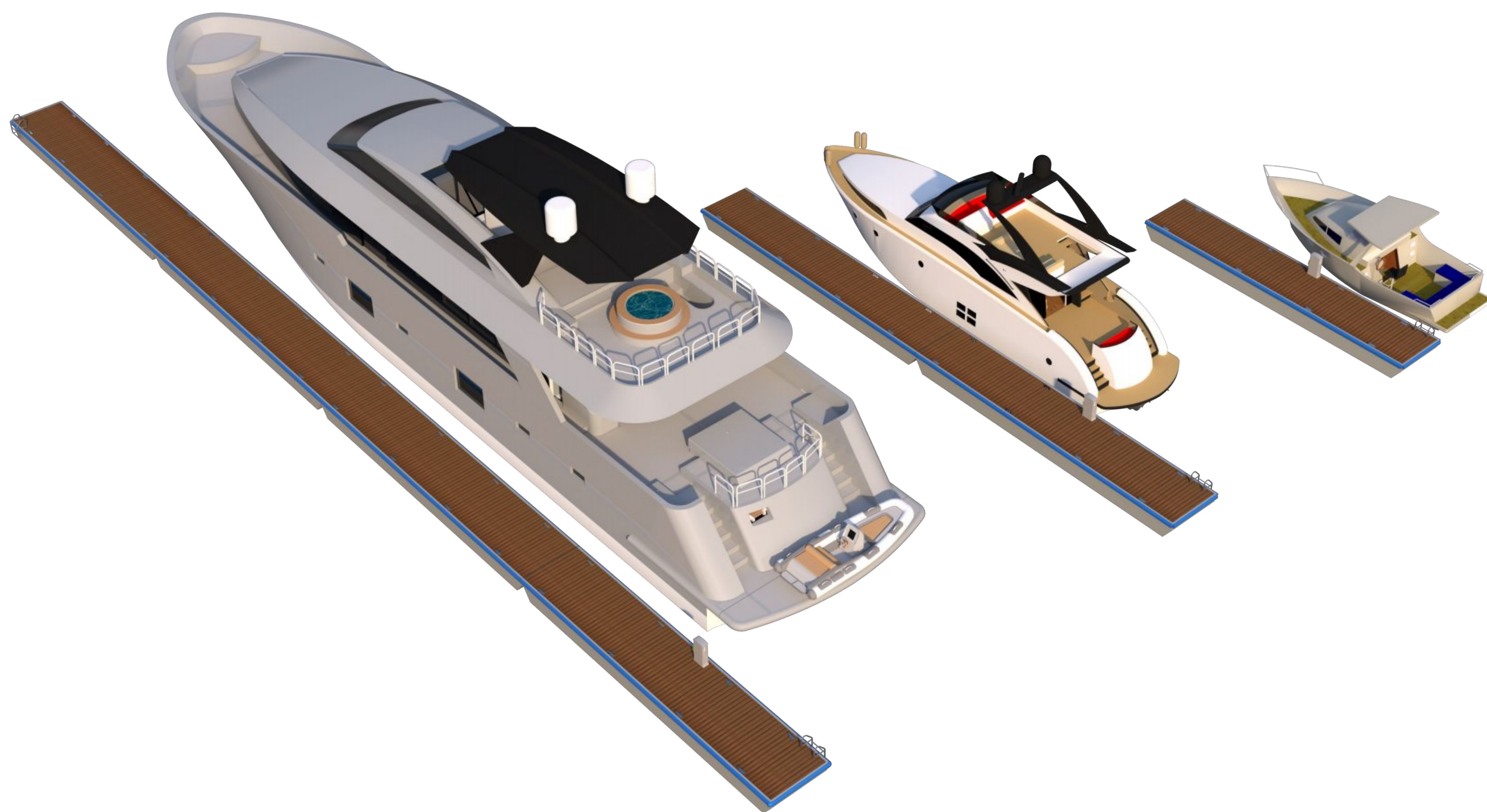
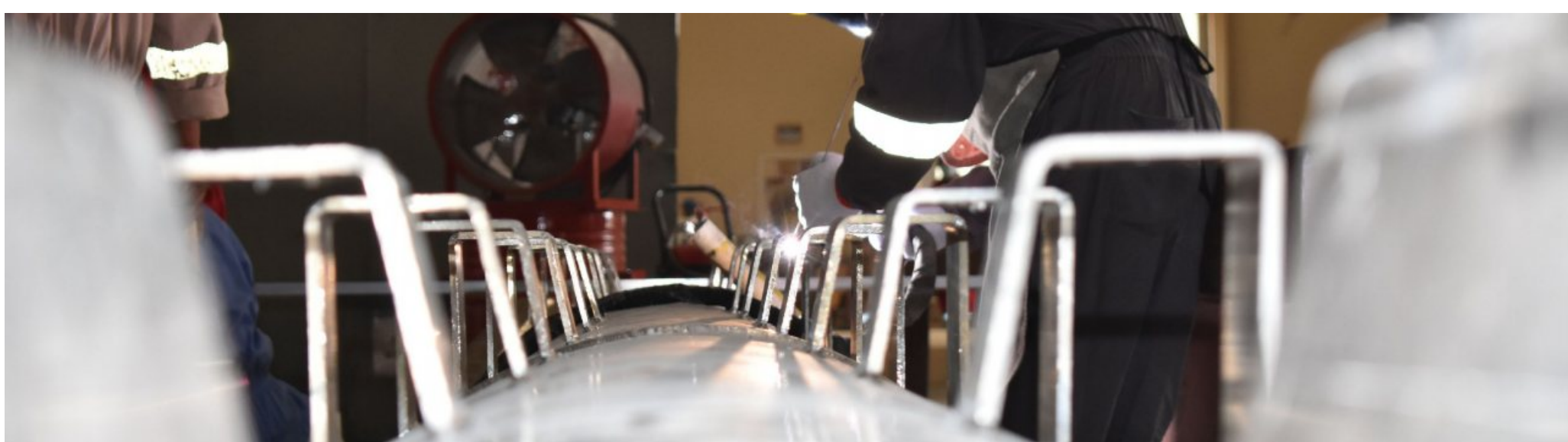




