

ATX

Submersible aerator

ATX

ATX Submersible aerator

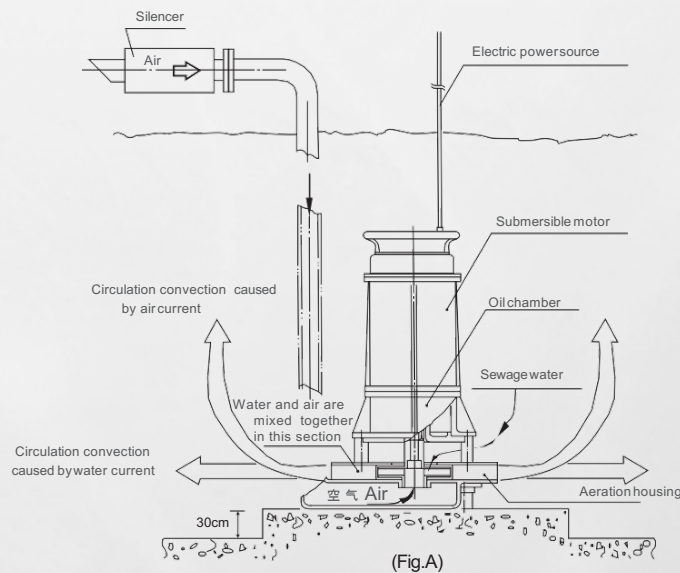
General

With fast industrial developments, human life became more materially civilized. On the contrary, gigantic quantities of waste-water were brought by the industrial manufacturing. In the meantime, large quantities of household waste water were also resulted from our daily life. All these have affected the living quality and damaged the environmental ecology. GSD has been making every endeavour in developing the waste water treatment equipment. In addition to waste water pumps, sewage pumps, sludge dehydration system, the company also developed submersible aerator and surface aerators for higher treatment rate of BOD and COD in the treatment of waste water. These aerators have been widely used in domestic and overseas waste water treatment plants.

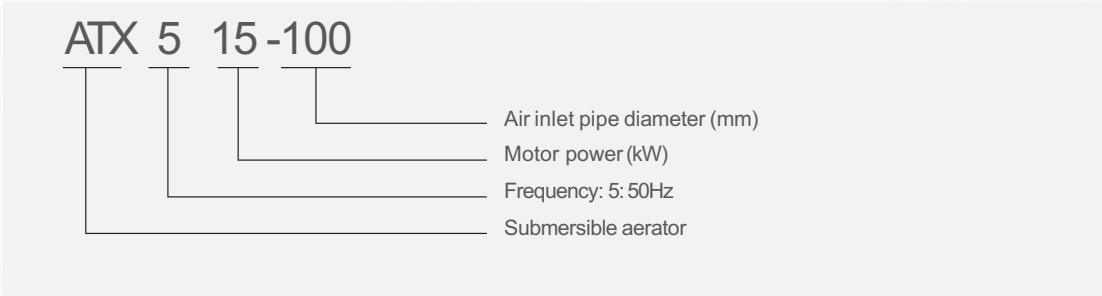
Characteristics (refer to fig.A)

Submersible aerator-ATX utilizes the rotation of the impeller coupled directly to the motor to create a centrifugal force, which makes local low pressure suck in water. Meanwhile the entrance of the Impeller results in vacuum to draw air from atmosphere. Water and air mix in the channel of aeration housing. The air-water-mixture current is discharged speedily by the centrifugal force.

Due to the water spurting extremely strong, make the fluid create convection and circulation effectively. Moreover the air becomes tiny bubbles. On the one hand the bubbles rise slowly, on the other hand the atmosphere oxygen is dissolved in water. Because the bubbles are tiny and numberless, their surface area is large, it makes the oxygen transfer rate per unit BHP higher than other types of aerator.

