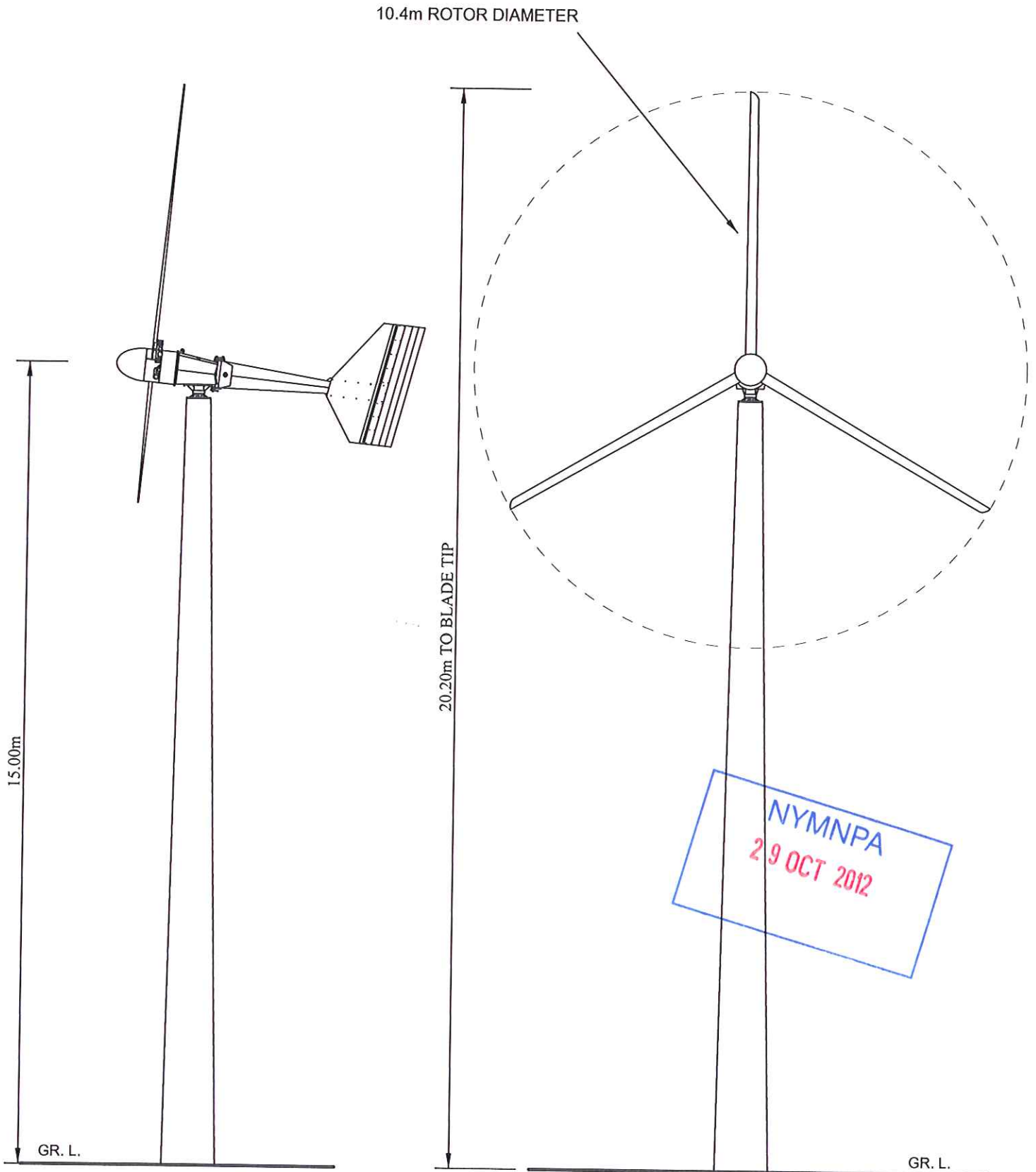


Westwind wind turbine

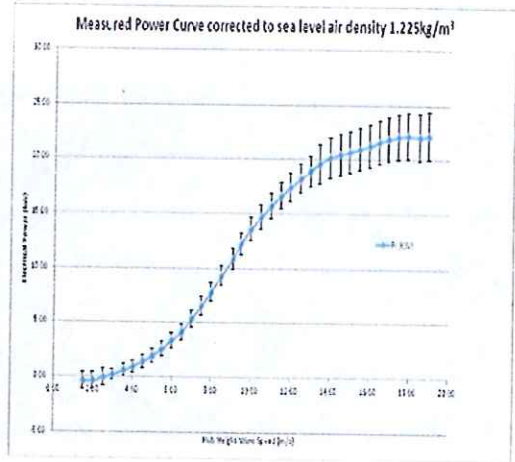
Drawing No. W20/15



SPECIFICATIONS

- Rated Wind speed: 14m/s
- Power at rated wind speed : 20kW
- Rated Output Voltage: 240v 50hz. 3 phase
- Cut-in wind speed: 2.77m/s
- Maximum power output: 22.74kW
- Rotor speed at rated power: 160rpm
- Sound at wind speed 8m/s 100m 45 dBA
- Sound Penalty : None
- BWEA Reference Annual Energy: 28,095kWh (@ 5m/s)
- Turbine Head Wt: 840Kg
- Blade diameter : 10.4m
- Blade Wt: 30 kg
- Blade sweep area: 81.67m²
- Operating Temperature Range: -15 to +50 degrees C

POWER CURVE



ACOUSTIC REPORT

Turbine Make	ACOUSTIC MODEL LEVELS		
	Westwind	Model	Other
Sound Power Rating (dBA)	93	1.47	NO

NYMND
29 OCT 2012



- ✓ Designed & Manufactured in Northern Ireland
- ✓ Business established > 30yrs
- ✓ Delivery 6-8 weeks
- ✓ Spare parts readily available

For further information or to arrange a site survey please contact us.

Westwind Wind Turbines
3 Carmavy Road
Crumlin
Co. Antrim
BT29 4TF





HISTORY

NYM / 2012 / 0729 / FL

The Westwind 20kW Wind Turbine has been on the market since 1984 and has proved itself to be an efficient and reliable turbine. During 2011 the turbine underwent MCS testing in the harsh conditions of South Uist in the outer Hebrides. Approval was granted 6th Jan 2012 and the turbine is now eligible for the latest tariff schemes.

OVERVIEW

1. Permanent magnet generator incorporating 36 poles with high quality NeFeBr Magnets and industrial grade copper windings.
