



glasstech[®]
WHERE INNOVATION CONTINUES

Architectural Glass Systems



Innovative, modular systems to maximize architectural glass productivity.

Flat, curved, cylindrical and asymmetrical – Glasstech architectural glass systems are renowned for producing everything from high performance coated glass to large gracefully bent lites to tight radius tempered panels for creative interior designs. Flexible and efficient, Glasstech systems lead the industry in innovation, quality and reliability.

With solutions to increase productivity, maximize operating efficiency, expand volume – and process Low-E glass at throughput rates comparable to clear float – Glasstech has the technology to keep its customers on the cutting edge.



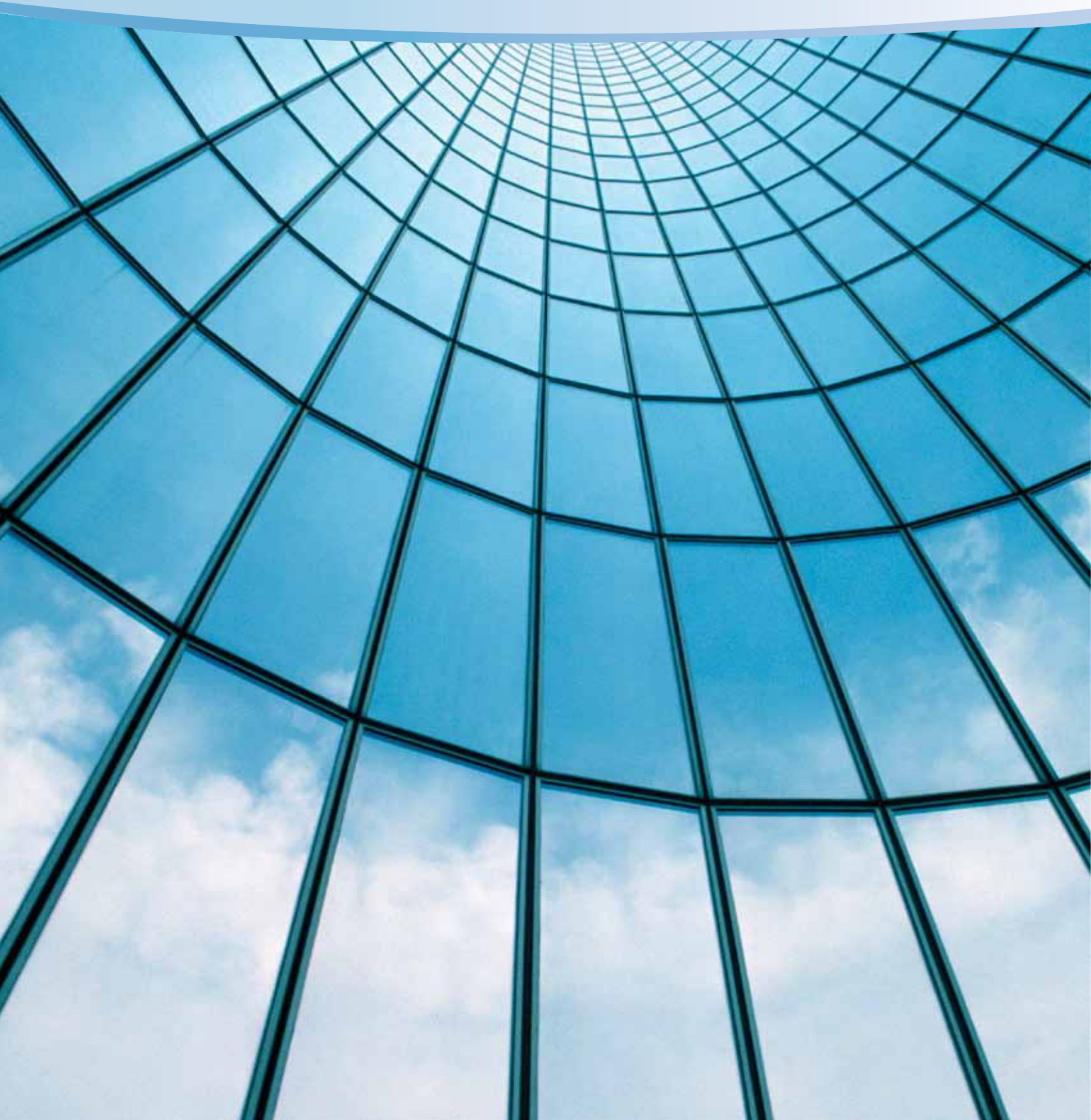


| Systems Overview |

Glasstech architectural glass systems are designed to meet industry demand for greater productivity, economical tooling and lower energy usage. A user-friendly PLC controller simplifies regulation of conveyers, bending motion and parts setup and provides instant diagnostics. System features and options include electric radiant or forced convection heating, Profiled Convection™ surface heating systems, a high-efficiency quench, computer-controlled bending with no part-dedicated tooling, a cooler that eliminates ductwork and more.

