

AquaCulture Equipment

.....
THE SAFEST FISH FARMING SOLUTION



HVALPSUND NET
FISH FARM SOLUTION

WWW.HVALPSUND.COM



Take it from our clients



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CERMAQ:
**Hvalpsund as the
backbone of the future
pens and nets supplies**



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**"A revelation for in
situ cleaning"**



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**"The guys will never go
back to nylon again"**



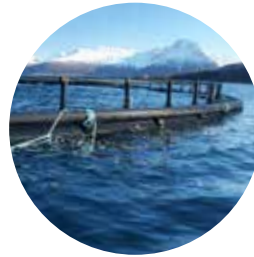
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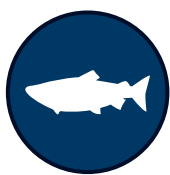


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FIRDA:
**"Hvalpsund matched
our criteria for both
price and quality"**

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SALMON



TROUT

Nets for Salmon & Trout

GENERAL

Large salmon or trout pens with thousands of tons of fish must have excellent water flow through the cage to keep high oxygen level high. Low oxygen levels effects fish welfare and will in turn have a negative influence of feeding and growth.

Finding the right balance between mesh size and twine thickness is key to having as big a mesh opening as possible. This then needs to be aligned with the size of smolt being introduced into the net pens.

THE NETS

Cage nets designed are in a way that means all stress and tension is absorbed by framing ropes rather than the netting. Carefully chosen materials that interact with each other to create a safe enclosure. A salmon or trout net is not an off the shelf product. Tweeking the mesh size to maximize the

water flow while ensuring fish are not getting caught is one of the keys.

WHY DYNEEMA®

Why does Dyneema® make an excellent salmon/ trout net? You can keep the break load whilst drastically reduce twine size – or use the higher strength to upgrade break load without increasing volume/weight.

With a thinner twine – you delay the point where the net needs to be cleaned or replaced. You also reduce the amount of net coatings such as anti-fouling liquid needed to coat the net.

That alone can pay for the slight increase in cost of using Dyneema® over traditional materials as nylon and polyester. The reduction in weight for the fully assembled cage net with Dyneema® is more than 50%.



**»Hvalpsund produces strong cage nets
and we will never buy anything else than cage
nets made with Dyneema® in the future«**

// Höskuldur Steinarsson, General Manager Fjardalax, Iceland

FARMER CASE: CERMAQ NORWAY AS REGION FINNMARK

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Species:	Atlantic Salmon
Cages:	40 cages 160 meter HD500.
Nets:	40 Dyneema® combi nets 160 and 120 meter circumference - 33 meter depth - a combination for both smolts and growouts. 220 kg break-load in 29mmsq and 154 kg in the 18mmsq smolt nets.

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Kjetil Knutsen
Operation and Service
Coordinator
..... .

CERMAQ

Cermaq – a Mitsubishi fully owned subsidiary – chose Hvalpsund as the backbone of the future pens and nets supplies with the signing for 15 HD500 Hvalpsund EXTREME pens and 15 combination nets in all Dyneema®. According to Cermaq there was a need for new inspiration in the Norwegian equipment industry and Hvalpsund ticked all the boxes for them. The HD500 pen features the widest walkway panels available in the market today on any circular HDPE pen. Combined with other innovative solutions such as double sinker tube sleeves and integrated mooring points the HD500 pen will not only serve Cermaq in many years to come. Supplied in combination with net pens in all Dyneema® it will be a true game changer.





»The Dyneema® material is superior for cod farming because of the wear and tear and it resists the chewing from the cod. And it's a light material to handle«

// Håvard Rogne, Atlantic Codfarmers AS



Nets for Cod

GENERAL

Although the quantity of farmed cod is significantly smaller than that of Salmon – farmed cod is still an important contribution to the supply of high quality white fish. Cod are known to bite and chew on net, twine or rope that sticks out in the net pen. If something catches the attention of the cod it will systematically bite and chew on this. Today wild caught cod fish is being transferred to holding pens ashore and harvested as demand is there. This ensures a better and steadier supply of this excellent fish.

THE NETS

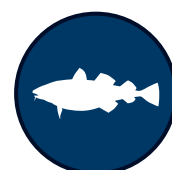
One way to keep the inside of the net pens, made especially for cod, as uniform as possible is to make sure that only dark colored materials are being used. By using only dark colors the net, twine or rope are less likely to catch the attention of the fish. Just as important we make sure that no knots, loose twine or rope ends are sticking out on the inside of the net pens. Finally covering the fully assembled net pen in a dark resin that glues all fibers

and filaments together is recommended. Covering the net pen with a resin makes it more difficult for the cod to bite and chew on the materials.

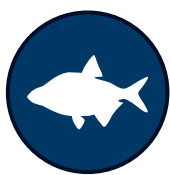
WHY DYNEEMA®

Why does Dyneema® make an excellent cage net for cod farming? The special properties of Dyneema® fibers - when it comes to superior abrasion resistance, light weight and ultra-high strength - makes it the perfect match. Cod farms are seeing significant reductions in holes and damages to the net, twine and rope related to fish bites after switching to Dyneema®.

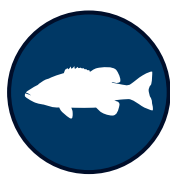
The thin twine results in less fouling that closes meshes as well as it takes longer for the fouling to attach. That in turn ensures higher water flow and better oxygen levels which increases fish welfare and leads to better FCR. Reduced service and logistic costs are elements that contribute to the fact that Dyneema® is an excellent choice for cod farmers.



COD



BREAM



BASS

Nets for Bream & Bass

GENERAL

As the Sea Bream is a predator fish they will bite and chew on items that stick out in the net. Sea Bream are notorious for aggressively trying to bite their way into freedom. Mostly because it is in their nature to chew on the twine, net or rope if it catches the fish' attention. If they create a hole – some fish can escape as well as wild fish can enter into the pen feeding on the fish feed. Sea Bass on the other hand are seen escaping through even the smallest hole in the cage. More than the Sea Bream – Sea Bass will swim out of a hole in the net.

THE NETS

Important to consider when constructing net pens for Sea Bream is to make sure that only dark colored materials are being used. By using only dark colors the net, twine or rope are less likely to catch the attention of the fish. Just as important we make sure that no knots, loose twine or rope ends are sticking out on the inside of the net pens. Finally the use of correct materials with sufficient strength and wear resistance is crucial.

Sea Bream and Sea Bass are often farmed in pens between 60 and 90 mtr circumference. Covering the fully assembled net pen in a dark resin that glues all fibers and filaments together is recommended. The net pen coated with a resin makes it more difficult for the cod to bite and chew on the materials.

WHY DYNEEMA®

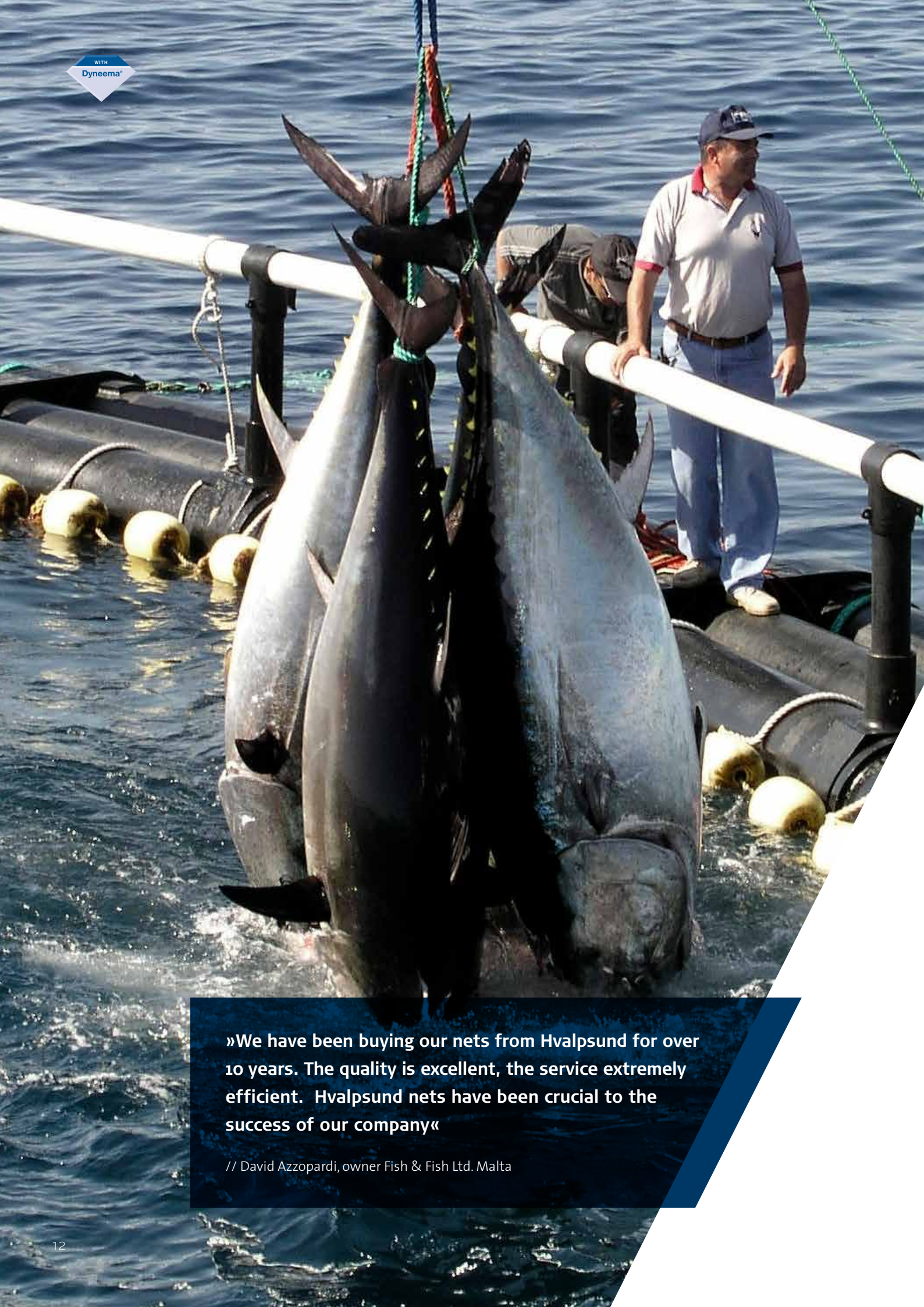
Why does Dyneema® make an excellent Sea Bream/ Sea Bass net? The very fact that Dyneema® is superior when it comes to abrasion resistance makes it the perfect match. Sea Bream farms report reduction in holes related to fish bites of more than 75-90% after switching to Dyneema®.