Elmar Marinas^{LLC}



MODULAR PONTOONS



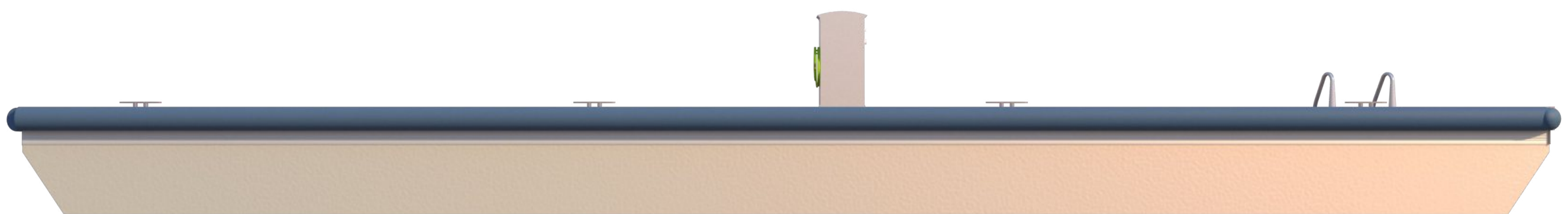
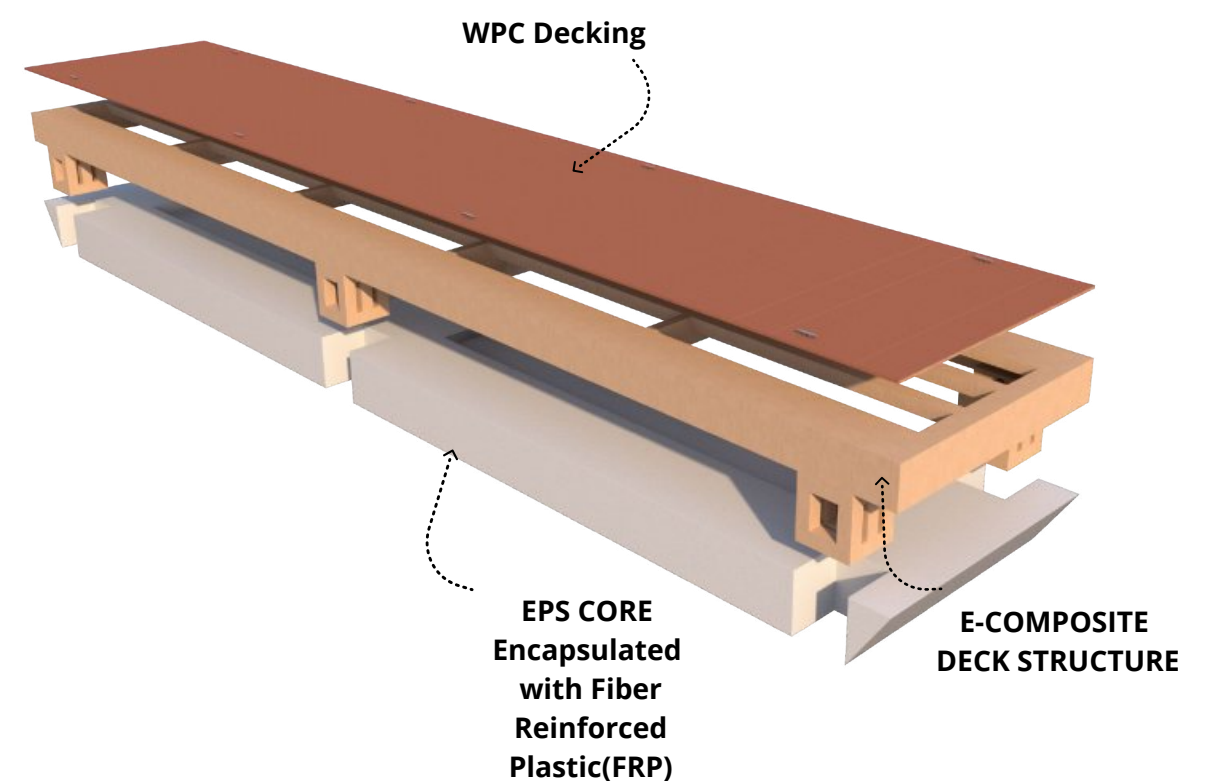
CONCEPT

The Modular pontoons have been designed by ELMAR Engineers to outlast the harshest weather conditions ranging from the extremely high temperatures of the Middle East, to the coldest waters of the Arctic seas. ELMAR modular pontoons are stable, durable, very elegant and most of all, they are **totally unsinkable**. They are crafted using the finest resins, similar to the ones used to build luxury yachts.

