BARRUS

Barrus Special Products

Your End-to-End Marine Solutions Partner

Turn-key engine solutions from design and development to testing and training

MERCURY YANMAR MARINER SHIRE

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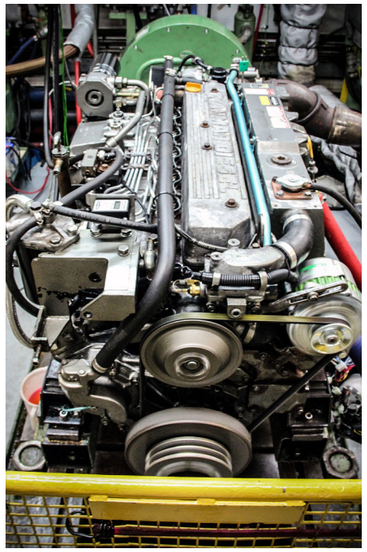


Barrus Special Products Division

A dedicated team with decades of engineering experience and knowledge solving the stringent requirements and applications of our partner organisations in the defence, professional rescue and commercial spaces.

Why Partner with Us?

We specialise in custom-built power and propulsion packages that are validated, stress-tested and specified according to your operational requirements.

Beyond prototyping and production, we offer 1,000's of aftermarket and equipment products affording you the simplicity and resilience of a single supplier relationship.

The result is a complete solution for your fleet that is reliable in any marine environment and right-sized for your development and procurement needs.

What Do We Offer?

Design and Development - From concept to blueprint, our engineers deliver precision-built solutions—fast. Test-ready, to your exact specifications.

Engine Production and Remanufacture - Engine overhaul, remanufacture and short-run production facilities built for engine modification and production of engines according to your specified performance output.

Real World Performance Testing - On the water testing allows you to validate the performance of our integrated solution against fuel economy, speed, handling and stability.

Certified Technician Training and Support - Servicing and fault-finding; dealer recertification; engine installation and full re-build training.

SOLAS Approved Engines- Barrus offer a range of SOLAS approved engines for defence and rescue use. We also offer a range of supplementary accessories to ensure your full needs our met in these challenging applications.

Our Industry Innovations

- FAST PIRS® (Post Immersion Restart System)
- Specialist engines with low underwater noise/signature

Design, Development and Real-World Testing

Our full product design team is at your disposal. We work in an agile way for fast turn around of your projects from concept or blueprint to prototype and production using our world-class manufacturing facilities.

Our experience is in designing and building custom propulsion systems for the most demanding applications—defence, police, rescue, and commercial fleets.

For over 60 years, we've partnered with these organizations to develop patented technologies like:

FAST PIRS® (Post Immersion Restart Systems) - enables our defence and rescue operation partners to restart 2 stroke engine after capsize or full submersion, allowing water into the engine and them systematically removing . This is an enormous advantage for search and rescue vessels.

Capsize PIRS® fully protects a 4 stroke engine from water ingression during capsize. This system seals all inlets to the engine automatically and provides instantaneous restart upon righting.

Real World Performance Testing

Grebe Lake, home of Great Moor Sailing Club is situated just 5 miles from barrus providing a 50 acre site for year round testing trials of our custom built products

This extension of our facility allows us to test your vessel in accordance with the fuel economy, speed, handling and stability requirements you outline.

Perform any further development and ready our products for a complete turn-key solution.

Our customers receive a complete package of performance and reliability that is ready to deploy across their fleet.

We offer completely tailored design and development solutions

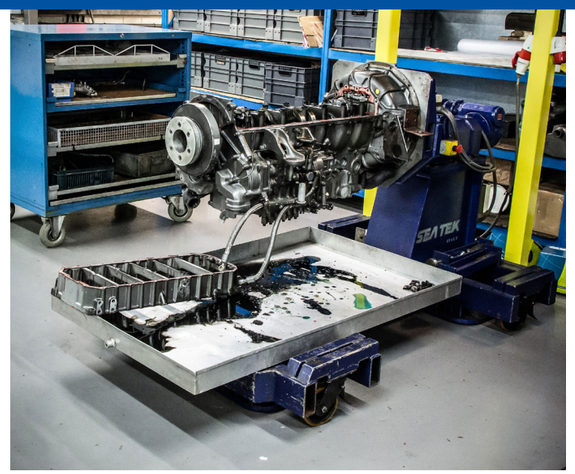
- Full project management from design, prototyping and productionisation

- Delivering and applying engine build modifications from concept, tailored to project and application needs

- Low volume manufacture and assembly service

- Prototype delivery and testing using our fully equipped testing facilities

We've worked on a range of partner projects such as unmanned or autonomous vessels to enable operations such as critical infrastructure surveillance.



