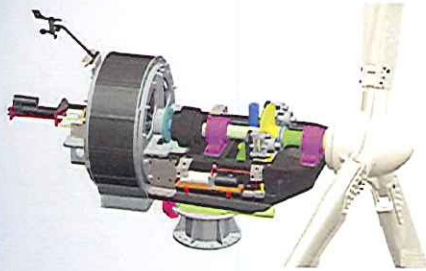


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Controller/GSM

C&F have developed their own microprocessor to control their range of turbines. The microprocessor is GSM enabled, allowing the machine to be remotely monitored and controlled over the internet or even by mobile phone. This facility allows us to monitor your turbine 24 x 7 at our monitoring / data centre, ensuring that your turbine is operating to its full potential at all times. This provides the customer with peace of mind that their investment is continuously working for them.



Connection Options (Grid Tie or Off Grid Connections)

We offer a complete hybrid solution including backup DC power, battery storage and control systems.



Carbon Credits

Leading the way in the renewables field, C&F Green Energy is currently establishing a carbon credits system for its customers. Once your turbine has been installed, the turbines output will be monitored on an ongoing basis. C&F will then issue the customer with an accredited certificate detailing the carbon credits produced each year. This could, in turn, be offset against a carbon tax.



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C&F Green Energy is part of the globally renowned Irish owned C&F Group, C&F was first established in 1989 in Galway, Ireland and now employs over 1,400 people in 7 sites worldwide. With manufacturing locations in Ireland, Germany, the UK, The Czech Republic, the Philippines and China, C&F is a global company with a local face.

The proof of our engineering capabilities can be seen from our customer list which includes IBM, EMC, BMW, Mercedes, Ford, VW, Thermo King to name but a few, all of which have awarded us multiple global contracts.

C&F Green Energy was officially established by the C&F Group in 2006. The group recognised the need to provide a more powerful and safer wind energy solution for the home, farm and business owner. With its experience in the manufacturing area, C&F set about designing an innovative wind turbine that would combine unrivalled performance and power with clean aesthetics and reliability.

With this in mind the company has assembled a world class team of industrial design experts in this field to deliver solutions based on innovation and engineering excellence. The group's success is attributed to its unrivalled levels of workmanship quality, streamlined manufacturing processes and un-surpassed levels of customer care and retention. This team has developed an innovative range of small to medium-sized turbines that incorporate the same advanced technologies that are used in Mega-Watt sized machines. Leveraging off the company's expertise in manufacturing and design and its global reach, has enabled C&F Green Energy to offer this advanced technology at very competitive prices.

Our commitment to customer service and our confidence in our products are evident in the fact that all customer contracts will be directly with C&F Green Energy and all warranties will be carried by C&F Green Energy. This includes the market leading warranty that is available for 10 years. As founder and CEO of the C&F Group, I am determined to make C&F Green Energy the world leader in small and medium sized generation. We build the best turbines in the world.

