

NEUTRA™ Carbon Dioxide System for pH Control

The safer and more cost-effective alternative to mineral acids for your fab's wastewater treatment



Table of Contents

03 General

03 Advantages

04 The addition method

04 NEUTRA diffusion hose method

04 NEUTRA inline injector method

04 NEUTRA reactor method

05 Why Messer

General

Industrial facilities must carefully manage wastewater pH to meet discharge permits, environmental regulations, and water reuse objectives. The NEUTRA™ Water Treatment Process uses carbon dioxide (CO₂) to safely and effectively neutralize alkaline wastewater.



NEUTRA inline injector



NEUTRA reactor

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
- Carbon dioxide systems can reduce the handling, storage, and transportation of highly corrosive mineral acids commonly used for pH adjustment
- Supports sustainability initiatives by reducing chemical consumption and associated transportation requirements
- 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 neutralization curve
- No corrosion of the system components
- The best economical and ecological alternative

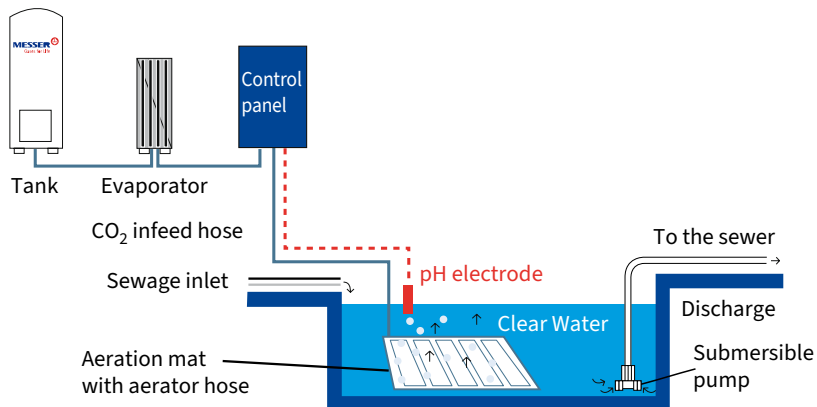
The addition method

The gaseous carbon dioxide is added to the wastewater using the NEUTRA water treatment methods and installations developed by Messer:

- NEUTRA diffusion hose method:
 - Carbon dioxide enters via finely perforated aeration hoses
- NEUTRA inline injector method:
 - Carbon dioxide enters via ball head nozzles
- NEUTRA reactor method:
 - Carbon dioxide enters via special reactors

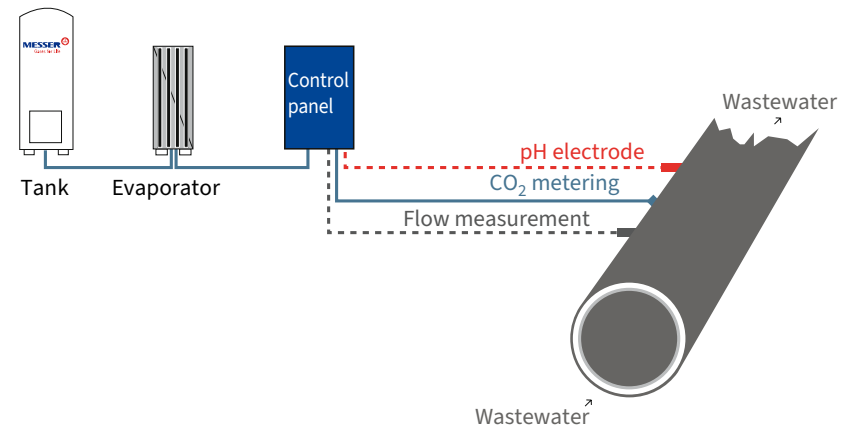
NEUTRA diffusion hose method

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



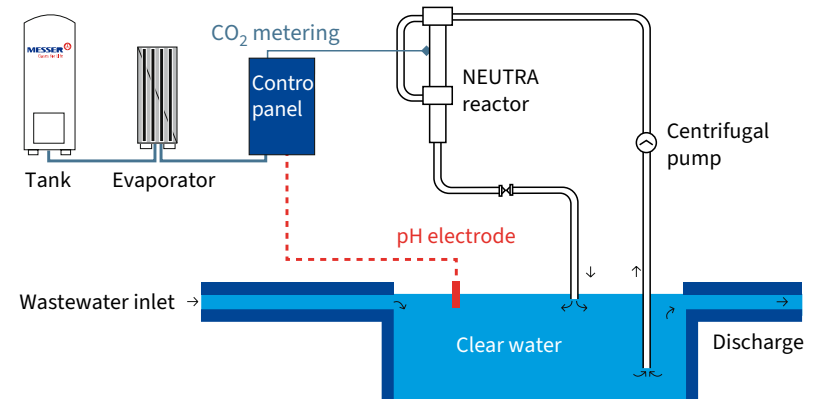
NEUTRA inline injector method

CO₂ ingress via ballhead nozzles directly into the wastewater pipe.



