

**Automation Solutions** 



## AUTOMATION

With DESMI Automation you get a solution that increases efficiency, competitiveness and enables you to meet future challenges with a green and sustainable profile.

## Customized Automation Solutions

DESMI offers a wide range of automation solutions developed for both marine and industrial application. The right combination of process and engineering knowhow enables us to develope and commission integrated control and monitoring systems for our pumps, whether it being on board vessels or in industrial production facilities.

Our product range covers solutions from simple motor starters to advanced PLC based energy saving and power quality solutions. With continuous development of our range of automation solutions, when installing pumps and pumping solutions around the world, we extend our optimization expertise to a range of other applications, where automation can make a difference.

DESMI has a wide portfolio of pumps and pumping solutions and oil spill equipment, which are integrated with DESMI Automation for optimizing energy consumption.



## Monitoring

# Monitoring of your system with data acquisition

Become more efficient, reduce costs and meet your energy optimization goals with our comprehensive portfolio of integrated solutions.

DESMI's energy-optimised, customised solutions for pump applications allow for outstanding operational performance in your industry.



DESMI's solutions provide you with a detailed overview of your installations, including fixed reporting of the requested data.

Our solutions are based on highly recognized automation platforms, where historical or current data for energy consumption, flow, operation, alarms, etc. can be displayed on mobile devices, operater panel or computers.



Customized solutions for smartphone or tablet.

- ✓ Real-time data overview
- ✓ Quick overview
- ✓ Report generator
- ✓ Alarm handling

## DESMI

## Motor starter

# Start your pump - but consider energy consumption

DESMI supplies a wide range of motor starters for our pumps. A motor starter is used in any application, which includes a pump or pumping system, and we can provide the solution you need. The three different solutions we supply are the DOL starter, soft starter and frequency converter, also known as the VFD or VSD. We can design the perfect energy solution based on your requirements.



DOL Starter 0.25 kW - 22 kW



SOFT STARTER 11 kW - 800 kW



VFD/VSD 0.25 kW - 800 kW

DESMI manufacturers motor starters ranging in size from 0.25 kW to 800 kW.



## OptiPower

### A Power Quality System

In recent years there has been a large increase in number of non-linear loads connected to the electrical grid such as computers, LED bulbs, UPS, frequency converters etc.

The growing use of such equipment for almost all electrical loads is starting to have disturbing effects on the electric system.

#### 3 large negative effects of poor power quality:

Energy efficiency

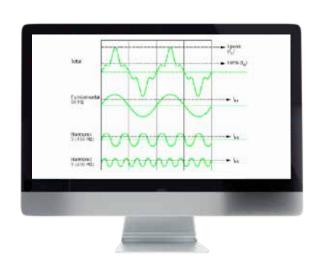
- Increased IRMS
- · Loss of installation power

#### Oversizing

- Transformer/generators
- Cables
- Fuses

#### Electrical disturbance

Component burning



Resonance of capacitor banks

OptiPower includes everything from power quality analysis to design and implementation of power quality enhancing equipment. OptiPower's active filter is a key component for optimal power quality.

#### OptiPower - Power Quality System

- ✓ Optimizing power quality management through intelligent analysis from measuring to installation
- ✓ Improvement or removal of harmonic electrical networks making it possible to meet required standards
- ✓ Easily achievable energy savings
- √ No more loss of energy
- √ No more overheating
- √ No more electrical disturbance



## OptiSaveTM

### An Energy Saving System

On board hundreds of vessels  $OptiSave^{TM}$  Energy Saving Systems have been installed to save energy by providing intelligent control of the vessel's cooling water system. And, with a typical investment payback time as short as 12 to 15 months, the many systems have quickly proved their worth.

The cooling water system on-board vessels is designed for operation in 32°C seawater and 100% engine load and the auxiliary equipment runs as if this condition is permanent.

However, the seawater temperatures of the oceans are not 32°C all over the world. Actually, there are only few hotspots where these conditions are present. This means that the cooling system in 95% of operation time is consuming too much energy.

By installing DESMI OptiSave<sup>TM</sup> Energy Saving System you will be able to regulate the energy consumption according to actual cooling demand and thereby save fuel for your generating sets.

## Yearly savings on +575 installed OptiSave™ systems around the world:







67,000 tons of fuel



16.8 million USD



345,000 MWh

#### Benefits of the DESMI OptiSave™ system:

- ✓ Energy saving up to 90%
- ✓ Short return on investment
- ✓ Prolonged lifetime of pumps due to less wear and tear
- ✓ Minimum changes in existing electrical installations
- ✓ Proven technology
- $\checkmark$  Proven savings from +575 systems in operation
- ✓ Reduced OPEX
- √ Worldwide service support







# OptiSave<sup>TM</sup> Pumps for free On Land and at Sea

With the Pumps For Free concept, DESMI offers a unique financing package for ship owners, who want to energy optimize their vessels, where the savings are used to pay for the investment. Short payback time, typically between 14-18 months.

DESMI offers a wide range of energy-saving products under the Pumps For Free concept, such as:

- Replacement of old low efficiency pump with DESMI highly energy-efficient pumps
- Energy-saving system, also called OptiSave™ for pump applications

- Energy-saving system, also called OptiSave™ for ventilation applications
- OptiSave<sup>™</sup> Online monitoring

The financing schedule is directly linked to the return on investment time / payback time, with quarterly payments



# Control at a high level

# For marine and industrial applications



The frequency converter contributes to creating great value for our customers. Based on our wide knowledge of pumps, DESMI design the optimal energy solution

DESMI has a wide range of frequency converters for all marine or industrial applications. DESMI supplies frequency converters ranging in size from 0.37 to 1000 kW in collaboration with leading control technology suppliers.



Small investment - big returns - lifetime savings



## DESMI Automation

# Has a team of engineers around the world

DESMI has the skills and knowhow required for onsite inspections and upgrade of automation systems. We handle:



For new-buildings we also do consulting work including reports and description of customized systems.

We have a flexible work force with a core of skilled automation engineers. Our automation team currently consists of 25 skilled automation engineers and technicians, who are located in Denmark, Poland, Singapore, Korea, and China ready to participate in joint developments across the many different industries and applications.

DESMI Automation handles project management from quotation to commissioning



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