

Over ProZero & Van Dyke Marine

De ProZero-serie van Tuco Marine staat voor toonaangevende kwaliteit en maatwerk in high-performance werkboden en crew transfer vessels. Elke boot wordt ontworpen op basis van uw operationele eisen, met een doordacht design en bewezen technologie. Het resultaat: maximale snelheid, brandstofefficiëntie en veiligheid, zelfs onder de zwaarste omstandigheden.

Van Dyke Marine is vertegenwoordiger van ProZero in de BeNeLux en begeleidt klanten volledig: van eerste advies en ontwerp tot levering, onderhoud en service.



VAN DYKE MARINE

Vertegenwoordiging in de
BeNeLux van

PROZERO
WORK BOATS

CONTACT

Van Dyke Marine
Burg. Catshoeklaan 10
4681 RJ Nieuw-Vossemeer – Nederland
+31 6 44 880 888
www.vandykemarine.nl
info@vandykemarine.nl





PRO:ZERO
Fast Boats for Professionals



PROVEN TECHNOLOGY

WIND FARM DAUGHTER CRAFTS



At Tuco we specialize in fast boats for professionals. Every day we work to set the standard in innovative lightweight maritime constructions and supreme material technology. We strive to deliver durable solutions that reflect and support the development of a safe, sustainable and prosperous future in maritime logistics.

Customers can rely on Tuco as a loyal partner that draws on intimate market knowledge, expert craftsmanship and years of experience with successful deliveries to ensure more than just customer satisfaction.

#weloveworkboats



PRO:ZERO

The ProZero series is a range of fast boats designed specifically for professional use. They are built to endure the harsh conditions of operations on open sea while providing the operator with an ideal work environment.

With advanced design and sophisticated application of composite materials, the ProZero series offers the customer significant commercial benefits and enhance overall vessel performance and energy efficiency. The ProZero range covers Offshore, Workboats and vessels for Security & Defense.

#weloveworkboats

PRO:ZERO
2009



OFFSHORE WIND FARMS
A SHARED HISTORY OF PROGRESS

ESCORTING OFFSHORE WIND FARMS INTO THE FUTURE

Tuco Marine's ties with the wind industry is practically as old as the industry itself. With our state-of-the-art range of ProZero Daughter Crafts for SOV deployment, we demonstrate our unbroken commitment to the sector. Building on the AluGuard series, Tuco Marine's first range of service boats, the ProZero series represents the quintessence of a tried, perfected and validated technology.

Paving the seaway

The robust and agile ProZero DCs are built to provide the best possible support in connection with transfer operations between Wind Service Operation Vessels (SOV) and wind turbines. The scale and remoteness of modern-day offshore wind farms requires accommodation of crew and technicians on SOVs. The ProZero design represents a direct response to the demands of this sector where transport of personnel and cargo between SOVs and wind turbines requires increasing attention to safety, dependability and efficiency.

The ProZero Daughter Crafts carry crew and technicians to their destination with confidence and strengthen the value stream for the operators.



Efficient and proven hull
Matchless strenght-to-weight and seaworthiness. Shaping first-class hulls with precision technique and cost-effective production.

PRO:ZERO
2018



PROZERO DAUGHTER CRAFTS
PROVEN TECHNOLOGY

PRO:ZERO



***2015 DESIGN**

MEETING THE DEMANDS FOR SAFE TRANSFER

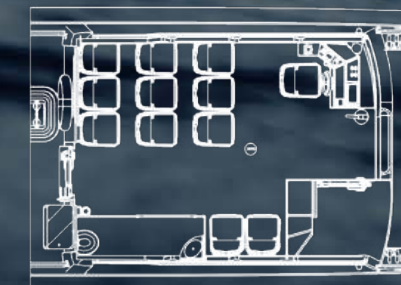
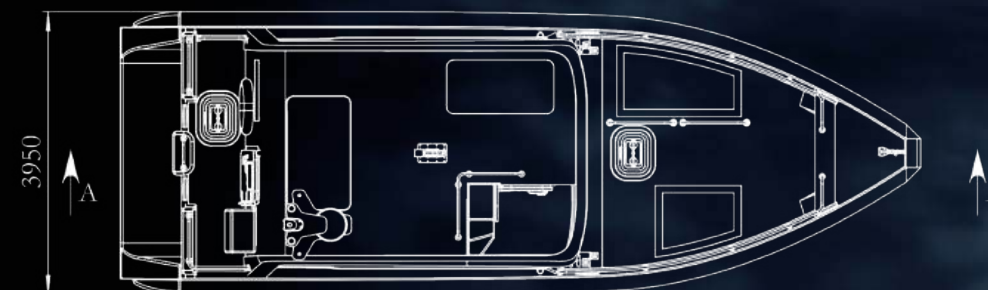
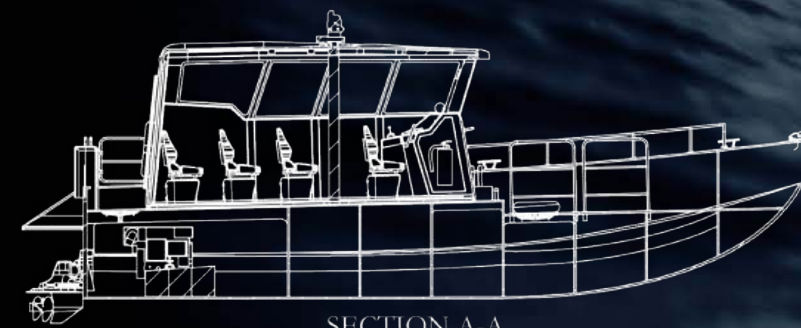
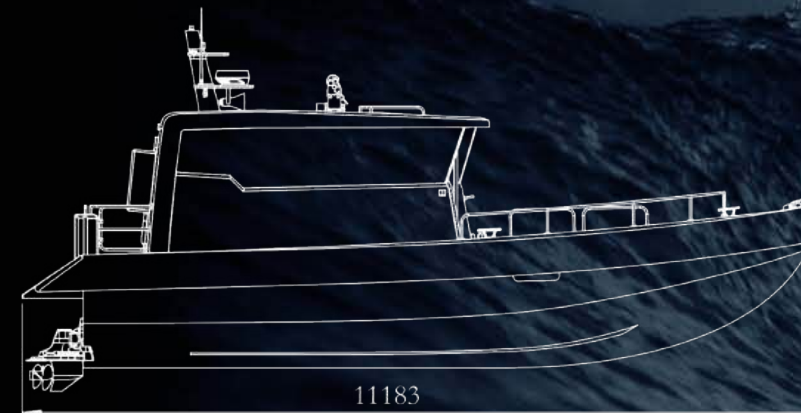
The 11m DCW Offshore Transfer is a fast transfer boat designed specifically for transporting personnel. It is a highly versatile and flexible vessel that is designed to meet the high safety and operational requirements for this type of boat. In addition to its purpose as a fast crew and passenger transporter, it is also capable of performing a range of other tasks where agility and efficiency is important.

The design allows for easy access from both fore and aft deck with an emphasis on quick, but safe accommodation of passengers in the cabin and cargo on the foredeck. Particular measures have been taken to develop the specialized boarding area at the bow fender, or optionally at the side fender, to guarantee safe passage for crew and personnel.

For daughter craft versions, the safe launch and recovery mechanism can be altered according to individual specifications and can be fitted for both single point hoisting or access to a stern garage on a mothership. Besides improved comfort, efforts have been made to secure a high level of redundancy to keep the vessel operational and fit as a stand-alone unit that is capable of carrying out transfer operations to and from shore.



***2019 DESIGN**



11M DAUGHTER CRAFT

PRO:ZERO 11M DCW – OFFSHORE TRANSFER



Design: 2016 | 5000-03-38
Length overall, approx.: 11,48 m
Beam overall, approx.: 3,85 m
Draft (full load), approx.: 0,73 m
Displacement (full load), approx.: 9.500 kg
Capacity: 10 passengers
Maximum load: 1.000 kg
Engines: 2x inboard diesel

BENEFITS:
This daughter craft is developed for wind farm service, with a specially designed fender for safe transfers. The design of the ProZero cabin ensure a huge amount of daylight, this also improve the personal comfort. Benefits by being significantly lighter than market average are lower fuel consumption and lighter lifting equipment on mother vessel. Supporting the great and proven sailing capabilities.

OPERATIONAL FEATURES:
Speed: 25-30 kt (with 3 persons)
Speed (cruise): 25 kt
Range: 8 hours at cruise speed.
Fuel capacity: 600 l

DESCRIPTION:
The boat has been built to meet the requirements from the competent authorities, and features a redundant propulsion system.

