

AUTOMATION

A L T E R N A T I V E S

FLEXSeal *Solar Module Edge Sealing System* by **Automation Alternatives**, is an innovative solution for precise and challenging dispensing applications. It delivers homogeneous continuous ribbon or bead of materials for a variety of applications, specifically, solar panel manufacturing. Precision and consistency of **FlexSeal** combined with its high operating speed significantly improves productivity and guarantees a quick return on investment.



Applications

FlexSeal is an ideal solution for applications such as solar panel manufacturing, smart window glass, insulated glass and similar applications where precise and controlled bead or ribbon of high viscosity sealing material is essential. The machine applies a flawless bead or ribbon of material around the perimeter or anywhere on the surface of the substrate. The unique articulating dispensing head of the machine with 360° of rotation provides uniform continuous ribbon with

round or square corners that are crucial for reliable and long-lasting, leak-proof seals. This is far more reliable than other sealing techniques including taping.

Cost Benefits

FlexSeal has a computer-controlled dispensing system that guarantees ultimate precision and consistency of the bead for critical applications. It delivers excellent results for challenging bead specifications using materials from low to very high viscosity. FlexSeal's high throughput, accurately controllable material usage and extremely repeatable bead quality reduce production cost and provide significant savings in cost of material and off-spec products.

Materials

FlexSeal produces perfect results with a variety of materials especially high viscosity hot-melt sealing materials.

Software and Controls

FlexSeal is easy-to-operate and is controlled by powerful, user friendly software. Its integral industrial computer is pre-configured and loaded with all the necessary software. The system can easily create dispense patterns or import more elaborate patterns from CAD packages. PLC-based systems are also available for compatibility with balance-of-plant systems if required.

Vision System

FlexSeal can have optional vision systems for registration and verification and inspection of dispense patterns and profiles.

Material Delivery system

FlexSeal will be equipped with integral single or tandem material delivery system with automatic and quick drum changeover or pails to eliminate downtime.

Material Handling

The system can easily be integrated in fully automated production lines. Upstream and downstream material handling systems, including loading and unloading conveyors, inline inspection and sorting systems can also be supplied as part of a turn-key package.

Technology Partner

In order to guaranty ultimate performance in handling and applying high viscosity materials, each system includes a matching high performance material delivery system from Graco, Inc., an industry leader in fluid handling systems. This combination, provides a single-source responsibility for the entire package and peace of mind for the end user.



Round or Square Corners

Technical Specifications

General		
Working Area	Up to 2,000 mm x 2,000 mm	Per request
Application	Inline or standalone	Short or Long Edge Leading
Vacuum Table	Precisely Machined	Optional built-in Transfer Conveyor
Material Handling	For Upstream and Downstream	Optional
Bead Placement Accuracy	Better than 0.2 mm	
Bead Placement Repeatability	Better than 0.15 mm	
Motion System	High performance servo system	
Bead Vision Inspection System		Optional
Enclosure	Designed for Safe Operation	
Measuring Units	Imperial and Metric	
Adhesive Delivery System		
Delivery System	Single or tandem	Ambient to Hot-melt
Metering Pump	Precision Gear	Computer Controlled
Flow Rate	To suit application	
Fluid Viscosity Range	1,000 – over 1,000,000 cps	
Dispensing head	360° Articulating	Ribbon, round or square corners
Tandem Configuration	Drums or Pails	Optional
Hardware and Software Systems		
Industrial PC	Rack-mount C/W LCD and keyboard	Includes PLC interface and HMI
Operating System	Windows 7	
Control Software	FlexSeal C/W integrated vision	



Automated Edge-Seal Line with Inline bead Inspection

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