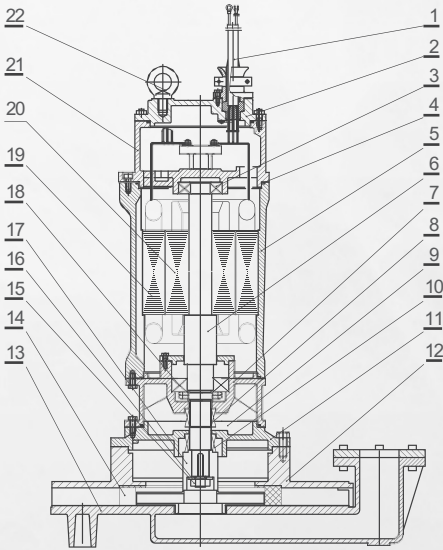


Type description



Construction

| NO. | Name | Material | |
|-----|----------------------------------|------------|----------|
| | | GB | JIS |
| 1 | Cable | 2RNCT | 2RNCT |
| 2 | The motor cover | HT200 | FC200 |
| 3 | Ball bearing | - | - |
| 4 | O-ring | NBR | NBR |
| 5 | Motor casing | HT200 | FC200 |
| 6 | Main shaft | 2Cr13 | SUS420J1 |
| 7 | Bracket | HT200 | FC200 |
| 8 | Mechanical seal | C-Al2O3 | C-Al2O3 |
| 9 | Lubricant | ISO VG32 | ISO VG32 |
| 10 | Mechanical seal | SiC-SiC | SiC-SiC |
| 11 | Oil cover | HT200 | FC200 |
| 12 | Aeration housing | HT200 | FC200 |
| 13 | Bottom cover of aeration housing | HT200 | FC200 |
| 14 | Entrance panel board | NBR | NBR |
| 15 | Screw | A2-70 | A2-70 |
| 16 | Gasket | 3Cr13 | SUS420J2 |
| 17 | Impeller | ZG0Cr18Ni9 | SUS304 |
| 18 | Ball bearing | - | - |
| 19 | Stator | - | - |
| 20 | Rotor | - | - |
| 21 | Motor cover | HT200 | FC200 |
| 22 | Lifting rings | 0Cr18Ni9 | SUS304 |

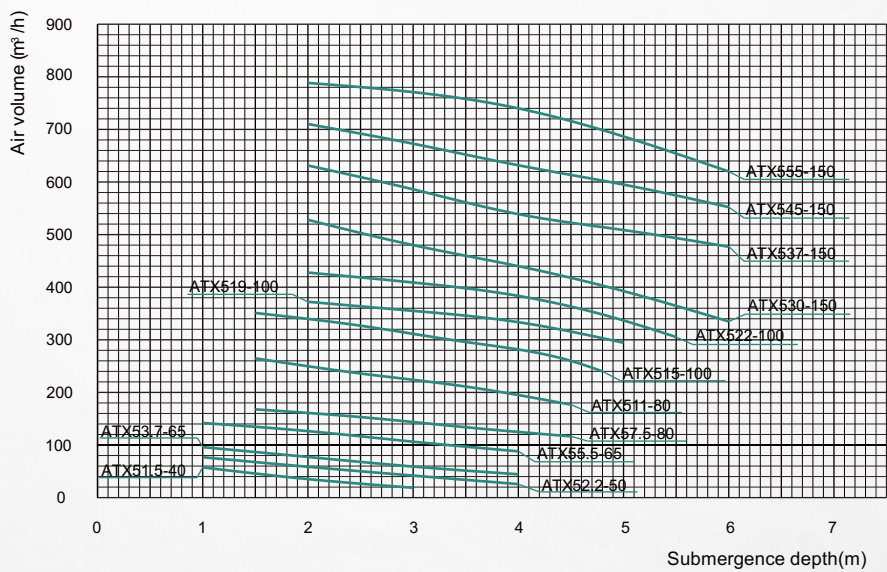


Features

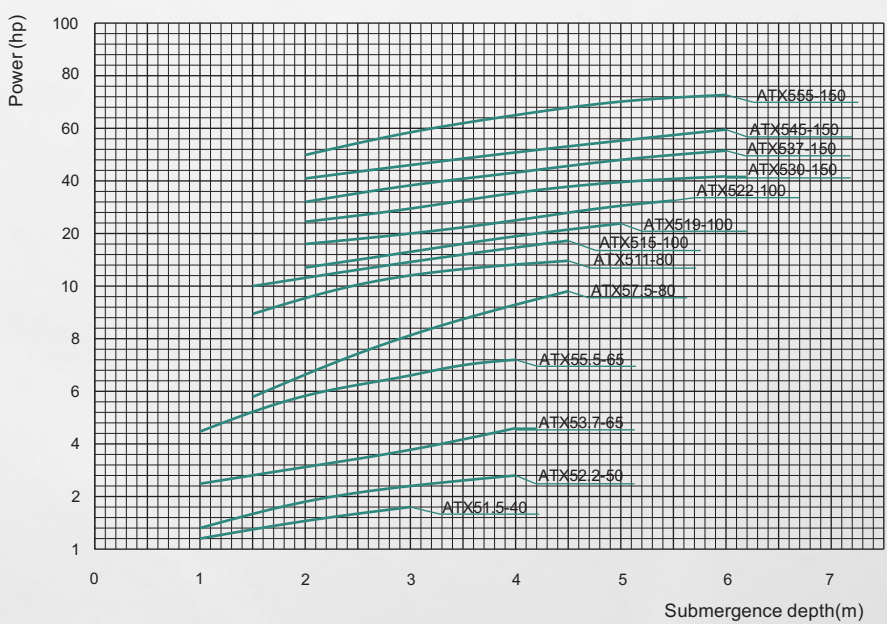
Submersible motor directly drive, low noise, high efficiency. It has unique design for gas mixing chamber whose air intake quantity is big. Air can be mixed well with water. It also has mixing function while aerating. Adopt double mechanical seal, can extend usefullife of motor. Dual protection :
1.Using a high filtration rate of the filter mesh to prevent particles from entering aerator body while maintaining the air input capacity. 2.Enlarge the space between the impeller and the mixing chamber to avoid the impeller being stuck by foreign material.
Use guide rail to allow pump for easy installation, maintenance & reparation.