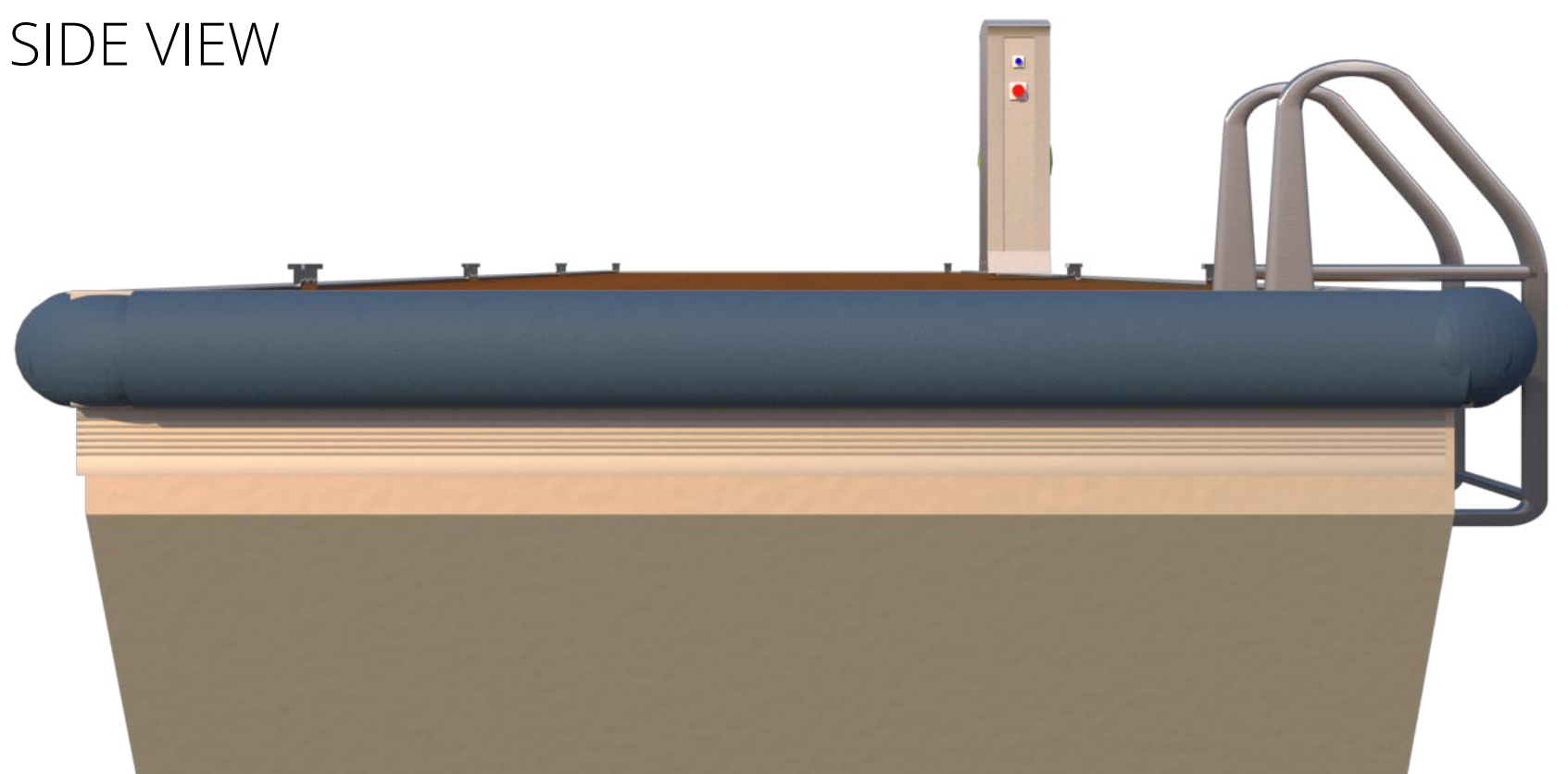
Layers of fiberglass cover the core members of the pontoon structure making it extremely strong and totally waterproof. The substructure is made with expanded polystyrene covered with layers of fiberglass mat and this combination delivers the required buoyancy while at the same time it guarantees the pontoon's unsinkability.

Finally, the top is dressed with a maintenance-free WPC decking and a D-shape fender all-around that protects the pontoon from any impact caused by the boats. The pontoon is made from 100% non-corrosive and certified environmentally friendly material. Its life expectancy is estimated to be in excess of 50 years.

Dimensions: 11x2.15x0.7m
Freeboard: 0.50m
Weight: Approx. 2800kg
Deck Material: Wood Plastic Composites
Structure Material: Composites
Fender Material: Rubber



SIDE VIEW



FRONT VIEW

APPLICATION

The pontoons can be used as stand-alone, for various applications such as swimming platforms or for mooring private boats, jet skis and kayaks, or they can be connected together in various combinations in order to form marinas with a mooring capacity of a few dozen boats to a full size commercial marina that can accommodate super yachts.



SHIPPING WORLDWIDE

Standard Modular pontoons are made in standard size of 11.00m x 2.15m so that they can fit in 40' containers and be shipped globally at minimal cost.

Being the manufacturer, ELMAR can produce the pontoons as per the customer requirements. Once the order is placed, our team of professionals will keep the client up-to-date during the manufacturing process. While the lead time for manufacturing and shipment is one month, the factory under full capacity, can produce up to 300 modular pontoons monthly.



