

worldwide semiconductor services



www.solutions-on-silicon.com

Solutions on Silicon **Your partner in**

Equipment Support

Maintenance, Trouble shooting, Upgrading, Training and Onsite Service Contracts

Process Support

Process design, Improvement,
Fab-to-Fab Transfer and Integration

Refurbishment

From custom to complete refurbishment

Relocation

Auditing, Fingerprinting, Decommissioning, Installation, Acceptance

Trading

Buy and sale your equipments true our global network

Materials

Supplier of first class second source parts & materials
Consignment programs



Solutions on Silicon **Organization**

Solutions on Silicon BV

Company founded 2004

Solutions on Silicon Service BV

SoS Service, supports our customers in the field on equipment and process support.

SoS Service offers turnkey solutions on equipment installations and upgrades.

Solutions on Silicon Trading BV

SoS Trading offers fab's to offer there access equipment true SoS website, with a 100% transparent deal closing structure .

SoS Trading offers fab's also equipment's from the world market where we will locate the pest possible machines (configuration/price) for our customers.

Ascent'tec Europe BV

Company founded 2003

Ascent'tec Europe BV operates one of the Largest

E-commerce Platforms for Semiconductor Parts world-wide



Solutions on Silicon **Services**

Applied Materials

P5000, Centura (Etch-CVD-RTP), Endura PVD, implant

ASMi

Epsilon, A400

CSD Epitaxi

EpiPro 3000 and 5000 series, Gemini 1, 2 and 3 series, Concept 2400

Lam Research

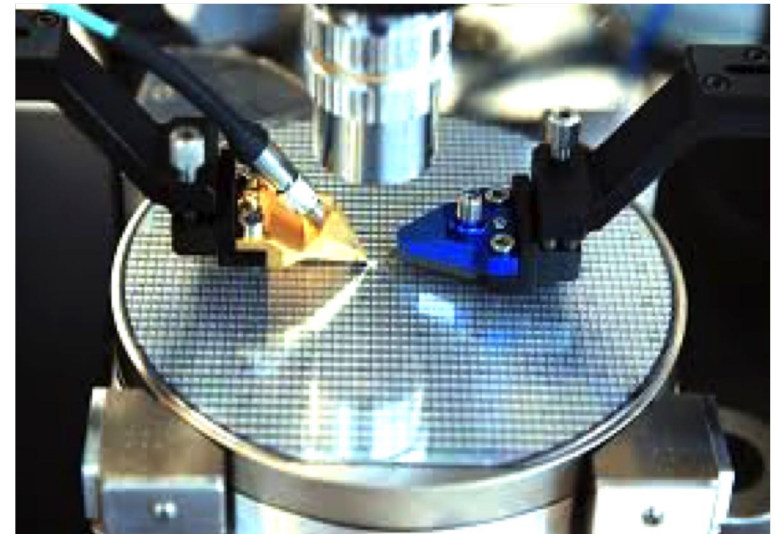
Autoetch, Rainbow, Alliance

SVG / Rite-track

8600, 8800 and 90-S / SE series

Varian / AMAT

Varian E220, E500 and AMAT 9500 series



Solutions on Silicon *Services, your ASM vertical furnace specialist*

