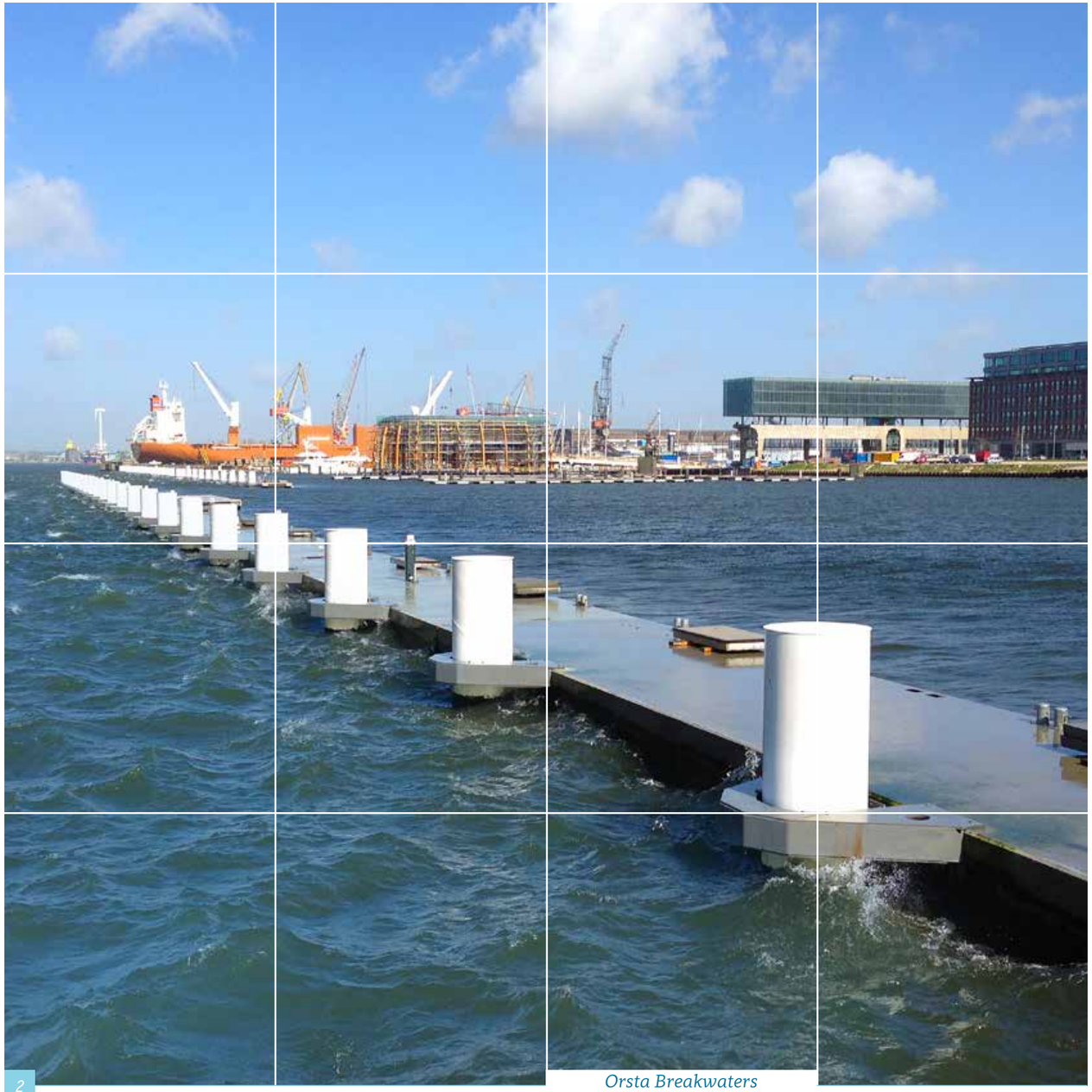
Breakwater.eu

Ørsta
Breakwater



Orsta Breakwaters

Orsta Breakwaters Concrete

What We Do

Orsta Marina Systems Nederland BV produces breakwaters and pontoons for her customers wherever they need them. Our technical staff use moulds that have been designed especially for on site production. This way, we can build breakwaters up to 8.00 metres wide and 35.00 metres tall on the spot. We work with local suppliers and craftsmen.

