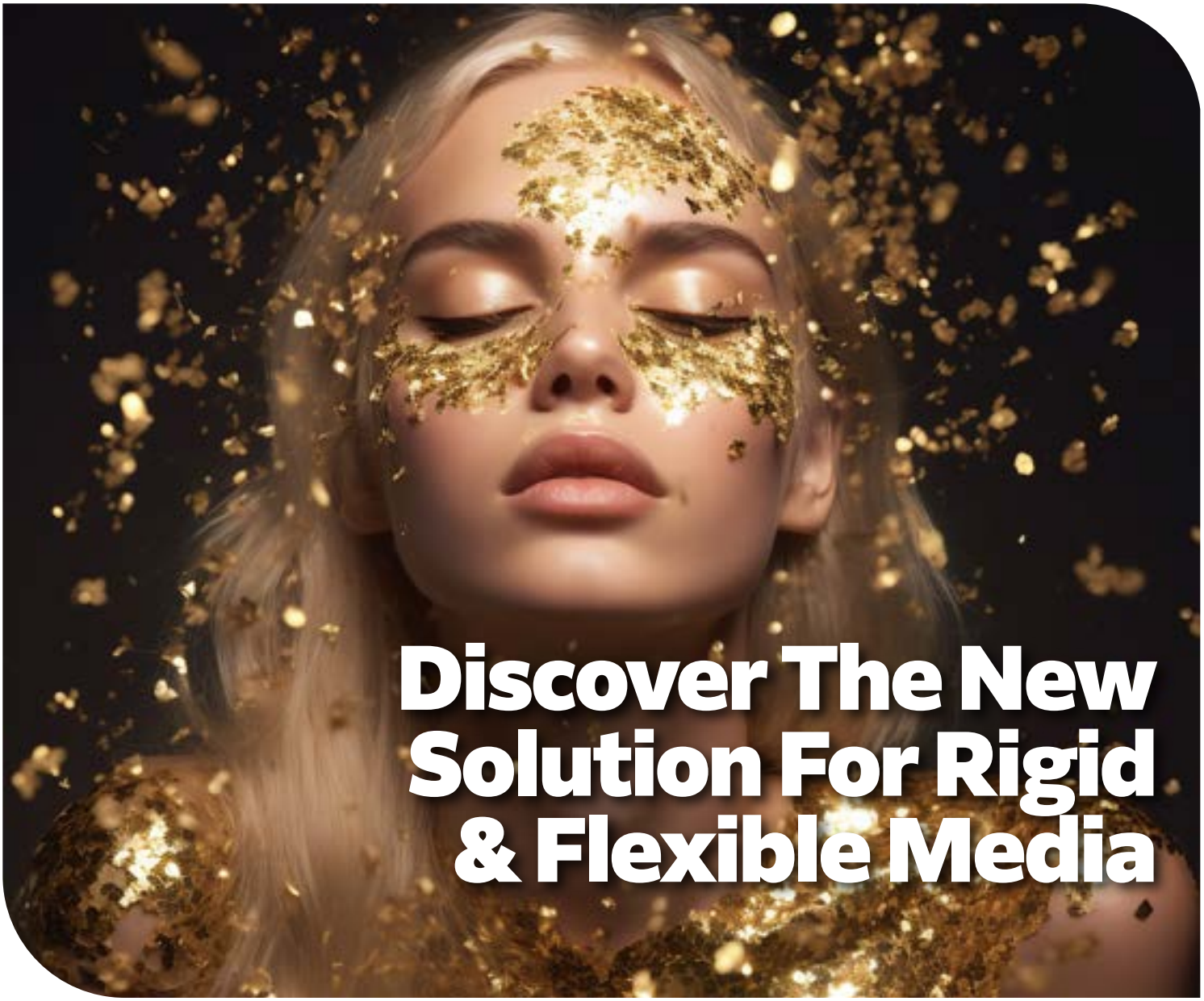
FUJIFILM
Value from Innovation



# Discover The New Solution For Rigid & Flexible Media

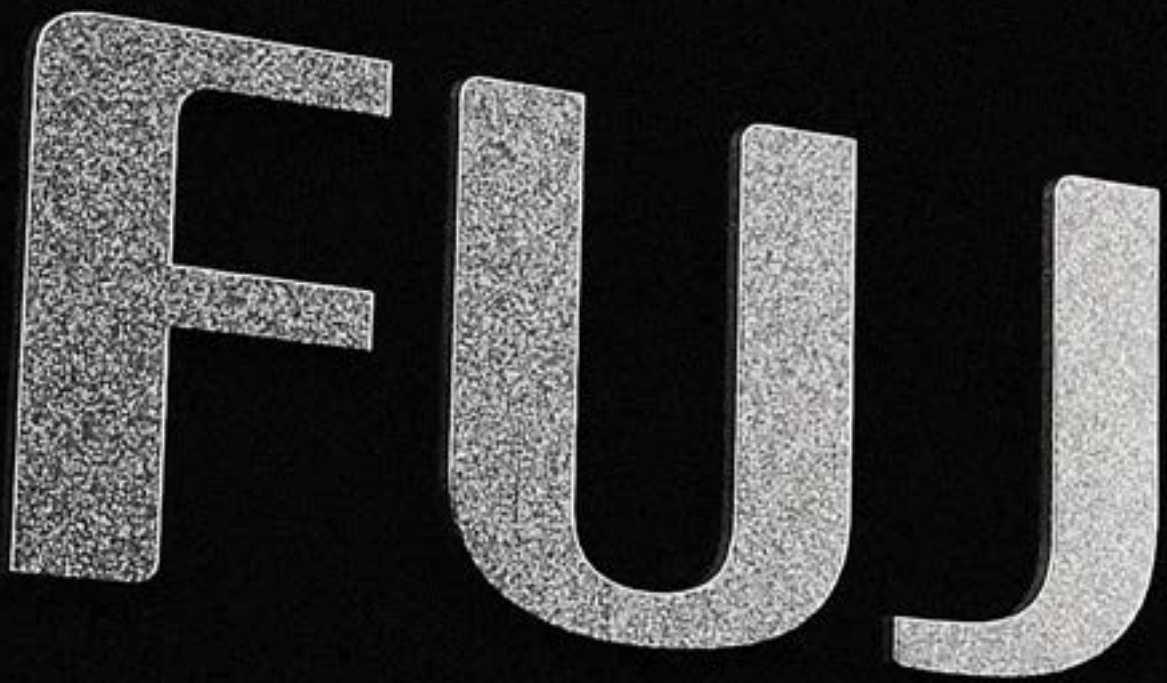
Acuity

# Ultra Hybrid LED

Product Guide

# Why Fujifilm?

**Fujifilm believes that our collective future of print is based on dynamic collaboration. Therefore, you deserve a partner who understands where you have been, where you are currently, and where you want to go. Fujifilm's business is anchored to the traditions of our industry and the historical relationship we have with the print community. When we combine our history of innovation and our commitment to product development with our enthusiasm for our customers' success, together we can achieve any vision you have for your company.**



## History of Innovation

The Fujifilm difference is supported by 4 pillars of strength. Our long history and countless milestone achievements are proof of both our longevity and dedication to this amazing industry. Fujifilm grew up in this business and there is no substitute for the collective experiences we have had and the depth to our understanding of the business. Our portfolio truly spans the entire print industry and is purely the result of the other pillars. Our history of innovation drives a culture of progress.

## Global Strength

The culture within Fujifilm is rooted in respect and innovation. The care with which we engage clients and investment in solutions has been critical to our ability to create advances in technology and infrastructure. Being devoted to traditional business processes allows us to align with traditional hierarchy while also being innovative and disruptive. Our approach is born from mutual respect for others and a willingness to drive change.

## Local Partner

Fujifilm Graphic Communication Division (GCD) is full of passionate team members. While globally, Fujifilm invests in Research & Development at a frenetic pace ($7 million dollars per day), locally, Graphics Communication Division (GCD) embraces a culture of relentless service & support. When it comes to innovation, we develop all our technology in house including printheads, inks, inkjet technology and image processing systems. And there is no better place to witness this than our remarkable Innovation Lab. Located in our North American Headquarters in Hanover Park, Illinois, just 30 minutes west of Chicago, the Fujifilm Graphics Innovation Hub (GIH) is here to showcase for you the newest innovations from Fujifilm's Graphic Communication Division. The GIH demonstrators have industry experience and are experts in the operation and use of our print equipment.

