



Innovative solutions for  
biological wastewater  
treatment.



Advanced automatic  
controls for biological  
processes

Technical sheet

[cimico.tech](http://cimico.tech)

# Advanced automatic controls for biological processes

## Description

Cimico offers customized advanced control solutions to optimize the operation of biological wastewater treatment facilities, both in municipal and industrial environments, with the double objective of ensuring compliance with requirements while minimizing operating costs.

## Treatment technologies

Our advanced control algorithms can be applied to Cimico technologies and existing technologies or WWTPs, including multiple treatment technologies and plant configurations.

- Conventional activated sludge (CAS).
- Exidation ditch.
- SBR or sequential batch reactor.
- Membrane bioreactor MBR.
- MBBR and MBBR/IFAS.
- Anaerobic digestion.

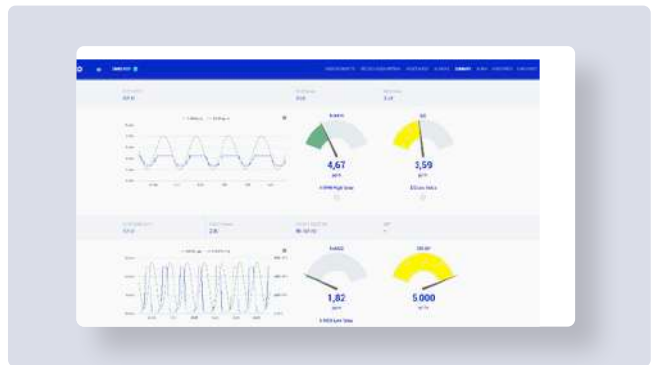
### • 01 Cimico's edge device



The connection to the WWTP is made with an edge device that is physically coupled to the PLC and SCADA of the WWTP.

- Local execution of intelligent control algorithms.
- Cybersecure Internet communications (Common Criteria ISO/IEC 15408).

### • 02 Cloud management platform



An internet connection will also be required for:

- Remote update of the control software and cybersecurity.
- Control algorithm visualization on customized dashboards.
- Through a certified data center (ISO 9001 and ISO 27001).

## Intelligent control modules

Just as each WWTP is different, so is each of our control solutions. Our advanced control solutions are composed of independent modules (control loops) for each actuator of the plant that we select according to the configuration of the WWTP and the customer's objectives.

### CONTROL OBJECTIVE

### ACTUATING VARIABLE

Nitrification

- Dissolved oxygen setpoint.
- Air pressure setpoint.
- Facultative area control.

Denitrification

- Internal recirculation flow rate setpoint.
- Methanol dosing setpoint.

Phosphorous removal

- Ferric chloride dosage setpoint.

Process stability

- Purge flow rate setting.
- SRT control.
- Sludge recirculation flow rate setpoint.
- Nutrient dosing setpoint.