

Essential power boost

HISTORIC FRENCH COMPANY RABAUD'S FIRST ELECTRIC CHIPPER FEATURES LITHIUM BATTERIES AND 4G REMOTE CONTROL FROM A MARKET LEADER

▶ The rush towards electric has now become a European diktat, to the extent that July 2021 marked the European Commission's proposal to halt the sale of petrol and diesel cars by 2035.

In Europe, this trend primarily began for those applications generally used in urban towns or rural contexts which place a particular emphasis on zero emissions and zero noise, which is now backed by clear legislation.

Strong history

There are also those firms whose roots lie in farming, as is the case with Claude Rabaud, who began by inventing his own agricultural machines such as the chipper, log splitter and post driver, and which today are looking to the future by pursuing the electrification of their range under the slogan, 'the meaning of innovation'. The French company Rabaud has been in the business of building machines for agriculture, forestry and landscaping for over 40 years, and is known throughout Europe.

The first model to see market demand for an electric version was the woodchipper, the XYLOCHIP 150 E. This marked the moment when Rabaud and Flash Battery first began working together, joining forces to create a design which is totally tailor-made from a mechanical and electrical point of view.

Dual purpose

The aim was two-fold: to substitute the combustion engine with an electrical powertrain system capable of maintaining its application performance in line with market demands, and to reduce noise and emissions when shredding branches in urban areas.

"One of the main challenges was the weight," says Jérôme Rabaud, general manager. "The chipper is hauled behind a vehicle and the legislation is very clear on this: the weight of a towed trailer must not exceed 750kg. The chipper therefore had to be optimised. Thanks to the high energy density of Flash Battery Batteries, we were able to guarantee five hours of continuous chipping without exceeding the weight limit."



ABOVE: Flash Battery's solutions offer high energy density

BOTTOM RIGHT: The Rabaud XYLOCHIP chipper powered by Flash Battery

Maximum performance

The electrical and mechanical design of this application required a synergic relationship between the respective technical departments, strategically supported by Efa France, Flash Battery's system integrator and partner for the French market. The custom design is a Prix Innovation winner at the Salon des Maires

"We took a totally bespoke approach to the design of the battery's mechanics, splitting the pack (16kWh at 51.2V) into two connected units while keeping within the vehicle's available space," says Flash Battery's export manager Elisabetta Orlandi. "A machine exposed to the elements and to sawdust requires IP65 protection and an integrated heating system to ensure maximum performance even at low temperatures, keeping the battery's life cycles above 4000."

Successful field tests

Three years on from that first design Rabaud has been able to field-test the Flash Battery remote control. "The automatic daily check of the Flash Battery batteries on the XYLOCHIP 150 E allows us to monitor the use of the machine anywhere in the world and prevent any malfunctions," says Jérôme Rabaud. "The connection with the Flash Data Centre website is a greatly appreciated plus, guaranteeing us outstanding follow-up of this new technology." **ivt**

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