Maintenance and Lifespan

Floating breakwaters are built with concrete and filled with EPS (styrofoam). Compared to steel breakwaters, using concrete breakwaters has a large advantage: concrete hardly needs any maintenance. Also, they have a very long lifespan: concrete pontoons will easily last for 40 years!

Reduction in costs

Concrete is heavy, but it is cheap in comparison. A small pontoon of 2.50 x 15.00 metres weighs about 15.000 to 20.000 kg. Larger models from 5.00 to 8.00 metres wide easily weigh 100.000 kg. The only way to transport pontoons of this size and weight is over water. Unfortunately, this is very expensive.

Since we build our pontoons on site, there are no transport costs for the finished product. As a consequence, the costs can be reduced by up to 30% of the total bid. Therefore, on site production also offers large financial advantages!

Anchoring

To secure floating pontoons you can use either piles or anchors. Orsta Marina Systems has over 50 years' experience in the anchoring of floating pontoons and breakwaters. With this technique, the placing of (expensive) piles is not necessary. Therefore using anchors is an inexpensive option for securing harbours.

Advice

Orsta Marina Systems can assist while you are still in the planning stages of creating a marina or harbour. Extended software for calculating wave heights in a specific area was created especially for us by Force Technologies. With this software, the height of the occurring waves can be calculated, taking into account the surroundings and the weather influences. The outcome of the calculation determines the specifications of the breakwater that is needed. Obviously, the attenuation of the breakwaters and the final wave heights behind the breakwater are of crucial importance for the port and the ships that are moored there.

Coupling

Orsta Marina Systems' unique coupling system provides a durable and reliable solution for connecting concrete pontoons. All concrete pontoons have 4 or more ducts inside the pontoons to allow steel wires of up to 80 meters long to run along the entire length of the walkway. Thus creating a single floating body.

Orsta Breakwaters

Orsta Pontoons Steel

YMCA jetty United Kingdom, custom-built

Orsta Pontoons Steel

Orsta Marina Systems Steel Pontoons are protected with Combi Coat to ensure that you will enjoy the products for a long, long time. The module-based steel concept with replaceable parts, high quality couplings and adjustable hinges makes an Orsta Marina silent, flexible and easy to modify. All modules can be easily combined to meet different requirements.

What Is Combi Coat?

Combi Coat is a combination of three individually protective treatment methods, hot dip galvanising, zinc phosphating and powder coating, in which the coating is fixed to the metal by heat treatment. The process ensures that the product has a long lifetime in highly corrosive environments, even without maintenance. Combi Coat ensures a product's lifetime that will last several times longer compared to normal hot-dip galvanisation. It lasts and still looks good, year after year.

5 Year Guarantee

Orsta Marina Systems offers a 5 year guarantee against manufacturing defects on steel parts, hinges, and floats for equipment used within their areas of application.

