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바람으로 만드는 새로운 전력

One Module
Wind Power System



탈착식 모듈 구조
Detachable Structure

디자인 확장성
Design Scalability

24시간 구동 시스템
24h Operation

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Mobile & Special-Purpose Wind Power System

single blade 500W

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Man-Ik Kim





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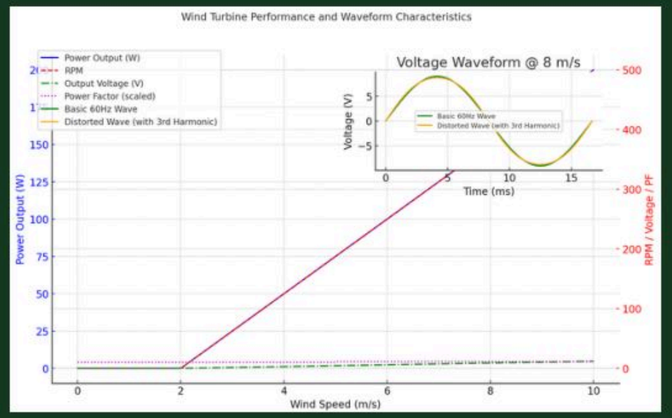
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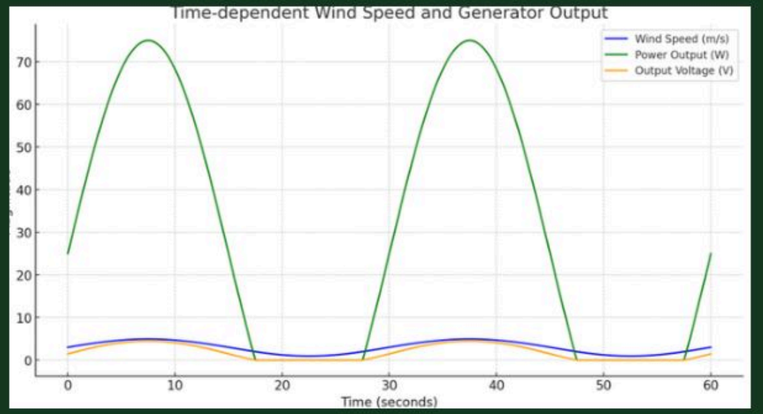
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(Technical Data Sheet)

Single-Blade Mobile & Special-Purpose Wind Turbine – 500W

- Technical Specifications
- Rated Output: 500 W
- Number of Blades: 1 Blade
- Number of Generators: 2 Generators
- Generator Type: Coreless Double-Rotor Generator
- Blade Type: Screw Blade
- Start-Up Wind Speed: 2 m/s
- Rated Wind Speed: 10 m/s
- Maximum Rotational Speed: 500 rpm
- Output Voltage: 12 V
- Winding Resistance: 170 Ω
- Number of Poles: 12-Pole Permanent Magnet
- Blade Dimensions: 120 mm × 900 mm
- Overall Dimensions: H 1200 × W 230 × D 350 mm





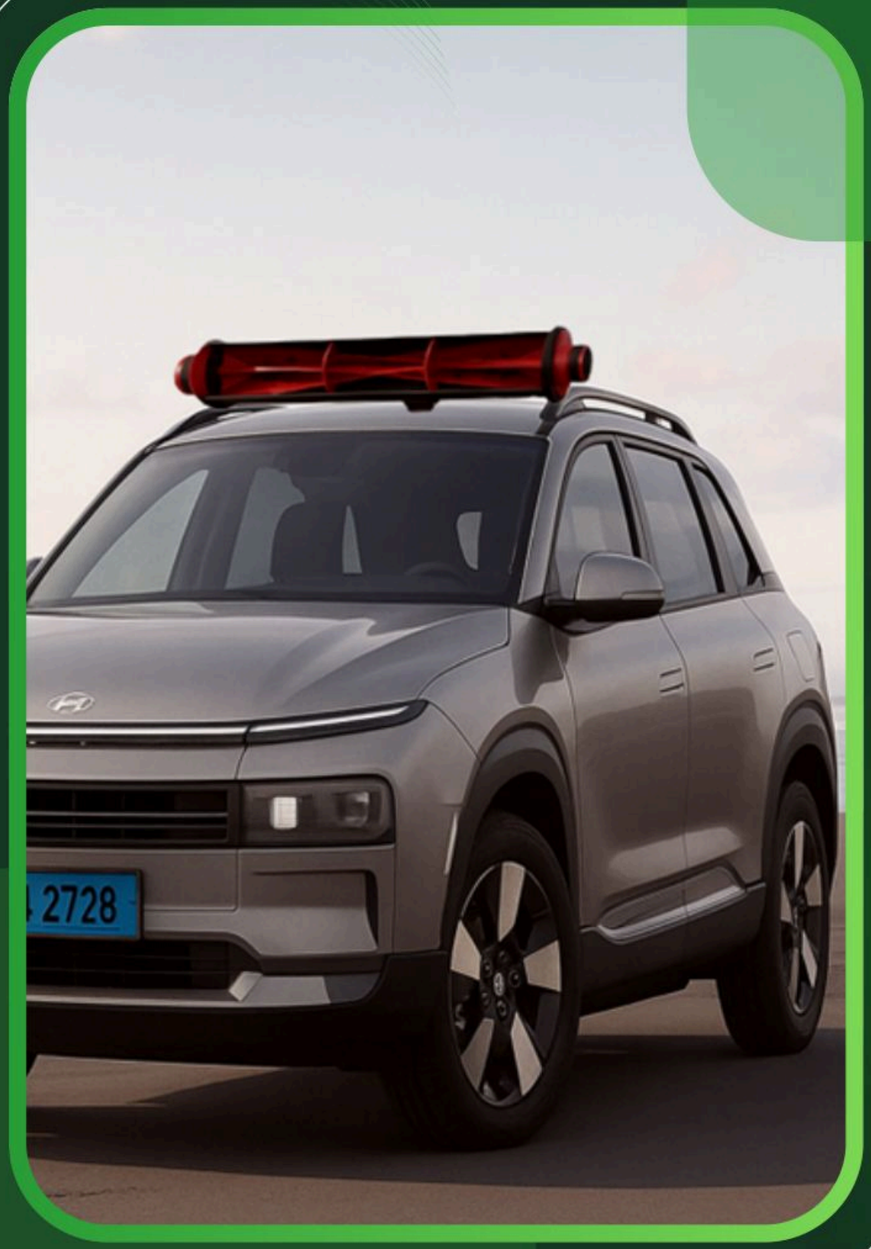
- Product Structure & Features
- This product is a compact modular wind power system featuring a Coreless Double-Rotor Generator and a Screw Blade design.
- The coreless generator structure eliminates the iron core, reducing rotational resistance and enabling responsive operation even under low-wind conditions.
- The double-rotor configuration places rotors on both sides of the stator, allowing the magnetic flux inside the generator to be utilized efficiently.
- The screw-shaped blade is designed to generate rotational force from wind coming from various directions and to maintain stable operation even in turbulent wind conditions.

