

Microgrid – Wind Turbine Catalog 2025

24400 Highpoint Road, #4, Beachwood, Ohio 44122



(833)-502-1920



HECSY - MICROGRID

WIND ENERGY HYBRID SYSTEMS:

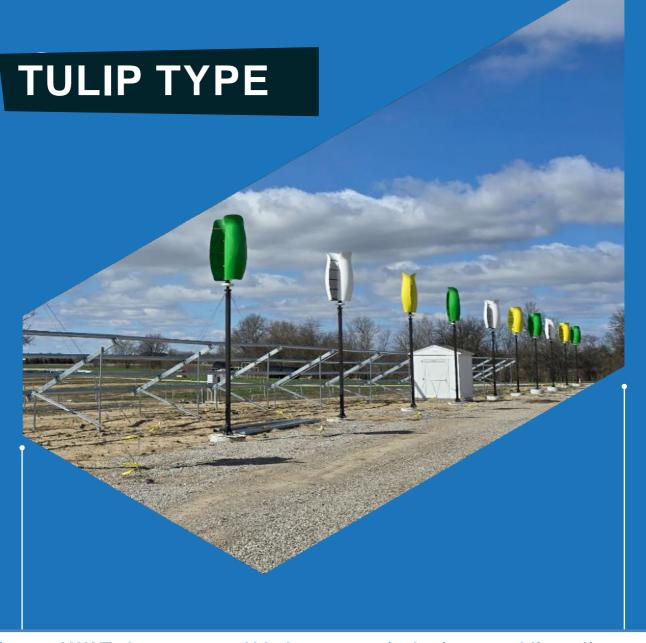
High Point Energy Control Systems has over 20 years of expertise in energy efficiency, automation, and control systems. Our experience allows us to provide services that help engineers, system designers, and customers make informed decisions to reduce or eliminate reliance on the utility grid.





VAWT VERTICAL ACCESS WIND TURBINE: What is the advantage of vertical wind turbine?

- **Smaller footprint**: Vertical wind turbines require less land to generate the same amount of power as horizontal turbines. This compact design allows them to be installed in areas with limited space, such as rooftops or small plots of land, making them a viable option for urban environments.
- Lower wind speed operation: Vertical turbines can operate efficiently at lower wind speeds compared to horizontal turbines. This makes them particularly suitable for urban and suburban areas where wind conditions can be inconsistent and turbulent, allowing for more consistent energy production.
- **Easier maintenance:** The design of vertical wind turbines makes it easier to access their components. This facilitates routine maintenance and repairs, reducing downtime and potentially lowering maintenance costs over the turbine's lifespan.
- Wildlife-friendly: Vertical wind turbines typically operate at lower blade speeds than horizontal turbines. This characteristic reduces the risk of harm to birds and bats, making them a more eco-friendly option for generating wind energy.
- Aesthetically pleasing: Many people find vertical wind turbines to be more aesthetically pleasing and less obtrusive than traditional horizontal turbines. Their sleek and modern design can blend more harmoniously with various landscapes and urban settings, potentially reducing visual pollution and increasing public acceptance.



Tulip-type VAWTs feature curved blades on a vertical axis, resembling tulip petals. They efficiently capture wind from any direction, generating power even at low speeds while minimizing noise and vibration.

These turbines, unlike HAWTs, do not require alignment with the wind, making them effective in areas with fluctuating wind conditions. Their design allows for power generation in urban settings where wind can be inconsistent, and their quiet operation is beneficial in populated areas.

Additionally, tulip-type VAWTs are visually appealing and can be installed in various locations, including rooftops and parks, contributing to sustainable energy solutions without disrupting aesthetics.

In summary, tulip-type VAWTs provide an effective and adaptable means of harnessing wind energy, supporting the integration of clean energy into daily life.

