



# BE-WIND 2023

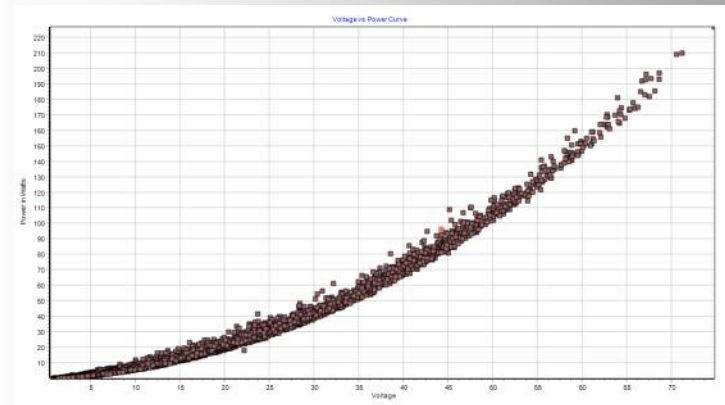
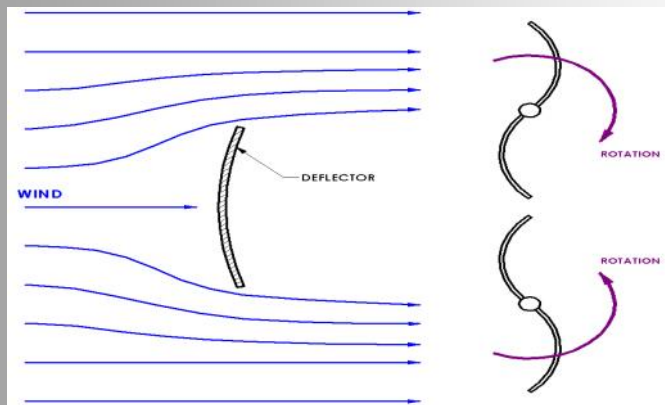
[www.be-wind.com](http://www.be-wind.com)

Thank you for requesting information on BE-WIND products.

The BE-WIND product line was founded and developed from the aerospace industry. Over 10 years in development and testing, using the state of art Design software and manufacturing process. We ourselves spent many years researching the requirements and concerns of invested people in the small wind market. As well we spent time reviewing many research documents and thesis on Wind technology. Having set high goals to produce a product that was efficient and durable.

The result was our patented Dual Axis Vertical turbine with a diversion and accelerator for a front shield. The forward shield not only prevents the wind force on the back side of the rotating blades, but also accelerates air flow to the production side of the blades. The second turbine gives us balance and redundancy. The system automatically aligns itself to always be focused directly into the wind to ensure best performance.

The self-alignment is an automatic design feature and can handle large wind gusts and sustained wind speeds of over 50 m/s and more. Yet able to have a kick in speed of only 1.5 m/s and extractable useable power, starting at 3 m/s.



Our focus is to supplement your power needs as best as possible. Either trying to reduce dependency from the grid and the increasing energy costs. Or support for battery systems for remote or backup power Applications. With our most advanced MPPT wind charge controller on the market. We make no claims to remove 100% of your power consumption, but we hope to put a reasonable dent into it. The ability to structure small Micro grid solutions, have opened a much larger market and power capabilities for BE-WIND .

If Off grid is your requirement, we can support Storage systems and join with Solar and Hydrogen to offer a Hybrid approach to maintain a possible 24-hour power source. We offer one of the best Warranties in the business and stand behind our US manufactured product. We continue to develop and test new innovative ways to make our technology more robust and less expensive as well as maintenance free, in many ways, without sacrificing quality and durability.

## 2023 NEWS UPDATE

We have recently removed our EOW-100 DUAL Turbine System from development and sales in order to completely focus on our flag ship Products the EOW-200-300 dual series turbines.

With an introduction to our new EOW-200 ECO turbine. We will maintain the EOW-100 as a special

Request product, for those in extreme weather conditions, or areas of violent weather needs.

The New EOW-200 Eco is exactly the same design as our most popular EOW-200 Composite.

Except this system will be at a much lower introductory cost. Because of the materials and construction. This turbine will offer . A new lower cost main structure, FRP constructed blades and shield, Main structure composed of high strength laminated Bamboo, coated for protection like a Wooden Boat hull. Lower cost components and will support only a 2-year warranty. As well It will only support the latest 2 x 500-watt generators for a total 1-kw hour turbine. All based around our new MPPT charge controller, For 24/48-volt battery charging only.

Our technology has been recognized around the world and is currently the only Dual production system in the world designed for the Urban environment and individual low-cost power production.

We offer one of the best Warranties on the market to date and continue to support our customers long after Warranty.



One of the most exciting things about our technology, is the flexibility to adjust the system for most applications and or environmentally cosmetic blending.

Customer requirements, from marketing, events, special lighting, optional color configurations and electrical Configurations. The systems are so silent you will not even know there running.

With virtually Zero Maintenance, no other system worldwide can compare, backed again with one of the



# Recognition World Wide.



14448462072017-1402017

*Certificate delivered by the European Commission,  
as the institution managing Horizon 2020,  
the EU Framework Programme for Research and Innovation 2014-2020*

The project proposal 784619, EOW

A micro dual-axis vertical wind turbine providing an alternative low carbon energy solution capable of working at high efficiency in low wind speeds for use in urban environments.

Submitted under the Horizon 2020's SME instrument phase 2 call H2020-SMEInst-2016-2017 (H2020-SMEINST-2-2016-2017) of 1 June 2017 in the area of SMEInst-09-2016-2017

Stimulating the innovation potential of SMEs for a low carbon and efficient energy system

by  
**EOW2 WIND LTD**  
72 GREAT SUFFOLK STREET  
SE1 0EL LONDON  
United Kingdom

following evaluation by an international panel of independent experts  
**WAS SCORED AS A HIGH-QUALITY PROJECT PROPOSAL  
IN A HIGHLY COMPETITIVE EVALUATION PROCESS\***

This proposal is recommended for funding by other sources since Horizon 2020 resources available for this specific Call were already allocated following a competitive ranking.


\*This means passing a 18 stringent Horizon 2020 assessment thresholds for the 3 award criteria (excellence, impact, quality and efficiency of implementation), required to receive funding from the EU budget Horizon 2020.

**Carina Cretu,**  
Commissioner for  
Regional Policy

**Carlos Moedas**  
Commissioner for Research,  
Science and Innovation



*Cretu* *Moedas*

Brussels, 14/07/2017



**COLLEGIATE  
WIND COMPETITION**  
U.S. DEPARTMENT OF ENERGY

Industry MVP  
Thank you for inspiring the teams  
New Orleans, LA - 2016



DEPARTMENT OF THE AIR FORCE  
AIR FORCE WARFIGHTING INTEGRATION CAPABILITY

Washington, DC

October 20, 2020

Re: Letter of Support for **Micro grid energy and StorageBE-WIND llc**

To Whom It May Concern:

**Micro grid energy and StorageBE-WIND llc** competed with over 800 other companies in the 2020 AFWERX Space Challenge looking for innovative solutions to support **Reimagining Fixed and Mobile Energy Generation**.

Subject matter experts from the government have carefully evaluated this submission and ranked it within the top 15% of all solution submissions. **Reimagining Fixed and Mobile Energy Generation** is therefore determined to be in possession of a solution that meets critical AF needs.

As the AFWIC Deputy Team Lead in Disruptive Technologies, I can attest to the potential this solution has to meeting critical technical needs within our Mission Area.

Our scientists and engineers in this area are interested in utilizing the products from this research effort to advance their programs and cooperate with our acquisition partners at agencies within the DoD to enable superior technologies and capabilities to ensure US energy superiority.

*Nathan K. Chang*

NATHAN K. CHANG, Lt Col, USAF  
AFWIC Deputy Team Lead, Disruptive Technologies  
[nathan.chang@us.af.mil](mailto:nathan.chang@us.af.mil)

## Generator technology:

Currently our generators are high performance PMG low RPM, low torque to take

advantage of most optimal wind conditions. With a maximum of 400 rpm under

max rated wind conditions for all 3 designs. Developed thru blade gapping technology and applied directly

into the aerodynamics of the system. Please review the systems Below and feel free to

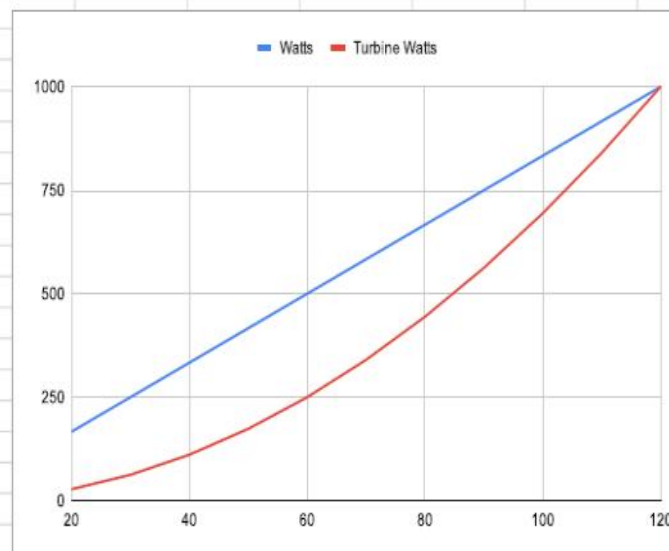
contact us or any distributor to discuss

Which Options would best fit your requirements and Budget?