## Broad Portfolio

The Fujifilm portfolio is broad and is the result of our history of innovation, our corporate reach, and our local connections. The breadth of our portfolio aims to fulfill every sector of the print market and continues to grow as our customer's needs grow. We aim to support the most progressive leaders, the maniacally detailed operators, the environmentally conscious, and the creatives that realize the impact that print can have on brand equity.

# Better By Design

## The new blueprint for wide format.

**With this project, we gave ourselves the freedom to go right back to first principles, and that led us to create something quite different from anything either we – or anyone else – had created before.**

### Good design starts with understanding

By seeking to understand everything, from the long-term business goals, to the day-to-day frustrations of the customers we serve, we give ourselves the best starting point for good product design.

That was where we began when we set out to redesign our Fujifilm Acuity range. We talk to our customers all the time, troubleshooting, consulting and offering technical support. But for this project we needed deeper conversations and more time in which to have them.

This wasn't a box-ticking survey sent out by email – this was our designers (a specialist industrial design agency, Realise Design, whom we'd appointed to support the Tokyo Design Team) shadowing our customers as they worked, looking for a thousand small ways to optimize their working experience – and therefore their businesses.

We looked at how improved product design could lead to improved usability, to enhanced performance and to a better ROI. The result was the launch of a brand new range of Acuity machines in 2021, that defined a 'new blueprint for wide format'.

This range now features dedicated roll and flatbed printers, along with a growing range of hybrid platforms.

# The best combination of productivity and quality

Common to all printers in Fujifilm's wide format range is the ability to produce the very best quality at the highest productivity. This means you can turn around high quality jobs faster than your competitors, and coupled with low ink consumption, represents an excellent return on investment.

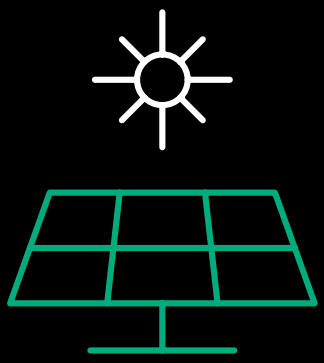
Speed and quality have been engineered into these workhorse printers, and is partly due to the greyscale piezoelectric printheads that produce near-photographic print quality.

## Instant printing without warm-up

When a valuable rush job comes in, the last thing you want to do is wait for your printer to warm up. Most Fujifilm wide format printers offer instant-on capability through their LED curing systems. Start-up time is typically less than 5 minutes from power on until nozzle check is ready. In addition, shut down time for most printers is also less than 3 minutes, including shutdown maintenance.

# Focusing on a greener future

**Fujifilm's ink R&D and manufacturing facility in Broadstairs, Kent, has regularly made the news as a four-time winner of the UK's Best Factory Award, but it is for its sustainability initiatives that it is now rapidly creating waves. The facility has implemented a wide range of initiatives to accelerate change towards a more sustainable operation.**



## 82,240 kW

**of power was produced from our solar panels in June 2022, that's enough to power a typical UK household for 26 years**

This is also 181% more power than the 29,185 kW produced in June 2021

## 760.3 tons

**of waste produced on site went for recycling**

(in 2021)

## 1000 liter IBCs

**returned for cleaning and reuse, rather than disposing of them**

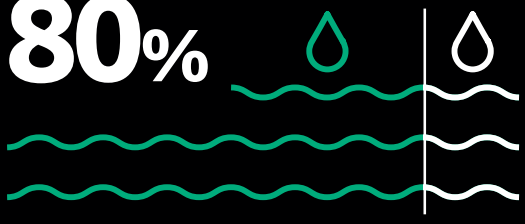
## 100%

**of our raw materials packaging is reused and recycled**

## We've saved 1 million kW per year

**on conventional energy by turning our factory HVAC (heating, ventilation and air conditioning) systems off overnight**

## 80%



**we replaced our oil-based solvent cleaner with an 80% water-based (aqueous) cleaning solution, combined with a 'world-first' pot washing machine**

## In R&D we have achieved a…

**50% reduction**
**in glass jar testing**

**38% reduction**
**in end container testing for one liter bottles**

**74% reduction**
**in end testing for five liter containers**

**We have also cut back on the use of one, two and three liter pouches by 29%, 33% and 20% respectively**

# Superb dot reproduction and bright vivid colors

**Color is the most important aspect of an ink; prints with rich color have more impact and are more saleable. What's more, a printer needs a wide color gamut for faithful reproduction of images and to match spot colors.**

Our Uvijet inks feature Fujifilm's proprietary Micro-V dispersion technology. This enables high concentrations of color pigment to be effectively dispersed and stabilized, resulting in brilliant results in the final printed product.

