FUJIFILM
Value from Innovation

AQUAFUZE ink
& Acuity Triton

PRODUCT BROCHURE

Revolutionary new AQUAFUZE ink with the Acuity Triton Harness elemental power

The Acuity Triton, powered by AQUAFUZE ink technology, is a revolutionary new roll-fed printer platform. It meets a multitude of market requirements by combining the benefits of LED UV and water-based inkjet technologies:

- It has low energy, low temperature drying compared to traditional water-based print systems.
- It provides excellent adhesion to a wide range of media without the need for a pre-coat primer or optimiser.
- Prints have a thin film that is scratch-resistant and do not require a top coat.
- Prints are low-odour, safety compliant, Greenguard approved and GHS label-free.
- The technology offers excellent jetting stability as a result of reduced nozzle blocking due to the low temperature drying.
- Instant cutting and lamination is possible, due to the make up of the water-based UV AQUAFUZE ink technology

Acuity Triton
at a glance

The Acuity Triton printer, incorporating AQUAFUZE ink, has an exceptional range of features making it an advanced 1.6 m roll printer.

AQUAFUZE water-based UV ink

Combining the benefits of LED UV and water-based inkjet technologies, AQUAFUZE ink is Greenguard approved and is low odour, has a low pile height, and is scratch resistant, with the ability to immediately finish once printed.

Printheads

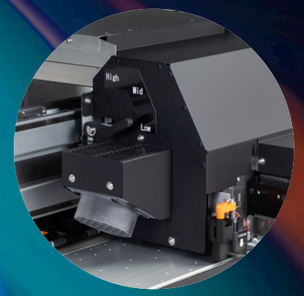
High definition micro piezo printheads, powered by AQUAFUZE ink, deliver excellent print results with 3.4 to 10.6 pl droplet sizes.

Multi-level pinch rollers

The Acuity Triton features pinch rollers for smoother feeding and handling of various media.

UV curing

UV lamp system results in perfectly cured and durable print, together with exceptional quality and consistent, repeatable prints.

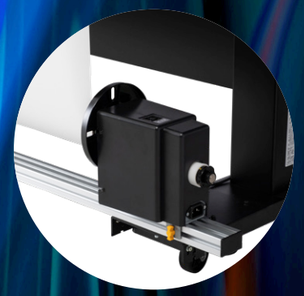


Adjustable head height

The Acuity Triton offers three adjustable head heights – low, medium and high – to prevent print graininess.

Motorised take-up system

The torque-control system of 30 kg allows take-up for roll media up to 150 mm.



Acuity Triton
powered by AQUAFUZE ink

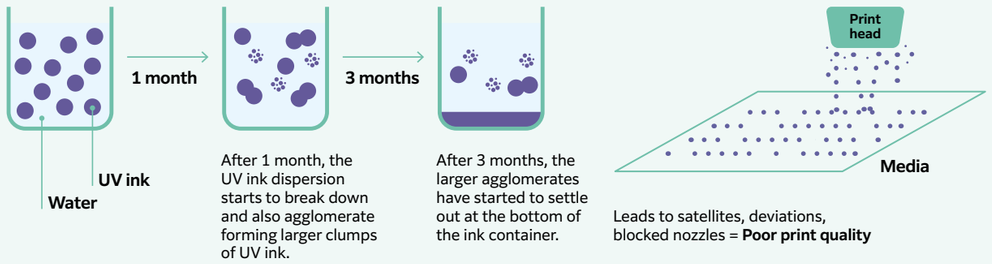
Drawing on more than 70 years of ink development history, Fujifilm is proud to introduce AQUAFUZE – a water-based LED UV inkjet ink built on a unique new photopolymer and an intelligent dispersion.

AQUAFUZE inkjet ink is formulated from Fujifilm's proprietary technology for stable water dispersion of photopolymers. Fujifilm has applied its original synthesis technology for highly functional materials and particle dispersions to create RxD dispersions. Based on this revolutionary dispersion, Fujifilm has developed a new UV-curable aqueous ink by combining the formulation technologies of both water-based and UV-curable inks.

A breakthrough in ink technology

Water-based UV inkjet inks are notoriously difficult to produce as traditional UV oligomers and monomers break down and agglomerate when in prolonged contact with a water-based solution.

This results in poor prints and head blockages:



After 1 month, the UV ink dispersion starts to break down and also agglomerate forming larger clumps of UV ink.

After 3 months, the larger agglomerates have started to settle out at the bottom of the ink container.

