## **HKE Hexagonal Water Generating Tube for Indoor Aquaculture**



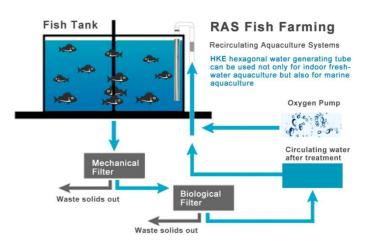
Due to the growing global population, the demand for protein-rich foods, the increased marine pollution, and overfishing, the number of fish species worldwide is gradually decreasing. Land-based aquaculture fisheries are recognized as an important trend that can replace capture fisheries when marine resources are exhausted. The industry is one of the fastest-growing food production industries in this century. By 2030, aquaculture

production is expected to account for 62% of the world's edible fish supply.

However, the traditional aquaculture industry has been facing several problems such as land, water resources, ecosystem

imbalance, wastewater management, and disease outbreaks. One of the solutions to manage these problems is the Recirculating Aquaculture Systems (RAS). RAS is an advanced aquaculture model with precise technology and a highly controllable environment among various aquaculture models nowadays. New technologies in water filtration and recycling are used to perform multiple treatments and tests on wastewater from aquaculture to achieve water recovery and recycling. The RAS system can get rid of the restrictions of natural resources such as climate, water source, light, etc., and control the living environment of farmed fish, shellfish, or shrimps. To make them grow under the most suitable water temperature, the best water quality, the best sunlight, and the most suitable dissolved oxygen environment.

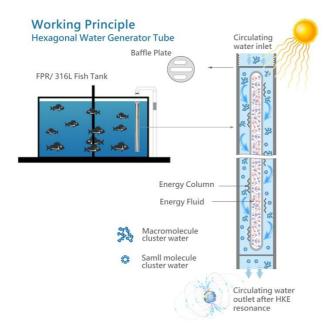
The hexagonal water produced by Hydrogen Kinetic Energy resonance technology is also known as structured water, which is very suitable for indoor water circulation freshwater or saltwater aquaculture systems like RAS system, thanks to its strong water activity, strong penetrating power, and high dissolved oxygen. Anaerobic single-celled algae are difficult to survive in the water; on the contrary, hyperoxic



multi-celled algae can grow healthier. The frequency of replacing freshwater or seawater is reduced, and the growth of bacteria is limited. Of course, fish, shellfish, or shrimp can also grow healthier.



## **HKE Resonant Technology in Hexagonal Water Generating Tube**



The body of the hexagonal water generation tube and the energy column are made of stainless steel 316L. The tube puts into 10~60M3 FRP or stainless steel fish pond. The treated circulating water is pumped into the water inlet of the tube and then discharged from the other end in this way to continuously circulate. Through the special design of the water inlet (baffle plate), the large amount of water can generate Vortex flow to guickly comprehensive resonance of the water. The built-in movable energy column is impacted by a large amount of water to simulate the natural disturbance of water to continuously collide with streams and stones which break the hydrogen bonds of the water.

Furthermore, the energy column, full of energy fluid inside is non-magnetized and non-wave energy, which can effectively receive the far-infrared emissivity of the sun and the gravitational force of the earth's rotating magnetic field. Under the influence of spontaneous rotation, physical resonance occurs so that the water molecule clusters are effectively cracked down into small molecular clusters. The Hexagonal Water Generator does not need to be powered, heated, condensed, gasified or added to any additives during the whole process.

## **Success Stories-Taiwan Gentian Grouper**

At present, there are 106 species of grouper in the world, 8 of which have been successfully propagated artificially, and 6 of them in Taiwan. This must be attributed to Mr. Dai. From 1990, after more than 5 years of research and development of the gentian grouper and Tiger grouper breeding technology, Mr. Dai successfully propagated the gentian grouper artificially on July 1, 1995, which shocked the fishery community around



the world. In addition to his persistence and perseverance, the right choice is the assistance to his success. He insisted on using hexagonal water generated by HKE hexagonal water generating equipment for aquaculture. It made him a great achievement in the industry.

## **Mechanical Specification**

Material	316L Stainless steel, Medical grade		
Flow Rate LPM	1.5 Seconds	44 L/min.	
Tube Length	45.27"/ 1150 mm		1000
Diameter (Outer)/ (Inner)	1.65"/ 42mm	1.5"/ 38.6 mm (1.2" female thread)	
Weight	131.6 Oz / 3.7 kgs (N. W.)		
Half-life Period	10 years		Fitting as op
SGS Non-Radioactive	Compliant with Non-Radioactive Contamination at		
Contamination Test	International level		



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