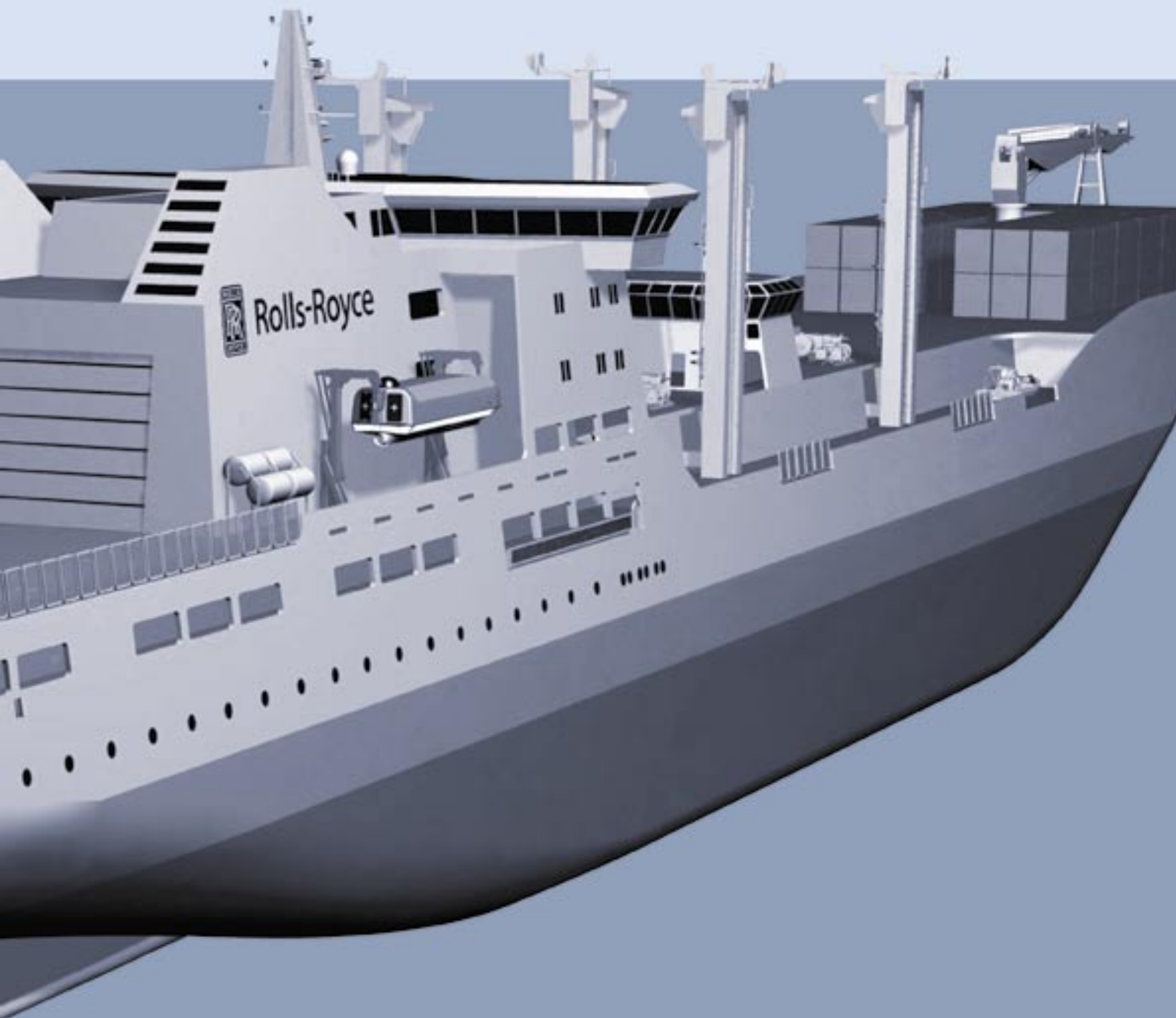




Rolls-Royce

Ship designs for naval and EEZ duties

Taking commercial experience into naval applications



Setting the standard

Rolls-Royce offers a wide range of ship designs for passenger, cargo, fishing, offshore support and naval logistics. The UT-Design™ offshore support vessels, launched in the 1970s, have become leaders in the industry with over 500 ordered. These proven, stable designs have spawned vessels custom designed to meet a wide range of individual customer specifications, examples are now in service around the coasts of Europe and India. NVC-Design™ cater primarily for the merchant/fishing sector, with some designs now enhanced for naval support and logistics applications. New designs are constantly evolving.

