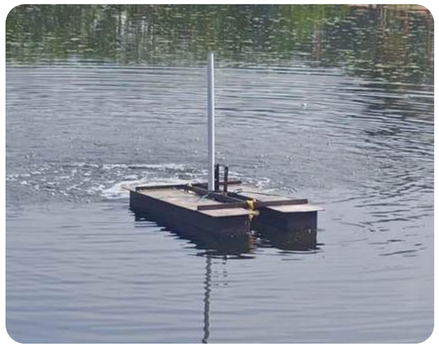
PRODUCT CATALOG

OUR INNOVATIVE PRODUCTS HELP US TO DELIVER & SCALE QUICKLY

Floating Wetlands

Mimic nature's process and provide wetland effect to waterbodies to clean the water.

- Improve water quality, reduce algal blooms and remove pollutants
- Produces Value (fish yield, oil, etc).
- Beautification tool for water-bodies
- Provide habitat to all life-forms



Floating Aerators

Aeration/Oxygenation helps in improving water quality and increasing Oxygen for sustenance & growth of aquatic life

Beneficial Microbial Cultures

Friendly bacteria work in tandem with wetlands to help devour nutrients and other unwanted pollutants to reduce algal blooms

HOW OUR PRODUCTS CREATE IMPACT

Beneficial Microbial Cultures

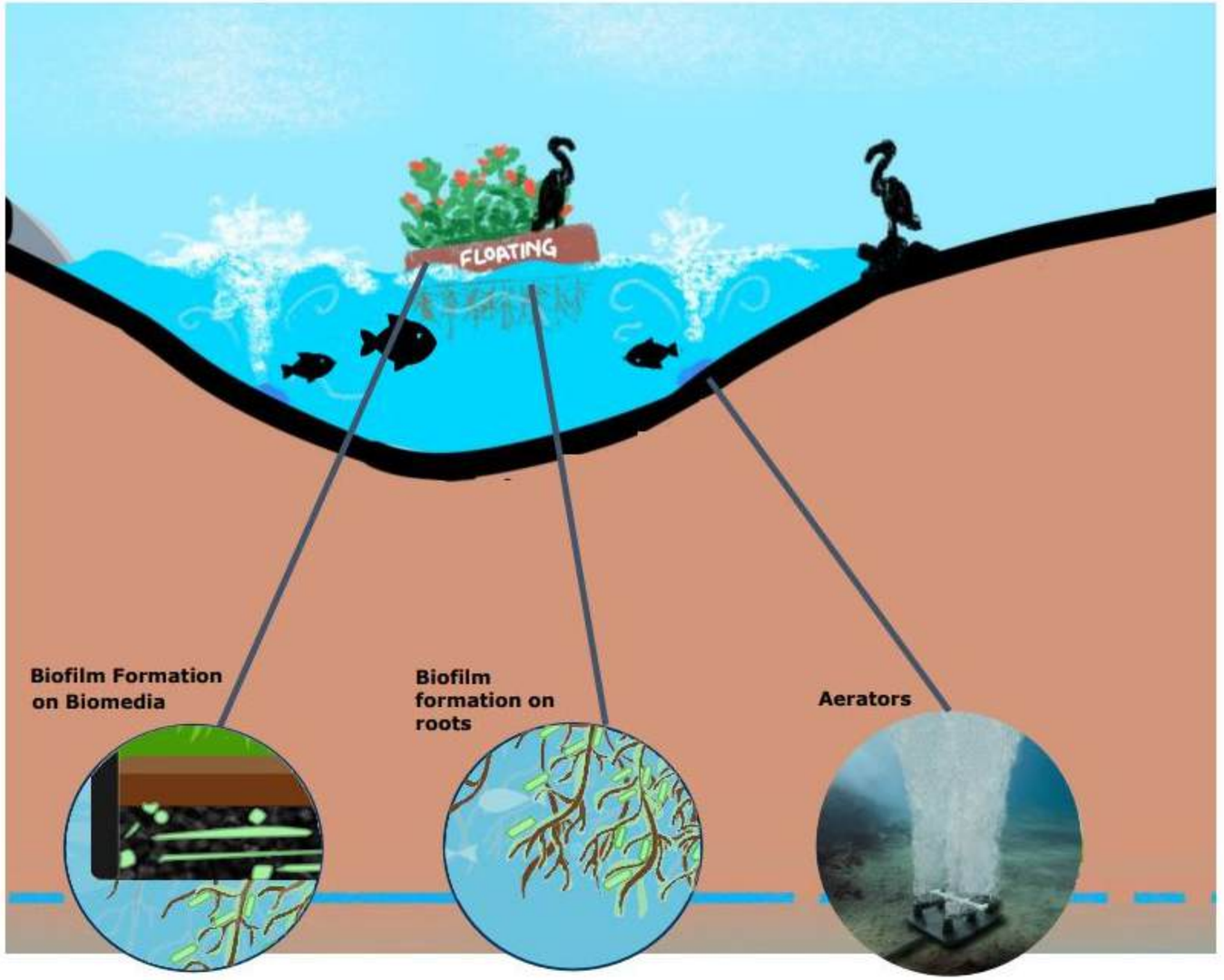
Takes up excess nutrients

Stops undesirable growth of algae and other weeds

Floating Aerators

Increase dissolved oxygen, making bacteria & islands efficient

Improved Ecosystem Quality



Floating Wetlands

House Biomedia, helping bacteria grow

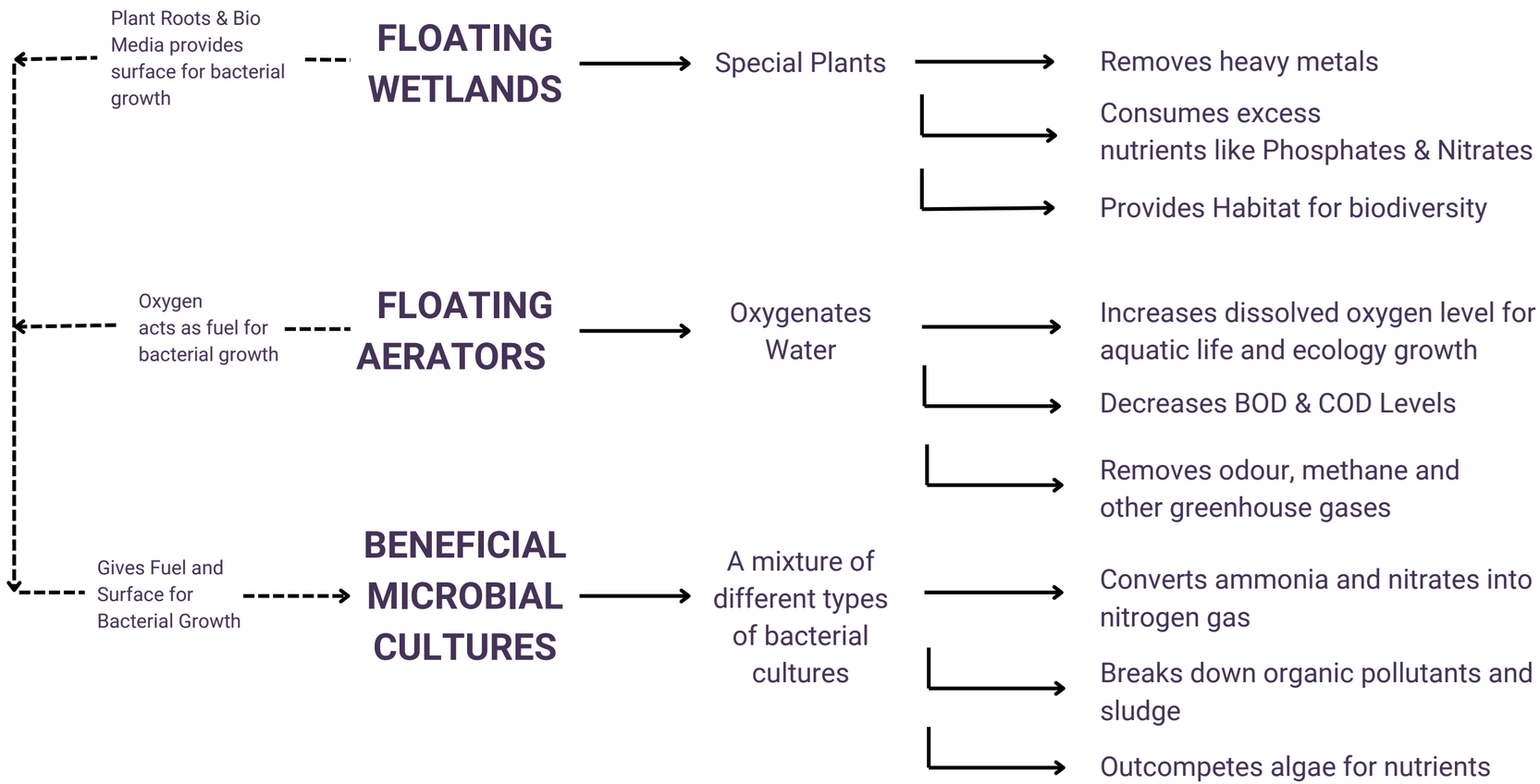
Bacteria together with plants take up pollutants

