Drakoo Wave Energy Converter
Best Application Exploration

Introduction:

With the growing global demand for sustainable energy solutions, Drakoo Wave Energy Converter is gradually becoming an important player in the green energy field as an innovative wave energy conversion technology. This highly efficient energy converter not only provides clean electricity, but also has a wide range of application potentials, providing new solutions to energy needs around the world.

The Drakoo Wave Energy Converter is an advanced wave energy conversion device that is capable of absorbing, transforming, and converting wave energy into electricity while reactively cancelling or reducing reflective wave energy in the ocean. Kinetic energy from the waves drives a hydro-turbine generator to produce electricity in a wide range of wave heights and periods.

Best Application Field:

1. Power supply to remote islands

For remote islands, traditional grid connections are costly and technically challenging. The Drakoo Wave Energy Converter can serve as an independent source of electricity to provide a stable supply of electricity to these areas, thereby improving the quality of life of residents and supporting the development of infrastructure.

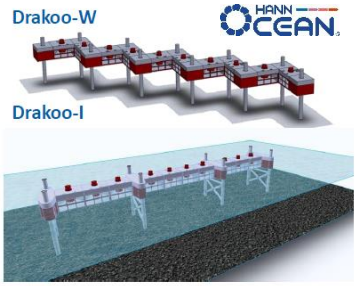
2. Marine Research Station

Oceanographic research stations are often located far from the continent and have special energy needs. The Drakoo Wave Energy Converter can provide reliable power to these sites, keeping research activities running smoothly while also reducing dependence on fossil fuels.

3. Offshore platforms

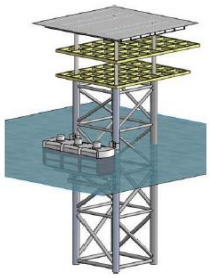
Offshore oil rigs and other offshore platforms require large amounts of electricity to sustain daily operations. By deploying the Drakoo Wave Energy Converter, these platforms can achieve partial or complete energy self-sufficiency, reduce operating costs, and reduce environmental impact.

MW-scale Floating Drakoo Array



- Hann-Ocean is developing a floating wave power array (1MWp) consisting of ten modules (100 kW each) to provide sustainable energy to coastal cities

Oil & Gas Application Feasible



- An engineering feasibility study was completed successfully in April 2019 by Hann-Ocean Energy under a consultancy contract with ATKINS Global:

(a) To provide the annual wave power projections of Drakoo WEC array at the chosen site
(b) To design the support structure for integrating the WEC array with the wellhead platform
(c) To simulate the 6-DOF dynamic loads acting on the jacket.

4. Renewable energy in coastal cities

Coastal cities can utilize the Drakoo Wave Energy Converter as part of renewable energy sources to diversify their energy mix. This not only helps to reduce greenhouse gas emissions, but also increases the city's energy security and independence.

Easten-China-Sea Bridge – 20MW WEC Array

- The bridge is 32.5 kilometers long and has 500 piers, each of which can be installed with a 40-kilowatt Drakoo. It can constitute a wave power array of 20 MW. It is estimated that the entire bridge can produce 46 million kwh yearly. If calculated at 75 cents per kw/hour, the total annual power generation is equivalent to 34.5 million yuan.

Hong Kong-Zhuhai-Macao Bridge – 32MW WEC Array

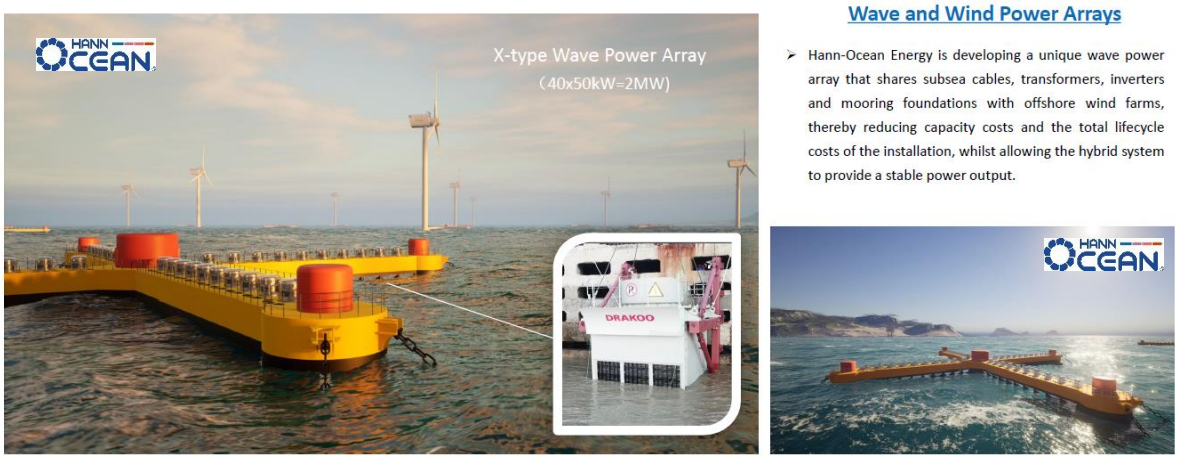
- The bridge is 55 kilometers long and has 800 piers, each of which can be installed with 40-kilowatt Drakoo. It can constitute a wave power array of 32 MW. It is estimated that the entire bridge can produce 74 million kwh yearly. If calculated at 75 cents per kw/hour, the total annual power generation is equivalent to 55 million yuan.

