



JACOBS

WIND ENERGY SYSTEMS

**QUALITY U.S. MADE
WIND SYSTEMS
SINCE 1986**

WTIC
WIND TURBINE INDUSTRIES CORP.

www.windturbine.net

Jacobs 31-20

| | |
|-------------------------|--------------|
| Rated Output | 20,000 watts |
| Cut-In Wind Speed (mph) | 7.5 mph |
| Rated Wind Speed (mph) | 26 |
| Rated Rotor Speed (rpm) | 175 |
| Survival Wind Speed | 120 mph |
| System height (ft.) | 9 feet |

Turbine Rotor:

| | |
|----------------------|---|
| Number of Blades | 3 |
| Orientation | Upwind |
| Axis (nominal) | Horizontal |
| Rotation | Counter Clockwise |
| Blade Material | Fiberglass |
| Rotor Diameter (ft.) | 31 |
| Swept Area (ft.) | 755 |
| Speed Control | 1. Centrifugal variable pitch governor (25 - 30 mph) 2. Side furling (40 - 45 mph) |
| Yaw Control | Passive Tailvane |

Generator:

| | |
|------|---|
| Type | Brushless, Synchronous, Three phase AC with outbound exciter. |
|------|---|

Transmission:

| | |
|-------|--------------------------|
| Type | Offset Hypoid Gear Drive |
| Ratio | 1:6.1 |

Inverter:

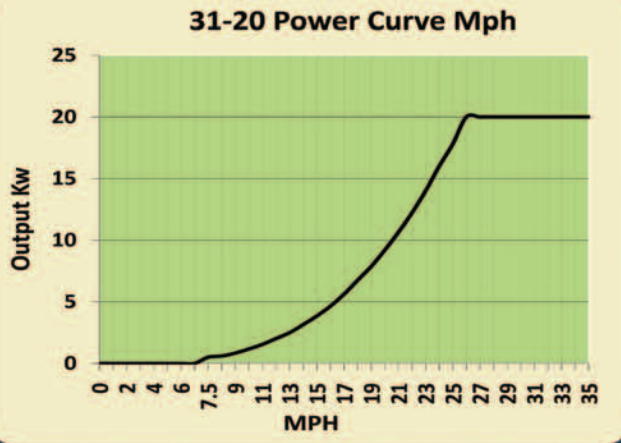
| | |
|--------------|---------------------------|
| Nexus Nex 20 | UL1741 certified inverter |
|--------------|---------------------------|

Freestanding towers available (80' - 140')

The Jacobs Wind Energy Systems have been providing customers with quality reliable electricity since the dawn of wind powered electric generation. Beginning as a smaller DC battery charging system in the late 1920's produced by Jacobs Wind Electric, the Jacobs brand has been electrifying rural areas ever since.

Known as "The Cadillac of Wind" The Jacobs Wind Energy System has been one of the most frequently copied but never duplicated turbines on the market. The current configuration of the Jacobs system started in the late 1970's as a 10kw unit and quickly evolved into the 20Kw unit (31-20) now offered by Wind Turbine Industries Corporation.

In 1986 WTIC assumed the responsibilities of production and distribution for this historic brand and has continually been innovating and improving the design.



| Typical Annual Production in Kwh | | | Average Annual Wind Speed @ Hub Height | | |
|----------------------------------|---------|---|--|--------|--------|
| | | | 9mph | 11mph | 13mph |
| Terrain Description | Good | Good "mostly clear" of obstructions | 10,700 | 20,000 | 31,500 |
| | Average | Some Ground Clutter Scattered Trees and Buildings | 10,100 | 18,800 | 29,600 |
| | Poor | Many Trees and Buildings, Lower elevation than surroundings. | 9,500 | 17,600 | 27,800 |

When choosing a location for a wind system there are numerous factors to consider; a good starting place is to make sure that the bottom stroke of the rotor will be a minimum of 30' above any obstructions in all directions for 500' feet.



For more information about products from WTIC please visit our website - www.windturbine.net or contact us at: wtic@windturbine.net (952) 447 - 6064