FIs provide habitat and breeding grounds to biodiversity

Ecological Restoration & Biodiversity Proliferation

Reduced Risk of Health Hazard

HOW OUR PRODUCTS CREATE IMPACT




Removes Color & Odour


Prevents Algae Growth


Removes Harmful Gases


Prevents Growth of Invasive Species


Removes Heavy Metals


Decreases BOD & COD


Increases Dissolved Oxygen


Increases Aquatic Life


Promotes Biodiversity


Self-Sustainable Solution

FLOATING WETLANDS

Introduction

Clean-Water's Floating Wetlands represent an innovative, sustainable solution designed to improve water quality and restore ecological balance in waterbodies. These floating platforms mimic the natural functions of wetlands by housing plants, bio media, and beneficial microbes, working together to absorb pollutants, control nutrient levels, and support biodiversity. Our Floating Wetlands with Bio Media are an ideal choice for restoring lakes, ponds, and rivers in both urban and rural areas, creating healthier water ecosystems while enhancing the aesthetic and ecological value of waterbodies.

Key Features of Clean-Water's Floating Wetlands :

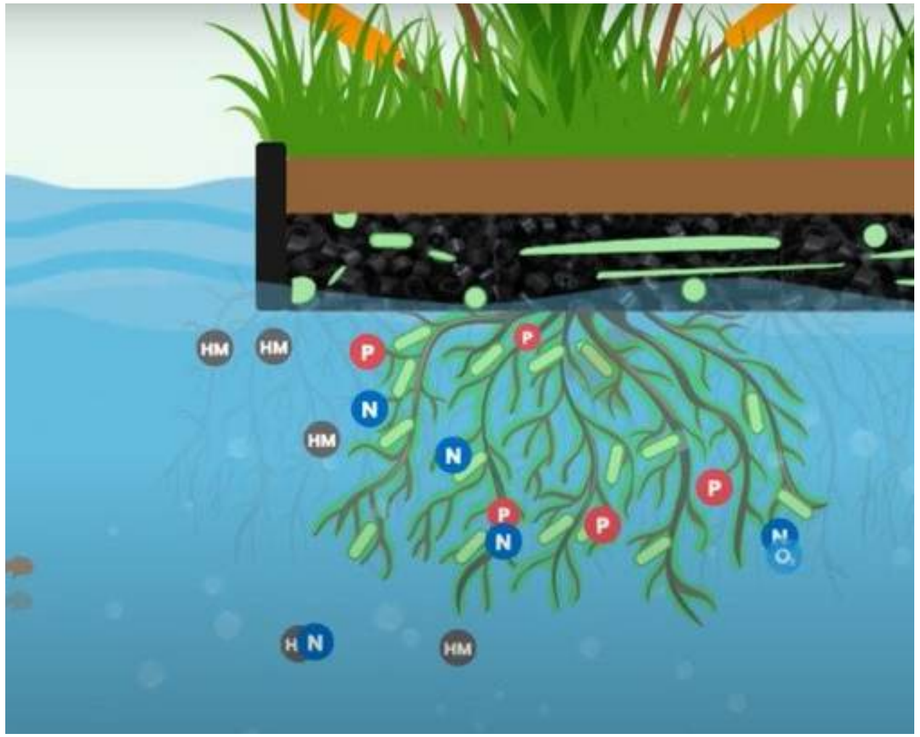
1. **Specialized Aquatic Plants:** Our Floating Wetlands are planted with species specifically chosen for their high absorption capacity and resilience. These plants naturally absorb pollutants and provide habitat for aquatic life, making them highly effective in water purification
.
2. **Bio Media for Enhanced Microbial Activity:** The bio media used in Clean-Water's Floating Wetlands has been specially designed to provide an optimal surface area for bacterial colonies to flourish. This increased microbial activity accelerates the breakdown of pollutants and supports the waterbody's natural processes.