John Flaherty
John Flaherty
CEO C&F Group

IRELAND UK GERMANY CZECH REP CHINA PHILIPPINES

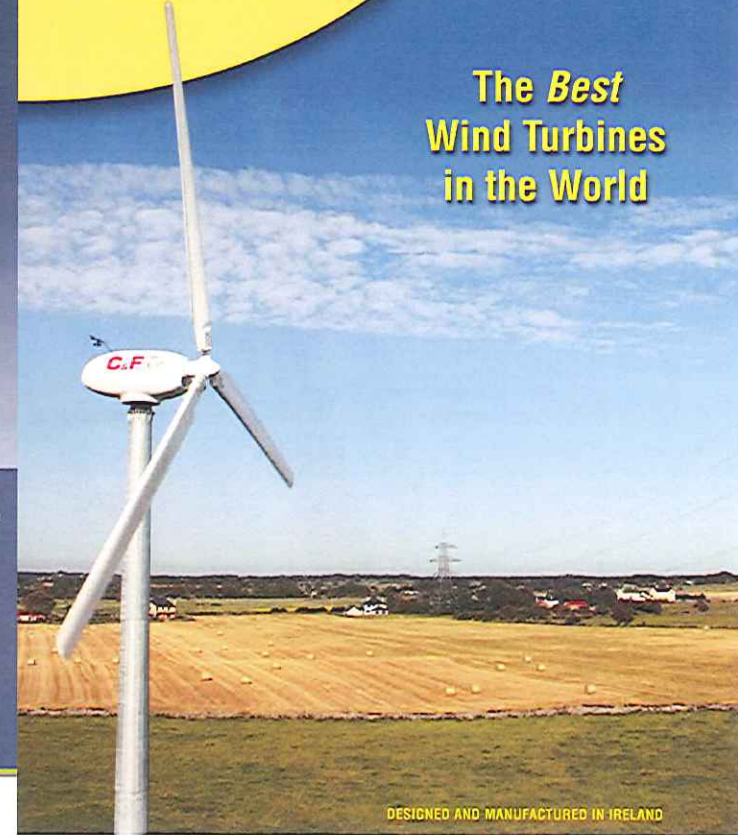


- IRE: Tooling Ltd., Ireland
- IRE: Green Energy, Ireland
- IRE: Automotive Trading as Iratco, Ireland
- UK: Manufacturing (UK) Ltd.
- CZE: Automotive Germany GmbH, Czech Republic
- CZE: Manufacturing CR, S.R.O., Czech Republic
- PHI: Manufacturing Philippines Corporation, Philippines
- CHN: Manufacturing China

IT Industry
Automotive Industry
Refrigeration Industry
Air Conditioning Industry
Wind Energy Industry
Delivering world class manufacturing processes all over the world
ESTABLISHED IN 1989, IRISH OWNED.



The Best
Wind Turbines
in the World



DESIGNED AND MANUFACTURED IN IRELAND

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Blade Pitch Control (Pitch Actuator)

The blades are automatically controlled to optimise aerodynamic performance under different operating conditions. Bigger blades give more power but demand a more sophisticated control mechanism. C&F have developed mega turbine pitch control technology, giving us perfect control over each model. This guarantees power production at the lowest wind speed, as well as at the highest wind speeds. The overall result is the most efficient small turbine available in the world today.

Yaw Actuator, Wind Vane Cup Anemometer

A wind direction vane and cup anemometer are monitored by the turbine microprocessor which then activates the yaw motor to align the turbine into the wind. This feature, usually employed on large turbines, improves performance and energy yield.

Mechanical Brake

All C&F turbines employ a hydraulic rotor brake system. Two calipers are used on the CF15/20 and one caliper on the CF6 and CF11/12. The braking system is designed to gently bring the turbine to a halt. Critically, the braking system is based on a failsafe operation principle.

Blades

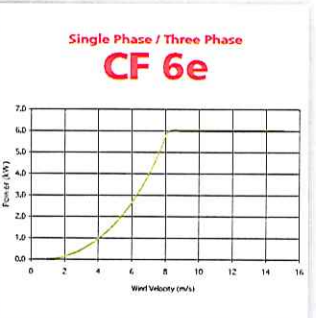
The structural design of the blades has been optimised for performance, strength and durability. All blades are vinyl ester infused glass/carbon fibre reinforced and are tested to IEC61400-2 Class 1 hurricane wind speeds. Finite element analysis has validated the aerodynamics of the blade design.

Mast

All C&F turbines employ a monopole mast which can withstand hurricane force winds. The mast is erected using a hydraulic ram, which enhances operator safety and facilitates ongoing safety. The CF50 turbine will be erected by a crane.



