



XAAR 502 GS150

Xaar 502 GS150

Industrial reliability

Exceptional print quality

Flexible and easy
integration

Gain competitive advantage with the Xaar 502 GS150

Reach higher levels of performance with the new Xaar 502 GS150 printhead. Whether printing high quality text, data and bar codes to secondary packaging or printing directly onto shaped products or primary packaging, this versatile printhead provides industrial reliability for high production up-time.

The unique PrecisionPlus architecture of the Xaar 502 GS150 builds on Xaar's incredibly successful Hybrid Side Shooter architecture, proven in the market-leading Xaar 1003 printhead. PrecisionPlus optimises the actuator performance giving more uniform drop formation and velocity across the print swathe and therefore exceptional print quality at longer throw distances.

For OEMs the remarkably uniform print swathe allows printheads to be mounted easily together. This, along with a combination of innovative features, ensures trouble-free and easy integration for a fast time-to-market. The Xaar 502 GS150 has the ability to print greyscale, offering Coding & Marking printers and manufacturers key technology advantages, unparalleled quality and resolution of print.

The Xaar 502 GS150 has been designed by Xaar to ensure its customers remain at the leading edge of print performance. Xaar is a world-leader in the development and manufacture of industrial inkjet technologies with more than 25 years' experience. The company is headquartered in the UK and has offices in USA, China and India. Today, Xaar's state-of-the-art manufacturing facilities in the UK are among the most innovative in the world.

Xaar 502 GS150

Approved inks

Xaar actively partners with a wide range of ink manufacturers to develop high-quality ink solutions for its printheads.

The Xaar 502 GS150 is designed to be compatible with a range of mineral oil and mineral oil-free (MOF) inks.



Industrial reliability

The Xaar 502 GS150 printhead is designed to deliver industrial reliability and robustness resulting in increased production up-time, particularly in harsh environments.

- A robust metal body protects against costly damage from contact with cartons and cases or other mechanical impact. The nozzle plate surround is designed to enable OEMs to continue with tried and tested printhead maintenance routines while protecting the nozzle plate
- Internal temperature management and an industrial design allow the printhead to work with a wide range of inks in varying ambient temperatures. This ensures high reliability all year round
- Capable of running in multiple fluid handling modes: using the optional, market-proven TF Technology in Pulsed mode, ink is recirculated when the printhead is not jetting. This allows ink recirculation to be implemented with the minimum of complexity and cost but still improves reliability, enabling nozzle self-recovery, extending maintenance cycles and eliminating air bubbles.

Exceptional print quality

The Xaar 502 GS150 and the revolutionary PrecisionPlus architecture deliver smooth graduations and excellent edge definition for printing text, bar codes and graphics.

- The enhanced PrecisionPlus actuator gives exceptionally uniform drop formation delivering even print density across the swathe width
- Together with PrecisionPlus architecture, the 500 individually lasered nozzles deliver unprecedented drop placement accuracy resulting in excellent print quality
- With the ability to print at up to 6 grey levels, the Xaar 502 GS150 is the first printhead to enable graphics and logos to be printed more subtly than with a binary printhead and opens up an opportunity for OEMs to offer their products with more than one cost-of-ownership ink consumption model
- The Xaar 502 GS150 is also capable of printing at a single binary drop size of 15 pL, or typically at 45 pL, 60 pL or 75 pL
- For printing directly to shaped products and packaging, the single row of nozzles gives integrators flexibility with throw distance and angle of printhead in relation to the product (horizontal and vertical jetting modes).

Flexible and easy integration

The Xaar 502 GS150 printhead offer a flexible range of ink supply options and easy printhead integration for maximum versatility, fast manufacturing and minimum servicing time.

- The Xaar 502 GS150 can use a simple gravity-fed ink supply, a vacuum-controlled ink supply or Xaar's TF Technology in Pulsed mode, a cost-effective way of taking advantage of ink recirculation. This allows OEMs to choose the best ink supply solution for their application
- The Xaar 502 GS150 has a compact mounting system enabling printheads to print as close to conveyors and transports as possible
- Industry standard ink fittings and an integrated filter module enable easy, clean and secure connection to ink systems
- The printhead's internal architecture enables quick and easy priming, automatic nozzle priming and self-recovery, all resulting in more uptime, fewer service interventions and less ink waste.

Physical attributes	Xaar 502 GS150 [†]	Xaar 502 GS150 OR
Active nozzles	500	500
Print swathe width	70.5 mm	70.5 mm
Number of rows	1	1
Nozzle pitch	141.1 µm	141.1 µm
Nozzle density (nozzles per inch)	180 npi	180 npi
Nozzle stagger	47 µm	47 µm
Nozzle guard	C & M	C & M
Printhead weight (dry)	208 g	205 g
Ink types	Oil	Oil
Drop volume*	15-75 pL	15-75 pL
Drop velocity*	7 m/s	7 m/s
TF Technology mode	None, Pulsed	High Flow
Number of grey levels*	6	6
Typical firing frequency @ Max DPD*	7.2 kHz	7.2 kHz
Dimensions (WxDxH)	104x17x113 mm	104x17x100 mm

*Dependent on ink used and system integration [†]Includes filter module

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