

CLEANTECH SOLUTIONS for superyachts

Vacuum collection
Wastewater treatment
Fresh water generation
Marine growth prevention
Dry and wet waste treatment
Corrosion protection



*Cleantech Solutions.
Anywhere.*



Cleantech solutions for superyachts

Evac is the world's leading provider of integrated water and waste management systems, as well as corrosion protection systems, for the marine and offshore industries. We are a complete system provider whose products meet all your needs.

We know your industry

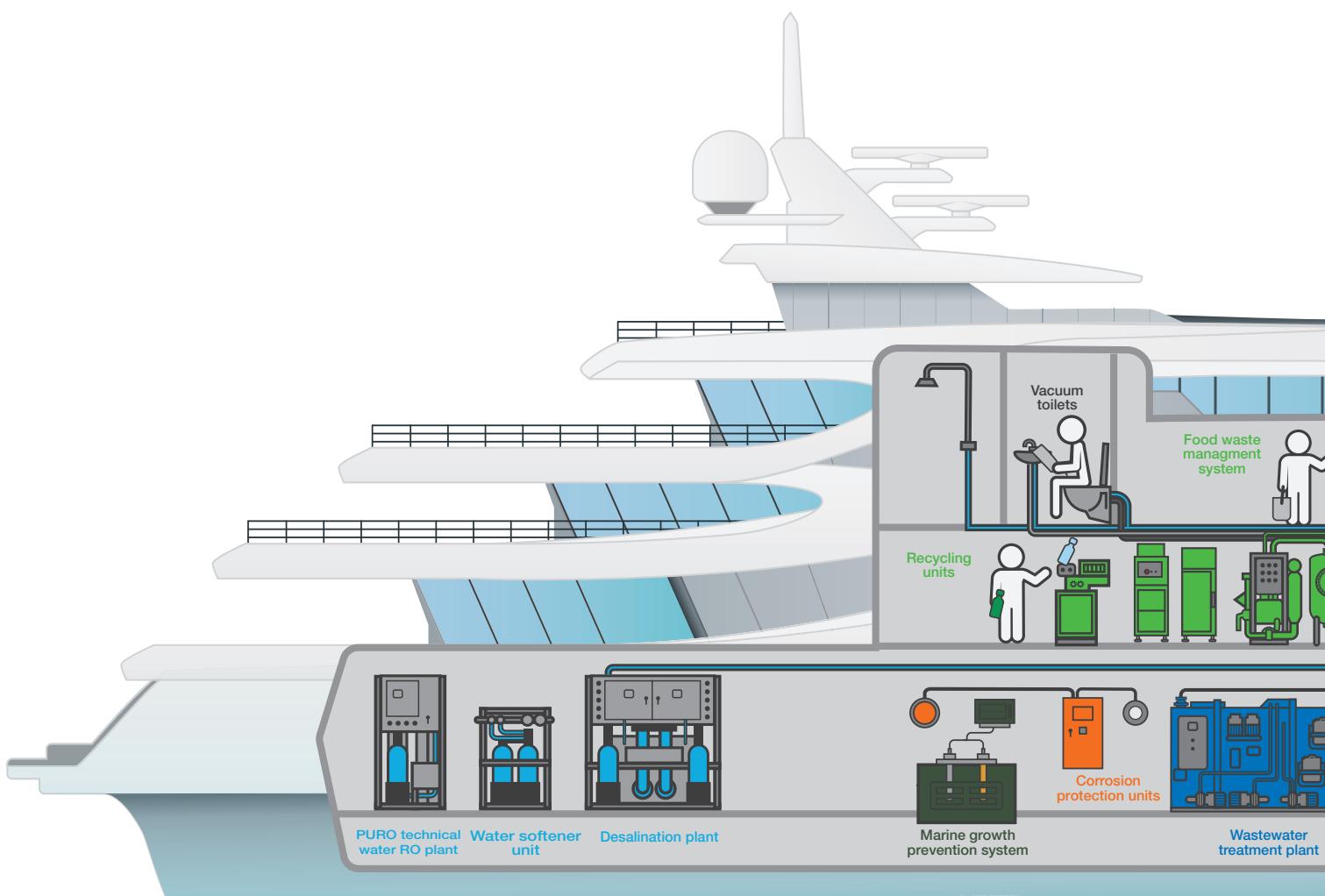
We are a reliable supplier with a long history in the marine industry and hundreds of superyacht reference cases. Our product development specialists can design customer-specific solutions to meet your exact needs.

Our yacht portfolio focuses on passenger comfort and aesthetics, high-quality materials, and elegant design.

