ANGLO BELGIAN CORPORATION

We power your future

# MARINE PROPULSION & AUXILIARY GENSETS



MADE | IN EUROPE WITH PASSION

# “A history of building the future, a future built on history”

ANGLO BELGIAN CORPORATION

We power your future

For more than 110 years, ABC has been committed to supporting the continuity of your operations. As a leading European manufacturer of innovative and highly reliable medium-speed internal combustion engines, we understand the technical and operational requirements of the marine sector.

ABC engines and generating sets are widely deployed for main propulsion, engine-electric configurations and auxiliary power supply. Designed for heavy-duty service, they ensure consistent performance under demanding conditions, where a dependable source of power is essential to your operations.

With over a century of international experience in engine manufacturing, ABC offers a high level of expertise and technical competence. The durability, reliability and simplicity of our engine and component design remain fundamental strengths and a defining feature of our approach.

We maintain a strong commitment to research, development and innovation. Our ongoing focus includes alternative fuels such as alcoholic fuels (methanol, ethanol), hydrogen and biofuels, all of which contribute to lowering carbon emissions. These technologies form an integral part of our current and future product offering.

At ABC, we place our customers at the centre of everything we do. Our team is ready to support you in making informed, future-proof decisions for your vessel or fleet, whether for newbuild projects or repowering initiatives.

Count on our expertise, no matter the challenges.

Tim Berckmoes
CEO, ABC Engines



**Powering the future of our worldwide customers by offering durability, reliability and ease of mind even in the most demanding conditions.**

Make a smart and safe investment and gain a competitive edge. At ABC, our mission is to eliminate trade-offs. You can rely on us to stay one step ahead of the curve. We have a longstanding tradition of making significant investments in research and development, ensuring that you receive durable, reliable and efficient solutions tailored to evolving local and global demands.



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# About ABC

Founded in 1912 and headquartered in Ghent (Belgium), ABC is a **leading European manufacturer** of medium-speed internal combustion engines (ICEs), with a power range **from 600 kW to 10.5 MW per engine**. Our innovative power generation solutions ensure reliable energy supply for marine vessels operating across the globe.

With **over 110 years of international experience in engine manufacturing**, ABC offers exceptional expertise and technical competence. A key pillar of our success is **built-in stability,** rooted in our geographic location at the crossroads of major logistics routes and supported by a **solid, long-term ownership structure** where passion, knowledge and entrepreneurship have been passed down from generation to generation.

**Focus on R&D**

At ABC, research and innovation are at the heart of our operations. **Durability, reliability** and the simplicity of our **engine and component design** remain core strengths. Our expertise lies in the development of ICEs running on both conventional and alternative fuels. We are committed to creating engines that are more efficient, deliver **more power**, consume **less fuel** and **significantly reduce or completely eliminate emissions**.

**The World is Our Playground**

Our rapidly growing installed base includes references in **more than 120 countries**. With a **global network** of dedicated engineers, project managers and factory-certified service technicians, ABC provides **tailored solutions** for customers seeking a **dependable energy source** for newbuild vessels or repowering projects.

# Made in EU

ABC's unique and stable position has enabled us to build a **strong track record in R&D and innovation**, develop a highly skilled and dedicated workforce and establish a fully integrated network of production units within a **vertically integrated value chain**. With both a European-based turbocompressor and exhaust after-treatment system production facility, we offer customers a distinct advantage across the entire air pathway, from intake to output. This results in a key benefit in today's globalised economy: **reliability**.

ABC uses exclusively European components, with **85% of all parts manufactured in-house**. We operate our own foundries and produce key components such as turbochargers. The remaining parts are sourced from reputable Western European suppliers. Our manufacturing process and engines do not rely on conflict minerals or rare materials, ensuring a secure and ethical supply chain.

As a result, ABC delivers significant added value in terms of **cost control, quality assurance, lead times** and the **availability of OEM spare parts**.







# Environment

ABC engines are **meticulously designed**, **expertly built** and **rigorously tested** to operate efficiently in the most challenging marine environments. As a leading manufacturer of **multi-fuel internal combustion engines (ICEs)**, ABC is actively engaged in helping customers reduce their environmental footprint.

With a strong focus on environmental responsibility, our engines offer **fuel flexibility** and provide a high-performance solution for operators seeking both power and sustainability. We continue to invest in alternative fuels, enabling system conversions to lower emissions and supporting the integration of **exhaust aftertreatment systems** that enable compliance with stringent emission standards, in line with **IMO Tier III**, **EPA Tier 4** and **EU Stage V** requirements.

In addition to engines running solely on liquid fuels such as **(bio)diesel or HVO**, ABC has developed a comprehensive range of **dual fuel ICEs** capable of operating on **alcoholic fuels** (methanol, ethanol) and **hydrogen** (BeHydro), several of which are already in service in demanding marine applications.

Under the BeHydro brand, ABC also offers a full range of **zero-emission, spark-ignited ICEs** designed to run exclusively on **100% hydrogen gas**.

Together, these solutions ensure long-term **operational flexibility** and **regulatory compliance** while supporting the global transition to low- and zero-emission shipping.

# Applications


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# **Empowering** Industries

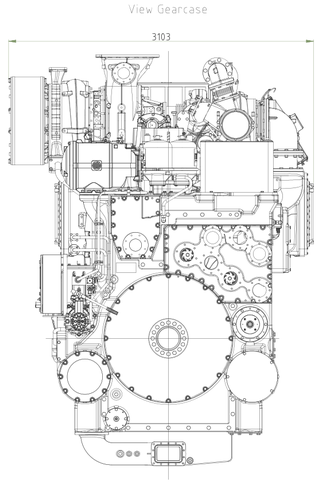
## Marine Power You Can Count On

ABC is a trusted industry leader, known for its strong commitment to delivering reliable and customised power solutions for a wide range of marine clients.

With a **broad product portfolio**, ABC supports diverse marine applications across sectors such as offshore vessels, dredgers, fishing vessels, tugboats, navy vessels, coasters & feeder vessels, cruise ships & ferries, inland waterway vessels and various other vessel types.

In every segment, our focus on **reliability, performance** and **customer-oriented solutions** reinforces our position as a preferred partner in achieving operational efficiency and sustainable growth.

**Count on our expertise, no matter the challenges.**



# **Offshore** Vessels

Offshore vessels operating in demanding marine environments require power systems that combine **reliability, robust performance** and **environmental compliance**.

ABC offers a comprehensive range of **liquid fuel engines** operating on **(bio)diesel, HVO, biofuels** and **MDO**. These engines are highly efficient and, when combined with **exhaust aftertreatment systems** (EATS), they **meet stringent local and international emission regulations**.

Building on this solid foundation, ABC also provides **flexible dual fuel solutions** using **alcoholic fuels** (methanol, ethanol) or **hydrogen**, as well as **100% hydrogen zero-emission internal combustion engines (ICEs)**. These future-ready technologies help reduce or eliminate emissions while maintaining the **trusted performance and reliability** expected in offshore operations.

Designed for harsh offshore environments, ABC engines deliver **maximum uptime, reduced fuel consumption** and **compliance with the strictest environmental standards**. They power a wide range of vessels ensuring **smooth logistics**, **easy maintenance** and **minimal downtime**.

This combination of **proven efficiency** and **future-ready innovation** ensures **lower operational expenditure** (OPEX) and delivers sustained value for your investment and **long-term business performance**.









FIND OUT MORE

# Dredgers

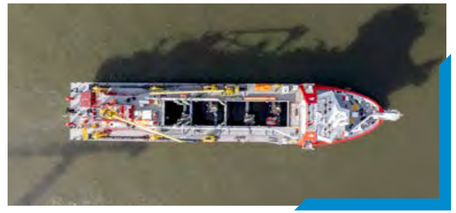
ABC continues to be the preferred engine partner for leading dredging companies worldwide. In this **high-demand, 24/7 industry, reliability** is critical and ABC's **medium-speed engines** are built to deliver **dependable performance** in even the toughest environments.

Our engines are specifically engineered for **heavy-duty operations** such as dredging and land reclamation. They combine **continuous operation** with **low fuel and lube oil consumption, long maintenance intervals** and **easy servicing**. Designed for simplicity and usability, they can be overhauled quickly and efficiently, even under challenging conditions.

ABC engines support a wide range of **fuel options,** including (bio)diesel, HVO and **dual fuel configurations** with methanol, ethanol or hydrogen. This **fuel flexibility** helps reduce emissions and **future-proofs your investment**.

With **high torque at low speeds, robust construction** and **operator-friendly interfaces**, ABC engines ensure **maximum uptime, stable power delivery** and **lower lifecycle costs**, supporting your operations every step of the way.







