

# PLASMA CLEANING EQUIPMENT PROVIDER DIRECTORY

<p>Company Address Phone Fax Founded</p>	<p>Model Introduced Type I=In-line, B=Batch, A=Automated</p>	<p>▲ Power Supply frequency and power (W) ❖ Plasma Modes D=Direct; RIE=Reactive Ion Etch; DS=Downstream Secondary; DIF=Downstream-Ion Free ✧ Gases Ar=Argon; O=Oxygen; H=Hydrogen; CF4=Carbon Tetrafluoride; He=Helium; N=Nitrogen; others as specified Ⓢ Chamber Vol=Chamber Volume, cm<sup>3</sup>; ES=Electrode Sizes, mm ❖ Capacity Max=Maximum Substrate Sizes, mm; Min=Minimum Substrate Sizes, mm; D=Wafers, Max. Diameter, mm</p>	<p>Ⓢ Throughput P/H=Packages/Hour; S/H=Strips/Hour; M/H=Magazines/Hour; W/H=Wafers/Hour ✕ Applications PW=Pre-Wirebond; PD=Pre-Die Attach; PE=Pre-Encapsulation; PoD=Post-Die Attach/Pre-Encapsulate; B/H=Butterfly/Hermetic-type packages; SiP=SiP/MCM/MCP/Hybrid packages; WFR=WLP/wafer flux removal; WRS=WLP/wafer resist stripping; WC=WLP/wafer for other cleaning (specify); OP=Other Packages (specify) Ⓢ Unique Features</p>	<p>[web site] ✧ Customer Contact and E-Mail  For additional information on a vendor's product line, please visit the web site indicated or <a href="http://ChipScaleReview.com">ChipScaleReview.com</a>. Material listed has been supplied by the respective companies. Advertisers are listed in <b>boldface type</b>. CM=Consult Manufacturer.</p>
<p>Anatech Ltd. 2817 Whipple Rd. Union City, CA 94587 ☎ 1.800.390.4449 ☎ 510.489.9671 🏠 1981</p>	<p>NT-1, NT-2, NT-3 Planar Plasma Systems Ⓢ 2003 ✧ A, B</p>	<p>▲ 13.56MHz or 40kHz@600, 1,000 or 1,500W ❖ D, RIE, DS, DIF ✧ CM Ⓢ NT-1 is a small throughput machine, NT-2 is a medium size production unit, NT-3 is large for mass production of BGA, flat panels, solar cells, leadframes or other apps. ❖ Max=300mm; D=300mm</p>	<p>Ⓢ CM ✕ PW, PD, PE, PoD, SiP, WRS Ⓢ CM</p>	<p>[anatechltd.com] ✧ Bill Smith, Plasma Systems Manager bsmith@anatechltd.com or gbar@anatechltd.com</p>
<p>Diener Electronic GmbH &amp; Co. KG Talstrasse 5, D-72202 Nagold, Germany ☎ +49.0.74.52.88.80.70 ☎ +49.0.74.52.88.07.50</p>	<p>Femto (2L volume), Pico (5L volume), Nano (24L volume), Tetra-100 (100L volume), ✧ B</p>	<p>▲ 40kHz@0-1,000W; 13.56kHz@0-1,000W; 2.45Ghz@0-1,000W ❖ D, RIE ✧ Ar, O, H, CF4, He, N Ⓢ Vol=2L to 12,600L; ES=Custom ❖ CM</p>	<p>Ⓢ CM ✕ PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC Ⓢ Fully automatic computer control with graphic display</p>	<p>[plasma.de] ✧ Dennis Merkel, VP, North American Sales merkel@plasma.de ☎ 610.929.8501 ☎ 610.929.8503</p>
<p><b>March Plasma Systems</b> (A Nordson Company) 2470-A Bates Ave. Concord, CA 94520 ☎ 925.827.1240 ☎ 925.827.1189 🏠 1984 (acquired by Nordson March 1999)</p>	<p>FlexTRAK Ⓢ July 2002 ✧ I, A</p>	<p>▲ 13.56MHz@600 or 1,000W ❖ D, RIE, DS, DIF ✧ Ar, O, H, CF4, He, N Ⓢ Vol=CM ❖ Max=335 x 305mm W; Min=CM; Wafers=CM</p>	<p>Ⓢ S/H=640; W/H=274 ✕ PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC Ⓢ High throughput, short cycle times, available with attachable strip/carrier/wafer handling</p>	