Bespoke solutions for changing needs

Superyachts can have unique challenges including varying passenger loads, frequent shutdowns, and rapid start-ups. Our specialist design team can help you overcome these challenges with just the right solutions from our wide product range or even a bespoke solution designed for your specific needs. We pride ourselves on our ability to take customer needs and changing operating areas into account right from vessel construction, with our large offering and flexible processes.

Our systems meet the strictest International Maritime Organization environmental regulations, and can also be operated in Environmentally Sensitive Sea Areas and Special Areas.



Evac Complete Cleantech Solution

The Evac Complete Cleantech Solution answers all your needs. Our toilets are the most silent on the market, and we are the sole supplier of vacuum urinals. A wide range of optional covers and buttons are available and we have also made toilets in custom colors and shapes.

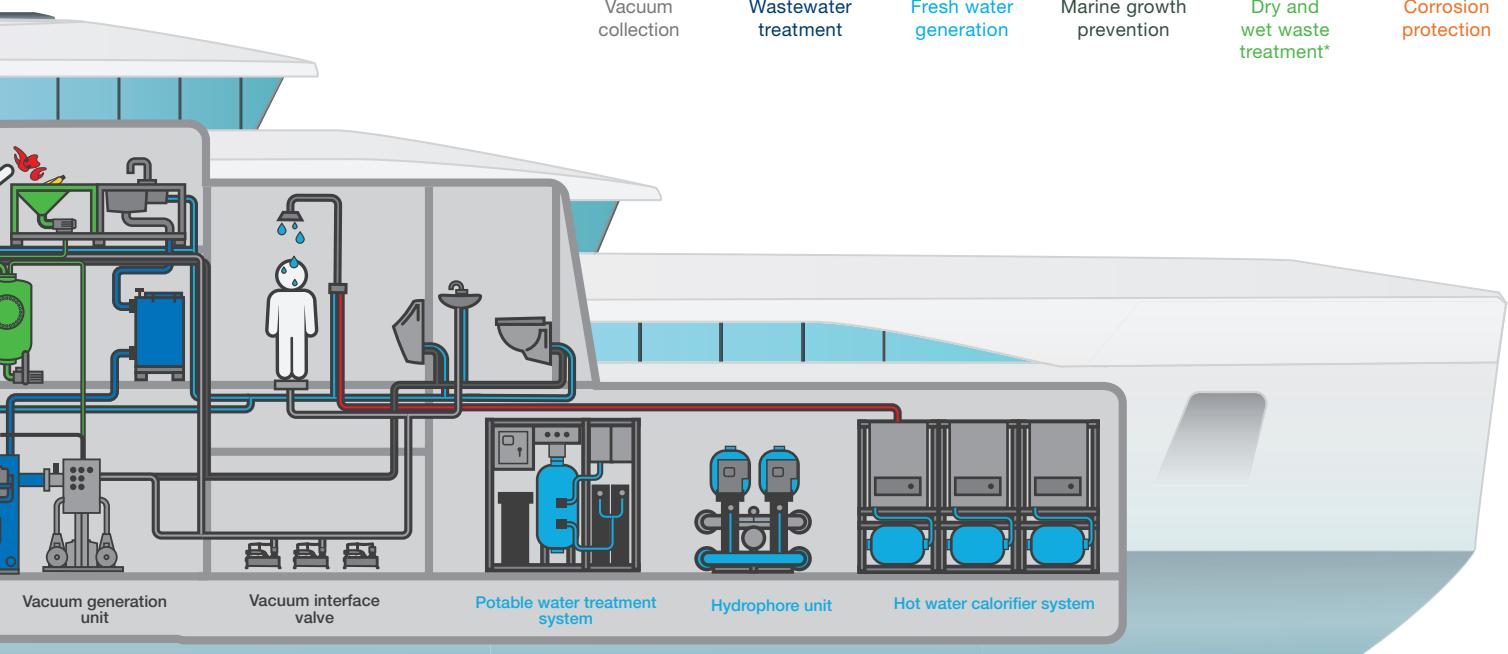
Our offering also includes hygienic food-waste collection and treatment units, as well as equipment for reducing the volume of recyclable and non-recyclable dry waste on board. We are the only supplier with expertise in vacuum collecting both wastewater and food waste.

Using systems from just one supplier simplifies maintenance and reduces the need for spare part storage, as parts are interchangeable.



Benefits

- Fewer partners means easier communication and saves time in project coordination
- Similar user interfaces and technologies make crew training easier and more efficient
- Smooth and efficient system integration, management, and troubleshooting
- Single point of contact for after sales service and spares.





