



The SOLVOCARB® process. Neutralization of alkaline wastewater 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) in order to neutralize 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 categorized 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 feed to wastewater plants
- No over-acidification of the wastewater due to the flat neutralization curve
- No corrosion of the system components
- Safe and simple storage and use of the carbon dioxide
- The best economical and ecological alternative

Areas of use The carbon dioxide can easily be used in most industrial areas in which alkaline wastewater occurs, for example in:

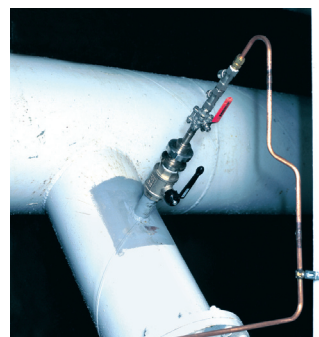
- Beverage industry
- Dairies and butcheries
- Bakery and confectionery industry
- Electroplating industry
- Cement and concrete industry
- Paper and cellulose industry
- Leather industry
- Textile industry
- Laundries and dye works
- Photo-chemical industry

The addition method The gaseous carbon dioxide is added to the wastewater using the SOLVOCARB® methods developed by Linde:

- SOLVOCARB®-B method
Carbon dioxide enters via finely perforated aeration hoses
- SOLVOCARB®-D method
Carbon dioxide enters via ball-head nozzles
- SOLVOCARB®-R method
Carbon dioxide enters via special reactors



SOLVOCARB® - B



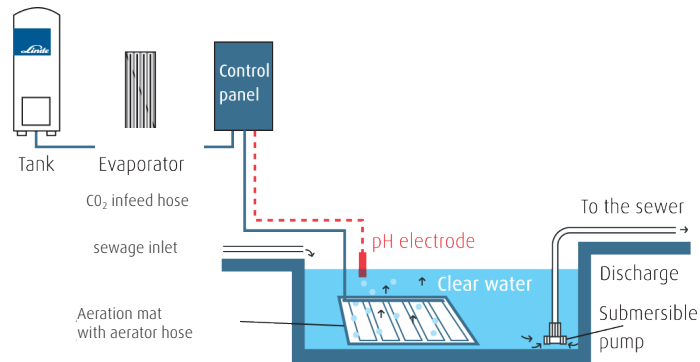
SOLVOCARB® - D



SOLVOCARB® - R

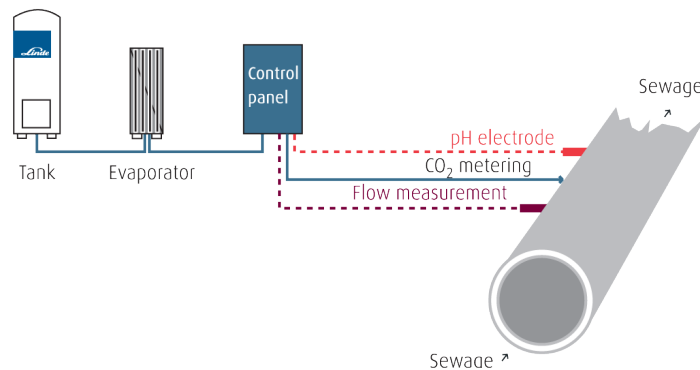
SOLVOCARB®- B method

CO₂ ingress via aeration hoses made of elastic and resistant plastic installed on the bottom of the tank



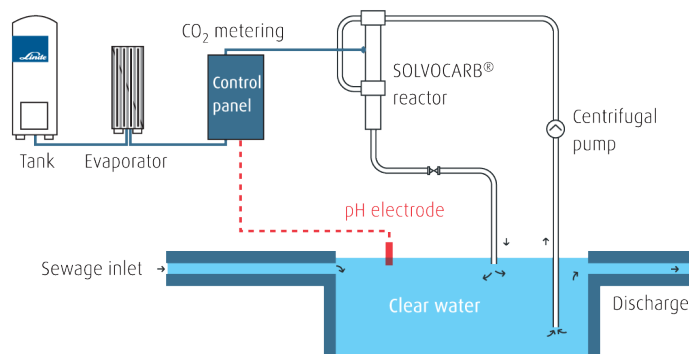
SOLVOCARB®- D method

CO₂ ingress via ballhead nozzles directly into the sewage pipe



SOLVOCARB®- R method

CO₂ ingress via reactors connected in the main flow or the secondary flow



Why Linde

Linde is a world leading industrial gas organization that offers a variety of gas products and services that improve quality and enhance environmental performance. Linde tailors solutions to meet the unique needs of each customer and their facility

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