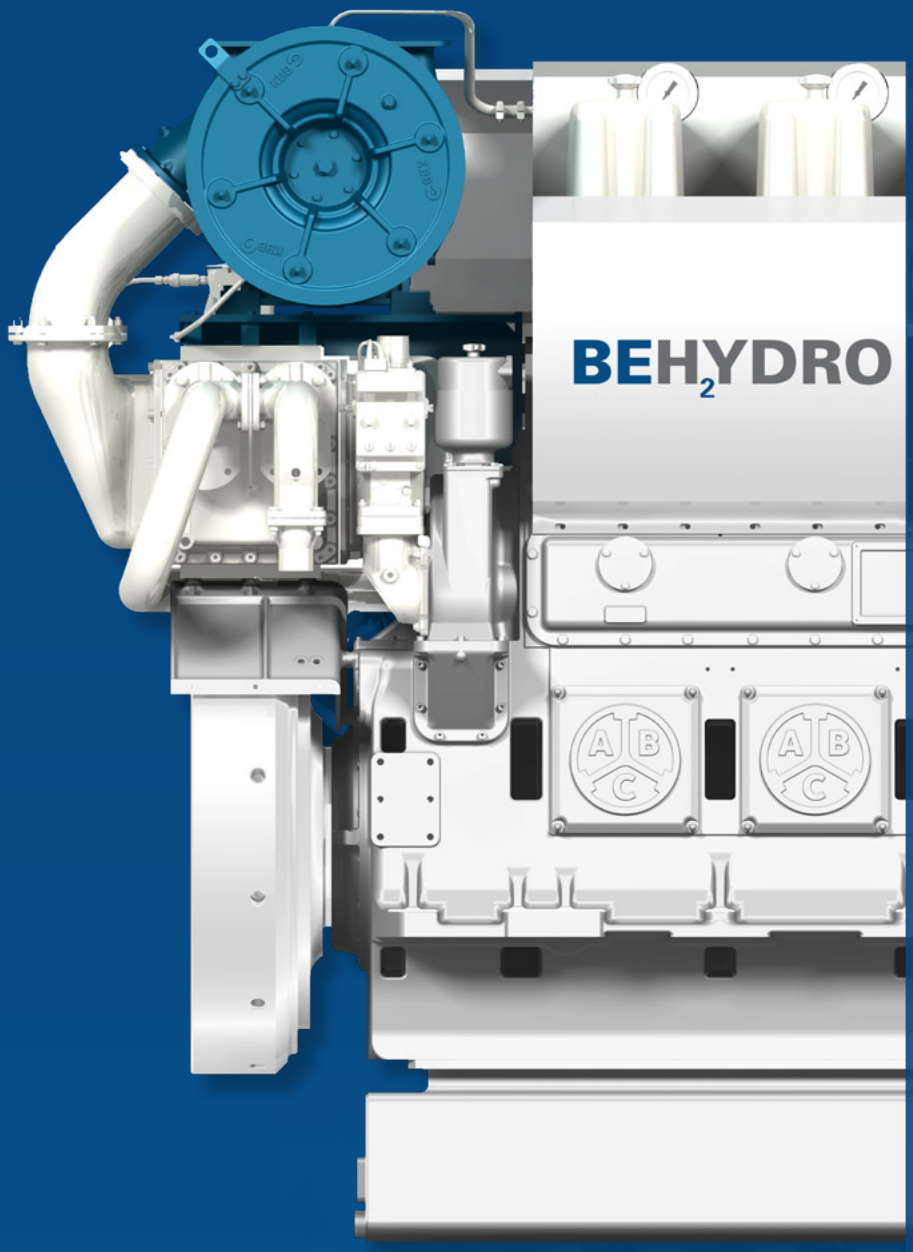
BEHYDRO

THE HYDROGEN FUTURE IS NOW



INFORMATION SHEET

BEH$_2$YDRO

THE HYDROGEN FUTURE IS NOW

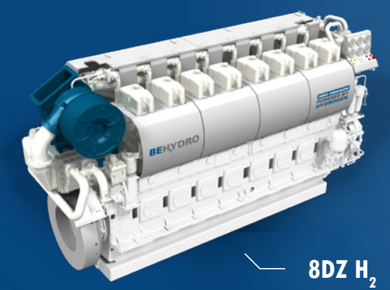
Global warming is leading to extreme weather conditions with disastrous consequences for mankind. Action is not only necessary, it is a must. The EU's binding target of achieving climate neutrality by 2050 has therefore prompted the industry to accelerate its energy transition.

