

Our strategic pillars in action



Ceramics

# IMPROVING OUTPUT FOR CERLAT



Cerlat Production Manager, Jorge Albalat, is responsible for the running of Cerlat's ceramic tile production lines and constantly looks at ways to maintain and improve production output and quality. The recent installation of a KERAjet 700 printer with Xaar 2001+ printheads has been a winning combination.



Play video

The company's expertise is premium wall and floor tiles with stone, wood, marble and cement designs encompassing some beautiful special effects for added appeal to its worldwide customer base. Therefore achieving a high print quality whilst ensuring cost effective and reliable production is critical to Cerlat's success.

When Cerlat decided to install new machines, given the reliability of the KERAjet printers and Xaar printheads experienced over the years, without hesitation Jorge Albalat selected a KERAjet 700 machine with the new Xaar 2001+ printheads. Installation was quick and since January 2017 has printed hundreds of thousands of tiles at a line speed of 30m/minute. "The Xaar 2001+ printheads have increased productivity dramatically," says Jorge Albalat.



Product Printing & Packaging

XAAR 3D

A key strand of Xaar's 2020 vision is 3D Printing. In 2016 the Company appointed Prof. Neil Hopkinson as Director of 3D Printing with a remit to drive the newly formed 3D business. In December 2016 Xaar announced the opening of two 3D centres, in Nottingham, UK and Copenhagen, Denmark; Neil also built up his team to include a number of project managers and 3D engineering specialists.

The 3D industry is moving from prototyping to production of end use parts, and creating substantially higher demand for scalable production and increasing mechanical performance of the parts made. Two of Xaar's core technologies are particularly relevant to overcoming these challenges:

- Xaar's TF Technology has an advantage over competitor technology because it enables jetting of viscous fluids that have a high particle content, leading to improved part integrity and quality
- Xaar's HL Technology enables vastly increased throughput, satisfying industry's demand for volume production in a way that competing products cannot achieve.

Xaar's 3D business is now split into two streams:

- High Speed Sintering (where Xaar is developing complete industrial level 3D printing machines)
- The printhead business (where the Company assists OEMs looking to use Xaar technology to build 3D printers).

High Speed Sintering developments are largely continuing behind closed doors while in the printhead business, announcements included the collaboration with BASF to improve the Photopolymer Jetting process also known as Material Deposition. This collaboration will enable manufacturers to produce 3D parts with improved properties and lower costs than currently possible.



Our strategic pillars in action continued



Thin Film

# XAAR 5601 UPDATE



The Xaar 5601 has been in development for seven years. With over £31 million invested in its research and development, getting customer feedback during the final stages of product development has been critical to ensuring a successful product launch.

During 2017 a number of development milestones were passed, freezing the product design, allowing the start of the final product to be manufactured and a demonstration of four colour printing. Customer feedback on the print samples they received from Xaar was extremely positive. Good progress was also made on developing the ecosystem which surrounds the Xaar 5601, which includes the drive electronics and ink supply system which are necessary to ensure OEMs can properly evaluate and get the most out of the new technology in their printers.

Using Xaar's new Thin Film Piezo Silicon MEMS technology, the Xaar 5601 is very high resolution with over 5,600 nozzles, capable of jetting up to eight litres of fluid per hour.

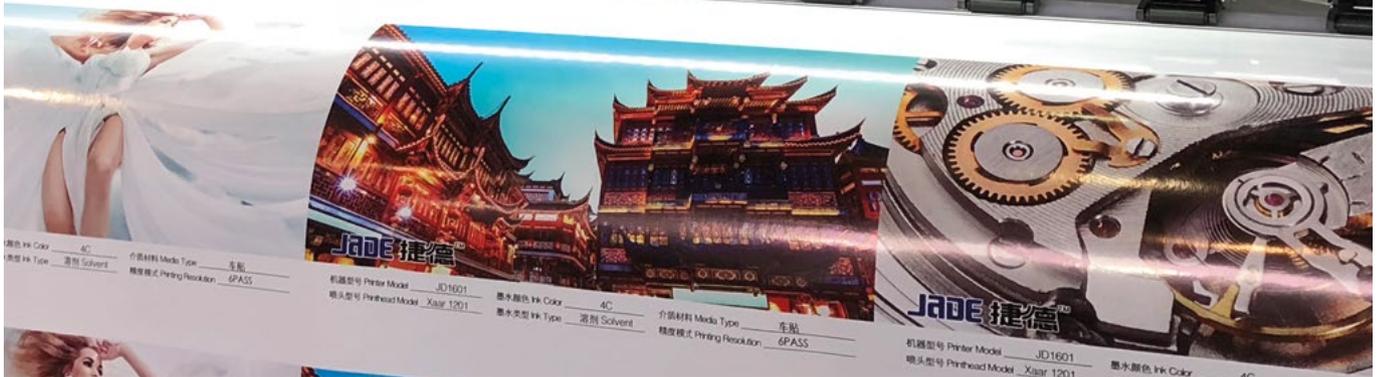
New innovations such as AcuDrp Technology allow complete control over greyscale drop ejection for perfect image quality.

The Xaar 5601 incorporates TF Technology to maximise production up time, print quality and lifetime. In addition, with the unique Z profile, multiple printheads can fit closely together for an exceptionally compact print zone, accurate drop placement between colours and reduced costs associated with accurate media control and positioning. This new printhead is optimised for aqueous inks and provides excellent suitability for other low viscosity fluids. Its small drop and outstanding performance make it ideal for a number of markets and Xaar's initial focus will be on Textiles, Commercial print and Packaging.



Thin Film

# XAAR 1201 UPDATE



## Xaar 1201 flexibility excites Graphic Arts and Textiles market.

The flexibility and productivity offered by the Xaar 1201 printhead sparked global interest in a high number of OEMs working in the Graphic Arts and Textiles sectors after it was launched in 2016. In particular, Xaar partnered with OEM Guangzhou Xucheng Electronic Technology to bring to market their Xaar 1201-based printers under their brands.

In a further deepening of the relationship, in September 2017 Xaar appointed XuCheng's subsidiary, Guangzhou HaoCheng International,

as Xaar 1201 Master Distributor in Greater China. HaoCheng's focus in 2017 and 2018 is to support printer development and provide printhead supply deals to a wide network of distributors and OEMs launching their own Xaar 1201 printers.

Since then, we have seen the number of new Xaar 1201-based printers on the market rise quickly, and in 2018 we expect this trend to continue.



Our strategic pillars in action



Acquisitions & Partnerships

# PARTNERSHIP PROGRESS



During 2017 we made good progress with developing some key partnerships to help progress our 2020 vision.

We announced a Joint Development Agreement with Xerox to develop the next generation of industrial bulk piezo printheads, with the Xaar 5501 announced as the first from this collaboration. In 3D we have built partnerships with Materialise (to include their market-leading 3D software with our 3D printer development kits), and BASF. We are working with BASF to improve the Photopolymer Jetting process which will enable manufacturers to produce 3D parts with improved properties and lower costs than currently possible.

In addition, we confirmed our collaboration with Meteor Inkjet to produce a development kit and commercial drive electronics for the Xaar 1201 printhead that shortens OEMs' Time-To-Market as well as ensures the best printhead performance possible. In November we signed a partnership agreement with COMEC Italia who will establish a European Distribution channel for EPS's digital products.