

confectionery

Confectioners set their sights on a 'Healthy' image

Think high-tech packaging and processing machinery manufacture and among the first user sectors that will spring to mind is confectionery. One of the leading industries in the use of drive, control and automation technology and the second largest market for robot systems after the automotive industry, confectionery adds up to a horn of plenty for the machinery sector.

Fully automated and enormously productive, a new generation of packaging and processing machines is hitting the world confectionery stage as witnessed by the numerous introductions at interpack last month (see pages 15 to 26).

This, despite the growing trend for healthy products slowing sales in the confectionery sector; in the UK for example the market dropped in value from £4.41bn (€5.65bn) in 2006 to £4.31bn (€5.52bn) in 2007.

And with out doubt confectionery manufacturers are looking to processing and packaging companies for new technology, in order to create NPD aimed at creating "healthier" options.

According to the Confectionery Market Report Plus 2008, released by Key Note Publications, the drop is attributable to consumers opting to reduce their consumption of confectionery as well as to mounting competition from other markets offering sweet snacks, such as biscuits, cakes and fruits.

Despite market growth not being achieved in 2007, there have been some significant developments in the sector, such as changes to portion size and companies placing new focus on dark chocolate products (the only area to show market growth) and those free from artificial additives.

The report said investment in existing brands, combined with innovation to

target changes in the food market, would fend off a future downward spiral in the value of the confectionery market.

According to respondents to the exclusive industry opinion survey conducted by Business Insights for its latest report – Growth Opportunities in Confectionery – dark chocolate made from 70%-plus cocoa solids offers the highest growth potential for NPD over the next five years.

This is closely followed by chocolate made with 51-70% cocoa solids, which is also considered to be 'dark' chocolate. Single-origin chocolate (chocolate made from beans grown in one particular area of region) is also pinpointed as offering high NPD growth potential.



As part of the research for the report Business Insights conducted research among industry executives on the confectionery sector around the globe. Respondents were asked to rate innovation development on a scale of 1, which was least innovative to 6 which was NPD leader. The response average is an average of the ratings given along the scale. North America and Western Europe are regarded as world leaders in confectionery NPD by industry executives. Eastern Europe and Latin America have a lot to learn from the market leaders according to the industry survey: www.globalbusinessinsights.com

CONFECTIONERY FACTS

- Chocolate claims the largest share of European confectionery market value. By 2010, the total European chocolate market will reach a value of \$35.4bn out of a total market value of \$61.2bn.
- The US confectionery market will experience stronger average annual growth compared to Europe reaching \$33.0bn by 2010.
- Twelve of the top 15 flavors used in confectionery NPD are natural. Fruit provides an element of healthiness that makes products more acceptable to health-conscious consumers. Business Insights industry survey confirmed that 'natural' will be the most important health trend in confectionery over the next five years.
- Mid-afternoon offers the strongest growth potential for confectionery products over the next five years. Over a third of industry executives rated the afternoon as having the 'most growth potential'.
- Growth in sugar confectionery is weak. Although it is the second largest category in US confectionery behind chocolate, it lags far behind in terms of both value (\$8.5bn) and CAGR (1.5% to 2010). Business Insights Confectionery Report. Visit www.globalbusinessinsights.com



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Brand owners invest in style

Kraft Foods is spending US\$15m to expand the chocolate production capacity at its plant in Hale, Belgium. The company expects the new production line to expand the factory's capacity from 60,000 tonnes to 80,000 tonnes annually.

It represents its largest single investment in European chocolate production for 15 years and reflects growing interest in premium brands. Sales of high quality chocolate products grew in Europe by 14 per cent in 2007 with demand in Belgium increasing by more than 25 per cent.

Nestlé has also signalled its intention to enter the premium chocolate market, announcing the launch of a number of new high-end products, some still under development. It has recently opened an R&D facility dedicated entirely to dark and premium chocolate. Nestlé plans to roll out the premium chocolates in Europe, the USA and Asia, although no timescale for the launch has been announced.

The company is the second largest chocolate company in the world with a 13 per cent share, but premium chocolate makes up only 4 per cent.

In Western Europe and developed economies confectionery demand is still growing rapidly. Despite a turn away from sugar-based confections in some countries the global confectionery market is set to grow by 15 per cent between 2006-11 to a value of US\$116bn (54 per cent currently being chocolate sales) and reach a volume of 15.1 billion kilograms.

System suppliers show off the fruits of their technology

Confectionery companies are being forced to think healthy and with this in mind a number of companies introduced a series of developments at interpack 2008.

Bosch Group's Packaging Technology Division, for example, brought three new confectionery processing machines to interpack. These have been designed to reflect manufacturers' demands for greater customisation, energy conservation and simpler cleaning procedures.

The company is also said to be 'trailing' several new processing lines for healthy confectionery products as consumers, particularly in Western Europe, shy away from sugar-based candies. Latest research from Mintel shows that close to 40 per cent of shoppers now actively avoid these products in France and Germany with the UK not far behind at 34 per cent.

While many machines can handle both traditional and healthy option ingredients the recipes may change more dramatically in future as more vitamin additives, fruits and fruit juices are incorporated. So 'future proofing' seems likely.

Bosch's new, energy saving, dosing system for sugar-glucose solutions, the BDK 2000 A, can produce these with up to 90 per cent dry substance. It also addresses the current issue of energy consumption, plus it has the potential to deal with different formulations.

The BDK 2000 A's waterless boiling method dissolves sugar using the water content of glucose syrup. After mixing in the integrated TurboMixx the resulting paste has a dry-substance content of up to 90 per cent, 10 per cent more than a conventional system. This means that only a further 3-7 per cent water needs to be removed to achieve the optimum dry-substance content for hard or chewing candy.