FIND OUT MORE

# **Fishing** Vessels

ABC has been a **trusted engine partner** for fishing vessels for over a century. From coastal trawlers to ocean-going factory ships, we support the entire sector with **reliable, medium-speed engines** ranging from **600 kW up to 10.5 MW per engine**.

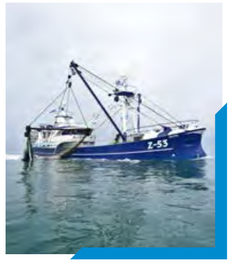
Built for **confidence** and **continuous operation** in **demanding conditions**, ABC engines deliver **strong torque, low fuel and lube oil consumption** and **long maintenance intervals**. Their **robust mechanical design** ensures **smooth performance** and **dependable power**, even during critical manoeuvres or extended trips at sea.

The **maintenance-friendly design** of our engines ensures **excellent accessibility**, allowing crews to service key components **quickly and efficiently**.

With a reputation built on **trust and consistent performance**, ABC engines have **low lifecycle costs** and keep operations **running smoothly.** ABC is a **valuable partner** for both owners and operators in the **global fishing industry**.








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# Tugboats

ABC engines are the **trusted choice** for a wide variety of tugboats worldwide, including **Tractor Tugs**, **Azimuth Stern Drive (ASD) Tugs, Rotor Tugs, Voith Schneider Propeller (VSP) Tugs and Conventional Tugs.** Designed to deliver **high bollard pull** and **precise manoeuvrability**, our medium-speed engines excel in both **harbour assistance** and demanding **offshore towage operations**.

Built to handle **frequent load fluctuations**, ABC engines combine **robust construction** with **low fuel and lube oil consumption**, **long maintenance intervals** and **easy servicing**. This ensures **maximum uptime** and keeps **operational costs** under control.

With **flexible integration** into various propulsion systems and power ranges suited for **newbuilds** and **repowering**, ABC provides **reliable, efficient** and **tailored power solutions** that support tug **operators** and **owners worldwide**.








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RELIABLE POWER FOR
TUGBOAT APPLICATIONS



# **Navy** Vessels

To protect **national security** at sea and along coastlines, naval vessels must perform reliably during both short and extended strategic missions. This demands **trusted partners** with **specialised expertise** and **dependable propulsion solutions**.

ABC has built a **strong reputation** supplying **medium-speed engines** for a wide range of naval vessels, including **Mine Counter-Measure Vessels (MCMVs), Offshore Patrol Vessels (OPVs)** and other **mission-critical platforms**. Our engines are engineered for continuous operation, fuel efficiency and long maintenance intervals, ensuring **readiness in all conditions**.

Designed for **easy maintenance** and **maximum uptime,** ABC engines can feature **double elastic mounts** to minimise noise and vibration as well as protection from shock, which are key factors for stealth and operational safety. Additionally, **NATO-codified spare parts** guarantee **streamlined logistics** and **support worldwide**.

With ABC, naval owners and operators gain **reliable, tailored power solutions** that meet **stringent mission demands** and help secure **operational success**.







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© Jorn Urbain

# **Coasters** & Feeder Vessels

Coasters and feeder vessels play a vital role in **short-sea and regional trade**, sailing between ports along coastlines and often navigating shallow waters and inland routes. These versatile cargo carriers require **reliable propulsion** and **efficient operation** to maximise voyage profitability.

ABC's **medium-speed engines**, capable of running on **(bio)diesel, HVO** and in **dual fuel configuration** on methanol, ethanol or hydrogen, provide **fast engine response**, which is critical for **safe navigation** in **strong currents** or **confined waterways**. They are built for **continuous use**, combining **advanced control systems** with a **robust mechanical design** that ensures **maximum uptime**. In addition, they offer **low fuel and oil consumption, long maintenance intervals** and **easy servicing**, all essential in **time-sensitive operations**.

Our engines can be paired with **hybrid systems** to enhance efficiency and reduce emissions, supporting compliance with **current and future environmental standards**. With ABC, shipowners and operators benefit from **durable and service-friendly engines** that deliver **low total lifecycle costs and proven reliability** on every route.







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# **Cruise Ships** & Ferries

Cruise ships and ferries face increasing demands to combine **passenger comfort** with **environmental responsibility** as ports worldwide enforce stricter **emission regulations.** Operators require propulsion systems that are **efficient, reliable** and **adaptable** to zero-emission zones and diverse operating conditions.

ABC's **medium-speed engines** offer flexible fuel options including **(bio)diesel, HVO, methanol, ethanol, hydrogen** and can be paired with **battery systems** for **emission-free** operation when navigating ports. Their **fast engine response** ensures safe manoeuvring in strong currents and confined waterways. Continuous operation and **low fuel consumption** support cost-effective journeys.

Designed for **easy maintenance** and **extended service intervals,** ABC engines deliver **maximum uptime** while **meeting evolving environmental standards**, helping operators reduce **OPEX** and balance efficiency, sustainability and passenger satisfaction.








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# **Inland** Waterway Vessels

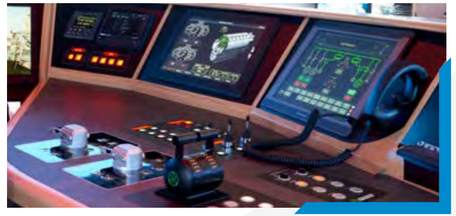
Inland waterway vessels require propulsion systems that prioritise **efficiency, reliability** and compliance with strict emission standards such as **EU Stage V.** ABC's **medium-speed engines** offer flexible fuel options including **(bio)diesel, HVO, methanol, ethanol** and **hydrogen**, complemented by integrated **exhaust after-treatment systems (EATS)** developed within our technology group, ensuring optimal efficiency and environmental performance.

Designed for continuous operation and ease of maintenance, ABC engines deliver **low fuel consumption, extended maintenance intervals** and ensure **maximum uptime**, all contributing to reduced **operational expenditure (OPEX)** and **mid- and long-term value**. This makes them a trusted choice for operators who need consistent, cost-effective power for transporting cargo safely and efficiently through complex inland waterways.

With ABC, shipowners benefit from a **durable, future-ready** solution that supports both **regulatory compliance** and **operational excellence** across diverse inland navigation applications.








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DOWNLOAD CASE STUDY EU STAGE V

# **Other** Vessel Types

Regardless of your vessel type, **dependable propulsion** is key to safe and efficient operations. With over a century of experience, ABC supplies **medium-speed engines** for a wide variety of heavy-duty marine applications. Our engines cover a **power range from 600 kW to 10.5 MW,** supporting both newbuilds and repowering projects across the globe.

ABC engines are built for **efficiency, uptime and simplicity**. They offer **low fuel and lube oil consumption**, long maintenance intervals and are easy to maintain, even in demanding operational environments. The result is a clear reduction in **operational expenditure (OPEX)** and greater **mid and long-term value** for shipowners, operators and investors alike.

Thanks to their **fuel flexibility,** including (bio)diesel, HVO, methanol, ethanol and hydrogen, combined with in-house developed **exhaust after-treatment systems (EATS)**, ABC engines meet the latest emission regulations while ensuring perfect system integration. Whatever your application, we deliver **reliable, cost-effective and future-ready power solutions**.





FIND OUT MORE



# **Engine** Families


**D36 Engine Platform**

Liquid Fuel: (Bio)diesel, HVO, Biofuels **36**

Dual Fuel Methanol (MeOH) **40**

**DZ Engine Platform**

Liquid Fuel: (Bio)diesel, HVO, Biofuels **44**

Dual Fuel Methanol (MeOH) **48**

Dual Fuel Hydrogen ($H_2$) **52**

Mono Fuel Hydrogen ($H_2$) **54**

**E23 Engines**

Liquid Fuel: (Bio)diesel, HVO, Biofuels **58**





# **Engine** Families


## Efficient Power Solutions with ABC Engines

ABC offers a comprehensive engine portfolio across three distinct engine platforms, delivering robust and efficient power solutions for a wide range of marine applications. Our engines cover a power range from **600 kW to 10.5 MW** per unit and are available in various configurations, including **liquid fuel, dual fuel** and **100% hydrogen** options.

### Reliable Power

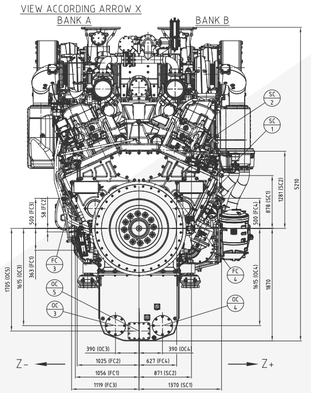
ABC engines are renowned for their exceptional **reliability**. Whether used for **vessel propulsion** or **onboard power generation**, our solutions reflect the importance of **quality** and leave no room for improvisation. Operating at **medium speeds** (up to 1,200 rpm) and featuring an intelligent **load distribution** design, ABC engines significantly reduce **mechanical wear**.

