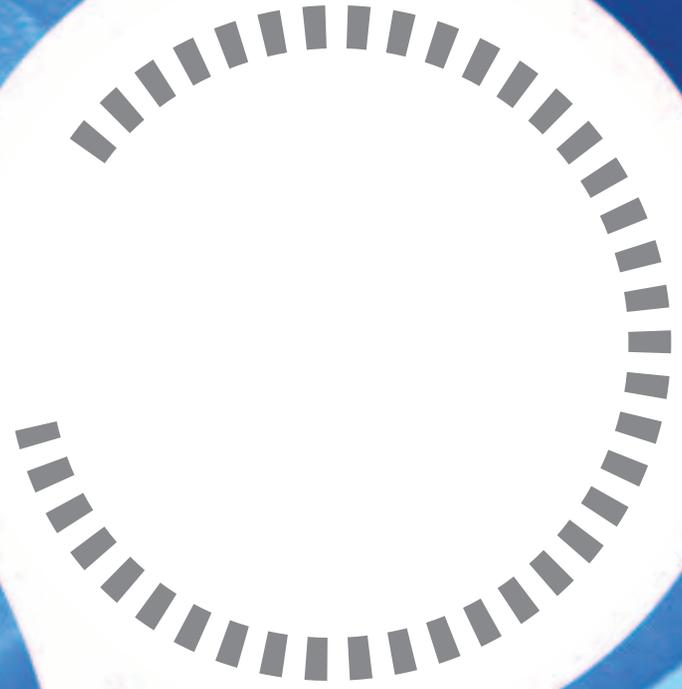


SEMICONDUCTORS/MEMS

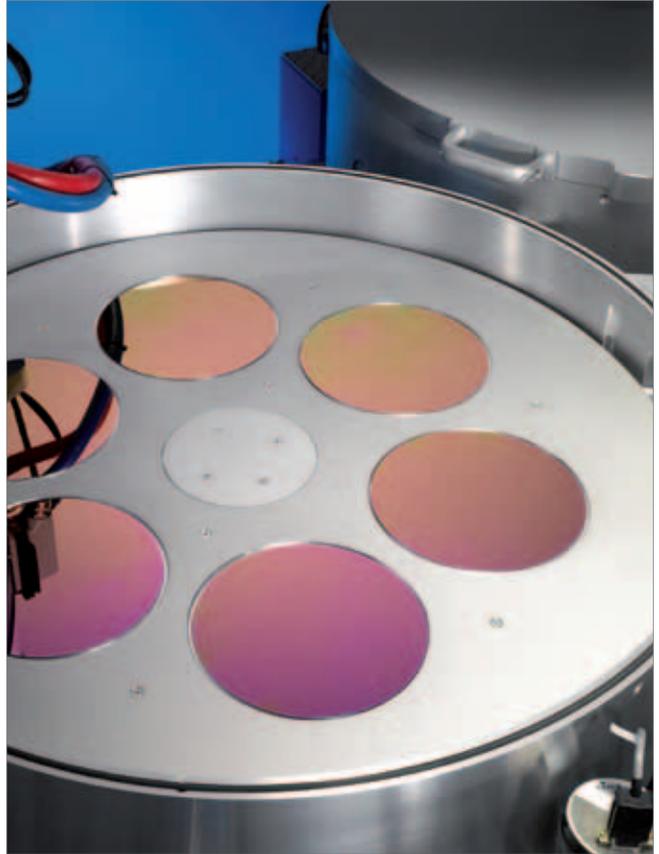
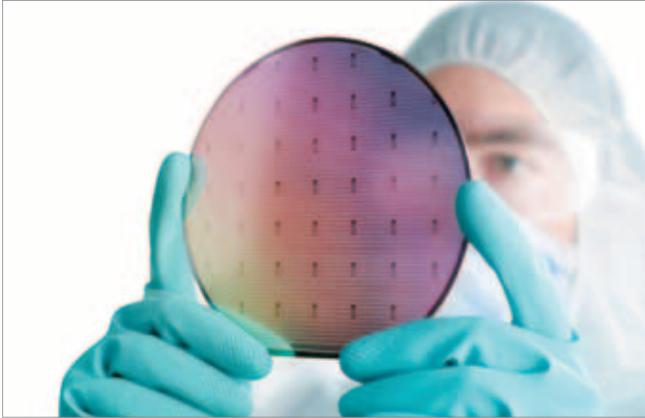


[www.s3-alliance.com](http://www.s3-alliance.com)



**S3Alliance**

SUPPLY . SERVICE . SOLUTIONS



## S3 ALLIANCE

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S3 Alliance provides the network, and product portfolio that brings leading edge solutions to our customers.