Many demanding industries such as shipping, railways and power generation need sustainable and financially viable technologies.
Thanks to BEH$_2$YDRO, the solution is within reach. The joint venture between Anglo Belgian Corporation (ABC) and CMB.TECH combines the knowledge and skills of a multi-fuel engine manufacturer with the insights of a leading shipping company with solutions for H_2 storage systems.

Both with its 100% hydrogen engines with ZERO emission and its dual-fuel hydrogen engines, BEH$_2$YDRO today offers innovative and user-friendly solutions that reduce the CO_2 footprint of its business partners completely or to an absolute minimum. We look forward towards a prosperous, green future.

Enjoy reading!

100% H_2 ENGINES



8DZ H_2

BE POWERFUL

Extended power range: 500 kW – 2670 kW
Possible to operate on less purified hydrogen
Quick reaction to variable load

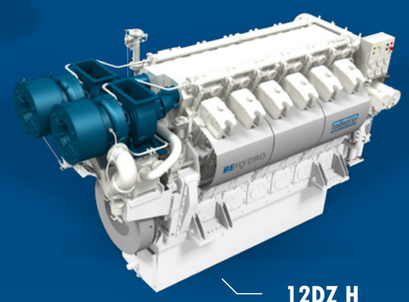
BE COMPETITIVE

Long lifetime: +200.000 running hours
Easy maintenance - Availability of spare parts
(no use of rare or conflict materials)

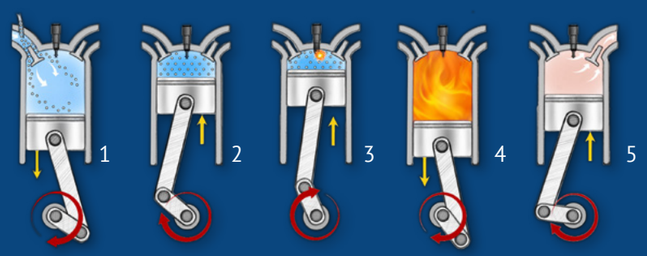
6DZ H_2

BE SUSTAINABLE

100 % clean technology: ZERO emission & non toxic
EU Stage V compliant without SCR and/or DPF system
No use of rare materials such as lithium, zinc,
cobalt, platinum, rare earths, ...