Sea Bream and Sea Bass farmers also state that the higher water flow coming from a thinner twine is giving better fish welfare and a better FCR. Reduced service and logistic costs are elements that contributes to the fact that the material of choice for Sea Bream and Sea Bass farms across the Mediterranean today is Dyneema®



»Nets with Dyneema® are really good for seabream production! The mesh is very strong and sewing by hand is important for increasing the net life! Nets with Dyneema® are very light and easy handling so that makes a good net for breeding other species too«

// Marc Frichou, Site Manager, Gloria Maris SAS

A large tuna fish is being hoisted by a crane on a boat. The fish is suspended by a green rope and is being lifted out of the water. A man in a white polo shirt and blue trousers is standing on the boat, looking at the fish. Another person is visible in the background, working on the boat. The boat has yellow buoys and a white pole. The water is blue and the sky is clear.

»We have been buying our nets from Hvalpsund for over 10 years. The quality is excellent, the service extremely efficient. Hvalpsund nets have been crucial to the success of our company«

// David Azzopardi, owner Fish & Fish Ltd. Malta



Nets for Tuna

GENERAL

Tuna is in every aspect like no other farmed fish. The wild caught Tuna are gently towed from the fishing ground to the holding pens. After having been carefully transferred into the tuna pens these huge and incredibly beautiful fish are nursed for like few other species. Not only are the tuna a lot bigger than other farmed fish species, they are also very delicate and so need to be handled gently. Even small cuts or bruises can ultimately cause that the fish will not survive.

Weighing everything from 50 to 800 kg – even losing just “a few fish” is not an option. The tuna fish’ behavior inside the cage is circling around the net often following exactly the same path.

THE NETS

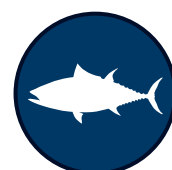
Tuna fish are being kept in pens with a size a lot bigger than many other species. A typical pen size between 150 and 300 mtr circumference combined with the fact that tuna pens often are located in

exposed offshore sites demands the ultimate equipment. The side walls of a tuna net must be kept straight not to catch onto the fins of the fish. With the size and weight of a tuna net surpassing e.g. Salmon or Sea Bream nets – special tools and machinery is needed for construction and handling of the nets. Hydraulic pulling tools makes the lashing in critical points stronger than any manual labor can do.

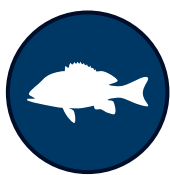
WHY DYNEEMA®

Towing of tuna pens are often done over great distances. For days the huge tuna pens are slowly being towed from the fish ground to the holding pens. Towing nets made with Dyneema® drastically reduces the drag forces coming from the net. The reduced drag forces lowers the fuel consumption and reduces cost of towing.

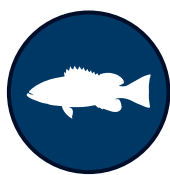
Further to that the lower drag forces in the net helps keep the residual volume in the net and the fish are less likely to get caught on the net panels.



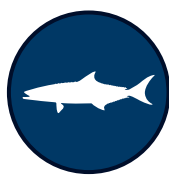
TUNA



SNAPPER



GROUPER



COBIA

Nets for Tropical Fish

GENERAL

These tropical fish contributes greatly to the rise in aquaculture volumes globally. Farmed in the regions close the equator species like red snapper and tiger grouper are in very high demand not only on the local markets but across the globe.

Each species has its own unique behavior that must be considered when designing the pens. As an example grouper likes to crowd and hide in “corners” and only certain depths.

Cobia has been viewed upon as one of the mayor species in farmed fish. Some forecast has indicated that in the long term Cobia will reach same volumes salmon globally. Because of its excellent growth rate and FCR Cobia is an interesting species.

THE NETS

Farming fish in tropical conditions means a lot fouling is growing on the pens all year round. It is

important that the net pens are constructed in a way so they can withstand constant washing and cleaning.

Net pens for grouper is typically made a small square pens so the fish can follow it's natural behavior and swim into the “corners”

WHY DYNEEMA®

The high degree of fouling seen in tropical waters makes Dyneema® an excellent choice. Thin twine with high strength gives the fish inside the net pens the best possible conditions. Good water flow that gives high oxygen levels and a constant supply of clean water in the net pens.

A net pen made with Dyneema® can in some cases remain up to twice as long in the water before being replaced compared to traditional materials such as nylon or polyester. That in turn provides reduction in both labor and material cost.









Nets for Tropical Fish

GENERAL

Tilapia - a fresh water delicacy - is being farmed intensively across the globe. In Africa Tilapia is being farmed in net pens in some of the big lakes across the African continent. Also in South America Tilapia is being farmed in lakes – and as an example it is typical to place Tilapia farms in the hydro lakes formed behind dams in Brazil. Tilapia can be seen biting and chewing on net, twine and rope and therefore it is important to take care when designing the net pens.

Barramundi is also known as “Asian Seabass”. The fish is well domesticated and is an excellent species for farming in net pens. Barramundi farms are among other places – located in Northern Australia and South East Asia. Barramundi is a strong and sturdy fish that copes well with the strain and stress that can come from being handled, graded or moved.

THE NETS

Net pens for tilapia farming in lakes are often set up in combination with an outer predator net. Tiger

fish in Africa and Piranhas in South America are just some of the predator fish that can attack net pens with tilapia. As tilapia bite and chew on the net it is important to make sure that there are no loose twine or rope ends inside the net pen that the tilapia can catch.

WHY DYNEEMA®

The Dyneema® fibers special properties when it comes to superior abrasion resistance, light weight and ultra-high strength makes it the perfect match.

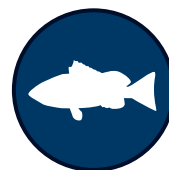
Not only is the Dyneema® fiber reducing damages related to fish bite, the net made from Dyneema® takes longer to get fouled that in turn ensures higher water flow and better oxygen levels which increases fish welfare and leads to a better FCR. Another clear advantage is that Dyneema® has excellent properties when it comes to keeping predators out of the net pens. Reduced service and logistic costs are elements that contribute to the fact that Dyneema® is an excellent choice for the farmers.



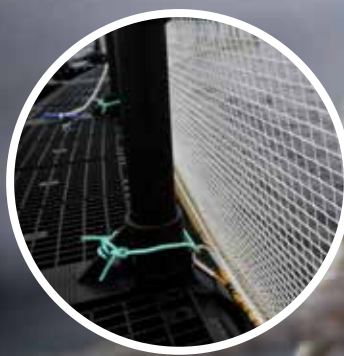
KINGFISH



TILAPIA



BARRAMUNDI



»We chose to buy Dyneema® based on the fact that they were so much stronger than nylon, ensuring that we had the best possible nets available for our stock security«

//Archie, Marine Harvest Scotland, Fresh water

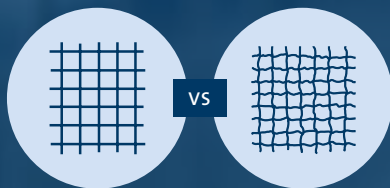
Dyneema®

the world's strongest fiber™

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The list of advantages of using nets made with Dyneema® fibres rather than nylon or polyester is long. This ultra light and strong fibre results in nets that outperform traditional nets in every aspect. What do we know:

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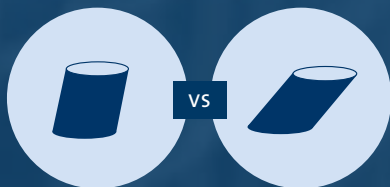
NO ABSORPTION OF WATER

Dyneema has the same break load wet and dry as oppose to nylon that loses 10-15% strength when wet. This also results in improved abrasion resistance and zero shrinkage



REDUCTION IN ANTIFOULING

Less than half the consumption of antifouling or coating. Nets from Dyneema® pay for themselves in reduced service cost



WATERFLOW INCREASE

40 % more volume in strong currents. Increased fish growth and better FCR. Lower impact from net to cage and moorings



LOW WEIGHT / VOLUME

Drastic logistic savings and easier handling when changing nets at sea. Both contributing to a reduction in carbon footprint as well as cost

Dyneema®

Tried, Tested, Proven

NOOMAS SIMULATION OF DYNEEMA® VS. NYLON

Simulations are performed of 160 m circular net pens with ordinary nylon net compared to net made with Dyneema®, looking at reduction in loading with respect to mooring line forces, net suspension forces, and von Mises stress in the floater is reported. For the cases considered, the analyses show that the net made with Dyneema® reduces the mooring forces to 78% and 72% for normal and high exposure, respectively.

