

MEMBRANES FOR BIOGAS CONTAINERS

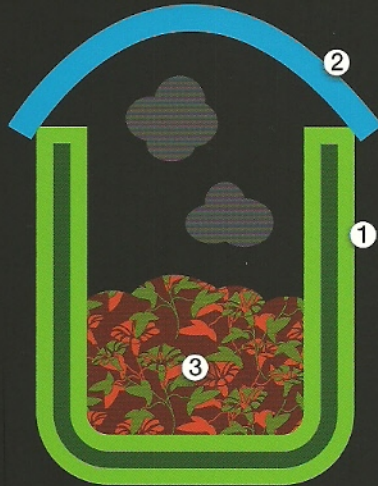
BIOO

NEOS
SIO

MEMBRANES FOR BIOGAS CONTAINERS

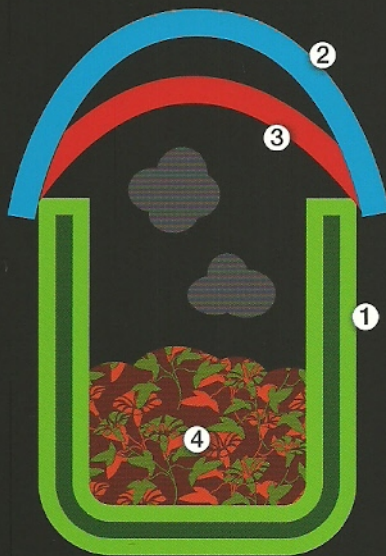
TYPES OF BIOGAS INSTALLATIONS:

Single membrane



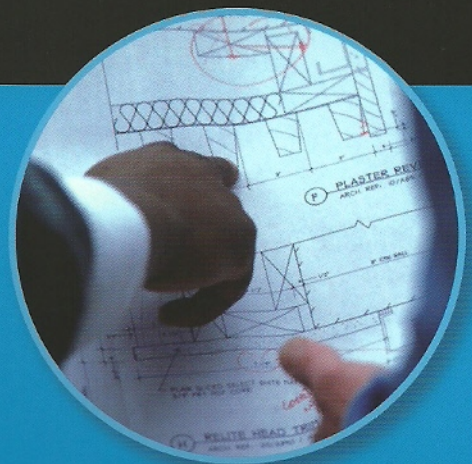
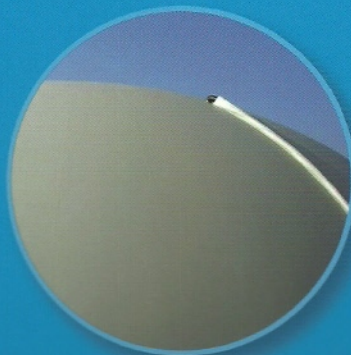
- ① Fermentation tank/reactor
- ② Membrane
- ③ Fermentation

Double membrane



- ① Fermentation tank/reactor
- ② Fixed outer membrane
- ③ Inner membrane (the 'lung')
- ④ Fermentation

It is recommended to
always work with qualified
structural engineers.



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BIOGAS INSTALLATIONS

A biogas installation is an installation where 'biogas' is generated and transformed into energy and heat.

Biogas typically refers to a (biofuel) gas produced by the anaerobic digestion or fermentation of organic matter including manure, sewage sludge, municipal solid waste, biodegradable waste or any other biodegradable feedstock, under anaerobic conditions. Biogas is comprised primarily of methane and carbon dioxide.

