

# TURBO JET AERATOR



*Subsurface Aeration*

**BLOWTAC**

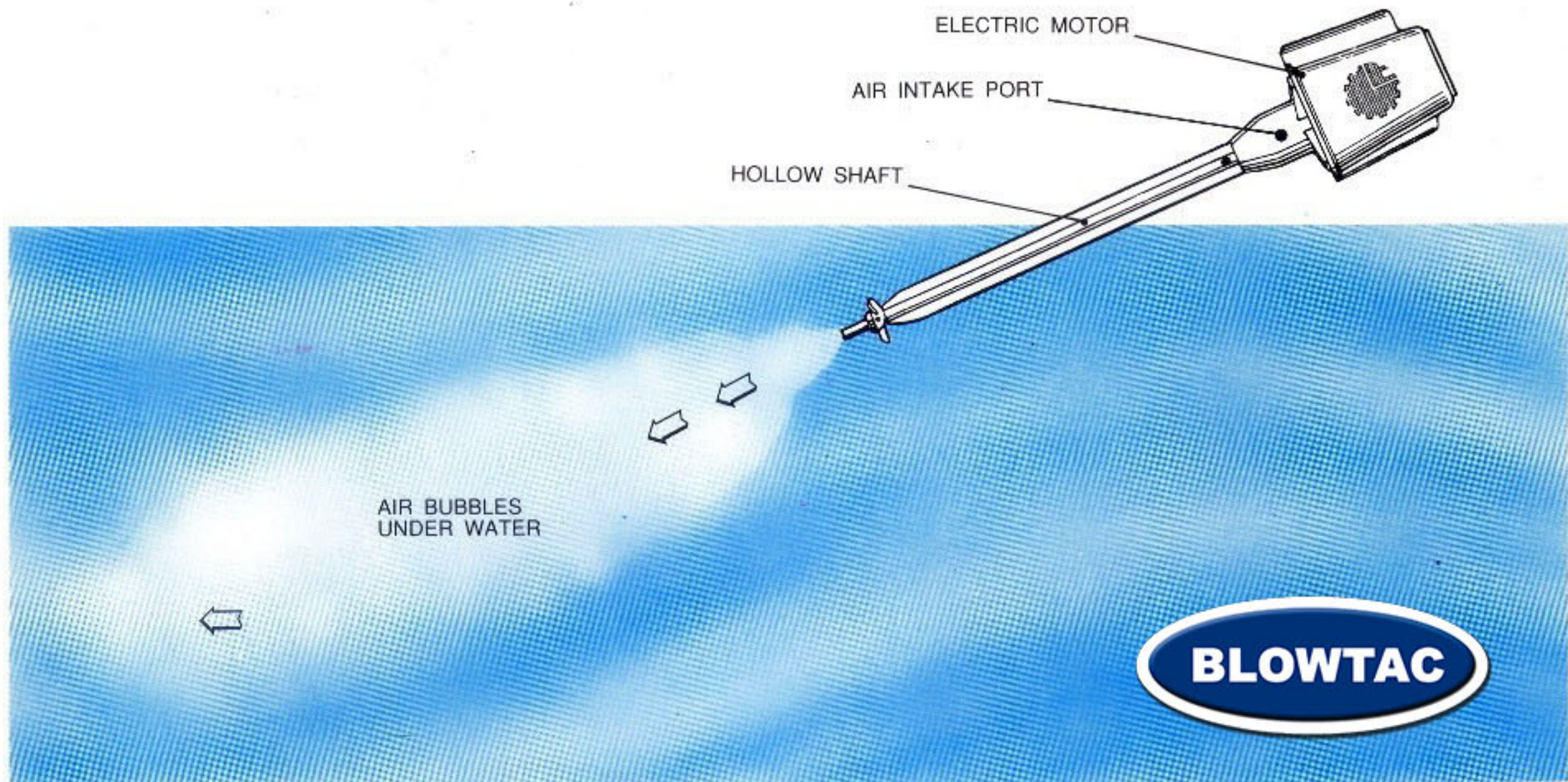
**INDUSTRIAL TECH SOLUTIONS**



## HOW THE AERATOR WORKS

The aerator is mounted at an adjustable angle in the water with the motor portion and air intake above the surface, and the propeller portion below the surface. The motor rotates, turning the hollow shaft which turns the propeller. This pushes water at a high velocity through and near the propeller blades, creating a partial vacuum at the end of the

shaft. Atmospheric air above the waterline is drawn in through the air intake port and into the hollow shaft. Turbulence and flow created by the propeller breaks up the air bubbles, mixes the basin and disperses oxygen. The horizontal water movement maximizes bubble hang time maximizing oxygen transfer.



