

# eco-line<sup>®</sup>

Sewage Treatment Systems



# eco-line®

## SEWAGE TREATMENT SYSTEMS

### General

The eco-line® system is constructed as a modular biological sewage treatment plant, which has been developed to meet the demands of the smaller to medium sized isolated sewage treatment applications. The eco-line® system is ideally suited for the treatment of sewage from villas, hotels, holiday villages - camping sites etc.

The eco-line® system has great flexibility which can be supplied as:

... A turn key system.

... An upgrade of an existing facility.

... Component parts for installation into existing or new infrastructure of steel or concrete.

The eco-line® system can be supplied as a complete turn key plant including tanks manufactured from fibreglass reinforced polyester for immediate installation. Connections for inlet, outlet and electricity are required to be done locally.

The eco-line® system is completely enclosed to minimise fluctuations in temperature, thereby providing stable conditions for optimum biological treatment.

The eco-line® system is based on a compact biological purification unit. The number of units installed will be dependant on the volume and strength of the sewage to be treated.

The modular design allows the treatment plant to be sized within a margin of approx. 50 PE.

### The Purification Process

The eco-line® system is a complete mechanical/ biological (and if necessary chemical) sewage treatment plant supplied, where needed, with full nitrification.

The biological degradation process of dissolved organic matter takes place by means of bacteria growing on a submerged filter. The process can be described as an aerated, fixed-film process, where air is introduced from the bottom of the filter to create aerobic conditions.

The fixed-film process is known to be one of the most stable and controllable techniques for the biological treatment of sewage. The process is stable despite the normal variations in the supply of sewage.

This makes the eco-line® process an ideal application for use in smaller treatment plants.

*The eco-line sewage treatment plant is prefabricated in a modular design for easy transportation on a standard trailer or in a sea container.*

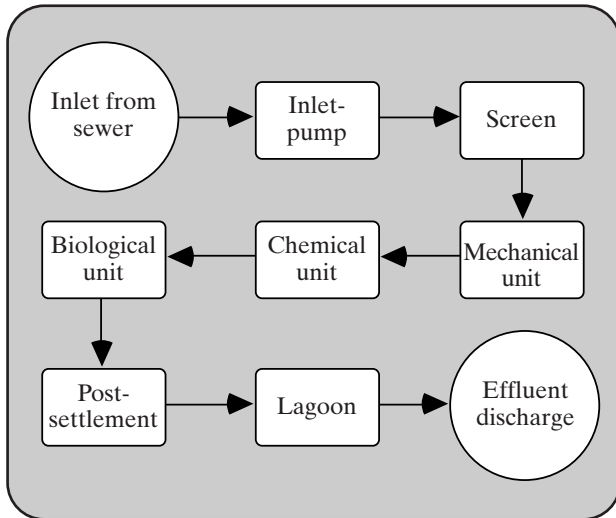
*Pre- preparation at the site makes it very easy to install the STP. Inlet, outlet, power supply and some civil work, and the plant will run few days after.*



As the equipment does not require daily adjustment, it is ideal for installation in remote locations. The eco-line® system can be equipped with a remote modem control, thereby minimising supervision. After biological treatment the eco-line® system contains a "drum-filter" which is a compact and efficient

## Installation & Running

The whole system comes pre-engineered into packages handled by standard trailers or sea containers. The whole system is manufactured in the factory under supervision of a quality assurance team. The only required work at the site is the connection with the pumps which allows fast installation.



Example of a complete purification process. The eco-line STP can be installed with pumps, screen etc. according to the clients requirements.

post-treatment solids separation stage. The "drum-filter" is constructed of corrosion resistant materials in order to minimise maintenance. As with the biological process the "drum-filter" can be equipped with remote modem control.

The eco-line® system requires a minimum amount of attention for reliable operation, usually less than 1 hour per week. Routine inspection, maintenance and cleaning can be undertaken by operators after a short period of training.

## Service & Maintenance

All parts of the plant are designed to enable maintenance to be carried out quickly and safely. To ensure a long operating life, all components are constructed of corrosion resistant materials e.g. fibre glass reinforced polyester, aisi 316 steel (acid resistant), PVC, PE (polyethylene).