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:

	page
Equipment	3
Metrology & Handling	6
Parts & Consumables	8
Service / Cleaning and Facility	10

## Remanufactured CMP/Grinding/ Scrubbing Systems



### CMP

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

### Post CMP Scrubbers

- 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](http://www.axustech.com)

## CMP & Cleaning Systems for R&D



### CMP

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

### Post CMP Cleaners

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

### GnP Process group provides also:

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



[www.gnptech.com](http://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](http://www.teikoku-taping.com)

## Tailored Wet Processing Systems



### Linear Wet Benches

- Semi to Fully Automated

### Upgrade Programs Spray Acid Tool (SAT) Spray Solvent Tool (SST)

### New SRD Systems

- Tabletop, Single or double Stack Stand Alone

### Refurbishment of Legacy Wetbenches, Parts for

- Akרון, SCP, Steag, UP

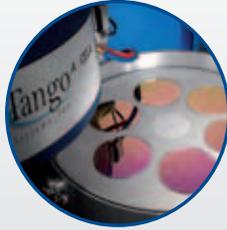
### Applications

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



[www.meillc.com](http://www.meillc.com)

## PVD Systems



### PVD Systems

#### ONYX

- Single Wafer Chamber up to 300mm

#### AXCELLA

- Single Wafer or Multi Wafer Chamber up to 300mm & Segment Carriers

#### TOPAZ

- Single Panel Chamber 500mm & 600mm

#### Hionix Film Deposition Services

#### Applications

- MEMS, Power Devices, Fan Out
- EMI Conformal Package Shielding
- Ad. Packaging (Bumping, UBM, RDL, TSV)

[www.tangosystemsinc.com](http://www.tangosystemsinc.com)

## 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](http://www.ultraspray.com)

## Atomic Layer Deposition (ALD)



### Technology

- Showerhead Type ALD / CVD Process
- Traveling Wave Type ALD Process
- Furnace Type Batch ALD Process
- High Film Uniformity & 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](http://www.cn-1.co.kr)

## 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

[www.tousimis.com](http://www.tousimis.com)

## New & Remanufactured Thermal Processing Solutions & Diffusion Furnaces



### Vertical Thermal Reactor (VTR)

### Horizontal Thermal Reactor (HTR)

### Compact Thermal Reactor (CTR)

### Remanufactured Systems

[www.exper-tech.com](http://www.exper-tech.com)

## Single Wafer WET Etch & Clean Systems



### Technology

ACM use Space Alternated Shift (SAPS), an advanced Megasonic Technology enabling a better Control of the Energy as well as Stable Cavitation Generated by Timely Energized Bubble Oscillation (TEBO) for Advanced Node Cleaning.

#### Applications

- TSV Clean, Wafer Maker Final Clean
- Main Cleans (Post Etch, Pre Film Deposition Clean,...)
- Cu, Ti and TiW Etch, RDL and Bumping Wet Etch
- Cu Plating

[www.acmrcsh.com](http://www.acmrcsh.com)

## High Precision Spin Coating Systems



### Spin Coater TOP-8

speed up and down freely 0 ~ 50 to 8,000 R.P.M. (Option: 10,000 R.P.M)

### Spin Coater ACE-200

speed up and down freely 0 ~ 50 to 8,000 R.P.M. (Option: 10,000 R.P.M)  
Most Compact spin coater, High & controllable speed.



