



CANTIERE
DELLE MARCHE

explorer yachting starts here

10
ANNI
VER
SARY
2010
2020

Aurelia

FLEXPLOERER 130

Cantieri delle Marche S.r.l.
Via E. Mattei - 36
60125 Ancona / Italy

www.cantieredellemarche.it
info@cantieredellemarche.it
T 071/206705



CANTIERE
DELLE MARCHE
explorer yachting starts here



CANTIERE DELLE MARCHE PRESENTS THE FIRST FLEXPLOERER, *AURELIA*, A NEW EXPLORER VESSEL DESIGNED TO TAKE CENTRE STAGE

“The first Flexplorer is a game changer, there is no doubt about it. It is actually already a trend-setter project if we look at many of the latest renderings published by other yards on the press after we presented the project. This makes us very proud, indeed,” says **Vasco Buonpensiere**, co-founder and **Sales & Marketing Director at CdM**. *“Being the first interpreters of a new trend and being those who lead the pack, launching this kind of yacht years before our competitors... well, it is just priceless and a perfect reward for all the efforts we did to create the Flexplorer range of vessels!”*

Being at the forefront of innovation and setting new benchmark in the explorer yachts segment is in CdM's

DNA. When CdM started its activity, explorer vessels were almost unknown to most yacht owners and neglected by most shipyards. Nowadays explorer or expedition vessels represent one of the most interesting class in the yachting market and many shipyards are proposing explorer-like yachts. We can safely say that CdM set a trend and still master the explorer vessel segment.

Recently CdM is moving forward with one-off projects and new series among which the Flexplorer line represents a highlight as well as a turning point. The embrace of both design and technological advancements and deeply held commitment to move forward define what a CdM's explorer vessel is today. **Flexplorer** is a testament to these values.



CANTIERE
DELLE MARCHE

explorer yachting starts here

10
ANNI
VER
SARY
2010
2020



Cantiere delle Marche S.r.l.
Via E. Mattei - 36
60125 Ancona / Italy

www.cantieredellemarche.it
info@cantieredellemarche.it
T 071/206705



“I HAVE FOLLOWED PERSONALLY THIS BUILD BOTH BECAUSE IT IS A VERY SPECIAL PROJECT WITH MANY TECHNICAL CHALLENGES AND BECAUSE OF MY CLOSE RELATIONSHIP WITH THE OWNERS WHO GAVE US - FOR THE SECOND TIME - THE PRIVILEGE OF BUILDING FOR THEM A VERY SPECIAL YACHT WHICH, FOR SURE, WILL TURN HEADS WHEREVER IT WILL CRUISE. THIS IS DEFINITELY ONE OF THOSE PROJECTS WHICH REMIND US WHY WE LOVE SO MUCH WHAT WE DO!!! GRAZIE!”

Ennio Cecchini, CdM's CEO



***Aurelia's* main features**

The Flexplorer line embodies all features of a pure explorer vessel, robustness, seaworthiness and comfort in all sea conditions adding to these qualities an extra dose of flexibility and functionality. The Flexplorer encompasses CdM's superlative levels in both construction and equipment. The first yacht in the Flexplorer line, *Aurelia*, is indeed a stunning piece of technology wrapped in an elegant design by **Sergio Cutolo/Hydro Tec** with groundbreaking interiors by **Francesco Paszkowski Design**. Her eye-catching superstructure, almost vertical bow, huge aft deck are not styling exercises as they provide the yacht with features that make her a perfect ocean-going vessel designed to face all sort of weather conditions in total safety and comfort. She has an **asymmetrical layout** on

the Main deck. The starboard side of the salon encompasses the side passage on starboard side becoming larger and benefiting from open views onto the sea through large side windows. Her bold hull boasts a custom Star Green livery by Alexseal Yacht Coatings. At **39.37m** and with a beam of **8.60m**, *Aurelia* has a **displacement of 392t**. Powered by twin **Caterpillar C32 A** Rating delivering **746kW** each, she reaches a top speed of **14 knots** and has a range of **above 7,000nm** at 10 knots. According to her Owner's wishes, she has only **four guest cabins**, a large Owner apartment on the Main deck forward while two Vip suites and a twin are on the Lower deck. A maximum of nine guests is pampered by a **crew of six**.



