



THE **SENTINEL**



**CREATORS OF DURABLE PRODUCTS
FOR HARSH ENVIRONMENTS**

TACTICAL WATERCRAFTS & WORKBOATS

AQUATRUCK
A DIVISION OF PFG GROUP



CREATORS OF DURABLE PRODUCTS FOR HARSH ENVIRONMENTS

PFG Group is a multi-sector, technology-focussed manufacturing partner.

We are a privately owned company with over forty years of history producing innovative solutions to a wide range of industries, locally, nationally and around the world.

Our head office is based in Tasmania, Australia with manufacturing facilities in Victoria, South Australia and Tasmania, and we distribute our durable products globally.

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PFG Group is a world-leading manufacturer and long-term supplier to the Defence and Public Safety Industries, with a range of product and service offerings. We design, build and supply our products through one of our three Australian-based manufacturing facilities.

PFG is renowned for creating durable products for harsh environments and we take pride in the quality of our workmanship. We have developed a world-class range of rugged workboats and high performance sea boats, so durable that the first vessel we built in 1994 has not yet reached end of life and remains in full commercial survey, currently used day and night, six days a week in a marine patrol environment. PFG brings technology to its customers and we have remained at the leading edge of technological-based solutions to improve operational efficiency. We have a number of world-firsts and operate within a mature product development framework that demonstrates a culture of creativity and innovation. This is reflected in our Sentinel vessel range.

PFG knows that its Sentinel vessels have exceeded our customers expectations with respect to stability, performance and durability. We are excited to provide Defence, Border Control, Public Safety, Fishers and Parks with a reliable solution that significantly reduces operating costs, offers longevity and low maintenance, improves operational availability, and provides outstanding human interface characteristics through reduced vibration and impact and fatigue exertion.

PRODUCTS & SERVICES



The Sentinel Tactical Watercraft

Seaboat configurations for tactical assault groups, crew transfer, general patrols or dive vessels.



Aquatruck Workboat

A range of vessels from 2.8m to 15m, in hard collar or plate designs, with cabins or consoles. Vessel stability is ideally suited to volunteer uses or requirements where repeatability of hull performance is necessary.



Landing Barges

Configured for personnel or vehicle movement with drop down front deck for drive on/drive off situations. Options include configuration for oil skimming or other surface collection requirements.



Support Craft

A range of vessels for general marine operation functions with significant lifting capacity, including elevated work platforms.



Biosecurity

Global pioneer in vacuum based ROV for removing fouling from ships, nets, harbour infrastructure, with capability to filter and retain solids, returning clean water back to the ocean.

THE SENTINEL DISCRIMINATORS

PFG manufactures The Sentinel vessels in one of three of its dedicated Australian manufacturing facilities.

The Sentinel vessels are a mature and proven platform with over 100 vessels in current operations and are available up to 15 metres in length in various configurations including hard and soft collars, plate vessels, cabins or consoles, with deck carrying capacity over 3,000kg.

The Sentinel vessels are manufactured from High Density Polyethylene (HDPE), a cost effective, environmentally friendly semi-crystalline engineered polymer that demonstrates several properties which rate it as a superior boat building material. The Sentinels are highly stable, provide superior reliability and availability and transfer low impact to the crew as the HDPE hull absorbs vibration.

It is these virtues that The Sentinel brings to a new generation of evolved fast military vessels, search and rescue vessels and support craft.



Longevity

The Sentinel vessels last four times longer than its alloy competitors due to its robust, durable HDPE construction, good engineering design and structural integrity.

Duty of care

The Sentinel vessels are highly stable platforms and the combination of their design and the HDPE material reduces the occurrence of rollover and capsize. The vessels also provide for reduced levels of personnel fatigue as the HDPE material absorbs vibration.

Stealth

The Sentinel vessels offer a low radar signature.

Engine

Outboard or Inboard/Jet configurable.
Availability – HDPE Hull is impact resistant and capable of hard beaching on rocks.

Durability

The Sentinel vessels are manufactured to ISO and NSCV from high density polyethylene (HDPE), a material that has industrial strength, is positively buoyant and will not corrode, therefore offering superior durability over longer life spans and is ballistically tested to NIJ Std 0108.01 without modification.

Flexibility

Highly configurable deck layouts including gun turrets, gun/ammunition lockers, dive doors and moon pools, dog transportation, FLIR / autonomous control.

Maintainability

HDPE does not suffer from electrolysis or corrosion, resists fouling and has 50-year UV protection.





THE SENTINEL TACTICAL WATERCRAFT

PFG's Sentinel range of tactical watercrafts have evolved from sturdy workboats to high-performing sea boats, finished to the highest standards, and suited to first response applications. They are fast, strong, stable, smooth and safe.

PFG's Sentinel range of fast response vessels include cabins and consoles, forward, centre, aft and side and can be further customised to be special-purpose dive vessels.

The HDPE construction material absorbs vibration, which enhances benefits to the crew and passengers. There is no corrosion or electrolysis and the material is easy to maintain, which improves availability and reliability.





The Sentinel 7.5

Like its larger sistership, The Sentinel 7.5 is designed to accommodate a highly flexible deck layout such that the vessel can be configured for a wide range of applications. The HDPE hull reduces vibration and impact forces, maximises availability and maintainability through its absence of electrolysis and corrosion and is extremely stable. The typical Sentinel design features may also be incorporated into this vessel size including fast boarding through the bow step and handrails, quick and safe movement around the console by maximising deck width using a D-collar arrangement and flush mounted access hatches, electronics and surveillance equipment to prevent snagging.

