



## PSG Plastic Service GmbH uses the complete product range of the ISD Group

### Consistent process optimisation with HiCAD, HELiOS, ERP-interface and HELiCON

From 2-D CAD to an optimised, consistent process chain with PDM system, ERP interface and product configuration – that is the technical progress the PSG has realised during the last years.

The PSG Group is a producer of hot runner systems and control technology. With its innovative solutions the company is ranked among the leading suppliers for the plastics processing industry in Germany. As a specialist for customized hot runner systems the successful company offers a huge variety of nozzles for all kinds of industries - from the smallest nozzle „Nano“ to the largest nozzle „Big Shot“. One of the most important factors is the flexibility of the products, as a great diversity of applications and innovations in the field of technical plastics development require very precise solutions.

Since 1994 the PSG Group has been using the CAD system HiCAD for its product development tasks. This was the basis for the gradual development of a comprehensive solution for the entire process chain – from sales to production. As a provider of complete solutions, the ISD Group turned out to be the optimal

partner for the ISD. Today, PSG uses a solution consisting of HiCAD, HELiOS and HELiCON that enables an optimal process control and ensures a permanent competitiveness.



Customized solutions: Distributor with different geometries and universally utilizable nozzles for a wide range of uses (Image: PSG GmbH)

#### » IN BRIEF

PSG Plastic Service GmbH

- Industry: Plastics industry
- Software: HiCAD, HELiOS, ERP-interface, HELiCON
- Products: Hot runner systems, control systems, cooling and temperature regulation systems
- Headquarters: Mannheim
- [www.psg-online.de](http://www.psg-online.de)

#### Keeping pace with the times

“After working with a 2-D system in the nineties, we switched to 3-D CAD with HiCAD. With the aim to optimise our document management, we also intensified our utilisation of the PDM system HELiOS. In 2012, we implemented an interface to the ERP system ProALPHA. One year later, we decided to additionally acquire HELiCON to automate the creation of standardized articles. During the implementation process, the ISD staff had always assisted us with their great expertise and competence”, recall Christine Walter, System administrator and Frank Gulde, chief designer at PSG.



Constructed with HiCAD: Nozzle from the "Allround" series (Image: PSG Plastic Service GmbH)

### Optimised production processes with HiCAD

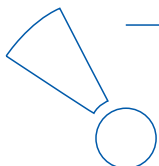
Engineers working with HiCAD generally appreciate the user-friendly, intuitive GUI, which also enables a fast familiarisation for beginners. During the switching to 3-D, the engineers at PSG greatly benefitted from HiCAD's unique 2-D/3-D associativity: As the whole process was performed gradually, a simultaneous working in 2-D and 3-D was required for a prolonged period. Even today, 2-D legacy data must sometimes still be loaded and edited. PSG does not only combine 2-D and 3-D CAD, but also parametric and non-parametric modelling: In some cases, existing, partly parameterised models require quick changes applied by means of non-parametric modelling, in other cases, customer data imported via STEP need to be processed further. Furthermore, PSG makes extensive use of HiCAD's Design Variant technology, which is based on a combination of parametric and non-parametric modelling. "We use the Design Variants very often. Our variants already contain the informati-

on that is needed for the actual production, e.g. the tolerances. HiCAD in conjunction with HELIOS enables us to realize our production concepts perfectly", explains Christine Walter. PSG has developed an innovative concept for production strategies that allows an optimal, lossless transfer of data between Engineering and Process Planning. In this way, the high level of quality required by the customers can be ensured on a sustained basis – for both standard products and customized products.

### Safer processes thanks to HELIOS

Over the years, the PSG Group has also intensified its use of the PDM system HELIOS that had been used for document and project management right from the start. Whereas in the past, the working method at the PSG was still drawing-oriented, it is now part master-oriented, including an automatic output of bills of materials. And a modern, workflow-controlled release system has been implemented, too.

In 2012, an interface to the ERP system ProALPHA was created. ProALPHA had already been used in various departments, e.g. in Sales and Purchasing. HELIOS workstations can be found in Engineering, Process Planning, Service, Quality Assurance and Project Planning. To prevent double entries and manual entries of article masters in ProAlpha, the PSG engineers and the ISD developed a concept for the ERP interface that allowed a controlled exchange of article master and structure data between HELIOS and ProAlpha. Furthermore, neutral formats of all relevant production documents are generated and these documents are then transferred to the ERP system for visualisation purposes. "We are more than satisfied with the support we receive from the ISD. The know-how of our cooperation partner and the precision of their project planning greatly contributed to the successful realisation of the interface", says Frank Gulde. The complete process chain could be optimised thanks to the described expansion of the software utilisation. New orders are stored in the ERP system by



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the Sales department, which automatically makes the data available as HELIOS project as a part of the CAD drawing. Controlled by the HELIOS workflow, the whole product development process through to the greenlighting by the customer for the actual production takes place via HELIOS, which has constant access to all relevant information.