HULL, DECK AND SUPERSTRUCTURE:
The boat is made of a combination of glass- and carbon fibre as sandwich construction with PVC as core material. This core material act as a natural buoyancy reserve material, due to its lightweight and zero water-absorption. Moreover, the sandwich construction avoids the use of internal stiffeners, increasing the usable internal space and offers a natural insulation capability, improving the comfort in the cabin and manned compartments.

FENDER:
The fender is constructed of closed cell polyethylene foam. Not deflating with solid core that cannot lose buoyancy or absorb water. Damage is strictly cosmetic keeping crew safe. Fender system absorbs major impacts and retains integrity and shape. ProZero fender's profile gives substantially more interior room than a comparable RIB. The fender has a special profile in the boat shaped to fit into the docking station of the wind mills, enabling a safe transfer between this one and the boat. Also, the frontal section is a separate wearing part bolted to a special reinforced composite profile in the bow, so it can be easily replaced.

DECK:
Equipped for single point lifting hook. Deck and cabin are self-bailing. Large working area in the fore deck. Transfer raised platform in the bow with stepped transition between this one and the main deck. 6 mooring bites. Aluminium railings in aft and fore deck. Aft platform over the water jets

CABIN & COCKPIT:
Toilet with WC and washbasin. 8 comfort seats for passengers plus 2 pilot seat. Hinged door in the aft of the cabin. Hinged door in the front of the cabin. Defreeze system for windows with hot air blowers. All windows are glued into the structure. Led lights in cabin and cockpit. Comfort insulation in the cabin.

TECHNICAL:
ENGINES, PROPULSION, STEERING etc.
2 x inboard diesel engine 2 x Sterndrivers, Engine split for redundancy
Redundant propulsion system

TANKS:
Structural diesel tank with hatch and filling protection. Independent fresh water tank. Independent dark water tank with odourless filter.

ELECTRICAL SYSTEM & LIGHTING:
All electrical wiring in marine cable. Shore power with control lamp, marked fuses, earth connection. Isolation transformer with earth plate for protection of galvanic corrosion. 24-volt electrical system. Main switches with separate battery systems for start, navigation and consumption. Battery charger with indicator. 1 x searchlight on cabin roof, manual operated. Navigational lights. 2 x floodlight on the working foredeck

NAVIGATION & ELECTRONIC EQUIPMENT:
Complete engine instruments supplied by engine manufacturer. Fuel gauge. Control panel for all lighting and other electrical equipment. 1 x magnetic compass

SECURITY EQUIPMENT:
Bilge pumps
Fire extinguisher at helmsman station
Automatic fire extinguisher system in engine room

PRO:ZERO

7.5M FRC MRK3

The 7,5 m FRC is a third-generation design built around the already well proven ProZero 7,5-meter Fast Rescue Boat. The first two iterations of the 7,5-metre FRC design have been developed and tested thoroughly during the ProZero development project for which Tuco received funding under the Horizon2020 SME Instrument programme.

This development project ended in 2018, but Tuco Marine has continued to refine the project results and implement them in the ProZero series. The third generation FRC represents the highest level of refinement yet.

The carbon fibre materials technology secures ultra-high levels of strength and durability at a very low structural weight. The new design presents a very large deck area which will accommodate large payloads or up to 16 persons. New bow and fender configurations have been added for improved safety during transfer operations across the bow.

As standard the FRC features a single water jet installation, but twin water jet installations are available upon request.

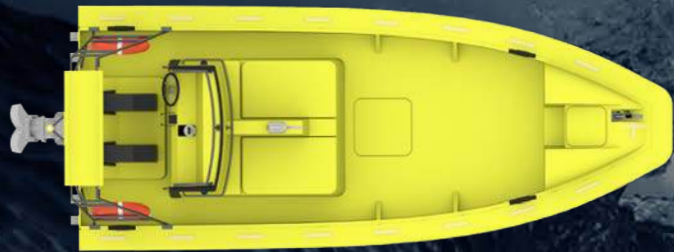


Low weight
Cutting weight and adding value.
Low weight design lifts the value chain.



7.5M FRC MRK3

PRO:ZERO 7.5M FRC MRK3



Design: 2019 | 5000-01-19
Length overall, approx.: 7.7 m
Beam overall, approx.: 2.86 m
Draft, approx. (without sterndrive): 2.36 m
Crew: 2 persons
Capacity: 14 persons
Maximum Load (incl. persons): 1310 kg
Engine: 1 x Water jet

OPERATIONAL FEATURES:

Speed (lightweight): 27 kts.
Speed (full load): 20 kts.

DESCRIPTION

The boat has been built to meet the SOLAS requirements for fast rescue boats

HULL, DECK AND SUPERSTRUCTURE:

The boat is made of a combination of glass- and carbon fibber as sandwich construction with PVC as core material. This core material act as a natural buoyancy reserve material, due to its lightweight and zero water-absorption. Moreover, the sandwich construction avoids the use of internal stiffeners, increasing the usable internal space.

FENDER:

The fender is made from closed cell polyethylene foam. It is non-deflatable and features a solid core that cannot lose buoyancy or absorb water. Any damage is strictly cosmetic keeping crew safe. The fender system absorbs major impacts and retains integrity and shape. The ProZero fender profile gives substantially more interior room than a comparable RIB.

DECK:

Deck is self-bailing.
Stowage for SOLAS equipment and mooring equipment.
Mooring bites.
Single point lifting hook (optional equipment).
Self-righting system.
Metallic arch.
Seats for crew.
Steering console with all around railing.
Painter hook (optional equipment).

TECHNICAL:

ENGINES, PROPULSION, STEERING & MANOUVERING

1 x Diesel inboard engine.
1 x Water jet (Option 1).
1 x Stern drive (Option 2).

Possibility of twin engine and drive installation for redundant propulsion system.

Main switches with separate battery systems for start and consumption.
Battery charger with indicator.
Navigational lights.
Working lights.
Searchlight.

TANKS:

Fuel tank (130 liter).

ELECTRICAL SYSTEM & LIGHTING:

All electrical wiring in marine cable.
Isolation transformer with earth plate for protection against galvanic corrosion.

NAVIGATION & ELECTRONIC EQUIPMENT

Electric engine controls. Complete engine instruments with RPM, temperature, oil pressure and voltmeter for start batteries supplied by engine manufacturer.
1 x start battery and 1 x consumption battery
Fuel gauge.
Control panel for all lighting and other electrical equipment.
Fixed VHF (optional equipment)
Magnetic Compass

SECURITY EQUIPMENT:

Manual bilge pump.
Electrical emergency pump in bilge, manual start, in the bilge and in the engine room.
Fire extinguisher on starboard side of steering console.
2 x lifebuoys.

DELIVERY:

All boats are launched, tested and calibrated and has gone through a scrupulous quality control at the yard in Denmark.
Delivery, hand over, test drive and technical review with customer at yard in Denmark. All boats are delivered with a complete owner's manual.

GENERAL:

The boat is built as standard according to the technical specification and our general quality standard. The specification is valid when being printed. Details in construction, design and equipment can be changed as a result of the experience from the use of the boats. The quality and the equipment standard, however, are equivalent at least to this specification. The hull and structure have a 2 years' warranty from the date of delivery. The equipment and devices fitted in the boat have a 1 year's warranty from the date of delivery.

PRO:ZERO



WORKBOATS
7.5M FRC MRK3



DECK LAYOUT

The boat has been designed to offer best in class maximized deck areas, enabling optimized operations, load carrying, and passenger capacity.

OPTIMIZING OPERATIONS

Attending to the human factor. Functional, and ergonomic console layout arranged to maximize the use of state-of-the-art operations management and situational awareness electronic aids.



PREVIOUS MODEL

PRO:ZERO



DECK
LAYOUT

PRO:ZERO

ROBUST HOOK MECHANISMS
SAFE AND EASY ACCESS

EASY ACCESS TO HOOK

The ProZero design ensures easy access to the lifting hook from the front deck or through a passageway in the cabin. Safety railing is mounted so that the hook operator can focus fully on the job at hand. Certified and safety approved lifting mechanisms can be fitted according to customer preference.



Low consumption
Minimized operating costs and improved environmental impact. For a sustainable and prosperous future.



LAUNCH AND RECOVERY

Not taking any risks

Launch and recovery of Daughter Crafts is an area that requires exceptional vigilance. The ProZero series is carefully designed to secure maximum safety and reliability for the users in these high-risk situations, and special care is taken in the design process to ensure accessibility to hooking points.

