

Features

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What Does an Aerotech Partnership Mean for You?

Last month's *In Motion* invitation for [System Integrators](#) met with such an enthusiastic response that we would like to expand upon some of the most common inquiries we received.

Four Decades of Growth and Fiscal Stability

We are proud to be celebrating our [forty-year anniversary](#) as a leading motion control organization with operations around the world. By partnering with Aerotech, you have selected a company with a history of steady growth, a strong financial foundation, and a stable ownership and organization that is truly *Dedicated to the Science of Motion*.



Advance Your Processes with our Award-Winning Technology

Aerotech's strong commitment to research and development has not only advanced the capabilities of our partners and customers, but has also earned us many [patents and prestigious awards](#). Our innovative products repeatedly earn the recognition of our peers and colleagues. At Aerotech, our greatest satisfaction comes from helping our partners and customers design the best automation solutions for their challenging manufacturing, test, and inspection applications.



Premium Performance at a Price-Competitive Rate

We understand the realities of today's competitive global landscape. Our integrators enjoy discounted pricing tiers that facilitate the use of Aerotech's high-performance products while maintaining price competitiveness in the marketplace.

Global Sales-Channel Support and Marketing

Our worldwide presence assures that your organization is supported from an application and service standpoint [anywhere in the world](#). Aerotech Partners can leverage our multi-lingual print and media resources as well as international sales and support locations to enhance their competitive position.

On-Site Training by our Certified Engineers

As an Aerotech Control System Integrator, your team will benefit from the same intensive training that our own engineers undergo. At our factory or on-site in your own facility, Aerotech will deliver [world-class training services](#) to your employees.

Stay In the Know with Advance Product Releases

Access product features and specifications as early as sixty days prior to general release to the public. This advanced information will allow you to prepare for key process enhancements and optimize your system performance.

[Contact us today](#) to discuss how your process and application knowledge can be leveraged through Aerotech's integrator project, and start benefiting from our established, global reputation for world-class engineering in motion control and positioning applications.

AGS1500 Gantry Optimized for Precise Contouring

[AGS1500 series Cartesian gantry systems](#) are designed for ultra-precision, high dynamic contouring to provide outstanding performance and versatility in a wide range of automation platforms. The planar design minimizes dynamic pitch errors at the workpoint.

AGS1500 systems are used in production plants around the world, in applications including:

- Precision Micromachining
- Stencil Cutting
- Fuel Cell Manufacturing
- Printed Electronics
- Flat Sheet Processing
- High-Speed Pick-and-Place
- Automated Assembly
- Vision Inspection
- Dispensing Stations
- High-Accuracy Inspection

High Speed/High Acceleration

Aerotech's high-performance [BLM](#) and [BLMH](#) series brushless linear servomotors drive the AGS1500 to speeds of 3 m/s and accelerations of 5 g. Dual linear motors and encoders are included on the lower axis for the highest level of performance and precision. The rugged noncontact optical linear encoders offer resolutions to 1 nm when coupled with Aerotech's encoder multiplier. The design is optimized to account for thermal expansion, ensuring high accuracy under varying operating conditions.

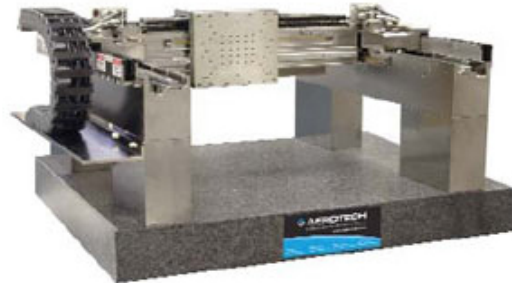
Rugged Design

The linear motor is a noncontact device, resulting in no backlash, wear, or maintenance. The bearings are preloaded linear motion guides with wiper seals and grease fittings, and are mounted to provide optimized dynamic stiffness and load distribution.

The AGS1500 design keeps the linear motors and linear encoders to the outside of the work area. This makes the gantry less susceptible to debris-induced damage.

Turnkey Operation

Aerotech's years of experience manufacturing precision positioning and control systems can be leveraged by acquiring a turnkey system. Typical options include Z-theta mechanisms, risers to accommodate automated parts handling equipment, brackets for flying optics components, isolation systems, and machine bases that are designed to accommodate the entire controls and electronics subsystems. For more information about Aerotech [gantry systems](#), or to discuss your application with an Aerotech Application Engineer, please [contact us](#).



Features and Benefits of the AGS1500

- Optimized design for precise contouring
- Velocity to 3 m/s and acceleration to 5 g
- High power brushless linear servomotors for smooth motion
- Travels up to 500 mm x 500 mm
- Customizable Z and θ axes for flexible configurations
- Noncontact linear encoders
- Configurable cable management system allows for integration of fiber lasers, cameras, air lines, etc. for multiple applications

Visit Aerotech at SPIE Optics and Photonics

SPIE Optics + Photonics 2010

Exhibition: August 3-5, 2010

Booth #622

San Diego Convention Center

San Diego, CA USA



Visit Aerotech at booth #622 at SPIE Optics + Photonics where we will demonstrate our industry-leading motion control technology, including:

- [ALAR series direct-drive rotary stages](#) for single and multi-axis electro-optic sensor testing, missile seeker testing, antenna testing, inertial navigation device testing, photonic component alignment, high-accuracy laser machining, and precision wafer inspection.
- [AMG LP \(Low Profile\) position and rate gimbal mounts](#) for angular testing of inertial sensors like gyros, MEMS, and accelerometers, missile seeker test and calibration, electro-optical sensor and FLIR testing, and optical testing of sensors in a vacuum.
- [AGC motorized mechanical goniometers](#) for applications where 90 degrees of angular travel is needed with the payload at the center of rotation, or where two axes of rotation are needed about a common point, such as optical alignment, payload tip/tilt, beam steering, sensor calibration, laser applications, automated manufacturing and/or testing, and multi-axis diffractometer systems.
- High-performance [single- and multi-axis motion controllers](#).

