



# PRODUCT INTRODUCTION

# COMPANY PROFILE

Ningbo Hope Net Marine Sci-tech Co.,Ltd is a R&D and manufacturing service enterprise established by JUDIN (H.K.) in the mainland of China dedicated to deep-sea aquaculture net system. Our company take full advantage of the the accumulated scientific and technological achievements, talents and innovation , focus on research and development, production, sales, engineering design, offshore innovations and other integrated services as a scientific and technological enterprise specialized in in the production of new type of special composite monofilament, new type of special semi-steel polymer composite mesh and special deep-sea aquaculture net; Before the founding of Ningbo Hope Net, the R&D team has been established. Relying on Chinese Academy of Fishery Sciences, Ocean University and other research institutes, the research and development of deep-sea special nets and ultra-high molecular polyethylene twisted nets has lasted for three years. After the founding of Ningbo Hope Net, the company continued to expand investment in the original projects and establish larger scale R & D, experiment and production bases. After five years of continuous research and development investment, the company officially put into production of the semi-rigid polymer composite network and it is the first product in China with all independent intellectual property rights. At present, the company's related products have been used in the Yellow Sea, East China Sea and South China Sea, and have been exported to South Korea, Nordic Europe, Australia, South America and other countries and regions. All products are certified by SGS international quality system and relevant national quality inspection department.

It is the orientation of Ningbo Hope Net Company to give full play to its superiority of intelligence, improve its product categories, keep up with the international pace, and constantly create innovations. Ningbo Hope Net Company will develop marine high-tech industry under the national marine economic strategy, constantly expand and strengthen ourself, constantly develop market, and contribute to the development of China's marine industry. Ningbo Hope Net Marine Sci-tech Co.,Ltd and its technical support team are your trustworthy and valuable partners. We will work together to promote the healthy development of China's deep-sea aquaculture industry, and work together to achieve common development for improvement of the comprehensive utilization efficiency of deep-sea aquaculture equipment, for the deep development of marine resources and for the safety of China's marine granaries. Welcome friends from all walks of life to negotiate business, and welcome clients all the world to visit our company for business , investigation and technical exchanges.



Semi-rigid Polymer Composite Network (HopeNet) adopts special netting technology with our own intellectual property rights to produce high-durability, anti-corrosion, high pollution-resistance, super deep-sea aquaculture network.

After years of intensive research and development, HopeNet is completely superior to copper alloy mesh and composite nylon/polyethylene mesh which are used in aquaculture industry. Its durability, pollution resistance, light-weight, with the deformation-resistance mesh, mesh deformation resistance and many other characteristics have significantly improved the production efficiency in aquaculture production. It has become the most advantageous net in deep-sea aquaculture industry.

In addition to produce HopeNet, according to customer needs and mesh characteristics, Ningbo Hope Net Marine Sci-tech Co.,Ltd also provide customers with the design, manufacture and installation services of netting system for deep-sea aquaculture platform, cage and purse net as well as the matching maintenance services such as net washing, net changing and net repairing, to meet the needs of different types of customers.

HopeNet is the best choice for your aquaculture nets. HopeNet provide new materials and equipment for aquaculture. Investors will benefit from the application of HopeNet. HopeNet can reduce production intensity and risk, significantly improve production efficiency and benefit from it benefit.

If you compare the cost of the entire lifecycle of HopeNet with the traditional cage nets while using cages, platforms, boats or seines, you will find many advantages of our nets, like the increasing of fisheries production, operating costs reducing.

## Long-Lasting Design Life:

HopeNet is made from PET (Polyethylene Terephthalate) monofilaments woven together to form a tough, high tensile strength, structurally stable hexagonal mesh. HopeNet has been exposed to mechanical damage and extreme weather. Useable in wide temperature range. HopeNet offers a 10-20year design life



## High Resistance to Predators Attacks:

The stiff, yet lightweight, HopeNet net pen is very resistant to predator bites, entanglement or chafing damage. Only a single layer of HopeNet is required to keep your fish stocks safe, reducing costs and risk.