3. **Multi-Layered Filtration System:** Floating Wetlands create a multi-layered filtration system:
• Plant Layer: Absorbs nutrients and pollutants.
• Bio Media Layer: Supports bacteria and beneficial microbes that target specific contaminants.
• Root Zone: Extends into the water, creating a network that entraps particles and provides habitat for smaller aquatic organisms.

4. Self-Sustaining, Low Maintenance and Robust: Once established, the Floating Wetlands are largely self-sustaining, requiring minimal maintenance. The plants continue to grow and absorb nutrients, while the microbial colonies on the bio media thrive as they consume organic matter, creating a balanced ecosystem over time. High and robust build quality ensure our floating wetlands are weather resistant and have a long operational life.

5. Aesthetic and Environmental Benefits: In addition to cleaning the water, Floating Wetlands with Bio Media enhance the visual appeal of waterbodies, making them more attractive to nearby communities. They also support biodiversity by providing shelter and food for fish, insects, and other aquatic life, creating a balanced mini-ecosystem on and around the platform.

FLOATING WETLANDS



Graphical Representaiton of how floating wetlands create a filteration system that absorb harmful nutrients and heavy metals from the waterbodies, and how biomedia and roots provide surface area for growth of beneficial bacterial cultures

FLOATING WETLANDS (FI #10)

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Hybrid - 7 Layered
- **Anchoring & Fixing:** Anchored to Bottom or from Side
- **Sizes:** 2m x 2m x 0.4m
- **Island Height:** 12 inches
- **Max Load:** 800 Kgs
- **Operational Design Load:** 400 kgs
- **Finish:** Epoxy Paint
- **Frame:** Metal
- **Ideal For:** Lakes , Ponds , Rivers & Drains
- **Expected Life** > 5 years

FLOATING WETLANDS (FI #11)

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Hybrid - 7 Layered
- **Anchoring & Fixing:** Anchored to Bottom or from Side
- **Sizes:** 1.2m x 1.2m x 0.3m
- **Island Height:** 12 inches
- **Max Load:** 230 Kgs
- **Operational Design Load:** 115 kgs
- **Finish:** FRP
- **Frame:** FRP
- **Ideal For:** Lakes , Ponds , Rivers & Drains
- **Expected Life** > 10 years

FLOATING WETLANDS (FI #12)

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Hybrid - 7 Layered
- **Anchoring & Fixing:** Anchored to Bottom or from Side
- **Sizes:** 2m x 2m x 0.4m
- **Island Height:** 12 inches
- **Max Load:** 800 Kgs
- **Operational Design Load:** 400 kgs
- **Finish:** FRP
- **Frame:** FRP
- **Ideal For:** Lakes , Ponds , Rivers & Drains
- **Expected Life** > 10 years

FLOATING WETLANDS (FI #13)

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Hybrid - 7 Layered
- **Anchoring & Fixing:** Anchored to Bottom or from Side
- **Sizes:** 3m x 2.5m x 0.4m
- **Island Height:** 12 inches
- **Max Load:** 1200 Kgs
- **Operational Design Load:** 600 kgs
- **Finish:** FRP
- **Frame:** FRP
- **Ideal For:** Lakes , Ponds , Rivers & Drains
- **Expected Life** > 10 years

FLOATING WETLANDS (FI #14)

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Hybrid - 7 Layered
- **Anchoring & Fixing:** Anchored to Bottom or from Side
- **Sizes:** 1m x1m, 2m x2m, 1m Diameter, 1m*2m, etc
- **Island Height:** 6-16 inches
- **Max Load:** 80-1200 Kgs
- **Operational Design Load:** 40-600 Kgs
- **Finish:** Wood, MS, Aluminium & FRP
- **Frame:** Wood, MS, Aluminium & FRP
- **Ideal For:** Lakes , Ponds , Rivers & Drains
- **Expected Life** 3-15 Years