※ Electrical configuration, inverter specification and ESS capacity may vary depending on installation conditions and project requirements.

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Application
The Single-Blade Wind Turbine is designed primarily for vehicle rooftops and camper vans.
It can also be installed in a wide range of renewable-energy applications, including:
Apartment balconies
Building exterior walls
Factory rooftops
Compact urban spaces
Product Value
Efficient power generation even in limited installation spaces
Responsive operation even at low wind speeds of 2 m/s
Suitable for carbon-neutral initiatives and RE100 applications

Price
Retail Price per Unit: KRW 1,500,000
VAT not included
For Bulk Orders:
Unit price may be negotiated depending on order quantity and delivery schedule
Volume discounts and delivery terms can be arranged separately



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Urban Wall-Mounted Modular Wind Power System Tow Blade 1000W

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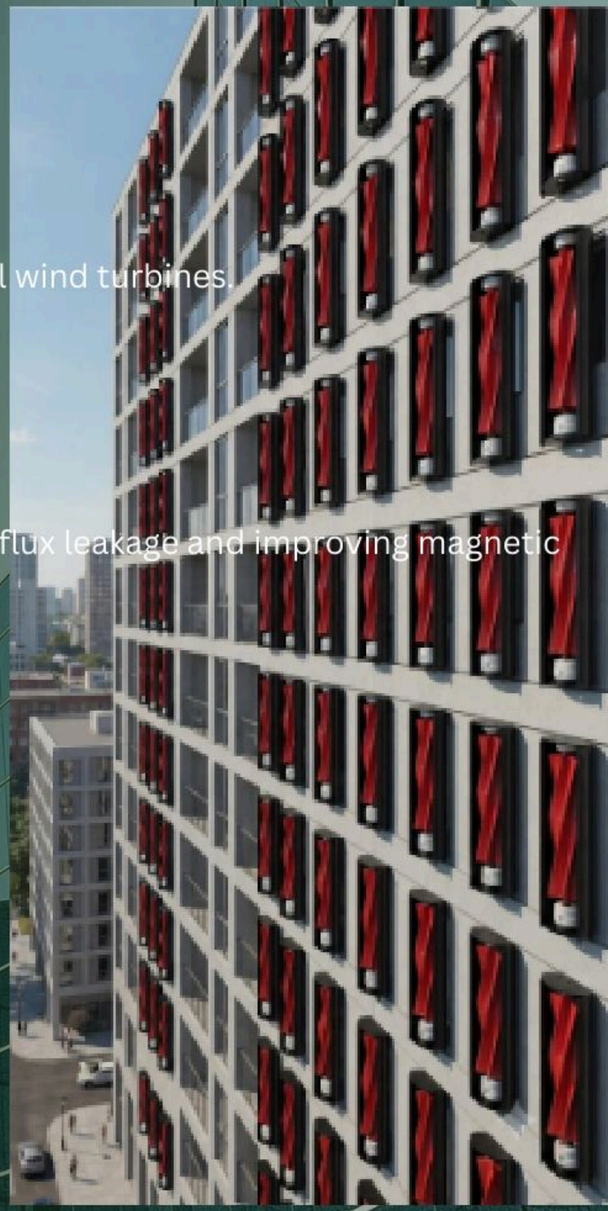
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Dual-Blade, 4-Generator System
Cut-in Wind Speed: 2 m/s | Rated Output: 1,000 W

Dual-Blade, 4-Generator System
Cut-in Wind Speed: 2 m/s | Rated Output: 1,000 W
Structural & Technical Advantages
This prototype incorporates a Coreless + Double-Rotor Generator structure to overcome the limitations of conventional small wind turbines.
Dual Coreless Structure
→ The stator contains no iron core, eliminating cogging torque and reducing rotational resistance.
→ Enables smooth and responsive rotation even at low rotational speeds and under light-wind conditions.
Double-Rotor Structure
→ Permanent magnets are arranged on both sides of the stator.
→ The opposing N–S magnetic poles concentrate the magnetic flux toward the center of the stator coils, minimizing magnetic flux leakage and improving magnetic utilization.