Lighter overall solution

Due to the lightweight construction of the ProZero Daughter Crafts, less stress is exerted on the lifting equipment. This allows fitting of lighter davit equipment which benefits the overall naval architecture and saves resources that enable clients to pursue their real goals. Light weight solutions lift the entire value chain.

We work closely with a number of leading equipment manufacturers and we are happy to include customized LARS solutions for individual clients.



Low weight
Cutting weight and adding value. Low weight design lifts the value chain.



PRO:ZERO



PRO:ZERO

STURDY RAILINGS

OPTIMAL WORK SPACE AND SAFETY

SAFETY ONBOARD

The foredeck is a large, skid proof cargo deck that is reachable by crane from the turbine or mothership. The helmsman can maintain a clear view of the cargo and deck crew while loading/unloading.

ROBUST RAILINGS

Sturdy railings are installed around work areas to ensure the safety of the personnel. The railings can be removed to accommodate over-sized cargo and to provide easy access and transfer.

LASHING POINTS

Dedicated cargo zones with lashing points are installed on deck to secure cargo during operations. The deck has been reinforced to accommodate the added load.

LIFTING EQUIPMENT

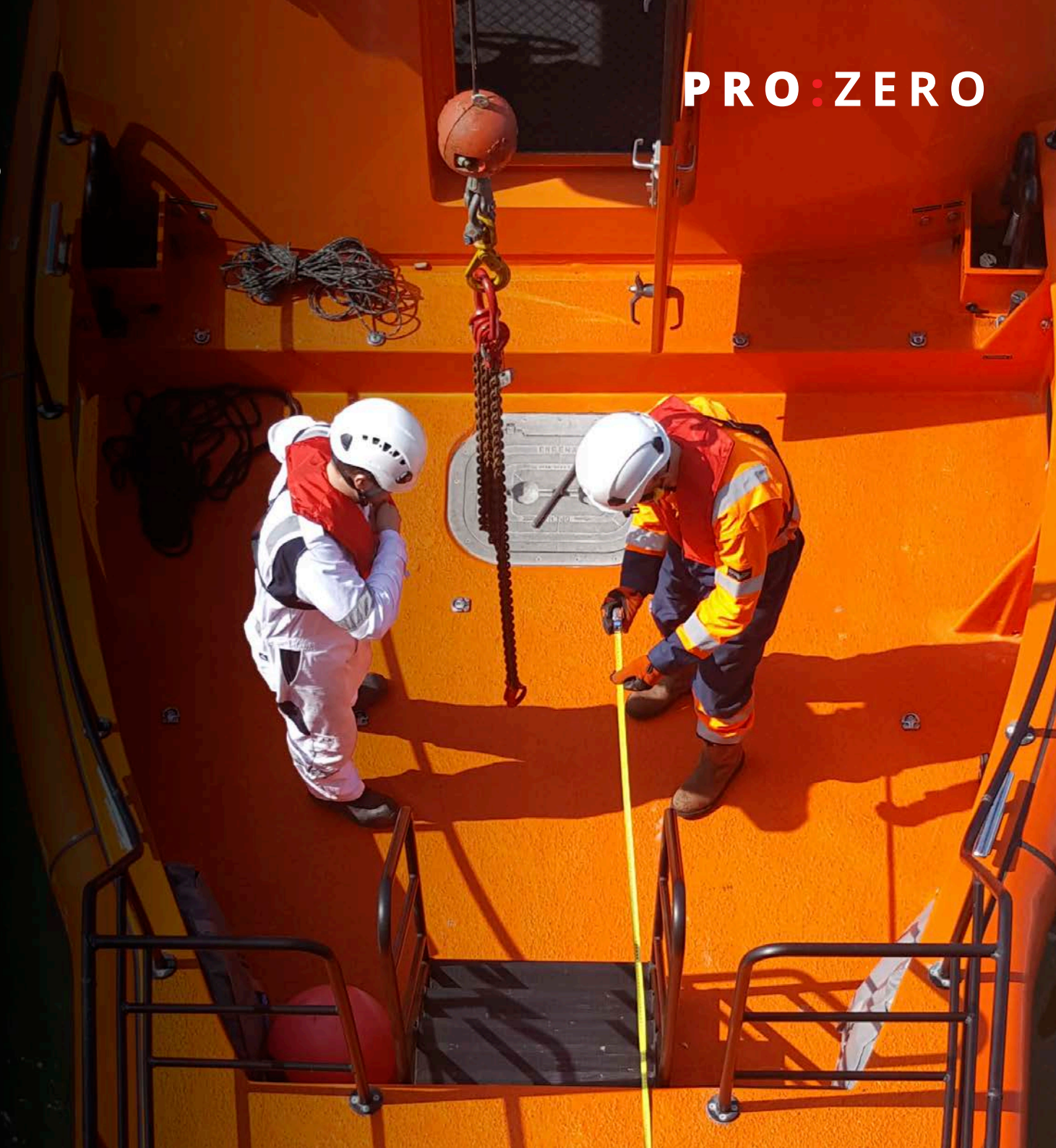
The ProZero Daughter Crafts can be equipped with a hydraulic crane for easy handling of equipment and cargo. Different onboard cranes are available to ensure compliance with local regulations.



Flexible construction

Construction with a purpose. Know-how and expert engineering at the service of unique client demands.

PRO:ZERO



PRO:ZERO

PREVIOUS MODEL



NOISE INSULATION
EFFORTLESS COMMUNICATION

INTERIOR DESIGN

The interior has been designed to provide the user with maximal comfort and spacious working conditions. Ergonomic seats ensure a comfortable ride, noise insulation eases communication and large windows afford ample light and great visibility.



Comfortable cabin
Attending to the human factor. Functional, bright and ergonomic working conditions with noise insulation for ease of communication.

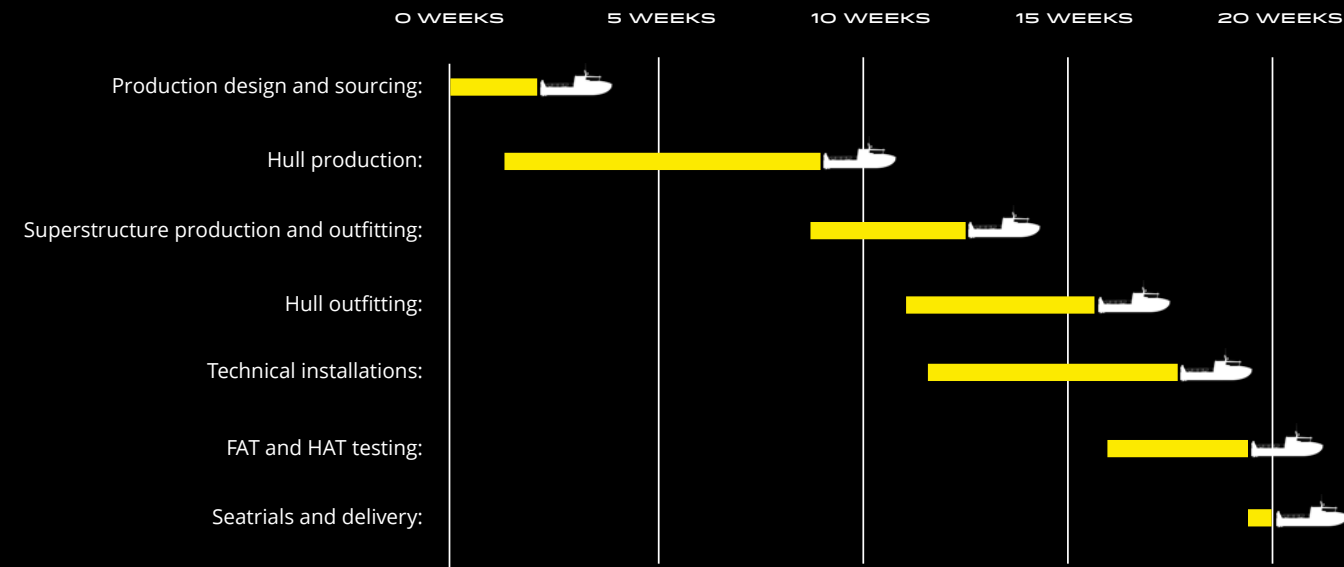


PRO:ZERO



COMFORTABLE RIDE
AIR SUSPENDED SEATS

PRO:ZERO



SERIAL PRODUCTION

Merging unparalleled quality with cost-efficiency and prompt delivery

Construction with fiber-reinforced composites is highly suited for serial production. Tuco has developed an exceptionally efficient modular production method to fully exploit the advantages inherent in composite materials.

