



## A smarter perspective on ship power solutions

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In this edition of Xtra, we bring you our latest technology and product updates. Interest in our X-DF dual fuel portfolio is increasing across the full fuel range. We shared the latest advances in our X-DF for LNG technology at a recent event with customers in Greece.

Our WinGD Xpert series covers the insights we've gained on ammonia combustion. And you can learn more about WinGD's X-EL Energy Management solutions in our latest information video.

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### TECHNOLOGY TALK

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#### WinGD Expert Talk Greece 2024



WinGD's dual-fuel technologies are at the heart of our approach to decarbonisation in maritime and this theme underpinned our Expert Talk event in Kallithea, Greece earlier in March.



Thank you to the many delegates who joined us to hear our experts describe the very latest developments in our sustainable technology portfolio. Sharing our insights with the esteemed shipping community in Greece, and hearing firsthand their observations, was an honour.

[Read more](#)

## Want to hear more from our Xperts?



**WINGD Xperts**



**Dr Beat von Rotz**  
Team Leader  
Applied Research & Measurements

[Watch our latest Xpert video here](#)

with Dr. Beat von Rotz, Team Leader, Applied Research & Measurements, who explains what our unique Spray Combustion Chamber research facility has revealed about the difference between ammonia and diesel flames – and how that has translated into our engine development process.

Be sure to follow us on LinkedIn to hear the latest from our WinGD Xperts as they answer some of our most frequently asked questions from our Customers.

Do you have a question you would like us to answer? Feel free to submit it by replying to this email.

## The Motorship covers WinGD's VCR technology

The advances in our Variable Compression Ratio technology are covered in a recent article in The Motorship. Learn more about how this technology is tipping the scale in favour of our dual-fuel LNG low-pressure engine among some shipowners.

[Read more](#)

## WinGD and Mitsubishi Shipbuilding agree ammonia fuel supply system

### TWO-STROKE ENGINES

### VCR NARROWS GAP BETWEEN DUAL-FUEL TWO-STROKE DESIGNS

Early orders indicate that WinGD's latest advance to its X-DF platform could answer some of the challenges associated with low-pressure dual-fuel engines

In the comparison between low-pressure and high-pressure dual-fuel engines, two things stand in favour of high-pressure. Diesel-cycle concepts deliver better performance in diesel mode and lower methane slip when using LNG. A new technology from engine designer WinGD aims to both close that gap and improve the case further for low-pressure engines amongst those already convinced – and there are early signs that some operators are seeing the value in variable compression ratio (VCR) technology.

As reported previously, VCR is the result of a decade-long development project between WinGD and Mitsui E&S (Mitsubishi Shipbuilding). It enables an engine's compression ratio to be adapted for the first time on marine engines, optimising combustion depending on fuel type, ambient conditions, engine load and other parameters. In early tests, WinGD was encouraged by efficiency improvements in Diesel mode, but in subsequent tests, improvements in both gas efficiency and methane slip abatement have been noted. In the most recent tests, using VCR reduced fuel consumption and CO<sub>2</sub> emissions by 2% when running on diesel. In LNG mode, overall GHG emissions (including CO<sub>2</sub>



Together with Japanese shipbuilder and technology developer Mitsubishi Shipbuilding Co., Ltd., we have completed the initial design of an ammonia fuel supply system (AFSS) for vessels powered by our X-DF-A ammonia-fueled engines.

[Read more](#)



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## X-EL - ENERGY MANAGEMENT SOLUTIONS

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Electrification and hybrid power technologies offer exceptional optimization potential for today's vessels, helping to improve fuel efficiency and reduce emissions while improving reliability and load response across the integrated power system.

WinGD's X-EL Energy Management takes a holistic approach to designing power arrangements that goes far beyond the main engine.

[Learn more here](#) or watch the in-depth video [here](#).

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## POWER YOUR CAREER

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Start your next career journey today



There has never been a more exciting time to start a career in the shipping industry. A career with WinGD has a direct impact on shaping a better world for tomorrow.

[Read more](#)

## BROCHURES



### WinGD Low-Speed Engines Booklet 2024

[Download now](#)



### WinGD Ammonia Dual-Fuel Engines - FAQ

[Download now](#)

## WHERE YOU'LL FIND US



## Sea Japan 2024

10-12 April 2024

Tokyo Big Sight, East Hall 1-3

**Stand 2B-06**

Tokyo, Japan

[Find out more](#)

## Posidonia

3-7 June 2024

Athens Metropolitan Expo SA

**Stand 3.112**

Athens, Greece

[Find out more](#)

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