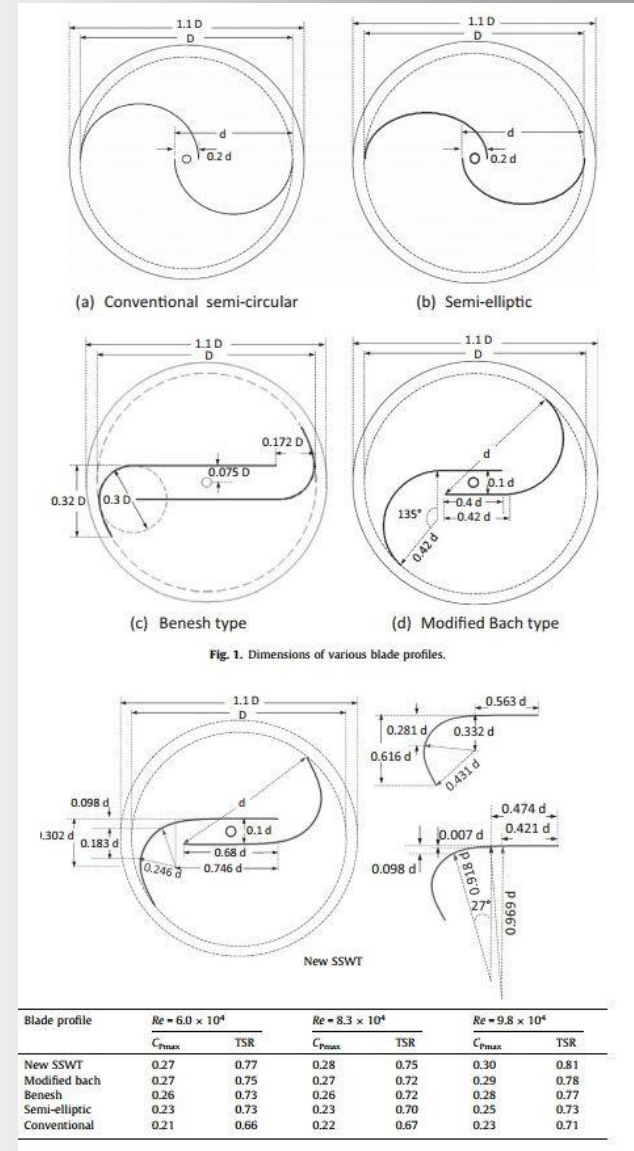
**All generators are 3-phase 96 VAC rated at 350 rpm.**

**As well all generators are undermounted for quick service or replacement if required, so Little to no disassembly of the turbine is necessary .**

RPM	Generator Power Curve		Turbine Power Curve	
	Vdc	Watts	Turbine Watts	
50	20	167	28	
75	30	250	63	
100	40	333	111	
125	50	417	174	
150	60	500	250	
175	70	583	340	
200	80	667	444	
225	90	750	563	
250	100	833	694	
275	110	917	840	
300	120	1000	1000	

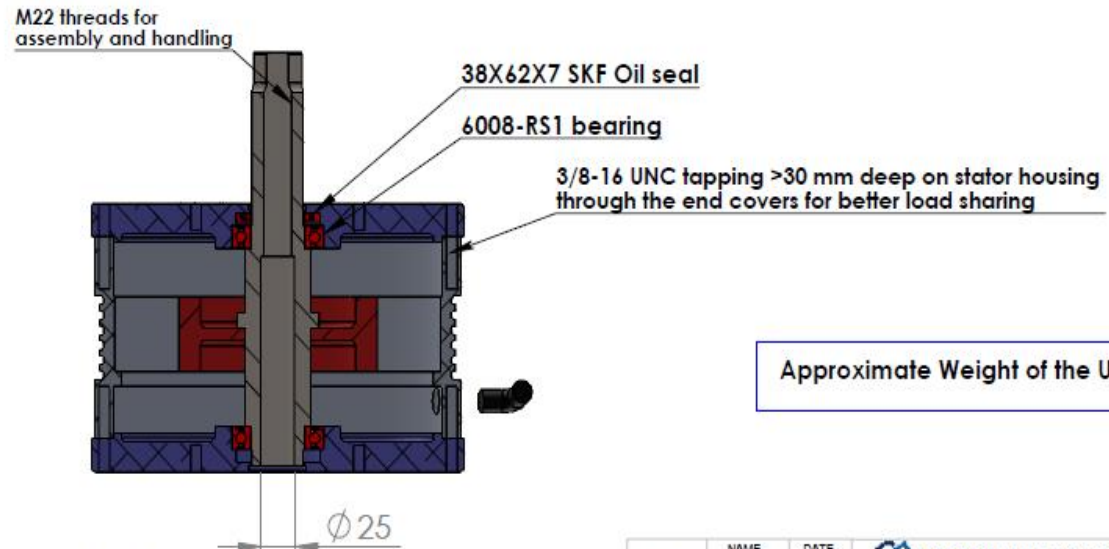
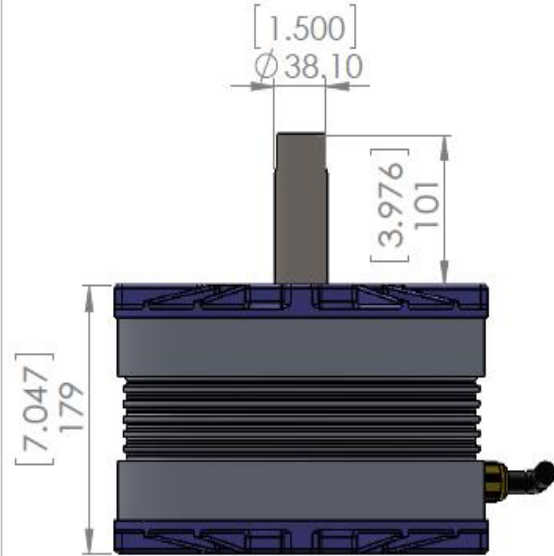
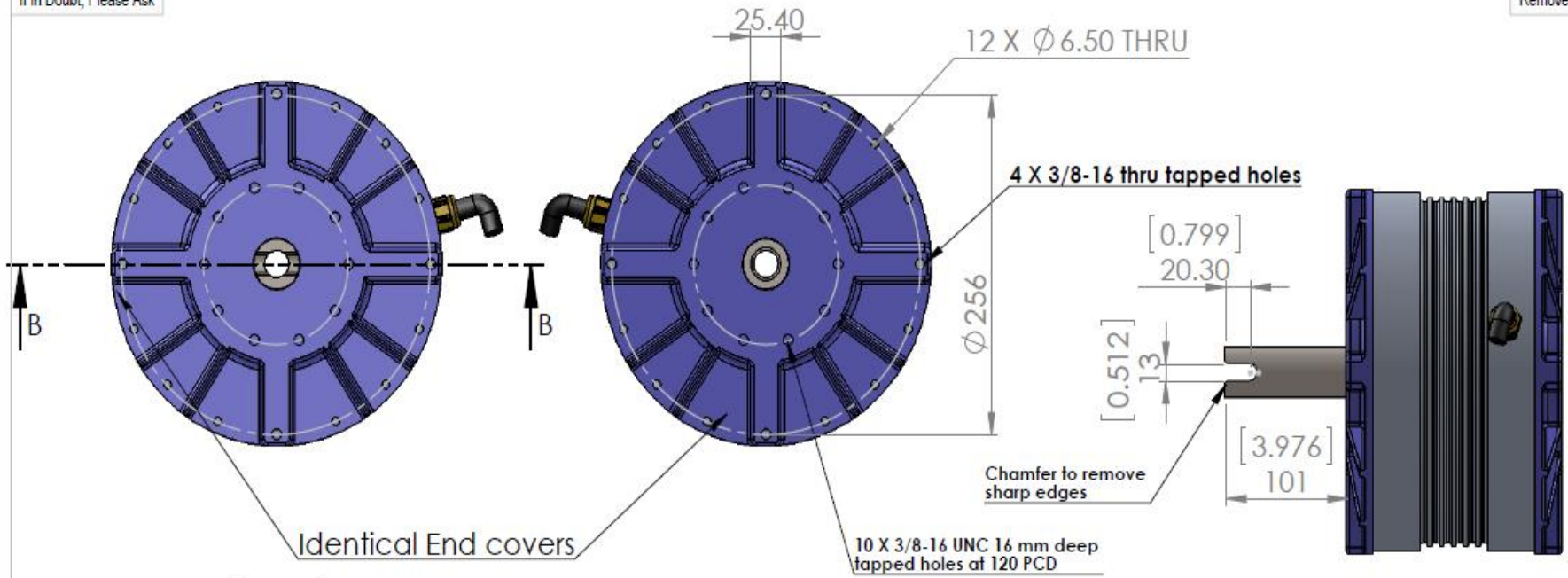


## BLADE GAPING TECHNOLOGY



If In Doubt, Please Ask

Remove Sharp Edges and Burs



Approximate Weight of the Unit: 26 Kg

SECTION B-B  
SCALE 1 : 5

General Tolerance Chart(in mm)					
Length or Dia.	0-10	10-100	100-250	250-400	400-600
Tolerance	+0.04	+0.06	+0.08	+0.1	+0.2

DRN BY:	NAME	DATE
SP	SP	Jan 30, 2021
CKD BY:		
APD BY:		
PROJECTION:		

**INNOTECH POWER LLC**

Title: 1 kW 300 RPM 96 Vac PMA Assembly

Project Name: Be-Wind Material:

Drawing No. INF-2021-BEW-1-300-96-Asy-PR-2

Revision No.: 1

1. 3/8-16 UNC Mounting holes added at 120 PCD

2. Chamfer added to leading shaft edge

SCALE: NTS SHEET 1/1 ALL DIMENSIONS ARE IN MM

# PRODUCT OVERVIEW AND DESIGN INFORMATION

## EOW-200-ECO SERIES NEW FOR 2023

**Primary Applications:** Remote small homes or cottages, tiny house construction,

Container construction, remote Buildings and roof top structures, Docks and Decks or Shore power for Boats as well as Remote difficult to get too areas.

Offering, Battery support, smaller power requirements. Power configuration are 2 x 500 generators

96-volt VAC 3-phase Which are converted using our New MPPT Future Energy controller to DC for most storage applications. 24-48 volt

This system is focused around Battery storage systems and introductory wind turbine enthusiasts. Compact and durable. This system boasts a much lower introductory Cost but maintains the BE-WIND performance.