To guarantee product excellence and quality uniformity across our range of vessels, female moulds are applied in the production of all ProZero hulls. This permits a very high degree of accuracy and consistency in the manufacturing process so that every single hull lives up to our rigorous quality standards. Production using high quality moulds outperforms any other building technique in terms of cost-effectiveness.

Our modular production method enables us to integrate specific design requests and we cooperate closely with all involved stakeholders to deliver uncompromising quality and excellent products without sacrificing short delivery times.



SHORT LEAD TIME
EFFICIENT PRODUCTION PLATFORM

SERVICE AND SUPPLY

Far and wide – support is always within reach

The reliability and speed of our products is echoed in our range of support services. We are committed to act fast whenever a customer needs us. We appreciate the significance of constant operational capacity, and Tuco Marine's Spare Parts and Service Team helps to intercept unexpected downtime and keep productivity at a maximum.

The team is staffed by some of the most skilled technicians in the industry and they work to ensure the highest possible level of technical support for our clients.

Integrating the best equipment

Beyond that, we have long-lasting relationships with OEMs. We collaborate with key vendors from the early design phase to integrate the best features into the building process. This way we create a safer and more comfortable boat for the crew.

Our extensive product knowledge and our unique ties with the industry allows us to offer a high degree of availability and coverage – we extend our support far beyond what you might expect from a boat-builder.



Swift support

Rest assured and focus on the job.
Our skilled technicians are always prepared to offer support.

PRO:ZERO

FULL SUPPORT
SKILLED SERVICE TEAM



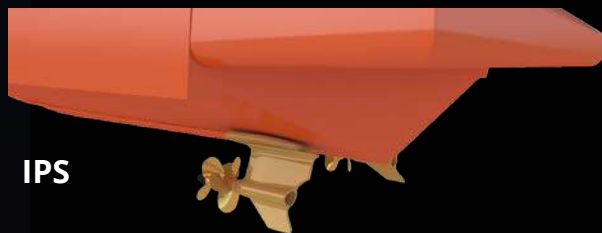
PRO:ZERO

MOVE FORWARD
YOU CHOOSE HOW

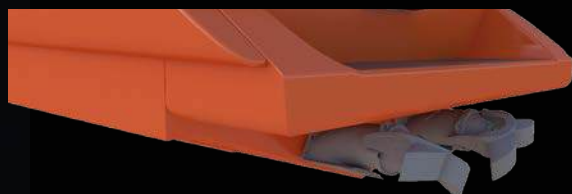
PROPULSION OPTIONS

The ProZero Daughter Crafts can be delivered with different propulsion systems according to customer needs.

IPS



Water Jet



Sterndrive



Further propulsion options are available:

Shaft drives

Outboards

EASY CONNECT FENDER

Close connections

The Easy Connect fender is optimized for safety and functionality

Easy Connect Fender

The Easy Connect fender is designed for enhanced grip in order to facilitate landing and safe transfer operations at stationary installations. The fender is made of closed cell polyethylene foam with a non-deflatable solid core that maximizes durability and landing grip. The standard Easy Connect fender is equipped with a high friction surface. Low friction surface is available upon request. The Easy Connect fender is bolted to the hull which allows easy replacement if damaged or substitution if an alternative landing profile is required.

EASY REPLACEMENT AND UPGRADE

Upgrade kit available

Upgrading to the Easy Connect fender is quick and efficient. The Easy Connect fender is composed of only three individual sections, which reduces cost and time required for upgrading.

2015



2017



Old



New



PRO:ZERO

FIBRE REINFORCED COMPOSITES

SUPERIOR MATERIALS

High strength, low maintenance

Clever choices of materials increase performance and productivity. Fiber reinforced composites have great strength-to-weight ratio, physical stability and molding flexibility. This makes them highly attractive for manufacturing the fast and durable ProZero vessels.

Safe and durable

Improved safety is also a benefit of using composites. Drop tests proves that the "sandwich"-type composite panels used in the ProZero series have better energy absorption capacity compared to for instance aluminium. This means that the structural integrity of the vessel is better preserved in the occasion of collision with objects. The sandwich panel acts as a closed cell, so that in the event of a collision where the outer skin is compromised, water intake is confined and obstructed whereas a similar aluminum panel will suffer full penetration which sets the vessel and crew at risk.

Working together

At Tuco, we carefully draw out all the potential inherent in these materials and we continuously work together with the Danish Technical University amongst others to verify the mechanical properties and advantages of composites.



Unmatched strength
Confront the elements with confidence. Built for strenght, safety and durability.

WORKSHOP AND INSTRUCTIONS

Professional training - skilled instructors

We can provide a variety of operations and maintenance courses that can accommodate clients from a number of sectors including Wind, Maritime, Oil & Gas and Military. Teaching is performed by our expert instructors, who have trained more than 8000 people.

A selection of ProZero courses:

- Introduction to materials
- Introduction to basic techniques
- Safety
- STCW - Personal Survival Techniques
- STCW - Proficiency in Fast Rescue Boats
- STCW - Proficiency in Fast Rescue Boats Refresh

Contact us at mail@tuco.dk for more info.



PRO:ZERO

TWO DAY WORKSHOP INCLUDED

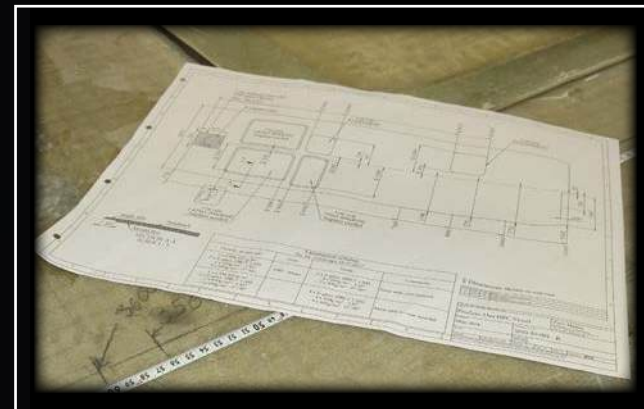
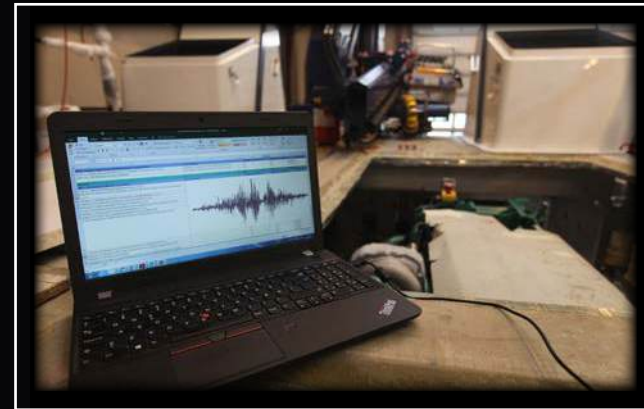


