



ALPHATRON
Marine



AlphaBridge

Redefining bridge design

jrceurope.com/alphabridge

Complexity, made simple

Whilst maritime technology becomes more complex, the number of skilled staff onboard is reducing, making high levels of monitoring vital to ensure a safe work environment for crew. Accuracy and reliability are paramount to efficient operations, which is why all equipment integrated on the AlphaBridge is designed to meet and exceed international standards. Our modular concept offers true flexibility to integrate sophisticated navigation and control systems from a diverse portfolio of technology, for any class and size of ship.





05 bridge operation

06 modular & space saving

11 total concept

12 3D proposal

13 you are in control

15 ergonomics

16 tugboat bridge

18 dynamic positioning

20 deliveries

22 one man bridge

26 merchant bridge

28 products & options

32 the right heading

33 quality meets innovation

35 centers of excellence



Bridge operation, made easy

The maritime world first became familiar with the AlphaBridge concept in 2007 when Alpatron Marine introduced a compact, modular bridge solution based on standard control panels in a neat, simple design. Now more than 350 vessels worldwide operate safely and efficiently thanks to the AlphaBridge. Our principle is that technology should make bridge operation easier - even for the highest class notations for vessels undertaking complex, sometimes hazardous operations.



Courtesy of Damen Shipyards



Courtesy of Damen Shipyards

The world's first truly modular bridge

The best of Dutch design has created a unique, versatile and innovative bridge system based on the highest quality materials and manufacturing techniques. Because of its modular concept, AlphaBridge can be preassembled at Alpatron Marine workshops around the world. Factory acceptance tests are carried out before shipment, ensuring your satisfaction in the quality of our delivery. AlphaBridge is built to your requirements. For instance, you can choose screen selection by KVM switch technology or full network MFD operation or modules in steel or aluminium, with special versions to meet diverse requirements on request. Basic color scheme is RAL 7012 / RAL 7004.



In addition to standard modules, AlphaBridge features work specific modules for offshore, dredging, fast ferry and workboat applications. Special custom made designs are available on request.



Courtesy of Damen Shipyards

Ergonomic design, safe operation

The ergonomic design of AlphaBridge follows regulations and enables intuitive, comfortable operation, which enhances the safety of your vessel. A unique facility to adjust the height of monitors and the work shelf in eight increments means that AlphaBridge is the first system to enable navigation and communication equipment operation from both a seated or standing position. Standard supply features simple manual height adjustment, while reliable electrical adjustment is available as an option.