Performance curves

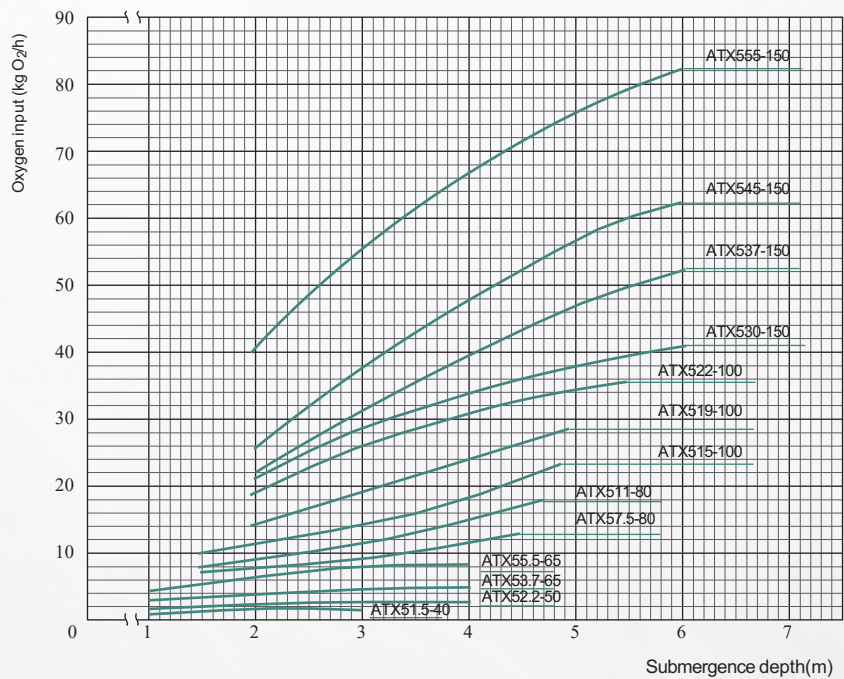
Air transfer specific curves



Power specific curves



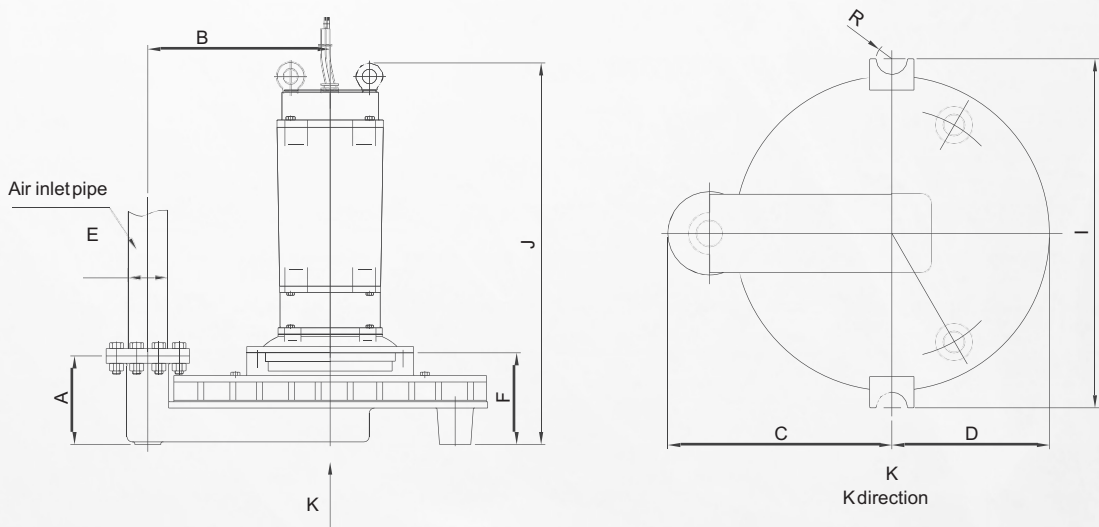
Oxygen transfer specific curve



Performance parameters

| Type | Power | | Operation range (m) | Min-max water depth (m) | Air inlet pipe diameter (mm) | The maximum intake of air (m ³ /h) | Oxygen transfer capacity (kgO ₂ /h) | Weight (kg) |
|------------|-------|------|---------------------|-------------------------|------------------------------|---|--|-------------|
| | hp | kW | | | | | | |
| ATX51.5-40 | 2 | 1.5 | 1.0-2.0 | 1.0-3.0 | 40 | 40 | 2-1 | 135 |
| ATX52.2-50 | 3 | 2.2 | 2.5-5.0 | 1.0-4.0 | 50 | 60 | 3-2 | 147 |
| ATX53.7-65 | 5.5 | 4 | 3.0-6.0 | 1.0-4.0 | 65 | 90 | 5-3 | 160 |
| ATX55.5-65 | 7.5 | 5.5 | 3.5-7.0 | 1.0-4.0 | 65 | 150 | 9-5 | 315 |
| ATX57.5-80 | 10 | 7.5 | 4.5-9.0 | 1.5-4.5 | 80 | 170 | 13-7 | 320 |
| ATX511-80 | 15 | 11 | 5.0-10.0 | 1.5-4.5 | 80 | 260 | 18-8 | 368 |
| ATX515-100 | 20 | 15 | 5.8-11.5 | 1.5-4.5 | 100 | 340 | 23-10 | 385 |
| ATX519-100 | 25 | 18.5 | 5.9-11.8 | 2.0-5.0 | 100 | 360 | 29-14 | 432 |
| ATX522-100 | 30 | 22 | 6.0-12.0 | 2.0-5.5 | 100 | 440 | 36-19 | 456 |
| ATX530-150 | 40 | 30 | 7.3-14.5 | 2.0-6.0 | 150 | 510 | 41-21 | 998 |
| ATX537-150 | 50 | 37 | 7.5-15.0 | 2.0-6.0 | 150 | 600 | 52-22 | 1080 |
