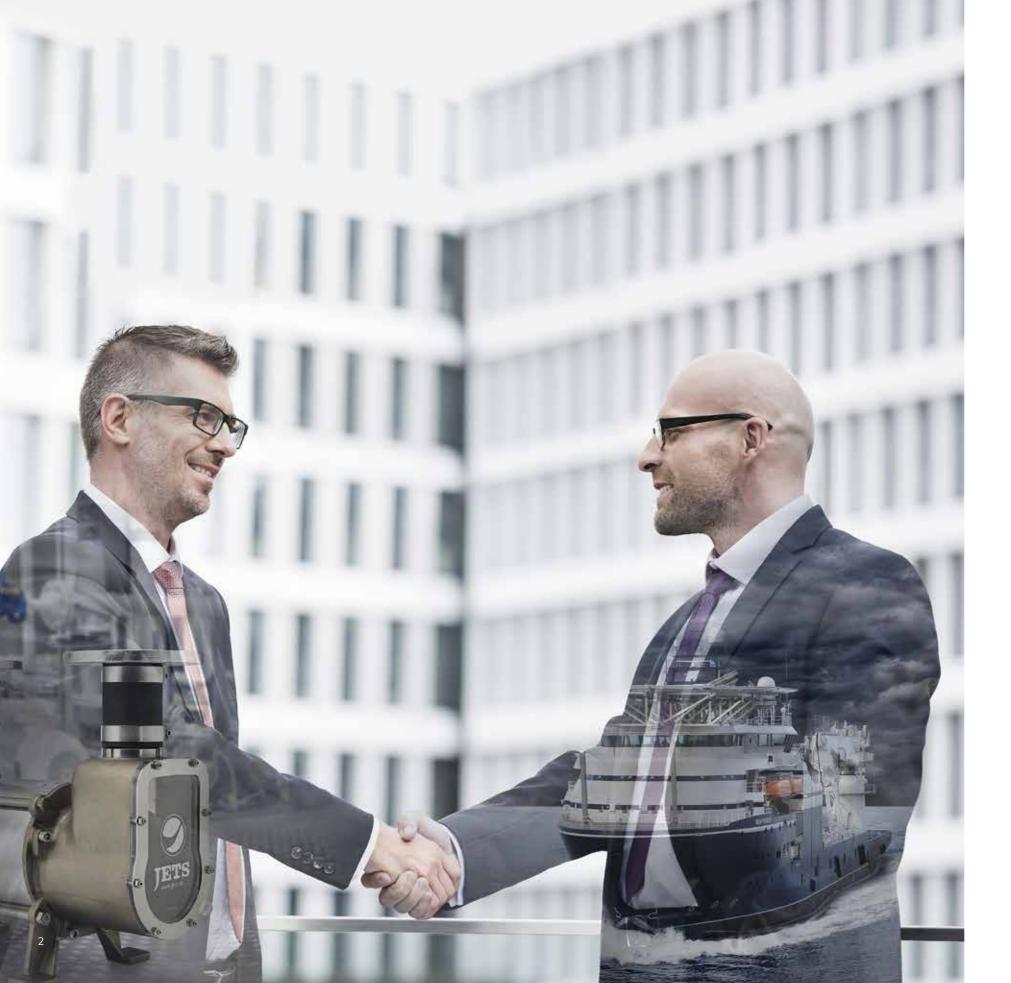




## ALWAYS TO BE TRUSTED





Jets<sup>®</sup> technology has proven its reliability at sea for decades. Our sanitary systems have contributed to countless memorable moments in every corner of the world – just because it works.

The strong focus on customers has made Jets® the natural choice for more than every second ship equipped with vacuum sanitary systems.

We take pride in the relations we build with our customers, and we take pride in the products we deliver. This gives us the confidence to state that we are always to be trusted.

## ALWAYS TO BE TRUSTED



VACUUMARATOR® PUMP BY JETS®



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passengers.

In-line installation of the Vacuumarator® pump combined with a small footprint and low weight allows for unique installation flexibility and considerable weight savings. These advantages, along with low energy consumption, make Jets® the preferred choice for designers, yards and owners.

