

Halia® QM pH neutralisation system

Innovative solution for pH control



Traditionally, sulphuric or hydrochloric acids have been used to control pH levels in water treatment plants. However, the corrosive nature of these acids can result in health and safety and environmental hazards. As an alternative, neutralising water with dissolved carbon dioxide (CO₂) delivers many operational and environmental advantages as it is effective, cost efficient, environmentally sustainable and easy to use.

Air Products understands water treatment requirements and our commitment to innovation has resulted in the development of our leading-edge water treatment technology, Halia® QM pH system, to improve CO₂ dissolution for water pH neutralisation.

Compact, automated and applicable to a wide range of water treatments, the Halia® QM pH neutralisation system comprises of mobile skid-mounted hardware and digital software, enabling easy configuration into the existing treatment line.

Designed to meet specific wastewater characteristics and particular pH neutralisation requirements, the system can be incorporated into existing installations, whether basin or pipe-based and a continuous process or batch. With high CO₂ dissolution efficiency, the Halia® QM pH neutralisation system ensures effective economic and environmental viability.

Customer benefits:

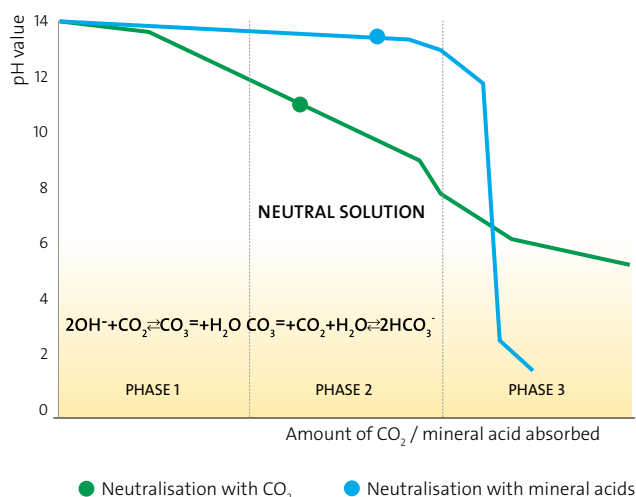
- Improved health and safety due to elimination of hazards such as burns, poisonous fumes and other risks resulting from mineral acid management
- Mitigation of excessive acidification by accurate pH control
- Minimised footprint from compactly designed hardware, with configurations tailored to specific circumstances
- Continuous operation via automatic pH control, reducing maintenance and downtime
- Economic gains as the process is highly cost-efficient, only consuming as much CO₂ as needed to reach required pH value
- Low initial investment required as system is simple, safe and compact

Applications

The Halia® QM pH neutralisation system is applicable for a wide range of industries including:

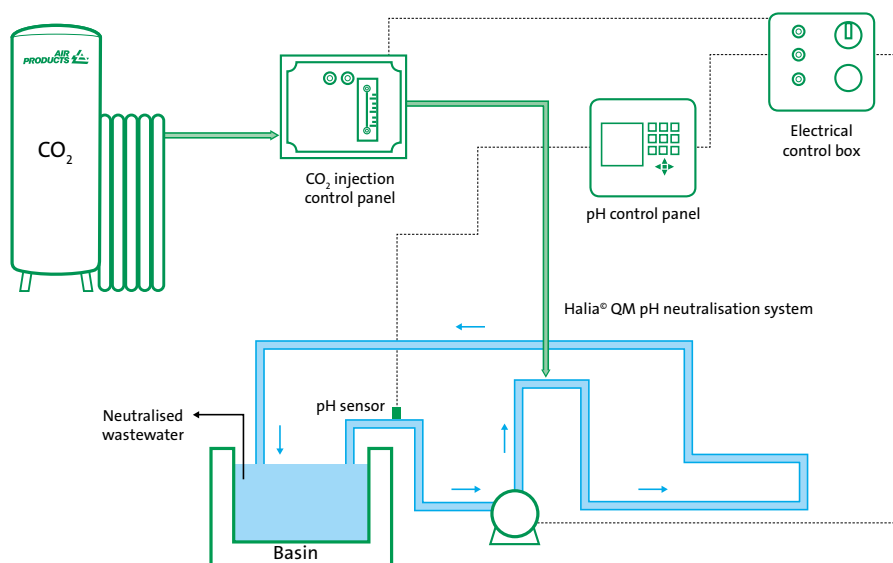
- Petrochemicals, pharmaceuticals and fine chemicals
- Pulp and paper
- Concrete and cement
- Food and beverages
- Detergents and bleach
- Textile and dyes
- Canning
- Bottling plants
- Municipal drinking and wastewater treatment plants
- Water neutralisation of cooling towers
- Remineralisation

Controlling pH with carbon dioxide



Example of a Halia® QM pH neutralisation installation

Carbon dioxide dissolved in water forms carbonic acid (H₂CO₃), a weak acid capable of reducing the pH progressively to the desired values. This process avoids an overdose and together with safe handling makes the use of carbon dioxide a widespread technology for neutralising alkaline water.



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