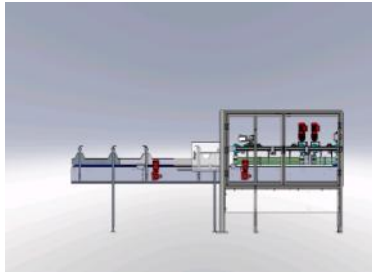


# Six Lane High Speed Box Diverter



**Client:**  
**Arnotts Biscuits**

**Location:**  
**Huntingwood  
NSW Australia**

## **The Project**

The Arnotts production facility at Huntingwood in western Sydney required a new, fourth production line including a new box diverter. The existing facility utilised three production lines, each with an existing box diverter. However Arnotts required the fourth production line to include a new diverter that would form a pattern of six rows of boxes to feed into a single case packer. While this sounds straight-forward, Arnotts required the fourth line to operate at a significantly higher rate than the other lines (240 boxes per minute instead of 140 boxes per minute) and Australis had to design a new machine capable of achieving this throughput.

By engaging Australis, Arnotts benefitted from the following outcomes:

- Single supplier to design, manufacture and install a 5.7 metre, powered modular belt conveyor to handle biscuit boxes operating at the high speed of 70 metre per minute.
- The design, manufacture and installation of a high speed diverting system actuated by a servomotor and ball screw for higher accuracy, and capable of forming 4, 5 or 6 rows of product. Instead of being mounted on the main frame, four motors were embedded on the moving arm to drive the boxes to reduce power transmission parts such as universal joints which cause downtime and require costly maintenance stoppages.
- Stainless steel construction for food environment. All cables enclosed in the main frame for easier cleaning and better visual amenity.

**Multi lane diverter**

**Multiple box sizes**

**240 boxes/ min.**

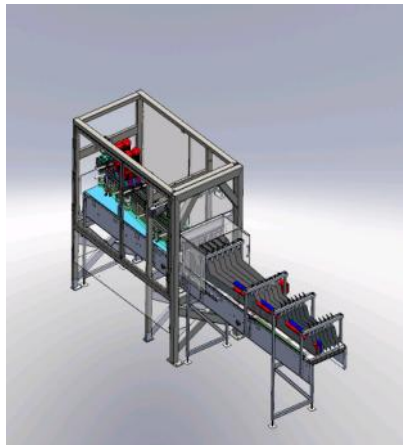
**Modular belt  
conveyor**

**Food grade**

**Stainless steel**

**Custom design**

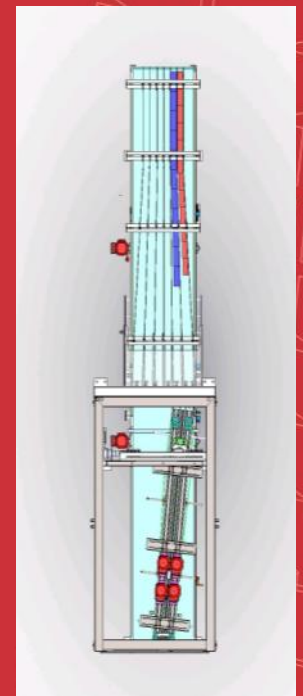
## **Modular Belt Conveyor**



## **High Speed Diverter**



## **Food Grade Construction**



## **The Result**

Australis provided the following outcomes:

- a customised solution that operates at high speed, is made of heavy duty structure and uses high speed/precision components.
- design, manufacture and installation of a high speed box diverter that can reach a rate of 240 boxes per minute, and handle a wide range of box sizes.
- low maintenance and higher reliability.

## **Innovation**

A key element of the Australis Engineering solution has been the design, testing, manufacture and installation of a high speed machine that uses high quality components, that is easy to use and maintain, and that achieves a speed 70% higher than the competitors' equipment but operates within the same footprint.

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