



JET

Atmospheric Transport Systems

*Take off with a revolutionary
approach to semiconductor
manufacturing*



The Jet™ Advantage

Jet is the core atmospheric automation subsystem for all Brooks wafer handling systems. As the starting point for all system design activity, Jet enables customers to build process tools around a common core. Jet is available in a choice of configurations to meet specific manufacturing environment requirements.

Key features of Jet include:

- *Crate-to-Operate™ in less than an hour*
- *Integrated, leveled, and tested automation subsystem*
- *Brooks' patented motion control expertise*
- *Availability in 2- 3- and 4-wide configurations*
- *Brooks' Razor™ and Vision™ atmospheric modules*

Jet Engine offers a revolutionary approach to addressing wafer handling requirements that delivers unmatched flexibility and ease of integration.

For a fully integrated atmospheric transport system that supports rapid set-up, high performance, and superior reliability, take off with Jet.



Brooks Automation's Jet family takes a revolutionary approach to semiconductor wafer handling. The industry's only fully integrated atmospheric wafer transport system, Jet features a flexible, modular architecture based on industry standards to enable fast set-up and cycle times, as well as seamless integration with existing fab equipment and processes. Jet systems also deliver the high performance, ultra-cleanliness, and proven reliability that today's advanced semiconductor manufacturers demand.

Jet is the first EFEM designed at the system level to enable plug-and-play integration of best-in-class components. Thanks to this unique modular, standards-based design, Jet systems are up and running—going from Crate-to-Operate™—in less than an hour. Jet's configurable, fab-compliant options and Fusion™ Controls application layer make it easy to adapt the system to application-specific needs and keep pace with rapidly evolving industry requirements.

Jet systems have been thoroughly tested under the most rigorous fab conditions to ensure industry-leading interoperability with manufacturers' equipment and processes. Patented direct drive technology delivers smooth motion control for the lowest possible vibration and particle contamination. Plus, Brooks' innovative motion control expertise enables Jet systems to transfer wafers using edge contact with maximum cleanliness and minimal damage—all while maintaining the highest levels of throughput and repeatability.

The Jet™ Solution

The Jet family of atmospheric transport systems delivers flexible configuration, rapid set-up, and high performance through industry-leading features, including:

- *Crate-to-Operate™ in less than one hour*
- *Kinematic mounting system*
- *Patented direct drive technology*
- *End-of-line configurable options*
- *Single-wire communication connectivity*
- *Uniform set of spares for easy part swapping across multiple tools*



3 bay Jet ATS



4 bay Jet ATS



2 bay Jet ATS

Fast Set-Up and Easy Integration

Jet™ is designed to operate seamlessly with existing fab processes and equipment for faster set-up and integration—going from Crate-to-Operate™ in less than an hour. In fact, because the Jet Engine core automation subsystem is integrated, leveled, and tested, Jet systems can be set up with unprecedented speed and ease—as much as 90% faster than other EFEMs and 95% faster than individual components. The fully integrated Jet system connects to the rest of the tool via a single wire connection, enabling plug-and-play integration of best-in-class components for shorter lead and cycle times. Plus, Fusion Controls' software-selectable fab settings dramatically speed system set-up.

Unparalleled Configurability

Jet™ provides standard automation subsystems with end-of-line configurable options—including robot end effectors and fab requirements—enabling fast, easy configuration. This way, it's possible to stock standard Jet systems and quickly add optional capabilities to meet specific tool and end-user requirements—without the lengthy lead times typically associated with custom orders.

Streamlined Inventory Management

Jet's modular system design, built around core automation units, results in significantly reduced cycle times. Requiring a smaller, uniform set of modules that can be used across multiple tools, Jet systems support fast, easy part swapping—without need for mechanical adjustments—for a flexible spares strategy and streamlined inventory management.

3 bay 2 LPM Jet ATS



POWERED BY
Fusion™

Brooks Automation: *Creating Manufacturing Efficiency. Accelerating Your Profit.*[™]

As semiconductor manufacturers and OEM tool suppliers work to manage rapid change and growing complexity, they rely on Brooks Automation for innovative products and world-class services to help them realize maximum return on their automation investment. Since our inception, Brooks has made quality and innovation top priorities. We leverage the latest enabling technology—from web-based spare-parts management and e-diagnostics to online knowledge management systems—to keep our solutions operating at peak performance. Brooks is ISO 9001 certified to ensure the highest levels of product quality and value.

Leveraging our global service network, Brooks is ready and able to respond to customer needs, ensuring maximum tool uptime. We offer hardware installation and implementation services—from stand-alone equipment installation and qualification to implementation of complex automated systems containing multiple Brooks products—as well as comprehensive technical support, field service, and systems integration. Brooks' GUTS[®] (Guaranteed Up-Time Support) rapid response program is broadly recognized for delivering unsurpassed responsiveness to customer problems whenever and wherever they may occur. Every call to our GUTS line is answered by a capable, empowered Brooks Service professional trained to diagnose and coordinate a response from first call to action plan within 59 minutes or less—guaranteed.

To anticipate customer needs, Brooks is actively involved in the definition and ongoing development of industry standards through its work on SEMI, SEMATECH, and 300mm standards committees. At the same time, we continue to build new levels of innovation and reliability into our products and invest in our global service infrastructure to make sure that we consistently exceed customer expectations for excellence and value.



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