



# Fully Automatic Candle Cooling System

## Application



### *Huge labour savings and a smooth workflow*

**The Problem to Solve:** To remove the 8 candles and transfer them to a cooling conveyor: One of the main design features was the method for removing the three sizes of candles from the end of the existing equipment. This was done by using a 2 axis lift and pull system which would fit over the existing machine. Also a rising dead plate was incorporated to enable us to slide product off of the machine. Removing the candles from the end of the storage equipment used a second 2 axis lift and pull system.

**The Main Challenges:** The challenges in the design was storing a large quantity of candles over a long period of time keeping the candle wax horizontal led to us using a large storage conveyor with bespoke transfers at each end. Software was designed to allow simultaneous loading and unloading to occur on the storage conveyor.

**Handling Three Sizes:** The design had to be capable of adapting to the three sizes, this was done by carefully designing the stroke length of the pull and push system to allow all three sizes to be catered for. Also due to two of the sizes being steel tins, and the third being glass jars, the system had to cope with the difference in weight and therefore friction on the belts.

**Health and safety considerations:** Safety guard frames were designed around the areas where pneumatics operated and the guard doors had safety switches which would dump the air when opened.

**The Conveyors Used:** Standard conveyors were used where possible and they were then modified to fit in sensors and dead plates (transfer plates) to allow product to be pulled and pushed onto and off of them.

**The Control System:** The new control system was designed to allow the operators to fill up the storage conveyor at the beginning of a batch then empty this conveyor once the candle wax had set and candles were ready for packing. The control system linked with the existing machine to pull candles off after every index.

### **MONK Conveyors Limited**

Unit 9, The Christy Estate, Ivy Road, Aldershot, Hampshire GU12 4TX  
Tel: +44(0)1252 369800 Fax: +44(0)1252 369801 Email: sales@monk-conveyors.co.uk  
Visit our website at: [www.monk-conveyors.com](http://www.monk-conveyors.com)