“ONE OF THE CHARACTERISTICS WHICH DIFFERENTIATE A SUCCESSFUL COMPANY FROM THE OTHERS IS ITS ABILITY TO KEEP ITS COMMITMENT TOWARDS IMPROVEMENT ALWAYS AT FULL SPEED. CDM AND ITS FANTASTIC GROUP OF PEOPLE HAVE PROVED ONCE AGAIN THAT - DESPITE THE INCREDIBLE SUCCESS THEY ALREADY HAVE - THEY ARE ALWAYS AIMING HIGHER AND HIGHER, PUTTING 200- OF THEIR EFFORTS TO MAKE THINGS HAPPEN EVEN IF - LIKE FOR THE FLEXPLOER AND THE A-FRAME CRANE IDEA - IT SEEMS IMPOSSIBLE TO ACHIEVE THE RESULT THEY ENVISAGE. BRAVO ENNIO, BRAVO BRUNO, BRAVO VASCO AND THE WHOLE TEAM AT CDM: I COULD HAVE NEVER DREAMT OF SOMETHING BETTER THAN THIS UNDER EVERY ASPECT!”

Aurelia's Owner



Aurelia's distinguished features

Among *Aurelia's* genuinely unique aspects it is worth mentioning the carbon fiber, 3.5t **A-frame crane** that is perfectly encompassed in the deck's flooring. This feature itself is a remarkable piece of engineering purposely developed by CdM's in collaboration with AMS (Advanced Mechanical Solutions) to provide the yacht with a powerful crane to launch an 8.5m **tender** – a **Jokerboat Clubman 28 EFB** - without interfering with full use of deck space. It goes without saying that the A-frame crane also allows much safer loading and offloading operations and it eliminates inclining issues. The fact that the tender is loaded and offloaded in the protected water at the stern of the vessel is another plus, indeed. The second tender is a William Dieseljet 445. Another remarkable feature are the **bulwarks** that are collapsible on both sides for around 7 metres to increase the deck space astern. Once the bulwarks are folded down it becomes a **beach area of more than 115 square metres**. There are many **storage spaces on board for both food and toys** to allow long permanence onboard and non-stop passages to remote destinations. On the stern terrace, to port side, **there is a stainless-steel drainable storage space** to host boards and other

toys, different slots for a carbon fiber removable 500kg crane, and a very **big lazarette** are only a few of the features which make the Flexplorer a perfect vessel for those who like to stay active when cruising. The list of toys includes 3 mountain bikes, two sea-bobs and a few surf boards.

As requested by her Owner, *Aurelia* has a proper **gym on the Lower deck astern** with plenty of natural light thanks to six skylights. The gym is equipped with top-end equipment by Technogym such as a stylish treadmill Run Personal (designed by Antonio Citterio), a Skillbike, a Cross Personal and a Kinesis Personal.

A huge **wine cellar** is another peculiar feature on board *Aurelia*. It spans two decks -Main and Upper deck - and is meant to be a remarkable design feature as it occupies the entire stairwell. It is composed by two separated wine cellars accessible from the main and upper deck. Each rack (a sort of square column) rotates on a swivel base. The racks rotate manually to give access to all bottles. They contain 44 bottles each. It has been designed by CdM in conjunction with Romagnoli Inox.



CANTIERE
DELLE MARCHE
explorer yachting starts here



“THE FLEXPLOER IS THE PERFECT EXAMPLE OF HOW THE SAME CONTENT CAN BE EXPRESSED IN DIFFERENT SHAPES: WITH CANTIERE DELLE MARCHE WE HAVE TOTALLY REVOLUTIONIZED THE CONCEPT OF EXPLORER VESSEL TO GET TO A SYNTHESIS WHICH ENCOMPASSED THIS TYPOLOGY’S CORE CHARACTERISTICS, COUPLING THEM WITH CENTURIES OF NAVAL TRADITION AND CREATING A NEW SHAPE AND A MODEL ABLE TO BE TAILORED TO EACH AND EVERY CLIENT.”

*Sergio Cutolo (Exterior design,
naval architecture and engineering)*



Naval architecture, equipment, etc.