Deck layout can be optioned as a dive-vessel for 8 passengers, with storage for 14 individual dive tanks and diving sets. Characteristic of the Sentinel brand, crew comfort is maximised with a combination of shock absorbing seats and sufficient room for a dive team to be safely seated for long transits.

The vessel is highly configurable and can be provided with or without a canopy in forward console, centre console, side console or rear console layouts as per the current layouts in its larger sistership or customised as a dive vessel. Further enhancement options for defence use include gun turrets, gun and ammunition lockers, dive doors and moon pools, dog transportation and stokes litter for personnel recovery. The deck can also be reconfigured as a dive-purpose vessel as per the current layout in its smaller sistership.

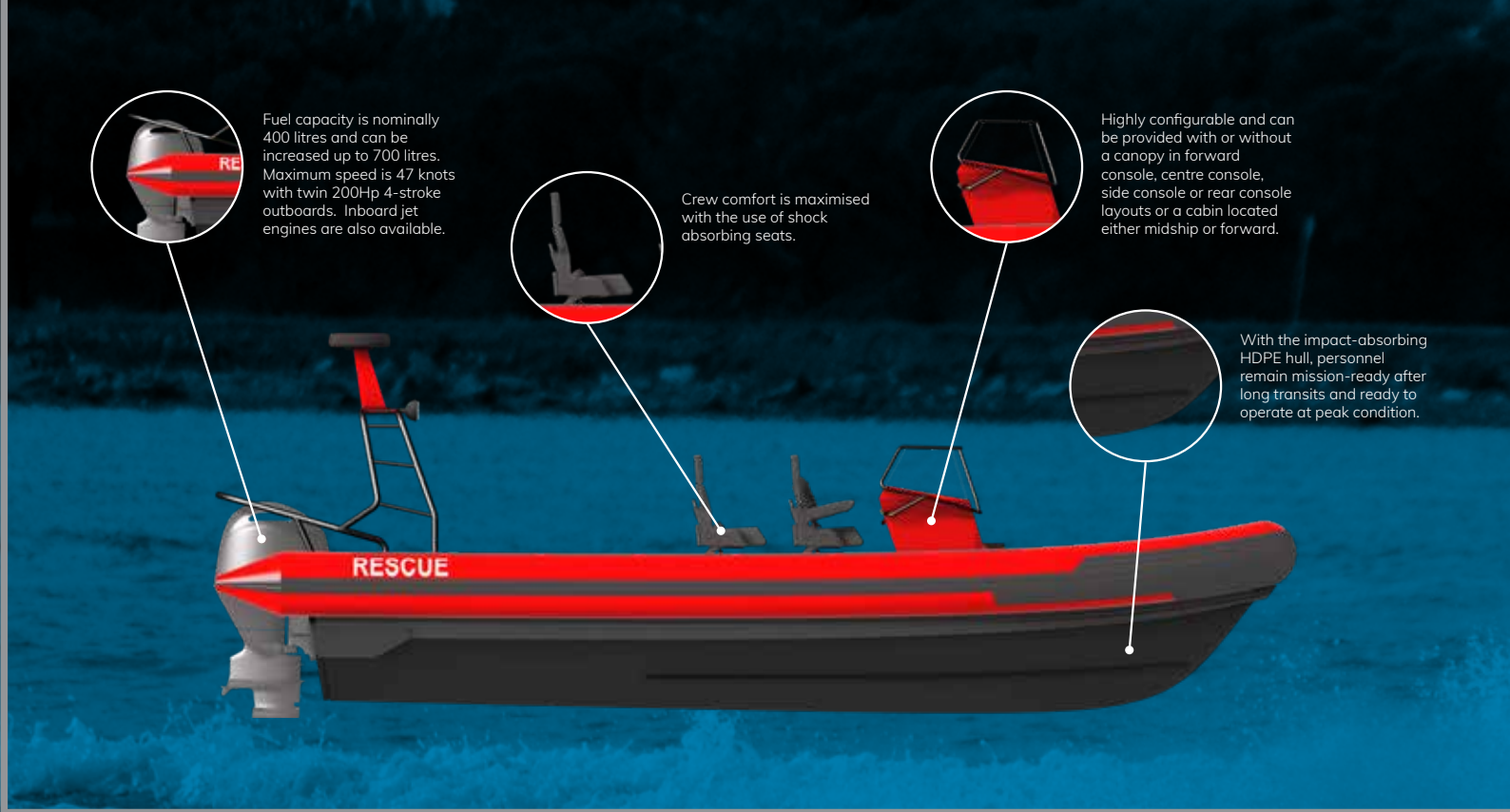
Fuel capacity is nominally 400 litres and can be increased up to 700 litres. Maximum speed is 47 knots with twin 200Hp 4-stroke outboards. Inboard jet engines are also available.



Model	The Sentinel 7.5
Class	NSCV 2D, ISO 6185-3, AMSA approved
Passengers	2 + 6 Crew
Length (OA)	7.5 m
Beam	2.5 m
Draught	0.45 m
Engine	2x 150 HP Outboard
Fuel	250 L
Speed	40 knots
Options	open deck, canopy, console, fwd/aft layouts, gun turrets, gun lockers, bow boarding step, stokes litter, drive vessel

Deck layout options include aft, centre or side console, with or without canopy, and can be further enhanced with custom storage, lockers and a dive door.