For this particular floater the stresses will be within requirements for both exposures, whereas it will fail for ordinary nets under high exposure. The suspension forces of the net at the floater, are reduced to

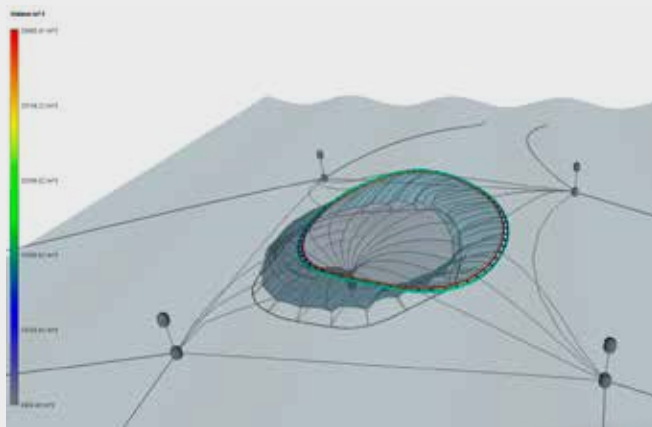
approximately the half, implying savings on number of side ropes for nets of dimension class o. It is visually verified that nets made with Dyneema® reduces volume loss under exposure.

Also concluding that you would be able to use a pen pipe diameter of 450mm for a 160 meter pen with a net made with Dyneema® where as using conventional nylon netting the pen pipe diameter had to be 500mm. Reducing the pipe diameter would save money not only on the pen itself but also on moorings, cranes, boat etc.

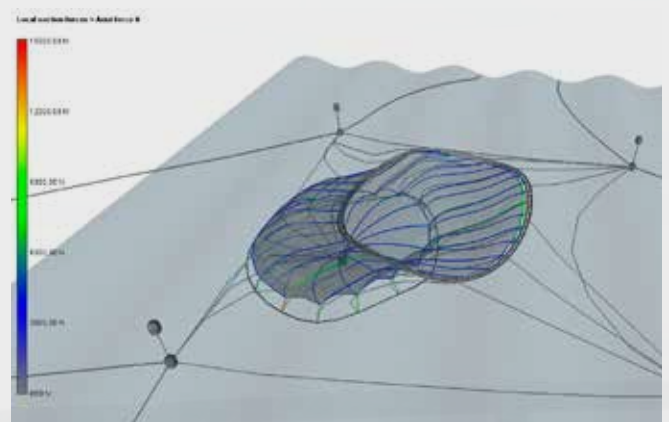
So the conclusion was that you do not only get less stress on the equipment but you also save money.



DYNEEMA® 46 % VOLUME REDUCTION



NYLON 66% VOLUME REDUCTION



FARMER CASE:
HJALTLAND GRIEG SEAFOOD

Where: Whalsay and Gonnfirth sites
– Shetland

What: Replacement programme of
39 nets in 90m circ + 8 net in
100m circ for Super Mono

William Sandison
Site Manager
at Hjaltland Grieg Seafood

»The nylon Super Mono nets supplied by Hvalpsund are the best fitting nets we have ever had at our farm. Undoubtly they are very well made nets.

The washer boys says the same and in fact say that these are the best grower nets they have ever washed. What's not to like«



Nylon Super Mono

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With focus moving away from copper based antifouling and towards in-situ washing – the chase is on for materials tailored to cope with the strain from regular high pressure washing. Introducing nylon Super Mono. The monofilament nylon twine has all the benefits of regular nylon in terms of high strength and abrasion resistance but also sits well in the water as it sinks. Furthermore the structure of the nylon Super Mono twine results in excellent blast cleaning properties

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Cage Nets Details

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Since the eighties Hvalpsund Net has participated in developing cage nets for innovative new cage constructions.

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We were asked to help design the nets for the Farmocean semisubmersible cages, The Dunlop and Bridgestone cages that are designed for very exposed offshore sites.

Hvalpsund Net was also invited to participate in the construction of the first cage nets for cod using the Aqua-GRID material, Micanti – and is one of the pioneers within developing nets with Dyneema®

Finally – not two net designs are the same and we construct the cage nets with such details as marine zippers, various steel goods, and plastic rings etc.







Net Service

An increasing part of our business is the running maintenance and service of the cage nets. We get the nets back for service from different clients in Scandinavia and The UK. First step is to wash the cage nets and then the cage nets will be thoroughly checked

and repaired. Individual certificates are then issued showing the break load of the netting etc. Finally the nets are disinfected and can be retreated with antifouling or resin treatment. We can offer a complete solution including logistics.



FARMER CASE: **AQUAPRI, DENMARK**

Species:	Rainbow trout
Annual production:	5,800 tons
Cages:	44 cages 50 mtr and 43 cages 60 mtr circ.
Nets:	30mmsq knotted Dyneema®. 95 and 190 kg break load
Coating:	Steen Hansen North Sea standard

Morten Knudsen
Production Manager,
Aquapri Denmark



»Dyneema® is a lot easier to work with – we will probably not be able to get the guys to ever working with nylon again. The quality of the nets we get is simply amazing – nothing to say there.

We are really happy with the nets we get back from servicing at Hvalpsund. Especially this year after we changed antifouling to Steen Hansen. That is some of the best nets we have gotten back for many years. All in all the cooperation with Hvalpsund is good«



Extreme HD500

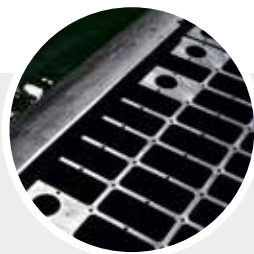
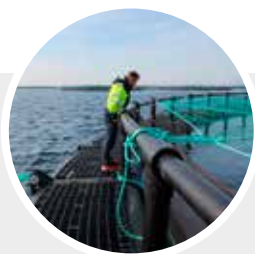
Hvalpsund Net built the first HDPE cages in the early 80's. Since then we have had a continuous focus on developing our EXTREME cages into what they are today. Hvalpsund Net has throughout the years built fish farm cages in most parts of Europe, Middle East, Africa, South America, South East Asia and New Zealand.

Our cages are available in sizes from 30 to 300 mtr in any 2 or 3 pipe configuration in sizes from 180 to 500mm. We have also supplied square cages used for harvesting or as nursery cages. Here you will

find our different options for brackets / stanchions, pipes and options for added features and accessories for fish farm cages.

The newest member of the Hvalpsund EXTREME family – HD500. Designed and developed in close cooperation with the people that work on the pens every day.

We have made a lot of new and innovative details that you cannot find in any other cage bracket on the market.



EXTREME HD500

Typically we recommend making the 500mm cages in sizes from 120m circumference upwards to ensure sufficient flexibility in the construction.





🔗 2 X 500MM HDPE100

PIPE CONFIGURATION	WALL THICKNESS	BUOYANCY PER METER
SDR11 x SDR11	45,5 mm	263 kg.
SDR13,6 x SDR13,6	36,7 mm	286 kg.
SDR17 x SDR17	29,4 mm	306 kg.
SDR21 x SDR21	23,8 mm	321 kg.





🔗 2 X 450MM HDPE100

PIPE CONFIGURATION	WALL THICKNESS	BUOYANCY PER METER
SDR11 x SDR11	40,9 mm	212 kg.
SDR13,6 x SDR13,6	33,1 mm	231 kg.
SDR17 x SDR17	26,5 mm	249 kg.
SDR21 x SDR21	21,4 mm	261 kg.

Extreme HD450

With heavy demand for going to bigger cages – the first HD450 popped out of the mold in 2011. Since then more than 10,000 brackets has been produced building cages in sizes from 100 mtr to 168 mtr circumference. The HD450 was the first bracket to come with the integrated sinker tube sleeve.

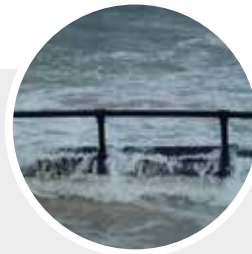
Typically we recommend making the 450mm cages in sizes from 100m circumference upwards

to ensure sufficient flexibility in the construction. Unique details are featured such as the front fender, sinker tube sleeve with galvanized or stainless protection and wide and heavy duty walk way panels.

Unbeatable economics makes this popular bracket a true best seller with installations in hot tropical conditions to the cold and harsh Northern Atlantic.

**“The Hvalpsund cages tick all the boxes for us.
The guys just love working on the wide walk ways”**

// Anders Lejbach, Farm Manager, Musholm A/S



EXTREME HD450

Typically we recommend making the 450mm cages in sizes from 100m circumference upwards to ensure sufficient flexibility in the construction.



FARMER CASE: MUSHOLM, DENMARK

Species:	Rainbow trout
Annual production:	4,000 tons
Cages:	12 x 120 mtr, 2 x 160 mtr and 4 x 90 mtr
Nets:	30mmsq knotted Dyneema®. 190 kg break load
Coating:	Steen Hansen North Sea standard

Anders Lejbach
Production Manager,
Musholm, Denmark



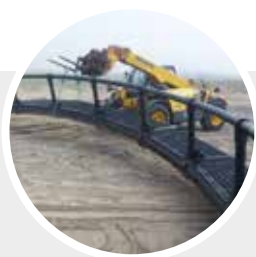
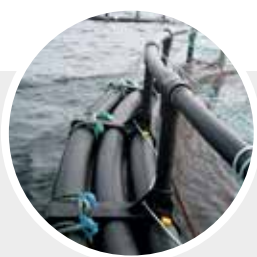
»We are using 120 and 160 mtr circumference cages. We have gone for the strongest available product on the market. Although sceptic at first we have to admit that working with the walk ways makes life easier – and some of the guys actually refuses to work on the cages if they are not fitted with walk ways.

Since we changed to the Hvalpsund 120 mtr 450mm and 160 mtr 500mm cages – we haven't had to make any repairs after the season which is the first time for us. It's important to have the right gear, and I feel confident with the gear we have now. I sleep well at night – even when it is blowing a gale«

Extreme HD315

With an innovative design this injection moulded bracket is the best solution for any 2 or 3 pipe cage with a size of up to 315mm. It has been made in a variety of pipe configurations in sizes from 60 to 160 mtr circumference.

This HDPE100 injection molded EXTREME bracket tackles the challenges of off-shore fish farming. With unlimited flexibility using 2 or 3 pipes in sizes from 225 – 315mm – we can design the cage to any size you may require.



