

# PLASMA CLEANING EQUIPMENT PROVIDER DIRECTORY

Company Address ☎ Founded	Model <input checked="" type="checkbox"/> Introduced <input checked="" type="checkbox"/> Type	Plasma Technology	Plasma Modes . Gases	S Chamber Size Vol=Chamber Volume, cm <sup>3</sup> ; ES=Electrode Sizes, mm	● Throughput <input checked="" type="checkbox"/> Applications	Unique features	[web site] * Customer Contact and E-Mail ☎ Phone ☎ Fax 🌐 Additional Offices
Advertisers are shown in <b>Boldface</b> type.		Plasma Modes: D=Direct; RIE=Reactive Ion Etch; DS=Downstream Secondary; DIF=Downstream-Ion Free; P=Preform; S=Solder; T= Tape Gases: Ar-Argon; O=Oxygen; H=Hydrogen; CF <sub>4</sub> =Carbon Tetrachloride; He=Helium; N=Nitrogen		● Capacity Max=Maximum Substrate Sizes, mm; Dia=Wafers, maximum diameter, mm	● Throughput: P/H=Packages/Hour; S/H=Strips/Hour; M/H=Magazines/Hour; W/H=Wafers/Hour <input checked="" type="checkbox"/> 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=WL/water flux removal; WRS=WL/water resist stripping; WC=WL/water for other cleaning (specify); OP=Other Packages (specify)		
Anatech Ltd. 6621-F Electronic Dr. Springfield, VA 22151 ☎ 1981	SCE <input checked="" type="checkbox"/> NS <input checked="" type="checkbox"/> Batch	13.56MHz @ 600 or 1,000 W	D, RIE, DS, DIF . Ar, O, H, CF <sub>4</sub> , He, N	S Vol=199,381; ES=2,485 cm <sup>2</sup> C Dia=300mm	● Cycle time= ~15 min. <input checked="" type="checkbox"/> PW, PD, PE, PoD, SiP, WFR, WRS	24" uniformity tabulation; best results ±1.6% within shelf, average ±7.0%; 9.2% within chamber, ±13.1% average	[anatechltd.com] * George Barr, President gbarr@anatechltd.com ☎ 800.752.7629 or ☎ 703.941.8860 ☎ 703.941.8077
<b>March Plasma Systems</b> (Formerly March Instruments) A Nordson Company 4057 Port Chicago Hwy. Concord, CA 94520 ☎ 1984 (acquired by Nordson March 1999)	AP-1000 <input checked="" type="checkbox"/> Jan. 2001 <input checked="" type="checkbox"/> Batch	13.56MHz @ 0-1,000 W	D, RIE, DS, DIF . Unlimited, including Ar, O, H, CF <sub>4</sub> , He, N	S Vol=128,000; ES=Max. 10 electrodes, ea. 350 x 405mm C Dia=300mm	● S/H=1280, M/H=32, W/H=40 <input checked="" type="checkbox"/> PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC	Self contained PLC touchscreen interface, unique magazine treat- ment technology	[marchplasma.com] * Frank Huysmans, VP-Sales fhuysmans@marchplasma.com ☎ 925.246.1662 ☎ 925.827.1189
	ITRAK <input checked="" type="checkbox"/> Mar. 2000 <input checked="" type="checkbox"/> Automated	13.56MHz @ 0-300 W	D . Unlimited, including Ar, O, H, CF <sub>4</sub> , He, N	S Vol=N/A; ES=N/A C Max=230mm L x 70mm W; min. 178mm W x 38 mm W	● S/H=>120 <input checked="" type="checkbox"/> PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC	High uniformity, high throughput, self contained PLC touchscreen interface	🌐 2762 Loker Ave. West Carlsbad, CA 92008 🌐 12000 28th St. North St. Petersburg, FL 33716
