Nordson® recognizes that aerospace manufacturing has a singular objective of delivering the highest quality finished products. Production processes must consistently uphold or improve the quality of units fit for flight. Manufacturing materials must perform in changing and extreme conditions therefore material integrity must be maintained throughout production processes and in the finished products.

While still maintaining high quality, a growing industry trend involves use of lighter, stronger materials to reduce weight, minimize noise and vibration, and enable new designs to optimize flight performance. The materials or processes used to support this are varied, but include: advanced composite materials; lightweight adhesives, sealants and coatings; and density-reduced foamed materials.

Additionally, manufacturing process improvements have become necessary both from quality and production efficiency standpoints. Increased implementation of automation improves production speeds and reduces labor while instilling consistency and repeatability to processes. The precision achievable with automated processes helps optimize material utilization while minimizing scrap or waste.

With a vast product array, Nordson has dispensing solutions for virtually all materials: single or multi-component; high, medium or low viscosity; ambient, hot or cold temperature; standard products and unique formulations. With more than 50 years experience in dispensing technology, Nordson has successfully handled adhesives, sealants, syntactics, fillers and coatings in stringent manufacturing environments. Thus, many aerospace products and manufacturing processes can benefit from the consistency and efficiency afforded with Nordson equipment.

Examples of processes where proven Nordson solutions can benefit aerospace manufacturing include but are not limited to:

- Filling honeycomb structures
- Potting interior hardware
- Encapsulating avionics
- Sealing rivets, seams and joints for fuel containment and flooring for corrosion prevention or vibration reduction
- Bonding structural assemblies
- Reinforcing fasteners
- Assembling components such as filters, insulation, seating, lights and transparencies
- Coating engine blades for impact resistance
- Masking for protection during chemical processing

In collaboration with manufacturers, subcontractors and government organizations, Nordson is continuously researching and developing solutions for emerging aerospace materials, processes and products.
Aerospace Applications

Nordson solutions are designed to provide consistent, high-quality manufacturing processes while improving production efficiency. Locally-available industry specialists and service technicians backed by a global team of knowledgeable engineers and 24/7 support staff help you develop, install and maintain dispensing solutions for established or emerging applications. With capability to process material from cartridge, loose, pail or drum forms, following are just a few specific examples of Nordson systems to help improve aerospace applications.

Meter/Mix Systems
The Cobalt™ series offers configurable solutions for processing bulk single or multi-component ambient materials, including those requiring special handling such as innovative lightweight materials. With a wide range of metering components, virtually any mix ratio can be achieved and consistently maintained. Dispensing can be accomplished either via manual/handgun or automatic/robotic means to either integrate into existing manufacturing lines or upgrade processes.

Unity™ dispense systems maximize material use when processing materials from cartridges or syringes. Precise, repeatable dispensing is achieved with a three-axis robot as a complete work cell with a small footprint.

Hot Melt Systems
Blue Series™ tank melters are paired with either handguns or automated dispense guns for consistent, accurate hot melt dispensing. These systems help improve bonding and sealing quality.

Special Systems
Our application engineering team offers vast knowledge across a broad spectrum of applications. From experience with a wide variety of dispensed materials, substrates and processes, our team can help engineer a system to efficiently handle as simple or complex an application as manufacturing requires to achieve the necessary finished product specifications.

Please contact your Nordson aerospace industry specialist to see how Nordson solutions can help you maintain high product quality while increasing production speeds and improving manufacturing efficiency.

For more information, talk with your Nordson aerospace expert.

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