Vacuum collection



Vacuum collection units collect sewage, condensation, and food waste by vacuum pumping it into a sewage treatment plant or collection tank. Since the 1970s, Evac has designed and manufactured a variety of vacuum collection systems including water-saving vacuum toilets, food waste collection units, and vacuum and collection units for condensation, which are typically used in conjunction with cooling equipment both on land and at sea.

With Evac Optima 5
vacuum toilets there
are no overflows
or unflushed toilet
bowls.



Evac Optima 5

Evac Optima 5 is the quietest vacuum toilet on the market according to independent research. It uses our proven pneumatic flush mechanism with flush memory and vacuum sensor technology.

With Evac Optima 5 there are no overflows or unflushed toilet bowls causing a temporary loss of vacuum – the control unit with flushing memory ensures that there is sufficient vacuum for flushing before allowing the flush to be performed.

Evac toilet push buttons

Push buttons are available in different colors and shapes. In addition to pneumatic operation an autoflush option with infrared sensor is also available.



The luxury features of this bidet toilet include a washlet feature, in which toilet paper is not needed.



Evac Optima Commodore

Evac Optima Commodore is a fully automated vacuum toilet. It includes the Evac Optima 5 toilet bowl, the Evac Commodore bidet seat and a remote control. The luxury features of this bidet toilet include a washlet feature, in which toilet paper is not needed, and an auto flush option.

This compact bidet toilet helps to solve space issues in small bathrooms. It also gives significant environmental benefits. Due to low toilet paper use the waste water consistency is easier to clean in the waste water treatment plant.



Evac OnlineVac

Widely used on superyachts, the Evac OnlineVac is a durable, low-maintenance online vacuum generation unit that macerates sewage and generates the vacuum required for the discharge process.

The vacuum is generated and sewage pumped by means of a special liquid-ring screw pump, manufactured – along with the pump casings – from high-quality, corrosion-resistant stainless steel. Vacuum generation is controlled via the vacuum sensor and PLC, with easy inspection of the inlet thanks to its transparent cover.



The Evac VacuConvert is compatible with a wide range of standard gravity toilet models giving designers more choice.

Evac VacuConvert

The Evac VacuConvert wall-mounting frame enables gravity toilets to be connected to an Evac vacuum collection system. The Evac VacuConvert is compatible with a wide range of standard gravity toilet models and broadens the options for architects and interior designers to use a wider selection of toilet models. The Evac VacuConvert is easy to install and features a front-access design for easy maintenance.

Evac vacuum interface valves

Vacuum interface valves (VIVs) are used to connect gravity based appliances to a vacuum sewage system. The VIVs allow standard bathroom fittings to be connected to the vacuum drainage system in new-build projects, while eliminating the need to replace existing fittings in refurbishment projects.



Wastewater treatment

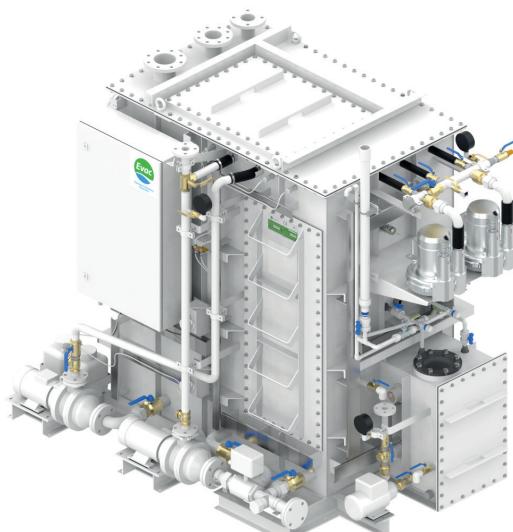
Wastewater treatment systems separate and neutralize organic contaminants in wastewater to comply with national and international legislation. Our offering includes biological and electrolytic wastewater treatment plants that refine black and gray water, as well as grease separators to separate grease from kitchen and galley wastewater.

The Evac MBR wastewater treatment plant allows vessels to operate in environmentally sensitive areas.



Evac MBR

The Evac MBR, membrane bioreactor, is a biological sewage treatment plant that offers advanced black and gray wastewater treatment solutions. It directly replaces traditional biological units, and with its membrane technology it easily fulfills all current and imminent treatment requirements. It allows vessels to operate in environmentally sensitive areas, treating and discharging all wastewater generated by passengers and crew without threat to health or the environment. Evac MBR treatment plants are certified to meet IMO MEPC 227(64) with nutrient removal, and also have River Rhine certification and U.S. Coast Guard (USCG) type approval.



