



NICO NANOBUBBLE GENERATOR SYSTEMS

Advanced Gas Transfer Systems For
Wastewater, Water & Process Optimization



NICO Nanobubble USA is a deep-tech product and engineering company at the forefront of water innovation, developing some of the world's most advanced nanobubble generator systems for the entire spectrum of water use and treatment.

Driven by a strong R&D foundation, NICO designs and deploys next-generation nanobubble technologies across wastewater and water treatment, agriculture, aquaculture, and industrial applications.

With fully integrated in-house engineering, global research collaborations, and patented innovations, NICO delivers high-efficiency gas transfer systems that redefine water quality, enhance biological performance, and unlock new levels of process efficiency.

Product Configurations

Choose the perfect setup for your specific operational requirements, from bare mixers to fully automated turnkey systems.



BARE NANOBUBBLE MIXER

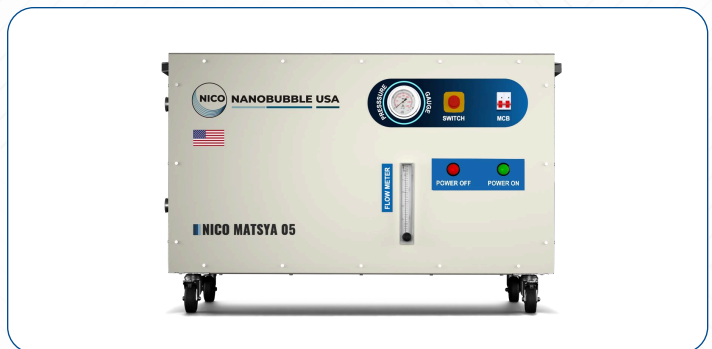
High-efficiency nanobubble mixer designed for direct integration into existing systems.

- ✔ Standalone nanobubble mixer unit
- ✔ Gas injection interface
- ✔ Flanged inlet / outlet connections
- ✔ Compatible with external pumps and systems

MIXER + PUMP & STARTER

A complete plug-and-operate solution combining the nanobubble mixer with a matched pump and starter system for consistent and reliable operation.

- ✔ Includes nanobubble mixer
- ✔ Matched centrifugal pump (SS / CI options)
- ✔ Electrical starter panel
- ✔ Skid-mounted design for easy installation



FULLY AUTOMATED SYSTEM

A fully integrated and automated nanobubble generator system engineered for industrial and municipal applications.

- ✔ Complete nanobubble generation system
- ✔ Integrated pump, piping, and fittings
- ✔ Advanced instrumentation (DO / pH / ORP sensors)
- ✔ PLC-based automation with HMI touchscreen control
- ✔ IoT-ready with cloud monitoring capabilities



Industry-Specific Models

Agriculture



NICO AGNIROOT

- Flow Range: 4.4 - 440 GPM (1 - 100 m³/hr)
- Gas Compatibility: Air & Oxygen
- Nanobubble Size: < 200 nm
- Seamless Integration with Irrigation Systems
- Plug-and-Play Deployment
- Minimal Maintenance Requirements
- Designed for Continuous Duty Operation
- Enhances Root-Zone Aeration & Nutrient Uptake

Aquaculture



NICO MATSYA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Maintains Stable Dissolved Oxygen (DO) Levels
- Enhances Fish & Shrimp Health, Growth & Survival
- Reduces Ammonia, Organic Load & Odor
- Improves Feed Conversion Ratio (FCR) & Productivity
- Seamless Integration Across Hatchery, Nursery, and Grow-out Systems, Including Open Ponds, RAS, Cage Culture, Biofloc, and Raceways

Industrial Wastewater Treatment



NICO DRONA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Enhances Aeration, Separation & Oxidation
- Improves Color, Odor & Overall Water Quality
- High Oxygen Transfer Efficiency (OTE) > 85%
- Reduces Chemical Dependency
- Energy-Efficient Aeration Solution
- Designed for Continuous Industrial Operation

Lake & Pond Restoration



NICO VYOM

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Restores Dissolved Oxygen (DO) Levels
- Mitigates Eutrophication, Algae Growth & Odor
- Enhances Natural Bioremediation
- Ensures Uniform Oxygen Distribution
- Non-Invasive Installation
- Scalable for Large Water Bodies

Municipal Sewage & Drain Treatment



NICO VARUNA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Improves Biological Treatment Efficiency
- Enhances Reduction of COD, BOD & Ammonia
- Accelerates Sludge Breakdown
- Retrofits with Existing STPs & Drains Systems
- Energy-Efficient Operation with Reduced OpEx
- Designed for Continuous Duty Operation

Health & Wellness



NICO AURA

- Flow Range: 1.59 - 5.94 GPM (0.36 - 1.35 m³/hr)
- Gas Compatibility: Air & Oxygen
- Nanobubble Size: < 200 nm
- Delivers Oxygen-Rich Water Experience
- Enhances Skin Hydration, Cleansing & Revitalization
- Gentle, Chemical-Free Water Treatment
- Compact, Quiet & User-Friendly Design
- Safe for Continuous Use in Wellness Environments
- Enhances Overall Water Quality & Sensory Feel

Oil & Gas



NICO DRONA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Promotes De-emulsification & Oil-Water Separation
- Improves Produced & Process Water Quality
- Supports Oxidation & Contaminant Breakdown
- Supports EOR & Reservoir Performance
- Reduces Sulfide Odor & Hydrocarbons
- Improves Separation & Flotation Performance

Mining



NICO DRONA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Enhances DAF & Mineral Recovery Efficiency
- Enhances Flotation Performance
- Supports Heavy Metal Oxidation
- Enables Process Water Recycling
- Enhances Recovery of Rare Earth & Critical Minerals