12DZ H_2



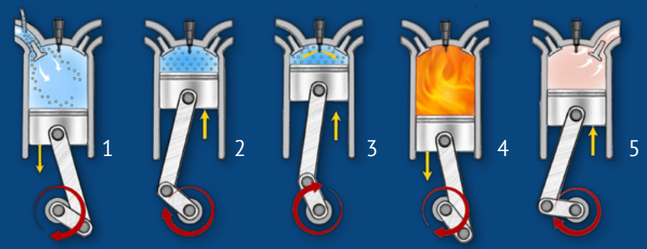
THE PROCESS

1 Air and H_2 inlet
2 Compression
3 Spark ignition
4 Combustion
5 Exhaust outlet

16DZ H_2

DUAL-FUEL H_2 ENGINES

8DZD H_2

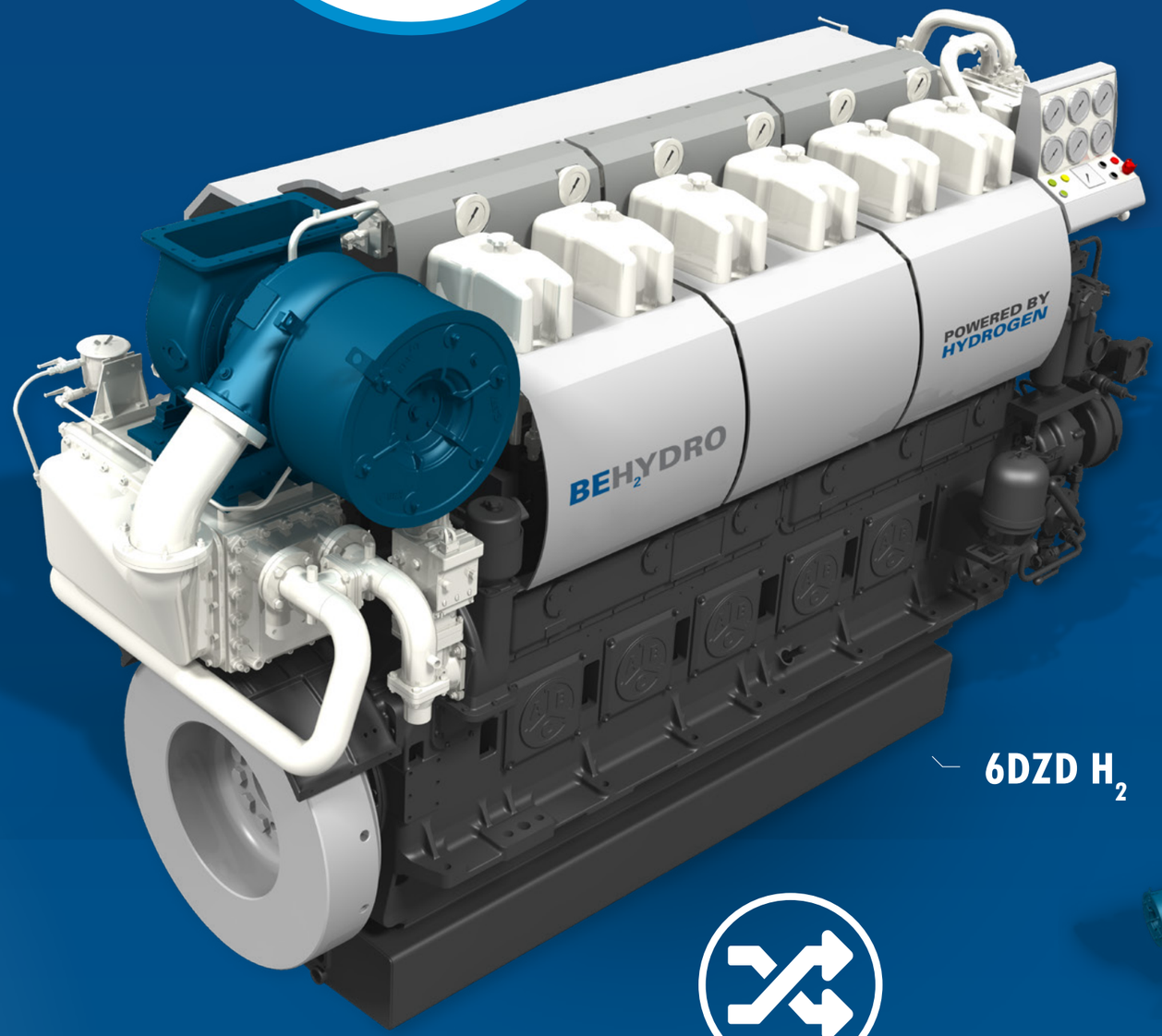


THE PROCESS

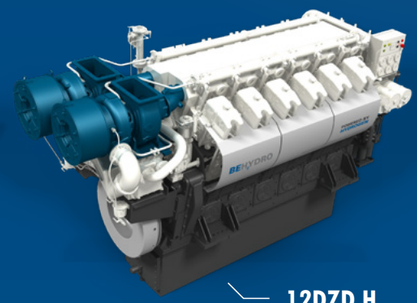
1 Air and H_2 inlet
2 Compression
3 Liquid fuel injection
4 Combustion
5 Exhaust outlet

