XAAR CASE STUDY

Fast-track décor innovation with Inkatronic using Xaar Aquinox



INKATRONIC
Inkjet competence for the industry

Inkatronic, Austria

Overview

Inkatronic needed to prove reliable, high-quality inkjet printing onto porous wood substrates for decorative interior applications. By working with Xaar's Aquinox printhead and enhanced fluid development process, the company validated pre-approved high-viscosity water-based inks in under a month and moved from testing to customer-ready samples in weeks. The project demonstrates how Xaar can reduce barriers to inkjet adoption, accelerate development and support more sustainable décor production.

The client profile

Inkatronic is an Austrian bespoke inkjet machinery manufacturer that solves niche industrial challenges through in-house R&D and turnkey machine development. Its team works across functional coatings, battery cell applications and digital printing, building bespoke machines for industrial applications.

The project

Printing onto porous wood substrates presents challenges around ink absorption, visual definition, clogging risk and production reliability. Inkatronic needed to transform cost-effective wood materials into premium décor elements for furniture, wall cladding and architectural design applications.

The company required a printhead and fluid development route that could produce strong samples quickly, without upfront investment in lengthy bespoke formulation or extended testing.

The solution

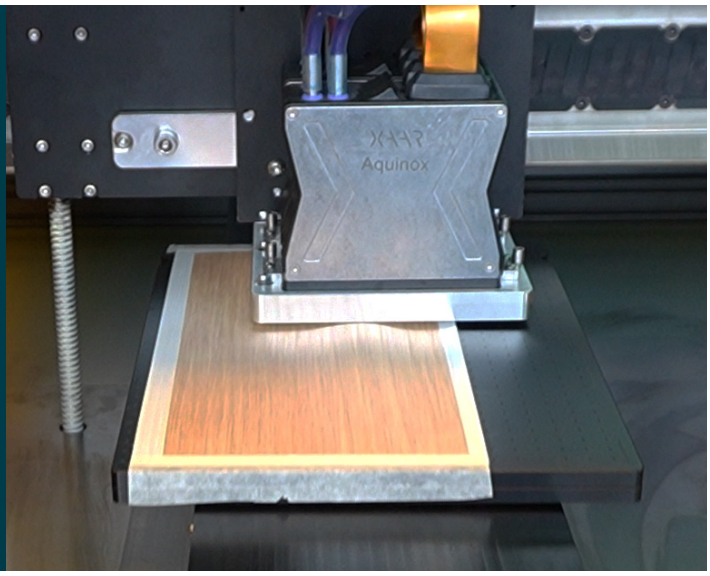
Inkatronic selected Xaar's Aquinox printhead and used Nazdar's pre-approved high-viscosity water-based inks through Xaar's enhanced fluid development process. The process gives customers flexible pathways, from ready-to-use fluids with optimised waveforms to fully bespoke development support.

The Aquinox printhead enabled high-viscosity fluid jetting with sharp image quality at a 5mm throw distance, reduced clogging and extended open time. Xaar's in-house print trials and waveform expertise helped validate performance on wood substrates in under a month.

The implementation

The project used Xaar's pre-developed waveforms and close R&D support to accelerate development. Inkatronic was able to move from testing to customer-ready samples in weeks rather than months.

The inks were formulated to remain on the surface of highly absorbent material, minimising ink wastage while maintaining strong visual definition and consistent coverage.



The impact

Outcome 1
Validated high-quality printing onto porous wood substrates in under a month

Outcome 2
Moved from testing to customer-ready samples in weeks, not months

Outcome 3
Reduced energy consumption by switching from UV to water-based inks and printing in a single pass

"We are delighted that Xaar is helping innovative companies such as Inkatronic open new applications for inkjet printing. Inkjet technologies are proving to be a game changer in many forms of manufacturing and this project proves that with our products and processes we can help accelerate development and innovation."

Neil Cook
Head of Strategic Marketing, Xaar

Technical highlights

Key capabilities

- Aquinox printhead
- High-viscosity water-based ink jetting
- Pre-developed waveforms and enhanced fluid development support

Compatibility points

- Porous wood substrates
- Furniture, wall cladding and architectural décor
- Functional coatings and additional manufacturing applications

Deployment notes

- Validated through Inkatronic's décor application development using Xaar Aquinox and pre-approved high-viscosity water-based inks.

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