| ATX545-150 | 60 | 45 | 7.8-15.5 | 2.0-6.0 | 150 | 700 | 62-25 | 1155 |
| ATX555-150 | 75 | 55 | 8.0-16.0 | 2.0-6.0 | 150 | 780 | 82-40 | 1200 |

Installation dimensions



| Type | Dimensions(mm) | | | | | | | | |
|------------|----------------|-----|-----|-------|-----|-------|------|--------|------|
| | A | B | C | D | E | F | I | J | R |
| ATX51.5-40 | 165 | 300 | 365 | 252.5 | 40 | 173 | 576 | 617 | 30 |
| ATX52.2-50 | 170 | 350 | 430 | 302.5 | 50 | 176 | 670 | 698 | 30 |
| ATX53.7-65 | 170 | 350 | 430 | 302.5 | 65 | 176 | 670 | 732 | 30 |
| ATX55.5-65 | 223 | 435 | 540 | 362.5 | 65 | 242 | 800 | 855 | 32.5 |
| ATX57.5-80 | 223 | 435 | 540 | 362.5 | 80 | 243 | 800 | 855 | 32.5 |
| ATX511-80 | 223 | 435 | 540 | 362.5 | 80 | 248 | 800 | 950 | 32.5 |
| ATX515-100 | 223 | 435 | 540 | 362.5 | 100 | 252 | 800 | 955 | 32.5 |
| ATX519-100 | 223 | 435 | 540 | 362.5 | 100 | 252 | 800 | 1120 | 32.5 |
| ATX522-100 | 223 | 435 | 540 | 362.5 | 100 | 252 | 800 | 1120 | 32.5 |
| ATX530-150 | 338 | 600 | 740 | 475 | 150 | 346 | 1108 | 1448 | 39 |
| ATX537-150 | 338 | 600 | 740 | 475 | 150 | 367.5 | 1108 | 1467.5 | 39 |
| ATX545-150 | 338 | 600 | 740 | 475 | 150 | 367.5 | 1108 | 1467.5 | 39 |
| ATX555-150 | 338 | 600 | 740 | 475 | 150 | 367.5 | 1108 | 1702.5 | 39 |