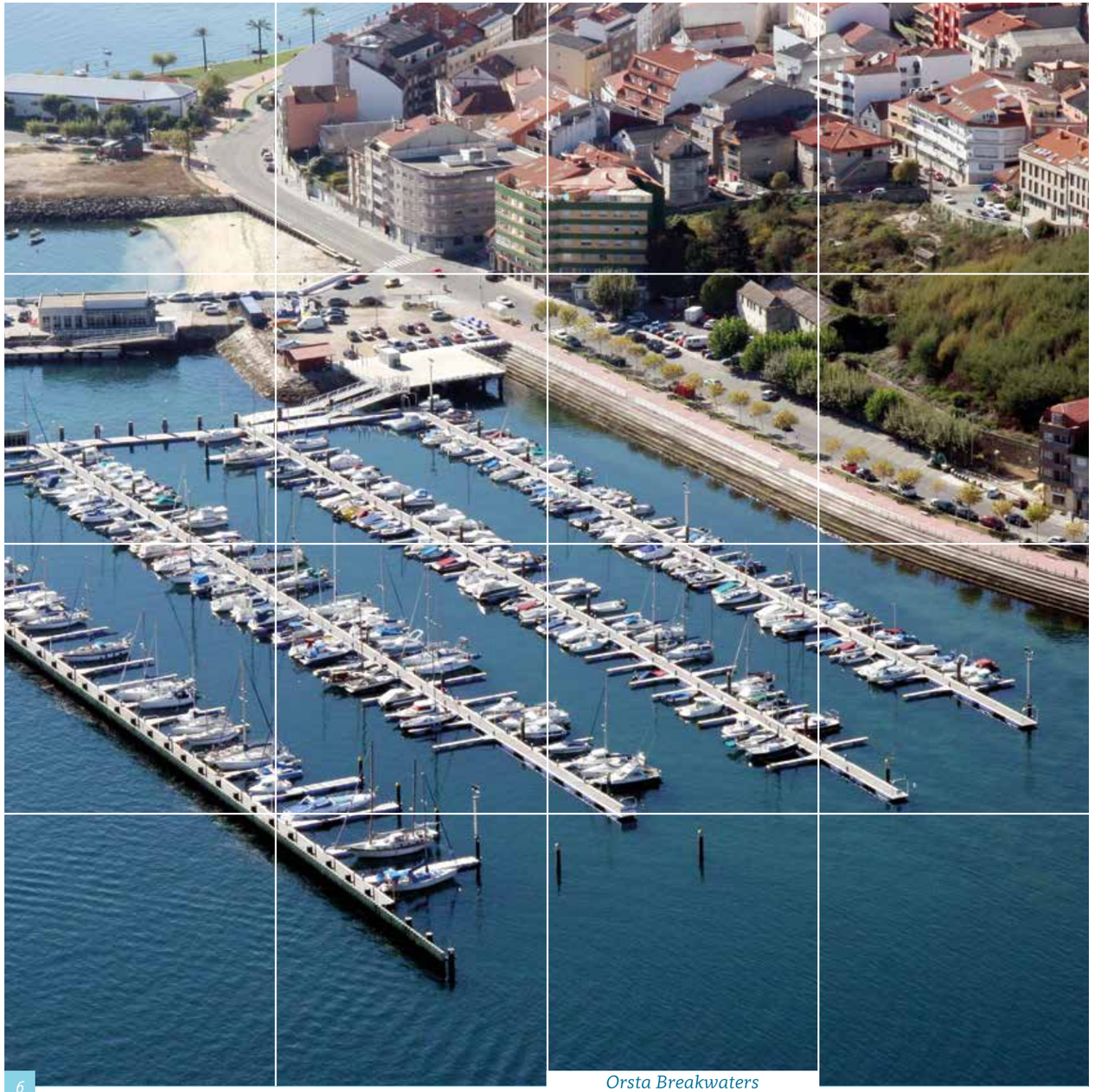
Coupling

A polyurethane coupling with a patented design results in minimal wear and tear and ensures stable pontoons. As metal parts from different pontoons are nowehere in contact, the couplings are completely silent. The patented hinges to connect the fingers are designed for the same purpose.

