

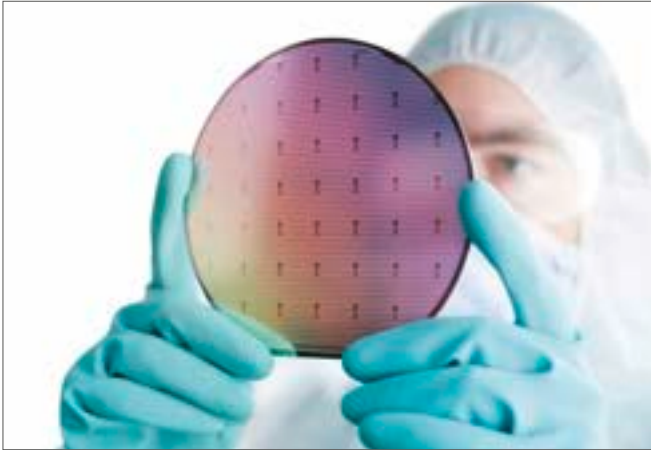
SEMICONDUCTORS/MEMS



S3Alliance

SUPPLY . SERVICE . SOLUTIONS

www.s3-alliance.com



FROM GLOBAL LEADERS TO EUROPEAN MARKETS

S3 Alliance provides the network, and product portfolio that brings leading edge solutions to our customers in the semiconductor, MEMS, life sciences, and green energy sectors.

Customer service is the key driving force behind our company and the reason our customers keep coming back. We strive to ensure satisfaction at all times by maintaining permanent communication, keeping our staff well trained, to provide technical support when needed. Our supply and service solutions are tailored to meet our customers ever changing requirements, enabling them to be competitive in what is now a truly global marketplace.

We source and offer quality products at the right price within the following areas:

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New CMP & Post CMP Scrubber, Remanufactured Systems



New CMP tool: CAPSTONE

- DIWO/DIDO
- 2 platen up to 4 carriers
- Multiple Multi Zones Carriers available for different applications

New Post CMP Scrubber: AQUARIUS

Refurbished CMP Platform

- AMAT/Mirra, Mirra Mesa
- IPEC Surface, 472, 372M
- Auriga, 676, 776
- Strasbaugh/6EC, 6DSSP



Refurbished Post CMP Scrubber

- Ontrack/DSS 100, 200
- Synergy

Grinders

- Strasbaugh (7AF), Disco (DFG 841), Okamoto



Foundry Services for CMP, Backgrinding and Cleaning processes

CMP and Backgrinding Upgrades

Process Integration

www.axustech.com

CMP & Cleaning Systems for R & D



CMP

- Semi-automated CMP Systems from 2"-12"

Post CMP Scrubber

- Semi-automated (4"-12") or fully automated (3"-6")



GNP Process group provides also:

- Consumable development evaluation
- Process development and optimization
- Throughput enhancement
- Additional CMP Options Characterization like: MEP, OEP
- Comprehension of CMP characteristics



www.gnptech.com

Tape / Detape / Wafer Mounting / Systems



Semi or Fully Automated Tape Lamination or Detape System

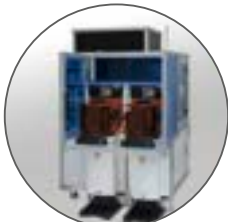
Wafer Mounting

UV Irradiation System

Edge Contact Handling and Processing

Applications

- BG Tape Lamination
- DFR Lamination for MEMS and SAW/BAW, Microfluidics
- Backside Coating Lamination
- Vacuum Lamination for Trench Filling, Via Filling
- BG Tape Remove, Cover Film Remove
- Dicing Tape Mount w/BG Tape Remove
- De-Mount/Reverse Wafer Mounting
- Regular Dicing Tape Mounting
- UV Irradiation



www.teikoku-taping.com

Tailored Wet Processing Systems



Linear Wet Benches

- Semi to Fully Automated

**Spray Acid Tool (SAT)
Spray Solvent Tool (SST)**

New SRD Systems

- Tabletop, Single or double Stack Stand Alone
- Plating Tools



Inception Single Wafer Spray

- manual or automated
- 2-4 chemical process tanks

Applications

- Advanced Metal Etch
- Metal Lift Off
- Resist Strip
- Advanced Cleaning



www.rena-na.com

Atomic Layer Deposition (ALD)



