

Xennia Carnelian

Flexible inkjet development system

The Xennia Carnelian inkjet dispenser incorporates industrial printhead technology in a flexible, high precision 3-axis printer for fluid & process development, printhead evaluation and accurate fluid dispensing.

Ideal for fluid & process development

The Xennia Carnelian is the ultimate industrial fluid development and printhead evaluation tool for printed electronics, biotechnology/pharmaceutical or other fluid development applications, allowing developers to get to grips with industrial inkjet technology quickly and cost effectively. The Carnelian comes with a choice of industrial piezo printheads, and can even be fitted with two different types of printhead to allow technology comparison. The combined industrial and low volume syringe ink system allows evaluation of small quantities of fluid, while enabling scaling to a larger volume for extensive testing or pilot production.

Industrial-scale process development made simple

The Xennia Carnelian is a small-scale development tool built around industrial-scale printhead and fluid control technology, meaning that fluid development can be completed using the Carnelian and then ported onto a production printer using the same technology, without the need for reformulation.

Powerful performance with flexible options

The Carnelian uses a robust fully programmable XY motion stage with sub-micron resolution and repeatability of $\pm 5 \mu\text{m}$ over an A4 printable area. An optional programmable Z axis allows print height to be easily adjusted for 3D substrates. The Carnelian is also available with an optional integrated vacuum table top and alignment camera system for advanced substrate handling and positioning, and with an optional integrated scanning UV lamp for inline pinning of UV fluids.

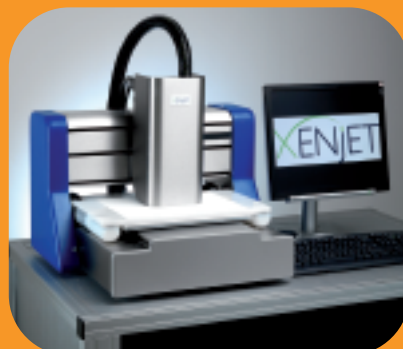
Intuitive printing with detailed control

Powerful XenJet print software is integrated into the Carnelian, allowing simple one click operation of the printer, or engineering level access to the detailed operation of the system if that is required. The software can also print fully variable data and process DXF/Gerber file formats with optional upgrades.

Application development support

Xennia offers a full application development and support service, including fluid formulation and process optimisation along with inkjet training, to help customers successfully implement inkjet technology into their production process.

- 💧 Functional materials dispensing
- 💧 Fluid testing and development
- 💧 Industrial printhead evaluation



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Specifications

Fluid type	Wide range of aqueous, solvent and UV fluids
Printheads	Up to 2 (most types of industrial piezo printheads)
Printable area	229 mm x 305 mm (9 in x 12 in)
Motion resolution	0.25 μm (XY), 0.5 μm (Z)
Repeatability	$\pm 5 \mu\text{m}$ (XY)
Print speed	Up to 150 mm/s (6 in/s)
XY positioning	Stepper motors
Z positioning	Stepper motor (38 mm (1.5 in) travel)
Fluid control	Combined industrial and low volume syringe system (most printheads) Small volume recirculating ink management system (recirculating printheads)
Printhead maintenance	Manual purge and wipe
Software	XenJet print software with integrated user interface Variable data capability and DXF/Gerber capability available as an option.
Dimensions (WxDxH)	1.2 m x 0.75 m x 1.6 m (47 in x 30 in x 63 in) (approx)
Power supply	120/230V, 50-60Hz, single phase
Optional accessories	Integrated vacuum table top Alignment camera system Integrated scanning UV lamp Programmable Z axis Variable data capability DXF/Gerber file processing

Subject to technical modification without notice



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