Custom-built

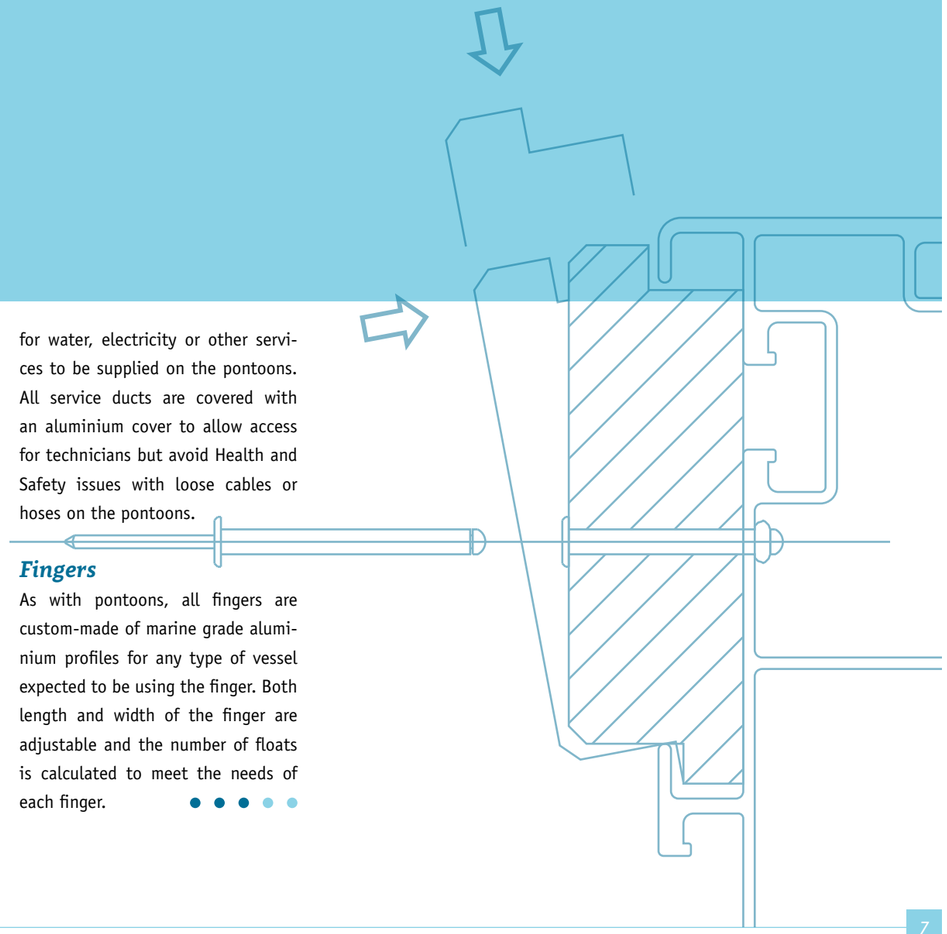
Orsta Marina Systems can design, produce and install a fully custom-built pontoon, including gangway and shore connection to fit specific requirements from environmental agencies, council commities or to facilitate safe and easy boarding or (un-)loading of vessels. This includes freeboards up to 2.00 metres.

All the steel parts are treated with Combi Coat, which ensures the products long lifetime and low maintenance costs.