## STANDARD SPECIFICATIONS

| JET-MIX | MOTOR |      | Oxygen Transfer rate    | Air volume           | Mixing volume  | Working depth | Unit weight |
|---------|-------|------|-------------------------|----------------------|----------------|---------------|-------------|
| Model   | HP    | KW   | Kg. O <sub>2</sub> / HR | M <sup>3</sup> / min | M <sup>3</sup> | M.            | Kg.         |
| JM-005  | 1/2   | 0.40 | 0.75                    | 0.21                 | 20             | 0.5-1.5       | 44          |
| JM-010  | 1     | 0.75 | 1.49                    | 0.42                 | 40             | 1.5-2.5       | 48          |
| JM-020  | 2     | 1.5  | 2.98                    | 0.83                 | 80             | 1.5-2.5       | 52          |
| JM-030  | 3     | 2.25 | 4.47                    | 1.26                 | 120            | 1.5-2.5       | 58          |
| JM-050  | 5     | 3.7  | 7.45                    | 2.09                 | 190            | 1.5-3.5       | 65          |
| JM-075  | 7.5   | 5.5  | 11.18                   | 3.13                 | 280            | 1.5-3.5       | 76.6        |
| JM-100  | 10    | 7.5  | 14.90                   | 4.17                 | 370            | 2-5           | 104.3       |
| JM-150  | 15    | 11   | 22.35                   | 6.26                 | 480            | 2-5           | 135.1       |
| JM-200  | 20    | 15   | 29.80                   | 8.35                 | 750            | 2-5           | 156.4       |
| JM-250  | 25    | 18.5 | 37.25                   | 10.44                | 930            | 3-6           | 225.8       |
| JM-300  | 30    | 22   | 44.70                   | 12.53                | 1100           | 3-6           | 240.2       |
| JM-400  | 40    | 30   | 59.80                   | 16.70                | 1500           | 3-6           | 322.7       |
| JM-500  | 50    | 37   | 74.50                   | 20.88                | 1900           | 4-7           | 356.0       |

Specifications subject to change without notice.



## Features

### **HIGH VELOCITY BELOW SURFACE AERATION**

The aerator is an electric motor-driven propeller aspirating aerator which creates the flow of atmospheric air, **below the water surface** at high velocity.

### **SUPERIOR MIXING**

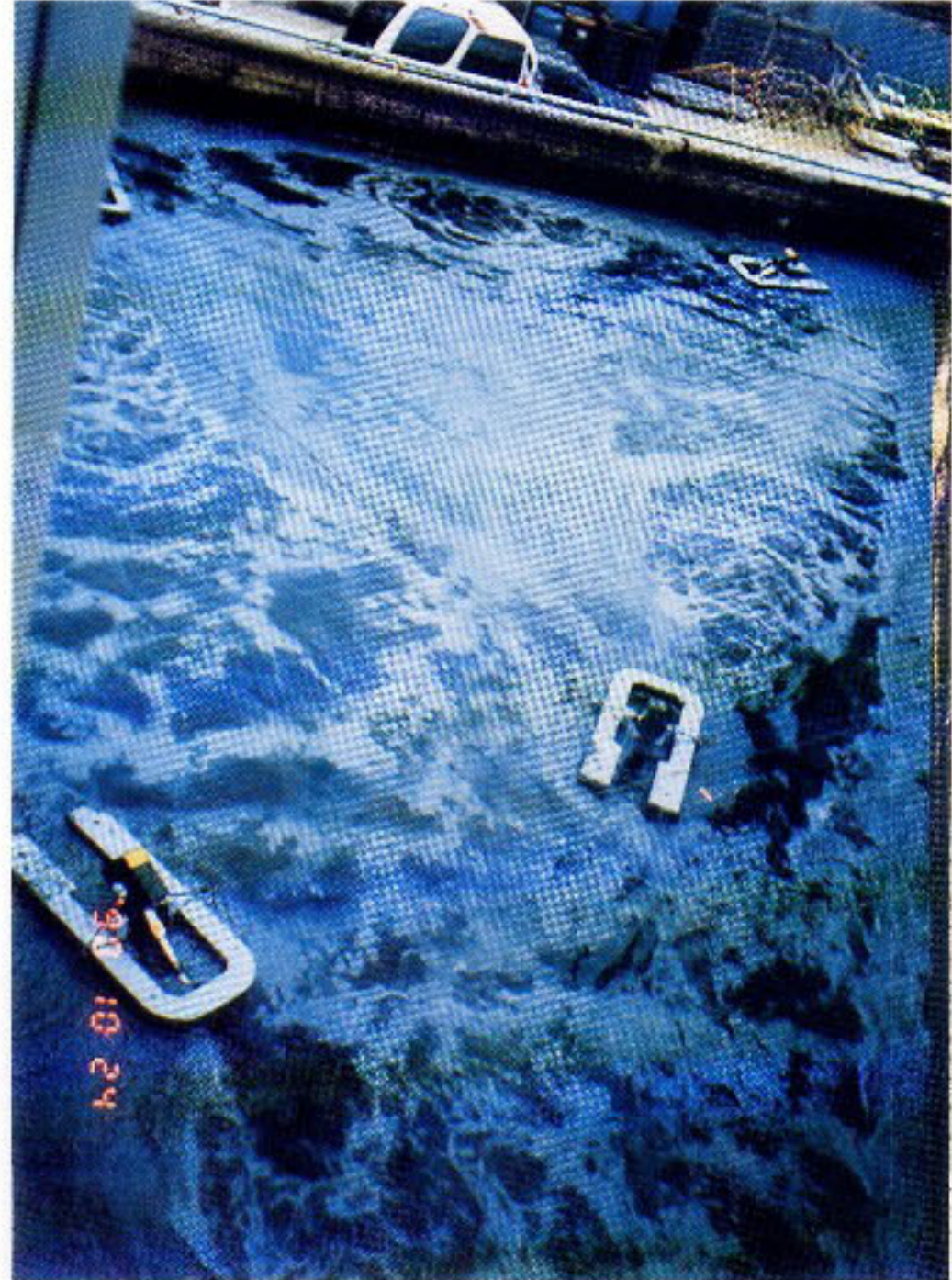
The high velocity flow system created by the aerator is horizontal flow rather than vertical splashing as in other aeration systems. The horizontal water movement will keep solid in suspension which accelerates the bacteriological activities.

