

Siemens equipment control system helps automate next generation semiconductor wafer carrier cleaning equipment

Dry and super clean

Entegris, the industry leading materials integrity management company, maintains 80% market share as the largest global supplier of semiconductor device and substrate handling products. Entegris' materials science expertise, advanced technology and extensive knowledge of product cleaning positions the company to create optimal systems that meet fab needs for cleaning wafer carriers before they are re-used.

Cleaning helps to assure the integrity of finished wafers by removing potential contaminants, giving customers better yields and enhancing Entegris' reputation for market excellence and leadership.

300 mm wafer carrier cleaning system

Entegris' latest process cleaning equipment – the ACS-300 – is a fully automated, highly modular 300 mm wafer carrier cleaning system featuring an automated robotic loading module. Coupled with a back-up manual loading system, it guarantees continuous product flow to the fab. The “plug & play” modules allow fabs to custom-build equipment to meet any Front Opening Unified Pod (FOUP) cleaning needs.

Minimizing the engineering costs

The ACS-300 includes a module with multiple ultrasonic wash/rinse cycles with seven different patterns, a spray/wash/rinse and dynamic dry module, and finally, a stand-alone dynamic dry module. Entegris modularized the hardware and software design to take advantage of Siemens programming tools, reduce tool development time and minimize engineering costs.

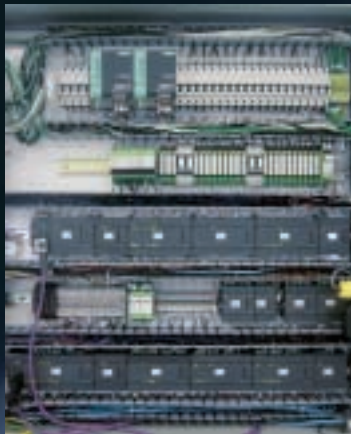
Each independent module is automated with a Siemens S7-200 PLC and I/O system along with Ethernet TCP/IP for inter-module connectivity, enabling the “plug & play” concept. Third party Human Machine Interface (HMI) software connects the fab host system via the Siemens ToolLink-SECS/GEM software package, allowing each

About Entegris

Entegris products and services protect and transport the critical materials enabling the world's leading technologies. As a leading materials integrity management company, Entegris provides products and services used in key technology industries including the semiconductor, data storage, chemical processing, biopharmaceutical, medical device, and fuel cells. Directly and through distributors, Entegris provides customer support on six continents.

More information about Entegris:

www.entegris.com



Pictures: Peter Wolters

cleaning tool module to upload status messages, alarms and operational data.

A long term working relationship

Entegris and Siemens began their collaborative working relationship 11 years ago when Entegris' Process Cleaning Equipment division was known as Atcor. “Siemens has been a trusted partner over the past decade and continues to help us build our next generation modular process cleaning equipment systems,” said Bill Shaner, vice president of Entegris solutions marketing. “Our long-term working relationship coupled with their outstanding technical support has allowed us to maintain our leading position in cleaning systems supplied to our global semiconductor customer market.” ■

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