5. Disaster emergency response

Rapid deployment of the Drakoo Wave Energy Converter can provide emergency power support for relief operations after a natural disaster, especially in power restoration after disasters such as tsunamis or hurricanes.

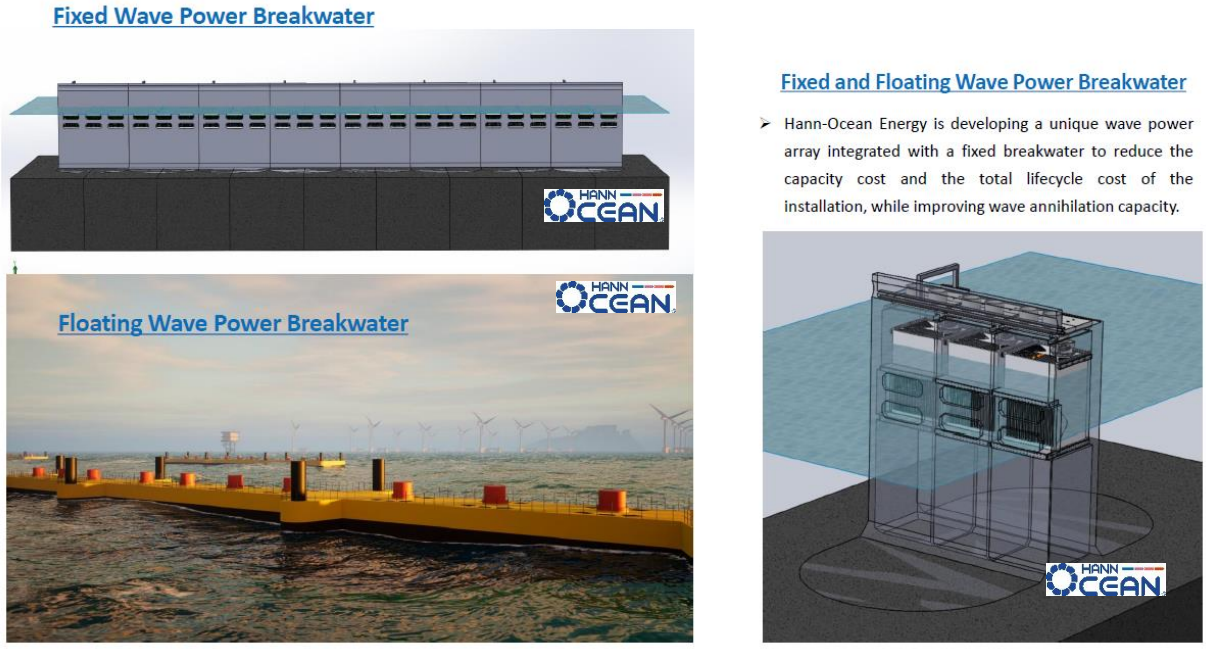
6. Wave and Wind Power Arrays

Hann-Ocean Energy is developing a unique wave power array that shares subsea cables, transformers, inverters, and mooring foundations with offshore wind farms thereby reducing capacity costs and the total life cycle costs of the installation, whilst allowing the hybrid system to provide a stable power output.



7. Fixed and Floating Wave Power Breakwater

Hann-Ocean Energy is developing a unique wave power array integrated with a fixed breakwater to reduce the capacity cost and the total lifecycle cost of the installation, while improving wave annihilation capacity.



Conclusion

The best applications of Drakoo Wave Energy Converter demonstrate the great potential of wave energy as a renewable energy source. Whether it's providing stand-alone power to remote locations or as part of the energy mix of coastal cities, the Drakoo Wave Energy Converter has demonstrated its unique value. With the continuous advancement of technology and the further reduction of costs, we have reason to believe that Drakoo Wave Energy Converter will play a more important role in the future energy field and contribute to the sustainable development of the world.