Equipment Support

Maintenance, Trouble shooting, Upgrading, Training and Onsite Service Contracts

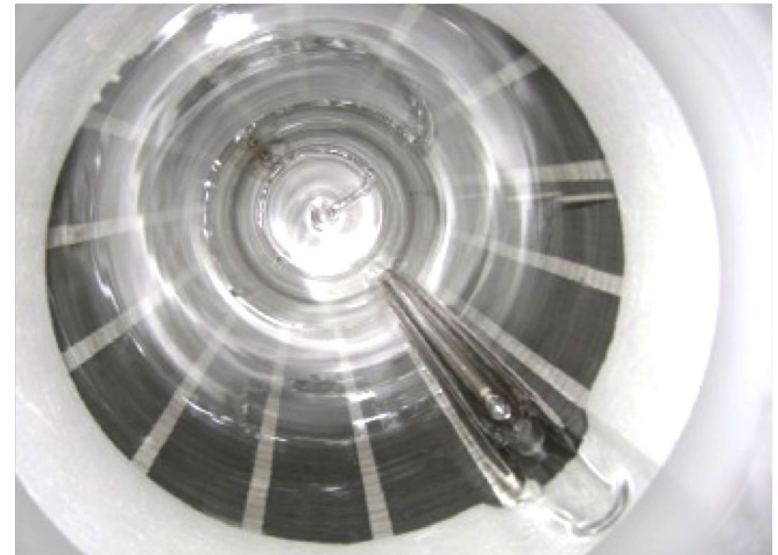
Process Support

Process design, Improvement,
Fab-to-Fab Transfer and Integration

Refurbishment & retrofits

- ✓ PS2 computer replacement
- ✓ Mid to High temperature conversion.
- ✓ Introduction of boot rotation
- ✓ Tylor made flanges with for example extra injectors
- ✓ Poly to Power Poly conversion
- ✓ 4 to 5 zone heater upgrades
- ✓ Complete process changes including new gaspanels

* **Note**, most of the services above can be preformed in the Fab



Solutions on Silicon *Services, your ASM vertical furnace specialist*

A400 High Temp Oxide conversion

SoS will supply

- ✓ High temperature flange
- ✓ High temperature door plates
- ✓ High temperature heater
- ✓ High temperature Power module
- ✓ High temperature Doors

To be decided after inspection

- ✓ Elevator arm
- ✓ External exhaust
- ✓ Gas panel (no changes for oxidation tool)

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Solutions on Silicon *Services, your ASM EpiTaxi specialist*

Equipment Support

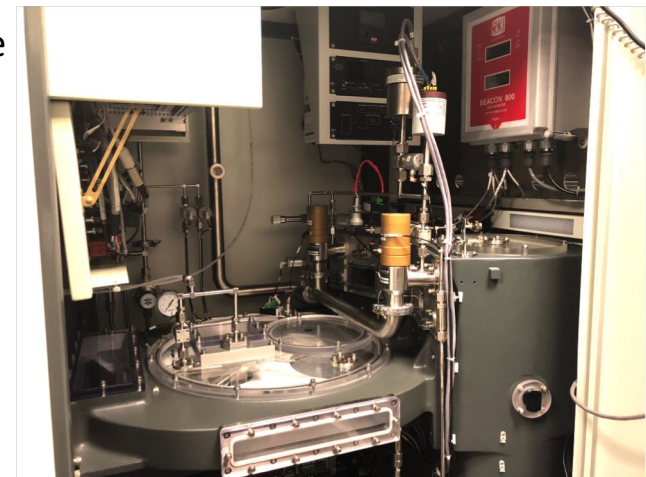
Maintenance, Trouble shooting, Upgrading, Training and Onsite Service Contracts

Process Support

Process design, Improvement, Fab-to-Fab Transfer and Integration

Refurbishment & retrofits

- ✓ MMI Footprint Reduction
- ✓ VAT valve for handling chamber
- ✓ Replacement H₂/HCl Detection (Riken Keiki)
- ✓ Flash Memory to replace FD and HD, System controller upgrade
- ✓ Compumotor replacement
- ✓ Inhouse transfer arm and gearbox refurbishment
- ✓ Inhouse MPI cleaning and calibration
- ✓ Power module footprint reduction
- ✓ Integrated LPE bubbler cabinets
- ✓ Piezocon TCS Delivery
- ✓ Improved water cooling cabinet