Engine Remanufacturing

EP Barrus Ltd has over 25 years' experience overhauling and maintaining marine engines. The Special Products Division has supported a wide range of customers with various brands but now has a core focus on rebuilding Yanmar Power Boat Engines for Leisure, Commercial and Defence customers.

This rebuild service will refresh a tired engine and give it a new lease of life, negating the need for a time consuming and expensive new installation with a new engine.

When an engine is received for overhaul, it is disassembled, cleaned and inspected. This ensures that all damaged or worn parts are highlighted for replacement. A report is then produced and submitted to the customer for consideration. This report includes a breakdown of the components required for overhaul along with potential causes of failure.

Once the engine has been disassembled it is stored in our specially built engine cabinets, ready to be called for assembly. With customer approval and when all the parts are in stock the engine is assembled by our team of qualified engineers to original manufacturers specification.

When assembly is complete, it is tested on one of our five engine dynamometers, usually exceeding original manufacturers specification. This is to ensure that the final product will have the same life expectancy as a brand-new engine.

Once the engine has finished its dyno test, it receives a full respray to give it a fresh appearance, ready for installation back into the customers' boat.

Training

Barrus offers a comprehensive range of courses for engineers and technicians which are available to dealers and partners.

The company headquarters in Bicester features a purpose-built Training School which is used to facilitate our bespoke training courses, supported by regional courses throughout the UK and Ireland and further afield.

Over 400 engineers attend the Recertification Course each year covering outboard and inboard engines throughout the year and over 600 engineers complete multiple courses.

With frequent product upgrades and wider ranges of engines Barrus training courses are essential to ensure the highest levels of support for end users.

Why Train with Barrus?

Leverage our deep technical expertise and ongoing professional development programmes for your technicians and service teams. Our training will provide your team with the proficiency and experience to use our products and bespoke solutions confidently:

- **Full engine servicing**
- **Recertification and training (for dealers)**
- **Full engine rebuild**
- **Engine installation**

Yanmar Inboard Engines

Reliable marine engines

Barrus utilises Yanmar engines for their custom-build projects. Yanmar delivers dependable, high-performance marine engines designed to meet the rigorous demands of both commercial and defence maritime sectors. Our engines are engineered for superior durability, efficiency, and operational readiness, ensuring mission success and business continuity in even the harshest environments.

Model	Displacement (Litres)	Horsepower (MHP)	RPM	Dry Weight (kg)
3YM30AE	1.266	29.1	3200	127
3JH40	1.6	40	3000	192
4JH	2.19	45 - 110	3000	220
4LHA-STP	3.455	160 - 240	3300	365
4LV	2.755	150 - 250	3500 - 3800	343
6LPA-STP2	4.164	315	3800	408
6LY-CR	5.813	400 / 440	3300	585
6LY2A	5.813	370 / 440	3300	535
8LV	4.46	320 - 370	3800	435
6LF	6.7	485 - 550	3000	780
6LT	8.7	500 - 640	2530	940

Mercury Outboards

Mercury is an industry-leading manufacturer of performance outboard motors. Designed for rugged dependability and optimised for efficiency, these outboards carry a host of advantages for our customers:

Noise and vibration dampening technologies for smoother operation.

Easy maintenance, supported by an extensive network of professional service centres across the globe.

Durability, thanks to premium corrosion-resistant alloys and heavy-duty components.

Superior efficiency, delivering maximum fuel economy.

As longstanding distribution partners, Barrus has pushed the envelope of what these already capable outboards can offer in terms of power output and reliability.