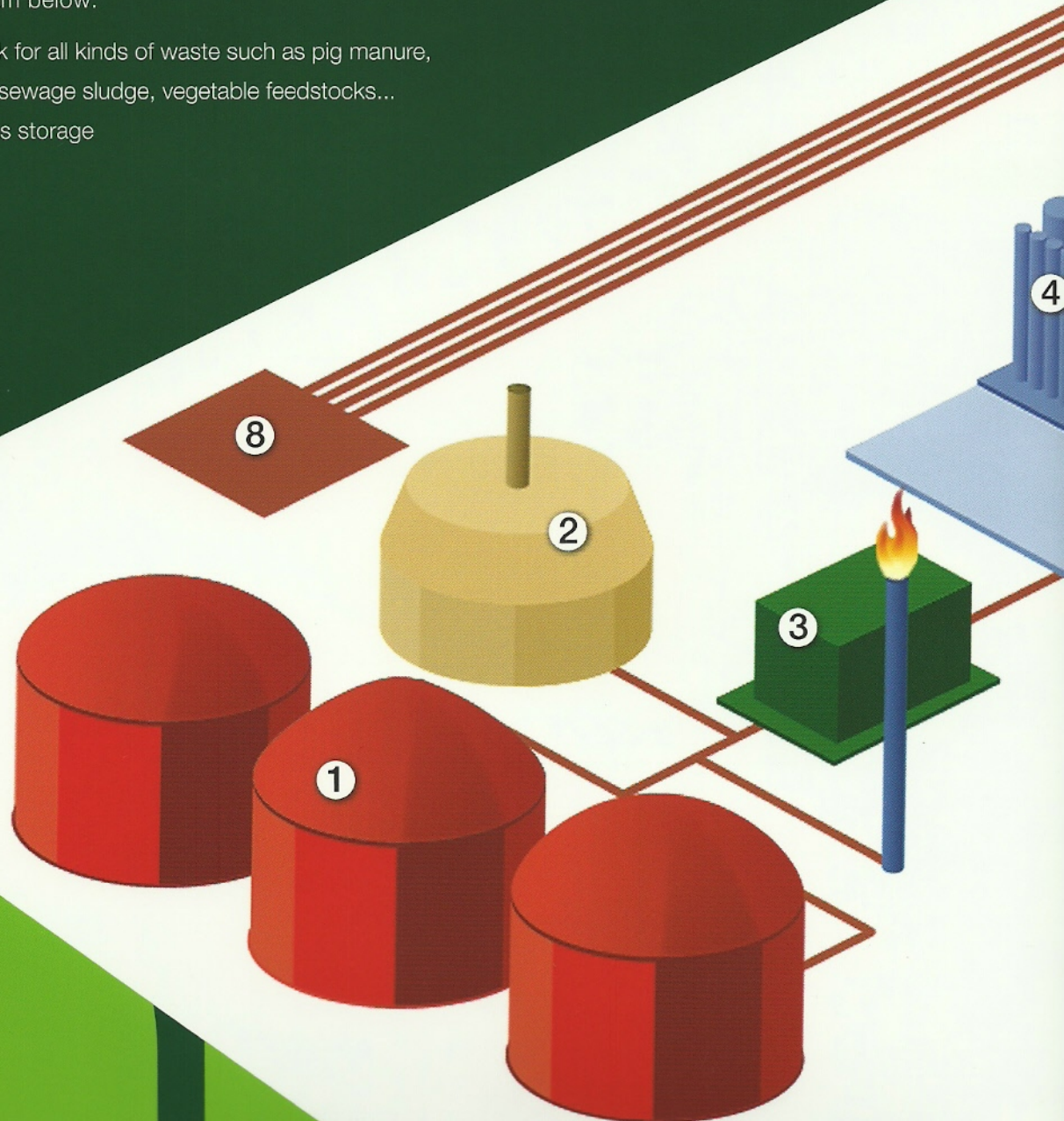
The gas produced is then burnt in a gas turbine by which electricity and heat are created.

In most biogas installations the reactor and digestion tanks are covered with two gas tight membranes. Depending on the nature of the feedstock, SIOEN makes a distinction between:

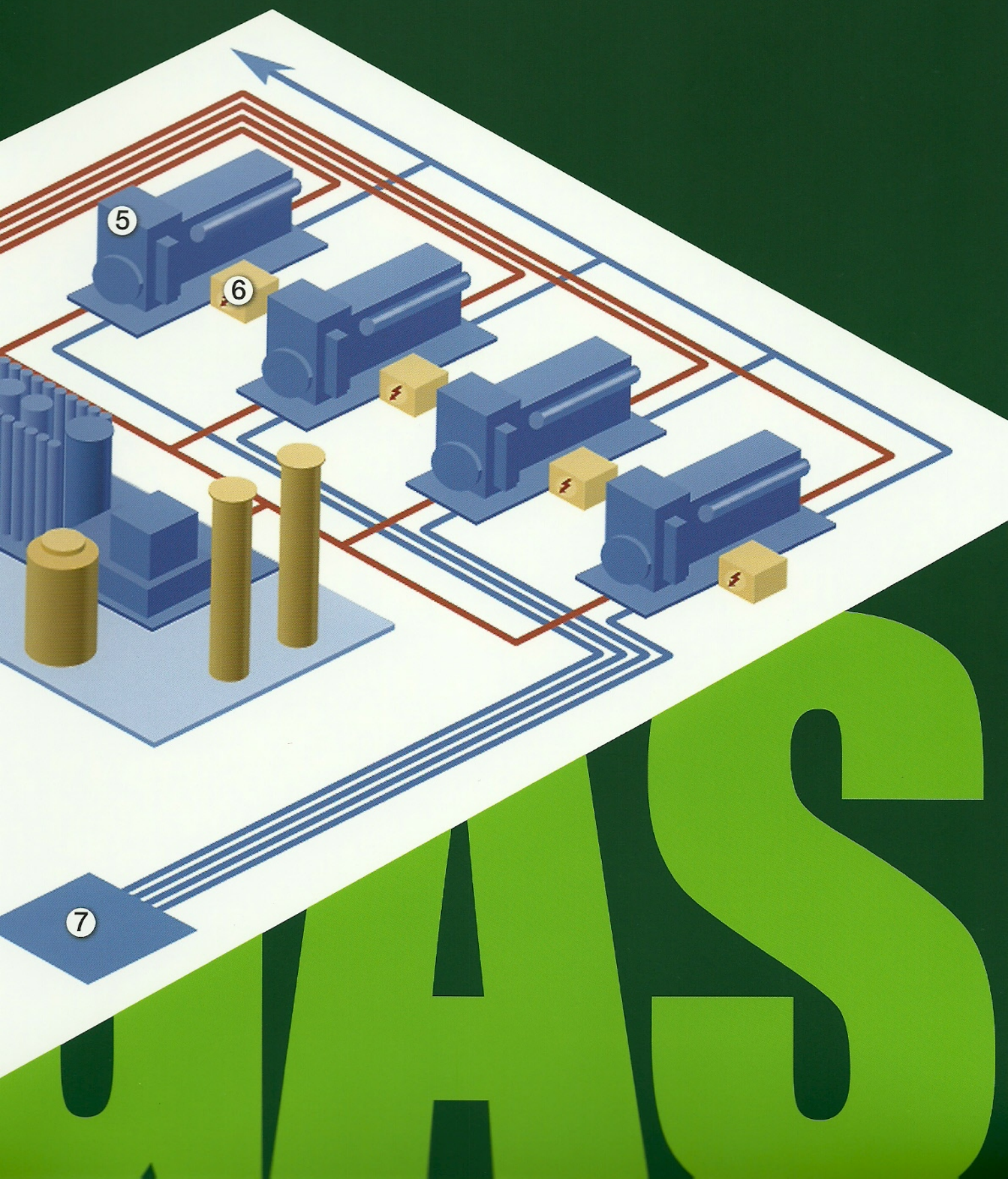
- Membranes suitable for greasy feedstocks as slaughter waste, soy bean scraps etc.
- Membranes with an excellent hydrolytic resistance for all kinds of wastes, even acid or alkaline.

One of the concepts of such a biogas installation is schematically shown in the diagram below:

- 1 Fermentation tank for all kinds of waste such as pig manure, slaughter waste, sewage sludge, vegetable feedstocks...
- 2 Buffer tank for gas storage
- 3 Compressor
- 4 Filter
- 5 Gas turbine
- 6 Electrical energy
- 7 Cold water
- 8 Hot water



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SIOEN SOLUTIONS

Sioen offers a range of membranes, depending on size, structure, engineering and the type of waste stored in the tanks.

	TYPE I		TYPE II		TYPE III	
	non flame retardant	flame retardant	non flame retardant	flame retardant	non flame retardant	flame retardant
hydrolitic resistant	B9070 900 g/m ²	B9160 900 g/m ²	B6070 1150 g/m ²	B6160 1150 g/m ²	-	-
grease resistant	B9899 900 g/m ²	B9189 900 g/m ²	B6899 1150 g/m ²	B6199 1150 g/m ²	-	B6658 1300 g/m ²

All types are lacquered (dull) to ensure a weldable, dirt repellent and chemical resistant fabric.

All type 1 & type 2 hydrolitic & grease resistant materials are standard available in colour grey 7264, 300cm wide. For other colours, please contact our sales people.

The type 3 grease resistant material B6658, colour 9002, is available in 250cm wide. Minimum order required of 1000lm.

EXAMPLES

