

<p>JMCC WING Farm & Ranch, LLC 1 2 5 & 10KW Multi Blade Wind Systems Company: JMCC WING – Farm & Ranch, LLC Wilmington, DE 19801 Email: jmcc@jmccannneyscience.com Prices available on request –</p>		<p>Wo only sell complete systems (see photos below). There are other expenses that you will incur. Some may be local to your location (see list at bottom for more details). Product colors and form factors may alter from photos below.</p>
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kW	Description – Multi Blade Gen	Controller	Inverter
		For use with Lead Acid or GEL Deep Cycle Batteries ONLY	1 & 2 kW systems 14 days 5 & 10 kW systems 4 weeks

<p>1 kW</p>	 <p>Product model 1 kW Multi Blade Started wind speed 2.5 m/s Rated wind speed 11 m/s Rated voltage 24V Rated power 1000W Max power 1200W Rotor Diameter of Blades 2.15m Blades Height 1.05m Blades quantity 3pcs Blade material: aluminum alloy casting Generator: 3 phase AC perm mag gen Approx. Net Weight: 24 kg</p>	 <p>Product model 24VDC-Controller Rated Battery Voltage 24V Wind Turbine Input Pwr 1KW Wind Turbine Shutoff 30V Wind Turbine Recovery 27V Note: this simple controller is for wind speed below 12m/s this is a light duty wind system for small home applications</p> <p>BATTERIES and TOWER POLE NOT INCLUDED</p>	 <p>Product model 1kW - Inverter Input rated voltage 24VDC Allow input voltage range 120 VAC ± 15% Frequency 60Hz Net weight 12kg</p> <table border="1"> <tr><td>System Cost: \$2900</td></tr> <tr><td>Shipping (est): \$560</td></tr> <tr><td>State Tax (est 6%) \$174</td></tr> <tr><td>Estimated Total: \$3634</td></tr> <tr><td>See List of additional Exp's</td></tr> </table>	System Cost: \$2900	Shipping (est): \$560	State Tax (est 6%) \$174	Estimated Total: \$3634	See List of additional Exp's
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<p>2 kW</p>	 <p>Product model 2 kW Multi Blade Started wind speed 2.5 m/s Rated wind speed 11 m/s Rated voltage 48V Rated power 2000W Max power 2200W Rotor Diameter of Blades 2.8m Blades Height 1.35m Blades quantity 3pcs Blade material: aluminum alloy casting Generator: 3 phase AC perm mag gen Approx. Net Weight: 48 kg</p>	 <p>Product model 2KW 48V Battery Voltage 48V Wind Turbine Input Power 2KW Solar input: 600w PWM stepless upload mode LCD display with all data Wind turbine auto and manual brake this is a light duty wind system for small home applications</p> <p>BATTERIES and TOWER POLE NOT INCLUDED</p>	 <p>Product model 2 kW - Inverter Input rated voltage 48VDC Allow input voltage range 120 VAC ± 15% Frequency 60Hz Net weight approx. 18 kg with By-pass function allows backup generator to operate</p> <table border="1"> <tr><td>System Cost: \$4500</td></tr> <tr><td>Shipping (est): \$860</td></tr> <tr><td>State Tax (est 6%) \$270</td></tr> <tr><td>Estimated Total: \$5630</td></tr> <tr><td>See List of Additional Exp's</td></tr> </table>	System Cost: \$4500	Shipping (est): \$860	State Tax (est 6%) \$270	Estimated Total: \$5630	See List of Additional Exp's
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<p align="center">Brochure JMCC WING Farm & Ranch, LLC 5 KW Multi Blade Wind Systems Company: JMCC WING – Farm & Ranch, LLC Wilmington, DE 19801 Email: jmcc@jmccanneyscience.com</p>		<p>We sell complete systems only (see photos below). There are other expenses that you will incur. Some may be local to your location (see list at bottom for more details). Product colors and form factors may alter from photos</p>					
<p>Prices may change due to variables</p>	<p>Require physical ship to address</p>	<p>We sell complete systems only</p>					
