

COATING & CONVERTING INDUSTRIES

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Adhesive Dispensing & Quality Assurance Systems



# THE SMART SOLUTION

## THE NEW GENERATION OF ADHESIVE MELTERS

The SmartMelt Series is the newest generation of PLC based melting and adhesive dispensing units developed by Valco Melton.



## **SMART CONTROL**



Smart Control allows the operator to visualize and manage the complete hot melt dispensing system (drum unloaders, melters, applicators, and accessories). Easily control your working process, create recipes, modify parameters, and program alarms. The system also generates and displays adhesive usage reports and simplifies maintenance monitoring with scheduled notifications when maintenance or replacements are required (resistors, modules, pumps, filters...).

## **>>>**

### **SmartMelt Series Adhesive Melters**

Achieve an accurate control of the amount of glue applied, even at full production speeds, to optimize adhesive usage. SmartMelt Series Units guarantee efficiency by reducing rejects during the acceleration ramp.

SmartMelt's digital IO interface connector, as well as the external communiation protocols are fully compatible with market standards, so additional technical support is not required at the time parts are replaced. All the electronic components used in SmartMelt units are commercially available.



### 💓 SmartDrum & SDrum

Valco Melton's SmartDrum and SDrum Unloaders achieve high melting rates with a number of adhesive types.

Featuring an innovative integrated control system, these drum unloaders are ideal for continuous operations that require the use of multiple drum unloaders working simultaneously. This new system can control up to 8 drum unloaders, sending a signal to the necessary untis based on the current production needs. It also features an alarm system that notifies when each drum needs to be changed.



## **SMART ARCHITECTURE**

What sets the SmartMelt Series apart is the posibility to perform system upgrades by simply adding SmartBoxes as production demands change. There are four different upgrade kits available, which can be easily added to the melter at a later time, with no additional technical suppor required.



Smart Drive

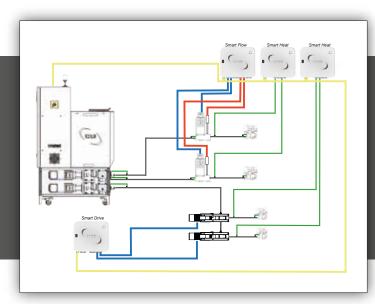
Up to 2 Smart Drive compact boxes with 2 frequency drives and 4 inputs for pressure reading to add extra pump control and process diagnostics



Smart Flow Up to 2 Smart Flow compact boxes, each with up to 4 flow meters and 4 pressure transducers



Smart Heat Up to 2 Smart Heat compact boxes for extra temperature channels with 4 hose/head connectors



## **EXTRUDERS**

Valco Melton's MEX Extruder Series achieve the highest melting rates when working with adhesives delivered in granulate format, such as EVA, PO, PA or polyester, and provides a constant, homogeneous adhesive flow.

Melt-on-demand technology preserves adhesive properties, preventing degradation, while extrusion technology eliminates the need for cleaning when switching between adhesive types.





# HOT MELT APPLICATION TECHNOLOGIES

## **FlexCoat Series Applicators**

FlexCoat Series is a highly flexible range of hot melt applicators, designed to allow faster work changes between continuous, intermittent, off-roll, and rotating bar applications by simply replacing the nozzle.

- Easy nozzle removal mechanism
- Nozzles can be turned to allow lamination in both directions
- Can work with MP II, MI III, and MPH-RM modules to adapt to application requirements

#### TAILORED TO YOUR PRODUCTION REQUIREMENTS



### Module Options

MP II Modules are designed for continuous applications. For high-speed applications, MI III Modules guarantee a sharp cut-off. MPH-RM Modules feature a micro-regulation system, making them ideal for applications where extreme precision on the adhesive dosage is required.



### Nozzle Options

FlexCoat and Akura applicators allow for simple changes from one nozzle type to another. Options available include rotating bar (1), continuous (2), intermittent (3), and off-roll (4). All nozzles can be turned to allow lamination in both directions.



**Akura Series Applicators** 



#### Akura M

Achieve uniform coatings at the lowest grammages with controlled adhesive dosing.

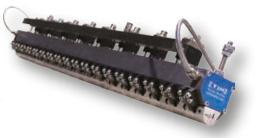
- A stream gear pump independently meters each module for immediate hydraulic response, guaranteeing an even cross-web adhesive distribution, even during machine ramp-up, and without the need for individual module adjustments.
- Easily switch from continuus to rotating bar applications by simply replacing the nozzle. Additionally, switch to curtain coating nozzles to apply a thin coat of hot melt adhesive without direct contact between the substrate and the coating die.



Akura PF & PFL

Adapt to any adhesive coating application requirement up to 2200 mm width.