FLOATING AERATORS

Introduction

Clean-Water's Floating Aerators are an advanced, eco-friendly solution designed to enhance water quality and oxygenate waterbodies. These aerators float on the water surface, pumping oxygen into the water to improve dissolved oxygen levels, which supports aquatic life and fosters a healthy ecosystem. Our Floating Aerators are ideal for use in all type of waterbodies like lakes, ponds, and reservoirs as well as rivers and streams, helping to control harmful algae, break down pollutants, and promote biodiversity. Suitable for both urban and rural waterbodies, Clean-Water's Floating Aerators improve the ecological balance of water systems.

Key Features of Clean-Water's Floating Aerators:

1. **High-Efficiency Oxygenation:** The aerators are engineered to maximize oxygen transfer by dispersing bubbles throughout the water column. This increase in dissolved oxygen supports fish, aquatic plants, and beneficial microorganisms, creating a balanced ecosystem.

2. **Reduction of Harmful Gases and Pollutants:** By raising oxygen levels, our Floating Aerators reduce harmful gases like ammonia, methane, and hydrogen sulfide, which often contribute to foul odors and poor water quality. This oxygenation accelerates the breakdown of organic pollutants, reducing Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) and enhancing water clarity.

3. **Enhanced Microbial Activity:** The aerators provide essential oxygen that fuels the growth of aerobic bacteria, which actively break down organic waste, sludge, and nutrients in the water. This process helps to limit the buildup of pollutants and control excess nutrients, preventing algal blooms.

4. **Self-Sustaining and Low Maintenance:** Clean-Water's Floating Aerators are designed to operate with minimal maintenance, making them cost-effective and easy to manage over long periods. The robust design ensures they are durable, weather-resistant, and capable of withstanding varying water conditions, providing reliable, consistent aeration.

Clean-Water's Floating Aerators offer a powerful, sustainable solution for maintaining water quality and ecosystem health, creating a positive impact on both the environment and surrounding communities.

FLOATING AERATORS (1 HP)

Floating aerators enhance oxygen transfer in water bodies via high-velocity jets, improving water quality and preventing algae blooms. Ideal for lakes, ponds, and treatment facilities, they support aquatic life and ecosystem health.

TECHNICAL SPECIFICATIONS

- **Horse Power:** 1 HP
- **Voltage Range:** 230V (Single Phase)
  420V (Three Phase)
- **Frequency Range:** 50 Hz/60 Hz
- **Ampere Range:** 6A (Single Phase)
  1.8A (Three Phase)
- **Water Flow Range:** 60-75 feet
- **Oxygen Generation (kg/hr) :** 3 Kg/hr
- **Power Consumption (unit/hr) :** 1 unit
- **Installation Depth (in feet) :** 4 feet from the surface level

Benefits

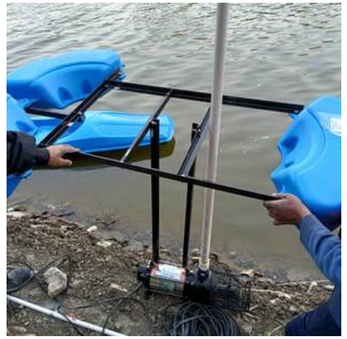
- Boosts oxygen levels to support healthy aquatic life and enhance water quality.
- Minimizes stratification for uniform temperature and oxygen distribution throughout the water body.
- Prevents harmful algae blooms for a clearer, healthier aquatic environment.

