



Rolls-Royce

Get the job done properly



Tugs, work boats  
and coastal ferries

work boats

## Solutions to your marine needs

Rolls-Royce provides an unrivalled range of products and services to the marine industry. With production facilities in 9 countries and a comprehensive support network worldwide, we are a global supplier of marine solutions.

Decades of intensive research, development, refinement and production of world-famous products and services have resulted in cutting-edge design and ship equipment for tugs, work boats and coastal ferries.

Our solutions are based on the latest technology and close customer cooperation throughout all projects. The result is proven reliability and profitability for your operation.

We deliver fully integrated ship systems comprising innovative and well-proven products customised to the individual ship and its specific operation, ensuring an optimum solution for any application.

Whether you choose complete ship systems or more limited solutions, you will always have the advantage of our special competence and technology.

### World-leading products and services

Hinze	Bird Johnson	Tenfjord
Frydenbö	Brown Brothers	UMAS
Kamewa	UT-Design	Allen
Spey	Ulstein Aquamaster	Trent
Bergen	Rauma Brattvaag	Allison
WR 21	Kamewa Ulstein	Mermaid™
NVC-Design	High lift rudders	



## Tugs, work boats and coastal ferries

To get the job done properly, you need a partner who knows your business and someone you can rely on to develop your ship and ship equipment. Set a course for profitability with Rolls-Royce.

