

# CLEVER CONVEYING

The main types of conveyor belts used in the food processing industry are traditional flat belts, modular belts or the new positive-drive belt generation.

Flat belts – either plied or homogenous and made of PVC or PU materials or other thermoplastic elastomers – were introduced to prevent belt slippage and elongations and have several layers composed of PU or PVC and fabric to reinforce them. But while they solve one problem, they also create other more critical issues,' explains Volta Belting's Udi Kedem VP, sales & marketing.

'Flat plied belts absorb fluids and moisture causing the layers to easily separate and make the belt unusable,' he says.

'A lot of effort is invested when sanitising the belts since they cannot be taken off the conveyor, making cleaning of the belts a near impossible task. Furthermore, the fabric can fray and may find its way into the conveyed products or cause the belt to get stuck in the conveyor bed and split at the edges.'

This is the reason why plied belts do not comply with international sanitation standards.

On top of this, explains Kedem, a complicated and time-consuming finger splicing procedure is required when repairing and installing the belts and fabrications break easily because they are glued onto a very thin belt base.

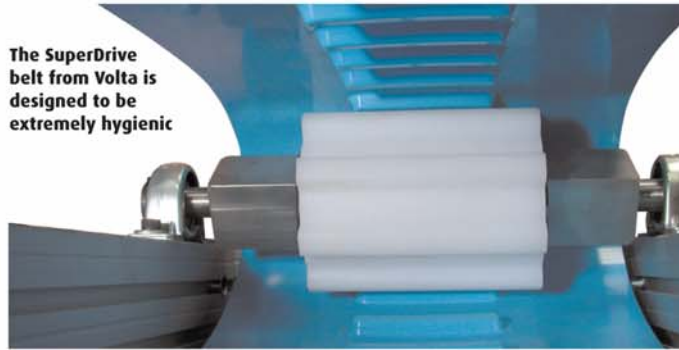
## Smooth sides, less cleaning

IN CONTRAST, traditional flat homogenous belts are extruded in one piece. This gives them the advantage of smooth sides and edges that are easily cleaned and have very low bacteria counts, since the material does not absorb liquids or moisture.

These belts are easily repaired, installed on-site and made endless by using a very simple welding procedure, says Kedem.

'Flat homogenous belts have a relatively long life service since they are

The SuperDrive belt from Volta is designed to be extremely hygienic



Even the most basic of seafood factories tends to need conveyor belts, but which is best suited to this highly sensitive product?

Rachel Mutter caught up with Volta Belting's Udi Kedem to find out about the latest generation of positive-drive flat belts

extremely resistant to chemicals, water, oils and abrasion. The belts are a strong base for welding fabrications such as cleats and sidewalls, which are made of the same sturdy material that will not wear or break,' he says.

## Slippage eliminated with modular belts

MODULAR belts have a different design from the traditional flat belts in that they are composed of rigid modular plastic components and are linked with pins. The main advantages of modular belts are that there is no belt slippage or elongation and no off-tracking on the conveyor bed.

'Regardless of these advantages, the food industry has had huge issues concerning sanitation, downtime and food safety when using modular belts. They require a lengthy cleaning procedure because food residue tends to adhere to the components' inner edges.

'The belts go through a long soaking process yet not all food residue is dissolved or cleaned away. Having food residue causes bacteria to harbour and grow, which may then contaminate the conveyed food products.

'Modular components tend to break into

pieces and may find their way into food products, pieces that cannot be seen by metal detectors,' he concludes.

## The next generation

POSITIVE-DRIVE flat belts are the next generation in belting technology. 'They are designed to solve the most crucial conveying problems in the food industry,' says Kedem.

