



CF250 – 250kW

CF250 General Data

Supplier/ Manufacturer	C&F Green Energy
Configuration	Horizontal Axis
Life Expectancy	20 Years
Drive Train	Direct Drive
Service Maintenance	Annually
Rated Power	250kW @ 9.0m/s
Cut In Wind Speed	3.0m/sec.
Cut Out Wind Speed	25 m/sec.
Rated Wind Speed	9.5 m/sec.
Survival Wind Speed	60 m/sec.
Passive Power Regulation	Active pitching (blade-angle adjustment)
Active Power Regulation	Fully variable back-to-back IGBT system
Noise Emissions	35dB(a)
Ambient Temperatures	From -10°C UP TO 40°C
Electrical Configuration	Inverter Connected
CE Compliant	Yes

Applied Standards

Degree of Protection	IP55
Standards	IEC 61400-1

Rotor

Rotor Diameter	35m
Rotor Speed	38rpm
Rotor Weight	4 Tonnes
Power Regulation	Active Blade Pitch

Blades

Number of Blades	3
Length	16m
Swept Area	952m ²
Position	Upwind
Direction	Clockwise

Material	Fiberglass/ Vinyl-ester
Colour	Matt White. Ral 9018
Weight	2300kg per set of 3

Shaft Assembly

Shaft Material	EN24T
Bearing Housing Type	Ductile Cast Iron
Bearing Type	Dual Spherical Roller
Bearing Lubrication	Grease

Fairing

Nacelle	2 Part - Fiberglass
Spinner	4 Part - Fiberglass

Electrical Output

Rated Turbine Output	250kW, 263 kVA in 9.5 m/s wind
Maximum Continuous Turbine Output	250kW, 263 kVA
Maximum 1 Minute Turbine Output	250kW, 263 kVA
Maximum 1 Minute Reactive Requirement	1 kVARS
Maximum Feeder Current	380A
Design Power Factor	0.96
Ofgem Total Installed	250kW
Ofgem Declared Net Capacity	250kW

Brake System

Primary Brake System	Full Blade Pitching
Back Up Brake System	1 Passive Spring Applied, Hydraulically Released + 1 Hydraulic Active
Primary Brake Compressor	Piston Type – AC Motor
Primary Brake Working Pressure	95 Bar

Yaw System

Type	Active Yaw
Signal From	Anemometer
Yaw Slew Ring	4 Point Ball Bearing
Yaw Drive Type	Double AC Motor with Planetary Gearbox
Damping Device Resisters	Active & Passive Yaw Brake
Electrical Connection	Twist Cable
Yaw Locking Device	Hydraulic Brake & Electric Brake on Motor

Generator

Manufacturer	C&F Green Energy
Type	Permanent Magnet (Radial)
Voltage	400V
Frequency	50Hz
Winding	Star
Rated Power	250kW
Rated Current	362A
Number of Poles	48
Rated Rotation Speed	40

Nacelle

Nacelle Frame	Welded Structure
Nacelle Frame Finish	Primer & Paint
Nacelle Cover	2 Parts Fiberglass
Dimensions	
Weight	12 Tonne Approx.
Colour	RAL 9018

Tower

Type	Monopole Steel with access door
Sections	3 Sections bolted on site
Weight	16 Tonne
Hub Height	35/40/50m
Blade Tip Heights	52.5m/57.5m/67.5m
Location Ladder	Internal with fall arrest system and work platform
Turbine Access	Internal with fall arrest system and work platform
Colour	Matt White Ral.9018

Controller

Manufacturer	Phoenix Contact
Model	PLC-ILC-150-GSM
Remote Monitoring	Bespoke SCADA
Data Logging	Yes