Direct-to-shape printing

Xaar 1003

- Unrivalled reliability
- Maximum production uptime
- Range of drop sizes
- Exceptional image quality

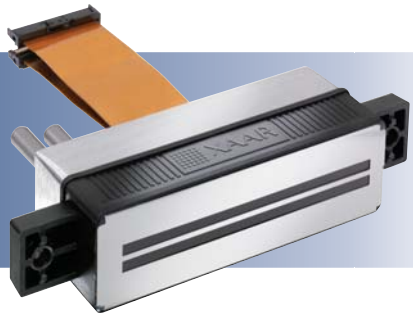
Digital inkjet direct-to-shape printing

From product protection, storage, handling and transportation to information, promotion and brand perception, packaging has many diverse purposes. A wide variety of substrates such as PET, wood, paper, metal, foil, glass and textiles are used to create everything from folding cartons, labels, sleeves and flexible packs to drums, bottles, cans and other rigid containers.

Digital inkjet direct-to-shape printing is a recent innovation for printing packaging such as cans, bottles, cylinders and other curved surfaces. With adoption now growing, digital inkjet direct-to-shape printing has the potential to revolutionise the packaging industry. It has the potential to eliminate labels, reduce inventory and work in progress, thereby delivering significant cost benefits. It also enables unlimited options to create individual designs, without the restriction of line changes or minimum order quantities, increasing the opportunity for brand engagement. New machine designs with high-speed printing capabilities using CMYK and white are now available. This means that printing directly onto packaging is possible as an integrated part of production bottling and packaging conversion for any production volume, therefore increasing cost-effectiveness, efficiency and output.

XAAR®

Direct-to-shape printing



Why digital?

Reduced cost

- No labels or associated application costs or processes, leading to significant savings especially for small order quantities
- No waste from redundant inventory due to label overruns, misapplication or design changes
- Focus on design and printing not label logistics
- No disposal costs of label release liner or surplus labels.

Mass customisation

- Mass customisation possible for targeted marketing, individual designs or limited editions, traceability and best-before information
- Design can be matched to specific pack sizes and consumer targets to maximise impact avoiding limitations of a fixed label size
- Production can be easy and fast and to specific languages
- Incorporate world events or local sports news into your design as they happen.

Improved manufacturing efficiency

- Job lead times are minimal with digital printing as there is no need to prepare, expose and set-up plates prior to the job, or adjust the press for registration
- Printing can start at the touch of a button immediately after design approval; job changes can be made on the fly and designs can be printed in-line with the packing or filling process which can reduce time-to-market significantly
- Reduced inventory – no need to hold surplus stock of finished packs or any labels
- Short and long run capability – minimum order quantity of one
- Samples and proofs are identical to final production, ensuring high quality presentation and batch-to-batch reliability.

Why inkjet?

Design creativity

- The non-contact nature of digital inkjet technology facilitates printing onto irregular shapes, and enables more design creativity
- It is possible to print images onto ridged or grooved areas of a substrate or container which are not suitable for labels or contact printing technologies.

Wide range of applications

- Digital inkjet printing enables the use of different ink types, including solvent-based, water-based, oil-based and UV inks
- Ink performance properties are matched to the broadest range of substrates and end uses, minimising the need for primers or protective varnishes
- UV inks printed onto PET or glass bottles offer excellent physical and chemical resistance so designs are not damaged by rubbing, scratching and exposure to water or other liquids
- Heavily-pigmented ink such as high opacity whites can be used (ideal for 'no label look' printing on transparent packaging such as PET and glass) as ink is kept in constant motion preventing sedimentation and nozzle blockage.

Why Xaar?

Unrivalled reliability

- Used extensively in production environments, with proven reliability throughout long manufacturing shifts and long periods between maintenance cycles
- Xaar's patented TF Technology® and unique Hybrid Side Shooter® architecture constantly recirculate ink through the printhead and directly past the back of the nozzle plate during drop ejection, at the highest flow rate in the industry. Air bubbles and particles in the ink are carried away from the nozzles, significantly improving reliability even in harsh manufacturing environments
- Low power consumption is achieved due to Xaar's patented shear mode, shared-wall technology and acoustic waveforms, delivering exceptionally low levels of internal mechanical stress.

Maximum production uptime

- Industrial design for continuous single-pass printing, specifically targeted at challenging manufacturing conditions
- The Xaar 1003 printhead is self-priming, so maintenance cycles are infrequent and in-line recovery is fast
- A recessed nozzle plate combined with the XaarGuard™ protects against costly accidental mechanical, electrical and chemical damage.

Outstanding print quality

- Digital inkjet prints bold, glossy colours so packaging designs stand out to enhance product branding
- 360 nozzles per inch, and up to 8 grey levels, gives an apparent resolution greater than 1000 dpi
- Smooth tonal gradations, sharp detail and fine text reproduction for excellent print quality and brand graphics.

XAAR®

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Issue 5 January 2016 English