



## AS-H Rectangular Package Wastewater Treatment Plants

Pre-engineered, rectangular plants for continuous or batch activated sludge treatment processes



Pre-Engineered, shop fabricated “plug’n play” operation ready Alfa Laval AS-H Rectangular Package Wastewater Treatment Plants for biological treatment with activated sludge are ideal for municipal or industrial applications.

They are custom designed and can handle flows up to 757 m<sup>3</sup>/day (200,000 gpd). Package plants are also suited for remote locations such as hotels, resorts, and camps.

The package plants, based on Alfa Laval Ashbrook Simon-Hartley design and more than 40 years of experience, set the standard for high process performance and reliability, low maintenance requirements and high treatment efficiencies. The final effluent can be discharged safely into nearby water streams.

By combining leading process engineering and technological knowledge with decades of hands-on experience, we have consistently provided the wastewater industry in developing cost effective wastewater treatment solutions.

### Applications

Rectangular package plants can be provided for conventional pollutant removal or advanced treatment for biological nutrient removal in numerous areas:

- Municipal and industrial sectors
- Food and beverage
- Pharmaceutical
- Mining
- Oil & gas
- Paper
- Leachate

Package plants are available in carbon steel tanks and 304 stainless steel based upon specified application and customer requirements.

The process tanks can be installed aboveground, underground, or partially buried based on the project site terrain, design, or needs.



Process tanks can be installed aboveground, underground, or partially buried.

### Benefits

The rectangular package plants offer numerous benefits:

- Complete process flexibility to meet advanced wastewater treatment standards.
- Lower construction costs
- Can be relocated
- Pre-engineered components accommodate many processes
- Process engineering for custom designs
- Kinetic modelling using a software that allows a virtual vision of all treatment interactions – even before construction begins. After commission, it allows you to view, customize and optimize treatment processes based on actual and potential influent parameters
- Detailed calculation results provided to customers



Example of typical Alfa Laval AS-H Rectangular Package Wastewater Treatment Plant

### Process guarantee

Alfa Laval offers a process guarantee for specific process results as required by the project specifications and / or customers' requirements.

### Working principles

Alfa Laval AS-H Rectangular Package Wastewater Treatment Plants are based on the activated sludge process that best meets the treatment objectives. They can accommodate both continuous flow and the sequencing batch reactor process.

Whether it is the conventional pollutant removal or advanced treatment for biological nutrient removal (BNR) including nitrification, denitrification and phosphorus removal, the package plants are available with advanced effluent treatment capabilities.

Each plant will be designed according to the site specific needs and thus the working principles would differ. See example next page

### Scope of supply

Rectangular package wastewater treatment plants can be offered in combination of the following treatment processes per project specific requirements to achieve the required effluent quality:

- Flow equalization
- Anaerobic selector
- Anoxic selector
- Aeration
- Clarification
- Tertiary filtration
- Chlorine and / or UV disinfection

along with the required ancillary equipment such as pumps, blowers, mixers, coarse and / or fine bubble diffusers, chemical feed system, control panel, mechanical or hopper bottom, clarifiers, tank covers, access stairs and walkways as part of the complete package treatment system.

### Control system

An Alfa Laval AS-H Package Wastewater Treatment Plant is supplied with its own control system. The standard offering is a relay logic based control system. It is robust, user friendly, and cost effective. A more sophisticated PLC based control system can also be offered depending on the project specifications and customers' specific needs as an optional upgrade.

### Optional extras

Painted steel pipe handrails and galvanized grating are the standard scope of supply. Optional aluminum handrails, aluminum bar grating and FRP grating are also available.

