Anakata New Generation
Wind turbines 400W-1400W

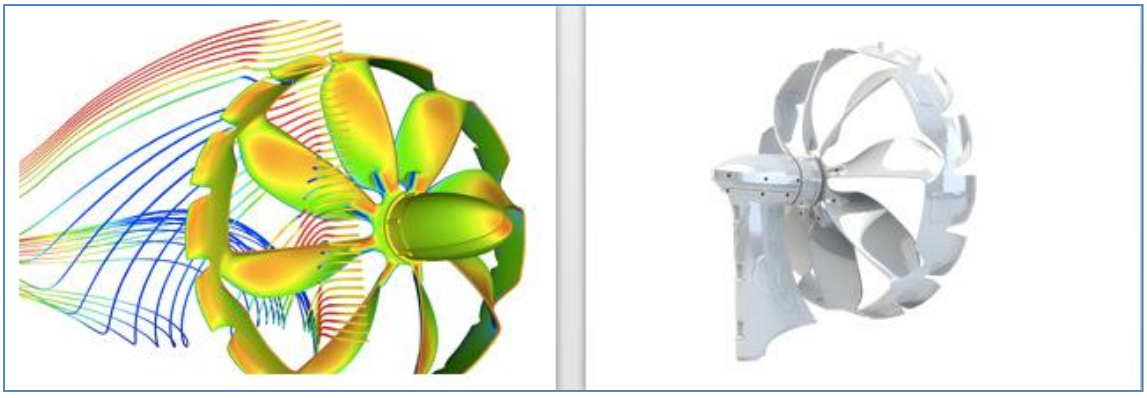
New generation wind turbines available in two different models: 400W-24V called A007 and 1400W-48V called A018

Suitable for installation on the ground or building roofs, quite and productive

Anakata New Generation
Hybrid & Storage solutions

The construction of the turbines:

-3D Model
-Engineering & materials study
-Prototyping
-Lab tests and on site tetsts
-Pre-production of various models for performance evaluation
-Tuning of the products
-Large-scale production for A007 & A018 models



Anakata New Generation
Hybrid & Storage solutions

Developed by Formula One aerodynamics and materials engineers, Anakata's patented 'Accelerator Technology' and 'micro-downstream' uses leading-edge technology to create a turbine that is more efficient than any other of its size. By increasing the speed of the wind as it approaches the rotor, Anakata's horizontal-axis wind turbines have significantly increased potential power output, even at low wind speeds. The downstream wind-trackers allow the turbines to react to a swift change of wind direction and gusting, to capture as much wind and generate as much power output as possible. The patented shroud designs of Anakata's wind turbines not only maximize efficiency, but also offer near-silent operation. Anakata's unique groundbreaking technology now enables wind power to be generated in areas where it was once considered unsuitable. This unrivalled innovative technology now enables small-scale wind generation to become economically and environmentally viable. The Anakata A007 and A018 are designed for use in a wide range of applications and users can tailor-make a wind power system according to their own energy needs and environment.

Anakata New Generation
Hybrid & Storage solutions

The small wind turbines can certainly be a viable alternative to other renewable energy sources, but the best results are achieved mixing solar and wind. The energy storage solutions are always more interesting nowadays because they are always able to ensure the supply of electricity to users, homes, shops or offices grid-connected as well as off-grid situations.
Etneo recommends and proposes solutions from 4kw to 6kw where is possible to connect: next generation wind turbines 400W/1500Ww, photovoltaic modules with variable power, expandable battery pack based on the real energy consumption and inverter able to manage the two renewable sources and the storage, with backup or totally off-grid management.
The future of energy usage is definitely closer to facilitate the storage of energy and the production of its own. While waiting for the lithium battery costs to decrease the today solutions are related to Gel battery pack.