Model	HECSY- TLP300-US	HECSY- TLP600-US	HECSY- TLP1000-US	HECSY- TLP2000-US	HECSY- TLP3000-US	HECSY- TLP5000-US	HECSY- TLP10K-US
Rated Power	400W	600W	1KW	2KW	3KW	5KW	10KW
Blades Length	0.68M	1.1M	1.1M	1.7M	1.7M	2.0M	2.0M
Wheel Diameter	0.38M	0.52M	0.52M	1.0M	1.0M	1.2M	1.2M
Rated Voltage	12V~24V	12V~24V	12V~48V	24V~96V	24V~96V	24V~220V	48V~380V
Start Up Speed	1.2m/s	1.2m/s	1.5m/s	2.0m/s	2.0m/s	2.0m/s	2.0m/s
Rated Speed	12m/s	12m/s	12m/s	12m/s	12m/s	12m/s	12m/s
Cut-in Speed	3.5m/s	3.5m/s	4.0m/s	4.0m/s	4.0m/s	4.0m/s	4.0m/s
Survival Speed	40m/s	40m/s	45m/s	45m/s	45m/s	45m/s	45m/s
Blades Quantity	2						
Blades Material	Fiber glass						
Generator Type	Coreless Disc	Type Maglev Le	vitation Permane	ent Magnet Gene	rator		
Working Temperature	40 C~+60 C				ı		
Protection Level	IP54						
Working environment humidness	≤90%						
Altitude	≤4500m						
Overload Protection	Electromagne	tic Brake					
Gross Weight	12kg	21kg	28kg	90kg	105kg	125 kg	160kg









THE DATA SHEET IS JUST FOR YOUR REFER



WE CAN CUSTOMIZE MORE SPECIFICATION FOR YOU





1. Efficiency:

Spiral-type turbines have a high coefficient of power (Cp) compared to other vertical-axis wind turbine designs. This means they can capture more wind energy and convert it into usable electricity.



2. Low noise:

Because spiral-type turbines have fewer moving parts, they tend to produce relatively little noise during operation.



3. Scalability:

They can be built at different sizes, from small turbines for personal use to large, industrial-sized installations.

U	2
C	
†	
_	
Ω	

Model	HECSY- SVP600-US	HECSY- SVP1000-US	HECSY- SVP1500-US	HECSY- SVP2000-US	HECSY- SVP2500-US	HECSY- SVP3000-US
Rated Power	600W	1KW	1500W	2000W	2500W	3KW
Max Power	650W	1100W	1600W	2100W	2600W	3500W
Blades Length	1.05M	1.3M	1.5M	1.5M	1.7M	2.0M
Wheel Diameter	0.52M	0.52M	0.6M	0.67M	0.6M	0.8M
Rated Voltage	12V~24V	12V~48V	12V~48V	12V~96V	48V~220V	48V~220V
Start Up Speed	1.2m/s	1.5m/s	1.5m/s	2.0m/s	2.0m/s	2.0m/s
Rated Speed	12m/s	12m/s	12m/s	12m/s	12m/s	12m/s
Cut-in Speed	3.5m/s	4.0m/s	4.0m/s	4.0m/s	4.0m/s	3.5m/s
Survival Speed	40m/s	45m/s	45m/s	45m/s	45m/s	40m/s
Blades Quantity	2	2	2	2	2	2
Blades Material	Fiber glass					
GeneratorType	Coreless Di	sc Type Maglev Le	evitation Perman	ent Magnet Genera	itor	
Working Temperature	-40 ~+80					
Protection Level	IP54					
Working environment humidness	≤90%					
Altitude	≤4500m					
Install Height	6~12m					
Overload Protection	Electromagi	netic Brake				
Gross weight	23kg	28kg	35kg	40kg	57kg	80kg
Packing list(cm)	17*17*111	17*17*132	36*36*36	65*47*47	28*28*190	206*20*20
	54*36*35	55*35*35	170*50*50	19*19*170	54*36*35	47*47*85 37*37*32