### **INCREASED DISSOLVED OXYGEN LEVELS**

The superb flow pattern of the aerator in horizontal style extends the bubble hang time, thus results in higher D.O. level which in turn creates more efficient biological action.

### **ENERGY AND MAINTENANCE COST REDUCED**

The aerator systems hold the outstanding success record in municipal, industrial and agricultural wastewater installations around the world. 35% and more in energy savings over the conventional diffuser and surface aerators are reported and maintenance cost minimized which thank to our aerator design.



*The flow-link capacities offers dead spot elimination boosting biological activity.*



*The new horizontal aeration system is the main element in wastewater treatment plants.*



*Hundreds of aerator troop has paraded into many aquaculture Industry plants.*



*The horizontal aeration technic offers mixing capability unmatched by other aeration system.*



## Flexibility Applications

### **AERATED LAGOONS**

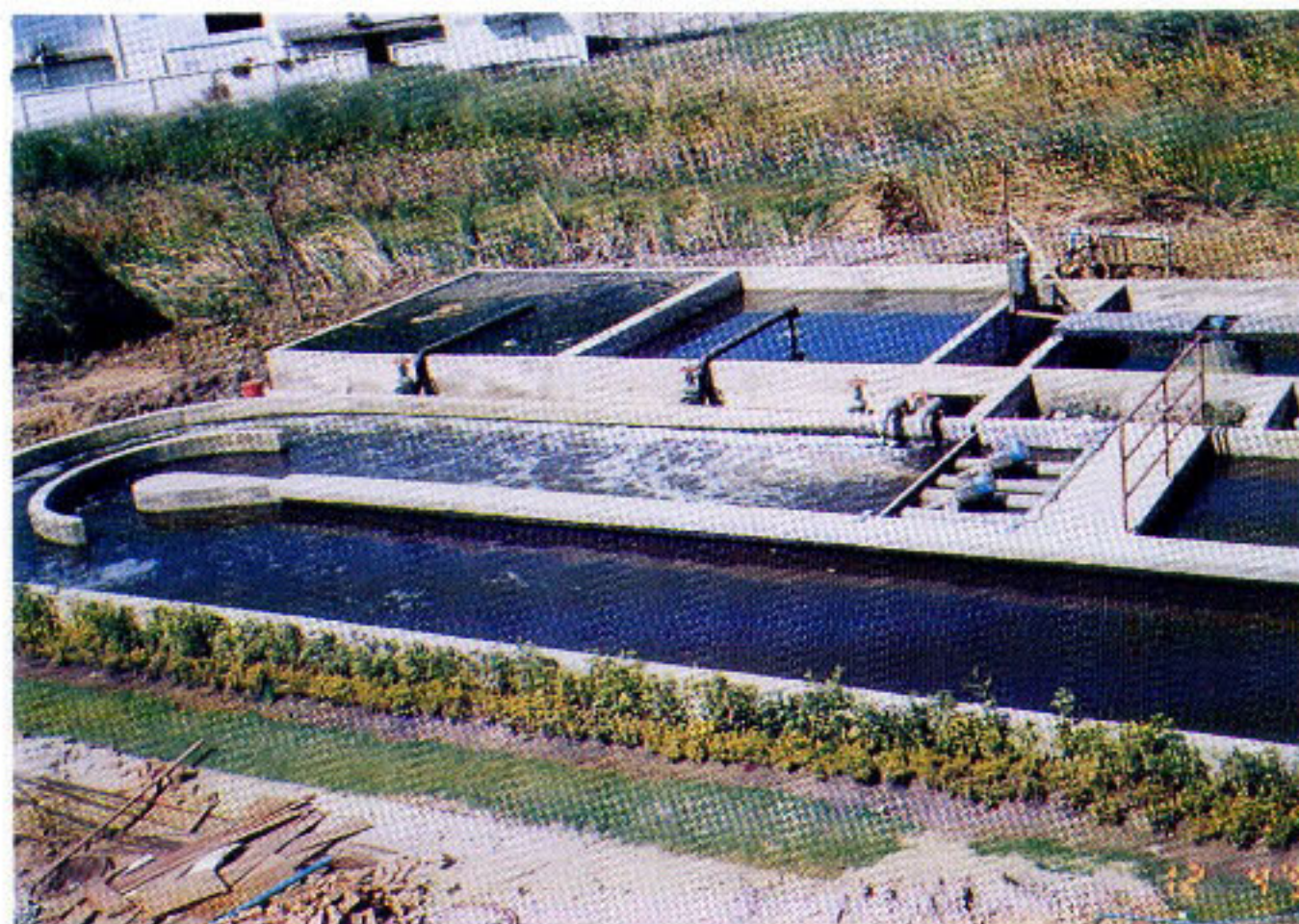
As its unique strong mixing action in horizontal flow, the aerator is considered to be the ideal tools for most aerated lagoon with various depth.