QUALITY
ASSURANCE

QUALITY ASSURANCE

Quality comes first

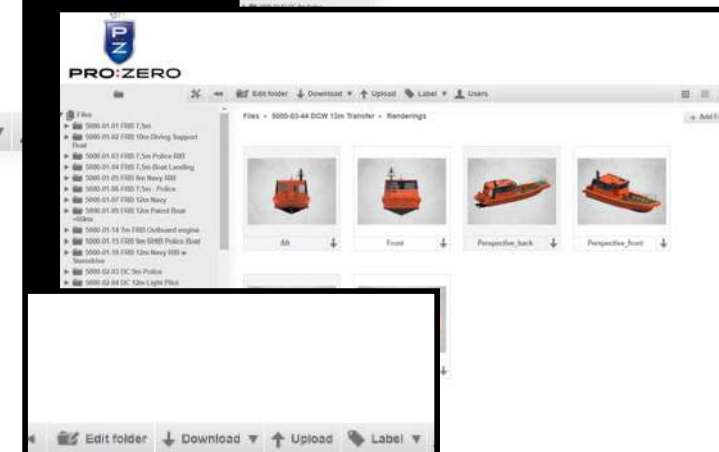
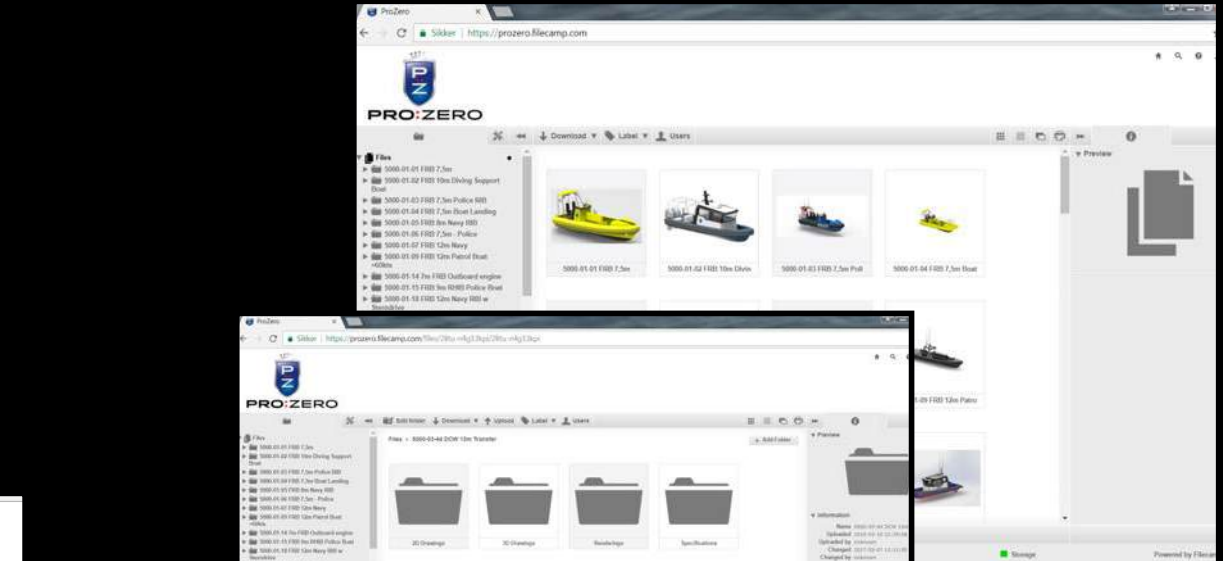
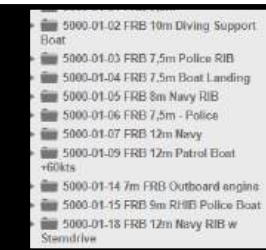
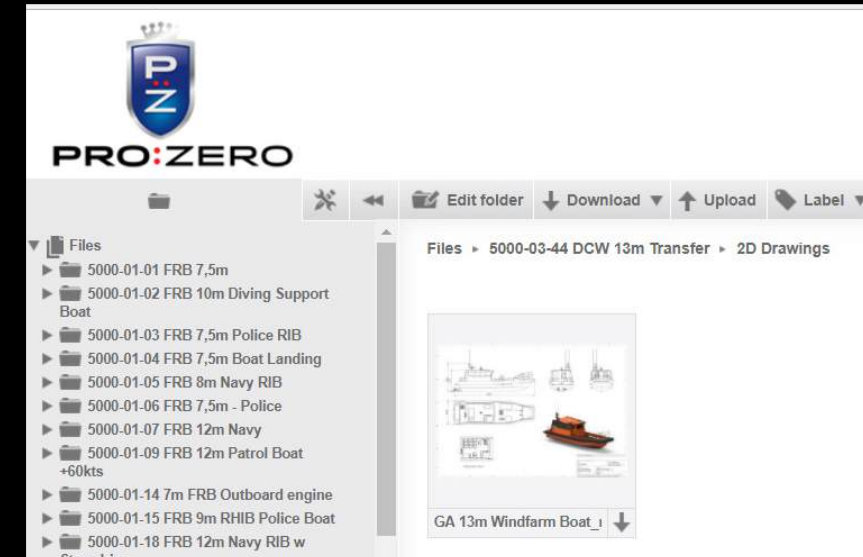
Quality is a keyword at Tuco Marine Group. In our pursuit of excellence, it is crucial that the quality is under complete control. We work nonstop to ensure that our products and services not only fulfill, but surpass quality requirements. Our skilled employees secure high quality at every step in the manufacturing process by performing systematic measurements and continuous monitoring of raw materials, components, assemblies and finished products.



ACCESS TO DRAWINGS AND 3D FILES

Easy decisions – exploit our design library and save time

As a service for naval architects and users, Tuco has launched a design library containing drawings and renderings for our range of ProZero vessels. The Filecamp library provides an efficient and convenient way for naval architects to access the ProZero designs. The comprehensive Filecamp data can support and facilitate planning, eliminate superfluous procedures and help in reaching informed design choices.



FILECAMP
EASY INTEGRATION

PRO:ZERO



THE BEST TEAM

Expert team

Modern boat building requires more than the expert skill of a single artisan. To build boats that accommodate the demands of today's maritime infrastructure, it requires innovative thinking and careful coordination of a long range of complementary skills. That is why the team at Tuco Marine is represented by everything from traditional craftsmen to 3D animators and marine engineers, who work together to create the synergy and momentum that is essential for the company to succeed. The sense of mutual commitment and shared accountability amongst the members of our team is exactly what keeps Tuco Marine at the vanguard of maritime commerce and technology. Thus, the team at Tuco Marine is not just a collection of individual people, but a collective working toward a common goal and sharing the rewards.



PRO:ZERO

PRO:ZERO

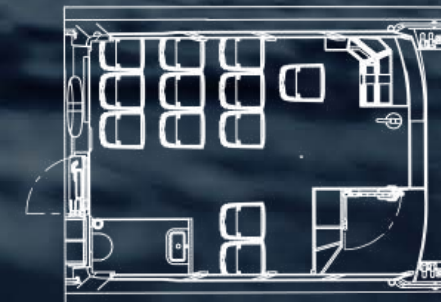
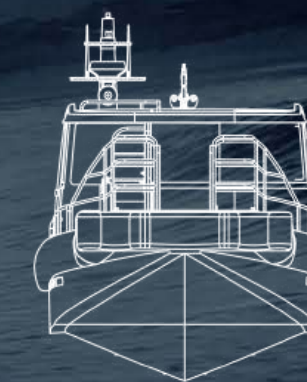
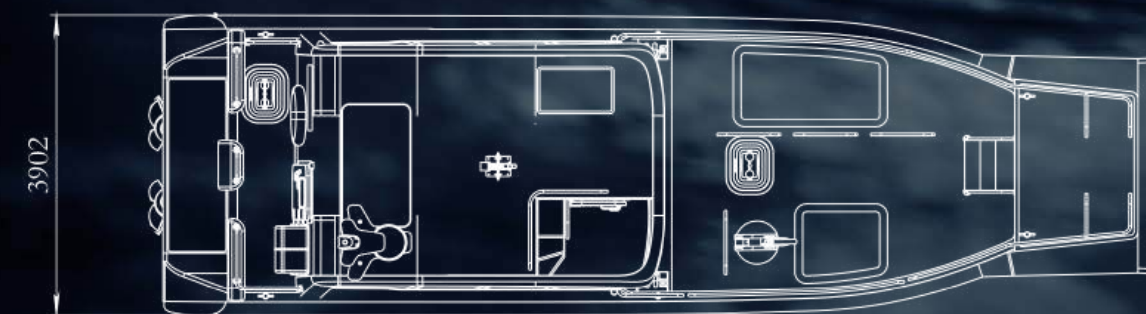
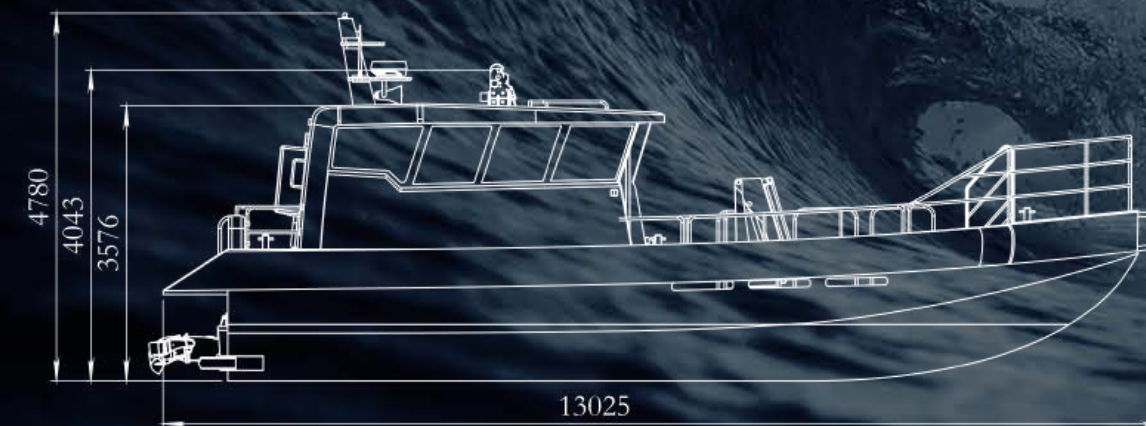
WIDENING THE WINDOW

The 13-meter DCW is developed on the basis of its smaller sibling, the 11-meter DCW Offshore Transfer vessel. It is perfect for safe and efficient transport operations to and from offshore installations.