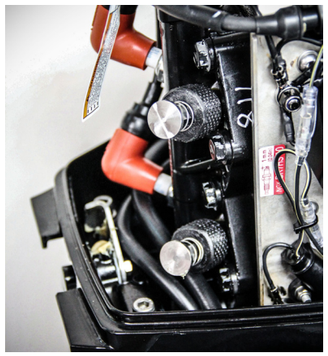
4-STROKE Models	Kilowatts	Max. RPM at full throttle	Cylinders / Displace-ment	Starting	Gear ratio	Alternator system	Weight
600 Verado	447	4600 - 5600	V12 7600 cc	SmartStart electric	2.50:1	150 amp	572 kg
400 Verado	294	5800 - 6400	V10 5700 cc	SmartStart electric	2.08 : 1	150 amp (1890 watt)	316 kg
350 Verado	261	5800 - 6400	6 (in-line) 2598 cc	SmartStart electric	1.75 : 1	70 amp (882 watt)	303 kg
225	168	225: 5200 - 6000	V6 / 3400 cc	SmartStart electric	1.85 : 1	85 Amp (1071 watt)	215 kg
150EFI	110.3	5000 - 5800	4 (in-line) 3000 cc	Electric (turn-key)	1.92 : 1	60 amp (756 watt)	206 kg
115 EFI	84.6	115: 5000 - 6000	4 (in-line) 2100 cc	SmartStart electric	2.07 : 1	35 amp (441 watt)	165 kg
60EFI	44.1	5500 - 6000	4 (in-line) 995 cc	Electric (turn-key)	1.83 : 1	18 amp (226 watt)	112 kg
40 EFI	29.4	5500 - 6000	3 (in-line) 747 cc	Electric (turn-key)	2.00 : 1	18 amp (226 watt)	98 kg
30(3) - 25 EFI(3)	22.1 - 18.4	30: 5250 - 6250 25: 5000 - 6000	3 (in-line) 526 cc	Manual or electric (turn-key)	1.92 : 1	15 amp (186 watt)	30: 78 kg 25: 71 kg
20(3) - 15 EFI(3)	14.7 - 11	5700 - 6200	2 (in-line) 333 cc	Manual or electric	2.15 : 1	12 amp (138 watt)	45 kg
9.9(3) - 8(3)	7.28 - 5.88	5000 - 6000	2 (in-line) 208 cc	Manual or electric	2.08 : 1	6 amp (76 watt) on electric start models	38 kg
2-STROKE Models	**Kilowatts**	**Max. RPM at Full Throttle**	**Cylinders/ Displace-ment**	**Starting**	**Gear Ratio**	**Alternator System**	**Weight**
50 - 40	36.8 - 29.4	5150 - 5850	3 / 697 cc	Manual or Electric	1.85:1	11 amp (130 watt)	75 kg
30 - 25	22.1 - 18.4	30: 4800 - 5500 25: 5000 - 5800	2 / 429 cc	Manual or Electric	1.92:1	6 amp (80 watt)	51 kg
15	11	5200 - 5800	2 / 249 cc	Manual	1.85:1	6 amp (76 watt)	42 kg

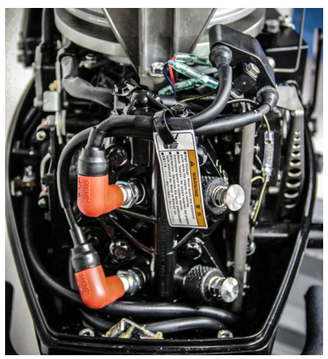
Post Immersion Restart Engines

PIRS (Post Immersion Restart System) restarts an outboard engine after being submerged; a system designed and developed by Barrus for the military, commercial and rescue services.

GEN 2 FAST PIRS®, the latest two-stroke development, rapidly drains the fuel system and cylinders of water with a restart time of less than 30 seconds.

Model	25HP / 30HP FAST PIRS GEN II	40HP / 50HP FAST PIRS GEN II
Maximum Output	25hp (18.4kW) @ 5800rpm 30hp (22.1kW) @ 5500rpm	40hp (29.4kW) @ 5850rpm 50hp (36.8kW) @ 5850rpm
Approx. Restart Times	3 - 5 minutes	3 - 5 minutes
Transom Height	403mm Shortshaft / 530mm Longshaft	403mm Shortshaft / 530mm Longshaft
Total Weight	51kg	75kg
Displacement / No. Cylinders	429 / 2	697 / 3
Bore / Stroke	68mm x 64mm	68mm x 64mm
Lubrication	50 : 1 pre mix	50 : 1 pre mix
Gear Ratio	1.92 : 1	13 : 24 (1.85 : 1)
Gearshift	F - N - R	F - N - R
Trim Positions	6 (4 - 24 degrees)	6 (4 - 24 degrees)
Starting System	Manual and Electric Standard (Key Switch on Engine)	Manual and Electric Standard (Key Switch on Engine)
Ignition System	Capacity Discharge with Mechanical Advance	Capacity Discharge with Mechanical Advance
Alternator	12 Volt 120 Watt	12 Volt 120 Watt
Propeller	Splined Rubber Hub (8” - 19” Pitch)	Splined Rubber Hub (8” - 19” Pitch)





