

**Express Toughening:**

**Top Quality – Unmatched Delivery Service**

**Ilford, Essex London – Founded in 2001 in South East England Express Toughening provides consistent customer service, great flexibility and stocks an impressive glass range. In 2010 Express Toughening re-focused its operations with a view to developing its retail processing business and putting a major investment in customer service, this has led to improvements in both turnover and profits. Owners Geoffrey and Philip Curtis built Express as a family business and customers experience the values and care that come with this.**

On request, customers can also receive this top service within 24 hours. Express Toughening ('The Glass Warehouse') also delivers balustrades, glass splashbacks and all types of glass common on the market, fittings and products relating to glass – it is therefore the first stop for DGU- manufacturers as well as for glaziers and glass and metal constructors. And there is another advantage for



Order processing with A+W Business (ALFAK): This modern and ergonomically-designed program assists with the quick and technically-complete entry of all products – the prerequisite for the short

customers: as an independent supplier, Express Toughening has unlimited access to all types of glass from all suppliers – customers get exactly what they want.

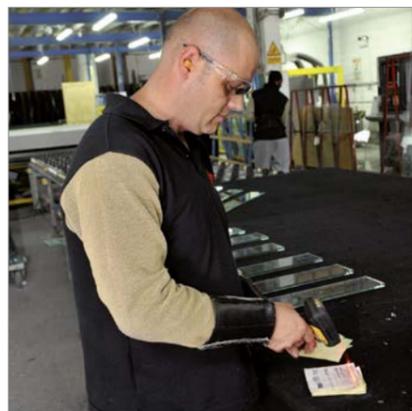
Processed glass (time-consuming edge processing, drilling, corner cut-outs, free shapes, etc.) currently accounts for 25% of total production and this share continues to grow. Director Daniel Curtis explains that employees in Sales respond to every customer inquiry within an hour. With its own vehicle fleet, customers in Essex, Kent, Surrey, Sussex, Cambridgeshire, Northamptonshire and the Midlands are supplied daily – and on request deliveries can also be made outside this area.

**Premium Software – Optimal Organisation**

Short delivery times require highly-efficient business and production processes, which can only

be controlled with state-of-the-art software systems. "Productivity," explains Daniel Curtis, "cannot be increased with more employees on the machines, but only with improved organisational structures, into which each employee is incorporated." When Daniel assumed responsibility for production at Express Toughening, he was able, thanks to A+W production software, to increase throughput per shift from 80 stock plates to 140 (!). This is how the company achieves its outstanding delivery capacity – a crucial competitive advantage in a hotly contested market.

With the help of the A+W order processing system A+W Business (ALFAK) and, for larger customers, EDI transfer, the orders are recorded and transferred to Production – rectangular panes for windows and facades as well as models and free shapes. Thanks to the ergonomically-designed graphic user interface and many functional features derived from practical experience, recording is quick and error-free. Free shapes are designed using the A+W CAD-Designer (Shaping & Nesting), a major tool for entering and digitising complex products but also the basis of machinery control and moni-



Using A+W barcoding, the status of each pane is registered in the production system and in the order processing – customer inquiries and evaluations by the management are supported optimally.



Daniel Curtis (L), Director, and Franco Difato, A+W Software Engineer and longtime contact for Express Toughening. Daniel: "The A+W software is outstanding, the service unmatched."

toring processes on the shop floor. For work preparation, the production software A+W Production (ALCIM) is used, depending on the required start date for production, to separate the orders according to production-technical criteria and optimise them. Production lots consist of items for various customers; these are recombined only at the end for the shipping logistics.

**Automated production**

After the glass has been cut on the state-of-the-art Bottero CNC cutting table, it is automatically edged, washed, and usually in the cutting pattern of the stock plate, fed into the high-tech toughening furnace – and naturally soft coatings, ornaments and low-iron glass of the highest quality can also be toughened. Panes which receive additional processing are fed into the CNC processing centre with the assistance of the placement instructions on the A+W monitor in Cutting: ALCIM has already pre-sorted everything. Thanks to the high degree of automation, the product quality is unmatched. All steps are executed quickly, without time and space-consuming intermediate storage. At the furnace discharge, labels are affixed to the panes with precise placement instructions.