Evac ORCA IV B

The Evac ORCA IV B electrolytic wastewater treatment plant is designed to treat black and gray wastewater aboard vessels. The Evac ORCA IV B is a purely electrolytic wastewater treatment plant that fulfills the requirements of IMO MEPC 227(64) and is also U.S. Coast Guard (USCG) approved.

The compact, modular design makes it ideal for both installation on new vessels and retrofitting existing vessels. It operates on a batch basis but is basically continuous, is fully automatic in normal operation, and only requires low maintenance. Depending on the model, the hydraulic load for black and gray vacuum wastewater treatment ranges from 1 350 to 63 000 liters / 357 to 16 643 gallons per day.



Evac M1 SS grease separator

Specially designed for marine and offshore applications, Evac M1 SS grease separator has a 99% separation efficiency at sea. As all discharges of cooking oil are prohibited, it is an ideal way of removing oil and fat from waste water before it goes to the grey water or sewage treatment plant. Semi-automatic in operation and comes with an automatic grease level alarm.



The Evac M1 SS grease separator has a 99% separation efficiency at sea.



Dry and wet waste treatment

We are a leading supplier of dedicated food waste systems and dry waste systems for yachts. Evac's dry and wet waste systems manage mixed or recyclable waste in a way that is safe, convenient, environmentally friendly, and energy efficient, reducing the volume through compaction and shredding. Moreover, they fulfill the regulations defined by IMO Marpol 73/78 Annex V that covers garbage waste types such as food and galley waste, dry waste and dangerous waste.

Evac U80 glass crusher

The Evac U80 glass crusher is a user-friendly solution for processing glass. Bottles are manually fed through the feed pipe and the glass pieces are collected in a bin, reducing the volume by approximately 80%. The crushed pieces are around 40mm in size, ideal for recycling with a minimal amount of dust. With safe and splinter-free operation, the crusher starts automatically when the lid is lifted and stops when the bin is full.



Evac UKP6060 is intended for areas where bacteria growth and smell cannot be allowed.

Evac UKP6060 refrigerated sack compactor and Evac URB3 bale storage compartment

The Evac UKP6060 is a refrigerated sack compactor with an exterior and interior in stainless steel, designed in accordance to USPH. Food contaminated waste is compacted in a durable plastic sack and stored at 4°C to avoid bacterial growth. It is intended for areas where bacteria growth and smell cannot be allowed and is perfectly suited for installation in food handling areas. The Evac URB3 refrigerated bale storage compartment is an excellent complement to the refrigerated sack compactor. The Evac URB3 is for intermediate storage of compacted waste, until removal to further storage or treatment is possible.



Evac OWMS food waste management system

The Evac food waste vacuum collection system is designed for the hygienic collection and treatment of food waste in compliance with IMO Marpol 73/78 Annex V, U.S. Coast Guard and other relevant regulations. Food waste is conveyed reliably, even when it contains large amounts of bulky or starchy substances such as pasta, rice, bread or potatoes, even fish skin, seashells and large bones.

With the advantage of small diameter piping, the system can easily handle the waste produced in the galley of a superyacht. It can be supplied with a GPS Discharge Control system which ensures that food waste is discharged into the sea only when allowed. All data is logged for two years in compliance with Garbage Record Book requirements.



Fresh water generation

Water treatment units turn seawater into process, service, and drinking water.

The equipment also filters and disinfects water, adjusts its hardness, and mineralizes fresh water that has been created or stored. We offer seawater desalination units using reverse osmosis (RO), as well as potable water treatment equipment using mineralization and disinfection.

Reverse osmosis desalinators

Designed for quality and reliability, the range of HEM units covers every requirement from compact, cost effective systems such as the Series 20 for smaller yachts to the largest ultra-rugged duplex units capable of sustained output under continuous operation exemplified by the Series 80 which can produce up to 100m³/day on the largest superyachts.



Pure reverse osmosis desalinator

These units are specially designed to produce demineralized water which can be used as technical water, most frequently for washing down the hulls of yachts, especially if they are of a dark color. This saves time and manpower because demineralized water leaves no streaks or traces. The unit produces between 25 000 to 36 000 liters / 6 604 to 9 510 gallons per day (17-25 liters / 4-6 gallons per minute) at a maximum salinity of 25 ppm TDS.



Water softeners

Water softeners reduce the risk of calcium build-up in water heaters, exchangers, piping and hydrophore tanks. The twin tank design means that when one tank needs to regenerate, service automatically switches to the other. The new generation of recirculation/high flow softeners enables fresh water tanks to be filled at any flow rate without having to worry about water softener capacity.



