

**EVEREADY™**



**kestrel**  
renewable energy

## WIND TURBINES

Through strict adherence to quality standards (ISO 9001 and 14001) and continuous technological development, Kestrel Renewable Energy's turbines are the most efficient and best-performing wind turbines available. Advanced engineering and robust construction make them the turbine of choice both locally and internationally.

### 4 POWERFUL MODELS

Each specifically designed to generate the desired amount of renewable energy to meet your requirements.



**e160<sup>i</sup>**



**e230<sup>i</sup>**



**e300<sup>i</sup>**



**e400<sup>nb</sup>**



# RENEWABLE ENERGY SOLUTIONS

## PATENTED PITCH CONTROL

Part of Kestrel's leading technology is the patented PITCH CONTROL. The blade pitch angle changes in high wind speeds. This feature is critical in high wind speed areas as the blade rotor does not turn out of the wind or furl as is the case with most fixed blade designs. As the blade pitch angle changes, speed is maintained so that maximum power can continue to be produced. The thrust force on the turbine is also simultaneously reduced. The pitch control system features on e230i, e300i and e400nb models.





SPECIFICATIONS

SMALL WIND TURBINE CLASS	11
MAXIMUM POWER <sup>A</sup>	700W
RATED OUTPUT <sup>B</sup>	600W
RATED WIND SPEED <sup>B</sup>	13.5ms <sup>-1</sup>
CUT-IN WIND SPEED	2.5ms <sup>-1</sup>
GENERATOR TYPE	Permanent-nagnet Axial flux brushless
ROTOR DIAMETER	1.6m (5.24ft)
NUMBER OF BLADES	5
BLADE MATERIAL	Fibreglass
TOWER TOP MASS	30kg (66lb)
TOWER HEIGHT	12-18m (39-59ft)
TOWER TYPE	Monopole
OVERSPEED PROTECTION	Rotor Turbulence
CONTROLLER TYPE	PWM diversion control
OUTPUT VOLTAGE	12, 24, 36, 48, 110, 200Vdc
APPLICATION	Battery-Charging Hybrid

SPECIFICATIONS

SMALL WIND TURBINE CLASS	11
MAXIMUM POWER <sup>A</sup>	850W
RATED OUTPUT <sup>B</sup>	800W
RATED WIND SPEED <sup>B</sup>	12.5ms <sup>-1</sup>
CUT-IN WIND SPEED	2.5ms <sup>-1</sup>
GENERATOR TYPE	Permanent-nagnet Axial flux brushless
ROTOR DIAMETER	2.3m (7.54ft)
NUMBER OF BLADES	3
BLADE MATERIAL	Fibreglass
TOWER TOP MASS	45kg (99lb)
TOWER HEIGHT	12-18m (39-59ft)
TOWER TYPE	Monopole
OVERSPEED PROTECTION	Pitch Control
CONTROLLER TYPE	PWM diversion control
OUTPUT VOLTAGE	12, 24, 36, 48, 110, 200Vdc
APPLICATION	Battery-Charging Hybrid



SPECIFICATIONS

SMALL WIND TURBINE CLASS	11
MAXIMUM POWER <sup>A</sup>	1000W
RATED OUTPUT <sup>B</sup>	1000W
RATED WIND SPEED <sup>B</sup>	10.5ms <sup>-1</sup>
CUT-IN WIND SPEED	2.5ms <sup>-1</sup>
GENERATOR TYPE	Permanent-nagnet Axial flux brushless
ROTOR DIAMETER	3m (9.84ft)
NUMBER OF BLADES	3
BLADE MATERIAL	Fibreglass
TOWER TOP MASS	75kg (165lb)
TOWER HEIGHT	12-18m (39-59ft)
TOWER TYPE	Monopole
OVERSPEED PROTECTION	Pitch Control
CONTROLLER TYPE	PWM diversion control & MPPT
OUTPUT VOLTAGE	12, 24, 36, 48, 80, 110, 200Vdc
APPLICATION	Battery-Charging Hybrid Water Pumping