**A+W Barcoding: Always informed**

Intelligent bar code-supported processes ensure that every pane runs through Production in timely and controlled fashion – it is precisely clear which pane is where at all times. Large-format monitors clearly display production information such as break pattern and oven bed configuration, enabling quick production and error-free flows. The information from the production data acquisition is re-reported back to the ALFAK order processing and is available there in short order in case of customer inquiries, but also for evaluations by company management. Daniel Curtis: "Previously, there were times where we did not know how many panes we had actually hardened in a shift. Since the introduction of A+W barcoding, this is no longer an issue – thanks to the exact barcode registration, we in the office have an overview of the production status of each pane and we know whether orders are ready for shipment or whether panes are still missing."

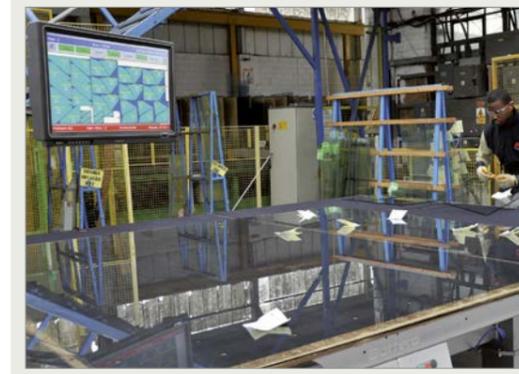
**EXPRESS TOUGHENING**



**Create value – save money: Software Highlights at Express Toughening**

**Shipping logistics – reducing costs with A+W production software**

When Express Toughening started production in 2001, it employed three people per shift in Shipping just for the sorting of glass. The glass had to be sorted by customer using measuring tapes and extensive lists. This changed suddenly with the introduction of ALCIM because now the glass could be sorted onto the toughening harp racks by route-customer-big to small. This enabled the despatch area to find the glass quickly and not have to do any sorting since the glass was already pre-sorted ready for despatch. Thanks to the automatic rack assignment, the panes can now be deposited by customer straightway – instead of three employees, only one employee per shift is required in Shipping. ALCIM, explains Daniel, was not exactly a bargain, but thanks to the savings it generates in Shipping alone, the software paid for itself within a year.



**Shape Optimisation – 'Green Production'**

Next to labour, glass is the biggest cost factor in glass processing. The fight for material is won and lost with the cutting. Here, thanks to A+W software, Express Toughening has been able to make significant improvements – given the approximately 100 types of glass which the company must keep on hand, optimise and cut these days, this is an inestimable advantage.

Express Toughening cuts a lot of models and shapes. Therefore, Daniel relies on the A+W Shape Optimizer (ShapeOpt), a special optimisation which combines model panes from different items within a rectangle in order to save space ('Nesting'). Thanks to the use of ShapeOpt, Express Toughening saves 10 stock plates each day. That way the company combines the beneficial with the comfortable: it increases its margins and at the same time contributes to the reduction of CO<sub>2</sub> emissions – material-conscious glass processing is environmentally-friendly glass processing.

**Software excellent – Service unmatched**

The Express Toughening Team takes on the competition with uncompromisingly good service. If a pane has to be re-worked, even owner Philip Curtis has been known to pack it in his own car and bring it to the customer – this keeps customers loyal and explains why the company's market partners do not just look at the price. With some pride Daniel Curtis explains: "Since we reorganised in 2010 we have not lost a customer due to bad service". It is no wonder that Daniel also expects excellent service from his suppliers – for him, this is the most important argument in favour of A+W in addition to high product quality: "The product is outstanding, the service unmatched. I can call the boys at A+W anytime –

they are always there for me and they help me with my problems. Franco and the others are all software experts and they know the glass industry inside and out. They are experienced technicians who know what they are doing and they never let us down."

**Forecast: More automation – Expansion of product lines**

Nothing is so good that it cannot be improved. Therefore, 'The Glass Warehouse' Express Toughening is constantly investing in new production technology in order to be able to offer its customers even better service and a still-wider range of products. Thus the team around Daniel Curtis, Chief Executive George Howard and Sales Direc-

tor Adam Curtis will expand its production capacities with an additional CNC processing centre, a CNC drilling machine, and last but not least, another new toughening furnace. Furthermore, the intention is to install a laminated glass production line – excellent prospects for the dynamic company and its customers!

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Left: The A+W Production Monitor shows the bed configuration at the infeed of the high-tech toughening furnace so that space is saved – the oven capacity is used optimally, up to 900 square metres of glass per shift are hardened. Naturally soft coatings, ornament and low-iron glass of the highest quality can also be toughened. Right: The modern Bottero CNC centre allows all edge processing and holes, even on model panes and free shapes.

