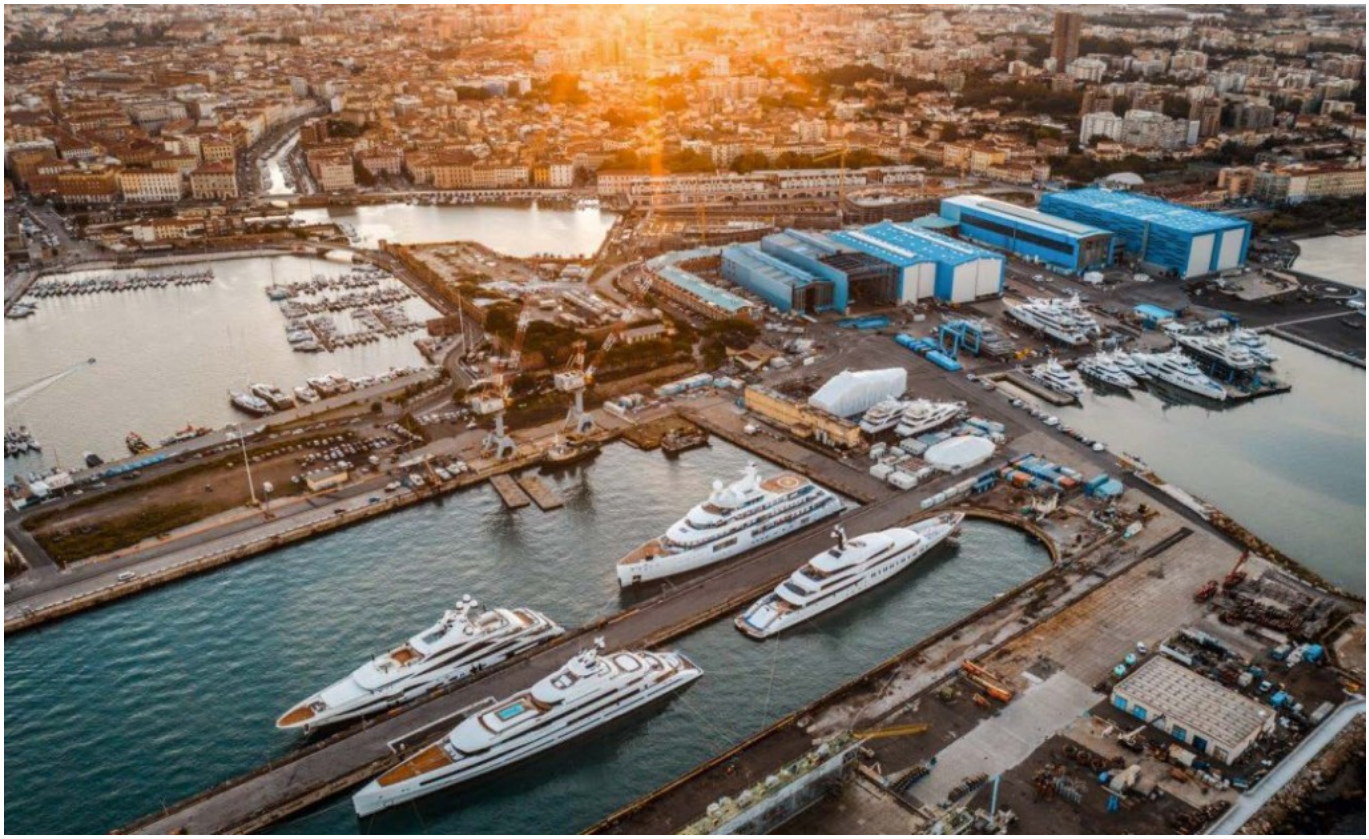
Established in 1873, Benetti is Italy's oldest shipyard specialized in luxury yachts and an icon of timeless style and construction excellence. Each yacht is unique, created according to the desires of the Owner, with the quality, expertise and reliability of a shipyard that has built over 400 vessels which sail today in absolute safety. Benetti is part of **Azimut Benetti Group, the world's largest privately owned yacht builder** and a guarantee of continuity and **financial stability**. Founder and majority shareholder Paolo Vitelli has been firmly at the helm for the last 50 years.



Benetti Giga Yachts / credits to Rory Bushe.

Benetti's commitment to reducing environmental impact

The yacht industry is fully aware of its responsibility towards future generations and the environment, and Benetti is doing its part with ongoing research and the brand's decade-long support of leading environmental associations in its sector. The

Shipyard is currently working with **Water Revolution Foundation**, a no-profit organisation whose main aim has for years been to reduce the yacht industry's impact, above all on the marine environment. Water Revolution Foundation's mission is to further sustainability through innovation, co-operation and technological development in both building and refitting.

Benetti has also decided to work with the UK-based **Blue Marine Foundation (BLUE)**, which aims to create a network of protected marine areas and promote sustainable, artisanal and small-scale fishing, thus contributing to the recovery of fish stocks. Under the agreement, buyers can choose to donate a percentage of their yacht's sale price to Blue Marine Foundation.

Access to energy, climate, the environment, human rights, co-operation and partnership for development are the key guidelines for Benetti's business, which constantly aims to guarantee high standards of quality in products and processes.

Production approach and management

In rising to the challenge of building magnificent boats characterised by advanced technology, innovation and striking design, Benetti respects all the employees involved, the planet and the local communities where its yards are situated, and above all it honours the sea and its inhabitants.

The close ties that companies in the yacht industry have with the sea should make them feel responsible for promoting environmental awareness. For many years a leading designer and builder of yachts symbolising excellence, Benetti makes every effort to respect ecosystems, right from the design phase, and to use innovative technologies to make sure its products have less and less impact on the environment.