Solutions on Silicon *Services, your ASM EpiTaxi specialist*

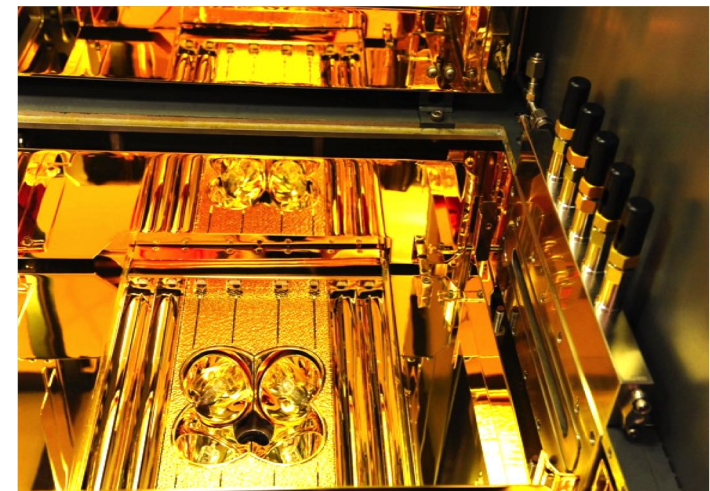
Upgrades available as field retrofits & refurbishment

- ✓ MMI Footprint Reduction
- ✓ Replacement H₂/HCl Detection (Riken Keiki)
- ✓ Flash Memory to replace Floppy Disk and Hard Disk
- ✓ System controller upgrade
- ✓ Improved transfer arm and gearbox
- ✓ VAT valve for handling chamber
- ✓ Upgrade Blade to MPI Injectorblock

Available mainly for refurbishment

- ✓ Improved water cooling cabinet
- ✓ Integrated LPE bubbler cabinets
- ✓ Piezocon TCS delivery

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Solutions on Silicon *Services, your ASM EpiTaxi specialist*

New H₂/HCl gas detection system

- ✓ State of the art Riken Keiki model BEACON 800
 - Up to 8 sensor modules
- ✓ Serviceable for many years to come

New Cooling water system

- ✓ Polypropylene → no leakage
- ✓ Quick connects
- ✓ SS piping to reactor
- ✓ Easily replaceable parts
- ✓ Identical for LH and RH systems
- ✓ New high capacity heat exchanger

Mini Bubbler Cabinet Mounted on the tool

- ✓ TCS source closer to the tool
- ✓ Reduced bubbler preparation time in the recipe

Piezocon TCS vapor sensor replaces LVC

- ✓ Eliminates PCRC runs to stabilise the LVC before production
- ✓ Reduces gas usage
- ✓ Reduces pre-deposition steps in recipe



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Refurbishment & retrofits

Solid State replacements Hard Disk & Floppy Disk Drive for AMAT Centura / Endura and P5000

The Situation:

The **AMAT** cluster tool computer system was designed in the 1980's using technology that has been obsoleted.

The **SCSI bus hard disk & floppy disk drives** are no longer available new. Furthermore the data file transfer size and speed limitations of this system are a barrier to its usefulness.

The SoS Solid State Replacement Solution:

- **SSHD**: replaces the hard disk with a solid state drive equivalent.
- **SSFD**: replaces the FD drive with a solid state version utilizing CF card.
- **SSRMM**: Solid State Removable Memory Module replaces the floppy disk drive with a large capacity removable memory option for backups.



Solutions on Silicon *Services, your AMAT 52/55 and 5000 specialist*

Refurbishment & retrofits

Touchscreen replacement for **Lightpen Interface** for AMAT Centura / Endura and P5000

The Situation:

The light pen control system for the **AMAT** cluster tools was designed in the 1980's and has been obsoleted.

The SoS Flat Screen Replacement Solution:

- Plug and play installation
- Touchscreen control, trackball or mouse
- Switching between clean room and grey room

