



GIULIANO SARGENTINI

# *Amazing* **G***race*

GIVEN HER SHEER VOLUME AND INNOVATIVE DRIVETRAIN, THE PICCHIOTTI **GRACE** IS THE MOST COMPLEX YACHT FROM PERINI NAVI GROUP—AND IS LIKELY TO REMAIN SO INTO THE FORESEEABLE FUTURE.

*By Justin Ratcliffe*

Simply put: *Grace E* is the most ambitious yacht ever built by the Perini Navi Group. At 239 feet (73 meters) and 1,835 gross tons, she dwarfs 497-gross-ton *Exuma* and 726-gross-ton *Galileo G*, her Vitruvius line predecessors at Perini's Picchiotti shipyard. But what really distinguishes the flagship vessel from her smaller stablemates—and indeed from almost every other superyacht on the water—is her diesel-electric and Azipod propulsion. Requested by her American owner from the start, this system alone presented a major challenge for the Italian builder in terms of design, technology, engineering and commissioning.

"I don't want to use the word strain, but I don't want to belittle the challenge either," says Burak Akgul, Perini's managing director of sales, marketing and design. "She represents a whole different ball game, even when compared with the *Maltese Falcon* and her unique sailing system."

There are a number of arguments in favor of diesel-electric propulsion. Generators can be loaded at their optimal efficiency, thereby reducing emissions and maximizing fuel economy, and onboard comfort is enhanced by near-silent operation in electric mode. Azimuthing pods offer further advantages over conventional prop shafts with a diesel-electric setup. *Grace E* is fitted with twin ABB Azipods consisting of a variable-speed electric motor driving a fixed-pitch propeller that can be rotated around its vertical axis. These produce thrust at full torque in any direction for dynamic positioning capability without the need for rudders and stern thrusters. And with no main engines connected to prop shafts inside the hull, the system provides more flexibility in the layout of the engine room.

But in practice, there are equally valid reasons why only a handful of superyachts are equipped with such systems. Besides the additional cost, they require more technical space for the multiple generators, frequency converters and switchboards that manage the propulsion and hotel power needs—valuable real estate that could be earmarked for owner or guest use, such as a cinema room. In the

case of *Grace E*, this issue was exacerbated by the relatively narrow beam associated with her so-called Briand Optimized Stretched hull. Nonetheless, around 50 tons of electrical equipment is housed in a dedicated and air-conditioned room amidships on the under lower deck just forward of the two-tier engine room.

"In the electrical room, we were playing with square centimeters of floor space," says project manager Andrea Tanferna. "Without a doubt, the main challenge was the electrical propulsion system and ensuring that everything is functional and ergonomic, but also easy to maintain and aesthetically pleasing."

One common side effect of placing so much electrical hardware in close proximity is electromagnetic interference, which can result in malfunctions and flickering lights. Avoiding such problems meant installing line filters and ensuring that several kilometers of cabling were adequately insulated. It also led to the late installation of bus bars. These solid metal conductors help reduce harmonic distortion, improve inductance and can be routed neatly around corners to maintain adequate clearance.

There was a prosaic and practical reason behind the owner's decision to adopt diesel-electric and Azipod propulsion: "Having experienced a canceled cruise caused by a generator malfunction, the owner felt that with multiple gensets, a single failure would not ruin his enjoyment of the yacht," says build engineer Peter Towning (who previously worked aboard 414-foot (126.2-meter) *Octopus*, also diesel-electric but with conventional drive shafts). "Diesel-electric propulsion makes sense by offering redundancy of power sources."

The two Azipod compartments in the aft tender garage mean there is little room for beach club facilities, so the area is dedicated to tender operations with various water toys and a 29-foot (9-meter) limo tender custom built by Cockwells in Falmouth, England. This





ABOVE: The main salon and dining room designed by Rémi Tessier. FACING PAGE: The state-of-the-art engine room required by the yacht's diesel-electric and Azipod propulsion system.

compromise, however, was accounted for from the start, and the owner opted instead for a panoramic gym, hydrotherapy room, sauna, steam room, massage parlor and forward observation lounge on the sundeck—an area totaling more than 2,500 square feet and connected by an elevator to the lower deck.

