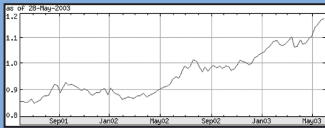




STRENGTH OF THE
EURO MAKES
GLASSTECH
EQUIPMENT VERY
ECONOMICAL



There has never been a better time for European companies to purchase a Glasstech system or retrofit that meets their needs.

With the Euro being approximately 35 percent stronger against the U.S. dollar in late May 2003 than it was in May 2002, the cost of Glasstech's line of world-renowned glass bending and tempering systems will likely never be better. It is the equivalent to a major discount on Glasstech's rugged and dependable American-made systems.

Companies in Europe cannot afford to let this opportunity pass.

Now, while the value of the Euro is so high against the U.S. dollar, is the time to act. At Vitrum 2003, contact Glasstech at Hall 16/II, Stand D-43.

Glasstech Has The Highly Efficient Low-E Glass Systems That Europe Needs

Driven by legislation requiring increased energy savings in buildings, the demand for energy efficient, low-emissivity glass in Europe is increasing dramatically.

Glasstech, Inc., Perrysburg, Ohio, U.S.A., has the systems, technology and advanced heaters to satisfy Europe's voracious appetite for tempered flat Low-E glass.

As the world leader in the manufacture of glass bending and tempering equipment, Glasstech's Low-E glass tempering technology is considerably ahead of its competitors. Glasstech's gas fired forced convection heater, the FCH2™, and convection-assisted electric radiant heaters, the ERH-C2™ and ERH-C3™, will be featured by Glasstech at Vitrum 2003, Hall 16/II, Stand D-43.

Glasstech's FCH2 Forced Convection Heater system, fired by natural gas, is the leading system for the efficient tempering of Low-E flat glass. The FCH2 can heat Low-E glass at a rate twice as fast as typical electric radiation heating systems, which dramatically improves productivity and reduces processing cost.

The FCH2 can heat clear glass at a rate of 30-seconds per millimeter of thickness and high performance, soft-coat Low-E glass at a rate of 33-35 seconds per millimeter. In addition, the FCH2's reduced heating time means glass spends less time on the roller bed, which provides for higher quality with less distortion.

Anglian Windows Limited of Norwich, England, and CET Glass Processors Limited of Northampton, England, both currently process Low-E glass around the clock on Glasstech's FCH2 equipment.

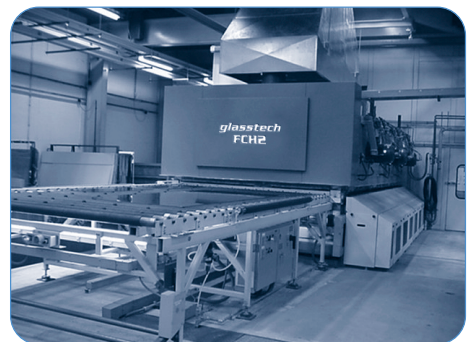
Anglian Windows has been using Glasstech's FCH2 for the past two years and has significantly increased its production of Low-E glass.

"We realized some time ago that under Document L, demand for toughened coated glass would rocket," said Anglian's David Duncan. "We appreciated that, with our existing equipment, we would have a major problem. We could not afford to lose toughening capability, which was already stretched and we could not afford to take any time or cost penalties for processing 4mm coated glass. What it meant, in effect, was that we had to find a way to toughen coated glass at the same rate as float glass."

He continued: "The decision to install the Glasstech system was not taken lightly – it represented a major investment for us. It was all worth it though, the new furnace has been excellent and is exceeding the throughput on coated glass promised by Glasstech. We needed a volume glass tempering plant that would take us forward, and that's exactly what we have."

Glasstech's ERH-C2 Electric Radiant Heater processes Low-E glass approximately 20 percent faster than a traditional electric radiant heater. The ERH-C2 adds upper convection to improve the productivity of Glasstech's traditional electric radiant system, the ERH. An ERH-C3 version is available with lower convection, capable of even greater throughput for Low-E glass.