Aurelia is a displacement yacht with a bulbous bow. Her hull is deep and flared in its forward sections to keep the deck dry in all weather conditions, even the worst, while they flatten and enlarge astern to allow large diameter propellers.

“The transverse frame, in line with the shipyard approach, allows for better spaces optimization, increasing the internal volume thanks to reduced internal structures,” says Sergio Cutolo. *“It also provides additional design flexibility, allowing for easier modifications/customisation. She has two pairs of electro-driven stabilizing fins. This solution grants better functionality*

also because, thanks to a sophisticated software, they work together with the two independent electro-driven rudders to improve the seakeeping. This allowed the installation of smaller machines and blades, minimizing the ‘rudder effect’ caused by larger fins while offering redundancy in case of blade failure.” **A gallery/tank deck runs below the guest area** to connect the engine room to the crew area. This technical space also allows easy access to equipment and tanks.

Thanks to the hull’s large volume, easily accessible storage compartments and freezers are located below the crew area.



CANTIERE
DELLE MARCHE
explorer yachting starts here



“DESIGNING THE INTERIOR OF *AURELIA* WAS REALLY A CHALLENGING JOB. IT WAS A PERFECT TEAM WORK AMONG ALL THE PLAYERS INVOLVED - THE OWNER, CANTIERE DELLE MARCHE AND OUR STUDIO IN COLLABORATION WITH MARGHERITA CASPRINI - WHICH GAVE US THE OPPORTUNITY TO EXPLORE UNPRECEDENTED DESIGN SOLUTIONS. *AURELIA* FEATURES AN INTERIOR DESIGN OF INDUSTRIAL INSPIRATION WHICH REMINDS OF A SOPHISTICATED NEW YORK LOFT. BRUSHED OAK SLATS OF MIXED WIDTH WITH A VINTAGE FEEL FOR THE FLOOR COMBINE WITH SLATE, CONCRETE, GLASS, IRON AND ALUMINIUM FINISH AND DETAILS. BROWN AND CHARCOAL GREY HUES FOR FABRICS AND FURNITURE, WEATHERED LEATHER FOR SOFAS AND CHAIRS, THE LAMP AND TAPS STYLE ENHANCE THE INDUSTRIAL-INSPIRED VIBE.”

Francesco Paszkowski
(interior design)



An interview to **Sergio Cutolo**, founder of Hydro Tec, who designed *Aurelia*'s bold exterior lines and developed her super-efficient naval architecture (not to mention her state-of-the-art engineering)

CDM *You designed the exterior line of Aurelia as well as all Flexplorers. Spaces on board Aurelia, 39.37 metres, are actually huge for a yacht of this size and the layout is extremely functional with plenty of space for storages, too. How did you succeed in combining an exterior that is not aesthetically heavy or voluminous with such roomy interiors?*

SC From a structural point of view, we have tried to minimise the impact of the structures on the hull and superstructures to maximise interior spaces. In the superstructure we have managed to create the perfect match between the designed internal layout and the positioning/size of the windows. The transverse frame, in line with the shipyard approach, allows for better spaces optimization, increasing the internal volume also thanks to the structural arrangement that requires limited space for internal structures. The hybrid structural arrangement, main longitudinal structures and transversal frames at 500 mm, also provides additional design flexibility, allowing for easier modifications/customisation. A gallery/tank deck runs below the guest area to connect the engine room to the crew area. This technical space also allows easy access to equipment and tanks. Thanks to the hull's large volume, easily accessible storage compartments and freezers are located below the crew area.

CDM *How you developed her naval architecture?*

SC The hull was preliminarily optimised using CFD analysis with particular attention to avoid any kind of interference between the various appendages (rudders, stabilizers, thruster, exhaust scoops, etc). Once the CFD analysis has been completed, the hull has been tank tested at MARIN Institute in Holland. The naval architectural aspects were influenced by the peculiar weight distribution and the profile of the bow which was designed according to the specific aesthetic needs of the owner.

Hull lines were designed to improve efficiency and to match the weight distribution as well as interior space requirements.