## Reassuringly consistent results

To achieve high quality images and beautiful, vibrant colors time and time again, not only must the inks be of an exceptionally high standard, the formulations must be ultra-consistent. Our Uvijet inks are manufactured to incredibly exacting standards. Quality assurance at our award-winning ink manufacturing facility is second-to-none; we only use raw materials that are consistently of the highest grade, which helps to ensure that every batch of ink we create is exactly the same as the last.

## Micro-V dispersion technology

Micro-V is a unique Fujifilm technology that breaks down pigment particles and ensures they are held in stable dispersion in the ink. It enables high concentrations of color pigment to be effectively dispersed and stabilized, resulting in an ink with high color intensity that resists both agglomeration and gravitational settling – so the ink has high color strength as well as being stable and reliable.

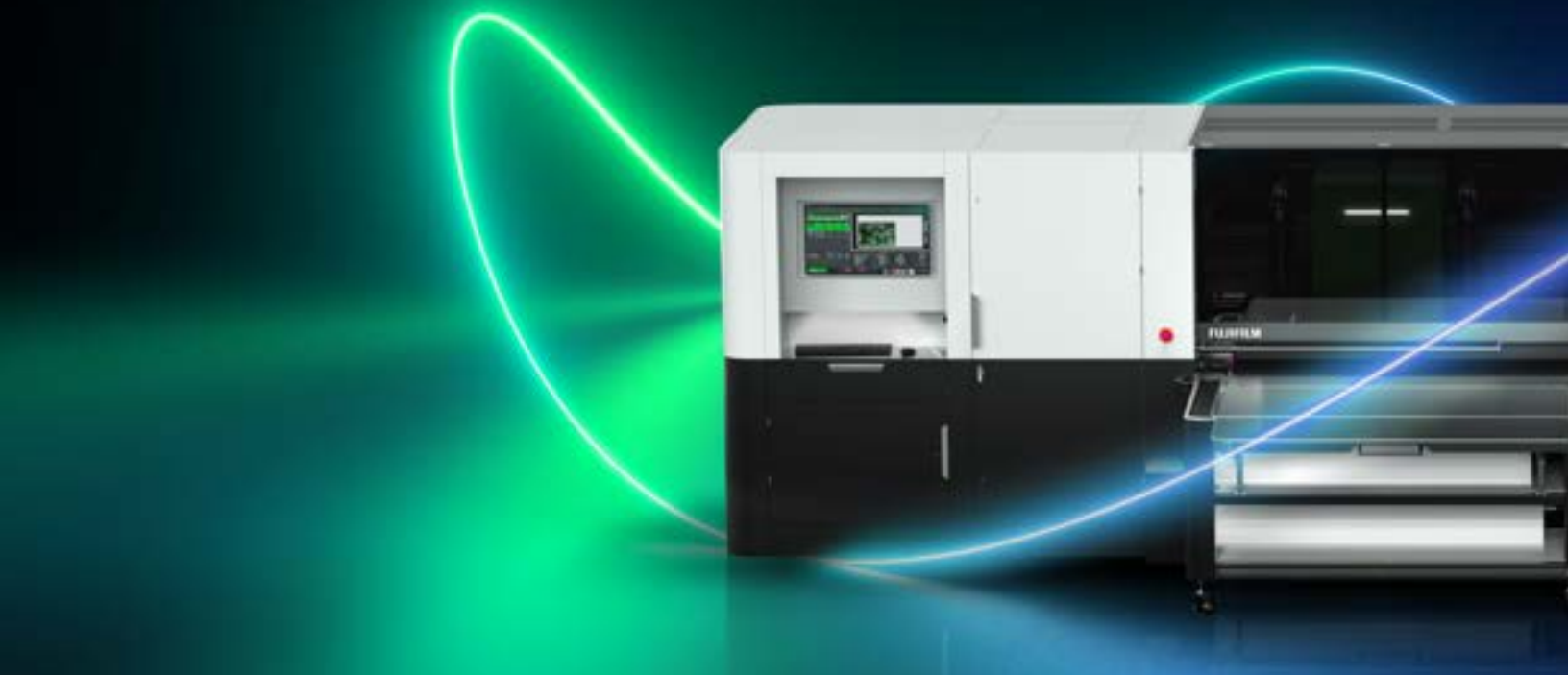
A proprietary Fujifilm dispersion technology is used to coat the individual pigment particles that are separated during the dispersion process. This coating gives the particles a tendency to repel each other and therefore prevents pigment agglomeration. A molecular bonding agent is used to provide a link between this dispersion coating and the ink binder, or 'vehicle', in order to stabilize the pigment particle in the fluid and prevent gravitational settlement.