BE POWERFUL

Extended power range: 500 kW – 2670 kW
Possible to operate on less purified hydrogen
Quick reaction to variable load



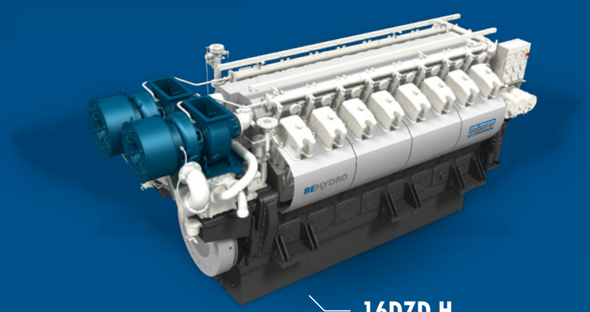
6DZD H_2



12DZD H_2

BE SUSTAINABLE

85 % CO_2 reduction. EU Stage V compliant
in combination with SCR and DPF system.
No use of rare materials such as lithium, zinc,
cobalt, platinum, rare earths, ...



16DZD H_2

BE COMPETITIVE

Long lifetime: +200.000 running hours
Easy maintenance
Availability of spare parts (no use of rare or conflict materials)

BE FLEXIBLE

Operating on 85 % hydrogen gas
AND 15 % liquid fuel
Possible to operate on 100 % liquid fuel

MARKET
APPLICATIONS

HYDROTUG

Port of Antwerp - Belgium
65 ton bollard pull - tractor tug
EU STAGE V (SCR & DPF) - IMO TIER III
2x 12DZD H_2 - 4000 kW

HYDROGEN STORAGE

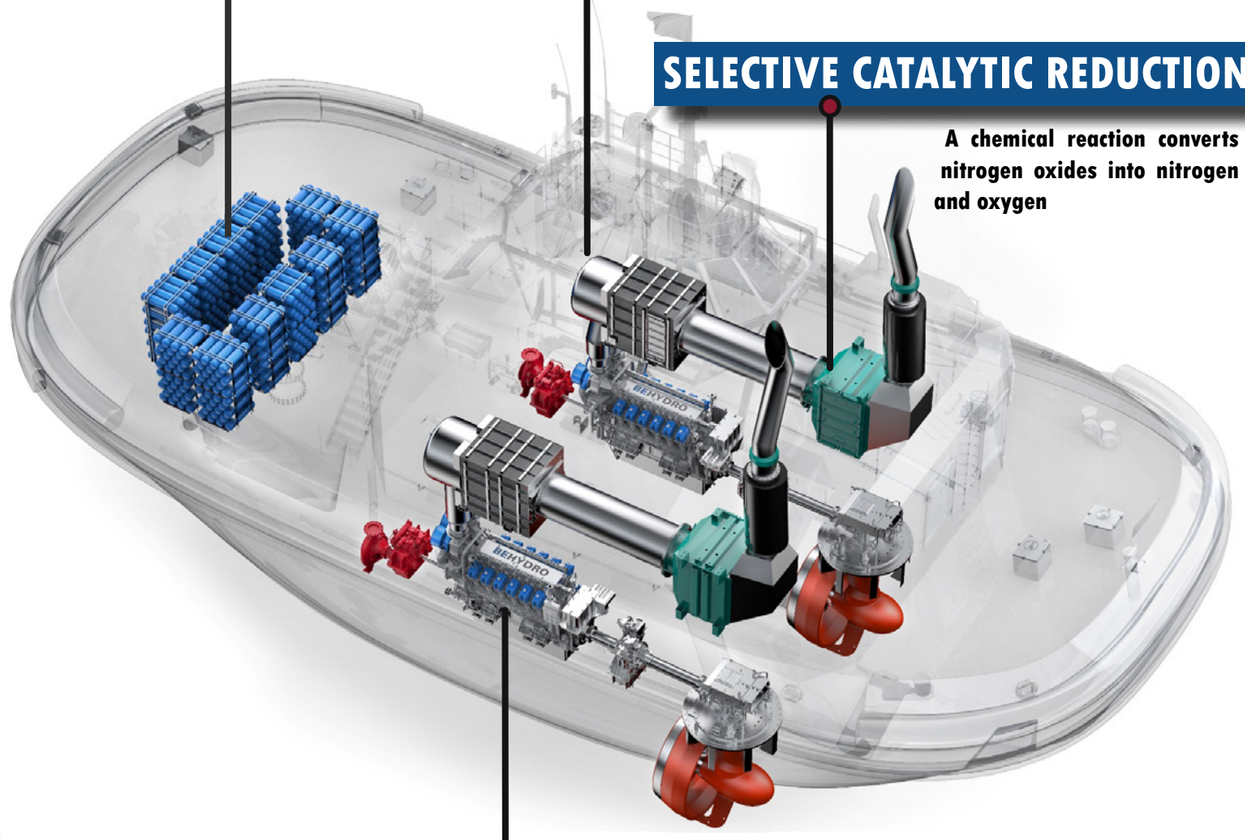
396 cylinder tanks - 250 bar
Storage of 400 kg hydrogen
Easy maintenance/acces/removal
Modulair hydrogen storage system