Leads to satellites, deviations, blocked nozzles = **Poor print quality**

Water-based UV curable inks formulated using Fujifilm's AQUAFUZE technology:

Even drop placement and stability, uniform jetting velocity = **Good print quality**

Unique new photopolymer

Intelligent dispersion

Integration expertise

"The Acuity Triton delivers exceptional print quality and speed while being incredibly user-friendly. Its intuitive and straightforward RIP software allowed our team to get up to speed after just half a day of training. Additionally, the advanced internal cleaning and maintenance functions surpass those of our existing machines, providing enhanced options for routine upkeep and deep cleaning, ensuring optimal performance and longevity."

Alex Liggett
Owner, The Vinyl Guys

AQUAFUZE inks have multiple benefits for more than just sign printers

Robust ink film
Enjoy benefits of printing with UV

‘Soft feel’ low build
Customers will love the feel

Low heat
Use more heat sensitive media

Wide application range
No need for optimisers

More production opportunities
Instant cutting and lamination

“The new AQUAFUZE ink technology represents a breakthrough in the industry. The immediate benefit is the significant reduction in time required to print and finish wrap jobs, allowing businesses to respond to urgent orders and complete large fleet projects more efficiently. However, the broader impact lies in the opportunity this technology provides for printers to diversify their revenue streams.

By offering same-day signage and sticker production, printers can present a completely new print solution to customers, setting themselves apart from traditional eco-solvent, UV, resin, and latex options. In addition, this innovation enables businesses to save money, time, and energy while expanding their service offerings.”

Alex Liggett
Owner, The Vinyl Guys

Water-based UV has long been regarded as the ultimate inkjet ink technology combining the benefits of LED UV curing with those of water-based as the table below shows:

	Productivity			Pile height	Energy consumption	Safety	
	Post print finishing	Start-print time	Optimiser required	Good/ poor	Low-High	Odour	Hazard warning label
Eco solvent	Slow	Good	No	Good	Medium	Poor	Yes
Latex	Medium	Poor	Yes	Good	High	Good	No
UV (LED)	Fast	Good	No	Poor	Low	Medium	Yes
Water-based UV	Fast	Good	No	Good	Medium	Good	No

Testing carried out on a limited number of machines. Fujifilm shall not be liable for technical errors contained in this table.

Revolutionising
the way you print

The Acuity Triton, powered by the new water-based UV ink, AQUAFUZE, delivers photographic-quality results with vibrant colours and exceptional durability. Whether you're creating signage, graphics, or custom applications, the Acuity Triton is designed to meet the most demanding projects with precision and ease.

THIN FILM FLEXIBLE INK

AQUAFUZE inks are designed for thin-film flexibility, expanding their application versatility for use on a variety of flexible materials. Whether you are printing banners, vehicle wraps, or display graphics, your prints will maintain their integrity without compromising flexibility.

SCRATCH RESISTANT AND DURABLE

Thanks to the advanced formulation of AQUAFUZE inks, your prints are not only vibrant but also incredibly durable. Scratch-resistant and designed to withstand the elements, your projects will maintain their professional appearance for a long period of time.

INSTANT LAMINATION AND CUTTING

With AQUAFUZE inks, lamination and cutting is no longer a waiting game. This innovative water-based UV ink technology allows for instant lamination and cutting straight after printing, speeding up the production process and ensuring your prints are ready for finishing as soon as they come off the press.

Applications that set you apart

From vibrant backlit displays to versatile car wraps, the Acuity Triton with AQUAFUZE ink delivers unparalleled quality, durability and flexibility across a wide range of applications. Whether you're creating graphics for retail spaces, automotive projects or custom signage, the Acuity Triton is engineered to meet your every need with consistency and precision.

Backlit displays

The Acuity Triton 1.6m roll-to-roll printer can print on backlit media such as films and fabrics, creating vibrant, glowing graphics when illuminated, thanks to AQUAFUZE ink technology.

Window graphics and décor

The Acuity Triton powered by AQUAFUZE inks is ideal for producing window decals, graphics, and films. These can be applied to windows in retail stores, offices or homes, providing both decorative and functional finishes.

Banners and large-format signage

The Acuity Triton with AQUAFUZE ink is ideal for printing large, eye-catching banners used at trade shows and events, and for outdoor advertising and retail displays. This new technology supports exceptional quality printing on vinyl, fabric and other substrates commonly used for banners and large signage.

PVC – cast, polymeric and monomeric

From cast vinyl to polymeric and monomeric materials, the Acuity Triton with AQUAFUZE ink is compatible with a wide range of PVC materials. Achieve high quality prints for applications ranging from durable signage to dynamic retail displays.

Windows, walls and floors

From windows and walls to floors, the Acuity Triton with AQUAFUZE ink is ideal for a wide range of substrates. Create stunning graphics for interior décor, advertising or retail spaces with easy application on both smooth and textured surfaces.