Technology

- Showerhead Type ALD/CVD Process
- Traveling Wave Type ALD Process
- Furnace Type Batch ALD Process
- High Film Uniformity and Quality

Applications

- Available Materials: Metal, Metal oxide, Metal nitride, Metal sulfide, Laminate and mixed materials
- Application fields: Semiconductor, Display, Solar cell, LED, MEMS, Optical-, Bio-, Nano- and flexible devices



www.cn-1.co.kr

Spray Coating Systems



Nozzle-less ultrasonic spray head technology

- Sprays thin, uniform films down to sub-micron thickness
- Variety of precision coating platforms available from **bench-top to large format**

Applications

- Coating applications include display, semiconductor
- Photoresist, Polyimide
- Conductive Coating
- Metal Coating (EMI Shield)



www.ultraspray.com

Asher / Descum Equipment



New E3511 Asher Equipment Remanufactured Asher Equipment

- Gasonics L3510, Matrix,...

Unique innovative Upgrades

Applications

- Semiconductor / MEMS
- Nanotechnology and LED Industries
- Biomedical



www.esi-semi.com

Critical Point Dryers (CPD)



Critical Point Dryers (CPD)

- Semi to Fully Automated
- Products for cleanroom and non-cleanroom**

- Research chemicals Supplies
- Accessories and instruments for the electron microscopy and analysis laboratory

Applications

- FOM, Aerogel, MEMS, SEM Preparation



www.tousimis.com

Dry cleaning system & Laser applications



Laser Cleaner Applications

- Frontend: Wafer Backside cleaning
- Backend: Probe Card and Socket cleaning
- General Cleaning: Rust and Residue removal, Mold cleaning, others

CO₂ Cleaner Applications

- Dry cleaning technic (soft dry ice with specific nozzles)
- Microjet: Glass cleaning
- Snow: Dust and Ash removal after Laser processing
- Super Snow: Mold cleaning (precise plastic mold, Press mold)
- Pellet: Metal parts cleaning, Stone parts cleaning



www.imt-c.co.kr

High Purity UPW & Chemical Heaters



(Europe except UK and Ireland)

QuantumNXT Stand-alone UPW Heater up to 288 kW

- Exceptional temperature response (quick, accurate)
- Ultra Clean Design (quartz, PFA)
- Water Stop Option (cut off IDLE mode water usage)
- Recirculation Option (recirculation for the water process line)

Inline Heater up to 18 kW for UPW and Chemistry available



www.treborintl.com

Dicing Fluid HiSpec Injector Systems & Wafer Bonder



HiSpec Injector Systems

Compact systems for precise dosing of dicing fluid in wafer dicing processes.

- Saw-side HiSpec Injector for precise dosing
- Inline HiSpec Injector for direct DI water line dosing

DXB 880 Wafer Bonder

- Compact, fully automated for fast, void free, and reliable bonding

Applications

- Semiconductor, MEMS
- Optoelectronic Devices
- Biomedical

www.millice.com.sg

Manufacturer of Plasma (RIE/ICP) Systems



RIE, ICP Etch

- Phantom III
- Minilock

PECVD

- Titan
- Minilock Orion
- Oracle III

Resist Strip / Descum

- Apollo (single chamber)
- Gemini (multi chamber)

www.triontech.com

Scribe and Break System & Wafer Expander



DTX Scribe and Break

The automatic diamond scribe and break and break only systems can manage diverse, precision processes.