After Micro-V dispersion, pigment particles have an average particle size of less than 200 nanometres – 0.2 microns. They start roughly the size of a grain of salt and are ground down in size to smaller than a human cell.

**Fujifilm pioneered UV inkjet printing, and has the highest number of patents for UV inkjet ink**

## Acuity Ultra Hybrid LED

# One platform unlimited results



Acuity Ultra Hybrid LED

**The Acuity Ultra Hybrid LED is a high-end printer designed for rigid and flexible media, offering superb, high quality printing in a 3.3m platform.**

## Engineered with the operator in mind

The Acuity Ultra Hybrid LED is designed with specialist inks to support near photographic quality printing of a huge range of applications at high speeds.

It is also a highly modular six-color system with a scalable architecture that can grow and change as business demands evolve. This means you can start with a CMYK device, and add light colors and white inks at a later date, making it one of the most versatile and flexible platforms on the market, able to produce the widest variety of products in the smallest machine footprint.

# Versatility

**The combination of intelligent design features and Fujifilm's new Uvijet UH high performance ink, ensures that the Acuity Ultra Hybrid LED is one of the most versatile platforms on the market, able to produce an unrivaled range of applications at both high quality and high speed.**

## Media load and unload tables

Fujifilm's patented media table design features a dimpled table surface which supports all media types while allowing easy media positioning, providing performance superior to most other systems on the market. In addition, an innovative catch mechanism improves media feed accuracy, and provides protection from accidental damage throughout a print run. Finally, the change over from roll to rigid or rigid to roll is ultra-quick, maximizing overall productivity.

## Intelligent vacuum control system

The Acuity Ultra Hybrid LED features an intelligent vacuum control system that has been designed from the ground up using sophisticated airflow CAD modelling software to generate excellent media hold down.