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### Reduced Cleaning:

Reduced downtime for cleaning, means greater profits. The smooth PET monofilaments of HopeNet dramatically reduce biofouling. Antifouling paint is not necessary, and the net pen does not necessarily have to be removed from the water for cleaning.



### Resistant to fatigue bending:

The comparison of HopeNet and copper alloy materials through homogenous friction damage and monofilament bending tests shows that The fatigue bending performance of HopeNet is 300 times+ of copper net.



### Maximise water flow:

The PET monofilaments have high intensity and weight. Couple this with HopeNet's anti-fouling properties and make HopeNet with a higher mesh ratio. This enables greater water flow and better oxygenation.



### Structural Stability:

The woven hexagonal mesh of HopeNet is far stiffer than traditional polymer meshes. The net pen shape is more stable and resistant to currents and waves, enabling the net pen to be used further offshore than traditional nets.

### Increased Escape Prevention:

HopeNet PET monofilaments is waving by manipulator which gives it higher intensity. Even if the mesh is damaged it will hardly unravel or unzip, maintaining the integrity of the net pen and your fish stocks within it.



### Easy to handle:

HopeNet can remain in the water for years without removal for cleaning or anti-fouling treatment. It practically does not absorb water and become saturated, making it easier and safer to handle, even when wet.



### Environmentally Friendly:

The HopeNet No toxic, chemical-resistance and won't be rusted or rotted resistant, The PET used in HopeNet is recyclable, and no chemical anti-fouling paints are required.



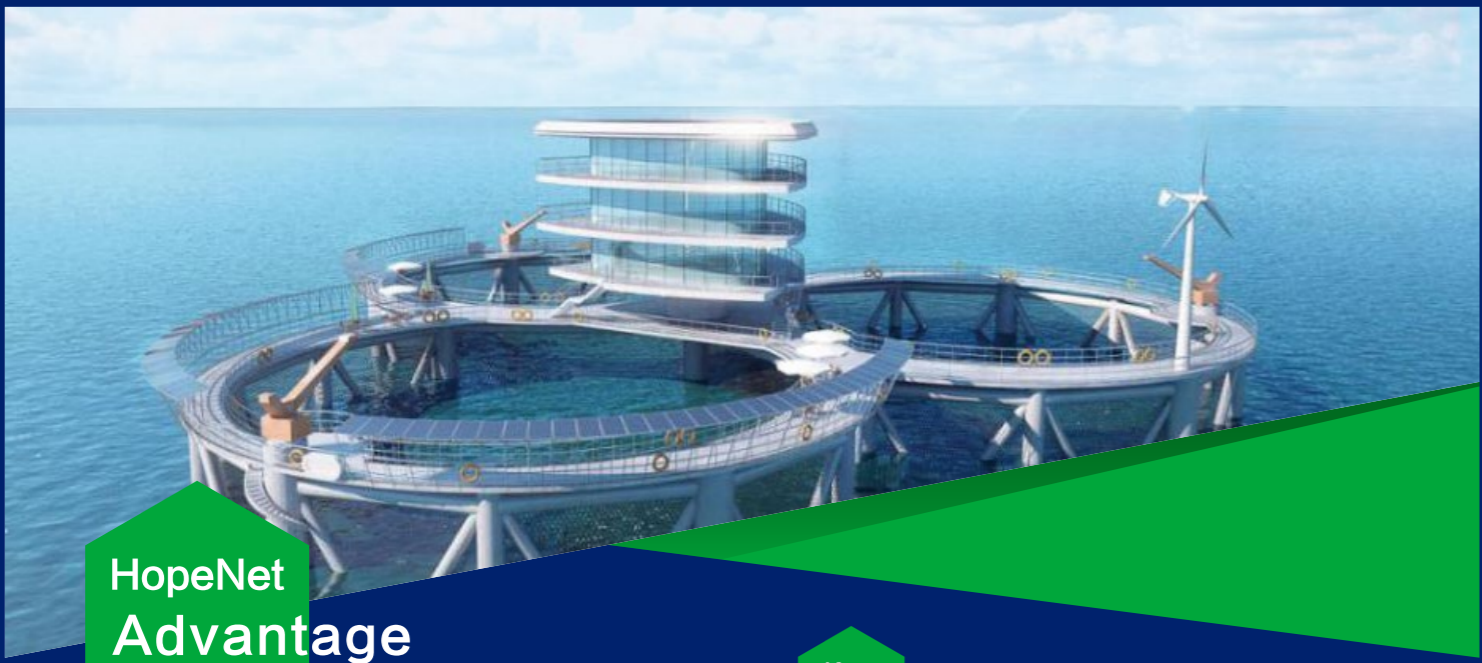
Ningbo  
Hope Net  
Marine Sci-tech  
Co.,Ltd