Measures have been taken to significantly improve energy efficiency in the production cycle. Incandescent light bulbs, for example, have been replaced by LED lamps, **reducing consumption by around 70%**.

These savings affect the energy required to work on the boats and in the yards and helps drastically reduce pollution.

To the same end, Benetti has installed a **photovoltaic plant and a sophisticated**

solar thermal system to produce domestic hot water and secure major energy savings, also on gas. Its integrated project involves a solar thermal plant, **new condensation boilers** and recirculated water from the compressors, which is collected in special tanks and can be used as domestic hot water. **This system saves up to 50% on methane gas.**

Another key initiative was the insulation of the new sheds with cladding that is **more efficient at both thermal** (less dispersion of heat) and **acoustic level**. The project also included the existing sheds. This is a source of great pride for Benetti's Livorno yard, which was not legally required to perform this work but decided in any case to do everything a large enterprise is dutybound to do for the environment.

Benetti has also put in place an **energy consumption monitoring system** enabling it to promptly intervene in the event of anomalous dispersions or malfunctioning.

While it is true that all yards have electric power stations for moored boats (**cold ironing**), it is also true that this is only possible for small yachts. Benetti, however, can also cater for Giga yachts of over 100 metres with its new high-power stations, reducing not only fuel consumption by onboard diesel generators but also water and air pollution.

In production areas, the purification plant has been fitted with a tank to collect **water for use in the production cycle**: this delivers considerable savings when we remember that this water is also used to wash boats.

Central to Benetti's environmental strategy is its **waste management process**, through which the Yard aims to avoid over-production, adopt effective remediation procedures and step up recovery operations rather than simply disposing of waste.

In all its yards, Benetti uses cutting edge methods to track flows of waste from production to disposal or end of cycle recovery, in compliance with current legislation.

For the purposes of sustainable solid and liquid waste management, drums for **collecting used cooking oil** have been installed close to the moorings of large

vessels undergoing maintenance and repair. These drums have a filter on the input side to prevent other particulates entering. They are **double walled** and the inner container has a safety system preventing spillage if they are accidentally overturned.

Onboard energy efficiency

Our business has always been underpinned by experience, passion and innovation. We work hard to improve and develop our know-how and recognise the value of people and their diversity, which we see as an indispensable resource.

This is our starting point for sharing key sustainability values: from the reduction of greenhouse gas emissions and other environmental parameters to the safeguarding of human rights, the provision of training for our professionals, and co-operation and development for more immediate access to energy. We want to and must describe the current scenario for our stakeholders, with concrete and accessible data explaining how the company is facing the situation, rising to challenges and dealing with the attendant difficulties, working towards specific objectives and reporting on the results achieved.

In this context, a central role is undoubtedly played by hybrid engines, which can reduce consumption considerably and noise almost entirely. These systems deliver a 15% reduction in both fuel and CO2 emissions.

To date, **four Benetti projects stand out in particular for their highly innovative propulsion systems**.

In 2002, the 65-metre **Ambrosia** yacht was the first step on this ambitious and complex path. It was the first vessel in the world to be equipped with **ABB’s Azipod advanced diesel-electric propulsion system**, ensuring optimum fuel consumption efficiency and a considerable improvement in terms of silent running.

The **FAST125** is a 38-metre yacht with an innovative D2P – Displacement to Planing® hull designed by Pierluigi Ausonio with the Azimut|Benetti Research and Development Centre. Thanks to its **wave piercer**, the hull allows the yacht to be used both in displacement mode, **guaranteeing reduced consumption** at low speeds, and in planing mode at higher speeds, while ensuring maximum comfort in both cases.

The **propulsion system** delivers a considerable reduction in noise and vibration levels and a further improvement in manoeuvrability. The Azipull Carbon 65 (AZP C65), in fact, is a lightweight, high performance, steerable thruster made entirely from carbon fibre, an innovation that has significantly reduced its weight at the same time as **reducing consumption and environmental impact**.

The 107-metre giga yacht **FB272 “Luminosity”, the world’s biggest hybrid yacht**, has an intelligent hybrid propulsion system consisting of a set of six 1,000 kW (approx.) generators. The energy produced is managed by an integrated electronic control system that supplies both the onboard services and the two 2,200 kW Azipod engines. The electricity generated is used to charge 35 tonnes of **batteries that can power the FB272 for 12 hours without using the engines**. This cutting edge system, which not only **saves energy but also ensures silent, vibration-free navigation**, was developed by top industry experts co-ordinated by Benetti’s Technical Department.

The yacht is also fitted with a heat recovery unit, which is used by the boat to save electricity.

The **B.Yond 37M** has a steel hull, an aluminium superstructure and a Siemens **Siship EcoProp diesel-electric system** developed for Azimut|Benetti Group by Siemens Marine’s Global Center of Competence.

This system makes it possible to operate in four different modes: Enhanced Comfort, ideal for night-time and coastal cruising; Eco Cruise/Hotel, for zero-emissions both at sea and at anchor; Extended Range, an option useful for long-distance cruises by guaranteeing reduced consumption; Eco Transfer, enabling the yacht to navigate with just one engine but using both driveshafts, with the advantage of reducing engine hours and improving efficiency.

Starting in 2021, installation of **SCR** (Selective Catalytic Reduction) filters will be obligatory on all engines, but Benetti decided to use them long ago to immediately start reducing emissions of pollutant NOx gases (nitrogen oxides). Solar panels will be installed on the boat’s hard top to generate around 4.5 kW/h and so save fuel and cut atmospheric emissions.

Head image: Livorno Shipyard: Benetti’s main production unit.