Marine

Marine Equipment Control

Energy efficient, high performance control of equipment in marine vessels

OPTIDRIVE™

Reliable & easy to use variable speed drives for the marine industry

Energy efficient control for all areas of your vessel

OPTIDRIVE™ variable speed drives allow precise, reliable and efficient control of electric motors in a wide variety of onboard applications

Cranes

OPTIDRIVE™ variable speed drives have been successfully operating in a wide range of crane and hoist applications throughout the world for many years. Optidrive provides an excellent solution, allowing operation across a wide speed range whilst maintaining full load capability. This allows low speed movement for delicate operations requiring careful positioning and control to be achieved, whilst also allowing high speed movement to ensure operating time is minimised where practical.

Optidrive P2 provides proven high performance motor control, particularly suited to the demands of crane and hoist applications. Up to 200% of torque is available from zero speed, even in open loop applications without encoders fitted. Dedicated "Hoist Mode" operation ensures the motor brake is correctly and safely controlled, and maintains safe operating conditions at all times. In addition, this minimises wear on the hoist brake, and reduces mechanical shock loads, prolonging service life and reducing maintenance costs.

Winches

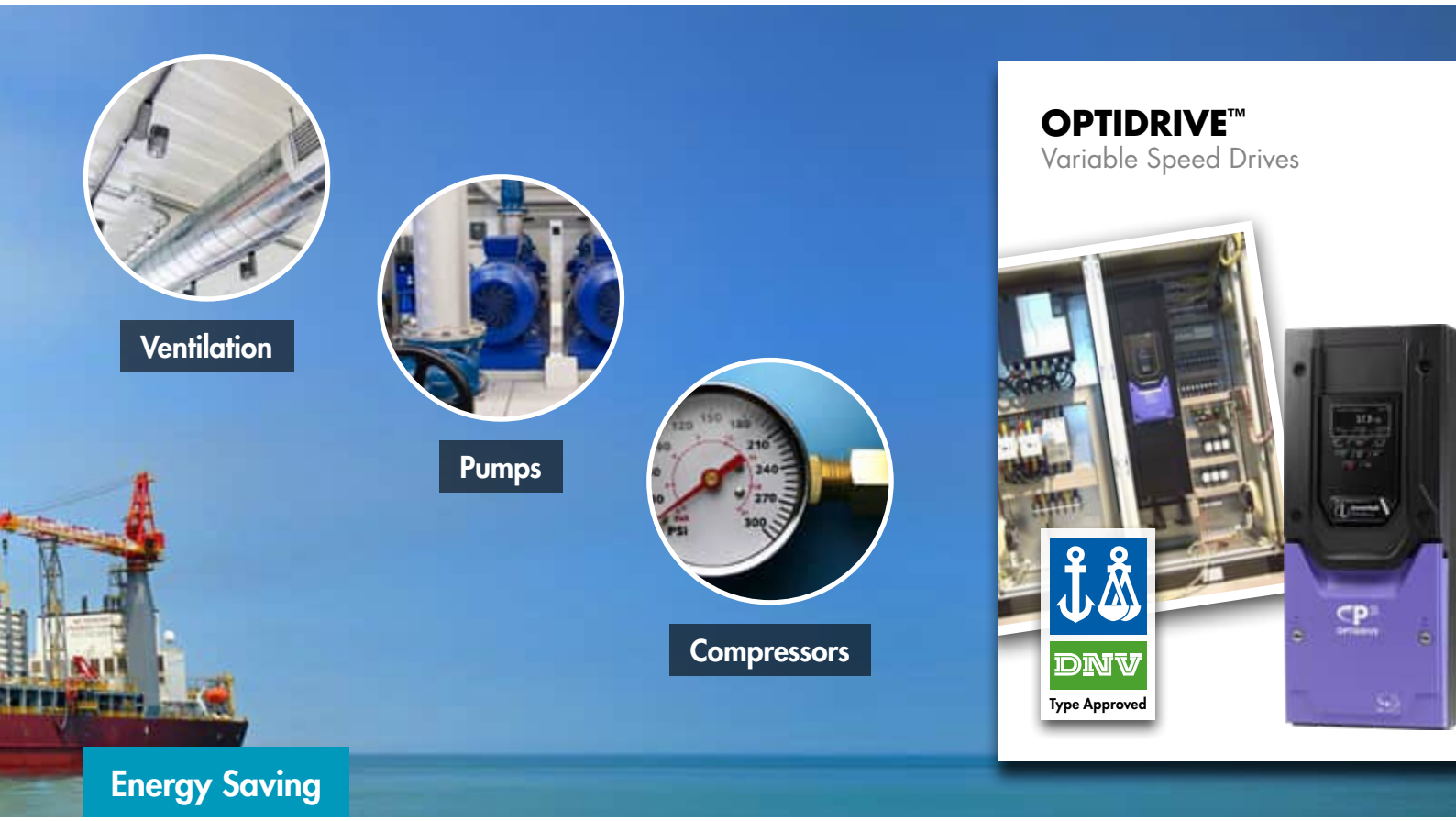
OPTIDRIVE™ P2 provides direct control of both motor torque and speed, with extremely fast dynamic performance necessary to meet the demands of winch applications, whether operating with encoder or open loop without encoder. Torque and speed may be simultaneously controlled, allowing the drive to be adapted to many different winch applications, such as mooring, anchoring or working winches. Overload capacity of 200% for up to four seconds as standard ensures that high peak torques are possible where required.