“The wellness deck was an idea that came from the owner’s previous yacht [a 164-foot Codecasa also called *Grace E*], where we had retrofitted a gym on the upper deck,” says Capt. Eddie Cooney. “This was a starting point of the interior design for *Grace E*, as the owner wanted it on the top deck to take advantage of the big windows, rather than in a poky space in the lazarette.”

Beyond her engine room and technical spaces, *Grace E* has a more conventional interior layout than *Exuma* and *Galileo G*, which were designed to the personal briefs of their owners. Guest accommodation consists of four en suite cabins on the lower deck and two VIP cabins on the main deck in addition to a full-beam master suite with 1,000 square feet of floor space. For the interior design, the owner selected the French designer Rémi Tessier after admiring his interiors aboard the Perini Navi sailing yacht *Riela* (now *Asahi*).

“Although *Riela* was the starting point for the design, the owners didn’t want a carbon copy,” says Tessier. “They were looking for

something simple but sophisticated, natural yet luxurious. In other words, everything a superyacht like this should be.”

Tessier’s sublime interiors are often based on a palette of signature materials such as wenge, Makassar ebony, brushed sycamore, parchment and polished stainless steel. *Grace E* features all of these and a sophisticated palladium finish, another Tessier favorite, on the ceilings. Natural and reconstituted limestone adds a touch of warmth to the heads, while plenty of glass and backlit white onyx create a light and airy ambience. Hand-woven silk and wool carpets or leather floor tiles, which will develop their own patina over time, provide a tactile texture underfoot. The sycamore wall panels, which are bleached as if by the sun and sea salt, are contoured and rippled to create a texture like wave-blown dunes—an effect mirrored in the bespoke, sand-colored carpeting. High-gloss Makassar ebony and an occasional graphite resin finish complement the weathered textures and tones. The clean contours, consistent materials and natural fabrics of pale aqua and light gray are punctuated with playful details, such as the tiny “windows” of backlit rock crystal in the stairwell.

The 22-strong crew are well catered for with generous dining and entertainment areas on the under lower deck, including their own gym, and well-appointed cabins on the lower deck. The bridge is ergonomically





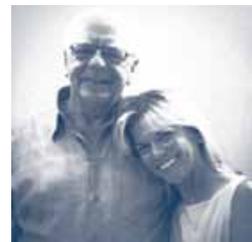
ABOVE: *Grace E*'s 31-foot Cockwells limo tender ready for launching.  
 FACING PAGE LEFT: The professionally equipped galley. FACING PAGE RIGHT: The stairwell and elevator shaft are illuminated by a skylight set into the sundeck canopy.

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laid out, and Cooney requested that the nav-con functions be replicated on both sides of the bridge, allowing him to entertain guests on one side while the yacht can be unobtrusively operated from the other. A pantographic victualing hatch close to the galley and cold stowage rooms on the lower deck opens upward and lays flat along the hull to allow the garbage boat or the tender carrying supplies to moor alongside. With an eye to operational functionality, the door has a small viewing window so the crew is able to see when the boat is in position.

Because the operational parameters of the Azipods depend on the hydrodynamics of the hull and need to be fine-tuned on a case-by-case basis, commissioning of *Grace E* took longer than a comparable yacht with conventional propulsion, and delivery was delayed. However, the sea trials exceeded expectations in terms of performance, noise and vibration.

## The Owners



When they decided to build *Grace E*, Bob and Christine Stiller explored several international shipyards and ultimately settled on the Perini Navi Group.

"We enjoyed chartering several Perini sailing yachts and came to know the Perini family and their key employees personally," says Christine. "We were actually attracted to the people involved before the resulting design."

The Stillers are no strangers to yachting. Bob grew up on New York's Long Island sailing small boats. As a young man, he delivered sailboats. Christine's foray into boating began on her first date with Bob when he invited her aboard his 30-foot Sea Ray.

Fast forward to the mid-1990s. The Stillers, married with three children, became acquainted with the joys of chartering. Eventually they purchased a 164-foot (50-meter) Codecasa—their first *Grace E*—named after Christine's mother. Their extensive use of that yacht made them realize they were seeking more, and only a custom build would yield precisely what they wanted.

