



Case Study

Italian Machine Builder uses EAO System Capabilities for Glass Production Machinery

Company Profile

Customer:

Leader in production of hollow-glass I.S. machinery

Industry name:

Machinery

EAO Series:

Series 84 switches: halo illuminated pushbuttons, selector switches and emergency-stops
CAN-bus module

Application:

Operator interface for glass production I.S. machinery

Business Challenge

The glass-making industry is under pressure to reduce costs. Growing competition and the greater availability of substitutable products, particularly within the hollow-glass market, is leading companies to review their efficiency. The objective is to improve process yield and quality while lowering costs and environmental impacts.

Hollow-glass manufacturers run their equipment day and night to maximise productivity. Glass forming machines, like the I.S. *Individual Section* machinery shown here, can produce in excess of 600 containers per minute so equipment downtime can result in a significant loss of product. The target for defects is close to zero. Therefore, maximum quality is paramount at every step of production. Glassworks operate in a challenging

environment. Like all highly concentrated industries, there are local environmental impacts. Noise is created by the machinery. Water is used to cool the furnace, compressor and unused molten glass, and emulsified oil cools and lubricate the gob-cutting blades. Several tonnes of dusty, raw materials might be delivered each day, all of which must enter by truck and leave as finished product. Only a small amount has to escape for there to be a dust problem.

Given these conditions, the quality of processes and equipment must be rigorously high to achieve the industry targets. Process improvements can be gained from a variety of enhancements to the glass making machines and the production systems. Of critical importance is the way operators interact with the machinery and the ease with which they control it.

EAO – Your Expert Partner for Human Machine Interfaces



The selection of components into ergonomic HMI systems like these are critical to the success of equipment designed for human operation



Halo illuminated Series 84 buttons are wired to the PCB and connected to a CAN-open module

Solution

As an expert in the field of Human Machine Interfaces, EAO won the contract from a major Italian company to develop a new control panel for their existing I.S. machinery. The goal was to satisfy the customer's needs while ensuring the interaction between operator and machine is made safer, easier, more intuitive and productive. Full consideration of the project's technical requirements, the operating environment and the ergonomic and human factors were fundamental to the success, including:

- Environmental sealing to at least IP65.
- High levels of interface personalisation.
- Possibility to retrofit older machines.

Our solution had to integrate seamlessly within the customer's equipment. In this instance, an industrial computer provides the main operator interface for data programming. Manual controls and special cycles are controlled by EAO's interface which interacts with the computer through CAN-bus. EAO's proprietary CAN-open module and software was used in this instance.

Stainless steel was specified for the front plate and protective enclosure of the HMI

components and electronics. The selection of components into ergonomic HMI systems like these are critical to the success of equipment designed for human operation. Our solution features

- Halo illuminated Series 84 buttons.
- Coloured aluminium, raised actuators.
- High-definition, laser engraved symbols.
- Series 84 low-profile Emergency-stop with protective shroud.
- PCB with canOPEN module.
- Stainless steel, fully sealed housing.

Customer benefits

EAO's solution assures the end user and the technology work in complete harmony. For the user, the benefit is clearly defined functionality and comfort of use, a critical key to reducing the likelihood of errors in operation and the dangers associated with poorly designed controls.

EAO is a global manufacturer of high-quality HMI components and systems. Founded in 1947, EAO has a global reputation for being an expert partner in for HMI in transportation, machinery, process control, lifting and moving, and automotive industries.

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