The extremely high level of performance and dynamic control ensures Optidrive P2 is suitable for auto tensioning applications — maintaining the correct level of winch tension in all operating conditions.

Bow Thrusters

Using **OPTIDRIVE™** to regulate thrusters provides the level of dynamic control necessary for precise operation, maximising manoeuvrability of vessels. Pitch control may be eliminated, whilst operating noise is also reduced. Overall energy efficiency is also improved, thanks to the rapid control response, with further benefits of improved reliability and reduced maintenance.

Energy efficient equipment control for marine vessels



Ventilation

Variable speed control of fans has long been proven as the most efficient method for controlling airflow volumes to directly match requirements, thereby reducing energy consumption and saving money. **OPTIDRIVE**™ HVAC and HVAC Eco drives are designed to offer the maximum possible levels of efficiency in fan control applications, whilst providing a wealth of additional features to ensure simple installation and easy set up. A dedicated Fire Mode operation ensures ventilation is maintained in emergency conditions. Resonance avoidance also ensures that the fan never operates at a speed which may create unwanted audible noise, providing quiet, efficient operation through the required speed range.

Pumps

OPTIDRIVE™ HVAC and HVAC Eco feature Invertek's unique Optiflow technology, providing reliable and efficient operation in a wide range of pumping applications. The internal PID controller allows the drive to automatically maintain a present pressure or flow level. Multiple drives may be networked together for typical Duty / Standby or Duty / Assist configurations, minimising the installation and commissioning time, and removing the need for external controllers. Operation with the latest high efficiency PM and Synchronous Reluctance motors is also possible, ensuring the most energy efficient solution is achieved.

Compressors

Applying **OPTIDRIVE**™ variable speed drives to air and refrigeration compressors allows the compressor speed to be automatically adjusted to accurately match the requirements, providing flexible, energy efficient control under all operating circumstances. Compressor speed is maintained within the correct range at all times to ensure reliability is maintained.

OPTIDRIVE™
Variable Speed Drives

World Leading Motor Control

IP55 / NEMA 12 **IP66** / NEMA 4X

For full product details, visit
www.invertekdrives.com

Rugged, robust drives designed for marine vessels

✓ Global Marine Accreditation
DNV accreditation for total peace of mind.

Type Approved

✓ Ambient Temperature up to 50°C
Ideal for vessel engine rooms with no need for air conditioning.

