



A Process-Controlled Approach to a Traditionally Complex Substrate

Industrial Digital
Printing On Demand

High-Speed Digital Printing on Polyamide 6.6

Polyamide 6.6 is widely used in high-performance industrial applications due to its mechanical strength, thermal stability, and chemical resistance. These properties make it a preferred material in sectors such as automotive, electronics, medical devices, and tooling. However, the same characteristics that make Polyamide 6.6 valuable in end-use applications have historically made it a challenging substrate for direct digital printing.

The Challenge: Printing on a Resistant Material

Polyamide 6.6 is engineered to perform under extreme conditions. Unfortunately, those same characteristics have long made reliable printing difficult. Poor ink adhesion, sensitivity to temperature variations, and inconsistent results have forced manufacturers to rely on slower, multi-step processes or avoid direct printing altogether.

Recognising the growing demand for efficient, durable, and scalable printing on this material, Bergstein Digital invested heavily in research and development. The goal was clear: achieve consistent adhesion and durability on Polyamide 6.6 while maintaining the high-speed, single-pass advantages the DIGI-Series is known for.

Industry Impact: Enabling New Applications

The ability to print at high speed directly onto Polyamide 6.6 opens new possibilities across multiple industries. Manufacturers can now combine material performance with digital flexibility unlocking new design freedoms, faster time-to-market, and more efficient production processes.



The Solution: DIGI-Series Industrial Printers

The DIGI-Series printers are already recognized for their ability to print directly onto a wide range of materials and complex shapes. With this latest advancement, Polyamide 6.6 now joins that portfolio.



High-Speed Single-Pass Performance

Capable of reaching print speeds of up to 25 meters per minute, the DIGI-Series combines speed and precision in a single-pass configuration. High throughput no longer requires sacrificing print quality.



Superior Adhesion Across Substrates

By ensuring strong and consistent adhesion, printed designs remain intact and durable meeting the requirements of industrial environments where reliability is non-negotiable.



Modular and Customizable Architecture

Every production line is different. That's why the DIGI-Series features a highly modular design, allowing seamless integration of pre-treatment, priming, and curing modules. This flexibility ensures the system can be precisely tailored to specific production needs.



Precision Without Compromise

Advanced control systems guarantee consistent print quality, even at maximum speed. Integrated pre- and post-treatment options further enhance process stability and output reliability.



User-Centric Operation

The Human Machine Interface (HMI) is designed with operators in mind. Role-based access control, intuitive workflows, and remote support capabilities make daily operation efficient and troubleshooting straightforward.

The Breakthrough: Engineering Adhesion and Durability

01. Excellent adhesion

02. Long-lasting performance

03. Eliminating unnecessary process steps while improving production efficiency

Moving Forward: The Future of Industrial Printing on Polyamide 6.6

With the DIGI-Series, Bergstein Digital sets a new benchmark for industrial printing on challenging substrates. By combining advanced technology, modular system design, and proven single-pass performance, the company delivers a solution that not only meets today's requirements but anticipates tomorrow's demands.

Bergstein Digital invites industry professionals to explore how this innovation can transform their production processes and redefine what's possible in industrial printing on Polyamide 6.6.



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