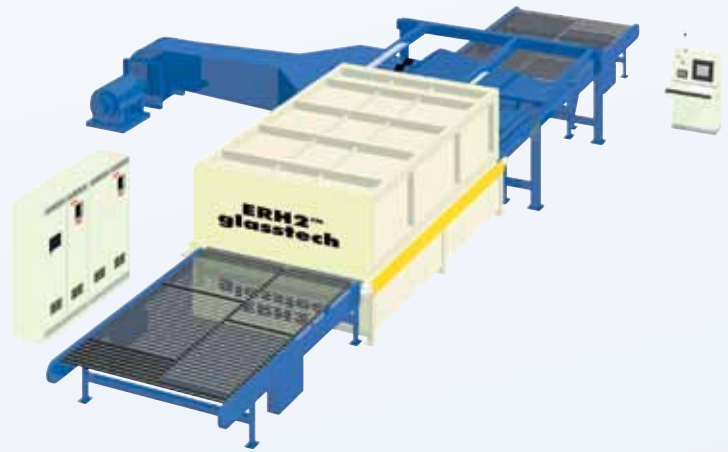
| Flat Glass Tempering Solutions |

Glasstech's flat architectural glass systems offer excellent tempered glass quality, high throughput, long-term reliability and modular flexibility to adapt and expand as needs change. Production capabilities are available for glass 2.8mm-19mm (.110"-3/4") thick and widths up to 2440mm (96").



ERH2™

System Features: Flat glass tempering system with electric radiant heating for processing all types of flat architectural glass products. Engineered for years of heavy-duty service with minimal maintenance costs, the ERH2 continuous flat glass system offers reliable, highly accurate and repeatable results with high productivity. Options include Glasstech's patented Profiled Convection heating system, which allows processing of high performance Low-E glass at higher throughputs.



- ERH2-C2 features special convection nozzle systems with built-in preheaters to deliver hot air to the upper glass surface utilizing Glasstech's patented Profiled Convection system.

