



New thread technology boosts security for banknotes

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Giesecke+Devrient

Giesecke+Devrient (G+D) has launched a new security thread for paper-based banknote substrates. The RollingStar i+ impresses with a variety of design options including textures, colors and dynamic effects. Brilliant motifs, movement and color shift purity when the banknote is tilted offer maximum protection against counterfeiting.

Central banks need to ensure simple, fast and reliable public authentication of their banknotes. Therefore, variable visual and dynamic effects, bold coloring and clear visibility of the security elements are essential.

RollingStar i+ is the new security thread in the RollingStar product range from Louisenthal, a fully owned subsidiary of G+D. The product range combines two security technologies: ColourShift for color changes and micro mirrors for dynamic effects arranged according to highly complex algorithms. With RollingStar i+, these two technologies have been developed after intensive research and elevated to a new level. RollingStar i+ – the i+ stands for "impact plus" – offers a new range of options in modern banknote design, dynamics and brilliance as well as a clearer color gradient.

An innovative multi-faceted sub structure and a highly sophisticated alignment and shaping of the micro mirrors enable an attractive optical design of the security thread. At the same time, the sub structure also offers expanded potential for customization and outstanding design integration possibilities. Each thread window can be assigned a specific motif. Central banks can thus optimally coordinate thread and banknote design.

The proven combination of dynamic effects and color shift reaches a new design level with RollingStar i+. Outstanding optical effects of color shifts and moving motifs ensure high attention in paper-based banknote substrates.

At the same time, the unique design options of the security thread pose a maximum challenge to counterfeiters. As usual in the RollingStar series, the new RollingStar i+ also offers proven magnetic machine readability. Last but not least, improved color homogeneity and an optimal color effect support fast and reliable authentication – even in low light conditions.

"Central banks need to innovate their banknotes with features that are visually attractive, counterfeit resilient and machine-readable. This is especially true with regard to security threads. Since banknotes are seen to act as a calling card for a country, all features need to play together in perfect harmony in the banknote design. A security thread should also offer sufficient options for design integration and individualisation towards country-specific motifs and themes," emphasises Dr Alfred Kraxenberger, Louisenthal Managing Director R&D, Technology and Production. "With our new RollingStar i+ security threads, we can cover these customer requirements entirely. They offer central banks numerous design possibilities through excellent color and dynamic effects and, in addition, the highest level of security."

The press release and high-resolution images can be downloaded [here](#).

About Giesecke+Devrient

Giesecke+Devrient (G+D) is a global security technology group headquartered in Munich. As a partner to organizations with highest demands, G+D engineers trust and secures essential values with its solutions. The company's innovative technology protects physical and digital payments, the connectivity of people and machines, the identity of people and objects, as well as digital infrastructures and confidential data.

G+D was founded in 1852. In the fiscal year 2020, the company generated a turnover of 2.31 billion euros with around 11,500 employees. G+D is represented by 74 subsidiaries and joint ventures in 32 countries. Further information: www.gi-de.com.