Automatic 3-Axis AB Glue Dispensing Robot for Silicone & Epoxy JW-GL02

Model No. JW-GL02



SPECIFICATIONS

Dispensing Types	Dots, Lines, Complex Patterns
Axis Configuration	Three-Axis Robot
Adhesive Compatibility	Silicone, AB Glue, Epoxy Resin, Two-Component Adhesives
Mixing Ratio	10:1
Application	Industrial Cable Harness Manufacturing

JW-GL02 is a three-axis dispensing robot for two-component adhesives, metering A and B at a 10:1 mixing ratio and applying dots, lines and complex patterns. It handles silicone, AB glue, epoxy resin and other two-component adhesives, and is built for industrial cable harness manufacturing.

Two-part adhesive fails at the mix, not at the nozzle: a ratio that drifts by a few percent leaves a tacky or brittle joint that only shows up after cure. GL02 meters the two components at 10:1 and mixes at the dispensing head, so the ratio is set by the machine rather than by an operator counting strokes. Twin pressure tanks on the frame hold A and B separately, and the pneumatic cabinet below carries the regulators and valves that keep both feed pressures stable through the shift.

The three glue machines differ by adhesive and by control. GL01 is a bench robot for single-component adhesives from a syringe, GL03 is a bench robot with a dedicated dispenser control system and computer-graphics input, and GL02 is the floor-standing two-component unit with 10:1 metering and tank feed for harness production.

Key Features

1. 10:1 metering of A and B, with the two components mixed at the dispensing head so the ratio is set by the machine, not by the operator.

2. Twin pressure tanks hold A and B separately, keeping both feed pressures constant through a production shift.

3. Three-axis motion covering dots, lines and complex patterns, programmed as a path rather than as a series of manual passes.

4. Accepts silicone, AB glue, epoxy resin and other two-component adhesives, covering both structural bonding and sealing.

5. Floor-standing frame with a touch screen HMI and push-button panel, plus a stack light for cycle status at a distance.

6. Pneumatic control cabinet below the work surface carries the regulators and valves for both component lines, away from the dispensing area.

Technical Specifications

Parameter	Specification
Model	JW-GL02
Machine type	3-axis AB glue dispensing robot, floor-standing
Axis configuration	3 axes
Dispensing types	Dots, lines, complex patterns
Adhesives	Silicone, AB glue, epoxy resin, two-component adhesives
Mixing ratio	10:1
Control	Touch screen HMI with push-button panel
Adhesive supply	Twin pressure tanks with pneumatic control cabinet
Application	Industrial cable harness manufacturing

Applications

— Cable harness overmoulding preparation - two-part epoxy or silicone applied at the breakout and connector backshell before moulding.

— Harness strain relief - AB adhesive beads at the jacket-to-connector transition, dispensed to a stored path.

— Automotive harness sealing - two-component sealant lines on grommet seats and connector cavities.

— Sensor and relay encapsulation - epoxy dots and lines on housings where the mixed ratio controls cure hardness.

— Control box assembly - structural bonding of cable entries and internal brackets with 10:1 metered adhesive.

FAQ

What is the primary application of the Automatic 3-Axis AB Glue Dispensing Robot?

This robot is engineered for high-precision dispensing of two-component (AB) adhesives, silicones, and epoxies. It is ideal for applications requiring consistent dots, lines, or complex coating patterns, making it perfect for industries like cable harness manufacturing, electronics assembly, and any process requiring reliable, automated adhesive application.

How does the 3-axis movement benefit the dispensing process?

The 3-axis (X, Y, Z) robotic movement provides full volumetric control, allowing the dispenser head to navigate complex paths and three-dimensional surfaces with high accuracy. This ensures uniform adhesive deposition, eliminates human error, and enables the automation of intricate patterns, significantly improving repeatability and product quality in industrial settings.

What types of materials can this machine dispense?

This machine is specifically designed for two-component materials, including AB adhesives (like epoxy and polyurethane), silicones, and other resin-based compounds. Its precision metering and mixing system ensures the correct ratio of resin and hardener is maintained, which is critical for the performance and curing of these materials.

What makes this dispenser suitable for cable harness manufacturing?

In cable harness production, precise application of potting, sealing, or strain relief compounds is crucial. This robot offers the accuracy and programmability needed for consistent glue dots or lines on connectors and wire junctions. Its automation increases throughput, ensures process repeatability, and reduces material waste, making it a key piece of cable harness manufacturing equipment.

What are the key efficiency and durability features of this industrial adhesive applicator?

Built for industrial environments, the dispenser features a robust mechanical structure, precision servo motors, and a durable dispensing valve system. It offers high-speed operation, easy programming for different patterns, and minimal maintenance requirements. These features combine to deliver long-term reliability, reduced operational costs, and a high return on investment through consistent, efficient production.