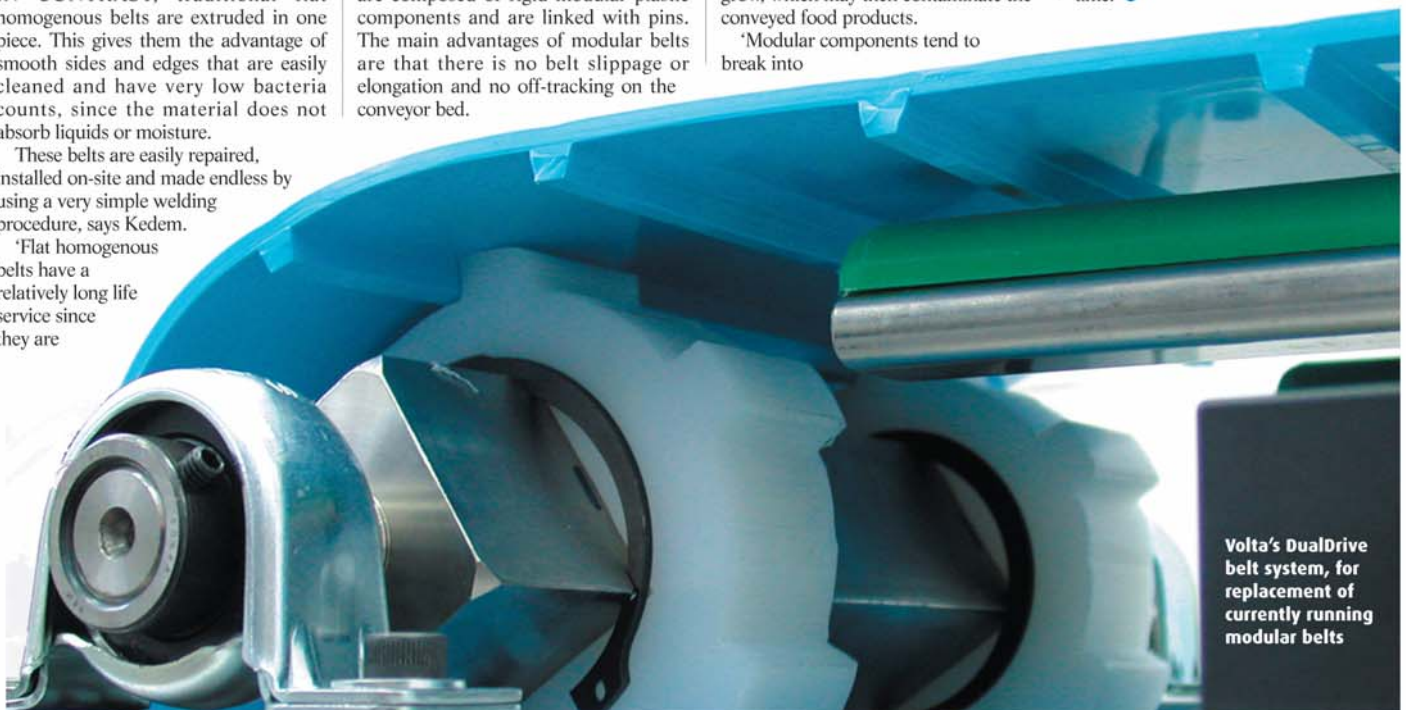
These belts have integrated teeth on the drive-side and a smooth homogenous surface on the conveying side. 'The smooth surfaces are easily and effectively cleaned, no soaking is required and its non-absorbent material has a significantly low bacteria count.

'There are no fabric layers or modular component to contend with, therefore, the belt will not fray nor break into pieces. In this way, the conveyed food products have a higher value and improved shelflife.

'The integrated teeth drive the belt and, thus, belt slippage and off-tracking are no longer a problem,' says Kedem.

Today, the food industry trends towards high hygiene levels, low costs and top quality products. The industry is also taking serious methods to keep up with green technology tendencies. The new generation belts have very low costs in water consumption, maintenance and sanitation while keeping the environment safe by lessening the need for water treatment and dumping of contaminated water.

Says Kedem: 'The positive-drive belts increase the factories' productivity by converting cleaning time into production time.' ●



Volta's DualDrive belt system, for replacement of currently running modular belts