

AUTOFEED-CUTTING MACHINES PROVIDE EXCELLENT FINISHING DEVICES

Matteo Muto, of Valiani, sets out the advantages of using automation in the print and packaging industry

There is no doubt, that small and medium-sized companies need to automate their production processes in order to grow in their industry. This also holds true in the printing and packaging market, where automation has become more and more essential.

The term 'automation' refers to all the requirements needed to run a machine with as little human intervention as possible. Automation is not to be considered an operator's opponent. On the contrary, it can be a perfect ally, because automation simplifies workflow and avoids human error. The global market, connected to auto-feeding machines, is experiencing significant growth and is expected to expand even further in the next few years. This is because it is more and more difficult to find skilled labour with a background in engineering.

SEMI- AND FULLY AUTOMATIC

The most basic classification when it comes to die-cutting machines is between semi- and fully automatic. In the last few years, the more popular flatbed-cutting machines, have been dependent on the operator's skill. The operator has to feed sheets of material by hand. For companies looking for repeatability and longer runs, this can be tedious, slow and labour intensive. The automatic machine continuously feeds sheets of material for cutting. It is an efficient, fast and extremely

profitable process, for both smaller and higher production.

Today, there is a substantial increase in terms of automation available. The research carried out by some brands has led to the development of high-tech and reliable machinery. However, most of the time, these are very expensive and not user-friendly. As a result, they are only suitable in large production. More recently, some brands have launched small, space-saving and affordable automatic-cutting machines, accessible to small- and medium-sized companies. These machines are extremely versatile – ideal for short and medium packaging runs. In terms of materials and thickness, the equipment is generally able to work rigid supports such as corrugated cardboard, honeycomb board, PVC and grey board. High performance levels are assured, along with perfect finishing over a thickness of one centimetre.

AUTO-FEED, DIE-CUTTING

Another widespread name for this equipment is the auto-feed, die-cutting machine. This term identifies a machine combined with an automatic feeder, a conveyor belt and a catch tray where the operator can easily collect completed jobs. Auto-feed machines are designed and developed to work continuously, without the presence of an operator.



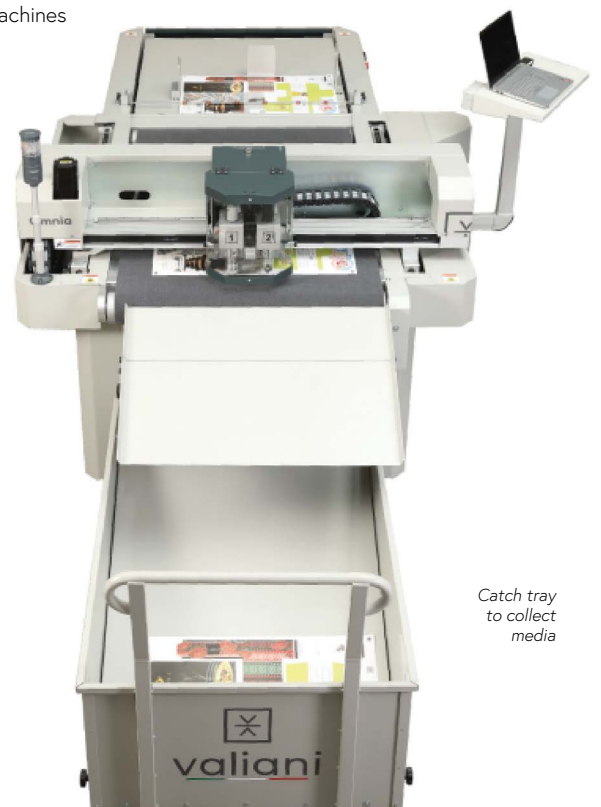
DIY cardboard pizza boxes

Automatic cutters are able to satisfy the growing demand for personalised die-cutting processes, exclusive packaging and unique labels, without the added cost of dies and make-readies.

“The automatic machine continuously feeds sheets of material for cutting”



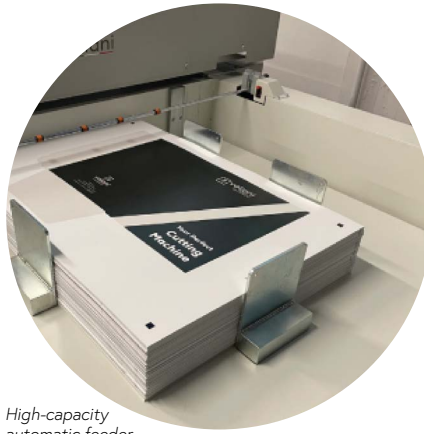
Valiani packaging die-cutting software



Catch tray to collect media



Creasing wheels
for high-end
packaging



High-capacity
automatic feeder

SIMPLICITY AND DIVERSITY

These machines provide simplified workflow, together with diversified production. This has been made possible by adding a QR code on the left-hand side of the media. The optical system quickly detects the code, pulls up the cut files into the software and executes each project, eliminating cut lists.

Another major advantage, offered by such cutting systems, in terms of productivity, is the ability to collect two sheets at a time when using A4 or SRA3. As a result, average output levels are significantly increased.

“Today, there is a substantial increase in terms of automation available”

A status indicator will notify the operator that the feeder has dropped to the minimum quantity so it can be reloaded without causing down time or interruptions.

Boxes, displays, cases, folders, shoppers, greeting and invitation cards, photo albums and vinyl stickers are the most common items made with an automatic-cutting solution. To give shape to these products, packaging software is highly recommended to resize pre-existing parametric templates.

For customer recognition and appreciation, the enhancement of the product – through avant-garde packaging – is worth a little extra effort. The role of packaging has

become extremely important in consumer recognition of products. The packaging industry needs to take into consideration the importance of product differentiation, brand visibility and consumer perception. With an automatic machine, this can be done more quickly, with a higher degree of customisation.

IN SUMMARY

The huge growth of automatic, conveyor-cutting systems can be accounted for by the gradual reduction in the need for costly outsourcing and an increase of in-house production. Each company using automation, will observe significant cost savings for both short and medium runs. Continuous media loading and processing, parallel-sheet feeding and the high-capacity feeder are other key advantages. This process specifically addresses the digital and offset printing market, with specific sizes to suit any printer.

“These machines provide simplified workflow, together with diversified production”

Automatic digital cutters are widely used in the advertising and packaging industry, in the use of materials such as paper, carton and vinyl. More sophisticated equipment increases production, reduces outsourcing costs and eliminates the need for operators in the manufacturing process. For most digital and offset packaging printers, there is a place for a cutting machine with an automatic feeder. ■

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Example of folding carton printed box