The boat is designed to meet our rigorous quality standards and embodies a range of features developed in close interaction with end-users and experts in wind farm services.

Gliding along on the tried and tested ProZero hull design, the 13m DCW carries its crew and passengers at speeds of up to 30 knots and handles the roughest conditions. The increased waterline length enhances performance, speed and stability further, thus adding value by enabling operators to take advantage of even greater transfer openings – all while preserving the essential qualities of the ProZero series, namely low weight and outstanding fuel efficiency.

The 13-meter DCW can easily be tailored to suit particular customer needs.



13M DAUGHTER CRAFT

PRO:ZERO 13M DCW - OFFSHORE TRANSFER



Design: 2016 | 5000-03-44
Length overall, approx.: 13,1 m
Beam overall, (with fender): 3,9 m
Displacement fully loaded: 12.000 kg
Crew: 2
Capacity: 10 passengers
Maximum Load: 1 .000 kg

OPERATIONAL FEATURES:

Speed (max): +25 kt
Range: 10 hours cruise speed.

DESCRIPTION:

The boat has been built to meet the requirements from the competent authorities.

HULL, DECK AND SUPERSTRUCTURE:

The boat is made of a combination of glass- and carbon fibber as sandwich construction with PVC as core material. This core material act as a natural buoyancy reserve material.

FENDER:

The fender is constructed of closed cell polyethylene foam. Not deflating with solid core that cannot lose buoyancy or absorb water. Damage is strictly cosmetic keeping crew safe. The fender profile in the bow is custom shape to fit with the landing station of the windmills, ensuring an easy and safe transfer of technicians in between both.

DECK:

Black anodized aluminium railings.
Decks are self-bailing.
Decks are painted with anti-skid finishing.
Storage are for hazardous goods in fore deck.
Storage for mooring equipment.
6 x mooring bites.
Bow stepped boarding access.
Raised platform in the bow for personal transfer.
Aft platform.
Attachment for single point lifting hook.
Step access to hook in front of the cabin.
Hydraulic crane.

CABIN & COCKPIT:

10 Seats for crew and 2 seats for passengers.
Hinged door in the front of the cabin.
Hinged door in the aft of the cabin.
Windshield wiper with interval relay.
All windows are glued into the structure.
Lights in cockpit with dual mode white / red light.
Chart lamp with white and red light.
Comfort insulation in the cabin.
Toilet with WC and sink.

CABIN & FORECASTLE:

Hinged door in the aft of the cabin.
Toilet with WC, sink and shower, with direct access from working deck though a hinge door on the cabin aft.
Hatch to access the mast.
Windshield wiper.
Led lights in cabin and cockpit.
Chart table and lamp with white and red light.
Comfort insulation in the cabin.
2 x Comfort seats for crew.
9 x Comfort seats for passengers inside the cabin.
2 x Cabins for 2 persons each.
1 x Pantry with sink, stove and fridge.
Hatch to access the foredeck from the forecastle.
Heating system in both cabin and forecastle.

TECHNICAL:

ENGINES, PROPULSION, STEERING & MANOUEVERING:

3 x outboard engines
1 x independent diesel genset (4kVA approx.)
1 x Hydraulic power pack

TANKS:

Fuel tanks with hatch and filling protection.
Fresh water tank
Black water tank with odour filter.

NAVIGATION & ELECTRONIC EQUIPMENT:

Electric engine controls. Complete engine instruments with RPM, temperature, oil pressure and voltmeter for start batteries supplied by engine manufacturer.
Fuel gauge.
Control panel for all lighting and other electrical equipment.
Magnetic Compass
GPS
VHF

SECURITY EQUIPMENT:

Manual bilge pump
Electrical emergency pump
High water level alarm in bilge.
Portable fire extinguishers

GENERAL:

The boat is built as a standard according to the technical specification and our general quality standard. The quality and the equipment standard, however, are equivalent at least to this specification.

DELIVERY:

All boats are launched, tested and calibrated and has gone through a scrupulous quality control at the yard in Denmark. Delivery, hand over, test drive and technical review with customer at yard in Denmark. All boats are delivered with a complete owner's manual.

PRO:ZERO



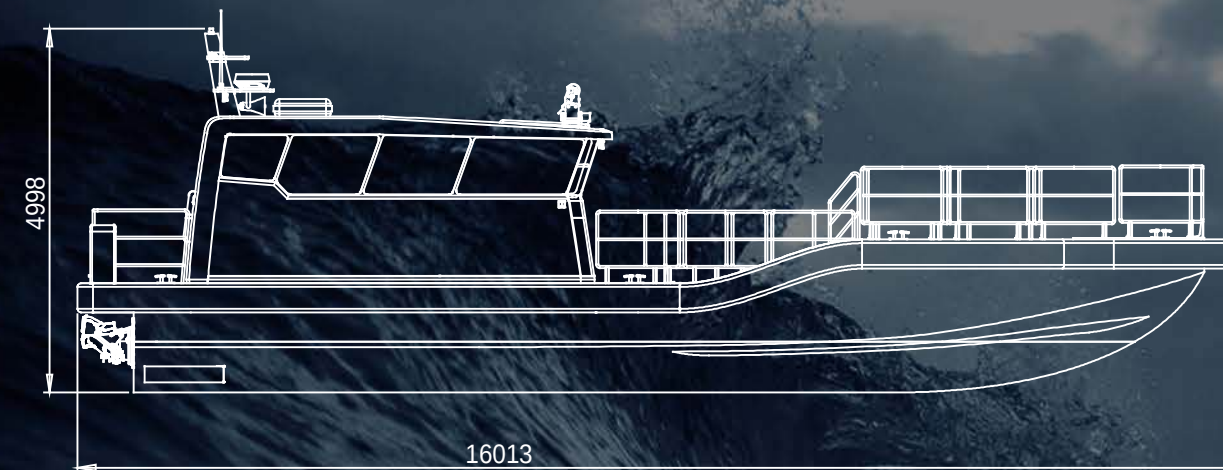
15M
DAUGHTER CRAFT

MAKING THE MOST OF IT

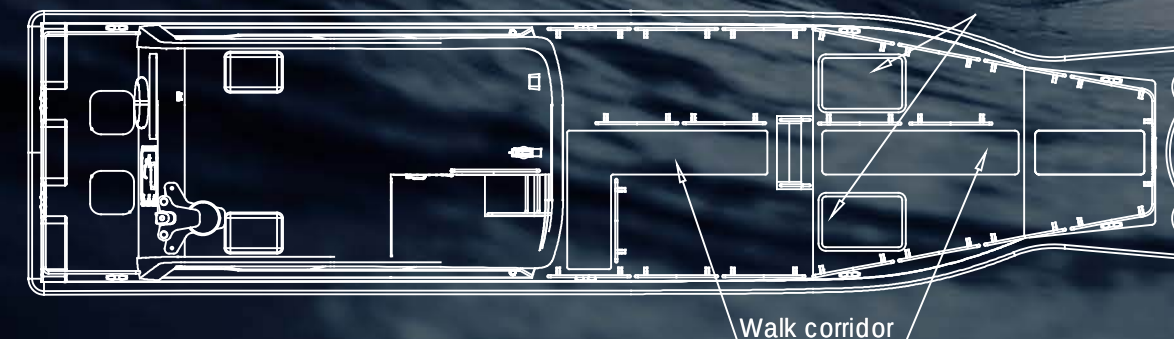
Taking it one step further, the 15-meter DCW carries forward all the advantages of its smaller counterparts while adding even more stability and rough sea performance. Thus, operators can take advantage of even greater transfer openings and keep productivity at a maximum.

It features the proven ProZero hull design made from a combination of glass and carbon fiber materials in a PVC-cored sandwich structure. This guarantees the trademark properties of the ProZero vessels, namely low weight, great performance and outstanding fuel economy.

