

Dimensions	Weight kgs	Height (mm)	Width (mm)	Depth (mm)	Connections	
AOT 250	220	1520	1100	285	AOT 250	DN150
with process cooling (optional)		1520	1100	440	Connections to external functions as process cooling and CIP	
Control cabinet	380	1800	1100	400		
CIP unit (optional)		1340	1200	800		DN32

Wallenius AOT 250

- a sustainable water treatment solution for large flows

Wallenius AOT 250 uses a unique purification method

- An Advanced Oxidation Technology - Wallenius AOT

Chemical-free water treatment

- Wallenius AOT products break down harmful microorganisms and other pollutants in water

Energy- and cost-efficient solution

- Customise purification effect in accordance with the degree of pollution, flow and turbidity
- Small footprint
- Modularly installed in new or existing systems
- Few moving parts, long lifetime

Accessories

- An optional CIP (Cleaning-In-Place) product, fully automatic, integrated with the Wallenius AOT unit to simplify operation

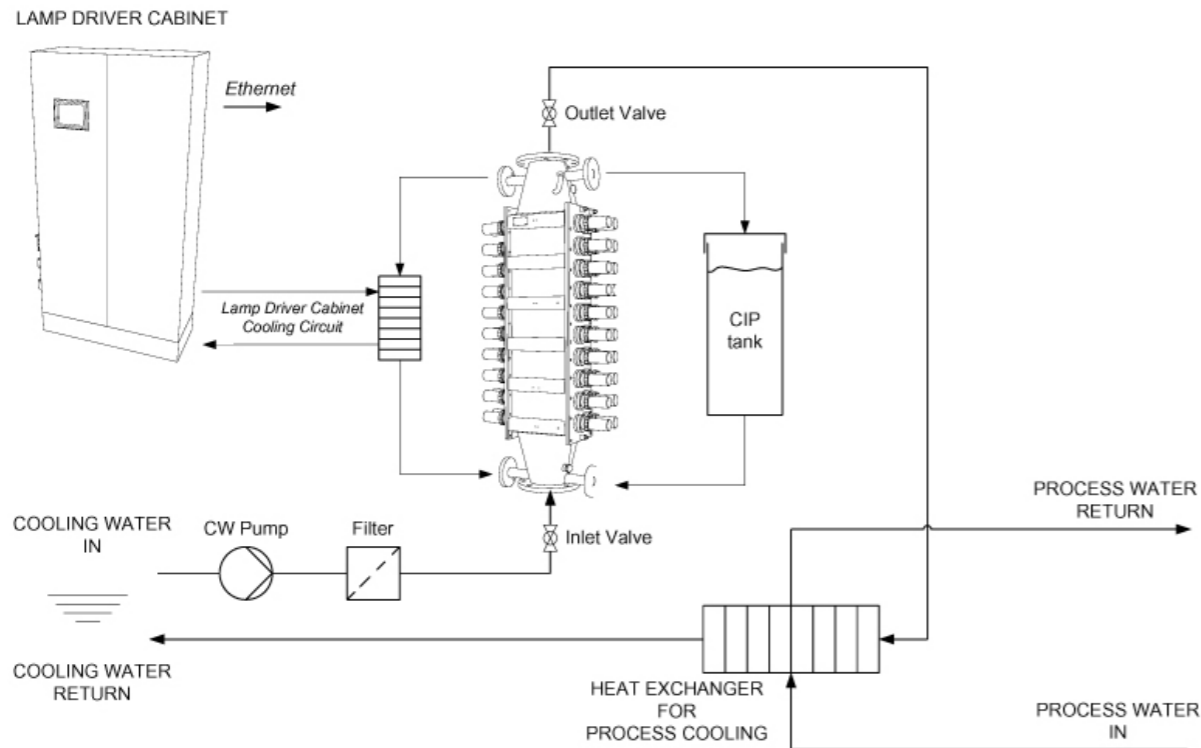
Control functions

- Lamp hours + alarm
- External pumps

Wallenius AOT 250



Installation example



For more information about Wallenius AOT 250 and Wallenius AOT, contact your local distributor or Wallenius Water, info@walleniuswater.com or www.walleniuswater.com/CONTACT/

Features and fits

A sustainable solution to fight fouling in heat exchangers

Our solution prevents harmful species such as algae, mussels and barnacles from settling onto the heat exchanger and initiate the growth of fouling. No chemicals are added in the process.

