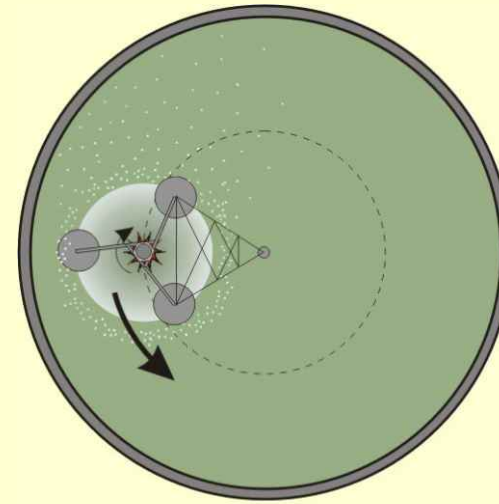
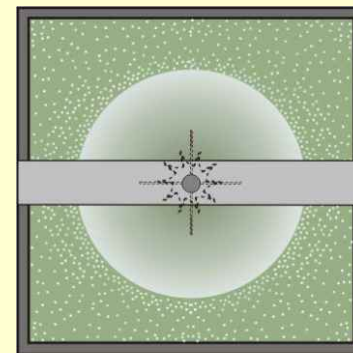
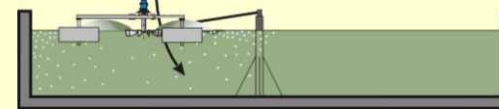


Applications

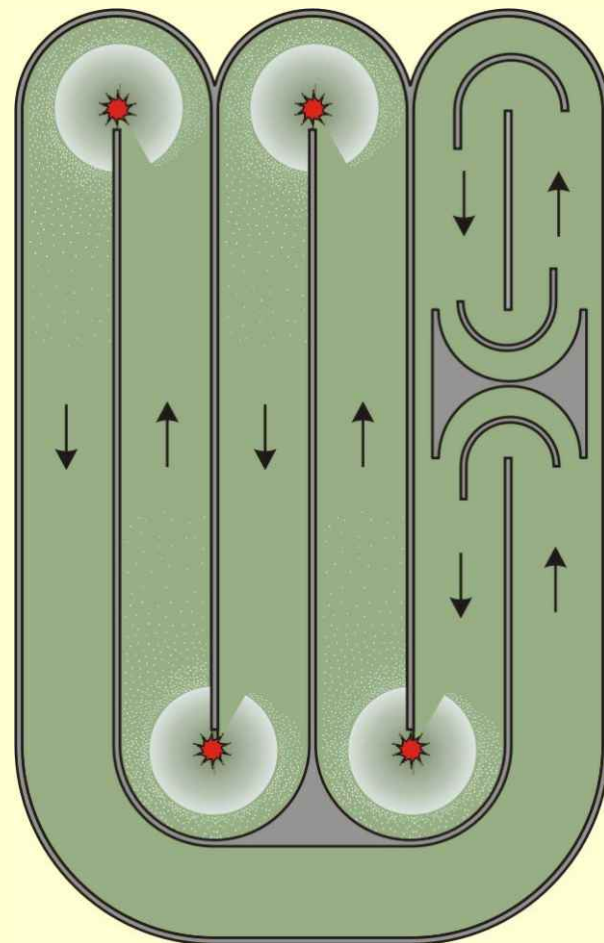
The Astrumaer aerator is suitable for all surface aeration situations such as Oxidation Ditch, Complete Mix Basin and Lagoons. For both type of Waste Water Treatment Plants, municipal and industrial the aerator has been proven to operate to full satisfaction.



Circulator



Complete Mix



Oxidation Ditch



Astrumaer

**low speed
vertical shaft aerator**

Contact information

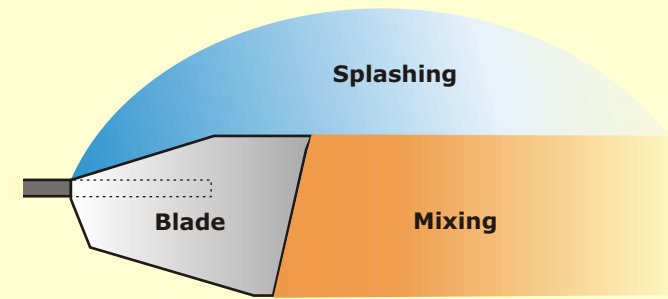
D. ten Hove Consultancy BV
 Sanne Windwei 1
 8582 KP Oudega (G.S.)
 The Netherlands
 Tel./fax +31.514.604848
 E-mail info@hoveconsultancy.nl
www.hoveconsultancy.nl
 Chamber of Commerce 32072867

Advantages of the Astrumaer

- High efficiency (kg O₂/kWh)
- High mixing and propulsion capacity
- Fine-drops splashing pattern
- Great range of oxygen input (5 > 400 kg O₂/h)
- Suitable for all applications (Oxidation ditch, complete mix tanks and lagoons)
- Low vibration
- Low hydraulic forces
- Non-clogging
- Robust
- Maintenance free

Introduction

The Astrumaer is the 3rd low speed vertical shaft rim-blade aerator that has been developed by D. ten Hove Consultancy BV in the Netherlands since 1992. Constantly research and innovation were the basis to develop the Astrumaer aerator in order to further increase performances. Comparison tests show that the Astrumaer is superior in oxygen transfer and mixing capacity.