FourStroke Capsize PIRS Engines

The latest FourStroke variation of the PIRS technology, Capsize PIRS, is fully automatic and integrated within the engine's electronic control unit. The system ensures no water can enter the internals of the engine and is operated without removing the engine cover.

Barrus was presented with the Marine Equipment, Electronics and Materials Award in the 2018 European Commercial Marine Awards Innovation Showcase for the new FourStroke Capsize PIRS development.

Model	60	75	115	115 CT	150
HP (kW)	60 (45)	75 (56)	115 (86)		150 (110)
Engine Type	Inline 4 Cyl. 8 Valve SOHC				
Displacement	995 cc	2.1 L			3.0 L
Starting	Smart Start Electric				
RPM WOT	5000-6000	4500-5500	5000-6000		5000 - 5800
Fuel System	Electronic Fuel Injection (EFI)				
Charging Amp/Watt	18A / 226W	35A / 441W			60A / 756W
Smartcraft Compatible	Yes				
Controls	Mechanical Throttle & Shift				
Steering	Big Tiller, Dual Cable, Hydraulic				Big Tiller, Dual Cable, Hydraulic, Dual Electro-Hydraulic
Shaft Length	20" (L)		20" (L) & 25" (XL)		
Gear Ratio	1.83:1	2.07:1		2.38:1	1.92:1
Gear Options	Standard Rotation		Standard & Counter Rotation		
Dry Weight	112kg	163kg		165kg	206 kg

Post Immersion Restart System Features

Prevents water from entering the engine

Reduces the chance of water & oil contamination

Fully integrated with engine electronics

Test mode for operational checks

No need to remove engine cover

Automatic operation

Twin capsize tilt switch for dependability

Accessories

Twin Engine Single Tiller

Engine Transit Frames

Outboard Trolley

Umbilical Tube

12V Auxiliary Power Supply

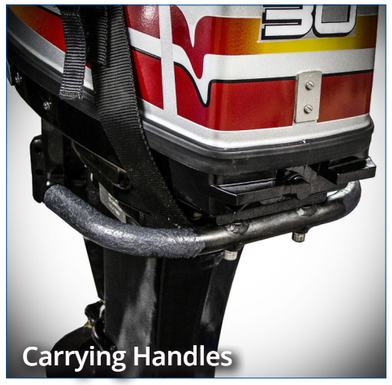
Outboard Cowl Covers

Propeller Guards

Outboard Flush Bag

Engine Lifting Harness

Waterproof Hour Meters



Carrying Handles

Rotationally Cast Fuel Tanks

Marine Equipment

The Marine Equipment Division was set up in 2018 as a first step in establishing a portfolio of brands with the vision to become a leading distributor in the chandlery and aftermarket sector.

The core product offering of Talamex, a complete single-branded chandlery range, Besto life-jackets, G-Nautics boat accessories, and Stazo boat safety systems, has grown considerably and currently this Barrus distributes over 20 leading brands.

SIMRAD - from TouchSensible and multi-touch technology, which delivers the perfect hybrid of a glass-bridge touch-screen display and all-weather conventional controls, to our cutting-edge HALO Radar and StructureScan™ 3D sonar, Simrad gives you the latest technology to let you get the most out of your time on the water.

International Paint Ltd, a division of AkzoNobel has become synonymous with the highest standard of care for all kinds of vessels and is an integral part of boat building and maintenance.

MG Duff specialises in producing sacrificial anodes for leisure boats, commercial ships, and offshore structures. MG Duff offers a range of over 3,000 anodes across all sectors as well as a bespoke anode manufacturing service and a range of related civil engineering services.

Guidi is one of the leading names in the marine equipment sector for both leisure and commercial craft, and the brand is synonymous with quality and product and process innovation. With over 50 years experience in the production of bronze, brass, chrome and nickel-plated accessories including non-stick valves, seacocks, thru-hulls, water strainers and hydraulic fittings, Guidi has pushed the boundaries achieving thirteen patents. The primary material used is bronze, of which Guidi was a pioneer.

