WET PROCESS CLEANING SYSTEMS PROVIDER DIRECTORY

Company Address 🏠 Founded Advertisers are shown in **Boldface** type.	Model ☒ Introduced ⩘ Type	Cleaning Processes ♦ Rinse Processes	Fluids Used	Drying Technologies	Sizes Handled Max=Maximum Substrate Sizes, mm; Min=Single Part Size, mm; Dia=Max. diameter, wafers now (roadmap planned)	Applications	[web site] ❊ Customer Contact and E-Mail ☎ Phone ✉ Fax 🌐 Additional Offices ◎ Unique Features
			Cleaning and Rinse Processes: I=Immersion; M=Megasonic; U=Ultrasonic; MS=Mechanical Scrubbing; S/C=Spin/Centrifugal; S=Spray; V=Vapor; W=Wet Bench; O=Other (specify) Fluids Used: A=Aqueous (specify chemistry); DI=DI Water; SA=Semi-Aqueous (specify chemistry); S=Solvent (specify chemistry) Drying Technologies: AN=Air Nozzle; AK=Air Knife; S=Spin; B=Bake; FA=Forced Air; HA=Heated Air			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; WOC=WLP/wafer for other cleaning (specify); OP=Other Packages (specify)	
Austin American Technology 12201 Technology Blvd., Suite 160 Austin, TX 78727 🏠 1986	Mega II Cleaner ☒ 1996 ⩘ Auto, Batch	I, U, S ♦ I, U, S	DI, S (Megasolv TM JP (nitrogen))	HA (nitrogen)	Consult manufacturer	OP=Flip chip	[aat-corp.com] ❊ Jon Phelps, Sales Manager jrphelps@aat-corp.com ☎ 512.335.6400 ext. 20 ◎ Mega II: Closed loop, cleans and tests, regenerates cleaning chemistry; Microjet FC: Small footprint, high impingement wash and rinse jets, low temperature stripping jet manifold dryer
	Microjet FC ☒ 2003 ⩘ NS	I, S ♦ S	DI, SA (Axarel, Zestron Microemulsions), S (non-flammable alcohols, 30% in water), O (non-foaming saponifers, 30% in water)	AK, AN, FA and jet manifold	Max=400mm; Min=400mm; Dia=400mm now	PW, PD, PE, WFR, flip chips	
Cookson Electronics Equipment (ACCEL Division) Highway 5 South Camdenton, MO 65020 🏠 1988	ACCEL MicroCel ☒ Jan. 1988 ⩘ Auto, Batch	I, S/C ♦ S/C, S	A (Hydrex, Aquanox, Vigon, etc.), DI, SA (Bioact EC7-R, Ionox FCR, Zestron FA), S (chlorocarbons, chlorofluorocarbons)	AN, S, HA	Max=533mm diagonal; Dia=200mm max. (300mm planned)	PW, PD, PE, PoD, B/H, SiP, WFR, OP= Optoelectronics, MEMS	[cooksonelectronics.com] ❊ Shean Dalton, Product Marketing Mgr. sdalton@cooksonelectronics.com ☎ 573.346.3341 ✉ 573.346.3341 🌐 HQ: Cookson Electronics Equipment 16 Forge Park Franklin, MA 02038 ◎ MicroCel: Centrifugal energy when matched with appropriate chemistries; MicroLine: Inline spray cleaning system, integrated flow modules
	ACCEL MicroLine ☒ Jan. 1996 ⩘ Auto, Inline	S ♦ S	A (Hydrex, Aquanox, Vigon, etc.), DI, SA (Bioact EC7-R, Ionox FCR, Zestron FA)	AK, FA, HA	Max=457mm diagonal; Dia=300mm max.	PW, PD, PE, PoD, B/H, SiP, WFR, OP= Optoelectronics, MEMS	
Cookson Electronics Equipment (Electrovert Division) Highway 5 South Camdenton, MO 65020 🏠 1951	Electrovert Aquastorm ☒ Feb. 1996 ⩘ Auto, Inline	S ♦ S	A (Hydrex, Aquanox, Vigon, etc.), DI	AK, FA, HA	Max. sizes must fit onto 610mm wide belt	PW, PD, PE, PoD, B/H, SiP, WFR, OP=Optoelectronics, MEMS	[cooksonelectronics.com] ❊ See above ◎ Patented dual nozzle technology combines the effectiveness of high volume/high pressure spray energy to enable conveyorized cleaner to fully penetrate underneath
EV Group Inc. (formerly Electronic Visions) 1210 Pontiac Ave. Cranston, RI 02920 🏠 1980 🌐 HQ: EV Group DI Erich Thallner Strasse 1 A-4780 Schärding, Austria	EVG-301, EVG-320 ☒ 1995 ⩘ Auto	M, MS, S/C ♦ CM	A, DI, S	AN, S, B	Max=300mm; Min=50mm; Dia=300mm	WFR, WRS, OP=Clean before wafer level bonding, fusion bonding (EVG850 SOI Bonder) ◎ Mask cleaning capability, no touch wafer handling system, Windows based operating system	[evgroup.com] ❊ Carol Lucero, Marketing Coordinator c.lucero@evgroup.com ☎ 602.437.9492 ✉ 602.437.9435
FSI International 3455 Lyman Blvd. Chaska, MN 55318 🏠 1973	MAGELLAN STG Immersion Clean Systems ☒ July 2002 ⩘ Auto	I, M, S/C, S, V, W ♦ I, M, S/C, S, V, W	A (acids, bases and hydrogen peroxide), DI, SA (ammonium, fluoride based and others), S(Class III combustible liquids)	AN, S, HA, also IPA/N_2 (STG/Marangoni)	Min=150mm; Single Part= 20mm; Dia=300mm	WFR, WRS, WO (under bump metal removal, solder ball oxide removal)	[fsi-intl.com] ❊ Deb Schwichtenberg deb.schwichtenberg@fsi-intl.com ☎ 952.361.1075 ✉ 952.361.1308 ◎ Offering CryoKinetic technology for particle removal from all types of surfaces that are sensitive to water or mechanical damage.