DXE Wafer Expander

Applications

- SiC, GaN, GaAs, Glass
- MEMS
- OptoElectronics Devices
- Biomedical

www.4jet.de

Spin Coater



High-Precision Spin Coating System

Multiple Vacuum Chucks available, up to 8.000rpm

ACE-200

- Up to 6 inches

TOP-8

- Up to 8 inches

DC-1020

- Dip-Coater for Samples

Applications

- All typical coating applications

www.spincoater.net

Non-invasive Flow Measurement & Bubble Detection



(except UK)

Ultrasonic Measurement

SEMIFLOW clamp-on flow sensor

- Real-time instantaneous flow measurement
- Reliable flow measurement up to 400L/min
- Accuracy of $\pm 2\%$
- 8 different sensor sizes

SONOCHECK air bubble detector

- Non-invasive measurement method directly through the tubing wall
- Fitting for a wide range of plastic tubing types



www.sonotec.eu

Scanning Electron Microscope



(Germany)

Tabletop SEM

- Compact and Light
- High-Resolution ($\approx 200\text{k}@30\text{kV}$)
- 100% motorized stage and 4Ch BSE as a basic model
- Fast and Easy Operations (ready in 90s)
- No gun alignment required
- Integrated EDS from every maker (option)

Applications

- Semiconductors and electronics
- Microsystems, Solar Cells, Carbone Nano Tubes
- Materials Science, Energy, Biology, Insects



www.emcrafts.com

Metrology



RT-3500

All in one wafer metrology System; Following non contact measurement combinable:

- Thickness, bow and warp
- Step height and roughness
- Film thickness



www.koviseng.com

Optical Microscope

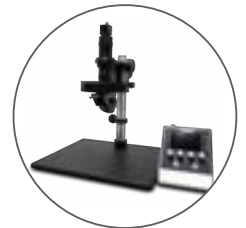


OptoNano 200, PT ZOOM B+, PT Biology

- Real-time Nano-Imaging
- 360° rotation
- Rotate speed adjustable, continuous zoom, multi angles observation
- Working distance up to 86 mm, motorised Zoom function available
- Powered by our proprietary software

Applications

- OptoNano 200: research laboratories and industrial production
- PT Zoom B+: semiconductor and manufacturing industries
- PT Biology: research laboratories and Biomedical industries



www.phaostech.com

Chemical concentration measurement



Ultrasonic conductivity and temperature technology for simultaneous monitoring of chemical concentrations in real time during the production process.

Applications

- Cleaning
- Photoresist and Stripping
- Etching
- CMP



www.rhosonics.com

Defect & Contamination Inspection



PrimaScan™ Series

Wafer and panel level tools for providing an all-surface contamination and defectivity inspection and imaging for:

- Opaque wafers
- Semi-transparent wafers
- Transparent wafers
- Reticles and panel level substrates

Celero™ Series

Subsurface defect inspection and classification for silicon carbide (SiC) and gallium nitride (GaN) based wafers and compound semiconductor materials.



www.ontoinnovation.com

Automated Wafer Handling Loader/Unloader

JABIL



Standard wafer handling solutions for non-standard wafer handling requirements (OEM, end-users)

- From 50–450 mm
- Bridge tool capability with no tooling change-over
- Non-standard wafer handling solutions (thin, warped, glass, thick, film frame)
- For all types (SMIF, FOUP or open cassette)
- SIM (Standard Interface Module) SIM 500, SIM 1000

www.jabil.com

Wafer Handling Tools

STC

SINCE 1988



- **Manual Wafer Transfer from 2"–8"**
- **Auto Wafer Transfer from 2"–8"**
- **Manual Flat/Notch finder**
- **Auto Flat/Finder**
- **Manual Wafer Lifter from 2"–8"**

www.stc.tw

Automatic Batch Wafer Systems

R2D automation

(Italy and UK)



- **Single Batch Transfer**
- **2/3 Station or Vertical Transfer**
- **Sorters, OCR Sorters**
- **OCR Readers**

www.r2d-automation.com

Wafer Sorting & Wafer Automation with Inspection Options

NADAtch



Wafer Sorting and Handling solutions with integrated Options for Inspection, Metrology and Stocking.

