



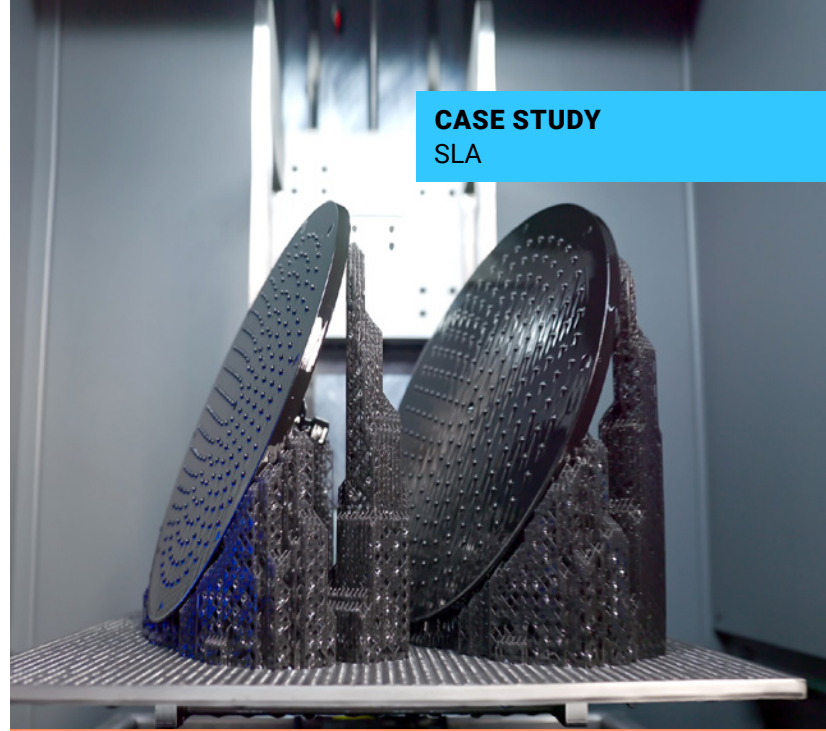
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SOLUTIONS FOR A 3D WORLD

# Making Waves: Hansgrohe Saves 80% on Prototyping Costs with the Neo450 Stereolithography 3D Printer

CASE STUDY  
SLA





Hansgrohe, a premium brand for bathroom and kitchen sanitary ware, achieved remarkable time and cost savings by using stereolithography 3D printing alongside CNC machining for their functional prototyping and jig and fixture creation.

## About Hansgrohe

The Hansgrohe brand stands for sanitary design and function for the kitchen and bathroom. The German manufacturer of sanitary installations for end consumers is one of the world's largest suppliers of complete bathroom fittings and has earned a well-deserved reputation for innovative, original designs.

Founded in 1901 in a small town in southern Germany, Hansgrohe has grown to become one of the world's leading suppliers of bathroom products with 5,600 employees. With manufacturing facilities in 4 countries and distributing products in more than 150 countries, Hansgrohe's commitment to quality and innovation in bathroom design and functionality has cemented its reputation as a major player in the sanitaryware industry.





# The Problem

## Slow, Expensive Development Cycles

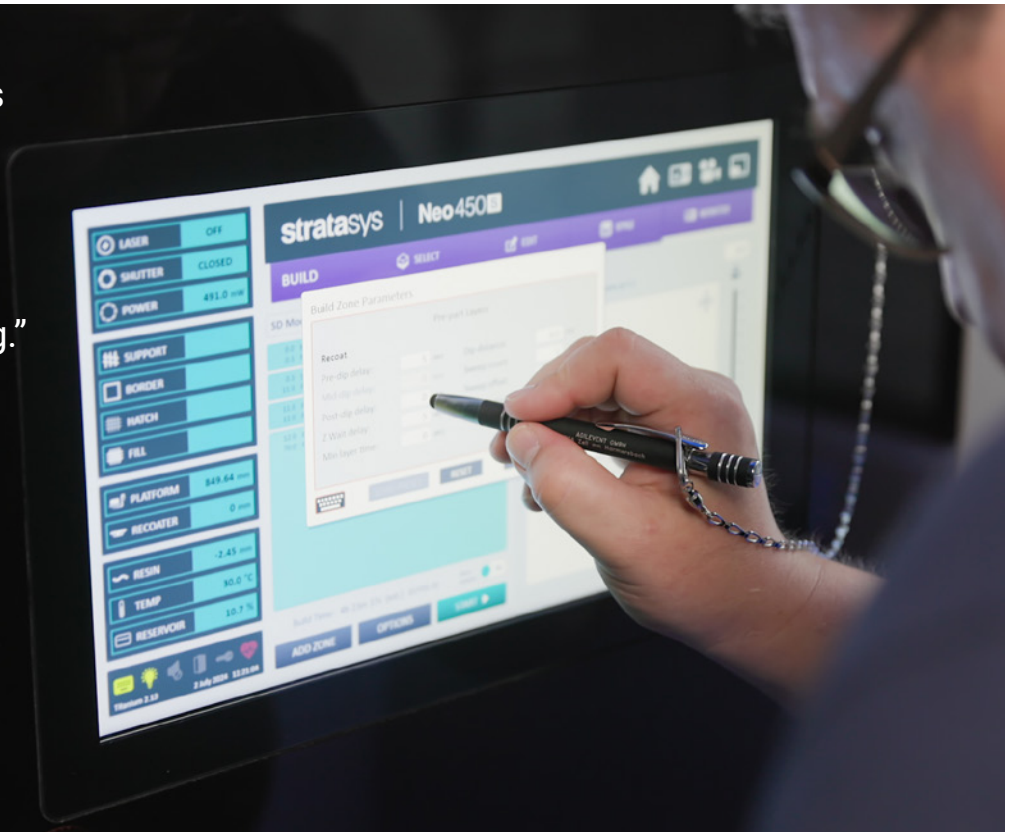
Founder Hans Grohe's first stroke of inventive genius was back in 1928 - the hand shower with porcelain handle. His invention made the showers of his time safer and more comfortable to use. Even today, Hansgrohe designers are still passionate about taking an idea, experimenting with it and developing it into a long-term solution.