This results in **longer engine life**, **extended overhaul intervals a**nd **maximum uptime**. ABC engines deliver **sustained, reliable performance**, even under the most **demanding conditions**.

### Tailored Solutions

Our experienced sales engineers work with you to propose propulsion solutions tailored to your specific requirements. Whether you're seeking a **main engine, engine-electric power source**, or **auxiliary gensets**, ABC engine solutions can be configured for **parallel operation** and seamlessly integrated into your vessel's design.

This **flexibility** makes ABC the ideal choice for both **newbuild** and **repowering** projects where **dependable power availability** and **long-term performance** are essential.




*16DV36 (up to 10.5 MW)*

# **Engine** Families

The **D36 engine platform** features a bore of 365 mm, offering power up to 10.5 MW per engine.

The **DZ engine platform**, with a range, with a bore of 256 mm, delivers up to 4 MW per engine.

The **E23 engine platform** has a bore of 230 mm and provides up to 7.2 MW per engine.

Find out more about each engine family and their unique capabilities in the following sections of this catalogue.







## E23

Bore: 230 mm
Stroke: 310 mm

**MCR up to 7.2 MW**

## DZ

Bore: 256 mm
Stroke: 310 mm

**MCR up to 4 MW**

## D36

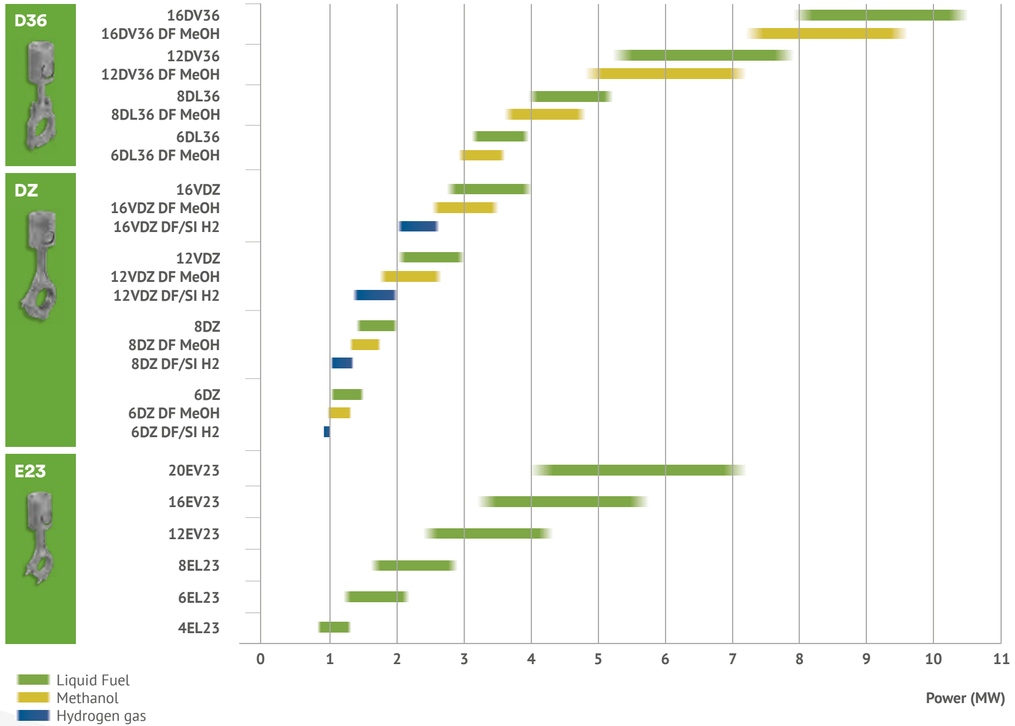
Bore: 365 mm
Stroke: 420 mm

**MCR up to 10.5 MW**

*MCR : Maximum Continuous Rating*



# **Power** Range



# **D36** Engine Platform

UP TO 10.5 MW*

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels



### 6DL36

MCR up to 3,955 kW
3,836 kWe / 4,795 kVA at 50 Hz
3,683 kWe / 4,604 kVA at 60 Hz

### 8DL36

MCR up to 5,274 kW
5,116 kWe / 6,395 kVA at 50 Hz
4,911 kWe / 6,139 kVA at 60 Hz

### 12DV36

MCR up to 7,910 kW
7,673 kWe / 9,591 kVA at 50 Hz
7,366 kWe / 9,208 kVA at 60 Hz

### 16DV36

MCR up to 10,547 kW
10,231 kWe / 12,788 kVA at 50 Hz
9,821 kWe / 12,277 kVA at 60 Hz





*Features, performance and emissions may vary based on configuration, usage and operating conditions.



# **D36** Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels

The **D36 engine series** delivers exceptional power, reliability and fuel efficiency for the most demanding marine operations. With both **inline and Vee configurations**, this robust engine range is designed for heavy-duty applications requiring continuous power and long service intervals. Each cylinder produces over **650 kW at 750 rpm**, offering a total output of up to **10.5 MW per unit**.

Built to endure, the D36 features a **rigid crankcase**, high-grade bearings and a **precisely aligned crankshaft**, all contributing to outstanding mechanical reliability and reduced bearing wear. Dual-stage turbocharging and an efficient injection system ensure **low fuel consumption**, even under tough operating conditions.

The engine's **high torque at low speed** supports rapid load response and smooth electrical stability, critical in dynamic marine environments. **PLN** or **common rail fuel injection systems** give operators the choice between **mechanical** or **electronic control a**nd compatibility with a wide range of fuels – including **(bio)diesel, HVO, biofuels, MDO and HFO** – supports global deployment.

Maintenance is streamlined thanks to a **removable power pack concept, while low oil consumption** and optional **exhaust after-treatment systems** ensure compliance with even the strictest emission standards.

For operators seeking **maximum power with minimal lifecycle cost**, the D36 engine series delivers proven performance in every voyage.



# **D36** Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels

**Durable Design**
Built for extreme conditions with minimal wear, ensuring high reliability and longevity.

**Versatile Fuel Options**
Runs on (bio)diesel, HVO, biofuels, gas oil, HFO, ... , alternative fuels such as methanol in dual fuel mode.




**Fuel Injection Flexibility**
Choose between mechanical PLN (Pump-Line-Nozzle) or electronic Common Rail (CR) injection.

**Stable Performance in Heavy Seas**
The D36 engines deliver consistent power in rough conditions, making them the ideal choice for heavy-duty applications.

**100% Power Availability at PTO**
Full power accessible at the PTO side for multiple-demand operations.

**Resilient to Load Variations**
Fast response to sudden power demands ensures uninterrupted operations.

**High Power Output**
Each cylinder delivers over 650 kW at 750 rpm, with low BMEP enhancing reliability.

**Fuel Efficient**
Dual-stage turbocharging, Miller and variable valve timing and optimised injection systems ensure low fuel consumption.

**Reduced Maintenance**
Removable power packs and optional Condition Based Monitoring (CBM) system enable faster servicing and predictive maintenance.

**Full Performance, Clean Power**
D36 engines meet the strictest emission standards (IMO Tier III, EPA Tier 3, ULEv) with optional exhaust aftertreatment systems.




# **D36** Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels


| | | | | | | Nominal power of gensets | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 50 Hz electric - 3 phase | | 60 Hz electric - 3 phase | |
| | Engine type | rpm | BMEP | kW* | HP | $P_w$ (kW) | $P_n$ (kVA) | $P_w$ (kW) | $P_n$ (kVA) |
| 16DV36 | 16DV36 | 750 | 240 | 10547 | 14330 | 10231 | 12788 | - | - |
| | 16DV36 | 720 | 240 | 10125 | 13757 | - | - | 9821 | 12277 |
| | 16DV36 | 600 | 240 | 8438 | 11465 | 8185 | 10231 | 8185 | 10231 |
| 12DV36 | 12DV36 | 750 | 240 | 7910 | 10747 | 7673 | 9591 | - | - |
| | 12DV36 | 720 | 240 | 7594 | 10318 | - | - | 7366 | 9208 |
| | 12DV36 | 600 | 240 | 6325 | 8594 | 6135 | 7669 | 6135 | 7669 |
| 8DL36 | 8DL36 | 750 | 240 | 5274 | 7166 | 5116 | 6395 | - | - |
| | 8DL36 | 720 | 240 | 5063 | 6879 | - | - | 4911 | 6139 |
| | 8DL36 | 600 | 240 | 4219 | 5732 | 4092 | 5116 | 4092 | 5116 |
| 6DL36 | 6DL36 | 750 | 240 | 3955 | 5374 | 3836 | 4795 | - | - |
| | 6DL36 | 720 | 240 | 3797 | 5159 | - | - | 3683 | 4604 |
| | 6DL36 | 600 | 240 | 3164 | 4299 | 3069 | 3836 | 3069 | 3836 |

**Conversion factors used:** 1 metric HP=0,736 kW → Generator efficiency: $\eta_c$ = 0,97 → Power factor: cos θ = 0,8
*Features, performance and emissions may vary based on configuration, usage and operating conditions.