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EXTREME HD315

With unlimited flexibility using 2 or 3 pipes in sizes from 225 – 315mm – we can design the cage to any size you may require.

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🔗 2 X 315MM HDPE100

PIPE CONFIGURATION	WALL THICKNESS	BUOYANCY PER METER
SDR11 x SDR11	28,7 mm	104 kg.
SDR13,6 x SDR13,6	23,1 mm	113 kg.
SDR17 x SDR17	18,5 mm	120 kg.

🔗 3 X 315MM HDPE100

SDR11 x SDR11 x SDR11	28,7 mm	156 kg.
SDR13,6 x SDR13,6 x SDR13,6	23,1 mm	170 kg.
SDR17 x SDR17 x SDR17	18,5 mm	180 kg.



➡ 2 X 250MM HDPE100

PIPE CONFIGURATION	WALL THICKNESS	BUOYANCY PER METER
SDR11 x SDR11	22,7 mm	66 kg.
SDR13,6 x SDR13,6	18,4 mm	71 kg.
SDR17 x SDR17	14,7 mm	77 kg.

➡ 2 X 225MM HDPE100

SDR11 x SDR11	20,5 mm	53 kg.
SDR13,6 x SDR13,6	16,5 mm	58 kg.
SDR17 x SDR17	13,2 mm	62 kg.





..... EXTREME HD250

Engineered to being the superior pipe bracket in this market segment of cages from 30 – 70 mtr circumference.

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Extreme HD250

The injection molded HD250 bracket used for either 250mm or 225mm pipes. Engineered to being the superior pipe bracket in this market segment of cages from 30 – 70 mtr circumference.

Often used for smaller pens in fresh water lakes in places like Scotland – as smolt pens but also used in such locations as offshore installations in Central American pacific, Mediterranean and the North Sea the HD250 has truly seen some of the most

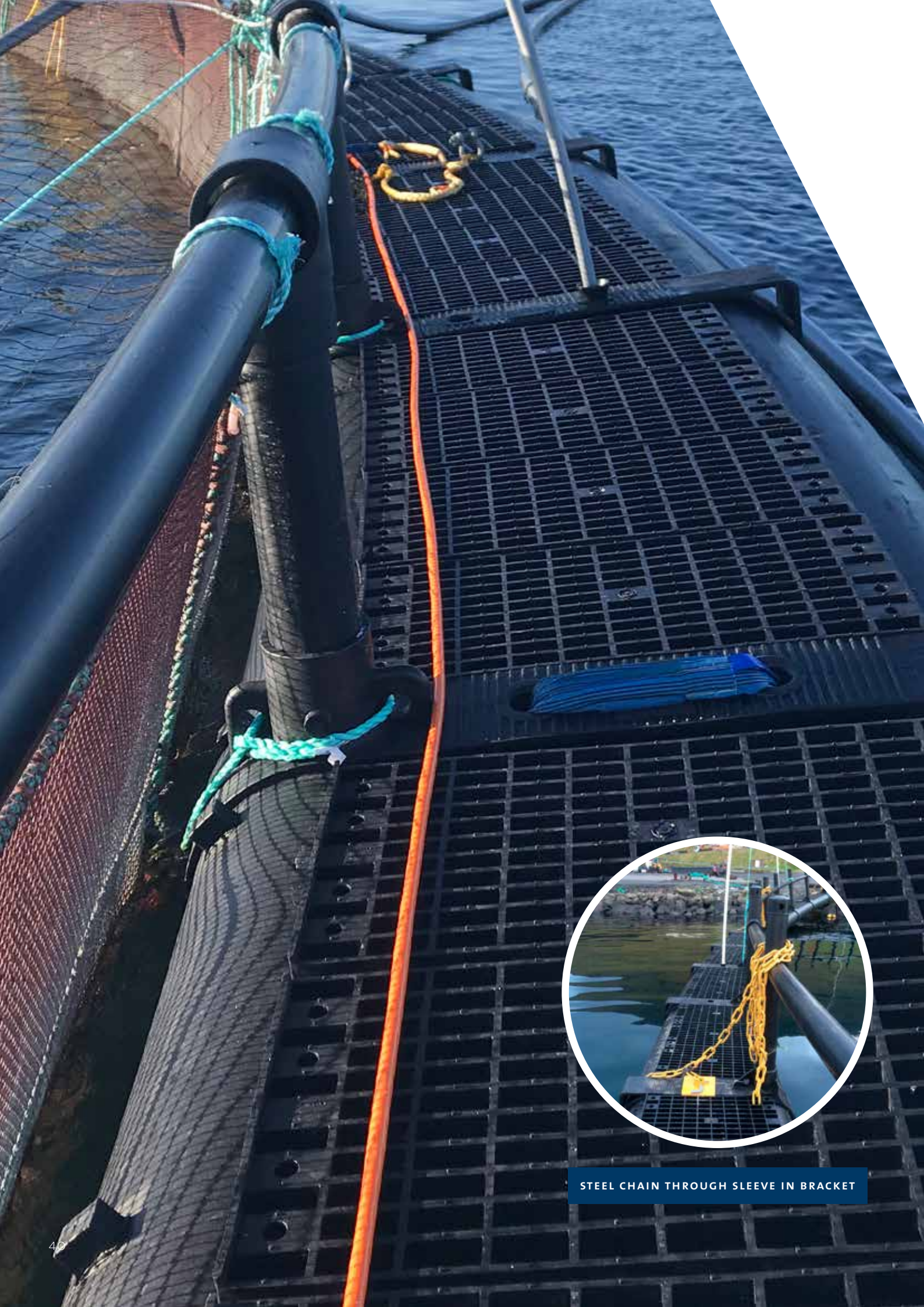
exposed locations for this type of bracket. With cages supplied built with HD250 we are not afraid to ask – how do you sleep at night?

STRENGTH

The bracket has been designed to be especially strong in places where it is needed. At the front of the bracket we have a fender to take the load from boat, barges etc. The bracket has also been reinforced where the upright is attached to the bracket.

.....
»The Hvalpsund HDPE cages are very strong and thick so we can make good gear, the brackets and handrail are well designed too«

// Marc Frichou, Site Manager, Gloria Maris SAS



STEEL CHAIN THROUGH SLEEVE IN BRACKET

Hvalpsund Extreme Mooring Option

Hvalpsund has for many years delivered the Hvalpsund extreme series cages and as a reaction to market demand we have developed the world's first HDPE injection molded brackets with integrated mooring feature.

The mooring point in the bracket has been test to handle mooring loads of more than 25 ton and is certified by NS9415.

The mooring point feature is included in all Hvalpsund Extreme HD500 and it takes away any stress about using slings around the pipe as is used on conventional cages.

Issues as slings damaging the pipe are no longer a problem as the mooring now is connected directly to the brackets.



SLINGS AROUND COLLARS



SLINGS THROUGH BRACKET

FARMER CASE:
INDUSTRIAS MARTEC, COSTA RICA

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Species:	Spotted Rose Snapper
Annual production:	1,000 tons
Cages:	60 + 80 mtr EXTREME cages with Dyneema® nets

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..... .

Carlos Lara
Mariculture Director
at Industrias Martec

..... .



»Offshore cage culture is a serious business especially when considering fast changing weather conditions on site. Late December 2016 our project with a nursery grid made out of 14, 15 meters in diameter cages with 10 meter deep nets, and our grow out grid made out of 8, 25 meter in diameter cages with 10 meter deep cages, was suddenly exposed for 7 days of continuous strong currents maintaining flows of up to 2.8 knots.

Thanks to Hvalpsund anchoring and grid design and installation, and the use of Hvalpsund extreme cages, our project suffered minimal damage, and our fish inventory valued at over 4 million US dollars was saved. Extreme conditions might not happen for months or years, but when they happen, only the use of superior equipment in combination with the right anchoring and grid design will guarantee minimal infrastructure damage, and saving fish inventories. With our coming expansion in 2017 there is no question we will continue using Hvalpsund for our offshore cage culture needs.«





Steel Bracket

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We produce steel brackets as both fully welded or disassembled. The brackets are from high quality steel and hot dip galvanized.

.....

The advantage of steel brackets is high strength and low cost. Further to that they can be made with any design in small series. The steel brackets are especially suitable for fresh water – or other environments with low corrosion.

Our steel brackets are available in sizes from 180 – 560mm.





SQUARE 250



SQUARE 315



SQUARE 450



SQUARE METAL



Square Cages

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Square cages have some advantages compared to the normal round cages. Often used in more sheltered sites for purposes as "nursery cages" or "smolt cages" but can also be used as harvest cages.

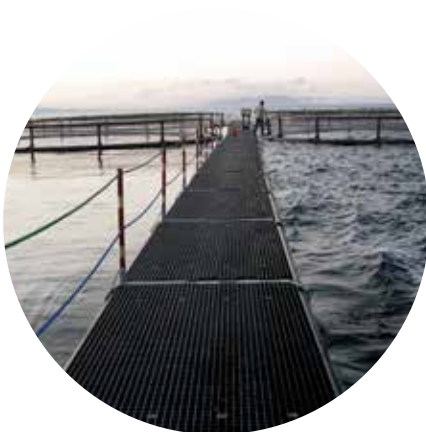
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Square cage systems can be built with a centralized walkway of variable width. Full walkway around every cage is also an option. Other features such as integrated bird net poles, and winches for dividing the cage nets can be added.

