

The logo features the word "CAMARC" in a large, bold, italicized sans-serif font. Above the "A" and "R" is a white graphic element consisting of a horizontal line that tapers to a point on the right, with a small downward-pointing arrowhead at the end. Below "CAMARC" is the word "DESIGN" in a smaller, italicized sans-serif font. A white graphic element, similar to the one above but with a curved bottom edge, frames the word "DESIGN" from below.

CAMARC
DESIGN

Workboat Design Proven Worldwide



Camarc Design, international designers based in the UK with over 35 years in business and over 500 proven vessels in-service Worldwide. Camarc specialise in the design of seaworthy high-speed working craft used by operators including Port & Pilotage Authorities, Government Navies, Coast Guards and Police forces. The designs range from 5m – 80m in length with options on materials and propulsion and the ability to offer speed capabilities of 50+ Knots. Specific vessel types from the proven range include Pilot, Patrol, Rescue, Fire, Crew, and RIB's.





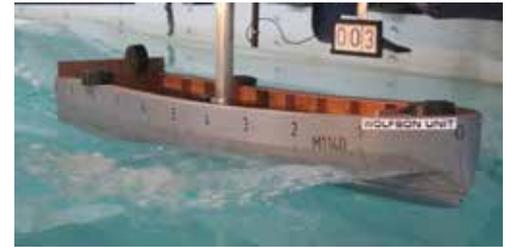
- Supreme Seakeeping
- Extremely Efficient
- Dry Running
- Load Tolerant
- Stable Platform



Hull Design

The Camarc double chine hull is well proven with over 500 craft in-service Worldwide, and is the choice for operators looking for a seaworthy high speed workboat. With an extensive tank testing programme developed over the last 35 years, the hull has been optimised and refined to provide the perfect balance of efficiency, stability, all-round seakeeping and comfort.

The latest breakthrough has seen the release of the **Camarc EVO** hull, boasting 9% efficiency gains over the already efficient platform, along with reductions in slamming accelerations of 10%. Importantly these refinements have been without compromise to the balanced all-round seakeeping capability synonymous with the Camarc hulls. The Camarc EVO hull is now being adopted on projects looking to reduce fuel consumption and emissions.



Camarc Pilot Boats

The Camarc range offers dedicated pilot boat designs with specific features unique to this type of craft and role. Ranging from 8m daughter craft up to 24m seagoing vessels, they can be built in steel, aluminium or composite, and fitted with propeller or waterjet propulsion with speeds typically up to 35 Knots to suit a given application. A Self-Righting capability can also be incorporated as an inherent part of the design.

There are over 160 pilot specific Camarc vessels in-service Worldwide for operators including both the Pacific and Atlantic Pilotage Authorities in Canada, the Columbia River Bar and Los Angeles & New York Pilots in the US, the Ports of Forth, Tyne, Tees, Harwich, Falmouth and Milford Haven in the UK, the Dutch Pilot Association, the Hong Kong Pilots, Sydney Ports, Svitzer, Smit Lamnalco, the Suez Canal Authority and many more.

Model	Length Range
Pi8	8m
Pi10	10-11m
Pi12	12-13m
Pi15	14-15m
Pi17	16-18m
Pi20	19-21m
Pi22	22-24m



Pi8



Pi10



Pi12



Pi15



Pi17



Pi20



Pi22





Boarding & Fender Solutions

Critical to the optimal design of a dedicated pilot boat is the inclusion of design features specific to this unique role. This includes the hulls with their pilot specific shape for operations considering approach, boarding and breaking away from the ship side. Reinforced structure & fender systems to offer protection against boarding impacts, and specific wheelhouse, railing, all-round visibility and rescue systems to operate safely whilst alongside are also incorporated in to Camarc's range of pilot boats.