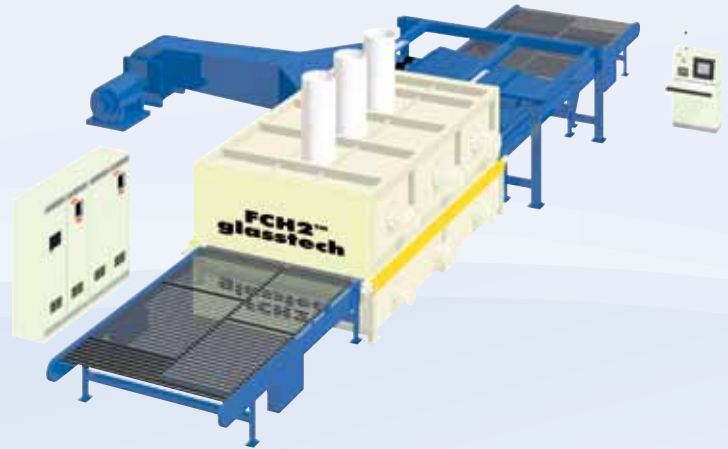
Production Capability – Loads/Hour

Glass Thickness		Standard System		C2 Option					
		Single Cycle 1 Load Heating	Single Cycle 2 Loads Heating	Single Cycle - 1 Load Heating			Double Cycle - 2 Loads Heating		
				Most Glass Types	Most Glass Types	Low-E* Coated		Most Glass Types	Low-E* Coated
(mm)	(in)	Most Glass Types	K Glass			Soft Coat	Most Glass Types		K Glass
3.0	.118	27	54	27	25.5	21.5	54	51	43
4.0	5/32	22.5	45	22.5	21	18	45	42	36
5.0	3/16	18	36	18	17	14	36	34	28
6.0	1/4	15	30	15	14	14	30	28	24
8.0	5/16	11	22	11	-	-	22	-	-
10.0	3/8	9	18	9	-	-	18	-	-
12.0	1/2	7.5	15	7.5	-	-	15	-	-
15.0	9/16	6	-	6	-	-	-	-	-
19.0	3/4	4.5	-	4.5	-	-	-	-	-

*Heating time may vary depending on the composition of the glass and the surface coating.

FCH2™

System Features: Flat glass tempering system with controlled, natural gas fired, forced convection heating. Capable of heating clear glass at a rate of 30 seconds per millimeter of thickness, FCH2 processes high performance Low-E glass at 33-35 seconds per millimeter, depending on the composition of the coating. This system requires less facility space for productivity equivalent to the ERH.



Production Capability – Loads/Hour

Glass Thickness		Single Cycle - 1 Load Heating			Double Cycle - 2 Loads Heating		
		Most Glass Types	Low-E* Coated		Most Glass Types	Low-E* Coated	
			K Glass	Soft Coat		K Glass	Soft Coat
(mm)	(in)	Most Glass Types	K Glass	Soft Coat	Most Glass Types	K Glass	Soft Coat
3.0	.118	36	36	30.5	72	72	61
4.0	5/32	30	30	25.5	60	60	51
5.0	3/16	24	24	20.5	48	48	41
6.0	1/4	19.5	19.5	17	39	39	33
8.0	5/16	14.5	-	-	29	-	-
10.0	3/8	11	-	-	22	-	-
12.0	1/2	7.5	-	-	15	-	-
15.0	9/16	6	-	-	-	-	-
19.0	3/4	5.5	-	-	-	-	-

*Heating time may vary depending on the composition of the glass and the surface coating.

| Bent and Tempered Glass Designs |

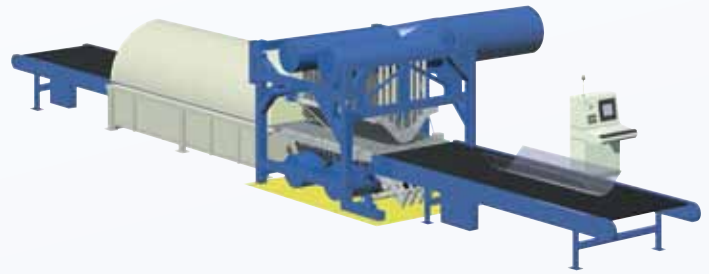
From constant radius and graceful S bends to small radius cylindrical curves and asymmetrical shapes, Glasstech architectural glass bending and tempering systems provide the design and creative freedom to build everything from exterior curtain walls to interior showcases, furniture and building entry systems. Glass parts are produced to exacting tolerances with the highest level of uniformity and optical quality – without the need for part-dedicated tooling.



ABTS™

Architectural Bending and Tempering System Features:

The most productive bending and tempering system available for the architectural market, Glasstech's ABTS processes a wide range of shapes, from constant radius to S bends to flat glass. ABTS is available with electric radiant or forced convection heating. Computer controls ensure precision bending and reduce changeover time by storing variables for different parts.



