Supporting your mission every step of the way

Flow Solutions for naval applications

Defense

DESMI
Make life flow

Meeting the extreme demands of operational scenarios

As the world's foremost provider of pumps and supporting systems for defense applications, we help you operate and maintain a highly dependable and effective fighting force.
Our class-leading products keep critical processes flowing while meeting the extreme demands in military scenarios. We offer a broad selection of pumps for naval ships plus helicopter refueling systems and much more – including the support you need to ensure reliable operation.
We have worked with defense for decades and understand your processes and requirements to the letter.

Solutions for naval vessels

Navies the world over trust us to deliver outstanding military-grade solutions for a variety of ship applications including engine room pumps, fire-fighting systems, ballast water treatment, washdown systems, radar cooling, and more.

Our range includes more than 100 pump types that fulfil most client expectations. We never compromise when it comes to product quality and offer fully shock rated pump designs.

- We understand the technical requirements and applications of navies
- We choose materials that suit the specific applications
- Our pumps are available in fully shock rated design
- We supply pumps for fully submerged use in action damaged compartments
- Our field engineers evaluate pump and system requirements on site

With their excellent quality and durability, our products adapt well to the additional requirements in naval applications

The DESMI design team adapts our standard range to Military Off-The-Shelf (MOTS) equipment, meeting the clients' shock requirements. We 3-D model the equipment according to contract requirements – and our project management includes the provision of test certification and integrated logistics support documentation.

