



**Control Electric
Co. Pvt Ltd**

We sell satisfaction...

SMALL WIND TURBINE SOLUTIONS

Reliable • Efficient • Sustainable



ABOUT CONTROL ELECTRIC

Control Electric Co. Pvt. Ltd. is a leading provider of renewable energy and industrial automation solutions. We design, manufacture, integrate and commission wind, solar and hybrid energy systems for residential, commercial, industrial and agricultural applications. Our solutions are engineered for reliability, efficiency and long service life.

OUR RENEWABLE ENERGY SOLUTIONS



SOLAR POWER PLANTS

- Rooftop Solar
- Ground Mounted Solar
- On-grid
- Off-grid
- Hybrid Solar



SMALL WIND TURBINE SYSTEMS

- 500 W
- 5 kW
- 10kW
- 20kW
- 25kW



HYBRID SOLAR + WIND SYSTEMS

- Solar + Wind + Battery
- Solar + Wind + DG Integration
- Grid Interactive Hybrid
- Remote Area Power Systems



BATTERY ENERGY STORAGE SYSTEMS

- Lithium-ion
- Lead Acid
- 48V / Higher Voltage Systems



INDUSTRIAL ENERGY SOLUTIONS

- SCADA Monitoring
- Remote Monitoring
- Energy Management
- DG Synchronization
- Automation Solutions

WIND TURBINE MODELS

Model	Capacity	Type
CEC-500	500 W	Helical Horizontal
CEC-5K	Upto 5 kW	Helical / Vertical
CEC-10K	Upto 10 kW	Helical / Vertical
CEC-20K	Upto 20 kW	Helical / Vertical
CEC-25K	Upto 25 kW	Helical / Vertical

APPLICATIONS



Residential



Farm Houses



Agriculture



Telecom Towers



Industries



Schools



Hospitals



Rural Electrification



Resorts



Street Lighting



Remote Areas



And More...

TYPICAL SOLAR-WIND-BATTERY HYBRID POWER SYSTEM



Clean Energy
Better Future



Low Maintenance
High Reliability



Environment
Friendly



Cost Effective
Solutions

TECHNICAL SPECIFICATIONS

AVAILABLE MODELS

- Straight-Bladed Vertical Axis Turbines (1 kW – 5 kW)
- Helical Horizontal Axis Turbines (0.5 kW – 5 kW)

TECHNOLOGY HIGHLIGHTS

- ✓ Patent pending blade control mechanism
- ✓ Integrated gearbox for improved performance
- ✓ Mechanical braking system for safe operation
- ✓ Low speed permanent magnet generator (PMG)
- ✓ Low cut-in wind speed
- ✓ Rugged FRP blades and corrosion resistant structure
- ✓ Designed for decentralized renewable energy applications
- ✓ Minimal maintenance and long service life
- ✓ Compatible with battery storage and grid systems

HELICAL HORIZONTAL AXIS TURBINES



STRAIGHT-BLADED VERTICAL AXIS TURBINES



HELICAL HORIZONTAL AXIS TURBINES



Rated at 10 m/s

Operable up to 15 m/s



AEP based on Weibull distribution ($k = 2.0$)

Rudder-based yawing mechanism

STRAIGHT-BLADED VERTICAL AXIS TURBINES



Rated at 10 m/s

Operable up to 15 m/s



Omni-directional operation –
no yaw system

TECHNICAL SPECIFICATIONS

S.No	Component	Details
1	Axis of Rotation	Horizontal / Vertical
2	Rotor a. Blades b. Assembly structure c. Control Mechanism	3 / 4 Nos. FRP Made. A tripod structure is used to assemble the blades rather than leaving them as a cantilevered body to provide stability. No electronics are used for pitch control, and it is achieved through floating eccentric control in a straight-bladed turbine. (patent pending). Yaw control for helical-bladed turbine.
3	Generator a. Type b. Capacity c. Rated Speed	Radial Flux PMG 500W to 25 kW 300 / 150 rpm*
4	Foundation a. Type b. Height c. Area d. Anchor	On-site Concrete Site specific Site specific Steel wire anchoring
5	Electrical and Electronics a. Rectifier b. Voltage follower	MDS 100A According to the battery voltage
6	Storage	12V/24V/48V batteries of customer choice

KEY ADVANTAGES



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Specifications are indicative and subject to site conditions and final engineering validation.