



MYSmart™ series MYC50 In-Line Coating



High-productivity, high-precision
Conformal coating systems

MYCRONIC
When passion meets innovation ●

Introducing The Myc50 Platform

High-Performance Conformal Coating Systems

As electronics continually become embedded into an endless variety of products, the need for high-precision conformal coating is greater than ever before. By automating complex coating processes, monitoring process parameters and switching spray patterns without interruption, the MYC50 gives you powerful, software-driven process flows that ensure years of productivity for even the most complex printed circuit boards.

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1. Fast and stable operation.
 2. Spray patterns can be changed on the fly, thus significantly improving process efficiency.
 3. Flexible multi-axis control enables precise coating of complex PCBs.
 4. Powerful process controls result in precise coating that consistently meet strict quality guidelines.
 5. Barcode reader enables automatic program loading and traceability.





- Fast and stable operation
- Automated spray pattern changeovers
- Flexible multi-axis control for complex processes
- Powerful process controls enhance quality
- Barcode-defined program selection

The MYSmart series MYC50 in-line conformal coating platform combines high-accuracy edge definition with advanced feedback systems. A wide range of process parameters can be monitored enabling high quality output. Options such as fan width control, flow monitoring non-heated circulation systems, heated circulation systems and barcode readers are a few examples of process control enhancements that are possible. Wherever ruggedized electronics are required, the MYC50 helps to prevent material waste while ensuring highly controlled coating film thickness, coating area and process speed.

APPLICATIONS

- Consumer electronics
- Industrial electronics
- Household appliances
- Automotive electronic control panels
- Military electronics
- Computer control panels
- Agricultural equipment control panels
- Battery protection boards
- Led lighting
- Outdoor led displays
- Converter circuit boards
- Security control panels
- Motor control boards
- Power management devices

SMART COATING MADE SIMPLE

The MYC50 is built upon years of coating experience, condensing that knowledge into a robust, easy-to-use system. The result is a highly capable platform that's simple to program and operate, yet powerful enough to add increasing value to your in-line operations as volume, complexity and automation demands grow, which could give you more ways than ever before to handle tomorrow's production challenges.



Highly Configurable For Precise Conformal Coating Results

The MYC50's high-precision platform, multi-angle rotation configuration and flexible software operation ensures perfect selective conformal coating output.

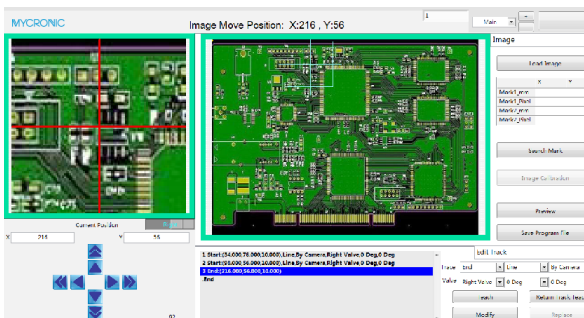
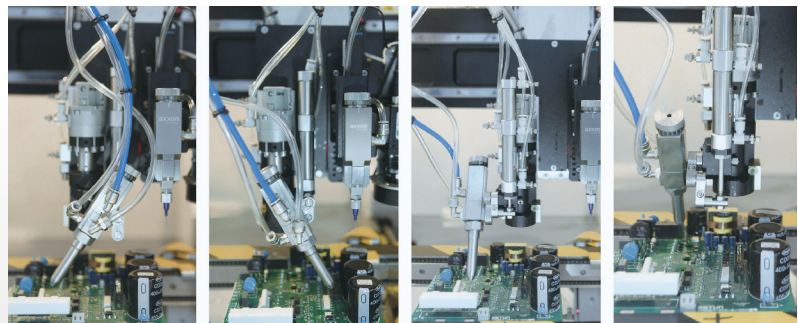


HIGH SPEED, HIGH PRECISION MOTION PLATFORM

- Robust design of frame structure and axis
- High precision ball screw and AC servo motor
- High speed operation with extreme precision

ANGLE AND ROTATE COATING CAPABILITIES

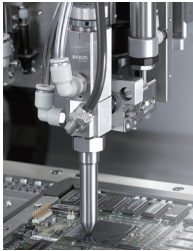
- Four-direction tilting
- Software controlled
- Modular design for easy installation and removal
- Suitable for V-5000 and V-420A



INTUITIVE SOFTWARE DESIGN

- Offline programming
- Easy software to operate and learn
- Rich functionality to meet complex processes
- A variety of program input methods including camera teaching

Valve Configurations For Every Application



THREE MODE VALVE V-5000

V-5000 is suitable for middle to low viscosity fluids. The three modes are line, swirl and spray. The V-5000 valve has high edge definition and good balance between efficiency and effect.

FEATURES AND ADVANTAGES

- Controlled film thickness at high speed
- Viscosity range: 500-10,000 CPS
- Optional 360 degree rotation structure
- Easy maintenance



NEEDLE VALVE V-420A

The V-420A needle valve is suitable for low viscosity materials and mainly used in selective coating applications. Maximum dispensing speed is 100 dots/s. For tall component coating areas and very small tolerances of noncoating requirements, the best choice is V-420A configured with spray or film valve.

