane loss

Skid-mounted and modular in design

Long-lasting, cost-effective performance

Full automation with advanced telemetry

Turnkey installation, start-up, and preventive maintenance services

When purified, biogas can be added to the natural gas grid and used in cogeneration applications to produce electricity, generate heat, and fuel vehicles

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### WATER SCRUBBING

Water scrubbing systems include a pressurized stainless steel scrubber vessel and a low-pressure stripper vessel, both packed with state-of-the-art unstructured media for the most efficient distribution for CO<sub>2</sub> absorption and desorption.

The unique closed-loop water circulation design eliminates the water consumption requirement by 99.5%. Compared to other technologies, water scrubbing offers reliable, chemical free operation with low and constant pressure requirements, making it the lowest operating cost system available in the market.

#### PRODUCT SPECIFICATIONS

Model	SCFM	Nm <sup>3</sup> /hr
SB500	500 SCFM	789 Nm <sup>3</sup> /hr
SB1000	1000 SCFM	1577 Nm <sup>3</sup> /hr
SB1500	1500 SCFM	2366 Nm <sup>3</sup> /hr
SB2000	2000 SCFM	3154 Nm <sup>3</sup> /hr
SB2500	2500 SCFM	3943 Nm <sup>3</sup> /hr
SB3000	3000 SCFM	4731 Nm <sup>3</sup> /hr

### MEMBRANE SEPARATION

Dürr also offers a containerized membrane separation system to minimize footprint, installation efforts, and time. The modular design allows for fast start-up, immediate product gas readiness, and minimal operator attention and maintenance requirements.

#### PRODUCT SPECIFICATIONS

Model	SCFM	Nm <sup>3</sup> /hr
SM100	100 SCFM	158 Nm <sup>3</sup> /hr
SM250	250 SCFM	394 Nm <sup>3</sup> /hr
SM500	500 SCFM	789 Nm <sup>3</sup> /hr
SM750	750 SCFM	1183 Nm <sup>3</sup> /hr
SM1000	1000 SCFM	1577 Nm <sup>3</sup> /hr
SM1250	1250 SCFM	1971 Nm <sup>3</sup> /hr
SM1500	1500 SCFM	2366 Nm <sup>3</sup> /hr
SM1750	1750 SCFM	2760 Nm <sup>3</sup> /hr
SM2000	2000 SCFM	3154 Nm <sup>3</sup> /hr

### TAIL GAS TREATMENT

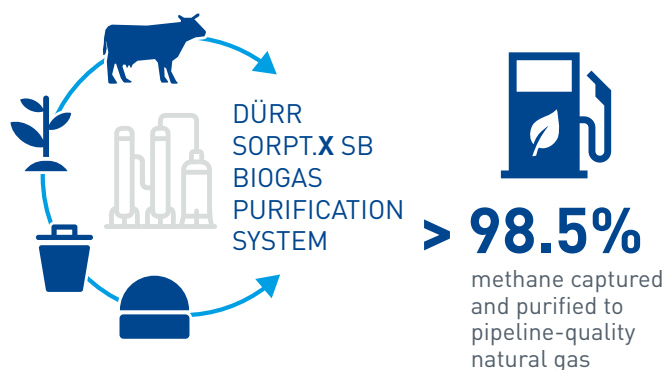
Dürr offers a range of flameless oxidizer systems to treat tail gas for all popular biogas upgrading/purification technologies, including water scrubbing, pressure swing adsorption (PSA), and membrane systems. The systems handle a wide range of methane content and, in most cases, run fuel-free by utilizing the tail gas as the energy source.

### LANDFILL GAS TREATMENT

The Oxi.X RV flameless regenerative thermal oxidizer is used to treat landfill where the methane concentration is too low to be flared, while also producing hot water. With the Oxi.X RV installation and its integrated water tubes, heat production for the local district heating network can continue operating for many more years.

### WASTE HEAT DECENTRALIZED POWER GENERATION

The Cyplan® ORC technology enables improved efficiency of new and existing decentralized power plants by transforming heat into electricity. The electrical efficiency of fossil fuel-driven gensets can be improved by up to 30%. The economical electrification of small to medium heat sources, such as biomass or geothermal resources, becomes possible with the Cyplan® ORC technology. The investment into Cyplan® ORC pays off in a short period of time.



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