A Rolls-Royce designed vessel is more than just a hull design. It is a hydrodynamically efficient vessel with diesel engines or gas turbines and all major systems fully integrated for the best performance, enabling vessels to be built anywhere in the world. Our ability to provide a full range of onboard equipment and systems ensures compatibility of equipment, with shorter construction times and a significant reduction in the technical risk and cost. In addition, customers benefit from the global Rolls-Royce support network with 60 offices in 34 countries. Over 30 years experience in vessel design is applied throughout the design process to ensure the operational profile precisely matches that specified by the customer.



UT 515 Abeille Bourbon is one of two vessels now operating around the coast of France.



UT 512 KV Harstad is in service with the Norwegian Coastguard.

NVC-Design™ Hydrographic, Multipurpose Vessels

Quiet, safe and efficient

These multifunctional vessels are designed for tasks including deep-sea ROV and AUV operations, fishing and a variety of scientific research operations including seismology, geology and marine biology.

The hull is designed for fuel efficiency and minimised slamming risk. Close attention to the reduction of in-water noise sources is the result of significant testing to determine the best interaction between the hull and the propellers. On board, noise and vibration levels are effectively minimised by diesel electric systems – double resiliently mounted generator sets and motors. Active stabilisation systems ensure safe operation in all weathers, and the advanced dynamic positioning system ensures the vessel stays on station. The generous freeboard and bow height minimises problems of working on wet decks.

Vessels can also be designed with scope for a mid-life upgrade to improve performance or extend life. All designs conform to the most stringent international environmental classifications.

NVC 360

Design features:

- Low in-water noise levels
- ROV/AUV operations
- Seabed operations (6500m)
- Dynamic positioning
- Bottom coring
- Water sampling
- Seismic testing



The NVC 390 is a multipurpose oceanographic research vessel equipped for deep-water operation anywhere in the world. It is exceptionally quiet when operating.

UT-Design™ Coastguard, OPV and EEZ Vessels

Innovatively flexible designs with proven performance

The offshore industry has been a major influencer of the technology-intensive and multifunctional vessel designs for this sector. Ship designs are suitable for a wide range of duties that include patrolling, fisheries protection, emergency standby, pollution control, fire-fighting, salvage and emergency towing. All designs can be tailored to suit the specific operational needs of the ship owner or operator and are compliant with relevant Class, SOLAS, IMO and MARPOL resolutions.

UT 504

Class
DNV: +1, ICE 1C, Tug, SF, EO, Oil Recovery, Dyn Pos AUTS, Clean
Option: ICE 1B

Technical:	
• Length	approx. 47.0m
• Beam	approx. 10.5m
• Draught (max)	approx. 4m
• Speed	approx. 17 knots
• Bollard pull	approx. 30 tonnes
• Deadweight	approx. 250 dwt



The UT 504, is currently the smallest vessel in the range and shares the proven hull form of the larger UT designs. Designed primarily for patrolling and pollution control, it has a tug classification, a full outfit of oil-spill control equipment and storage tanks of up to 200m³ for recovered oil. A shallow draft makes it ideal for smaller ports and manoeuvring around grounded vessels.



The UT 512 is a patrolling and pollution control vessel, with a 'tug' classification and a full outfit of oil-spill control equipment and a tank for recovered oil of 1,000m³. As other roles include fisheries protection, emergency standby and towing, it is equipped with fast boarding/rescue boats and a comprehensive civil and military communications system.

