



## CASE STUDY:

# Creating a green alternative to vinyl record production with Ricoh UV flatbed technology



Terenzi uses the RICOH Pro™ TF6251 UV flatbed printer to develop fast, scalable, and sustainable production of vinyl records using Greenyl — an innovative, eco-friendly material. Terenzi prints the name of the artist, songs, and album, plus graphics, directly onto both sides of the record.

## COMPANY & CHALLENGE

Founded in 1967, Terenzi Group helps companies turn ideas on the drawing board into concrete reality. Based in Milan, the group provides a full suite of product industrialisation services, including design, prototyping, optimisation, production, and assembly. Operating three main lines of business, Terenzi specialises in metal and plastic applications, such as interior furnishings, medical devices, and consumer products. In recent years, vinyl records have made a remarkable comeback, with annual sales now worth more than one billion dollars. For manufacturers, the trend presents a huge opportunity to press high volumes of records for music labels — but there's a problem: the polyvinyl chloride (PVC) traditionally used for records is one of the most environmentally damaging of all plastics, with production causing high levels of harmful chemical emissions.

Thankfully, manufacturing company Terenzi and established music label and publisher Rude Records have developed an innovative solution: Greenyl — a completely eco-friendly material made from recycled plastics, using sustainable production processes. The Greenyl discs are created using an industrial press, before Terenzi prints the name of the artist, songs, and album, plus graphics, directly onto both sides of the record.

During design and testing stages, Terenzi used a small printer with standard inks to add information to one Greenyl record at a time. As the company attracted interest and gained contracts from music labels, including requests for up to a thousand records for each artist, it was vital to scale up production.



Luca Terenzi, CEO at Terenzi, explains: "In the first year, we plan to produce around 500,000 Greenyl records, and, after that, we estimate volumes will increase even further. To achieve this, we needed a solution that would deliver high print speeds and productivity to keep lead times as short as possible for clients. And it was essential to create an energy efficient and eco-friendly workflow in line with our sustainability goals."

## SOLUTION

During a site visit, Terenzi turned to its partner Ricoh to find a way to print onto high volumes of Greenyl records. Ricoh evaluated the requirements in terms of speed, quality, sustainability, and costs, before running tests using UV flatbed devices. One key assessment criterion was the performance of Ricoh's eco-friendly UV inks when printed directly onto the face of the Greenyl records. The results were excellent, leading Terenzi to select the RICOH Pro TF6251 printer with ColorGATE Productionserver software.

Luca Terenzi continues: "Ricoh provided excellent guidance during the initial consultation, including a detailed Total Cost of Ownership analysis. As we increase production volumes, maintaining cost efficiency will be extremely important. This gave us added confidence to move forward with the proposed solutions."



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With the Pro TF6251, Terenzi prints onto 16 Greenyl records simultaneously. Newly pressed discs are placed onto a custom-made jig installed on the flatbed table. When printing on one side is complete, Terenzi flips the discs over to print the artist, song, and album information onto the reverse.

Terenzi offers Greenyl records in multiple colours: black, green, yellow, blue, and red, and with transparent or smoky effects. To ensure clarity of text and graphics on the discs, Terenzi chose Ricoh's Pro UV Ink GP120 formulations, which provide strong adhesion and colour consistency on plastic substrates. The company can use CMYK colours, plus white and clear inks to create more vibrant and unique graphics for different artists.

Luca Terenzi adds: "The colour capabilities of the Pro TF6251 are impressive, especially the option to use white and clear inks to create multilayered graphics. The precision and quality is excellent, allowing us to print very small text onto both sides of the record that remains completely legible."

## BENEFITS

Working with Ricoh has helped Terenzi take the innovative Greenyl concept from small scale testing to full industrial production. The combination of high print speeds, fast curing Ricoh UV inks, and the ability to print on multiple records simultaneously contributes to exceptional productivity. And as production volumes increase, the Pro TF6251 will enable Terenzi to deliver Greenyl records to music labels rapidly.

Luca Terenzi explains: "We initially questioned whether we could find a device to print directly onto records at high speed and scale, but the Pro TF6251 meets and exceeds our requirements. The instant cure UV inks enable us to start printing immediately onto the reverse of the record once the first side is finished. And when the second side is completed, we can place the record straight into a sleeve ready for packing and dispatch."

Equally important, the Ricoh solution enables Terenzi to keep production of Greenyl records fully sustainable and environmentally friendly: for example, printing directly onto the disc removes the need to produce a separate paper label.



In the coming years, we aim to produce well over one million records annually, so this is just the beginning — and we hope Ricoh will continue to support us on the journey.

*Luca Terenzi, CEO*



And Ricoh's UV inks carry a Greenguard Gold certification that demonstrates they have minimal environmental impact and low chemical emissions. Furthermore, the use of long life LED lamps in the Pro TF6251 to cure the inks helps to optimise energy efficiency and reduce power consumption.

Luca Terenzi concludes: "The Pro TF6251 forms a key component in the Greenyl production process. We will highlight our use of Ricoh's eco-friendly inks and sustainable production in our online content to promote the concept and attract new business. In the coming years, we aim to produce well over one million records annually, so this is just the beginning — and we hope Ricoh will continue to support us on the journey."





## ABOUT RICOH

Ricoh is empowering digital workplaces using innovative technologies and services that enable individuals to work smarter from anywhere. With cultivated knowledge and organisational capabilities nurtured over its 85 year history, Ricoh is a leading provider of digital services, information management, and print and imaging solutions designed to support digital transformation and optimise business performance.

Headquartered in Tokyo, Ricoh Group has major operations throughout the world and its products and services now reach customers in approximately 200 countries and regions. In the financial year ended March 2022, Ricoh Group had worldwide sales of 1,758 billion yen (approx. 14.5 billion USD).

For further information, please visit [www.ricoh-europe.com](http://www.ricoh-europe.com)

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