



Acuity TR with Aquafuze Ink Technology Product Brochure



# Revolutionary new AQUAFUZE ink with the Acuity TR Harness elemental power

The Acuity TR, 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:

- Low energy and low temperature drying reduces costs and minimizes environmental impact
- Excellent adhesion without the need for a pre-coat primer or optimizer saves time and lowers production costs
- Scratch-resistant thin film prints do not require a topcoat, delivering durable results while reducing material use
- Low-oder, safety compliant, Greenguard-approved, and GHS label-free prints ensure user safety and meet environmental standards
- Reduced nozzle blocking with excellent jetting stability improves print consistency and minimizes downtime
- Instant cutting and lamination enabled by AQUAFUZE technology speeds up post-printing processes and boosts efficiency

FUJIFIL

AQUAFUZE

**Acuity TR** 

Acuity TR

# **Acuity TR** at a glance

The Acuity TR printer, incorporating AQUAFUZE ink, has an exceptional range of features making it an advanced 1.6 m (63 in.) roll printer.

## **AQUAFUZE** water-based UV ink

Combining the benefits of LED UV and water-based inkjet technologies, AQUAFUZE ink is Greenguard approved, low odor, low pile height, and scratch resistant, allowing immediate finishing after printing.

# **Printheads**

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

# **Multi-level pinch rollers**

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





Acuity

# **UV** curing

The UV lamp system ensures perfectly cured, durable prints with exceptional quality and consistent, repeatable results.



# Adjustable head height

The Acuity TR offers three adjustable head heights - low, medium and high - to maintain optimum quality and prevent print graininess.

#### Motorized take-up system

The torque-control system of 30 kg (66 lbs) enables reliable take-up for roll media up to 150 mm (5.9 in).





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# **Acuity TR** powered by AQUAFUZE ink

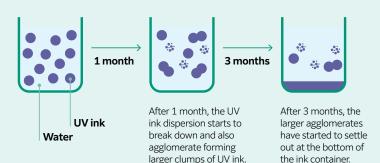
Drawing on more than 70 years of ink development history, Fujifilm is proud to introduce AQUAFUZE – a water-based LED UV inkjet ink built on a unique new photopolymer and an intelligent dispersion.

AQUAFUZE inkjet ink, formulated from Fujifilm's proprietary technology for stable water dispersion of photopolymers, uses RxD dispersions, an original synthesis technology for highly functional materials and particle dispersions, to deliver a revolutionary UV-curable aqueous ink that combines the strengths of both water-based and UV-curable formulations.

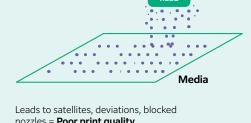
## A breakthrough in ink technology

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, but Fujifilm's proprietary RxD dispersion technology overcomes this challenge to deliver stable, high-performance inks.

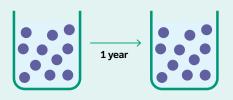
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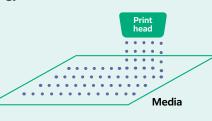
nozzles = Poor print quality



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



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





# **AQUAFUZE** inks have multiple benefits for more than just sign printers



#### **Robust ink film**

Enjoy benefits of printing with UV



#### Low heat

Use more heat sensitive



#### More production opportunities



# 'Soft feel' low build

Customers will love the feel



# Wide application range No need for optimizers

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**

# Ink technology performance

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 Drying	Start-Print Time	Optimizer Required	Good / Poor	Low-High	Odor	Hazard Warning Label
Eco Solvent	Slow	Good	No	Good	Medium	Poor	Yes
Latex	Fast	Poor	Yes	Good	High	Good	No
UV LED	Fast	Good	No	Poor	Low	Medium	Yes
AQUAFUZE	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.



# Revolutionizing

# the way you print

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



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, prints are vibrant, scratch-resistant, and durable, ensuring projects maintain a professional appearance even after long-term use and exposure to the elements.

