

Feadship and AtomicOne join forces to bring MXBuster technology to the superyacht fleet

Hoofddorp, 21 October 2026 – Feadship and Dutch technology developer AtomicOne are joining forces to bring MXBuster® combustion optimisation technology to yachts over 30 metres. The collaboration follows more than a year of successful operation on board a Feadship and opens new possibilities for reducing emissions and fuel consumption across the existing fleet.

Developed by AtomicOne, MXBuster improves the combustion process at the engine intake rather than treating emissions after combustion. Hydrogen produced from purified water, together with conditioned water vapour, is introduced into the intake air to improve combustion. The result is lower emissions, reduced soot formation and lower fuel consumption.

Independent testing, certification and classification organisations including Lloyd's Register and SGS, have validated the performance of MXBuster on medium-speed shipping engines and superyacht gensets. Performance data highlights include up to 55 per cent NOx reduction, alongside verified reductions in exhaust gas temperatures and particulate matter.

Because MXBuster is installed as a separate add-on, no modifications to the engine itself are required. The system can be used with both conventional diesel and HVO.

The first MXBuster system installed on board a Feadship has now been in operation for more than a year, providing valuable real-world data on its performance. During this period, soot deposits have been eliminated and emissions reduced. Initial onboard measurements also indicate the potential for reduced fuel consumption. In separate tests on modern land-based diesel engines, MXBuster has demonstrated fuel-consumption reductions of up to 14 per cent, alongside reductions of 25–35 per cent in AdBlue consumption. Following successful onboard testing, Lloyd's Register has approved the technology for installation without affecting the engine's certified configuration.

“What makes MXBuster particularly interesting is that it has relevance for both existing and future yachts,” says Mattes Kruize, Director New Business & Supply Chain and a member of Feadship's K&I Steering Committee. “For many yachts with Tier II engines, conventional solutions for reducing emissions require considerable space and modifications to the engine room. MXBuster gives us another option to explore, while the technology also has the potential to influence how we design engine rooms for future Feadships.”

For existing yachts, the compact nature of MXBuster is particularly relevant. Many yachts continue to operate with Tier II engines, while upgrading them to Tier III standards using conventional SCR systems can be difficult due to the space required for exhaust after-treatment equipment. MXBuster requires only minimal modifications to the engine room and could therefore provide an alternative route for reducing emissions from existing installations.

The technology also has potential for future yacht design. Its compact installation could reduce or even eliminate the need for large exhaust after-treatment equipment, creating greater freedom in engine-room layout and preserving the possibility of single-level engine rooms.

Feadship, AtomicOne, Eindhoven University of Technology and specialist maritime partners are also collaborating on the Machine Room of the Future programme. By combining combustion optimisation with compact exhaust after-treatment, the aim is to further reduce emissions while avoiding the space, weight and complexity associated with conventional systems.

Feadship has secured exclusive rights to apply MXBuster and the associated technologies to yachts over 30 metres, opening new possibilities for technology-driven upgrades across the existing fleet.