2. All main shell components hot dipped galvanized or interzinc primed for enhanced corrosion protection.
3. 3 Bladed rotor. The blades are manufactured from Fibre Glass to the highest standard.
4. Blades have a pitch control mechanism. The mechanical pitch control ensures that the blades maintain the optimum pitch angle as the wind speed increases or decreases to maximize the harvesting of the energy from the wind.
5. The generator is horizontally mounted with a direct drive and no gearbox thus maximizing efficiency.
6. Overspeed protection is by means of passive yaw. A finely tuned well proven mechanical design allows the tail to furl when wind speeds become excessive thus the wind turbine does not need to be attended to when there are periods of high winds and there is no complicated electrical/ electronic system to fail.
7. Controller incorporates pulse width modulation voltage clamp with dump load and over volts protection.
8. The generator is test run on our dyno test bench before final assembly to the nacelle.
9. Can easily be connected to local electricity grid, or used for 240V battery charging, heating or a combination. Single, split and three phase grid connections are possible
10. Fully galvanized steel towers with the option of heights 15,18, 22m or specials on request. With a gin pole system these masts can be easily raised or lowered.
11. Range of colours to select from.
12. Standard 2 years manufacturers parts warranty which covers generator, controller, blades etc. We can also offer an extended insurance backed warranty to 5 years or 10 years for added peace of mind.