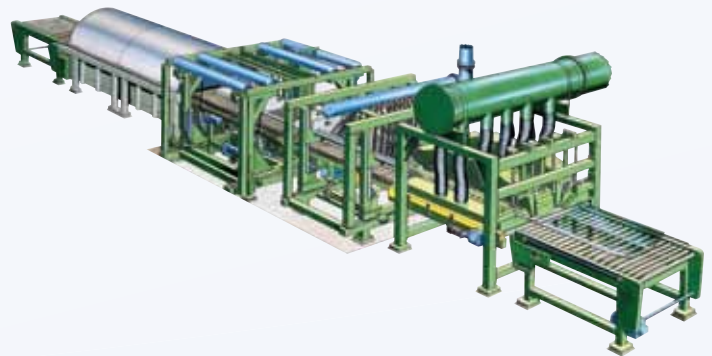
Production Capability – Loads/Hour

Glass Thickness		Maximum Production Rate – Load/Hour		2140mm (84") Wide System				2440mm (96") Wide System			
				Maximum Load Area		Maximum Single Piece		Maximum Load Area		Maximum Single Piece	
(mm)	(in)	Single Cycle 5.5m (18') Heater	Double Cycle 11.0m (36') Heater	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
6.0	1/4	14	28	2140 x 3660	84 x 144	2140 x 3660	84 x 144	2440 x 3660	96 x 144	2440 x 3660	96 x 144
8.0	5/16	11	22	2140 x 3660	84 x 144	2140 x 3660	84 x 144	2440 x 3660	96 x 144	2440 x 3660	96 x 144
10.0	3/8	9	18	2140 x 3048	84 x 120	2140 x 3048	84 x 120	2440 x 3048	96 x 120	2440 x 3048	96 x 120
12.0	1/2	7	14	2140 x 3048	84 x 120	2140 x 3048	84 x 120	2440 x 3048	96 x 120	2440 x 3048	96 x 120

TRCB™

Small Radius Bending and Tempering System Features:

Glasstech's small radius cylindrical bending and tempering system can process glass in small radius V bends, cylindrical curves and other symmetrical and asymmetrical shapes. Perfect for furniture, shower enclosures, retail displays and panels with minimal framing, the system uses interchangeable sets of rollers to create bends quickly and accurately without expensive molds. In addition, all formed glass is tempered to meet international fracture standards.



Production Capability – Loads/Hour

Glass Thickness		Maximum Production Rate – Load/Hour		Maximum Single Piece* – Z97 & BS 6206		Maximum Piece* – ECE R43 & JIS 3211	
(mm)	(in)	Single Chamber System 5.5m (18') Heater	Double Chamber System 11.0m (36') Heater	(mm)	(in)	(mm)	(in)
3.0	.118	26	54	1000 x 2000	40 x 80	–	–
3.2	1/8	26	54	1000 x 2000	40 x 80	–	–
4.0	5/32	23	45	1220 x 2440	48 x 96	815 x 1500	32 x 59
5.0	3/16	18	36	1220 x 2440	48 x 96	1220 x 2440	48 x 96
6.0	1/4	14	28	1220 x 2440	48 x 96	1220 x 2440	48 x 96
8.0	5/16	9	18	1220 x 2440	48 x 96	1220 x 2440	48 x 96

*Minimum glass size: 380mm (15") in the direction of travel.

Innovation Continues

Glasstech systems are the product of inventive minds, creative thinking and innovative problem solving. Customer experience has proven, beyond a doubt, that Glasstech equipment is the most rugged, dependable and versatile. Since 1971, Glasstech has been the leader in advancing glass bending and tempering technology with developments such as:

- Computer-controlled process and heat control
- Roller hearth transport
- Bending in the heat
- Horizontal processing without tong marks
- Precision, easily changed tooling
- Modular construction
- Diagnostic monitoring
- Advanced quenches, minimizing iridescence and reducing energy
- Forced convection and electric radiant heating
- Shape modeling proprietary software which corrects glass designs, minimizes distortion, maximizes optical quality and increases production efficiency
- Prototype production
- Auto Glass Inspector
- Sample/pilot production run capabilities

Glasstech supports its systems with:

- A one-year warranty
- Retrofits
- Tooling
- Replacement parts
- Ceramic rollers
- Service audits
- Refresher operator training
- Custom service/support packages
- 24-hour phone, fax and E-mail service inquiries

Glasstech, Inc.
Perrysburg, Ohio USA
Tel: +1-419-661-9500
Fax: +1-419-661-9616

Glasstech, Inc.
New York, New York USA
Tel: +1-212-489-8040
Fax: +1-212-307-5781

glasstech[®]
WHERE INNOVATION CONTINUES

www.glasstech.com

Glasstech, Inc.
Shanghai, China
Tel: +86-21-5836-7560
Fax: +86-21-5836-8968

Glasstech, Inc.
Mumbai, India
Tel/Fax: +91-22-2528-7575