Easy to install, operate and maintain, Jets<sup>®</sup> equipment is renowned for its high level of quality and reliability, which is appreciated by crews and passengers on the high seas, as well as by our customers onshore.

A complete Jets® sanitary system combines our vacuum toilets with Vacuumarator® pumps connected to our own sewage treatment plant: Ecomotive® by Jets®. All built and delivered with best-in-class knowledge and installed using three decades' worth of experience.



**JETS® TOILETS** 

# SANITARY SYSTEM

The scalability of Jets® vacuum solutions allow their use in virtually every possible scenario, from one-toilet cabin systems, to the world's largest cruise vessels with thousands of



VACUUMARATOR® PUMP BY JETS®



ECOMOTIVE® BY JETS®



## THE HEART OF OUR SYSTEM

The unique Vacuumarator<sup>®</sup> pump is the heart of any Jets<sup>®</sup> system. It creates vacuum, macerates sewage and discharges – in one single-pass operation.

The Vacuumarator<sup>®</sup> pump is the most compact and reliable vacuum generator available for sanitary systems. It is highly efficient in transporting any combination of black and grey water under vacuum.

The first Vacuumarator<sup>®</sup> pump, invented and made by Jets<sup>®</sup> in 1989, revolutionised sanitary systems on ships. Since then we have continuously developed and refined our technology, and expanded the capacity range.

Renowned for their reliability and impeccable quality, more than 60,000 Vacuumarator<sup>®</sup> pumps by Jets<sup>®</sup> are currently in operation worldwide.



## THE UNIQUENESS OF THE VACUUMARATOR<sup>®</sup> PUMP:

#### FLEXIBILITY

Small footprint and low weight allow unique installation flexibility.

#### UNSURPASSED RELIABILITY

The Vacuumarator<sup>®</sup> pump is the most reliable generator available for vacuum toilet systems.

#### HIGH CAPACITY

The Vacuumarator® pump provides unmatched system performance.



Certified by IMO, EC, US Coast Guard, Transport Canada and Russian Maritime Register of Shipping. Approved according to MARPOL Annex 227(64).

## DEVELOPMENT AND TESTING

Ecomotive® by Jets® was developed by our subsidiary Ecomotive AS, in close cooperation with the Norwegian University of Life Sciences. The plant is designed to treat both sewage and grey water. The Ecomotive® plant was tested under real-life conditions at the university's on-site student dormitories equipped with vacuum toilets.

ECOMOTIVE<sup>®</sup> SEWAGE TREATMENT PLANT BY JETS®

## A FIRST-CLASS COMBINATION

The Ecomotive<sup>®</sup> range of sewage treatment plants is developed for optimal integration with our Vacuumarator® pumps. Jets<sup>®</sup> vacuum units can either be supplied as part of the plant, or installed separately in a suitable location as required.

This first-class combination meets the highest environmental requirements, while at the same time featuring a small footprint and installation flexibility.

Jets® vacuum units have been interfaced with various makes and models of sewage treatment plants for more than 25 years, always providing a perfect match with their unique versatility.

Designed and manufactured by Jets®, Ecomotive® treatment plants now take this one step further, as they too incorporate the well-known quality and reliability of Jets®, with the same level of global support and service that you are accustomed to.



# DESIGN

to please.

Throughout the industry, Jets® toilets have earned a reputation for reliable operation. In recent years, customer requirements have shifted towards toilets that are also well-designed and visually pleasing.

In order to meet these requirements, Jets® has successfully enlisted the help of leading Scandinavian designers in developing elegant, yet highly functional toilets.

lets® was honoured with the Norwegian Design Council's 2014 Award for Design Excellence for the Pearl toilet.



Wall mounted vacuum toilet. Award-winning design.



## AWARD-WINNING

## Nothing about a sanitary system is more important than reliability, but design awareness is growing. We always strive



AWARD FOR DESIGN EXCELLENCE NORWEGIAN DESIGN COUNCI





## THE HIGHEST STANDARDS

All Jets<sup>®</sup> products and systems are manufactured to the highest standards, carefully assembled and thoroughly tested.

Product development, production, logistics and service are carried out by a handpicked network of internal and external resources, keeping our customers worldwide satisfied by delivering quality on time – every time.



