



## ELECTRONIC MFG. SERVICES (EMS)

# Specialized Coating Services Relies on PVA Coating Systems

By James Carr, Member — Board of Directors, Specialized Coating Services

PCBs for the military, defense, aerospace, and medical markets often require conformal coating and ruggedization. However, many OEMs do not have the in-house equipment and expertise to protect these products. Specialized Coating Services has built a reputation over the last 22 years of providing high-quality conformal coating and a range of other services to meet the growing demand for coated boards.

Many customers choose selective conformal coating as their primary application method. In fact, most military contracts still require a conventional spray method. Spraying is the most efficient way to coat assemblies and is widely used to protect all types and sizes of PCBs. With systems from PVA, Specialized Coating Services can save its customers time and money.

Cofounded in 1996 by Rick Ramirez and Kim Atkins, the company provides contract conformal coating, potting and encapsulation, and ruggedization of PCBs. Specialized Coating Services has grown from a startup that focused on a single customer to providing worldwide service and employing more than 100 people.

Contributing to the company's process success has been its partnership with Precision Valve & Automation (PVA). Specialized Coating Services uses PVA robotic conformal coating systems, which can significantly reduce or even eliminate the need for masking.

The company attributes its success to providing quality products, delivering on time and promoting open communication with both customers and suppliers. It services a variety of industries, including the medical, military, aerospace, elec-

tric vehicles, automotive energy, and commercial segments.

### Cross-Country Expansion

In 2003, Specialized Coating Services expanded from providing conformal coating services only to the West Coast into the Midwest and East Coast markets. This year, it opened a second facility in Billerica, Massachusetts, to help meet the needs of its Midwest and East Coast customers by providing quicker turnaround times and reducing freight costs, as well as keeping with the rapid pace of growth in these areas.

The 13,000 ft<sup>2</sup> (1,208m<sup>2</sup>) facility is equipped with the latest in robotic and conventional spray systems, as well as plasma treatment, cleaning and ionic test equipment, potting and encapsulation meter mix systems, and more. The certifications currently in place in the California facility are planned for mid-2018 in Massachusetts, including AS9100D, ISO 9001:2015, ITAR, and ANSI/ESD S20.20, with NADCAP in early 2019. With these certifications in place on both coasts, the company's customers can be assured that their boards will be handled in compliance with the latest practices and procedures.

The company's coating services are used in for a wide variety of products and industries. For the military, the company coats and ruggedizes PCBs for the U.S. Navy, U.S. Army, Coast Guard ships, submarines, tanks, troop equipment, attack aircraft, guidance systems, rockets, and drones. In the medical industry, these coated boards are used in devices that include monitors, pacemakers and operating room equipment.

The commercial industry uses coated boards for shipyard



**Specialized Coating Services uses PVA Delta 8 systems for military, aerospace, medical, and industrial conformal coating.**

equipment monitoring, tractors for agriculture, GPS construction equipment, security cameras, and traffic monitoring systems. Applications in energy include solar power, wind turbines and grid management products. The company also coats boards that are used in spacecraft, such as satellites and space station equipment, as well as commercial aircraft. Other applications include automotive electronics as well as the growing market for electric vehicles.

In addition to offering minor sub-assembly of parts and aqueous cleaning, the company offers spraying, robotic coating, potting and encapsulation, nanocoating, plasma treatment, ionic testing, and UV selection.

### Partnership with PVA

PVA is a global provider of fluid dispensing and spray systems for adhesives, sealants and coatings. The company is a speciality manufacturer of automated and manual dispensing equipment, spray coating equipment, pumps, and valves. Its selective conformal coating systems combine closed-loop process control, high levels of accuracy and repeatability for use in mid- to high-volume manufacturing environments.

Manufacturers around the world rely on PVA's conformal coating systems,

fluid dispensing solutions and custom automation products. For over 25 years, the company has been developing cus-



***The PVA Delta 8 is a versatile robotic conformal coating and dispensing system.***

tommer-driven solutions for industries that include solar, semiconductor packaging, PCB assembly, medical device manufacturing, and consumer electronics. From benchtop equipment to inline systems, each opportunity is evaluated independently to provide the customer with the best fit for their process.

PVA offers a wide range of products. In addition to selective conformal

coating, the company manufactures solutions for automated dispensing, meter-mix dispensing, surface mount adhesives, coating inspection systems, inline curing ovens, optical bonding, board handling, valve controllers, manual dispensing and coating systems, and material delivery tanks and pumps.

Specialized Coating Services has been using PVA's selective conformal coating configurations for more than 12 years. As a result of the joint effort between Specialized Coating Services and PVA, the company has been able to produce 1,500 to 2,000 additional boards per day.

According to Rick Ramirez, president and cofounder, "PVA's coating systems meet the flexibility requirements of our customers, while providing the consistent quality, reliability and repeatability we depend on to uphold our reputation as a quality service provider."

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