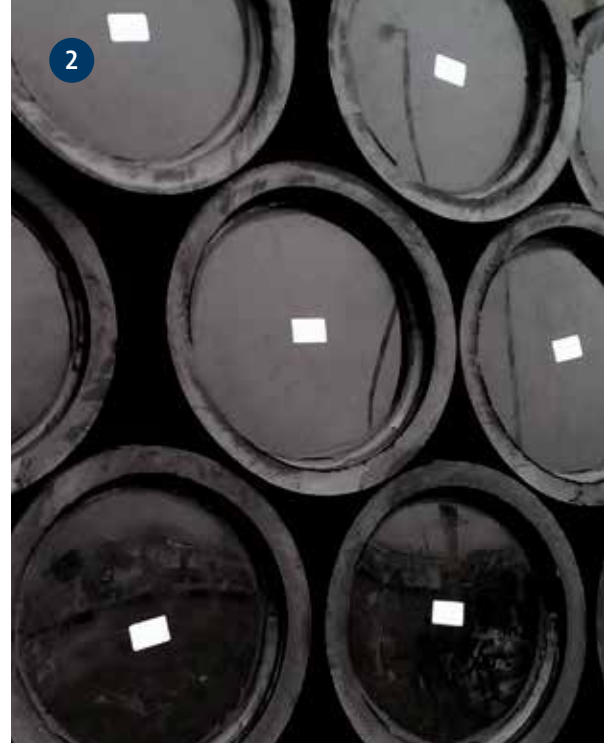
The square cage systems can be either as individual cages or built together in larger systems of 4, 6, 8 or even 12 cages – in typical sizes of between 6 x 6 to 12 x 12 mtr. Harvest cages are often constructed in a larger size i.e. 15 x 40 mtr.

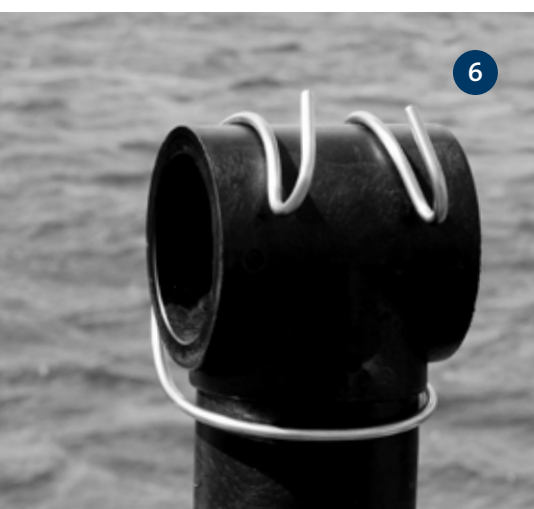
Pontoons

Pontoons or centralized walk way systems can be used either to connect cages to land – or work as a platform to work from when servicing the cages. The options for sizes and configurations are almost endless. A few examples are shown here with a 150 mtr pontoon that allows for walking from the shore out to the cages and a centralized working platform tying a large battery of cages together.









Cage Details

1

DYNEEMA ROPE BETWEEN BRACKES

Clients that prefer the floatation collars are able to move free – can have the cage supplied with Dyneema® rope in between brackets to keep the distance instead of HDPE blocks welded onto the pipes.

2

FLOODING SECURITY

To stop the pipes from flooding in the unlikely event of a pipe breach – we can offer either the standard solution of polystyrene cylinders – but also plates welded to pipe ends or an inflated heavy duty rubber buoy to stop the water.

3

MOORING

As a reaction to market demand we have developed the world's first HDPE bracket with an integrated mooring point. This feature comes integrated in the HD500 and can be retrofitted on the HD450

4

SPECIAL DESIGNED CAGES

Round is not always the answer. Working with the versatile HDPE material we can design and construct cages for different purposes in almost any design imaginable

5

DOUBLE SINKER TUBE SLEEVE

On the new HD500 is the only twine bracket available with two sinker tube brackets. The 2 sleeves allows for a system with one rope holding the weight ring and another rope used for tensioning the net. Alternatively you can use the sleeve for a bird net pole.

6

NET HOOK

Stainless steel AISI316 net hooks used to keep the jump fence up. Available as either a double hook going around the hand rail or a single hook going into the hand rail T

7

PREDATOR NET POLE

The keep a predator net up we can fit the brackets with heavy duty HDPE poles. This feature comes integrated in the HD500 and can be retrofitted on the HD450

8

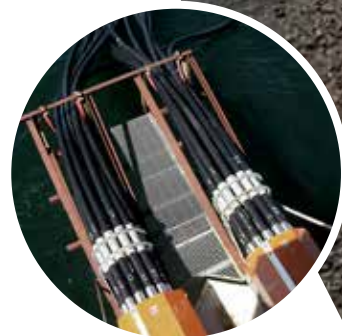
SINKER TUBE

The HD450 has one and as a unique feature the HD500 has 2 cylinders integrated to have chain or rope run through it to keep net weights and sinker tubes.

Feed Pipes

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Feed pipes used to transport feed from barge or boat to the cages available in coils or straight lengths. The pipe is available to fit all standard size feeding systems like 70mm, 90mm and 100mm. Typical coil sizes are 100 – 300 mtr and we supply electro-fusion couplings to connect the lengths of pipe as well.



NEW OPTION



Antistatic Pipes

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Electro shock from electrostatic charging is a health and safety risk and so anti-static feed pipes can significantly increase the safety for crew working with and around the feeding system. We now supply feed pipes with a customized outer layer in order to increase the electrical conductivity. This is to avoid electrostatic charging of the pipes by feeding systems that use dry air to blow the food pellets through the pipes.

Mooring Systems

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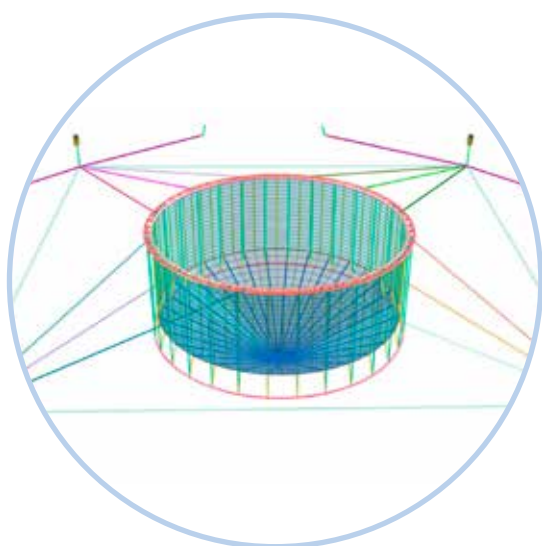
Hvalpsund has for many years made mooring designs and plans, both in direct cooperation with the farmers themselves as well as with external engineers.

.....

Placing a fixed structure in the raging elements always poses a risk – and therefore we always engage closely in dialogue with the local farmer to know exactly the conditions at the specific location.

TURNKEY SOLUTION

We can either supply a turnkey solution – where we plan and design the moorings, supply all the equipment and launch it into the sea. Alternatively we can provide only parts of these services and equipment. On the following pages we will find a selection of the mooring equipment







FENDERS



MAKER BUOYS



Buoys & Fenders

Hvalpsund EXTREME buoys are HDPE buoys made from thick walled pipe. By combining extruded HDPE pipe with injection molded HDPE end caps we have reached a wall thickness of more than 30mm.

Traditionally rotational molded buoys on the market are made from MDPE (which has a lot lower impact strength compared to HDPE) – and typically has a wall thickness of 8-10mm. This makes our EXTREME HDPE pipe buoys 4-5 times stronger than other buoys on the market.

➔ FENDERS

SIZE	BUOANCY	DIAMETER	ITEM NUMBER
60"	72 kg	480 mm	41 01 060
75"	118 kg	610 mm	41 01 075
100"	280 kg	810 mm	14 01 100
120"	540 kg	965 mm	14 01 120

Our marker buoys and fenders are available in a wide number of different shapes and sizes depending on what the purpose is. For further information please contact our sales department

➔ HDPE100 PIPE BUOYS

SIZE	PIBE DIAMETER	END CAP	LENGTH	PIPE THICKNESS	MAX DEPTH
300 ltr	610 mm	20-22 mm	1,1 mtr	19 mm	40 mtr
500 ltr	800 mm	30-32 mm	1,2 mtr	30 mm	50 mtr
750 ltr	800 mm	30-32 mm	1,75 mtr	30 mm	50 mtr
1000 ltr	1000 mm	30-32 mm	1,5 mtr	30 mm	40 mtr
1200 ltr	1000 mm	30-32 mm	1,8 mtr	30 mm	40 mtr
1500 ltr	1000 mm	30-32 mm	2,2 mtr	30 mm	40 mtr
2000 ltr	1200 mm	30-32 mm	2 mtr	30 mm	20 mtr
3000 ltr	1200 mm	30-32 mm	3 mtr	30 mm	20 mtr

Anchor Chains

The assortment of anchors available range from mint to second hand options to suit all conditions. We can offer new anchors, from leading Asian producers or we can offer second hand equipment from leading European yards

We also keep a standard assortment of the below mentioned chain in stock for immediate delivery. We stock ordinary anchor chain as well as studlink anchor chain.

🔗 STUDLINK CHAIN, GRADE 2 (NS9415 certified)

Standard lengths of 27,5 mtr. Available in any size from 12mm to 132mm

DIMENSION	BREAK LOAD	WEIGHT PER METER
32 mm	583 kN	23 kg
36 mm	732 kN	29 kg
40 mm	896 kN	36 kg
44 mm	1080 kN	43,6 kg
48 mm	1270 kN	52,3 kg
50 mm	1370 kN	56,7 kg
56 mm	1710 kN	70,3 kg





Safex® Shark Anchor

Designed for sandy or muddy bottom conditions. The Safex® Shark differs from other plough type anchors in it's unique design that ensures perfect installation first time – every time. No need to reposition as they cannot roll over and so results in massive savings in the installation process.

Built in Europe from highest quality marine grade steel. Each Safex® Shark is individually marked for traceability.