MOTS - Military Off-the-Shelf Pumps

Shock Rated Engine Room Pumps

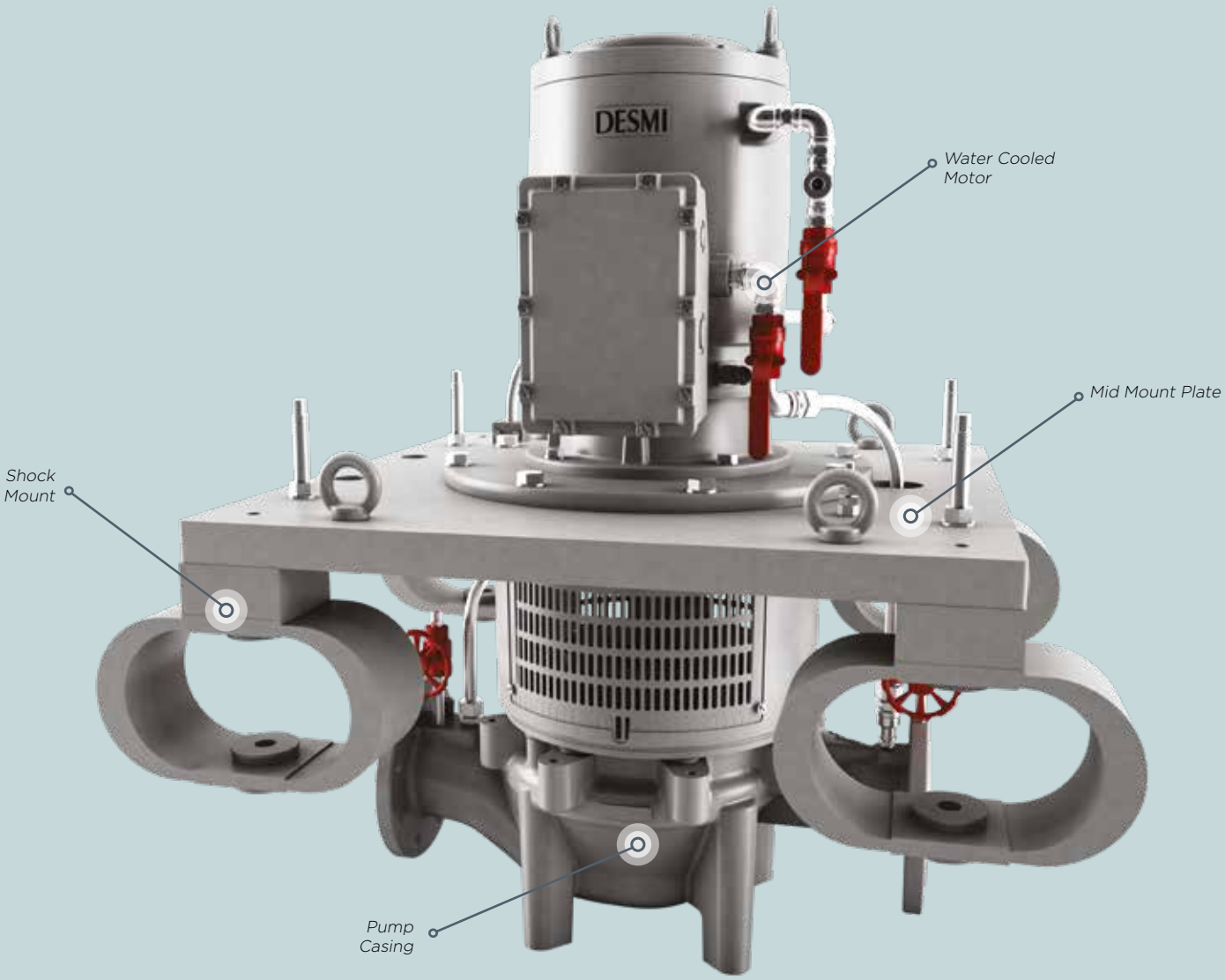
Helicopter Refueling Systems

Shock Rated Pumps

DESMI has a clear understanding of naval technical requirements and applications when it comes to pumps and systems.

We select the correct materials and design for each individual application - for example bilge, fire, ballast, general service, cooling, fuel and lube oil transfer, to name just a few.

Any of these pump applications can be supplied fully shock rated and for fully submerged operation in compartments that are vulnerable to ‘action’ damage.