**HOPENET**<sup>®</sup>  
KikkoNet<sup>®</sup>  
Maccaferri



Official website Marine Ranching  
Netting system





# HopeNet Advantage

## Key features

HopeNet brings significant advances to today's fish farms. This innovative net is made of UV stabilised PET monofilaments, woven into a double twisted hexagonal mesh, with special characteristics unique characteristics. Net pens fabricated from HopeNet provide optimum conditions for the growth of many fish species, in addition to reduce the operating costs of the whole farm.



Thanks to these properties, HopeNet can be left into water for several years, without the use of antifouling paints. The PET monofilaments are chemically stable and inert. Moreover, HopeNet practically does not absorb water and therefore, the weight of the net remains throughout its whole service lifecycle.



Standard net pens can be fully assembled in our factory reduce the workload of on-site operation, on or off-shore. HopeNet net pens are lightweight, robust, strong and highly resistant to mechanical damage during installation, relocation, cleaning and fish harvesting. The surface of the PET monofilaments is very smooth, enabling the mesh to resist damage, predators and biofouling far better than traditional polymer nets.

- 1 Highly resistant to predators attacks – only a single net is required.
- 2 Provides enhanced escape prevention – even if damaged.
- 3 Significantly reduces biofouling.
- 4 Smooth surface reduces 3 times' less cleaning workload than traditional polymer net pens.
- 5 It hardly unravel or unzip – even if damaged.
- 6 Semi-rigid barely deformable structure – withstands ocean forces.
- 7 resists wear and tear and has an estimated service life of more than 20 years.

The “waterline” around the uppermost edge of the net pen is fabricated to enable simple and rapid assembly with various models of floating cage collars, Breeding platform, Breeding ship, Enclosure Culture. Jump net can be supplied pre-assembled if required.

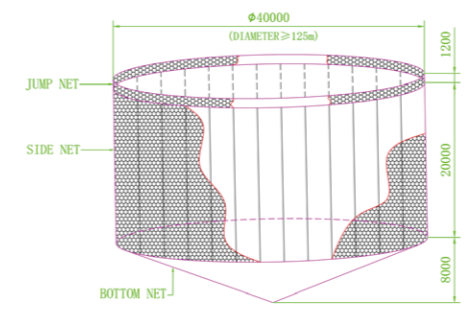


The “Bottom Line” around the lowermost edge of the net pen also enables efficient anchoring with sinker tube. Deformation is reduced and the risk of tearing is minimised due to the inherent semi-rigid structure and high tensile strength of the net.

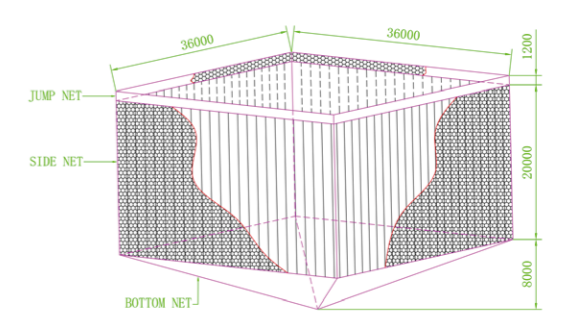
### The net pen can include:

- Customised shapes.
- Customised dimensions.
- Jump net.
- Bird net.
- Delivered pre-assembled.

A variety of standard net pens are available, but they can be customised to suit your site, species and dimensional requirements. The dimensions may change, but the quality is always high!