Wallenius AOT 250 for large flows

Wallenius AOT 250 is especially designed to handle large flows of water, as in the power industry and other industrial processes, using sea water for cooling. One unit can handle a capacity of 250 m³/h. There is no upper limit how many units that can be applied on one site. This is a similar product to the certified award-winning ballast water purification system, PureBallast.

Green operation with Wallenius AOT 250

No additives or generation of residuals in the process make our chemical-free product a green alternative. Wallenius AOT is a proven technology with validated performance by the Det Norske Veritas, the International Maritime Organization, Stockholm University and the Ctgb (Board for the Authorisation of Plant Protection Products

and Biocides) in the Netherlands.

Minimum of maintenance

Wallenius AOT 250 has a robust design, few moving parts and few consumables, which leave maintenance at a minimum. The product is modular, allowing compact and flexible installations. The number of lamps can be adjusted according to purification need, giving flexible efficiency. The product is fully automated and can be controlled either locally or remote via a web browser.

Accessories

An optional CIP (Cleaning-in-Place) makes operation and maintenance easy. The CIP fluid is a non-toxic and 100% biodegradable solution. The CIP unit can be automated by the control cabinet.

Control cabinet

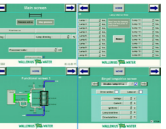
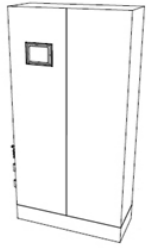
The control cabinet controls external pumps and the optional CIP unit. There is an alarm connected to operated lamp hours. Control possibilities either locally or remote.

Technical specification

Max hydraulic water flow:	250 m ³ /h
Lamps, effect:	2 x 1,5 to 20 x 3 kW
Power supply:	400 VAC, 3 phase with neutral, 50 Hz
Pressure drop:	<0,5 bar (at 250 m ³ /h)
Operating pressure class:	PN 6
Compressed air press.:	5-7 bar
Working temperature, max:	+40°C
Ambient temperature, max:	+40°C
IP class:	54
Connections:	DN150
HMI:	8" (touch screen)
Weight, reactor:	250 kgs
Weight, electrical control cabinet:	380 kgs

Control cabinet

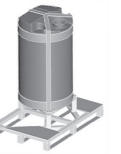
With an 8" screen and a user friendly interface, the control cabinet controls the Wallenius AOT 250. It also controls the external pumps and the optional CIP unit. The control cabinet is water cooled. It is possible to use the processed water for the cooling of the Wallenius AOT 250 through a heat exchanger.



Accessories

CIP (Cleaning-In-Place)

An external CIP can be provided to the Wallenius AOT 250. It is a non-toxic and 100% biodegradable solution. The CIP unit can be automated by the control cabinet.