NEUTRA reactor method

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



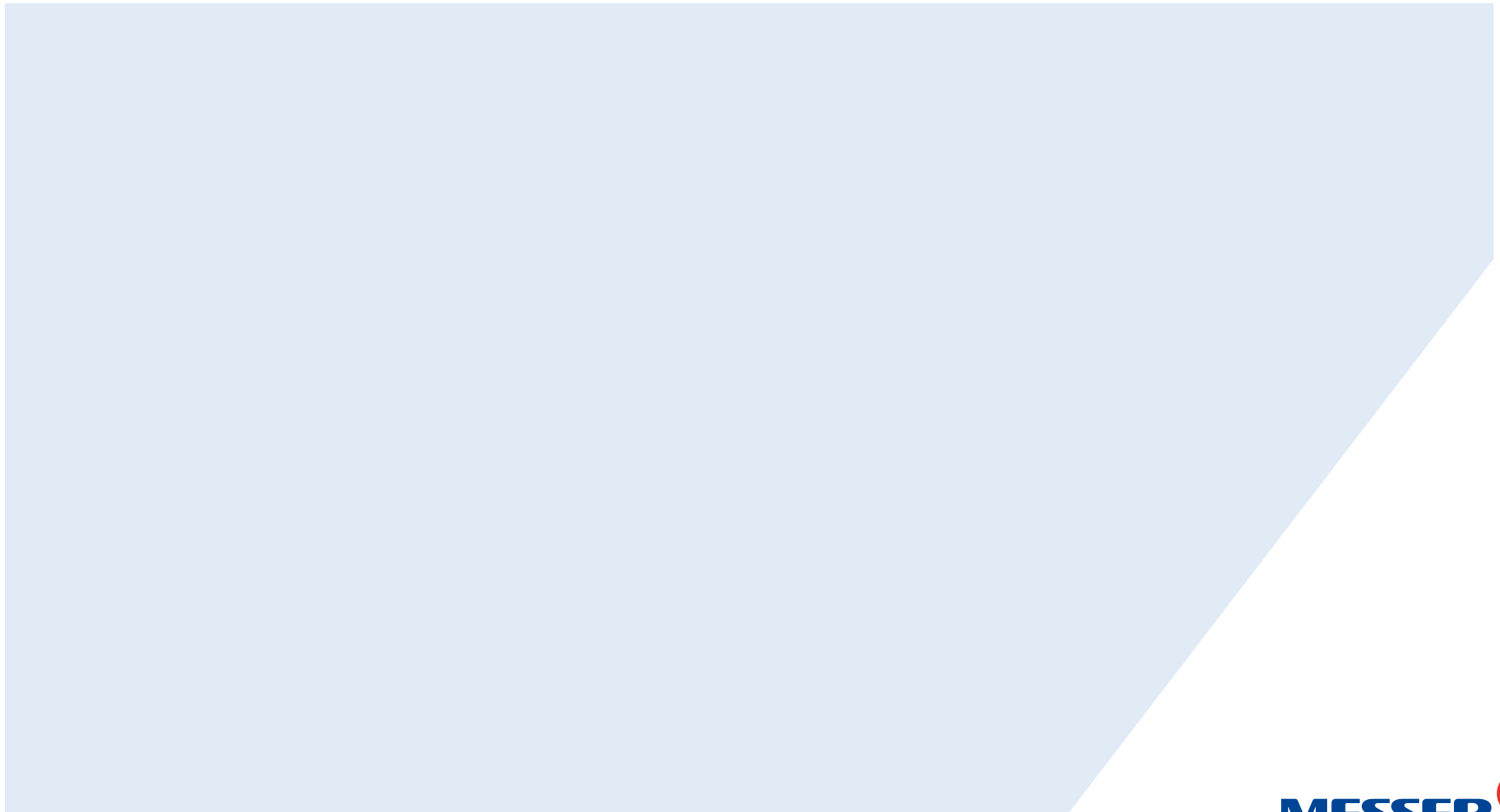
Why Messer

Effective water treatment solutions begin with a clear understanding of how water flows through your fab.

Messer works closely with you to evaluate existing processes, identify challenges, and analyze opportunities to improve performance without requiring expensive facility expansions.

Call us today for a free consultation: 1-833-763-7737





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