UT 512

Class
DNV:+1A1, Tug, Fi-Fi 1, EO, Oil Recovery

Technical:	
• Length	approx. 83.0m
• Beam	approx. 15.5m
• Draught (max)	approx. 6m
• Speed	approx. 18.5 knots
• Bollard pull	approx. 110 tonnes
• Deadweight	approx. 1,500 dwt

UT 515

Class
DNV: +1 A1, ICE C, Tug, FiFi 2, EO
Option: ICE 1B, Oil Recovery

Technical:	
• Length	approx. 80.0m
• Beam	approx. 16.5m
• Draught (max)	approx. 6.8m
• Speed	approx. 19.5 knots
• Bollard pull	approx. 200 tonnes
• Deadweight	approx. 1,600 dwt



The UT 515 is designed for a wide range of coastguard duties including emergency standby, rescue and assistance duties, tanker assistance (up to approx 300,000 TDW), towing, oil recovery, law enforcement operations and fishery control, fire-fighting operations and salvage.



The UT 517 is a coastguard and pollution control vessel equipped with oil booms and skimmers. Other roles include surveillance, law enforcement, anti-smuggling, fishery protection, search and rescue, data collection, and assistance with salvage and firefighting.

UT 517

Class
DNV: +1A1, SF, Oil Recovery, HELI-DK (SH), Fi-Fi 1, Dyn Pos AUTS, EO, Crane, ICS

Technical:	
• Length	approx. 94.0m
• Beam	approx. 15.5m
• Draught (max)	approx. 4.5m
• Speed	approx. 20.0 knots
• Deadweight	approx. 1,500 dwt

UT 527

Class
DNV: +1A1, Supply Vessel, Tug, Oil Recovery, HELI DK-SH, Fi-Fi 1/2, Clean, Dyn Pos AUTR, EO, Com F-V(3)C(3)

Technical:	
• Length	approx. 92.0m
• Beam	approx. 18.0m
• Draught (max)	approx. 5.8m
• Speed	approx. 20.0 knots
• Bollard Pull	approx. 130 tonnes
• Deadweight	approx. 1,600 dwt



The UT 527 is a flexible multi-field standby-rescue vessel and can be readily adapted for EEZ duties. It has a high top speed/ bollard pull, and is equipped with two daughter craft that can be recovered through the stern hatch or alongside. Ample accommodation areas provide a large capacity for survivors.

NVC-Design™ Underway Replenishment Ships

Speed and stability as well as payload

With the changing emphasis of speed in military support requirements, there is a need for the replenishment ships of the future to keep up with the fleet and meet IMO MARPOL regulations that all tankers are double-hulled by 2010.

25,000dwt and 14,000dwt designs capable of 20 to 27 knots are now available and use modern, commercially proven and efficient roro hull forms. Both support solid RAS and helicopter operations at unrestricted headings up to Sea State 6. Acquisition costs are kept low as the starting point is a commercial-off-the-shelf vessel, with space for a range of naval systems designed in. This approach enables navies to adopt a commercial ship with a basic level of replenishment ability and upgrade capability at any time during the vessel's life.



14,000t deadweight capacity

Class

DNV: +1A1, DG-P, DEICE, OPP-F, HELIDK-SHF, F-AMC, LCS-DC, E0, RP Clean Design

Technical:

• Length	approx. 173.2m
• Beam	approx. 26.60m
• Scantling Draught	approx. 9.3m
• Speed	20 or 27 knots