Through this technology:
Power output can be maintained at a level comparable to conventional cored generator systems.
Rotation is smoother and quieter.
The screw-blade design helps reduce rotational noise and enables smooth operation.
The blade housing is designed to enable start-up at wind speeds as low as 2 m/s.
The overall structure is compact and lightweight, making it suitable for installation in space-constrained urban environments.





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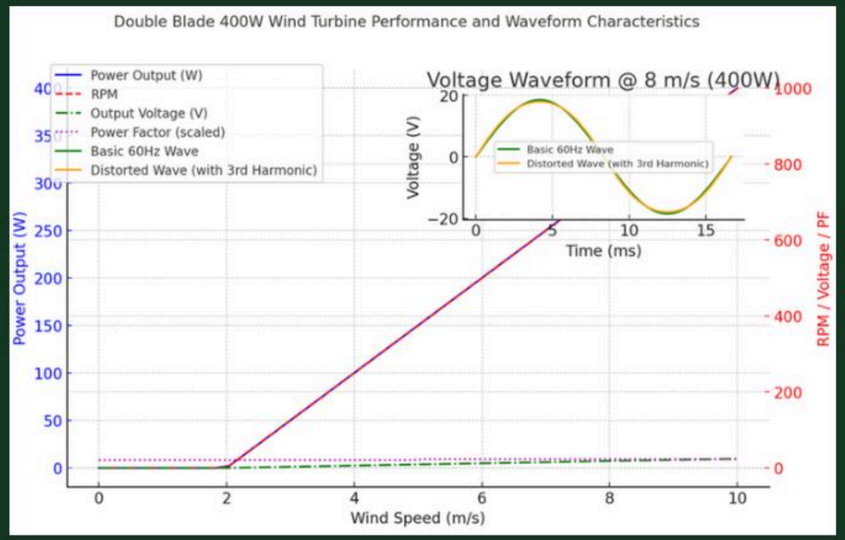
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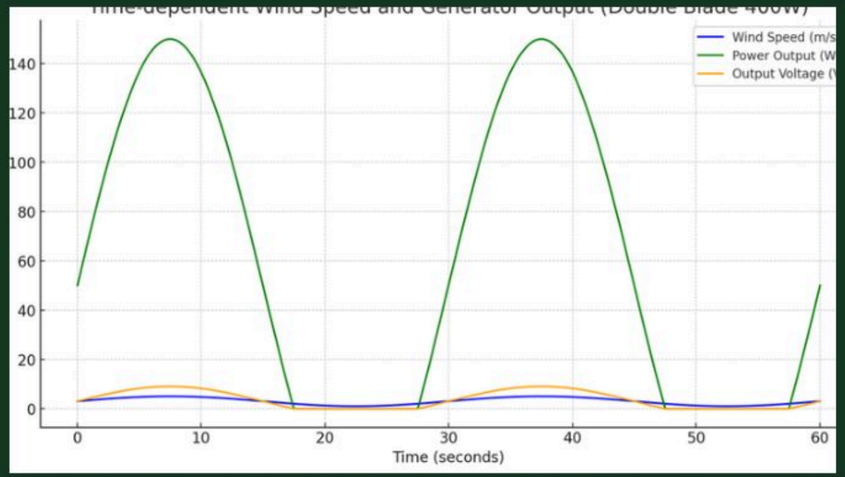
Two-Blade Wall-Mounted Wind Power System (1,000W)

Technical Data Sheet

Winding Resistance: 170 Ω × 2
(Actual resistance is reduced when connected in parallel)
→ Increased current capacity through the two-blade generator configuration.
Maximum Rotational Speed: 500 rpm
→ Maximum rotational speed at rated wind conditions.
Output Voltage: 12 V
→ Output voltage at rated power.
Blade Dimensions: 120 mm (W) × 900 mm (L) × 2 Blades
→ Two identical blades arranged in a horizontal opposed configuration.
Housing Dimensions: 450 mm (W) × 1,200 mm (H)
→ Expanded housing width to accommodate the two-blade generator system.



Power Factor (PF):
At 2 m/s start-up wind speed: Approx. 0.85
At rated wind speed or above: Approx. 0.95
Total Harmonic Distortion (THD):
Wind speed 2–5 m/s: Approx. 5%
Wind speed above 5 m/s: Approx. 3%
Output Power Efficiency: 75%–85%
→ Electrical efficiency range depending on wind speed and load conditions.
Output Waveform:
Fundamental frequency: 60 Hz sine wave
Includes some third-harmonic components
Internal Loss: Approx. 10%
→ Estimated system losses caused by winding resistance, friction, and other factors.



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Application

The Two-Blade Wind Power System is designed for renewable-energy support projects for residential houses, apartments, and other urban applications.

It can also be applied to a variety of installation environments, including:
Apartment balconies
Building exterior walls
Factory rooftops
Compact urban spaces

