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Dunapack Reduces Development Time with CATIA PLM Express

Dunapack uses CATIA PLM Express to design the most optimum packaging for automotive parts and electrical components for its automotive customers. Working in a virtual environment has considerably reduced its costs and the time needed to provide its customers with the best possible solution for their packaging needs.

The Hungary based Dunapack Ltd. became an Austrian company in 1990 and is today a market leader for the manufacture of paper-based packaging in the Central-Eastern European region. Dunapack's most important products are corrugated base paper and corrugated products. Corrugated boards satisfy the demands of various industrial sectors because

they are sturdy, can be flattened for easy transportation, range from light weight to heavy-duty and are environmentally friendly.

One of the challenges facing Dunapack is the increasing number of packaging companies on the market and their capacity for growth. Dunapack needed to invest in new converting and printing technologies with up to seven colors and new machines to differentiate itself from the competition. It also needed to expand its design department to handle the increasing number of orders coming in. Today, Dunapack has ten designers at its headquarters in Budapest, confirming their competitive edge. This is a considerable advantage since its designers use their creativity and technical background to design customized packaging tailored to customer needs. This innovative approach has won Dunapack many new customers in the Central-Eastern European region.

DESIGN RIGHT THE FIRST TIME

In 2006, Dunapack adopted CATIA PLM Express to better respond to the needs of its automotive and electronics customers that use CATIA to design their products. Previously, most customers would give Dunapack a physical part and its designers would have to measure the part using conventional manual methods, which were not always precise. They would then design the package, produce a physical prototype in their production facilities and test the package to see if the part fits correctly and if there is not too much wasted space. Most of the time, adjustments would be needed because the part would not fit or the package would be too big. It would have forced Dunapack designers to go back and modify their design, produce a new physical prototype of the package and test it again. This trial and error procedure was costly, time consuming and not a satisfactory solution for its customers.

Since adopting CATIA PLM Express, Dunapack has successfully transformed its design processes by adopting a more innovative approach to packaging design. In effect, customers provide Dunapack with 3D CATIA models of

the parts they want to package and Dunapack engineers design the right package for the part in question in its CATIA PLM Express environment. Thanks to the software, it is also possible to design packaging for products that have not yet been produced. This means that production of the goods to be packaged can take place in parallel with package design. Dunapack is the only company in Hungary to work this way.

REDUCE WASTED SPACE AND COSTS

More specifically, Dunapack receives a CATIA model of the part and uses CATIA to measure this part – this is a considerably more precise method than performing manual measurements. It then designs the package that best fits around the box and shows the interaction between the two to its customers in a virtual environment. Simulating, on screen, the way the box folds around the product provides valuable information on how to handle the package and helps avoid manipulation errors that can compromise structural integrity. "Showing our customers the way the package folds and unfolds in 3D has been a powerful educational tool for our customers since they are able to see how to manipulate the

box and how their part will fit inside", said Zsuzsanna Ráthonyi, Combined Designer at Dunapack's Hungarian office. "CATIA is the best way to adopt these 3D models and create the optimum packaging for the model since we can ensure that there will be the least amount of wasted space", she continues. "It also saves us the considerable cost of having to produce physical prototypes to validate our designs. By communicating with customers in a virtual environment and by designing right the first time, we have succeeded in reducing development time by one-third", she adds.

CAD-Terv Engineering Ltd. was instrumental in advising Dunapack on what solutions to use for their specific job. In effect, the role-based approach of CATIA PLM Express allowed CAD-Terv to target the specific needs of Dunapack designers and perfectly match the applications that best do the job. Dunapack was hence able to easily tailor its CATIA installation with the right options; thanks to Sheet Metal for handling corrugated cardboard that needs to be folded around the CATIA model of the product to be packaged and with Surface Design for obtaining measurements of the virtual model provided by its customers as well as for the design of the package itself. The solution's flexible and intuitive interface made it possible, with just two weeks of training, for Dunapack designers to master the system and to begin designing the best possible packaging solutions for its customers.)



For more information:
www.dunapack.hu