

New!



A new look, new content and new features describe Glasstech's re-launched Web site.

"We want to make our Internet site as user friendly and informative as possible," said Jay Molter, Glasstech's Vice President of Marketing and Sales. "The new site is brighter and contains up-to-date information on all of our systems, including our recently introduced line of solar products."

While much is new about the site, its address on the Internet remains the same: www.glasstech.com.

Please visit the site and let us know what you think about it and any suggestions you might have. E-mail us at www.glasstech.com.

SOLAR

Glasstech® Pioneered Solar Module Development

Uses Knowledge To Create Solar Processing Systems

History supports Glasstech as being among the elite group of pioneers whose work led to the development of modules to produce renewable electrical energy from sunlight.

Solar Involvement

In the early 1980s, Harold A. McMaster and Norman C. Nitschke, Glasstech's founders, were experimenting and providing financial backing for developmental work in solar energy. They formed Glasstech Solar, Inc., Wheat Ridge, Colorado, and Solar Cells, Inc., Toledo, now located in Perrysburg, Ohio, Glasstech's headquarters city.



The work spearheaded by McMaster and Nitschke led to the development of the photovoltaic technology that is the basis for the processes used by First Solar, Inc., also in Perrysburg, and other developing solar energy companies in the flat-plate photovoltaic (PV) field.

Through this association, Glasstech gained an insider's understanding and one-of-a-kind experience which had a direct bearing on the formation of its Solar Products business unit earlier this year. Using this understanding and experience, Glasstech has assembled a wide array of specially adapted systems for the production of glass substrates for the solar power industry.

Glasstech's Solar Products unit also benefits from the company's bank of knowledge concerning the bending and tempering of glass for the architectural and automotive markets. This is invaluable experience, developed during Glasstech's 37 years as the leading provider of rugged, production-proven glass bending and tempering systems.

Currently, Glasstech offers five systems that produce precisely bent or curved glass parts ideal for the concentrating solar power (CSP) and concentrating photovoltaic (CPV) markets and the extremely flat glass parts required by the PV markets.

Glasstech processed parts meet the solar industry's requirement for reliability, repeatability, tight specifications and cost effectiveness.

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Glasstech® Pioneered Solar Module Development

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CSP and CPV Systems

Glasstech's Solar Cylindrical Radius Bender (CRB-S™) is the world's most efficient and precise system processing tempered and heat-strengthened, parabolic trough reflector glass shapes for the concentrating solar power (CSP) market. The system processes glass from 1.6mm up to 5.0mm into specified shapes without dedicated tooling. Shape changes take minutes and energy savings are significant, since no molds are heated.

The Solar External Press Bender System (EPB-S™) for tempering and heat-strengthening produces high quality, economical, accurate bent parts with minimum tooling and fast cycle times. The EPB-S is ideal for smaller, high volume spherical and parabolic shapes.

The Solar Advanced Deep Bend and Tempering System (DB 4-S™) for tempering and heat-strengthening produces complex parts for dish segments and smaller, high volume, spherical and parabolic solar collector deep bend shapes.

PV Systems

The **Solar Electric Radiant Heater Flat Glass Tempering System (ERH-S™)** is a continuous flat-glass tempering system for fabricating glass specified for silicon wafer-based photovoltaic panels or thin film photovoltaic solar panels. The system is ideal for heat-treating active (coated superstrate) glass, high light transmission (low-iron) smooth or textured cover panels, rigid back panels and clear glass for PV panels.

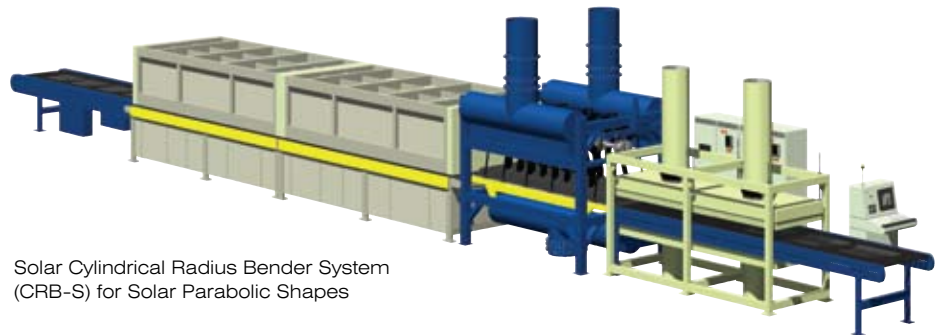
The **Solar Forced Convection Heater Flat Glass Tempering System (FCH-S™)** is Glasstech's gas-fired convection heater system alternative. The FCH-S also is a continuous flat-tempering system. It normally requires less floor space and potentially can offer significant energy savings compared to an electrically heated system.

Both PV-targeted systems offer high productivity and meet the solar industry's very precise flatness specifications.

The CRB-S system processes glass from 1.6mm up to 5.0mm into specified shapes without dedicated tooling.

More Information

Complete information on these and all Glasstech systems can be found at Glasstech's booth at glasstec 2008, Hall 13, C49, or online at Glasstech's newly developed Web site, www.glasstech.com.



