

POWER solutions



the Archimedes

Taking care of you, safely and soundly

Urban
Wind Turbine



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Supporting Self sufficiency

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Archimedes “2.0”

With a design based on the theory of Archimedes, the Liam is a new type of wind turbine, comprising three circular blades. These are intertwined at the base, forming an axis, then wrapped around one another and expanded, creating a three-dimensional conical turbine. This form mimics the Nautilus shell (bio mimicry).

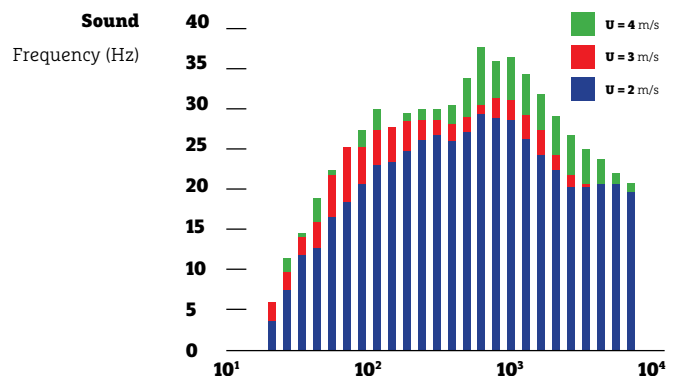
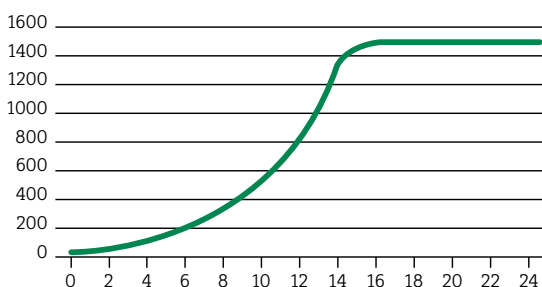
Quiet strength

“Due to its unique construction, wind from angles up to 60 degrees is drawn into the turbine and then rotated 90 degrees by the shape of the coils (sheets). This, and its wind-searching and self-directing properties, make the Liam ideal for urban environments with a lot of turbulence. Because of the 90 degrees rotation, it uses almost the full amount of energy available in wind. Resulting in minimal resistance and a minimum of sound produced which will merge with urban noises.”

High efficiency

The Liam distinguishes itself not only in form but also through high efficiency and low investment cost. The conical shape increases the blade-surface which results in an average yield that is considerably higher compared to a normal three-bladed wind turbine and is therefore not to be compared in terms of operation.

Archimedes urban windturbine with 1,5KW output generator



This power curve has been constructed with utmost care and represents data points which have been acquired under standard test conditions and corrected for turbulence. Local geographical and meteorological circumstances can however influence the power curve significantly, which may cause deviation from this power curve.

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Sustainable combination

The Liam is ideal to combine with solar panels to create the perfect mix of wind and sun on your roof. This is a good way to be electric-energy neutral or delivering. When more electricity is generated than used, it is possible to return this surplus to the grid. It depends on your location whether this is an option or not. When there is no grid available, the surplus can be stored in batteries for later use.

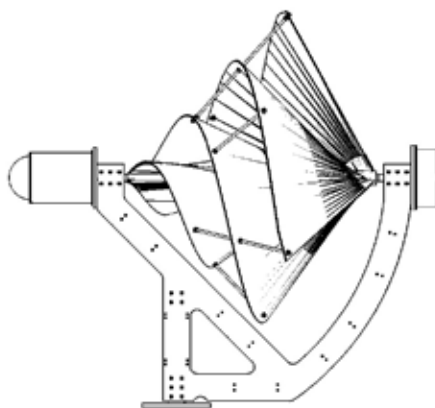
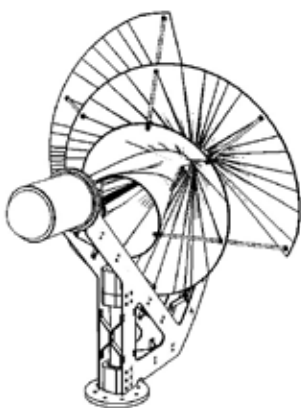
Small, silent and affordable are key words when describing the Liam. Over a decade of research led up to the development of this turbine and these spectacular results. Main characteristics of this innovative design are high efficiency, low cut-in wind speed creating the highest yield (W/m²)*, silent operation, insensitive to turbulence, low maintenance and an organic appearance. All together this wind turbine is able to generate about five times more energy than other turbines with the same diameter.

Designed for urban surroundings, the Liam is exceptionally suitable for family homes, public and commercial- and high-rise buildings. This Dutch design handles turbulence like no other wind turbine. In fact, multiple Archimedes wind turbines can be placed in close range of each other, preferably in a triangular pattern.

Depending on local wind conditions, the Liam is competitive with solar panels. Under perfect conditions the return on investment will be even higher, resulting in a shorter payback time. On average the LIAM F1 produces approximately 1433 to 1800 kWh annually (with an estimated average wind speed of 5.2 m/sec)*. As wind speeds depend on location and altitude, wind speeds at higher altitudes will be higher. The best way to estimate and calculate your personal payback time is to measure the wind speed at your location. Our anemometer the Archimeteo can be used to give actual data about the possible wind-and solarpower. Options for grid tie-in or off-grid are available. Grid tie-in is not always possible or economical. Local laws and limitations should be reviewed carefully in advance.

In summary, the Archimedes LIAM urban wind turbine offers the following advantages:

- Excellent technology, resulting in money savings by controlling your electricity bills
- High yields as a result of low cut-in wind speed
- Independence from centralized energy providers (when combined with solar panels)
- Reduction of your carbon footprint by a significant 680 kg* annually, and helping to reduce the effects of greenhouse gas emission
- Suitable for nearly any roof
- Low vibrations and low noise emission.



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Innovation Dock *the flying office*



Research & Development

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On grid/off grid solutions

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