

## Features

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### See New Engineered Systems in the Latest Edition of Aerotech's Resource Guide

Aerotech's always current online directory of motion control products features information on our complete product line. Each listing provides an overview of the product, specifications, downloadable CADs and data sheet PDFs, product ordering information, an engineering reference, and much more.

Our advanced [motion control](#) and positioning components and systems are used in aerospace, assembly, automotive, disk drive, electronic manufacturing, flat panel, imaging, laser machining, machine tool, MEMS, metrology, nanotechnology, packaging, photonics, photovoltaics, print, semiconductor, test and inspection, and textile applications.

Our Engineers and Technicians have developed an array of systems for applications ranging from [semiconductor](#), [medical](#), laboratory, photonics and fiberoptics, [lasers](#), [automotive](#), [packaging](#), and more. We are well-versed in vacuum and cleanroom techniques. We use over 30 years of [motion control](#) and positioning system experience to provide systems tailor-made for our customers' operations, while employing the most accurate, highest performance motion control and positioning components available. And with the knowledge we have from designing and manufacturing the components that make up these systems, Aerotech's engineered motion control systems work the first time, every time.

To view the systems online, [please click here](#), or order the complete Resource Guide on CD [here](#).



## Exhibiting Motion Control Around the Globe

From Walt Disney World to Kobe, Japan, you can find Aerotech proving their *Dedication to the Science of Motion*. Over the following weeks, we will showcase the latest developments in precision motion control and positioning components at some of the top trade show events in the world. Join us at any one of the following exhibitions:



- [ICALEPCS 2009](#)  
12th International Conference on Accelerator and Large Experimental Physics Control Systems  
October 12 - 16, 2009  
Kobe International Conference Center  
Kobe, Japan
- [MM Live 2009](#)  
Micro, Precision, and Nano Manufacturing Event  
October 20 - 21, 2009  
Ricoh Arena  
Coventry, United Kingdom
- [Seoul Air Show 2009](#)  
International Aerospace and Defense Exhibition  
October 20 - 25, 2009  
Seoul Airport  
Gyeonggi-do Seongnam-si, Seoul, Korea
- [ICALEO 2009](#)  
28th International Congress on Applications of Lasers and Electro-Optics  
November 2 - 5, 2009  
Hilton in the Walt Disney World Resort  
Booth 30  
Orlando, Florida USA
- [Aero Engineering 2009](#)  
Strategic Business Summit with a supporting supply chain exhibition  
November 10 - 11, 2009  
Manchester Central Convention Complex  
Manchester, United Kingdom
- [Productronica 2009](#)  
International Trade Fair for Innovative Electronics Production  
November 10 - 13, 2009  
Messe Munchen International  
Hall B3.360  
Munich, Germany
- [SPS/IPC/DRIVES](#)  
Electric Automation Systems and Components Exhibition and Conference  
November 24 - 26, 2009  
Mesago Messe Frankfurt  
Hall 4.581  
Nurenburg, Germany

### **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.

### [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)**

<a href="#">A3200 Digital Automation Platform</a>	Version 2.54.004
<a href="#">Ensemble Multi-Axis Controller</a>	Version 2.54.004
<a href="#">Soloist Single-Axis Controller</a>	Version 2.54.004

### **Aerotech Quick Links**

[Knowledge Base - FAQs](#)  
[CAD Downloads from 3D PartStream](#)  
[Employment](#)

[Engineering Reference](#)  
[Software & Manuals](#)

[Tradeshows](#)  
[Motor Sizer](#)