# **D36** Engine Platform

UP TO 9.6 MW*

**Dual Fuel** Methanol (MeOH)



### 6DL36 DF MeOH

MCR up to 3,600 kW
3,492 kWe / 4,365 kVA at 50 Hz
3352 kWe / 4,190 kVA at 60 Hz



### 8DL36 DF MeOH

MCR up to 4,800 kW
4,656 kWe / 5,820 kVA at 50 Hz
4,470 kWe / 5,587 kVA at 60 Hz

### 12DV36 DF MeOH

MCR up to 7,200 kW
6,984 kWe / 8,730 kVA at 50 Hz
6,705 kWe / 8,381 kVA at 60 Hz



### 16DV36 DF MeOH

MCR up to 9,600 kW
9,312 kWe / 11,640 kVA at 50 Hz
8,940 kWe / 11,174 kVA at 60 Hz

*Features, performance and emissions may vary based on configuration, usage and operating conditions.



**D36** Engine Platform

POWERED BY METHANOL®

**Dual Fuel** Methanol (MeOH)

The **D36 DF MeOH** engine range offers vessel owners a reliable, **future-proof** solution to meet the growing demand for **low-emission** marine operations. Operating on **methanol** as the main fuel, these dual fuel engines help ship operators comply with **stringent environmental regulations** and win contracts in ports and regions where **cleaner vessels** are a requirement.

With a **maximum output of 9,600 kW**, the D36 DF MeOH delivers **exceptional performance** for large ships in demanding conditions. Thanks to its **low-pressure methanol system**, it is **more affordable**, **easier to install** and **less complex** than high-pressure alternatives, without compromising on **durability** or **efficiency**.

**Fuel flexibility** is at the core of the D36 DF MeOH design. When **methanol** is not available, the engine can seamlessly operate on **(bio)diesel or HVO**, ensuring **uninterrupted operations** and **simplified voyage planning**. This adaptability not only safeguards **uptime** but also extends the vessel's **operational range** across **global routes**.

For owners seeking **long-term value**, the D36 DF MeOH combines **proven D36 engine durability** with **reduced emissions** and **lower operating costs**. Its **robust design**, optimised for **marine duty cycles**, ensures **reliable performance**, while **easy maintenance** and **extended service intervals** support **maximum vessel availability**.

The D36 DF MeOH is the ideal choice for operators who want **power, flexibility and sustainability** in one engine platform.



*One of four powerful 12DV36 DF MeOH engines on the test bench at the ABC factory, successfully completing the Factory Acceptance Test (FAT) for an XL cable-laying vessel.*

# **D36** Engine Platform

## **Dual Fuel** Methanol (MeOH)

**Proven Dual fuel Innovation**
Successfully tested on methanol and (bio)diesel, delivering stable performance under varying load conditions while meeting the highest quality standards.

**Fuel Flexibility When It Matters**
Operate on methanol in low-emission zones or automatically switch to (bio)diesel or HVO when methanol is unavailable, guaranteeing uninterrupted operations worldwide.




**Low-Pressure Fuel Injection**
Uses a safe, simple and cost-effective low-pressure port injection system, significantly reducing investment costs, complexity and maintenance compared to high-pressure alternatives.

**Future-Proof Power, Ready Today**
Dual fuel capability allows seamless switching between methanol and (bio) diesel, ensuring operational flexibility and compliance with evolving emission regulations.

**Investment That Stays Ahead**
Early adoption of methanol technology without operational risk, avoiding costly repowering as emission regulations tighten.

**Clean Power, Full Compliance**
Meets IMO Tier III, EPA Tier 3 and ULEv standards with optional exhaust after-treatment systems such as DPF, SCR and oxidation catalysts for ultra-low emissions.

**Reliable Dual fuel Power**
Robust, consistent performance with low BMEP ensures durability in demanding marine conditions. Full power available via the PTO side to support multiple onboard demands.



# **D36** Engine Platform

POWERED BY METHANOL®

## **Dual Fuel** Methanol (MeOH)

| | | | | | | Nominal power of gensets | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 50 Hz electric - 3 phase | | 60 Hz electric - 3 phase | |
| | Engine type | rpm | BMEP | kW* | HP | $P_w$ (kW) | $P_n$ (kVA) | $P_w$ (kW) | $P_n$ (kVA) |
| 16DV36 | 16DV36 DF MeOH | 750 | 220 | 9600 | 13043 | 9312 | 11640 | - | - |
| | 16DV36 DF MeOH | 720 | 220 | 9216 | 12522 | - | - | 8940 | 11174 |
| 12DV36 | 12DV36 DF MeOH | 750 | 220 | 7200 | 9783 | 6984 | 8730 | - | - |
| | 12DV36 DF MeOH | 720 | 220 | 6912 | 9391 | - | - | 6705 | 8381 |
| 8DL36 | 8DL36 DF MeOH | 750 | 220 | 4800 | 6522 | 4656 | 5820 | - | - |
| | 8DL36 DF MeOH | 720 | 220 | 4608 | 6261 | - | - | 4470 | 5587 |
| 6DL36 | 6DL36 DF MeOH | 750 | 220 | 3600 | 4891 | 3492 | 4365 | - | - |
| | 6DL36 DF MeOH | 720 | 220 | 3456 | 4696 | - | - | 3352 | 4190 |

**Conversion factors used:** 1 metric HP=0,736 kW → Generator efficiency: $\eta_c = 0,97$ → Power factor: $\cos \theta = 0,8$
*Features, performance and emissions may vary based on configuration, usage and operating conditions.

# **DZ** Engine Platform

UP TO 4 MW*

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels



### 6DZ

MCR up to 1,500 kW
1,440 kWe / 1,800 kVA at 50 Hz
1,296 kWe / 1,620 kVA at 60 Hz

### 8DZ

MCR up to 2,000 kW
1,920 kWe / 2,400 kVA at 50 Hz
1,728 kWe / 2,160 kVA at 60 Hz

### 12VDZ

MCR up to 3,000 kW
2,880 kWe / 3,600 kVA at 50 Hz
2,592 kWe / 3,240 kVA at 60 Hz

### 16VDZ

MCR up to 4,000 kW
3,840 kWe / 4,800 kVA at 50 Hz
3,456 kWe / 4,320 kVA at 60 Hz





*Features, performance and emissions may vary based on configuration, usage and operating conditions.



# **DZ** Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels

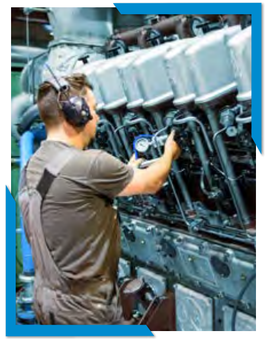
ABC's **DZ engine range**, available in both **inline** and **Vee configurations**, has built a strong reputation for reliability and cost-efficiency in **demanding marine applications**. These **four-stroke**, **medium-speed engines** deliver trusted performance and low operating costs, making them a solid choice for both **main propulsion** and **onboard power generation** across a wide variety of vessel types.

With a clear focus on **fuel flexibility**, the DZ platform operates efficiently on various fuels including **(bio)diesel**, **HVO** and **biofuels**. These engines can also be adapted for **dual fuel operation** using alternative fuels such as **methanol, ethanol** and **hydrogen**. In addition, the DZ range is available for **100% hydrogen operation**, making it a future-proof solution that supports your energy transition strategy.

Thanks to their **low operating pressure** and **moderate engine speed**, DZ engines offer **extended overhaul intervals**, **reduced mechanical wear** and **prolonged operational life**. Their smart design enables fast and easy access to components, while the **mechanical injection system** ensures simple, **robust performance under all conditions.**

Marine operators benefit from **minimised downtime** and **quick servicing**, which means fewer interruptions and lower maintenance costs. With their **low fuel and lube oil consumption**, DZ engines stand out for their **low Life-Cycle Costs (LCC)**, providing true value over the long term.

Each DZ engine is **customised** to the needs of your vessel and operational profile, combining **efficiency, reliability** and **ease of use**. These are all essential qualities for smooth and dependable marine operations.