# INSTANT LAWINATION 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.



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Acuity TR Applications

# **Applications that**

# set you apart

From vibrant backlit displays to versatile car wraps, the Acuity TR 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 TR is engineered to meet your every need with consistency and precision.



#### **Backlit displays**

The Acuity TR 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 TR 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 TR 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 TR 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 TR 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 TR 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 TR ensures flawless results.



#### Vehicle wrap

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 colors but also resist fading and damage from the elements.

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Acuity TR

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

The Acuity TR is a 1.6 m (63 in.) wide printer that boasts a unique print/dry process that has been specifically designed and perfectly optimized for AQUAFUZE ink technology to ensure it always delivers excellent print results whilst maximizing production efficiency.

# **Acuity TR key features**

- 1.6 m (63 in.) wide printer
- A unique print / dry process
- Optimized for AQUAFUZE ink technology
- Rapid start-up with no excessive heat build-up
- Ultra-reliable low-temperature cure
- Low energy consumption

# "

Since incorporating the Acuity TR 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 colors particularly on brighter artworks has been highly praised, further elevating the impact of our prints."

**Alex Liggett** 

Owner, The Vinyl Guys



# **Technical specifications**

ACUITY TR				
Productivity & Resolution	Up to 1200 x 2400 dpi Draft: 17.2 m²/hr (185.2 ft²/hr, 1200 x 600 dpi) High speed: 15.3 m²/hr (164.7 ft²/hr, 1200 x 1200 dpi) Production: 11.5 m²/hr (123.8 ft²/hr, 1200 x 1200 dpi) Quality: 9.4 m²/hr (101.2 ft²/hr, 1200 x 1800 dpi) High quality: 6 m²/hr (62.4 ft²/hr, 1200 x 2400 dpi)			
Productivity	6 to 17.2 m²/hour (64.6 to 185.1 ft²/hour)			
Ink type	AQUAFUZE water-based UV ink			
Ink drop size range	3.4 - 10.6pl (operator selectable)			
Ink color / container	CMYK (4 slots) / 1 liter 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	1615 mm (63.6 inches), Length: 1500 mm (59.1 inches)			
<b>Media size</b>	Width: 500–1625 mm (19.7–64 inches) Weight: 30 kg (66 lbs) or less Thickness: 1.3 mm (0.05 inches) or less			
Heavy duty roll (optional)	Supports up to 100 kg (220 lbs)			
Curing system	3 way heater (Pre-heat/Platen/Dryer) 4 inch (101 mm) UV-LED			
Dimension (WxDxH)	2770mmx895mmx1611mm(109.1inx35.2inx63.4in) with ink pack adapters mounted			
Weight	186 kg (410 lbs) total — printer body: 146 kg (322 lbs), stand: 32 kg (70.5 lbs), winder: 8 kg (17.6 lbs)			
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			
Environmental conditions	Printer operation: temperature: $20^{\circ}$ C to $32^{\circ}$ C ( $68^{\circ}$ F to $89.6^{\circ}$ F); humidity $40\%$ to $60\%$ RH, non-condensing Accuracy guaranteed: temperature: $22^{\circ}$ C to $30^{\circ}$ C ( $71.6^{\circ}$ F to $86^{\circ}$ F); humidity $40\%$ to $60\%$ RH, non-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			

Specifications

INK CONSUMPTION (ESTIMATED)	К	С	М	Y	Total	Ink change
High speed mode (1200 x 1200 dpi)	1.14 ml	1.35 ml	5.71 ml	2.33 ml	10.53 ml	379 sqm
Quality mode (1200 x 1800 dpi)	1.65 ml	1.98 ml	3.25 ml	3.57 ml	10.45 ml	382 sqm
High quality mode (1200 x 2400 dpi)	1.65 ml	2.03 ml	3.39 ml	3.67 ml	10.74 ml	372 sqm

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