FEATURES AND ADVANTAGES

- Good sealing effect, especially for low viscosity materials
- Cost effective
- Simple structure and easy maintenance
- Flexible needle sizes and changeable needles
- Adjustable flow rate by parameter settings
- High precision dispensing accuracy



FILM VALVE V-5400

The V-5400 film coating valve is suitable for low viscosity fluids and solvent-based materials. A special nozzle structure enables the material to be applied in a non-atomized manner, with a utilization rate of up to 99%. Optional sizes of nozzles help achieve the best results of film width and thickness for your application.

FEATURES AND ADVANTAGES

- Non-atomizing mode reduces emissions
- Adjustable film width and high transfer efficiency
- High material utilization, reduced waste, and low cost
- Optional 90 degree rotation of film direction
- No masking required



LOW PRESSURE SPRAY VALVE V-5800

The V-5800 low pressure spray valve is for medium and low viscosity fluids. It can achieve a small width and a thin film thickness, ideal choice for precision selective spraying and thin deposition requirements.

FEATURES AND ADVANTAGES

- Low spray pressure
- Thin coating thickness
- Viscosity range: 0--10000cps



HIGH PRESSURE VALVE V-300HP

The V-300HP high pressure valve is a dispensing/ potting valve for medium to high viscosity fluids. The unique stainless steel balance shaft design ensures dispensing stability at high pressure situation. The powerful drawback function ensures clear cut-off and consistent dispensing result.

FEATURES AND ADVANTAGES

- Draw-back function, clean material cut-off
- Can bear 3000 psi high pressure
- Replaceable needle design
- Viscosity range: ≥ 10000 cps

MYC50 In-Line Specification

MOTION SYSTEM

X,Y AXIS	Z AXIS
X, Y speed: max 800 mm/s	Z axis speed: max. 300 mm/s
X, Y acceleration: max. (0.8g peak with s-curves)	Z axis acceleration: max. (0.3g peak with s-curves)
X, Y repeatability: $\pm 25 \mu\text{m}$, 3σ	Z axis repeatability: $\pm 25 \mu\text{m}$, 3σ
X, Y drive mode: servo motor, ball screw	Z axis drive mode: servo motor, ball screw

D AXIS

Rotation angle: ± 90 degrees	Valve rotation axis
Repeatability: ± 0.1 degree	Rotation angle: ± 30 degrees
Drive mode: cylinder	Repeatability: ± 0.1 degree

WORK AREA

ONE WORK STATION (WITH CAMERA)	TWO WORK STATIONS (WITH CAMERA)
Single valve max: 590*450 mm	Single valve max: 450*450 mm
(V-5000 + V-420A) max : 550*440 mm	V-5000+V-420A max: 450*440mm
V-5000 tilting module + V-420A max : 540 * 360 mm	V-5000 tilting module + V-420A max: 450*360 mm
Three valves max: 520*440mm	Three valves max: 450*440mm
/	Max. clearance above and below PCB: 90mm

BOARD HANDLING

BOARD HANDLING	FACILITY REQUIREMENTS
Drive mode: stepper motor, stainless steel chain	Power: 220V, 2.5kW, 16A, 50/ 60 Hz
Payload capacity: 5 kg	Air supply: 80 psi (5.5 bar)
Min. board/carrier width: 40 mm	System footprint: 1290*1364*1638 ± 50 mm(W*D*H)
Max. board/carrier width: 500 mm	Machine weight: 900 kg
Max. board/carrier length: 650mm (1 station) 450mm (2 stations)	Standards compliance: CE, UL (optional)
Min. board edge: 3mm	Exhaust volume: diameter 200 mm volume $\geq 13\text{m}^3/\text{minute}$
Width adjustment drive mode: stepper motor	/
Communication signal: SMEMA	/

CONTROL SYSTEM

CONTROL SYSTEM	FLUID DELIVERY METHODS
Computer: IPC, LCD monitor, keyboard	V-5000 three-mode spray valve
Operating system: Windows 10	V-420A precise needle valve
Control software: Mysmart Coat	V-5400 film coater
CCD resolution: 1.3M pixel	V-5800 low pressure spray valve
/	V-300HP high pressure valve

STANDARD FEATURES

STANDARD FEATURES	OPTIONAL FEATURES
Industrial computer and software and monitor	Conveyor module/ bottom return conveyor
X, Y, Z axis and motion platform	Cleaning platform
Conveyor auto-width adjustment	Pressure tank supply module
Ultraviolet and white light	Low liquid alarm module
Safety interlock	Circulation heating module
Audible alarm	Pump supply module
Exhaust port	Laser height detection module
Fluid supplying pipe	Laser fan width adjusting control (V-5400)
Material changeover module	Nozzle calibration module
CCD camera	Exhaust fan
Fiducial alignment software	In Exhaust detection module
Machine spare part kit	Four direction tilting module
Valves spare part kit	Electric tilt and rotate module
/	2D barcode reader module
/	Flow monitoring
/	Offline programming

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