The new *Grace E*'s volume affords the extended Stiller family great living space. "We have room for everything we wanted, but at the same time, the yacht has the right proportions," says Bob. "It is not so high off the water that I don't feel a relationship to the sea."

Bob says he still has the "soul of a sailor" and likes to be close to the sea. It was Bob who pushed for the innovative diesel-electric propulsion system with Azipods.

"We chose it thinking it would save on fuel consumption and be better for the environment," he says.

*Grace E* works well for the couple, inside and out. "When we met Rémi Tessier, we knew right away we would enjoy working with him," Christine says. The flow and aesthetics of the yacht are very much in keeping with the Stillers' lifestyle and their homes.

One key element of the design is the wellness deck. "Bob's favorite spot on the boat is the massage table," says Christine. "The spa area is very busy all morning, then we migrate to the beach club in the afternoon, and in the evenings we spend time on the bridge deck."

Christine also extolls the virtues of life aboard where one has a constant change of location without ever packing. World travelers, the Stillers agree that not even in the finest hotels can one experience the same level of service that they have 24/7 aboard *Grace E*.

"At sea, there is that ingredient of being with nature that is so special to us—a quiet energy and peacefulness that is unique," Bob says.

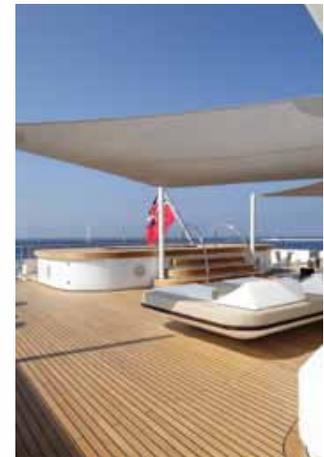
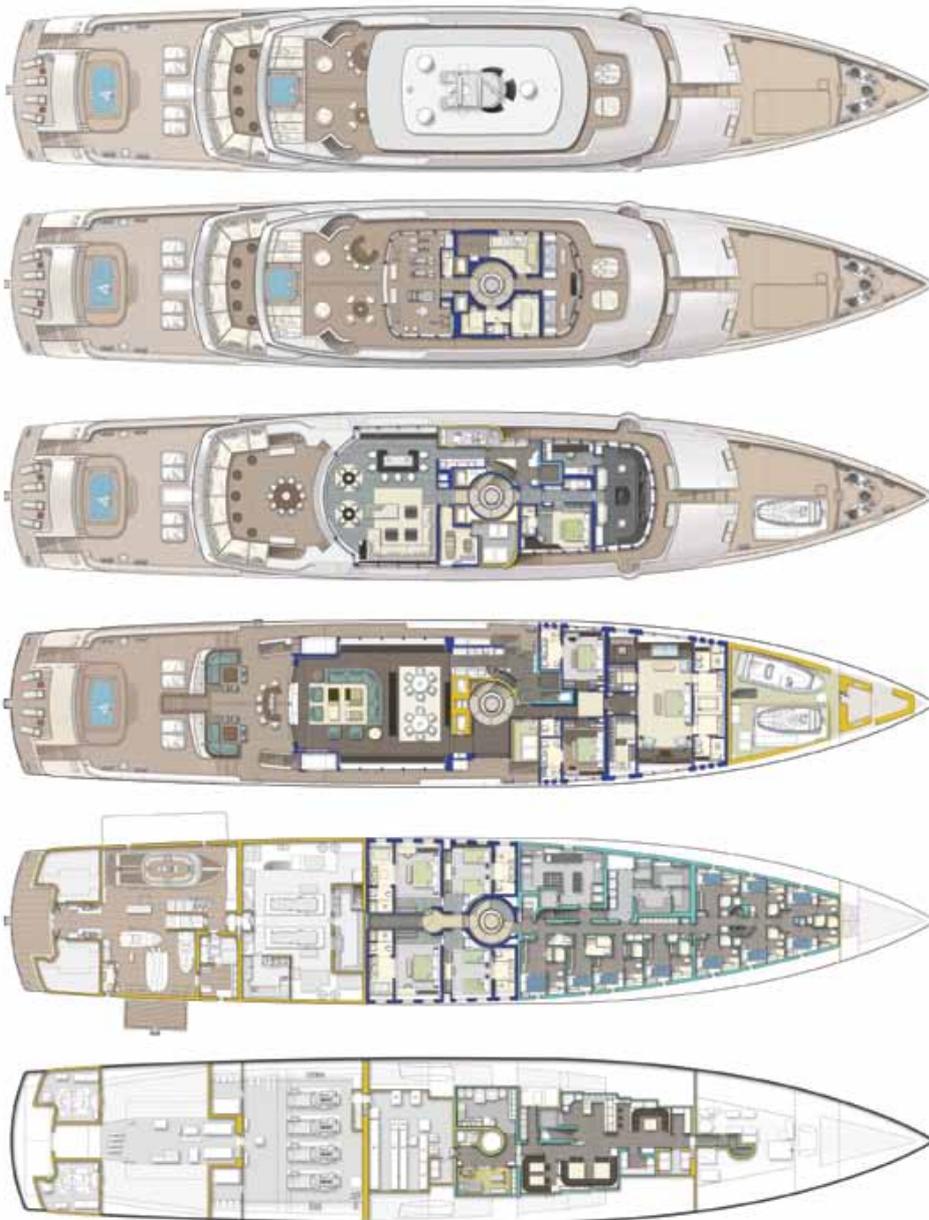
Among all the special touches aboard *Grace E* are some unique art pieces. One bought specifically for the boat is an Edward Ruscha the Stillers purchased at auction. It reads, "DID ANYONE SAY DREAMBOAT?"