*Our aeration system is improving water quality throughout U.S.A., Europeans and Asians.*

### **RIVER AND CANAL RESTORATIONS**

The river and canal polluted by the residents will be restored by using the JM aerators. The boosting of D.O.levels for aquatic life can improve water quality in lake, canal or reservoir and upgrade the surrounding ecosystem.



*The aerator horizontal mixing capacity supports the oxidation ditch design.*

### **OXIDATION DITCH**

The oxidation ditches are mostly seen in activated sludge process. The aerator is specially effective in oxidation ditch because of its high horizontal mixing pattern of best design.



*BOD drop levels are recorded up to 95%*

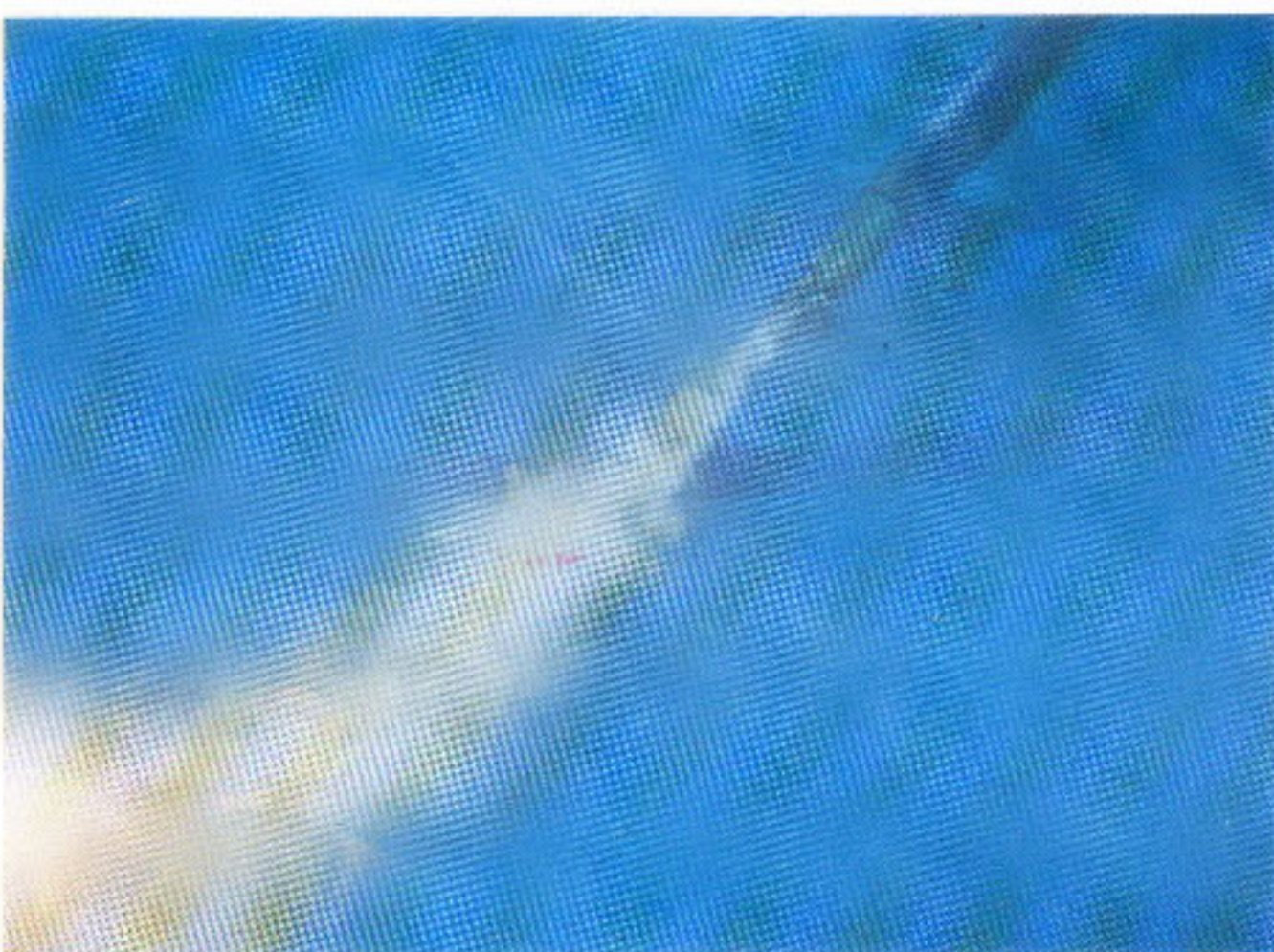
