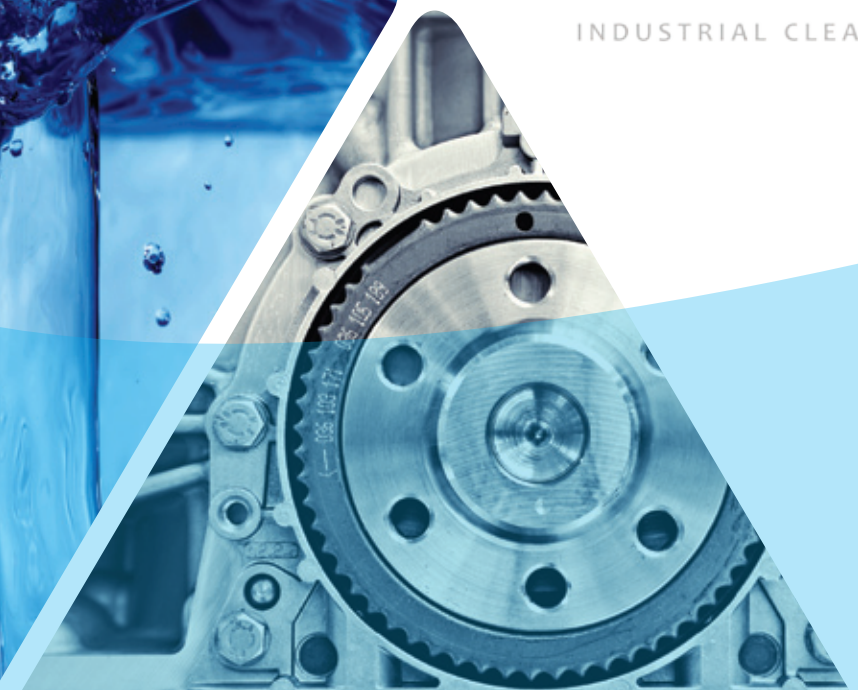


THE LARGEST MANUFACTURER
OF INDUSTRIAL CLEANING
SYSTEMS IN SCANDINAVIA



AQUA CLEAN

INDUSTRIAL CLEANING SYSTEMS

The left side of the page features several overlapping triangular and quadrilateral shapes. These shapes contain images of water droplets on green leaves, a close-up of water droplets on a light blue surface, a close-up of water droplets on a green leaf, and a white airplane flying in a blue sky with clouds. The bottom of the page has a solid blue wave-like shape.

ABOUT AQUA CLEAN

THE LARGEST MANUFACTURER OF INDUSTRIAL CLEANING SYSTEMS IN SCANDINAVIA

AQUA CLEAN, a Finnish family company founded in 1993, is the largest manufacturer of industrial cleaning systems in Scandinavia and one of the leading actors internationally.

We also offer a wide range of oil separators, detergents and spare parts.

Our main industry sectors are the metal working industry, aviation, automotive and railways. Typically our solutions are used in production lines and maintenance activities.

Our head office is located in Espoo and our factory in Pori.

A majority of our business is export, and we are active in Europe, Asia and North America.

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**“WE ARE THERE TO SOLVE
YOUR TOTAL PROBLEM RELATED TO
CLEANING IN ALL ASPECTS: TECHNICALLY,
ENVIRONMENTALLY AND IN
AN ENERGY-SAVING MANNER.”**

OUR MISSION

AQUA CLEAN's mission is to resolve the whole cleaning problem of the customer, in all aspects: technically, cost-effectively and energy-efficiently whilst minimizing the environmental impact.

