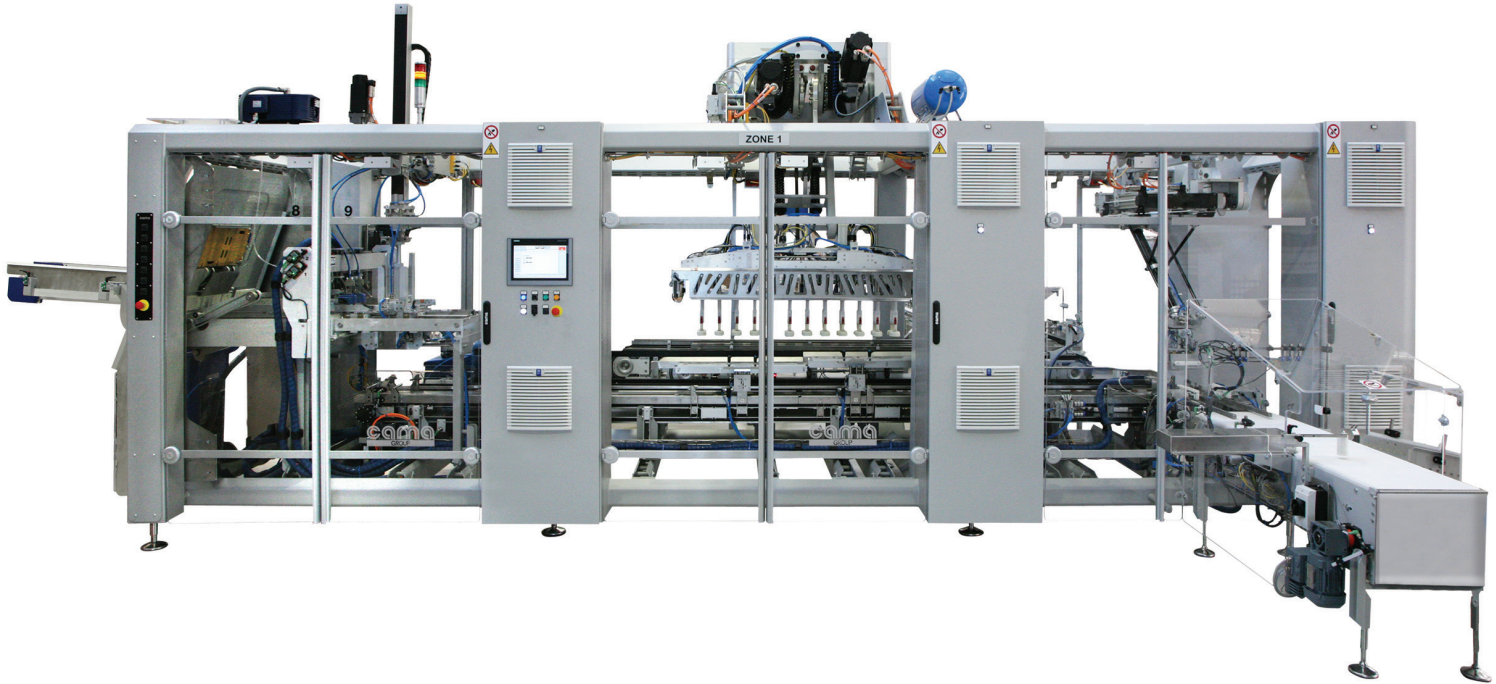




Massive pet food variation demands maximum packaging flexibility



When you're catering for multiple customers, with multiple products, in multiple packaging formats, flexibility becomes the most important tool you have - especially in secondary packaging

Consumers drive retailers, who in turn drive manufacturers, who then drive their suppliers – it's a story as old as industry. In some markets, the relationships are linear and not particularly broad, but in others, the hierarchy spreads like a tree's roots, getting wider and wider the further down the supply chain it goes.

Massive product variety

A case in point would be the pet food industry, which has undergone a bit of a renaissance over the last few years. It used to be five flavours of unappealing meaty chunks in 400g tins. That was it! Now, it is multiple flavours, multiple packaging formats, multiple sizes... the list goes on.

The consumer – and, just as importantly, their pets – are now spoilt for choice, which means the supermarkets are trying

offer the best-selling and most appealing combinations of flavours, styles, sizes and counts. This demand for variation feeds back to the producers, who, in turn have to constantly redevelop lines and styles and, finally, the producers then demand the means to package these varieties from the packaging machine suppliers. It's not easy!

Market driven

Gunnar Hallmann, Group Strategic Project Manager, at C&D Foods explains: "We are very market driven... we have to be! Customer demand for new formats and better packaging is fed to us by both the consumers and the supermarkets for whom we make own-brand pet food. As we explain in our value statement to them 'It's our product – but Your Brand. In that way we depend on each other for our success'.



"It's hugely competitive," he continues, "and to keep pace we have to undergo continual investment in our products, our people, our processes and, of course, our packaging machinery. In this respect, to maintain our hard-fought competitiveness, we need high speed, high technology, high flexibility packaging solutions from machinery that we know will deliver all the time... without issue... and without downtime."