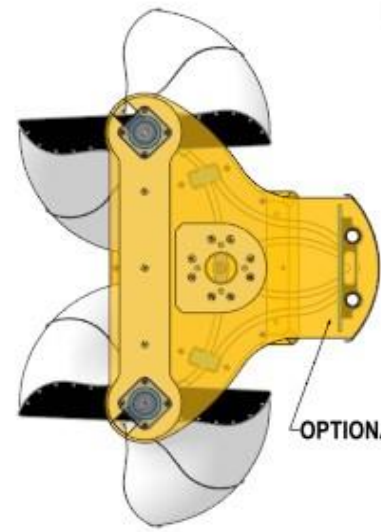
The Bamboo structure is manufacturing the same as the Composite units, but require a little more maintenance. Special coating is applied To the Bamboo material to secure it from weather conditions.

To maintain the wooden weather resistance. Similar to a wooden marine boat. The new Fiberglass laminated blades and shield are also less costly than the Carbon fiber, yet support the structural integrity for longevity.

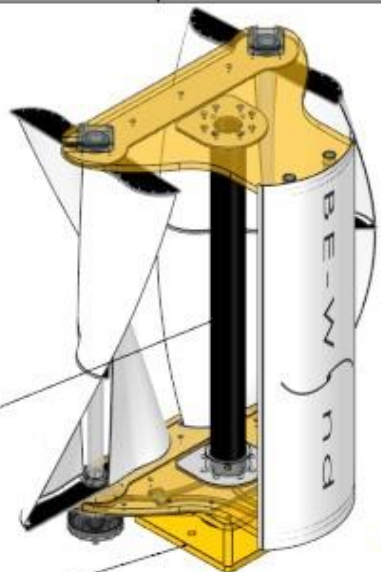


# BE-WIND ECO-200 TURBINE

NOTES



OPTIONAL SOLAR PANEL

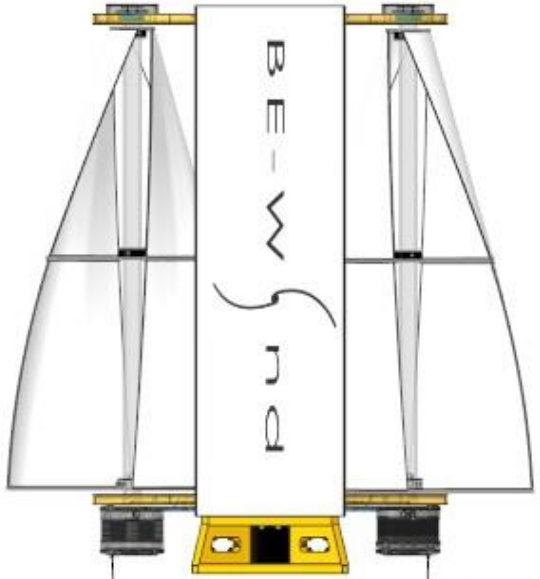
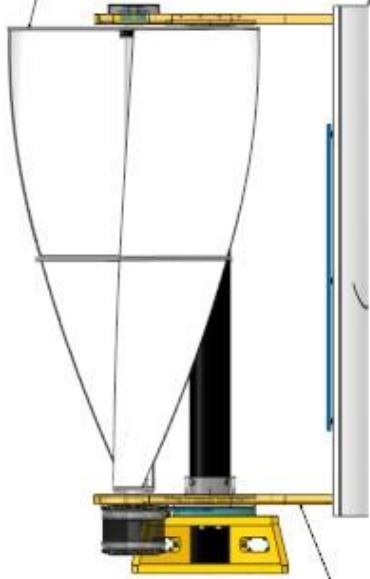


COMPOSITE SUPPORT TUBE

1.5" THICK NATURAL VERTICAL BAMBOO SHEET

FIBERGLASS BLADES

FIBERGLASS SHIELD



1.5" THICK BAMBOO STRUCTURE

2 X 500 WATT GENERATORS

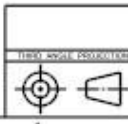


SOLAR PACKAGE

BLUE LED LIGHTS

SOLAR CONTROLLER

12 VOLT BATTERY



REV		APPROVALS		DATE		REV		APPROVALS		DATE	

DRAWN BY		CHECKED BY		DATE		SCALE		SHEET NO.		TOTAL SHEETS	

PROJECT NO.		PROJECT NAME		DATE	

DESIGNED BY		CHECKED BY		DATE	

DRAWN BY		CHECKED BY		DATE	

PROJECT NO.		PROJECT NAME		DATE	

BE-WIND LLC  
2022 ECO-200 1KW

## **EOW-200-2 DUAL SYSTEM**

All around the EOW-200 is our most popular system to date and has been the Flagship from the start. Perfectly matched for almost any Application including Homes and small business, Farmers, Ranches and Cottages or Island homes.

The design brings the most efficient wind energy in the world. 2023 series

Now offers a Complete energy package, with nothing other than wire connection.

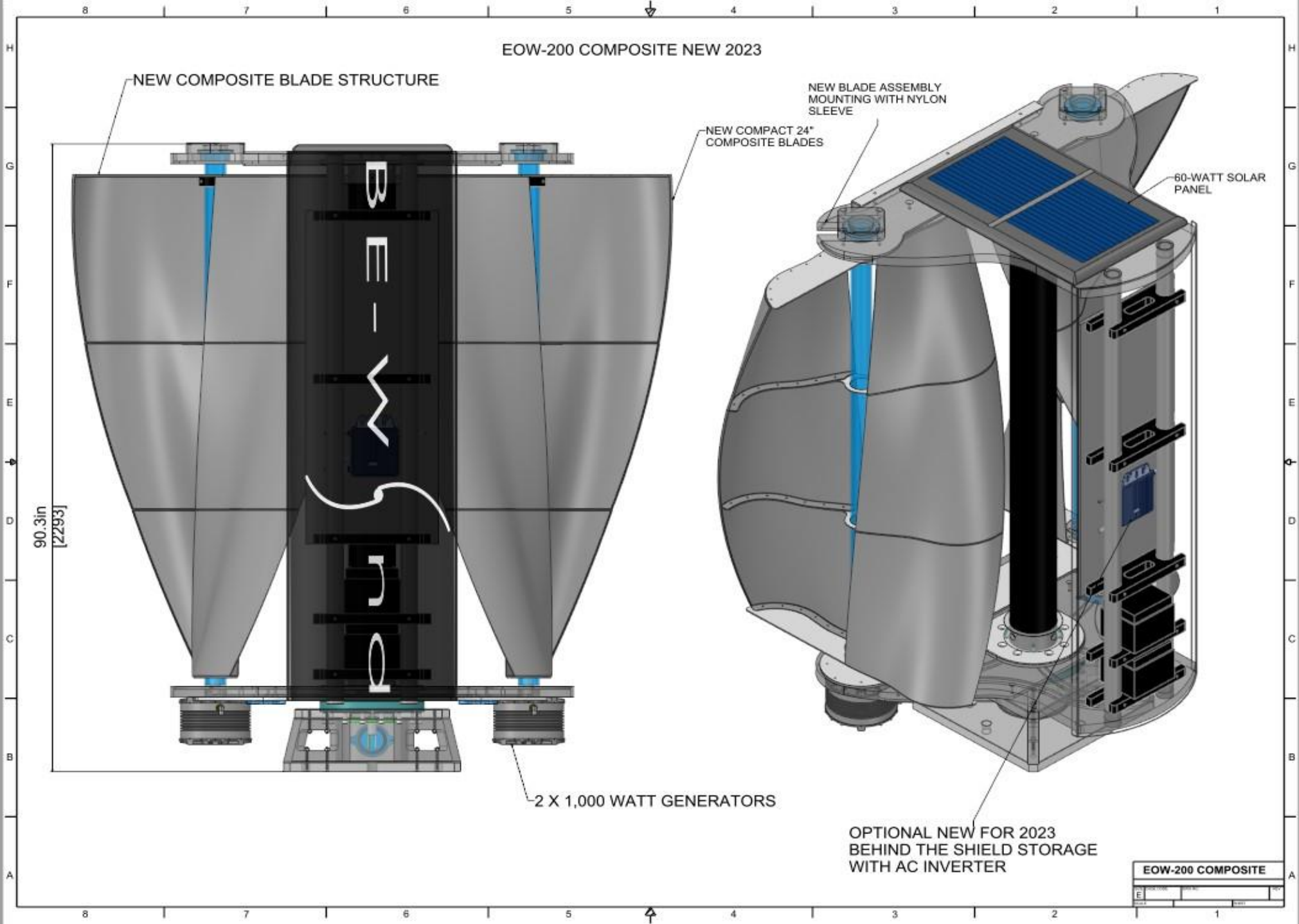
As an option, we can now include the complete electrical kit, mounted directly on the turbine And secured behind the forward shield.

Compact enough for easy shipping and installation, yet capable to offer the best performance and annual power production. Flexible with multiple color configurations and electrical configurations. The new 24" blade design and Top slotted structure allows for a more compact shipping solution, reducing the larger shipping crates.

This system stands alone amongst any vertical system on the market.

Designed for extreme wind conditions. This is our recommended product for standard Wind installations.

EOW-200 COMPOSITE NEW 2023



## EOW-300 SERIES

The EOW-300 has been redesigned and enhanced for higher production.

The 300 is now available as a total re-design to incorporate a more powerful system

That will have a specific focus and customer base.

Catered to Micro grid and higher Power applications, this is a perfect system

for low-cost micro grids and hybrid systems or plainly just more power needs.

The new design offers 2 x 2-kw, Coming soon 2 x 4-kw for max output of 8 kw and will maintain upgradability to future power plants.

This unit was designed as a Micro grid or Hybrid solution with a similar design,

but with a higher re-enforced sub structure to support the bigger generators

and higher wind loads. Designed specifically for Business and Micro Grid applications, requiring

larger power needs or Extreme home locations, Ground based Telecom and localized

EV charging sources. along with new electronics for

Hybrid interaction with Solar applications and larger storage capacities.

B 7 6 5 4 3 2 1

REVISION HISTORY

ALL EOW-300 WILL HAVE AN UPGRADE PATH TO THE NEW 4- KW GENERATORS WHEN AVAILABLE.