OUR HISTORY

- 1993 | AQUA CLEAN Ltd is founded by *Frey Taxell* and Sampo Rosenlew Ltd of Finland.
- 2001 | Frey Taxell acquires AQUA CLEAN Ltd and the company begins the marketing of Sampo-Rosenlew industrial cleaning systems under the brand AQUA CLEAN. Sampo-Rosenlew Ltd is responsible for the Finnish market under their own brand name.
- 2004 | AQUA CLEAN Ltd delivers their first industrial cleaning system to China.
- 2005 | China becomes AQUA CLEAN's largest business zone until 2012.
- 2011 | AQUA CLEAN Ltd acquires the industrial cleaning system business from Sampo-Rosenlew Ltd and assumes responsibility for the Finnish market with the AQUA CLEAN brand.
- 2014 | AQUA CLEAN Ltd starts distribution in the United States, becoming active on three continents.
- 2015 | AQUA CLEAN Ltd becomes the largest manufacturer of industrial cleaning systems in Scandinavia.

OUR VALUE PROPOSITION: EXCELLENT QUALITY, HIGH EFFICIENCY AND PRODUCTIVITY, AS WELL AS ADAPTABILITY FOR YOUR ENVIRONMENT

QUALITY

Over 30 years of international experience with well-known references

As our references also prove, we have been international since day one. Our distribution and service network exists in over 20 countries, on three continents. We select components and material that is long-lasting and our quality system is comparable with the ISO 9001 and ISO 14001 standards, and we will obtain the ISO 9001 and ISO 14001 certification by the end of the year 2017.

SPEED

Fast support and short lead times

Whatever your need, it's important to us that you get prompt and on-time service from us and our extensive distribution and service network. This applies equally to responding to new enquiries, providing user and on-site support as well as delivering machines and spare parts.

FLEXIBILITY

A wide standard range with many options and modification possibilities also customized solutions

We have a flat organisation and a modern production facility, all our production being on made-to-order basis. Therefore, we can produce the most complex custom-made machines within a reasonable timeframe. We carry all major spare parts in our stock for fast deliveries and we use a modern CRM and ERP system to plan and keep track of things.

COST

We aim to deliver you the lowest total cost of ownership and running costs

We choose our suppliers carefully, without sacrificing quality. Our machines are simple to install in existing environments, require little service and in most cases you will also find components subject to wear at a supplier near you. It's important to us that you can avoid hidden costs.

OUR APPROACH

CUSTOMER FOCUS

Before making an offer, we apply a needs analysis methodology so that we can have an understanding of the whole context, to ensure that your needs are met. Points of interest are, among others:

- What happens to the items before cleaning?
- What will be cleaned? What materials, how large and heavy are they?
- What will happen to the items once they are clean?
- What are your requirements or current benchmark in terms of cleanliness, cycle time and capacity?

EXPERTISE

Cleanliness is largely impacted by:

- Filtering effectively, so that the cleaning liquid lasts longer and keeps performing well
- Separating oil effectively, so that the cleaning liquid lasts longer and keeps residual oil out of the cleaning process
- Setting the right temperature, so that the cleaning liquid will do its job more efficiently whilst keeping energy costs low
- Using the right amount and type of chemistry, so that the cleaning liquid lasts longer
- Adjusting the cleaning and rinsing cycle time, so that your productivity needs are met
- Applying the appropriate level of pressure and flow, so that the equipment lasts longer whilst being effective

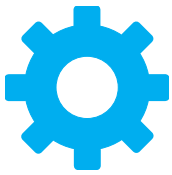
EXPERIENCE

Over the years, our designers and sales staff have studied thousands of applications. With this experience, we are able to offer outstanding solutions to different processes and meet the changing demands of the market. You can be sure that our solution won't become your weakest link.



INDUSTRY SECTORS

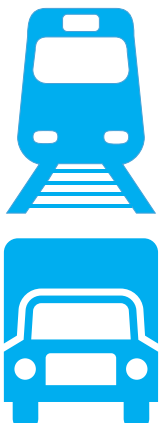
METAL WORKING INDUSTRY



In today's metal working industry, such as wind power equipment manufacturing, there is a high level of automation and tough availability requirements for the equipment, as well as great cleanliness expectations of the goods throughout the supply chain. AQUA CLEAN systems fit the production process seamlessly and do their job effectively, with easy operation and minimal downtime.