<p>[marchplasma.com] ✧ Frank Huysmans, VP-Sales fhuysmans@marchplasma.com ☎ 925.246.1662 ✧ Jeffrey Seah, Asia Pacific Bus. Mgr. jseah@marchplasma.com 🌐 Asia Pacific Branch Office 10 Bukit Batok Crescent #08-05 to #08-08, The Spire Singapore 658079 ☎ +65.6896.9630 ☎ +65.6896.9631 ✧ Terumitsu "Terry" Tsuji Japan Business Manager ttsuji@marchplasma.com 🌐 Japan Branch Office Toshin Bldg. 8F, 1-5-21 Katsushima Shingawa, Tokyo 140-0012 Japan ☎ +81.3.5762.2081 ☎ +81.3.5762.2802</p>
	<p>FlexTRAK-SH Ⓢ 2004 ✧ I, A</p>	<p>▲ 13.56MHz@600 or 1,000W ❖ D, RIE, DS, DIF ✧ Unlimited, including Ar, O, H, CF4, He, N Ⓢ Vol=CM; ES=CM ❖ Max=CM; Min=CM; Wafers Max=300mm</p>	<p>Ⓢ S/H=640 ✕ PW, PD, PE, PoD, B/H, SiP Ⓢ Advanced strip handling system with high throughput, short cycle times</p>	
	<p>FlexTRAK-WR Ⓢ 2005 ✧ I, A</p>	<p>▲ 13.56MHz@600 or 1,000W ❖ D, RIE, DS, DIF ✧ Unlimited, including Ar, O, H, CF4, He, N Ⓢ Vol=CM ❖ Max=335 x 305mm; Min=CM</p>	<p>Ⓢ S/H=NA ✕ WFR, WRS, WC Ⓢ Advanced strip handling system with high throughput, up to 300mm</p>	
	<p>AP-1000 Ⓢ 2001 ✧ B, A</p>	<p>▲ 13.56MHz@600 or 1,000W ❖ D, RIE, DS, DIF ✧ Unlimited, including Ar, O, H, CF4, He, N Ⓢ Vol=CM ❖ Max=CM; Min=CM; Wafers=300mm</p>	<p>Ⓢ S/H=1,280; M/H=32; W/H=40 ✕ PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC Ⓢ Stand-alone system with PC touchscreen interface and advanced plasma technology</p>	
<p><b>Pac Tech</b> 328 Martin Ave. Santa Clara, CA 95050 ☎ 408.588.1925 ☎ 408.588.1927 🏠 1995</p>	<p>PlasPac 300 Ⓢ 1999 ✧ B</p>	<p>▲ 13.56MHz@2,500W ❖ RIE ✧ Ar, O, H, CF4, He, N, SF<sub>6</sub> Ⓢ Vol=85; ES=75mm ❖ Max=CM; Min=CM; Wafers=300mm</p>	<p>Ⓢ W/H=75 (150mm), 60 (200mm), 15 (300mm) ✕ PW, WRS, substrate cleaning and wetability improvement by Ar plasma Ⓢ Selective wafer cleaning, optimized for bumping and wirebonding processes, high power and cleaning/etching homogeneity, flexibility</p>	<p>[pactech-usa.com] ✧ Dr. Thorsten Teutsch, President and CTO teutsch@pactech-usa.com 🌐 HQ: PacTech GmbH Am Schlangenhorst 15-17 14641 Nauen, Germany</p>
<p>Panasonic Factory Automation Company (Div. of Matsushita Electric Corporation of America) 909 Ashbury Dr. Buffalo Grove, IL 60089 ☎ 847.495.6218 🏠 1988</p>	<p>PSX303 model KXF-927D Ⓢ CM ✧ CM</p>	<p>▲ CM ❖ RF parallel electrode type, single substrate exposed to plasma, not batch or bulk type ✧ CM Ⓢ CM ❖ CM</p>	<p>Ⓢ CM ✕ PW, PD, PE, PoD</p>	<p>[panasonicfa.com] ✧ Dorothy Perry perryd@us.panasonic.com</p>
<p>UCP Processing Ltd. (Former division of INFICON Ltd.) LI-9496 Balzers Alte Landstrasse 6 Liechtenstein 🏠 2003</p>	<p>LFC060S Ⓢ 2002 ✧ I, A</p>	<p>▲ 13.56Mhz@600W ❖ D, DS ✧ Ar, O, H, N Ⓢ Vol=6,000 or 9,000cm<sup>3</sup>; ES=200 x 300mm ❖ Max=280 x 280mm; Min=100 x 20mm; Wafers=200mm</p>	<p>Ⓢ S/H=500 ✕ PW, PD, PE, PoD, SiP, WFR, WC pre-solder reflow Ⓢ Stand alone strip cleaner with integrated strip and magazine handling</p>	<p>[ucpgroup.com] ✧ Albert Zueger, Managing Director albert.zueger@ucp.li ☎ +423.388.3103 ☎ +423.388.3732</p>