

OMEGA CARTON BAG MACHINE 145

Michael Brunton talks with Oktay Duran about Duran Machinery's latest folder gluer innovation.



Elsewhere in this issue we report on the 2008 Pro Carton Design Awards. Winner of the 'Most Innovative use of Cartonboard' was a cartonboard carrier bag designed by Astrid Vanderborght. By coincidence, just at the time that the awards were being presented at the Promarca Congress (Switzerland), came news that Duran Machinery in Turkey were planning to officially launch their Omega Carton Bag Machine 145.

Currently, carrier bag work is very much a manual operation and is very labour intensive. Now, with Duran's latest contribution to the carton packaging industry, it is possible to produce 3,000-10,000 carton bags an hour (dependent on size and substrate) with a maximum of 4 operators. Sheet fed printers, particularly carton printers, are sure to find this potential market opportunity of significant interest.

BACKGROUND DEVELOPMENT

Duran Machinery was established back in 1989 and has now established itself as a leading supplier of folder gluers (Omega range) that can handle a wide range of carton styles. The company continues to present new products to the market — such as their Omega Magnus, Phoenix Flame Sealer, Omega Allpro-S Series, Omega

Turnpro and Omega Braille System in the last four years. These products will be followed by a complete series of ancillary equipment in 2009. "Our ongoing focus on R+D has ensured that the development and productivity of our Omega gluers keeps us at the forefront of technology," explains Mr Oktay Duran. "When you come across a carton style that can not be produced on the existing range of gluers, it represents a promising opportunity to develop a new machine — and the increasing market demand for luxury carton bags is what has led us to develop the Omega Carton Bag Machine."

Sheet fed carton bag production is a labour-intensive operation all around the world. Although the sheets are printed and die-cut by conventional machinery, the



Pro Carton Design Award. 'Most Innovative use of Cartonboard.'

folding and gluing process requires large numbers of workers — often not practical to combine such operations in one plant. "This is why, so often, luxury carton bags are produced by specialist companies," says Mr Duran.

"Another driver for the development of this machine is that new environment regulations all around the world are encouraging recycled and reusable material, especially for secondary packaging. We all see plastic bags gradually fading from department stores as well as supermarkets. But the existing production methods for carrier bags can not meet the growing demand. It is obvious that carton bags will become more prevalent if we can improve productivity and reduce the production costs. With this in mind we've developed this Carton Bag Machine that can be as easily operated as a folder gluer — it's the first of its kind in the industry."

Operated just like any folder gluer, the printed and die-cut sheets are placed in the feeder. There are servo controlled inserters for reinforcement boards to be placed into the bag — two reinforcement boards on the neck of the carton bag (where the rope handles are threaded) and one at the bottom to strengthen the bag. These supports are



PRODUCTIVITY DATA

Market research undertaken by Duran Machinery indicates that an efficient 'manual' operation produces 300,000 carton bags monthly with a team of 30 to 40 workers. The Omega Carton Bag Machine, at average production speeds, can

produce 1 – 1.5 million carton bags per month with two shifts of 4 operators each.

"Of course, change over time is very important when it comes to running small batches of carton bags. This has been one of our main focuses when designing the machine. The OCBM has full memory as its standard feature. Once the dimensions are entered into the memory, the operator only needs to make minor adjustments on the gluer for future runs of the same job. This results in the impressive productivity of the machine. The general design idea behind the OCBM was our Omega Allpro-S line with its modularity and ease of operation and general frame design. Having designed the S Series for fast and easy operation with minimum change over times led us to the achieved productivity of the OCBM.

"The machine is also capable of running a broad range of substrates," says Mr Duran. "We are aiming to cover the

essential because either the rope handles might tear the carton, or the bag will not be capable of carrying product. "The need to insert reinforcement boards is one of the main reasons why carton bags have not been produced on a gluer until now — it just wasn't possible," says Mr Duran. "However, our new machine inserts these boards with the required accuracy and folds the initial flaps onto the neck reinforcement boards. When the bellows are formed, the bag goes into the straight-line folding process. Finally, the bottom flaps of the carton are opened by way of a patented system to allow for the final reinforcement board to be inserted and refolded for the completion of the product. Currently, the carton bag comes out ready to be fitted with rope handles but our research continues and we hope soon to have a solution for that too — in fact, we've recently teamed up with another machinery company for the automation of this process.

complete range that is already on the market for carton bags — from 170 to 400gsm. Our first machine is 1450mm in width and this will be followed with an Omega Carton Bag 160, depending on market demand. The minimum open carton bag that the model 145 runs is 40cm."

Asked how long it took to develop the new machine, Mr Duran says, "The process sounds easy when describing the machine's technical specifications, but to be able to run at high speed and achieve the stated productivity requires the length of the machine to be 27 metres! This might give you an idea about the complexity of the system. Our R&D Department worked 18 months on this specific project, not including market research."

News of the Omega Carton Bag Machine development was made at Drupa — and certainly created significant interest with specialist bag companies as well as cartonmakers. "Now we are ready to launch the machine to world markets," says Mr Duran. The company plans to show it at their plant during January to March when the machine will be run by its owner at Duran Machinery. "We will thoroughly monitor the production process and train their crews. All potential customers are welcome to view the machine at our plant in the New Year." For more details contact Pinar Kuçukaras. pinararas@duranmakina.com Tel: +90 212 886 30 31.

The general design principles behind the OCBM was the Omega Allpro-S gluer shown here.