Model	HECSY- SVP4000-US	HECSY- SVP5000-US	HECSY- SVP7000-US	HECSY- SVP10K-US	HECSY- SVP15-US	HECSY- SVP20K-US
Rated Power	4KW	5KW	7KW	10KW	15KW	20KW
Blades Length	2.5M	3.0M	3.5M	3.5M	4.0M	4.0M
Wheel Diameter	0.65M	1.2M	1.2M	1.2M	1.2M	1.2M
Rated Voltage	48V~220V	48V~220V	48V~220V	48V~380V	96V~220V	48V~380V
Start Up Speed	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.5m/s	2.5m/s
Rated Speed	12m/s	12m/s	12m/s	12m/s	12m/s	12m/s
Cut-in Speed	4.0m/s	4.0m/s	4.0m/s	4.0m/s	4.0m/s	4.0m/s
Survival Speed	45m/s	45m/s	45m/s	45m/s	45m/s	45m/s
Blades Quantity	2 Pcs					
Blades Material	Fiber glass					
Generator Type	Iron-Core permanent magnet Generator	Iron-Core permanent magnet Generator	Iron-Core permanent magnet Generator	Iron-Core permanent magnet Generator	Iron-Core permanent magnet Generator	Iron-Core permanent magnet Generator
Working Temperature	-40C ~+80C					
Protection Level	IP54					
Working environment humidness	≤90%					
Altitude	≤4500m					
Install Height	6~12m					
Overload Protection	Electromagn	etic Brake				
Gross Weight	120kg	140kg	265 kg	280kg	300kg	340kg









X TYPE



1. Higher efficiency:

X-type wind turbines have higher efficiency as compared to traditional wind turbines due to their unique blade design.



2. Lower noise:

X-type wind turbines produce lower noise as compared to traditional wind turbines.



3. Better performance in low winds:

X-type wind turbines can generate electricity in low wind speeds, which is not possible with traditional wind turbines.



4. More compact design:

X-type wind turbines have a more compact design and can easily fit into small spaces, making them ideal for residential areas.



5. Lower maintenance cost:

X-type wind turbines have fewer moving parts, which reduces the maintenance cost as compared to traditional wind turbines.

Model	HECSY- XTP6000-U	HECS S XTP1000		HEC XTP200		HECS XTP3000	-	HECSY XTP3500-0		HECSY- XTP4000-US
Rated Power	600W	1000W		2000W		3000W		3500W		4KW
Max Power	630W 1100W			2200W		3200W		4000W		4.5KW
Blades Length	1.0M	1.0M		1.35M		1.65M		1.65M		2.1M
Wheel Diameter	0.62M	0.62M		1.1M		1.6M		1.6M		1.85M
Rated Voltage	12V~24V	12V~48\	/	24V~4	8V	24V~220	V	24V~220	V	24V~220V
Start Up Speed	1.2m/s	1.2m/s		1.5m/s		1.5m/s		1.5m/s		1.5m/s
Rated Speed	10m/s	10m/s		11m/s		11m/s		11m/s		11m/s
Cut-in Speed	2.5m/s	2.5m/s		3.0m/s	3	3.0m/s		3.0m/s		3.5m/s
Survival Speed	40m/s	45m/s		45m/s	40m/s			40m/s		40m/s
Blades Quantity	3	3	3			3		3		3pcs Includeinner boostdrum
Blades Material	Fiberglass	Fiberglas	SS	Fiberglass		Fiberglas	S	Fiberglas	S	Fiberglass
Generator Type	Maglev Levita	tion coreless Pe	ermane	ent magnet	Genera	ator				Iron core
Working Temperature	-40 C ~+80 C									<u> </u>
Protection Level	IP54									
Working environment humidness	≤90%									
Altitude	≤4500m									
Install Height	3~12m									
Overload Protection	Electromagne	ticBrake								
Gross Weight	26kg 28kg		80k	g	100k	kg 130		30kg		150kg
PackingList(cm)	120*27*50 One carton	120*27*50 One carton		*52*45 e carton		220"37"42		120*27*50 68*68*40 Two wooden		120*27*50 103*103*41





Model	HECSY XTP5K-US	HECSY XTP7K-US	HECSY XTP8K-US	HECSY XTP10K-US	HECSY XTP15K-US	HECSY XTP20K-US	HECSY XTP30K-US
Rated Power	5KW	7KW	8KW	10KW	10KW	20KW	30KW
Blades Length	2.1M	2.8M	2.8M	3.2M	3.6M	4.2M	5.0M
Wheel Diameter	1.85M	1.85M	1.85M	2.0M	2.4M	2.4M	3.0M
Rated Voltage	48V~220V	48V~220V	48V~380V	48V~380V	96V~380V	96V~380V	96V~380V
Start Up Speed	1.5m/s						
Rated Speed	11m/s						
Cut-in Speed	3.5m/s						
Survival Speed	40m/s	40m/s	40m/s	45m/s	45m/s	45m/s	45m/s
Blades Quantity	3 PCS Include One boost drum						
Blades Material	Fiber glass						
Generator Type	Maglev coreless generator	Iron-core generator	Maglev coreless generator	Maglev coreless generator	Maglev coreless generator	Maglev coreless generator	Maglev coreless generator
Working Temperature	-40C ~+80C						
Protection Level	IP54						
Working environment humidness	≤90%						
Altitude	≤4500m						
Install Height	3~12m						
Overload Protection	Electromagnet	tic Brake					
Gross Weight	195kg	230kg	260kg	273kg	365kg	400kg	600kg











