



The Aero Mechanical Conveyor



Unloading bags of malt

### Customer Requirements

*Theakston's Brewery brew a range of quality beers, famous for their 'Old Peculier.' They are committed to upholding their traditional brewing methods in a brewery building which is 150 years old.*

However, to meet ever increasing demand, Theakston's recognized the need for operational improvements in areas, such as materials handling, that would have no effect on the quality of their beers.

1. Until early 2000, malt was delivered direct to the brew house door in 110lb/ 50kg bags.
2. Every week 280 bags were manually unloaded one at a time and transported in a wheel barrow to a storage area around a hoist.
3. The manual hoist, which took two men to operate, was used to transfer enough of the bags to a third floor in the roof space where they were stored ready to be opened and discharged into the grist mill – the start of the brewing process.
4. In 2001 the malt supplier changed all deliveries to 55lb/ 25kg bags meaning that 560 bags had to be manually hoisted to the roof space each week

The time it took to unload each bag, move it to the hoist area and to hoist it up ready for use was effectively taking a full man week. In addition, the unloading process tied the delivery truck up for an entire morning.

### Spiroflow Solution

We introduced an Aero Mechanical Conveyor, with 3" (76mm) diameter conveying tubes and 30 feet (9m) long.

- 55lb/ 25kg bags of malt are delivered on one ton pallets
- These are then unloaded by fork lift truck in less that half an hour and stored in a new warehouse area across the yard from the brew house.
- They are taken to what was the hoist area by electric pallet truck as required prior to each brewing.
- The Spiroflow Aero Mechanical Conveyor, with its integral bag dump station, has replaced the hoist.
- Now bags can be emptied at ground floor level at a rate commensurate with the performance of the grist mill.
- A high level alarm in the buffer hopper above the mill warns the operator if he is emptying bags more quickly than the mill can accommodate.

*"We prefer to use bags as it is easy to control the weight of ingredients for each brew. One of the many things we like about the Spiroflow Aero Mechanical Conveyor is that what's put in at the bottom, comes out at the top. There is no loss in the conveyor – essential to ensure each brew has the correct amount of each ingredient." - Head Brewer, Bill Wilson*

The malt required for each of the nine weekly brews is now taken to the top floor and charged in to the grist mill buffer hopper in about an hour. Bill Wilson reports that the only maintenance on the Aero Mechanical Conveyor has been an annual check on the rope tension.