



## KaVo

Simplifying product illustration with 3DVIA Composer

With 3DVIA Composer, we've seen a more than 50 percent reduction in the time needed to produce our technical documentation—and that's a very important factor for us to reduce time to market.



**Thomas Lippl**  
Continuous  
Engineering Manager  
KaVo

### Challenge

KaVo needed an automated solution for producing 3D interactive work instructions and product illustrations to provide the appropriate level of detail and accuracy to product assembly and technical documentation so that time to market could be reduced.

### Solution

KaVo implemented Dassault Systèmes' 3DVIA Composer and integrated the solution with its product development and engineering change processes in ENOVIA to automate assembly and generation of technical illustrations from CATIA 3D models at product release.

### Benefits

KaVo is already realizing a 50 percent time reduction in the generation of technical documentation and expects to exploit even more ways to optimize the variant-rich and high quality assembly line.



KaVo. Dental Excellence.

### Legacy of innovation

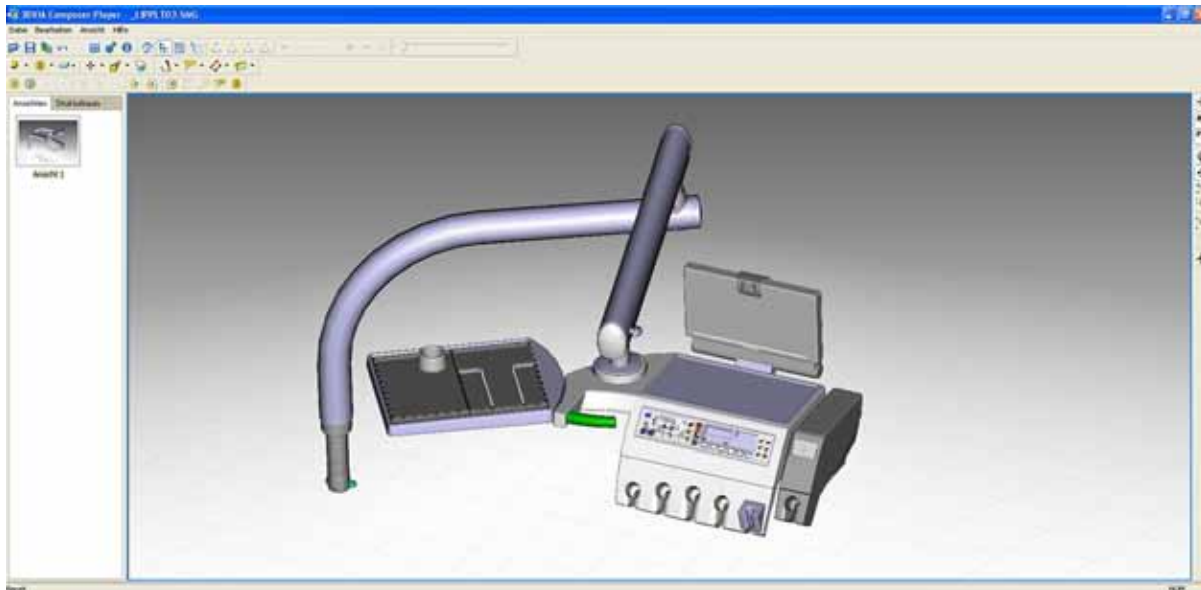
For more than 100 years, KaVo has provided top quality, innovative technology and equipment to dentists and dental technicians. With more than 3,300 employees in over 21 countries around the world, the company is one of the recognized leaders in the global dental marketplace thanks to a legacy of introducing innovative, high-tech products, including chairs, cabinets, imaging systems, laboratory and diagnostic equipment, lasers, instruments, and more. KaVo's more than 2,200 patents are testament to the company's relentless pursuit of innovation. And as the art, science and business of dentistry advances in complexity, KaVo is committed to continuing to focus its efforts on producing industry-leading solutions for its customers' needs.

As part of its ongoing program of continuous improvements, KaVo wanted to increase the value and usability of its technical documentation for product assembly. Engineers were creating assembly drawings from KaVo's 3D CATIA models and converting them to PDF files for use by workers in production. But information on the PDFs was not detailed enough to ensure that all aspects for high quality assembly were detected fast enough and without further assistance from the engineering departments. And the company felt it was not appropriate to expect assembly workers to be CAD specialists. "So we looked for a simple yet intelligent view

format that could be derived directly from our 3D data," said Franz Reinalter, IT Team Leader Cross Functional Application at KaVo.

### Automatic drawing creation, smooth information flow

After examining several options KaVo chose 3DVIA Composer from Dassault Systèmes because of the flexibility to integrate it with the company's existing product development and engineering change processes managed in ENOVIA. "This was one of the key reasons that 3DVIA Composer was such a good choice for us," Reinalter said. "With Dassault Systèmes' assistance to create an interface between ENOVIA and our ERP systems, we are able to collect the intelligence we need and automatically create the view- and instruction files upon design release." Reinalter says the work invested in creating the interface and automatically converting the native CATIA data into small 3DVIA Composer files is definitely worth the effort, considering the improved quality and



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**Franz Reinalter**  
IT Team Leader Cross Functional Application  
KaVo

ease of use of today's KaVo's assembly documents. "It's certainly easier for our workers to visualize and assemble with the 3D perspective 3DVIA Composer gives us," he said. "And we see that translate into faster and smoother information flow between our engineering and assembly teams, supporting the high quality our products are known for."

### Faster creation of documents and updates

KaVo also is using 3DVIA Composer to create its technical documentation used by field technicians in after sales service and in customer product manuals. "We used to have to wait until a product had gone into production to obtain the necessary photos of the finished assembly to create our technical documentation. Or we had to translate the CATIA data into STEP or IGES data which we sent to external service providers to create the documentation," explained Thomas Lippl, Continuous Engineering Manager, KaVo, "But now that we can work directly from the 3D CATIA design data, we're able to produce all the necessary technical documentation before production even begins. With 3DVIA Composer, we've seen a more than 50 percent reduction in the time needed to produce our technical documentation—and that's a very important factor for us to reduce time to market."

Lippl says it is also easier to incorporate product design changes. "When the engineer makes a change in CATIA, the technical documentation is automatically updated while at the same time providing the necessary control throughout the process," he explained. "And the editors don't have to start from scratch as they can easily take over the incremental changes; everyone has the most current version and it's all achieved far faster than we could have ever dreamed of with our previous approaches." KaVo also anticipates that the need for printed paper instructions will vanish as workers become more comfortable and familiar with using 3D interactive work instructions created by 3DVIA Composer. They expect to see a reduction in printing costs and, subsequently, reduced environmental impact. The company's future plans also include using 3DVIA Composer technical illustrations much more in electronic documentation for further after sales service applications and in its marketing department to showcase new products to customers online. "A lot of work and knowhow was required to achieve such a highly integrated solution as we've implemented it," Reinalter said. "But with the expert integration services and first-class 3DVIA Composer software from Dassault Systèmes, we have been able to meet the high process requirements from our lines-of-business."



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