



Azipod® Gearless Propulsion  
More profitable business with reliable  
and efficient operations

# Azipod® – State-of-the-art gearless steerable propulsion system



**Versatile Azipod propulsion can be fitted to most ship types. It is the designed solution for global maritime operations delivering high reliability and improved operational and environmental efficiency.**

For more than 25 years, Azipod propulsion has set electric propulsion trends. Azipod propulsion has made vessel operations safer and more environmentally friendly, has reduced vessel life cycle costs and has given both merchant shipping and offshore operators increased vessel performance. Azipod propulsion also enables several benefits and cost-efficiency for shipyards and the whole shipbuilding process.

Today, more than 5,000MW of Azipod power has been ordered for various

ship types. The electric drive motor of Azipod propulsion is located in a submerged pod outside the ship hull. A ship with Azipod propulsion does not need rudders, long shaft lines or stern transversal thrusters.



**Azipod CRP (Contra-Rotating Propeller) is the designed solution for fast ferries and provides fuel savings of up to 20% compared to a conventional propulsion system**

## How Azipod® improves your business:

- **Up to 20% more energy efficiency**  
With reduced fuel consumption and life cycle costs.
- **Environmentally friendly propulsion system**  
Lower fuel consumption reduces emissions. A minimal need for lubricants reduces potential leaks. Azipod propulsion also allows the use of biodegradable lubricants.
- **Reliable solution**  
Simple gearless design and heavy-duty tests before solution acceptance.
- **Safe and maneuverable**  
Even the largest vessels can be maneuvered with decimeter accuracy. Narrow harbors can be entered quickly and safely.

**Azipod® increases ship availability to another level. Vessels equipped with Azipod® have a >99% availability on average.**

# Our broad offering of gearless Azipod<sup>®</sup> propulsion units and thrusters



Azipod propulsion covers propulsion unit needs from 1.5MW up to more than 22MW. With single, twin, triple, multiple or hybrid propulsion unit combinations, all propulsion power requirements can be fulfilled in an energy and cost efficient way. The nozzle versions are available for high thrust applications. Ice-strengthened versions are available for heavy arctic or icebreaking operations.

Azipod DO for ship applications for powers 1.5–7MW



Azipod CO for ship applications for powers 1.5–4.5MW



Azipod XO for ship applications for powers 7–22MW



Azipod DZ for high thrust applications for powers 1.5–7MW



Azipod CZ for high thrust applications for power 1.5–4.7MW



Azipod VI for different ice classes for powers 5–17MW



Azipod ICE for different ice classes for power 2–5MW

# Reliable and efficient power for several ship types

Azipod propulsion has created tangible fuel savings for ship operators, opened new seaways in the arctic seas and enabled huge ships to enter narrow harbors with agile, safe and fast maneuvering. It has gathered operational experience in demanding conditions in hot tropical waters and freezing arctic environments with over 12 million operation hours.

## High reliability and reduced fuel consumption

Operational reliability and lower fuel consumption bring numerous benefits for most ship types.

## High performance in demanding conditions

Ice-going cargo vessels equipped with Azipod propulsion can operate safely and efficiently, even without icebreaker assistance.

## Remarkably improved onboard comfort

Lower propeller vibration and noise

levels improve passenger comfort and create a comfortable work environment for the crew.

## Excellent station keeping characteristics

Azipod propulsion is good choice for offshore DP vessels like OSVs, OCVs, and drilling ships and rigs.

## Save space onboard

Azipod propulsion saves space inside the vessel hull for greater design flexibility that enables more cargo onboard.



Offshore supply vessel Normand Flower is equipped with 2 pcs 2.3MW Azipod CO units



Luxury yacht Grace E is powered with 2 pcs Azipod CO 1.6MW propulsion units



High speed ferries Akashia and Hamanasu have CRP Azipod propulsion with 17.6MW Azipod V propulsion unit and 24.4MW diesel driven propeller



Arctic container vessel Norilsk Nickel with single 13MW Azipod VI propulsion

Azipod propulsion is the suitable fit for all ship types that enable electric propulsion – from new LNG carriers to ferries.



Icebreaker supply vessel Aleksey Chirikov is equipped with 2 pcs 6.5MW Azipod VI propulsion units



Semi-submersible drilling rigs Development Driller I and II have both 8 pcs 3.2MW Azipod CZ thrusters



Wind Turbine Installation vessels Pacific Orca has 4 pcs 3.4MW Azipod CO thrusters



Quantum of the Seas has 2 pcs 20.5MW Azipod XO units



Crude oil tanker Tempera with 16MW Azipod VI



Icebreaking tug Polar Pevek with 2 pcs 5MW Azipod VI propulsion units

# Flexibility and cost efficiency to shipbuilding



**Azipod propulsion brings clear design, constructional and installation benefits for the shipyard. Most vessels with Azipod propulsion can be built at the same cost level as a corresponding vessel with a conventional electric propulsion system with a shaft.**

## **Improved freedom of ship general arrangement**

General arrangement can be made more suitable for the shipyard's construction process, and more efficient ship design and increased payload can be achieved.

## **Straightforward and simple installation**

The pod unit – motor, shaft line, bearings, seals and propeller in one unit – is easy to install, reducing installation work compared to a conventional shaft line system or a mechanical z-drive.

## **Easy noise and vibration management**

Due to the inherent characteristics of the electric propulsion and the gearless Azipod thruster design, noise and vibration management is easy.

## **Late stage installation**

The Azipod propulsion unit can be installed in the vessel at a very late stage – just before ship launching. This means improved cash flow for the builder as the parts are delivered to the yards right on time.

ABB Marine and Ports consults ship owners, ship builders and ship designers at the concept design phase to get the best advantage of Azipod propulsion concept.

# Taking safety and productivity to the next level with ABB's integrated operations and global service network



ABB's Integrated Operations center takes ship support to the next level

**ABB Marine and Ports' worldwide professional service network ensures high availability and operation at high performance with lower life cycle costs.**

We have a comprehensive service network in all main shipping hubs. Specialized Regional Propulsion Products service centers offer local support in main operating areas.

## **Integrated Operations**

ABB's Integrated Operations solutions bring the shipping industry into the connected age helping ship owners and operators to optimize operations, reduce

maintenance and simplify ship design. The result is more stable operations and lower costs. Integrated operations are all about the connected vessel – connecting your ships to the HQ, to ABB's integrated operations center, and to a wealth of experience and data that can optimize the operations of every single vessel.

## **Preventive maintenance programs**

Committed, long-term maintenance programs for predictable and reduced costs.

## **Modernizations**

Latest technology upgrades resulting in improved fuel efficiency and performance.

## **Operator training**

Full benefits of the Azipod propulsion best practices – such as safe, timely and fuel efficient harbor maneuvering.

## **On-call services and spare parts**

On-call services with professional service engineers and comprehensive spare part services.

## **Condition monitoring services**

Enhanced operation support with remote condition analysis of Azipod propulsion unit resulting in better availability and efficiency.

Always on global service network with 750 service experts globally in 28 main maritime hubs enable support anywhere in the world – at any time.

# Contact us

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