Disaster Relief

Loncin Portable Generators and Pumps

Model	LC2000i-S	LC3000-i-S	LC3500i	LC7000i
Generator Type	Inverter			
Rated Voltage	110 V / 230 V	230 V		
Rated Output	1.6 kW		3.0 kW	6.0 kW
Dims L x W x H mm	499 x 285 x 455		578 x 440 x 510	920 x 765 x 773
Net Weight	21 kg	26.5 kg	45 kg	118 kg

Model	LC2500-AS	LC5500-AS	LC6500D-A	LC8000D-A
Generator Type	Open Frame			
Rated Voltage	110 V / 230 V			
Rated Output	2 kW	2.8 kW	5.0 kW	6.0 kW
Dims L x W x H mm	590 x 430 x 467		681 x 546 x 550	681 x 546 x 550
Net Weight	40 kg	47 kg	79 kg	87 kg

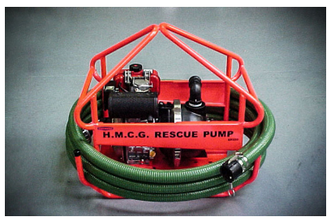
Model	LC25ZB21-1.75Q5	LC50ZB30-4.5Q5	LC80ZB35-4.5Q5	LC25ZB21-1.75Q5	LC50ZB30-4.5Q5
Pump Type	General Pump	General Pump	General Pump	High Lift Pump	Semi Trash Pump
Discharge Diameter	1"	2"	3"	2"	3"
Lift	21 metres	23 metres	35 metres	60 metres	30 metres
Delivery Volume	8,000 litres	30,000 litres	60,000 litres	30,000 litres	45,000 litres
Net Weight	13 kg	23 kg	28 kg	30.5 kg	39 kg

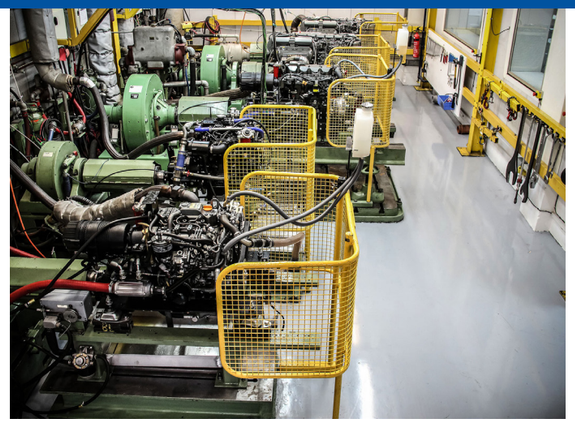
Air Liftable Pump

A 2'' trash pump designed with a lightweight, air-portable frame that can be used for salvage, fire fighting and general pumping. The pump weighs just 48kg, has a maximum flow of 820 litres (180 gallons) per minute and is utilised by H.M. Coastguard search and rescue helicopters.

Salt Water Pump

Ideal for applications on salt water and mild base chemical (PH 4-9), a Yanmar salt-water rescue pump is an integral part of the RNLI all-weather lifeboat fleet and has a maximum flow of 865 litres (190 gallons) per minute and weighs just 40kg.





Barrus Facilities

Barrus's commitment to research and development is reflected in the number of patented technologies that it has developed for a range of critical applications. The R&D team works closely with users of the equipment to understand their specific requirements and the hostile conditions in which they often have to operate.

The Production team offers a flexible approach to meet the most demanding customer requirements. The substantial investment made by Barrus has created one of the world's largest and most modern custom engine-building facilities, allowing Barrus to build products from single units to large volume production runs. Barrus's test facilities enable delivery of fully tested, run-in and first serviced engines. Barrus also provide an engine overhaul facility, extending the life of these significant capital assets.

Barrus's Facilities Include:

Five dynamometers capable of testing diesel engines up to 900hp. The dynos can be pre-programmed and are run automatically by computer control for 24/7 operation.

Two overhead mono-rail production lines capable of supporting outboard engines up to 350hp and inboard engines up to 500hp.

An outboard test cell which can accommodate up to eight 400hp engines.