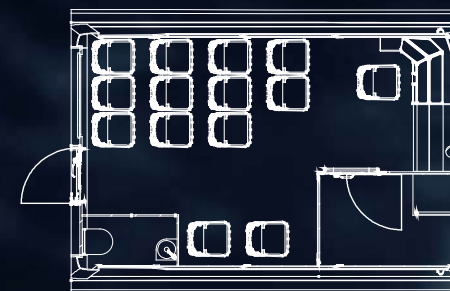
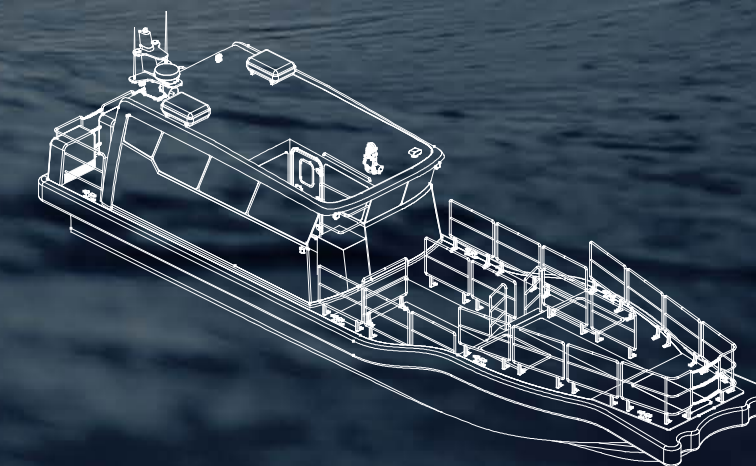
This 15-meter crew transfer vessel is the product of the usual care and attention to detail that Tuco puts into every project. The design is in full compliance with pertinent regulation and requirements of classification societies and makes available all the tools and safety features necessary for the crew to perform their daily tasks with confidence and efficiency. Like its smaller counterparts, the 15-meter DCW design is open to customization and accommodation of unique customer specifications.



Cargo areas
1200 x 800 mm

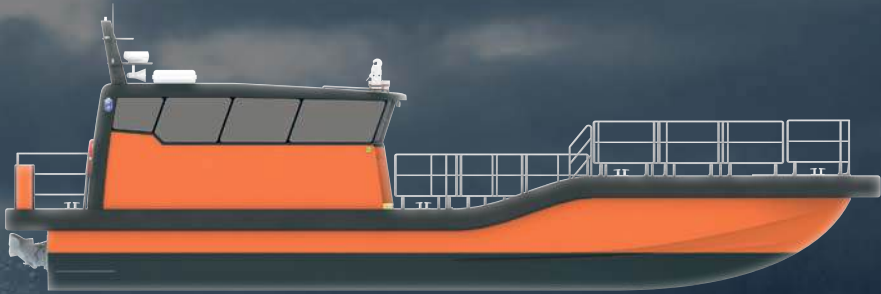
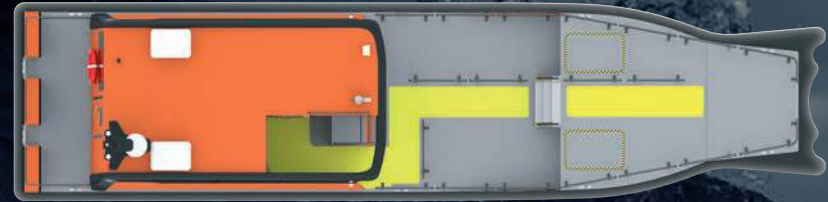


Walk corridor



Cabin Interior

PRO:ZERO 15M DCW - OFFSHORE TRANSFER



Design: 2017 | 5000-03-37
Length overall, approx.: 16,02 m
Beam overall, approx.: 3,89 m
Draft (full load), approx.: 0,70 m
Capacity (incl. crew): 14 passengers
Maximum load: 1.000 kg
Engines: 2x inboard diesel

BENEFITS:
This daughter craft is developed for wind farm service, with a specially designed fender for safe transfers. The design of the ProZero cabin ensure a huge amount of daylight, this also improve the personal comfort.

Benefits by being significantly lighter than market average are lower fuel consumption and lighter lifting equipment on mother vessel.

OPERATIONAL FEATURES:
Speed: 35 kt (lightweight)
Speed (cruise): 25 kt
Fuel capacity: 800 l

DESCRIPTION:
The boat has been built to meet the requirements from the competent authorities, and features a redundant propulsion system.

HULL, DECK AND SUPERSTRUCTURE:
The boat is made of a combination of glass- and carbon fibre as sandwich construction with PVC as core material. This core material act as a natural buoyancy reserve material, due to its lightweight and zero water-absorption. Moreover, the sandwich construction avoids the use of internal stiffeners, increasing the usable internal space and offers a natural insulation capability, improving the comfort in the cabin and manned compartments.

FENDER:
The fender is constructed of closed cell polyethylene foam. Not deflating with solid core that cannot lose buoyancy or absorb water. Damage is strictly cosmetic keeping crew safe. The fender has a special profile in the boat's bow and stern shaped to fit into the docking station of the wind mills, enabling a safe transfer between this one and the boat. Also, fender sections in this areas is a separate wearing part bolted to a special reinforced composite profile in the bow, so it can be easily replaced.

DECK:
Deck is divided in three levels, aft deck, main deck and bow transfer platform, with an aluminium ladder to access the last one from the main deck.

Equipped for single point lifting hook.
Deck is self-bailing.
Cargo area in the front deck.
8 metallic mooring bites.
Aluminium railings in aft and fore deck.
Aft platform over the water jets

CABIN & COCKPIT:
Toilet with WC and washbasin.
12 comfort seats for passengers plus 2 pilot seat.
Hinged door in the aft of the cabin.
Hinged door in the front of the cabin.
Defreeze system for windows with hot air blowers.
All windows are glued into the structure.
Comfort insulation in the cabin.
Protected exit on the cabin front, in starboard side, for access to the lifting hook and to the transfer area.

TECHNICAL:

ENGINES, PROPULSION, STEERING etc.
2 x inboard diesel engine
2 x water jet.
Redundant propulsion system.

TANKS:
Structural diesel tanks.
Independent fresh water tank.
Independent dark water tank with odourless filter.

ELECTRICAL SYSTEM & LIGHTING:
All electrical wiring in marine cable.
Shore power with control lamp, marked fuses, earth connection.
Isolation transformer with earth plate for protection of galvanic corrosion.
24-volt electrical system.
1 x searchlight on cabin roof, manual operated.
Navigational lights.
2 x floodlight on the working foredeck
2 x floodlight on the aft cargo deck.

NAVIGATION & ELECTRONIC EQUIPMENT:
Complete engine instruments supplied by engine manufacturer.
Fuel gauge.
Control panel for all lighting and other electrical equipment.
1 x magnetic compass

SECURITY EQUIPMENT:
Bilge pumps
Fire extinguisher at helmsman station
Automatic fire extinguisher system in engine room.