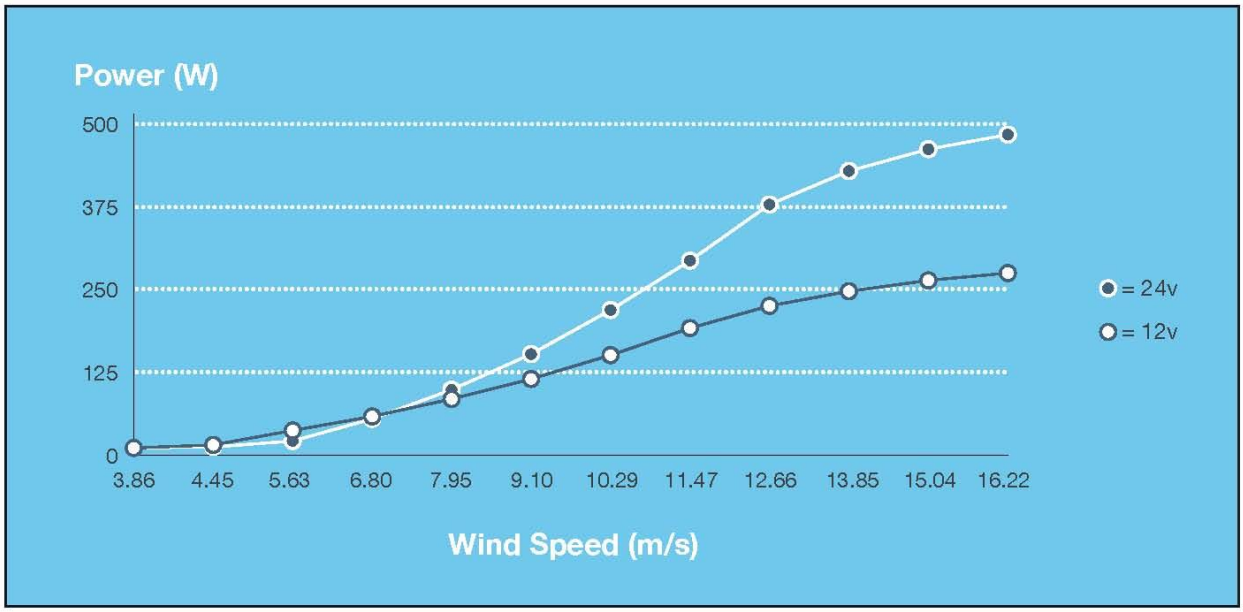
Anakata New Generation
Hybrid & Storage solutions

TECHNICAL SPECIFICATIONS	A007 HORIZONTAL AXIS TURBINE
Turbine type	Downstream horizontal axis
Rated power	370 watt a 12,5m/s
Peak power	130 watt a 20,0m/s
Output	12V DC or 24V DC (suitable for off-grid, battery bank charging, other third party inverters or multi source systems. May be used with an inverter to supply AC grid or non-grid-tie-in
Voltage options	12Vor 24V
Generator	Permanent magnet generator, brushless, no gearbox
Start-up wind speed	3,2m/s
Cut-in wind speed	3,7m/s
Over-speed protection	Designed to comply with EEC directive 89/336/EEC
Survival wind speed	50,0m/s
Rotor diameter	0,85m
Overall cowl diameter	1,0m
Rotor material	Acrylic coated ABS
Weight	17Kg
Mast diameter	48mm external diameter
Noise emission	5 dB at 5m height at 10m/s wind speed
Yaw tracking	Aerodynamic, passive, downstream

ADDITIONAL SPECIFICATIONS

High performance / high wear polymer yaw bearings
Nylon-cased slip ring to prevent cable twisting
Zinc-coated, stainless steel or power-coated anodized aluminum fittings to prevent corrosion

Anakata New Generation
Hybrid & Storage solutions



AEP for ANAKATA A007		
Ave. Wind Speed (m/s)	12v Output (kWhrs)	24v Output (kWhrs)
4.0	109	132
4.5	166	206
5.0	235	297
5.5	316	417
6.0	407	561
6.5	510	736
7.0	626	943
7.5	754	1,181
8.0	893	1,457

The annual energy production (AEP) gives a predicted power output taking into account chnageable wind speed across a whole year and is generated using actual wind distributions, therefore offering more realistic statistics than simply reviewing a turbine's rated power is isolation.