Some of our references within this sector:

| ABB | Bosch | SEW Eurodrive | Siemens | Wärtsilä |



RAILWAY AND AUTOMOTIVE

Maintenance workshops for railway equipment, such as traction motors, metro and train bogies and wheelsets, or road vehicles such as truck and bus, face greater effectiveness requirements to decrease vehicle downtime and optimize service intervals. There is also more focus on costs and the environment. AQUA CLEAN cleaning systems have a compact design to easily fit your maintenance process and to ensure excellent cost-efficiency, and an advanced filtering system for improved uptime and a lesser environmental impact.

Some of our references within this sector:

| Caterpillar | Scania | Volvo | Dubai Metro | TMB Barcelona |



AVIATION

Manufacturers of aircraft engines and components, and maintenance workshops of aircraft wheel and landing gear components share many key success factors, such as the safety of components, wash quality and the application of digital process control. Ultimately, all this contributes to the safety in the skies for both new and existing aircraft. When using AQUA CLEAN systems, we will help you to achieve excellent cleanliness without harming the objects that are cleaned. Our machines can be connected to your Manufacturing Execution System (MES), so that you can monitor all cleaning activity centrally.

Some of our references within this sector:

| Emirates | Finnair | Lufthansa | SAS | Airbus | GE Aircraft | Rolls-Royce Aerospace |



AQUEOUS CLEANING
SYSTEMS FOR
ENGINEERING:
THE METAL WORKING
INDUSTRY, RAILWAY AND
AUTOMOTIVE INDUSTRY,
AVIATION PRODUCTION
AND MAINTENANCE.



PRODUCTS – OVERVIEW

HERE IS AN OVERVIEW OF OUR PRODUCT RANGE
– READ MORE ON THE FOLLOWING PAGES

Cabinet spray cleaners

AQUA CLEAN Compact-, Single- and Multi-series – for production environments, vehicle garages, and maintenance workshops.



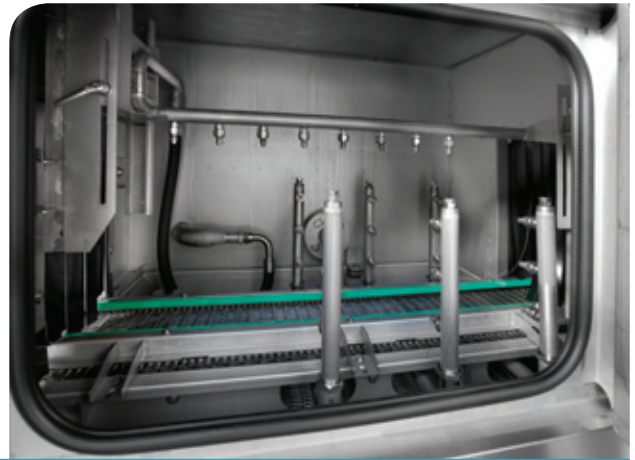
High flow systems

AQUA CLEAN High Flow-series – for items in bulk and with complicated geometry.



Tunnel cleaning systems

AQUA CLEAN Tunnel – for high through-put capacity needs in a production line.



Industry specific applications

AQUA CLEAN Aviation, Rail and Special – for special needs, e.g. aircraft engine parts and wheels, metal hardening, train bogies and wheelsets.



Oil separators

AQUA CLEAN Oil Separators – for removal of oil from cleaning liquid surfaces, degreasing baths, cutting emulsions, and industrial wastewaters.



PRODUCTS – CABINET

INTENDED FOR

AQUA CLEAN cabinet cleaning systems range consists of the Compact-, Single- and Multi-series. The Compact-series machines are intended for small and medium-size items in maintenance activities, and the Single- and Multi-series for medium-size and large items in production activities and with further automation and productivity related requirements.

