Landscan LSP$_{HD}$

A series of linescanning systems designed specifically for use in the glass industry. High definition thermal imaging from a combination of fast scan speeds (up to 150Hz) and high resolution optics (1000 samples per scan line).

Cyclops Portable Thermometers

Land Cyclops 100B & 390B are dedicated high precision, portable infrared thermometers, designed for accurate measurement in the temperature range 450 to 3000 °C / 842 to 5432 °F.

Model FG

The Fibroptic Model FG has been designed specifically for use within the glass industry - particularly on the forehearth and working end. Its output can be linked directly to readout or control equipment.

Intelligent Scanning

Intelligent scanning solutions aim to solve problems by providing more than just a measurement. Land is able to provide a custom solution according to your requirements; this includes custom temperature ranges, application specific mountings, and custom communications protocols.

LAND

Non-Contact Temperature Measurement Solutions

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UKAS CALIBRATION 0034 — Applies in the UK

UKAS QUALITY MANAGEMENT 001 — Applies in the USA

LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025:2005

REGISTERED ISO 9001 MANAGEMENT SYSTEM

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Continuous product development may make it necessary to change these details without notice.

CGLASS(US)/0810

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Non-contact Temperature Measurement Solutions for the Container Glass Industry

Container Glass
Temperature Measurement Solutions

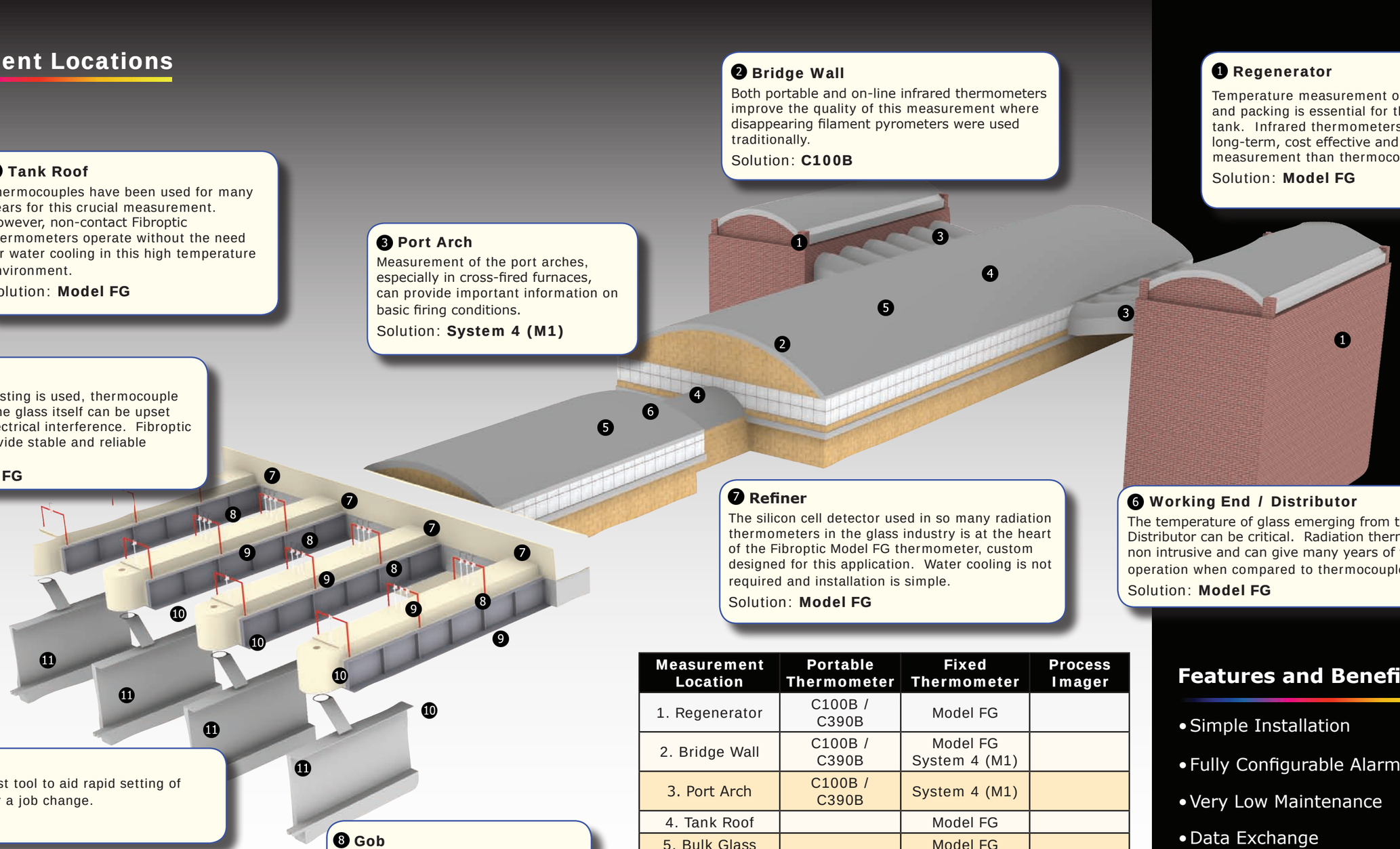
An AMETEK® Company

Measurement Locations

❹ Tank Roof
Thermocouples have been used for many years for this crucial measurement. However, non-contact Fibroptic thermometers operate without the need for water cooling in this high temperature environment.
Solution: **Model FG**

❸ Port Arch
Measurement of the port arches, especially in cross-fired furnaces, can provide important information on basic firing conditions.
Solution: **System 4 (M1)**

❺ Bulk Glass
Where electric boosting is used, thermocouple measurement of the glass itself can be upset dramatically by electrical interference. Fibroptic thermometers provide stable and reliable measurement.
Solution: **Model FG**



❷ Bridge Wall