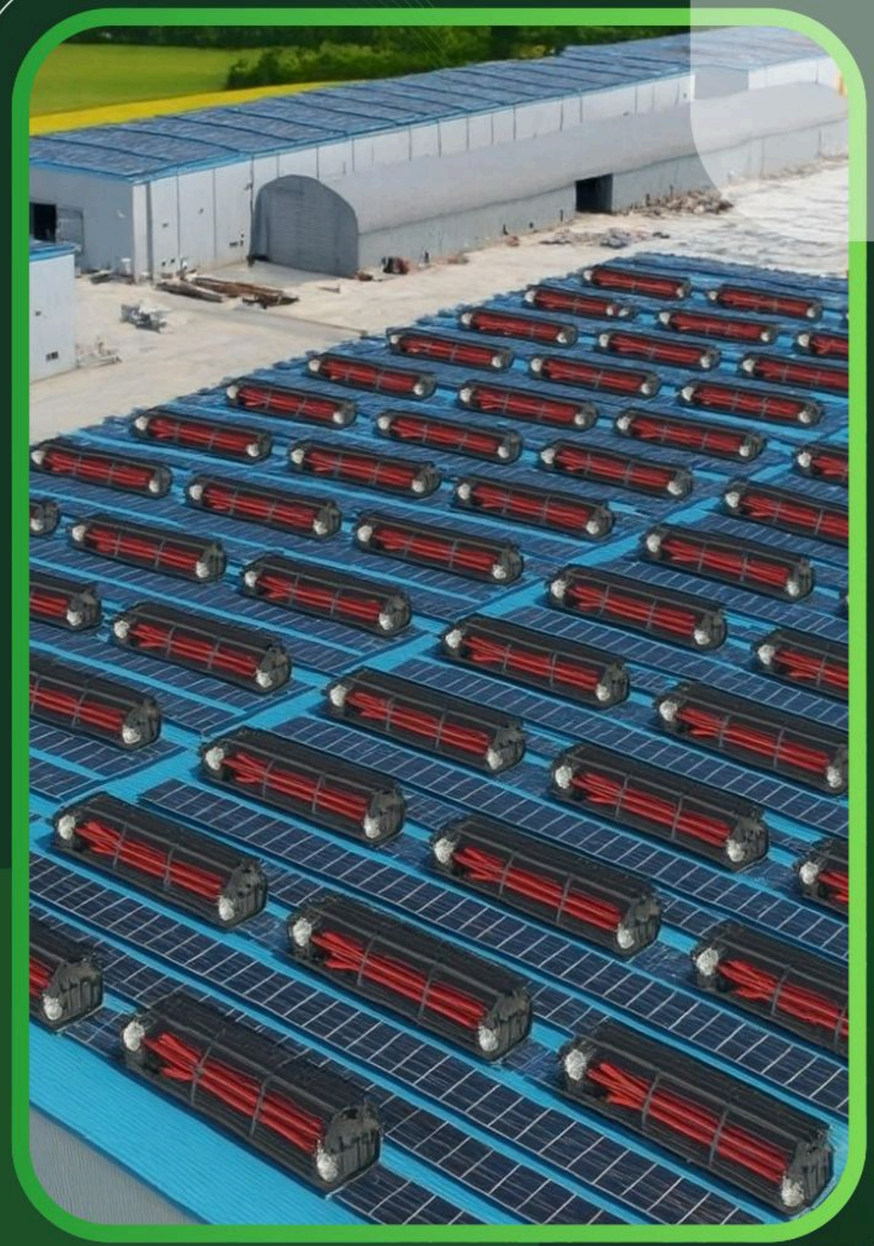
Product Value

Efficient power generation even in limited installation spaces
Responsive operation even at low wind speeds of 2 m/s
Ideal for carbon-neutral initiatives and RE100 applications



Price

Retail Price per Unit: KRW 3,000,000
VAT not included
For Bulk Orders:
Unit price may be negotiated depending on order quantity and delivery schedule
Volume discounts and delivery terms can be arranged separately
Company Info



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Urban Wall-Mounted Modular Wind Power System

Triple-Blade, 6-Generator System – 3 kW

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Triple-Blade, 6-Generator System

2m/S start , 3KW

The Triple-Blade Wind Power System is a multi-purpose wind power solution designed for installation on building exterior walls, apartment balconies, factory and residential rooftops, as well as for Energy Highway infrastructure and large-scale Power Wind Tower applications.

This product adopts a Double-Rotor Structure, Horizontal Opposed Configuration, and Screw Blade Design to overcome the structural limitations of conventional wind power systems.

The Double-Rotor Structure is designed to maximize magnetic flux utilization, enabling high-output power generation.

The Horizontal Opposed Configuration allows the three blades to rotate in a balanced manner, supporting stable and powerful operation.
The Screw Blade Design smoothly captures airflow while minimizing friction and noise, resulting in smooth rotational performance.

The rated output is 3 kW (500 W × 6 generators), and the system is designed to operate even under very low wind conditions of approximately 2 m/s, while also utilizing higher-speed airflow such as vehicle-induced wind.

In particular, the Triple-Blade system is designed for Energy Highway projects, where vehicle-induced airflow can be utilized for power generation. It can also be stacked and expanded as a Power Wind Tower module to form large-scale wind power systems with capacities reaching tens of megawatts.

Despite its compact size, the system is designed as a core technology for urban distributed power generation, supplementary power-grid applications, RE100 initiatives, and carbon-neutral energy projects.



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Triple-Blade Wall-Mounted Wind Power System (3,000 W)
Technical Data Sheet

Rated Output: 3,000 W
→ High output is achieved by configuring six generator channels in parallel within the triple-blade structure.

Winding Resistance: 170 Ω × 6
(Actual resistance is reduced when connected in parallel)
→ The six-channel generator configuration significantly increases current capacity.

Maximum Rotational Speed: 500 rpm
→ Maximum rotational speed maintained at rated wind conditions.

Output Voltage: 48 V
(Compatible with DC systems when connected to MPPT)
→ Optimized for connection with ESS and inverter systems.

Blade Dimensions: 120 mm (W) × 900 mm (L) × 3 Blades
→ Three blades arranged in a horizontal opposed + screw-blade configuration.

Housing Dimensions: 1,000 mm (W) × 1,200 mm (H) × 250 mm (D)
→ Modular housing designed to accommodate three blades and six generator channels.

