



SWCC Wind Turbine Certification Program

No./SWCC 22-02

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www.smallwindcertification.org | (800) 423-6587 | (562) 699-0543

CERTIFICATION HOLDER: Kodair Wind Designs Ltd. Cashla Athenry, County Galway Ireland H65 V243 www.kodairwind.com	EVALUATION SUBJECT	
	BRAND:	Kodair Wind Designs
	MODEL:	KW20
	TYPE:	Small Wind Turbine – Electricity producing, with peak power <150kW

PRODUCT CERTIFICATION SYSTEM:

The SWCC wind turbine certification program includes safety and durability evaluations and performance and acoustic ratings for small wind turbines as established in the *ICC-SRCC Rules for Wind Turbine Listing Reports* per the standard listed below. The program also includes periodic factory inspections and surveillance of the manufacturer's quality management system and field evaluations.

COMPLIANCE WITH THE FOLLOWING STANDARD(S): *ACP 101-1 – 2021, Small Wind Turbine Standard*

TURBINE PARAMETERS:

The following parameters were provided by the manufacturer and verified by the testing laboratory.

Rotor Configuration:	Horizontal (HAWT)	Overspeed Control:	Active Pitch with pull- back system
Number of Blades:	3	Power Form:	240 VAC, 1-phase, 60 Hz
Rotor Diameter:	13.1 m	Maximum Overcurrent Protection:	208 AC @ 240 VAC
Rotor Swept Area:	134.8 m ²	Inverter:	ELPower 30kW UL
Cut-In Wind Speed:	3 m/s		
Cut-Out Wind Speed:	25 m/s		

POWER PERFORMANCE RATINGS:

Power performance ratings are determined from the laboratory testing and calculated in accordance with the methods in the *ACP 101-1-2021* standard. Actual power, energy production and sound levels will vary depending on site conditions for installed turbines. Ratings are provided at standardized conditions to allow for comparison between certified turbines.

ACP Reference Annual Energy @ 6 m/s

Estimated annual energy production assuming an average wind speed of 6 m/s (13.4 mph), a Rayleigh wind speed distribution, sea-level air density, and 100% availability.

58,508
kWh/year

ACP Reference Sound Pressure Level

The sound level that will not be exceeded 95% of the time, assuming an annual average wind speed of 5 m/s (11.2 mph), a Rayleigh wind speed distribution, sea-level air density, 100% availability and an observer location 60 m (~200 ft) from the rotor center.

41.8*
db(A)

ACP Reference Power @ 11 m/s

The wind turbine power output at 11 m/s (24.6 mph) at standard sea-level conditions.

20.3
kW

ACP Peak Power @ 14 m/s

The wind turbine power output measured at peak power wind speed of 14 m/s (31.3 mph).

20.8
kW

*Deficiency: Insufficient acoustic data was collected at several wind speeds, as required by IEC 61400-11, ed. 3, Annex F. Additional testing to be conducted by 2026. Acoustic results subject to change with the addition of the new data.

DESIGN & DURABILITY:



Turbine design and duration test comply with ACP 101-1 Standard – 2021 for an IEC Class II SWT with an average wind speed (V_{ave}) of 8.5 m/s and reference wind speed (V_{ref}) of 42.5 m/s. The turbine satisfied Duration Testing requirements. ACP 101-1 modifies the duration testing specified in IEC 61400-2, ed. 3 to require at least 1000 hours of power production including at least 10 hours of wind speeds 15 m/s or greater.

IDENTIFICATION:

Certified turbines must be identified with the certification mark and information below provided in the installation and/or operation manual in accordance with the *Rules for Certification Mark Use* and ACP 101-1:



1. Manufacturer's name and model number
2. ACP Reference Annual Energy
3. ACP Reference Power
4. ACP Peak Power @ Peak Power Windspeed
5. ACP Reference Sound Pressure Level
6. Name and website of certification body granting certification to SWT model

CONDITIONS:

The small wind turbine certification is subject to the following conditions:

1. Turbine must be installed and operated in accordance with the manufacturer's instructions and local codes. Where applicable, turbines interconnected to electrical supply grids must be in accordance with the manufacturer's instructions, local codes and utility requirements.
2. Performance and acoustic ratings have been determined in accordance with the testing and calculation methods established in the compliance standard listed. Actual performance will vary based on the specific usage, installation and local environmental conditions.
3. Compliance assessment is conducted in accordance with the requirements and scope of the listed standard. The certification does not include testing or assessment of the tower or tower foundation. The certifications do not address electrical safety.
4. Certifications are not to be construed as representing aesthetics or any other attributes not specifically addressed in the listed standard, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use.
5. There is no warranty by ICC-SRCC express or implied, as to any finding or other matter in this certification, or as to any product covered by the certification.
6. Changes to the design of this wind turbine are to be approved by ICC-SWCC. If changes are made to the turbine without approval, this Certificate is not valid.
7. This document must be reproduced in its entirety.
8. Certification status should be confirmed on the ICC-SWCC Directory at www.smallwindcertification.org and are subject to annual review and renewal.

Shawn Martin

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