FLOATING AERATORS (2 HP)

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Horse Power:** 2 HP
- **Voltage Range:** 230V (Single Phase)
  420V (Three Phase)
- **Frequency Range:** 50 Hz/60 Hz
- **Ampere Range:** 11A (Single Phase)
  3.3A (Three Phase)
- **Water Flow Range:** 100-110 feet
- **Oxygen Generation (kg/hr) :** 3.8 Kg/hr
- **Power Consumption (unit/hr) :** 1.5-1.8 unit
- **Installation Depth (in feet) :** 5 feet from the surface level



FLOATING LOTUS-SHAPED SOLAR AERATOR

Introduction

Clean-Water's Lotus-Shaped Solar Aerator is an innovative, customizable solution designed to oxygenate waterbodies while adding aesthetic beauty. This floating structure combines functionality with visual appeal, resembling a lotus flower and weighing approximately 1500 kg. Powered by solar energy, it operates efficiently with minimal environmental impact, making it an ideal solution for lakes, ponds, and reservoirs in urban and rural areas. Equipped with LED lights that illuminate the waterbody at night, the Lotus-Shaped Solar Aerator not only improves water quality but also enhances the nighttime ambiance, transforming waterbodies into vibrant community spaces.

Key Features of Clean-Water's Lotus-Shaped Solar Aerator:

1. **Customizable Design:** The Lotus-Shaped Solar Aerator is designed to be adaptable to client needs. Its shape, size, and aeration power can be customized, allowing it to meet specific waterbody requirements while maintaining its lotus-inspired appearance.

2. **High-Efficiency Oxygenation:** Powered by solar energy, this aerator delivers high oxygen levels to the water, improving dissolved oxygen and supporting aquatic life. Its efficient aeration system promotes microbial activity, reduces pollutants, and prevents harmful algae, creating a balanced ecosystem within the waterbody.

3. **LED Illumination:** The aerator is equipped with LED lights that illuminate the waterbody at night. This lighting enhances the aesthetic appeal, making the aerator a beautiful, eye-catching centerpiece. The illuminated lotus design transforms the waterbody into a visually stunning feature, particularly suited for parks and public spaces.

4. **Robust and Weather-Resistant Structure:** Built with high-quality, durable materials, the aerator is designed to withstand various weather conditions. Its 1500 kg floating structure ensures stability, even in turbulent water, and provides a long operational life with minimal maintenance.

5. **Eco-Friendly, Solar-Powered Operation:** As a solar-powered device, the Lotus-Shaped Aerator operates with zero emissions and minimal environmental impact. This sustainable solution offers an energy-efficient way to improve water quality, reduce harmful gases, and lower Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) without relying on external power sources.

6. **Aesthetic and Environmental Benefits:** Beyond its functional benefits, the lotus shape and LED lights enhance the beauty of the waterbody, creating an attractive focal point that draws visitors and fosters community engagement. The improved water quality, oxygenation, and biodiversity also support a healthy aquatic environment, making the waterbody more enjoyable for people and wildlife alike.

FLOATING LOTUS-SHAPED SOLAR AERATOR

CLEAN WATER

Product Description:

The 3HP scorpion jet aerator is a solar-powered solution designed to improve water quality in lakes and ponds, powered by a 6.5 KW system of floating solar panels. Mounted on a specially developed floating structure, this system supports both the solar panels and the suspended underwater aerator, ensuring optimal performance.

The aerator is uniquely designed in the shape of a lotus, enhancing the aesthetics of the waterbody, and features LED lights powered by solar energy that illuminate the structure at night. Customizable to meet specific requirements, this eco-friendly aerator combines functionality, sustainability, and visual appeal.

Salient Features:

- **Solar Powered Efficiency**
- **Special Floating Structure**
- **Aesthetic Lotus Design**
- **Nighttime Illumination**
- **Customizable Design**
- **Environmentally Friendly**
- **Versatile Application**
- **Innovative Technology**

FLOATING LOTUS-SHAPED SOLAR AERATOR

CLEAN WATER

TECHNICAL SPECIFICATIONS

- **Build:** Galvanized MS Structure | FRP Petals & Floaters
- **Anchoring & Fixing:** Anchored to Bottom
- **Diameter** ~ 30 ft. (Customizable)
- **Weight** 1300-1500 kgs
- **Aerator Horse Power** 3 HP
- **Aerator Type** Submersible Jet Scorpion Aerator
- **Floating Solar Panel Capacity:** 6.5 KW
- **LED lights:** 24 (Customizable)
- **Auto/Manual** Auto

BENEFICIAL MICROBIAL CULTURE

Introduction

Clean-Water's Beneficial Microbial Cultures offer a powerful, natural solution for restoring water quality in various waterbodies, including lakes, ponds, reservoirs, and streams. These cultures consist of a diverse mix of beneficial bacteria specifically formulated to break down pollutants, control harmful nutrients, and balance the ecosystem. By reducing organic waste and controlling algae growth, Clean-Water's Beneficial Microbial Cultures support healthier aquatic environments, making them ideal for urban and rural waterbody restoration projects.

