

Accel® MicroCel™ Centrifugal Cleaning System

Energy cannot be created, but it can be converted. With centrifugal energy, Speedline's MicroCel Centrifugal Cleaning System answers the question of how best to convert energy in the cleaning process. Centrifugal energy is created when parts are rotated inside a sealed process chamber. During the wash process, parts are immersed and then rotated in the wash solution. The alternative clockwise/counterwise rotation creates fluid forces applied parallel to the part's flat underbody and over-body surfaces. Energy is efficiently created and applied in the optimal direction – a win-win combination.

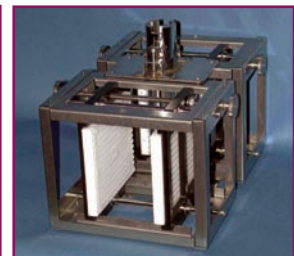
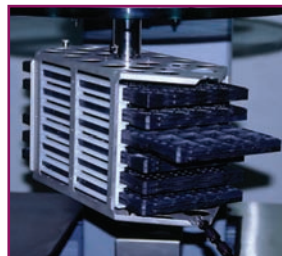
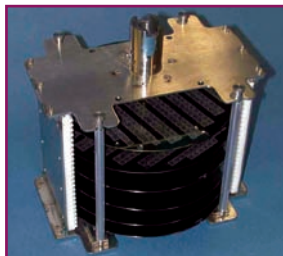
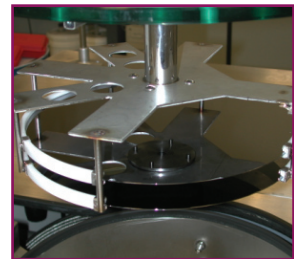
for rapid moisture extraction. Combine spin drying with convection drying and you are assured 100% dry parts, even below room ambient humidity levels.



In a 1920mm x 965mm (6.3ft x 3.2ft) footprint, the MicroCel delivers incomparable cleaning, complete drying and fluid recycling in a compact size. It is the first technology

packages, such as flip chips, MCMs, SIPs, BGAs, CSPs and hybrid circuits. Solvent versatility, MicroCel can handle most cleaning solutions, including H₂O, saponified solutions, semi-aqueous solutions, detergents, alcohol-based solvents, and terpenes. With the patented MicroCel system, you can meet your needs today and tomorrow.

Products cleaned in the MicroCel system are held in place and secured to the head using universal adjustable fixtures, standard fixtures, or custom fixtures specific



In addition, the spinning of the part extracts the wash solution during the spray rinse step. Spin drying's performance is unsurpassed

to use centrifugal energy to clean electronics circuit assemblies, precision parts, medical devices, bumped wafers, and advanced

to your product type. All custom fixtures are designed by Accel for each customer application.

The MicroCel system is a zero-discharge system - an automatic, on-board, closed-loop, fully integrated waste water treatment system. When using solvents that separate from water, the zero-discharge system automatically removes them from the used rinse water and returns the wash solvent to the wash reservoir for reuse. The rinse water is then processed through a four-stage purification process, including microbial control, 5-micron filtration, carbon adsorption, and mixed-bed deionizing resin to restore the rinse water



to its original purity level. No drain or waste water treatment systems are required.

Benefits of Accel MicroCel:

- Incomparable Cleaning
 - 0.0µg/in²
 - No visual residue at 30x optical inspection underneath components.

- 100% dry, spot-free product
 - Short cycle times: 7-14 minutes
- Low power consumption
 - 14kW, 35AMP

For more information, please contact your nearest Speedline contact or local distributor. ■



- **How fast do you spin the product?**
 - RPM adjust depends on the size of the fixture.
 - Adjust twice the speed of the wash or as high product and fixture will allow (typical dry at 600 RPM).
- **How long do you spin the product?**
 - The centrifugal effect is always present, so reversing the direction is not necessary.
 - When you see the chamber is dry (ie. no more fluid on the walls) the product is dry.
 - Typically this cycle time is between 20-60 seconds.
- **How many cycles?**
 - Here again the centrifugal effect is always present
 - i) The program can accommodate up to 999 seconds.



ABOUT SPEEDLINE TECHNOLOGIES

Speedline Technologies is the global leader in process knowledge and expertise for the PCB assembly and semiconductor industries. Based in Franklin, Massachusetts, U.S.A., the company markets five best-in-class brands — Accel microelectronics cleaning equipment; Camalot dispensing systems; Electrovert wave soldering, reflow soldering, and cleaning equipment; MPM stencil and screen printing systems; and PROTECT global services, support, and training solutions. For more information, visit us at www.speedlinetech.com.



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