[www.spincoater.net](http://www.spincoater.net)

## Coater / Developer Track Systems



### Remanufactured TEL Track Systems

- MARK Series
- ACT Series
- LITHIUS Series

### Spare Parts

### Engineering Service



[www.aplt.co.kr](http://www.aplt.co.kr)

## Gasonic Asher Equipment



### Remanufactured Gasonics L3510 Asher equipment

- Plasma Asher, Plasma Resist Strip and Etch tools
- Unique innovative upgrades
- cost-effective technical solution

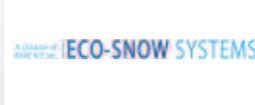
### Applications

- Semiconductor, MEMS
- Biomedical
- Nanotechnology & LED Industries



[www.esi-semi.com](http://www.esi-semi.com)

## CO<sub>2</sub> Dry Cleaning



### CO<sub>2</sub> Snow Aerosol Cleaning

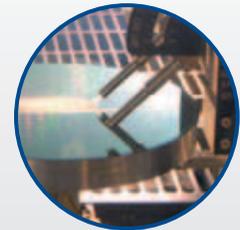
- Semi-automatic or fully automated 4" to 12" Equipment for

### MASK Cleaning

- Post Repair Clean
- Full MASK Clean

### Applications

- MEMS Cleaning
- Backend Package Cleaning
- Metal lift Off
- Particle removal
- Post Dicing Cleaning



[www.ecosnow.com](http://www.ecosnow.com)

## 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](http://www.triontech.com)

## Room Temperature Wafer Bonder



### Principle surface activation

### Room Temperature

### Vacuum

**Void-free high yield rate bonding can be realized**

### Applications

- Si / Si
- SiO<sub>2</sub> / SiO<sub>2</sub>: For insulated pack.
- Si / Quartz, Quartz / Quartz
- Cu / Cu
- Wafer Level Pack. for MEMS (Acc.sensor)



[www.mhi-global.com](http://www.mhi-global.com)

## Ultra Violet Lights for Clean Room



**Detect particles as small as 30 microns that are not visible to the human eye and prevent contamination. Easy to use.**

### Applications

- Cleanroom incoming parts control after cleaning by external cleaning subcontractors
- UV inspection prior to assembly in Clean Room
- UV inspection during assembly in a Cross Flow Cabinet
- UV inspection after cleaning



[www.labino.com](http://www.labino.com)

## Table Top Mini SEM



### MiniSEM

- easy to use, simple SEM
- small size, fast image scan SEM (image within 3min)
- low, easy maintenance
- high resolution

### All Options:

- 5 Axis fully motorized: XYZ, tilt angle and rotation
- Top View CCD camera in the chamber
- High and Low Vacuum Mode
- Dual Detector (SE, BSE)

### Applications

- Semiconductors, Electronics, Fuel Cells,
- Material Sciences, Biology, Medicine,...



[www.seceng.co.kr/eng/](http://www.seceng.co.kr/eng/)

## Automated Wafer Handling Loader / Unloader



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

- From 50mm to 450mm
- 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](http://www.jabil.com)

## Automatic Wafer / Package Inspection / Laser Marking Systems



Advanced Technology Inc.

**2D and 3D Vision with Micro and Nano Pixel Imaging Surface Defect Inspection for: Contamination, Foreign Material, Scratch, Etch Residue, Discoloration**

- Post Wafer thinning and Dicing Crack Inspection
- Wafer Macro defect inspection Tool: 2D, 3D Bump, die to die and
- Cracks inspection kerf, Edge trim Inspection

### Laser Marking Tool

### Reticle Inspection Tool

- Pellicle Surface Inspection and defects
- Backside Surface inspection,...

