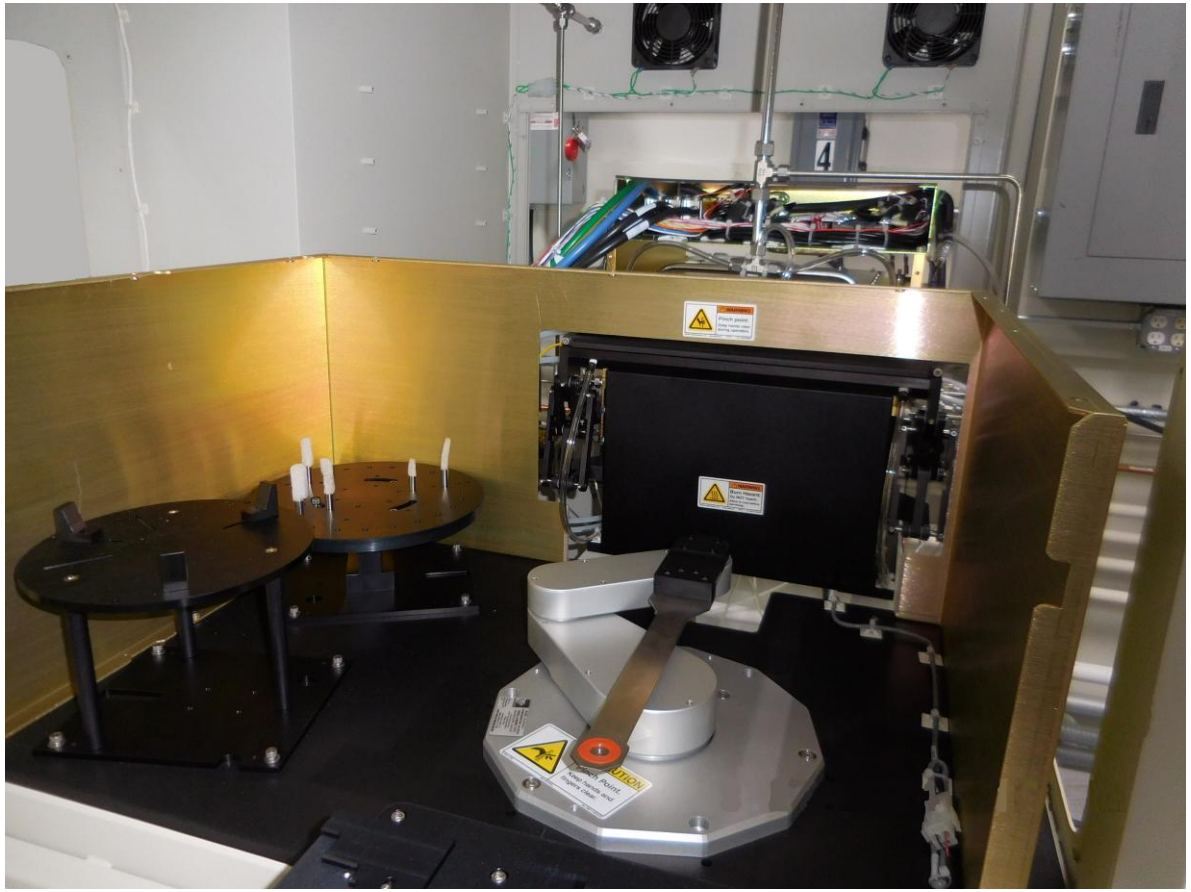
In today's semiconductor industry, where the trend is to balance “performance + cost + flexibility,” investing over a million dollars in Rapid Thermal Processing (RTP) equipment often leads to over-specification, low cost-effectiveness, and a high operational burden. "Not every process needs a million-dollar machine."

In modern semiconductor processing, choosing the right-fit RTP solution is more important than blindly pursuing the most expensive system. Rational investment, focus on process requirements, and selection of high-value professional solutions are the wise choices of a mature fab.



Five reasons why “expensive ≠ practical”: Over-investment becomes a burden!

1. Core value ≠ Price tag: The true value of an RTP system lies in its process repeatability, uniformity, system stability, and yield performance — not in brand premiums or redundant, stacked features. Many million-dollar RTP systems are packed with "high-end looking but practically unnecessary" configurations that don’t match the actual process needs of most users.
2. High investment brings high maintenance and operating costs: Expensive systems often come with proprietary consumables, exclusive maintenance tools, and costly annual service contracts. These systems tend to be complex to operate and highly automated, increasing the need for training and technical upkeep, ultimately reducing overall equipment availability.
3. No guarantee of better process yields: There are mature RTP solutions on the market that cost significantly less than a million dollars and still meet the demanding requirements of semiconductor manufacturing in terms of repeatability, uniformity, and system stability. High price doesn’t always equate to better performance.
4. Rapid tech iteration, faster depreciation: With semiconductor equipment technology evolving every 3–5 years, million-dollar RTP systems depreciate rapidly and are difficult to resell. This leads to long ROI cycles and increased investment risk.
5. More cost-effective alternatives are already mature: The market already offers reputable brands and professional teams that provide RTP systems with strong process performance, greater flexibility, and better cost control — all at a fraction of the million-dollar price. Solutions featuring modular design, upgradeable architecture, and standardized parts offer significant long-term TCO (Total Cost of Ownership) advantages.