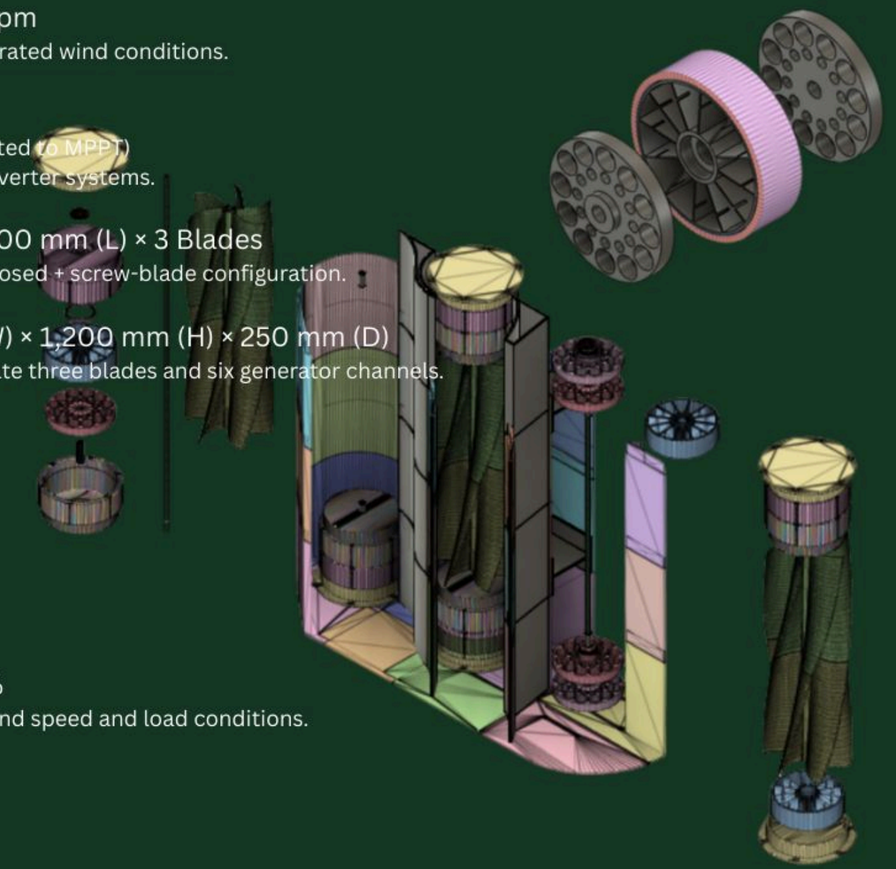
Power Factor (PF):
At 2 m/s start-up wind speed: Approx. 0.85
At rated wind speed or above: Approx. 0.95

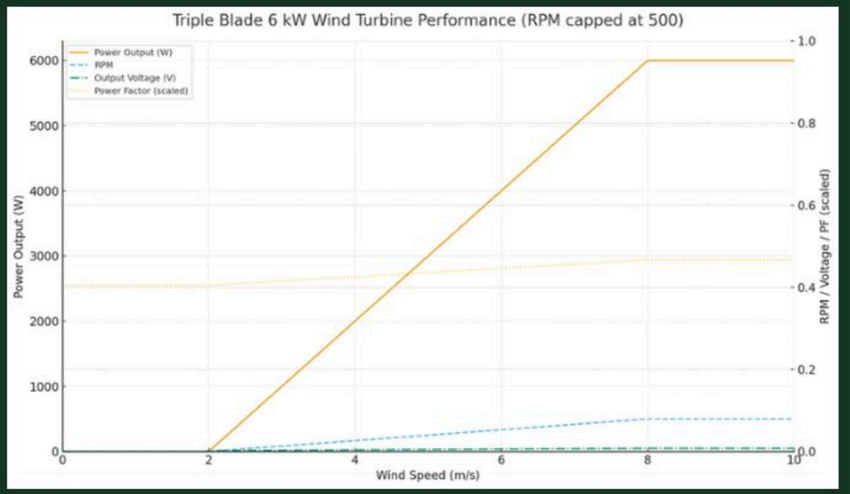
Total Harmonic Distortion (THD):
Wind speed 2–5 m/s: Approx. 5%
Wind speed above 5 m/s: Approx. 3%

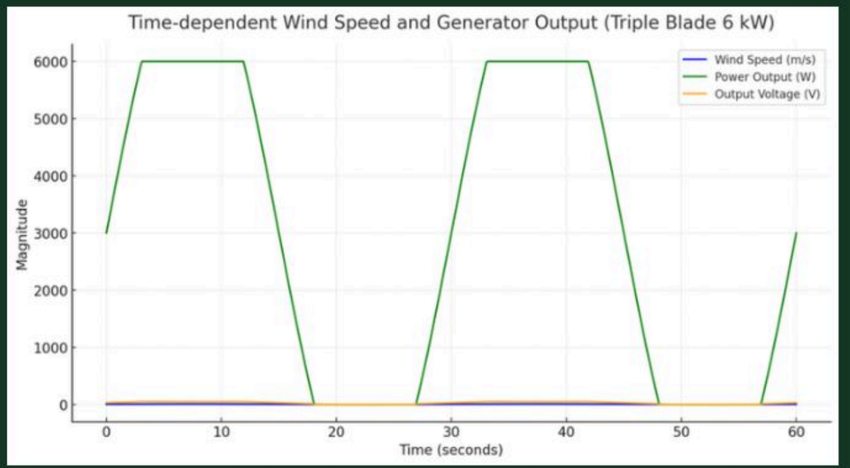
Output Power Efficiency: 75%–85%
→ Average efficiency range depending on wind speed and load conditions.