DIESEL PARTICULATE FILTER

DPF removes diesel particulate matter
or soot from the exhaust gas

SELECTIVE CATALYTIC REDUCTION

A chemical reaction converts
nitrogen oxides into nitrogen
and oxygen



BEHYDRO DUAL-FUEL ENGINE

V12 - 2000 kW
Dual Fuel hydrogen (85%) - liquid fuel (15%) co-combustion
85% CO_2 reduction

With BEH$_2$YDRO dual-fuel gensets, up to 85% of the GHG emissions of a regular diesel generator can be saved. When combined with green H_2 production, these gensets provide clean power at a cheaper cost compared to fuel cell or battery technology.
The BEH$_2$YDRO mono-fuel gensets can offer a zero carbon footprint while offering a reliable and affordable power supply.

CONTAINERIZED GENSET

ALTERNATIVE MARINE POWER

Mobile genset delivers automatically at correct Voltage/Frequency next to the vessel. No expensive power converters are required.

RAILWAY SOLUTIONS

Many railway tracks are difficult to be electrified.
Dual-fuel powered locomotives can be used on these tracks to achieve a low carbon emission footprint.

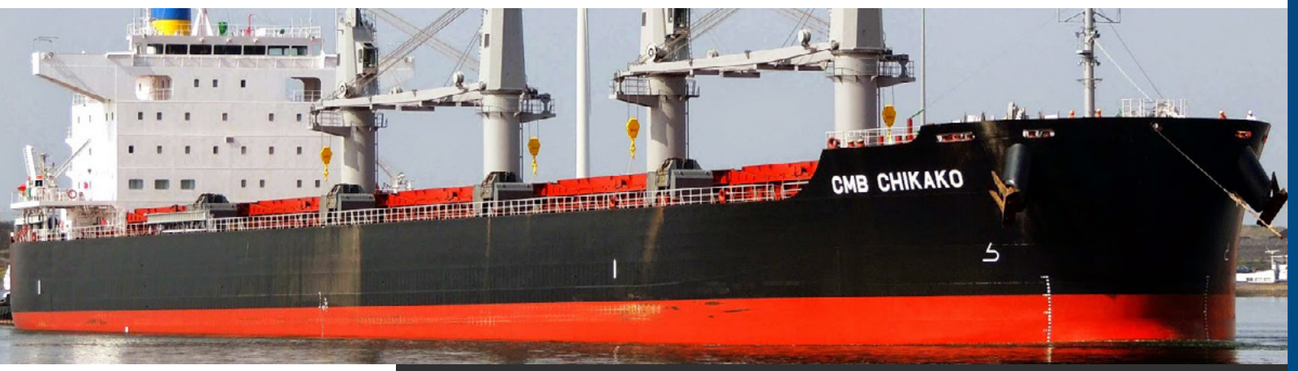
CONTAINERIZED
HYDROGEN ENGINE

As part of the testing programme, a full-scale production model of the BEH$_2$YDRO engine was installed into a custom-made container. The full setup of the 6-cylinder engine, container, hydrogen valve train, generator and H_2 supply has been extensively tested at the factory in Ghent (BE).