NEW UPPER STRCUTURE

NEW BLADE LAYOUT


112.9in [2868]

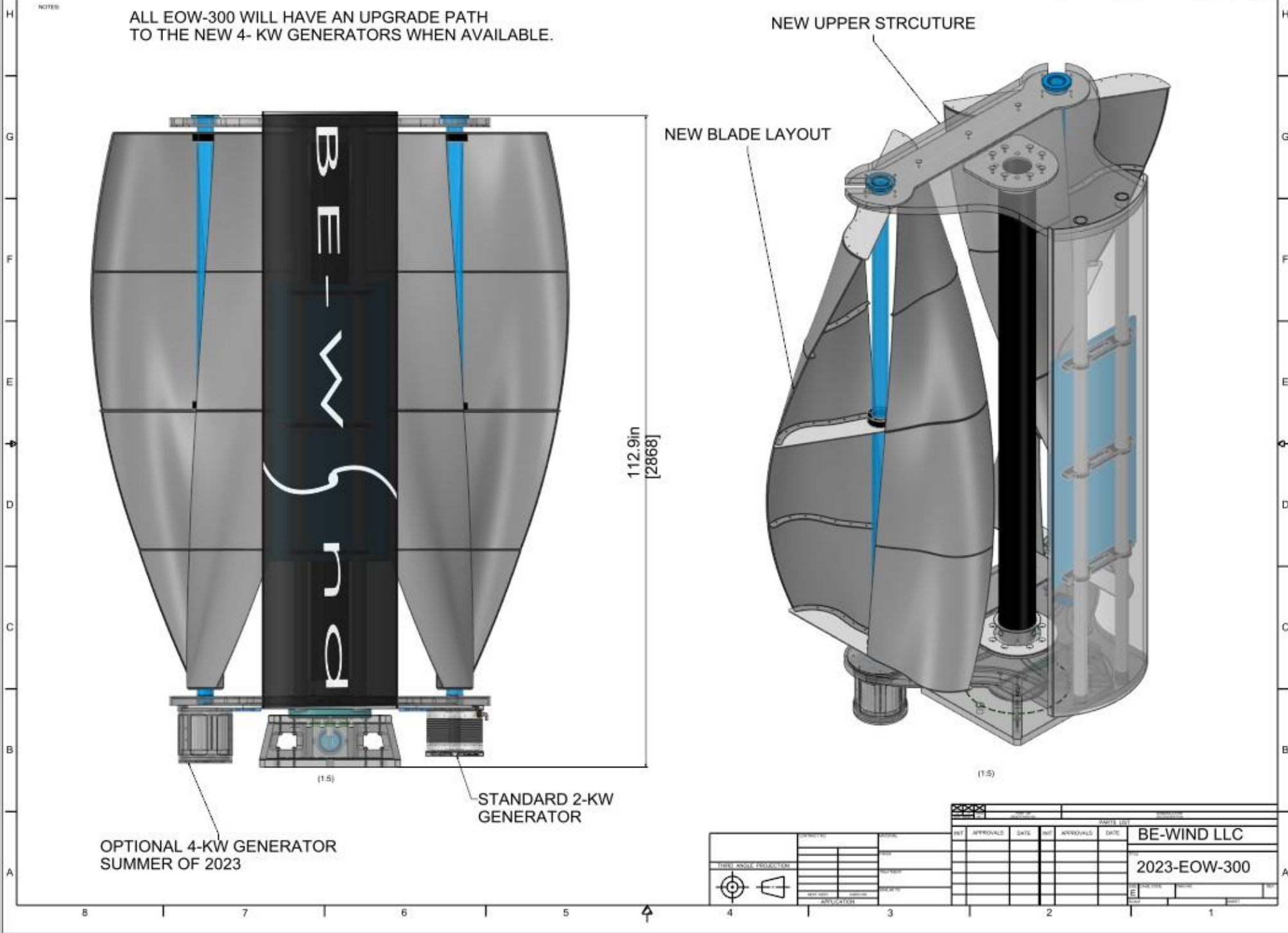
STANDARD 2-KW GENERATOR

OPTIONAL 4-KW GENERATOR  
SUMMER OF 2023

(1:5)

(1:5)

	DRAWING NO. 2023-EOW-300	PROJECT NO. 2023-EOW-300	DATE 2023-08-01	APPROVALS [Signature]	DATE 2023-08-01	APPROVALS [Signature]	DATE 2023-08-01	APPROVALS [Signature]	DATE 2023-08-01	APPROVALS [Signature]	DATE 2023-08-01
	BE-WIND LLC										
2023-EOW-300											



## **MOUNTINGS AND SPECIAL APPLICATIONS**

**BE-WIND** has developed many special mounting configurations for clients all over the world.

Our standard mounting configurations will now consist of 12” Diameter extruded FRP Composite pole. With several ground attachment configurations, this pole is standard length Of 20 ft. and should be ground mounted with at least at least 5 ft. secured in the soil.

This same pole design can be customized for different applications and mounting structures.

At **BE-WIND** we can help design the best attachment and or mounting system for your requirements.

Our Universal mounting structure, supports all our systems, current and past and is attached to the pole

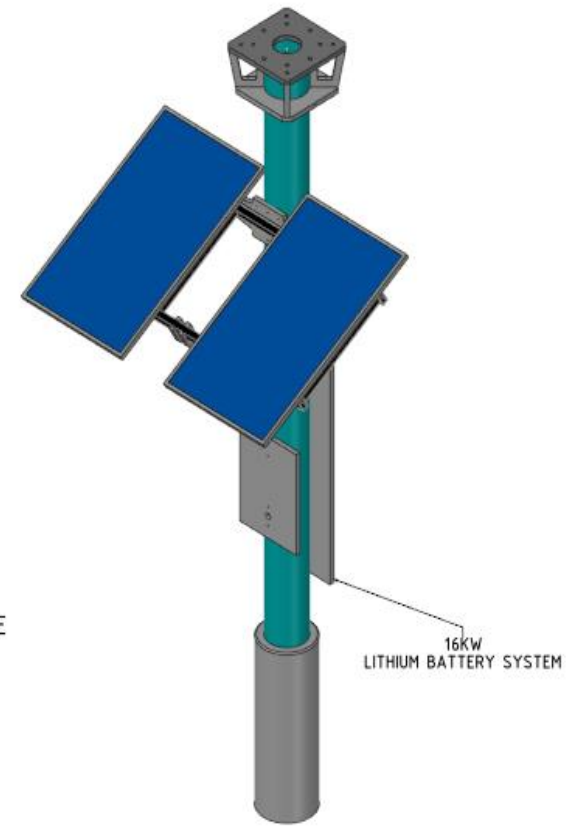
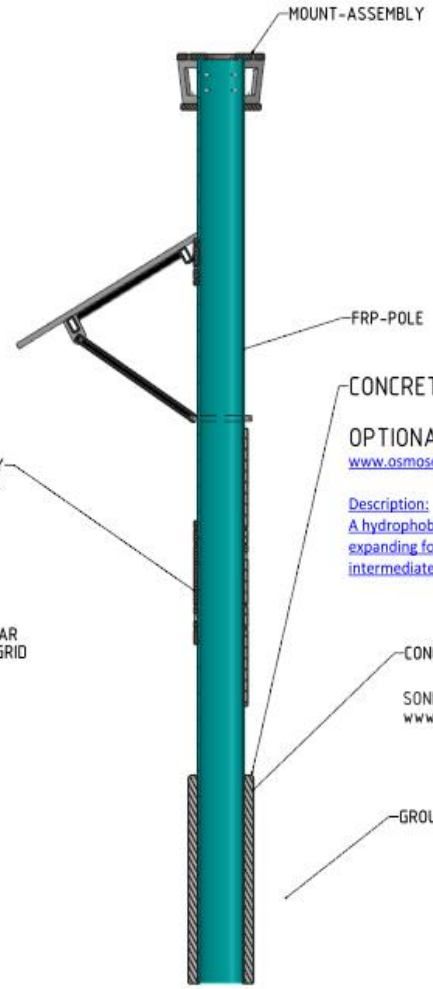
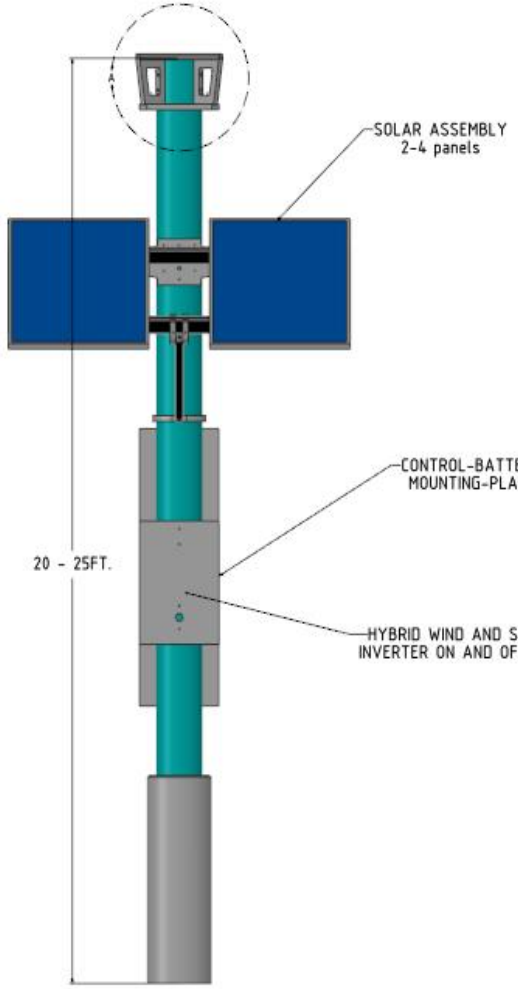
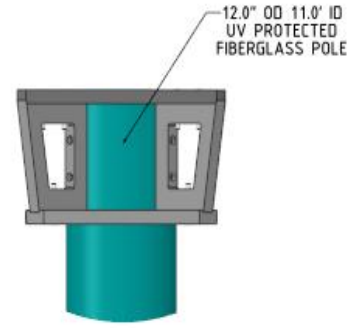
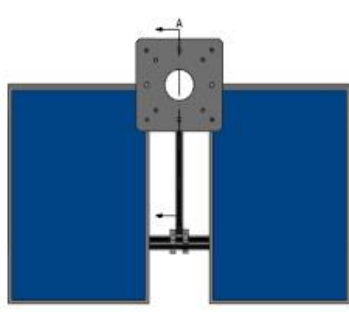
Structure. Please review the multiple mounting designs and let us know which best fits your application.

