

What bar manufacturers want: no cross-contamination, less product waste and more productivity

Bar production is changing in response to three major developments. The most significant one is the eating-on-the-go trend. As the pace of life accelerates, people try to juggle an increasing number of commitments related to work, family, and leisure time. Consequently, snacks – including bars – have an increasingly important role to play in this kind of lifestyle. Consumers keep them on hand throughout the day, and they sometimes replace actual meals. Therefore, consumers no longer simply desire traditional chocolate bars, but seek out healthy alternatives such as grain-based or sugar-free bars. The second development is the growing shift in consumption towards healthy bars and/or bars that are “free from” a certain ingredient. This has of course always been important for customers with nut or gluten allergies, but today’s wide range of “free from” products signals that this trend has gone mainstream. Increasingly, bars contain ‘healthy grains’ like chia seeds or are labelled gluten-free, which makes them easier to digest and offers a healthy alternative to wheat and rye. Bars are healthier and more popular than ever, with supermarket shelves boasting a large selection. But rising popularity and increased variety are not the only observable trends: Bars are now being produced in different sizes, too. Combined, these three developments create new challenges for bar production.

Changing market demands require increased flexibility and hygienic design

Manufacturers can respond to these market trends by upgrading their equipment, for example by choosing a complete bar production so-



Bosch Packaging Technology WRF600Flex

lution that coordinates each and every production process. In any event, bar production must prevent cross-contamination when product changeovers occur. This can be done by ensuring the production lines

are designed with hygiene in mind. Integrated quick-release systems facilitate easy access for operators, without requiring tools for maintenance and cleaning. Cleaning dirty machine parts must be possible at

The WRF 600 Flex roller

The WRF 600 Flex roller former from Bosch Packaging Technology allows customers to combine the manufacture of multi-layered bars – such as nougat and caramel bars – into a single production process. The patented, flexibly adjustable working width is designed to minimise or completely avoid any cutting off or 'trimming' of edges at the side when cutting slabs of material for muesli, chocolate, protein, or fruit bars. As a result, less product is wasted, helping lower production costs and contribute to faster return on investment. The working width ranges between 400 and 1500 mm. As a standard feature, the slab thickness can be continuously adjusted between 5 and 30 mm. The hygienic design of the WRF 600 Flex also enables manufacturers to comply with hygiene requirements and ensures the system can be accessed from all sides for simple cleaning without the need for tools. The WRF 600 Flex may be incorporated into the Contiline from Bosch, a complete system for the production of high-quality bars.

any time during production. Special surface coatings or easy-to-manipulate scrapers can also stop material build-up on machine surfaces. A well-thought-out design can play a major part in ensuring compliance with the food industry's strict hygiene regulations.

To ensure production processes are efficient, every component of bar production, from dosage through to cooling, needs to be flexible and enable fast product changeovers. Most machine parts can be adjusted or removed without tools, for example movable fanning systems that fan out the bars and guarantee quick format changes. Coupled with an intuitive user interface, productivity and product quality can be boosted significantly.

Product recalls on the rise

The year 2015 recorded an increase in foodstuff recalls by 78% compared to 2014 according to the UK Food Standards Agency (FSA). Out of 159 recalls, most cases that year related to failures to list ingredients, with 63 cases involving nutritional issues and 96 involving allergies. Manufacturers had to recall products that contain allergens such as nuts, milk, and gluten, as well as products that contained bacteria, such as salmonella, or even traces of metal. Given the significant increase in these figures, the FSA called for manufacturers and

suppliers to take immediate action. For this reason, hygienic design – from a manufacturing perspective – is crucial in terms of product safety for consumers and brand safety for manufacturers considering how costly recalls can be.

Single source solutions minimise waste and maximise productivity

Production lines should be geared towards long production cycles and uniform quality. Manufacturers no longer just produce traditional chocolate bars, but also make muesli, granola, and cereal bars; bars containing fruit, coconut, or a combination of nougat and caramel; brittle bars; and bars with multiple layers. Quality consistency is a must given the wide selection of products. Unsurprisingly, mixing ratios need to be standardised. Gentle handling is also important in order to prevent product damage, particularly when working with flaky ingredients. Furthermore, the equipment needs to ensure consistent mixing quality, even when different volumes are being processed.

Manufacturers can boost productivity and efficiency by minimising waste, most of which occurs during the shaping phase. With the help of new technologies, edge cutting – also known as trimming – can even be eliminated completely. Once the material has been shaped, trimmed and pre-cooled, the slab is then cut to

size. Again, with a view to preventing waste, manufacturers can opt for ultrasonic sealing technology, which exerts very little pressure on the bars and thereby ensures quality.

Using different machines during production can be problematic in terms of interfaces. Compatibility issues between individual components not only lead to delays when trying to integrate processes, but also have an adverse effect on the productivity of a line. From a manufacturer's perspective, every second counts. Coordinating the individual processes from mixing, shaping, pre-cooling, cross-wise cutting, and fanning out through to lengthwise cutting, covering, and final cooling saves time and money in the long run. In order to keep up with changing market demands and to remain competitive, systems therefore should be designed with high output levels in mind. A fully integrated line – if possible even going beyond production to incorporate primary and secondary packaging – ensures maximum effectiveness for the system as a whole.



Sales Director For Bar Solutions

About the author:

Peter Dreßler is Head of Sales for bar production at Bosch Packaging Technology.