<p align="center">5 kW</p>	 <p align="center">MULTI BLADE GEN & TOWER TOWER OFF GRID ONLY</p> <p>Blades diameter: XXXX(M) Rated rotor speed: 200(r/m) Rated wind speed:12(m/s) Rated power:5KW Max power:10KW Output voltage: 120V/240V Startup wind speed: 3(m/s) Work speed:3-30(m/s) Security wind speed:50(m/s) Generator shell material: cast iron</p> <p>XXXXHeight of pole: 8m (also avail in 10/12/15m) Wall Thickness: 7mm Tower diameter: 219(mm) Flange: 320*320*16 (mm) Sections of tower: 3 Material: Q235 Steel pipe Surface treatment: anticorrosive paint</p> <p>This system is off grid but can be used with a “transfer switch” to change between grid and off grid power.</p>	 <p align="center">CONTROLLER/DMPLD/BATTERIES</p> <p>Rated Wind Input: 5kW Rated PV (solar) Input Power: 3kW Battery Volt (adjustable): 120V/216VDC Floating Charge Volt: 140/252VDC Control Mode: PWM Display Method: LCD Display Parameter: Battery Voltage, Charging Current, state parameter Cooling Method: Fan Protection Type: Solar panel reverse-charge protection / Solar panel reverse-connect protection / Battery reverse-connect protection / Battery open circuit protection / wind turbine automatic brake and Manual brake protection *Extra Control function (optional): Yawing, variable pitch, mechanical brake, hydraulic brake, electromagnetism brake *Communication interface (optional): RS485/USB/GPRS/WIFI/Ethernet Operation Ambient Temperature : -30~70℃ Operation Altitude: ≤4000m Operation Ambient Humidity: -30~+65℃/35~85%RH,no condensing Size(WxHxD) mm: (Dumpload box)XXXxXXXxXXX (Control box)XXXxXXXxXXX Weight kg: Dumpload XXXX / Controller XXXX</p> <p>Includes XXXX Batteries 200 Ah GEL</p> <p>Additional Batteries order at \$450 each x XXXX = \$XXXX Additional</p>	 <p align="center">INVERTER</p> <p>Rated Output Capacity: 5kw Rated Battery Voltage: 120/XXXVDC Over Voltage Point: XXX/XXXVDC Over Voltag Recovery Point: XXX/XXXVDC Under Voltage Point: 105/189VDC</p> <p>Under Voltag Recovery Point: XXX/XXXVDC No Load Loss: 0.4A Output Waveform: Pure Sine Wave Display Method: LCD Display Parameter: Battery Voltage, Output Voltage, State Cooling Method: Fan Rated Output Voltage: 110/120/220/230/240 VAC Total Harmonic Distortion: ≤4% Output Frequency: 50/60 Hz Dynamic Response: 5% Overload Ability: 120% one minute,150% 10 seconds Inverting Efficiency: Max. 90% Noise (1m) : ≤40dB Dielectric Strength: 1500VAC, 1 min Protection Type: Battery over voltage protection / Battery under voltage protection、Battery reverse-connect protection / Output over load protection、Output short circuit protection / Over temperature protection Operation Ambient Temperature: -30~60℃ Operation Altitude: ≤4000m Operation Ambient Humidity: 0~90%,no condensing Size(WxHxD)mm: XXXX× XXXX× XXXX Weight (KG) : XXXX</p> <table border="1" data-bbox="1005 1881 1356 2027"> <tr> <td>System Cost: \$XX,XXX</td> </tr> <tr> <td>Shipping (est): \$2500</td> </tr> <tr> <td>State Tax (est 6%) \$0</td> </tr> <tr> <td>Estimated Total: \$XX,XXX</td> </tr> </table>	System Cost: \$XX,XXX	Shipping (est): \$2500	State Tax (est 6%) \$0	Estimated Total: \$XX,XXX
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Shipping (est): \$2500							
State Tax (est 6%) \$0							
Estimated Total: \$XX,XXX							

<p align="center">Brochure JMCC WING Farm & Ranch, LLC 10 KW Multi Blade Wind Systems</p> <p>Company: JMCC WING – Farm & Ranch, LLC Wilmington, DE 19801 Email: jmcc@jmccanneyscience.com</p>		<p>The following prices are for complete systems with photos below. There are other expenses that you will incur. Some may be local to your location (see list at bottom for more details). Product colors and form factors may alter from photos below.</p>
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<p align="center">10 kW</p>	 <p align="center">MULTI BLADE GEN THREE PIECE TOWER OFF GRID ONLY</p> <p>Blades diameter: 6.2(M) Rated rotor speed: 100(r/m) or /200(r/m) Rated wind speed:12(m/s) Rated power:10KW Max power:20KW Output voltage:220V/120V/240V Startup wind speed: 3(m/s) Work speed:3-30(m/s) Security wind speed:50(m/s) Generator shell material: cast iron</p> <p>Height of pole: 8m (also avail in 10/12/15m) Wall Thickness: 7mm Tower diameter: 219(mm) Flange: 320*320*16 (mm) Sections of tower: 3 Material: Q235 Steel pipe Surface treatment: anticorrosive paint</p> <p>This system is off grid but can be used with a “transfer switch” to change between grid and off grid power.