Wallenius AOT

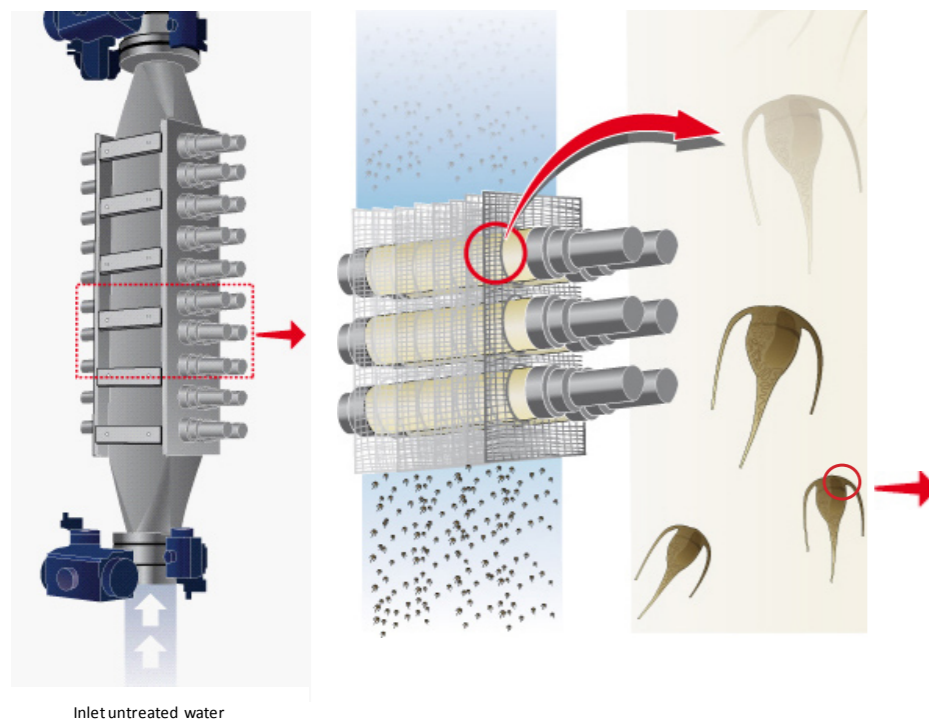
An advanced technology from Wallenius Water

No chemical substances are required or generated by the Wallenius AOT process.

The Wallenius AOT process occurs within a closed chamber in which radicals are generated. These radicals are highly reactive so they instantaneously break down harmful microorganisms and other pollutants. The radicals are short lived and exist for only a few milliseconds, which means they have no possibility of leaving the reaction chamber.

Related technologies to Wallenius AOT can be found in many of today's smart products, such as the self-cleaning windows of skyscrapers and cars, which prevent the growth of organisms through an AOT reaction that occurs when sunlight strikes the titanium dioxide.

The principles of Wallenius AOT



Wallenius AOT makes it possible to decompose:

Bacteria e.g:

- Legionella pneumophila, even in amoebas
- E. coli
- Waste water microorganisms

Protozoa e.g:

- Cryptosporidium
- Giardia
- Amoebas
- Cordylophora caspia
- Electra crustulenta

Fungi e.g:

- Candida albicans
- Aspergillus fumigatus

Algae e.g:

- Green algae
- Chlorophyta
- Dinoflagellates

Virus e.g:

- Tobacco mosaic virus
- Tomato bushy stunt virus
- Polio virus

Chemical compounds e.g:

- Bound chlorine
- Pharmaceutical residues
- Odor

Tested and approved technology

The Wallenius AOT technology is included in all Wallenius Water's products. Some products are focused on specific applications and have therefore been tested and approved by:

- IMO (International Maritime Organization), Det Norske Veritas (DNV) and Stockholm University
- Ctgb (Board for the authorisation of plant protection products and biocides - in the Netherlands) Authorisation no. 13295 N.

Selected products fulfill the Dutch Assessment Guideline for Legionella in tap water, BRL K14010-01/01 set by KIWA, tests performed by Vitens Laboratories in the Netherlands

Award-winning technology

The Wallenius AOT is included as the core of PureBallast which have been awarded by WWF, Lloyds List and Sustainable Shipping. PureBallast is the first chemical-free ballast water purification system to be approved by the IMO and certified by Det Norske Veritas, DNV. PureBallast is jointly developed by Wallenius Water and Alfa Laval and is sold by Alfa Laval.

Water flows through the purifier consisting of a light source and a catalytic surface. When the catalytic surface is exposed to light, free radicals are formed which break down contaminants in the water. This process occurs only inside the purifier and leaves no harmful residuals behind.

1. A radical formed from a water molecule hits the cell wall of a microorganism in the water.

2. The radical steals a hydrogen atom from the cell wall. Multiple radicals repeat the same process resulting in the microorganism breaking down.

3. The radical reverts to a water molecule.