Water softeners reduce the risk of calcium build-up in water heaters.

Fresh water skids/sterilizers

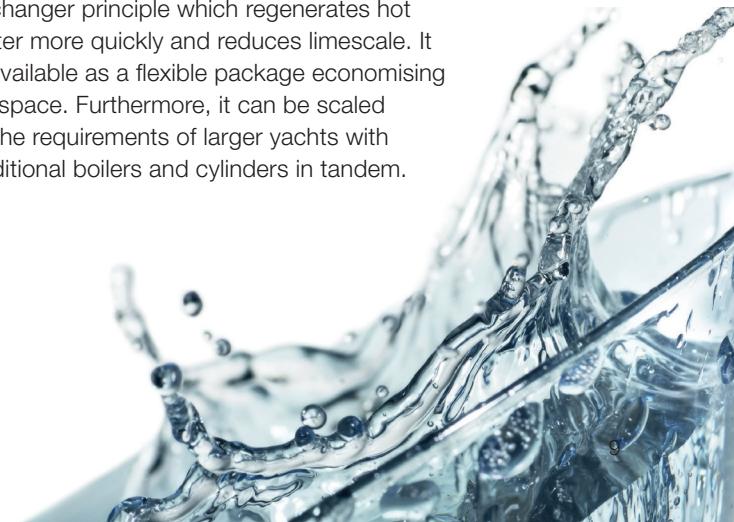
It is essential that on-board water is safe and pleasant to drink. HEM freshwater treatment skids are compact, self-contained units providing a number of water treatment processes including prefiltration and active charcoal filters with a choice of UV or silver ion sterilizers. The same components can be supplied in modular form for installation in areas where space is limited.

Hydrophores

The new electronically controlled hydrophore system incorporates state-of-the-art variable frequency drives, pumps and control technology to provide responsive and reliable water distribution for yachts. The use of variable frequency drives ensures smooth water pressure regulation, avoids any water hammer effects and greatly reduces the size of pressure reservoirs.

Hot water systems

At peak times, conventional hot water systems may struggle to meet the combined demands of multiple showers, galley and laundry requirements. To overcome this, a new system has been developed on the heat exchanger principle which regenerates hot water more quickly and reduces limescale. It is available as a flexible package economising on space. Furthermore, it can be scaled to the requirements of larger yachts with additional boilers and cylinders in tandem.





Marine growth prevention

We provide systems developed by Cathelco, specifically for preventing bio-fouling in the sea water pipework of luxury yachts.

These have compact control panels and a range of anodes which can be fitted in seachests and strainers or within the pipework itself. There are also copper anodes with integral cathodes to protect plastic strainers and pipework. Systems can be supplied solely for marine growth prevention or as dual purpose units with corrosion suppression features.



The most widely used marine growth prevention system in the world.

Cathelco



Corrosion protection

We provide reliable and technically advanced Cathelco solutions to hull corrosion problems using impressed current cathodic protection (ICCP) systems.

With lightweight, flush mounted anodes and electrodes, they achieve optimum efficiency without detracting from the smooth lines of the craft.

The Minitek system protects steel hulls, whilst the Alutek system provides precisely controlled corrosion protection for aluminium hulls.



Reliable and technically advanced solutions to hull corrosion problems.

Cathelco



Service

Close to you where ever you travel

We are your global service partner throughout the life-cycle of your yacht. We have service hubs in North America, Northern Europe and Southern Europe. We offer a wide range of spare parts and exceptional service through our extensive global network of offices and representatives.

We support our stakeholders by providing:

- Engineering and technical advice
- Installation and start-up
- Service and repair
- Service contracts
- Refurbishment and retrofit
- Spare and replacement parts
- Training and education
- Onboard system and spares analysis.



*Cleantech Solutions.
Anywhere.*



Read more about our references:

www.evac.com/en/references

We are committed to provide service and support to our customers worldwide. Find your nearest Evac team at evac.com/contacts



Vacuum
collection



Wastewater
treatment



Fresh water
generation



Marine growth
prevention



Dry and
wet waste
treatment*



Corrosion
protection

Evac is the world's leading provider of integrated water and waste management systems, as well as corrosion-protection systems, for the marine, offshore, and building industries. Our cutting-edge solutions and services support customers to develop their business in a sustainable way, as all our products and processes are designed to contribute to a better environment and cleaner seas. With offices in 13 countries across four continents and representatives in more than 70 countries, we are committed to provide service and support to our customers worldwide.

www.evac.com

Find our contact information at www.evac.com/contacts

* Solutions for building industry customers are sold under the Bvac trademark