System solutions

Concept designs

Propulsion and manoeuvring systems

Deck machinery

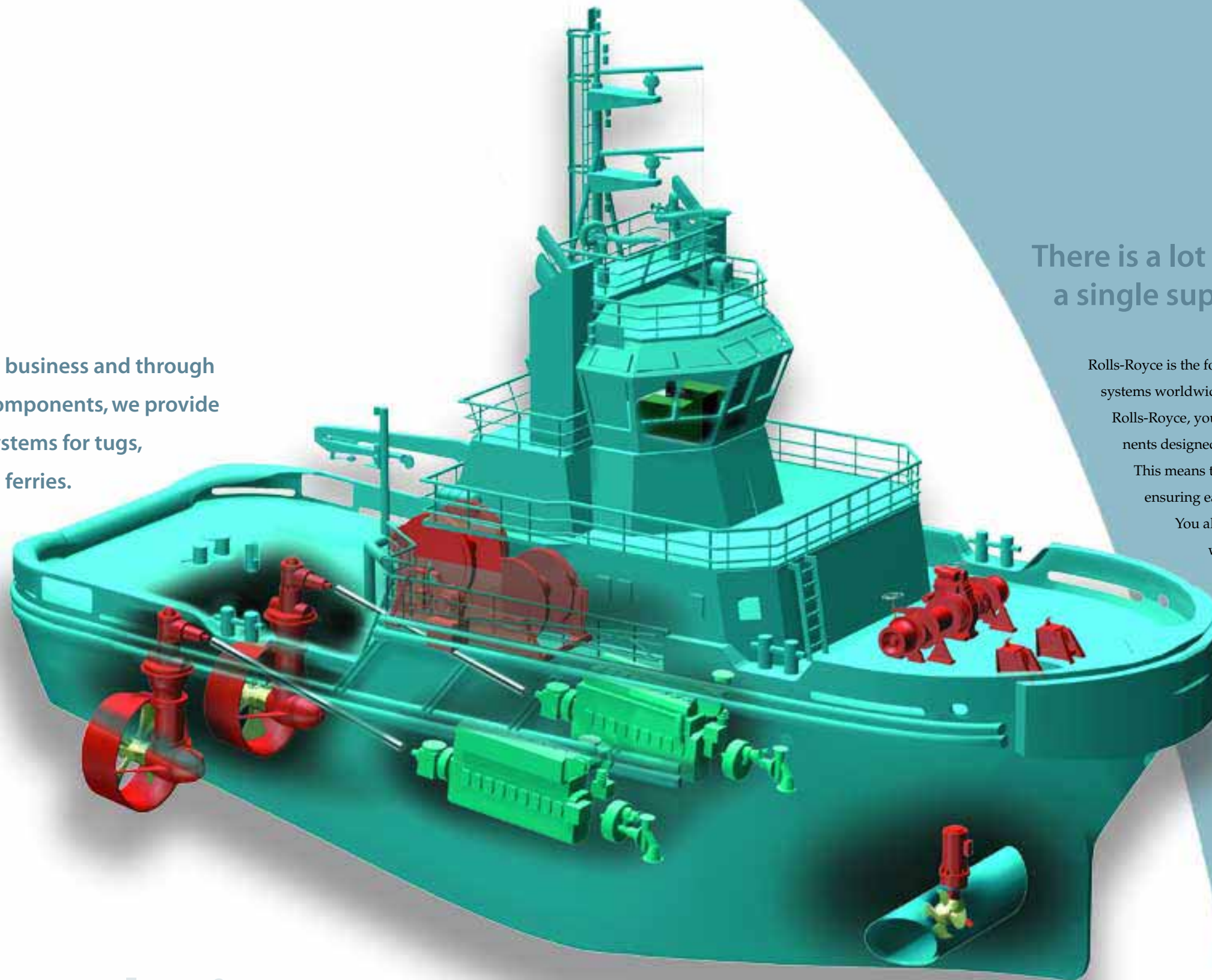
Diesel and gas engines

Global support

## There is a lot to gain from a single supplier

By understanding your business and through access to a variety of components, we provide fully-integrated ship systems for tugs, work boats and coastal ferries.

Customised systems with high performance and minimised design and engineering costs.








Rolls-Royce is the foremost supplier of fully-integrated ship systems worldwide. By choosing an integrated system from Rolls-Royce, you will have a turnkey package with components designed and manufactured specially for your vessel. This means that all the components are fully compatible, ensuring easy installation and trouble-free operation.

You also have only one supplier to think about, who knows the products inside-out and takes full responsibility during all phases of the process. Delivery, installation and support are also more efficient thanks to our extensive global network.

We provide a wide range of system solutions, ranging from automation and control systems to complete propulsion systems. We also provide the know-how of our experienced consultants from the development of the ship's design to the vessel's equipment, global support, maintenance and finance.

Whether you choose a fully-integrated ship system or a single product, you always have the advantage of cost-efficient solutions with high operating profitability.

# System solutions

 <p><b>THRUSTER SYSTEMS</b></p> <ul style="list-style-type: none"> <li>• Azimuth thrusters</li> <li>• Tunnel thrusters</li> <li>• Podded propellers</li> </ul>	 <p><b>DECK MACHINERY</b></p> <ul style="list-style-type: none"> <li>• Towing winches</li> <li>• Windlasses</li> <li>• Rope reels</li> </ul>	 <p><b>PROPULSION SYSTEMS</b></p> <ul style="list-style-type: none"> <li>• F.P. propellers</li> <li>• Water jets</li> <li>• Reduction gears</li> <li>• Diesel and gas engines</li> </ul>	 <p><b>MANOEUVRING SYSTEMS</b></p> <ul style="list-style-type: none"> <li>• Steering gear</li> <li>• Rudders</li> <li>• Thrusters</li> </ul>	 <p><b>AUTOMATION SYSTEMS</b></p> <ul style="list-style-type: none"> <li>• Monitoring and control</li> <li>• Bridge controls</li> <li>• Switchboards</li> <li>• Consoles</li> </ul>
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Rolls-Royce supply the world's most comprehensive range of propulsion and manoeuvring systems for tugs, work boats, river vessels and coastal ferries.



**Ship name:** "Tiger Sun"  
**Owner:** Tiger Tugs Rivtow Marine Ltd.  
**Type:** Harbour tug  
**Units:** Ulstein 1350H azimuth thrusters  
 2 x 1650H azimuth thrusters  
**Yard:** Sylte Shipyard Ltd.

## Optimised towing, manoeuvrability and environmental propulsion

Excellence in naval architecture, hydrodynamics and marine engineering puts Rolls-Royce in the unique position of supplying the world's most comprehensive range of propulsion and manoeuvring systems for tugs, work boats, river vessels and coastal ferries.

We supply optimised solutions, derived from our ability to focus on – and respond to – the needs of our customers, resulting in optimised designs, long-term reliability and functionality, customised to each vessel. We provide propulsion systems which meet the demand for improved overall efficiency, easy and reliable berthing as well as improved passenger comfort.

With products ranging from azimuth thrusters and tunnel thrusters through conventional propulsion to water jets and steering gear and flap rudders, we tailor advanced propulsion and manoeuvring systems to any vessel.