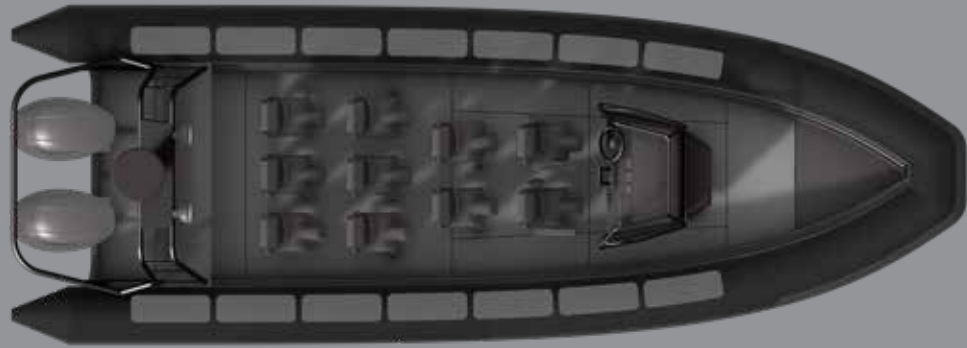


The Sentinel 8.5

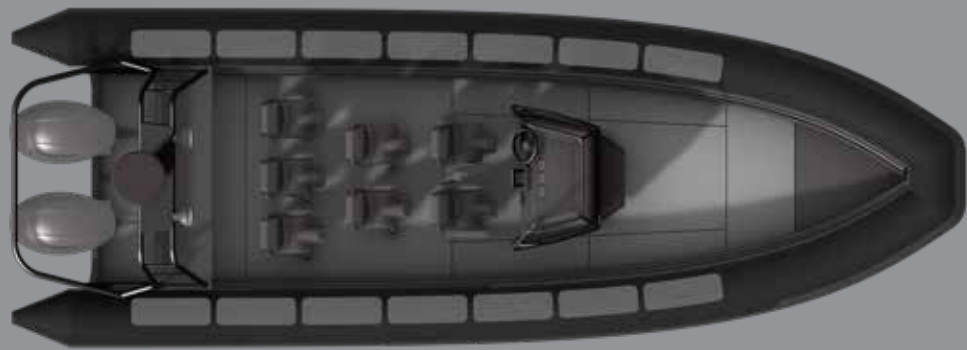
The Sentinel 8.5 has been designed specifically for defence and security applications. The combination of the vessel design and the HDPE material makes it a highly stable platform that reduces the risk of rollover and capsize, reduces the vibration and impact forces to its crew and is easily maintainable, therefore improving vessel operational availability and reliability. Design features also include consideration to fast boarding through the bow step and handrails, quick and safe movement around the console by maximising deck width using a D-collar arrangement and flush mounted access hatches, electronics and surveillance equipment to prevent snagging.



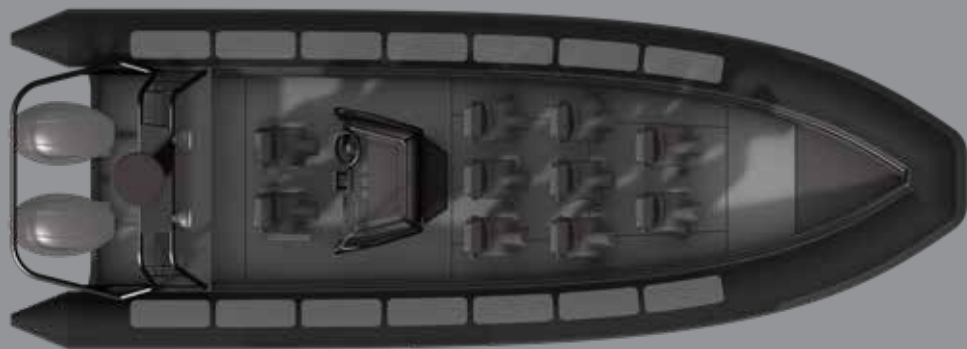
Model	The Sentinel 8.5
Class	NSCV 2C, ISO 6185-3, AMSA approved
Passengers	2 + 8 Crew
Length (OA)	8.3 m
Beam	2.99 m
Draught	0.55 m
Engine	2x 200 HP outboard
Fuel	400 L to 700 L
Speed	47 knots
Options	open deck, canopy, console, fwd/aft layouts, gun turrets, gun lockers, bow boarding step



Forward Console



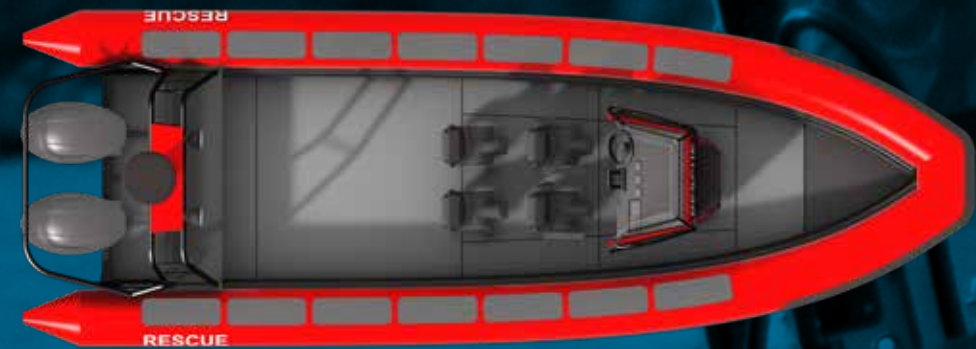
Centre Console



Aft Console

Enhancement options for defence use include gun turrets, gun and ammunition lockers, dive doors and moon pools, dog transportation and stokes litter for personnel recovery.