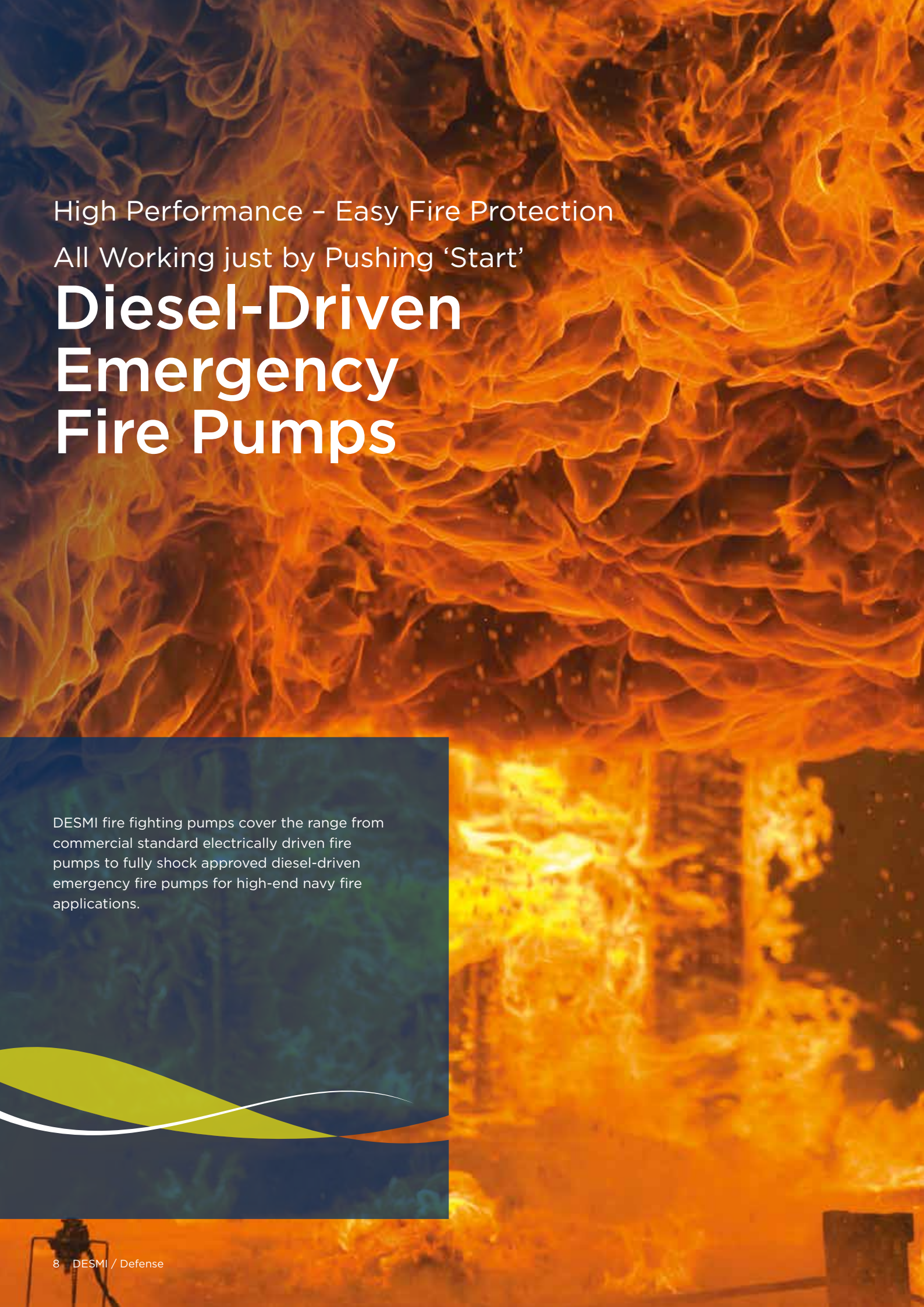


Made to withstand shock and remain in operation both before, under, and after a shock impact

All DESMI centrifugal pumps are available in shock rated design. The pumps are made to survive, and it is crucial that these pumps are working in order to bring the sailors back home safely. They are made to withstand shock and remain in operation both before, under, and after a shock impact.

Shock Rated Engine Room Pump

Shock Rated Engine Room Pump



High Performance – Easy Fire Protection

All Working just by Pushing ‘Start’

Diesel-Driven Emergency Fire Pumps

DESMI fire fighting pumps cover the range from commercial standard electrically driven fire pumps to fully shock approved diesel-driven emergency fire pumps for high-end navy fire applications.

Portable Emergency Diesel

- DRIVEN FIRE PUMP - SP-D3-2

First-class pump solution with a capacity of 40 m^3/h at 7 bar. Low magnetic signature and designed especially for a life at sea. Weight is 160 kg.

Shock Rated Diesel-driven

EMERGENCY FIRE PUMP - DES100

These pump units are designed to withstand the rough life at sea and to be ready for action at all times. Even after the ship has been exposed to shock. Capacity is 100 m^3/h at 7 bar.

Diesel Hydraulically Driven Emergency Fire Pump

Customised Emergency Fire System

Military & Commercial

Helicopter Refueling

The DESMI refueling systems are intended for use in the military sectors. DESMI is the preferred supplier of systems for both fixed wing aircraft refuel capabilities. Each system is specifically designed for pumping, filtering, and dispensing fuel for military and naval use and will at all times deliver dry clean fuel at the end of the nozzle.

The ship-based helicopter refueling system is used for pressure and gravity fueling of aircrafts on board naval vessels, and the system is also fitted with a facility to defuel the aircrafts. The refueling system comprises a 'pump and filtration module', a 'dispenser module', and an electrical and mechanical control system which can be interfaced to the ship's control system.

Pump and Filtration Module

The pump and filtration module consists of filter water separators and positive displacement fuel pumps.