# Propulsion

### Typical applications



**Ship name:** "Victoria"  
**Owner:** Svenska Sjöräddningssällskapet  
**Type:** Fast rescue vessel  
**Units:** Kamewa FF375 water jets  
**Yard:** Malö Yachts, Sweden



**Ship name:** "Osprey 2000"  
**Owner:** Kootenay ferry  
**Type:** Double-ended ferry  
**Units:** Ulstein Aquamaster 1350 H azimuth thrusters  
**Yard:** Kootenay Lake Ferry Builders Ltd. (Vancouver Shipyard Ltd.)



**Ship name:** "American Queen"  
**Owner:** Delta Queen Steamboat  
**Type:** River Cruise vessel  
**Units:** Ulstein Aquamaster US 901  
 CRP azimuth thrusters  
**Yard:** McDermott, USA



**Ship name:** "Sapezal"  
**Owner:** Hermasa Navegacao da Amazonia  
**Type:** River pusher  
**Units:** Ulstein Aquamaster US 1401 azimuth thrusters  
**Yard:** Erin Shipyard, Brazil

## Propulsion systems for the toughest work



**AZIMUTH THRUSTERS**  
 • Ulstein Aquamaster azimuth thrusters with fixed pitch, controllable pitch and contra-rotating propellers.



**AQUAPILOT**  
 • Control systems for azimuth thrusters.



**WATER JETS**  
 • Kamewa water jets in power range 150 kW – 1500 kW.



**TUNNEL THRUSTERS**  
 • Kamewa Ulstein tunnel thrusters.



**CONVENTIONAL PROPULSION**  
 • Kamewa Ulstein C.P. propellers in the range of 500 kW – 5000 kW.



**RUDDERS AND STEERING GEAR**  
 • High lift rudders. Tenfjord steering gear.

### Typical applications



**Ship name:** "Thames"  
**Owner:** Prins van Vijnngaarden  
**Type:** Split barge/suction dredger  
**Units:** Ulstein Aquamaster ALT 400 azimuth thrusters  
**Yard:** IHC Holland, Holland



**Ship name:** "Gyrfalcon"  
**Owner:** Tractor Marine Inc., USA  
**Type:** Tug  
**Units:** Ulstein Aquamaster 2 x 1650H azimuth thrusters  
**Yard:** Marco, USA

## Azimuth thruster applications for the future



**AZIMUTH THRUSTERS**  
 • Ulstein Aquamaster azimuth thrusters for in-hull installation.



**AZIMUTH THRUSTERS**  
 • Ulstein Aquamaster azimuth thrusters with contra-rotating propellers.

### Azimuth thrusters for tug, work boat and coastal ferry applications

(250 kW – 10 MW)  
 Ulstein Aquamaster azimuth thrusters are available:

- with ducted or open propellers
- with fixed or controllable pitch propellers
- with contra-rotating propellers
- with solutions for diesel engines or electric motors for the following applications:
  - hull mounted (fixed)
  - hull mounted (retractable)



**AZIMUTH THRUSTERS**  
 • Ulstein Aquamaster azimuth thrusters for on-deck installations.



**AZIMUTH THRUSTERS**  
 • Ulstein Aquamaster azimuth thrusters with contra-rotating propellers.



**AZIMUTH THRUSTERS**  
 • Ulstein Aquamaster azimuth thrusters retractable.

### Typical applications



**Ship name:** "Stjernarøey"  
**Owner:** Rogaland Trafikkselskap  
**Type:** Double-ended ferry  
**Units:** Ulstein Aquamaster US 1401 azimuth thrusters  
**Yard:** Remontowa, Poland



**Ship name:** "River Queen"  
**Owner:** Kamphuisen  
**Type:** River Cruise vessel  
**Units:** Ulstein Aquamaster US CRP 901 azimuth thrusters  
**Yard:** De Hoop Lopith, Holland

Rolls-Royce winch systems are known for their high-capacity, easy operation and compact design. Proven turn-key solutions with the best of marine technology.



Ship name: "Citta Della Spezia"  
 Owner: Rimorchiatori Riuniti  
 Type: Tug  
 Design: Damen  
 Yard: Damen

## Ready for the big pull

Rolls-Royce is the leading supplier of heavy-duty winches for harbour and coastal tugs thanks to customers demanding the best solutions possible. Our towing winch systems are the preferred choice among the major tug operators around the world. They principally appreciate the tremendous pulling force, compact design, easy operation and high reliability. We provide both low and high-pressure driven winches for tugs.

Rolls-Royce also provides a wide range of anchoring and mooring winches for river vessels and coastal ferries. The range covers low-pressure and high-pressure hydraulics, electric pole change and electric frequency converter-driven mooring systems.