➔ SAFEX SHARK

ITEM	HOLDING POWER	MBL EYE (TONS)	WEIGHT (KG)
SAFEX® SHARK 800	35	139.2	807
SAFEX®SHARK 1200	50	139.2	1217
SAFEX®SHARK 1600	64	139.2	1617



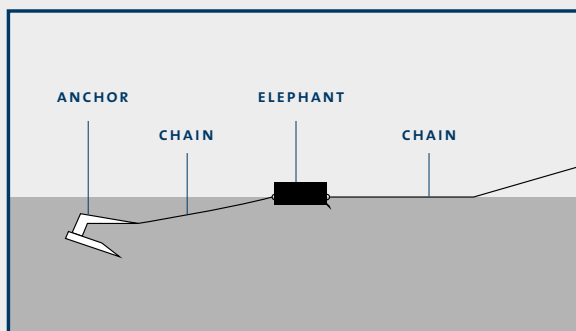
Safex® Elephant Anchor

Developed for those hard and difficult bottom types where regular anchors give up. Combines the effect of concrete blocks with proper teeth that will see the Safex® Elephant bite in every condition. Can be serial connected with the Safex® Shark anchor.

Each Safex® Elephant is individually marked for traceability.

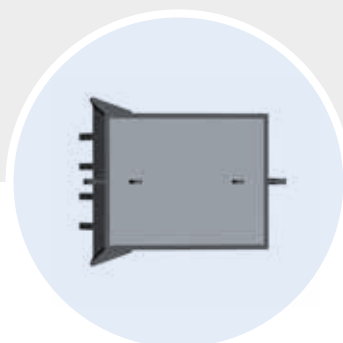


➔ SAFEX ELEPHANT



WEIGHT UNDER WATER

The Elephant anchor can be filled with concrete on site – and weighs 4,1 tonnes under water.



Mooring Accessories

High quality laser cut anchor plates and welded rings. Our standard anchor plate is laser cut from 1 piece of steel, has a breaking load of more than 100 tons and can be adjusted through changing goods thickness. Our standard plate adapts to most applications however any special requirements can be met in cooperation with our suppliers.



RING – CUT OUT FROM PLATE

Combining the versatility of a mooring ring but in a welding free design. MBL available over 150 tons.



MOORING PLATE

Reinforcements in the connection points. Shackles will not wear the plates. Available in any design required.



SAFEX® LINE HAULER

Hassle free pick up of anchor lines. Certified for lifting mooring plates and anchor lines. WLL 10 tons.



SAFEX® PLATE HOLDER

Designed to hold any type of mooring ring or plate. Rotates with the boat and ensures safe work.



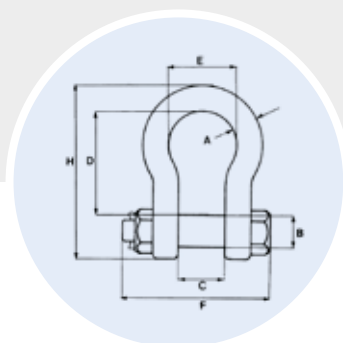
Shackles

We have most types of shackles in stock. Our shackles are available in many different qualities and from leading shackle producers. Safety type galvanized as Red Pin (Gunnebo Anja) Dee type galvanized as Green Pin (Van Beest) or Bow type screw collar pin from Blue Line (Markussen) are just some of the variations we have.



➔ SHACKLES, SAFETY TYPE H

DIM.	SWL 5:1	A	B	C	D	E	F
3/4"	4,75 t	19 mm	22 mm	31 mm	76 mm	51 mm	112 mm
7,8"	6,50 t	22 mm	25 mm	36 mm	83 mm	58 mm	127 mm
1"	8,50 t	25 mm	28 mm	43 mm	95 mm	68 mm	147 mm
1 1/8"	9,5 t	28 mm	32 mm	47 mm	108 mm	75 mm	165 mm
1 1/4"	12,0 t	32 mm	35 mm	51 mm	115 mm	83 mm	178 mm
1 3/8"	13,5 t	35 mm	38 mm	57 mm	133 mm	92 mm	164 mm
1 1/2"	17,0 t	38 mm	42 mm	60 mm	146 mm	99 mm	202 mm
1 3/4"	25,0 t	45 mm	50 mm	74 mm	178 mm	126 mm	243 mm
2"	35,0 t	50 mm	57 mm	83 mm	197 mm	146 mm	269 mm

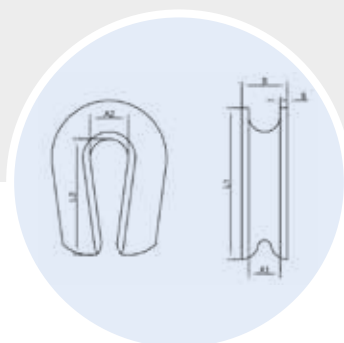


Thimbles

Heavy duty – hot dip galvanized thimbles are in stock from 12 – 56mm but also available in special sizes upon request. We can supply thimbles in combination with steel rings or master links. Galvanized or with marine painting. We also stock galvanized or stainless steel regular thimbles in sizes from 8 – 34mm.

➔ HEAVY DUTY THIMBLES

DIM.	A1	A2	L1	L2	B	S	WEIGHT	ITEM NO.
12 mm	13,5 cm	38 cm	91 cm	70 cm	20,6 cm	3,6 cm	23 kg	44GK414G-12
16 mm	16,8 cm	44 cm	108 cm	83 cm	24,6 cm	4,1 cm	34 kg	44GK2100-16
19 mm	19,8 cm	51 cm	127 cm	95 cm	31 cm	5,6 cm	67 kg	44GK414G-19
22 mm	23,9 cm	57 cm	140 cm	108 cm	35,1 cm	5,6 cm	79 kg	44GK2100-22
25 mm	26,9 cm	63 cm	156 cm	114 cm	39,6 cm	6,5 cm	125 kg	44GK414G-25
28 mm	33,3 cm	73 cm	178 cm	130 cm	46 cm	6,4 cm	182 kg	44GK2100-28
32 mm	36,6 cm	89 cm	230 cm	165 cm	55,6 cm	9,7 cm	371 kg	44GK414G-32
35 mm	39,6 cm	89 cm	230 cm	165 cm	65 cm	12,7 cm	533 kg	44GK2100-35
40 mm	43,7 cm	102 cm	286 cm	203 cm	69,1 cm	12,7 cm	772 kg	44GK414G-40
45 mm	46,7 cm	114 cm	310 cm	229 cm	72,1 cm	12,7 cm	806 kg	44GK2100-45
48 mm	53,1 cm	152 cm	384 cm	305 cm	78,5 cm	12,7 cm	1135 kg	44GK414G-48
56 mm	60,5 cm	178 cm	435 cm	355 cm	92,2 cm	16 cm	1793 kg	44GK2100-56



Steel Goods

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We stock and produce many different types of steel goods - for both nets, cages and moorings. See a few examples on these pages. For the full assortment of steel goods you can contact our Sales Department.

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CARABIN HOOKS

Galvanized or stainless,
6-16mm



GUNNEBO MASTERLINS

Yellow painted or galvanized.



LIFTING BLOCKS

Single, double or triple
blocks for lifting



SAFETY HOOKS

1,000 - 4,200 kg lifting capacity,
SWL 5:1



STAINLESS STEEL RINGS

AISI316 in sizes from
30-200mm in 6-25mm wire



SWIVELS

Galvanized or Stainless, 1,100 -
3,600 kg lifting capacity, SWL 5:1

Ropes with Dyneema® & Danline

Rope and twine made from Dyneema® fiber make the strongest rope available. Apart from ultimate strength the ropes with Dyneema® are chosen due to very low elongation, minimal shrinkage and high abrasion resistance. This makes them suitable for applications such as moorings, cage net framing ropes or sinker tube suspension. Rope from Dyneema® is available both with and without heat setting and in different colors. Another option is to get the rope covered with an abrasion protecting polyester braiding – which is recommended when used in places where there can be direct contact between cage components and rope.

➔ 12 STRAND DYNEEMA®

DIAMETER	BREAK LOAD	RUNNAGE	WEIGHT PER 100 MTR
6 mm	4.0 t	50 mtr/kg	2 kg
8 mm	8.1 t	28.5 mtr/kg	4.0 kg
9 mm	10.1 t	24.0 mtr/kg	4.2 kg
10 mm	10.9 t	20.4 mtr/kg	5.0 kg
12 mm	17.8 t	11.6 mtr/kg	9.0 kg
14 mm	21.7 t	8.6 mtr/kg	12.0 kg
16 mm	26.1 t	6.9 mtr/kg	14.0 kg
18 mm	35.8 t	5.2 mtr/kg	19.0 kg
20 mm	40.8 t	4.6 mtr/kg	22.0 kg
22 mm	50.5 t	3.8 mtr/kg	26.0 kg
24 mm	60.0 t	2.9 mtr/kg	34.0 kg
26 mm	65.0 t	2.8 mtr/kg	36.0 kg
28 mm	71.0 t	2.4 mtr/kg	40.0 kg
30 mm	77.8 t	2.3 mtr/kg	43.0 kg

> Available up to 44 mm diameter

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DYNEEMA®



DANLINE



➔ 3 STRAND DANLINE

DIAMETER	BREAK LOAD	ITEM NO.
8 mm	1050 kg	24 08 080
10 mm	1570 kg	24 08 100
12 mm	2200 kg	24 08 120
14 mm	2950 kg	24 08 140
16 mm	3750 kg	24 08 160
18 mm	4700 kg	24 08 180
20 mm	5700 kg	24 08 200
22 mm	6850 kg	24 08 220
24 mm	8050 kg	24 08 240
26 mm	9350 kg	24 08 260
30 mm	12150 kg	24 08 300
32 mm	13650 kg	24 08 320
36 mm	17000 kg	24 08 360
40 mm	20800 kg	24 08 400
44 mm	24800 kg	24 08 440
48 mm	29200 kg	24 08 448

➔ 8 STRAND DANLINE

DIAMETER	BREAK LOAD	ITEM NO.
36 mm	17000 kg	24 08 360P
40 mm	20800 kg	24 08 400P
44 mm	24800 kg	24 08 440P
48 mm	29200 kg	24 08 480P
52 mm	33800 kg	24 08 520P
56 mm	38800 kg	24 08 560P
64 mm	49700 kg	24 08 640P
72 mm	62000 kg	24 08 720P

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We carry all the most common types and dimensions of rope in stock – and at any time we have more than 50 tonnes of rope in stock. Most commonly used is our Danline rope – know by the red marker – which is carefully selected for it's high quality. It is a strong and abrasion resistant UV-stabilized polypropylene rope. We also stock other types of ropes such as nylon ropes, polypropylene multifilament ropes and HDPE ropes.