### LED 2D and 3D Inspection Tool

- LED FAB Process Inspection

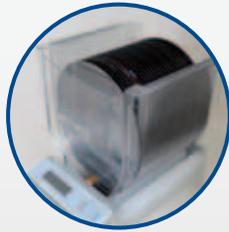


[www.ati2000.co.kr](http://www.ati2000.co.kr)

## Manual Wafer Handling Products



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



[www.stc.tw](http://www.stc.tw)

## Automatic Wafer Handling Systems



- Wafer Handling**
  - Manual Wafer Handling Tools
  - Flat & Notch Aligners
  - Wafer Inspection
  - Horizontal Slide Transfer
- Mass Transfer**
  - Wafer Transfer Units
  - Back-to-Back Loading
  - Cross-slot detection
- Automation Systems for**
  - Wafer Sorting
  - Wafer Inspection
  - Automated Furnace Loading
  - Wafer Packaging



[www.mactronix.com](http://www.mactronix.com)

## Wafer Surface Metrology



### Capacitive, IR, BP or WL Interferometry

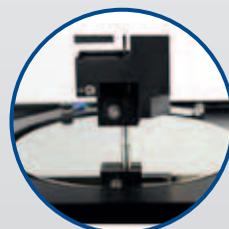
- Thickness, TTV, Bow, Warp measurement
- Wafer Characterization
- Layer thickness measurement

### Wafer Surface Metrology

- Roughness measurement
- MEMS/Membrane thickness

### Applications

- Bumps dimensions
- Film Thickness
- Step Height, cavities
- Ultrathin wafer
- Silicon, sapphire Characterization System using Capacitive Sensors:
  - Thickness, Bow Warp,
  - Local Flatness,
  - High throughput
- Wide range of Material measurements using White Light Sensors for SiC, GaN, Glass, Ge,...



[www.microsense.net](http://www.microsense.net)

## Automatic Batch Wafer Systems



(Italy and UK)

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



[www.r2d-automation.com](http://www.r2d-automation.com)

## Retaining Ring & Customized Plastic Parts



### Retaining Ring available in different materials

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

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

[www.willbesnt.com](http://www.willbesnt.com)

## CMP Pad Conditioners

**SHINHAN DIAMOND**



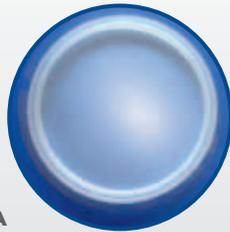
### Diamond CMP Pad Conditioners

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

[www.shinhandia.co.kr](http://www.shinhandia.co.kr)

## CMP Parts & Services

**Wärde®**  
Making A Difference™



- Development and Manufacturing of CMP Parts for AMAT & EBARA parts
- Silicon and Rubber parts for CMP, Etch and Other
- CMP Parts and CMP Repairs

[www.warde.com.sg](http://www.warde.com.sg)

## CMP Pads



### CMP Polyurethane Pads

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

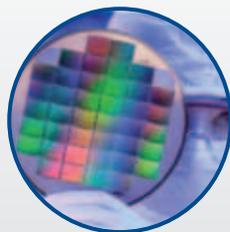
### Applications

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

<http://www.ivt.com.tw>

## Hard Material Slurries

**SINMAT**  
Specialized CMP Slurries



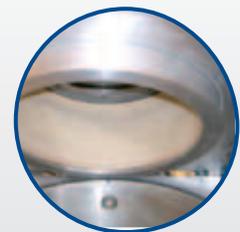
### CMP Slurries for hard Materials: SiC, GaN, Sapphire, Diamond, AlN

- Foundry Services  
High Polishing rate, low Sub Surface Damage, low roughness
- Micro Diamond Slurry for higher removal rate, low Sub surface Damage
- Ultra smooth, low removal rate, very low roughness slurry

[www.sinmat.com](http://www.sinmat.com)

## Materials for Cleaning Critical Surfaces

**Foamtec International**  
Where Contamination Control Division  
cleaning critical surfaces



### Materials

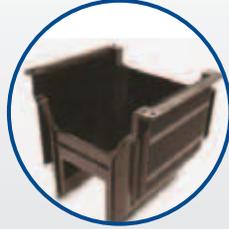
- ScrubPads
- Foams
- Microfiber Wipers
- Swabs
- Ergonomic Tools (ScrubPen, tips...)

