

JACOBS[®]

WIND ENERGY SYSTEMS

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

JACOBS

MANUFACTURED BY
WIND TURBINE INDUSTRIES, CORP
PRIOR LAKE, MINNESOTA

WTIC
WIND TURBINE INDUSTRIES CORP.
www.windturbine.net

Jacobs 31-20

Rated Max Output	20,000 watts
Cut-In Wind Speed	3.5m/s (~8 mph)
Rated Rotor Speed	175 - 185 rpm
Survival Wind Speed	120 mph (53.5m/s)
Height (ft.) (less Rotor)	9 feet (2.7m)
Weight (lbs.)	2000

Turbine Rotor:

Number of Blades	3
Orientation	Upwind
Axis (nominal)	Horizontal
Rotation	Counter Clockwise
Blade Material	Fiberglass
Rotor Diameter	31' (9.5m)
Swept Area	755 (230m)
Speed Control	1. Centrifugal variable pitch governor 25-30mph (11-13.5m/s) 2. Side furling 40-45mph (18-20m/s)
Yaw Control	Passive Tailvane

Generator:

Type	Brushless, Synchronous, Three phase AC with outbound exciter.
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Transmission:

Type	Offset Hypoid Gear Drive
Ratio	1:6.1

Inverter:

Nexus Nex 20	UL1741 certified inverter
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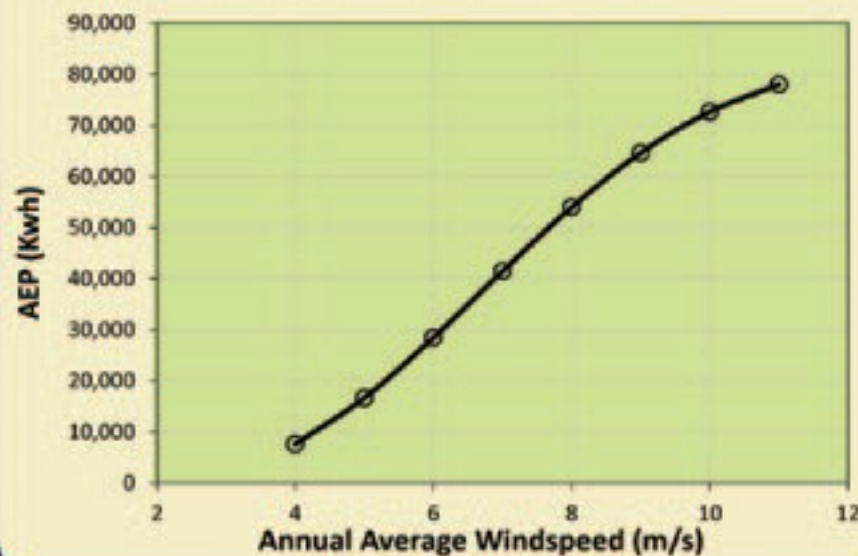
**Free Standing Towers Available 80'-160' (24.5m-48.5m)

The Jacobs Wind Energy Systems have been providing customers with quality reliable electricity since the dawn of wind powered electric generation. 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.



Estimated Annual Energy Production (AEP)



	Hub height Windspeed @ Sealevel		Estimated AEP Kwh
	m/s	MPH	
Actual energy production will vary depending on site conditions such as turbulence and elevation	4	8.96	7,600
	5	11.20	16,630
	6	13.44	28,430
	7	15.68	41,434
	8	17.92	53,951
	9	20.16	64,613
	10	22.40	72,671
	11	24.64	77,986

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