CDM *On the occasion of sea trials - in all weather conditions - she proved to be even more efficient than expected. Would you please tell us what makes her so efficient?*

SC I'll make a list of the key characteristics: Her hull is a typical fast displacement round bilge hull, with a bulbous bow and deep and flared in its forward sections to keep the deck dry in all weather conditions, even the worst, and to allow for optimal space for the crew area and for the Owner Suite. The hull has a generous



CANTIERE
DELLE MARCHE

explorer yachting starts here



arc and flat sections at the stern. The Beam/Draught ratio has been brought to an optimal value and special arrangements have been made to allow high diameter/high efficiency propellers. Towards the transom, transversal sections flatten and enlarge astern to allow large diameter propellers without affecting the draught and huge space for beach club and swim platform. *Aurelia* has two pairs of electro-driven stabilizing fins. This solution, which is not common on vessels of this size, has multiple beneficial effects. First, the four fins arrangement grants, by definition, for better course keeping because they cancel completely the steering effect caused by aft fins. In addition to that, *Aurelia* was designed also with independent electrically driven rudders that, thanks to a sophisticated software, work together with the four stabilizers furtherly improving coursekeeping and, consequently, seakeeping itself.

CDM *What are the main benefits of having four fins?*

SC Compared to two-fins installations, the four-fins installation allow for the installation of smaller machines and blades, offering redundancy in case

of blade failure. In practice the experience showed that, during normal operation, the contribution of the aft fins to stabilization is about one third compared to the forward ones, so they be kept almost centered reducing any possibility of turbulence to the propellers. At anchor, the four fins work in synchrony to provide optimal stabilization.

CDM *As said at the beginning, Aurelia behaviour during the tough sea trials exceeded your expectations...*

SC Yes, indeed! Data from sea trials were excellent in all regards: the maximum speed has been more than 15 knots, exceeding by more than one knot the contract specifications. Also range calculations showed an incredible 7.000 nautical miles range at 10 knots, much higher than the contractual values, due to the extremely low fuel consumption which is about 70 l/h at a speed of about 10 knots. This amazing achievement is the result of the hull optimization combined with the perfect integration between the hull itself and the propulsion package (engines, gearboxes, propellers).



Unprecedented design solutions

Francesco Paszkowski on the interior decoration of *Aurelia*

Aurelia's interior decoration - highly personal and extremely original - is the work of the Florentine designer Francesco Paszkowski in collaboration with Margherita Casprini. It is like nothing else ever seen aboard a yacht. "The brief for *Aurelia* was to create a peculiar interior. It had to reflect the owner's personality," says Paszkowski. "He doesn't like a boat interior furnished with famous brand furniture, he likes objects and furniture which have a special feeling and vibe, which tell a story and have a flavour."

Brown and charcoal grey hues and an industrial style are the red thread throughout the yacht. Brushed oak floorboards underfoot are cut to different widths to give an irregular, repurposed look. Panels of plywood bearing a thin coat of concrete butt up to steel girders overhead. There is concrete on the walls and ceilings - a thin coat of concrete on panels of plywood - as well as steel framed-furniture and shelves, and sofas upholstered in vintage leather. Antique Persian rugs add warmth to the atmosphere. The wiring for the lights on the boat is carried through brass piping fixed in plain sight to ceilings and bulkheads, even the light switches are old-fashioned industrial boxes that stand proud on every wall. "A feature that is likely to win over even

the hardest-hearted of modernists is the wine cellar," says Paszkowski. It spans two decks - Main and Upper deck - and is meant to be a remarkable design feature as it occupies the entire stairwell. It is composed by two separated wine cellars accessible from the main and upper deck. Each rack (a sort of square column) rotates on a swivel base. The racks rotate manually to give access to all bottles. They contain 44 bottles each. It has been designed by CdM in conjunction with Romagnoli Inox. "We are very proud of the iron staircase with the steps covered with leather surrounding the wine cellar," adds Paszkowski. "We like it, as it fits with the industrial vibe, but the leather gives a special sensation under your feet." Every major item of furniture has been rescued from a previous life, or at least inspired by a vintage piece: daybeds and benches resemble old wool mattresses, recreated in precious Ralph Lauren fabrics; there is a lamp whose mantle once adorned an airfield as a landing light, discovered in a flea market in Florence; the model of a Spitfire and a few exquisite pieces of art and paintings hanging on the walls. "This design gave us the opportunity to explore unprecedented design solutions on board."