## QUALITY CONTROL

Quality control is an integrated part of our streamlined production process, ensuring customer satisfaction through high reliability.

Our globally implemented quality system means all Jets<sup>®</sup> facilities around the world adhere to the same strict testing procedures, ultimately resulting in a carefree voyage for both crew members and passengers.

Jets Vacuum AS Management System is certified according to ISO 9001:2015 and 14001:2015.







## UPGRADE TO JETS<sup>®</sup> – GAIN BENEFITS RAPIDLY

Your existing vacuum system can easily be replaced in favour of the latest generation Jets<sup>®</sup> technology, for immediate savings, added vacuum capacity and improved reliability.

Vacuumarator<sup>®</sup> pumps will improve the efficiency of any vacuum system. By upgrading to Jets<sup>®</sup>, the capacity of your current installation will increase while power consumption is significantly lowered, and time spent on maintenance is dramatically reduced.

And as the need for anti-foaming chemicals is eliminated, so are the associated costs and environmental impact of these chemicals.

Switching to a Jets<sup>®</sup> sanitary system can even be done without interrupting the ship's normal operations, allowing you to start saving as soon as the Jets<sup>®</sup> equipment goes operational.

More than 100 cruise ships, a large number of luxury yachts and several offshore vessels have been successfully retrofitted with Jets® vacuum units. There is simply no reason not to upgrade to Jets®.

ALREADY A JETS® OWNER? Vacuumarator® pumps and other parts of the Jets® sanitary system are all subject to continuous development. Existing Jets® equipment can be easily replaced with our most recent technology without interrupting the vessel's operations. This way, cost-effective upgrades of older systems are easily accomplished.







## KNOW-HOW AND EXPERTISE AVAILABLE WORLDWIDE

Jets<sup>®</sup> has accumulated unique know-how and expertise in vacuum toilet systems and marine sanitation for three decades. This combined experience is readily available to all of our customers.

Jets® personnel and representatives are trained regularly through training programs designed to improve skills and keep participants up to date on the latest developments in Jets® technology. Jets® also offers specialized training for customers' crews and technical staff.

We aim to share our knowledge and experience with each and every one of our customers, and will gladly assist by offering guidance during the construction and installation phases of Jets<sup>®</sup> products and the piping systems that connect them.

We know better than most that a correctly designed piping installation is essential to a well-functioning vacuum system, possessing some of the world's best competence in this field.



# Head office Jets® representatives For further details on Jets® representatives, please visit our website www.jetsgroup.com

JETS<sup>®</sup> GLOBAL NETWORK

## WE CONTINUE TO CARE – EVEN AFTER DELIVERY

We always strive to please our customers, believing that caring for them and sharing our know-how at all times – anywhere in the world – are key to our continued success.

A Jets<sup>®</sup> representative is the customer's local expert and point of contact. Highly motivated and well-trained staff provide first-class technical service and support, either by remote troubleshooting or on-site.

Jets® representatives do their utmost to solve problems and carry out inspections, installations and repairs without interrupting your day-to-day operations.

Original parts are available worldwide from our handpicked network of local representatives and from strategically located central hubs.



## THE PREFERRED SUPPLIER

Ease of installation, operation and maintenance make Jets<sup>®</sup> an excellent choice.

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#1+ Lines

SLAND PERFORMER

REFERENCES

#### ISLAND PERFORMER

Designed and built by ULSTEIN, this sophisticated RLWI/IMR vessel was delivered to Island Offshore in July 2014

# 8 out 10

offshore service vessels are equipped with Jets® vacuum sanitary systems

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#### EDDA FIDES

Built by Astillero HJ Barreras in Vigo, Spain, the Edda Fides was delivered to its owner in March 2011 as the only purpose built monohull accommodation vessel in the world.

EODA FIDES

Jets<sup>®</sup> has been the preferred supplier for offshore ships, accommodation platforms and oil rigs for a number of years. In many cases, existing solutions of inferior quality are replaced in favour of Jets<sup>®</sup> vacuum systems.







## VIKING NEPTUN

The largest vessel in the Eidesvik fleet and the first ship of its kind, Viking Neptun was developed by Salt Ship Design in Norway for cold climate operations.