1. Higher Efficiency:

H-type turbines have a higher efficiency compared to traditional wind turbines because of their unique blade design. Their blades are longer and curved, which enables them to capture more wind energy.



2. Better Performance in Low Wind Speeds:

H-type turbines have better performance in low wind speeds compared to traditional turbines, which means they can generate electricity even in wind speeds as low as 3 meters per second.



3. Reduced Noise Pollution:

The unique blade design of H-type turbines reduces the amount of noise they produce, making them more suitable for residential areas.



4. Lower Maintenance Costs:

H-type turbines have fewer moving parts compared to traditional turbines, which means they require less maintenance and have a longer lifespan.

Model	HECSY HTP1K-US	HECSY HTP2K-US	HECSY HTP3K-US	HECSY HTP3K2-US	HECSY HTP3K3-US	HECSY HTP3500-US	HECSY HTP4K-US
Rated Power	1000W	1000W	3000W	3000W	3000W	1000W	1000W
Blades Length	1.6M	1.6M	2.0M	2.0M	2.0M	1.6M	1.6M
Wheel Diameter	1.2M	1.2M	1.4M	1.4M	1.4M	1.2M	1.2M
Generator Type	Maglev coreless	Maglev coreless	Iron-core	Iron-core	Maglev coreless	Maglev coreless	Maglev coreless
Rated Voltage	24V~220V	24V~220V	48V~220V	48V~220V	48V~220V	48V~220V	48V~220V
Start Up Speed	1.3m/s	1.3m/s	1.3m/s	1.3m/s	1.5m/s	1.5m/s	1.5m/s
Rated Wind Speed	10m/s	10m/s	10m/s	10m/s	10m/s	10m/s	10m/s
Cut in wind speed	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s
Survival Wind Speed	40m/s	40m/s	40m/s	40m/s	40m/s	40m/s	40m/s

Blades Quantity	3 pcs		3000W	3 pcs	3 pcs	3 pcs Include boost drum	1000W
Blades Material	Aluminiun	n alloy					
Working Temperature	-40 ~+40						
Protection Level	IP54						
Working environment humidness	≤90%						
Altitude	≤4500m						
Install Height	3~12m						
Overload Protection	Electroma	Electromagnetic Brake					
Gross Weight	45kg	70kg	115kg	120kg	140kg	170kg	200kg





Model	HECSY HTP5K1- US	HECSY HP5K2- US	HECSY HTP6K1- US	HECSY HTP6K1- US	HECSY HTP7K1- US	HECSY HTP8K- US	HECSY HTP10K- US	HECSY HTP10K2- US
Rated Power	5000W	5000W	6000W	6000W	7KW	8KW	10KW	10KW
Blades Length	2.8M	2.8M	3.2M	3.2M	3.2M	3.2M	3.6M	3.6M
Wheel Diameter	1.8M	1.8M	2.0M	2.0M	2.0M	2.0M	2.4M	2.4M
Generator Type	Maglev coreless	Maglev coreless	Iron-core	Iron-core	Maglev coreless	Maglev coreless	Iron-core	Iron-core
Rated Voltage	48V~380V	48V~380V	48V~380V	96V~380V	48V~380V	48V~380V	96V~380V	48V~380V
Start Up Speed	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.0m/s
Rated Wind Speed	10m/s	10m/s	11m/s	11m/s	11m/s	11m/s	11m/s	11m/s
Cut in wind speed	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s

Survival Wind Speed	40m/s	40m/s	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s
Blades Quantity	3 pcs	3 pcs Include boost drum	3 pcs	3 pcs	3 pcs	3 pcs Include double boost drum	3 pcs	3 pcs Include double boost drum
Blades Material	Aluminium allo	у						
Working Temperature	-40 ~+80							
Protection Level	IP54							
Working environment humidness	≤90%							
Altitude	≤4500m							
Install Height	2~12m	2~12m						
Overload Protection	Electromagnetic Brake							
Gross Weight	234kg	260kg	245kg	260kg	280kg	290kg	340kg	360kg