✓ Conformal Coating Option
Provides additional protection of the PCB against moisture and dust.

✓ RFI Filter Ensures Compatibility with IT Grids
RFI filter ensures suitability for IT grids with no interference with ship systems.

✓ Advanced Motor Control
200% torque from zero speed.

✓ Robust Design
Ball bearing fans for long service life.

✓ Low Harmonic Performance
All variable speed drives can introduce harmonic currents to the onboard grid which can affect the performance of generators if not controlled. **OPTIDRIVE**™ maintains THD (Total Harmonic Distortion) below 30%, which means very low disturbance of the power supply without the need for costly external line chokes.

✓ Energy Saving
Reducing CO_2 and cutting costs.

✓ Ease of Use
Flexible integration and fast commissioning.

✓ Easy Integration with Vessel Systems
Flexible communication options.

PROFIBUS® Modbus CANopen EtherNet/IP

✓ Saving Energy / Reducing CO_2
With large scale increases in global energy costs and the introduction of taxes and legislation relating to the industrial production of CO_2 gases, the need to reduce energy consumption and save money has never been greater. **OPTIDRIVE**™ can reduce energy consumption by up to 60% on critical applications on marine vessels.

✓ Easy Installation
Compact and modern design utilising the latest available technology has resulted in robust drives with small dimensions and innovative mounting and cabling features.

✓ Simple and Rapid Commissioning
14 parameter basic setup; default settings suitable for most applications and contactor style connection for simple wiring.

Global Support

Sales, service and application support network in over 80 countries

Easy to do business with!

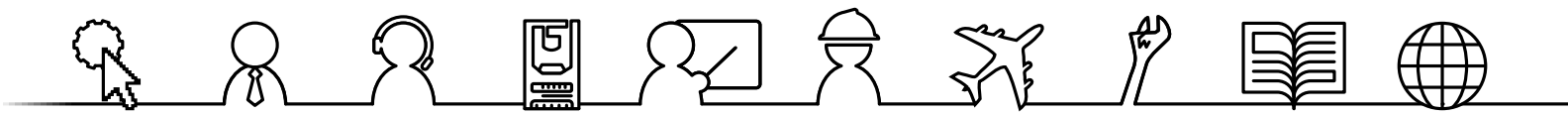
We will be there when you need us and we will be easy to do business with, we will get it right from the start and we will be doing it before you ask for it.

We think globally, but act locally

We know through experience that we need to be near to our customers at the main marine hubs and seaports around the world. This is critical to our ability to react quickly to our customers, whether it is for service, training, troubleshooting or application support.

This expert local service is delivered through an integrated sales and service network in over 80 countries that has been built to reflect the global nature of the marine industry.