Both portable and on-line infrared thermometers improve the quality of this measurement where disappearing filament pyrometers were used traditionally.
Solution: **C100B**

❶ Regenerator
Temperature measurement of the crown and packing is essential for this area of the tank. Infrared thermometers provide a long-term, cost effective and more reliable measurement than thermocouples.
Solution: **Model FG**

❼ Refiner
The silicon cell detector used in so many radiation thermometers in the glass industry is at the heart of the Fibroptic Model FG thermometer, custom designed for this application. Water cooling is not required and installation is simple.
Solution: **Model FG**

❻ Working End / Distributor
The temperature of glass emerging from the Refiner or Distributor can be critical. Radiation thermometers are non intrusive and can give many years of trouble-free operation when compared to thermocouples.
Solution: **Model FG**

❾ Mold
The GMT is the best tool to aid rapid setting of cooling levels after a job change.
Solution: **GMT**

❽ Gob
Accurate measurement of gob temperature maintains the relationship between glass viscosity and gob weight. The use of either portable or fixed infrared thermometers improves the reliability of this measurement.
Solution: **C100B**

❿ Lehr & ⓫ Lehr Exit
A low temperature thermometer at the loading point views the conveyor chains to ensure that they are heated sufficiently.
Land provide two high speed process imagers capable of thermally mapping the surface of the hot product - LSP-HD 5FL linescanning and FTI-E thermal imaging systems.
Solution: **FTI-E / LSPHD 5FL**

Measurement Location	Portable Thermometer	Fixed Thermometer	Process Imager
1. Regenerator	C100B / C390B	Model FG	
2. Bridge Wall	C100B / C390B	Model FG System 4 (M1)	
3. Port Arch	C100B / C390B	System 4 (M1)	
4. Tank Roof		Model FG	
5. Bulk Glass		Model FG	
6. Working End / Refiner	C100B / C390B	Model FG	
7. Forehearth		Model FG	
8. Gob	C100B	System 4 (M1)	
9. Mould	GMT		
10. Lehr			LSPHD5FL / FTI-E
11. Lehr Exit			LSPHD5FL / FTI-E

Individual thermometer datasheets are available on request

Features and Benefits

- Simple Installation
- Fully Configurable Alarms
- Very Low Maintenance
- Data Exchange
- Suitable for All Coatings
- Designed for Harsh Industrial Environments

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