	ZETA Surface Conditioning Systems ☒ Dec. 1995 ⩘ Auto	I, M, S/C, S, V, W ♦ I, M, S/C, S, V, W	A (acids, bases and hydrogen peroxide), DI, SA (ammonium, fluoride based and others), S(Class III combustible liquids)s	AN, S, HA, also IPA/N_2 (STG/Marangoni)	Min=150mm; Single Part= 20mm; Dia=300mm	WFR, WRS, WO (under bump metal removal, solder ball oxide removal)	
	ANTARES CX Advanced Cleaning Systems ☒ July 1998 ⩘ Auto	I, M, S/C, S, V, W, CryoKinetic ♦ I, M, S/C, S, V, W	A (acids, bases and hydrogen peroxide), DI, SA (ammonium, fluoride based and others), S(Class III combustible liquids)	AN, S, HA, also IPA/N_2 (STG/Marangoni)	Min=150mm; Single Part= 20mm; Dia=300mm	WFR, WRS, WO (under bump metal removal, solder ball oxide removal)	
PacTech 328 Martin Ave. Santa Clara, CA 95050 🏠 1995	MegaPac 200 ☒ CM ⩘ Semi-auto, Batch, Inline	I, M, U, S, WB ♦ I, M, U, S, WB	DI, S and Aqueous (any compatible with stainless steel)	CM	Max=200mm; Min=50mm; Dia=200mm (300mm planned)	WFR, WRS, WLO (custom as ordered) ◎ Rinse dryer included, megasonic, PLC, heated solvent capable, explosive safe due to vapor protection by N_2 protection and indirect heating	[pactech-usa.com] ❊ Ron Blankenhorn, President, Pac Tech USA ron@pactech-usa.com ☎ 408.588.1925 x201 🌐 HQ: PacTech GmbH Am Schlangenhorst 15-17, 14641 Nauen, Germany

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Stoelting 502 Hwy. 67 Kiel, WI 53042 1905	CBW API-LACS NS Auto, Batch	S S	A (Aquanox, Hydrex, Zestron), DI	AK, AN, FA, HA	Max=610mm; Min=25mm; Single Part=1.8mm	PW, CM, PD, PE, PoD, B/H, SiP, WFR	[stoelting.com] Barbara Tasch, Marketing Communications Manager industrial@stoelting.com 920.894.2293 920.894.7029
SUSS MicroTec (formerly Karl Suss) Schleissheimer Str. 90 85748 Garching Germany 1949	Delta 36T Developer Etcher Cleaner System Semi-auto	M, U, MS, S/C, S, also high pressure nozzle for DI water M, U, S/C, S	A, DI, S	AN, S	Max=400mm; Dia=560mm	CM Media temperature control optional, CO2 reionization unit for DI-water optional, drain separation optional, Ethernet interface optional (standard on 36/16T)	[suss.com] Jim Hermanowski jhermanowski@suss.com 802.244.5181 ext. 267 Sales: SUSS MicroTec Inc. 228 SUSS Dr. Waterbury Center, VT 05677 SUSS MicroTec Co. Ltd. 8F-11, No. 81, Shui-Lee Rd., Hsin-Chu 300, Taiwan
	Delta 36/16T Cleaner System Semi-auto				Max=400mm; Dia=560mm		
	CL200, SOI200 2000-02 Auto, Batch	M, S/C, S M, S/C, S	Aqueous (diluter SCI), DI	S, HA (IR heater)	Max=200mm; Min=50mm; Single Part=50mm; Dia=200mm (300mm planned)	WFR, WRS, O=mask cleaning	
	ACS200Plus, ACS300Plus 2001-02 Auto	M, U, S/C, S M, U, S/C, S	A, DI, SA	NS	Max=200-300mm; Min=50mm Dia=300mm	WFR, WRS	