C&D Foods purchased its first Cama Group machine in 2004 for use in its production facility in Longford, Ireland. 2010 saw another installation in Ireland, with more following at other production sites - it has seven across Europe - in 2013/4. One of its most recent investments has been for its Esbjerg plant in Denmark for the packaging of 300 g alucups, shallow square round-cornered trays with foil lids.

Single solution to replace two machines

"The plant in Denmark is C&D Food's main site for the production of alucups, with different sizes being filled and packed on site," Hallmann explains, "but we had upgraded the filling capacity for 300 g cups in the Danish plant and the two existing machines we had, which packaged different formats, were both reaching end of life. The brief we gave to Cama was for single-plant solution that would do the job of the two older machines, but with greater throughput and far greater flexibility."

Cama's solution comprised two of its IF series monoblock loading units with a box-forming machine and robotic Loading unit. The IF series is based on the company's award-winning modular Monobloc architecture - offers users a unique combination of integrated packaging machines and robotic loading units. Through tight integration of each of the primary



modules (forming, loading and closing), Cama has developed a machine that delivers the incredible flexibility demanded by the pet food industry, but within a reduced footprint.

This secondary packaging solution had to cater for multiple packaging formats, with different product counts (6/9) and rows (1/2/3), in a variety of tray only/tray+external lid combinations.

In operation, cartons are formed and glued and passed onto an outfeed transport conveyor underneath the main line. At the same time, the filled alucups arrive on two independent lanes and are fed into to loading units. The products are phased at the infeed of each loading unit by two star wheels and are moved into two pairs of independent vertical race-track pocket conveyors, with a single product in each pocket; these pockets are moved intermittently based on the loading pitch, until the carton/tray loading configuration is obtained.

Advanced robotic technology

The grouped products are then collected by a two-axis robot with a specially designed gripper and loaded inside the previously erected tray/hood cartons, phased by box-phasing units according to the loading configuration. Loaded packages are then transferred outside the loading unit (according to the loading configuration), where they are conveyed to a coupling/merging unit where the trays are glued together (two or three trays). The coupled trays are then conveyed to the by-pass conveyor to the Customer's palletising unit or to the lidding station.

Trays to which a lid will be applied are deviated onto the conveyor and phased - long-side leading -towards the lidding machine, where they are collected in a mono-axis

phasing conveyor and positioned – as single box or coupled boxes – under each lidding head. The lid blanks are taken from the magazine and the lid is then applied by means of a two-axis robot with four dedicated lidding heads. An open-flap-detection system rejects any carton/lid with an open flap to a separate ejection station.

IF series machines are part of Cama's Breakthrough Generation (BTG), which is setting the standard in secondary packaging. They comprise modular, scalable frameworks that offer easy entry and access, coupled to a hygienic machine design. Within this framework, contemporary automation solutions, including advanced rotary and linear servo technology, is tightly coupled to in-house-developed robotics, to deliver the all-important flexibility and adaptability required by modern packaging operations.

Bespoke solution

"This was a tailor-made solution," explains Renato Dell'Oro, Area Sales Manager at Cama. "It took a while to design, build and install, especially fabricating some of the innovations that looked great on paper. At the time, it was the first time we had gone into a level of detail this deep. The complexity was huge, but it had to be to deliver the flexibility the customer required. Knowing these challenges, we made sure that the customer had the same technical and sales team on hand throughout the entire process.

Hallmann agrees: "It was a challenging task, compounded by the need to find the optimum layout based on the available real estate within our Danish plant. From initial contact to machine start we both faced multiple hurdles, but despite the extra time taken, CAMA never gave up! It pursued all the issues until they were resolved – all within

the bounds and costing of the original quote. This to us was vital! I have no doubt that other companies would simply have said 'enough is enough' or 'we need more money'. Cama did not! It stuck to the agreement.

Good feeling and good technicians

"When we tender for packaging machines," he continues, "we always ask a number of different companies. There are lots of discussions and lots of solutions. In this case, we got it down to two, but eventually felt that Cama's machine layout and packaging solution was the best fit for our needs. There's a good feeling about Cama as a company. We have a full-time project manager supported by some really good technicians, and it's the same technical team all the time, there's very little change. And, unlike other suppliers, the Cama sales team stuck with us the whole time, until the project was finalised, not just up until we signed the order."

Dell'Oro concludes: "C&D Foods supply so many supermarkets with own-brand products, that the packaging variety is immense. Flexibility is essential! These guys were early pioneers in the packaging of different flavours in multi tray packs, a concept which is now universal across the industry. With such a large array of packaging formats, you might think that changeover routines are arduous and protracted, but as the tins are all the same (only the content and labels differ) it is simply a case of replacing the carton/lid forming and closing heads – but these are all quick-release – and using an HMI to adjust the software parameters. You don't need change the pockets on the racetracks. It was a challenging project, but at Cama, we're great believers in the adage 'you achieve by doing'. We always try to go that little bit further, which is why we win so many repeat orders."

Cama Group, since 1981, is an international leader in engineering and production of high-technology secondary packaging systems. We offer completely integrated packaging lines, from primary packages up to final packaging, ready for palletizing, serving the Food (Bakery, Confectionery, Coffee, Ice Cream, Dairy, Ready Meals, Grocery), Non Food (Personal, Health & Home Care) and Pet Food industries.
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