Key Features of Clean-Water's Beneficial Microbial Cultures:

1. **Targeted Nutrient Control:** The microbial cultures are designed to consume excess nutrients such as nitrogen and phosphorus, which often lead to harmful algal blooms. By reducing these nutrient levels, the cultures help maintain balanced water chemistry and prevent eutrophication.

2. **Breakdown of Organic Pollutants and Sludge:** Beneficial microbes actively decompose organic waste, sludge, and other pollutants. This natural breakdown process reduces Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD), resulting in cleaner, clearer water and less buildup at the waterbody's bottom.

3. **Algae Suppression:** By outcompeting algae for nutrients, these microbial cultures effectively prevent excessive algae growth, ensuring that waterbodies remain clear and healthy. This helps to maintain oxygen levels, supporting fish and other aquatic life.

4. **Odor and Color Reduction:** The microbial activity reduces unpleasant odors and murky color by breaking down the organic compounds that cause them. This leads to more visually appealing and pleasant-smelling water, enhancing the experience for nearby communities.

5. **Eco-Friendly and Self-Sustaining:** As a natural solution, the microbial cultures work with the waterbody's existing ecosystem, promoting long-term ecological health. Once introduced, they establish self-sustaining bacterial colonies that continue to purify the water with minimal external intervention.

6. **Environmental and Aesthetic Benefits:** Clean-Water's Beneficial Microbial Cultures improve water quality without the need for chemicals, preserving the natural balance of the ecosystem. Healthier, clearer water supports aquatic biodiversity and enhances the visual appeal of waterbodies, making them more inviting for community interaction and recreational activities.

BENEFICIAL MICROBIAL CULTURE

Dosing

Direct/Shock Load

Directly sprinkle the prescribed amount on the surface of the water. For best results, please sprinkle at different places on the surface and near any inlets.

Indirect/Timed Release

Obtain a 200 litre drum with a tap at the bottom. Dilute the prescribed dosage in the drum with water from the water body. Open tap slightly to achieve the prescribed rate of dosing. For best results, place the drum near an inlet to the water body.

Consult with our experts to learn about the right dosing technique for your water body.

BENEFICIAL MICROBIAL CULTURE

CLEAN WATER

BIOLOGICAL NUTRIENT REMOVAL PROCESS

1) Oxidation

$$COHNS + O_2 + \text{bacteria} \longrightarrow CO_2 + NH_3 + \text{other end products} + \text{energy}$$

2) Synthesis of new cell tissue

$$COHNS + O_2 + \text{bacteria} \longrightarrow C_5H_7NO_2 \text{ (new cell tissue)}$$

3) Endogenous decay or respiration

$$C_5H_7NO_2 + 5O_2 \longrightarrow 5CO_2 + 2H_2O + NH_3 + \text{Energy}$$

4) Anaerobic Fermentation

$$\text{Complex Organic Matter} \longrightarrow \text{Soluble Organic Molecules} \longrightarrow 3CH_4 + CO_2$$

5) Biological Nitrogen Removal in the form of Nitrogen gas

(i) Nitrification $NH_3 + O_2 \longrightarrow NO_2^- + 3H^+ + 2e^-$

$$NO_2^- + H_2O \longrightarrow NO_3^- + 2H^+ + 2e^-$$

(ii) Denitrification in this process NO_3^- is converted to nitrogen gas (N_2) by denitrifying bacteriaa These are heterotrophic bacteria which need organic matter as a source for carbon.

$$2NO_3^- + 10e^- + 10H^+ \longrightarrow N_2 + 6H_2O$$

Analysis of the Chemical Processes

This set of reactions describes the main biochemical processes that beneficial microbial cultures facilitate in polluted waterbodies to break down pollutants, reduce nitrogen levels, and improve water quality.

1. Oxidation: Organic compounds (COHNS) are broken down by bacteria with oxygen, releasing carbon dioxide (CO_2), ammonia (NH_3), and energy. This helps reduce organic pollutants, with bacteria using the energy for growth.