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THE SAFEST FISH FARMING SOLUTION



Bird Net Supporters

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HDPE bird net supporters made as large hamster wheels – or smaller but higher bird stands available in almost any size required. We have supplied hamster wheels from 16 to 60 mtr circumference.



Bird Nets

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Top nets, bird covers, bird nets, anti bird net. The designations are many – and so are the options for design and specifications of twine, mesh, ropes etc. Made to custom fit the cages – with abrasion panels in critical places – like under the bird net supporter.









Bird Net Poles

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Custom fit solution for both new and existing pens. Hvalpsund bird net poles are available in lengths between 3 and 6 mtr. As a standard we use 50mm diameter poles with a goods thickness of either 4mm or 8mm depending on the gauge needed. Special measurements are available on request.



FARM CASE:

FIRDA SEAFOOD GROUP – NORWAY

Species:	Salmon & rainbow trout
Annual production:	16,000 tons
What:	12 new 160m cages HD500 2017 15 new 160m cages HD500 2018 5 new Dyneema grow out nets 2018

Ola Braanaas

Owner
Firda Seafood Group AS



WHY DID YOU CHOOSE A DANISH EQUIPMENT SUPPLIER OVER THE ESTABLISHED LOCAL PLAYERS?

»Firda is mostly concerned with high quality gear. We know that Hvalpsund for a number of years has been supplying farms in exposed areas in Faroes and Iceland. Furthermore we are happy to see more players enter the market – especially a family owned and run company like Hvalpsund. It gives us a lot of confidence in the supply.«

HOW IMPORTANT IS PRICE COMPARED TO INNOVATION AND NEW SOLUTIONS?

»Quality is the most important for us but obviously it has to be at competitive pricing. At the end of the day the fish will have to carry all the costs and we cannot position ourselves at a cost level that diverts from the standard in Norwegian aquaculture. We believe that Hvalpsund matches our criteria both in terms of quality and price. In addition the very wide walk ways contributes to the OHS for our staff. As the Hvalpsund HD500 bracket has bigger distance between the sinker tube suspension and the net it will reduce the risk of contact between the net and sinker tube.«







Landing Nets

FRAME SIZES: Ø 65 cm – Ø 100 cm – Ø 125 cm – Ø 150 cm – Ø 175 cm

-
- > Available frame materials: Galvanized double steel ring – Single aluminium prepared for handle
 - > Netting options: large mesh outer net, small mesh inner and with/without tarpaulin
-

➔ SPARE PART LIST

DESCRIPTION	ITEM NO.
Tarpaulin Ø 65 cm	8947036
Tarpaulin Ø 100 cm	894703
Tarpaulin Ø 120 cm	894703S
Tarpaulin Ø 150 cm	894732
Tarpaulin Ø 175 cm	894733
Brailer lock BK11	894702
Spring for brailer lock BK11	8947027

DESCRIPTION	ITEM NO.
Slider for brailer lock BK11	8947021
Release arm for brailer lock BK11	8947024
Wire + rope for brailer lock BK11	894713
Lose outer net 50 mm for 100 cm	894706
Lose inner net 11 mm for 100 cm	89471010
Lose outer net+ tarpaulin for 100 cm	894711
Lose outer + inner net for 150 cm	89471215M

Other spareparts available on request.



Sweep Nets

Hvalpsund Net makes sweep nets / crowd nets for all size cages. We always keep a wide of mesh and twine sizes in stock to make any type and size of net. Recently we have seen a rising demand for sweep/crowd nets made knotless net with Dyneema® fibres as well. The main advantage of using nets made with Dyneema® fibres is drastically reduced volume and weight. This causes for much easier handling of the net – and cutting the work of crowding fish to a minimum. Another advantage is that the thinner Dyneema® twine reduces drag in water reducing the work load.

The sweep / crowd nets are made exactly to fit your cage and fish size. Send your specifications to us – and we will work out a price with knotless netting made with both nylon and Dyneema® fibres.



Dip Nets



➔ DIP NET FRAMES, STAINLESS STEEL, ROUND

DIAMETER	MATERIAL	HANDLE INCLUDED	ITEM NO.
40 cm	AISI316	No	88 41 98
50 cm	AISI316	No	88 41 97
60 cm	AISI316	No	88 41 96

➔ FRY NETS

HANDLE	SIZE	NET TYPE (mm)	ITEM NO.
20 cm	9 x 15 cm	1, light	88 41 31
27 cm	11 x 20 cm	1, light	88 41 33
120 cm	14 x 21 cm	1, light	88 41 32
120 cm	12 x 21 cm	2, Heavy	88 41 32A

➔ DIP NET BAGS - FLAT BOTTOM

MESH SIZE	TREAD NO.	ITEM NO. Ø 40 cm	ITEM NO. Ø 50 cm	ITEM NO. Ø 60 cm
2 mmsq	210/6	88 41 71	88 41 71 50	88 41 71 60
4,8 mmsq	210/15	88 41 72	88 41 72 50	88 41 72 60
6 mmsq	210/15	88 41 73	88 41 73 50	88 41 73 60
8 mmsq	210/18	88 41 74	88 41 74 50	88 41 74 60
11 mmsq	210/18	88 41 76	88 41 76 50	88 41 76 60
15 mmsq	210/24	88 41 77	88 41 77 50	88 41 77 60
19 mmsq	210/72	88 41 78	88 41 78 50	88 41 78 60

➔ DIP NET BAGS - POINTED BOTTOM

MESH SIZE	TREAD NO.	ITEM NO. Ø 40 cm	ITEM NO. Ø 50 cm	ITEM NO. Ø 60 cm
2 mmsq	210/6	88 41 81	88 41 81 50	88 41 81 60
4,8 mmsq	210/15	88 41 82	88 41 82 50	88 41 82 60
6 mmsq	210/15	88 41 83	88 41 83 50	88 41 83 60
8 mmsq	210/18	88 41 84	88 41 84 50	88 41 84 60
11 mmsq	210/18	88 41 86	88 41 86 50	88 41 86 60
15 mmsq	210/24	88 41 87	88 41 87 50	88 41 87 60
19 mmsq	210/72	88 41 88	88 41 88 50	88 41 88 60

Fish Bins

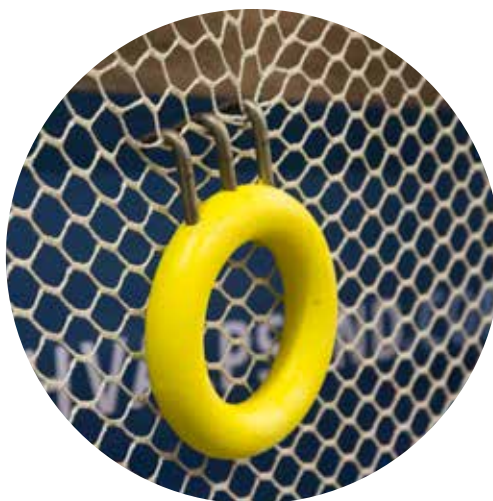
We can provide heavy duty insulated fish bins in sizes from 400 – 1400 liter with or without insulated lid. The bins are rotationally moulded and filled with PU foam for maximum insulation. The bins are easily stackable and with drainage holes in both sides. Lids can be latched on by replaceable rubber straps.





FEED SCOOP

For professional and precise hand feeding.
Whether on land or at sea.



NEET HOOK

For net handling at sea. Claws made from
stainless steel and the ring ensures buoyancy
if dropped at sea.

Environment Measurement

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We supply most types of field instruments for measuring oxygen, PH, salinity, nitrate, ammonium etc. These instruments are available in many different versions. See a couple of models here:

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YSI

ProODOTM is a handheld instrument measuring dissolved oxygen instrument with luminescent, optical dissolved oxygen (DO) technology. The ProODO utilizes “smart” digital sensor technology which stores calibration data within the sensor. This allows probes to be placed on any ProODO instrument without re-calibration.

OXYGUARD

The Handy Polaris is the first Handy with the “second generation” Handy Probe and microprocessor controlled electronics. The Polaris has several advanced functions yet it is probably the easiest Handy to use that OxyGuard has ever produced. It has also been possible to keep the price very attractive! OxyGuard Handy pH – easy pH measurements! The Handy pH is now based on the same technology that makes the Handy Polaris such an excellent meter. With the Handy pH it is easy both to take measurements and to calibrate the probe.

PRODUCT: YSI



PRODUCT: OXYGUARD







Dead Fish Collector

Our range of dead fish collectors include fully welded HDPE cones as well as the rotationally moulded LiftUP system. We can also supply all types and sizes of lay-flat and spiral hoses, quick couplings, air hose and water separation bins. Each system is individually made to fit exactly the individual cages.

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Safety Lines

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The new patented safetyline system from Hvalpsund, ensures that your people are safe when working on the edge of the pen.

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Pens are often used in rough sea, with not only workers going about their daily work but also external personnel inspecting the stock. Wearing personal floatation devices will prevent a person falling into the sea from going under - but not shield the body from freezing sea water.

The shock coming from immersion in very cold water, can be fatal. Since immediate exposure to icy water causes involuntary inhalation, a result can be drowning. The cold water can also cause heart attack due to vasoconstriction, the heart has to work harder to pump the same volume of blood throughout the body. For people with heart disease, this additional workload can cause the heart to go into arrest.

