

The glass refiner and insulated glass manufacturer Glas Schöninger invests consistently in state-of-the-art software and production technology. Schöninger thus improves productivity and efficiency across the boards and expands its product range in the area of high-quality refined glass.



Glas Schöninger: Giving the glass value

With its current innovation push, this traditional company in Weiden with seventy-two employees is reacting to a difficult situation on the market: medium-sized glass refiners in Germany are swimming against the stream.

Yet investments in intelligent production software and new technologies are just part of the innovation. "If you want to give the glass value," explains Managing Director Tilmann Schöninger, "you need to combine the best quality with the greatest delivery reliability and a completely new dimension of customer service. This begins with active sales, which offers demanding customers expert advising: for highly-refined glass does not sell itself."

Tilmann Schöninger explains, "Cheap is neither what we want to nor what we can do. But our customers know that they can always rely on us and expect our maximum service. To be able to ensure this in the future, we must be extremely flexible and constantly optimize our processes with purposeful innovations. This pays off: we have a loyal customer base and a pleasingly small number of complaints."

A traditional company with High-Tech processes

In order to guarantee quality and the greatest delivery reliability, for decades Glas Schöninger has relied on A+W software-controlled processes, from creating quotations to controlling production to dispatch. "Without comprehensive organization thanks to A+W software," continues IT manager Thomas Knott, "we could never realize such short delivery times for our high-end products." Glas Schöninger has been implementing elements of Industry 4.0 for decades, step by step together with A+W and its machine partners –



The greatest efficiency in cutting, sorting, and insulated glass feeding: the automatic insulated glass feeder (right) is the ideal complement to automated sorting with the HEGLA SortJet, which is controlled by A+W Dynopt.

even if this used to be called something different. The Weiden glass refiner was among the first companies anywhere to implement completely-networked production, at a time when diskettes were still carried to machines at other companies. At the latest with the introduction of the real-time optimization A+W DynOpt in 2012, which controls all cutting and storage processes, Glas Schöninger largely became a smart factory. With DynOpt, the company succeeded for the first time in manufacturing any desired production sequence completely automatically in the smallest space with minimal waste. The automated glass feeder on the insulated glass line is a perfect addition to the system.

On its way to being an all-rounder

Glas Schöninger produces performance insulated glass for Flachglas Markenkreis in sizes up to 2.70x5.00 meters. The A+W Production Terminal

on the line displays the sheet structure and reference edge and prevents errors when inserting sheets that are not inserted by the feeder machines. A Viprotron quality scanner detects any defects and allows timely re-cutting of bad sheets. The results are defect-free sheets and timely, complete deliveries.

The safety glass and grinding areas are being expanded further, and in the future should receive a still greater share of the total production. Currently, two CNC processing centers, a completely-automatic drilling machine, and the modern TSG furnace produce the "space glass" product range, which includes full-glass doors, full-glass systems, glass separators, railing glazing, and shower stalls. The current production environment also allows the rational series production of all types of furniture and shop glass.

Lot size 1 with Industry 4.0

With this quick expansion of the processing/safety glass area, an efficient solution for the production of lot size 1 had to be found. Using hand drawings that are sent back and forth between producer and customer and that are entered manually into the CNC center in the end, it is not possible to make money with processing.

Since the latest software reorganization, therefore, intelligent A+W interfaces between technical order entry and the CNC machines ensure the fully-automatic creation and transmission of machine codes. There is no need for time-consuming and expensive manual machine programming.



Responsible for the sale of Glas Schöninger's increasingly complex glass products since the end of 2016, especially in the area around Munich, is Andreas Schulze, an enthusiastic specialized salesman with many years' experience in the flat glass industry. "We approach customers purposefully," explains Schulze, "and we offer them sophisticated solutions, whether in the functional insulated glass or safety glass sectors. We are increasingly relying on high-tech glass with great processing depth. The need for advising increases here, and sometimes you also have to explain to customers what is possible."

"Intelligent interfaces are the unspectacular champions in a smart factory."

Dr. Klaus Mühlhans, Technical Key Account Manager
A+W Software GmbH



The DXF files are transmitted online to the CNC centers and the Schraml drilling machine. The machine operator scans the sheet label and then sees all technical data for the sheet such as dimensions, processings to be done, etc. on the A+W Production Terminal. If everything looks right, he initiates processing.

The processing is reported as "finished" in the production database with another bar code reading. Thus, the new sheet status is reported to all production points, and also to the A+W Business ERP system.

Bar code control: where is my sheet?