# DZ Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels

**Reliable, Stable Power**
Known for their rock-solid reputation and dependability, DZ engines and gensets are designed to excel in the most challenging conditions.

**Fuel Flexibility**
DZ engines run on (bio)diesel, HVO, and biofuels, with dual-fuel options for alcoholic fuels (methanol, ethanol) or hydrogen gas, as well as a spark-ignited version for 100% hydrogen gas (zero GHG emissions).

**Quick and Easy Maintenance**
Designed for accessibility, the DZ engines allow rapid servicing of key components, minimising downtime and ensuring a continuous, uninterrupted power supply.




**Maximized Uptime**
Ideal for heavy-duty applications, providing reliable power for continuous and emergency use and contributing to safer operations in demanding marine environments.

**Engineered for Reliability**
DZ engines deliver simple, mechanical, affordable and reliable power, tailored to meet your specific needs.

**Versatile Engines**
Built for heavy-duty operations, delivering reliable power for both continuous and emergency use in the most challenging marine environments.

**Large Power Band**
DZ engines cover a wide power range up to 4 MW per engine, delivering up to 3,840 kWe at 50 Hz and 3,456 kWe at 60 Hz when coupled with an alternator.

**Low Life-Cycle Costs**
High-quality components, low fuel and lube oil consumption, easy servicing and extended overhaul intervals deliver exceptional Life-Cycle Cost (LCC) savings.



# DZ Engine Platform

| | | | | | | Nominal power of gensets | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 50 Hz electric - 3 phase | | 60 Hz electric - 3 phase | |
| | Engine type | rpm | BMEP | kW** | HP | $P_w$ (kW) | $P_n$ (kVA) | $P_w$ (kW) | $P_n$ (kVA) |
| 16VDZ | 16VDZ | 1000 | 188* | 4000 | 5435 | 3840 | 4800 | - | - |
| | 16VDZ | 1000 | 176 | 3750 | 5095 | 3600 | 4500 | - | - |
| | 16VDZ | 1000 | 166 | 3536 | 4804 | 3395 | 4243 | - | - |
| | 16VDZ | 900 | 188* | 3600 | 4891 | - | - | 3456 | 4320 |
| | 16VDZ | 900 | 166 | 3184 | 4326 | - | - | 3057 | 3821 |
| | 16VDZ | 800 | 173 | 2944 | 4000 | - | - | - | - |
| | 16VDZ | 750 | 179 | 2840 | 3859 | 2726 | 3408 | - | - |
| | 16VDZ | 720 | 181 | 2752 | 3739 | - | - | 2642 | 3302 |
| 12VDZ | 12VDZ | 1000 | 188* | 3000 | 4076 | 2880 | 3600 | - | - |
| | 12VDZ | 1000 | 176 | 2800 | 3804 | 2688 | 3360 | - | - |
| | 12VDZ | 1000 | 166 | 2652 | 3603 | 2546 | 3182 | - | - |
| | 12VDZ | 900 | 188* | 2700 | 3668 | - | - | 2592 | 3240 |
| | 12VDZ | 900 | 166 | 2388 | 3245 | - | - | 2292 | 2866 |
| | 12VDZ | 800 | 173 | 2280 | 3098 | - | - | - | - |
| | 12VDZ | 750 | 179 | 2130 | 2894 | 2045 | 2556 | - | - |
| | 12VDZ | 720 | 181 | 2064 | 2804 | - | - | 1981 | 2477 |
| 8DZ | 8DZ | 1000 | 188* | 2000 | 2717 | 1920 | 2400 | - | - |
| | 8DZ | 1000 | 176 | 1875 | 2548 | 1800 | 2250 | - | - |
| | 8DZ | 1000 | 166 | 1768 | 2402 | 1697 | 2122 | - | - |
| | 8DZ | 900 | 188* | 1800 | 2446 | - | - | 1728 | 2160 |
| | 8DZ | 900 | 166 | 1592 | 2163 | - | - | 1528 | 1910 |
| | 8DZ | 800 | 173 | 1472 | 2000 | - | - | - | - |
| | 8DZ | 750 | 179 | 1420 | 1929 | 1363 | 1704 | - | - |
| | 8DZ | 720 | 181 | 1376 | 1870 | - | - | 1321 | 1651 |
| 6DZ | 6DZ | 1000 | 188* | 1500 | 2038 | 1440 | 1800 | - | - |
| | 6DZ | 1000 | 176 | 1405 | 1909 | 1349 | 1686 | - | - |
| | 6DZ | 1000 | 166 | 1326 | 1802 | 1273 | 1591 | - | - |
| | 6DZ | 900 | 188* | 1350 | 1834 | - | - | 1296 | 1620 |
| | 6DZ | 900 | 166 | 1194 | 1622 | - | - | 1146 | 1433 |
| | 6DZ | 800 | 173 | 1140 | 1549 | - | - | - | - |
| | 6DZ | 750 | 179 | 1065 | 1447 | 1022 | 1278 | - | - |
| | 6DZ | 720 | 181 | 1032 | 1402 | - | - | 1075 | 1344 |

**Conversion factors used:**
1 metric HP=0,736 kW
→ Generator efficiency: $\eta_G$ = 0,96
→ Power factor: cos θ = 0,8

*For special applications. Contact ABC for more information.

**Features, performance and emissions may vary based on configuration, usage and operating conditions.

# **DZ** Engine Platform

UP TO 3.53 MW*

**Dual Fuel** Methanol (MeOH)



### 6DZ DF MeOH

MCR up to 1,326 kW
1,273 kWe / 1,591 kVA at 50 Hz
1,146 kWe / 1,433 kVA at 60 Hz

### 8DZ DF MeOH

MCR up to 1,768 kW
1,697 kWe / 2,122 kVA at 50 Hz
1,528 kWe / 1,910 kVA at 60 Hz

### 12VDZ DF MeOH

MCR up to 2,652 kW
2,546 kWe / 3,182 kVA at 50 Hz
2,292 kWe / 2,866 kVA at 60 Hz

### 16VDZ DF MeOH

MCR up to 3,536 kW
3,395 kWe / 4,243 kVA at 50 Hz
3,057 kWe / 3,821 kVA at 60 Hz





*Features, performance and emissions may vary based on configuration, usage and operating conditions.



# **DZ** Engine Platform

POWERED BY METHANOL®

**Dual Fuel** Methanol (MeOH)

ABC's **DZ methanol dual fuel engines** offer vessel operators a reliable, efficient and **future-ready solution** for low-emission marine propulsion and onboard power. When produced from renewable sources, **methanol is $CO_2$ neutral**, making it a strong candidate for cleaner shipping. The DZ MeOH dual fuel range includes both **inline and V-engines**, allowing flexible integration across vessel types.

Depending on the operational profile and load, a ratio of up to **70% methanol and 30% conventional fuel or biofuel** can be achieved. These are **energetic ratios**, meaning up to **70% of the engine's energy output** is derived from methanol. When methanol is not available, the engine can run fully on **(bio)diesel** or **HVO**, ensuring **uninterrupted operations**.

This flexible technology enables early adoption of methanol without waiting for full fuel infrastructure rollout, **avoiding future conversion costs**. When paired with ABC's **exhaust after-treatment system**, emissions of soot and $NO_2$ are minimised, helping you meet the most stringent environmental regulations.

***Running on Methanol Today.***




*A 12VDZ methanol dual fuel engine on the test bench at the ABC factory, ready for the Factory Acceptance Test (FAT). Two engines of this type are now powering a newbuild tugboat.*

DOWNLOAD ONE-PAGER

WATCH THE VIDEO

# **DZ** Engine Platform

**Dual Fuel** Methanol (MeOH)

**Retrofit of existing ABC engines**
Existing ABC diesel engines can be easily retro-fitted to dual fuel methanol, demonstrated by the Port of Antwerp-Bruges' Methatug.

**Safe dual fuel MeOH fuel system**
The double-walled methanol fuel system prevents leaks, ensuring IGF code compliance, with necessary safety and installation regulations.

**No lubrication additives required**
DZ DF MeOH engines don't require lubrication additives, eliminating the need for a separate lubrication unit, saving space and costs.




**In-house development**
The DZ DF MeOH engines are developed in-house, using proven technology, ensuring long-term efficiency and reliability.

**Compact fuel preparation room**
Ideal for heavy-duty operations, low-pressure injection requires less preparation, reducing ATEX zone size and increasing storage space for cost savings.

**Low-pressure fuel injection**
Using a low-pressure (<10 bar) port injection, methanol offers a safe, simple and cost-effective system compared to high-pressure direct injection alternatives.

**DZ dual fuel MeOH engines trusted by leading global operators**
Global leaders trust ABC's DZ DF MeOH engines, reducing $CO_2$ emissions while driving innovation and sustainability in heavy-duty applications.