</p>	 <p align="center">CONTROLLER/DMPLD/BATTERIES</p> <p>Rated Wind Input: 10kW Rated PV (solar) Input Power: 3kW Battery Volt (adjustable): 120V/216VDC Floating Charge Volt: 140/252VDC Control Mode: PWM Display Method: LCD Display Parameter: Battery Voltage, Charging Current, state parameter Cooling Method: Fan Protection Type: Solar panel reverse-charge protection / Solar panel reverse-connect protection / Battery reverse-connect protection / Battery open circuit protection / wind turbine automatic brake and Manual brake protection *Extra Control function (optional): Yawing, variable pitch, mechanical brake, hydraulic brake, electromagnetism brake *Communication interface (optional): RS485/USB/GPRS/WIFI/Ethernet Operation Ambient Temperature : -30~70°C Operation Altitude: ≤4000m Operation Ambient Humidity: -30~+65°C/35~85%RH,no condensing Size(WxHxD) mm: (Dumpload box)600x890x600 (Control box)440x210x380 Weight kg: Dumpload 59 / Controller 10</p> <p>Includes 18 Batteries 200 Ah GEL</p> <p>Additional Batteries order at \$450 each x 18 = \$8000 Additional</p>	 <p align="center">INVERTER</p> <p>Rated Output Capacity: 10kw Rated Battery Voltage: 120/216VDC Over Voltage Point: 170/306VDC Over Voltag Recovery Point: 165/297VDC Under Voltage Point: 105/189VDC</p> <p>Under Voltag Recovery Point: 120/216VDC No Load Loss: 0.4A Output Waveform: Pure Sine Wave Display Method: LCD Display Parameter: Battery Voltage, Output Voltage, State Cooling Method: Fan Rated Output Voltage: 110/120/220/230/240 VAC Total Harmonic Distortion: ≤4% Output Frequency: 50/60 Hz Dynamic Response: 5% Overload Ability: 120% one minute,150% 10 seconds Inverting Efficiency: Max. 90% Noise (1m) : ≤40dB Dielectric Strength: 1500VAC, 1 min Protection Type: Battery over voltage protection / Battery under voltage protection、 Battery reverse-connect protection / Output over load protection、 Output short circuit protection / Over temperature protection Operation Ambient Temperature: -30~60°C Operation Altitude: ≤4000m Operation Ambient Humidity: 0~90%,no condensing Size(WxHxD)mm: 600×890×600 Weight (KG) : 93</p> <table border="1"> <tr> <td>System Cost: \$27,000</td> </tr> <tr> <td>Shipping (est): \$2500</td> </tr> <tr> <td>State Tax (est 6%) \$0</td> </tr> <tr> <td>Estimated Total: \$29,500</td> </tr> </table>	System Cost: \$27,000	Shipping (est): \$2500	State Tax (est 6%) \$0	Estimated Total: \$29,500
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Estimated Total: \$29,500							

	<p>Talk to us to spec out your system. The Multi Blade home system is an economical alternative to the industrial grade JMCC WING Generators. The Multi Blade systems are only available in the smaller sizes (1 to 10 kW) and are about 60% the cost but less efficient than the JMCC WING Generators. If you have a good wind area they are a good alternative.</p>	<p>The 2, 5 & 10 kW controllers also include an option to add solar panels (solar panels not included) – we sell batteries and LP Diesel Generators also</p> <p>Multi Blade are OFF GRID only</p> <p>See List of Additional Expenses that you may encounter in your installation (see #5 BELOW)</p>	
<p>1.)Method of Shipment</p>	<p>We will ship to the customer location by least expensive method. Shipping costs listed above are estimates. We will give a final quote when finalizing your order. We do not markup shipping prices but pass them through to you.</p>		
<p>2.)Payment</p>	<p>By 100% WIRE or Electronic Check will start your order – Instructions given when you place your order Invoice quotes are good for 5 days from the time we issue you an invoice via email</p>		
<p>3.)Delivery Date</p>	<p>14 working days after payment (estimate) – we are not responsible for shipping delays beyond our control.</p>		
<p>4.)Remarks</p>	<p>This quotation was quota with freight and tax.- validity time is 5 days from the date you receive invoice. We provide instructions to install. Customer is responsible for installation. No returns or refunds, once you place your order it starts the process that immediately ships and we cannot stop the order.</p>		
