



**BARTELT & SOHN, BERLIN, GERMANY:**

## The “Future” isn’t just born... it has to be made!

**GLASSTEC 2006: A 20 FOOT LONG GLASS BRIDGE** is the sensation at this international exhibition. **Glass: the supporting element demonstrates daring elegance and highest resilience. Together, designer, engineer and producer have created an object of highest innovation, opening the way for fully new construction possibilities – and with them, new perspectives for glass processors and constructors. Responsible for the project’s realization: Bartelt & Sohn, Berlin, Germany; first choice for the superlative execution of challenges in glass: long before the year 2006!**

Kurt Horn, owner and General Manager at Bartelt & Sohn, sees it this way: „If we want to continue as technology leader in the market of the future, we need, supported by new materials, break-through technology and competent staff, to continuously bring innovative products into that market. Globalization demands from us break-through thinking and action – far beyond our own country’s borders!”

Not only recognizing but creating opportunities; not merely following developments but actively forming them – this powerful drive for innovation stems from the Bartelt & Sohn’s tradition of competent craftsmanship and uncompromising customer orientation.

Already at the onset of the 70s, the glass processor in Berlin was essential in the prototype development for an automatic edge finishing machine. The team, at the time 30 employees strong, experimented with new tooling and grinding devices under the guidance of the business-astute master craftsman Kurt Horn. Propelling the business forward with the extension of an automatic machinery park, he took over the company’s reigns completely, together with his wife Christiane, upon the death of his father, senior master craftsman Heinz Bartelt, in 1980.

### Premium Products rather than Mass Production

1989: the Berlin Wall falls. For Bartelt & Sohn, the challenge to undertake new investments arrives. The demand for safety glass grows. To establish their own tempered glass production in-house in 1993, the third move in the company’s history becomes necessary. At the new location in Berlin Marienfelde, over 40,000 sq. feet of production space make possible, the installation of a laminated safety glass line in 1999, alongside the existing tempering and semi-tempering glass lines. Since then, under the labels ESG Berlin, TVG Berlin and VSG Berlin, the complete spectrum of safety glass is produced here in highest quality. The company expands at breathtaking pace. Bartelt & Sohn set up a silk screening department; the in-house metal fitting shop for fenestration is expanded. Through the employment of the most modern CNC-guided processing machinery, the company perfects and expands its product palette in the processing and finishing areas: milling, drilling, bevelling, shape edging, faceting, fluted bevelling, engraving, surface finishing – the networked machinery



*Kurt Horn, master glazier and businessman, has been managing shareholder of Bartelt & Sohn since 1980.*

park makes it possible to rise to the increased demand with utmost precision. Kurt Horn explains, “A product and processing range of highest quality: that’s our concept to counter today’s ruinous price battles.”

Bartelt & Sohn have excellent production and delivery capacities at their disposal for serial production; however, their specialty is premium quality, custom work – very often one-of-a-kind. Their list of customers includes the local glazier, ordering a standard size 1 replacement pane, as well as the large German building corporation, requiring sophisticated facade elements, all-glass



*CNC drilling in networked production environment: The ToolTV control unit shows the man at the machine the sheet geometry and production data – sheets are identified by scanning their barcodes. After a brief check, the operator scans the barcode again and thus releases the transfer of CNC data: fully automatic processing begins.*



*In the laminating clean room, ToolTV shows the parameters of the current pair of sheets, the sheet structure, and especially the film layer to be used. Before the sheet is passed on to the pre-compound, the operator reports it complete by scanning its barcode.*

### Networked thinking: ALCIM Networked Production

Uncompromisingly implemented as a networked concept at Bartelt & Son, ALCIM registers and analyses every working instruction and transfers the production information to the control units at the terminals where it is available for visualising, checks, and machinery control.

Networked production starts in the office – with the online control of machinery and production control systems. From dynamic sorting buffers via CNC grinding, polishing, and drilling to toughened and laminated glass production, quality checkpoints can be set and the production monitoring can be defined. ALCIM constantly monitors the completeness of processing steps, registers broken and damaged sheets and supplies real-time data to quality control, order processing, packing, and despatch. This improves the customer service: When a customer calls, the order entry staff can inform him about the order status and the delivery date. This is an important means of improving customer satisfaction – just like the brand-new capacity planning based on which delivery dates can be quite accurately fixed right at order entry.