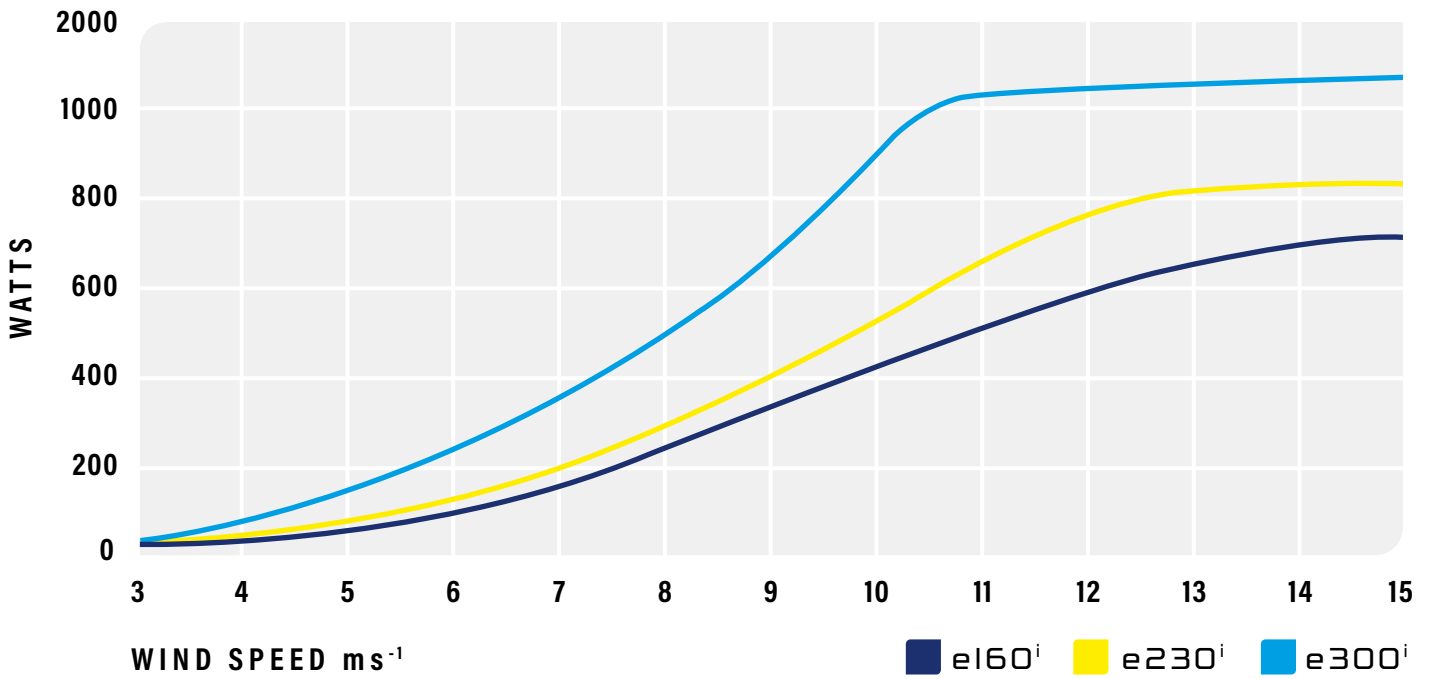
SPECIFICATIONS

SMALL WIND TURBINE CLASS	1
MAXIMUM POWER <sup>A</sup>	3500W
RATED OUTPUT <sup>B</sup>	3000W
RATED WIND SPEED <sup>B</sup>	12.0ms <sup>-1</sup>
CUT-IN WIND SPEED	4.0ms <sup>-1</sup>
GENERATOR TYPE	Permanent-nagnet Axial flux brushless
ROTOR DIAMETER	4m (13.1ft)
NUMBER OF BLADES	3
BLADE MATERIAL	Fibreglass
TOWER TOP MASS	230kg (507lb)
TOWER HEIGHT	12-18m (39-59ft)
TOWER TYPE	Monopole
OVERSPEED PROTECTION	Pitch Control
CONTROLLER TYPE	MPPT
OUTPUT VOLTAGE	48, 110, 250Vdc
APPLICATION	Battery Charging Hybrid Water Pumping