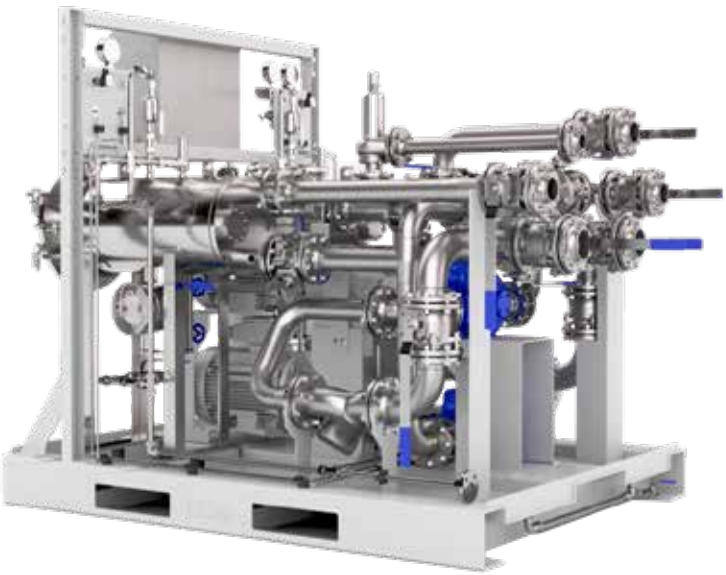
The twin pump refueling system has built-in redundancy for maximum reliability. The service and transfer pumps and filter water separator duties are fully interchangeable by use of valves.

All DESMI aviation fuel systems will be adapted to specific customer needs to ensure that the best possible option is selected for the job.

Dispenser Module

The dispenser module consists of a mechanical meter, defueling pump, hose, hose reel, pressure refueling nozzle, gravity refueling nozzle, and an optional filter water barrier.

A Helicopter In-Flight Refueling (HIFR) kit can be connected to the pressure refueling nozzle hose or a deck-mounted connection on the flight deck.



Pump and Filtration Module

Dispenser Module

Ballast Water Management Systems

DESMI manufactures Ballast Water Management Systems which can be configured for shock tested according to naval standard.

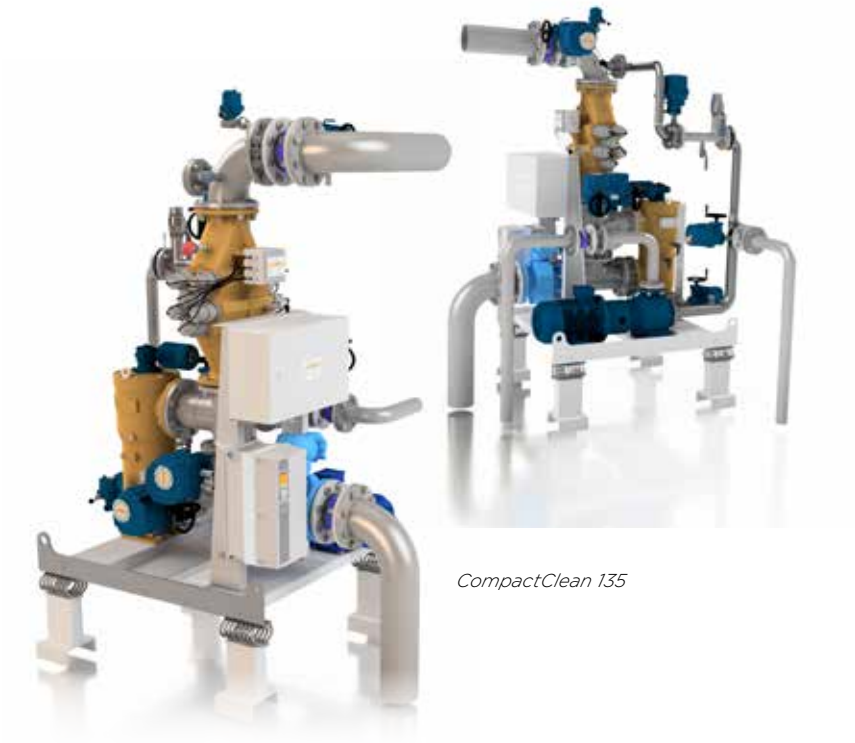
The name of the system is CompactClean, and it is the most compact BWMS on the market which combines very low space with large flow rates.

The operation of the system is based purely on mechanical treatment, and therefore, it does not involve any use of chemicals or active substances.

This eliminates risks of hazards to crew, vessel, and the environment.

CompactClean has no salinity or temperature limitations.

The CompactClean BWMS is type approved in accordance with USCG and the IMO BWMS system code (also referred to as the revised G8) and can be classed from various classification societies.



CompactClean 135

The Most Compact and Effective Ballast Water Management System on the Market!

