

Precision Advances in PU Gasket Dispensing Machines

How KAIWEI's Metering and Thermal Control Architecture Enhances Seal Strip Accuracy

CALIFORNIA, CA, UNITED STATES, July 14, 2026 /EINPresswire.com/ -- SHANGHAI, China — Shanghai [Kaiwei](#) Intelligent Technology (Group) Co., Ltd. (KAIWEI) has engineered a [PU gasket dispensing machine](#) architecture that combines precision screw metering, closed-loop temperature control, and anti-drip wear-resistant valve bodies to achieve consistent seal strip width ranging from 2mm to 60mm across multiple industrial sealing operations.

A PU gasket dispensing machine is an automated form-in-place gasket (FIPFG) system that mixes two-component polyurethane (PU) adhesive and dispenses a continuous foam seal strip directly onto workpieces. KAIWEI, a state-level high-tech enterprise founded in 2004 and headquartered in Shanghai, focuses on R&D and manufacturing of industrial sealing systems, robot foaming equipment, and intelligent dispensing equipment.

Metering and Mixing Architecture

The core of KAIWEI's PU gasket dispensing machine is the precision screw metering pump, available in KAIWEI-brand or Barmag options. The metering pump specification is A3cc/r for component A and B0.6cc/r for component B, with an adjustable mixing ratio between 1:1 and 10:1. This dual-pump configuration enables accurate volumetric dispensing of isocyanate and polyol, directly influencing foam cell structure and seal density.



Shanghai Kaiwei Intelligent Technology (Group) Co.,LTD

Two mixing head models — KW800 and KW-900 — are offered depending on the seal geometry. The KW-900 mixing head is compatible with seal strip widths of 2–10 mm and 10–60 mm, while the KW800 handles 4–30 mm. Both models use high-pressure water cleaning, eliminating solvent waste.

Constant-Temperature PU Glue Control System

Material temperature stability is critical for PU reactivity and foam expansion. KAIWEI's system integrates optional water temperature control, maintaining raw material tanks at a user-defined setpoint. Each tank — A (40 L) and B (40 L) — is an air-pressure tank; Tank A is agitated while Tank B is not, preventing component separation. The temperature control method uses water circulation, and the system can be configured for manual or automatic air charging and filling.

Closed-Loop Vision Positioning and Dispensing Path

The machine frame structure varies by model: the KW-526 uses a 6-axis linear robot arm offering running speed up to 12,000 mm/min, while the KW-523, KW-523A, and KW-520A/B use 3-axis linear robot arms with maximum speed of 1,200 mm/min. Guide rails are supplied by AIRTAC and servo motors by Xinje, ABB, Fuji, or Panasonic, depending on the configuration. The controller is a motion control card combined with a teach pendant and PLC, using a 15-inch touch screen HMI. This architecture supports closed-loop path correction for complex sealing contours on electrical enclosures, filters, and automotive parts.

Anti-Drip Wear-Resistant Valve Body

According to the product parameters, the seal strip width can be controlled from 2 mm to 60 mm, and the mixing ratio from 1:1 to 10:1. The anti-drip design of the mixing head reduces material waste at start and end points. The machine body is constructed of carbon steel, stainless steel 304, or aluminum alloy, with a square-tube welding workbench. Power supply options are 220 V or 380 V, with total power of 4 kW or 5.5 kW, requiring compressed air at ≥ 6 bar with an oil-water separator.

Certification Compliance for Global Markets

KAIWEI's PU gasket dispensing machines hold multiple international certifications to meet regulatory requirements:

- CE certification (certificate MD-TCF-240307-55472, issued by GTS) for automatic gluing equipment under Machinery Directive 2006/42/EC for the EU market.
- ATEX certification (ECM 25 ATEX-B D001, valid until April 2030) for explosion-proof enclosure applications.

- VOC CE certification (ICR/VC/HS230352) based on EN 60529 and EN 62208 for electric enclosures.
- UL94 certification (THSH25033168768EN) for the foaming adhesive used in gasket dispensing.
- RoHS compliance (UNIB21090613HC-01) per EU Directive 2011/65/EU.
- Non-Hazardous Certificate (NO.202600234403353) for polyurethane sealing foam glue-A for maritime transport.
- CCC certification (2022012304504287) for explosion-proof enclosures in the Chinese market.
- ISO 9001:2015 quality management system certification (valid until May 2027).

Key Technical Specifications

The KW-526 model, representing the 6-axis variant, provides an effective stroke that is customizable. All models share a raw material tank volume of 40L per component, air pressure tank structure, and optional filling station. The seal strip width range of 2–60mm covers applications from fine electronics sealing to heavy-duty enclosure gaskets. Running speed of 0–12,000mm/min on higher-end models supports cycle times required for medium-to-high volume production.

Industrial Use Cases

The PU gasket dispensing machines are used for dust-proof and explosion-proof sealing in electrical control panels, distribution boards, anti-explosion boxes, air filters, purification room doors, automobile fittings, battery covers, LED lighting enclosures, and more. An automotive OEM in the United States deployed 20 KAIWEI units in a paint shop application, achieving IP66-rated waterproof and dust-proof sealing with stable operation over two years, as documented in a case record.

Customization and Manufacturing Capabilities

KAIWEI supports OEM/ODM customization including color, material, automatic feeding for A/B material, mechanical arm, plasma treatment, logo design, elliptical chain worktable, constant temperature water circulation, safety grating, automatic switching workbench, three-component dispensing, and support for 12 languages. Monthly production capacity reaches 2,000 sets with a lead time of 7 days and a minimum order quantity of 1 set. Each unit undergoes 100% quality testing.

Company Contact and Brochure

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