

# **Spang** *Power Electronics*

## **Custom Engineered Power Systems for Glass Production**

Spang Power Electronics has provided custom engineered AC power control solutions for over 70 years, including 50/60 Hz SCR and IGBT-based high frequency outputs tailored for the Glass industry.

## Engineering Expertise for the Glass Industry

Spang's in-house application expertise, combined with integrated system manufacturing and testing capabilities, delivers reliable, innovative, and comprehensive solutions for the following applications:

- ▶ Float/Tin Bath Roof Heating
- ▶ Electric Melt Furnace
- ▶ Annealing/Tempering LEHR
- ▶ Melt Furnace Boosting
- ▶ Forming/Bending LEHR
- ▶ Forehearth



FLAT GLASS



LCD GLASS



CONTAINER GLASS



SPECIALTY GLASS

## Beyond SCR Controls: Spang's IGBT-Based High Frequency Power Supplies

- ▶ Improve thermal uniformity in melt
- ▶ Reduce electrode degradation
- ▶ High-frequency power for precise energy control
- ▶ Electric melt or boosting to reduce furnace emissions
- ▶ Reduce energy costs and carbon footprint

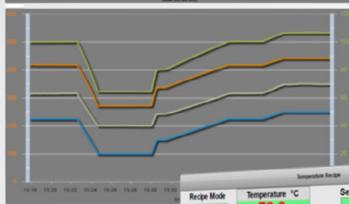
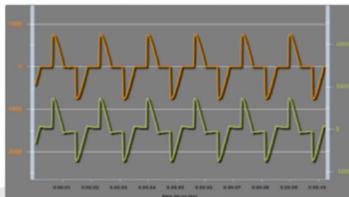


# Spang 1050 Series Digital SCR Power Controllers

- ▶ **Advanced Digital Control**  
The latest in digital signal processing (DSP) technology with integrated temperature control for stable, repeatable process performance.
- ▶ **Integrated Diagnostics & Communications**  
Built-in diagnostics, high-speed networking, and integrated I<sup>2</sup>T fuse in a touch-proof package.
- ▶ **Modular & Scalable System**  
Modular, maintainable design with expandable I/O interfaces to support sophisticated and evolving system applications.
- ▶ **Centralized, Intuitive User Interface**  
Single, full color touchscreen capable of managing multiple controllers from one interface.
- ▶ **Flexible Configuration & Data Management**  
Web-based, product-hosted configuration with Micro SD storage.

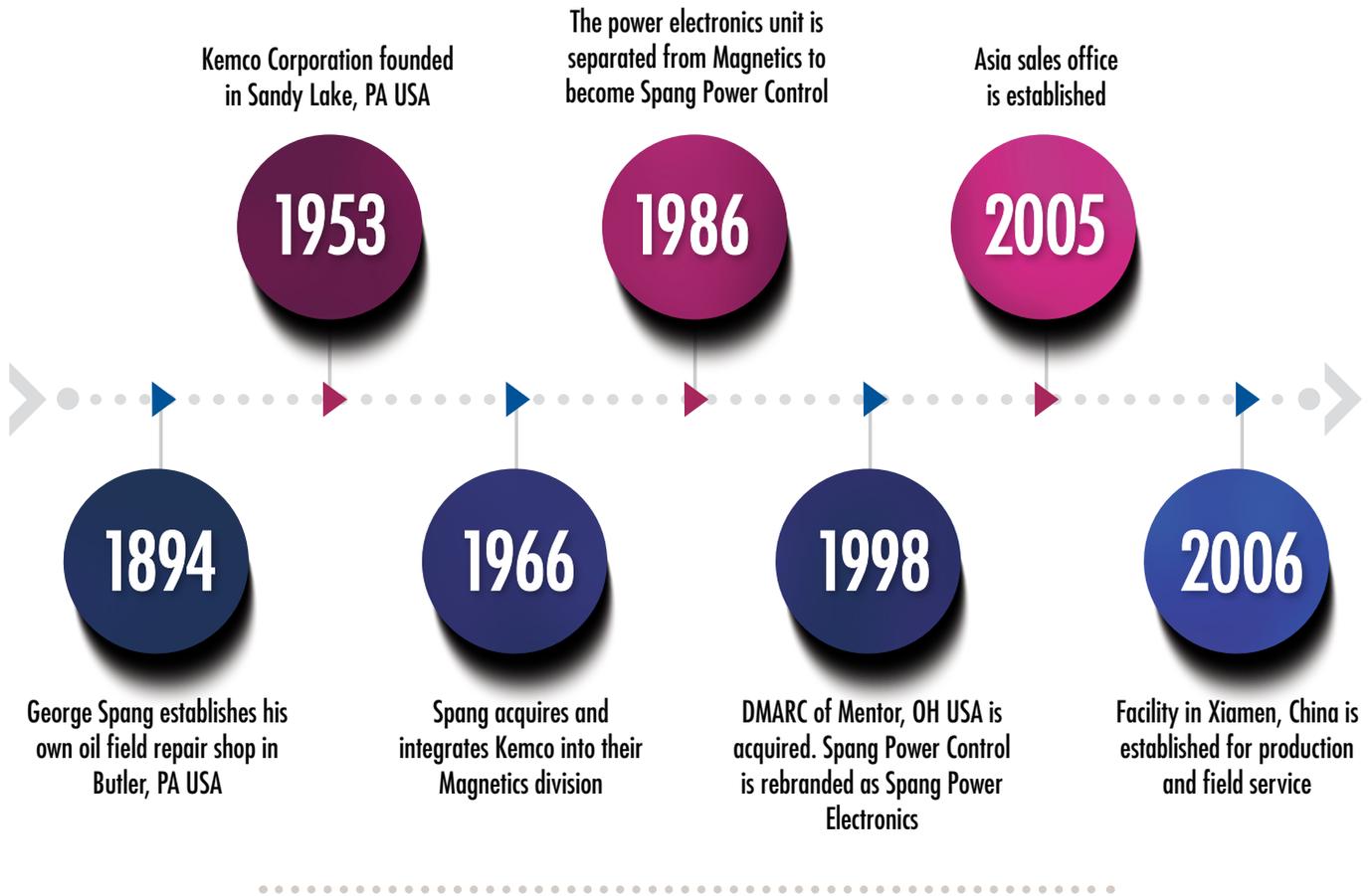
# Advanced Solutions Engineered for Glass Manufacturing

- ▶ DC elimination for direct firing into glass
- ▶ IGBT-based power supplies for high frequency power delivery
- ▶ Automatic power synchronization to reduce peak demand
- ▶ Phase Angle, Zero Crossover, or Hybrid SCR Firing options
- ▶ Auto-tap technology for melt/boost applications and silicon carbide heating elements
- ▶ Integrated cooling and protection within a compact, fixed bucket panel design
- ▶ Field-proven solutions delivering increased glass quality and reduced energy costs



## Our History

With extensive expertise, US-based engineering, and ISO 9001 certified manufacturing processes, we deliver products distinguished by superior performance, reliability, and product longevity.



## **Spang** Power Electronics

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