

The SOLVOCARB® Process. Neutralisation of Alkaline Waters with Carbon Dioxide.

General Due to stricter environmental requirements, today wastewater may only be discharged into the sewage pipelines or outlet channels if it is within a narrow pH range around the neutral point. The SOLVOCARB method employs the environmentally-friendly gas carbon dioxide (CO₂), to neutralise alkaline waters. When dissolved in water, carbon dioxide forms carbonic acid and reduces the pH value to the appropriate level.

Advantages Compared with mineral acids, carbon dioxide and carbonic acid offer many advantages:

- Carbon dioxide is not categorised as a substance that is harmful to water
- No additional salt formation in the water as chlorides, sulphates etc. and therefore no increased salt load in the infeed to wastewater plants
- No over-acidification of the wastewater due to the flat neutralisation curve
- No corrosion of the system components
- Safe, simple storage and use of the carbon dioxide
- The best economical and ecological alternative

Areas of use Carbon dioxide can treat alkaline wastewaters from most industries, including:

- Beverage
- Dairies and butcheries
- Bakery and confectionery
- Electroplating
- Cement and concrete
- Paper and cellulose
- Leather
- Textile
- Laundries and dye works
- Petro-chemical

The addition method Gaseous carbon dioxide is added to the wastewater using the SOLVOCARB methods developed by BOC:

- SOLVOCARB B method
Carbon dioxide dissolves via finely perforated aeration hoses
- SOLVOCARB D method
Carbon dioxide is injected via ball-head nozzles
- SOLVOCARB R method
Carbon dioxide dissolves in special reactors



SOLVOCARB B

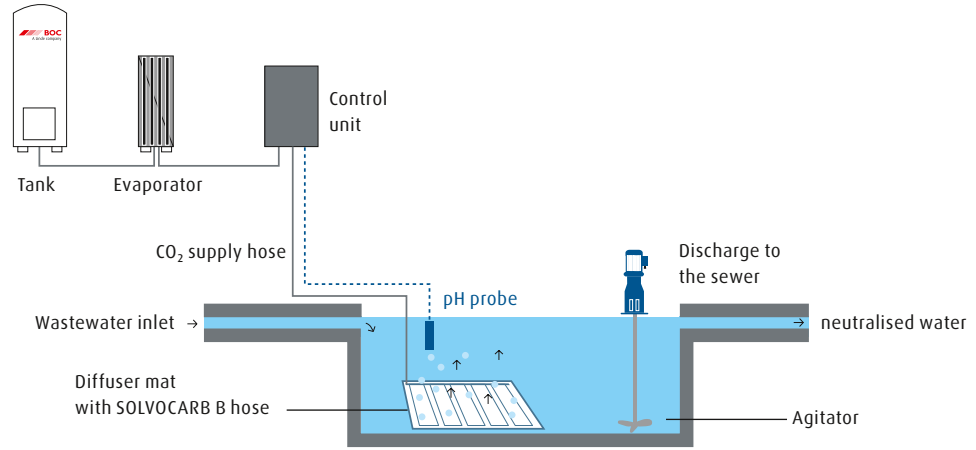


SOLVOCARB D

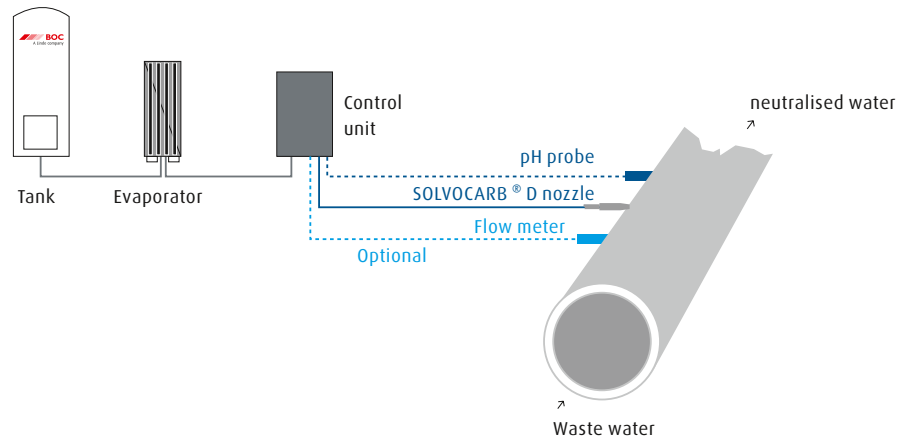


SOLVOCARB R

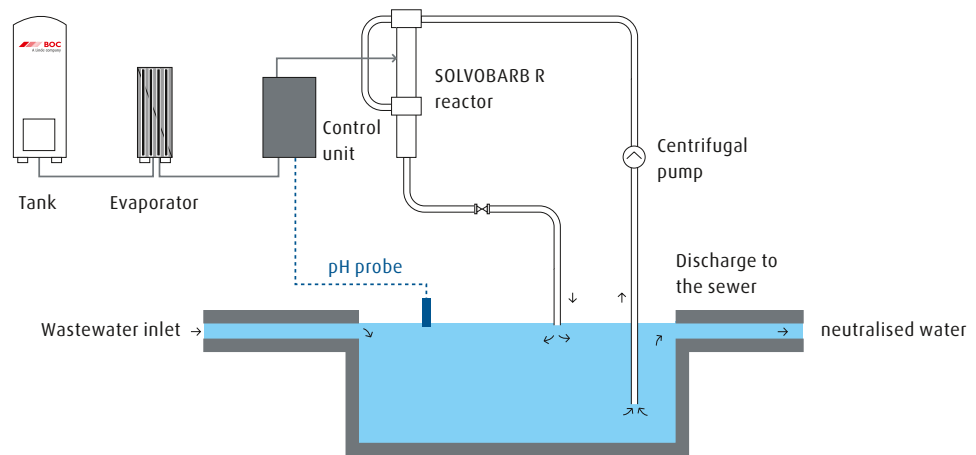
SOLVOCARB B method CO₂ dissolution via perforated hoses made of elastic and resistant rubber installed on the bottom of the tank.



SOLVOCARB D method CO₂ injection via ballhead nozzle directly into the piped flow.



SOLVOCARB R method CO₂ dissolution via reactor connected in the main flow or the secondary flow.



Contact To discover more about gas applications technologies for Water Treatment contact the experts at BOC.

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