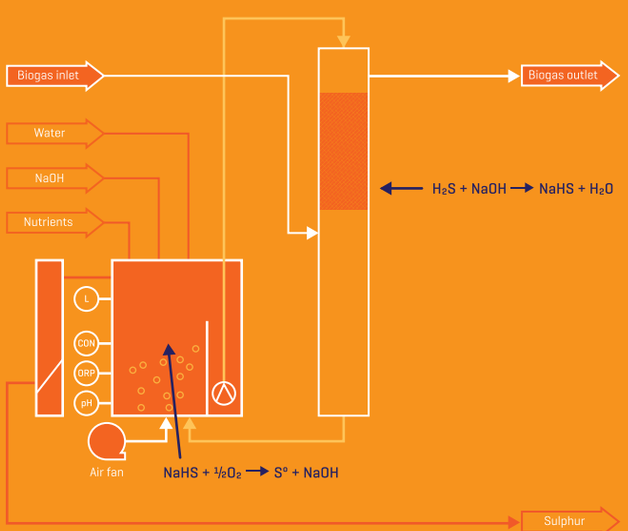
dmt Clear Gas Solutions

Sulfurex® BR

Bio-chemical Gas desulphurization

Why use Sulfurex®BR?

- **No Waste streams**
- **Sulphur fertilizer as by-product**
- **Suitable for all H_2S concentrations**



How does it work?

The Sulfurex®BR technology operates as a counter-current scrubber. During this process H_2S is absorbed by the caustic solution and converted into NaHS. The saturated caustic flows to the bioreactor, where bacteria oxidise NaHS to elemental sulphur and regenerate the caustic.

Thanks to the continuous regeneration of the caustic solution, the Sulfurex®BR reaches high removal efficiencies with minimal chemical consumption. The elemental sulphur is separated from the liquid in an integrated settler, and can be used as a high quality fertilizer. This technology offers the most economical solution for high H_2S loads.

We value your waste

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Selection table

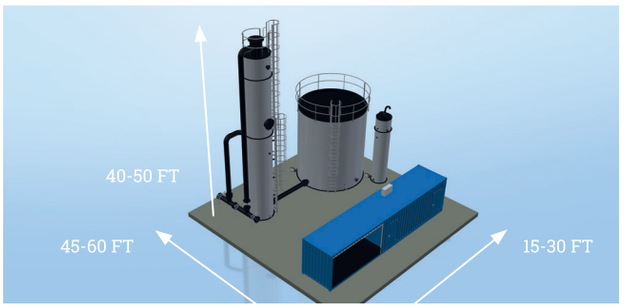
Sulfurex® BR	Load (kgS/d)					
	100	200	300	500	750	1000
Model	BR-100	BR-200	BR-300	BR-500	BR-750	BR-1000

Higher loads on request.

Bio-chemical desulphurisation explained

The Sulfurex®BR technology combines the reliability of a chemical process with the low operational cost of a biological system. In the scrubber H_2S is absorbed by the caustic solution at a pH of 8-9. The saturated caustic flows to the bioreactor. Thiobacillus bacteria convert H_2S into elemental sulphur in the presence of a limited amount of oxygen. During this process the caustic is continuously regenerated and reused in the chemical scrubber. The formed sulphur will settle down and can be further dewatered.

Because the oxygen is added to the bioreactor and not to the biogas, the desulphurisation process is optimally controlled. This also guarantees that the biogas is not degraded with nitrogen and oxygen and keeps its caloric value.



Scrubber

$H_2S + NaOH \longrightarrow NaHS + H_2O$

Bioreactor

$NaHS + ½\ O_2 \longrightarrow S^0 + NaOH$

Optional features

- Gas Drying and conditioning
- Sulphur dewatering
- Full (bio) gas analysis

Please visit our website for more information and references, or scan this QR code to go to the Gas Deshulphurization page: **www.dmt-cgs.com/products/biogas-and-syngas-deshulphurization**

Our challenge
To create a clear
and prosperous future

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