

LIFFEY MILLS ADOPTS ROBOT TECHNOLOGY

Liffey Mills, one of Ireland's largest ruminant animal feed manufacturers, has recently doubled production and installed a turnkey palletising and pallet wrapping system at their mill in Roscrea, Tipperary.

Liffey Mills had a unique problem at the end of their new manufacturing process for cattle rations and turned to Webster Griffin for a tailor-made solution.

The 'state of the art' installation is for palletising 25kg bags of their "Milk Master" and "Beef Nuts" at speeds of 1200 bags/hour.

The system includes bag in-feed conveyors with flattener to squeeze the bags flat and prepare them for palletising, Okura A1600 palletising robot, empty pallet magazine, extensive pallet handling conveyors, high speed pallet stretch wrapper and integrated control.

Liffey Mills were confronted by some particular problems which were best solved by a robot palletiser

- There was limited space available so a conventional palletiser was simply too large.
- Liffey Mills need to palletise at speeds of up to 1200 bags/hour therefore, a simple low cost 'pick 'n' place' palletiser could not be considered – for example when operating at 1200 bags/hour the robot is picking up, palletising and returning to the pick-up position in 3 seconds, changeover of the loaded pallet with the next empty pallet must be completed in under 5 seconds.
- Liffey needed to palletise onto a large 4' x 5' (1200 x 1500) agricultural pallet, therefore an articulated robot with extensive reach was essential.

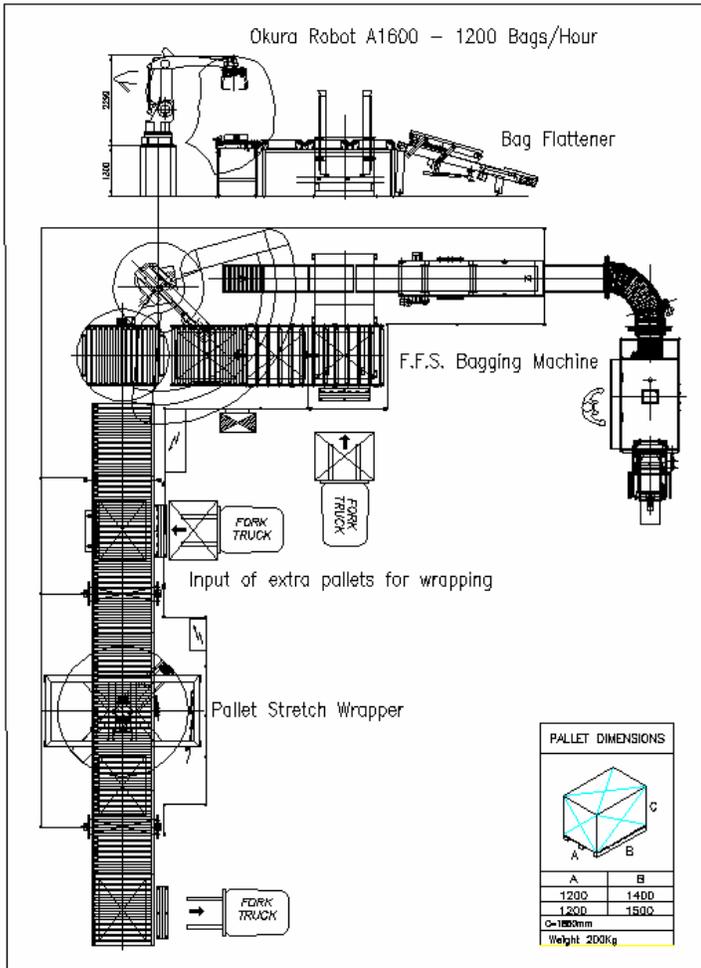
The Okura robot was designed and developed for palletising, hence it has distinct advantages above other industrial robots which can be adapted to stack bags onto pallets.

The Okura control software is self-optimising – ensuring speed and accuracy are maintained.



Pictures show various views of the Webster Griffin system - Okura robot palletiser (this page) and (overleaf) the automatic pallet wrapper during factory test





It is able to handle different bag or pallet sizes – new palletising programmes can be prepared, evaluated and downloaded to the robot from a lap top PC. It provides 'precision palletising' resulting in neat, square palletised loads, it has fewer moving parts and is less expensive to maintain than a conventional palletiser.

Flexibility– a robot is not dedicated to palletising one type of unit load; in the future Liffey Mills can use their Okura to palletise pails, bins, boxes or even blocks.

So that bagged product can be packed and despatched immediately to the farm or merchant, the robot was combined with an automatic pallet wrapping line.

To ensure stability during transit loaded pallets are stretch wrapped by the Unitech 300 which can also receive random pallets from other packing lines as well as the robot palletiser. On arrival the pallet height is checked and an appropriate wrapping programme is selected.

A Double first for Webster Griffin

This is Liffey Mill's first robot and the first Okura palletising bags in Ireland. Before making their selection Liffey Mills carried out a technical evaluation of European robot integrators and palletiser manufacturers choosing Webster Griffin after visiting several reference sites with them.

The attraction of robot palletising can be summed up in a few words by Mark Wilson, MD, of Webster Griffin.

"Our new Okura A1600 robot is a low cost alternative to conventional palletisers that provides the flexibility and durability to cope with anything an industrial environment can throw at it. With the application of Webster Griffin expertise, an Okura robot is an attractive proposition for most animal feed and pet food producers".