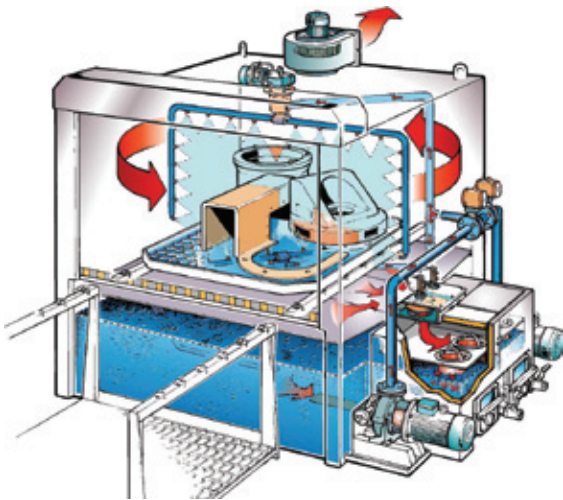
MAIN BENEFITS

AQUA CLEAN cabinet cleaning systems are the equipment of choice of numerous multinationals. Cleanliness results are excellent, thanks to the smart functioning and design. The productivity of the machines is high because of good dimensional capacities and short cycle times. We also help you consider the environment: the machine operation is based on a filtered closed loop circulation, so the same cleaning liquid lasts longer.



MAIN TECHNICAL SPECIFICATIONS

Model	Item Max Height	Item Max Diameter	Load Capacity
AS-100	700 mm	900 mm	500 kg
AS-150	900 mm	1300 mm	700 kg
AC 1.3	900 mm	1100 mm	800 kg
AC 1.7	900 mm	1500 mm	800 kg
AC 2.0	900 mm	1800 mm	1000 kg
AC 2.5	900 mm	2300 mm	2000 kg
AC 2.9	900 mm	2700 mm	4000 kg



FUNCTION

The heated cleaning liquid, a combination of water and an alkaline based detergent, is sprayed onto the items from all directions, via the spray system. This removes dirt and grease effectively. High spray pressure and temperature combined with a large flow of the liquid enhance the mechanical degreasing effect. High temperature also speeds up the drying of the items at the end of the cycle. The cleaning process is closed, which minimizes the environmental impact; the alkaline cleaning liquid solution is circulated, cleaned and filtered between cycles. The Multi-series features rinsing and optional drying functions.



CONSTRUCTION

The machine is manufactured in stainless steel, and it consists of a heat insulated enclosed cabinet with a rotating or oscillating spray system with built-in nozzles, a load carriage, a hinged or lifting door, and a tank system. A loading platform or a wheeled load trolley is located in front of the unit.

PRODUCTS – HIGH FLOW

INTENDED FOR

AQUA CLEAN High Flow machines are intended for cleaning of components in bulk and with a complicated geometry. They are often used in the final stage of a production process with high purity requirements. Pre-treatment processes, such as iron phosphating prior to painting, can also be carried out with the High Flow machines.

MAIN BENEFITS

The machines give you excellent cleanliness for items which are not accessible for standard cabinet cleaning systems. The short cycle time and smart accessories give you a high productivity, and our High Flow machines are well adaptable to your operations.

CONSTRUCTION

The machine is manufactured in stainless steel and consists of a cabinet with a rotating basket fixture, a tank system and a manual or automatic conveyor system.

MAIN TECHNICAL SPECIFICATIONS

Model	Basket Depth	Basket Width	Basket Height	Load Capacity
HF 643	600 mm	400 mm	300 mm	100 kg
HF 865	800 mm	600 mm	500 mm	300 kg



