

# Dry Etching Equipment Market to Reach \$16.24 Billion by 2029 with 8% CAGR

*The Business Research Company's Dry Etching Equipment Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034*

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/EINPresswire.com/ -- What Is The [Dry Etching Equipment Market](#) Size And Growth?

In recent times, the dry etching equipment market has experienced a robust growth spurt. It is projected to increase from \$11.02 billion in 2024 to \$11.94 billion in 2025, experiencing an 8.4% compound annual growth rate (CAGR). The impressive growth during the historic period can be

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attributed to factors like the surging demand for compact electronic gadgets, expanding use of semiconductors in consumer electronics, escalating production of integrated circuits, increased investment in foundry infrastructure and the rising preference for automation in fabrication processes.

There is a prediction for a significant expansion in the dry etching equipment market in the coming years, with an expected increase to \$16.24 billion by 2029 at a compound annual growth rate of 8.0%. This projected growth over the forecast period can be tied back to the extensive use of 3D

NAND and FinFET technologies, heightened demand for cutting-edge node chips, an increased requirement for high-performance computing devices, substantial investment in memory chip production, and a surge in demand for wearable electronics. Key trends to note for the same period are the technological progression in plasma etching techniques, breakthroughs in atomic layer etching systems, increased funding in research and development for etching tools less than 5nm, advancements in the domain of dry etching associated with heterogeneous integration, and the introduction of artificial intelligence-reliant process control systems.

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### What Are The Current Leading Growth Drivers For Dry Etching Equipment Market?

The dry etching equipment market is anticipated to gain traction due to the escalating demand for semiconductor devices. Semiconductors, which are special materials with unique characteristics used to regulate electrical current, are seeing increased demand primarily due to the swift development of consumer electronics. Devices such as smartphones, laptops, and smart home gadgets predominantly depend on sophisticated chips to enhance their performance and functionality. These chips are made more efficient, compact, and superior-performing by dry etching equipment which accurately structures and patterns microscopic circuits on silicon wafers. In May 2023, data from the Japan Electronics and Information Technology Industries Association, a trade organization in Japan, revealed that the country's electronic equipment production rose to \$5.6 billion (771,457 million yen). Moreover, consumer electronics output ascended to \$233 million (32,099 million yen), marking an upturn from the \$183 million (25,268 million yen) recorded in May 2022. Thus, the burgeoning demand for semiconductor devices is fueling the expansion of the dry etching equipment market.

### Which Companies Are Currently Leading In The Dry Etching Equipment Market?

Major players in the Dry Etching Equipment Global Market Report 2025 include:

- Panasonic Corporation
- Applied Materials Inc.
- Lam Research Corporation
- Tokyo Electron Limited
- KLA Corporation
- Hitachi High-Technologies Corporation
- NAURA Technology Group Co. Ltd.
- DISCO Corporation
- Advanced Energy Industries Inc.
- ULVAC Inc.

### What Are The Future Trends Of The Dry Etching Equipment Market?

Top players in the dry etching equipment market are focusing their efforts on producing advanced solutions, such as equipment based on plasma etching, to raise precision, scalability, and efficiency in the manufacturing of semiconductors. Equipment based on plasma etching is a tool used in semiconductor manufacturing that utilizes ionized gases to subtract material from a substrate, making permitting accurate etching of micro-scale patterns and structures. As an illustration, in November 2024, Hitachi High-Technologies Corporation, a technology organization based in Japan, introduced the DCR Etch System 9060 Series, tailored for specific isotropic (horizontal) etching at the level of atomic layers. This system relies on plasma etching technology and is conducive to the fabrication of cutting-edge three-dimensional semiconductor devices, such as 3D-NAND and 3D-DRAM structures. Through a distinctive wafer-cooling method merged with an infrared lamp that quickly changes wafer temperatures, the system delivers high processing throughput and a minimal equipment footprint. This provides atomic-level mastery

over wafer pattern formations, an essential aspect in the manufacturing of intricate 3D semiconductor designs. Moreover, the system is appropriate for both R&D and large-scale production, lending assistance to hasten development cycles, decrease expenses, and boost productivity in semiconductor production.

#### How Is The Dry Etching Equipment Market Segmented?

The dry etching equipment market covered in this report is segmented

- 1) By Type: Inductively Coupled Plasma Etching, Capacitive Coupled Plasma Etching, Reactive Ion Etching, Deep Reactive Ion Etching, Others Types
- 2) By Component Type: Etch Chambers, Gas Control Systems, Power Supplies, Cooling Systems, Software And Control Systems
- 3) By Equipment Type: Batch Etchers, Single Wafer Etchers, High Volume Production Etchers, Modular Etching Systems, Etch Tools With Advanced Automation
- 4) By Application: Semiconductor Manufacturing, Micro-Electro-Mechanical Systems, Light Emitting Diode Production, Other Applications
- 5) By End-User: Electronics, Automotive, Aerospace, Healthcare, Other End-Users

#### Subsegments:

- 1) By Inductively Coupled Plasma Etching: High Density Plasma Systems, Low Pressure Plasma Systems, Advanced Wafer Etching Systems
- 2) By Capacitive Coupled Plasma Etching: Parallel Plate Plasma Etching Systems, Medium Frequency Plasma Systems, Single Wafer Processing Systems
- 3) By Reactive Ion Etching: Parallel Plate Reactive Ion Etching Systems, High Selectivity Etching Systems, Low Damage Etching Systems
- 4) By Deep Reactive Ion Etching: Bosch Process Etching Systems, Cryogenic Process Etching Systems, High Aspect Ratio Etching Systems
- 5) By Others Types: Microwave Plasma Etching Systems, Neutral Beam Etching Systems, Atomic Layer Etching Systems

View the full dry etching equipment market report:

<https://www.thebusinessresearchcompany.com/report/dry-etching-equipment-global-market-report>

#### Which Is The Dominating Region For The Dry Etching Equipment Market?

In 2024, Asia-Pacific led the global market for dry etching equipment and is anticipated to continue to be the region with the quickest growth in the coming years. The report on the dry etching equipment market encapsulates regions such as Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East and Africa.

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