Operating philosophy

The Astrumaer aerator is connected to a heavy duty gearbox with coupled E-motor by means of an extended intermedian shaft. The aerator is submerged into the water and rotates with a very low speed (40 - 90 rpm). The aerator is designed to ensure that the required splash action will start as close as possible to the centre of the aerator. This creates a very fine 360 degree circular splash pattern. The large surface area of the fine droplets and the long exposure to the air results in a very high oxygen transfer. Due to the very high and deep pumping action of the special designed blades the water will be taken up from the bottom of the basin creating a constantly and rapidly renewing of the water to be aerated with as result a higher oxygen mass transfer. Also the high turbulence at the water surface of the basin gives a further enhancement of the oxygen transfer.

The submerged horizontal plate creates a low and controlled axial load water pressure which ensures a stable and vibration free operation. This low axial load pressure also has been proven very effective for avoiding surging of the aerator.

The design of the aerator is such that clogging of the aerator will not occur under all conditions, even unscreened water.



Product information

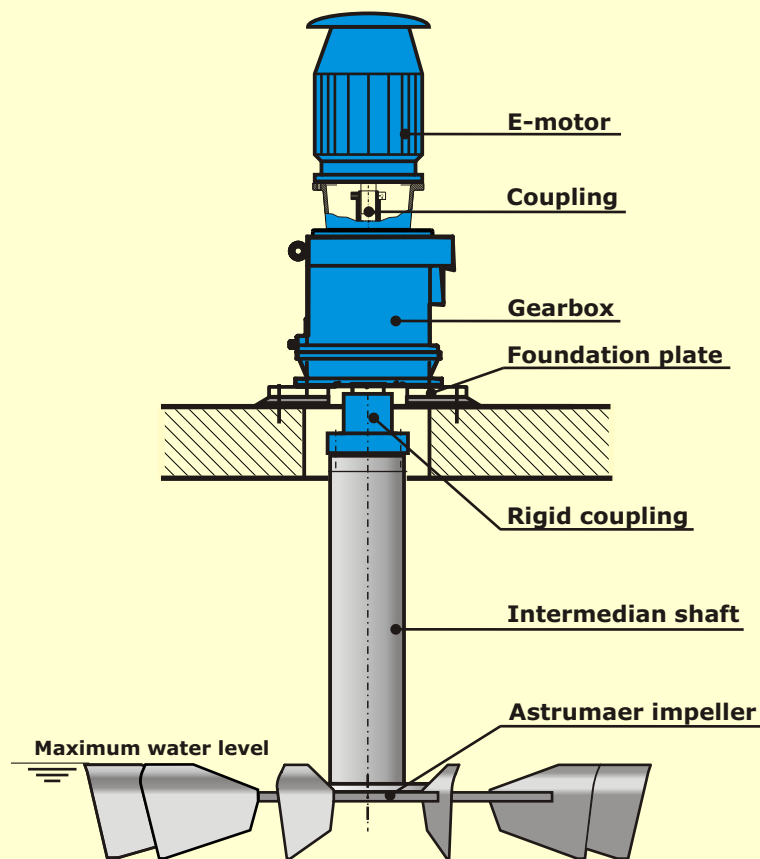
The Astrumaer aerator is a high efficiency low speed, open type vertical shaft aerator.

The Astrumaer consist of 10 vertical blades connected at the circumference of a horizontal flat plate. The shape of the blades is special designed for maximum splashing and mixing/propulsion of the water with minimum water friction. The blades are at the top side slightly folded into the direction of rotation to control the water splashing.

The horizontal flat plat is designed to withstand the reaction forces of the water working at the blades however special care has been taken for avoiding the interfering of the natural splash pattern of the water.

The robust intermedian shaft is constructed as one-piece shaft and is connected to the gearbox by means of a rigid coupling with high strength fastenings bolts.

The aerator can be constructed either from (coated) carbon steel or stainless steel



Selection

The Astrumaer aerator is available in a wide range of diameters with a certain "overlap". Starting point is oxygen requirement, where gearbox selection and motor power available is very important. Since basin geometry will influence performance this also will be taken into account. The "overlap" creates sufficient flexibility to select the most optimum aerator installation.

As a first indication the graph can be used for quick selection.