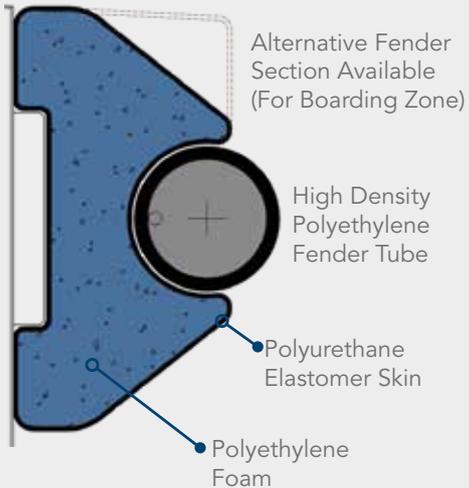
Protection Alongside



Hull Shape & Boarding



Camarc Popsure Fender



There are a large range of fender system options and materials, offering varying levels of protection with factors to consider such as fixing, weight, cost, robustness and maintenance. A wide range of fender systems have been used and are available on Camarc pilot vessels, with the main categories summarised below.

Additionally, there is the option to install the Camarc Popsure fender system. This is a system that was designed specifically for pilotage and is exclusively available on Camarc pilot boats. In principle, the external HDPE pipe protects against damage & abrasion whilst the large foam section behind the pipe spreads the load in to the structure. Specific non-slip boarding sections acting as deck extensions have also been developed to assist in boarding operations.

Tyres



Custom



Foam Section



D Fender







Patrol Range

Model	Length Range
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P10	9-10m
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P12	11-13m
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P15	14-15m
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P17	16-18m
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P20	19-22m
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P24	23-26m
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P28	27-30m
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P32	31-34m
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P36	35-39m
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P42	40-45m
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Camarc Patrol boats range from 5m RIB's up to 80m OPV's, but are most typically found in the 9m - 45m range. The designs can be built in steel, aluminium or composite, and powering & propulsion can be installed for speeds of 50+ Knots to suit specific applications. High speed capability whilst offering a stable platform with supreme all-round seakeeping is the reason this range is the choice of Government Navies, Coast Guards, Police and Security Forces Worldwide.

Operators of the Camarc patrol range include the UK Ministry of Defence, UK Royal Marines, the United States Coast Guard, NYPD, French Gendarmerie & French Navy, China Yangtze River Police, UK Welsh Fisheries and the Kuwait Fisheries, Croatian Marine Police and Royal Gibraltar Police amongst many more.



P10



P12



P15



P17



P20



P24



P28



P32



P36



P42

Emissions & Alternative Power

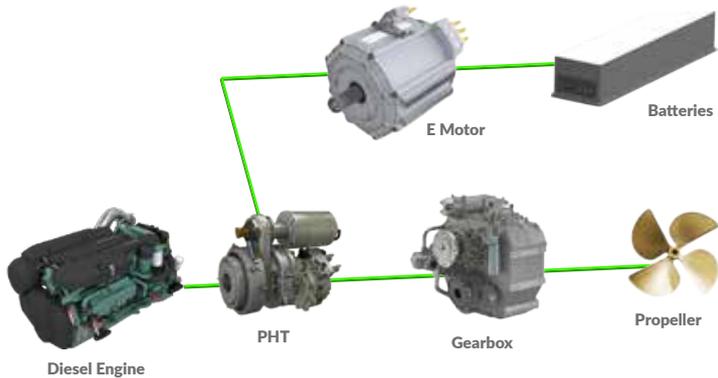


Numerous Camarc vessels are now fitted with IMO Tier III SCR emission systems

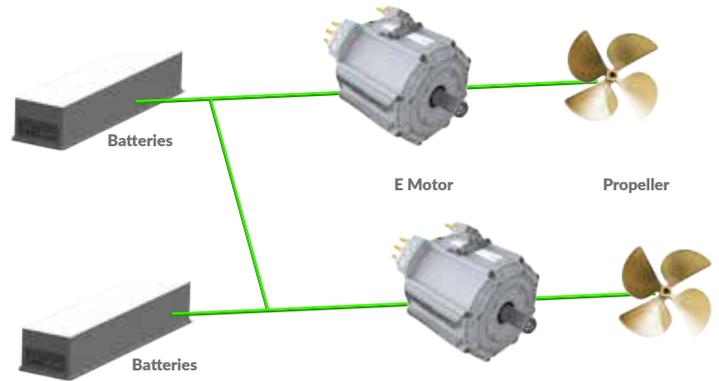
As well as reducing fuel consumption and emissions through hull design optimisation and weight control programmes, Camarc continue to look at other measures including the use of SCR exhaust systems and alternative forms of power.