**CANTIERE
DELLE MARCHE**
explorer yachting starts here

10
ANNI
VER
SARY
2010
2020



Cantiere delle Marche S.r.l.
Via E. Mattei - 36
60125 Ancona / Italy

www.cantieredellemarche.it
info@cantieredellemarche.it
T 071/206705



CANTIERE
DELLE MARCHE

explorer yachting starts here



AMS Advanced
Mechanical
Solutions

An interview to *Francesco Pelizza*

AMS developed - in conjunction with CDM's Technical Department - the project of the A-frame crane.

CDM AMS designs and produces cranes, too, and the A-frame installed on the Flexplorer Aurelia is a very peculiar one. What are its main characteristics?

AMS Throughout the years we have produced a lot of cranes and tender launching systems tailored according to the space available on board, the lifting capacity required and the handling needs of the vessel, yet I have to say that the A-frame crane represented a first and a true challenge. With the A-frame crane, Ennio Cecchini and the CDM's team really had a stroke of genius! We embraced the idea with enthusiasm and worked with the CDM team shoulder to shoulder to bring the project to completion. A-frame cranes are usually designed to perform offshore load handling on ships, fishing and research vessels, Aurelia's A-frame crane is the first crane of this kind ever used on a luxury yacht. Cranes are usually considered a nuisance as they 'steal' space and are not so nice under the aesthetic point of view. On top of that, when you deal with launching and hauling a heavy tender there are heeling issues as the weight force acts just on one side of the yacht. With the A-frame crane the tender is launched or hauled right astern and the yacht doesn't heel at all. Furthermore, working behind the stern offers a shelter which allows operating in smooth waters. 'Our' A-frame crane is a highly sophisticated piece of engineering built entirely in carbon fibre to be as light and stiff as possible. It is composed by two pillars and a transverse cylindrical element that encompass and holds the winch that has to be free to rotate to remain always in perpendicular

position (that is aligned with the gravity force) while the frame rotates. The main dimensions of the frame are (B x H) 4.2m x 10.1m, the structural carbon weight is 460kg and the total weight is 1150kg. The lifting capacity is above 3 tons. The two pillars have been laminated in two pieces each and then bonded together, and secondary bonded with the top transverse cylindrical element.

The whole structure, when not in use, is recessed into the deck floor and hidden underneath flush deck flaps. We designed the automatically-operated flaps, too.

The A-frame crane must operate smoothly in all positions and the structure, while moving from 'rest' position to launching position undergoes critical stresses. The first critical position occurs when the structure starts rising from the deck and, due to the very narrow angle, the weight force on the actuators is at its maximum. Moreover, the actuators must work in perfect synchrony to make the structure operate without any torsion or misalignment. Another critical position is reached when the structure reaches an obtuse angle to let the tender hang beyond the stern to be launched or hauled.

