

# 2M



AUTOMATION LTD

# Powder Filling Line Control System

## Project Brief

### Key 2M Services Supplied:

- PLC Programming
- Electrical Commissioning
- Production Efficiency Trials
- Frequency Speed Drives Configuration



“Making the World a Sweeter Place” is one of Merisant’s delicious tag lines. They manufacture and market some of the very well known low-calorie tabletop sweeteners such as Equal®, Canderele®, PureVia® and Sweet Simplicity®.

Merisant have built a new manufacturing facility in the Czech Republic which is operated by their newly formed subsidiary CzechPak

Manufacturing s.r.o. The CzechPak facility initially produces Canderele® branded products for the EAME region. The facility commenced production in August 2008 and has taken over some of the manufacturing from their partners in Germany.

2M, in partnership with GEA Albro of Ashford, Kent, was hired to fully commission the powder filling line that had recently been moved from Germany to the Czech Republic. Our scope was the powder filling process and bottle-handling for the whole line.

The full line consists of a Depalletizer, Jar Cleaner, Sleever, Date Printer, Filler, Capper, Packer and Palletizer.

Our main objective was to supply the powder via a conveyor to a rotary filling machine and fill bottles to the required customer specification.

We also had to ensure that the empty and filled bottles were smoothly transported through the line. This was done through accurate speed control and robust handshaking with all the equipment on the line.



## Design Philosophy

After an initial site survey, 2M realised that the first requirement of the project was to translate the control system language from German to English to help 2M

and CzechPak engineers fully understand the control philosophy.

Following this, proper documentation of the software

on the system from different parts of Europe including France, Germany and Italy.

At the end of just three weeks, we were producing saleable product.

was under-

taken. To get the line into full production required working with an array of engineers representing different machines

Working with GEA Albro and CzechPak, 2M went on to recommend improvements to the operation of the line, and after agreement by all parties the changes were successfully implemented. This included upgrading of the frequency drive system, the adding of a new Operator Panel for line configuration, and alarm messaging.

### Key Components Used:

- Siemens S7-300
- Danfoss Drives
- Ultra-sonic Level Sensors and Amplifiers

