

Automation Case Study

High speed flexographic printing

Customer profile

SICOSA is a Spanish company, based in Girona, with 30 years' experience in the manufacture and sale of flexographic printing machinery. Founded in 1990, SICOSA produces a wide range of flexographic printing machinery for an array of industry sectors.

The Challenge

Offering state-of-the-art efficiency and a maximum speed of 300 m/min, the company's 8-color central drum Xtrem flexographic geared printer needed a solution that delivered speed, power and accuracy to its 8 print stations. The company was also looking to introduce smart elements to the product, such as remote monitoring and commissioning, and a state-of-the-art HMI.



The Xtrem has automatic coil change and a printing width of 1,000 mm, with a drying system that operates via electric resistance and gas, an automatic ink cleaning system option, and machine control via a 15" touch screen. Each machine can be customized for individual clients, so SICOSA has high requirements from its automation systems. The company approached Inovance to find a solution.

The Solution

An array of Inovance products were combined to provide the best solution. These included MD520 high performance universal AC drives and MD500-ECAT communication cards. This combination delivers unified AC asynchronous and PM synchronous motor control with all the benefits of fast EtherCAT connectivity.

In addition to the MD520 AC drives, Smart automation was delivered, via an IIoT plugin for remote monitoring. The AC703 high performance intelligent controller is utilized for

multi-layer networking and provides support for EtherCAT remote I/O modules from the flexible Inovance GL10 series.

Inovance's IT7150 HMI was also selected due to its ability to support VNC remote access through mobile devices and its Ethernet connectivity.

The solution is supported by Inovance's proprietary software, including InoDriverShop_MD monitoring software, InoProShop and InoTouchPad, supporting the EtherCAT fieldbus, as well as the Inovance standard library in CodeSys for Control Tension.

The Benefits

Inovance's compact solution for SICOSA delivers enhanced reliability through conformal coated PCBs, complies with efficiency level IE2 (as defined in IEC 61800-9-2), and comes with Safe Torque Off (STO). The Inovance solution has improved accuracy, speed, and performance, while the ability to install the system fast and commission it remotely has reduced build times.

Industrial IoT capabilities and remote monitoring ensure the machine is at the cutting-edge of smart automation.



Key Benefits

- Smaller machine cabinets
- Optimized motor size without losing machine performance
- Easy commissioning
- HMI enables component replacement by non-specialist staff
- Real-time information enables on-the-fly optimization
- Open architecture for integration with third-party products
- Integrated safety on servo drives



Carlos Lloveras, CEO of SICOSA, says, "I have been pleasantly surprised at how easily SICOSA has programmed this new machine and with the high performance the Inovance products have demonstrated in testing. The products fit perfectly into our machines and Inovance's technical specialists have been great to work with."

David Bedford Gaus, Spanish Country Leader at Inovance Technology Europe, adds, "We worked closely with SICOSA's team to devise a solution for their flexographic printing machines. Inovance has improved the commissioning, efficiency and speed of the Xtrem through our IIoT-enabled smart automation products and MD520 high performance universal AC drives."