In the fully networked ALCIM environment at Bartelt & Son, breakage reports can be made right at the cutting table; necessary remakes will be directly created from the next (residue) plate of the same glass type. These remakes will be passed through production with utmost priority to join their waiting counterpanes. Thanks to this automatic “express and tracking option” there are practically no delayed or incomplete shipments.

installations, transparent flooring, shop fronts, interiors and bullet-proof teller windows. Despite the heavy competition within the industry, Bartelt & Sohn turnover 40% of their sales in Berlin and 60% further away – in Western or Northern Germany.

Long-standing customers are the backbone of the business; new customers have normally done their comparison homework and chosen Bartelt & Sohn conscientiously. Their experience: not the cheapest, but the best!

No edge is milled, no hole drilled before all the details are clear: an enormous added-value, requiring specialist knowledge, attention to human resources and good customer orientation. Only well-trained personnel are employed at Bartelt & Sohn. And the training comes from within: young recruits grow up in the business, learning their careers in six various technical and commercial areas, many remaining with the firm after completing their training. A Quality Management system clearly defines

the responsibilities and work practices necessary for responsible, customer-orientated, quality work.

### Glass Processing – Software Controlled

Bartelt & Sohn is an ALBAT+WIRSAM customer of the first hour. The long years of co-operation between the two companies has led to many A+ W software innovations, with which all the glass processing and finishing functions have been integrated. A strong customer

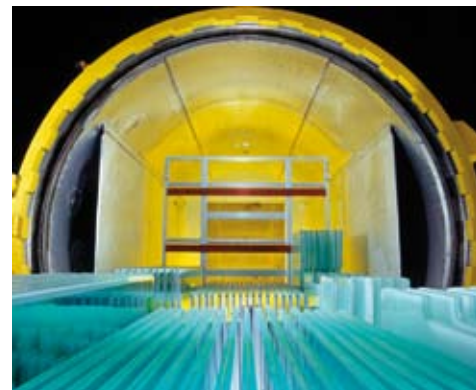
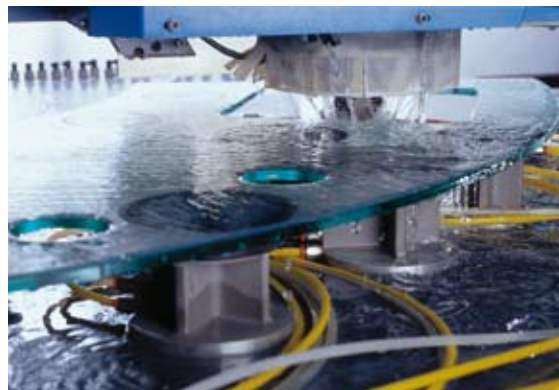
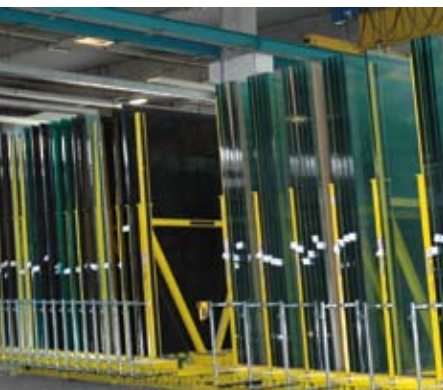
DIALOG to develop practice and future-orientated solutions is a major part of the ALBAT+WIRSAM philosophy.

Whereas, at order entry, the ALFAK ERP software elements are of first importance, later, the use of multiple processing technology for the manufacture of safety glass – far more complex than that for IG manufacture – demands the intelligent planning and organization of the production processes.

The ALCIM PPS system plans, guides and networks Bartelt & Sohn’s production; in the commercial area, the company

*This team has brought about the latest innovations on the IT sector – from left to right: Björn Kölsch, ALBAT+WIRSAM project manager; Sascha Reinelt, IT manager of Bartelt & Sohn; Michaela Wiemann, Sales/glass processing at Bartelt & Sohn; Heiko Schuh, ALBAT+WIRSAM sales; Julia Horn, financial accounting at Bartelt & Sohn; Robert Horn, production manager at Bartelt & Sohn.*





*High-tech production lines are as vital for sophisticated glass processing as a well-equipped special glass stock which, at Bartelt & Sohn, is a modern, compact stock.*

relies on the latest ALFAK generation with integrated technical registration. The team at Bartelt & Sohn know that, without the necessary, intelligent IT networking, a high-tech machinery park cannot reach maximum efficiency. „Intelligently networked“ means that, from the creation of the initial quotation to the final “order dispatched” report, all commercial and technical data are available paper-free to everyone, everywhere throughout the company – precluding reliance on folders, sheets and forms to know where, when and what’s going on with the sheets and orders in progress.

