

Time and Cost Savings and Improved Performance Achieved with ANSYS DesignSpace Simulation Software

With 30 years of experience, Plantool markets and manufactures tailor-made special machines, standard circular saws, system solutions and production lines for metal industries. Located at Seinäjoki, Finland, Plantool is one of the leading production automation companies in Nordic countries.

TECHNOLOGY USED

ANSYS® DesignSpace®

CHALLENGES

- Tailor-made special machines don't allow for prototypes; for each new order the company takes on major risk because the initial creation must be the final product and therefore must be designed right the first time.
- Because special machines must often be designed from scratch, the design and simulation process must be flexible. The usage of existing 3-D models for simulation is essential.

SOLUTIONS

- Virtual prototyping was used to design better tailor-made special machines.
- ANSYS DesignSpace was integrated with Autodesk® Inventor® 3-D design tools to analyze machine parts and structural performance in the early stages of the design process.
- Large assemblies were analyzed with minor defeaturing of the model.
- Various alternatives were cost-effectively investigated.

BENEFITS

- Because ANSYS DesignSpace integrates with Autodesk Inventor, geometry modeling for analysis could be completed with a program Plantool designers were already familiar with, eliminating the need to learn new software.
- Easy to use simulation in ANSYS DesignSpace allowed designers to conceptualize, design and validate their designs without the need for advanced analysis knowledge.
- Analysis of parts and performance early in the design process saved overall project time and resulted in fewer design changes during testing phase.
- The ability to optimize structures saved money and improved performance and reliability by letting designers compare model variations and choosing the best one.

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COMPANY INFORMATION

Country: Finland

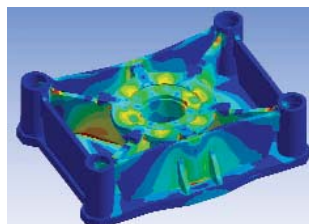
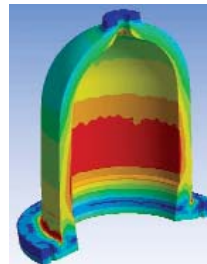
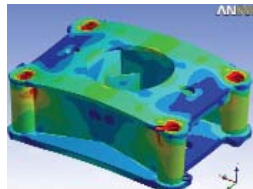
Industry: Production Automation



www.plantool.fi

“With ANSYS DesignSpace simulation software, our designers can evaluate structural performance in the early stage of design process. This reduces guesswork and allows for faster project cycles that lead to machines that function more reliably. Optimization can also be performed on our standard products, which leads to more cost-effective and better performing products.”

Topias Sepponen
Design Engineer, M.Sc.
Plantool Oy



CASE STUDY