

FOR IMMEDIATE RELEASE**Horner Automation Improving Efficiency in The Heart of Italy's Textile Industry.****Summary**

Carding machines are a central mechanism of the textile industry. They are designed to organise raw textile fibres, such as wool and cotton, in a way that untangles and cleans them. The fibres are passed through carding machines in the same direction creating more uniformed materials for further processing.

Less than 100km west of Milan, Italy's fashion capital, is a city steeped in textile history. Biella is a small northern Italian city which can trace its role in wool and textile production back to the 11th century. Horner Automation was approached by one of Biella's prominent textile producers with a project to update its textile carding machines.

Goals of the Project

At the start of this project, the client was in the process of moving equipment to a new plant. That is where Horner came in.

The primary goal of the new plant was to achieve the same level of production by reducing the number of textile carding machine used in the process from three to just two. The new plant would also have a reduced height compared to the working plant from 2.5 meters to 1.5 meters.

The first challenge of the project was to keep in line with regulatory standards. These included energy efficiency and standards around how waste materials such as pineapple leaves were used to produce special fibres.

Each machine also had different requirements. Something the Horner team would have to ensure were matched correctly with our solutions.

The Horner Solution

Working closely with the client's team, we decided that the best controllers for this project were the eXL10 plus SmartRail and WebMI for every machine.

We chose WebMI for remote access of the plant, changing recipes and production control & variation of frequency and brushless drives and motion controllers. The primary reason EX10e controllers were used was for their wide-ranging functionality.

The carding machines in this project included a breaker and finisher. A breaker produces jute slivers by breaking up the fibres. The finisher on the other hand is fed with the slivers from the breaker to produce a stronger, better quality jute. These machines have at least nine frequency drives between them all in CANOpen network.

To avoid the risk of losing finesse in acceleration and deceleration ramps, which are created in the eXL10 and then sent to the drives over CANOpen communication, the IO are all on SmartRail in a

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separate CsCAN network. This also allows communication to the other Controllers in the Plant for data exchange and Ramp synch. Ethernet Channels are used for remote access and intranet connection.

Many features within the Horner controllers were extremely useful for this project, for example the two CAN and two Ethernet ports. These ports provide fantastic network capabilities and CANOpen configuration. One port is used for programming locally and the other can be used by the end customer or by WEBMI.

The CANOpen protocols allow a user to know more about the drive functionality. This gives the user more information and more parameters, resulting in more control for the user.

In terms of software and programming, this project was created using Advanced ladder. The project also used Horner's WebMI software. This facilitated the monitoring of progress using a PC, but it is also possible to do this with the touch screen controller.

Future Proofing

Another reason the eXL10 was used, was the flexibility it offers for future modifications. For example, eXL10 is easy to expand as it has two CANopen ports. Having these two ports gives easy networking to I/O's and other Horner controllers. The two Ethernet ports allow customers to have access to the machine on the Intranet which can be found on the Horner website.

Read more stories on our website: <https://hornerautomation.eu/applications/case-studies/>

About Horner Automation Europe

Based in Cork, Ireland, Horner Ireland Limited is the European Headquarters of the Horner Electric Group and was founded in 1997.

Our ethos is to design and manufacture innovative products that are extremely easy to use and provide significant value to our customers. We pride ourselves on being the industry leading provider of all-in-one controllers. We offer all-in-one control solutions for OEM's, integrators, and end-users.

Our range of Programmable Logic Controllers and Human Machine Interfaces are widely used across industry. Our speciality is designing products that exactly suit your needs. If our standard product range does not meet your requirements there is every possibility that we can produce a custom product that will.

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Press Pictures:



Figure 1 - Inside of the cabinet of the carding machine



Figure 2 - Horner eXL10 PLC/HMI in place on the machine's cabinet

Download link: https://hornerautomation.eu/?cmdm_direct_download_id=160931

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