



Making the most of digital printing

Koenig and Bauer Kammann Managing Director, Matthias Graf, met Greg Morris at its German headquarters to discuss the rise of digital printing.

Digital glassmaking and the efficiencies it brings to manufacturers has been well documented. Glass decorators have also embraced the technology revolution and the use of digital decoration has become more commonplace.

One such company is Koenig & Bauer Kammann, based in Bad Oeynhausen, Germany.

Its revenue from digital printing machines sales has increased over the past four years and this year will account for 30% of revenue – its highest ever. This figure is expected to rise to 50% within four years.

Its Managing Director, Matthias Graf, has been with the company for 13 years and said: “Digital printing is the most important printing application in the past few decades.

“I think that digital printing will be a must when we have a look at the machine range of the customers in the future, everybody must have a digital solution.”

Mr Graf believes digital brings advantages – but warns that companies should have a digital

▲ Mr Matthias Graf has been MD since 2005.

▶ Digital printing allows for photo-realistic images on a bottle.

strategy before they invest in the new equipment.

“If you look back three or four years when the first solutions were launched in digital, our company has made great strides in that time. We have launched some interesting concepts and as a company we have learnt a lot.”

Family origins

Kammann is a well-established glass decorator that started producing printing machines in 1955 in the town of Bunde in the Nordrhein-Westfalen region of Germany. It was a family-run business until 2004 when it was taken over by a private equity investor. It moved to its current location in 2010 and was acquired by Konig and Bauer in 2013.

Today the company employs 160 staff at its German headquarters and also has subsidiaries in the USA and China which employ a further 40 people.

It supplies the glass, plastics and metal packaging sectors, with glass making up 65% of its revenue.

The company supplied conventional printing equipment, such as screen printing machines, for many years, but has embraced digital culture.

“It has been a big investment on our side, we need a lot of manpower and expertise from our employees but that makes it successful from our point of view,” he states.

It has spent the past five years honing its digital expertise and learning about the process. The company’s philosophy is to work with a prototype customer which is willing to take a risk. The two will learn together - and sometimes fail together on the journey.

“Sometimes you have to go a step back to go two steps forward. The customer knows that if this application works, they will be the first to be able to offer it. This has always been a successful scenario for us to work in this way.”

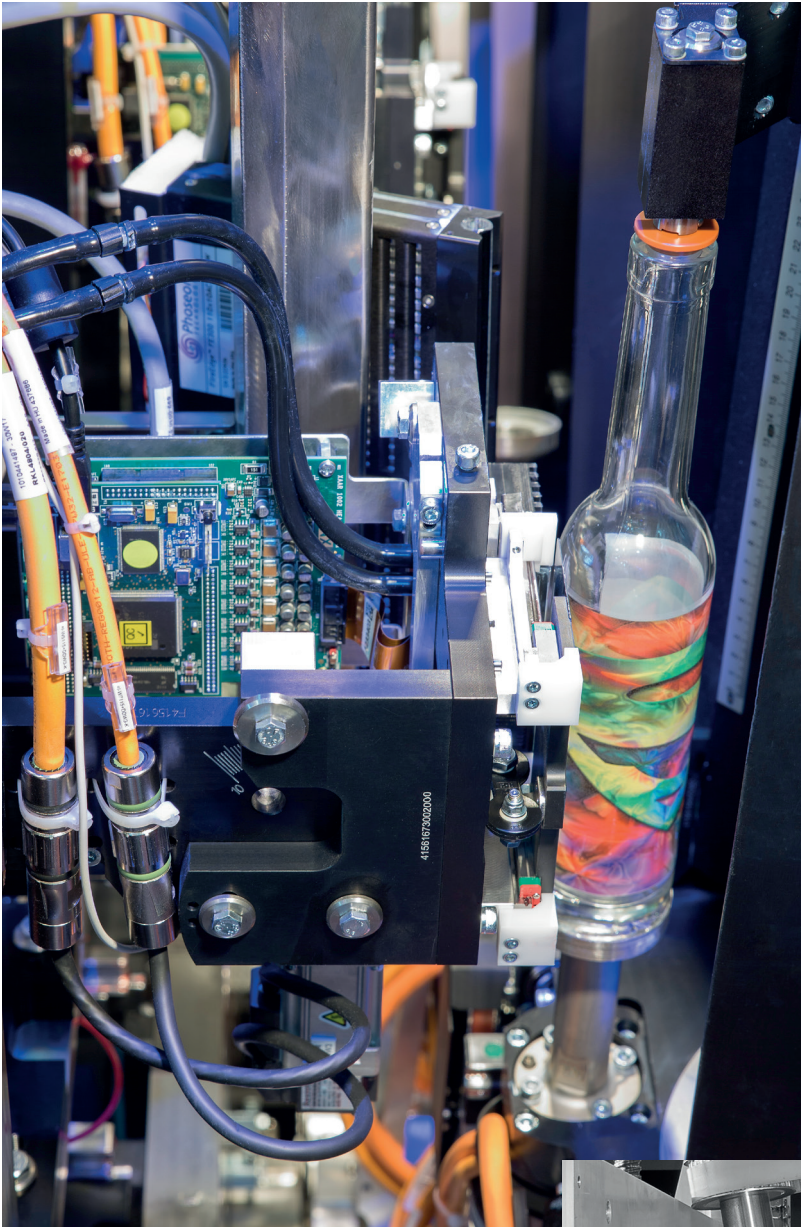
It is building a new factory near its existing structure. The factory will increase its capacity by 30% and include assembly and logistics halls and office space. The company’s revenues have increased by 40% in the past five years and it needs more room to create new machines. The 11,000m² site will open at the end of next year and will have room for the company to manufacture 16 machines parallel, with the opportunity to increase to 24 machines if need be. It currently manufactures 12 machines parallel at its present location.