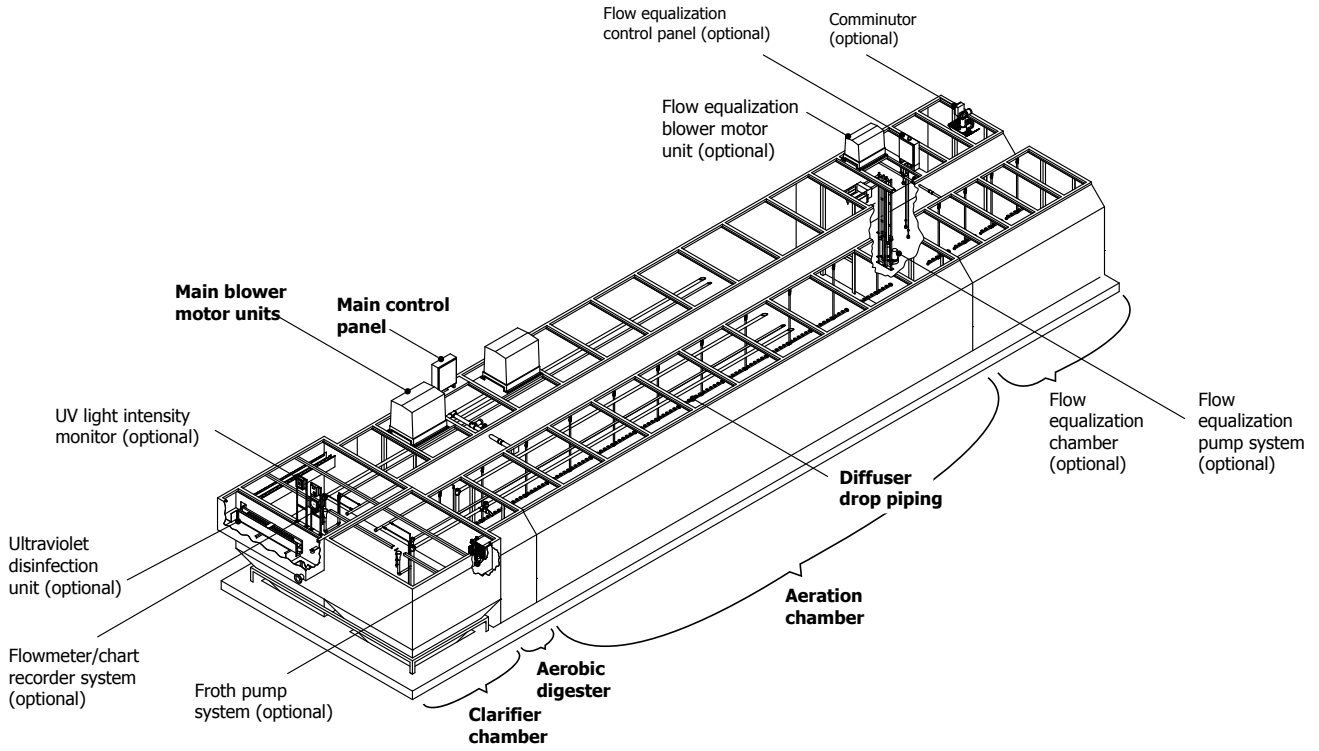
Alfa Laval AS-H Rectangular Package Wastewater Treatment Plants can also be supplemented with the AS-H Iso-Disc Cloth Media Filter for tertiary treatment to meet extra strict effluent discharge criteria, or if it is the intention to reuse the treated wastewater.

### Circular, field erected package plants

For flows up to 11,356 m<sup>3</sup>/d (3.0 million gallon/day) in a single train we provide Alfa Laval AS-H Circular Field Erected Package Wastewater Treatment Plants.

### Service

Alfa Laval AS-H package wastewater treatment plants have been designed for maximum robustness and minimal maintenance requirements. When required, an Alfa Laval service team will always be available and happy to assist.



Example of plant layout for an Alfa Laval AS-H Rectangular Package Wastewater Treatment Plants based on the activated sludge process.

Alfa Laval reserves the right to change specifications without prior notification.

**How to contact Alfa Laval**  
 Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)