Below is our most common design concepts with additional accessories to support single or dual Solar panels and or other accessories.

Custom configurations are available with optional solar mounting configurations.

Either single, dual or quad Solar panels for special configurations and power requirements,

can be designed into the mounting supports. Contact the distributor or **BE-WIND** to discuss options and designs.



12.0" OD 11.0" ID  
UV PROTECTED  
FIBERGLASS POLE

MOUNT-ASSEMBLY

SOLAR ASSEMBLY  
2-4 panels

FRP-POLE

CONCRETE FOUNDATION

OPTIONAL: UN TESTED FOAM CORE

[www.osmose.com/products-pole-setting-foam](http://www.osmose.com/products-pole-setting-foam)

Description:

A hydrophobic, two-part polyurethane, expanding foam, designed to rapidly provide intermediate backfill for setting utility poles.

CONCRETE SOUND TUBE  
16" - 18" OD

SONIC TUBES:  
[www.spiralpaper.com/concrete-form-tubes-s/1825.htm](http://www.spiralpaper.com/concrete-form-tubes-s/1825.htm)

GROUND SOIL

16kW  
LITHIUM BATTERY SYSTEM

20 - 25FT.

CONTROL-BATTERY  
MOUNTING-PLATE

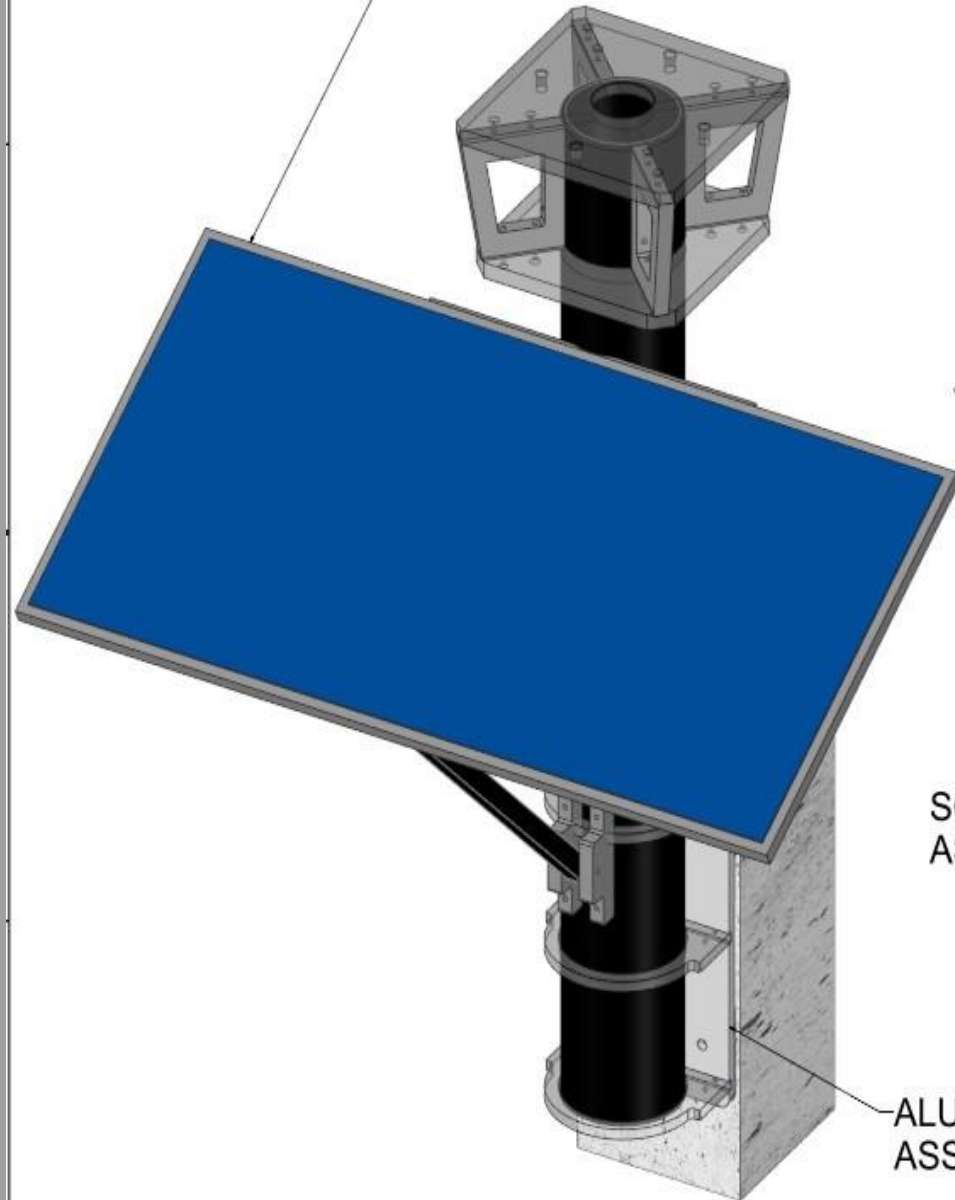
HYBRID WIND AND SOLAR  
INVERTER ON AND OFF GRID

SECTION A-A

BE-WIND LLC

FRP-FIBERGLASS STRUCTURAL POLE			
DATE	CODE	DWG. NO.	REV.
SCALE	1:12	SHEET 1 of 2	

500 WATT SOLAR PANEL



SCALE 1:6

TURBINE MOUNT

8FT COMPOSIT POLE

WIND MPPT CHARGE CONTROLLER

MOUNTING 24 VOLT BATTERY STORAGE SYSTEM WITH 2,000 WATT AC INVERTER

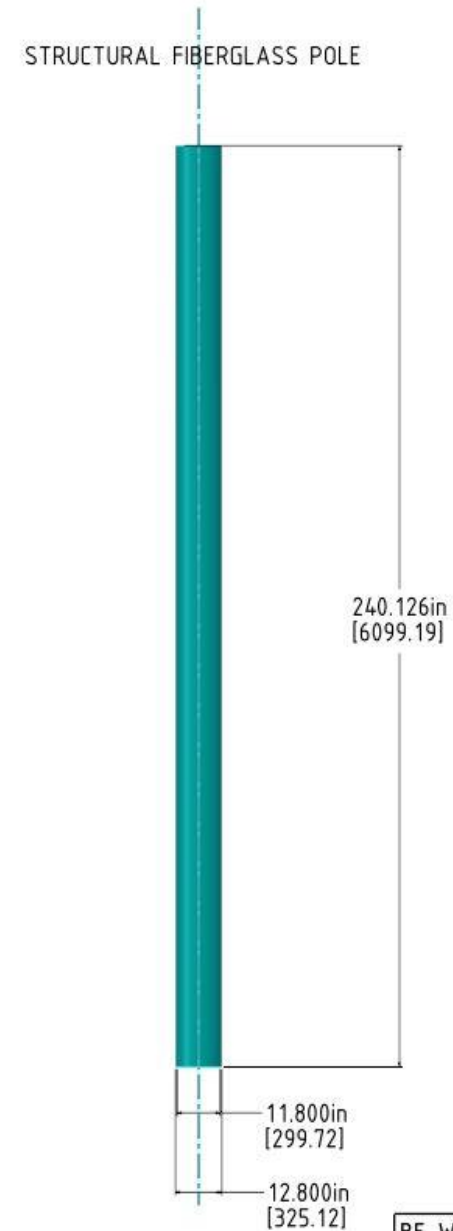
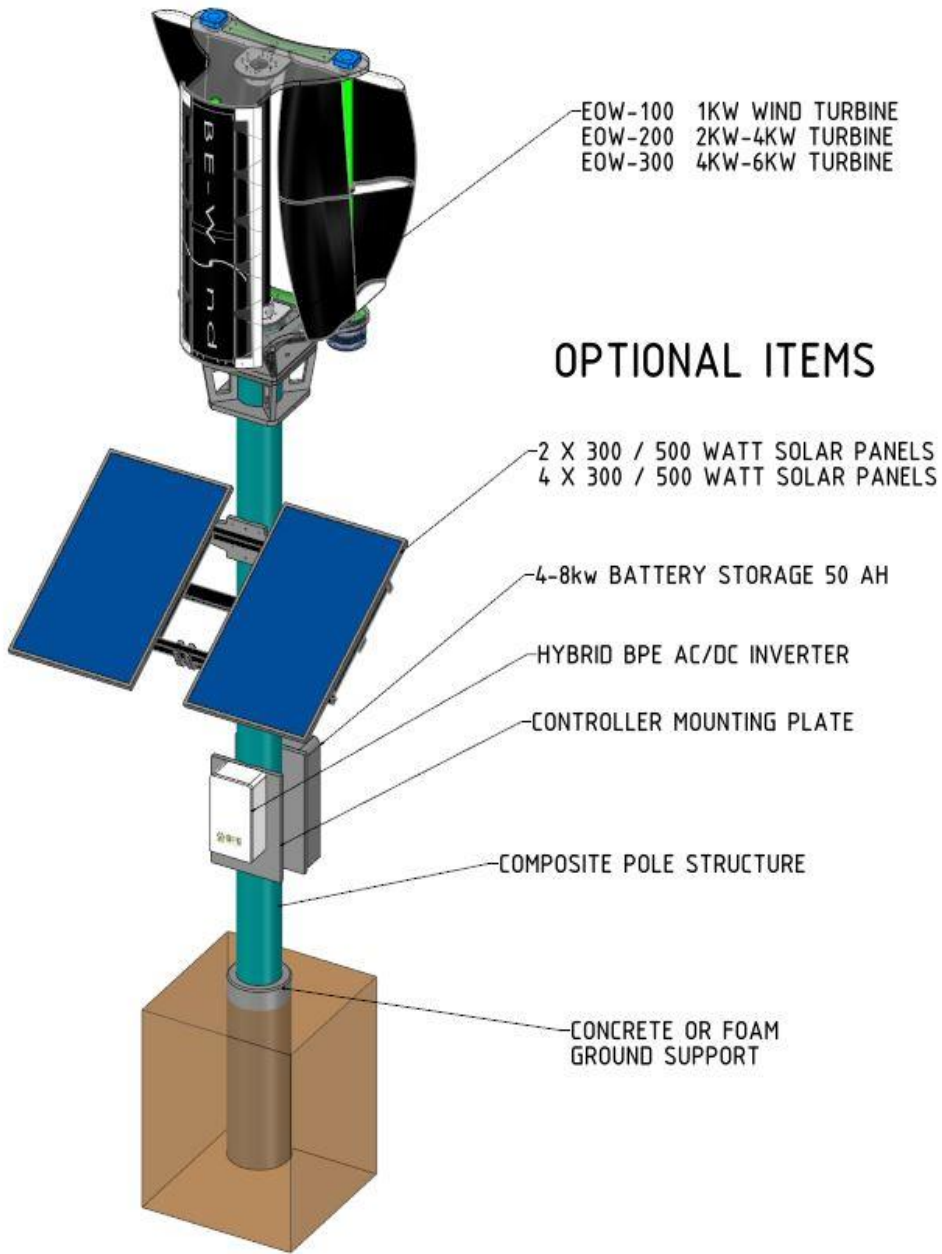
SOLAR TILT MOUNT ASSEMBLY

