glasstech®
WHERE INNOVATION CONTINUES

Automotive Glass Systems

Automotive Control System/Upgrade/Retrofit

Original Automotive Control System

Since its inception in 1971, Glasstech has utilized Motorola control technology, initially the 6800 series and later the 6809 series. Many 6809 systems are still in use today, but the technology has been overtaken and components are difficult to replace or service. New and improved control systems are now available and Glasstech has partnered with Rockwell Automation to offer the state-of-the-art Allen-Bradley ControlLogix™ based solution.

The new control system is a complete solution featuring:

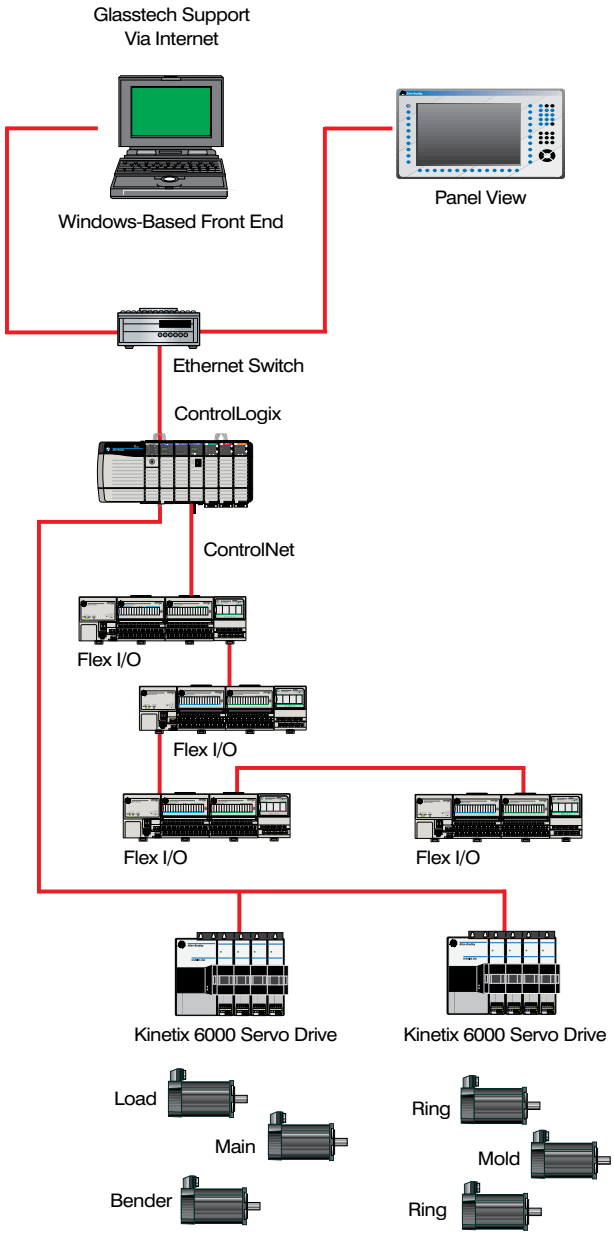
- ControlLogix™ 5561 processor
- Flex I/O on ControlNet
- Kinetix 6000 integrated motion
- Powerflex drives
- RSLogix5000 programming software
- Panelview™ Plus operator interface

Why Upgrade?

With the new control system, Glasstech's customers will have:

- Improved cycle time/increased production
- A single automation solution with widely accepted standard
- Long-term, stable solution
- Minimized spare parts inventory
- Local support and worldwide spare parts availability through Rockwell Automation distributors
- Minimized production downtime during retrofit with Glasstech streamlined retrofit process
- Standard PLC solution
  - Additional diagnostics for less downtime while troubleshooting
  - Supports Rockwell Automation integrated architecture/Factory Talk strategy
  - Simplified process modifications
  - Process and quality data available from additional packages like PlantMetrix/Historian

Automotive Retrofit System Diagram



Automated with Allen-Bradley Controls
A Global Brand of Rockwell Automation

Automotive Control System/Upgrade/Retrofit Technical Features

ControlLogix™ Upgrade

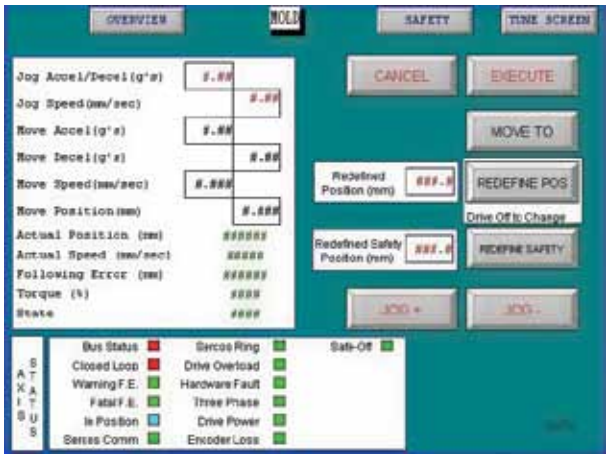
New Allen-Bradley System	Old 6809 System
Software	**Software**
• Modem and extra Ethernet port and software included as standard for remote diagnostics and program downloads	• Not available
• All programs downloadable from WBFE	• Programs stored on chips or need to be downloaded from external computer
• Closed loop servo control	• Typically open loop control
• Improved mold and shuttle sequence for faster cycles	• Not available
Hardware	**Hardware**
• Standard off-the-shelf Allen-Bradley hardware	• Custom hardware from Glasstech
• Fiber optic sercos communications to servo drive for noise immune communications to drives	• Only analog drives available
Operator Interface	**Operator Interface**
• Color Graphics HMI	• Text-based system
• Recipes stored on hard drive; contains more description information	• Recipes stored on 6809 boards; allows for only one field of information
• Historical information can be printed or saved on hard drive for later review	• Typically information is either logged to printer or lost
• Production monitor standard – includes number of loads in, loads out, quench cycles, time in cycle, time out of cycle, time in don't load, and part starved time	• Production monitor typically not available

Sample Panelview Screen

The Side Exit Bender individual axes maintenance screen is used to:

- Setup Jog control parameters and Jog command functions
- Display speed, position and torque feedback, sercos ring and drive status

The screen also provides access to the axis tuning and safety screens.



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