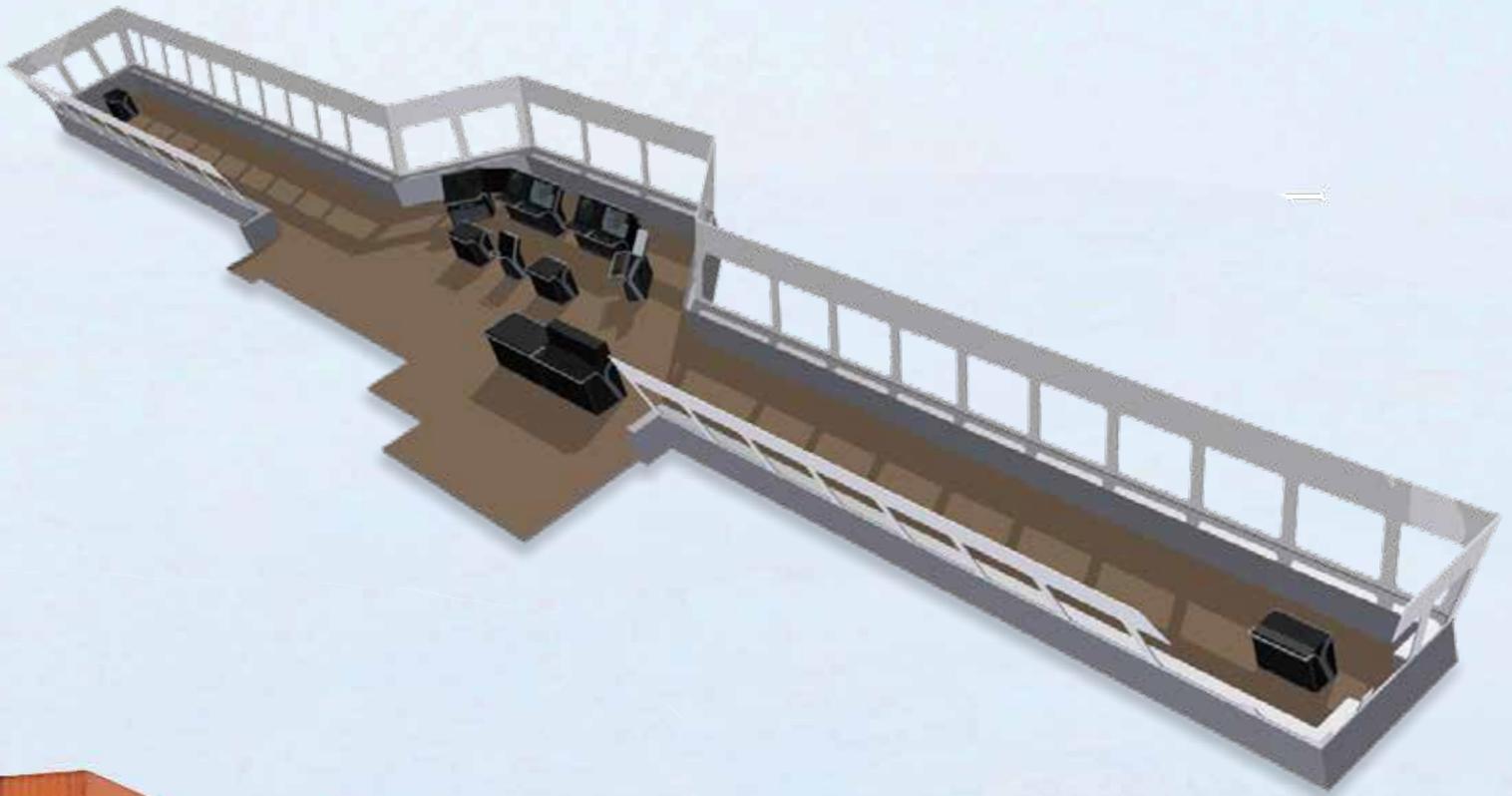


Standard console

Setting standards, in space saving design

The AlphaBridge aim is to minimize the space that each individual component uses on the bridge console, resulting in a solution that follows the latest thinking in ergonomics and class rules. Perfectly suited to even the largest container vessels with their relatively small wheelhouses, which are often sized down to maximize the cargo volume of the vessel.







Moored tightly, as is the concept

JRC and Alpatron Marine designs, builds, delivers, installs and provides technical support for high-spec navigation and communication equipment on board ships. Our experience and expertise enhances the safety of your ships and crews in increasingly busier shipping lanes, whilst boosting fuel efficiency and reducing emissions. The result is more efficient operations, fewer errors and ultimately, a stronger bottom line.

In recent years we have taken our position as an established technology specialist and systems integrator to the next level, through intensive collaboration with specialist shipyards and shipowners. In accordance with our desire to respond even better to changing needs in the maritime world, we initiated a strategy to develop more products in-house. Alpatron Marine has since become a leading producer and co-producer of complete bridge systems.





A good start, in all dimensions

In close contact with the shipyard, owner and naval architect, a full 3D proposal is created before the actual bridge layout is taken into production. As a result of our flexible and modular approach, multiple variants based on the core AlphaBridge concept may be composed to ensure we offer the best solution for your vessel.

All AlphaBridges carry the same DNA, with the same uniform design and control functionality that the aviation industry uses to secure safety at 30,000ft, which ensures safety and efficiency at sea level.



Innovation, in form and function

A unique CAN bus dimming circuit controls the brightness on all AlphaBridge control panels and other equipment if suitable. A patented snap on mounting system makes it possible to fit control panels and Alpatron Marine designed monitors without tools. As a result, a minimal amount of screws or mounting bolts are visible.



