

## Showcasing Precision: IECHO's High Speed Digital Cutting System for Foam Board at FESPA

# FESPA GLOBAL PRINT EXPO

**Hangzhou, Zhejiang May 6, 2026 ([IssueWire.com](http://IssueWire.com))** - The FESPA Global Print Expo has long served as a definitive compass for the wide-format printing and signage industries, attracting manufacturers and innovators from across the globe. At the most recent gathering, the floor buzzed with discussions surrounding automation and material versatility, particularly concerning rigid substrates. Among the technological highlights, the presence of the [Reliable High Speed Digital Cutting System for Foam Board](#) by IECHO garnered significant attention. International attendees and industry veterans noted the

seamless transition between complex intricate designs and heavy-duty industrial throughput. Observation from the exhibition floor suggested that visitors were particularly impressed by the machine's vibration-free operation even at peak velocities of **1800mm/s**, marking a shift toward more stable, intelligent finishing solutions in the competitive European and North American markets.

### Technical Synergy: Addressing the Specific Demands of Foam Board

Foam board, often referred to as foamcore, remains a staple in the advertising, exhibition, and architectural modeling sectors due to its lightweight nature and structural rigidity. It typically consists of a polystyrene foam core sandwiched between two layers of matte paper or plastic. While its versatility is undisputed, foam board presents unique challenges during the finishing process. Traditional manual cutting or low-speed mechanical systems often result in jagged edges, compression of the foam core, or tearing of the outer liners.

To maintain the structural integrity and aesthetic quality of the board, a cutting system must possess high-frequency oscillation capabilities and precision depth control. The market increasingly demands a [High Speed Digital Cutting System](#) that can mitigate these physical risks while maintaining a high output rate. This technical necessity is where the IECHO BK series finds its niche, bridging the gap between delicate artisanal finishing and robust industrial manufacturing.

### Integrated Technical Architecture: Precision Engineering for Rigid Substrates

The IECHO BK series is engineered as a versatile platform designed for continuous **24/7 production** environments. The system's structural integrity is rooted in a high-strength integrated frame, providing the necessary damping to maintain stability during rapid acceleration and deceleration. This is critical for foam board, where any lateral vibration can lead to micro-fractures in the fragile foam core.

- **Modular Tool System and Execution Precision**

A defining characteristic of the BK series is its modular tool head design, allowing for the rapid exchange of over **10 specialized cutting tools**.

- **Electric Oscillating Tool (EOT):** Specifically for foam board applications, the EOT operates at high-frequency oscillations to shear through cell structures without compression. This ensures a clean, vertical edge profile even on high-density substrates, eliminating the "crush" effect common in traditional knife cutting.
- **Technical Versatility:** Beyond the EOT, the system accommodates the **Universal Cutting Tool (UCT)** for through-cutting materials up to **5mm** thickness and the **Kiss Cut Tool (KCT)** for precision adhesive vinyl processing often laminated onto foam boards.
- **Accuracy Parameters:** The system achieves a repeated cutting precision of **±0.1mm**, significantly reducing waste in high-value graphic production.

- **Intelligent Motion Control and Vision Systems**

In high-speed operations, intelligence is the primary safeguard for accuracy. The BK system integrates a proprietary **Intelligent Vision System**, utilizing high-definition CCD cameras to recognize registration marks on printed foam boards.

- **Deformation Compensation:** The system automatically calculates and adjusts the cutting path

to compensate for material shrinkage or printing distortions, ensuring a high-fidelity alignment between graphics and the physical cut.

- **Automatic Surface Detection:** An integrated infrared sensor provides automatic table initialization and material thickness detection. This prevents over-cutting into the sacrificial felt mat and ensures consistent depth—a critical factor when dealing with the thickness variances common in bulk-manufactured foam boards.
- **Advanced Vacuum and Software Ecosystem**

The "intelligent" framework extends to the hardware-software synergy, optimizing the handling of lightweight rigid materials:

- **Intelligent Zoned Vacuum:** The system utilizes a partitioned vacuum suction table, where suction power is concentrated exclusively on the material's footprint. This localized high-pressure hold-down ensures foam board stability during high-G maneuvers.
- **Workflow Integration:** The IECHO software environment supports standard vector formats (PLT, DXF, PDF, etc.) and integrates seamlessly into global prepress workflows, allowing for rapid transition from design to finished product.

## Cross-Industry Application and Scalability

While foam board is a primary focus for the advertising sector, the BK series' technical parameters make it indispensable in sectors requiring high tolerances. In the composite materials sector, the same precision used for foamcore is applied to technical fabrics and honeycomb structures. In the automotive interior and textile industries, the system's ability to handle multi-layer cutting with consistent accuracy has proven essential for maintaining tight tolerances. The adaptability of the cutting heads means that a single investment can serve multiple production lines, a strategic advantage for enterprises looking to diversify their service offerings without a proportional increase in floor space.

## Corporate Foundation and Global Service Infrastructure

The reliability of a technical system is inherently linked to the stability of its manufacturer. Hangzhou IECHO Science & Technology Co., Ltd. (IECHO) has established itself as a global intelligent cutting solution supplier since its inception in 1996. Now a publicly-traded entity (Stock code: 688092), the company operates from a manufacturing base exceeding 60,000 square meters. With a workforce where R&D personnel account for over 30%, the focus remains steadfast on technological evolution and quality control.

The company's commitment to international standards is evidenced by its rigorous adherence to ISO quality **management** systems and its pursuit of global certifications such as CE and RoHS. These benchmarks ensure that the products delivered to over 100 countries meet the safety and environmental requirements of diverse regulatory landscapes.

IECHO's operational philosophy—"high-quality service as its purpose and customer demand as the guide"—is reflected in its extensive service network. Headquartered in Hangzhou, with branches in Guangzhou, Zhengzhou, and Hong Kong, the company maintains hundreds of distributors overseas. This structure supports a 7 \* 24 free service hotline, ensuring that industrial users can maintain high uptime and operational continuity.

As the non-metal cutting industry continues to transition toward automation and digitization, the role of

reliable, high-speed systems becomes increasingly central. By combining technical precision with a robust global support framework, IECHO continues to redefine the standards of intelligent cutting, empowering enterprises to achieve sustainable growth and technical excellence.

For more information on intelligent cutting solutions, please visit the official website:

<https://www.iechocutter.com/>



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