Biogas



NICO DRONA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Enhances Anaerobic Digestion Efficiency
- Improves Biogas Yield & Methane Quality
- Reduces Sludge Retention Time (SRT)
- Controls Odor in Digestate
- Reduces H₂S & Improves Methane Quality (%)



Ultrapure Water



NICO VANTA

- Flow Range: 22 - 115 GPM (5 - 26 m³/hr)
- Gas Compatibility: Oxygen, Ozone
- Nanobubble Size: < 200 nm
- Precision Dissolved Gas Control
- Contamination-Free Operation
- Stable & Controlled Oxygenation
- Enables Micro-Contaminant Removal
- Improves Surface Cleaning Efficiency
- Compatible with Ultrapure Water Systems

Swimming Pools



NICO AQUAPOL

- Flow Range: 22 - 44 GPM (5 - 10 m³/hr)
- Gas Compatibility: Oxygen & Ozone
- Nanobubble Size: < 200 nm
- Enables Chlorine-Free Usage
- Improves Water Clarity & Hygiene
- Eliminates Odor & Irritation
- Enhances Organic Matter Breakdown
- Energy-Efficient Circulation Integration
- Compact & Low Maintenance System

Hydrogen & Electrolyzers



NICO VANTA

- Flow Range: 22 - 115 GPM (5 - 26 m³/hr)
- Gas Compatibility: Oxygen & Ozone
- Nanobubble Size: < 200 nm
- Enhances Gas-Liquid Interaction & Microbubble Scavenging
- Improves Electrolyzer Efficiency
- Optimizes Feedwater Quality
- Supports Stable Electrochemical Reactions
- Reduces Electrode Fouling & Scaling
- High-Purity Compatible Operation

Food & Beverages



NICO VANTA

- Flow Range: 22 - 115 GPM (5 - 26 m³/hr)
- Gas Compatibility: Oxygen & Ozone
- Nanobubble Size: < 200 nm
- Precision Gas Infusion & Control
- Separates FOG (Fats, Oils & Grease) for Cleaner Processing
- Improves Product Quality & Shelf Life
- Enhances Carbonation & Fermentation
- Supports Hygienic, Food-Grade Design
- Maintains Consistent Process Conditions

Research & Pilot System



NICO LSM

- Flow Range: 0.22 - 1.76 GPM (0.05 - 0.4 m³/hr)
- Gas Compatibility: Air & Oxygen
- Nanobubble Size: < 200 nm
- High Precision Gas Control
- Compact & Portable Design
- Ideal for R&D & Pilot Studies
- Enables Repeatable Testing Conditions
- Supports Multi-Process Experimentation

Biotech & Life Sciences



NICO BIOGEN

- Flow Range: 0.22 - 1.76 GPM (0.05 - 0.4 m³/hr)
- Gas Compatibility: Air & Oxygen
- Nanobubble Size: < 200 nm
- Precision Oxygen Delivery for Cell Culture
- Enhances Cell Growth & Viability
- Maintains Stable Culture Conditions
- Low Shear, Cell-Friendly Operation
- Sterile & Controlled Process Environment

Automotive Cleaning



NICO DRONA

- Flow Range: 4.4 - 4400 GPM (1 - 1,000 m³/hr)
- Gas Compatibility: Air, Oxygen, Ozone
- Nanobubble Size: < 200 nm
- High Efficiency Cleaning Performance
- Enhances Dirt, Oil & Grease Removal
- Improves Foam Stability & Surface Coverage
- Supports Water Recycling & Reuse
- Reduces Chemical Consumption



Industries We Serve

NICO's nanobubble technology delivers innovative and sustainable solutions across diverse industries, enhancing water quality, optimizing process efficiency, and improving productivity through advanced gas-transfer technology.



Agriculture



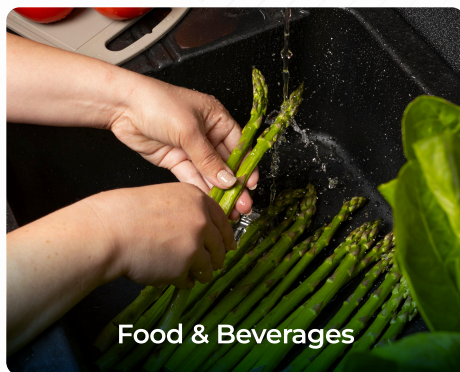
Aquaculture



Wastewater Treatment



Pond & Lake Rejuvenation



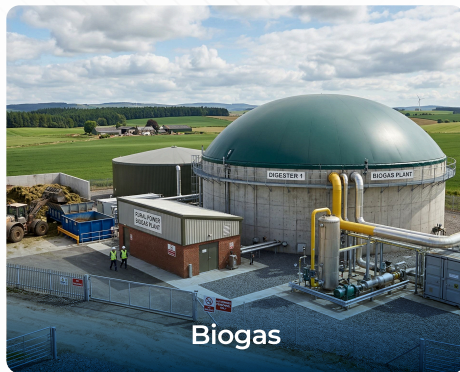
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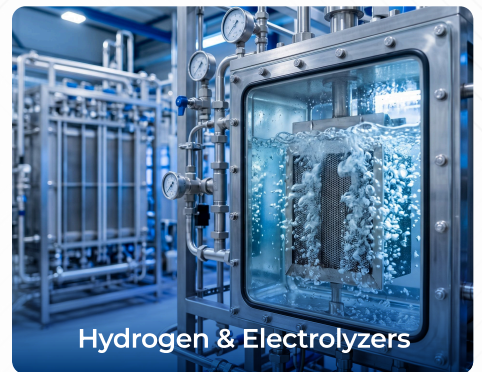
Mining & Mineral Processing



Health & Wellness



Automotive Cleaning



Hydrogen & Electrolyzers



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