### Chamber Cleans

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

[www.foamtecintlwcc.com](http://www.foamtecintlwcc.com)

## Wafer Cassette



### Wafer Cassette

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

### Shipping Box from 2" to 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](http://www.ckplas.com)

## Back Grinding Wheel

SHINHAN DIAMOND



### Backgrinding 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](http://www.shinhandia.co.kr)

## Bearingless Pumps



(UK & Ireland)



### For following applications:

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

[www.levitronix.com](http://www.levitronix.com)

## Dicing Saw & Blades



### Chuck Tables

- New and Refurbished

### Dicing Saw

### Dicing Blades

- Resin, Electro formed, Metal, vitrified Bond

### High Temperature UV Tape

[www.npmt.com.tw](http://www.npmt.com.tw)

## Diaphragm Pumps & Heaters



(CH, CZ, D, France, Italy, PL, Russia)



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

[www.treborintl.com](http://www.treborintl.com)

## Advanced Ceramic Solutions



### For CVD and PVD

- HDP Tubes
- Insulated Rings
- Housing Gas Nozzles

[www.theadvancedceramic.com](http://www.theadvancedceramic.com)

# SERVICE / CLEANING AND FACILITIES

## 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](http://www.ptbsales.com)

## Atmospheric and Vacuum Robot Repair / Exchange



- **Robots and Aligner**
  - Aligners, 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](http://www.greenspec.co.kr)

## Hydrogen Separators, Analyzers, Generators



- **Hydrogen Analysis**
  - HEMS – Hydrogen Elimination Mass Spectroscopy ppb qualification of Hydrogen
- **Hydrogen Generation**
  - Fuel Cell-Ready Hydrogen
- **Hydrogen Separation**
  - Reforming fuels
  - Gas or Liquid, Fossil or Bio

[www.powerandenergy.com](http://www.powerandenergy.com)

## Yaskawa and Kawasaki Robot Repair Service

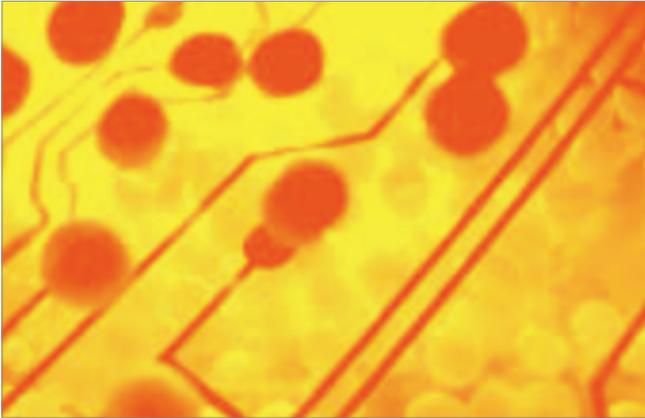


- **Yaskawa Robot Repair and Service**
  - Robot Maintenance & Service Contract
  - Robot and Controller Repair Service
- **Kawasaki Robot Repair**
  - Receiving Robot
  - Visual Inspection
  - Disassembly, Assembly, Function Test
  - Final Assembly & Torque Test

[www.cektech.com](http://www.cektech.com)

## ABOUT S3 ALLIANCE

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Customer service is the key driving force behind our company and the reason our customers keep coming back to us.

We strive to ensure customer satisfaction at all times by maintaining permanent communication, keep our staff well trained, work closely with suppliers if technical support is needed. And having market adapted conditions (pricing, response time,...)