N Series Open Carrier Sorter

- Up to 6 open carrier platforms for max 200 mm

T Series 300 mm Bridge Wafer Sorter

- With up to 8 FOUP/FOSB loadports for max 300 mm

Plus EFEMs, Bare Wafer Stockers, and many options available.

www.nadatech.com

Retaining Ring & Customized Plastic Parts



Retaining Ring available in different materials

- PEEK, PPS, PBN
- available for AMAT Mirra, Reflexion, Ebara FREX and others

Parts for CVD and ETCH Producer, Speed, Endura, Centura

www.willbesnt.com

CMP Pad Contitioner & Back Grinding Wheels



Diamond CMP Pad Contitioner

- Flexible and accurate diamond arrangement
- ARIX Technology (extended Lifetime) Defectivity Reduction
- CVD Type Technology (LASER Processing)

Back Grinding Wheels

- Available for all Type of Grinders, DISCO, OKAMOTO, TSK, Strasbaugh,
- Super Polish Wheels for Low Roughness and low Sub surface Damage

www.shinhandia.co.kr

CMP Pads



CMP Polyurethane Pads

- Controlled pore size and distribution using Single Mold Technology
- Window Pad available for EPD
- All types of grooves

Applications

- Oxide, STI, W, Cu
- Sapphire, Glass, Quartz

www.ivt.com.tw

CMP Parts & Services

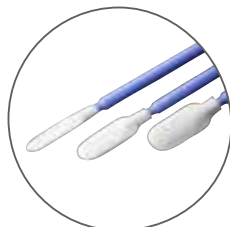


Development and Manufacturing of CMP Parts for AMAT and EBARA parts

- Silicone and Rubber parts for CMP, Etch and other
- Other CMP Part Repairs (Rotary Union, Motors,...)

www.warde.com.sg

Materials for Cleaning Critical Surfaces



Materials

- ScrubPads
- Foams
- Microfiber Wipers
- Swabs
- Ergonomic Tools (ScrubPen, tips...)
- Control Wiper Polycheck

Chamber Cleans

- CVD, HDP chamber from AMAT, LAM
- ETCH from LAM, AMAT, TEL
- VOC Free PM Wiping Change tent
- Implant, Photo

www.foamtecintlwcc.com

Products for Silicon Wafer Handling



- Wafer carrier
- Storage Boxes
- Wafer Shipping Products
- All handling plastic items

New from remaining stock of Entegris or other Brands or Reclaimed and fully quality controlled.

www.redstonetechnical.com

Seals and Components



Engineered to withstand the harshest environments, Greene Tweed solutions deliver proven performance, unmatched reliability, reduced downtime, and enhanced efficiency for leading semiconductor fabs, foundries, and OEMs.

Applications

- Dielectric and Conductor Etch
- PECVD/PEALD
- Wet Processing
- SubFab



www.gtweed.com

Wafer Cassette



Wafer Cassette

- PEEK from 4"–8"
- Teflon/PFA, PP from 2"–12"

Shipping Box from 2"–8"

Single Wafer Carrier 2", 3", 4", 5", 6" made of PP

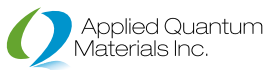
Mask package, Reticle SMIF POD

Plastic or Metal Film Frame

FOUP for Thin Wafer

www.ckplas.com

H-SiO_x Resist



High quality, versatile photoresist

- Electronic grade hydrogen silsesquioxane (HSQ) based resin
- Electron beam, NIL, He-ion, EUV, dielectric, and conformal coating applications
- Ultra-high resolution below 10 nm to 2 μm features
- Superior etch and ion milling resistance



www.aqmaterials.com

Consumables for: bonding, grinding, dicing, cleaning

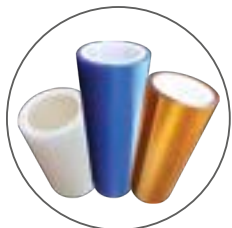


High performance materials and application equipment

- WaferGrip™
- KerfAid Dicing Surfactant
- StripAid™
- TruClean

www.millice.com.sg

Dicing Saw & Blades



Chuck Tables

- New and Refurbished

Dicing Saw

Dicing Blades

- Resin, Electro formed, Metal, vitrified Bond

High Temperature UV Tape

Polishing Template

www.nds-tw.com

Diaphragm Pumps & Heaters

TREBOR®

(Europe except UK and Ireland)

- High Purity PFA Chemical Pumps
- High Purity Di Water Quartz Heater
- High Purity Chemical Heaters
- New Flexible Chemical Heaters



www.treborintl.com

Thermoplastic Piping Systems

ASIA
Industrie Systeme

Excellent mechanical strength and chemical resistance while preserving fluid purity.