#### Goliat FPSO

Built by Hyundai Heavy Industries in South Korea and delivered in 2015, this groundbreaking floating platform was designed for operations in the challenging conditions of the freezing Barents Sea.

## DINA STAR

Built by Norwegian shipyard Kleven, owned by Myklebusthaug Group and operated by Reach Subsea, Dina Star is a multipurpose offshore vessel capable of light construction and ROV operations. Powered by the most compact, efficient and reliable vacuum generator available, Jets® systems have been selected by some of the world's leading cruise and ferry lines.



#### MS FRAM

Built in Italy by Fincantieri and fittingly named after the ship used by Norwegian polar explorers Nansen and Amundsen, this Hurtigruten Group ship routinely carries adventurous passengers into the frigid waters of the Arctic Ocean, Greenland, and the Antarctic.



#### CARNIVAL DREAM

The first ship of its class, Carnival Dream's maiden voyage took place in 2009 after leaving Fincantieri's yard. Now joined by the Carnival Magic and the Carnival Breeze, Carnival Dream and her two sisters are the largest ships ever built in Italy.



# 3,646

## EUROPA 2

Rated by many as the world's top cruise ship, Europa 2 is a 5-star-plus vessel completed in 2013 by STX Europe in St-Nazaire, France.

Operated by Hapag-Lloyd Cruises and with a passenger capacity of just 516, its unprecedented level of personal luxury makes for a truly unique, upscale cruise experience.

60,000 Vacuumarator® pump by Jets® in operation worldwide

Vacuumarator® pumps

KNM SKJOLD

The world's fastest armed vessels in active duty, six of these Skjold-class stealth missile craft are currently in service with the Royal Norwegian Navy. Built by Umoe Mandal in Norway, the Skjold class can achieve speeds of 60 knots.

To navies across the world, failure is simply not an option. Sailors will not rest until the mission is accomplished, so all on-board systems must reflect this need for uninterrupted operational stability.

With 60,000 Vacuumarator® pumps in operation worldwide on passenger, offshore, merchant and naval ships, as well as in the building and transport sectors onshore, you can trust Jets® to deliver a well-proven and highly reliable system – every time.

wide, chooses Jets<sup>®</sup>.







This is why every second ship built with a vacuum sanitary system world-

#### **TYPE 45 DESTROYERS**

An advanced class of guided missile destroyers built for the United Kingdom's Royal Navy, the Type 45 is designed for anti-aircraft and anti-missile warfare.



#### QUEEN ELIZABETH

The lead ship of the UK's impressive new Queen Elizabeth-class aircraft carriers, and capable of operating up to 40 aircrafts, this is the largest warship ever built for the Royal Navy.

### CAPE CLASS PATROL BOATS

From 2013 to 2015, eight of these high-speed patrol boats, built by Austal, entered service with the Australian Customs and Border Protection Service, where they play a significant role in enforcing Australia's border security.



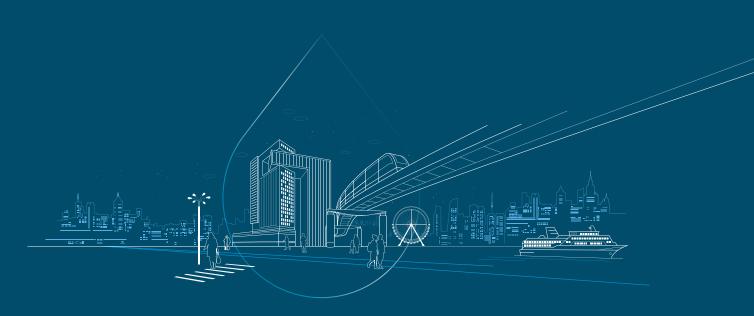
## FJORD LINE FERRIES

Among our recent deliveries are Fjord Line's two new luxury cruise ferries "Stavangerfjord" and "Bergensfjord", both of which were equipped with a complete Jets® sanitary system to serve a total of 3,000 passengers.

As some toilets are flushed up to 20 times an hour, cruise ships and ferries are among the most challenging applications in marine sanitation.

With decades of experience from successful deliveries and hundreds of satisfied shipowners worldwide, our success in the cruise and ferry industries really speaks for itself.





# Pioneering eco-efficient technology



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