From 1937, when we patented the world's first low-pressure hydraulic winch, we have been working closely with our customers to constantly improve our products. We have always focused intensively on research and development, taking advantage of the vast experience, know-how and skills we have gained. We are ready to handle your requirements.



TOWING WINCHES  
 • Rauma Brattvaag towing winches.



FORWARD WINDLASSES/  
 TOWING WINCHES  
 • Rauma Brattvaag forward windlasses/  
 towing winches.



ROPE REELS  
 • Rauma Brattvaag rope reels.

# Winches

### Typical applications



Ship name: "Lady Anya"  
 Owner: Humber Tugs, UK  
 Type: Tug  
 Yard: McTay Maritime Ltd.



Ship name: "Redbridge"  
 Owner: Red Funnel Towage  
 Type: Tug  
 Yard: Yorkshire drydock



Ship name: "Fairplay"  
 Owner: Fairplay Schleppdampfschiffs- Reederei  
 Richard Borchard GmbH, Germany  
 Type: Tug  
 Yard: Santodomingo, Vigo, Spain



Ship name: "Marietta B"  
 Owner: Baretta, Italy  
 Type: Tug  
 Yard: Tommasi



## Diesel and gas engines for hard work and outstanding comfort

Rolls-Royce engines are made for tough operation and reliable transport. They have always been in the front line where demands for reliability, flexibility and comfort have been vital.

Rolls-Royce engines for propulsion and generator applications are cost-effective, easy to maintain and manufactured under strict international quality standards to meet future environmental requirements.

For coastal ferries comfort for operators and passengers is ensured by the low vibration characteristics and high-performance resilient suspension.

The combination of more than 60 years experience, tough design, reliability and low operating costs have allowed Rolls-Royce medium-speed engines enjoy the position of being the ultimate service partner for owners of tugs, work boats and coastal ferries all over the world.

A real "work horse" shall be able to handle shock-loads under all conditions, – at all speeds. Rolls-Royce has the technology.



**B-ENGINES**  
• Bergen B-engines with outputs from 2545 – 5300 kW.



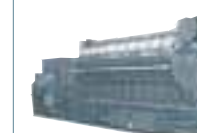
**K-ENGINES**  
• Bergen K-engines with outputs from 600 – 4010 kW.



**B 32:40 ENGINES**  
• Bergen B 32:40 engines with outputs from 3000 – 9000 kW.



**GENERATOR SETS**  
• Bergen generator sets with outputs from 600 – 9000 kW.



**LEANBURN GAS ENGINES**  
• Bergen Lean-burn gas engines with outputs from 2220 – 3330 kW.

# Engines

### Typical applications



**Ship name:** "Bob"  
**Owner:** Buksér og Berging AS  
**Type:** Tug  
**Yard:** Moen Slipp A/S



**Ship name:** "Rennesoey"  
**Owner:** Rogaland Trafikkselskap AS  
**Type:** Double-ended ferry  
**Yard:** Fiskerstrand Verft A/S



**Ship name:** "Anasuya3"  
**Owner:** The Great Eastern Shipping Corp. Ltd.  
**Type:** Tug  
**Yard:** Bharati Shipyard Limited, India