25,000t deadweight capacity

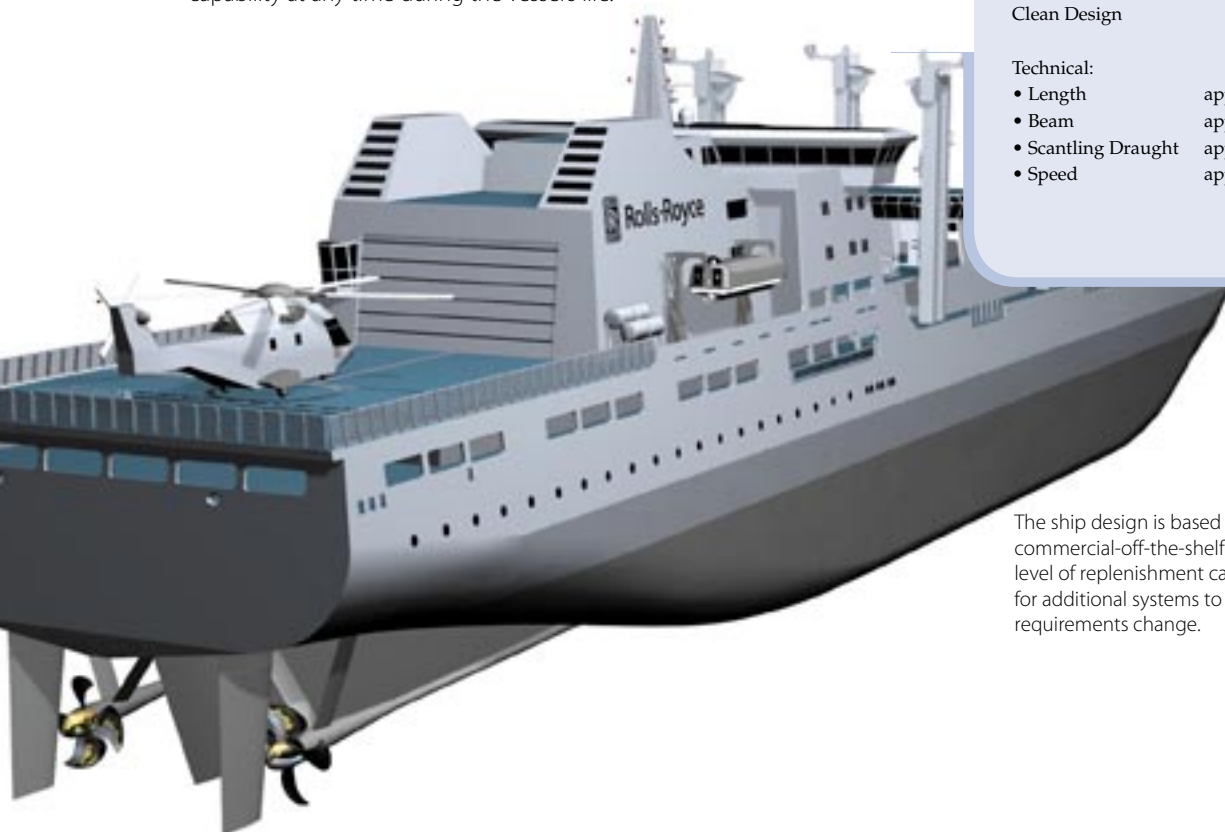
Class

DNV: +1A1, DG-P, DEICE, OPP-F, HELIDK-SHF, F-AMC, LCS-DC, E0, RP Clean Design

Technical:

• Length	approx. 223.4m
• Beam	approx. 28.80m
• Scantling Draught	approx. 9.3m
• Speed	approx. 20 knots

The ship design is based on a proven commercial-off-the-shelf hull with a basic level of replenishment capability and space for additional systems to be added should requirements change.



NVC-Design™ Fast Logistic Vessels

Economic fast strategic sea-lift

To meet the changing emphasis in military support requirements – the deployment of rapid response forces to distant areas at short notice – Rolls-Royce has designed a family of vessels with the rare combination of long range and high speed with relatively high payload. These high-speed troop transport and logistic vessels use a monohull commercial ropax hull design with a wave-piercing bow. This combination provides excellent sea-keeping with good passenger comfort, and low fuel consumption with high dead weight. With a range of 3,000n miles, 2,500 tonnes of cargo can be transported at 40 knots – almost twice as fast as existing ships of equivalent payload. The smaller Intra-Theatre Logistic Vessel has a cargo area of 2,310m² and is capable of transporting up to 350 troops over 4,000nm at 40knots.

Specific military features include a helicopter landing area amidships capable of accommodating an aircraft up to Chinook size. Mountings and services are also provided for the installation of close-in weapons systems.