DZ Engine Platform

POWERED BY METHANOL®

Dual Fuel Methanol (MeOH)

| | | | | | | Nominal power of gensets | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 50 Hz electric - 3 phase | | 60 Hz electric - 3 phase | |
| | Engine type | rpm | BMEP | kW* | HP | $P_w$ (kW) | $P_n$ (kVA) | $P_w$ (kW) | $P_n$ (kVA) |
| 16VDZ DF MeOH | 16VDZ DF MeOH | 1000 | 166 | 3536 | 4804 | 3395 | 4243 | - | - |
| | 16VDZ DF MeOH | 900 | 166 | 3182 | 4326 | - | - | 3057 | 3821 |
| | 16VDZ DF MeOH | 800 | 166 | 2829 | 3844 | 2716 | 3395 | - | - |
| | 16VDZ DF MeOH | 750 | 166 | 2652 | 3603 | 2546 | 3182 | - | - |
| | 16VDZ DF MeOH | 720 | 166 | 2546 | 3459 | - | - | 2444 | 3055 |
| 12VDZ DF MeOH | 12VDZ DF MeOH | 1000 | 166 | 2652 | 3603 | 2546 | 3182 | - | - |
| | 12VDZ DF MeOH | 900 | 166 | 2387 | 3245 | - | - | 2292 | 2866 |
| | 12VDZ DF MeOH | 800 | 166 | 2122 | 2883 | 2037 | 2546 | - | - |
| | 12VDZ DF MeOH | 750 | 166 | 1989 | 2702 | 1909 | 2387 | - | - |
| | 12VDZ DF MeOH | 720 | 166 | 1909 | 2594 | - | - | 1833 | 2291 |
| 8DZ DF MeOH | 8DZ DF MeOH | 1000 | 166 | 1768 | 2402 | 1697 | 2122 | - | - |
| | 8DZ DF MeOH | 900 | 166 | 1591 | 2163 | - | - | 1528 | 1910 |
| | 8DZ DF MeOH | 800 | 166 | 1414 | 1922 | 1358 | 1697 | - | - |
| | 8DZ DF MeOH | 750 | 166 | 1326 | 1802 | 1273 | 1591 | - | - |
| | 8DZ DF MeOH | 720 | 166 | 1273 | 1730 | - | - | 1222 | 1528 |
| 6DZ DF MeOH | 6DZ DF MeOH | 1000 | 166 | 1326 | 1802 | 1273 | 1591 | - | - |
| | 6DZ DF MeOH | 900 | 166 | 1193 | 1622 | - | - | 1146 | 1433 |
| | 6DZ DF MeOH | 800 | 166 | 1061 | 1441 | 1018 | 1273 | - | - |
| | 6DZ DF MeOH | 750 | 166 | 995 | 1351 | 955 | 1193 | - | - |
| | 6DZ DF MeOH | 720 | 166 | 955 | 1297 | - | - | 917 | 1146 |

**Conversion factors used:** 1 metric HP=0,736 kW → Generator efficiency: $\eta_G = 0,96$ → Power factor: $\cos \theta = 0,8$
*Features, performance and emissions may vary based on configuration, usage and operating conditions.

# **DZ** Engine Platform

UP TO 2.67 MW*

**Dual Fuel** Hydrogen ($H_2$)



## 6DZ DF H2

MCR up to 1,000 kW
960 kWe / 1,200 kVA at 50 Hz
864 kWe / 1,080 kVA at 60 Hz

## 8DZ DF H2

MCR up to 1,335 kW
1,282 kWe / 1,602 kVA at 50 Hz
1,152 kWe / 1,440 kVA at 60 Hz

## 12VDZ DF H2

MCR up to 2,000 kW
1,920 kWe / 2,400 kVA at 50 Hz
1,728 kWe / 2,160 kVA at 60 Hz

## 16VDZ DF H2

MCR up to 2,670 kW
2,563 kWe / 3,204 kVA at 50 Hz
2,304 kWe / 2,880 kVA at 60 Hz

**BELGIAN JOINT VENTURE**

ABC CMB.TECH

*Features, performance and emissions may vary based on configuration, usage and operating conditions.



**DZ** Engine Platform

BEHYDRO
THE HYDROGEN FUTURE IS NOW

**Dual Fuel** Hydrogen ($H_2$)

Under the **BeHydro** brand, ABC offers **hydrogen dual fuel engines** that help vessel owners significantly reduce **greenhouse gas emissions** by up to **85%**. These engines combine hydrogen with a pilot injection of **(bio) diesel** or **HVO**, offering a flexible, low-emission solution for demanding marine operations.

The **dual fuel** design ensures full operability even when hydrogen is temporarily unavailable, reducing reliance on a single fuel source. The switchover from hydrogen gas to 100% liquid fuel happens automatically, ensuring a **seamless transition without operator intervention**. This provides shipowners with **fuel flexibility**, **operational continuity** and **peace of mind**, while also enabling an early investment in hydrogen technology.

By choosing **BeHydro**, operators can **future-proof** their fleet and avoid the high costs of later conversions. Combined with an **ABC exhaust aftertreatment system**, these engines also achieve **extremely low NOx and particulate emissions**, staying well below **EU Stage V limits**. Proven at sea and available in both **inline** and **V-engine configurations**, they meet evolving regulations without compromising on performance or reliability.

***Running on Hydrogen Today.***




**BE FLEXIBLE**

Dual Fuel : Operating on 85% hydrogen gas and 15% liquid fuel
Possible to operate on 100% liquid fuel

**BE SUSTAINABLE**

Dual Fuel: 85% $CO_2$ reduction
No use of rare materials such as lithium, zinc, cobalt, platinum, rare earths.
DZD $H_2$ engine > 80% Circularity

**BE COMPETITIVE**

Longevity: +200,000 running hours
Easy and simple maintenance
Availability of spare parts
(no use of rare or conflict materials)

**BE POWERFUL**

Extended power range: 500 kW - 2,670 kW
Possible to operate on less purified hydrogen
Quick reaction to variable load

VIDEO BEHYDRO DUAL FUEL

VISIT THE WEBSITE

# **DZ** Engine Platform

UP TO 2.67 MW*

**Mono Fuel** Hydrogen ($H_2$) – **ZERO EMISSION**



### 6DZ SI H2

MCR up to 1,000 kW
960 kWe / 1,200 kVA at 50 Hz
864 kWe / 1,080 kVA at 60 Hz

### 8DZ SI H2

MCR up to 1,335 kW
1,282 kWe / 1,602 kVA at 50 Hz
1,152 kWe / 1,440 kVA at 60 Hz

### 12VDZ SI H2

MCR up to 2,000 kW
1,920 kWe / 2,400 kVA at 50 Hz
1,728 kWe / 2,160 kVA at 60 Hz

### 16VDZ SI H2

MCR up to 2,670 kW
2,563 kWe / 3,204 kVA at 50 Hz
2,304 kWe / 2,880 kVA at 60 Hz





BELGIAN JOINT VENTURE

ABC CMB.TECH

*Features, performance and emissions may vary based on configuration, usage and operating conditions.



# **DZ** Engine Platform

BEHYDRO
THE HYDROGEN FUTURE IS NOW

**Mono Fuel** Hydrogen ($H_2$) – **ZERO EMISSION**

Under the **BeHydro** brand, ABC offers **spark-ignited (SI) hydrogen ICEs** that deliver 100% zero-emission power. These mono-fuel engines emit no harmful substances such as **$CO_2$, $NO_x$, $SO_x$**, or **particulates**, supporting clean and compliant marine operations. With only water vapour and aspirated air as by-products, **they meet** even **the most stringent emission standards** without the need for **exhaust aftertreatment**.

The engines run exclusively on **hydrogen** and are also able to operate on **less purified hydrogen**, making them suitable for varying supply conditions. They also avoid the use of scarce or toxic raw materials such as lithium, cobalt, platinum, or rare earths – reducing environmental impact and health risks.

Available in both **inline and V-engine configurations**, BeHydro SI engines provide a reliable and sustainable power solution for vessel owners aiming for **zero emissions** without compromising on performance or safety.