	MultiTRAK <input checked="" type="checkbox"/> Mar. 2001 <input checked="" type="checkbox"/> Automated	13.56MHz @ 0-600 W	D . Unlimited, including Ar, O, H, CF <sub>4</sub> , He, N	S Vol=N/A; ES=Max. 305mm L x 154mm W C Max=Varies	● S/H=>840 <input checked="" type="checkbox"/> PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC	Multiple strip handling; high uniformity, high throughput, self contained PLC touch- screen interface	
	XTRAK <input checked="" type="checkbox"/> June 2001 <input checked="" type="checkbox"/> Automated	13.56MHz @ 0-600 W	D, DIF . Unlimited, including Ar, O, H, CF <sub>4</sub> , He, N	S Vol=N/A; ES=N/A C Max=305mm L x 152mm W; min. 50 mm L x 16mm W	● S/H=>120, C/H=>120 <input checked="" type="checkbox"/> PW, PD, PE, PoD, B/H, SiP, WFR, WRS, WC	Ion-free plasma, servo- motor handling, high uniformity, high through- put, self contained PLC touchscreen interface	
Matrix Integrated Systems 4050 Lakeside Dr. Richmond, CA 94806 ☎ 1986	Panther 300 <input checked="" type="checkbox"/> July 2000 <input checked="" type="checkbox"/> Automated single wafer Bobcat 200 <input checked="" type="checkbox"/> July 2000 <input checked="" type="checkbox"/> Automated single wafer Cougar 200 <input checked="" type="checkbox"/> July 2002 <input checked="" type="checkbox"/> Automated single wafer	All models: 2.45GHz @ 5000 W and 13.56 MHz @ 600 W	All models: D, RIE or dual mode, both . All gases including Ar, O, H, CF <sub>4</sub> , He, N and forming gases H <sub>2</sub> N <sub>2</sub> , SF <sub>6</sub>	All models: S Vol=Not specified C Max=N/A, Dia=100-300mm	● W/H=>100 <input checked="" type="checkbox"/> WC including incoming wafer plasma clean; descum of resist, polymide, BCB; surface prep; dry strip; rework strip of resist, etc.  ● W/H=>70 <input checked="" type="checkbox"/> WC including descum of resist, BCB, etc.	All models: Product line uses identical software and common hardware, small physical size, high throughput, multiple plasma chamber configu- rations	
NEXX Systems, LLC (former Advanced Systems Group of Applied Science and Technology Inc.) 90 Industrial Way Wilmington, MA 01887 ☎ 2001	Cirrus 80 <input checked="" type="checkbox"/> 1995 <input checked="" type="checkbox"/> Batch	2.45GHz @ 1,000 W	Permanent magnet ECR source using microwaves . Ar, O, H, CF <sub>4</sub> , He, N	S Vol=600 x 606mm cylinder C Min. substrate 500 x 500mm	● NS <input checked="" type="checkbox"/> PW, PD, PE, SiP	High-density plasma with low ion energy, no risk of device damage	[nexxsystems.com] * Florence Lee, Inside Sales Administrator florence_lee@nexxsystems.com ☎ 978.284.4910 ☎ 978.284.492?
Panasonic Factory Automation Company (Division of Matsushita Electric Corporation of America) 1711 North Randall Rd. Elgin, IL 60123 ☎ 1998	PC30B-HS and PC32P-M <input checked="" type="checkbox"/> NS <input checked="" type="checkbox"/> Both auto- mated, inline	RF parallel electrode type, single substrate exposed to plasma, not batch or bulk type	. Ar, O	C PC30B-HS: 250mm L x 70mm W; PC32P-M: 330mm L x 160mm W	● NS <input checked="" type="checkbox"/> PW, PD, PE, PoD	Reliable use of ultra-thin gold plating, improved wetability of organic surfaces for overmolding and underfill processes	[panasonicfa.com] * Tom Garvin, Application Engineer garvint@panasonic.com ☎ 847.468.4459 ☎ 847.468.4599