Manufacturing procedure

The procedures to make a digital machine are different to a conventional printing machine.

“When you sell digital machines you must have the right one for the application, you have to think about the printing process, you have to train the customer and think about everything around the machine. A successful process begins a long time before the printing machine actually starts to run.

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It must have a digital philosophy and a business plan. There have been some companies who have gone digital but cannot handle the machines or have been unable to create a successful market."

The advantages of digital printing include the personalisation of bottles, photo-realistic printing and it allows the glassmaker to create special edition bottles, such as Christmas and summer bottles. It allows the machine manufacturer to print on the embossing, on the debossing, and on the conical part of the article.

"You can print something without contact with the article surface, so it offers more possibilities than other applications," states Mr Graf.

"We create attractive packaging to make it stand out from other items on the shelf."

But what has caused this digital revolution? According to Mr Graf, the ideas among designers, brand owners and creative were always there but they did not have the technology to implement it.

As well as the hardware equipment to make acceptable quality printing, a company requires specialist software knowledge and trained operators.

"We have gained that knowledge and it means we can print the whole range of article shapes, but it has taken a long time to master this knowledge.

We have had to learn over the months and years and you only learn by actually doing the process. So it was important for us that when we started we had a pioneer customer to test everything around the digital before we could widen our market and be successful with other customers.

"It has been a steep learning curve but we have a really motivated team who are at a high level and that has made it easier.

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"There is a much more of a focus on how you prepare your artwork, how you run it to the press, how you run it into the machine and make it printable to get the best results, for example."

He describes the company's three USPs as its investment in digital hardware, its investment in staff training and know how in the new process, and its range of solutions to make digital printing possible.

It also has the experience now of using digital machinery. The digital process is still evolving and Mr Graf expects many more developments over the next 15 years. But thanks to its investments the company will remain at the forefront of the digital revolution.

"A lot of people in the market are looking at those using digital to see if they are successful or not. It has taken a while, but we have the experience and I can say now it is a proven printing technology that has been accepted by the market.

"A company cannot just say 'I can print digital'.



“But we are still learning today. It is completely different if you are printing for the cosmetics industry or the drinking glass industry or the bottle industry.

“The quality testing and the reaction of the substrate is slightly different so you have to have different parameters in the machine and process.

“The machine can run everything at the end of the day but to run it at the highest output and best printing quality you need these fine parameters in the machine and you have to be prepared. That’s the learning curve.”

Kammann is divided into four groups: Most staff work in R&D, while a further 60 work in engineering and assembly. It has a number of sales agents, supported by an administration team. It has specialist digital workers, with six working in R&D on digital applications and also its own software department.

“We have our own software department, which is not typical of our competitors, states Mr Graf.

