

Automotive EPB-T™

External Press Bending System

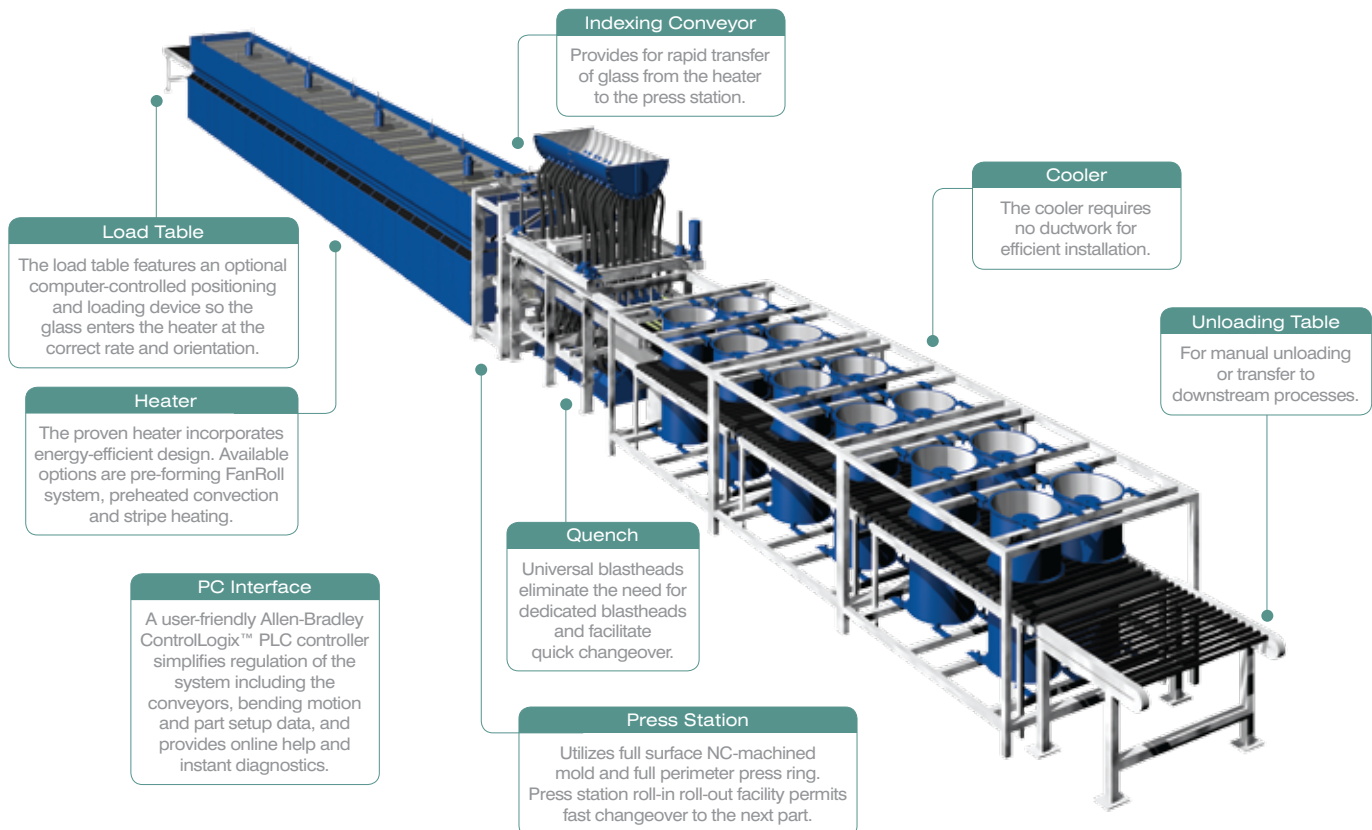
Glasstech's EPB-T system is an innovative, highly versatile glass bending system designed for production of automotive sidelites, backlites and sunroofs. The system satisfies the automotive OEM demand for complex part shapes with superior optical quality, while also meeting the glass processor's need for greater productivity, economical tooling and energy conservation.

Designed as an expandable system, the production capabilities of EPB-T can easily meet specific production needs. The system is available in two configurations, EPB-SS [single stream, 915mm (36") wide] and EPB-DS [dual stream 1828mm (72") wide] for maximum production flexibility. In the highest throughput configuration, EPB-SS and EPB-DS achieve a cycle time of 7 seconds. Both systems can produce two parts of suitable size per cycle, thereby providing an effective cycle time of 3.5 seconds. EPB-T can be supplied initially as a lower capacity system in each configuration. Thus, as production requirements grow, the system can be upgraded and expanded for greater throughput.