2. Synthesis of New Cell Tissue: Bacteria consume organic material and oxygen to produce new cell tissue ($C_5H_7NO_2$), allowing them to multiply and continue processing pollutants.

3. Endogenous Decay or Respiration: Bacteria use their stored compounds in the absence of nutrients, releasing CO_2, H_2O, NH_3, and energy. This stabilizes the bacterial population and further reduces pollutants.

4. Anaerobic Fermentation: In low-oxygen conditions, complex organic matter is broken down into methane (CH_4) and CO_2 by anaerobic bacteria. This helps reduce sludge

5. Biological Nitrogen Removal:

- Nitrification: Ammonia (NH_3) is oxidized to nitrate (NO_3^-) through nitrite (NO_2^-), converting toxic ammonia into a safer form.
- Denitrification: Nitrate is converted to nitrogen gas (N_2) by denitrifying bacteria, removing excess nitrogen and preventing nutrient overload.

BENEFICIAL MICROBIAL CULTURE

Microbial cultures, consisting of beneficial bacteria consortia, combat eutrophication by improving water clarity, reducing sludge, and removing excess nutrients. This low-cost solution prevents algae infestations in diverse water environments.

Benefits

- Quickly tackles eutrophication in water bodies.
- Improves water clarity and odour within a few days.
- Biologically removes excess nutrients, reducing sludge
- Safely stops undesirable infestations of algae and water hyacinth.

REDUCES ODOUR

REDUCES COLOR

STOPS INVASIVE SPECIES

REMOVES HARMFUL NUTRIENTS

FISH, AQUATIC LIFE FRIENDLY

EASY TO DOSE

HUMAN FRIENDLY

BIO ENGINEERED

QUICK RESULTS

COST EFFECTIVE

TERMS & CONDITIONS

CLEAN WATER

1. Payment Structure - 100% upfront.

2. Accessories - It is optional for the buyer to purchase Accessories from us. Accessories are charged additionally & include: 1. Peat Moss; 2. Planting Mix of Soil, Coco-Peat & Manure; 3. Rope; 4. Chains & Hooks Attached to the Bottom of the Floating Wetlands

3. Packing & Transportation - Will be charged extra at actuals.

4. Installation - Installation is in the scope of the purchaser.

5. Plants - The plants native to the region shall be procured and planted by the purchaser at his cost.

6. Anchoring - The island comes equipped with a hook for anchoring. Attaching a rope and anchor to the hook and anchoring it is under the purchaser’s scope.

7. Maintenance - Maintenance of the island is under the purchaser’s scope.

8. Inspection - The purchase must duly inspect the product for defects and report it to the seller.

9. Delivery Time - The delivery time of the islands is 45 days.

10. Size of islands - The actual dimensions of the island may vary by approx. 5%.

WARRANTY

1. Duration - The warranty on floating wetlands will expire 6 months from the date of delivery to the purchaser. The warranty applies to the original purchaser. It is not transferrable or assignable. Warranty is not applicable to Floating Aerators

2. Purchaser's Remedy - Purchaser’s sole & exclusive remedy under this warranty shall be limited to the repair, Remedy: at the Manufacturer’s option and expense, of any defective part of the island. In no event will the manufacturer be liable for more than the amount of the Purchaser’s purchase price, not to exceed the current list price of the product excluding tax, shipping & handling charges.

3. Purchaser's Duties - The purchaser shall give written notice to the manufacturer of any defect in material or workmanship within 15 days of delivery of the island.

4. Exclusions - The warranty and obligations stated here shall not apply to:

- Loss or Theft of an Island.
- Any damage caused by misuse, abuse, unauthorized modification, or improper storage.
- Any damage caused by natural hazards, including but not limited to lightning, tropical storms, strong winds, or natural disasters.
- Any damage or material loss due to animals and/or wildlife.
- Conditions resulting from exposure to negative buoyancy or exceeding buoyancy specifcations of the island.
- Plants or any other perishable or consumable items. Any island that has been removed from India.

5. No Oral Modifications or Waivers - No modifications of this warranty or waiver of its term shall be binding on either party unless approved in writing by an authorized official of the party.

THANK YOU!

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