

Adhesive Equipment Advances with Smart Dispensing, Collaborative Robotics, and Eco-Friendly Systems | DataM Intelligence

Adhesive equipment evolves with automation, IoT, and eco-friendly UV/EB & hot-melt systems, boosting efficiency in automotive, electronics, and packaging.

MISSOURI, MO, UNITED STATES, July 30, 2025 /EINPresswire.com/ -- [Adhesive equipment Market](#) is fueled by growing demand for precision dispensing in automotive, electronics, packaging, and construction industries; increasing adoption of lightweight composite materials; and the need for efficient, high-speed production lines.

Advanced bonding techniques such as UV-curing, hot-melt, and 2K metering systems are enhancing product performance, reducing waste, and shortening cycle times. Applications include structural bonding in electric vehicles, micro-dispensing of conductive adhesives for wearable electronics, high-volume sealing in consumer packaging, and advanced composite assembly in wind-turbine blades. As

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Precision dispensing equipment combining robotics, real-time monitoring, and eco-friendly curing has become the backbone of modern manufacturing, driving efficiency and sustainability”

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manufacturers pursue automation and sustainability goals, integrated dispensing robotics with IoT connectivity and closed-loop quality monitoring are driving equipment upgrades, enabling real-time process control and predictive maintenance across diverse production environments. The Adhesive Equipment Market reached US\$ 23.6 billion in 2024 and is projected to expand at a CAGR of 6.2% through 2031, targeting approximately US\$ 32.0 billion by 2032.

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Adhesive equipment Market Recent Key Developments and Technological Advancements :-

July 2025 – Nordson Corporation launched its new AutoJet® 2650+ spray system with enhanced electrostatic atomization, delivering up to 30% better coating uniformity for thin-film adhesives in electronics manufacturing.

June 2025 – Henkel introduced a collaborative robot (cobot) dispensing cell featuring its latest Loctite® 2K adhesives, offering plug-and-play integration and real-time viscosity monitoring for small-batch and prototype lines.

May 2025 – 3M unveiled the Accuspray AB1000 automatic bead applicator, featuring automated width adjustment and closed-loop flow control for consistent sealant application in automotive seam sealing.

April 2025 – Valco Melton released its VisionXpert™ system, embedding machine-vision sensors into adhesive heads to verify bead placement and dimension within ± 0.1 mm, reducing rework and waste in plastic assembly.

Adhesive equipment Market Acquisitions and Mergers :-

In Q2-2025, ITW Dynatech acquired Adhesive & Equipment, expanding its portfolio in precision micro-dispensing for medical device and semiconductor packaging applications.

Robatech finalized the purchase of a European nozzle-design specialist in June 2025, enabling in-house development of anti-string and anti-drip dispensing tips for high-throughput industries.

Dymax Corporation formed a strategic alliance with Dispensing Limited in May 2025, combining Dymax's UV-curable adhesives with Dispensing Limited's automated dosing platforms to target flat-panel display and optical bonding markets.

Adhesive equipment Market Opportunities :-

Electric Vehicles & Composites: Growing EV production drives demand for automated adhesive dispensing systems capable of handling structural epoxy and silicone adhesives for lightweight composite bonding.

Smart Manufacturing & Industry 4.0: Integration of IoT sensors, predictive analytics, and cloud-based process monitoring creates opportunities for retrofit solutions and digital service offerings.

In the healthcare and medical devices sector, the precise micro-dispensing of biocompatible

adhesives and sealants is emerging as a rapidly growing niche, particularly in applications such as implantable devices and point-of-care diagnostics.

Sustainable Packaging: Water-based and hot-melt adhesive equipment that reduce VOC emissions align with environmental regulations, driving upgrades in food and beverage lines.

Aerospace Assembly: High-temperature-resistant dispensing systems for structural adhesives in aircraft interiors and engine composites require specialized metering and mixing units, representing a high-margin segment.

Adhesive equipment Market Key Players are :-

Henkel

Hernon Manufacturing Inc.

ITW Dynatech

3M

Dispensing Limited

Nordson Corporation

Valco Melton

Adhesive & Equipment

Robatech

Dymax Corporation

Adhesive equipment Market Segmentation :-

By Technology

Hot-Melt Adhesive Systems; UV/EB Curing Equipment; 1K & 2K Metering Machines; Spray & Bead Applicators

By Automation

Level Manual Dispensing; Semi-Automatic Systems; Fully Automated Robotic Cells

By Application

Structural Bonding; Sealing & Gasketing; Electronic Potting; Micro-Dispensing; Packaging Sealing

By End-Use

Industry Automotive & EV; Electronics & Semiconductors; Packaging; Medical & Healthcare; Aerospace; Construction

By Region

North America; Europe; Asia-Pacific; Latin America; Middle East & Africa

Latest News – USA

In July 2025, the U.S. Department of Energy awarded a grant to 3M and ITW Dynatech to develop energy-efficient hot-melt extruders for large-scale palletizing operations. In June 2025, Nordson Corporation opened a new automation center in Detroit, focusing on integrating its AutoJet systems into smart-factory applications for the automotive supply chain. In May 2025, Henkel announced expansion of its Irvine, California, technical laboratory to support UV-curing adhesive trials for semiconductor packaging.

Latest News – Japan

In July 2025, Dispensing Limited partnered with Toyota Motor Corporation to pilot collaborative dispensing robots for structural adhesive bonding in EV battery packs. In June 2025, Robatech inaugurated its first Asia-Pacific R&D hub in Osaka, Japan, focusing on nozzle innovation for precision optical adhesives. In April 2025, Dymax Corporation and Sony Semiconductor co-developed a micro-dispensing system for under-fill and die-attach applications in Japan's advanced image-sensor fabrication lines.

Conclusion

The adhesive equipment market is evolving rapidly as end-use industries seek faster throughput, higher precision, and lower environmental impact in bonding and sealing operations. Technological advancements spanning smart metering, vision-guided dispensing, and collaborative robotics—are enabling next-generation manufacturing lines in automotive, electronics, healthcare, and packaging. Strategic acquisitions and partnerships are consolidating specialized nozzle, metering, and curing expertise, while Industry 4.0 integration opens avenues for digital services and predictive maintenance. As sustainability imperatives drive the shift toward water-based and energy-efficient adhesive processes, equipment suppliers that offer flexible, connected, and eco-friendly solutions will capture the greatest growth through 2031.

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Sai Kumar

DataM Intelligence 4market Research LLP

+1 877-441-4866

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