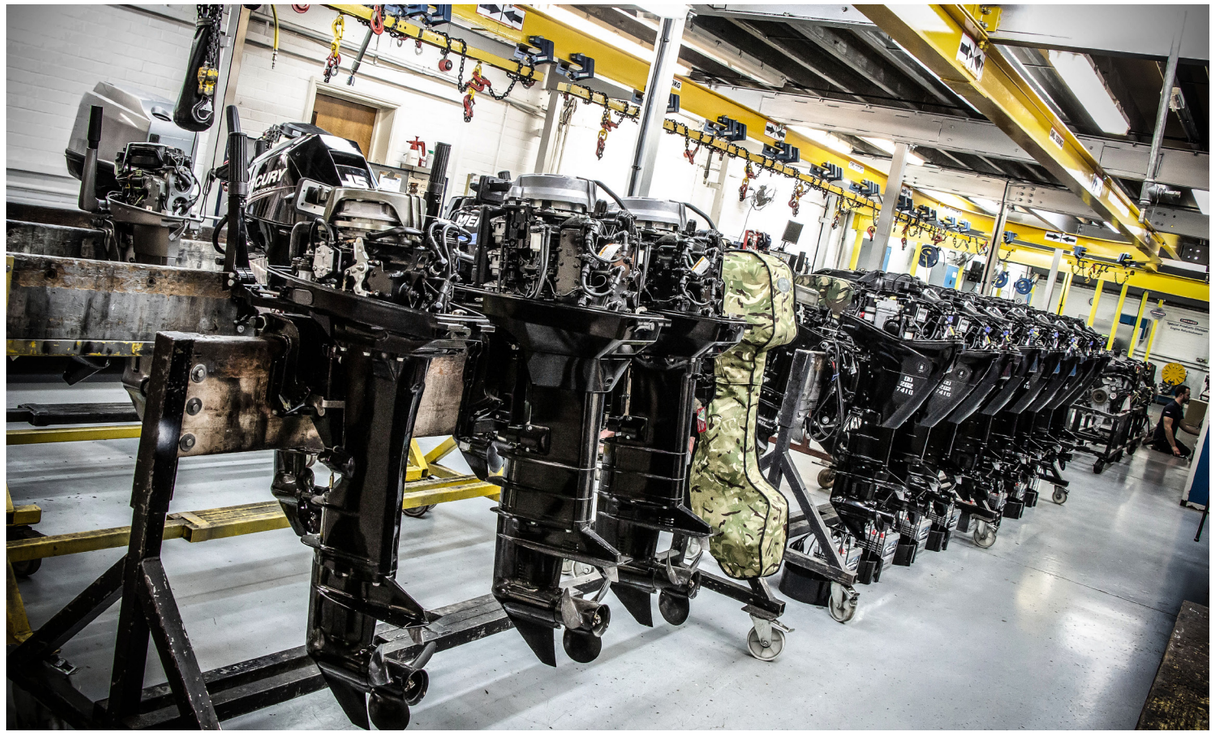
Computer measuring machine (CMM) for inspection and design purposes.

Extensive CAD capability and 3D printing facilities for rapid prototyping.

Machine shop and welding centre for prototype and low volume manufacture.

Dedicated inboard and outboard engine overhaul area.

Spray booth with warm air ventilation for superior paint finish.



Shire Workboat Diesel Engines

In 1998, we began production of the Shire range of inboard engines fitted to narrow boats, wide beam boats and dutch barges. In that same year, we were the first manufacturer to design and fit a genuine twin thermostat system - and still are today.

Our shire workboats engines now offer our commercial customer the same reliability, efficiency and versatility. Produced to spec for ocean going vessels, benefiting from extensive after sales support and easy servicing.

Hybrid Marine International

The Hybrid Marine International system is manufactured by EP Barrus and has multiple modes including electric drive, diesel drive, sailing regeneration and generator mode- removing the need for onboard generators, reducing the carbon footprint and saving costs.

Barrus's commitment to research and development is reflected in the substantial investment it has made in creating one of the world's largest custom engine building facilities.

To discuss your custom-build requirements, please contact our team. We are committed to providing tailored solutions to meet the exacting standards of marine, defence, commercial, and professional applications.

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PROUD MEMBER OF BRITISH MARINE
LEADING THE INDUSTRY

Suppliers of SOLAS approved outboard & inboard engines.

Specifications are subject to change without notice.
Every effort is made to produce sales literature and price lists that are accurate and current.

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