For Swen Wieland and his R&D prototyping team, turning these gems of an idea into something tangible and testable can be no easy task. To support the company's product designers, he creates 3D models and functional prototypes, devices that bring products to market more quickly, efficiently and deliberately.

Swen's team faces major challenges in the prototyping process. Traditional methods, especially CNC machining, are time-consuming and expensive. It can take up to three weeks to produce a prototype, creating bottlenecks in the development cycle and limiting designers' ability to iterate quickly.

“It's also sometimes difficult to reconcile the designer's vision with what's technically possible with CNC machining.”

Swen Wieland





# The Solution

## Stereolithography 3D Printing with Neo®

Hansgrohe invested in a Neo450 stereolithography 3D printer from Stratasys. Driven by the need for larger parts with high strength and superior surface quality, as well as speed and accuracy of the printed part, the Neo was the clear winner when the team compared the leading 3D printers on the market.

Hansgrohe's research and development team uses Neo mainly for jigs and fixtures and for functional prototyping, and Somos® WaterShed Black is the ideal material for most prints as it offers a smooth surface as well as higher moisture resistance and a 50% faster processing speed than alternative black resins. Parts can be quickly and accurately tested for properties such as pressure, sound and water flow, allowing engineers to identify problems and refine their designs.

Shower heads are one of Hansgrohe's main products, and they frequently iterate and refine prototypes to stay at the forefront of the industry. The ability to prototype large parts like rain shower heads accurately and quickly has brought significant benefits to the team's development process.

This tile leveler was printed using the Neo450 and, since it is intended for end-customer use, it was produced in WaterShed Black to ensure both the required color and durability.

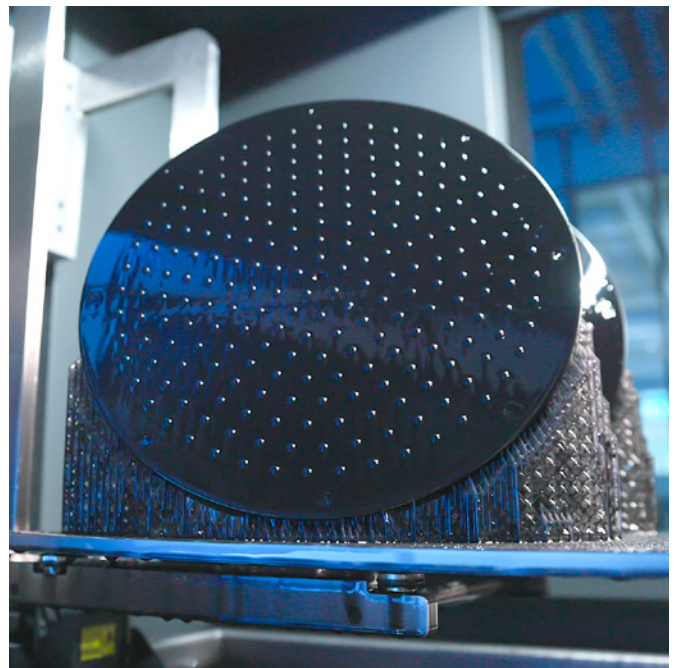
The largest part printed was a luxurious rain shower head to review the design with dimensions of 350 mm diameter, easily achievable thanks to the Neo's large printing platform. Printing such a large and complex part really demonstrates the Neo's accuracy and superior surface quality.

**"With the Neo, we save  
80% of prototyping costs."**

**Swen Wieland**



This robust tile leveler, printed in Somos® WaterShed Black, is for customer-use.



Rain showerhead prototypes can be printed quickly and accurately with the Neo450



# The Impact

## 80% Lower Prototyping Costs & Superior Accuracy

Prototypes that used to take three weeks to produce with CNC machining can now be printed overnight, speeding up the development process.

The Neo450 SLA printer delivers incredibly accurate results and can create shapes that traditional machining simply can't handle. This level of precision is crucial for parts such as shower heads, which require small, precise holes for water flow. Using Somos Watershed Black material enhances stability and accuracy while reducing the need for extensive post-processing.

With fast and accurate 3D prototypes of bathroom components, Hansgrohe engineers can test and optimize their designs before mass production in brass casting or injection molding.

Looking to the future, Hansgrohe is looking forward to expanding the use of 3D printing technology and is investigating the possibility of printing real silicone parts, which would significantly expand prototyping capabilities.



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