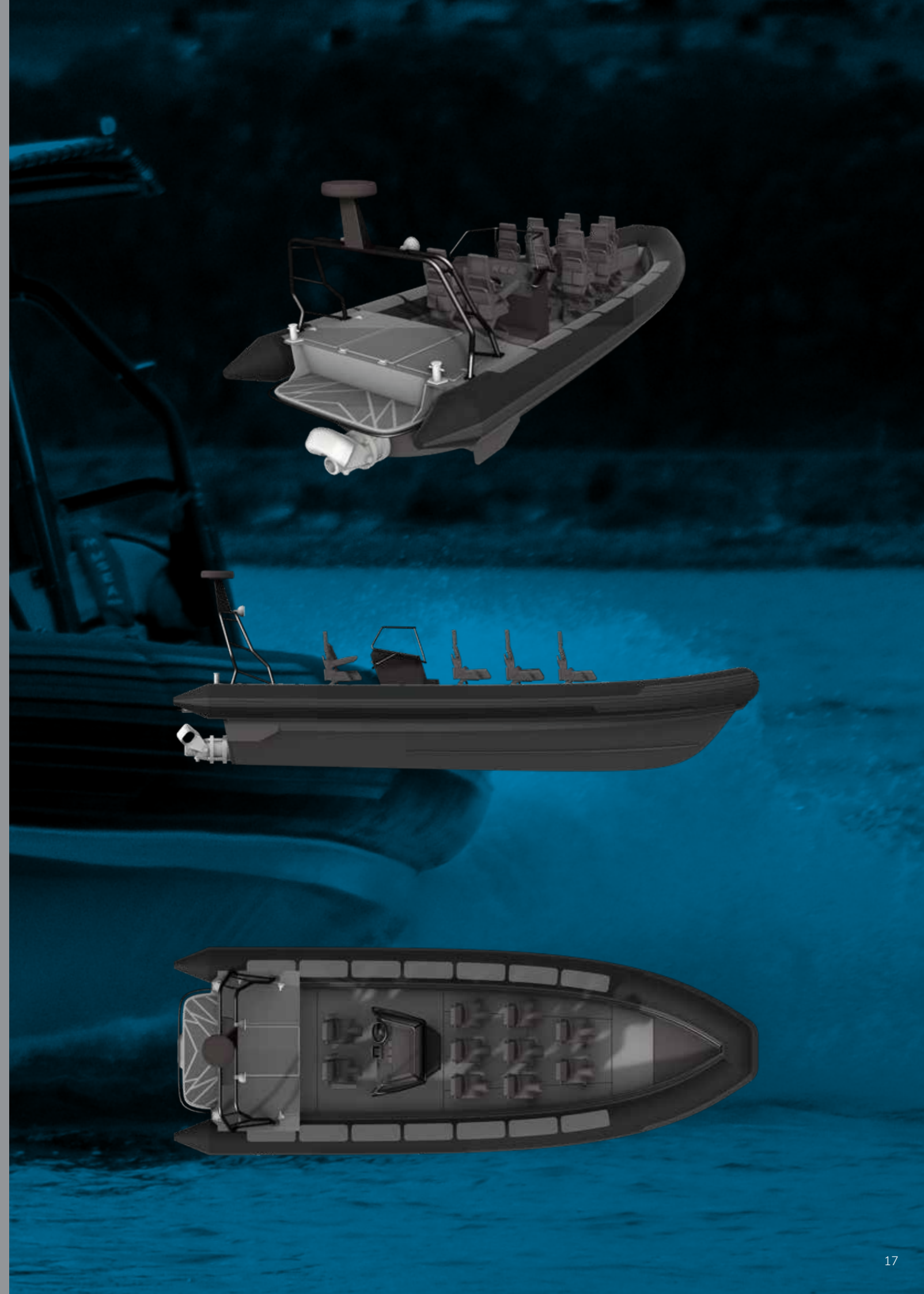
The deck can also be reconfigured as a dive-purpose vessel as per the current layout in its smaller sistership.