An All-Electric installation removes the need for diesel and carbon emissions completely, and is best suited to vessels that mostly operate at slow speeds or transit over short distances. For high-speed vessels with longer transits and little time between operations to charge, an all-electric solution is unlikely to suit with the current battery technology.

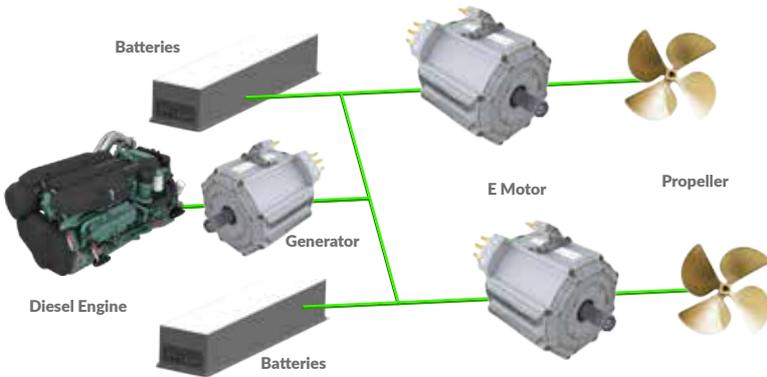
Hybrid Diesel-Electric or Diesel-Hydrogen installations can offer a viable alternative where operating profiles suit. As well as cutting fuel consumption and emissions, a Hybrid installation can maintain the known security and redundancy operators are used to via conventional diesel power. The use of a Hybrid installation in any form does come with a significant weight and cost penalty and so the suitability needs to be reviewed carefully against an operational profile to ensure compatibility.



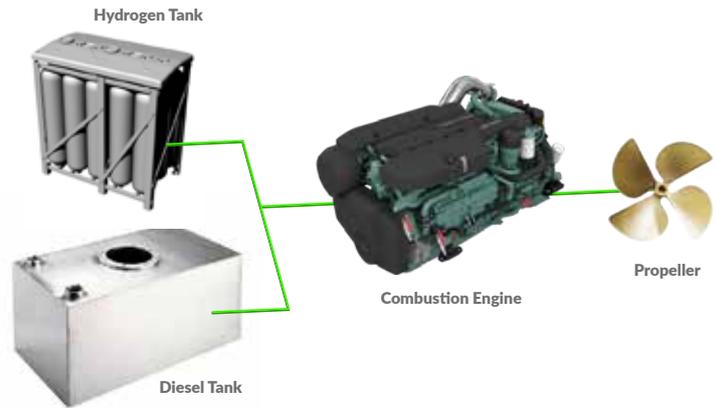
Diesel-Electric Hybrid (Parallel)



All-Electric



Diesel-Electric Hybrid (Serial)



Diesel-Hydrogen Hybrid

Search & Rescue

Camarc SAR craft offer supreme seakeeping capabilities to support SAR craft operators who find themselves in the most extreme of environments. Most of the Camarc SAR range also have a self-righting capability incorporated, inherent to the design. Survivor capacity, rescue systems & features and towing capabilities are optimised to suit every specific operator's needs. Camarc SAR vessels are proven Worldwide an in operation with the US Coast Guard, Italian Coast Guard, Turkish Rescue & Salvage, China Rescue & Salvage and Malaysian MMEA to name a few.