Anakata New Generation
Hybrid & Storage solutions

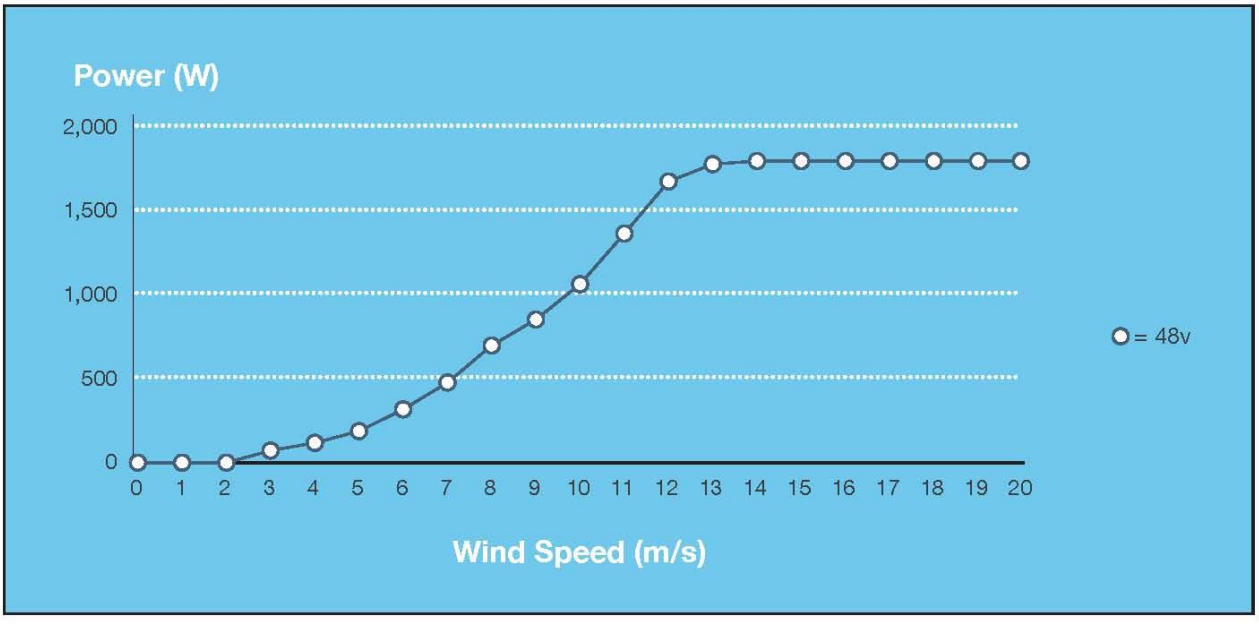
TECHNICAL SPECIFICATIONS A018 HORIZONTAL AXIS TURBINE

Turbine type	Ducted downwind horizontal axis
Rated power	1.400 watt a 11,5m/s
Peak power	1.850 watt a 15,0m/s
Output	48V DC (suitable for off-grid, battery bank charging, other third party inverters or multi source systems. May be used with an inverter to supply AC grid or non-grid-tie-in
Voltage options	48V
Generator	Permanent magnet generator, brushless, no gearbox
Start-up wind speed	2,6m/s
Cut-in wind speed	2,8m/s
Radiated interference	Designed to comply with EEC directive 89/336/EEC
Over-speed protection	Electronic speed control and electrical load control
Survival wind speed	50,0m/s
Rotor diameter	1,80m
Overall cowl diameter	2,38m
Rotor material	PAG (glass reinforced polyamide)
Weight	78Kg
Mast diameter	89mm external diameter
Noise emission	30dB at 5m height at 10m/s wind speed
Yaw tracking	Aerodynamic, passive, downstream
Turbine type	Downwind self-tracking

ADDITIONAL SPECIFICATIONS

High performance / high wear polymer yaw bearings
Nylon-cased slip ring to prevent cable twisting
Zinc-coated, stainless steel or power-coated anodized aluminum fittings to prevent corrosion

