



The Flexible Screw Conveyor with a beveled edge screw handles difficult products.



Thomas Tunnock Ltd. chose Spiroflow equipment to improve efficiency in their factory.



The Flexible Screw Conveyor in use in the factory.

Customer Requirements

Thomas Tunnock Ltd is renowned for their famous Caramel Wafers, Snowballs, Caramel Logs and Tea Cakes.

A major part of the success of these products is Tunnock's own brand of chocolate made from a secret recipe using cocoa liquor, two famous brands of proprietary chocolate, sugar and lecithin.

1. To improve efficiency, the chocolate production section was relocated a step at a time.
2. This ensured no loss of output as they need 60 tons of their creamy milk chocolate plus a significant amount of dark chocolate to meet demand.
3. A hygienic and reliable conveyor was required to transfer the sugar and chocolate ingredients to a pre-mixer for delivery to a series of chocolate conches where they are mixed with the liquid components.
4. The chocolate mass is worked in the conches until it reaches that special Tunnock's flavor and smoothness.

Spiroflow Solution

It was Tunnock's own engineers who suggested a Spiroflow Flexible Screw Conveyor to load the dry ingredients into the pre-mixer as several are successfully used on other processes around their factory.

- Samples of sugar and their two proprietary brands of chocolate were sent to us for trials in our testing facility.
- One brand was supplied as a crumb and the other as a traditional slab.
- Although our standard screw coped admirably with the sugar and the chocolate crumb, the required rate could not be achieved with the slab chocolate - It tended to smear and build up on the screw.
- We supplied a screw with a beveled cross-section which was specifically developed for difficult products and has proven its worth on materials that have smearing or cohesive characteristics.
- It works by placing more surface area in contact with the product for greater propulsion while preventing build up on the active surface.
- It delivers three different ingredients from three separate feed points to the pre-blender.