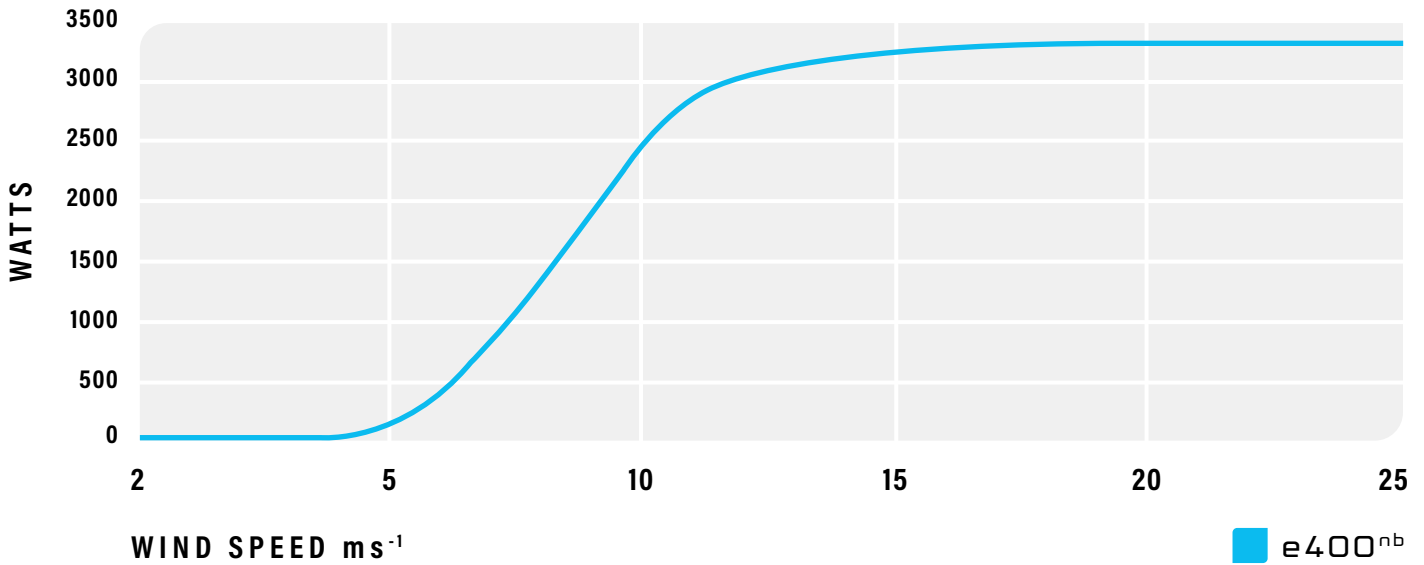
\*A | Nominal bench test power activity \*B | Nominal values subject to environmental and atmospheric condition. Output will vary in accordance to system inefficiencies and cable losses

PWM (Pulse Width Modulation) MPPT (Maximum Powerpoint Tracking)

## e160<sup>i</sup> | e230<sup>i</sup> | e300<sup>i</sup> AVERAGE POWER



## e400<sup>nb</sup> AVERAGE POWER



### WIND SPEED TABLE

<b>Km/h</b>	7,2	9,0	10,8	12,6	14,4	16,2	18,0	19,8	21,6	23,4	25,2	27,0	28,8	32,4	36,0	39,6	43,2	46,8
<b>m/s</b>	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	9,0	10,0	11,0	12,0	13,0
<b>mph</b>	4,5	5,6	6,7	7,8	8,9	10,1	11,2	12,3	13,4	14,5	15,7	16,8	17,9	20,1	22,4	24,6	26,8	29,1

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