



SEMICONDUCTOR FAB TOOL HOOKUP SYSTEMS

Overcoming Component Shortages in Semiconductor Fab Tool Hookup Systems

In semiconductor manufacturing, tool hookup boxes are essential for connecting tools to the necessary gas supplies. These boxes are installed in the fab floor and play a critical role in ensuring the tools operate efficiently.

CHALLENGE

Recently, the semiconductor industry has faced significant challenges with the availability of critical components such as regulators and valves for tool hookup boxes. Lead times for these components have extended to over a year, creating substantial delays. Given that these components are specified by fab owners, finding suitable replacements that meet or exceed specifications has become crucial.

The inability to promptly hook up tools can lead to significant financial losses. When multi-million-dollar machines are delivered but cannot be connected due to component shortages, the resulting downtime can quickly escalate costs. The challenge lies in identifying alternative regulators and valves that can be delivered promptly to keep the fab operational.

SOLUTION

Parker Hannifin, through its Veriflo division, addressed this challenge by leveraging its expertise in fluid control technology. Parker's team of experts is fully trained to measure the necessary Cv (flow coefficient) requirements for all flows involving regulators and valves. This expertise allows them to cross-reference and find suitable alternatives to components specified by other manufacturers.

Parker Veriflo has significantly reduced lead times for pressure regulators and valves, averaging 8 weeks or better. This improvement is due to extensive capacity expansions and a commitment to industry-leading delivery times. By revamping their tool hookup regulator and valve offerings with a "Simple by Design" strategy, Parker has streamlined the design and manufacturing processes, enabling rapid delivery without compromising on quality or performance.

CUSTOMER VALUE

The implementation of Parker Veriflo's solutions has had a transformative impact on semiconductor fabs facing component shortages. Through expert knowledge, strategic capacity expansions, and streamlined design, Parker Veriflo provides reliable, timely solutions that keep fabs running smoothly and efficiently.



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