3x

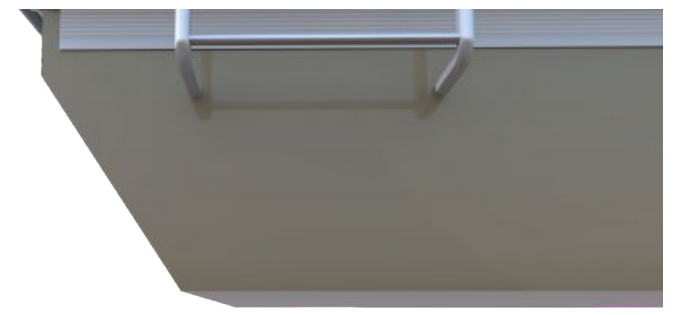


DESIGN OPTIONS

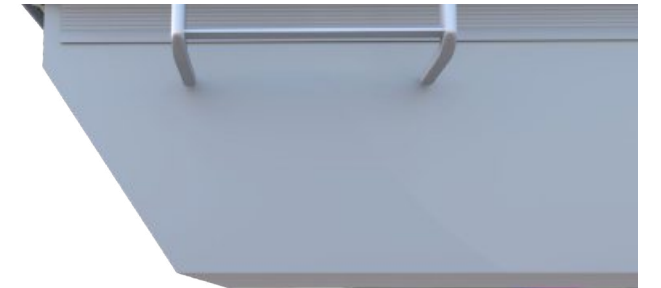
Pontoon Body

There are three colour options for the decking and three matching options for the pontoon colour as displayed below. pontoons are manufactured with the colour combinations chosen by the client.

Grey Beige



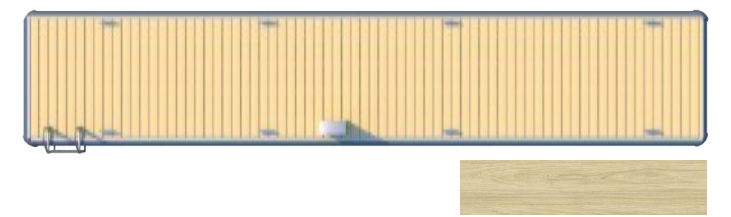
Light Grey



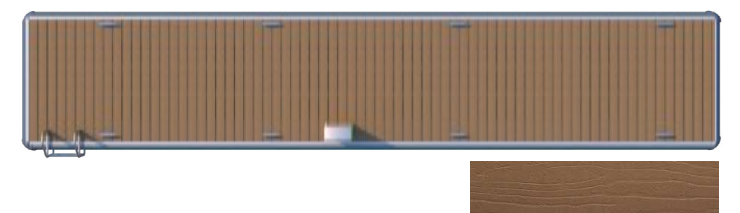
Decking

Pontoons are shipped with pre-installed premium WPC solid Decking which is durable, does not require any maintenance and is suitable for all weather conditions. There are 3 standard colors of decking which can be chosen by the client at the time of ordering the pontoons..

Desert Sand



Teak



Charcoal



Fendering System

All pontoons come with installed premium marine-grade fenders which are installed allaround eliminating the chances for the moored boats to get any dents or scratches. Fenders are non-marking and suitable for all weather conditions.