Output Waveform:
Fundamental frequency: 60 Hz sine wave
Includes some third-harmonic components

Internal Loss: Approx. 10%
→ Estimated system losses caused by winding resistance, friction, and other factors.







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Application
The Triple-Blade Wind Power System is a 3 kW high-output modular wind power system designed for large-scale urban distributed energy applications.

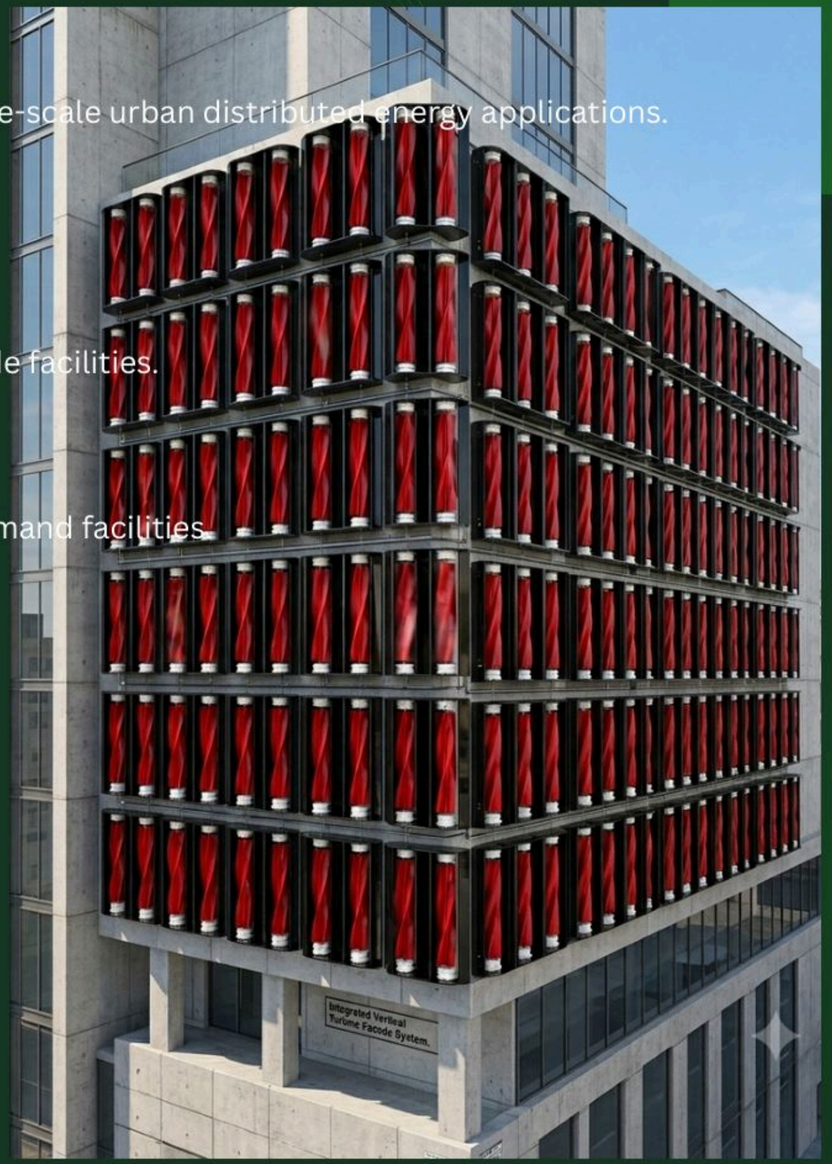
Key Applications

Energy Highway
Captures vehicle-induced airflow and converts it into electrical power.
Can be installed along road infrastructure such as streetlights, sound barriers, bridges, and other roadside facilities.

Power Wind Tower
Triple-blade modules can be vertically stacked to create larger-capacity wind power systems.
Suitable for installation at data centers, public buildings, industrial complexes, and other high-power-demand facilities.

Additional Applications
Building exterior walls and factory rooftops
Public and private renewable-energy projects supporting RE100 and carbon-neutral initiatives
Product Value
Efficient power generation in space-constrained environments
Responsive operation at low wind speeds of approximately 2 m/s
Suitable for RE100 and carbon-neutral energy projects
Modular and scalable configuration for larger power-generation systems

Price
Retail Price per Unit: KRW 5,000,000
VAT not included
For Bulk Orders:
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Volume discounts and delivery terms can be arranged separately



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Industrial / Factory Wind Power System

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Industrial & Factory Wind Power System

The Industrial & Factory Wind Power System is a 6 kW modular wind power system designed for facilities with high electricity demand, including factories, industrial complexes, logistics centers, and large commercial or industrial buildings.

Expanding beyond the conventional structure of small wind turbines, the system is designed so that wind power modules can be configured according to the installation conditions and power requirements of each industrial site.

The system incorporates a Coreless Double-Rotor Generator and Screw Blade structure, enabling operation under low-wind conditions while supporting a modular design that allows flexible installation and expansion.

The rated output is 6 kW, and the system is configured with 1 blade, 2 generators, and 4 BLDC motors in a hybrid drive structure.

The BLDC motors are designed to assist in maintaining generator rotation and providing auxiliary drive depending on operating conditions and system control requirements, with the goal of supporting more stable operation under changing wind conditions at industrial sites.

Industrial facilities typically operate a wide range of electrical loads, including production equipment, lighting, HVAC systems, and charging equipment. Accordingly, this system can be expanded from a standalone wind power unit into a distributed power system integrated with a dedicated inverter, power controller, and ESS.

Multiple wind power modules can also be connected in parallel to increase total installed capacity, while system specifications can be adjusted according to site voltage, frequency, grid-connection requirements, and power demand.