CDM *What about your relationship with CDM?*

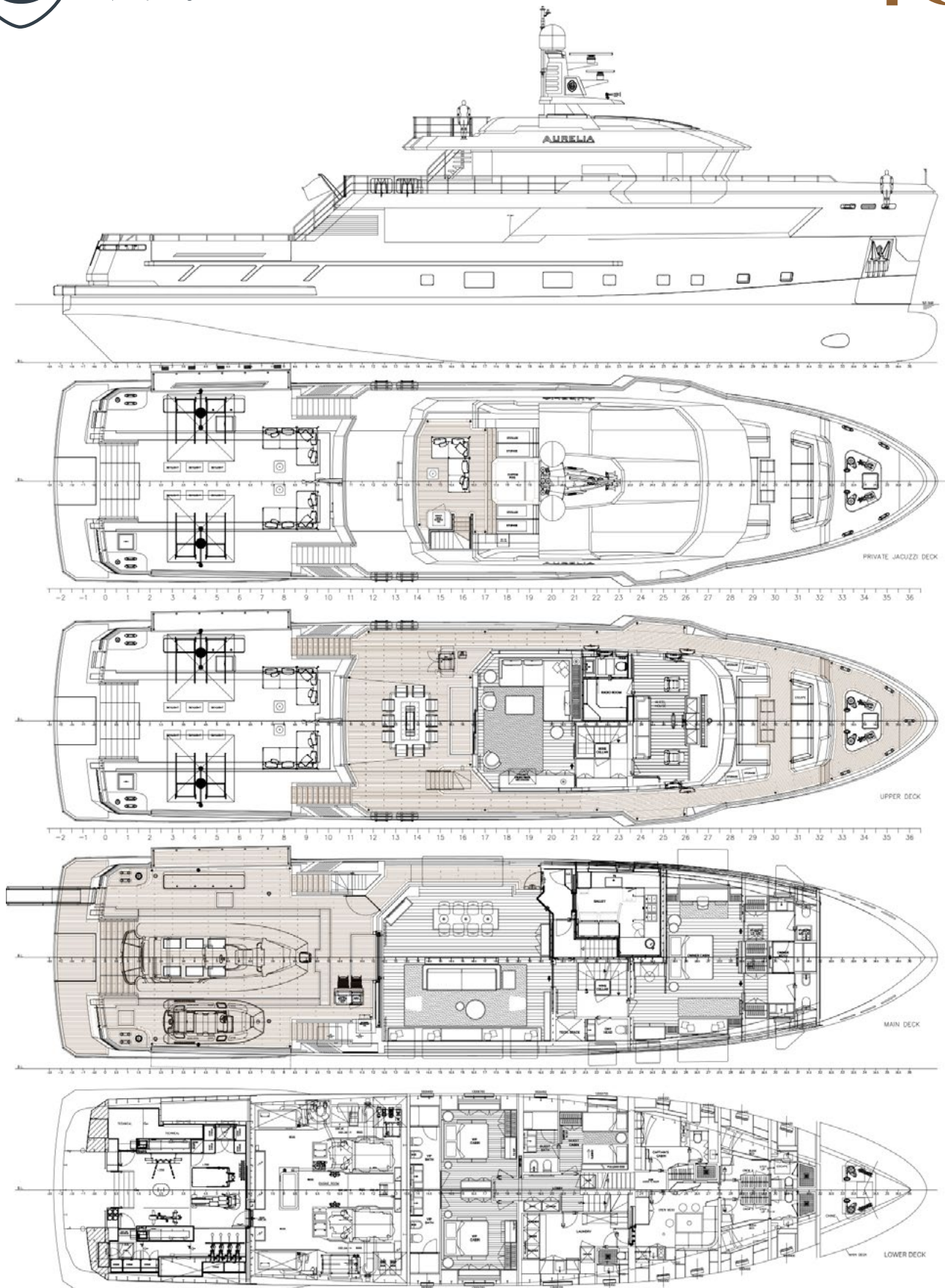
AMS We've been working with CDM for many years on a great number of projects. We have built stern doors, hatches, handling systems, cranes, foldable bulwarks for CDM explorer yachts of the Darwin Class, Nauta Air and Acciaio series and for custom projects such as Audace and Crowbridge. We are developing a new, larger A-frame crane for the Flexplorer 146. Our relationship with CDM is excellent under all aspects and when we work on a project we join forces and really become an unique team.



CANTIERE
DELLE MARCHE

explorer yachting starts here

10
ANNI
VERSA
RY
2010
2020





Main Data

LOA	39.37m
LWL	38.23m
Beam	8.60m
Draught *	2.60m
Displacement *	392t approx.
Gross Tonnage	453 GT
Main engines	2xCaterpillar C32 2x746 kW @1600-1800 rpm (A Rating, Heavy Duty)
Transmission	2 x ZF3351 gear ratio 4.000:1
Generators	2x Kohler 55kW
Maximum speed	14 knots
Range at 10 knots	5,000 nm
Fuel capacity	60,000 litres
Freshwater capacity	8,500 litres
Black/grey/ bilge water	2,000 litres

* At full load



**CANTIERE
DELLE MARCHE**

explorer yachting starts here



Main Data

Tender	1 x Joker Boat Clubman 28 EFB 1 x Williams
Crane	A-frame carbon fiber 3.5 t Main dimension: b x h 4.30m x 9.70m
Owners / Guest	8
Crew	6
Construction	Steel hull; aluminium superstructure
Classification	C Malta Cross HULL •MACH Ych, unrestricted navigation
Naval architecture	Hydro Tec
Exterior styling	Hydro Tec
Interior design	Francesco Paszkowski Design/ Margherita Casprini
Builder/year	Cantiere delle Marche/2020