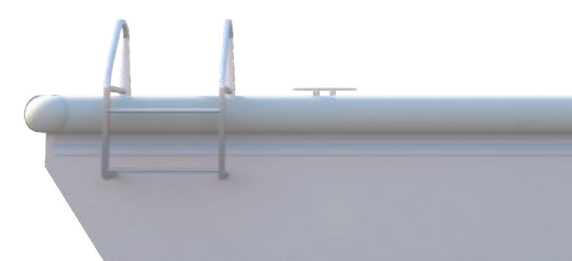
Navy Blue



Grey



Off white

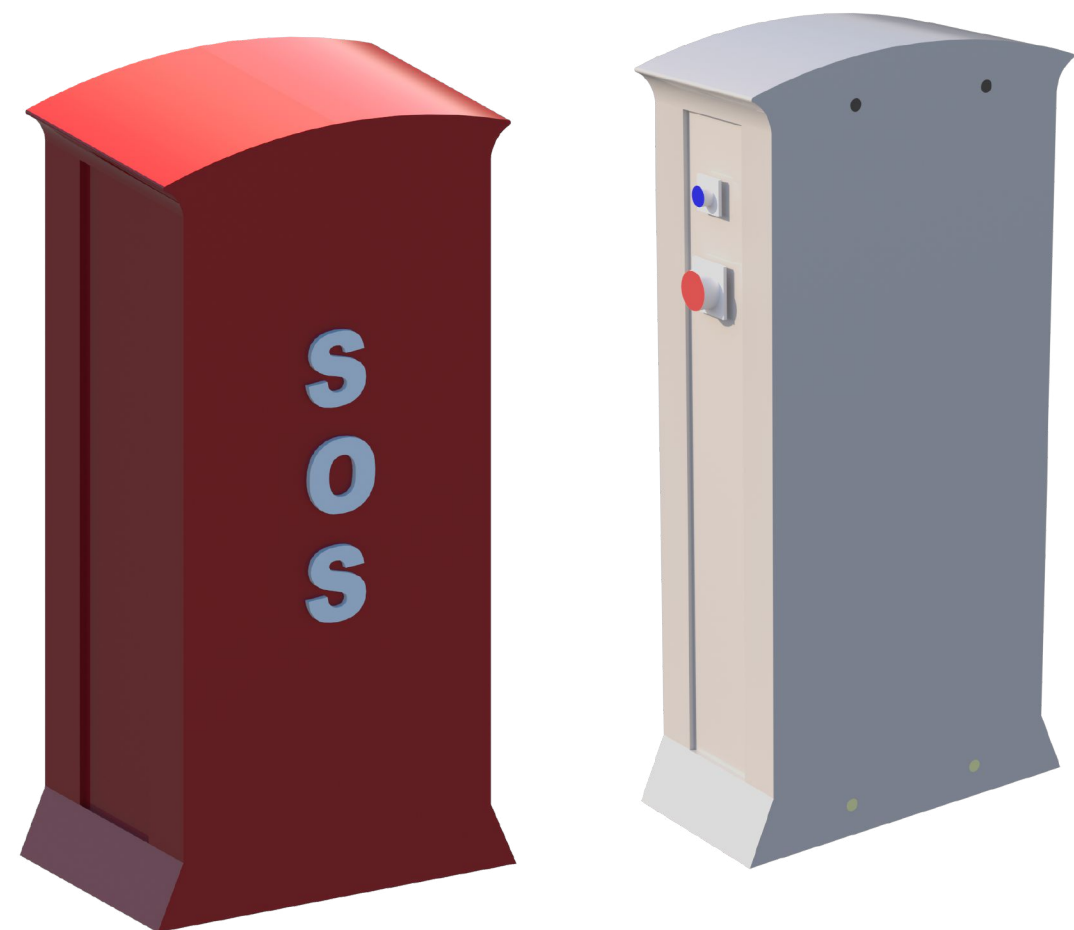


ACCESSORIES

POWER/WATER AND SOS

Pedestals

Service pedestals are manufactured with non-corrosive materials and can be ordered as optional items. They are equipped with electrical sockets, lights and water outlets of various sizes according to each country requirements.



Access Gangway/Bridge

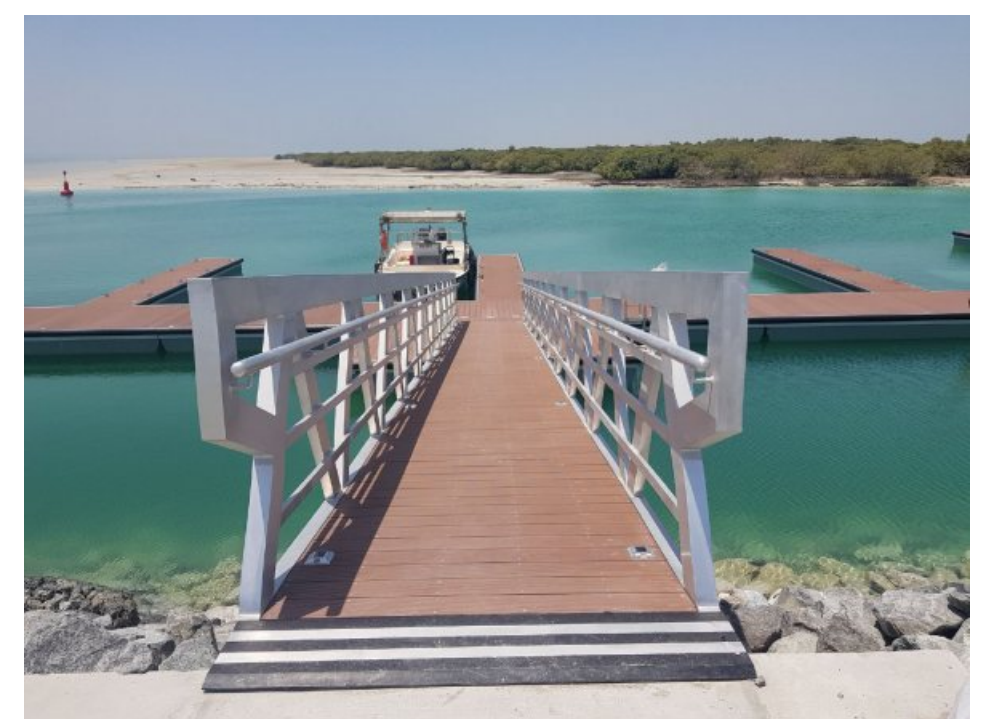
There must be a connecting bridge between the shore and the pontoons/marina. This is defined by a number of factors:

- *The tidal differential* at location.
- *The distance* between the shoreline and the pontoon.
- *The required slope* so that the length of the gangway can be defined i.e. if the tidal differential is 3m and the required slope is 1:4, then the gangway length is 12m.
- *Load bearing capacity*