Bosch claims that during production of 1,000kg of candy paste the unit will save up to 90 kilowatt hours. The dosing system is capable of producing 2,000kg/hour.

The basic system offers volumetric dosing while the gravimetric version uses flow control for precise and fail safe operations.

The TwinHead gentle touch, double twist wrapper from Bosch requires fewer interfaces with the product as two heads perform the entire wrapping process. A gripper integrated with the first head lifts the candy directly from the infeed disc to a second head where the twist occurs thus eliminating unnecessary transfer functions.



Bosch's Contiline fanning-out system

Handling 1,800 items/minute, the large disc infeed minimises centrifugal forces and allows gentler handling, which is further enhanced by the absence of brushes, distributor and deflector plates. As there is less chance of damage to the product this reduces contamination and residue in the machine, enabling simpler cleaning.

Bosch also introduced its latest Contiline dual roller former for shaping, coating, fanning-out and cutting confectionery bars. The fanning-out system positions fresh cut bars crosswise to prevent lateral cut surfaces sticking and ensuring optimum distance between bars prior to coating.

Gum wrapper

LoeschPack, represented in the UK by Cornwell Products, demonstrated a new generation of machines for wrapping chewing gum and chocolate bars as well as other confectionery products.

The gum line comprises five machines: a SUPERLOGIMP grooving and breaking unit cuts between 35 and 38 sticks from one slab. Paper sleeves are then applied to each stick on a GW03 machine at rates above 2,000/minute using a tab fold developed by the company.

Sticks are then layered and passed loose to the cartoner; an alternative version can form groups. The LM/2-K dual cartoning machine then packs the sticks into cardboard sleeves at 160 packs/minute. The individual sleeves are glued together to produce a sophisticated opening and presentation mechanism, says LoeschPack. Finally the individual packs are placed in open display folding cartons on the WKM-1 cartoning machine which produces 40 packs/minute.

The LTM/2-G is claimed to be the world's first dual lane fold wrapping machine for chocolate

confectionery

bars, with a sealed inner wrap. The parallel process lines allow up to 360 items/minute to be handled or 130/minute for multipacks when used in combination with the LTM-K-SA machine.

The LTM-DUO fold wrapping machine for chocolate bars has a special folding facility and is based on an open balcony design which features a completely separate drive system for improved hygiene and increased output compared with earlier models, achieving 180 bars/minute, says LoeschPack.

Flexible bagger

TNA's robag® 3b fx 180 vertical bagger, with rotary triple jaw has been designed to deliver up to 300 bags/minute when producing 180mm bags for confectionery applications.

Four servo motors provide more flexibility of control and operation, TNA claims. As well as fine tuning the product transfer system to enhance performance the bagger has specially shaped chutes to concentrate the product more effectively, ensure less 'string out' and increase speeds.

Developments of interest to confectionery manufacturers include also TNA's kanga jaw technology on the robag® 3b vffs packaging system. "The kanga jaw configuration emulates a box-motion," said group marketing manager Shayne De la Force. It is powered by a linear motor adding an up and down motion to the rotary jaws which allows jaw path control so the jaws approach each other on a horizontal line. Formats can include TNA's Quattro and block bottom bags.

TNA has also patented its trenza® technology for producing bags on hanging strips, often used in the sweet or candy industry. The system can be fully integrated with the robag® 3b twin 180 rotary double jaw bagger. A modified knife is provided for the vffs system to produce a string of bags instead of cutting them individually. When fed into the trenza®, the machine simultaneously attaches the strip and cuts the bag.



As easy as 1, 2, 3 ...

Cremer B.V. has solved a complex counting problem for major confectionery product contract packer Vetipak of the Netherlands. Normally counters are used in the sector to sort products into mixtures and assortments, where products vary in weight, are hard to separate or when small numbers need to be counted. In this application Vetipak were asked to make a mixture of a number of products, packing in small batches, in various pack styles and to make matters complicated, each pack style has to be made simultaneously. While each pack style carries the same assortment of products they each require different counts.

Cremer's answer was to set up the system so every counting machine in the line is dedicated to



a particular product, as normal, but in such a way that every bucket on the elevator is assigned to a specific packing point, serving a particular pack style. The packing points in this case are two baggers and a cartoner.

The highly flexible system is easy to programme says the company, so that several mixtures with variable compositions are counted and discharged simultaneously without the need for major adjustments.

Hotel Chocolat

High quality 'indulgence' products, such as dark chocolate with high cocoa content are seeing increased demand. In fact the global high-end chocolate sector shows an annual growth of 8 per cent.

So when Hotel Chocolat moved into the retail sector it was necessary for it to re-assess its packaging operations. The company decided a high quality end-fold overwrap was needed on its retail packs, while maintaining a traditional shrink wrap for its mail order products.

To facilitate changes it installed two B225FF machines from Marden Edwards, with an output of 40 boxes/minute, which is almost four times the output of its L-sealers and shrink tunnels.

CONFECTIONERY NIBBLES

- The 755 ET cut and double twist wrapper, from **A.M.P. Rose** is the latest version of its 750 range. The new machine is designed to wrap long products up to 150mm in length and can handle products such as chewy candy, toffee and gum.
T: +44 (0) 1427 611969
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- An improved product separation facility is incorporated into the latest medium speed wrapper for hard boiled sweets from **Theegarten-Pactec**. This, says the company, ensures a gentle transfer of the product from the feeding plate to the first wrapping head at efficient speed levels. The MCH machine can also handle chocolate products wrapped in double twist, fold wrap as well as protected twist and foil wrap at rates between 600-1,200/minute. Top twist and side twist wraps can be applied at speeds of 700/minute.
www.theegarten-pactec.com

FURTHER INFORMATION

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