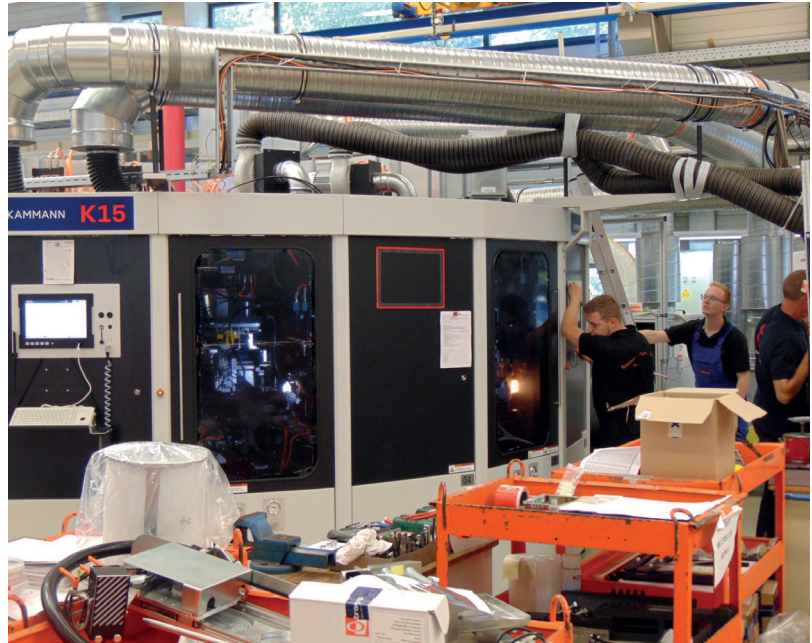
“But we understood early in the process that you need this knowledge to have a USP to compete with other companies.”

Most interest in digital applications has been from Europe and North America. The company serves several industries and has seen the most interest from the plastics sector.

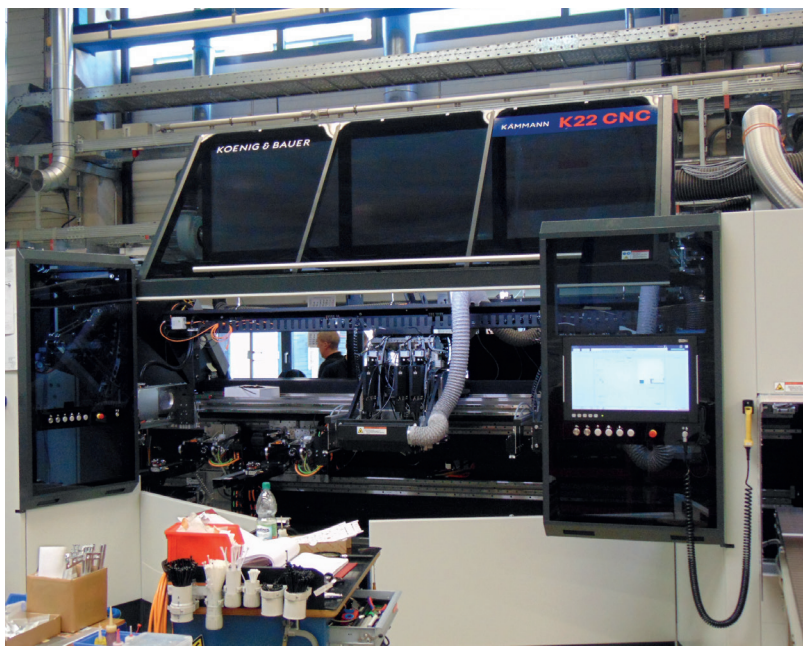
“There has been a bigger push because it is easier to print on plastic. It is much more complex to print on glass and to find the right process compared to the other substrates.”

The future

Mr Graf believes future developments will take place within the hardware machine, within printing components, in ink, and in the handling of the machines and implementing it on online work flows.



▲ The company employs 160 people at its headquarters.



“There are so many things possible that were not possible in the past that there will be many changes in the next years.”

Despite the rise and publicity surrounding digital printing, Mr Graf is keen to highlight that conventional printing remains an important part of the business.

“Screen printing and other conventional applications still exist Customers will mix between conventional and digital printing machines. There are arguments for the conventional machines in the future and we are still developing solutions in this area. There are potentials to optimise and offer special solutions to customers.”

Digital manufacturing will continue to evolve in the future – and Kammann intends to remain at the top of the digital learning curve.

“We always try to be near the market and understand the requirements of the customer and find the right solutions, whether it is in digital or conventional printing or an entirely new process. That’s our philosophy,” concludes Mr Graf. ■

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www.kammann.de/en/