

Energy and Automation



For over 90 years, LOVATO Electric has been designing and manufacturing low voltage electrical devices for industrial applications.

Founded in 1922 in Bergamo, Italy, LOVATO Electric is a privately owned company, and has been managed by the same family of entrepreneurs for 4 generations. Among the first Italian companies to achieve ISO 9001 certification in 1992, LOVATO Electric has a range of over 10,000 products that comply with the strictest requirements of international standards.

Motor protection circuit breakers, contactors, pushbuttons, switch disconnectors, limit switches, digital multimeters, energy meters, soft starters, AC motor drives, automatic power factor controllers and engine and generator controllers are just some of the products designed and built by LOVATO Electric. To provide competitive products and services in the industrial automation and energy management fields is our company's "mission". Our 13 branches abroad and a network of over 90 importers ensure the availability of Lovato Electric products in more than 100 countries all over the world.

Why ANSYS Maxwell in Lovato

In LOVATO, the choice of ANSYS hasn't been driven by the pulse to turn to the world market leader, but has been the result of an accurate software selection by means of a pilot project verification carried out in collaboration with EnginSoft.

This project has been accomplished in two different phases. In the first one, a virtual model of a switcher has been created inside ANSYS Maxwell 3D, with the aim to reproduce its functioning and match the experimental data.

In the second phase LOVATO has exploited the parametrization and optimization tools inside ANSYS Maxwell to investigate different configurations and increase the overall switcher performances.

Eventually ANSYS Maxwell has proved to be the most accurate, advanced and easy to use tool among the valued ones. Nowadays ANSYS Maxwell is applied both in the first phase of the product design and to enhance existing products, guaranteeing that the project complies with the necessary performance requirements before its production starts.

ANSYS Maxwell is also used to both maximize the performance, for example in terms of magnetic forces and closing time of mobile parts, and increase the energetic efficiency of the magnetic devices.

“In Lovato we have always been in favour of all software solutions that can provide us with competitive advantage - declared Eng. Guaiatelli, CAE engineer in LovatoElectric - and in this perspective ANSYS Maxwell seems to be the right tool able to support us in the design of our products, allowing us to evaluate many design alternatives in less time, thus increasing their specific quality; in just few words to work towards INNOVATION, what everybody talks about and what we take very seriously into account.”

“After a careful technical assessment, we have chosen ANSYS Maxwell since in our opinion it represents the best technology currently available on the market - continued Eng. Guaiatelli - moreover EnginSoft represents a serious and reliable partner who has assisted us with highly qualified professionals during the pilot project phase, enabling us to become quickly autonomous.”

Eng. Iacopo Guaiatelli
CAE Engineer - Lovato Electric Spa

ANSYS Maxwell allows Lovato to reduce the number of prototypes which are necessary to guarantee the correct fulfilment of the regulation and to validate the project functionality at the same time. Therefore ANSYS Maxwell is capable to steer the design phase avoiding the risk of taking into account wrong strategies, lagging the products time to market.

In conclusion ANSYS simulation technology enables LOVATO to accurately predict how their products will thrive in the real world. LOVATO trusts ANSYS software to ensure their products integrity and to drive business success through innovation.