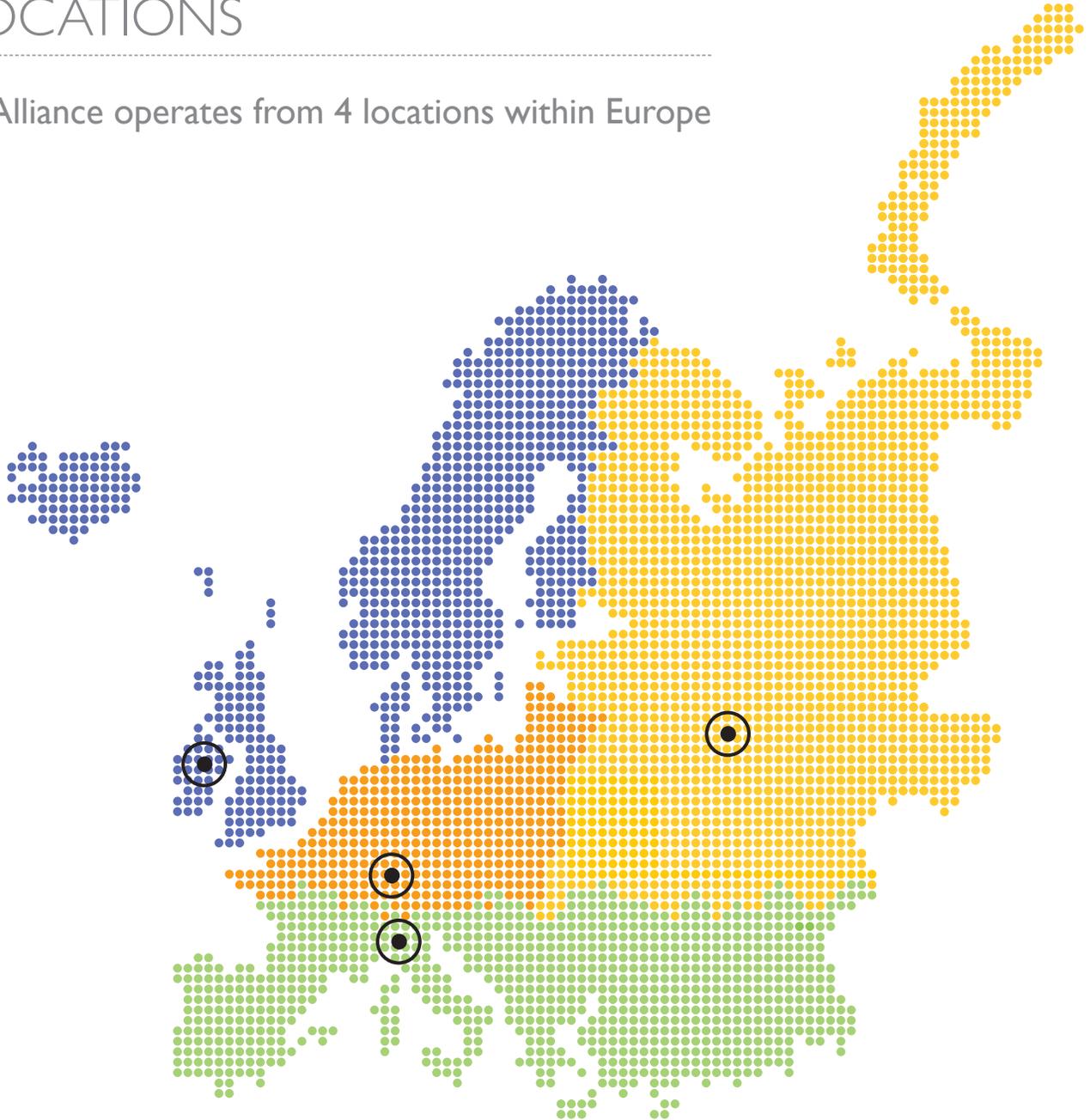
We provide warranty on all our tools and services, offer onsite support where necessary and often accommodate what would be traditionally defined as out of hours support.

Different service contracts are proposed with preventive and/or corrective maintenance up to Full service contract.

We also apply an escalation policy in order to have different level of reaction based on the criticality of the situation.

# LOCATIONS

S3 Alliance operates from 4 locations within Europe



## UK - Ireland Office

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N. Ireland

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Fax: +44(0) 2871 357 744  
E-mail: salesuk@s3-alliance.com



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Mahrenstraße 23  
D-72138 Kirchentellinsfurt  
Germany

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



## Russian Office

A Subsidiary of S3 Alliance GmbH

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Zemlyanoy Val str. 64/2  
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Moscow, 109004, Russia

Tel: +7 495 638 5493  
Fax: +7 926 654 6386  
E-mail: salesrussia@s3-alliance.com



## Italian Office

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21052 Busto Arsizio (VA)  
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