***Running on 100% Hydrogen Today.***



*A BeHydro 100% hydrogen 6-cylinder engine at ABC's factory in Ghent, Belgium, delivering 1 MW of zero-emission power.*

**BE SUSTAINABLE**

Mono Fuel: 100% $CO_2$ reduction
No use of rare materials such as lithium, zinc, cobalt, platinum, rare earths.
DZ $H_2$ engine > 80% Circularity

**BE COMPETITIVE**

Longevity: +200,000 running hours
Easy and simple maintenance
Availability of spare parts
(no use of rare or conflict materials)

**BE POWERFUL**

Extended power range: 500 kW - 2,670 kW
Possible to operate on less purified hydrogen
Quick reaction to variable load

VIDEO BEHYDRO 100% $H_2$

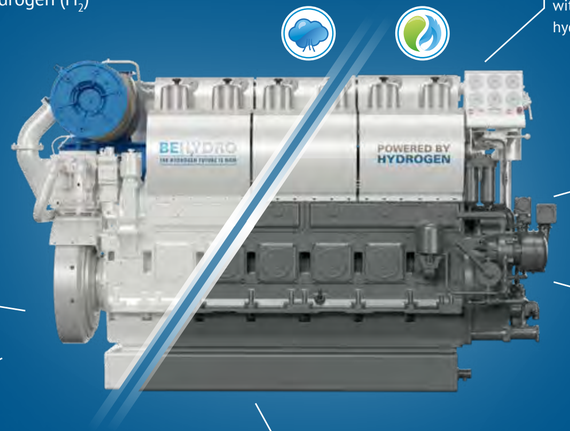
VISIT THE WEBSITE

# **DZ** Engine Platform

**Mono Fuel** Hydrogen ($H_2$) – **ZERO EMISSION**

**Dual Fuel** Hydrogen ($H_2$)

**Reliable, Stable Power**
BeHydro dual fuel and 100% hydrogen engines deliver power outputs from 900 kWm (1,360 HP) to 2,670 kWm (3,630 HP) per engine. When paired with an alternator, they cover a power range of 855 kWe (1,069 kVA) to 2,537 kWe (3,171 kVA).




**Quick and Easy Maintenance (DF)**
Easily accessible and familiar engine components minimise downtime, ensuring an uninterrupted power supply. Maintenance teams experienced with diesel engines will find the transition to hydrogen combustion engines seamless.

**Fuel Flexibility (DF)**
BeHydro dual fuel engines run on up to 85%* hydrogen or 100% (bio)diesel/ HVO fuel. They switch seamlessly to conventional fuel when hydrogen is (temporarily) unavailable.

**Versatile and Reliable (DF)**
BeHydro hydrogen engines handle slight impurities in hydrogen and use proven technology for long-term, efficient operation.

**Sustainable Power, Cleaner Future**
BeHydro engines offer 100% clean, $CO_2$-free energy with mono-fuel technology and are EU stage V and IMO Tier 3 compliant without DPF/ SCR systems.

**Future-proof (DF)**
BeHydro engines are rigorously factory-tested, ensuring exceptional reliability and dependability. Investing in hydrogen-ready technology today future-proofs your operations and gives you a competitive edge.




# **DZ** Engine Platform

**Mono Fuel** Hydrogen ($H_2$) – **ZERO EMISSION**

**Dual Fuel** Hydrogen ($H_2$)


BEHYDRO
THE HYDROGEN FUTURE IS NOW

| | | | | | | Nominal power of gensets | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 50 Hz electric - 3 phase | | 60 Hz electric - 3 phase | |
| | Engine type | rpm | BMEP | kW* | HP | $P_w$ (kW) | $P_n$ (kVA) | $P_w$ (kW) | $P_n$ (kVA) |
| VDZ DF SI H2 | 16VDZ DF/SI H2 | 1000 | 125 | 2670 | 3628 | 2563 | 3204 | - | - |
| | 16VDZ DF/SI H2 | 900 | 125 | 2400 | 3261 | - | - | 2304 | 2880 |
| | 12VDZ DF/SI H2 | 1000 | 125 | 2000 | 2717 | 1920 | 2400 | - | - |
| | 12VDZ DF/SI H2 | 900 | 125 | 1800 | 2446 | - | - | 1728 | 2160 |
| DZ DF/SI H2 | 8DZ DF/SI H2 | 1000 | 125 | 1335 | 1814 | 1282 | 1602 | - | - |
| | 8DZ DF/SI H2 | 900 | 125 | 1200 | 1630 | - | - | 1152 | 1440 |
| | 6DZ DF/SI H2 | 1000 | 125 | 1000 | 1359 | 960 | 1200 | - | - |
| | 6DZ DF/SI H2 | 900 | 125 | 900 | 1223 | - | - | 864 | 1080 |

**Conversion factors used:** 1 metric HP=0,736 kW → Generator efficiency: $\eta_G = 0,96$ → Power factor: $\cos \theta = 0,8$
**Dual Fuel (DF):** Up to 85% hydrogen gas + (bio)diesel, HVO, marine diesel oil (MDO),…
**Mono Fuel (SI):** 100% hydrogen gas
*Features, performance and emissions may vary based on configuration, usage and operating conditions.

# **E23** Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels



## 4EL23

MCR up to 1,320 kW
1,056 kWe / 1,320 kVA at 50 Hz
1,267 kWe / 1,584 kVA at 60 Hz



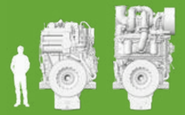
## 6EL23

MCR up to 2,160 kW
1,728 kWe / 2,160 kVA at 50 Hz
2,074 kWe / 2,592 kVA at 60 Hz



## 8EL23

MCR up to 2,880 kW
2,304 kWe / 2,880 kVA at 50 Hz
2,765 kWe / 3,456 kVA at 60 Hz



*Features, performance and emissions may vary based on configuration, usage and operating conditions.



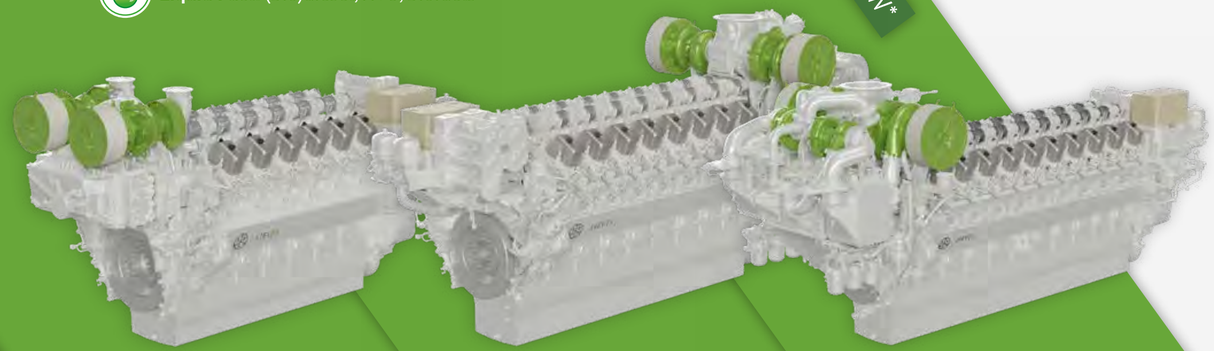
# **E23** Engine Platform

UP TO 7.2 MW*

**EVOLVE**

OUR ENGINES ARE FLEXIBLE, YOUR FUTURE IS SAFE

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels



## 12EV23

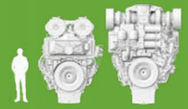
MCR up to 4,320 kW
3,456 kWe / 4,320 kVA at 50 Hz
4,500 kWe / 5,625 kVA at 60 Hz

## 16EV23

MCR up to 5,760 kW
5,000 kWe / 6,250 kVA at 50 Hz
5,530 kWe / 6,912 kVA at 60 Hz

## 20EV23

MCR up to 7,200 kW
5,760 kWe / 7,200 kVA at 50 Hz
6,912 kWe / 8,640 kVA at 60 Hz



*Features, performance and emissions may vary based on configuration, usage and operating conditions.

# **E23** Engine Platform

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels

The **Evolve E23 engine range** delivers dependable, high-performance propulsion for **heavy-duty tugboats** and other demanding marine applications. Available in inline and V configurations, with power outputs from 330 kW/cylinder (SST) or 360 kW/cylinder (DST), these engines ensure reliable performance today while preparing operators for tomorrow's fuel transition.

Designed for **fuel flexibility**, the E23 can run on conventional and alternative fuels, with a **modular design** enabling straightforward conversion to **dual fuel or 100% gas** operation. This adaptability protects against fuel supply uncertainty and ensures compliance with evolving emission regulations, making it a safe, **future-proof investment.**

Advanced features such as **common rail injection**, **variable valve timing**, **Miller cycle** and **two-stage turbocharging (DST)** deliver **low emissions** and **optimised fuel consumption** across all operating profiles. The versatile cylinder head design allows smooth integration of **liquid fuel injection**, **dual fuel capability** and **spark-ignited systems**.