Prints on heat-sensitive media

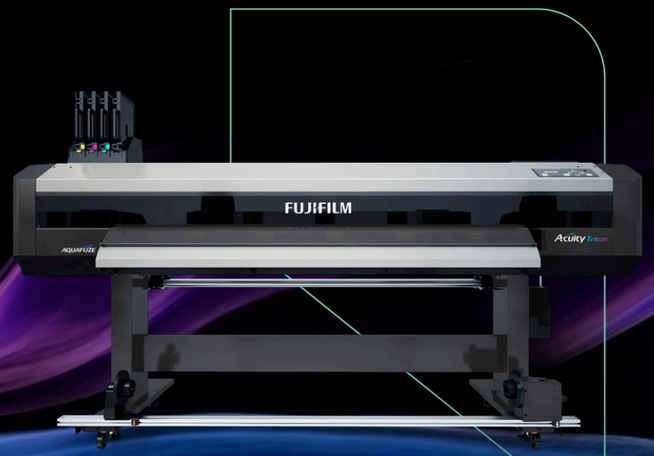
Thanks to the water-based UV ink technology, the Acuity Triton can print on heat-sensitive media due to its low energy, low heat LED curing system, without damaging or distorting it. Whether you're working with delicate materials or creating custom designs on speciality substrates, the Acuity Triton ensures flawless results.

Vehicle wraps

Transform vehicles with vibrant, durable car wraps printed using AQUAFUZE ink. With exceptional adhesion, flexibility and conformity, your car wraps will not only stand out with bright, bold colours but also resist fading and damage from the elements.

The brand new Acuity Triton is the first printer to benefit from AQUAFUZE ink technology

The Acuity Triton is a 1.6 m wide printer that boasts a unique print/dry process that has been specifically designed and perfectly optimised for AQUAFUZE ink technology to ensure it always delivers excellent print results whilst maximising production efficiency.



Acuity Triton key features

- 1.6 m wide printer
- A unique print/dry process
- Optimised for AQUAFUZE ink technology
- Rapid startup with no excessive heat build-up
- Ultra-reliable low-temperature cure
- Low energy consumption

Watch the full product video

“Since incorporating the Acuity Triton into our production, customer feedback has been overwhelmingly positive. Clients appreciate the superior print quality, noting the smoother, lower pile of the water-based UV AQUAFUZE ink compared to other UV machines. This results in a premium feel that enhances the overall finish. Additionally, the vibrancy of the colours particularly on brighter artworks has been highly praised, further elevating the impact of our prints.”

Alex Liggett
Owner, The Vinyl Guys

Technical specifications

Acuity Triton	Specification
Resolutions	Up to 1200 x 2400 dpi Draft: 17 m²/hr (1200 x 600 dpi) High speed: 15 m²/hr (1200 x 1200 dpi) Production: 12 m²/hr (1200 x 1200 dpi) Quality: 9 m²/hr (1200 x 1800 dpi) High quality: 6 m²/hr (1200 x 2400 dpi)
Productivity	6 to 15 m²/hour
Ink type	AQUAFUZE water-based UV ink
Ink drop size range	3.4 - 10.6pl (operator selectable)
Ink colour/container	CMYK (4 slots) / 1 litre pouch
Ink key characteristics	- Does not contain CMR substances - GHS hazard-free - Scratch-resistant with soft feel - Thin, durable ink film - Low temperature drying for diverse substrates - Instant cutting and laminating
Ink certification	GREENGUARD Gold certified - category Wallpaper, AgBB 2024, French VOC and CMR-regulation: Class A+, Belgian VOC regulation
Max print size	Width: 1615 mm, Length: 1500 m
Media size	Width: 500-1625 mm Weight: 30 kg or less Thickness: 1.3 mm or less
Curing system	3 way heater (Pre-heat/Platen/Dryer) 4 inch (101 mm) UV-LED
Dimension (WxDxH)	2770 mm x 895 mm x 1611 mm (with ink pack adapters mounted)
Weight	186 kg (printer body: 146 kg, stand: 32 kg, winder: 8 kg)
Power supply	Voltage: AC 100V/ 120V + 10% / AC 200V/ 240V + 10% Frequency: 50/ 60 Hz + 1Hz
Interface	Gb-Ethernet (1000BASE-T)
Printhead cleaning	Auto vertical wiping blade cleaning
RIP connection	VerteLith for Fujifilm (bundled) and other RIPS compatible
Enviromental conditions	Printer operation: temperature: 20°C / 32°C; humidity 40% / 60% RH - no condensing Accuracy guaranteed: temperature: 22°C / 30°C; humidity 40% / 60% RH - no condensing
Power consumption	Power off: 20W or less Standby: 240W or less Operating: 1.4kW or less (peak: 2.7kW)
Safety standards	CE/UKCA/NRTL
Remote maintenance	FF RECS supported

Print mode productivity (m²/hr)				
Draft	**High-Speed**	**Production**	**Quality**	**High Quality**
17	15	12	9	6

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