Glass Bending and Tempering
Tamglass Tempering System

Summary:
Process integration and a change from electromechanical to hydraulic actuators let safety-glass processing machinery supplier Tamglass Tempering System Incorporated to cut production times to speed up shipping schedules. For suppliers of curved glass panels for automotive, appliance, and architectural uses, the QSB (Quick Set Bend) Bending and Tempering System makes it easier to form glass with complex shapes.

Challenge:
A total of 102 hydraulic actuators had to be controlled with an accuracy of 0.003 inches to match the precise contour of the desired bend. Furthermore, failsafe operation had to be maintained even if the sensors measuring the position should lose power.

Solution:
The RMC100 series motion controllers were selected because they provided the direct interface with both position transducers and hydraulic valves, while supporting failsafe operation. Each controller can manage up to eight axes simultaneously, and all are programmed from Delta’s graphical software package.

Benefits:
Changing to the RMC100 with hydraulic actuators allowed Tamglass to eliminate 700 electromechanical parts from the glass bending system. The simplicity of this design reduced the re-design and the build time for a unit from ten to six months. In addition, the controllers support Profibus, which allowed them to communicate directly with the industrial PC providing the human-machine interface.

“...we were able to install and get it up and running faster than any other system we have done.”

“Jack Sandlin, Chief Engineer, Tamglass