- IMO & USCG Approved
- Low holding time
- Chemical Free Treatment
- Shock mounted to withstand shock events
- Down to UV-transmission of just 42% - Also in US territory!
- No salinity or temperature limitations
- Very low footprint
- Multipurpose Backflush/Recirculation/ Stripping pump included
- Easy to maintain and Worldwide Service Network available
- Computer Based Training and Service app available for download
- Shock noise vibration according to naval standard

Energy Saving System

OptiSave™

Save fuel, cut cost and reduce emissions

Reducing onboard energy consumption is an easy and effective way of reducing vessel emissions. This is exactly what OptiSave™ does, and it can make a big difference: With no major rebuilding or refitting, it will help you cut energy consumption on ships to save fuel, cut costs, and reduce emissions.

The cooling systems on most ships are designed to deliver sufficient performance with the engines running at 100% load in 32° Celsius seawater. Even though sea temperatures are rising, mostly they are still below 32° Celsius, and cooling system design conditions are rarely present – but the cooling systems still operate at full capacity and therefore consume more energy than needed.

By regulating cooling pump and fan performance according to actual demand, you can save energy: By regulating a cooling pump this way, you reduce its power consumption by 50% in 28° Celsius water – and savings increase as the temperature drops.

The many benefits of DESMI OptiSave™ are:

- Significant energy savings
- Reduced OPEX
- Prolonged pump and fan lifetime due to less wear and tear
- Short return on investment
- Fast installation with minimal changes to existing electrical system
- Worldwide service and support

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Modular and safe system

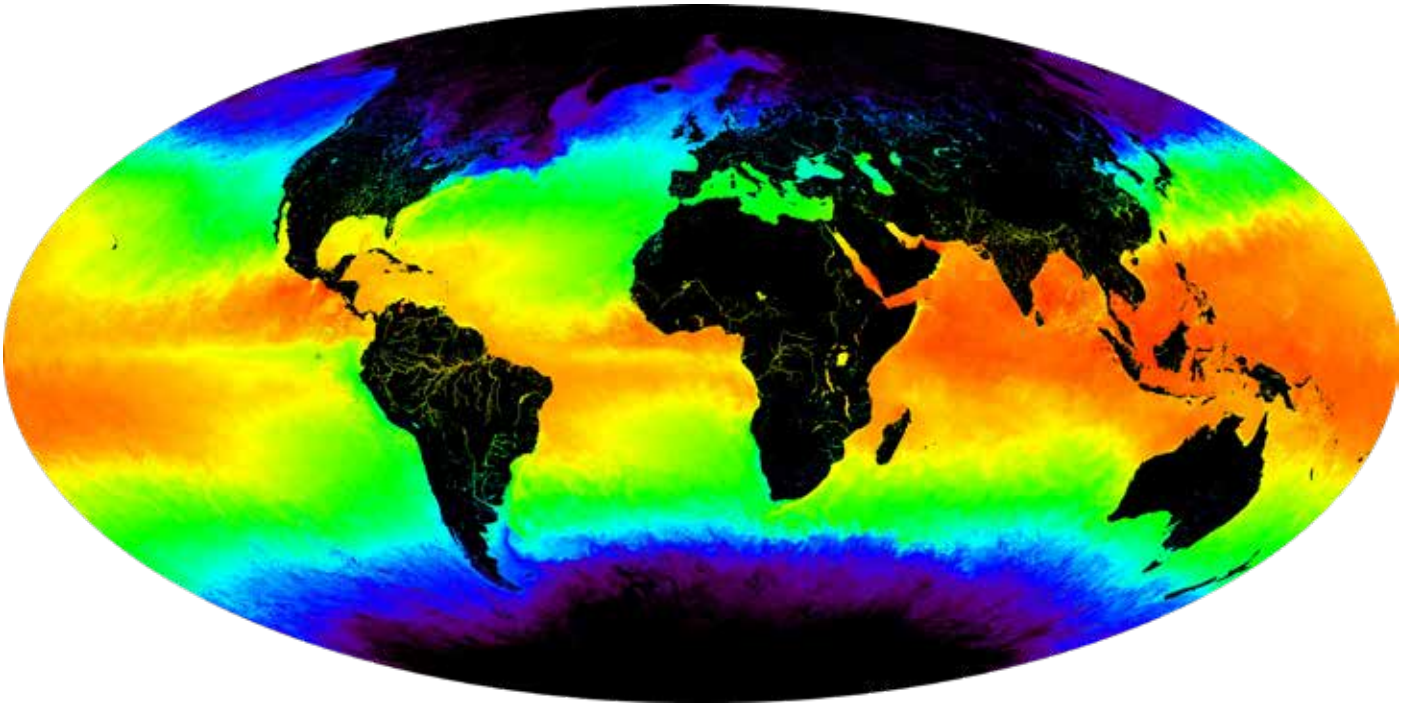
The OptiSave™ system consists of a master control panel (MCP), a user interface, a frequency converter for each pump or fan in the system, and a number of temperature sensors that are integrated with the MCP via local I/O stations or TCP/IP. OptiSave™ is modular and can be expanded as needed, and you can integrate it fully in the ship's IAS/AMS/CAMS/ICAMS system.