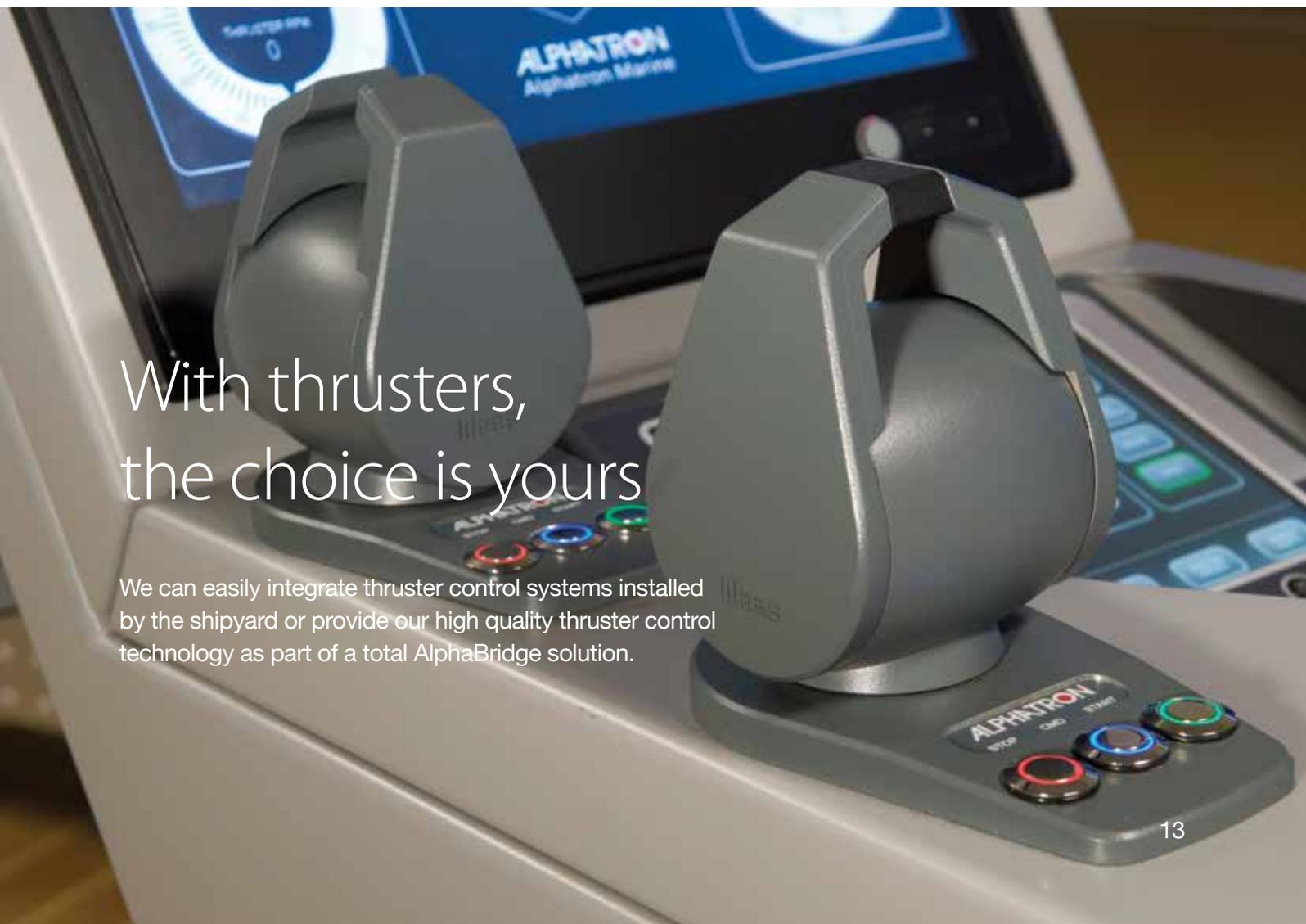
Full control, your way

Full, flexible and ergonomic control is a leading principle in the AlphaBridge system. You can choose customized joysticks or trackpad controls of the same type and quality as used by the aviation industry, and reflecting the flexibility of AlphaBridge, you can specify and personalise all control functions on demand.



With thrusters,
the choice is yours

We can easily integrate thruster control systems installed by the shipyard or provide our high quality thruster control technology as part of a total AlphaBridge solution.





POLARIS
ROTTERDAM
IMO 9496915

A new definition of ergonomics

The Dutch Pilot Organization ordered three new pilot station vessels. After a careful selection procedure, the AlphaBridge concept was chosen as the heart and brain of these sophisticated new craft. In addition to advanced navigation and communication equipment, we installed various operational control desks that fully complied with the high ergonomic standards required for safe pilot operations.







Limited space, unlimited functionality

Modern tugboats are equipped with azimuth thrusters that are manoevrable through 360°. The AlphaBridge tugboat variant ensures all round visibility and vessel control, without compromise. The AlphaMultiCommand Chair can rotate 180° allowing for various compatible design options suitable for ASD, Rotortug, Z-Peller, Schottel and Voith Schneider.