Basin dimensions

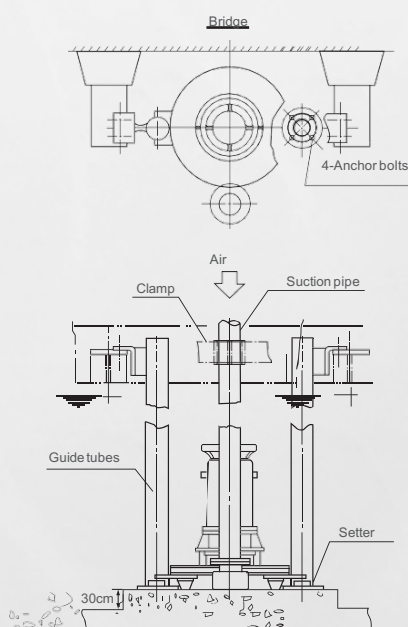
| Type | Max water depth (m) | Shape and dimensions (m) | | |
|------------|---------------------|--------------------------|-------------|-------------|
| | | Round(Diameter) | Square | Rectangular |
| ATX51.5-40 | 3 | 3.5 | 3.1 x 3.1 | 2.5 x 3.8 |
| ATX52.2-50 | 4 | 4.8 | 4.2 x 4.2 | 3.4 x 5.2 |
| ATX53.7-65 | 4 | 6.6 | 5.8 x 5.8 | 4.8 x 7.1 |
| ATX55.5-65 | 4 | 8 | 7.1 x 7.1 | 5.8 x 8.7 |
| ATX57.5-80 | 4.5 | 9.8 | 8.7 x 8.7 | 7.1 x 10.6 |
| ATX511-80 | 4.5 | 12.5 | 11.1 x 11.1 | 9.1 x 13.6 |
| ATX515-100 | 4.5 | 12.5 | 11.5 x 11.5 | 9.1 x 13.6 |
| ATX519-100 | 5 | 12.5 | 11.8 x 11.8 | 9.7 x 14.5 |
| ATX522-100 | 5.5 | 12.5 | 12.0 x 12.0 | 9.7 x 14.5 |
| ATX530-150 | 6 | 16 | 14.5 x 14.5 | 12.5 x 17.0 |
| ATX537-150 | 6 | 16 | 15.0 x 15.0 | 13.0 x 17.5 |
| ATX545-150 | 6 | 16 | 15.5 x 15.5 | 13.0 x 17.5 |
| ATX555-150 | 6 | 16 | 16 x 16 | 13.5 x 18.0 |

Note: To achieve higher efficient operation, oversize particles and long fibers should not in the aeration tank.

Installation

For better and easier maintenance of the aerator, following instructions shall be noticed:

- The setter should be fixed on concrete base of the aeration basin (Before the aeration basin was filled with waste water).
- When designing the strength of the bridge (As shown in below Fig.) construction, the warping and the lifting equipment should be considered.
- The guide tubes should be prepared in advance and it is advisable to use stainless steel tubes.
- The air pipes should be fixed if necessary depending upon the actual condition.



For further details, please fulfill the chart below.

Customer _____ Undertaker _____

Name of project _____ Address of project _____

Telephone _____ Fax _____

| | | | | |
|--------------------|------------------------------------|--|--|------------------------|
| Local condition | Elevation (m) | | Max relative humidity (%) | |
| | Local atmospheric pressure (MPa) | | Max air temperature (°C) | |
| Water condition | Wastewater type | | Treatment process | |
| | * Aeration time (H/day) | | Waste water daily volume (m ³ /d) | |
| | | Aeration tank Inlet | | Aeration tank effluent |
| | COD (mg/l) | | | |
| | BOD (mg/l) | | | |
| | NH ₃ -N (mg/l) | | | |
| | pH | | | |
| | Temperature (°C) | | | |
| | Others | | | |
| *JA's parameters | Use location | <input type="checkbox"/> Regulating reservoir <input type="checkbox"/> Aeration tank <input type="checkbox"/> Others | | |
| | Air capacity (m ³ /min) | | Dissolved oxygen (kgO ₂ /h) | |
| | Water depth (m) | | Others | |
| *Tank's dimensions | Rectangle or square(m) | Length | | |
| | | Width | | |
| | | Height | | |
| | Circle(m) | Diameter | | |
| | | Height | | |
| | Others | | | |
| Other requirements | | | | |

Notes: 1. Please fill in the parameter lists as complete as possible.
2. The item with “*” must be filled.

WASTEX

บริษัท เกสโธเรียมเทิล เทรดดิ้ง จำกัด



074-300212-4



GreatOrientalTrading-GOT



@gotrading



GOT

Great Oriental Trading
www.gotrading.co.th