### **AERATION TANK**

The aerator can be utilized in conventional tank for activated sludge or digester. The units with proper placement in tank can provide the complete mix and eliminate dead spots.



**Technology of the Future**

The under water effect of aerator horizontal movement capacities has benefitted customers year after year. As our well established Research and Development plus the past valuable field performance, We have obtained the patent covering the design and use of our turbo jet aerator which is effective throughout U.S.A., Europeans and Asians.



*Below water action of aerators self aspirating unit.*

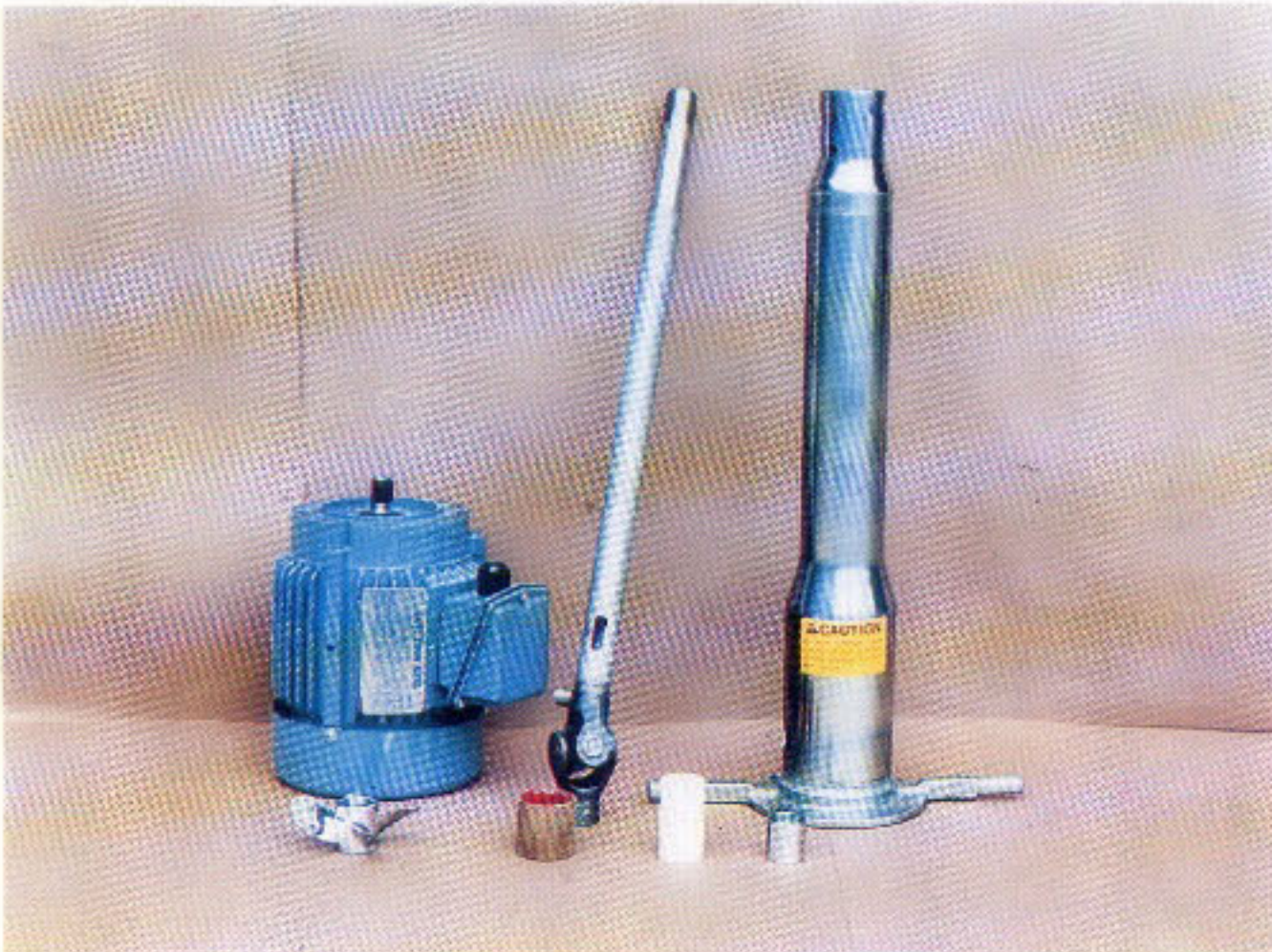
The aerator is made from hi-grade material utilizing modern technology for trouble-free operations.