Sitting comfortably, truly dynamic positioning

The AlphaMultiCommand Chair is a versatile piece of control equipment suitable for extremely demanding applications. Within easy reach of the operator, a multitude of functions can be accessed or controlled, including: dynamic positioning system, hydroacoustic reference devices, laser radar, fan beam, (chart) radar, ECDIS, conning, CCTV, cargo handling, VHF and alarm monitoring. A touch screen AlphaCommand MFC panel provides access to various auxiliary functions such as screen selection, intercom (AlphaCall), PABX (AlphaConnect), window wipers (AlphaWiper), search light, navigation lights, deck lights and other systems.



The chair is available with full electrical control in respect to height and position, but is also available as a fixed version without electrical adjustment and/or flat armrest. Customized variants can be made on request.



Before building to a higher standard, you have to set a few

Emphasising the attention to detail in all areas, careful consideration has gone into enhancing the performance, satisfaction and situational awareness of the watch officer. Even as far as strategically placed cup holders, the smallest details are taken care of with AlphaBridge.

Considering redundancy, ergonomics and regulations, hardwire control buttons are also provided, giving direct access to relevant functions required by class or operator.



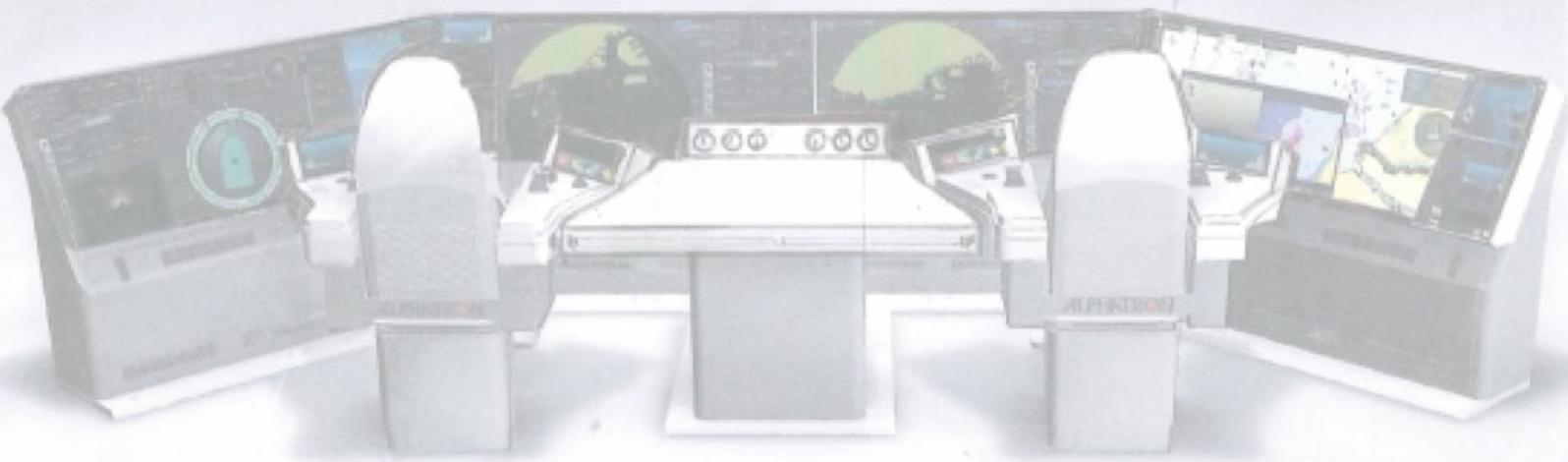


Delivery #329 and counting



Damen Yacht Support Vessel Sea Axe 6711





One man bridge, with a clear difference

AlphaBridge premium Sept 2018

In 2014, JRC and Alpatron Marine established a far-reaching strategic partnership. This unique combination of expertise offers a one-stop-shop concept for navigation, communication, automation and complete ship's bridges. You get the best in maritime electronics by JRC, Alpatron and other manufacturers, from a single supplier, together with the role as a total system integrator.

Less than a year after starting our partnership, we introduced the new JRC AlphaPremiumBridge. This state-of-the-art 46-inch display concept combines the presentation of radar, ECDIS, conning, alarm monitoring and dynamic positioning data in an easy to use format with all navigational controls located on the screen. The screens can also present other information in the form of 'picture in picture', such as CCTV from an independent source.