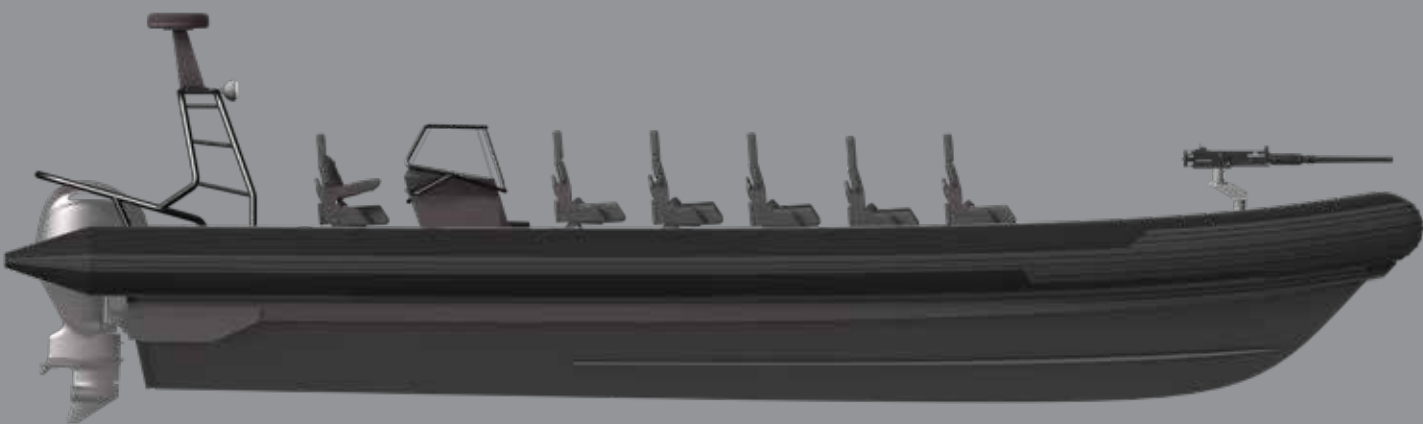


Forward Console



Cabin





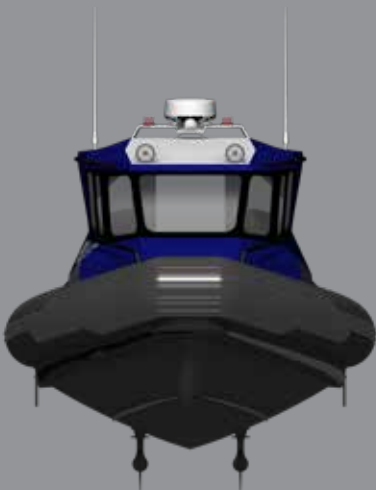
The Sentinel 11

The Sentinel 11 is the is the premier crew transfer or blue water vessel for truly offshore operations. It has all the characteristics of the smaller Sentinel vessels. The typical Sentinel design features may also be incorporated into this vessel size including fast boarding through the bow step and handrails, quick and safe movement around the console by maximising deck width using a D-collar arrangement and flush mounted access hatches, electronics and surveillance equipment to prevent snagging.

The vessel is highly configurable and can be provided with or without a canopy in forward console, centre console, side console or rear console layouts as per the current layouts in the smaller sistership or as a cabin vessel. Further enhancement options for defence use include gun turrets, gun and ammunition lockers, dive doors and moon pools, dog transportation and stokes litter for personnel recovery. The deck can also be reconfigured as a dive-purpose vessel as per the current layout in its smaller sistership.

Fuel capacity is nominally 700 litres and can be increased up to 1,000 litres. Maximum speed is 40+ knots with twin 300Hp 4-stroke outboards. Inboard jet engines are also available.

Predicted Vessel Characteristics



Model	The Sentinel 11
Class	NSCV 2D, ISO 6185-3, AMSA Approved
Passengers	2 + 12 Crew
Length (OA)	11.0 m
Beam	3.3 m
Draught	0.55 m
Engine	2x 300 HP+ Outboard
Fuel	700 - 1,000 L
Speed	40 knots
Options	open deck, canopy, console, fwd/aft layouts, cabin, gun turrets, gun lockers, bow boarding step, stokes litter, drive vessel





AQUATRUCK WORKBOAT

From the Queensland Police Service to the Tasmanian Police Service, from dive boats to flood rescue boats, from patrol boats to oil spill response vessels, PFG's Aquatruck range of vessels can be found right across the breadth of the Search and Rescue sector.

PFG's Aquatruck range of Search and Rescue vessels is extensive and includes open boats, consoles and cabins.

The HDPE construction material is positively buoyant, which makes the vessels extremely stable, capable of carrying large loads without jeopardising freeboard. PFG's smallest Aquatruck vessel, the Bullet, at just 2.8m length has enough buoyancy to withstand 10 men.





Bullet 2.8

The Bullet 2.8 is an ideal flood rescue vessel for use in rapidly rising flood waters and under emergency situations. Stability of this vessel is unreal when fully loaded and has been tested with 10-men while it maintained flotation.

The vessel is rated to 15HP and is surveyed for 5 passengers. Unloaded, it is fast and responsive. With a draught of only 0.25m, the Bullet 2.8 has been designed for emergency flood water situations where stranded communities need rescuing in family groups. Weighing only 85kg under commercial survey and with 22 vessels capable of fitting into a standard 20-foot container, the Bullet 2.8 makes an ideal solution for bulk storage in communities prone to flash flooding and mudslides.



Model	Bullet 2.8
Class	ANS Commercial Tender
Passengers	1 + 2 Crew
Length (OA)	2.8 m
Beam	1.55 m
Draught	0.25 m
Engine	15 HP Outboard
Fuel	25 L
Speed	20 knots
Options	lifting lugs, removable seats, oars





Thunder 4.6 / 6.5

The Thunder 4.6 and Thunder 6.5 have been designed specifically as flood rescue and marine rescue vessels. They have 450mm HDPE hard collars, which provide superb stability at rest and rideability at full speed. The side console is positioned to be able to accommodate a stretcher or stokes litter, and seating is provided so that a patient can be treated while under speed. The shallow draught of just 0.45m makes this an ideal vessel for shallow depth operations.

A side hatch is located on the port side to allow patients to be easily pulled from the water. Attachment points for a Jason's Cradle are located on the inside of the hard collars. The Thunder 4.6 is surveyed for six persons and the Thunder 6.5 is surveyed for eight persons. Both boats have a 200kg payload allowance, that is provided for in the under-seat storage.

Model	Thunder 4.6
Class	NSCV 2D
Passengers	2 + 4 Crew
Length (OA)	4.6 m
Beam	2.3 m
Draught	0.45 m
Engine	2x 50 HP Outboard
Fuel	150 L
Speed	25 knots
Options	open deck, canopy, console side or centre, side hatch, stokes litter, jason's cradle

Model	Thunder 6.5
Class	NSCV 2D
Passengers	2 + 6 Crew
Length (OA)	6.5 m
Beam	2.4 m
Draught	0.45 m
Engine	2x 90 HP Outboard
Fuel	250 L
Speed	25 knots
Options	open deck, canopy, console side or centre, side hatch, stokes litter, jason's cradle

The deck layout is also flexible, and the side console can be replaced with a centre console if required. The fuel tank is divided in half with each compartment plumbed individually to each outboard, so that multiple fuel sources may be used.