ROUND CAGE + CONE BOTTOM NET

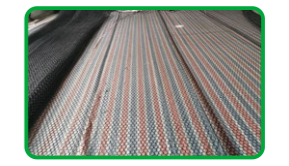
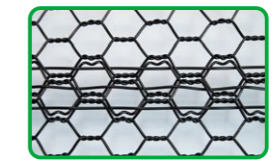
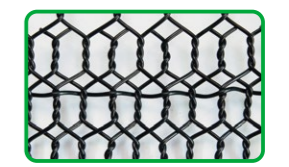
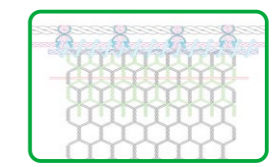


SQUARE CAGE + CONE BOTTOM NET

The “Waterline” of the net pen is designed for simple assembly with a floating cage collar.

The “Bottom Line” is designed for simple attachment of sinker tube.

Accurate finishing, attention to construction details, stringent QA&QC, safe, strong and robust construction



NET TYPE	UNIT	SQUARE	CYLINDRICAL	TRUNCATED CONE	TRUNCATED PYRAMID
<b>Shape</b>					
<b>Dimension</b>					
Side / Diameter	m	Upon request	Upon request	Upon request	Upon request
Top Perimeter / Circumference	m	Upon request	Upon request	Upon request	Upon request
Tapering Rate	m	-	-	Approx. 5%	Approx. 5%
Side wall depth	m	Upon request	Upon request	Upon request	Upon request
<b>Bottom type</b>					
Flat (Bottom depth - 0m)		√	√	√	√
Conical (Bottom depth - 3-6m)		N.A	√	√	N.A
Pyramidal (Bottom depth - 3-6m)		√	N.A	N.A	√

\*Molecular bonding of polymer composite monofilaments is still unstable at the end of production, and will be stabilized after 2 to 3 years, the strength will also be improved constantly during the meantime. According to the test results, the strength will not decrease sharply with time, and the durability of applications on land can be maintained for more than 50 years. Applied to the field of marine aquaculture, the longest life span can be more than 10 years.



**Quality control:**  
Ningbo HopeNet company implements several production process quality management methods.

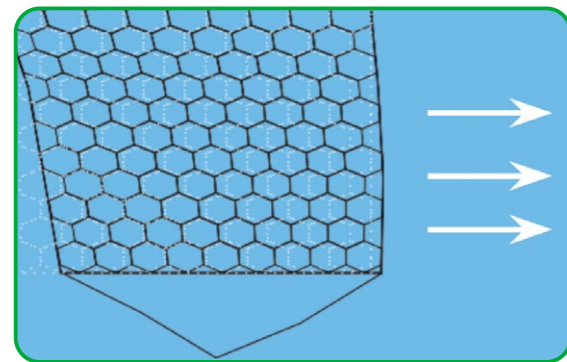
**Wire inspection:**  
Wire must be inspected after each purchase to check whether the surface is intact, and check its hue and thread diameter.

**Wire tensile test:**  
Regularly measuring wire diameter, using special equipment to implement tensile test. After modification of production methods and raw materials, it must be implemented again.

**Mesh inspection:**  
When the machine starts, adjusts and switches, using inspection ruler to perform inspection of mesh.

**Width inspection:**  
When the machine starts, adjust and switches, using tape measure to perform inspection of net width.

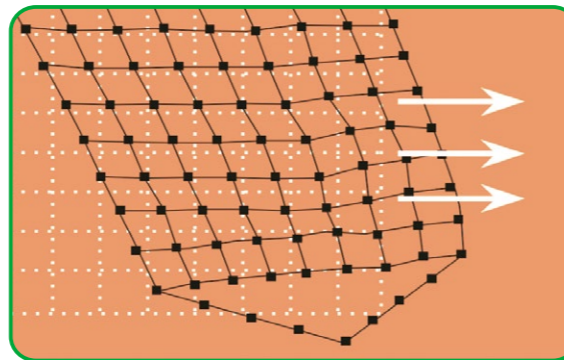
**Twisting and appearance inspection:**  
When the machine starts, adjust and switches, to perform twisting and appearance inspection.



