
Press release

Smap3D GmbH digitizes pipeline planning and fabrication at EKATO SYSTEMS



Stirred not shaken: EKATO SYSTEMS relies on integrated software solutions from Smap3D for its vacuum process plants (Image: EKATO SYSTEMS GmbH).

Nittendorf, September 25th, 2025

EKATO SYSTEMS GmbH, a German manufacturer of state-of-the-art vacuum process plants, has completely digitized its pipeline design and fabrication processes with Smap3D GmbH. The integrated Smap3D software solution for process engineering, 3D planning, and production control, as well as the bending and collaring solutions provided by partners from the Connected Pipeshop Alliance, ensure process reliability, increase efficiency, and lay the foundation for further growth.

EKATO SYSTEMS' mixing systems are indispensable in the cosmetics, pharmaceutical, and food industries. In order to keep pace with global expansion and safeguard increasingly complex processes, mechanical design and plant engineering were to be implemented in a single software, and production planning and control were to be

optimized with software support. The German family-owned company from the Black Forest opted for the complete solution from Smap3D GmbH, consisting of the Smap3D Plant Design modules P&ID, Piping, Isometric, and Bending Simulation, as well as Smap3D PIPEFAB. As an expert in pipeline planning and fabrication, Smap3D supported the project from consulting and implementation to training, which created acceptance in the specialist departments and ensured a smooth start.

Integration and Consistency instead of Isolated Processes

It all started with Smap3D P&ID, which automatically creates 2D flow diagrams and keeps them up to date, followed by Smap3D Piping for 3D design, which is fully integrated into the existing CAD system Solid Edge, with seamless data transfer to the PLM and ERP systems. Another milestone was the integration of Smap3D Bending Simulation, which helps prevent scrap and production errors: “With Smap3D Piping in conjunction with Smap3D Bending Simulation, we can now check whether the pipe can be produced on our in-house bending machine as early as the design stage,” says Stefan Wenning, Head of Engineering at EKATO SYSTEMS.

Dynamic Production Planning with Smap3D PIPEFAB

EKATO SYSTEMS made the biggest leap forward with the introduction of Smap3D PIPEFAB, the central planning and control software for production. Orders are dynamically broken down into optimized production units, taking into account setup times, waste, capacity utilization, and material flow. This results in shorter throughput times and significantly optimized setup times. The software also offers a direct connection to production machines, which EKATO SYSTEMS obtained from the “Connected Pipeshop Alliance” partner network, to which Smap3D also belongs:

- The “Tubomat” bending machine from Pipe Bending Systems (PBS) replaces time-consuming manual welding with automated sawing, deburring, bending, cutting ring pre-assembly, and flanging, resulting in significant cost and quality advantages.
- The compact, easy-to-use T-115 collaring machine from T-Drill creates collars directly on the running pipe. The entire process (milling, pre-drilling, cutting) is carried out in three steps at a single workstation.

Maxim Lich, Managing Director of Smap3D GmbH, is delighted with the successful project: “We are proud of this strong partnership. The high level of automation enables growth because the end-to-end solution from process engineering to production speeds up processes, minimizes manual effort and prevents errors. With these intelligent tools, EKATO SYSTEMS is perfectly positioned for the future.”

More information can be found at www.smap3d.com/en/references/ekato-systems.

(3.482 characters incl. headlines, with spaces)

About Smap3D GmbH

Smap3D offers holistic software solutions for the engineering and fabrication of pipes. The company covers the entire process chain, from process engineering (P&ID) through piping planning (3D Piping) and Isometric, to fabrication planning and control. Modules for steel construction and for the simulation and conversion of point cloud data (3D Laser scanning) round out the portfolio. The solutions can be completely integrated into the most common CAD systems in use in industry, Solid Edge, Solidworks and Inventor, enabling turnkey plant engineering. With headquarters in Germany as well as worldwide offices and partners, Smap3D has distinguished itself through many years of expertise in plant planning and construction. The team provides assistance and advice to customers and partners, from consulting and implementation to training and technical support. This continuous process in all phases of product development has been proven in companies from many different industries, including process industry (e.g. chemical, beverage, food, pharmaceutical), environment and water technology.

Website

www.smap3d.com/en

Sociale Networks

LinkedIn: www.linkedin.com/company/smap3d-gmbh

Facebook: www.facebook.com/Smap3DGmbH

YouTube: www.youtube.com/@Smap3DGmbH

Contact

Smap3D GmbH

Katrin Ehrenleitner, PR Marketing Manager

Am Marktplatz 7, 93152 Nittendorf, Germany

Tel.: +49 9404 9639-41

kehrenleitner@smap3d.com