HP PVDF:

- Diaphragm Valve
- Tee Fitting
- Pipes
- Elbow



www.asianvalve.com

Vacuum Control Valves

NOVASEN

High-performance valves for industrial and semiconductor vacuum control

- Different communication interfaces

APC Butterfly Valve in Regular- and Eco-Version

- Flange Size: DN025 up to DN320

APC Pendulum Valve

- Flange Size: DN025 up to DN320
- Ultra-High Vacuum Capability
- Wide Pressure Range



www.novasen.net

UHP Gas Delivery Components

ASFLOW
ADVANCED SEMICONDUCTOR FLUIDS, LLC

Valves and Regulators

- Leak-tight diaphragm and bellows designs for UHP gases
- Fast, precise control with long cycle life

Filters and Diffusers

- 2.5 nm particle retention for ultra-clean processes
- Low pressure drop for stable, high-flow delivery

Fittings

- Mirror-polished, high-integrity connections
- 100% helium-leak tested; compatible with global UHP standards



www.asflow.com

Bearingless Pumps

LEVITRONIX®

(UK and Ireland)

For following applications:

- Slurry mixing and dispense
- Electro Chemical Deposition (Au, Cu, Permalloy, Solder)



www.levitronix.com

Vacuum Pump and Power Supply Repair / Exchange



- **Cryo Pump Repair, Refurbishment or Exchange**
- **Power Generators/Supply Repair and Refurbishment**
- **Refurbished turbo and mechanical pumps**

www.ptbsales.com

Atmospheric and Vacuum Robot Repair / Exchange



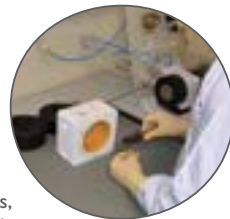
- **Robots and Aligner Services**
 - Brooks, PRI, Equipe Genmark, Rorze
- **Head Platen Motors**
 - Kollmorgen
- **CVD Vaporizer / LMFM Unit Repair / Overhaul**
 - Source Material: TEOS, TDMAT, TEP, TMCTS, BCHD

www.greenspec.co.kr

Trebor Pumps Repair



(Europe except UK and Ireland)



Signature Service Provider

- S3 Alliance GmbH is a certified Signature Service Provider (SSP) for Trebor Products, specializing in the repair of all Trebor Diaphragm Pump Models
- We have the facilities (wet bench, compressor) and toolsets for this service, as well as a variety of rebuild kits available for immediate repair out of our stock

www.s3-alliance.com

OEM-Grade Quality Services for Yaskawa & Kawasaki



- **OEM Experienced Engineering**
- **New OEM Replacement Parts only**
- **100% OEM identical Service and QC**
- **Comfortable Service and short Lead Times**
- **Attractive Conditions**

www.cektech.com

Ozone Generators Repair



Repair of:

- Ozone Generators
- Megasonic Amplifiers
- High-performance semiconductor equipment

Infusion Systems – easy to install stand alone and fully integrated.

- ZEUS – Ozone Gas Delivery System
- Cronus DIO3 Delivery System
- Semitool Hydrozone Systems Support