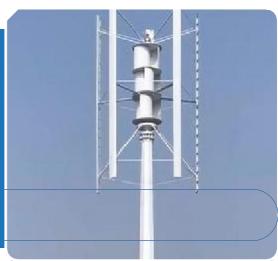




Model	HECSY HTP10K3- US	HECSY HTP15K- US	HECSY HTP20K- US	HECSY HTP30K- US	HECSY HTP50K- US	HECSY HTP80K- US	HECSY HTP80K- US	HECSY HTP100- US
Rated Power	10KW	12KW	15KW	10KW	10KW	10KW	10KW	10KW
Blades Length	3.6M	4.0M	4.0M	3.6M	3.6M	3.6M	3.6M	3.6M
Wheel Diameter	2.4M	2.6M	2.6M	2.4M	2.4M	2.4M	2.4M	2.4M
Generator type	Maglev coreless	Iron-core	Maglev coreless	Maglev coreless	Maglev coreless	Maglev coreless	Maglev coreless	Maglev coreless
Rated Voltage	48V~380V	96V~380V	96V~380V	96V~380V	96V~380V	220V~380V	380V	380V
Start Up Speed	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s
Rated Wind Speed	11m/s	11m/s	11m/s	11m/s	11m/s	11m/s	11m/s	11m/s
Cut in wind speed	2.5m/s	2.5m/s	2.5m/s	3.0m/s	3.0m/s	3.0m/s	3.0m/s	3.0m/s
Survival Wind Speed	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s
Blades Quantity	3 pcs Include double boost drum	3 pcs Include doubleboost drum	3 pcs Include doubleboos drum					
Blades Material	Aluminium allo	ру						
Working Temperature	-40C~+80C							
Protection Level	IP54							
Working environment humidness	≤90%							
Altitude	≤4500m							
Install Height	2~12m							
Overload Protection	Electromagnet	ic Brake						
Gross Weight	380kg	400kg	420kg	470kg	715 kg	1500kg	2000kg	3200 kg











1. High efficiency:

Q type wind turbines are designed to maximize their power output, which makes them highly efficient.



2. Low wind speed operation:

Q type wind turbines can operate at low wind speeds, which makes them suitable for installation in low wind areas.



3. Low noise:

Q type wind turbines are designed to operate with low noise levels, making them suitable for installation in residential and urban areas.



4. Easy maintenance:

Q type wind turbines are designed for easy maintenance, requiring little downtime for repairs and replacement of parts.



5. Robust design:

Q type wind turbines are built to withstand harsh weather conditions, making them reliable and durable.

Model	HECSY QUP400-US	HECSY QUP600-US	HECSY QUP800-US	HECSY QUP1000-US	HECSY QUP1500-US	HECSY QUP2000-US
Rated Power	400W	600W	800W	1000W	1500W	2000W
Max Power	450W	650W	850W	1100W	1600W	2200W
Blades Length	0.87M	0.96M	0.96M	1.17M	1.17M	1.5M
Wheel Diameter	0.98M	1.15M	1.15M	1.3M	1.3M	1.5M
Rated Voltage	12V~24V	12V~48V	12V~48V	12V~48V	12V~48V	24V~96V
Start Up Speed	1.5m/s	1.5m/s	1.5m/s	1.5m/s	1.5m/s	2.0m/s
Rated Wind Speed	10m/s	10m/s	10m/s	10m/s	10m/s	10m/s
Cut inwind speed	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s	2.5m/s
Survival Wind Speed	45m/s	45m/s	45m/s	45m/s	50m/s	50m/s
Blades Quantity	3	3	3	3	3	3
Blades Material	Aluminiumall	oy				
Generator Type	Three Phase	Permanent Axial	Flux Coreless Mag	lev Levitation Gene	rator	
Working Temperature	-40 C ~+80 C)				
Protection Level	IP54					
Working environment humidness	≤90%					
Altitude	≤4500m					
Install Height	3~12m					
Overload Protection	Electromagn	etic Brake				
Gross Weight	23.0kg	38.0kg	40.0kg	60.kg	80.0kg	120.0kg
Packing List(cm)	95*35*36 85*54*8 2boxes	46*44*108 14*105*64 2boxes	46*44*108 14*105*64 2boxes	121*52*57 120*70*14 2boxes	156*62*66 156*85*12 Twowooden boxes	120*27*50 103*103*41