Process your [free visitor registration online](#) to avoid lines at the event. For a one-on-one demonstration of our high performance motion control and positioning equipment, please [schedule an appointment](#) with an Aerotech Application Engineer.

Motion Control and Positioning Library

This resource provides a short summary and a link to articles, tutorials, white papers, and other materials that discuss problems and solutions involving motion control and positioning equipment and systems.

[Explore Aerotech's Online Library of Product Catalogs and Brochures](#)

Browse our motion solutions for applications in aerospace, semiconductor, medical device fabrication, laser processing, micromachining, electronic manufacturing, test and inspection, data storage, and more. Request a hard copy of any brochure or catalog, or download a PDF today.

[New Life: Advances in Laser Machining Key to Stent Market Growth](#)

With the coronary stent industry once again on the rise, laser machining promises to help stent manufacturers meet the significant production challenges that remain. Laser-workstation motion components, controllers (software), and the lasers themselves have led to many recent advances, and are the focus of this article.

[Solar Nears Tipping Point](#)

As solar cell production gains momentum, manufacturers are focused on higher efficiency, sustainable quality, and incorporating more automation. Gain insight into how solar cell manufacturers are leveraging the latest precision motion control technologies, robotics, networked automation inspection stations, and automation solutions to make more units at a lower cost.

[Controller Retrofit Solutions](#)

The high cost of new machine tools has many manufacturers considering *re-control* of their existing machinery. Re-control projects allow manufacturers to realize significant cost savings while modernizing the control system, which is typically the backbone of the machine tool itself. The Aerotech A3200 Digital Automation Platform has played a key role in accomplishing these objectives for many large global manufacturers.

[Laser Processing in Stent Production](#)

The diameter of a human hair is approximately 100 microns, while the entire wall thickness of the material in a stent is 25% the thickness of a human hair. By reviewing these numbers, it is easy to understand the difficulties of ensuring quality stent manufacturing. But what is the best method of production to meet these tight tolerances?

[The Need for Speed](#)

Packaging OEMs look to advanced software solutions and linear servos to boost system performance.

[Machine Vision Speeds PCB Solder-Joint Inspection](#)

The system combines servo motion, continuity testing, and solder-joint inspection in one unit for processing of automotive connectors.

[Resolution Resolved](#)

System or stage resolution is often spelled out for motion controls as well as in vendor catalogs and Web site specifications. However, many misinterpret what the term truly means.

[Linear Motor Basics](#)

A steady increase in practical industrial applications has secured a place for linear motors. Here's an overview of the various types of linear motors and what differentiates them from their rotary counterparts.

[How to Select and Install Air Bearing Stages](#)

Air bearing stages are noted for their smooth, frictionless motion. A few tips and techniques will ensure you benefit from their advantages.

[Micropositioning Meets Mechatronics](#)

Compared to traditional methods, the mechatronic design approach is more of a holistic approach to product design, where the tradeoffs between different functional components (software, hardware, user interface, etc.) are carefully considered for their impact on overall performance.

[Motion Control Requirements for Hermetic Seam Welding](#)

A discussion of the motion control platform in regard to [hermetic seam welding](#) of sophisticated electronic devices implanted in the human body.

[Digitizing a Century of Astronomical Images](#)

Aerotech's ABL9000 air-bearing stage is put to use to efficiently digitize more than 500,000 photonegatives.

[Two-Photon Polymerization: A New Approach to Micromachining](#)

Femtosecond lasers enable microfabrication with resolution beyond the diffraction limit.

[Precise Triggering of External Events Based on Axis Position](#)

An axis-based trigger in the controller can significantly improve part quality, reduce cycle time, and eliminate processing problems. This article discusses Aerotech's unique PSO (Position Synchronized Output) option, and how any application that requires precise data acquisition or process action linked to axis position can benefit from it.

[Applications Dictate Gimbal Selection](#)

The choice between direct-drive and gear-driven gimbals and optical mounts presents an opportunity for a comparison of the pros and cons for each.

[Linear Motors Application Guide](#)

A tutorial guide to the history, design, and application of linear motors.

Latest Software Releases (Red indicates a new release)

A3200 Digital Automation Platform	Version 3.00.001
Ensemble Multi-Axis Controller	Version 3.00.001
Soloist Single-Axis Controller	Version 3.00.000

Aerotech Quick Links

[Knowledge Base - FAQs](#)
[CAD Downloads from 3D PartStream](#)
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[Tradeshows](#)
[Motor Sizer](#)