Anakata New Generation
Hybrid & Storage solutions

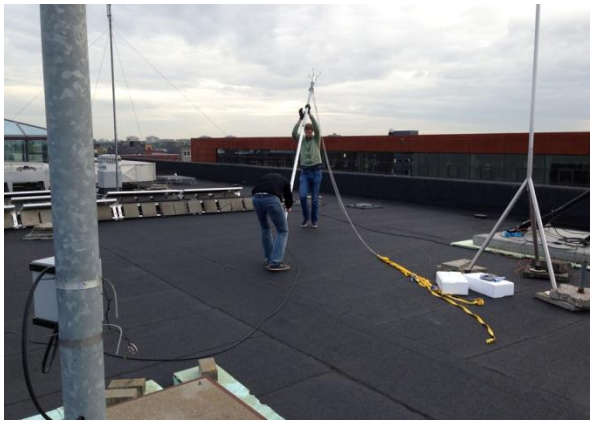


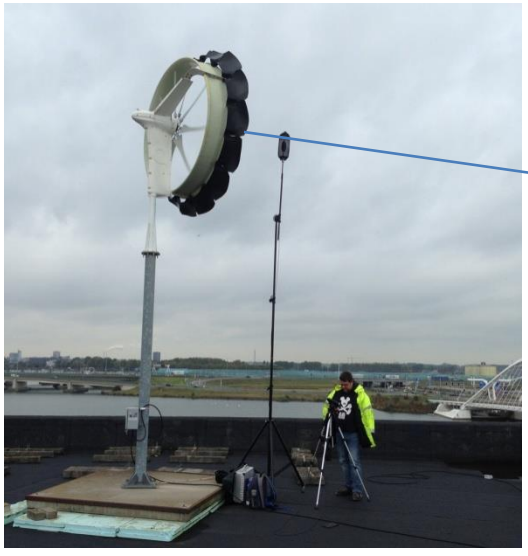
AEP for ANAKATA A018	
Ave. Wind Speed (m/s)	48v Output (kWhrs)
4.0	937
4.5	1,211
5.0	1,526
5.5	1,879
6.0	2,267
6.5	2,684
7.0	3,123
7.5	3,579
8.0	4,045

The annual energy production (AEP) gives a predicted power output taking into account chnageable wind speed across a whole year and is generated using actual wind distributions, therefore offering more realistic statistics than simply reviewing a turbine's rated power is isolation.

Anakata New Generation
Hybrid & Storage solutions

Although at the moment, in many European countries, has not yet applied any type of certification on the noise of a small wind turbine, with EU colleagues have been done some tests by German Fraunhofer to analyse the noise level of the A018 model, the 1,5kW wind turbine, then some changes have been done after these tests to get a 35% noise level less and a 5% production capacity more.
Here are some pictures during the various checks made and the equipment used.