The efficiency, reliability and performance of the hydrogen engine was fully optimized. BEH$_2$YDRO can rely on a large in-house expertise and a high-performance engineering team closely monitoring and improving the performance of the hydrogen combustion technology. BEH$_2$YDRO is committed to deliver superior quality and reliable hydrogen combustion engines for today's energy demand.

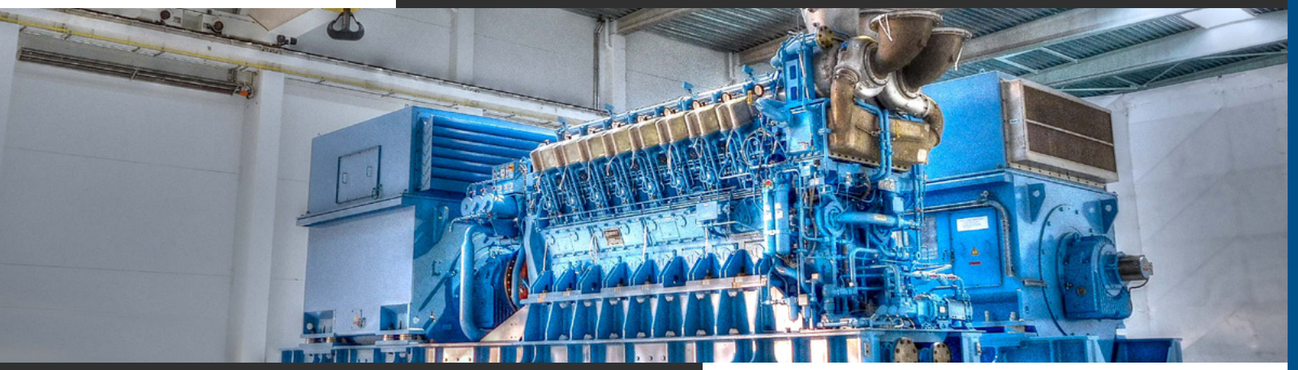
BELGIAN JOINT VENTURE

The joint venture combines the skills of a premium engine manufacturer with the views of a leading ship owner. Many industries such as shipping, railway and power generation have a need for clean technologies in order to make the energy transition happen. BEH$_2$YDRO has set itself the goal of providing the best solution for these demanding industries.



CMB .TECH

CMB.TECH builds, owns, operates and designs large marine and industrial applications that run on hydrogen and ammonia. CMB.TECH also offers hydrogen and ammonia fuel to its customers, either through own production or by sourcing it from third party producers. CMB.TECH is CMB's cleantech division. CMB is a Belgian shipping company based in Antwerp and was founded in 1895. CMB owns and operates a fleet of 140 ships in various shipping segments.



ABC founded in 1912 and located in Ghent, Belgium, is a leading European manufacturer of medium-speed engines in the power range between 600 and 10 400 kW. The company develops and manufactures reliable and innovative medium-speed engines for the energy and transport industry (propulsion engines and generating sets for marine applications and diesel-hydraulic or diesel-electric engines for locomotive traction applications).

ANGLO BELGIAN CORPORATION

We power your future

OUR MISSION

- REDUCE CO_2 EMISSIONS AT SEA, AT LAND
- INVESTMENT IN R&D
- DEVELOPMENT HYDROGEN COMBUSTION ENGINE
- STORAGE OF HYDROGEN
- INTRODUCTION H_2 IN DIFFERENT APPLICATIONS

CONTACT US

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SCAN ME

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