- Quick-change nozzle mechanism for faster changes between continuous, off-roll, and rotating bar applications.
- For applicator widths up to 1100 mm, an intermittent nozzle option is also available.





Configure separate or overlapping adhesive application zones to

match your specific production needs. An innovative dual nozzle

integrates two separate shims, each one configured to create

a different pattern, wich can

be applied in succession or simultaneously. Patterns can be easily changed by replacing shims.

FlexCoat Dual Nozzle

## ConvertCoat Applicators

Rotating bar technology offers reliable coat weight control and streak-free finish, making these applicators ideal for clear to clear applications, transparent labels, adhesive tapes and flexible packaging.

- Servo-driven nozzle bar runs in the same direction as the product to create a uniform, streak-free, coating of adhesive across the full substrate width. Additionally, this rotating bar technology prevents even the smallest contaminants from becoming trapped between the die and the substrate, eliminating the potential risk of damage to the coating surface.
- Coat weight adjustments are done inside the applicator and independent of the blade. Pattern changes can be made without re-adjustment.
- Interchangeable blades allow for width and pattern changes.



ConvertCoat Applicators allow for easy changes between rotating bar and slot die applications



### **Endurance Series Applicators**

Endurance Series adjustable width applicators can feature manual, motorized, or automatic width regulation systems, and can work on continuous or off-roll application processes.

EA Adjustable Width Applicators feature manual, motorized or automatic width regulation systems

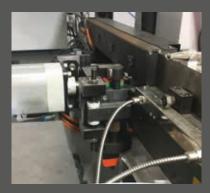
### **Bracket Options**

Utilizing the appropriate mounting bracket guarantees a correct adhesive penetration, coat-weight, and easy pattern adjustments.

Against-roll mount assemblies ensure that the coating head is accurately and consistently presented against the substrate and back up roll for minimal job-to-job alterations.

Off-roll mount assemblies allow for changes in substrate thickness. By maintaining a stable tension at the coating area, this bracket keeps the substrate in continuous contact with the die.







## **COMPLETE COATING SYSTEMS**

Valco Melton's Adhesive Coating Systems provide uniform and reliable adhesive application on continuous or intermittent products.

Our Coating Systems are manufactured with two substantial side plates and house the extrusion die, die mount, precision EPDM rubber or chrome coating roller, motorized back up roll and any necessary path and nip rolls to suit the specifications of the project.

Valco Melton extrusion dies and precision die mounts with micro-adjustments are also offered as an integral feature within the ConvertCoat and ProCoat systems.





Designed to allow simple changes between rotating bar and slot die applications, ConvertCoat stations perform homogeneous, flawless coatings up to 1600 mm wide. Ideally suited for continuous adhesive applications when working with clear-to-clear, transparent labels, adhesive tapes and flexible packaging.



#### ProCoat

ProCoat Stations bring enhanced flexibility to your production line. From continuous adhesive coatings to high-speed, intermittent applications, window frame patterns, or the lowest grammage, rotating bar applications, this range of coating stations can be customized to fit your specific requirements.





# **ACCESSORIES & UPGRADES**

Valco Melton offers a wide range of accessories and upgrade options to adapt to you own specific production line requirements, including adhesive dosing upgrade options like pressure transducers, flow metering systems or pumping stations.





### **EBS Pumping Stations**

EBS remote metering stations provide a flexible solution for multiple dosing points with added consistency and pattern stability.



### **Flow Control**

SmartFlow controllers feature a programmable mapping of input and output signals to control different production lines with independent product specifications. This intelligent system continuously monitors the amount of adhesive dispensed and compares it to the application's set point; When the actual flow rate deviates from the set point, the SmartFlow system automatically adjusts the pump speed.





#### **Pressure Transducers**

Pressure transducers can be configured to set an alarm when they detect variations in the adhesive flow, temperature or viscosity. When feeding pumping stations or a metering coating head, they work on closed loop with the motor control to maintain a constant output pressure. Pressure boost mode guarantees a constant flow during machine ramp up and down.

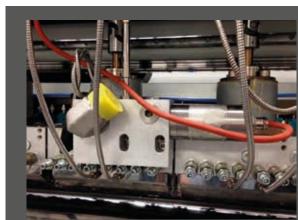


## Static Mixers

When installed on the coating head adhesive input, static mixers homogenize the temperature and viscosity of the adhesive flow. They are also frequently used in combination with flow control systems to mix precise amounts of adhesives and additives.

## >>> Viscosimeter

Viscosity changes have a negative impact on the adhesive flow and pattern positioning. Integrating an in-line viscosimeter allows the system to keep constant adhesive viscosity through a closed loop with the temperature control system, stabilizing the manufacturing process.



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