

# *Process Equipment Manufacturers*

SEDIMENTATION | FILTRATION | MIXING

**AERATORS**



## SURFACE AERATORS

### Introduction

Wastewater aeration is the process of introducing atmospheric oxygen (O<sub>2</sub>) into wastewater to facilitate the aerobic biodegradation of pollutants. The activated sludge process is the most common form of aerobic biological wastewater treatment. This popular process relies on aeration to promote the rapid reproduction of micro-organisms that break down organic matter in the wastewater. Aeration also raises dissolved oxygen levels in the final effluent which in turn helps sustain plant and animal life in the receiving rivers and lakes.



Hence, the efficiency of biological treatment plants depends considerably on the quality and suitability of the aerator used. The major factors to be considered in the selection of aerators are the basin dimensions, the required amount of oxygen and mixing.

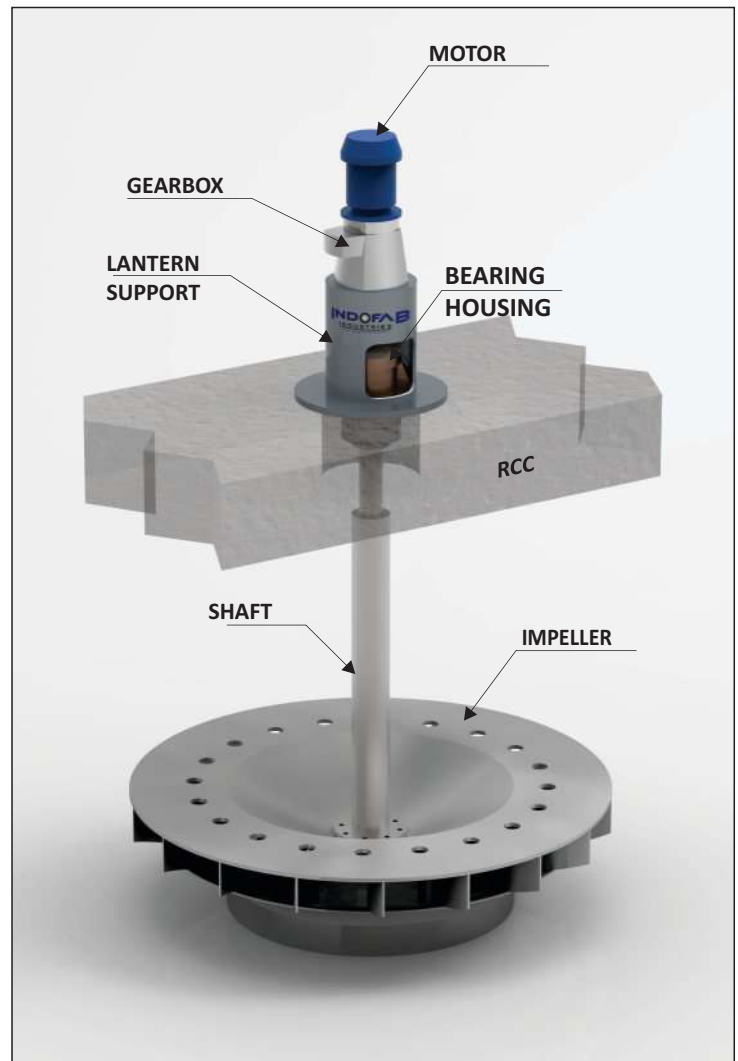
### Why to choose mechanical surface aerator ?

Mechanical surface aerators are widely used for many applications in modern wastewater treatment. They transfer atmospheric oxygen to the liquid by surface renewal and exchange. This provides the mixing necessary for distribution of the aerated liquid throughout the tank. Mechanical aerators have found favour because they dispense with the compressors, air-cleaning devices, piping, & diffusers, and their maintenance, which are necessary with injected-air systems, and because they fit into a wide variety of tank shapes, not being bound to the depth and width structures common with diffused air systems.

### Why to choose Indofab surface aerator ?

- Indofab Aerators are among the most efficient slow speed aerators. The simple mechanical structure consisting of motor, gearbox, lantern support, shaft and Impeller allows easy operation.
- Bi-directional rotating impeller is a unique design which provides operational flexibility in adverse conditions.
- It can either be easily mounted on fixed bridge, or be attached to the side of the basin by means of a special barge system in cases where water level can vary.
- It is a slow speed (115 to 31 RPM) design, which ensures movement of biomass smoothly without fragmentation.
- A non-clogging impeller design, with very high no. of curved vanes to provide smooth water gliding which ensures minimum erosion.
- A conical skirt which provides automatic reduction in power consumption at lower liquid levels.

- Adjustable weir available (on request) for water level control based on tank constructional details.
- High Efficiency helical gear box with additional bearing lantern support arrangement, which makes the system sturdy and trouble free for operation and maintenance in long haul.
- Higher depth of SWD is possible with the use of draft tube.
- Modular design that can be upgraded without much change, for example, extended nozzle without the requirement of draft tube, which ensures higher SWD, this requires INDOFAB's opinion on individual basis.
- We guarantee the efficiency of our aerators in all aspects on account of sound evaluations of our numerous applications of this equipment.
- Our adaptable design makes it possible for our aerator impellers to be retrofitted to any existing (slow speed) aerator system. \*This requires INDOFAB's expert opinion on individual basis.



## Performance

Designed and proved to have a Oxygenation capacity averaging between 1.8 – 2.0 Kg/kWh at standard conditions depending on the model w.r.t. installed power for Activated Sludge Process (ASP).

## Sizes

Available in all standard power ratings from 2hp to 100hp.

## Gearboxes & Motors

High efficiency ( $\eta > 92\%$ ) helical gearbox with motors of varying efficiency IE2 / IE3.

## Application

Indofab Aerator are deployed to be used in both municipal and industrial wastewater treatment plants, including those of the food, pharmaceutical and petrochemical industries. Indofab's aerators can be installed in several different tank configurations including rectangular, square and round aeration tanks, etc. Float-mounted aerators are also available, where the liquid keeps varying.

## Material of Construction

These Aerators are mainly offered in Carbon Steel (C.S), Rubber lined (CS-RL), CS-FRP, CS- HDGI, Mild Steel Epoxy Painted (MSEP), AISI 304 / L, AISI 316 / L.

# INDOFAB INDUSTRIES

Process Equipment Manufacturers

ISO 9001:2015 Certified Company

INDOFAB INDUSTRIES is a well-known name for supply of Quality Process Equipments for past 35 years. The company has its legacy of working with top notch EPC contractors and Consultants, serving large size Project requirements for Government & Private Organizations.

INDOFAB is an ISO 9001:2015 Certified company for Design & Manufacture of Industrial Process Equipments in the field of solid-liquid separation; working for diverse Industries like WTP, ETP, STP, Municipal/Industrial Water & Waste Water Treatment, Paper & Pulp, Mineral Processing & Ore Beneficiation and Milk of Lime Plants.

The company has In-house Design, Testing, Pilot Facilities for Establishing its designs & continues to deploy latest Analysis/Design tools for Process Equipment Design. Combined with In-house Manufacturing Capacity with over 44000 Sq.Ft. Working area with 8 EOT Cranes facilitates working of about 100+ team turning out more than 1150 tons of steel per annum.

Strategically located facilities in & around Mumbai our office & manufacturing facilities are easily accessible for representatives, heavy vehicles & port facilities. We at INDOFAB are glad to retain more than 75% of our repeat clients due to our efficient after sales spares & services for decades together.

Few of our Esteemed Clients / Consultants we work for



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