

USCG Bernard C. Webber relies on MTU for fast response

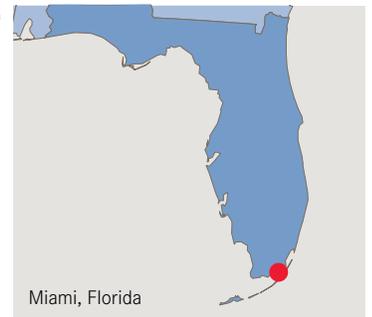


Who: USCG Bernard C. Webber, Fast Response Cutter

What: Two MTU 20V 4000 diesel engines

Why: High power-to-weight ratio, fuel economy and low lifecycle costs

Where: Miami, Florida, USA



The U.S. Coast Guard has unveiled a new class of patrol boats, Fast Response Cutters, to protect American waters. The 154-foot *Bernard C. Webber* is the first FRC to be commissioned. Powered by two MTU 20V 4000 diesel engines, the ship can achieve speeds up to 28 knots. With a high power-to-weight ratio and exceptional fuel economy, MTU engines are perfectly suited to help the *Webber* execute its missions.

Through a relationship that spans decades, MTU is the largest supplier of propulsion engines and systems to the U.S. Coast Guard. MTU engines power motor lifeboats, coastal patrol boats, national security cutters and fast response cutters, conducting important missions in extreme conditions. Today, the Coast Guard depends on MTU for 100% of its new patrol and response boats.

The Coast Guard's new Sentinel Class Fast Response Cutter (FRC) is capable of deploying independently for waterways and coastal security, fishery patrols, drug and illegal migrant law enforcement, search and rescue, and national defense. The FRC program is the USCG's first new cutter initiative in more than 20 years. Named after Coast Guard enlisted heroes, the FRCs are replacing the Coast Guard's venerable Island-class 110-foot patrol boats.

"The Sentinel class of cutters is a tribute not only to the enlisted men and women serving in the Coast Guard today, but the many heroes that preceded them," says Coast Guard Commandant Adm. Robert J. Papp, Jr. "It will be a critical asset in securing and protecting our nation's maritime environment."

A strong lineage

Built by Bollinger Shipyards in Lockport, Louisiana, the new FRCs will help the Coast Guard address its current patrol boat gaps and efficiently complete all potential missions. The boatbuilder provides new construction, repair and conversion products and services to the commercial offshore energy and marine transportation markets around the world, including the U.S. government and naval shipbuilding marketplace. Family-owned and operated since 1946, Bollinger maintains 10 ISO

Scott Theriot, vice president and general manager, Bollinger Shipyards
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Power. Passion. Partnership.



The 154-foot *Bernard C. Webber* is powered by two MTU 20V 4000 diesel engines, providing a total power output of 4,300kW.

9001:2008 certified shipyards and a fleet of 28 dry-docks for shallow draft and deepwater vessels. Bollinger has earned a premier reputation for superior quality, value, timely service and delivery to its customers.

Head of its class

In April 2012, the Coast Guard commissioned its first FRC, *Bernard C. Webber*, in Miami, Florida. Built to accommodate a crew of 24 and endure a minimum of five days at sea, the ship has a length of 154 feet and a beam of 25 feet. Armament includes a Bushmaster remote-controlled 25 mm autocannon and four crew-served Browning .50 caliber machine guns. As the Coast Guard's newest class of vessel, the *Webber* is equipped with the latest technology. Its command and control systems are fully interoperable with USCG's existing and future assets and with the U.S. Departments of Homeland Security and Defense.

A powerful ally

Fast Response Cutters will enforce U.S. and international maritime law, and ensure security along the 95,000 nautical miles of U.S. coastline. Performing this important mission demands exceptional power below deck. With two 20-cylinder Series 4000 M93L MTU engines providing a total power output of 4,300kW, the *Bernard C. Webber* is ready to respond quickly to any situation. The bow thruster delivers 75kW power, while the propulsion system provides a maximum speed of over 28 knots.

Only MTU can provide the power density and design characteristics needed to meet the demanding requirements of the new Fast Response Cutter. Each engine produces 5,095 horsepower—a high output relative to the engine's compact size. "The MTUs have the right horsepower-to-weight ratio and the company has a great history of building high-powered, lightweight engines," adds Scott Theriot, Bollinger Shipyards vice president and general manager.

To meet FRC requirements, this engine had to meet the rigorous American Bureau of Shipping Naval Vessel Rules Standard (ABS/NVR). This certification required MTU to subject the 20V 4000 engine to a grueling 1500-hour bench test, running approximately 500 hours at 110 percent overload.

USCG senior chief engineer Richard Libbey says, "The Series 4000s perform really well and are very dependable. They're way more technical than the older MTU engines on some of our other cutters, like the 87-footers, but they're still simple to operate," he says. "We start them up for a patrol by opening all the cooling valves and fuel valves, push a button and the engines start. We idle them for about 30 to 45 minutes. They'll run on 10 cylinders first, and then all 20 kick in as the engines warm up. After that, we're set. We simply monitor their performance during the patrols."

Ready to serve

The powerful 20V 4000 is the perfect fit for the *Bernard C. Webber*. Engineered for a low operating noise level, the engine's advanced technology ensures exceptional fuel efficiency, compared to other engines in its class. Ease of serviceability, fuel economy and MTU's legendary reliability ensure low lifecycle costs—especially important since each FRC is expected to perform at a high level for decades.

Just like the Coast Guard, MTU is always on call. Engine support, parts and service are readily available—wherever and whenever a Fast Response Cutter is on patrol. Bollinger and the Coast Guard receive excellent service and support from MTU and distributor Florida Detroit Diesel Allison (Miami, FL) for the FRC's twin engines. MTU also provides end-to-end support for the USCG's MTU engines, through its dedicated worldwide distribution network.

The *Bernard C. Webber* and other new FRCs will deliver vital capability and readiness to the Coast Guard. With twin Series 4000 engines under its deck, each ship is well equipped to save lives, enforce laws and protect U.S. ports and natural resources.

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MTU is a brand of Rolls-Royce Power Systems AG. MTU high-speed engines and propulsion systems provide power for marine, rail, power generation, oil and gas, agriculture, mining, construction and industrial, and defense applications. The portfolio is comprised of diesel engines with up to 10,000 kilowatts (kW) power output, gas engines up to 2,150 kW and gas turbines up to 35,320 kW. MTU also offers customized electronic monitoring and control systems for its engines and propulsion systems.



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