# Facts about

## eco-line system

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**Easy and Low Cost Installation**

•  
**Low Energy Consumption**

•  
**Vandal Proof**

•  
**No Noise Nuisance**

•  
**No Odour**

•  
**Proven Reliability**

•  
**Modular Design**

•  
**Turn Key Installation or Component Supply**

•  
**Ideal for Villages, Schools, Hotels Camp Sites etc.**

•  
*The eco-line System is manufactured by*

**AEC** aps, Denmark  
www.aec.dk

*Only the covers will be visible when the STP is installed.*

*Due to its modular design, it is very flexible and easy to expand the STP.*



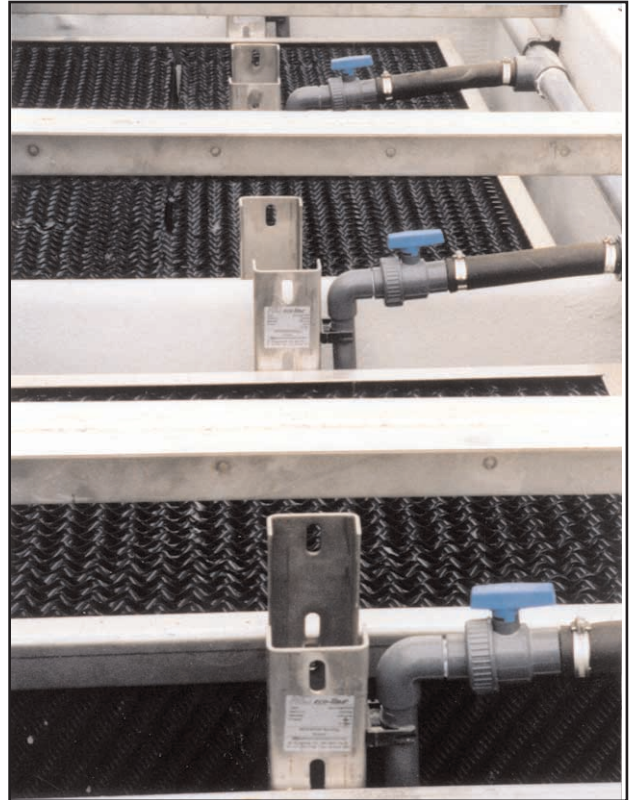
## The *eco-line* Filter Unit for Biological Treatment of Sewage...

The bio-filter unit is "the heart" in the *eco-line*® system. The compact design, and the large filter surface area, enables the construction of an economical treatment plant which achieves the demands of the regulatory authorities for the discharge of treated sewage. The use of a fixed film process means that the *eco-line*® treatment plant is very stable and makes the system suitable for villages, schools, camp sites etc.

The *eco-line*® filter unit is constructed of non-corrosive materials which ensures a long life and low maintenance cost.

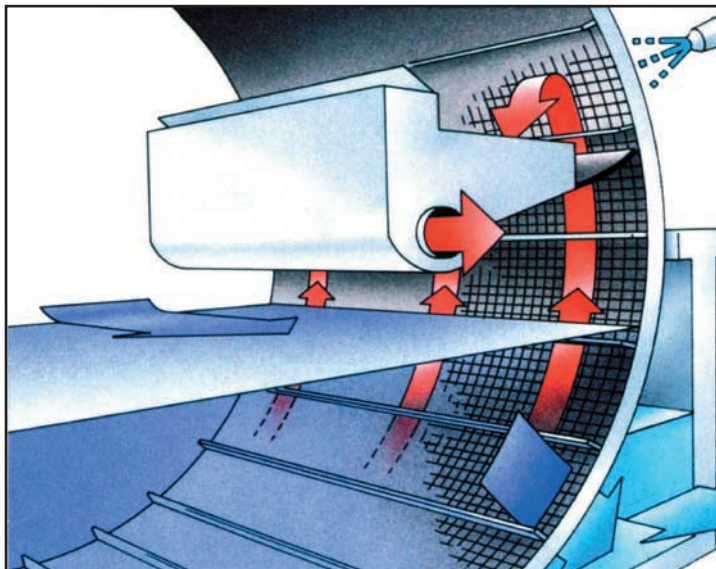
AEC can install a turn key *eco-line*® treatment plant in fibre glass reinforced polyester or, if preferred, deliver equipment ready for installation in new or existing concrete tanks.

The modular design gives flexibility to the design of a new treatment plant including the utilisation of existing infrastructure.



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## Post-Sedimentation through the Patented $\Delta$ HYDROTECH Drum Filter...



The Hydrotech drumfilter is a very compact and efficient post sedimentation stage in the *eco-line*® system. The water passes through the drum, which remains stationary, until the water level inside the drum reaches a certain level.

The drum then starts to rotate slowly whilst a rinsing process removes separated solids from the filter by backflushing into the solids collection tray. The sludge is then discharged to the sludge holding tank.



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