The ERH-C2 and -C3 convection systems are available as new systems and as retrofits to existing Glasstech electric radiation systems.



Automotive Glass Leadership

Style-conscious auto designers use dramatic glass shapes to help set their automotive designs apart from other look-alike models.

The industry's automotive production managers and glass processors know that the way to translate the designers' increasingly complex models into reality is to turn to the world's leading innovator of glass bending and tempering equipment, Glasstech, Inc., Perrysburg, Ohio, U.S.A.

Glasstech's state-of-the-art DB™ 4 bending and tempering system is the workhorse in the company's stable of automotive bending and tempering systems.

This highly dependable and efficient system currently is being used throughout Europe to bend and temper sidelites, quarterlites and backlites for a wide variety of models, including products from Ford, Opel, Volkswagen/Audi, Peugeot/Citroen, Renault, Fiat, BMW and Mercedes.

The DB 4 has been revised with user-requested features to improve even further on its optical quality and shaping capabilities as well as to increase the productivity and yield of the glass being processed.

The recent addition of Quick-Change and Fast-Cycle options has significantly improved the DB 4's productivity. The company recognizes that, with shorter part runs and turnaround times, customers are demanding more versatility. They need flexible machines with minimal downtime for tooling changes. Traditionally, the industry incurs 6 to 8 hours of downtime for part changes.

With Glasstech's Quick-Change option, customers can now expect a changeover time of just 90 minutes good glass to good glass. This new system also has been reported to increase product yield by 2-3 percent, giving a significant improvement in profitability.

In addition, the Fast-Cycle option typically gives customers 20 percent more output than the standard system.

Glasstech's cylindrical benders, CRB1™ and CRB2™, produce sidelites without the need for part-dedicated tooling. With extremely tight tolerances and the high repeatability of parts, the CRB2 meets Volkswagen's very critical standards.

Recently, Glasstech introduced the CRB3™, which further refines this family of systems' capabilities by imparting cross-curvature of up to 5mm. All three systems are able to change from one part to another in a matter of minutes.

The new EPB™, External Press Bending and Tempering system, from Glasstech offers many novel features and produces cylindrical, compound curvature, symmetrical and asymmetrical bends having very accurate peripheral and body shape. The EPB is available in a number of versions with cycle times ranging from 30 seconds to 7 seconds. It utilizes economic tooling and an adjustable quench plus Quick-Change bender stations.

Glasstech technology also leads the field in evaluating glass designs while still in CAD format. The Shape Modeler® from Glasstech is a computer simulation software package that uses mathematical modeling to verify the integrity of a design from the shape and optical viewpoints.

Shape Modeler saves significant time and expense by minimizing development time and proposing changes in the design to overcome optical problems. The program's accuracy has been verified to twenty thousandths of an inch or 0.5mm for parts of average complexity.

At Vitrum 2003, the company is located in Hall 16/II, Stand D-43.

Do You Want More From Your Glasstech System?

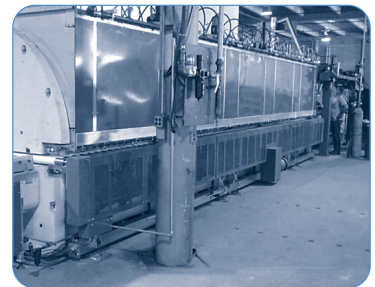
Do you already own a Glasstech automotive or architectural system?

Are you sure you are getting the most out of your system?

Contact Glasstech's Sales Department and arrange for a status audit of your system. A trained Glasstech engineer will thoroughly review your system.

The engineer will suggest changes and updates, such as the newly introduced Quick-Change and Fast-Cycle options for the DB 4, or a new state-of-the-art control system to help you reach peak efficiency on your rugged and dependable Glasstech system.

For more information on system audits and the other aftermarket services available from Glasstech, e-mail, call 001-419-661-9500 or fax 001-419-661-9616.



glasstech
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Glasstech is committed to continuously improve and provide its products and services so that they meet or exceed its own and its customers' quality, cost and schedule requirements.

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