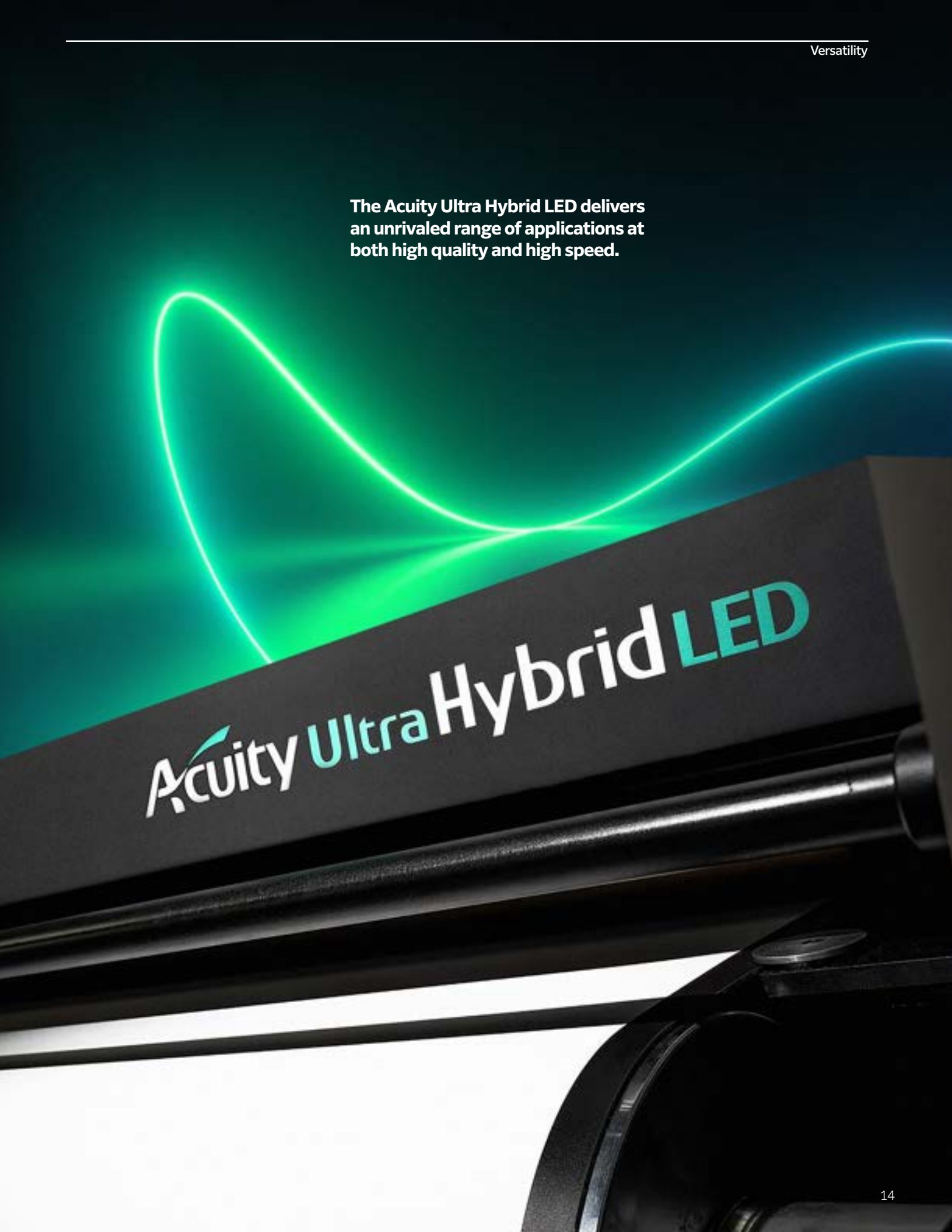
The system automatically turns on the vacuum zones needed for any print job based upon the media width, and automatically adjusts the vacuum control power to maintain a constant force under the belt regardless of media type and size. This ensures excellent media hold down, whilst maintaining consistent media transport, to ensure high print quality.

In addition, the belt is a single piece constructed of a semi-rigid polyurethane material, so it resists both ink damage and distortion over time, ensuring years of continual use. The belt drive rollers are also substantial 32cm diameter steel rollers that resist deflection when the belt is tensioned.

## Key features

- Versatile, ultra-high quality printer
- Native 3.5 picolitre, 3 level greyscale printheads
- Linear-driven printhead carriage
- Dimpled media tables support all media types
- 3.3 m width
- LED UV curing for lower power consumption
- Uvijet UH high performance inks
- 6 channel with white option
- Dual roll printing
- Prints on heat-sensitive materials
- Intuitive GUI