Ozone Infusion System Products

www.ozoneinfusion.com

CMP Parts Repair



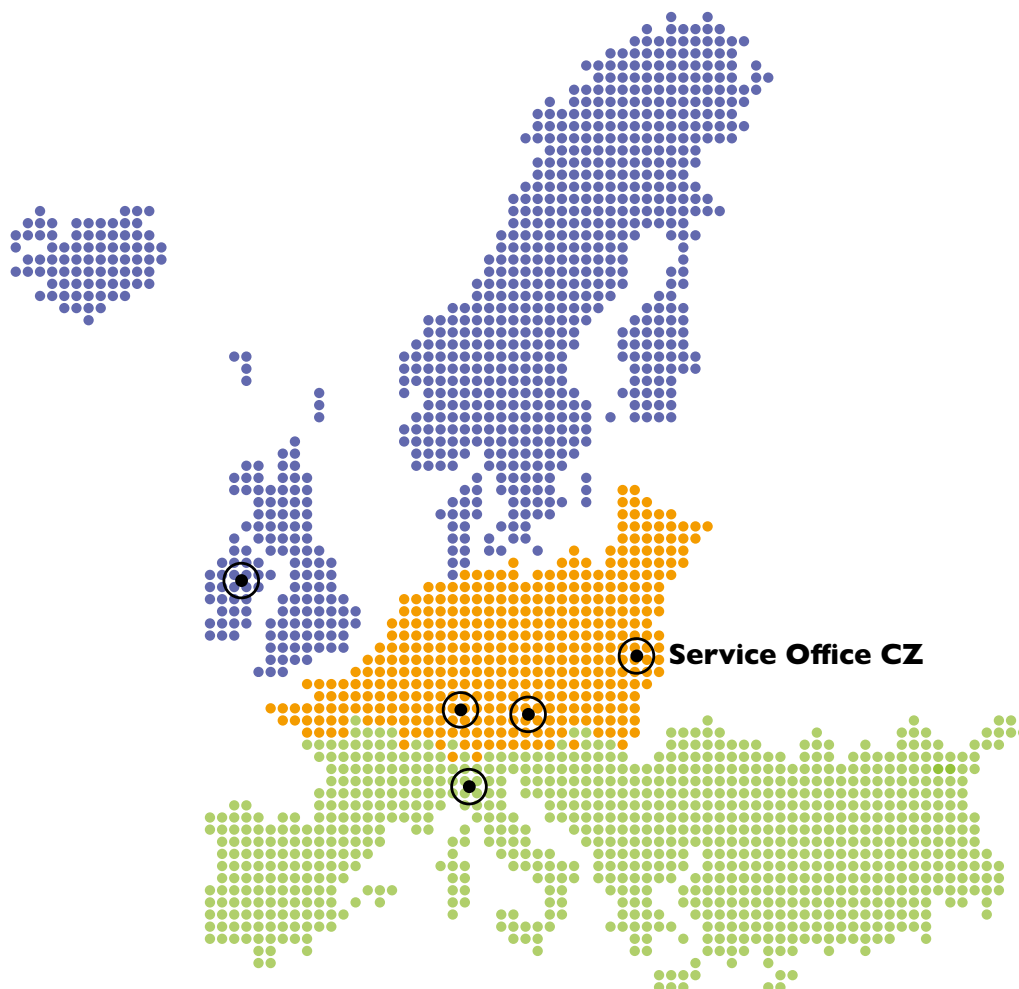
Repair of AMAT/EBARA:

- Rotary Union
- Motors
- Pad Conditional Hub Assembly
- Polishing Head Spindle Assembly
- Gear Box Modification and Overhaul

www.warde.com.sg

LOCATIONS

S3 Alliance operates from several locations within Europe



UK - Ireland Office

S3 Alliance Ltd
85A Ledwidge Avenue,
Londonderry, BT47 6GZ
N. Ireland

Tel.: +44 2871 357 760
Fax: +44 2871 357 744
E-mail: salesuk@s3-alliance.com



German Main Office

S3 Alliance GmbH
Mahdenstraße 23
D-72138 Kirchentellinsfurt
Germany

Tel.: +49 7121 16 777-0
Fax: +49 7121 16 777-10
E-mail: salesgmbh@s3-alliance.com



Italian Office

S3 Alliance SRL
Via Rossini 4
21052 Busto Arsizio (VA)
Italy

Tel.: +39 033 143 0295
E-mail: salesit@s3-alliance.com

Sales Office

S3 Alliance GmbH
Schaezlerstraße 32
D-86152 Augsburg
Germany

Tel.: +49 821 596 576
E-mail: salesgmbh@s3-alliance.com



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www.s3-alliance.com



Our new website