Nozzle from the new "Easy Shot" series.  
Rapidly and easily configurable in HELiCON.  
(Image: PSG Plastic Service GmbH)

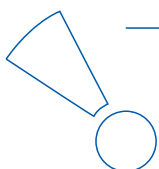
### Easy and efficient automation with HELiCON Engineer

But that's not all: PSG additionally uses the product configurator HELiCON Engineer for an automation of all standard products. HELiCON Engineer is a CAD application that can be integrated into HiCAD and HELIOS and enables an automatic generation of technically perfect 3-D CAD models and specific drawings. The program uses the data existing in HiCAD and HELIOS and enables the definition of rules that ensure the validity of chosen product combinations. The product know-how will be stored in HELiCON and leads the user automatically to the creation of error-free products, including the generation of CAD drawings, bills of materials and PDM data. HELiCON allows a quick and easy product adjustment through automation of repetitive tedious routine tasks in Engineering. Before the introduction of HELiCON, the CAD engineers at PSG spent much time on the search for matching parts in assemblies, or on manual

adjustments. During order processing, they often had to deal with repetitive tasks. Smaller constructions with only minimal changes were often created several times. This resulted in longer lead times, a high consumption of resources and a lack of efficiency. On the one hand, PSG already controlled its parametric variants via Excel, or made calculations on technical product designs. But on the other hand, these procedures were very time-consuming and required programming skills. And the limits of the program soon became evident: "The biggest sources of error and the most time-consuming tasks certainly consisted in the manual data input and the repetitive routine tasks. It was therefore important for us to find a program that could spare us exactly these tasks", explains Christine Walter, system administrator. She and her colleague Frank Gulde, chief designer, had soon realised the benefits that HELiCON offered: "We were sure that we could achieve our aims with the help of HELiCON", says Christine Walter. "The product configurator enabled us to shorten lead times, minimize errors, increase product quality and reduce product development costs. At the same time, we could create a standardized structure with consistent designations."

### Fast implementation of HELiCON

HELiCON was then implemented at PSG within a few weeks. First, the requirements concerning the software were specified and the staff members of the PSG were trained appropriately by the ISD. After a short test period of approximately five weeks, the first assembly could be generated via the configurator and transferred to the CAD drawing. Prior to this, all parts had to be converted to 3-D, and relations had to be defined. "These first steps were a little time-consuming, but still manageable", reports Christine Walter. During this preparatory stage, an expert of the ISD provided permanent support.



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### More time for customized designs

HELiCON generates the assembly, creates the article master, generates a product structure, creates part and assembly drawings as well as an associated project. In this way, all double work is eliminated. All modular products of the PSG and their individual variants can be visualised in HELiCON. Standard parts are directly assembled in the configurator. Models of the complete product can be created in a very short time. Each article that has been previously configured in HELiCON will be recognized and re-used, preventing an inadvertent, repeated creation of the same article. The finished product will always be created from existing components, which does not only save time, but also prevents an accumulation of identical single-part data. The different dependencies in a product resulting from a general product diversity used to be possible sources of error, but have been eliminated now that the configurator had been introduced at PSG. "I am glad that we can now fully concentrate on our CAD models", says Frank Gulde. "We do no longer have to waste any time for the search of matching components, or for manual adjustments. The time savings due to the omission of such tedious routine tasks are really enormous."

### Customer-friendly consulting

In fact, PSG has already shown strong interest in acquiring HELiCON around the time when the ERP interface was introduced. After detailed consulting, the advice of the ISD was to introduce the new systems successively, one by one, since experience has shown that employees usually need some time to familiarise themselves with their operation. In retrospect, Frank Gulde confirms: "It was a good decision to let one year pass by. In the end, the advice we got from the ISD proved very helpful. We first implemented the ERP interface, familiarized ourselves with it, and fully concentrated on HELiCON afterwards. In

this way, our staff was given enough time to get accustomed to the changes and realise their projects successfully."

### Progress and evolution thanks to ISD products

With HiCAD, HELiOS and HELiCON, PSG uses the full range of ISD's software products. The next planned steps are a customisation of HELiCON, and the purchase of further HELiCON Studio licenses in order to further promote the concept of product configuration at the PSG.

### Long-term partnerships

Part of the PSG Group's company philosophy are long-term partnerships and a long-standing, successful cooperation with its customers. A good example of this philosophy is the year-long and fruitful partnership with the ISD: "The PSG has always appreciated the ISD as an extremely competent partner. Their services, such as training and consulting, in conjunction with their high-performance software as part of a well conceived one-stop solution has significantly contributed to our success!" says Frank Gulde with great satisfaction.

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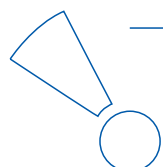
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