Technical Documentation

Loads Specifications for UGE-600
112 mph (50 m/s)

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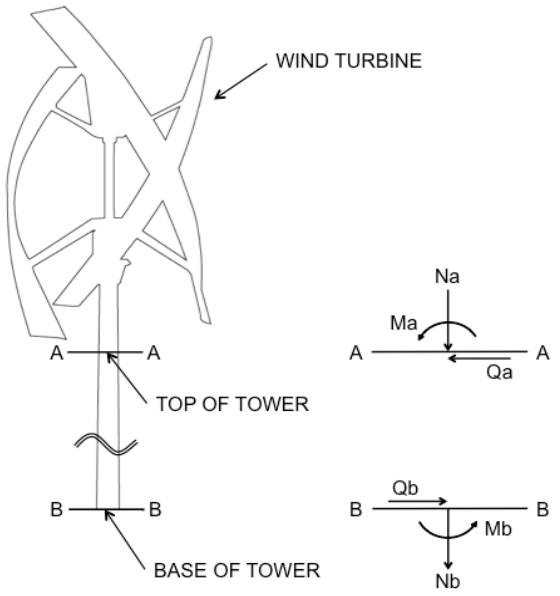

UGE-600
Vertical Axis Wind Turbine Specifications

Load Specifications
50 m/s (112 mph)

Maximum Loads at the A-A plane (For all of towers)	
Nmax	0.94 kN [0.21 k]
Qmax	2.06 kN [0.46 k]
Mmax	0.93 kN*m [0.69 k*ft]

Maximum Loads at the B-B plane	
2M Tower	
Nmax	5.11 kN [1.15 k]
Qmax	3.39 kN [0.76 k]
Mmax	8.13 kN*m [6.00 k*ft]
7M Tower	
Nmax	7.05 kN [1.58 k]
Qmax	4.45 kN [1.00 k]
Mmax	28.98 kN*m [21.37 k*ft]
13M Tower	
Nmax	9.85 kN [2.21 k]
Qmax	6.18 kN [1.39 k]
Mmax	66.16 kN*m [48.79k*ft]
20M Tower	
Nmax	16.11 kN [3.66 k]
Qmax	14.43 kN [3.20 k]
Mmax	179.80 kN*m [132.58 k*ft]

Tower Notes:

- Maximum wind speed: 50 m/s
- When the applicable load per the table above is applied to the turbine and tower, the maximum deflection of the structure supporting the turbine and tower should meet the standard deflection tolerances of the local building code. For steel and concrete structures in the USA, deflections should meet the requirements of the AISC or ACI codes respectively. The lateral deflection of the top of the tower should under no circumstances be above 1.5% of the tower height.
- The turbine operating frequency ranges between 0 and 3.3Hz. Care should be taken to prevent resonance between the turbine and the supporting structure.
- Tower should include a J-hook or other means of strain relief for the leads leaving the generator, upper and lower hand holes at either end of the tower, and be properly grounded and connected to a lightning protection system (if present) per the NEC or the local electrical code.
- Please see the UGE Warranty Agreement for information about the implications of designing your own tower on the turbine's warranty.