Orsta Breakwaters

Orsta Pontoons Aluminium



Orsta Pontoons Aluminium

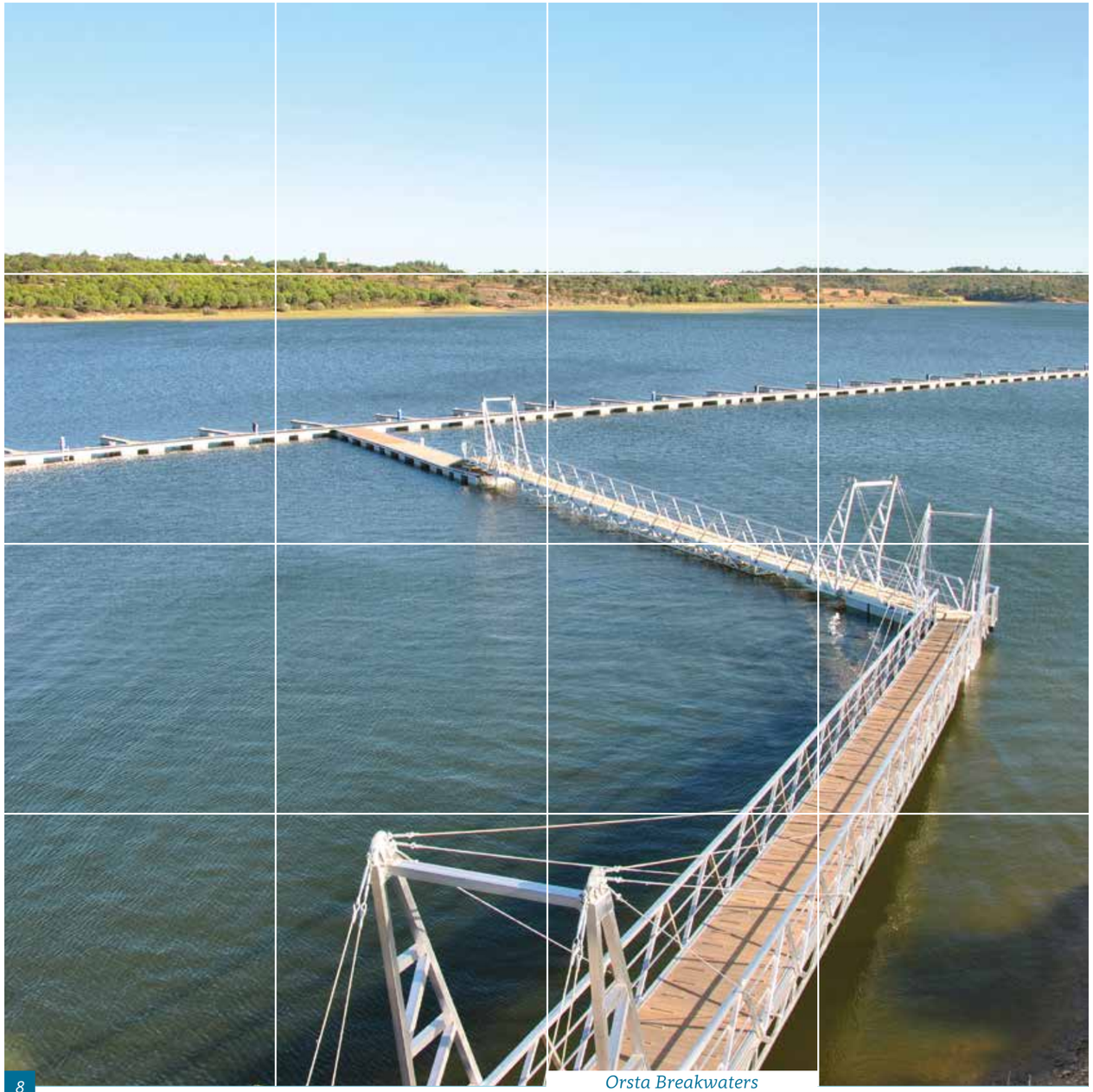
Orsta Marina Systems aluminium pontoons are made of marine grade aluminium profiles designed to withstand even the most challenging environment. Depending of the situation on site, a choice out of more than 20 different profiles will be made to ascertain the optimal configuration for your needs. All pontoons are custom made to ensure that the full potential of any marina or plot of water can be used.

Service Ducts

All pontoons can be equipped with one or more service ducts to allow for water, electricity or other services to be supplied on the pontoons. All service ducts are covered with an aluminium cover to allow access for technicians but avoid Health and Safety issues with loose cables or hoses on the pontoons.