One of the most important new functions for the Glas Schöninger team is comprehensive sheet tracing via bar code reading. Thanks to systematic plant data collection (PDC), it is clear at all times which sheet is where, which processings have already been completed, and what remains to do.

Thomas Knott, "The A+W Barcode Tracking has taken our entire production organization to a new performance level. Only with it are we in a position to truly organize ourselves efficiently without long information paths, complicated inquiries, and time-consuming re-makes. Earlier, an employee frequently had to search for racks for hours in order to find a sheet if he was not sure whether or not it had been produced yet. Today, he just looks in the system – done!"

Precisely in shipping, where finished products from the various departments are combined and must be loaded correctly, identification and registration via bar code reading is enormously helpful.

No detours in production: technical order entry with A+W Business. The data for the CNC machines is generated during order entry and provided to the machine on the A+W Production Terminal.

Since all PDC information is reported back to A+W Business, the employee in order processing can always provide customers with an answer to the question "where is my sheet?" – the specification of the order number or other identifying data is enough. Quick and reliable – this fits perfectly with Glas Schöninger's service philosophy.

Experiencing the change

Among Glas Schöninger's strengths is making the right investment at the right time. This way, you do not chase each trend; instead, you actively shape change with a sense of proportion. Thus it is possible to do justice to your own tradition through innovation.

Contributing to the company's success, however, is also a corporate culture that incorporates employees and encourages them, delegates responsibility and shows appreciation: this results in less fluctuation and is, as Til Schöninger emphasizes, one of the most important value of this family-owned company.

And Glas Schöninger trains people too: this is how it was possible to fill up the whole grinding shop including responsibility for TSG production entirely with people we trained! Obviously the company motto "tradition and progress" is implemented actively and consistently.

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Til Schöninger relies on teamwork. (from left: Andreas Schulze, Sales, Munich; Tilmann Schöninger, Managing Director; Thomas Knott, IT Administrator; Sandra Kugler, A+W Sales Central Europe; Andreas Mink, Flat Glass Mechanic; front: Michael Achmann, Authorized Agent/Sales Management)



With a bar code reading, the machine operator on the Schraml drilling machine displays the data (dimensions, processings) for the current sheet on the A+W Production Monitor. There is no programming to do since the A+W high-tech interface makes the finished control data available: thus it is also possible to produce a lot size of 1 economically.

A+W iQuote on your iPad:
Configure the product you
want step by step, entirely
based on the manufacturer's
current reference data.

A+W Cantor at the BAU trade fair 2017: Maximum transparency, fully incorporated online shop

Components manufacturers are being instructed to adopt fully-integrated ERP systems if they want to make it big in the market. The age of isolated solutions is finally over in our developing markets. At the BAU 2017, A+W Cantor will be displaying what a modern industrial solution should be offering.

The products in demand are all-in-one systems that cover every step of modern-day component production, from procurement, to inventory management, offer and order processing, time management and product control, right up to the optimised supply logistics. The system is based on a single database, enabling free and complex analysis of all company data.

This type of system integrates the manufacturer's trade partner online and provides a simple, mobile way of taking orders and configuring products on dealer software or a web browser. As soon as the dealer has taken the order, all of the order information is available for all departments.

A+W iQuote: From the online shop right onto the shop floor

If you want to offer efficiency and flexibility for order entries, you need a reliable tool for configuring your products from your browser, without needing an installed ERP System. Mobile and flexible! The A+W iQuote online shop is fully integrated into the A+W Cantor system. Order confirmations work just the same as in the dealer program. The system seamlessly accesses the existing reference data of the manufacturer.

All of the technical product tests are also stored in the online registration system. Mistakes with the order are impossible! You don't need to submit an inquiry or listen to boring explanations over the phone anymore. As a result, the whole order process is very efficient.

What you always wanted to know: Analysis and information at the click of a mouse

An integrated system like A+W Cantor, which works exclusively on one database, is perfect for open queries and reports.

Using the SQL tool wizard, the data can be processed and the results can be presented clearly as diagrams and tables in A+W Cantor Cockpit. All analyses and diagrams are available in real-time on the A+W Cantor Cockpit.

YOU decide what you want to see and present your queries elegantly alongside individual reports.



A+W Cantor Cockpit: Individual analyses and diagrams in real-time

What you get:

- Higher efficiency levels and less demand for staff in internal order management
- Spend less time coordinating with your dealers
- Complete functionality on mobile devices
- Easier to acquire and retain custom from new dealers
- Perfect support for your distribution channel

What you get:

- Open and documented database – free access for SQL queries
- Diagrams and analyses available in real-time on the A+W Cantor Cockpit
- You decide what is important to you
- Customise the analysis to your previous figures on corporate management