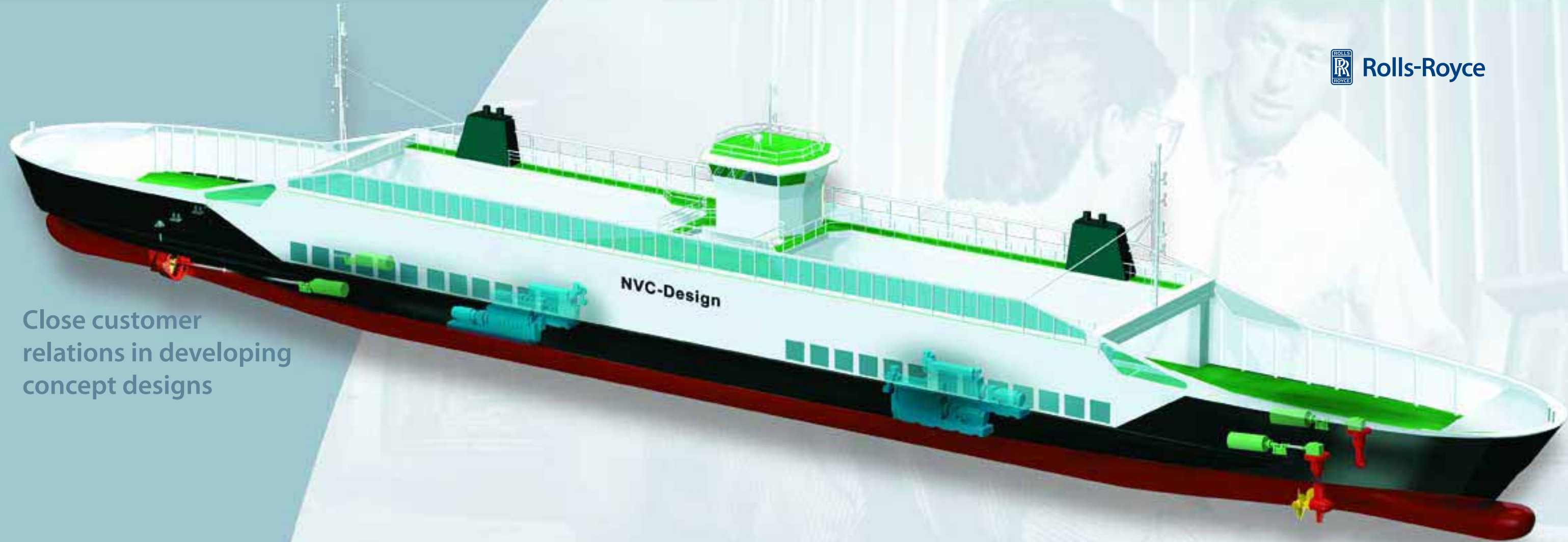
**Ship name:** "Masfjord"  
**Owner:** Bergen Nordhordland Rutelag  
**Type:** Double-ended ferry  
**Yard:** Trønderværftet AS

The Rolls-Royce engines have proven their excellence during tough operation for decades.

Where economy, safety, comfort and reliability is essential, real power from Rolls-Royce is indisputable.



**Ship name:** "Bess"  
**Owner:** Buksér og Berging AS  
**Type:** Tug  
**Yard:** Moen Slipp A/S



Close customer relations in developing concept designs

**Working closely with the customer is essential to design and develop vessels that are purpose-built for specific tasks – it's all about commitment and responsibility.**

Working closely with customers is the foundation of all of our work. Our customers challenge us to create functional and cost-effective solutions. The results are vessels that are in perfect harmony with the element in which they will spend their life.

We provide complete project implementation, guiding the customer through the entire process, from concept to completion. We also tailor vital equipment to suit your specified application. In addition, you have the advantage of our vast expertise and our truly global support network.

The NVC-Design for coastal ferries is developed to meet your specific requirements with the benefits of advanced technology, economical operation and safe and flexible solutions.



# NVC-Design



## Global Service and Support

The Rolls-Royce Service and Support concept has been developed to secure complete life-cycle support for your ship and its equipment. Our goal is to make your investment profitable for as long as possible, and to protect your values through our dedicated and global service network.

We enable you to choose the kind of service level you need in the most cost-efficient way. Choose between day-to-day servicing, service agreements or a comprehensive service solution.

### THE PARTNER SOLUTION

#### **A comprehensive service agreement**

Lifelong support means less downtime, low life-cycle costs and proven high second-hand value. The Partner Solution provides you with these important advantages. This service solution allows you to optimise your daily routines, and ensures that our servicing puts your investment in the best hands. This also allows you to structure your own after-sales service to increase reliability and economy for your applications' operating conditions.

### SERVICE AGREEMENTS

#### **We save you time and money**

Time is crucial, so swift and correct response to enquiries or problems is of mutual benefit. Our aim is to increase your profitability by implementing long-term and cost-effective service agreements. These include delivering original replacement units, regular on-site inspections and personnel training.

### BASIC SUPPORT

#### **We get you back in business**

Our Service and Support is based on reliability, determination and the expertise to carry out services and deliveries at short notice. The Basic Support Agreement gives you access to our skilled field workers and genuine spare parts supplies, wherever and whenever you need them. The agreement also includes access to our in-house repair and maintenance centres all over the world.

### WORLDWIDE AVAILABILITY

#### **We are always present**

A Rolls-Royce service centre is never far away, no matter where you are. With a comprehensive network of service centres around the world, we are a global company and yet still local. We offer 24-hour availability worldwide, backed by a first class logistics system, which secures you rapid response to inquiries within the shortest possible time.