PRODUCTS – ACCESSORIES

OPTION	DESCRIPTION	Compact	Single	Multi	High Flow
Hinged Door	Also serves as loading platform when opened	s	-	-	-
Lifting door	Electromechanical lifting door	o	s	s	s
Oil Separator	Increases cleaning liquid life: separates oil from cleaning liquid after the process	o	o	o	o
By-pass filter	Prevents solid parts to sediment at bottom of tank	o	o	o	o
Automatic Water Refill	Monitors and maintains proper water level in tank	o	o	s	s
Dosing System	Adds desired amount of detergent when filling tank	o	o	o	o
Steam Extractor	Steam-free door opening: extracts steam from cabinet	o	o	o	o
Steam Condenser	Extracts, cools down and leads back steam to tank	o	o	o	o
Power-Rotated Spray	Rotates spray system at desired speed	o	o	o	-
Spray Lance	Spray lance installed on side of machine	o	o	o	-
Load platform	Supports load carriage when outside of machine	o**	o	o	o
Load trolley	Wheeled trolley for transporting load carriage	o	o	o	o
T-Conveyor	To handle multiple loads simultaneously	o	o	o	o
Powered load carriage	Gear motor equipped with frequency converter	o	o	o	o
Through Going Conveyor	Transports load into machine, and onwards to unloading	o	o	o	-
Fine filter	Prevents solids from being sprayed on items	o	o	o	o
Fluid-solids separation	Effectively remove solids from liquid	o	o	o	o
Safety Sensor for door	Stops door movement and fully opens door when touched	o**	o	o	o
Two lifting doors	Additional door added to machine	-	o	o	-
Oscillating Spray System	Runs in back-and-forth motion, for long items	-	o	o	-
Higher cleaning cabinet	Higher cleaning cabinet (C2 height)	-	o	o	-
Increased load capacity	For heavier items	-	o	o	o
Integrated drying	Fan-heated drying at the end of cycle	o	o	o	o
Air Blast	Heated compressed air blown with rotating air nozzles	o	o	o	o
Cleaning Baskets	To place components in machine	o	o	o	o
Vacuum Drying Oven	For maximal drying of the items	-	-	-	o

*) Standard if Rinsing Function selected **) Option available with Lifting Door s = standard, o = optional, - = not available

PRODUCTS – TUNNEL

INTENDED FOR

AQUA CLEAN Tunnel range is intended for continuous operation as part of a production process.

MAIN BENEFITS

The tunnel systems give you excellent cleanliness, a high throughput capacity and adaptability to your production process.

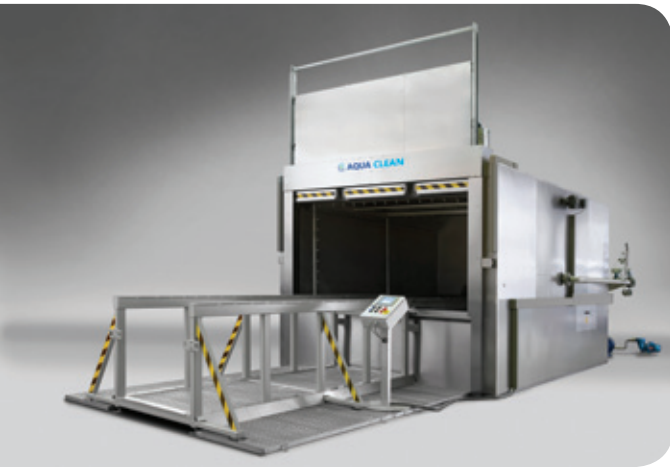
FUNCTION

The machine functions, which can be e.g. cleaning, rinsing and drying, run continuously in their respective zones, which the items pass through on a conveyor.

CONSTRUCTION

AQUA CLEAN Tunnel systems are always custom-made according to customer specification and needs, including zone lengths and process stages. The machines are manufactured in stainless steel, and the conveyor net is controlled with a frequency converter.





PRODUCTS – SPECIAL SOLUTIONS

In addition to our comprehensive standard range with many modification possibilities and a wide range of accessories, we have long experience from special solutions to meet special needs. For example we can provide super-size cabinet systems for cleaning pits, and cabinet systems with rotating brushes. Some applications for these special solutions are metal hardening and surface coating, aircraft engine parts and wheels, huge fan blades, train bogies, wheelsets, and over 30-ton engine blocks.



PRODUCTS – OIL SEPARATORS

INTENDED FOR

AQUA CLEAN oil separators are intended to remove free oil from surface of process-fluids, degreasing baths, cutting emulsions and industrial wastewaters.

MAIN BENEFITS

AQUA CLEAN oil separators help you increase the productivity of your cleaning operations by prolonging the cleaning liquid life. Compared with traditional disc-style oil skimmers, they also have a higher performance. They also are very efficient due to minimized forming of air and foam in the oil.