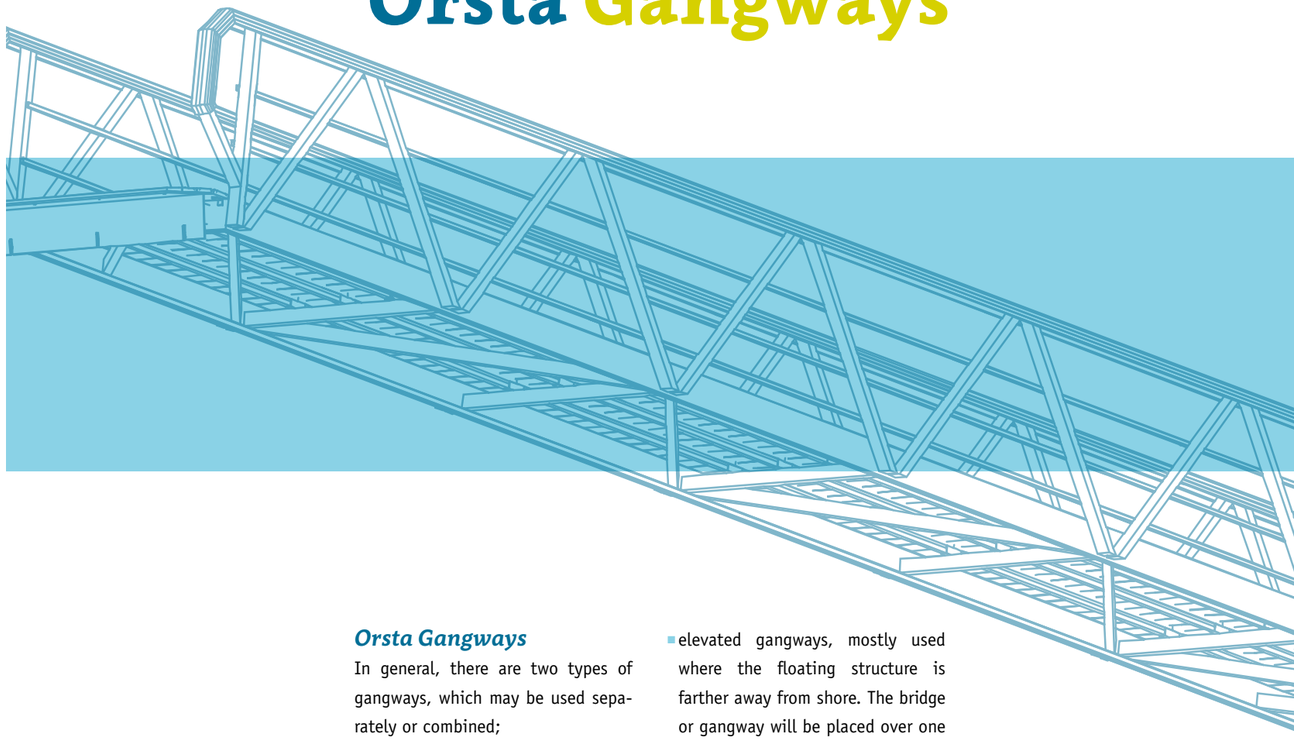
Fingers

As with pontoons, all fingers are custom-made of marine grade aluminium profiles for any type of vessel expected to be using the finger. Both length and width of the finger are adjustable and the number of floats is calculated to meet the needs of each finger.



Orsta Breakwaters

Orsta Gangways



Orsta Gangways

In general, there are two types of gangways, which may be used separately or combined;

- articulated gangways, these are the most common gangways. One side of the gangway is connected to the shore by means of a hinge that is securely fastened to a quay wall or earth anchor. The other side rests on the floating structure and moves along with the tide or fluctuations of the water level.
- elevated gangways, mostly used where the floating structure is farther away from shore. The bridge or gangway will be placed over one or more piles before descending to the floating structure or the other side of the crossing.

All gangways are designed to its use, but generally they are made up to 30 meters long and 3 meters wide. Larger gangways are certainly no exception but require individual designs and calculations.

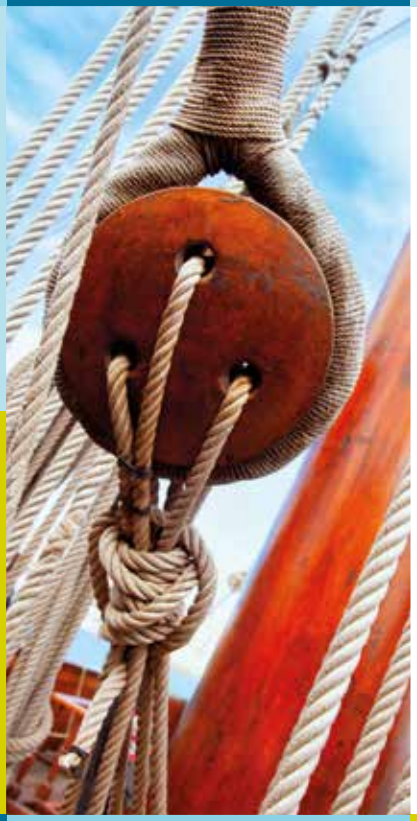
Orsta Breakwaters

Auxiliary Equipment

Auxiliary Equipment

All Orsta Marina Systems equipment can be fitted with different types of auxiliary equipment, ranging from cleats and bollards to waste water management and fuel systems.

Standard items include rescue ladders, emergency bollards several types of cleats and bollards and fenders.



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