Case study 539

Bournville confectionery factory requires emergency drying

A popular confectionery producer faced difficulties relating to the humidity and dampness of one of their Midlands-based storage and distribution areas. At Andrews Dehumidification, we regularly work alongside food production companies to ensure conditions are as they should be, but our involvement in this project was slightly different. Rather than require assistance for controlling relative humidity inside the actual production line, our client needed help adjusting conditions inside the storage warehouses. The area in question had succumbed to dampness after many months of relative humidity being excessively high, leaving cardboard packaging outers wet.

Our client has a dedicated machine on site which is used to process, shape and print the cardboard but it was unable to function properly due to the condition of the box material. As a result, there was a delay with the parcelling which had a knock-on effect on delivery and ultimately sales and meant that an urgent solution was sought. Following a phone conversation with one of our experts, an engineer was sent to the location in order to analyse the problem and perform an analysis of the affected area. As the storage space in question was only meant for temporary use, the client was unaware of the problems that existed within the premises.

After examining the entire facility, our engineer noticed that pre-installed dehumidification equipment from another supplier was in place and had obviously proven ineffective. As these units were not performing as the client had hoped and were providing inadequate drying capacities, our engineer proposed an alternative solution comprising of specialist Andrews Dehumidification kit. Due to its ability to operate in low temperature environments – as in this case – it was decided that two KT2000 desiccant drying units would be most suitable for application.

These high-performance systems are designed for economical operation and can dry out areas of up to 3,300m³ in size. These specifications are therefore ideal for warehouse and storage environments where low temperatures and humidity are both key considerations for optimal manufacturing and production; particularly those involving the storage and distribution of food and packaging. As desiccant dehumidification units extract moisture from the air which then goes through an intricate process of absorption and heating, warm air is expelled from the machine as a means of balancing humidity and drying the environment.

Each system features a humidistat option to enable automated operation, allowing our customer to leave the equipment unattended overnight. During the installation, our engineers decided it was best to use ducting to draw warm air in from an external area to assist the internal heater of the units and allow them to operate more efficiently whilst simultaneously reducing costs. The client was so impressed with our service that they installed a permanent power supply and dedicated space for ductwork to simplify the installation process in the likely event that they require our equipment in the future.







Extraction rate (max) 450 litres / 24h Air flow (max) 2000 m3/h Power supply 415 V 3 ph N+E 50 Hz Run 28.5 A Noise level (max) 82.75 dBA @ 1 metre Weight (kg) 225 kg Keep dry area (typical) 5500m3 Dry out area (typical) 3300 m3 Plug type BS4343 5 pin 32 A Average power consumption 20 Kw/hr Duct length (max) 40 metre Generator size 26 kVA Dimensions (L x W x H) 1290 x 890 x 1050 mm Nominal extraction rate at 75% RH/20oC 300 litres/24h Duct size (regen) 150 mm Duct size (dry / wet air) 300 mm **Control** Humidistat option