PRO:ZERO

100% Electric

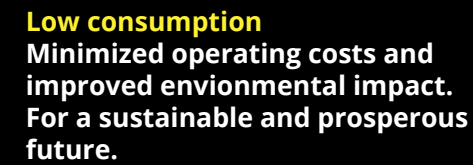
Artemis
TECHNOLOGIES

Artemis
EFOILER

EFOILER
12M EF-12 WORKBOAT

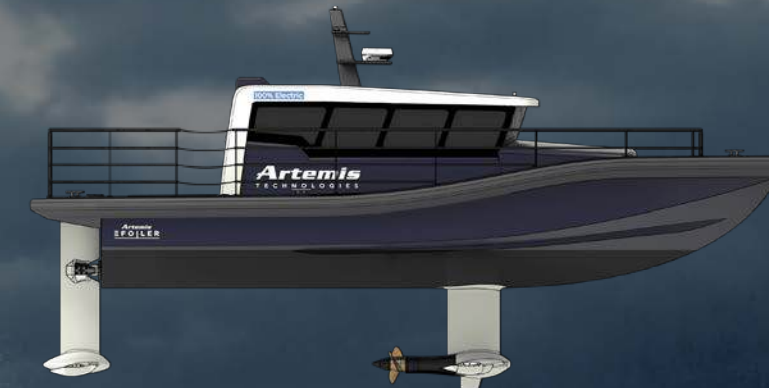
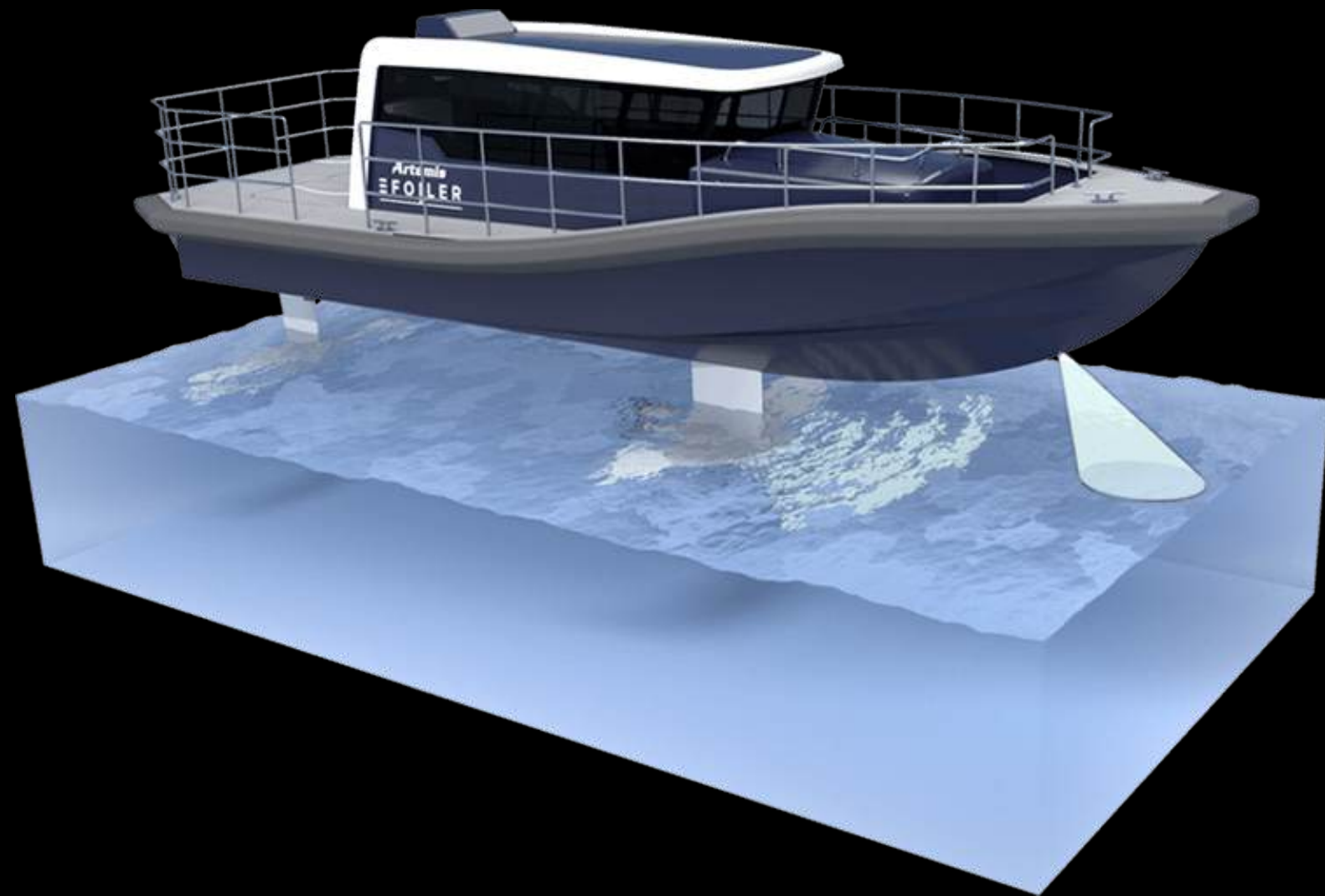
The 12M Artemis eFoiler® propelled multi-purpose workboat is the world's first high-speed 100% electric foiling commercial vessel. It is designed and built to high commercial standards, delivering market leading electric propulsion, ride comfort and energy efficiency during operations in the harshest environments.

Our vessels and subsystems have been rigorously tested to ensure operational capability, and efficient performance, across a range of tough conditions. The deep carbon composite V-bottom hull provides a safe and reliable base for high-speed foiling operations in coastal and offshore waters.





PRO:ZERO 12M EF-12 WORKBOAT



Design: 2022 | 5000-07-27
Length overall, approx.: 11,5 m
Beam overall, approx.: 4 m
Draft (full load), approx.: 2,2 m
Displacement (full load), approx.: 10000 kg
Capacity: 6 persons
Maximum load: 10000 kg
Engines: 400 kWh battery pack

BENEFITS:
The 12M Artemis eFoil® propelled multi-purpose workboat is the world's first high-speed 100% electric foiling commercial vessel. It is designed and built to high commercial standards, delivering market leading electric propulsion, ride comfort and energy efficiency during operations in the harshest environments.

The walk-around deck layout with a central cabin and doghouse, provides flexibility and room for a variety of missions and boarding requirements.

OPERATIONAL FEATURES:
Speed (cruise): 25 kt.
Range: 60 Nautical miles.
Fast charge time: 52 seconds per Nautical mile.

DESCRIPTION:
The boat has been built to meet the requirements from the competent authorities, and features a redundant propulsion system.

HULL, DECK AND SUPERSTRUCTURE:
ProZero Foam cored carbon vinylester infused laminate.

PROPULSION:
Main propulsion with 250 kW and 60 kg Tunnel thruster.

DECK:
Handrails: Alloy fabricated and powder coated.
Custom rigid fender around deck edge.

ACCOMMODATION:
Capacity for up to 8 Seats - Client Specific layout
Wheelhouse: Navigation console.

ENGINES, PROPULSION, STEERING etc.
1 x battery pack.
Grid fed booster (Battery storage system) and dispenser (1 or 2 outlets).

ELECTRICAL SYSTEM & LIGHTING:
System includes an Artemis Technologies 800V marinised EV battery, with a hydrogen fuel cell range extender option under development.

FLIGHT CONTROL SYSTEM:
Flight control: Autonomous.
Manual inputs: Steering & throttle.

SHIP SYSTEMS:
Bilge and Fire pump: 5 x Electric bilge pumps + 1 x manual bilge pump.
Fixed system in battery enclosures and portable fire extinguishers.

PRO:ZERO



EFOILER
12M EF-12 CREW TRANSFER VESSEL

12M EF-12 CREW
TRANSFER VESSEL

Our 12M Crew Transfer Vessel, is designed and built to allow engineers to get to their destination and deliver their services without discomfort, in a safe and efficient manner.

The Artemis EF-12 CTV has a top speed of 32 knots, and a range of 50 nautical miles at a cruising speed of 25 knots.

Interior cabin layout is adjustable and can be transformed into mission specific environments for the crew, or seating arrangements for passenger transport.

Our workboats create minimal wake when foiling, enabling them to operate at high-speed in inland waterways, or in busy ports and harbours.

Whether undertaking Crew Transfer, Emergency Response or Patrol Operations, our range of Artemis eFoil® 100% Electric Commercial Workboats are specifically designed for high-speed operations in the most challenging environments.

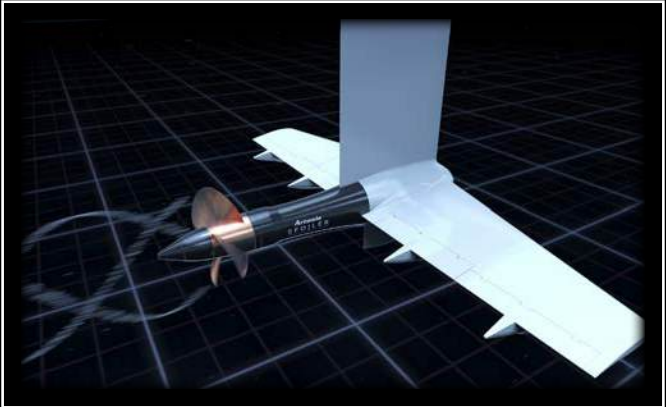


CREW TRANSFER

Manufactured from robust lightweight glass and carbon fibre composites, which reduces the weight of the boat enabling higher speeds and longer range.



Comfortable ride
Due to the electric fully submerged drivetrain, the Artemis eFoil® provides a quiet experience. Flying over the waves on a high-speed foiling vessel removes the usual bumpy ride, and associated sea sickness.



PRO:ZERO



GAME CHANGING TECHNOLOGY

WIND FARM REFERENCES

- Belwind 1
- Horns rev 1
- Horns Rev 3
- Sandbank
- Belwind Alstom Haliade
- Anholt wind farm
- Dolwin 2
- Gwynt y Môr Offshore Wind
- Meerwind OWF
- Borkum Riffgrund Offshore
- Gemini offshore
- Race bank Windfarm
- Butendiek OWF
- Godewind 1
- Godewind 2
- Baltic 2
- Dantysk
- Veja Mate
- Burbo Bank
- Lincs
- Walney Phase 1
- Walney phase 2
- Meerwind Sûd/Ost
- EnBW Baltic 2
- Galloper



REFERENCES



*To the above comes a large number of businesses within Renewable Energy and Offshore that are covered by Non-Disclosure agreements



MARINE GROUP

Krogsbjergvej 2
DK-5600 Faaborg
Tlf: +45 7020 3898
E-mail: mail@tuco.dk
www.tuco.dk
www.prozero.dk