

THE QUIET REVOLUTION

The Italian electrical conglomerate A.C.E. recently launched 'Ecolibri' – a revolutionary, small wind generator that is the clear technology leader in its field. Philip Yorke takes a closer look at a product that is setting new standards in 'micro' energy-efficiency and silent operation.



A.C.E. is an Italian company that was founded in 1967 and specialises in the production of high quality wire harnesses for a diverse range of industries. These include the electronics, medical lighting, elevator, photovoltaic industries as well as many other sectors. In 2005 ICS ACE Cabling was founded in Chisinau, the capital city of Moldova, and has since become fully integrated with the Italian host company. All production cycles are monitored constantly at both facilities through special barcode readers. In addition, the advanced quality control systems provide the final quality checks and metrology prior to delivery.

On 8 May 2014 the company launched 'Ecolibri', a revolutionary compact wind turbine. This product was the result of many years of development work carried out in association with the University of Milan. The

Ecolibri micro wind turbine was born out of a company with over 30 years' experience in the field of electro-mechanical applications and one which is specialised in the production of wire harnesses, as well as in the design and manufacture of industrial automation solutions.

Efficient, space-saving energy resource

The Ecolibri project began in earnest in 2011 and was based on the need to develop a space-saving resource of clean, renewable energy for both domestic and commercial applications. Thus the concept of designing a highly efficient and compact wind turbine generator was born that would meet the growing demand for independent, renewable power sources in the international market place.

To meet this growing demand, the Ecolibri 'Micro' wind generator built by ACE was

designed with many outstanding features. These include the ability to achieve a constant function regardless of the wind direction, as well as extremely low noise levels with negligible environmental impact. In addition, the Ecolibri micro wind turbine offers low start-up speed and resistance to high wind speeds. Furthermore the system provides automatic, complimentary braking adjustments at high speed and is simple to install and operate.

This unique Ecolibri 3kW micro wind turbine comes with vertical axis and is ▷





designed for 'stand-alone' applications where power grids are not available. However, the system is also ideally suited for connection to national electricity networks if desired. Furthermore, the new product is extremely environmentally friendly with an unobtrusive design allowing it to blend easily into the surrounding topography. In addition, the micro wind turbines can be painted with sympathetic colours, which can camouflage the wind-driven generators in their local habitat to an even greater degree.

Silent running

One of the most important breakthroughs achieved by the Ecolibri micro wind-turbine is its silent running ability. The noise of the wind turbine blades is undetectable at -20Db, even in the presence of strong winds, as the blades are designed in such a way that they cannot rotate at a higher speed than the wind itself. Consequently they do not cause the noise levels and 'hiss' experienced with traditional wind turbines.

Installing an Ecolibri wind turbine results in a very cost-effective facility that provides an ideal alternative to a grid connection system,

whether one is available or not. The use of an Ecolibri wind turbine provides the optimal renewable energy source and can avoid the usual high costs involved with a grid connection supplied by a large energy supplier. The long lead times associated with the installation of a national grid system are thus also avoided. With the Ecolibri micro wind turbine, all the necessary components are supplied, which has a nominal power rating of 3kW. The full package comes with an electrical interface complete with inverter and all the equipment needed to operate the micro power plant.

Installation of the revolutionary micro wind turbine varies according to the customer's specific requirements and can be located either at ground level with a supporting metal pole anchored to a concrete plinth, or on a roof with adequate support. Under the current EU legislation, the supporting pole may be between 2 metres and 12 metres high, depending upon the individual requirements of the customer.

With the resources available at ACE and the positive response from both trade and consumer press, the Ecolibri silent running micro

wind turbine looks set to become a major international success in its niche market. □

For further information about the Ecolibri micro wind turbine and value-added services visit: www.ecolibri.it – info@ecolibri.it