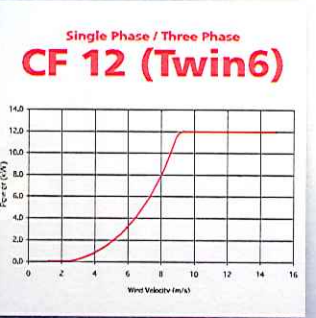
SPECIFICATION SHEET	
Rotor Diameter	8 m
Tower/Mast	15 m / 20 m
Max. Power	6 kW
An. Yield @ 5 m/s	17,000 kWh
Rated Wind Speed	8.0 m/s
Min active wind speed	1.2 m/s
Cut out wind speed	NONE
Annual Carbon Saving	8 - 14 Tonnes
Noise @ 5 m/s at 60m	42 dBA
Max RPM	220 rpm
Method of Installation	Hydraulic Tilt Installation
GSM Controlled as Standard	



SPECIFICATION SHEET	
Rotor Diameter	9 m
Tower/Mast	15 m
Max. Power	11 kW
An. Yield @ 5 m/s	24,000 kWh
Rated Wind Speed	8.0 m/s
Min active wind speed	1.2 m/s
Cut out wind speed	NONE
Annual Carbon Saving	14 - 19 Tonnes
Noise @ 5 m/s at 60m	42 dBA
Max RPM	220 rpm
Method of Installation	Hydraulic Tilt Installation
GSM Controlled as Standard	



SPECIFICATION SHEET	
Rotor Diameter	9 m
Tower/Mast	15 m
Max. Power	12kW or 2 x 6kW
An. Yield @ 5 m/s	24,500 kWh
Rated Wind Speed	0.5 m/s
Min active wind speed	1.2 m/s
Cut out wind speed	NONE
Annual Carbon Saving	14 - 10 Tonnes
Noise @ 5 m/s at 60m	43 dBA
Max RPM	220 rpm
Method of Installation	Hydraulic Tilt Installation
GSM Controlled as Standard	



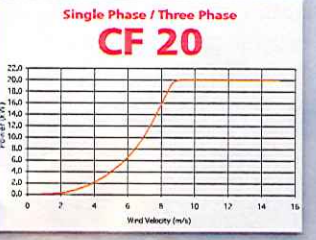
SPECIFICATION SHEET	
Rotor Diameter	11.1 m
Tower/Mast	15 m
Max. Power	15 kW
An. Yield @ 5 m/s	34,000 kWh
Rated Wind Speed	8.0 m/s
Min active wind speed	1.5 m/s
Cut out wind speed	NONE
Annual Carbon Saving	19 - 23 Tonnes
Noise @ 5 m/s at 60m	34 dBA
Max RPM	90 rpm
Method of Installation	Hydraulic Tilt Installation
GSM Controlled as Standard	



SPECIFICATION SHEET	
Rotor Diameter	13.1 m
Tower/Mast	20 m
Max. Power	15 kW
An. Yield @ 5 m/s	43,400 kWh
Rated Wind Speed	8.0 m/s
Min active wind speed	1.5 m/s
Cut out wind speed	NONE
Annual Carbon Saving	24 - 28 Tonnes
Noise @ 5 m/s at 60m	35 dBA
Max RPM	90 rpm
Method of Installation	Hydraulic Tilt Installation
GSM Controlled as Standard	



SPECIFICATION SHEET	
Rotor Diameter	13.1 m
Tower/Mast	20 m
Max. Power	20 kW
An. Yield @ 5 m/s	47,500 kWh
Rated Wind Speed	8.0 m/s
Min active wind speed	1.5 m/s
Cut out wind speed	NONE
Annual Carbon Saving	25 - 30 Tonnes
Noise @ 5 m/s at 60m	35 dBA
Max RPM	90 rpm
Method of Installation	Hydraulic Tilt Installation
GSM Controlled as Standard	



SPECIFICATION SHEET	
Rotor Diameter	20 m
Tower/Mast	29 m
Max. Power	50 kW
An. Yield @ 5 m/s	117,250 kWh
Rated Wind Speed	8.0 m/s
Min active wind speed	2.2 m/s
Cut out wind speed	NONE
Annual Carbon Saving	70 - 80 Tonnes
Noise @ 5 m/s at 60m	TBA
Max RPM	50 rpm
Method of Installation	Crane
GSM Controlled as Standard	