The new JRC Multi Function Display (MFD) forms the backbone of this ruggedized concept.



AlphaPremiumBridge can be fully controlled in various ways, including with the AlphaController, an intuitive, intelligent rotary switch. The AlphaController enables each screen to be selected and controlled from a single workplace. Additional joysticks or trackpads are available in order to meet all control and layout needs of your vessels.

Achieve more, with fewer people

When the radio officer was replaced by electronics 25 years ago, Alpatron Marine came up with the integrated GMDSS console, which incorporated all relevant equipment. We have been pioneering new ways of working for years, gradually harmonizing control and navigation technology. We introduced uniformity to lighting and switches, created a simple click system for flexible equipment installation and developed dynamic height adjustment for displays, to name just a few of our innovations.

The large 46-inch screens used on the AlphaPremiumBridge ensure that navigation officers get a clear view even when standing several meters away, making one man bridge operations much easier and therefore safer. Following the trend of smaller bridge design and reduced manning, AlphaPremiumBridge provides greater clarity on watch. For large ships, the system uses a chart format that corresponds as much as possible to what navigators are used to, which helps to avoid human error in the sometimes high pressure bridge environment.



The interface puzzle, solved

JRC and Alpatron Marine offer a total concept solution for both shipbuilder and customer. We will listen to all requests for variants on our core bridge concepts. We take the AlphaBridge or AlphaPremiumBridge (with 26, 36 or 46-inch screen options) as the basis and incorporate the desired observation and control elements according to a number of ergonomic principles, such as ensuring operating panels are always within reach.

As a shipbuilder, you do not have to worry about the size of a cabinet, we take care of that. We take away any concerns our customers might have and maintain all contact with subcontractors if required. As a total systems integrator, Alpatron Marine understands the importance of securing all interfaces, so whether you are a shipbuilder, owner or designer, we can make your job easier.

Fully approved

The ergonomic design of the AlphaPremiumBridge meets all requirements of classification societies and the international standard ISO 8468 (Ship's Bridge Layout and Associated Equipment). It is installed on vessels complying with various class societies including Lloyds Register, DNV and BV. The AlphaBridge concept can be composed of various makes and types of equipment in order to comply with specific requests.





Raising the bar, awarded by design

Confident in the design excellence of the AlphaPremiumBridge, we entered it into the 'Erkenningen Goed Industrieel Ontwerp 2013' (Recognition of Good Industrial Design 2013) competition. The judges recognized its superlative ergonomic design qualities and made it a winner. We are proud to once more be part of this select group of winners, chosen because of their class leading industrial designs.



2013:
good industrial
design

Traditional design, ahead of its time

The strengthening of the partnership between JRC and Alpatron Marine has been prompted by the ever growing Asian market and the expansion of our own product range and supplementary services in recent years. With history that spans 100 years, JRC develops the best quality maritime products. Alpatron Marine understands the end user and has been a system integrator with an eye for ergonomics and total concepts for 25 years.

Asia is traditionally building mainly larger vessels and the operation of the entire bridge from a sitting position has not been the norm. Watch officers work standing up, so we have developed a derivative of the one man bridge for larger vessels. The JRC premiumbridge features a variety of 46-inch (26 or 36-inch also available) screens in the front console, supplemented by extra consoles with control and operating panels as well as a free standing steering console.

This unique approach reflects our ability to satisfy the bridge design requirements of shipyards and owners. The JRC premiumbridge is built in compliance with IMO regulations and is available for all ships regardless of their tonnage and class notation, including IBS, NAUT-OSV(A). Manufacturing of the system can take place as near as possible to the actual building location.



46-inch at home, why not at sea?

What you do not see is just as important as what you do. Today, we have huge televisions and PC monitors at home. JRC and Alpatron Marine believes big is best at sea too, so we base our AlphaPremiumBridge concept on 46-inch full HD displays. The LED technology allows for a phenomenally bright picture with excellent colors that can be seen from nearly every angle. With thin bezels, the crisp, clear picture is the center of attention. Even when walking around a large bridge, the important navigation and safety information displayed can always be seen when you have displays of this size and quality.

The AlphaBridge software works intelligently with the displays. With only a touch of a button, you can switch between various systems such as radar, ECDIS or conning. It is a great example of how hardware and software are designed to work together to give you the best experience possible – but on a whole new scale.