Example of HopeNet in marine current HopeNet.

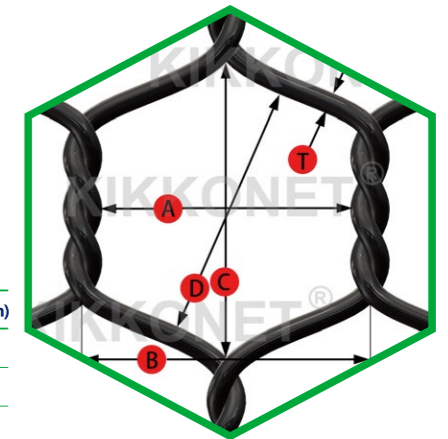


HopeNet was developed in response to market demands for a more robust net, which required less maintenance, offered greater life and could withstand rough conditions. HopeNet meets the strictest National and International standards and regulations. A variety of standard net pens are available, but they can be customised to suit your site, species and dimensional requirements. The dimensions may change, but the quality is always high! HopeNet can offer technical/economical feasibility studies in cooperation with you. We are able to provide customized solution and technical assistance from design to installation and during operation. For the detailed specification, you can contact us for more information



Conventional Net pens in the same marine current.

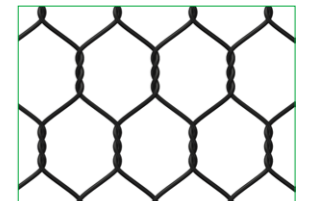
Mesh size	T (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Weight	Rolls width (m)
Small Mesh	2,00	35	40	43	37	320 g/sq.m	1,60
Small Mesh	2,50	35	40	43	37	570 g/sq.m	1,60
Small Mesh	3,00	35	40	43	37	850 g/sq.m	1,60
Large Mesh	2,50	45	50	71	59	400 g/sq.m	2,00
Large Mesh	3,00	45	50	71	59	590 g/sq.m	2,00
Super Large Mesh	2,50	73	80	100	85	280 g/sq.m	1,80
Super Large Mesh	3,00	73	80	100	85	360 g/sq.m	1,80



A = width inside  
B = width center  
C = height inside  
D = diagonal inside  
T = PET monofilament thickness

**Monofilament Properties**

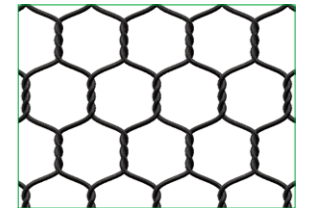
Physical Properties	Test Method	Units	MF3.0	MF2.5
Material			PET	PET
Colour			black	black
Nominal Diameter		mm	3.0	2.5
Tolerance before production of mesh		mm	±0.2	±0.18



(KikkoNet®) Large Mesh - M45

**Mechanical Properties**

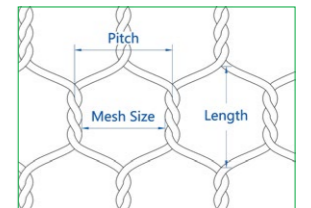
	EN ISO527	Mpa	≥230	≥230
Tensile Strength	EN ISO527	Mpa	≥30	≥30
Elongation at break	ASTM D638	Mpa	≥7000	≥7000
Tensile Modulus	EN ISO4892-3	Mpa	≥200	≥200
UV resistance	ROHS Directive		Conformity	Conformity
Heavy Metal Free			Conformity	Conformity



(KikkoNet®) Small Mesh - M40

**Characteristics of the Net**

Nominal Characteristics		Large Mesh	Small Mesh	
Mesh Size		45	35	
Pitch		50	40	
Length		70	43	
Mass per unit area		kg/sqm	0.59	0.57
Tensile Strength, MD	20mm/min at 20±5°C	kN/m	≥40	≥35
Tensile Strength, CMD	20mm/min at 20±5°C	kN/m	≥22	≥20
<b>Roll Size</b>				
Width		m	2	1.6
Length		m	100	100



- 1 Customized roll length are available upon customers request
- 2 Exact loading plan shall be provided upon confirming the order specification