Wind Module → Power Controller → Inverter → ESS / Grid / Load

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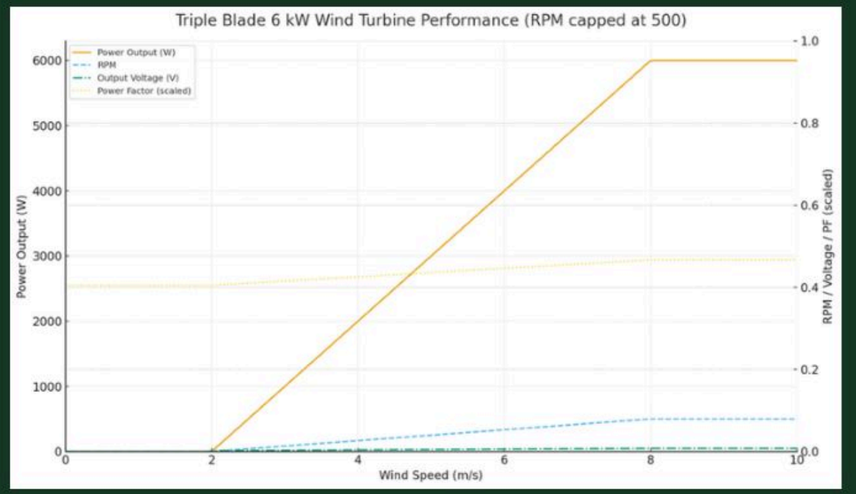
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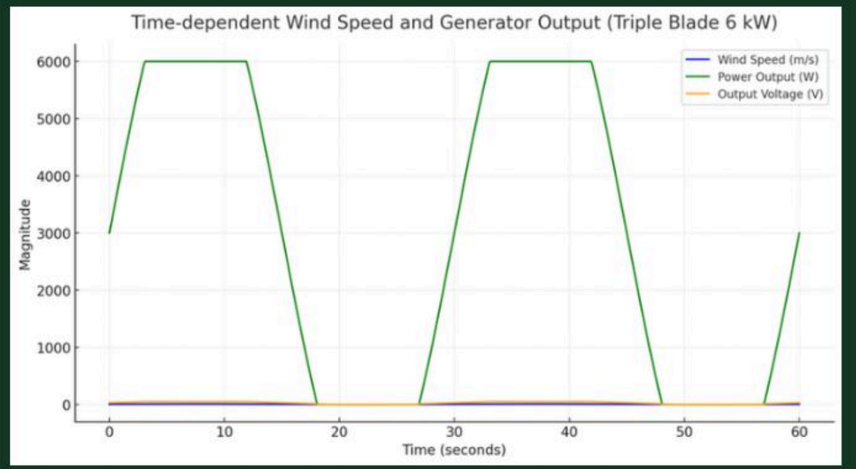
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Man-Ik Kim

(Technical Data Sheet)

Industrial & Factory Wind Power System – 6 kW

Technical Data Sheet
Rated Output: 6,000 W
System Configuration: 3 kW Module × 2
Installation Structure: Vertical Dual-Module Configuration
Generator Type: Coreless Double-Rotor Generator
Blade Type: Screw Blade
Modular Stacking Structure
Inverter Integration: Available
ESS Integration: Available
Operating Configuration: Grid-Connected / Stand-Alone
Main Applications: Industrial complexes, factories, logistics centers, and large-scale power-demand facilities





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Hydrogen–Wind Hybrid Power System

6000W / 1 Blade / 2 Generator / 4 BLDC Motor

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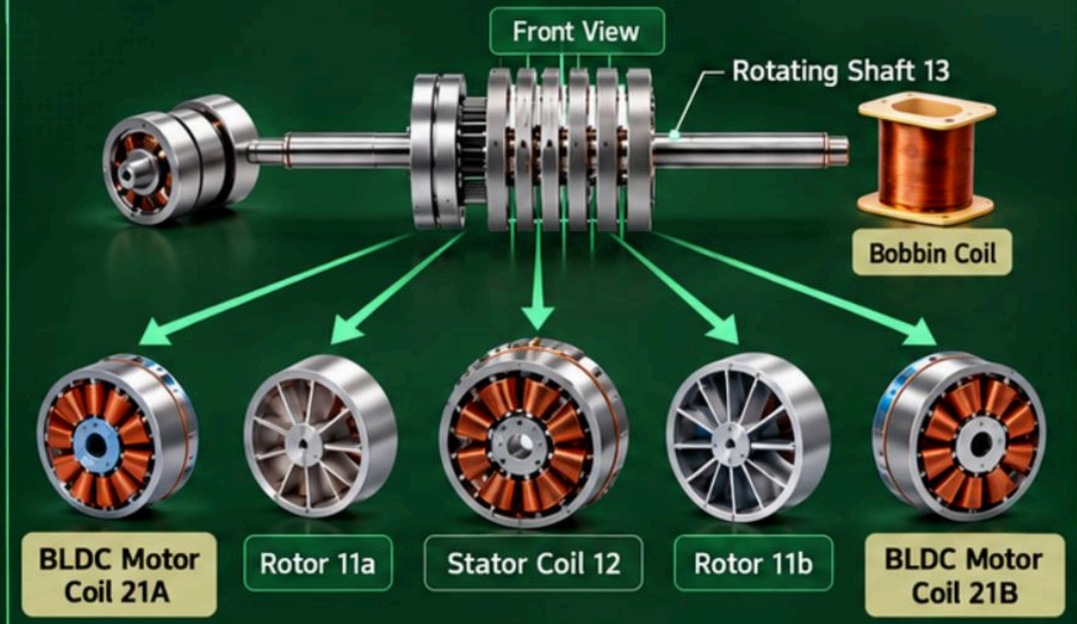
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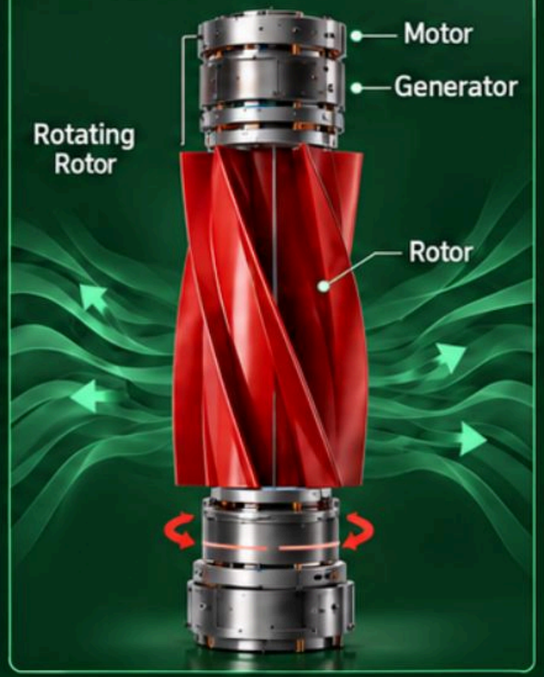
SWH