**The Acuity Ultra Hybrid LED delivers an unrivaled range of applications at both high quality and high speed.**



# Ultra-high quality

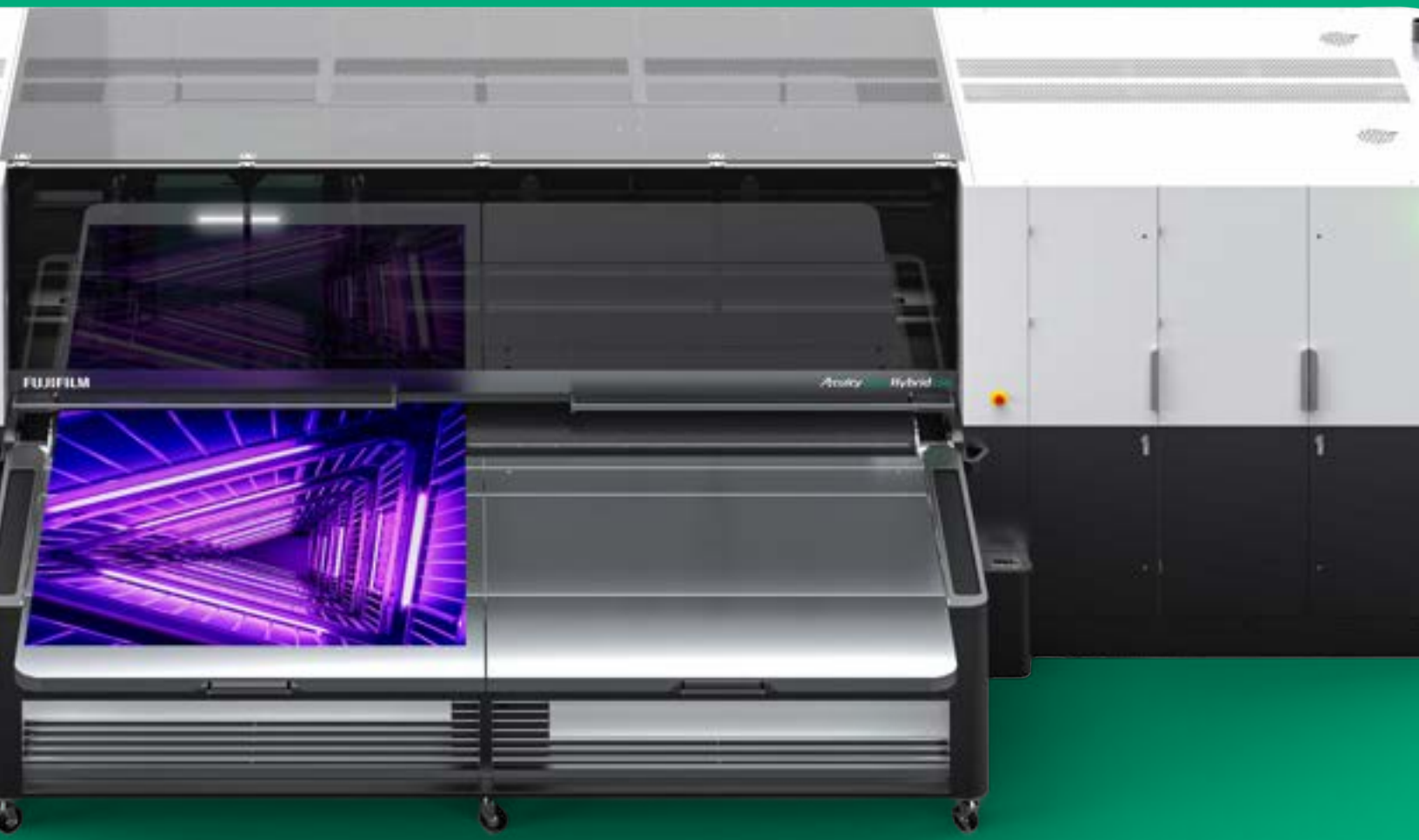
**The Acuity Ultra Hybrid LED uses the same head carriage as the Acuity Ultra R2, capable of ejecting greyscale drops down to 3.5pL in size to deliver superb print quality. Combined with an industrial build quality, a linear motor head carriage drive and Fujifilm's high performance Uvijet UH inks, the very best print quality is guaranteed.**

### Heavy duty chassis

Like the Acuity Ultra R2, the Acuity Ultra Hybrid LED is built on a substantial welded steel construction, together with solid steel bars, which contribute to the machines 8.3T weight. This design not only delivers a robust construction, it also ensures that the printer displays very little vibration during operation, further enhancing print quality.

### Linear motor head carriage drive

Many hybrid printers use a belt drive to move the print carriage, often resulting in a reduced life span as well as impacting print quality. The Acuity Ultra Hybrid LED uses a linear motor drive for the head carriage delivering travel speeds of 1900mm per second when using the fast carriage travel speed. The carriage movement is quiet and free from vibration, travelling along dual rails with the carriage supported by 6 large race bearings.




**Uvijet UH ink**

Fujifilm has developed a new high performance LED curing ink for use in the Acuity Ultra Hybrid LED, specifically designed to give the adhesion performance needed in a hybrid solution. However, the ink still delivers the same high coverage and print quality as Fujifilm's other Uvijet AU and GS inks, with customers also able to benefit from the same low ink usage.

The Uvijet UH ink set consists of six standard colors (CMYKLcLm) and an optional white ink.

The printer can be configured with two white ink channels to maximize throughput speeds and print density.