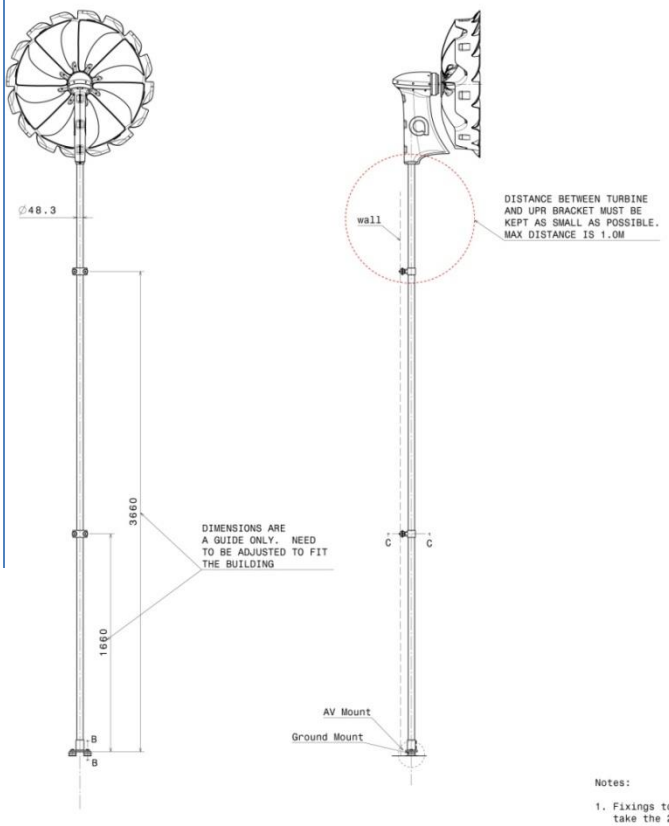


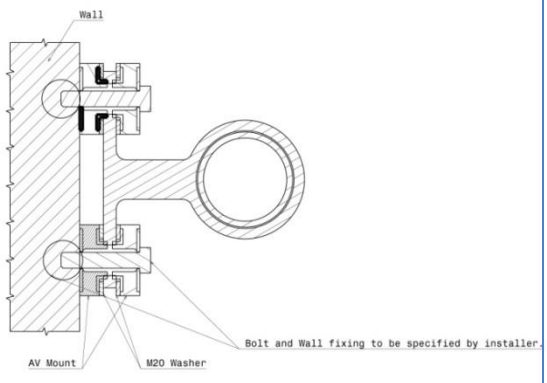


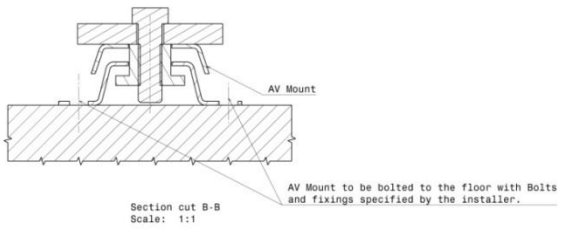
The actual model has white color flaps

Anakata New Generation
Hybrid & Storage solutions

The wall fixing kit consists of 2 flanges, wall pipe with outer diameter 48mm and a basis for the eventual or mandatory fixing to the ground. This solution allows the installer to mount the pole in support of a load-bearing wall of the building to facilitate the installation and making it more economical.





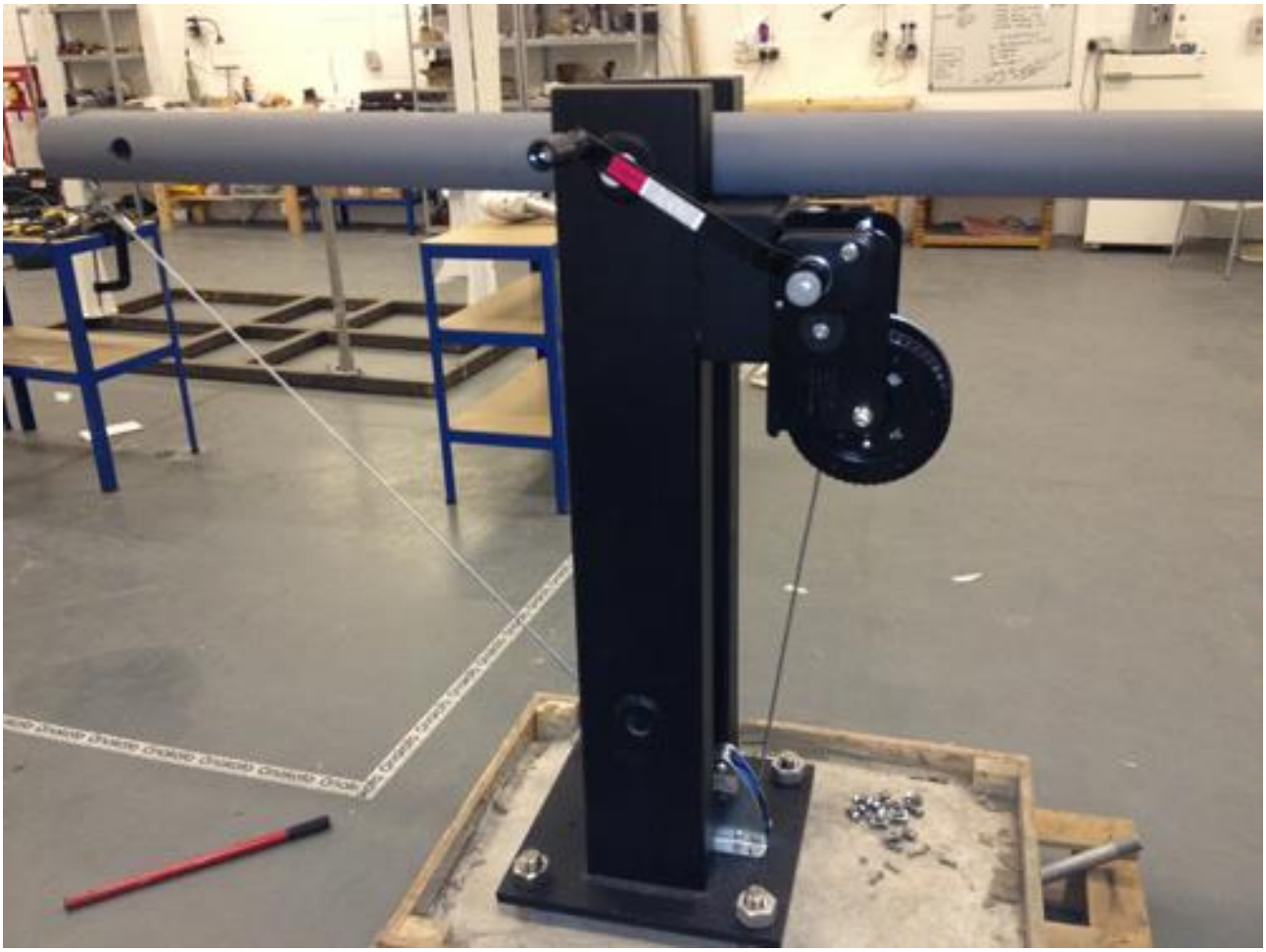


Notes:

1. Fixings to the wall need to be structural to take the 20kg Weight and 100Kg drag load from the turbine.
2. It is the installers responsibility to ensure that the wall is fit for the installation.