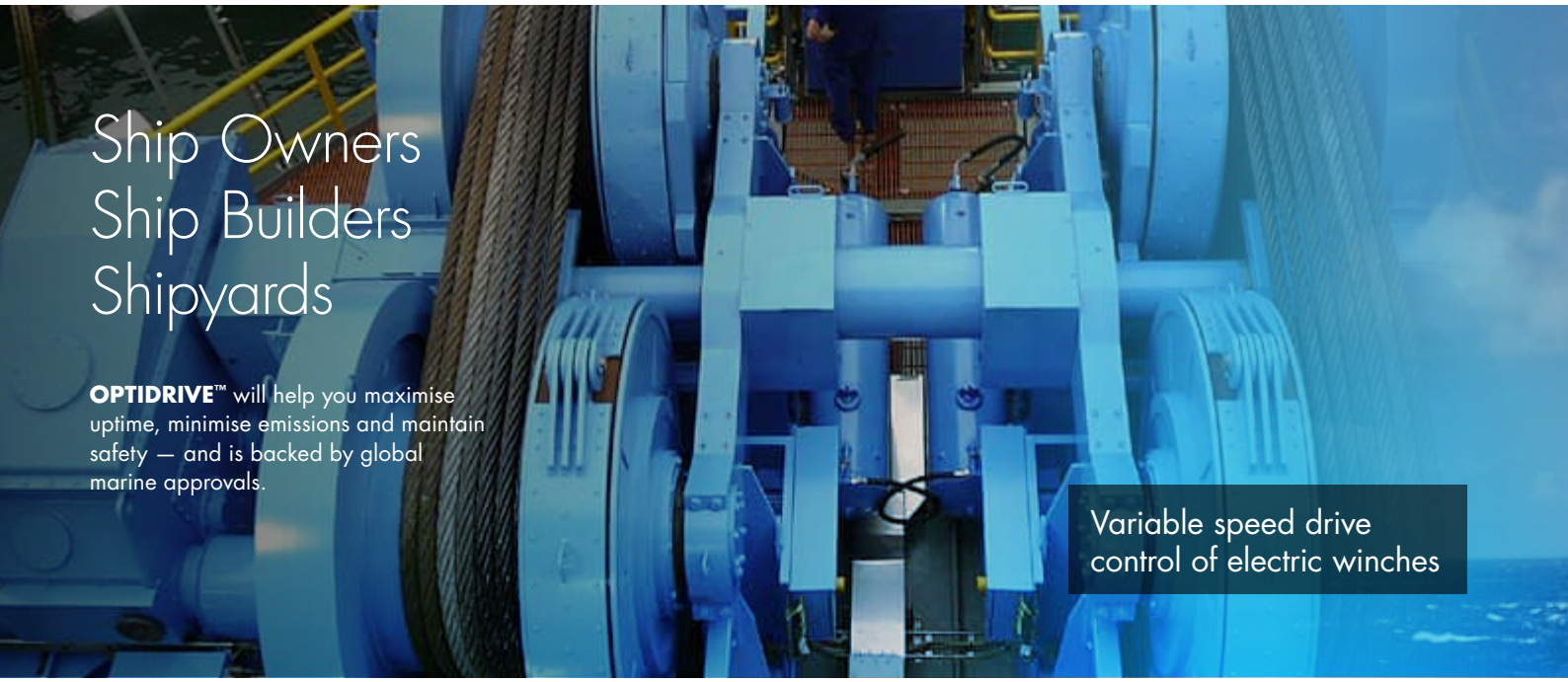
Find locations near you at
www.invertekdrives.com/contact



Online Support | Pre-sales Support | Customer Service | Technical Support | Knowledge Management | Field Service | Logistics & Distribution | Spare Parts & Repair | Service Contracts | International Support

Improving Vessel Performance and Profitability

With **OPTIDRIVE**™ variable speed drives



OPTIDRIVE™ is ready to operate in marine environments straight out of the box with no additional enclosures required

Saving Energy, Cutting CO_2 Emissions

Energy efficiency is the single most important factor in reducing CO_2 emissions. **OPTIDRIVE**™ variable speed drives from Invertek Drives can cut the energy consumption of fans, pumps and compressors found on marine vessels by as much as 60%.

Optidrive delivers reliability, high performance and efficiency in a compact, easy to use unit made for marine environments. Optidrive includes IP55 and IP66 enclosure ratings, conformal coating and is designed to operate trouble-free in the 50°C temperatures frequently found in environments such as vessel engine rooms.

Type Approved

DNV is an independent globally renowned foundation with the objective of safeguarding life, property and the environment.