The Acuity Ultra LED Hybrid with white ink allows flood white under-printing for non-white media, over-printing white for backlit applications on transparent media and/or printing white as a spot color. The new ink range has both Greenguard Gold and AgBB certification.

# Designed with the operator in mind

A range of advanced features have also been incorporated into the design of the Acuity Ultra Hybrid LED to improve operation and maximize uptime. These include:

- A second workspace with keyboard and monitor that mirror the functions of the PC that drives the machine, meaning a single user can operate the printer from either the input or the output sides of the machine
- Media tension buttons controlling the roll functions of the machine are located on both the input and output sides for ease of use
- The input media roller is adjustable, moving up and down, for improved tension, and to help keep the roll media flat and wrinkle free
- The durable aluminum media shafts cater for either single 3.3m rolls, or two rolls each up to 1.6m wide. The printer uses a special airshaft which allows two rolls of the same media having different diameters to be run at the same time

## Acuity Ultra Hybrid Speeds

| Roll Media | 0% Smoothing |
|---|---|
| **1 pass** | 3390 |
| **2 pass** | 3078 |
| **3 pass** | 2346 |
| **4 pass** | 1819 |
| **6 pass** | 1291 |
| **8 pass** | 990 |
| *speeds in ft²/hr | |

| Rigid Media | Media Size Portrait x2 | 0% Smoothing |
|---|---|---|
| **1 pass** | 8' x 4' board | 100 |
| **2 pass** | 8' x 4' board | 72 |
| **3 pass** | 8' x 4' board | 53 |
| **4 pass** | 8' x 4' board | 41 |
| **6 pass** | 8' x 4' board | 29 |
| **8 pass** | 8' x 4' board | 23 |
| *speeds in sheets per hour | | |

# Technical specifications

| Acuity Ultra Hybrid LED | |
|---|---|
| **Media** | Maximum width 130 in |
| **Print sizes** | Maximum width 130 in |
| **Ink range** | Fujifilm Uvijet UH ink, standard colors – CMYKLcLm – Optional white |
| **Ink reservoir** | Top loading 7 liter tanks for colors , 2 liter tanks for white |
| **Print head** | Up to 16 Kyocera KJ4A heads |
| **Number of nozzles** | 5,312 nozzles per color channel with white channel having 10,624 |
| **Print resolution** | Print resolution up to 1200 x 1200 dpi |
| **Productivity** | Up to 3,078 $ft^2$/hr for RTR, 53 sph for 8' x 4' sheets |
| **Curing system** | LED Lamp – lamp life minimum 5000 hours |
| **RIP** | ColorGATE Production server<br>Caldera |
| **Power supply machine** | 380- 400V 3 phase 50/60 Hz 20A, 18 kW consumption<br>(Vacuum motor: 380-440 V 3-ph+N+E, 50/60 HZ, 35A, 25 kW) |
| **Connectivity** | Connectivity Minimum 1000 base T |
| **Services** | Pressure (minimum): 8 $kg/cm^2$ (8.00 bar / 116 psi) |
| **Media Type – RTR** | Up to 0.078 in – PC, PET, UV textiles, Papers, SAV, Mesh, banner PVC |
| **Media Type – rigid** | Up to 2 in – Foam PVC, Rigid PVC, Dibond, PE Flute, Acrylic, P&B |
| **Media RTR – single roll** | 397 lbs x 14 in diameter x 10.5 ft width |
| **Media RTR – dual roll** | Each - 110 lbs x 14 in diameter x 5.25 ft width |
| **Media RTR on table rollers** | 44 lbs max weight |
| **Media capabilities rigid** | Max 3 $lbs/ft^2$ – Max single sheet weight on table 176 lbs |
| **Sheet sizes** | Minimum sheet size 20 x 28 in, Max 126 x 118 in (with table extensions) |
| **Environment** | 62-82° F, 40-80% RH (noncondensing) (Altitude 0-6,560 ft) |
| **Dimensions L x W x H** | Machine: 27 ft. 4 in. x 6 ft. 11 in. x 7 ft. 1/4 in.<br>Tables: 12 ft. 1 5/8 in. x 4 ft. 11 1/2 in. x 3 ft. 2 1/2 in. |
| **Working area recommended** | 406.69 in. x 340.55 x 110.24 in. |
| **Weight** | 18,300 lbs (Uncrated) |

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