

ERH-S™

SOLAR ERH-S™

Electric Radiant Heater Flat Glass Tempering System

ERH-S with electric radiant heating is a continuous flat glass tempering system for fabricating glass specified for silicon wafer-based photovoltaic (PV) panels or thin film photovoltaic (TFPV) solar panels. The system is ideal for heat treating active (coated) glass, high light transmission (low-iron) smooth or textured cover panels, rigid back panels and clear glass for PV panels.

One of the world's leading systems for efficient processing of all types of flat glass products, ERH provides reliable, repeatable results with high productivity for low cost and highly accurate perimeter and surface shape for efficient product performance.

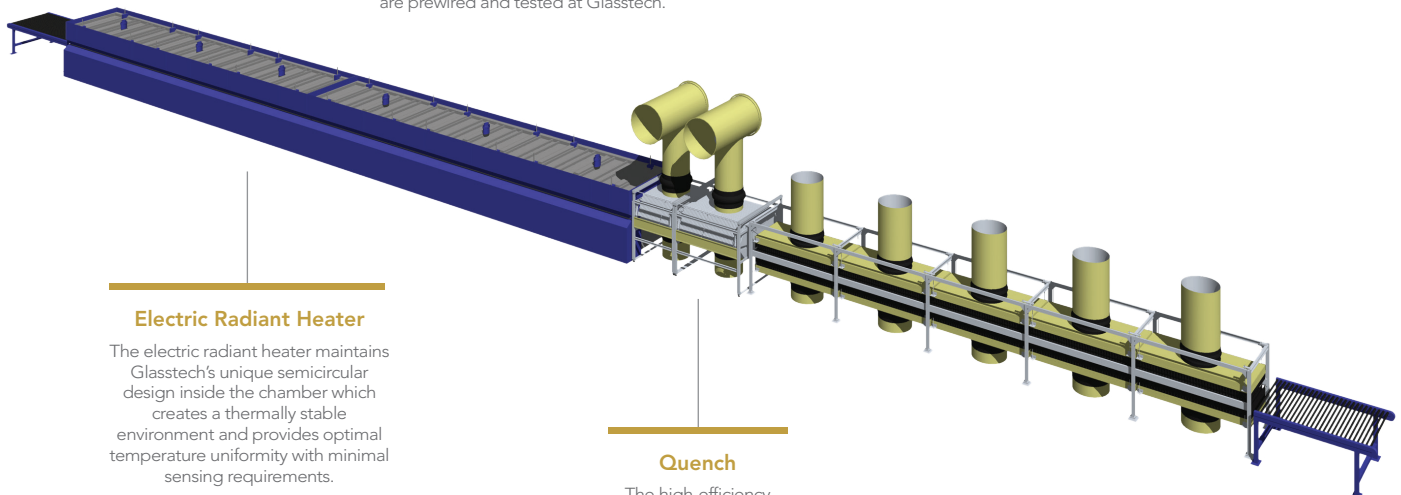
The Glasstech ERH-S System

- Processes glass parts from 3.0mm – 6.0mm (.118" – 1/4") thickness
- Can heat high performance coated glass in 40-60 seconds per millimeter of thickness, dependent on type of convection option and type of coating
- Is available in 1220mm (48") and 1520mm (60") widths
- Can process coated and low-iron glass without difficulty

C1 and C2 options incorporate convection technology to assist in processing coated/Low-E glass at greater efficiencies.

Heat Control Panels

Designed for easy on-site installation, heat control panels for the electric heating elements are prewired and tested at Glasstech.



Electric Radiant Heater

The electric radiant heater maintains Glasstech's unique semicircular design inside the chamber which creates a thermally stable environment and provides optimal temperature uniformity with minimal sensing requirements.

Quench

The high-efficiency quench uses computer-designed modules to provide quenching with minimal energy consumption.

PC Interface

An Allen-Bradley ControlLogix™ PLC controller using Windows® based software regulates furnace temperature and runs and synchronizes all conveyors.

SOLAR ERH-S™ TECHNICAL FEATURES

Production Capability*													
Glass Thickness		Standard 120' Length						Extended 144' Length					
		Production at Line Speed											
		Meters/Minute			Feet/Minute			Meters/Minute			Feet/Minute		
(mm)	(in)	Most Glass Types	Low-Iron	TCO Coated**	Most Glass Types	Low-Iron	TCO Coated**	Most Glass Types	Low-Iron	TCO Coated**	Most Glass Types	Low-Iron	TCO Coated**
3.0	.118	18.3	15.9	12.2	60.0	52.2	40.0	21.9	19.1	14.6	72.0	62.6	48.0
4.0	5/32	13.7	11.9	9.1	45.0	39.1	30.0	16.5	14.3	11.0	54.0	47.0	36.0
5.0	3/16	11.0	9.5	7.3	36.0	31.3	24.0	13.2	11.4	8.8	43.2	37.6	28.8
6.0	1/4	9.1	8.0	6.1	30.0	26.1	20.0	11.0	9.5	7.3	36.0	31.3	24.0

* Production rates for coated panels or different glass compositions will vary depending on part size, thickness and specific type of coating used, and the consistency of the coating.

** TCO coating refers to Low-E type pyrolytic tin oxide coatings.

Systems available in 1220mm (48") and 1520mm (60") widths

Minimum Glass Size: 380mm (15") in direction of travel

Standard System Configurations					
Load Width		Heater Length		Max. Load Length	
				Standard System	
(mm)	(in)	(m)	(ft)	(mm)	(in)
1220	48	36.6	120	2440	96
		43.9	144	2440	96
1520	60	36.6	120	2440	96
		43.9	144	2440	96

Installed Electric Power								
Heater Width		Heater Length		Heating	Quench†	Cooling	Drives	Standard Total
(mm)	(in)	(m)	(ft)	(kW)	(kW)	(kW)	(kW)	(kW)
1220	48	36.6	120	3100	270	300	22.5	3692.5
		43.9	144	3700	270	337.5	22.5	4330
1520	60	36.6	120	3875	340	300	22.5	4537.5
		43.9	144	4650	340	337.5	22.5	5350

† Quench power based on 4mm (5/32") minimum thickness to ANSI Z97 1-1984 and BS 6206 or compatible international standards.

‡ Convection compressor kW dependent upon glass coating type.

Other system widths available based on customer specifications.

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