<p>5.) Additional Expenses</p>	<p>Additional expenses include the following items which you will have to source locally. We will provide you with a complete list of specifications that you must follow to install your system and you will need a licensed electrician to make electrical connections and comply with local codes. The list of extra items you will provide may include batteries, extra batteries, battery cables, LP or diesel Generators, pole for Generator for 1kW, 2 kW and 5 kW systems, cables for pole support, cement and bolts to tie down generator pole, local wiring between wind power head and electronics, connectors, secure location to place equipment and possibly the following: Transportation / local licensed electrician / permits / rental of machines such as telehandlers or cranes / installation team and related expenses / shipping container rental or purchase for large systems / extra wire & cable & electrical connectors & posts / extra batteries /</p> <p>These systems are for OFF Grid and light duty home applications only. For industrial grade power and applications use the JMCC WING Generators and related products.</p>		
<p>6.) Example of how to calculate your expected wind energy and battery life (based on 10 kw system. Plus some tips and suggestions.</p>	<p>With GOOD average wind area one can expect approximately 30% of maximum output ON AVERAGE. The power output will range from 0 to 10 kW or more as the wind speed varies. This means that over the course of an average day, you can expect about 3 kW x 24 hours per day = 72 kWh per day and per month x 30 days per month = 2160 kWh per month. The average American home uses about 32 kWh of energy per day or 960 kWh per month. Look at your electric bill to see your current usage and compare. The 18 GEL batteries have about 2.4 kWh rated energy per battery = 18 x 2.4 kWh = 43.2 kWh so the fully charged batteries would operate your home for over a day without any wind to recharge the batteries. You may consider purchasing an extra set of batteries at the time of purchase of your system to extend your operating time on batteries. You do not want to deplete your batteries completely as it shortens their life time. It is best to add extra batteries at the beginning since the batteries have to be matched (weak batteries will deplete healthy new batteries). You may also consider purchasing a backup LP (liquid propane) or Diesel Generator which will complement your wind system. The LP is easier to store and lasts forever so for this size system we recommend LP if you decide to get a backup assist generator. It is a good investment AND saves on your batteries. It also gives you full power when the wind and batteries are not providing power. THE GOAL is to operate from wind 95% of the time. If you can live without power for short periods of time then you may not need the backup generator. But consider the following. The LP backup Generator will cost less than \$1000 while an extra set of batteries will cost about \$8000. You can use the LP generator to assist your wind system for a lot less investment than an extra set of batteries AND will have power all the time. If you are off grid there are many ways to conserve energy. You will get to know your wind system and what it will and will not do. We try to explain this to customers so they have realistic expectations and that the system fills their energy needs. Fill out the customer questionnaire so we can determine your energy needs. This Multi Blade system is OFF GRID but you can also be connected to the grid and operate with EITHER grid power OR the off grid system by use of a “transfer switch” which will allow you to switch between and select the power source you want to use for your energy needs (they cannot be both provide power at the same time). NOTE you may consider upgrading the Inverter to larger capacity.</p>		