### Technical Order Processing with ALFAK

With Bartelt and Sohn’s new order processing techniques, the capture and integration of entire, complex glass elements is now amazingly simple. The ALFAK generation 2007 is highly integrated into the Shaping & Nesting (CAD) software. First choice for glass processors, the Shaping and Nesting CAD programme is an important tool for the capture and digitalisation of complex products, and, at the same time, provides the basis for control and monitoring processes within the production run.

Now, using ALFAK to capture the complexly configured model sheets

and processing information, the order processing clerk becomes the draughtsman! Even though the new entry simply requires the modification of existing data with a few mouse clicks, ALFAK’s back-up information virtually produces the entire sheet, providing all relevant technical details, generating at the same time the CAD data for the production monitoring systems and CNC machinery.

And, the clerk needn’t be a CAD expert! All basic and recurring forms are catalogued and archived through ALFAK; providing them as templates when needed. A newly entered form, recognized by the system as complying with an archived template, is quickly assigned the complete, precisely calculated technical and processing specifications.

Once constructed, highly-complex processing plans are embedded in the system for later reference; not only are all technical and production control details immediately available; other sophisticated information, including processing tool allocation, is recorded for future reference and integration into the standard quotation and job order tools.

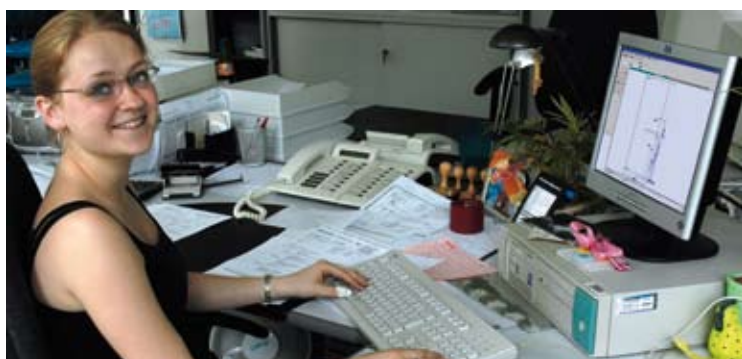
### The future has begun

The glass bridge on exhibit at Glasstec 2006 has now been erected in the

Bartelt & Sohn showroom – as 3-D visiting card and bigger-than-life indicator of the company’s philosophy. It’s safe to say that we’ll be seeing variations of this fascinating construction often in near future – as, literally, the “carrying elements” of exemplary architectural solutions. The technology is there! And, with it, Bartelt & Sohn’s have secured their position in the international market as highly innovative partner – wherever highest quality glass processing and customer service are required. Production Director Robert Horn and daughter Julia, Bartelt & Sohn’s newly designated successors, are striving hard, together with parents Kurt and Christiane, to keep this true in future!

In all areas of the company, the employees’ dedication to the business at hand is obvious. Called upon to participate in Bartelt & Sohn’s development and actively assume responsibility, they have risen to the challenge! The Horn family sees this as their most important advantage. The well thought-out, continually optimized operations, the future orientated product range, the openness to new ideas and, not least, the dedication to good customer service would not be possible without this mutual cooperation and trust between the company’s management and staff. |

*At order entry, ALFAK can automatically create the necessary DORMA order data and transfer them on a mouse-click. DORMA uses these to create a work order and returns – electronically, of course – a delivery notification: A vital function for Bartelt & Sohn as a DORMA wholesaler.*



### ! Kontakt

#### Bartelt & Sohn OHG

Spernberger Str. 7 • D-12277 Berlin (Marienfelde)  
Tel. +49 (0) 30 72 39 09-0  
www.bartelt-sohn.de • info@bartelt-sohn.de

#### ALBAT+WIRSAM Software AG

Konrad-Adenauer-Straße 15 • D-35440 Linden  
Tel. +49 (0) 6403-970-0  
www.a-w.de • info@a-w.de