Model	HECSY QTP2500- US	HECSY QTP3K- US	HECSY QTP4K- US	HECSY QTP5K- US	HECSY QTP8K- US	HECSY QTP10K- US	HECSY QTP20K- US	HECSY QTP30K- US	
Rated Power	2500W	3000W	4000W	5000W	8000w	10KW	20KW	30KW	
Blades Length	2.0M	2.0M	2.5M	2.5M	3.0M	3.0M	3.5M	5.0M	
Wheel Diameter	2.0M	2.0M	2.5M	2.5M	3.0M	3.0M	3.5M	5.0M	
Rated Voltage	24V~220V	24V~220V	48V~220V	48V~220V	48V~220V	48V~220V	96V~380V	96V~380V	
Start Up Speed	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.0m/s	2.5m/s	2.5m/s	2.5m/s	
Rated Wind Speed	10m/s	10m/s	10m/s	11m/s	11m/s	11m/s	11m/s	11m/s	
Cut in wind speed	2.5m/s	2.5m/s	2.5m/s	3.0m/s	3.0m/s	3.0m/s	3.0m/s	3.0m/s	
Survival Wind Speed	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s	50m/s	
Blades Quantity	3	3	3	3	3	3	3	3	
Generator Type	Iron-core generator	Coreless generator	Iron-core generator	Coreless generator	Iron-core generator	Coreless generator	Coreless generator	Coreless generator	
Blades Material	Aluminium alloy								
Working Temperature	-40 C~+40 C								
Protection Level	IP54								
Working environment humidness	≤90%								
Altitude	≤4500m								
Install Height	3~12m								
Overload Protection	Electromagnetic Brake								
Gross Weight	180.0kg	240.0kg	300.0kg	340.0kg	400.0kg	450.0kg	520.0kg	600.0kg	









1. Low noise:

Compared to traditional horizontal axis wind turbines, the lantern-type wind turbines produce less noise, making them ideal for urban and suburban areas.



2. Low wind speed:

They can operate even at low wind speeds, making them suitable for areas with lower wind speeds, such as urban areas.



3. Low maintenance:

Due to the simpler design, these turbines require less maintenance and fewer moving parts, lowering the overall maintenance costs.



4. Aesthetically pleasing:

They have a unique and modern look like a lantern, making them ideal for urban and remote areas, where there is an emphasis on blending renewable energy

Model	RX- LTV400	RX- LTV600	RX- LTV800	RX- LTV1000
Rated Power	400W	600W	800W	1000W
Max Power	450W	650W	850W	1100W
Blades Length	0.6M	0.6M	0.6M	0.6M
Wheel Diameter	0.9M	0.9M	0.9M	0.9M
Rated Voltage	12V/24V	12V/24V	12V/24V	12V/24V
Start Up Speed	1.2m/s	1.2m/s	1.2m/s	1.2m/s
Rated Wind Speed	12m/s	12m/s	12m/s	12m/s
Cut in wind speed	2.5m/s	2.5m/s	2.5m/s	2.5m/s
Survival Wind Speed	40m/s	40m/s	40m/s	40m/s
Blades Quantity	5	5	5	5
Blades Material	Nylon Fiber			
Generator Type	Three Phase Perma	lev Levitation Generator		
Working Temperature	-40 C~+40 C			
Protection Level	IP54			
Working environment humidness	≤90%			
Altitude	≤4500m			
Install Height	3~12m			
Overload Protection	Electromagnetic Bra			
Gross Weight	13.0kg	13.0kg	13.0kg	13.0kg
Packing List(cm)	32*62*46 One carton	32*62*46 One carton	32*62*46 One carton	32*62*46 One carton







CONTACT INFORMATION



Address:

24400 Highpoint Road, Beachwood, Ohio 44122, United States



Phone:

+1 833-502-1920



Email:

www.info@hecsy.com



Website: www.hecsy.com