Fast Naval Sea-Lift Vessel

Class

DNV: +1A1, HSLC R0 (300,300,300) CARGO

Technical:

• Length	approx. 177.0m
• Beam	approx. 24.0m
• Design draught	approx. 3.15m
• Cargo capacity	2,500t/1,800 lane-m
• Service speed	40/36 knots
• Deadweight	4,000 dwt

Intra-Theatre Logistic Vessel

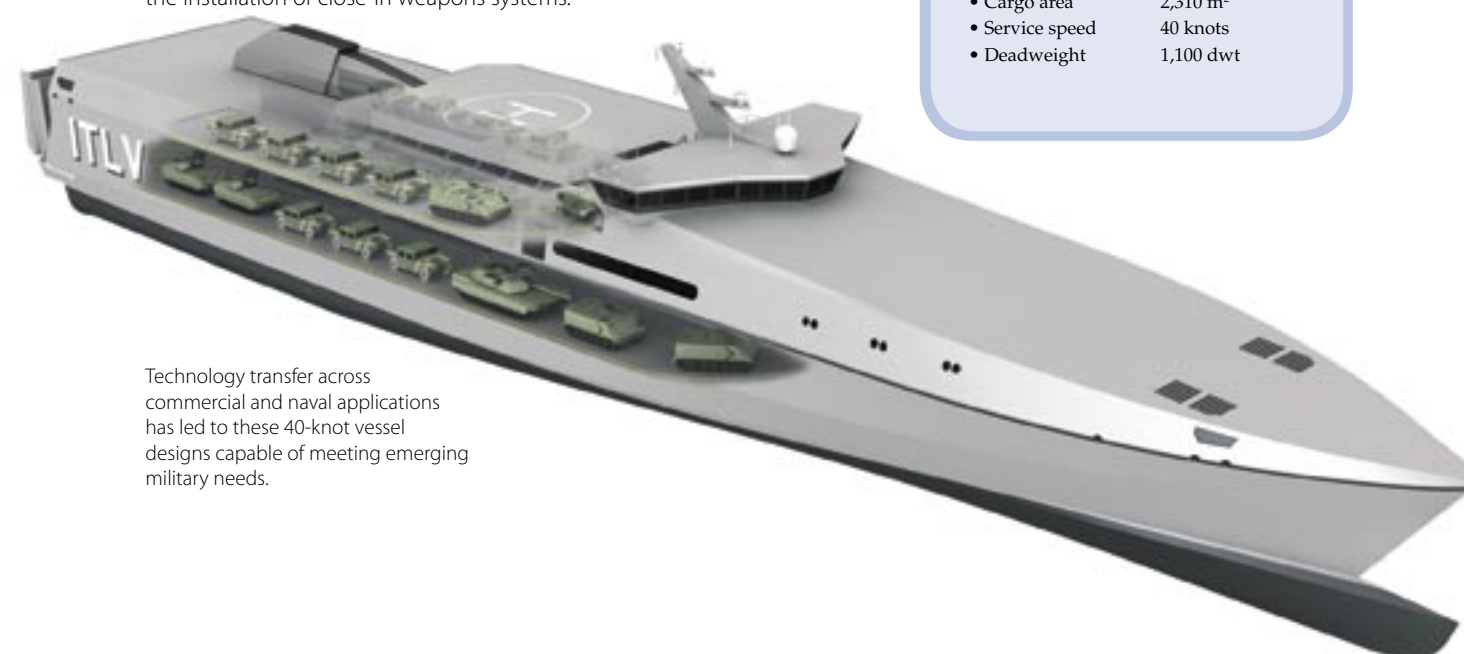
Class

DNV: +1A1, HSLC R0, CARGO, HELIDK-SH, or equal class in LR, BV, GL or ABS

Technical:

• Length	approx. 121.0m
• Beam	approx. 19.0m
• Design draught	approx. 4.15m
• Cargo area	2,310 m ²
• Service speed	40 knots
• Deadweight	1,100 dwt

Technology transfer across commercial and naval applications has led to these 40-knot vessel designs capable of meeting emerging military needs.





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