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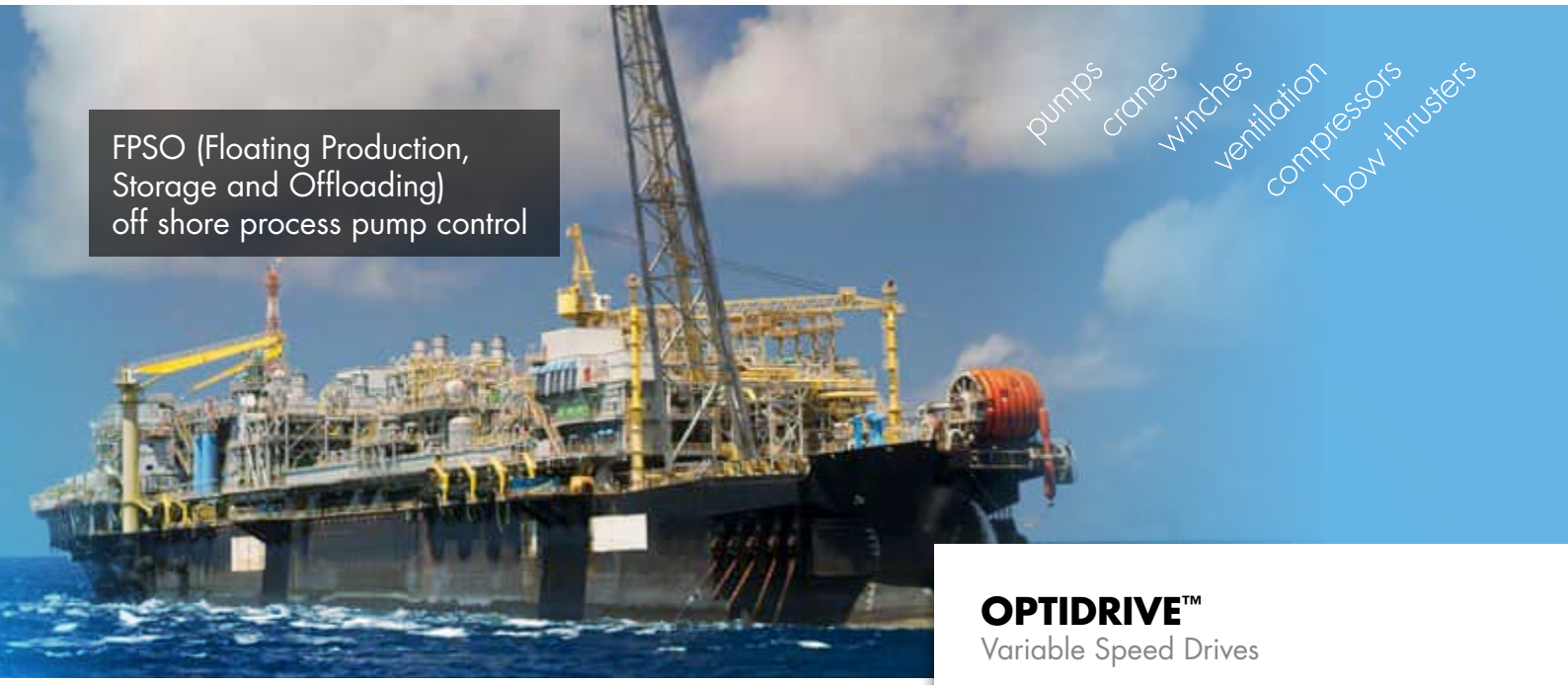

Integrated Safety

OPTIDRIVE™ provides SIL2 (Safety Integrated Level) functional safety standards based on the IEC 61508, providing complete peace of mind

Energy Savings Calculator

See exactly how much energy you could be saving on your vessel!

Download on the App Store

GET IT ON Google Play

www.invertekdrives.com/calculator

OPTIDRIVE™

Variable Speed Drives

- World leading motor control
- Easy to use
- Simple to commission
- Easily integrated with vessel control systems
- Rugged, robust design

PROFIBUS®

CANopen

Modbus

EtherNet/IP

IP55 / NEMA 12

IP66 / NEMA 4X

Invertek Drives.com

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DNV Type Approved

Invertek Drives

- Sales, service & application support in over 80 countries
- World-class production, innovation & training facilities at UK headquarters
- Global assembly cells controlled by cloud-based manufacturing database
- ISO 14001 environmental & ISO 9001 quality management systems

SYSTEM CERTIFICATION ISO 9001 SGS
SYSTEM CERTIFICATION ISO 14001 SGS

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