

SCREEN Launches SU-3300 Single Wafer Cleaning System

New System Delivers World-leading Productivity and High Processing Performance

Kyoto, Japan – September 1, 2016 – SCREEN Semiconductor Solutions Co., Ltd. has finalized development of its new SU-3300 single wafer cleaning system.¹ The SU-3300 provides world-leading throughput² combined with a range of unique cleaning technologies. Sales of the system are scheduled to begin in September.

SU-3300

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In recent years, the continuing miniaturization and diversification of semiconductor devices has increasingly required wet cleaning systems that can provide the stability needed to prevent damage to fragile patterns while controlling microscopic particles. At the same time, these systems must also be able to deliver highly economical performance capable of further reducing overall costs.

In response to these growing industry requirements, SCREEN has applied their expert knowledge of single wafer cleaning systems that has been accumulated over many years to the development of its new SU-3300 seventh generation system. The latest evolution in the SU series features extremely compact chambers arranged in four level, stacked towers. This configuration allows the SU-3300 to be expanded to include up to 24 chambers. The system provides world-leading productivity while featuring an impressively space efficient design.

The SU-3300 is also equipped with APAC2,³ the latest version of SCREEN's highly regarded proprietary cleaning technology. APAC2 improves the in-chamber environment, providing ideal conditions for handling increasingly minute semiconductor devices. The system also includes a number of other unique new technologies specifically designed to boost processing performance. Nano control nozzles⁴ help to raise etching uniformity and lower chemical usage while Nanodry⁷ drying technology⁵ reduces damage to highly fragile wafer patterns.

With the addition of the SU-3300 to its lineup of single wafer cleaning systems, SCREEN will be able to meet a wider range of needs experienced by its customers. The system is also expected to make a significant contribution to the advancement of the overall semiconductor device industry.

1. A single wafer system performs cleaning of individual wafers. It offers superior performance compared to batch cleaning systems that can process up to 50 wafers at a time. In recent years, there has been a growing requirement for single wafer systems with throughputs similar to batch systems.

2. This productivity is achieved during operation under actual processing conditions. (Current as of August 2016, based on SCREEN research.)
3. APAC2 is an abbreviation of Advanced Process Atmosphere Control 2. This proprietary SCREEN technology enables the creation of super-clean conditions inside chambers, significantly improving the processing environment. It is a more advanced version of the highly regarded APAC technology used by SCREEN in its SU-3200 single wafer cleaning system.
4. SCREEN's proprietary Nano control nozzles provide extremely high-precision management of chemical temperatures, flow rates and dispensing points. They enable a highly uniform application of chemicals while reducing usage levels by approximately 50% compared to conventional systems.
5. Nanodry7 drying technology efficiently controls the air-liquid interface (three-phase boundary line) on the wafer surface, enabling rapid, high-precision processing. It maintains the temperature and humidity inside the chambers at consistently optimum levels, effectively reducing damage to the increasingly fragile patterns on wafers.

Note: The SU-3300 will be introduced at SEMICON Taiwan 2016, to be held in Taiwan from September 7 (Wed.) to 9 (Fri.), 2016.

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