Another challenge for an operator falling into the water is getting back onto the pens, which in rough waters could result in further injuries.

As a response to these challenges we offer the only system in the market that ensures that personnel not falls into the water in the first place.







Mussel pipes and long lines

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Whether for compensation farming or human consumption - we supply mussel pipes with nets or long lines for shell fish farming. We custom design the setup for each individual application. Enquire to learn more.

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Net Repair

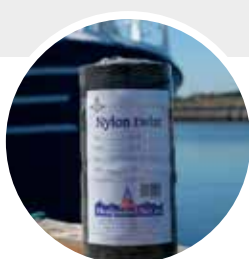
One of the secrets of extending the lifetime of the nets is proper maintenance. Besides the option of returning the nets to the Hvalpsund net servicing facility we can also provide all the gear that ensures the repairing is done with the right quality of materials. We always keep netting of standard mesh and twine sizes in stock. Finally you can order a repair kit to come with your new nets.

➔ NYLON TWINE BRAIDED, WHITE OR BLACK

DIM.	RUNNAGE	BREAK LOAD	ITEM NO.
1,0 mm	650 mtr/kg	75 kg	2206010SP
1,5 mm	540 mtr/kg	100 kg	2206015SP
2,0 mm	280 mtr/kg	180 kg	2206020SP
3,0 mm	250 mtr/kg	250 kg	2206025SP
4,0 mm	160 mtr/kg	300 kg	2206030SP

➔ NYLON TWINE TWISTED 3 STRAND. BLACK OR WHITE. WITH OR WITHOUT RESIN

DIM.	RUNNAGE	BREAK LOAD	ITEM NO.
1,1 mm	1200 mtr/kg	34 kg	35150008S
1,2 mm	900 mtr/kg	41 kg	351500010S
1,4 mm	790 mtr/kg	55 kg	35150012S
1,6 mm	630 mtr/kg	62 kg	35150015S
1,8 mm	470 mtr/kg	86 kg	35150020S
2,0 mm	400 mtr/kg	105 kg	35150024S
2,2 mm	340 mtr/kg	115 kg	35150028S
2,3 mm	300 mtr/kg	128 kg	35150032S



Rubber Wear

➔ OVERALLS PESCA SUPERIOR, ORANGE

SIZE	ITEM NO.
S	48 03 400
M	48 03 410
L	48 03 420
XL	48 03 430
XXL	48 03 440
XXXL	48 03 450

➔ SMOCK PESCA SUPERIOR, ORANGE

SIZE	ITEM NO.
S	48 03 350
M	48 03 360
L	48 03 370
XL	48 03 380
XXL	48 03 390
XXXL	48 03 395



OVERALLS



SMOCK

THE SAFEST FISH FARMING SOLUTION



Antifouling & Coating



AQUANET NORTH SEA

AquaNet North Sea is an effective water-based anti-fouling impregnation for net bags used in the aquaculture industry. AquaNet has been specially developed to ensure a good initial result as well as a long-term anti-fouling effect.

North Sea has three strength options (standard – high – ultra) – and is tailor-made for fish farming conditions in Northern Europe.



NETCOATING

NetCoating is an eco-friendly, hard-wearing, specially designed product for users who want to avoid the use of active ingredients/biocides. NetCoating provides high UV protection for nets, strengthens the net and can contribute to a significantly longer lifetime for nets. It has been developed for users who hose down their nets. The durability of the coating naturally depends upon how frequently the nets are hosed and the pressure/distance to the net during hosing. Netcoating is free of biocides.

HDPE Work Boats

Custom built HDPE work boats – with endless number of options. Sizes from 3,9 to 9,0 mtr with the engine of your choice. Inboard or outboard, conventional shaft or jet. With or without a cabin. Other options such a small crane and capstan available as well.

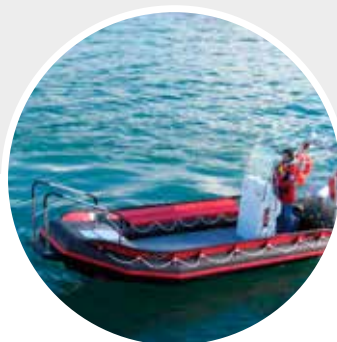


CAPSTAN

MODEL	LENGTH	WIDTH	LOAD	PROPULSION
S390	3,90 MTR	1,80 MTR	4 PAX	OUT BOARD
S500	5,00 MTR	2,08 MTR	6 PAX	OUT BOARD
S650	6,40 MTR	2,45 MTR	12 PAX	OUT / Z DRIVE / JET
S750	7,45 MTR	2,70 MTR	12 PAX	OUT / Z DRIVE / JET
S850	8,5 MTR	3,00 MTR	12 PAX	OUT / Z DRIVE / JET
S900	9,0 MTR	3,50 MTR	12 PAX	OUT / Z DRIVE / JET
P850	9,0 MTR	3,00 MTR		OUT / Z DRIVE / JET



S500



S650



S750



P850



S900

Our History and Organisation

OUR HISTORY

It all started in 1934 as a small one man company primarily serving the local fishing fleet – which was 40 boats at that time and our small net loft was the main activity. We built our first fish farm in 1981 and since then the requirements and legislation has been ever changing. We have always kept up to or even surpassed current standards – and today our range of products includes only top quality aquaculture solutions. Today we supply to professionals all over the world – that demands highest quality equipment at the best price.

OUR ORGANISATION

Within our crew there is not long from head to tale. So the decision process is short which keeps us a flexible unit. Within our team – we have combined experience that surpasses 100 years.

Our skilled has personnel has helped plan and build fish farms for several decades in almost every region of the world. Our skilled and trained personnel allows us to react quickly and devote the right amount of attention to the task at hand. In other words – we are ready for a challenge.



YEAR 1981



YEAR 1986



YEAR 1992



YEAR 2006



YEAR 2008



YEAR 2011



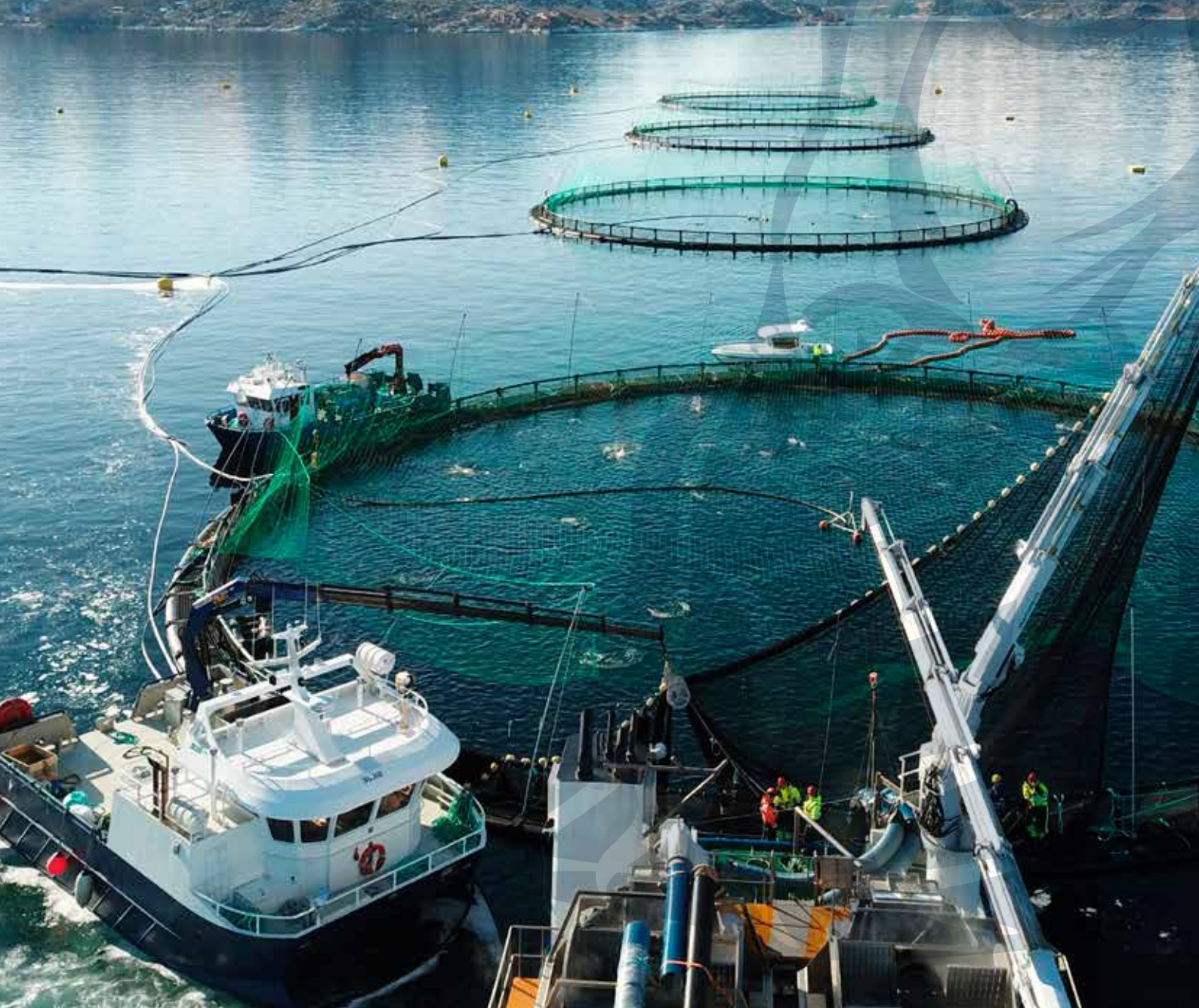
YEAR 2015



YEAR 2018

Your Longterm Partner

SINCE 1934



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HVALPSUND NET
FISH FARM SOLUTION