* **Note**, all of the above retrofits can be preformed in the Fab



Solutions on Silicon *Services, your AMAT & Varian Implanter specialist*

Equipment Support

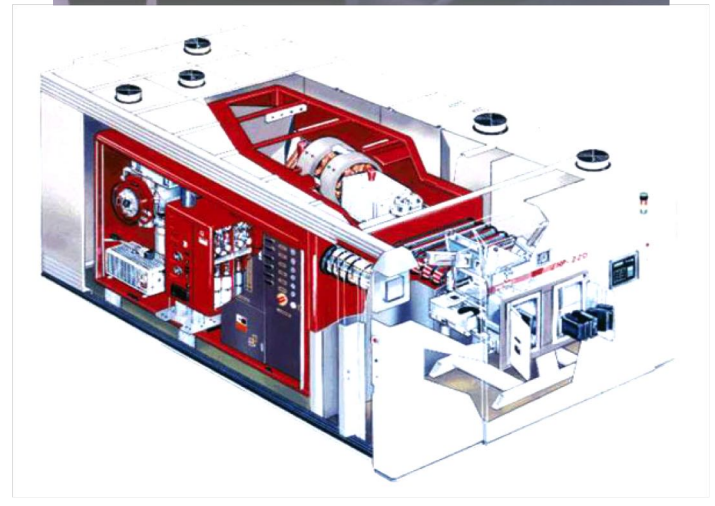
Maintenance, Trouble shooting, Upgrading, Training and Onsite Service Contracts

Process Support

Process design, Improvement, Fab-to-Fab Transfer and Integration

Refurbishment & retrofits

- ✓ Wafer Size conversion
- ✓ Hardware conversion for example from cryo to turbo for loadlocks ect



Solutions on Silicon *Services, your Research specialist*

Equipment Support

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Process Support

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Refurbishment & retrofits (Rainbow 4420, 4520, 9400 and 9600SE)

Dual Monitor upgrade

- ✓ Robot calibration much easier
- ✓ Better access to process chamber
- ✓ No remote monitor needed anymore → footprint reduction

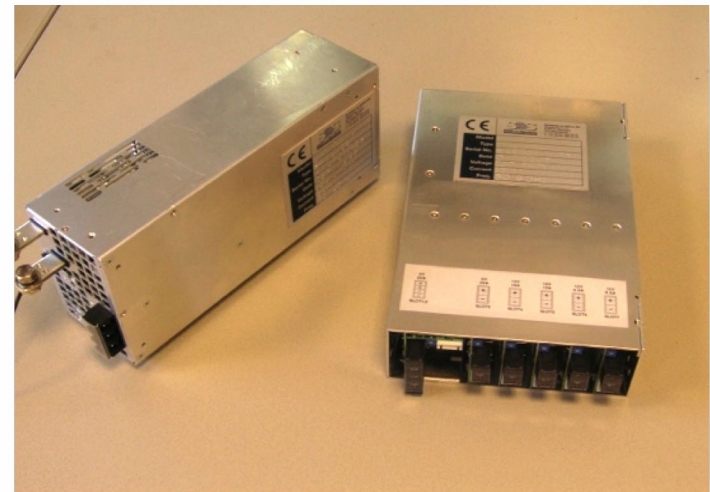
Power Supply upgrade

- ✓ Replaces obsolete power supplies
- ✓ Major cost savings plus 2 years warranty
- ✓ One size fit all (LAM 4420, 4520, 9400 and 9600)

Pneumatics upgrade

- ✓ Less slit valve errors (overlock) → big MBR improvement
- ✓ Less noise and air consumption

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Solutions on Silicon Trading, *your trading partner for equipments*

