The automotive manufacturing industry is one of the most demanding environments around. With stringent quality and cost control standards to meet, automotive manufacturers are constantly in search of ways to improve their operations. In the niche market of electric vehicle production, these standards become even tighter.

One U.S.-based automotive manufacturer was looking to break in to the new market for electric vehicles. In start-up, the manufacturer was in search of strategic partners to help reduce costs in the production of a four-door electric sedan.

In St. Louis, MO, multiple Chrysler production plants were closing their doors, leaving behind Nordson equipment. Nordson took this opportunity to buy the equipment back and refurbish it for use in the United States electric automotive production facility. The entire process was completed for under $1 million.

“Nordson was really the only one who came to the table when this customer was looking to acquire equipment on a budget,” said Nordson representative Tony Burton. “That was the beginning of a lasting partnership.”

General assembly soon began on the manufacturer’s first electric model using refurbished Nordson pumps, CP guns, ejector guns, temperature conditioning units and Pro-Meter® S and G dispensing systems to build doors, hoods, lids and for glass bonding applications. Nordson’s knowledge of shot and gear metering technologies was another important factor that set them apart from other possible partners.

The Pro-Meter S combines shot meter technology with proportional control to provide precise, repeatable deposition and efficient material usage. The material cylinder of the Pro-Meter S is filled by positive pressure from a Nordson Rhino bulk unloader to ensure positive material refill and eliminate “empty dispenses.” The first-in, first-out material flow eliminates dead spaces for material to pack out. In turn, the on/off gun dispenses the material with consistent bead profiles regardless of changing robot speeds. This combination of technologies made production of doors and hoods, as well as glass bonding, seamless.

In powertrain and final assembly applications, Nordson Rhino XD pumps, CE-20 guns, and a Pro-Meter® G gear pump were used to produce electric
battery packs, which determined how far the vehicle could travel on a single 45-minute charge – either 150, 225 or 300 miles.

The company went public in 2010 as they launched their first electric car model. Their stock immediately took off as electric vehicles became very popular with the rich and famous. Soon after, popularity continued to grow in the United States as well as Europe and China.

With success growing, the manufacturer partnered with Comau and Hokuto to increase production. In the same year, they made the move to fully automated production lines.

When the manufacturer decided to go fully automated on their assembly lines, they requested bids from many different suppliers. The choice came down to Nordson and one other supplier. With approximately 60 systems in each body shop, this was no easy decision.

“Nordson was ultimately chosen because of their past relationship with the manufacturer. They had been working together from the start and the manufacturer wanted to keep that ‘true partnership’ intact,” said Burton.

The electric automotive manufacturer continues to work with Nordson equipment, and will be launching their newest model in 2017.

Nordson Corporation engineers, manufactures and markets differentiated products and systems used for the precision dispensing of adhesives, coatings, sealants, biomaterials, polymers, plastics and other materials, fluid management, test and inspection, UV curing and plasma surface treatment, all supported by application expertise and direct global sales and service. Nordson serves a wide variety of consumer non-durable, durable and technology end markets including packaging, nonwovens, electronics, medical, appliances, energy, transportation, construction, and general product assembly and finishing. Founded in 1954 and headquartered in Westlake, Ohio, the company has operations and support offices in more than 30 countries.

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