ALUMINUM WALL MOUNT ASSEMBLY

SCALE 1:6

DATE	CAGE CODE	DRG NO.	REV
D			
SCALE	SHEET		





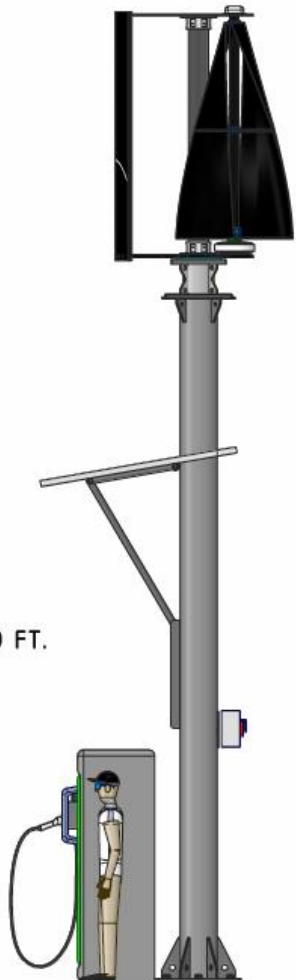
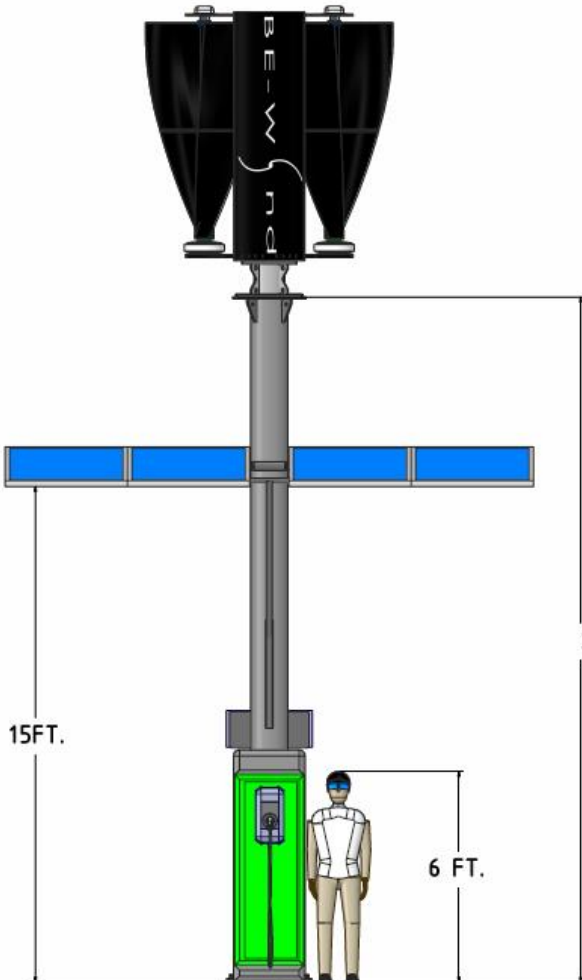
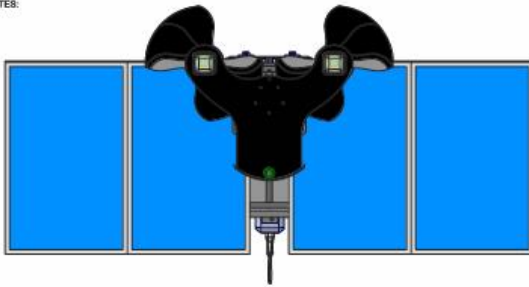
BE-WIND HYBRID SYSTEM			
SIZE	BLDG. CODE	EWLE NO.	REV.
NO.			
SCALE: 1/8"			SHEET 2 of 2

NOTES:

### BE-WIND ELECTRIC VEHICLE CHARGING STATION

- 1) DESIGNED FOR USE WITH BOTH SOLAR AND WIND
- 2) MAX CAPACITY OF 3,000 WATTS INPUT , INTO A 48 VOLT BATTERY SYSTEM
- 3) BE-WIND-EDW-200 COMPOSIT SYSTEM
- 4) 4 X 250 WATT SOLAR PANELS
- 5) VICTRON EASY SOLAR 3KVA ALL IN ONE POWER SOLUTION
- 6) LITHIUM-ION TECHNOLOGIES BATTERY SOLUTION 48 VOLT 100 AH STORAGE WITH OPTION TO INSTALL UPTO 4 BATTERY SYSTEMS
- 7) CUSTOM SECURE CABINET TO HOUSE ALL THE COMPONENTS

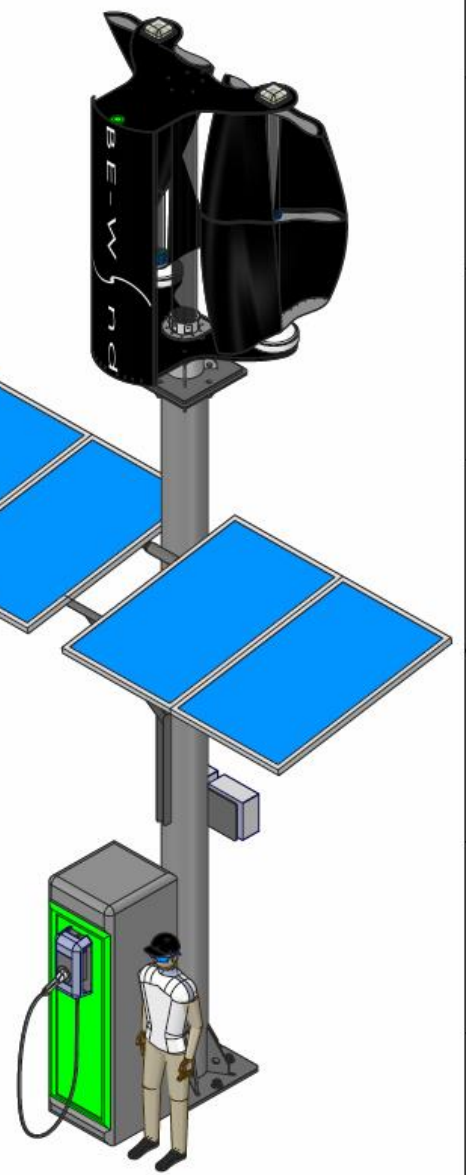
OPTIONS: SOLAR STREET LIGHTING CAN BE ADDED.  
 LED MULTIY COLOR APPLICATIONS.  
 BE-WIND FRONT SHIELD CAN BE USED FOR MARKETING OR ADVERTISING MATERIALS.



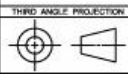
OPTIONAL DESIGN FOR 320 WATT OR LARGER PANELS

CONFIGURATION CAN BE ADJUSTED TO SUPPORT OTHER MEANS OF DUAL POWER APPLICATIONS.