Bullshark 5.5

The Bullshark is a proven-performer as an in-shore patrol vessel and has been put to extensive use by Queensland Police, Tasmanian Inland Fisheries Service, Birkenhead Point Marine and Rufus King Fisheries. The reliability of vessel performance is exceptional and the use of HDPE material increases operational availability as there is little to no maintenance or repair required. Ten vessels were ordered by Queensland Police and delivered in 2018, and are used at remote locations along the Queensland border, as far north as Thursday Island.

Deck layout options include aft, centre or side console, with or without canopy and can be further enhanced with custom storage lockers and a dive door.



Model	Bullshark 5.5
Class	NSCV 2C
Passengers	2 + 2 Crew
Length (OA)	5.7 m
Beam	2.47 m
Draught	0.42 m
Engine	2x 115 HP Outboard
Fuel	150 L
Speed	38 knots
Options	aft / centre / side console, canopy, gun turrets, gun lockers, bow boarding step, stokes litter





Sentinel 6.0

PFG Group first supplied the Tasmanian Police Service in 2001 with a range of vessels known as the Sentinel Class. 'Sentinel' means to 'look over or keep watch' and was the identity afforded by the Police Commissioner at the time. Described as 'unstoppable' by their users, these vessels remain in service and have been repowered a number of times since commissioning.

The vessels are used as first response vessels for marine incidents and general patrols. Their hardy design, use of HDPE construction material and the fact that they remain in service in critical operations after nearly 20 years, is evidence of the durability, robustness and longevity of Aquatruck vessels.



Model	Sentinel 6.0
Class	NSCV 2C
Passengers	2 + 2 Crew
Length (OA)	6.0 m
Beam	2.4 m
Draught	0.45 m
Engine	2x 115 HP Outboard
Fuel	200 L
Speed	40 knots
Options	gun and ammunition lockers, dive doors, dog transportation, stokes litter or jason's cradle





Persephone 7.0 / 15

The Persephone was originally designed and supplied as a hydrographic survey vessel with a comprehensive cockpit, galley and generous cabin layout. The vessel is also ideal as an offshore patrol vessel and can be manufactured up to 15 metres in length. The vibration-absorbing HDPE hull not only ensures that personnel remain fit over long journeys but also that sensitive equipment is not subject to unnecessary loads and forces.

The cabin layout is customisable, and features include the provision of hard mounted survey equipment, computer workstations, map/planning table or bench, lounges or additional seating, freshwater and sullage tanks. Craneage may be installed on the aft deck and other options include gun turrets, gun and ammunition lockers, dive doors and moon pools, dog transportation, stokes litter or Jason's Cradle for personnel recovery.

As with all Aquatruck vessels, the HDPE hull offers no corrosion or electrolysis, is extremely stable and smooth in the water and has a 50-year UV protection.



Model	Persephone 7.0
Class	NSCV 2C, Workboat
Passengers	2 + 4 Crew
Length (OA)	6.95 m
Beam	2.43 m
Draught	0.51 m
Engine	2x 150 HP Outboard
Fuel	400 L
Speed	35 knots
Options	fixed survey equipment, work stations, map desk, gun turrets, gun and ammunition lockers, dive doors, moon pools, dog transportation, stokes litter or jason's cradle, water tanks, sullage tanks



LANDING BARGES

PFG has developed a highly configurable landing barge with a deck carrying capacity of 3,000kg. Capable of carrying a range of vehicles, the vessel can also be fitted with oil spill response or debris recover equipment.

The HDPE construction material allows for hard beaching to occur and with a draught of just 300mm, this is a go-anywhere vessel.





Responder 9.0

Designed as a strong and robust landing barge coupled with oil spill response recovery, the Responder 9.0 is testament to the flexibility and adaptability of the Aquatruck range. The vessel has a 2,500kg deck loading capacity, capable of carrying a Landcruiser or smaller vehicles, quad bikes and trailers.