—Jill Bobrow

With no shafts or struts to create drag or transmit vibration, noise analysis at top speed recorded a hushed 46 decibels in the owner's suite and 47 decibels in the main salon. Moreover, the dynamic positioning system allowed the yacht to stay on station in up to 35 knots of wind, and her range at 12 knots was a globe-trotting 7,500 nautical miles.

"I'd like to think that *Grace E* illustrates to a certain clientele that they can do something different, and it would be great if that brought them to Picchiotti, even for Vitruvius projects with more traditional propulsion systems," Akgul says. "She represents what we set out to do in the first place with the Vitruvius series, which was to build something different." ■

**For more information:** +39 0584 424208, [perininavi.it/en](http://perininavi.it/en)



ABOVE: The wellness center, comprising gym, Jacuzzi, sauna, steam bath, beauty parlor and hydrotherapy room, takes full advantage of the plentiful light and sea views on the sundeck.

## PERINI NAVI GRACE E

**LOA:** 240ft. 5in. (73.28m)  
**LWL:** 235ft. 10in. (71.87m)  
**BEAM:** 43ft. 3in. (13.18m)  
**DRAFT (loaded):** 13ft. 2in. (4m)  
**CONSTRUCTION:** steel and aluminum  
**DISPLACEMENT:** approx. 1,680 tons  
**GROSS TONNAGE:** approx. 1,835  
**PROPULSION:** 2 x ABB Azipods (1,600kW each)

**FUEL:** 48,871 gal. (185,000L)  
**WATER:** 7,925 gal. (30,000L)  
**SPEED (max.):** 16.5 knots  
**SPEED (cruising):** 12 knots  
**RANGE:** 7,500 nm @ 12 knots  
**GENERATORS:** 4 x Caterpillar C32, 2 x Caterpillar C18  
**STABILIZERS:** Quantum Zero Speed  
**CLASSIFICATION:** 100 Croce di Malta A1 SSC, Yacht, Mono,

G6, LMC, UMS, DP(AM), EP, MCA  
**NAVAL ARCHITECTURE:** Philippe Briand  
**EXTERIOR STYLING:** Philippe Briand  
**INTERIOR DESIGN:** Rémi Tessier  
**GUESTS:** 1 master suite, 2 VIP cabins, 2 double cabins, 2 twin cabins  
**CREW:** 22 crew in 10 cabins + 1 captain's cabin  
**BUILDER:** Picchiotti/Perini Navi Group  
**YEAR:** 2014