

# Some of our projects/reference cases

## Hurtigruten

Hurtigruten ASA has operated the patented EnwaMatic Maritime Technology for over 12 years across their fleet. During this time their HVAC systems have been protected against corrosion, scaling and general fouling by a unique combination of side stream filtration and water treatment.



## Polar Duchess

GC Rieber prides itself on continuously developing its operations to reduce the overall impact its activities have on the marine environment. When introduced to Enwas chemical free water treatment EnwaMatic®, they immediately installed their first unit on the Polar Duchess. Duchess's clean water improves AC plant efficiency.



## Al Aamriya

In 2011 Enwa agreed a pilot scheme with the LNG Carrier Company MOL LNG (Europe) for the EnwaMatic® Maritime on the vessel Al Aamriya. The agreement came after independent water analyses from fresh water systems showed elevated levels of iron, copper and suspended solids in the cargo cooling system. The major benefits for LNG Carriers and other vessel types is the improved heat transfer efficiency, reduced energy consumption, down time and life cycle costs.



## Volstad

Volstad, one of the majors in offshore shipping, has selected chemical free water treatment for all its engines and HVAC systems, and will save large volumes of chemical waste. It has always been on our mind to look after the environment. That we save money at the same time is of course a bonus to us, says Volstad.



+47 33 48 80 60 (NO)  
 +46 31 742 92 50 (SE)  
 +44 15 30 830 354 (UK)  
 mar-off@enwa.com  
[enwa.com](http://enwa.com)

# EnwaMatic® - for maritime applications

Keeps your systems clean without chemicals



- Fully automatic
- Filtration to 5µm
- Corrosion inhibition
- Scale control
- Bacteria growth control

ADVANCED WATER TECHNOLOGY



# EnwaMatic® technology – for maritime applications

## Keep your systems clean without chemicals

If any freshwater based, closed loop, cooling or heating system is left without treatment, the system will rapidly deteriorate causing operational problems and high maintenance cost.

Effective water treatment ensures system efficiency is maintained and equipment life is pro-longed. The EnwaMatic® technology is a cost-effective alternative to chemical dosing and offers an ideal documented 'Clean Ship' Water Treatment environment.



## EnwaMatic® technology benefits

- Environmentally sound technology
- Continuous filtration and self-regulating water treatment
- Improved energy efficiency
- Improved heat transfer efficiency
- Extended life time
- Reduced service and maintenance costs
- Cost-effective alternative to chemical dosing

## Environment friendly and safe to handle

Through its non-abrasive, non-toxic and self-regulating cooling fluid treatment, the EnwaMatic® technology eliminates the need for chemical additives, thus protecting both the environment and personnel.

Because the EnwaMatic® technology is chemical free, the risk of bacteria growth such as Nitrite Reducing Bacteria is significantly diminished. The stainless steel filter tank is insulated and encapsulated in a tough outer casing. Mounting holes are fitted as standard for securing the units to the deck.



Water samples from the EnwaMatic® technology. Day 1 to day 30 from left to right.

# EnwaMatic® technology – for chilled water/ HVAC-systems and engine cooling water

Enwa offers two product series for maritime applications which both include the unique EnwaMatic® water treatment technology; EnwaMatic® Maritime (EMM) designed and developed for maritime HVAC systems, and EnwaMatic® Engine (EME) designed and developed for engine systems.

## EnwaMatic® Maritime/ EnwaMatic® Engine – technical information

	EMM/EME F1	EMM/EME F2	EMM/EME F3
Total System Volume (m <sup>3</sup> )	0 - 7	0 – 20	0 - 40
Power (W)	25-30	25-30	25-30
Width (mm)	550	600	600
Depth (mm)	550	600	600
Height (mm)	1500	1700	2000
Weight empty (kg), dry	30 kg	45 kg	50 kg
Weight full (kg), inclusive water and media	90 kg	200 kg	240 kg

### Automated backwash features include:

- A fully enclosed, IP 44 rated, wall mounted control panel
- Single phase, 230 v supply, AC 50/60 Hz
- Visual alarm and output signal for optional connection to IAS

## EnwaMatic® for smaller heating and cooling systems



## EnwaMatic® Midi & Mini – technical information

Type	Circulation up to	Pipe dimensions		Max temp	Max pressure
		In	Out		
EM Mini, system volume up to 500 litre	3 l/min	3/4"	1/2"	85 °C	6 bar
EM Midi, system volume up to 1200 litre	5 l/min	3/4"	1/2"	85 °C	6 bar

Note: Provide the same level of filtration and treatment but require a cartridge filter instead of automated backflush