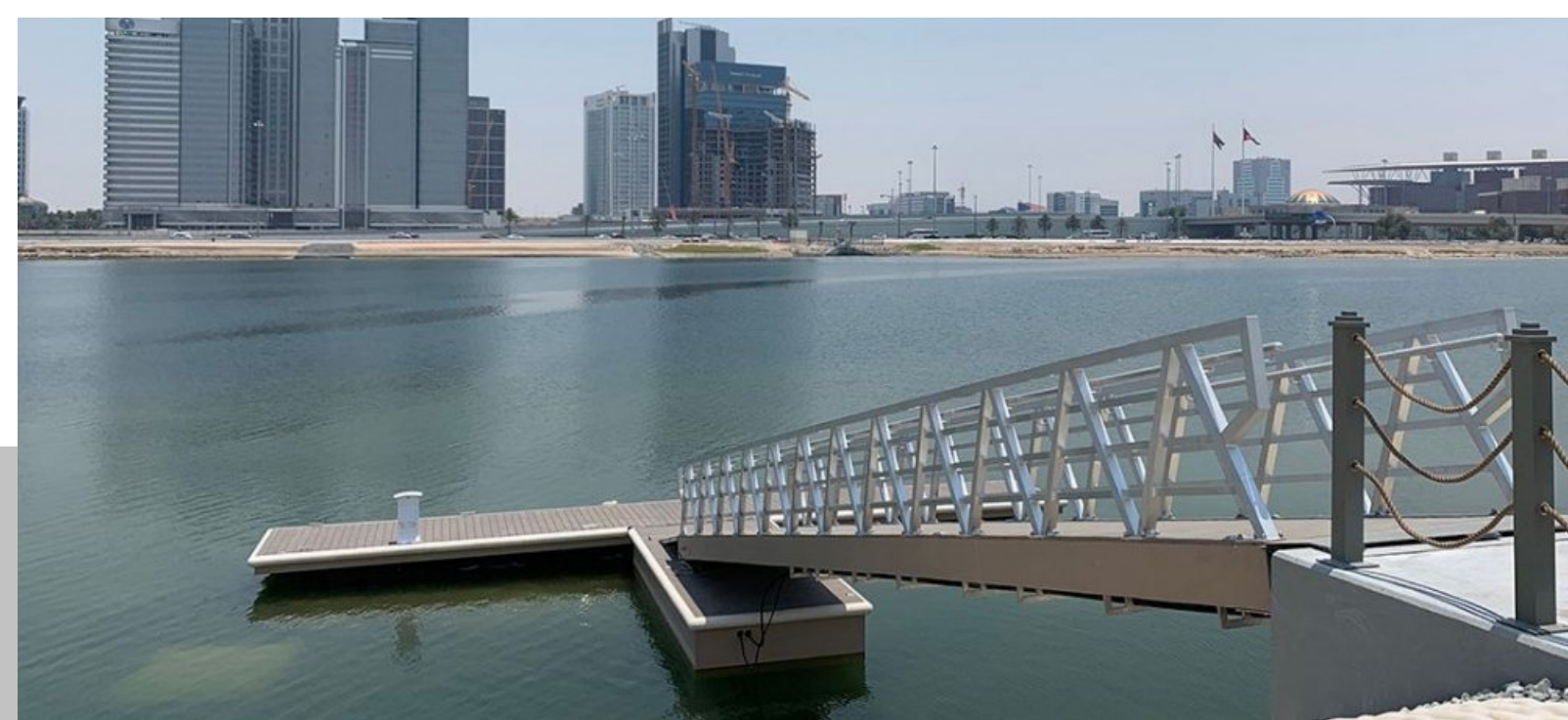
Once the above information is collected and sent to our Engineers, ELMAR will be able to recommend a suitable access to the pontoon.



Aluminium Gangway/Bridge up to 30m Length connected to concrete block for locations with tidal differences



Light Duty Gangway for marinas installed at calm/protected area



ACCESSORIES - CONT.



Mooring Cleats and Bollards

Marine mooring cleats and bollards are made of marine grade stainless steel material (SS316L) and are mounted to the pontoons structure. They come in 3t, 5t, 10t and 20t capacity to suit all sizes of vessels from small boats to super-yachts .



Swim Ladder

Suitable for temporary or permanent mounting. Made of durable aluminum tubing with comfortable steps..

- Mounting Style: Ladder catch
- Material: Marine Grade Aluminum
- Number of Steps: Three



Solar LED Deck Lights

IP68 certified marine grade dock lights will provide all in one solution for jetties. All need to be done is to install them on your desired spot and wait for the first charge.



PONTOON STABILITY (Standard Model)

Scope

This section describes the procedure and verification checks carried out for the operational analysis of pontoon. The analysis was performed according to the requirements, criteria and parameters reported in the codes and standards.

Stability Checks:

Pontoon has been verified based on IMO MSC 267 along with AS3962 rules and all stability criteria has been satisfied.

Lightship Case:

Code	Criteria	Value	Units	Actual	Status	Margin %
267(85) Ch2 - General Criteria	2.2.1: Area 0 to 30	3.1513	m.deg	10.2554	Pass	+225.43
267(85) Ch2 - General Criteria	2.2.1: Area 0 to 40	5.1566	m.deg	15.3213	Pass	+197.12
267(85) Ch2 - General Criteria	2.2.1: Area 30 to 40	1.7189	m.deg	5.0658	Pass	+194.71
267(85) Ch2 - General Criteria	2.2.2: Max GZ at 30 or greater	0.200	m	0.509	Pass	+154.50
267(85) Ch2 - General Criteria	2.2.3: Angle of maximum GZ	25.0	deg	32.7	Pass	+30.91
267(85) Ch2 - General Criteria	2.2.4: Initial GMt	0.150	m	1.613	Pass	+975.33
2.2 pontoons	2.2.4.1 GZ area: to Max GZ	4.5837	m.deg	11.6431	Pass	+154.01
2.2 pontoons	2.2.4.3 Angle of vanishing stability <=100m in length	20.0	deg	90.3	Pass	+351.51

*Note: Comprehensive Design Report can be provided upon request

** Note: Elmar Marinas operates a policy of continuous development and reserves the right to change specifications without notice.