SAR10



SAR12



SAR15



SAR17



SAR20

Over 180 RB-M currently in service for the U.S Coast Guard

"Performance wise the 41ft out performs just about any platform I've ever driven for the Coast Guard"
Master Chief Gordon Muise USCG

"This vessel, absolutely meets or exceeds any requirements that we have for a vessel of this size in the Coast Guard"
Rear Admiral Wayne E. Justice USCG



Model Length Range

SAR10 9-10m

SAR12 11-13m

SAR15 14-15m

SAR17 16-18m

SAR20 19-22m

SAR24 23-26m

SAR28 27-30m

SAR32 31-34m

SAR36 35-39m

SAR42 40-45m



SAR24



SAR28



SAR32



SAR36



SAR42

Self-Righting Design

Camarac Design have over 200 proven self-righting vessels in-service. This includes the US Coast Guard's Response Boat Medium (RB-M) fleet and the Italian Coast Guard's latest CP300 fleet.

Camarac's specific self-righting capability is built into the design from the start, and therefore becomes an inherent part of the vessel. The application of passive and active systems can be discussed for each project with the aim to provide simple fail-safe arrangements for this critical feature.



0°



40°



80°



120°



160°



180°

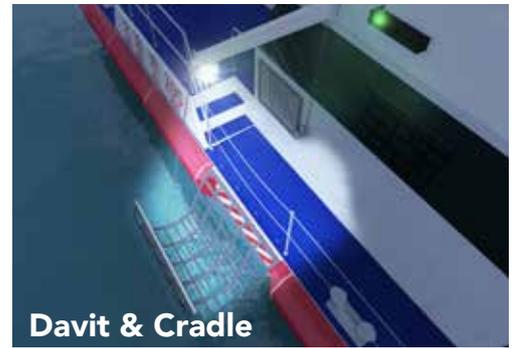




Rescue Cradle



Rescue Platform



Davit & Cradle



Rescue Systems

A range of Camarc MOB rescue systems are available to suit a given operation and vessel type. They are designed to be simple and reliable in retrieving rescued persons quickly and safely from the water to deck level. The choice in system can be tailored to suit the means of propulsion fitted to the vessel and to suit an Operator's preferences, and multiple systems can be fitted to vessels with a more dedicated rescue role.





FB10



FB12



FB15



FB17



FB20

Model	Length Range
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FB10	9-10m
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FB12	11-13m
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FB15	14-15m
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FB17	16-18m
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FB36	35-39m
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FB42	40-45m
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Fire Boat Range

Camarc Fire boats range from 9m up to 45m. Our designs are built in steel, aluminium, or composite depending on the application, and are installed with powering & propulsion to suit speeds typically up to 40 Knots for rapid response. Fire pumping arrangements can be optimised to make use of propulsion engines already installed onboard where relevant, and fire monitor arrangements can be optimised to suit FiFi operations and station keeping capabilities. Operators of Camarc Fire Boats include the London Fire Brigade, the Turkish Rescue & Salvage Department, and there are more projects underway including one for the Greek Hellenic Fire Service.





FB24



FB28



FB32



FB36



FB42





CB17



CB20



CB24



CB28

Crewboats

The Camarc Crew Boat range offers vessels from 16m up to 65m in length. The designs can be built in steel, aluminium, or composite and installed with powering & propulsion for speeds typically up to 35 Knots. The highly efficient Camarc EVO hull with an excellent tolerance to payload provides operators with reduced fuel consumption and emissions, along with excellent seakeeping and comfort.

Model	Length Range
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CB17	16-18m
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CB20	19-22m
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CB24	23-26m
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CB28	27-30m
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CB32	31-34m
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CB36	35-39m
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CB42	40-45m
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CB60	60-65m
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CB32