Download

Video



Photos



Texts



General Plans



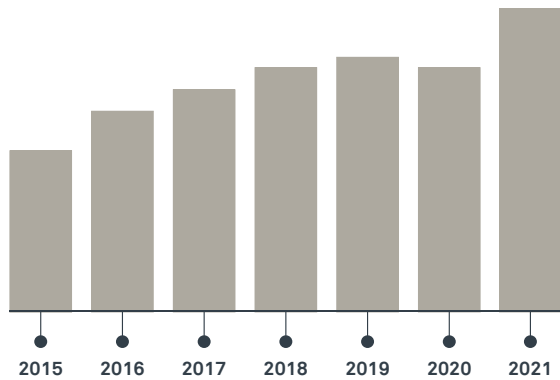
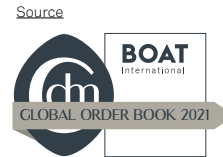
TEN YEARS AGO, CDM LAUNCHED ITS FIRST EXPLORER YACHT, DARWIN 86 VITADIMARE 3. TEN YEARS LATER, AURELIA, FIRST FLEXPLOER 130, HULL NUMBER 23, OPENS A NEW CHAPTER FOR CDM.

IN THE PAST TEN YEARS MANY THINGS HAVE CHANGED IN THE YACHTING MARKET AND THE EXPLORER VESSELS NICHE GREW STEADILY. THE GRAPHICS ON THE NEXT PAGE SHOWS HOW CDM ASSERTED ITSELF AS THE TOP BUILDER OF EXPLORER YACHTS IN THE WORLD.



EXPLORER VESSELS

TOP GROWING MARKET

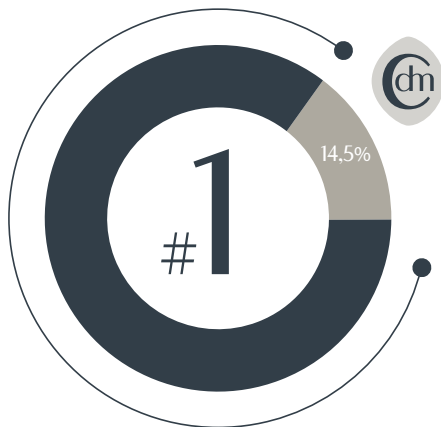


+ 10%
THE EXPLORER YACHT SEGMENT OUTPERFORMED THE MARKET GROWTH

registering a CAGR of 10% over the last 6 years.

CDM

VS EXPLORER SUPERYACHT MARKET

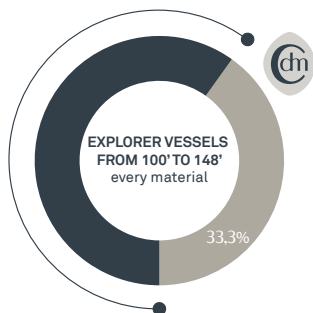


CDM WORLD LEADER IN THE EXPLORER SEGMENT.

With 9 units for a combined LOA of 1.084 ft or 330 mt, CDM is building 14,5% of the explorer vessels' entire production worldwide.

CDM

VS EXPLORER SUPERYACHT MARKET FROM 100' TO 148' EVERY MATERIAL

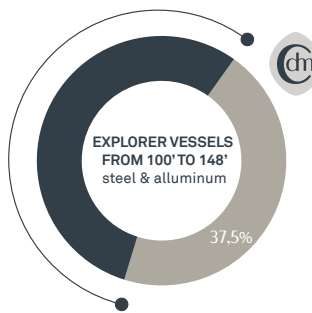


CDM IS BUILDING 33,3% OF THE ENTIRE PRODUCTION OF EXPLORER VESSELS BETWEEN 100' TO 148' FEET.

CdM is already a case history for its success and the constant customer satisfaction.

CDM

VS EXPLORER SUPERYACHT MARKET FROM 100' TO 148' STEEL AND ALUMINUM



CDM IS BUILDING 37,5% OF ALL THE EXPLORER VESSELS UNDER CONSTRUCTION.

In its own specific market CDM is by far the most successful shipyard in the world.