- | | | |
|--------------------------------|------------------------|------------------------|
| Alarms (IBS rules) | DP | PA/PABX |
| Anemometer | ECDIS | Propulsion controllers |
| Auto pilot | GMDSS | Rudder indicator |
| Automation | Gyro | Searchlight |
| BNWAS | Intercom | Ship's horn |
| Camera (CCTV) | Main steering | Sound reception |
| Chartradar | MFD system | TCS |
| Conning | MF/HF | Thruster controller |
| Control panel various function | Nav lights and control | VDR |
| (D)GPS | Night vision | VHF (direction finder) |
| | NMEA repeaters | Window wipers |

Quality instruments, accurate reading

The Alphaline MF range of instruments provides a clear overview on the bridge whilst enabling straightforward operation of various equipment including rudder angle indicator, echosounder and speed or heading repeater.

All new Alphaline instruments can be operated via touchscreen panels that use the latest TFT technology. You can choose different screen sizes; the small 5-inch (MFS) is available in portrait and landscape. Medium 6.5-inch (MFM) and large 8.4-inch (MFL) displays are also available. For ease of operation, touch screen control is supported by a multi-functional rotary knob if more functionality is required.

Instruments can be standalone indicators or repeater units for i.e. vessel speed, depth, time, wind speed and direction, or as a magnetic heading repeater. We offer a full range of design-protected, advanced instruments characterized by simplicity of operation, with recognizable, well-lit keys and a TFT screen adjustable in five color modes. Analog controls remain for some functions.

- Depth repeater
- Engine information panel
- Hardwire switch panels
- Heading repeater
- Heading/rate of turn repeater
- Meteo system
- Radar control unit
- Rate of turn repeater
- Rudder indicator system
- Rudder/rate of turn repeater
- Ship's clock
- Speed repeater
- Steering repeater
- TMC repeater system
- Touch screen switch panels
- Trio repeater depth/speed/heading
- Wind speed and direction system





Single supplier, multiple options



In line with the JRC and Alpatron Marine philosophy to offer total solutions, window wipers are a valuable complement to our product range. Switch them on and you can see clearly, whatever the weather – rain, snow or ice.



Various meteorological sensors are available, designed to withstand the toughest environmental conditions at sea. These high accuracy sensors use industrial standard interfacing that can be complemented with the AlphaMeteo display.



We can deliver wheelmark approved LED navigation lights as a total solution in combination with control and monitoring systems. With shockproof, watertight housings, problems caused by vibration and water ingress are a thing of the past.



A wide selection of air and electronic horns suitable for small boats, as well as IMO approval for vessels over 100 meters that can withstand the punishing use of commercial and military service.



JRC and Alpatron Marine supplies searchlights for any type of vessel, ensuring your peace of mind in the quality of products on board. Deck controlled, cabin controlled or remote controlled versions are available.



Co-operation, a user perspective

We are in close contact with the Dutch Pilot Organization, who provide us with valuable feedback on operation of all sorts of vessels. This helps us to design the most user friendly products and concepts.

Providing, the right heading

Additional (Alphatron) products are available ensuring that your bridge concept can be delivered from a single source. For example, we have a range of heading solutions that covers the minimum required magnetic compass, to a state of the art, maintenance free fiber optic compass.



Magnetic compass



GPS compass



Gyro compass



Fiber optic compass

A variety of standard or customized control panels based on our uniform design and available in three versions with LED backlight and central dimming can be ordered for a wide range of functions. Panels have a hard-wired connection directly to the equipment and include an emergency button approved by classification societies.





Japanese quality meets Dutch innovation

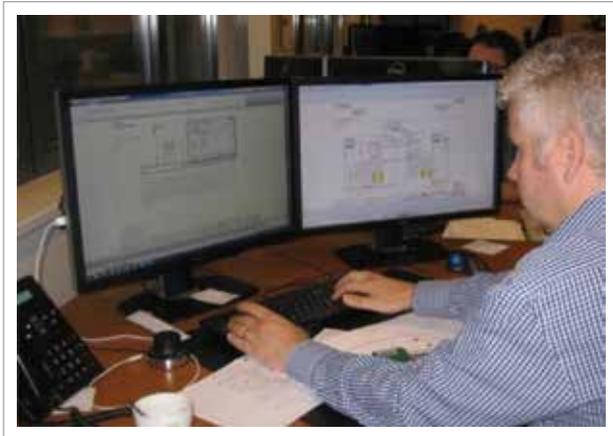
'Today, we have a challenge to change and reshape the face of marine equipment and integration that we see today. With the marine industry's own unique and ever evolving dynamics, together with Alpatron Marine we can embrace the challenges and opportunities presented to us'.