CB36



CB42



CB60



Visibility & Noise

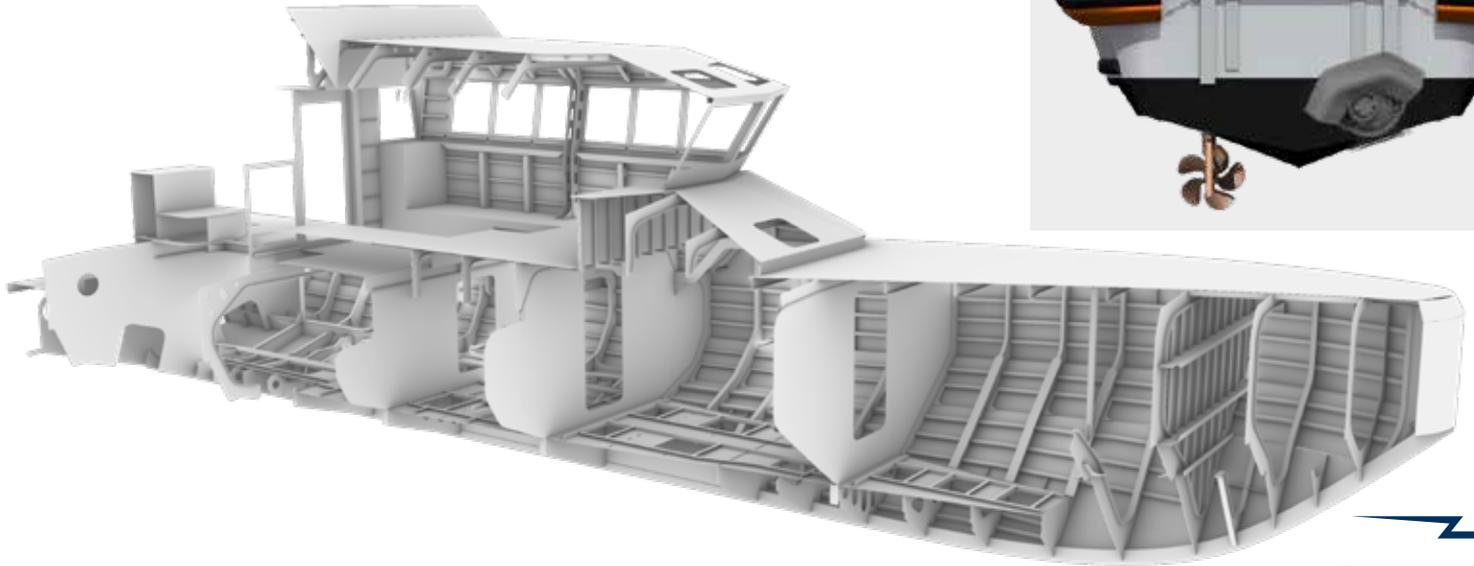
Ensuring both excellent all-round visibility and reduced noise levels for the crew are critical to the safe operation of any vessel. This is particularly true of workboats operating long hours at high speeds. Camarc optimise all-round visibility through internal layout, window and structure design. Acoustic insulation schemes can be adopted along with the use of a resiliently mounted wheelhouse to reduce noise and vibration levels, with <math><65\text{dBA}</math> being achieved on some Camarc high-speed applications.



Propulsion & Structure

Varying forms of propulsion have been installed across the Camarc range, with propeller and waterjet propulsion making up the majority of applications. Considerations in selecting the propulsion type include vessel role, speed, efficiency, manoeuvrability, MOB safety, debris, cost & maintenance. Camarc can offer their independent advice on which form of propulsion would best suit a given application.

Camarc vessels can and have been designed in Aluminium, Steel and Composite materials. Operator and Builder preferences, vessel speed and material availability tend to be the factors affecting the choice of construction material. A robust structure suitable for the intended duty can be designed in any of these materials and in accordance with Classification construction standards.





Model	Length Range
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R6	6m
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R9	9m
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R10	10m
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R11	11m
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R12	12m
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R13	13m
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R15	15m
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R6



R9



R15



Rib Range

Camarc Design RIB's range from 6m up to 15m, built in aluminium and composite materials and fitted with outboards, diesel sterndrives or diesel waterjet installations to achieve speeds of 45+ Knots. The open console and enclosed cabin layouts can be adapted to suit operator requirements and the Class standards adopted for structure offer a more robust commercial RIB platform than is typically found in this market. Operators of Camarc RIB's include the French Navy, Senegal Navy, Royal Moroccan Navy, Togo Navy, French Affaires Maritimes and UK's Specialised Marine Support amongst others.



R10



R11



R12



R13

www.camarc.com



WORKBOAT DESIGN PROVEN WORLDWIDE