Address	**SMAC Moving Coil Actuators** 5807 Van Allen Way Carlsbad 92008
Country	USA
State	California

PRODUCTS OR MACHINERY

SMAC Electric Actuators make glass processing easier.

SMAC electric actuators incorporate programmable speeds, positions, and, especially importantly for glass, programmable forces including very low forces on the order of 0.1N or less. SMAC electric actuators also incorporate a patented "Soft-Land" capability, which is very useful when applied to brittle materials. The force programmability works over the complete stroke, so the same force can be applied through the stroke. Soft-Land incorporates a rapid approach to the working surface followed by a gentle pre-programmed force for final contact.

Measuring Thickness of Thin Flexible Glass
Problem: Accuracy of the current air cylinder, LVDT and force control system.

Solution: The customer used the Soft-Land feature of the SMAC LAL20 in conjunction with a load cell mounted on the rod of the SMAC actuator. The LAL20 is controlled by a dual-axis LAC25.

Inspection of the Curvature of Automotive and Aircraft Window Glass
Problem: Accuracy of the current air cylinder, LVDT and force control system, short life of LVDT, time consuming position calibration.

Solution: The two original pneumatic cylinders for centering the windscreen were replaced by two LAL95-015 units. Two of the six pneumatic cylinders for position measurement were not needed anymore. The LAL95 provides both positioning and measurement functions. All other sensors, mechanical and electronic parts were unchanged. 100% QC/QA in-line inspection now possible during production.

Glass Grinding
Problem: The grinding process produces a 125µm finish with less than a 50µm variation. Damage to glass at the beginning and end of the grind cycle is caused by inadequate force control of the air cylinder driving the grind wheel. The force required is from two to four Newtons, with a 5mm stroke.

Solution: Customer was able to land softly on the glass panel and provide a constant force using the "force mode" of the LAL55 at both the beginning and end of the stroke.

Company Profile of **SMAC Moving Coil Actuators**

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