***Note: Exact unit weight and freeboard are subject to detailed specification of the unit, equipment and mooring methods.

International Codes & Standards

ISO 12215-5 – 2009 Edition

ISO 12215-6 – 2008 Edition

IMO MSC.267(85)

AS 3962-2001 Guidelines for design of marinas

Pontoon Data

Length: 11.00m.

Draft: 207 mm

Breadth: 2.15m

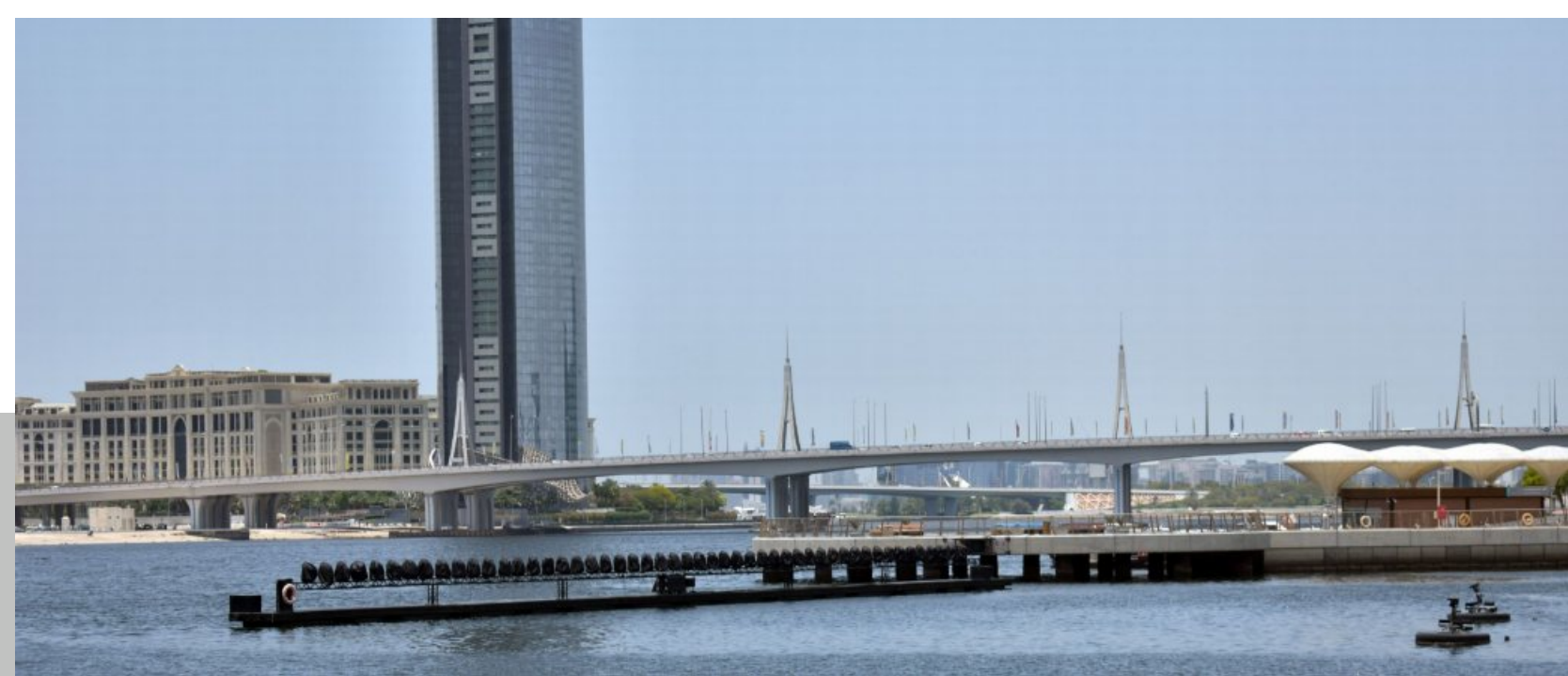
Self-Wt.: 4.8 Tons

Depth: 0.76m

Live Load: 3kpi

Strength Checks:

All pontoons are verified with various loading & environmental conditions as per international codes and standards.



KEY ADVANTAGES

LOW MAINTENANCE

Unlike other pontoons systems Elmar Modular pontoons does not require any maintenance over its life span.