FUNCTION

The tramp oil is collected from the surface of liquid with a clever self-adjusting suction device. A gentle pneumatically operated diaphragm pump is used so that no foam is formed and the oil collected is not mixed with into the solution. The unwanted oil and light fragments are fed into the waste oil container, and the cleaned liquid is returned back to the cleaning tank.

CONSTRUCTION

AQUA CLEAN oil separators are made of all stainless steel with durable polytetrafluoroethylene membranes.

Model	Max Temperature	Pump Capacity	Separation Container
OS-50	70°C / 158°F	50 l/h	3 l
OS-200	70°C / 158°F	200 l/h	5 l
OS-400	70°C / 158°F	400 l/h	20 l

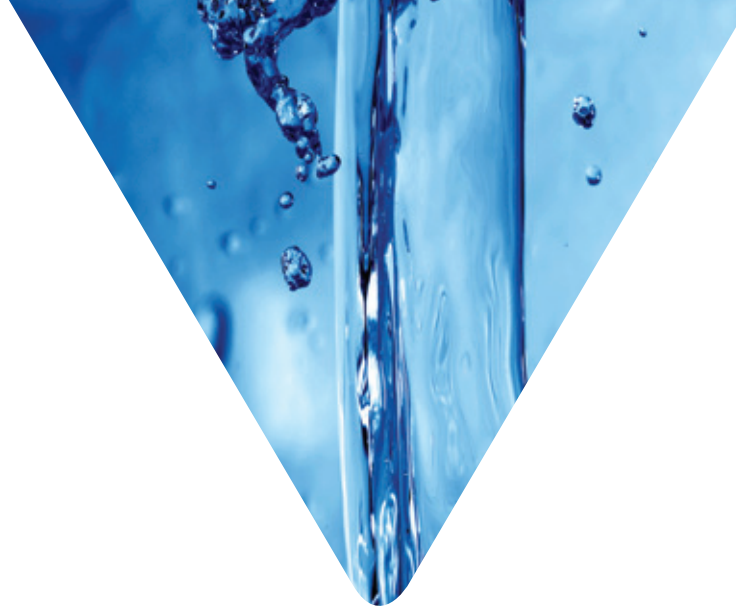
AFTER SALES

A cleaning system is an important part of maintenance and production. Downtime of a cleaning system can mean downtime for the whole activity, which is why our after sales is first class.

Original AQUA CLEAN spare parts are made especially for AQUA CLEAN systems, taking into account the quality characteristics, safety factors, and durability expectations. We have a comprehensive range of parts, both purchase components and self-produced, and we always keep the most critical parts in stock for all our models. We prioritize international components that are easy for you to replace when necessary.

We assist you quickly and accurately with your spare parts requirements, and our wide distribution and service network is there to support you as well. Our extranet system assists in the component ordering, and our staff have many years of experience of the entire product range.





DETERGENTS



DST-DEGREEZ DETERGENTS

Many factors have an effect on cleanliness. For example, it requires insight in the production flow, capacity of the cleaning system, function and condition, and the types and volumes of the objects. Proper preparation is a key success factor.

Our partner for chemical detergents are DST-Chemicals A/S of Denmark with over 30 years of experience from the industry. In addition to detergents, the DST range includes solutions for derusting, passivation/corrosion protection, cleaning after thermal or chemical deburring, and machine cleaning.

The DST-Degreez series of detergents features numerous alternatives to choose from. They are strongly demulsifying, thus achieving extremely long bath lives and outstanding cleanliness. DST-Degreez work in low temperatures without foaming which helps consume less energy and get the machine in operation faster. Additionally, DST-Degreez detergents are Scantox-tested and declared non-hazardous.

We are there to help you choose the right detergent to get the best solution for your needs and materials. Contact us for more info or read more at dst-degreez.com

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DISTRIBUTORS

We are global and local. On our home page **aquaclean.fi** you will find an AQUA CLEAN representative near you. For sales outside our current distribution network, please contact us directly.

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