Buying secondary equipment

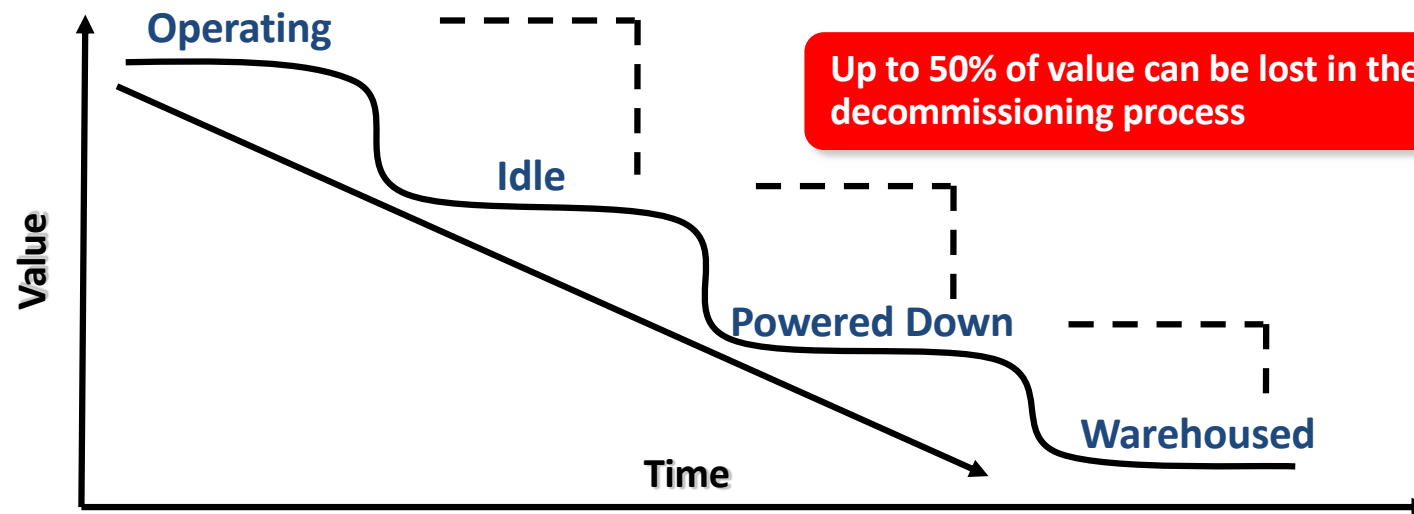
Ask for serial number and tool location to determine the tool owner

Use specialised, reliable refurbishment partners

Selling surplus equipment

Find a reliable, global remarketing partner without a large own stock of equipment

Use specialised service partners for the decommissioning and collect tool date in early stages



ascent'tec, *your partner in parts and materials*

ascent'tec Founded 2003 - a Solutions on Silicon company

Headquarter - Nijmegen the Netherlands

1000 M² Warehouse

Over 16.000 line items on hand

Core Activities:

Sales & Sourcing parts legacy tools

Repair & Part Exchange loops

Re-sell parts from Customers thru our Webshop

Consignment parts on and off- site



WELCOME AT THE LARGEST
PLATFORM OF
SEMICONDUCTOR PARTS

We have more than 7000 parts in stock



www.solutions-on-silicon.com

Ascent'tec, *your partner in parts and materials*

Global Supplier Representations:

- ✓ More than 895 line items Consumable & Spare Parts on stock.
- ✓ Samsung Chiel Slurry

New OEM - OPM & Second Sourced parts:

- ✓ **Feedthroughs**
200MM – 300MM
Semiconductor, OLED, Solar Cell
- ✓ **ESC**
New 200 – 300mm
- ✓ **O-Ring & Seals**
Any compound, any size
Bonded – Shaft seals
- ✓ **Lamp repair**
Process Technology hotshot heaterlamp

Global Representations Repair Service

RF Generators – Matches & Power-supplies
ENI/MKS, AMAT, AE, Trazar and LAM
Dynatronix, Xantrex

Heater & ESC Refurbishment:
200 – 300mm

Robot Repair:

MAG7: 200-300mm, Transfer arm set Dual/Single
MTR5: 200mm, Transfer arm set Dual / Single
PRI:300mm only
Yaskawa: ATM
Kawasaki: ATM



Ascent'tec, *your partner in parts and materials*

ascent'tec established an unique platform to sell and resell your parts to generate and safe cash

Is your old stock causing a problem at a certain moment? Your warehouse is bulged out?
Everyone is looking for an answer and searching for a solution.
It is a small step to contact **ascent'tec** !



> 16.000 Line Items
on hand



5" – 6" – 8" parts
Used / OEM new



Customer

50% - 60% of list price
to lower your parts spending



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