Solar Cylindrical Radius Bender System (CRB-S) for Solar Parabolic Shapes

CRB-S™ achieves shape changes in minutes with significant energy savings.

The Glasstech EPB-L is the most energy-efficient bending and annealing system in the industry.

AUTOMOTIVE

EPB-L™ Fulfills Needs of Two Major Trends

The Glasstech External Press Bending System (EPB-L™) for annealing automotive safety glass is the ideal system to respond to three differing, yet major trends within automotive glass processing.

First, the EPB-L system offers users significant energy savings compared to traditional “coffin” type processing systems, as the EPB-L heats only a single mold and the glass versus the traditional method of heating and cooling multiple molds as well as the glass.

Secondly, as the industry demands ever-tighter tolerances to address the introduction of new windshield wiper technology and heads-up display, the EPB-L meets these stringent requirements.

Also, more and more vehicles are utilizing laminated glass in sidelites and backlites to provide safety, security, acoustics and ultraviolet protection. The EPB-L produces monoliths for bent and annealed windshields, backlites and sidelites suitable for lamination in compound and complex shapes.

The EPB-L is an innovative, highly versatile glass bending system that satisfies the automotive OEM demand for tighter surface tolerances with superior optical quality, while also meeting the glass processor’s need

for greater productivity, economical tooling and energy conservation.

Using only a single tool set ensures the EPB-L provides high statistical repeatability, as well as significantly lower energy consumption, when compared to gravity-sag systems.

Designed as an expandable system, the EPB-L easily meets specific production needs. In the highest throughput configuration, the EPB-L achieves a cycle time of 8 seconds for glass monoliths. This enables the two parts required for lamination to be produced every 16 seconds.

EPB-L can be supplied initially as a lower capacity system. Thus, as production requirements grow, the system can be upgraded and expanded for greater throughput.

Among forward-looking features, the EPB-L system’s final heating section is equipped with a patented FanRoll system that pre-forms glass before it arrives in the pressing station. This provides an increase in forming capability. The system also utilizes Glasstech’s patented edge stress control technology, which increases edge strength while maintaining inner band tension. This feature helps reduce installation and in-service breakage.

The EPB-L is part of a family of systems, including the EPB-T-SS™, that forms and tempers a single-stream of sidelites, and the EPB-T-DS™, that forms and tempers a single backlite or a dual stream of sidelites. All EPB systems process to stringent optical requirements with tight tolerances and produce parts with reflective and transmitted optics.



Automotive External Press Bending System (EPB-L) for Windshields

The innovation continues in Glasstech's aftermarket solutions.

AFTERMARKET

AGI™, Tooling, Rollers Making News

Glasstech systems are production proven and rugged. To ensure processors get the maximum production and value from their systems, Glasstech also offers a wide variety of aftermarket products and services.

The accessibility of such products as the recently introduced AutoGlassInspector™, recent developments in tooling production and just-announced availability of ceramic rollers from Glasstech are prime examples of how Glasstech constantly searches for ways to improve its overall product offering.

Auto Glass Inspection

Glasstech's AutoGlassInspector™ (AGI) numerically evaluates the transmitted optics in a just-formed glass part, efficiently and automatically checking and confirming the optical quality of automotive backlites and windshields. This inline system digitally compares the part's optical quality to industry standards.

The AGI's powerful state-of-the-art analysis computer scrutinizes a part in less than 10 seconds and displays the results on a video screen. This affordable solution is usable on Glasstech and other glass processing systems.

Once the equipment is installed, it requires no attention from the operator, who simply initiates an analysis with the click of a wireless mouse. This inline system reduces inspection manpower, rapidly recouping capital investment costs.

Tooling

A recently instituted Glasstech program controls total tooling cost, ensures efficient and trouble-free tool start-up and makes sure the tooling fits the processor's specific machine.

Glasstech has developed updated tooling which can offer a reduced price for a majority of today's complex automotive glass parts. Additionally, the program includes testing on Glasstech's in-house test furnace to ensure the tooling produces acceptable product. Further, a Glasstech tooling engineer will oversee the tool's installation in your plant and train personnel on the tool's proper use.

Under normal usage, Glasstech tooling is capable of producing hundreds of thousands of parts before any major rework is needed. However, Glasstech also will produce tooling designed for smaller lot production at costs lower than large-volume tooling.

Rollers

Continuously striving to ensure its customers the utmost in quality and service, Glasstech is now supplying ceramic rollers. By broadening its sources of supply, Glasstech provides customers with the optimum roller for their Glasstech system.

Glasstech will supply rolls to ensure customers the best quality and price for their specific application.

Whether a processor needs a few replacement rollers or a full complement of ceramic rollers, Glasstech can provide the rollers at competitive pricing. Further, Glasstech is inventorying many standard rollers and can ship within a few days of receiving an order.

For more information on Glasstech aftermarket parts and services, please contact your Glasstech representative or the Glasstech Aftermarket Sales Department (Aftermarket@glasstech.com).

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WHERE INNOVATION CONTINUES

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