

## Case Study – IPax Automated Multipack System

Client: N/A  
Industry: Snacks  
Equipment installed: IPax

### Automated Multipacking Line For Snacks

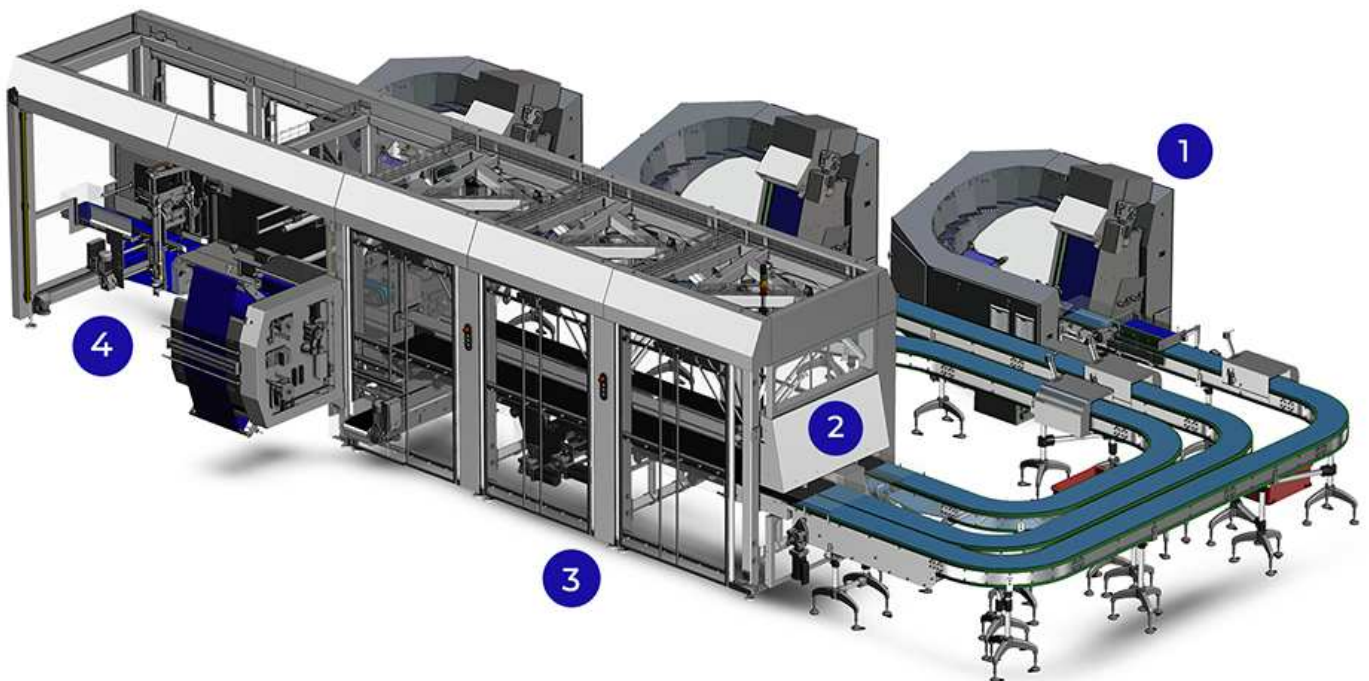
AMP Automation have a long history of supplying multipack equipment, from single flavour to variety packs. Initially supplying flow wrapping machines we now specialise in the design and build of complete automated turn-key projects.

Innovative design and smart solution mean the line offers several advantages including a small footprint, flexible pack formations, reduced wrapping material requirements and award winning safety features.

The customer needed a line to multipack their snacks into 3 piles of 2, with each pile being a different flavour. Receiving the primary packs from the VFFS machine, the whole line is to be automated.

Several of our patented and patent pending designs have revolutionised how multipacking can be achieved allowing the option of both on-edge and on-flat formats on the same equipment.

The line consists of several SnackFeeders followed by conveyors to transport the individual packs to the delta robot cells which in turn feed the IPax integrated flow wrapper to form the multipacks.



**1** Primary packs from vertical bagging machines are fed into the AMP Automation SnackFeeder sorting area. The bucket elevator collects packs and transfers them onto the phasing rollers, which are positioned like stairs from the top of the feeder down to the beginning of the belt conveyor.

The phasing rollers rotate sending the individual packs down to the next roller step. Each set of phasing rollers is servo driven and as well as helping to separate the packs they also control the gaps between each pack to deliver consistently spaced bags onto the conveyor and through to the tamping unit.

**2** The conveyors carrying the primary packs are scanned by a vision system before they enter the delta robot cells. Vision systems have multiple purposes and collect a wide range of data. In this instance they scan the location of the pack on the belt to allow the delta robot to pick. It also detects the orientation of the pack, so the robot picker can turn the relevant amount of degrees necessary to place the primary pack in the correct position on the wrapping machine feed conveyor at up to 120 picks per minute.

**3** The packs can be stacked in different formats from four primary packs in a multipack to 40+ packs. The line shown in this brochure is for up to three flavours packed in two formats; piles of 2 x 3 and 3 x 3. The user friendly Windows HMI screen allows quick and easy format changes and also contains the complete illustrated operating and maintenance manual.

**4** The piles of packs are then conveyed into the flow wrap to form the multipack. For sealing the ends of the packs standard rotary jaws can be used or to reduce wrapping material by forming a tighter pack box motion jaws are an option. A common controls system for the complete line means there are no issues with communication and all parts work seamlessly together. The line can also be set up to connect to existing machinery up and down stream.