*JM aerators are available from 1-50 Horsepower range.*

The simplicity of our design offers customer easy and safe operation in long run.

The research over years is responsible for its performance and operation.



*Under NEMA Standard C-Face motor with oversized bearing extends the motor lifetime.*



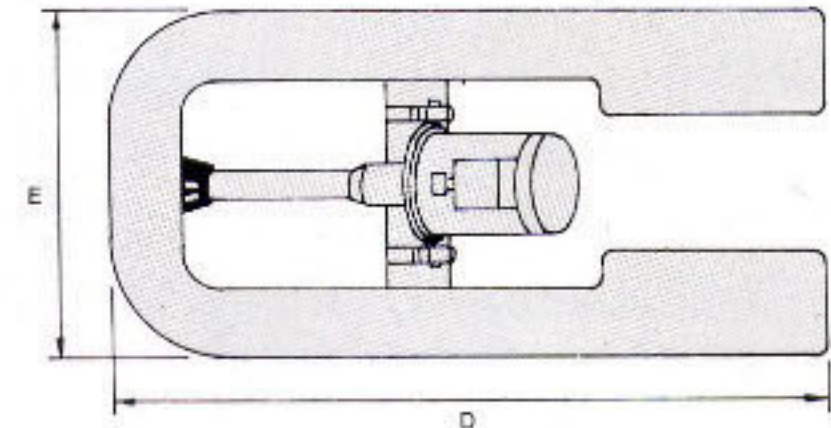
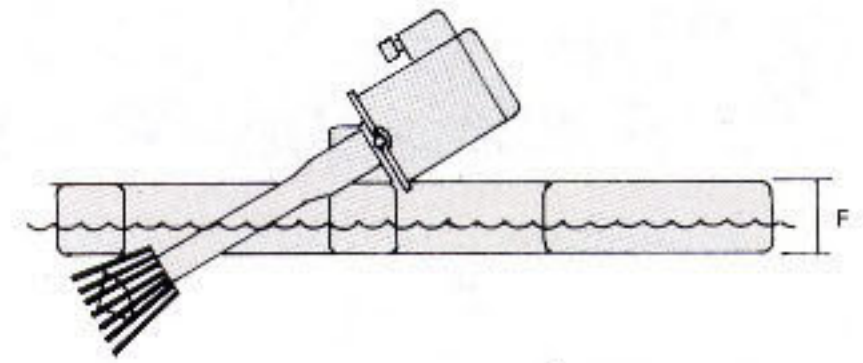
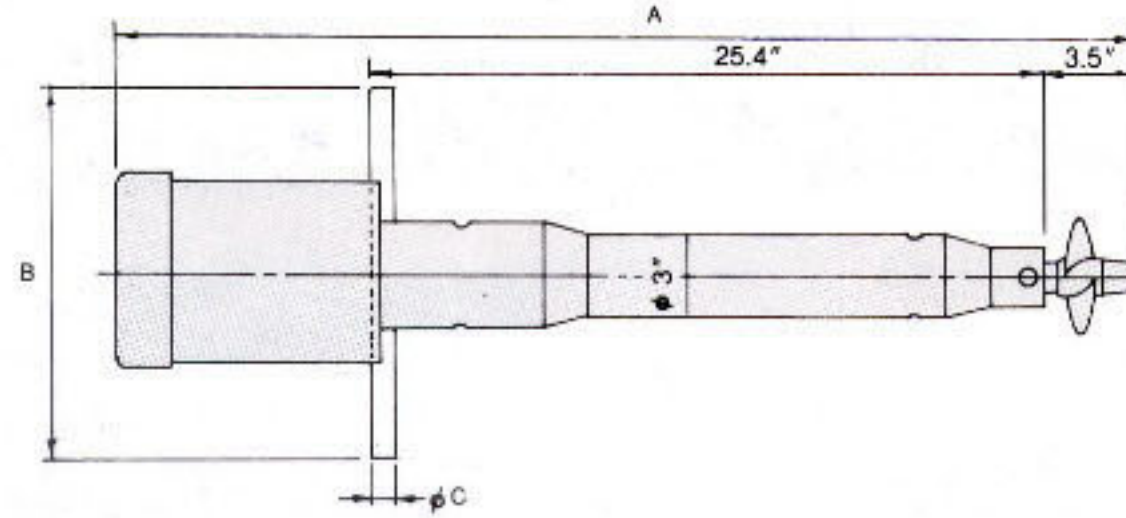
*Mounting flexibility*