Anakata New Generation
Hybrid & Storage solutions

Sample Kit of ground/roof pole with manual lift for flat roof or ground installation The manual lifting system allows the assembly and installation of the A018 wind turbine without the use of cranes or means with the drum, this means that even in case of maintenance or replacement of parts of the turbine can be easily lowered.



Anakata New Generation
Hybrid & Storage solutions

Conext XW 4000W 24V, hybrid inverter for energy storage with two different sources sun and wind.

How it works?

It manages photovoltaic source (with an external charge controller 60A and 2600W output, so 9 PV modules 250/260W each) wind power (400W generator with dedicated charge controller and accessories) storage in Batteries (battery pack 24V configurable from 100Ah to 10000Ah) grid connection for automatic switching in case of dead batteries. Possibility to connect to 230V AC generator without mains electricity for management to island.

OFF-GRID KIT
USING A007 AND
4kW CONEXT INVERTER

Anakata New Generation
Hybrid & Storage solutions

Conext XW 5500W 48V and 6800W 48V, hybrid inverter for energy storage with two different sources sun and wind.

How it works?

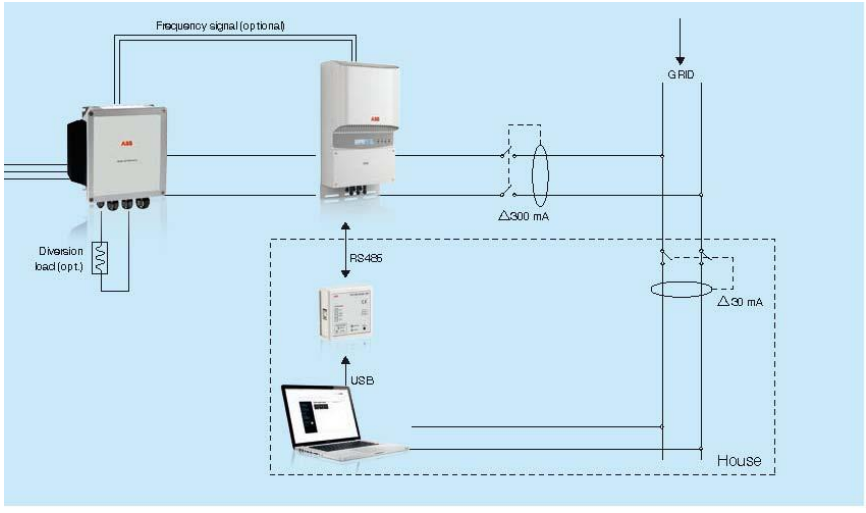
It manages photovoltaic source (with an external charge controller 60A and 3500W output, so 12 PV modules 250/260W each) wind power (1400W generator with dedicated charge controller and accessories) storage in Batteries (battery pack 48V configurable from 100Ah to 10000Ah) grid connection for automatic switching in case of dead batteries. Possibility to connect to 230V AC generator without mains electricity for management to island.

OFF-GRID KIT
USING A018 AND
4,5/6kW CONEXT INVERTER

Anakata New Generation
Hybrid & Storage solutions

The up-to-date on grid kit is composed of a booster set, the ABB 3kW inverter, the wind interface for the protection of the turbine. Depending on the type of installation and the chosen sites other accessories can be defined for the 1.4kW turbine, which is currently the only model that can be connected to the electricity grid.

ON-GRID KIT USING ABB INVERTER AND WIND INTERFACE



Anakata New Generation
Hybrid & Storage solutions

A018 with lifting pole in ground installation.

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A007 with fixed pole in roof/ground installation.

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A007 with fixed pole in ground installation in high mountain

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A007 with fixed pole in ground installation in high mountain

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A018 with lifting pole flat roof installation

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Anakata New Generation
Wind turbines 400W-1400W

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