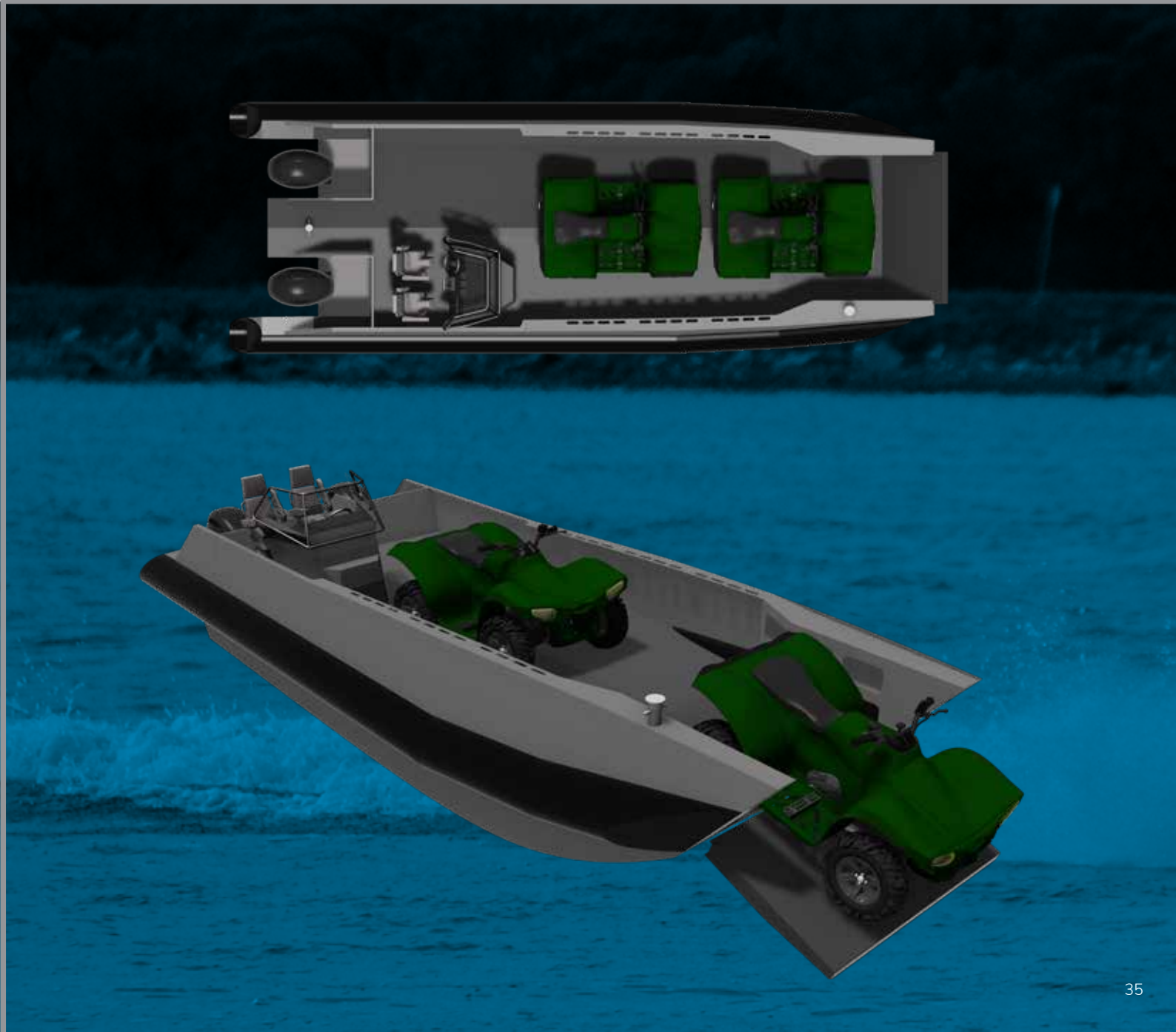
The landing ramp is opened and closed using hydraulic control and the draught of the vessel is only 0.3m. The HDPE material used in the Aquatruck construction is capable of hard beaching and can withstand placement on rocks, allowing for go-anywhere operations to access remote locations or recover from difficult terrain.

The vessel can also be fitted with oil spill or debris recovery apparatus. The first vessel was completed with a removeable oil skimming device complete with 2,500L collection tank and used as an oil response vessel. The responder 9.0 can also be fitted with a crane for recovering heavier items from the water.

Standard military options also include gun turrets, gun and ammunition lockers, dive doors, moon pools, dog transportation, stokes litter or Jason's Cradle.



Model	Responder 9.0
Class	NSCV 2C
Passengers	2 + 4 Crew
Length (OA)	9.0 m
Beam	3.44 m
Draught	0.30 m
Engine	2x 150 HP Outboard
Fuel	500 L
Speed	32 knots
Options	aft/side console, canopy, oil spill or debris recovery, crane, gun turrets, gun lockers, gun and ammunition lockers, dive doors, moon pools, dog transportation, stokes litter or jason's cradle





SUPPORT CRAFT

PFG's Aquatruck range of vessels includes Support Craft for civilised harbour and marina roles within the defence and security sector.

These vessels are nominally fitted with lifting capacity and towing features, and serve as general workboats.

Stability of vessel is paramount in lifting operations and Aquatruck's HDPE construction material is ideal for providing the safest platforms. Aquatruck Support Craft, with 3m elevated work platforms fully extended, do not need outriggers to stabilise the vessel.





Utility 7.5

The Utility 7.5 showcases Aquatruck's unprecedented stability – using a 3m elevated work platform on the foredeck that, when fully extended, does not require outriggers on the vessel. The Utility 7.5 was designed and delivered as a customised vessel to port authorities, for on water inspection of vessels, harbours and port infrastructure.

The Utility range can be supplied with or without the elevated work platform and is capable of incorporating other useful equipment for port operations, such as oil and debris booms, and customised seating for transfer of personnel.

Model	Utility 7.5
Class	NSCV2C Restricted
Passengers	2 + 4 Crew
Length (OA)	7.78 m
Beam	3.49 m
Draught	0.53 m
Engine	2x 40 HP Outboard
Fuel	400 L
Speed	10 knots
Options	elevated work platform, oil and debris booms, stokes litters, custom seating plans