*Easy Installation*

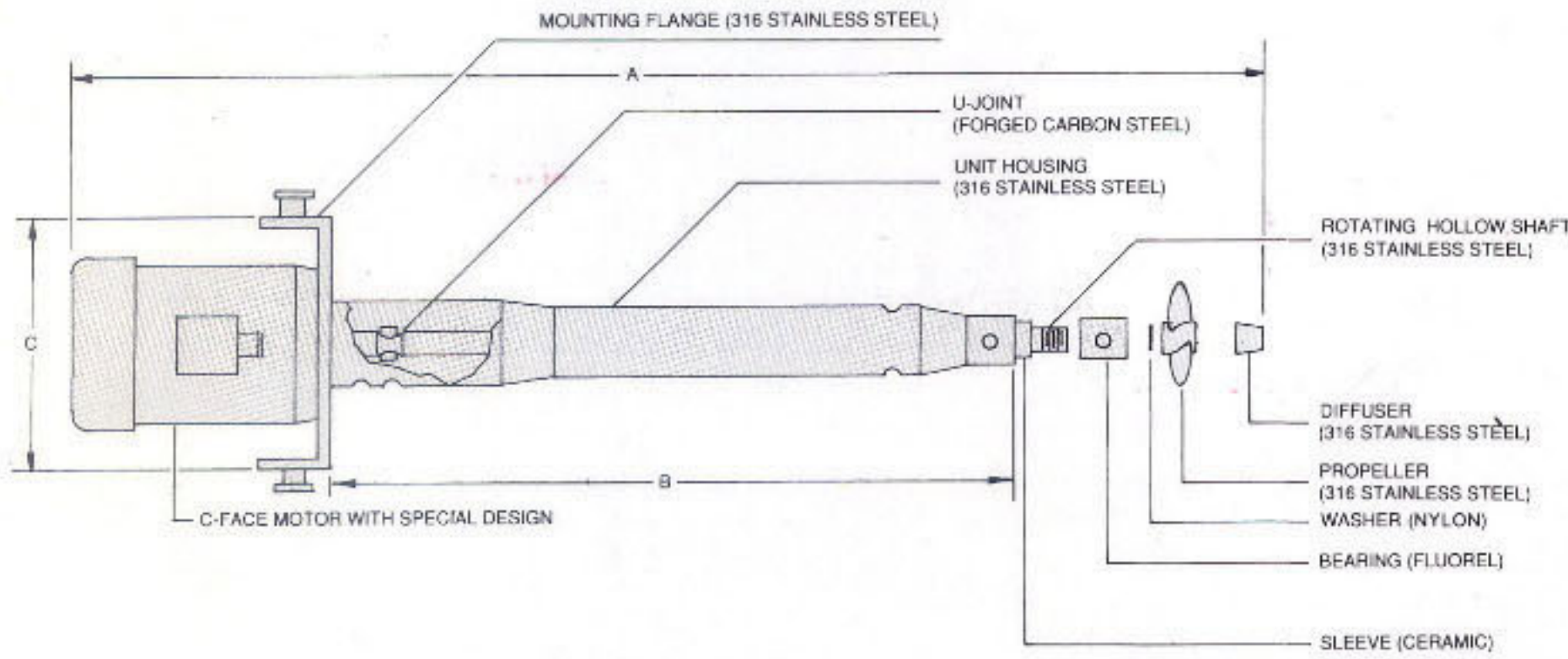
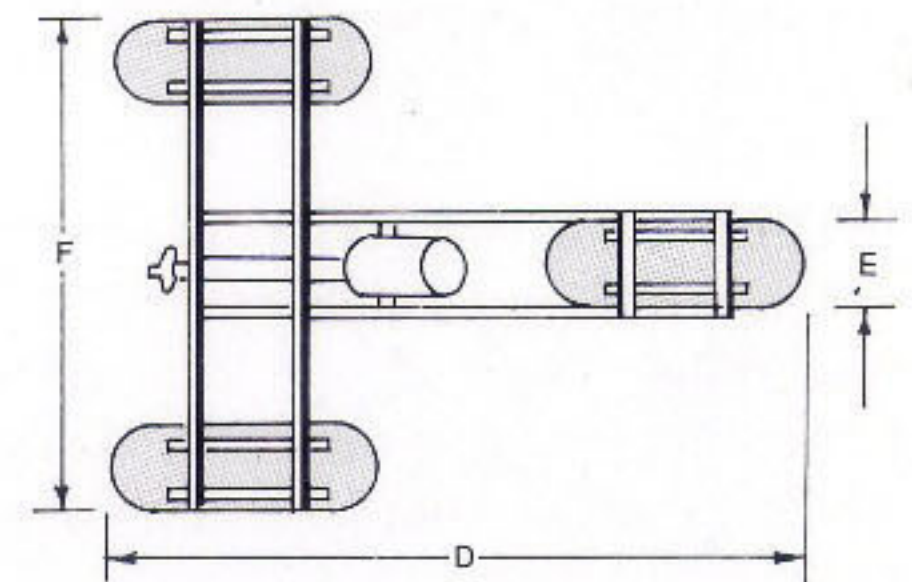
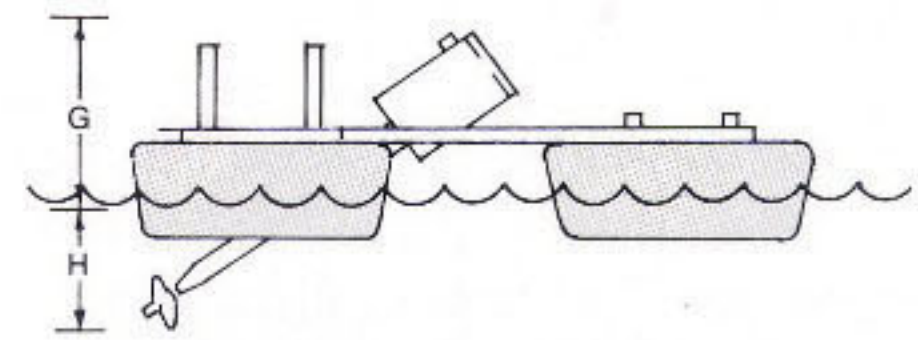


