

Wind assisted propulsor

► System introduction

The wind assisted propulsor is an energy-saving device that utilizes wind energy to provide additional propulsion for ships. Its core principle is the Magnus effect: when a rotating cylinder moves through a wind field, a pressure difference is generated on its two sides, creating a lift force perpendicular to the wind direction. By controlling the direction of rotation, this lift force can be converted into thrust that propels the ship forward.



► System composition

Rotating outer cylinder: made of lightweight and high-strength composite materials

Base and supporting inner tower: Is installed on the deck, bearing the weight of the propulsor and wind load

Drive system: The electric motor is located on the propulsor base or inside, driving the propulsor to rotate at high speed

Control system: intelligently adjusts rotation speed and direction based on wind speed, wind direction, and ship course

► Advantages and features

Energy saving and consumption reduction: Achieves an average energy saving of $\geq 2\%$ per unit

Environmental protection compliance: Reduces carbon emissions, improves the CII rating of ships, and meets the new regulations of the International Marine Organization (IMO)

Strong adaptability: Adopts movable and tiltable design to adapt to different ship types and loading/unloading needs;

Intelligent control: Is equipped with an automatic control system to respond to changes in wind conditions and ship course in real time

Convenient maintenance: Adopts modular design and clear internal structure to facilitate routine inspection and maintenance

► Application scenarios

Ship type: Bulk carriers, oil tankers, container ships and other large ocean-going vessels

Wind conditions: Suitable for sea areas with frequent crosswinds and oblique winds

Regulatory requirements: Ships that need to improve their CII rating or meet energy efficiency standards such as EEXI and EEDI