

RFQ and Bid Suggestions: How to Spec a



qual-i-ty /'kwälədē/ **wind** /wind/ **tur-bine** /'tər.bīn, 'tər.bīn/ - *noun*

OK, it may sound funny that we are spelling it out in this document, but over the last ten years we have had a number of good customers use our wind turbines with great success. Then, when the need or project scale escalated to full force deployment, or government funding was required, suddenly military professionals & project managers were handed hobby wind turbines in place of the superwind turbines they had proven in the field, and were counting on for future success.

Professional Procurement Managers have suggested we offer the following company and product points so no one gets us mixed up with shaky “R&D only companies”, Asian hobby turbine manufacturers, or folks caring more about selling shares than the wind equipment they may build.

How is our company different?

1. We are not looking for Investors – we are not selling stock. We are a self-sustainable privately owned company, managed by experienced wind industry leaders.
2. We sell fully developed, real-world tested products of the highest quality; this is accomplished with no government funding or subsidies. We do not experiment on our customers.
3. Our Products are made with pride in Germany and the USA. None are ITAR restricted.

How are our superwind turbines different?

A quick visit to our website www.missioncriticalenergy.com and you will see what our equipment looks like, as well as all product attributes. But more importantly, a visit to the site will also give you an idea of the serious mission critical projects we help support, as well as a sampling of our highly respectable, notable, good *repeat customers*, who rely on our products to do what we advertise.

Below is the technical data for both the superwind 350 series wind turbines as well as the superwind 1250. Before one starts to ‘copy and paste’ those specs, here are some important points one should consider including in an RFQ or Bid Statement, in order to avoid ending up with equipment that will not survive, regardless of price class.

For the record, this is not an attempt to rig or manipulate a bid, rather it is suggested clear language that separates a superwind from what many consider to be hobby wind turbine equipment. Thank you to those purchasing professionals who contributed to this document!

Other Professional Procurement Managers have used or recommended the following:

for any 350 watt turbines or the 1250 watt turbine

1. The Turbine must have Rotor Blade Pitch Over-speed Control, with no external weights, counterbalances or springs for speed regulation and power regulation. [1.a the blades must not bend in high wind conditions or for high wind over-speed control] [1.b a furling tail/vane/rudder is not desired over-speed control,] see item #4.0 below.
2. The Wind Turbine must have non-electric over-speed protection [2.a turbine shall not rely on the battery power to stop in high wind conditions.] [2.b Turbine shall not rely on turbine amperage output or high amperage limits to slow or stop turbine] see item #4.0 below.
3. The turbine and its designed/designated battery charging system must be able to provide 100% complete charging to the batteries, have a dump load diversion charge controller with an outdoor rated aluminum dump load resistor block.
4. The turbine's Cut-out Wind Speed is: NONE. [4.a no cut-out wind speed – the turbine never stops making power.] [4.b Turbines which utilize furling tails/vanes to stop or avoid wind flow, turbines with battery high voltage breaking systems, and turbines that stop with high amperage limit based braking all have cut-out speed restrictions]
5. The Turbine's operation is autonomous [during normal operations – including high winds and storm events - the turbine requires no outside controls or human interaction to operate]

Again, all of our wind turbines have the above 5 features. Now we will divide the specifications between the 350 watts series turbines – the superwind 350 – and the superwind 1250 (1250 watts).

SUPERWIND 350 TECHNICAL DATA (including the C, HD and SV models)

• rated power	350 Watts
• rated wind speed	12.5 m/s
• cut in wind speed	3.5 m/s
• cut off wind speed	none
• rotor diameter	1.22 m
• number of blades	3
• blade material	CFRP (Carbon Fibre Base)
• rotor speed	500-1300 rpm
• generator/ magnets	permanent magnet, 3-phase / Neodymium
• voltage output	12VDC, 24 VDC or 48 VDC
• connection	charge controller
• speed regulation	passive pitch control
• power regulation	passive pitch control
• main brake	electro dynamic – generator short-circuit
• weight	11.5 kg
• rotor thrust (operation)	64 N

SUPERWIND 1250 TECHNICAL DATA

• nominal power	1250 Watts
• nominal wind speed	11,5 m/s
• cut in wind speed	3,5 m/s
• cut off wind speed	NONE
• rotor diameter	2,40 m
• number of blades	3
• blade material	glass fiber/carbon fiber reinforced plastics
• rotor speed	300 – 600 rpm
• generator/ magnets	permanent magnet, 3-phase, Neodymium
• nominal voltage	24 VDC or 48 VDC
• speed regulation	rotor blade pitch
• power regulation	rotor blade pitch
• brake 1	generator short-circuit
• brake 2	disc brake
• weight	45 kg
• rotor thrust (operation)	190 N

We welcome you to contact us directly with any questions that might help you or your team better understand the products they are acquiring, or to receive our customer references .

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