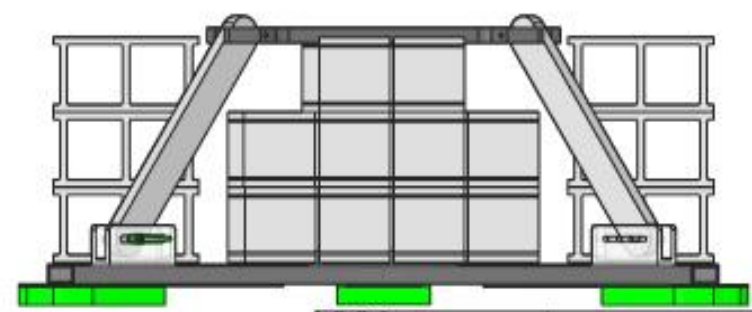
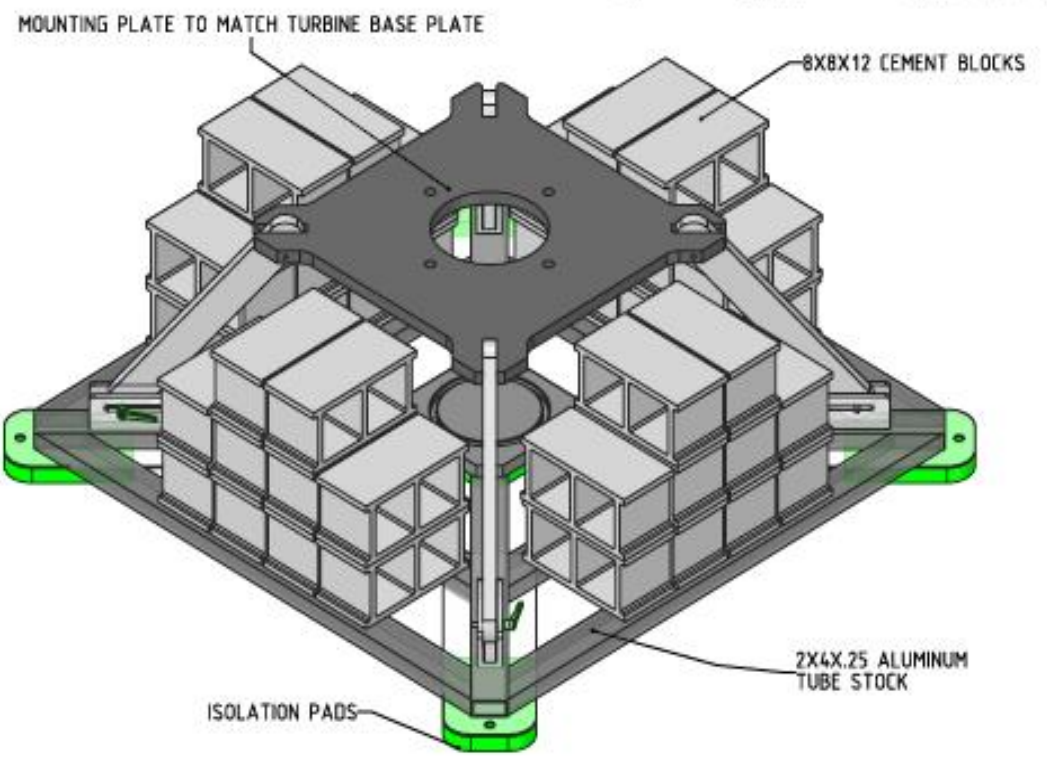
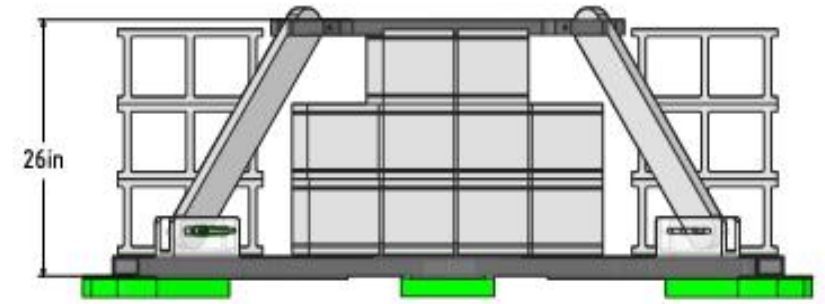
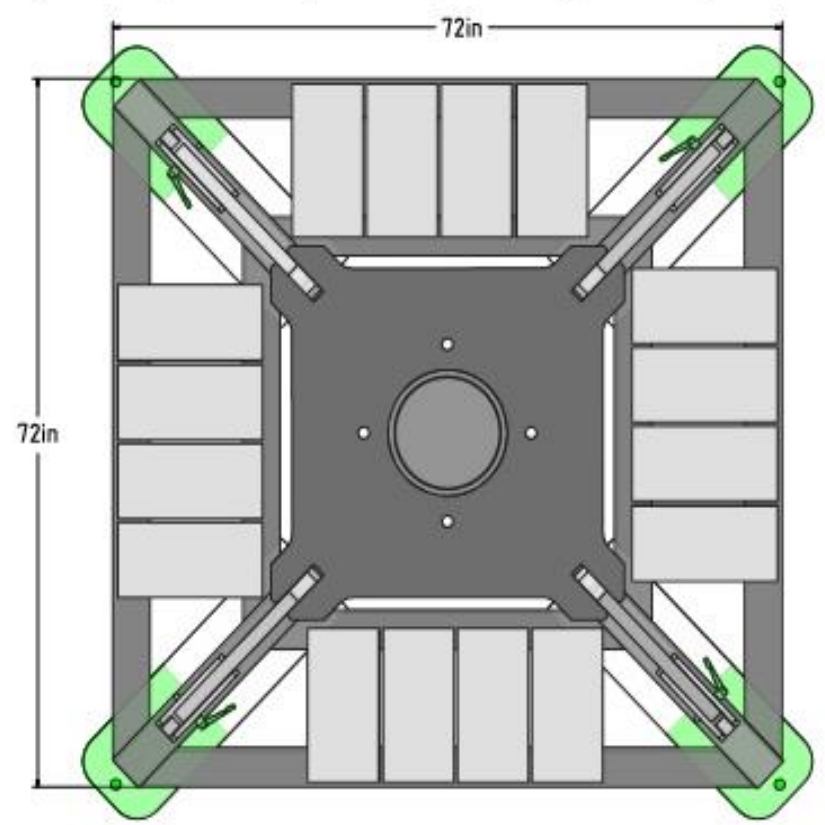
DESIGNED AND DEVELOPED BY  
 MIKE BERDAN BE-WIND LLC  
[www.be-wind.com](http://www.be-wind.com)



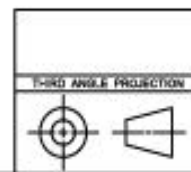
CONTRACT NO.		MATERIAL		PARTS LIST		DESCRIPTION	
INIT	APPROVALS	DATE	INIT	APPROVALS	DATE	BE-WIND LLC	
						EV-CHARGING STATION	







NOTES: ALL MATERIAL ALUMINUM 6061 T6  
 OR STEEL TUBING  
 WELD TOGETHER AT ALL JOINTS



CONTRACTING	MATERIAL
	FINISH
	TREATMENT
REV. NO.	ISSUED TO
DATE	SCALE
APPROVALS	APPLICATION

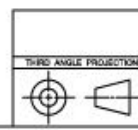
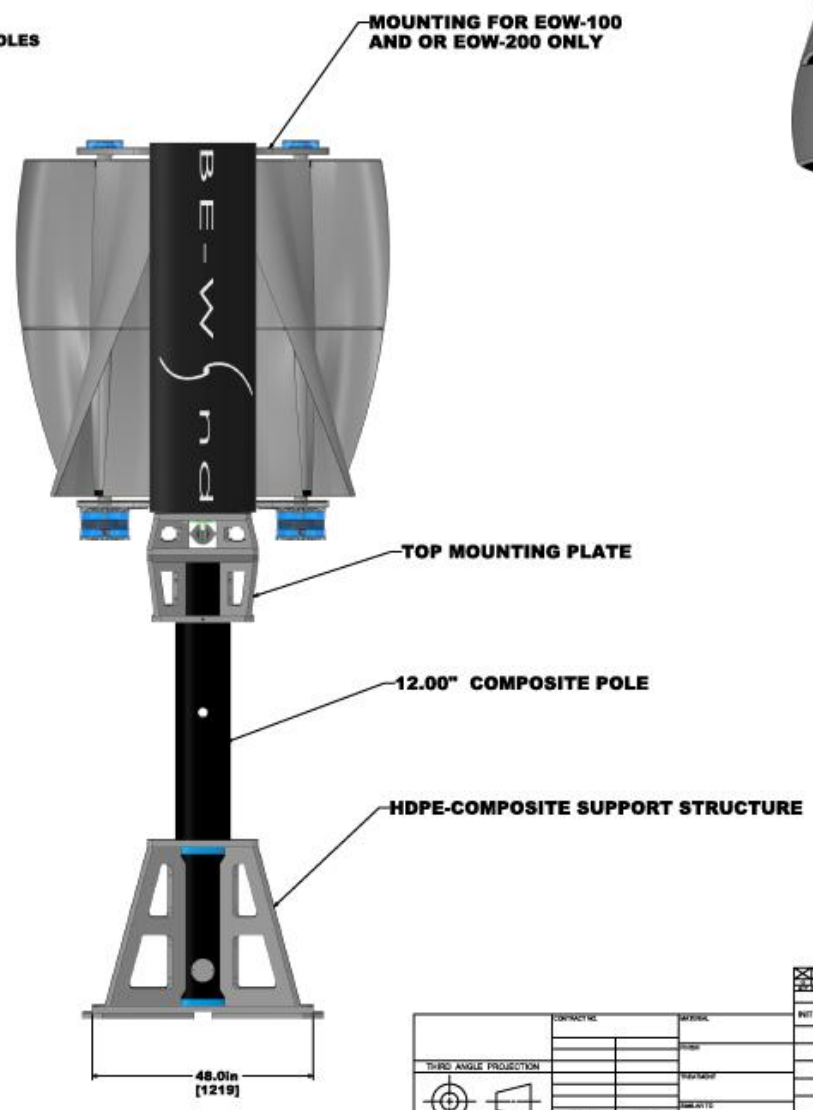
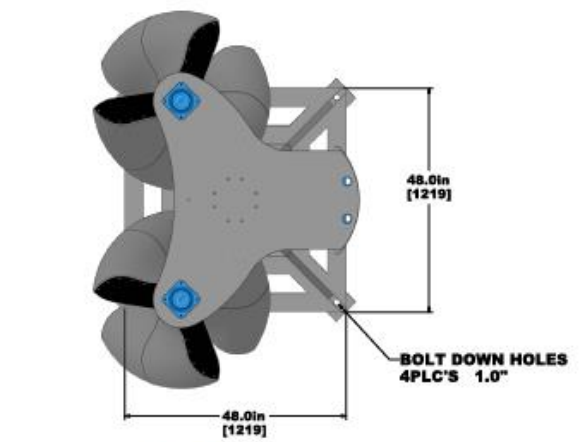
PARTS LIST			APPROVALS			APPROVALS		
ITEM NO.	DESCRIPTION	QUANTITY	INIT	APPROVALS	DATE	INIT	APPROVALS	DATE

BE-WIND LLC		
TITLE: GROUND MOUNT 100-200 UNITS		
SCALE: D	DATE: 0000	REV: 0000

NOTES:

### COMPOSITE MOUNT



CONTRACT NO.	ISSUE
REV. PART	LOCATION
APPLICATION	DATE

PARTS LIST			APPROVALS		
REV.	APPROVALS	DATE	REV.	APPROVALS	DATE

BE-WIND LLC

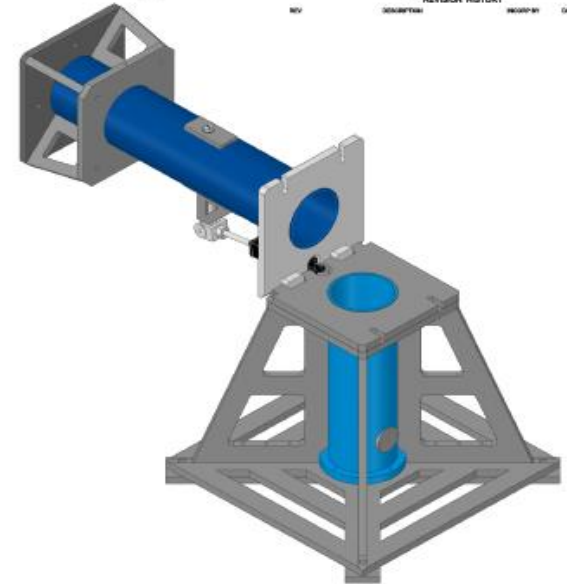
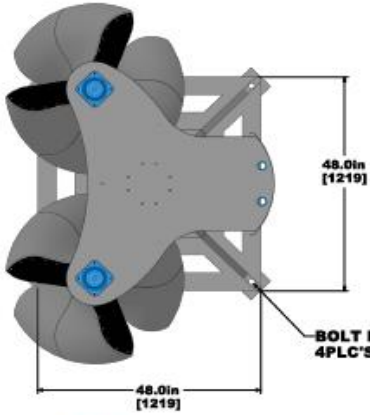
COMPOSITE MOUNT

REV. DATE/ISSUE: E 001-02252022

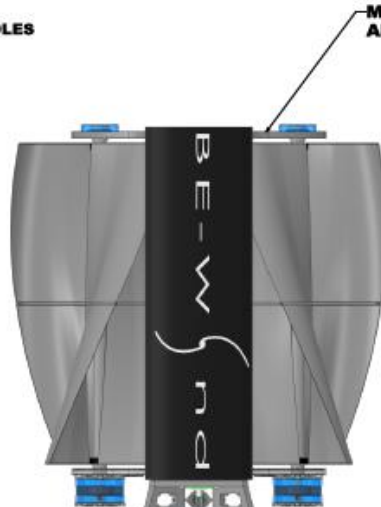
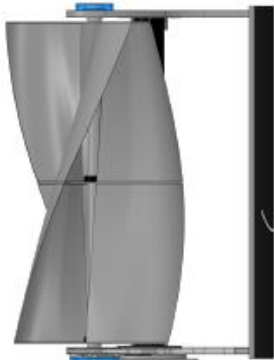
SCALE: 1:1

NOTES:

### COMPOSITE MOUNT WITH HYDRAULIC TITL



SCALE 1:8



HYDRAULIC TILTING CONFIGURATION

TOP MOUNTING PLATE

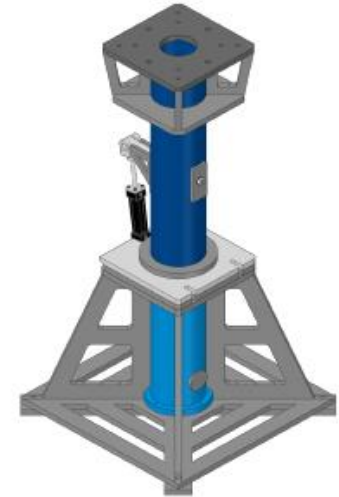
12.00" COMPOSITE POLE

HDPE-COMPOSITE SUPPORT STRUCTURE

38.5in [978]

99.6in [2530]

48.0in [1219]



CONTRACT NO.	SERIAL	DATE	APPROVALS	PARTS LIST			REVISION
				NO.	DESCRIPTION	DATE	

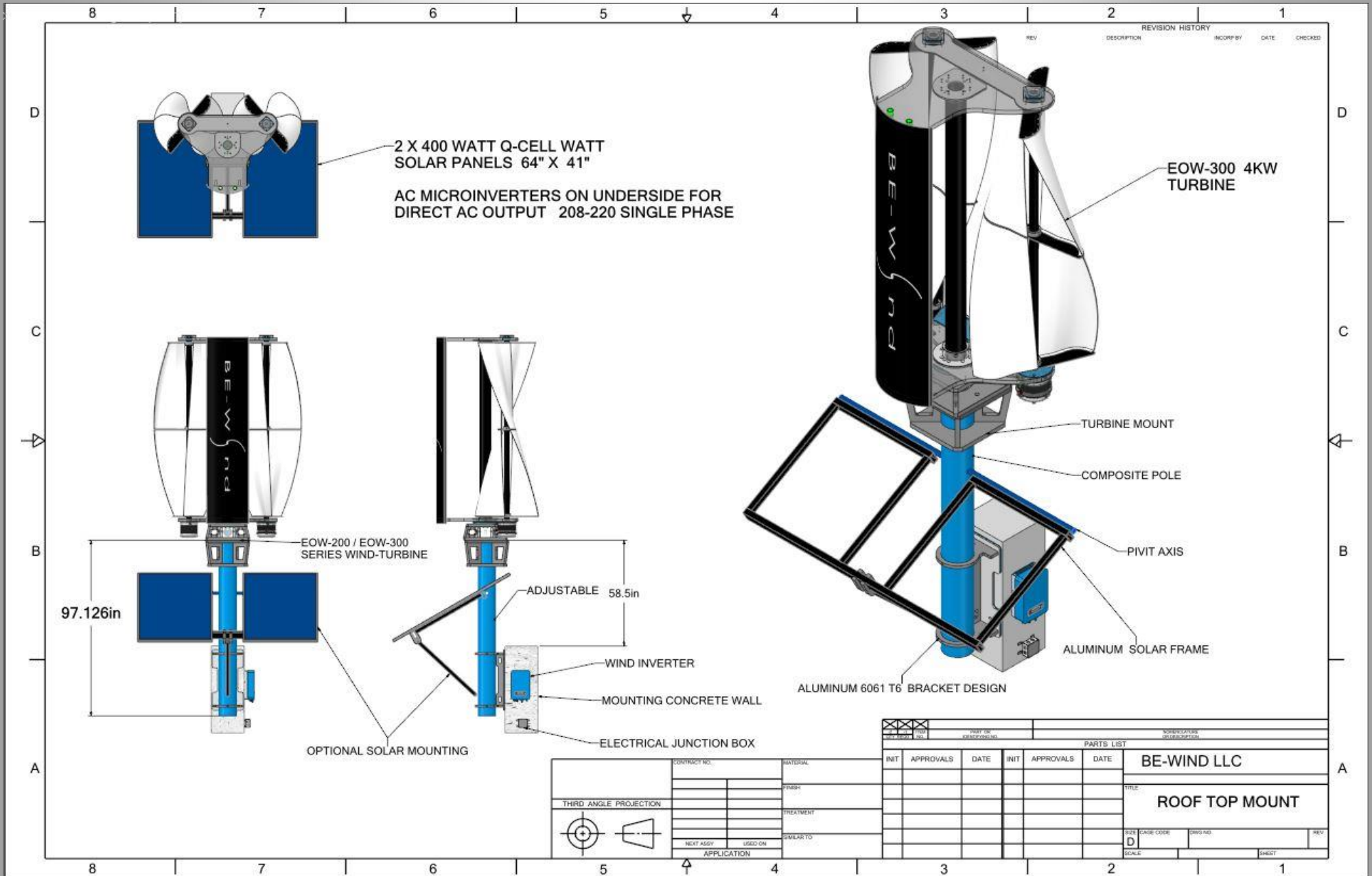
  

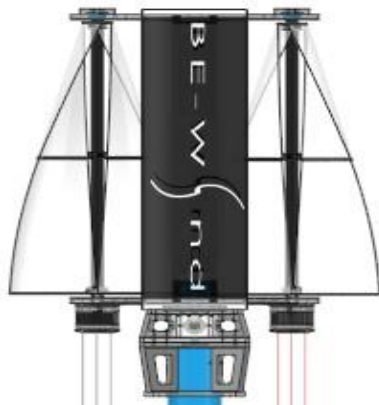
THIRD ANGLE PROJECTION			
CONTRACT NO.	SERIAL	DATE	APPROVALS
REV A	LINE-ON	DATE	DATE
APPLICATION			

BE-WIND LLC		
COMPOSITE MOUNT		
REV	DATE	BY
E	001-02252022	A
DRAWING CODE		SHEET
		1 OF 1

# Side Mounting Configurations.





OPTIONAL 3-PHASE DISCONNECTS

**BE-WIND MPPT CONTROLLER**



**HYBRID INVERTER**



**BE-WIND MPPT TECHNOLOGY**

- 1) 2 X 3-PHASE 96VAC GENERATORS
- 2) AIRFORCE DUAL MPPT CHARGE CONTROLLER 24 / 48 VOLT BATTERY SYSTEM.
- 3) WIFI / BLUETOOTH MONITORING AND SMART PHONE APP LINK WITH CONFIGURATION AND DATA LOGGING.
- 4) OUTDOOR RATED CABINET FOR ANY LOCATION INSTALLATION.
- 5) LARGE TOUCH DIGITAL INFORMATION SCREEN AND CONFIGURATION SCREEN
- 6) CONVERT BATTERY POWER THRU A HYBRID INVERTER CHARGER SUPPORTING 24 / 48 STORAGE EITHER ON GRID OR OFF GRID APPLICATIONS.

DC-OUTPUT

DC-INPUT

GRID POWER

**BATTERY BANK**



**STANDARD ELECTRICAL**

REV	DATE	BY	CHK
E			





Please feel free to reach out directly to BE-WIND or any of its listed distributors for further information, including pricing and delivery schedules. You can check out more information as well on our Website, Facebook page And LinkedIn page and articles.

Also feel free to reach out to me at [mberdan@be-wind.com](mailto:mberdan@be-wind.com)

For any direct questions.

[www.BE-WIND.COM](http://www.BE-WIND.COM)

