

CONYPLEX B.V. (CONTEST YACHTS)

SAILING THROUGH YACHT DEVELOPMENT AND PRODUCTION WITH SOLIDWORKS



Using SOLIDWORKS design and analysis solutions, Conyplex B.V. has shortened development time while simultaneously improving the quality of its yachts.

Challenge:

Accelerate design, improve quality and accuracy, and enhance visualization in the development of top-of-the-line sailing yachts.

Solution:

Implement SOLIDWORKS design and SOLIDWORKS Premium design and analysis software.

Results:

- Reduced development cycles by 50 to 66 percent
- Cut production time by 25 percent
- Eliminated fit issues and rework
- Improved design visualization with photorealistic renderings

Life. Style. Sailing. That's the credo of Conyplex B.V., the manufacturer of Contest Yachts. For more than 50 years, the Dutch shipbuilder has produced premium quality sailing yachts, introducing innovations in high-performance cruiser design. Since the company's founding, its shipyard has maintained control of the entire production process to ensure the highest possible standards in yacht building.

Working with renowned boat designers, leading research institutes, and top-notch suppliers, Conyplex strives to develop innovative solutions that optimize sailing yacht design. The boat manufacturer's approach has resulted in a range of superior-quality performance cruisers that are cherished by boating enthusiasts around the world.

In keeping with the company's commitment to quality, Conyplex decided to upgrade its Technical Department's design tools from AutoCAD® 2D software to a 3D development platform in 2007. According to Engineer Robert Vijselaar, the catalyst for moving to 3D was the need to visualize and assess a vessel's space needs, minimize and resolve manufacturing issues, and streamline and accelerate development.

"A sailing ship isn't a straight, square shape," Vijselaar explains. "Working in 2D, we designed the yachts in sections, and then took care of the fit problems related to that approach in the workshop. We wanted to improve design accuracy to streamline interaction between the different groups in our shipyard. Using 3D design tools and better CNC milling technology, we believed we could develop and manufacture better products in less time."

After evaluating the Autodesk® Inventor®, Pro/ENGINEER®, and SOLIDWORKS® design systems, Conyplex decided to conduct a trial of SOLIDWORKS software to determine if the solution could help the shipbuilder achieve its ambitious development goals. With SOLIDWORKS, the company cut its development cycle time by 50 percent on the trial project, prompting Conyplex to standardize on SOLIDWORKS design and SOLIDWORKS Premium design and analysis software for sailing yacht development.

"We chose SOLIDWORKS because it is easy to use, provides excellent visualization and rendering tools, and is used by most of our suppliers," Vijselaar recalls. "The decision to use SOLIDWORKS was obvious, especially after its positive impact on that first trial project."

DESIGNING MORE ACCURATE BOATS FASTER

Since implementing SOLIDWORKS solutions, Conyplex has realized additional time savings, reducing development cycles by as much as 66 percent while improving design accuracy and manufacturing productivity. "Using SOLIDWORKS, we produce a completely symmetrical composite hull that has an exact, one-to-one correlation with what we designed on the computer," Vijselaar points out. "The same goes for all of the parts and large assemblies inside the hull. With SOLIDWORKS, what we model is what we get."

Instead of completing retrofits in the workshop to address design changes or clearance and fit issues, Conyplex engineers can address design modifications in SOLIDWORKS, providing greater flexibility and better quality. "Simply put, we can adapt the design before production starts," Vijselaar adds. "This gives us greater control over the accuracy of the design, which saves time, improves quality, and accelerates time-to-market."



"SOLIDWORKS helps us design and manufacture better products faster, which improves delivery times and enhances customer satisfaction."

— Robert Vijselaar, Engineer

NESTING AUTOMATES PRODUCTION

In addition to reducing design cycle time, the move to SOLIDWORKS and the implementation of SolidNEST® nesting software from Gold Partner SigmaTEK have combined to shorten yacht production time by 25 percent. The two packages allow Conyplex to drive its CNC milling operations—milling pieces up to 25 meters in length—while maintaining aesthetic aspects of the design, such as the direction of the wood grain on interior doors and cabinets.

"With SOLIDWORKS and SolidNEST, the software recognizes the direction of the wood grain on every piece of wood on the boat," Vijselaar points out. "This solution not only maximizes material usage, resulting in less waste. It also ensures that we don't have to reproduce parts to match the wood grain. SOLIDWORKS helps us design and manufacture better products faster, which improves delivery times and enhances customer satisfaction."

DESIGN VISUALIZATION IMPROVES COMMUNICATION

The move to SOLIDWORKS 3D has also helped Conyplex to more efficiently create high-quality visuals of its boat designs and special features, improving communication and interaction with its customers. For example, the shipbuilder uses PhotoView 360 photorealistic rendering tools to illustrate what the final boat will look like in stunning detail, such as how a hidden anchor system extends and retracts its folding arm.

“When you are developing top-of-the-line sailing yachts, clients have high demands for the newest equipment available,” Vijselaar says. “With SOLIDWORKS 3D tools, we’ve improved the effectiveness of customer communications and can react more quickly to developments in the market.”



Conyplex B.V. uses SOLIDWORKS software in combination with the SolidNEST partner application to optimize material usage during production.

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