The Glasstech EPB-T system utilizes several new patented features to provide high capability and quality parts. For example, the final heating section can be equipped with a FanRoll system that is used to pre-form the glass before it arrives in the pressing station. This provides an increase in forming capability and reduction of time and heat required to form the glass.

Production Capabilities

- Bent and tempered sidelites, sunroofs and some backlites for automotive applications
- Bent and heat-strengthened parts suitable for lamination
- Cylindrical, compound and complex-shaped tempered or heat-strengthened parts
- Glasstech's EPB system meets the shape tolerance and optical quality requirements of Audi/Volkswagen, BMW, Honda, Toyota, Nissan and Mercedes
- Glass parts meet international fracture standards



Automotive EPB-T™ Technical Features

Product Size and Forming Capability

	Glass Thickness		Size				Depth of Bend				Minimum Radius of Curvature			
			Minimum Glass Size Length x Width		Maximum Glass Size Length x Width		Major Axis (Perpendicular to Flow)		Minor Axis (Parallel to Flow)		Major Axis (Perpendicular to Flow)		Minor Axis (Parallel to Flow)	
	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(ft)
EPB-SS Standard System	3 – 6	.118 – 1/4	356 x 406	14 x 16	1220 x 864	48 x 34	84	3.3	31	1.22	1143	45	6000	20
EPB-SS With Small Part Option	3 – 6	.118 – 1/4	228 x 254	9 x 10	1220 x 864	48 x 34	84	3.3	31	1.22	1143	45	6000	20
EPB-SS With FanRoll System Option	3 – 6	.118 – 1/4	356 x 406	14 x 16	1220 x 864	48 x 34	100	4	31	1.22	890	35	6000	20
EPB-DS	3 – 6	.118 – 1/4	356 x 406	14 x 16	1220 x 864	48 x 34	84	3.3	31	1.22	1143	45	6000	20
EPB-DS/BL	3 – 5	.118 – 3/16	356 x 406	14 x 16	1000 x 1728	40 x 68	84	3.3	31	1.22	1000	40	4249	14

Production Capability – Based on a 1m Part

	Example System Configurations		Glass Thickness			
	Heater Length		3.0mm	3.5mm	4.0mm	5.0mm
	(m)	(ft)	(sec)	(sec)	(sec)	(sec)
EPB-SS Low Capacity	21.3	70	9.5	10.5	12	14
EPB-SS High Capacity	39.6	130	7	7.25	7.5	7.75
EPB-DS Low Capacity*	18.9	62	9.5	10.5	12	14
EPB-DS High Capacity*	31.5	104	7	7.5	7.75	8

*The EPB-DS can produce one or two parts in the above cycle times.

Floor Space Requirements

	Heater Length		A Total Length		B Total Width		C Total Height		Blower Room Dimensions L x W x H	
	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)
	EPB-SS Low Capacity	21.3	70	44	144.4	9	30	7	23	30 x 15 x 5
EPB-SS High Capacity	39.6	130	73.2	240	9	30	7	23	30 x 15 x 5	100 x 49.2 x 16.4
EPB-DS Low Capacity	18.9	62	44	144.4	11	36	7	23	60 x 30 x 5	197 x 100 x 16.4
EPB-DS High Capacity	31.5	104	72	236	11	36	7	23	60 x 30 x 5	197 x 100 x 16.4

Installed Electric Power

	Heating	Quenching**	Cooling	Drives	Total
	(kW)	(kW)	(kW)	(kW)	(kW)
EPB-SS Low Capacity	1400	1325	27	40	2792
EPB-SS High Capacity	2740	1325	54	60	4179
EPB-DS Low Capacity	1740	2650	36	80	4506
EPB-DS High Capacity	3180	2650	72	120	6022

**Quench power based on ECE capability for 2.8mm thickness.

Load Table Positioner

The standard positioner is adjusted by computer and manually loaded. This ensures correct positioning for bending. An optional servo positioning system provides reduced part changeover times by allowing the operator to change positioner settings from the control panel.

Indexing Conveyor System

The final heating section is equipped with an indexing conveyor system which allows the glass to be rapidly transferred to the pressing station, thereby minimizing heat loss and improving the optical quality of the part.

Press Station

The press station utilizes precision, NC-machined tooling that is maintained at a constant temperature ensuring consistent and repeatable product quality. The tooling is designed with Quick Change features to reduce part changeover times. As an optional feature, the system can be equipped with a second press station that is located and prepared "offline."

Universal Quench Blastheads

The adjustable quench blastheads eliminate the need to change the quench heads for each new part shape, thus reducing tooling costs and overall part changeover time.

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