

Wastewater Gas Analyser WGA v.020

MEASUREMENT SYSTEM TO MONITOR RELEVANT GREENHOUSE GAS EMISSIONS OF N_2O , CH_4 , CO_2 AT WASTEWATER TREATMENT PLANTS











The sampling hood (left) with aluminium cage for flexible mounting and the analyser unit (right).

KEY FEATURES

- REAL-TIME CONTINUOUS MEASUREMENTS: Accurate monitoring of N2O, CH4, CO2 emissions
- EMISSION RATE CALCULATION: Integrated maintenance-free flow sensor
- NO GAS BOTTLES REQUIRED: Simplified operation and lower costs
- AUTOMATED ZERO POINT CALIBRATION & CHECKS: Internal automated zero-point and cross-interference checks
- BACKGROUND MEASUREMENT: Precise net emissions estimation by distinguishing between background and process-related emissions.

- ROBUST SWIMMING SAMPLING HOOD: Stable gas collection on dynamic water surfaces
- TEMPERATURE STABILIZED: Ensures accuracy under changing conditions
- HUMIDITY RESISTANT: Sample Gas drying prevents sensor degradation from moisture
- OPTIONAL HEATED SAMPLING TUBE: Prevents condensation losses
- DESIGNED FOR LONG-TERM Field
 Deployment: Rugged, Weatherproof IP64
 enclosure with sun roof

CUTTING-EDGE AIRYX TECHNOLOGY: applied for patent: PCT/EP2024/087231



Airyx webpage WWW.AIRYX.DE



Airyx Contact info@airyx.de



DESCRIPTION

The Airyx WGA 020 provides long-term stable, real-time measurements of relevant greenhouse gas emissions from wastewater treatment plants along with minimal maintenance and calibration effort.

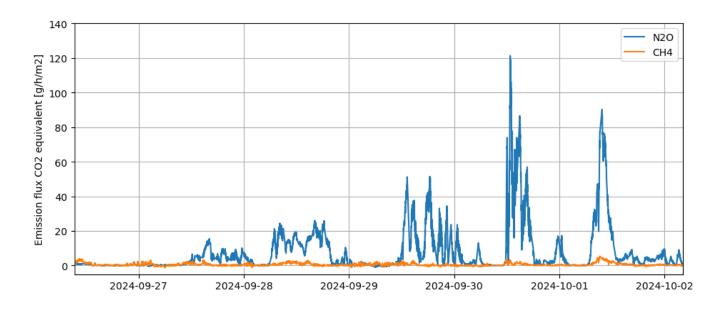
TECHNICAL DETAILS

Measured Gases	N ₂ O, CO ₂ , CH ₄ , O ₂	
Measurement Principle	Non-dispersive infrared (NDIR) for N2O, CO2, and CH4;	
	Electrochemical sensor for O ₂	
	Data cross-interference correction and water removal for high	
	measurement accuracy	
Additional Parameters	Ambient temperature, Ambient pressure, Total sample flow	
Time resolution	1 s internal, typ. averaging 60s, averaging adjustable	
Enclosure	Rugged and weatherproof design, IP64 rating	
Power Supply	24 VDC, external power supply	
Power consumption	50 W nominal, 120 W peak	
Operating Temperature	-10°C to +40°C	
Dimensions	Analyser: 660 x 400 x 240 mm	
Weight	Analyser (incl. staffing & sun shield): ~25 kg. Sampling hood unit: ~30 kg	
Mounting Options	customer specific	
Data interfaces	Ethernet, optional 4-20mA, additional data storage on USB memory stick	

MEASUREMENT RANGES AND LIMIT OF DETECTION

Gas	Measurement Range	Limit Of Detection	Emission Rate Sensitivity
N ₂ O	0-1000 ppm	0.5 ppm	0.8 mg/m ² /h
CO ₂	0-100 000 ppm	50 ppm	84 mg/m²/h
CH ₄	0-1000 ppm	5 ppm	3 mg/m ² /h
O ₂	0-100 vol %	0.1 vol % or 0.5 % of reading	n/a

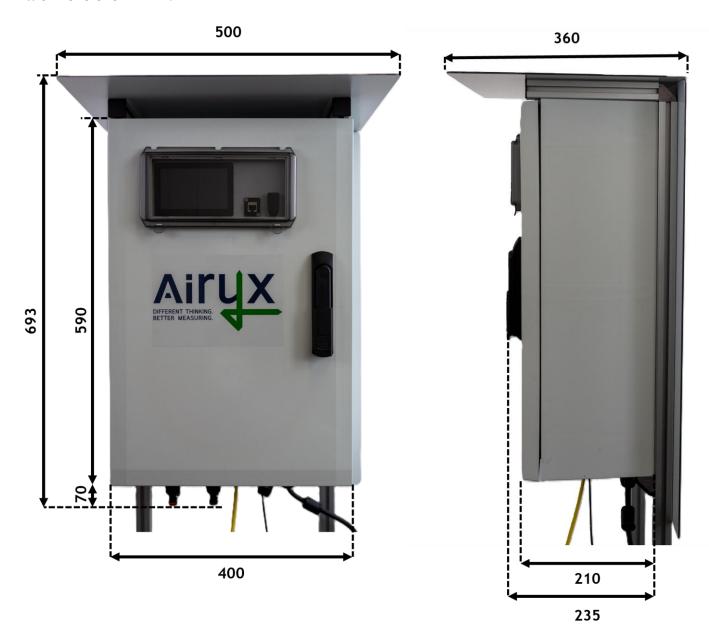
DATA EXEMPLE





DIMENSIONS

All dimensions in mm.



Airyx GmbH Hans-Bunte-Strasse 4 69123 Heidelberg Germany

Contact: info@airyx.de