Small Wind Hydrogen Hybrid Power Module

Internal Structure & Main Components (Front View)



Screw Blade Rotor System



Completed Module (Exterior)



Hydrogen Auxiliary Power System Configuration



A New Paradigm for Distributed Renewable Energy

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Hydrogen–Wind Hybrid Power System – 6,000 W

Technical Data Sheet

Rated Output: 6,000 W

Blade Configuration: 1 Blade

Generator Configuration: 2 Generators

Assist Drive: 4 BLDC Motors

System Type: Hydrogen–Wind Hybrid System

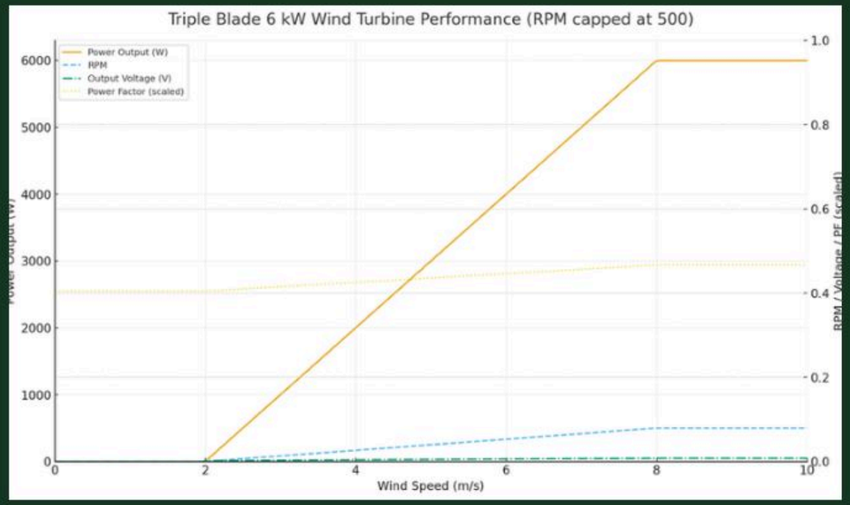
Dimensions: H 1,700 × W 625 × D 625 mm

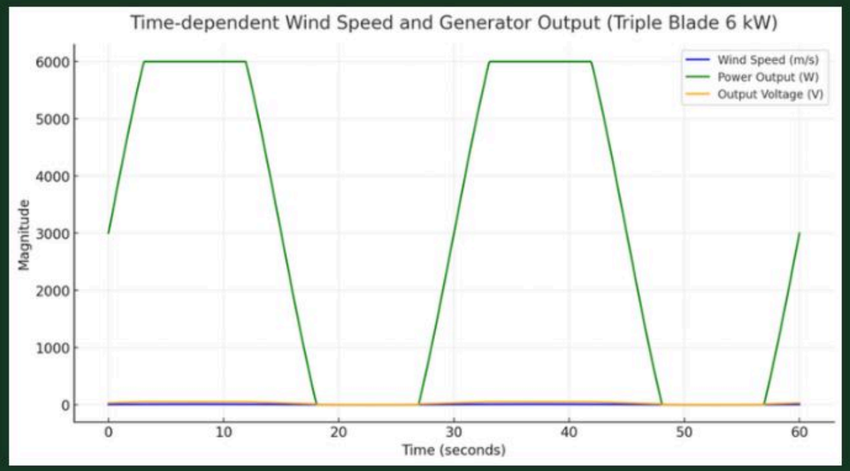
Structure: Modular Wind Power System

Power Conversion System: Compatible with Dedicated Inverter

Energy Storage: ESS Integration Available

Operating Configuration: Wind Generation + BLDC Assist Drive





Hydrogen Fuel Cell → Power Controller → 4 BLDC Motors → Wind Generator Assist

※ Final inverter, hydrogen fuel-cell, controller and ESS specifications are determined according to project requirements.


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HYDROGEN HYBRID
ROAD INFRASTRUCTURE
DISTRIBUTED POWER GRID
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Gimpo-si, Gyeonggi-do 10063, Republic of Korea
E-mail : kjs8876@naver.com
Tel : +82-31-984-3301
Mobile : +82-10-4405-5604)
Project Manager | Man-Ik Kim