COLOR CHOICES

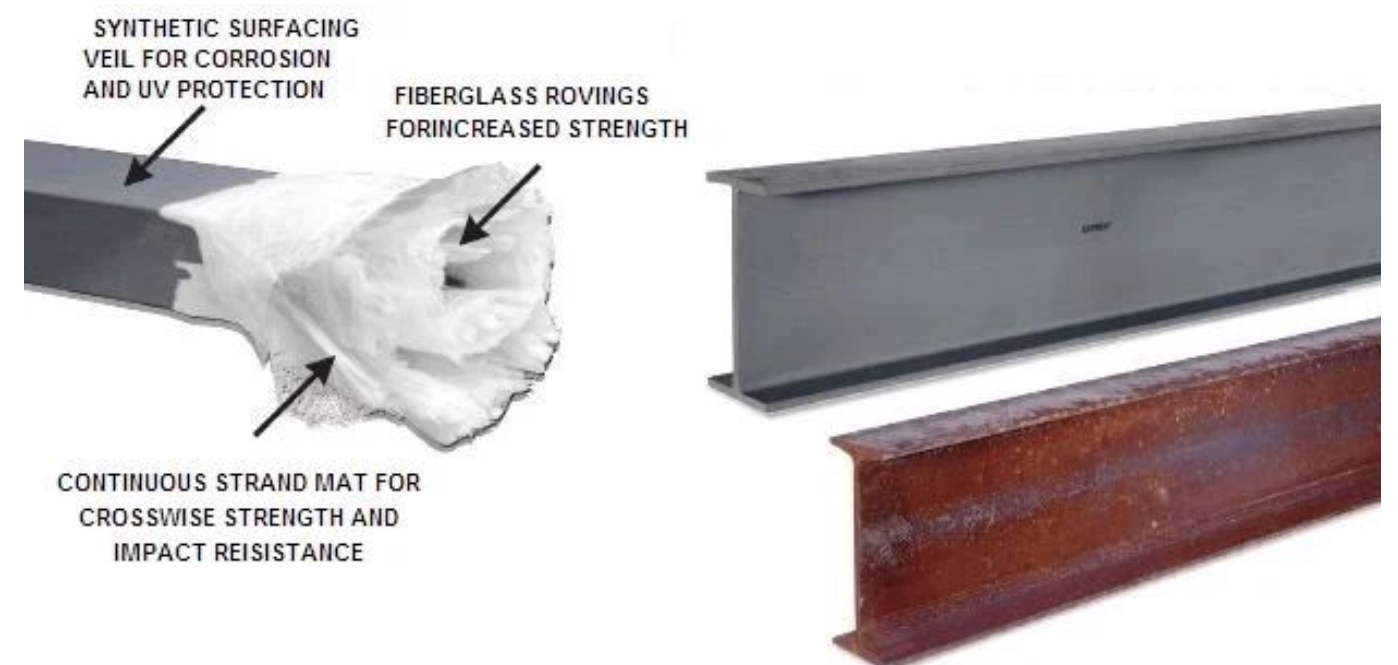
Color pigments are added to the composite materials which enable us to offer any color combination to our clients.

IMPACT RESISTANCE

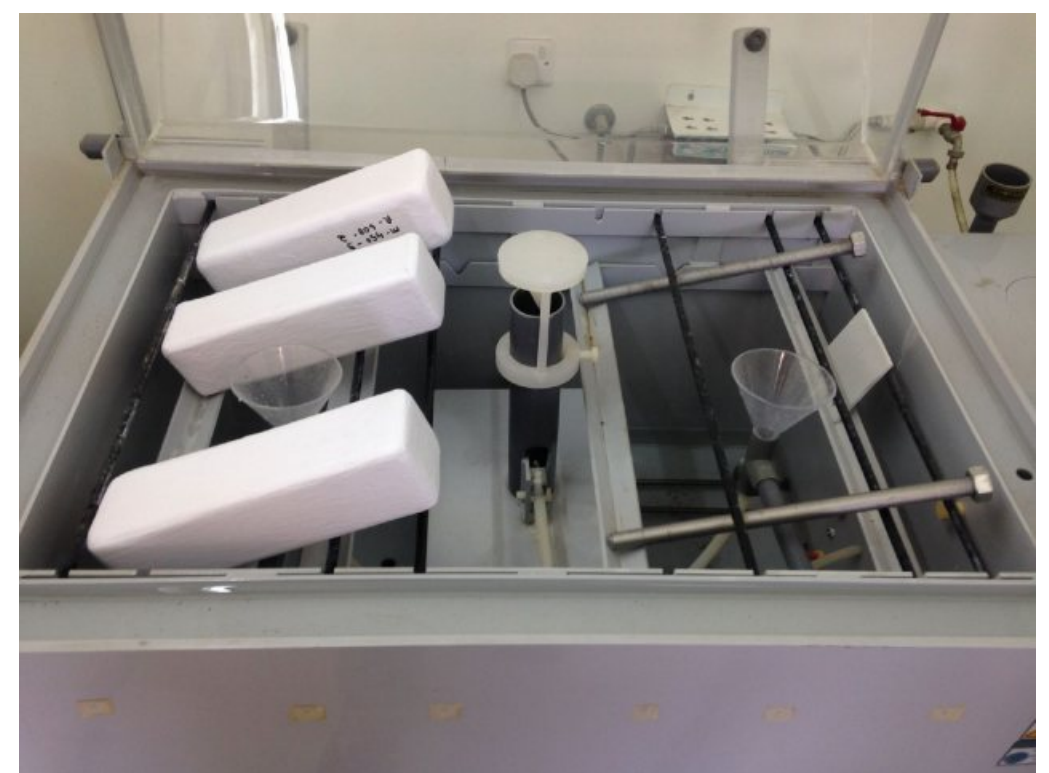
The glass fibers in the composite material distribute the loads evenly throughout the structure which prevents any damage to the surface and will not be deformed under impact.

CORROSION RESISTANCE

Fiberglass has been proven to perform extraordinary when exposed to direct sunlight and marine environment which is the reason why its the ultimate choice for the boat builders.



Fiberglass VS steel



Elmar Composites system tested in salt spray machine in Elmar facility



Manufactured in UAE

Head Office/Manufacturing Unit: Umm AL Quwain

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