OptiSave™ is designed for safe and dependable performance. In the unlikely event of sensor malfunctions or other technical issues, all cooling pumps and fans return to 100% speed, ensuring sufficient cooling capacity in any operating scenario.

Fast installation and global support

The modular system offers great flexibility during design and installation. You can integrate OptiSave™ in newbuilt vessels or retrofit the system on vessels that are already in operation. Installation can be carried out by the DESMI installation team or by your crew supervised by DESMI. Depending on your vessel and requirements, installation typically takes only 4 to 6 working days.

We have installed OptiSave™ on 700+ vessels all over the world, and no matter where the ship is headed, we are ready to support its onboard DESMI systems: With subsidiaries, distributors, and partners in 150 countries on six continents, DESMI is present around the globe.



Airfield Fuel Pipeline Pump

Special Pumping Solutions

Diesel-driven fuel pump for bulk fuel installation in remote areas. 120 m³/h at 6 bar in explosion-proof design.

For many years DESMI has supplied pumps and pumping solutions for the naval industries.

Such as:

- Helicopter wash down booster pumps
- Airfield fuel pipeline pumps
- Diesel hydraulically driven fire pumps
- Hot fresh water modules
- Aircraft carrier refueling systems
- Heeling and anti-heeling systems
- Hydrophore sets
- and much more for navy ships around the world.

Our list of references include:

Iver Huitfeldt Class, DK

Queen Elizabeth Class, UK

Mars Tankers, UK

Etc.

Aircraft Carrier
Refueling System

Helicopter in Flight
Refueling System

Call the
DESMI Service Hotline
round the clock
at +45 96 32 81 10

After-sales and service

from DESMI Service

Call us anytime and let us know what you need: Our global after-sales and service department DESMI Service offers parts and services that keep your aquaculture operation running.

Our spare part kits cover several pumps and contain the parts you need for overhauls, for example shaft seals, bearings, and O-rings. You can also order individual spare parts as needed, and for some parts or products, we ship within 48 hours.

Our highly experienced and factory trained service teams provide a long list of onsite services, from installation and commissioning to service, repair, upgrades, and maintenance, plus training and technical support – whatever it takes to optimize your critical flow processes.

Overhaul Videos

We exist to help you complete your missions

DESMI works closely with MODs, OEMs, and shipbuilders to deliver critical flow processes that help governments on every continent achieve their national security ambitions. Our pumps and supporting systems are trusted worldwide for dependability and performance.

We help you maintain stringent operational standards through sector insight, tight security protocols, and the flexibility to navigate complex processes. We offer global support and after-sales service plus an efficient global supply chain.

Founded in Denmark in 1834, we have provided the expertise, solutions, and aftermarket support our customers need for nearly two centuries. We help you operate more efficiently and reliably, enabling you to complete your missions, achieve your tactical goals and strategic objectives – and get your vessels and crews safely back.

Together, we can make a difference, whatever the future holds. Because we, like you, are here to **make life flow**. For more information, visit **desmi.com**

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DESMI
Make life flow