# NOMINAL DIMENSIONS



| MODEL  | HP  | A   | B     | C    | D   | E   | F  |
|--------|-----|-----|-------|------|-----|-----|----|
| JM-005 | 1/2 | 39" | 13.8" | 0.8" | 62" | 30" | 6" |
| JM-010 | 1   | 39" | 13.8" | 0.8" | 62" | 30" | 6" |
| JM-020 | 2   | 41" | 13.8" | 0.8" | 62" | 30" | 6" |
| JM-050 | 5   | 44" | 13.8" | 0.8" | 62" | 30" | 6" |

Float is one-piece molded polyethylene filled with diphenylmethane diisocyanate (MDI) and compounded polyol blend.



| MODEL  | HP. | A      | B      | C      | D       | E      | F      | G      | H      | FLOTATION WEIGHT (KG.) |
|--------|-----|--------|--------|--------|---------|--------|--------|--------|--------|------------------------|
| JM-075 | 7.5 | 72.70" | 49.28" | 14.00" | 143.12" | 18.16" | 95.57" | 37.50" | 18.45" | 131.46                 |
| JM-100 | 10  | 72.70" | 49.28" | 14.00" | 143.12" | 18.16" | 95.57" | 37.50" | 18.45" | 131.46                 |
| JM-150 | 15  | 76.22" | 49.28" | 14.00" | 143.12" | 18.16" | 95.57" | 40.25" | 18.45" | 131.46                 |
| JM-200 | 20  | 76.22" | 49.28" | 14.00" | 143.12" | 18.16" | 95.57" | 40.25" | 18.45" | 131.46                 |
| JM-250 | 25  | 79.10" | 49.28" | 18.68" | 143.12" | 21.04" | 95.57" | 40.92" | 18.45" | 135.09                 |
| JM-300 | 30  | 79.10" | 49.28" | 18.68" | 143.12" | 21.04" | 95.57" | 40.92" | 18.45" | 135.09                 |
| JM-400 | 40  | 86.75" | 49.28" | 21.97" | 143.12" | 25.04" | 95.57" | 40.92" | 18.45" | 135.09                 |
| JM-500 | 50  | 86.75" | 49.28" | 21.97" | 143.12" | 25.04" | 95.57" | 40.92" | 18.45" | 135.09                 |

\* Flotation unit consists of 3 pontoon, made of polyethylene filled with urethane foam.\*

## INDUSTRIAL TECH SOLUTIONS

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