

Innovative solutions for dry storage and floor life reset at SMT



Along with partner [ASYS](#), Moisture specialist Super Dry® Totech will feature its broad range of dry storage solutions for moisture sensitive devices at this year's SMT in Nuremberg. Visitors to **Booth 4A-456** will find out how [Super Dry low humidity desiccant cabinets](#) can protect a wide range of products against defects caused by humidity. Designed to exceed IPC/JEDEC J-Std-

033C, Super Dry Cabinets can dehumidify to less than 0.5% RH. This qualifies them not only for unlimited safe storage, but also means they can safely remove moisture, thus resetting floor life without oxidation, even at ambient temperatures.

There is a growing trend in the electronics industry of increasing component lead-times, whilst reducing development cycles make it increasingly necessary to hold extra stocks on the operational side. Warranty management, and last time buys are other reasons for growing requirements for specialised storage services. For component distributors and those companies that do not wish to make the investment in capital equipment, or may be looking for a flexible and scale-able off-site warehousing solution, Totech's outsourced [Long Term Storage Service, LTS²](#), is the alternative value-added service, helping to overcome challenges that go beyond moisture and oxidation control, including the need to arrest intermetallics without inducing tin whiskers.

For those that wish to keep their safe storage in-house but need an alternative to the capital investment typically required for dry cabinets, there is the new ["Dry Air Only" solution](#). After

carefully defining the exact environment required, including humidity, temperature, recovery time and traceability, the end-user pays only for the dry air - as it is consumed.

Amongst the equipment on display on the SMT booth will be the [MSD series from Super Dry Totech](#), a modular drying cabinet that adapts to your storage and drying requirements. Incorporating the extremely powerful, U5000 Series Dynamic Dry Unit, the basic MSD can be expanded in the field without the need for additional dry units. This can result in a cost saving of more than 50%. Performance is maximized and regeneration times reduced through closed loop control.

[XSDR 'Floor Life Reset Cabinets' from Super Dry® Totech](#) bring an increased level of process control to multiple batch management of moisture sensitive devices. Using innovative sensor technology and sophisticated software, the XSDR Series Reset Cabinets can independently track the timing of 10 separate batches of components being reset at the same time per chamber. Two separate chambers, each with their own dry-unit and heater enable two different temperatures to be applied in the same cabinet, dehumidifying to less than 1% RH.

[The XSDC series of cooling cabinets](#) is ideal for numerous applications where chilling is required, keeping all substances at a precise safe operating temperature with 4.0 traceability. With a stable internal temperature of 2 - 20°C with minimal energy expenditure, the XSDC cabinets aid in the slow-down of inter metallic growth.

Other exhibits include the company's fully automated, robotically controlled, component handling and storage system, [Dry Tower](#). Incorporating mature, proven MSD technology and wide-ranging WMS-System integration capabilities, Dry Towers are capable of automatically managing tens of thousands of reels and trays and are totally modular for all mix and volume manufacturing scenarios. Being demonstrated live at the show will be Dry Towers' integrated Autonomous Indoor Vehicles (AIV). The driverless transport systems can manoeuvre autonomously in production and feed the required material to the line, including magazines, component reels, paste, and cleaning paper. The Dry Tower can be seen on the ASYS stand, # 4A-324.

The Super Dry [XSDC long term storage cabinets](#) have an outstanding performance for long term storage of moisture sensitive components and PCB's. The U-5000 series dynamic drying unit reaches very reliable, low humidity values of <5%RH and automatically regenerates when

necessary whilst the powerful cooling unit maintains a constant temperature as low as 10°C below ambient.

The sophisticated software tool, MSL 2.0, enables manufacturers of any size to comprehensively maintain control of all their component inventory, and particularly their moisture sensitive devices. Whether integrated with existing ERP and MES systems or used in a standalone fashion, real time monitoring and traceability of moisture sensitive inventory helps manufacturers on the path to achieving their 4.0 goals.

For situations when storage under strictly defined conditions is necessary, Super Dry Totech will be working with ASYS Cleanroom Solutions to offer the CONSIDUS Dry Storage Systems. Consider cabinets give the optimum protection for highly sensitive components and assembly parts. Three different dehumidification technologies are available to achieve a totally stable and dry atmosphere;

- Adsorption dehumidification
Controlled drying and circulating of air with a powerful adsorption drier.
- Nitrogen dehumidification
Controlled feeding of nitrogen.
- Compressed-air dehumidification
Controlled feeding of compressed air.

ASYS Cleanroom Technology offers traceability software for monitoring and documentation of the component status, MSL Level and relative humidity.

The continuing miniaturization of electronics, including thinner components and new materials has made the management and treatment of moisture sensitivity an increasingly critical element of electronics product reliability. Manufacturers are being challenged to manage larger and larger volumes of parts in a controlled and traceable manner. Super Dry Totech has the innovative solutions.

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Delivering globally to the world's top tier OEM and EMS companies, and manufacturing in Asia and in Europe, Totech Super Dry has become the industry measure for ultra-low humidity storage cabinets. Proper control of moisture sensitive devices (MSDs) per IPC and JEDEC standards has become more critical than ever since the introduction of lead free and its higher reflow temperatures. Boasting <1% relative humidity control and the fastest recovery times, Super Dry cabinets are available in a wide range of sizes and configurations, all with certified performance control measures. Super Dry Totech Dry Tower Systems comprehensively solve the complex logistics problems central to manufacturing with moisture sensitive devices in 4.0 smart factories.

As of May 2017 [ASYS automation Group \(Dornstadt, Germany\)](#) became a majority investment partner.

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