

ev1200-60kW

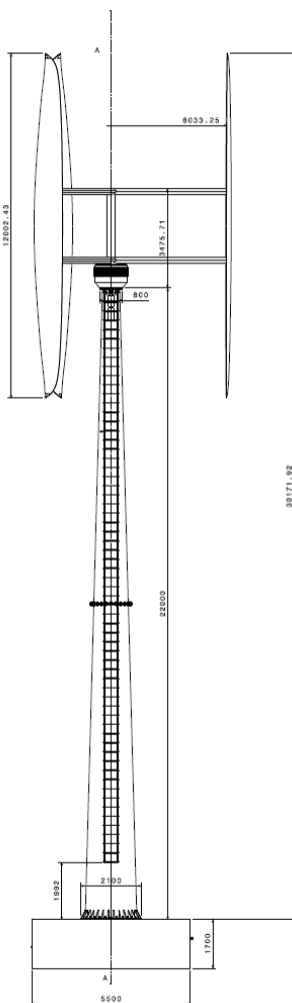
Dynapitch

Product specification - preliminary



The ev1200 is Envergate's flagship and is the world's first vertical wind turbine of this size to incorporate an active-controlled wing pitching system.

The electrical pitching system optimises the angle of the wings within the rotation based on the prevailing wind-direction, wind-speed, air-temperature and air-density. Crucially, these pitch corrections enable the wings to operate at the highest performance levels in turbulent airflow conditions.



Technical specification	ev1200
Nominal performance at 11,5m/s	60kVA
Installed peak power	85kVA
Grid-Power adjustable	30-60kVA
Bidirectional Grid / Battery Operation	optional
Startup / Engage / Cut-off wind speed	1,6 / 2,5 / 22m/s
Wing span / Rotor diameter / Swept area	12m / 10m / 120m ²
Mast / Rotor Center / Top wing tip height	22 / 24 / 30m
Wing, 135kg, foiled, matt white	80% cfk / 20% gfk
Pitch control X/Y axis	Electrical Servo
Generator 60KVA, 47 Hz, 3 phase	35 pole pair, PMG
Inverter 60KVA with Buck-Booster Converter	Efficiency >97%
Net feed-ON-GRID (50/60Hz)	400VAC (+/- 3%)
Power factor range (adjustable)	0,8 ind. to 0,8 cap.
Total harmonics distortion (HDT) on grid	< 3%
Turbine control (Master-Slave via fiber optics)	2 PLC
Data transmission to Web Portal, Remote Login	GPRS/UMTS/xDSL
Annual performance at 5m/s *	73'000 kWh/a
Annual performance at 7,5m/s *	201'000 kWh/a
CE Certification based on IEC 61400-2:2006	Wind Class 2
Noise emission @ 1-10m/s wind speed	38 - 43 dB
First custom deliveries	September 2012
Delivery time, calendar days	120
Order placement	Yes
* ISA Standard Atmosphere, Weibull 2	
Range of application	ev1200
Family houses, residences, hotels	✓
Farmyards, urban areas, communities	✓
Industrial buildings, park areas	✓
Windfarms, Compaction, Repowering	✓