Ocean 8.8

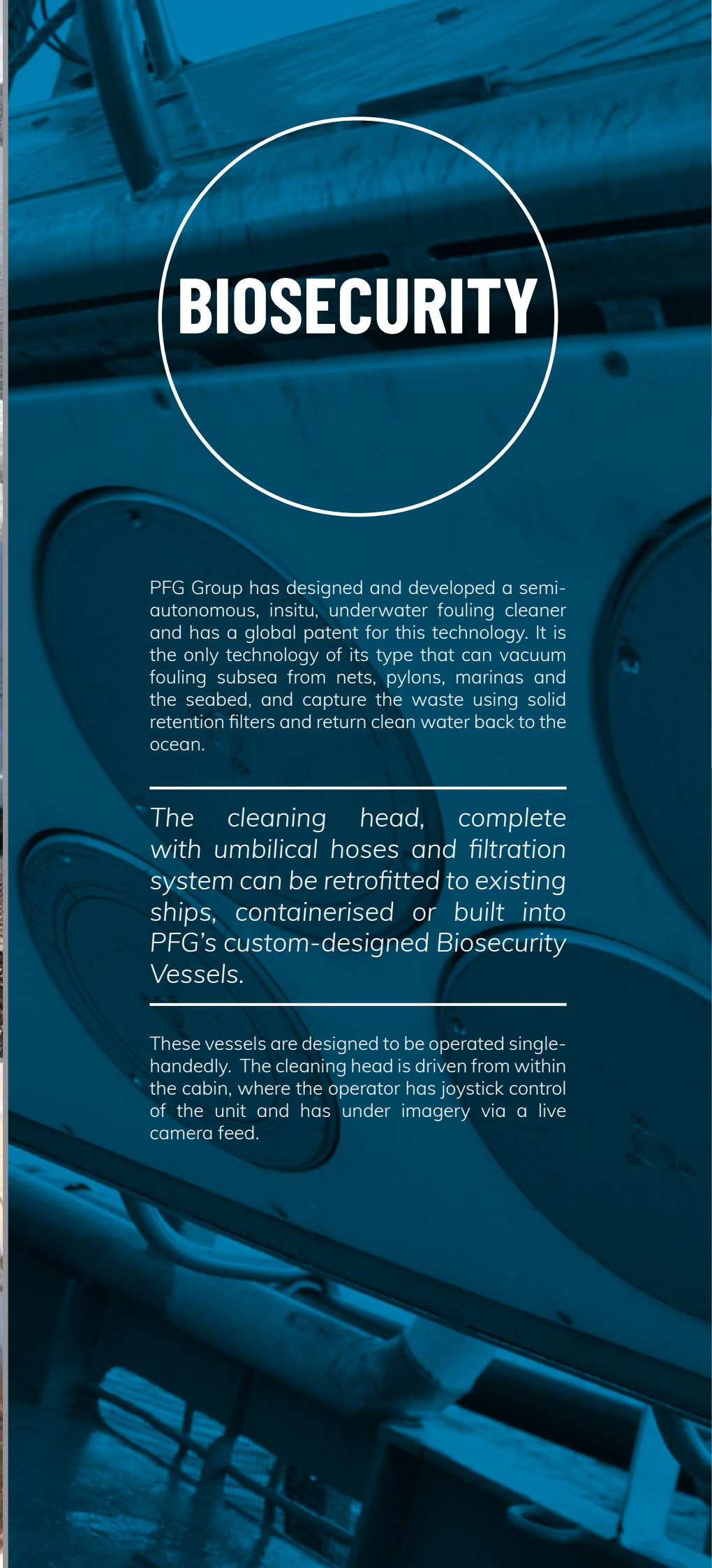
Born of a need to provide crew transfer vessels with lifting capacity for the Southern Ocean, the Ocean 8.8 is a powerful blue water vessel. It has a simple and rugged layout, making it ideal for transferring a small crew with lots of equipment. The cabin layout is large enough for all crew to be out of the weather, however small enough and aft positioned to maximise foredeck space.

The 500mm vibration-absorbing HDPE hard collars create a smooth ride, provide stability at rest and do not puncture like typical soft collared vessels.

The Ocean 8.8 is optioned with either outboards or jets, towing post, deck winch and crane.

Model	Ocean 8.8
Class	NSCV 3D
Passengers	2 + 4 Crew
Length (OA)	8.8 m
Beam	3.0 m
Draught	0.57 m
Engine	2x 150 HP Outboard
Fuel	150-400 L
Speed	35 knots
Options	outboards / inboard jets, towing post, winch, crane





BIOSECURITY

PFG Group has designed and developed a semi-autonomous, insitu, underwater fouling cleaner and has a global patent for this technology. It is the only technology of its type that can vacuum fouling subsea from nets, pylons, marinas and the seabed, and capture the waste using solid retention filters and return clean water back to the ocean.

The cleaning head, complete with umbilical hoses and filtration system can be retrofitted to existing ships, containerised or built into PFG's custom-designed Biosecurity Vessels.

These vessels are designed to be operated single-handedly. The cleaning head is driven from within the cabin, where the operator has joystick control of the unit and has under imagery via a live camera feed.



Applications

Net cleaning

shark nets, bathing nets, security nets to reduce maintenance and repair costs, reduce the conglomeration of bacterial pests, improve hygiene and improve life span

Jetty/Pylon Surveillance

structure cleaning to remove fouling prior to observation of the structure, mine sweeping or general inspection

Hull cleaning

cleaning the hull of a ship prior to port entry/exit to remove and capture foreign fouling that present pest-infestation risk and improve trans-ocean fuel burn

Asset Management

underwater inspection of structures for the purposes of maintenance planning

Model	MIC 2.5
Class	NSCV Class 3D
Passengers	2 + 4 Crew
Length (OA)	13.56 m
Beam	4.57 m
Draught	0.875 m
Engine	2x 150 HP outboard propulsion Cummins 6CT8.3 220Hp Aux 1 Cummins 6BT5.9 122Hp Aux 2
Fuel	500 L ULP, 200 L Diesel
Speed	15 knots
Options	on deck filtration system, 1.5T crane, mechanically fed umbilical



CREATORS OF DURABLE PRODUCTS FOR HARSH ENVIRONMENTS



Tasmania
8 Negara Crescent
Goodwood TAS 7010
+61 (3) 6274 0222

Victoria
87-93 Tramway Road
Morwell VIC 3840
+61 (3) 5135 3900

South Australia
31 Belair Drive
Port Lincoln SA 5606
+61 (8) 8683 5130

Contact
admin@pfg-group.com.au
www.pfg-group.com.au