'Where communication, observation, navigation and automation are of crucial importance, you can count on the technological solutions and top quality electronics of Alpatron Marine. With our broad product range and our highly skilled employees, we deliver proven solutions that work'.

Jun Nakazawa
General Manager JRC

Luuk Vroombout
CEO Alpatron Marine Group

Local workforce, global outlook



In house design engineering software programs AutoCad, Inventor and SEE Electrical guarantee the same quality of engineering worldwide.



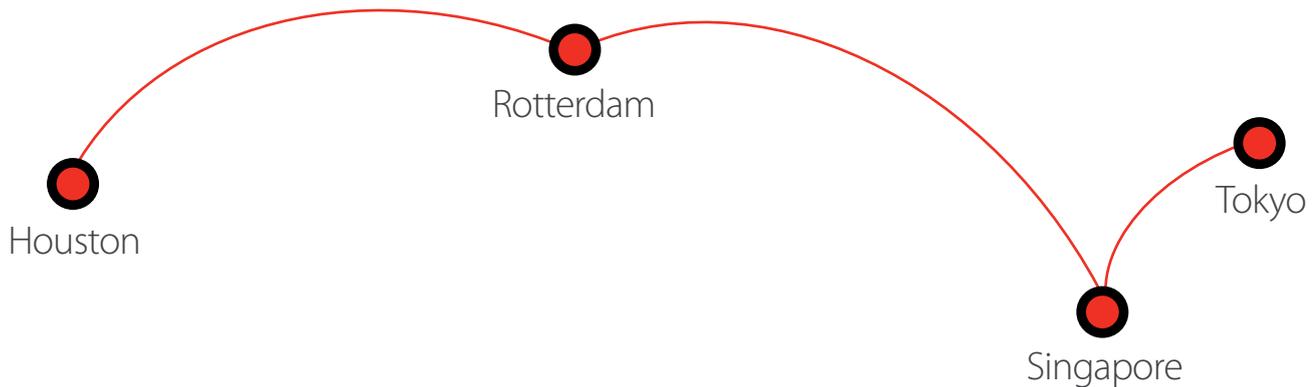
With the nature of our modular concept we can pre-assemble the complete bridge at one of our workshops and ship globally.



A team of specialist engineers is available in order to advise, engineer, install, sell and operate on any of our products anywhere in the world.



We are able to provide a customer defined technical, operational or approved ECDIS training at any of the training centers around the world.



Point to point, Centers of Excellence

For almost 100 years, JRC has delivered unsurpassed quality marine electronics throughout the world via an extensive network of JRC offices and agents and for nearly 25 years, Alpatron Marine has gained ground in the highly competitive market of electronic equipment on the basis of a simple recipe: deliver what you promise.

The collaboration between JRC and Alpatron Marine has resulted in the world's most technologically advanced marine electronics solutions. Organized from our Center of Excellence network and with a combined 125 years of expertise as a foundation, we offer a true one-stop-shopping concept that provides shipowners and shipyards with peace of mind.

Each Center of Excellence offers local sales and support, marketing, training, technical support, on board service (repair and inspection) and distributor management for the region. The Centres of Excellence are interconnected with each other and are able to share information within the same system, therefore allowing us to be continually up-to-date, regardless of time zone or normal opening hours of each center. With such an integrated setup we are able to provide a total concept for newbuildings from offshore patrol vessels to IBS, NAUT-OSV(A) classed anchor handlers in addition to the retrofitting of any required marine product. Delivery is fast, whether we are supplying a small fishing vessel or a VLCC.

At the core of our Centers of Excellence is a highly committed team that is available 24/7 to listen to our customers and focus on innovative solutions for a myriad of needs.

All over the world,
close to the customer

JRC/Alphatron Marine

Schaardijk 23 (harbor 115)

3063 NH Rotterdam

The Netherlands

T +31 10 453 4000

F +31 10 453 4010

jrceurope.com/alphabridge

Centers of Excellence

Houston, Rotterdam, Singapore, Tokyo