With high **component commonality** across the platform, operators benefit from **faster servicing**, reduced parts inventory and **easy retrofit** or **upgrade options** throughout the engine's lifetime. Evolve offers more than propulsion: it provides **long-term operational security,** ensuring your vessel remains competitive, compliant and ready for the fuels of the future.

**FUTURE PROOF • FUEL FLEXIBLE • SAFE INVESTMENT**



**Liquid fuel**
Highly efficient Common Rail or PLN fuel injection system for liquid fuels.

**Dual fuel**
Micro pilot liquid fuel injection combined with gas injection system.





**Gas**
100% gas using a spark plug.



# **E23** Engine Platform

**EVOLVE**
OUR ENGINES ARE FLEXIBLE, YOUR FUTURE IS SAFE

**Liquid Fuel:** (Bio)diesel, HVO, Biofuels



**Environmentally Friendly**
Evolve specific exhaust after-treatment system (EATS) to ensure compliance with emission standards.

**Future Proof Engine Platform**
offering a secure investment, regardless of policy changes, competing technologies, or fluctuating fuel prices.

**Fuel Flexibility**
easy conversion from liquid fuel to dual fuel or spark-ignited operation.




**Easy Retrofit**
ABC DZ engines can be replaced with the new Evolve engine without changes to the foundation.

**Best Efficienty**
for every fuel type.

**Exchangeable Power Unit**
Ensuring a swift and hassle-free replacement process, up to 20% reduction in overhaul time can be achieved.

**Reliable Medium Speed-Power**
from 720 – 1,200 rpm.

**Compact High-Performance Engine**
MCR of > 1.3 MW with only 4 cylinders. MCR 6- and 8-cylinder engines up to 360 kW/cylinder (DST).

**Streamlined Component Design**
The component commonality within the Evolve engine range offers enhanced maintenance efficiency and cost effectiveness.

# **E23** Engine Platform

## **Liquid Fuel:** (Bio)diesel, HVO, Biofuels

| | Engine type | rpm | BMEP | kW** | HP | Nominal power of gensets: 50 Hz electric - 3 phase $P_w$ (kW) | 50 Hz electric - 3 phase $P_n$ (kVA) | 60 Hz electric - 3 phase $P_w$ (kW) | 60 Hz electric - 3 phase $P_n$ (kVA) |
|---|---|---|---|---|---|---|---|---|---|
| 8EL23 | 8EL23 * | 1200 | 280 | 2880 | 3913 | - | - | 2765 | 3456 |
| | 8EL23 | 1200 | 256 | 2640 | 3587 | - | - | 2534 | 3168 |
| | 8EL23 * | 1000 | 280 | 2400 | 3261 | 2304 | 2880 | - | - |
| | 8EL23 | 1000 | 256 | 2200 | 2989 | 2112 | 2640 | - | - |
| | 8EL23 | 900 | 256 | 1980 | 2690 | - | - | 1901 | 2376 |
| | 8EL23 | 750 | 256 | 1650 | 2242 | 1584 | 1980 | -- | -- |
| | 8EL23 | 720 | 256 | 1584 | 2152 | - | - | 1521 | 1901 |
| 6EL23 | 6EL23 * | 1200 | 280 | 2160 | 2935 | - | - | 2074 | 2592 |
| | 6EL23 | 1200 | 256 | 1980 | 2690 | - | - | 1901 | 2376 |
| | 6EL23 * | 1000 | 280 | 1800 | 2446 | 1728 | 2160 | - | - |
| | 6EL23 | 1000 | 256 | 1650 | 2242 | 1584 | 1980 | - | - |
| | 6EL23 | 900 | 256 | 1485 | 2018 | - | - | 1426 | 1782 |
| | 6EL23 | 750 | 256 | 1238 | 1681 | 1188 | 1485 | - | - |
| | 6EL23 | 720 | 256 | 1188 | 1614 | 1140 | 1426 | - | - |
| 4EL23 | 4EL23 | 1200 | 256 | 1320 | 1793 | - | - | 1267 | 1584 |
| | 4EL23 | 1000 | 256 | 1100 | 1495 | 1056 | 1320 | - | - |
| | 4EL23 | 900 | 256 | 990 | 1345 | - | - | 950 | 1188 |
| | 4EL23 | 750 | 256 | 825 | 1121 | 792 | 990 | - | - |
| | 4EL23 | 720 | 256 | 792 | 1076 | - | - | 760 | 950 |

**Conversion factors used:**
1 metric HP=0,736 kW
→ Generator efficiency: $\eta_G$ = 0,96
→ Power factor: cos θ = 0,8
*Dual Stage Turbo (DST)
**Features, performance and emissions may vary based on configuration, usage and operating conditions.



4EL23 6EL23 8EL23



# **E23** Engine Platform

EVOLVE
OUR ENGINES ARE FLEXIBLE, YOUR FUTURE IS SAFE

## **Liquid Fuel:** (Bio)diesel, HVO, Biofuels

| | Engine type | rpm | BMEP | kW** | HP | Nominal power of gensets: 50 Hz electric - 3 phase $P_w$ (kW) | 50 Hz electric - 3 phase $P_n$ (kVA) | 60 Hz electric - 3 phase $P_w$ (kW) | 60 Hz electric - 3 phase $P_n$ (kVA) |
|---|---|---|---|---|---|---|---|---|---|
| 20EV23 | 20EV23 * | 1200 | 280 | 7200 | 9783 | - | - | 6912 | 8640 |
| | 20EV23 | 1200 | 256 | 6600 | 8967 | - | - | 6336 | 7920 |
| | 20EV23 * | 1000 | 280 | 6000 | 8152 | 5760 | 7200 | - | - |
| | 20EV23 | 1000 | 256 | 5500 | 7473 | 5280 | 6600 | - | - |
| | 20EV23 | 900 | 256 | 4950 | 6726 | - | - | 4752 | 5940 |
| | 20EV23 | 750 | 256 | 4125 | 5605 | 3960 | 4950 | - | - |
| | 20EV23 | 720 | 256 | 3960 | 5380 | - | - | 3802 | 4752 |
| 16EV23 | 16EV23 * | 1200 | 280 | 5760 | 7826 | - | - | 5530 | 6912 |
| | 16EV23 | 1200 | 256 | 5280 | 7174 | - | - | 5069 | 6336 |
| | 16EV23 * | 1000 | 280 | 4800 | 6522 | 5000 | 6250 | - | - |
| | 16EV23 | 1000 | 256 | 4400 | 5978 | 4583 | 5729 | - | - |
| | 16EV23 | 900 | 256 | 3960 | 5380 | - | - | 3802 | 4752 |
| | 16EV23 | 750 | 256 | 3300 | 4484 | 3438 | 4297 | - | - |
| | 16EV23 | 720 | 256 | 3168 | 4304 | - | - | 3041 | 3802 |
| 12EV23 | 12EV23 * | 1200 | 280 | 4320 | 5870 | - | - | 4500 | 5625 |
| | 12EV23 | 1200 | 256 | 3960 | 5380 | - | - | 4125 | 5156 |
| | 12EV23 * | 1000 | 280 | 3600 | 4891 | 3456 | 4320 | - | - |
| | 12EV23 | 1000 | 256 | 3300 | 4484 | 3168 | 3960 | - | - |
| | 12EV23 | 900 | 256 | 2970 | 4035 | - | - | 3094 | 3867 |
| | 12EV23 | 750 | 256 | 2475 | 3363 | 2376 | 2970 | - | - |
| | 12EV23 | 720 | 256 | 2376 | 3228 | - | - | 2475 | 3094 |

**Conversion factors used:**
1 metric HP=0,736 kW
→ Generator efficiency: $\eta_G$ = 0,96
→ Power factor: cos θ = 0,8
*Dual Stage Turbo (DST)
**Features, performance and emissions may vary based on configuration, usage and operating conditions.



12EV23 16EV23 20EV23

# **Global** Presence

ABC's **engineering expertise**, supported by a robust network of reliable partners, enables us to deliver **turn-key marine propulsion and power solutions** worldwide. We operate in more than **70 countries** through our **international branches**, providing **on-site commissioning, engine upgrades, repairs, preventive maintenance** and **expert advice** for ABC engines. Our dedicated **service teams** work closely with trusted partners to maximise **engine productivity** and **uptime**.

To ensure a **rapid response**, ABC maintains a substantial **inventory of spare parts**, enabling swift dispatch worldwide, often within hours. This **global spare parts service** is supported by **local service stations** holding extensive stocks of **spares** and **consumables**, ensuring fast delivery and effective **maintenance support**.

Our commitment to excellence combines advanced **engineering capabilities** with responsive **global service**, supporting vessel performance from commissioning to ongoing operation.






# **Worldwide** Agents




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**Contact one of our agents worldwide**

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We power your future

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