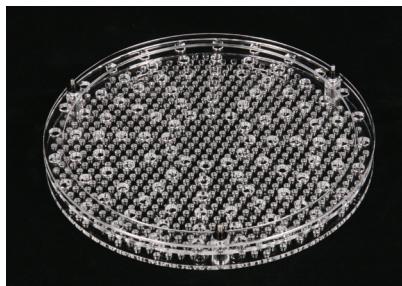




QuantumClean®: Process Improvement Through Consistently Cleaner Parts®

QuantumClean is the global leader in high-purity outsourced process tool parts cleaning, performance coatings, refurbishment and analytical & engineering services to the semiconductor, solar and LED industries. **QuantumClean** operates on the frontier of the sub-20nm high-purity semiconductor parts cleaning market through leading-edge technologies, resources and expertise.



Global Locations

We operate innovative Advanced Technology Cleaning Centers® around the globe, built on the premise of providing customers process improvement through consistently cleaner parts that meet today's demanding sub-28nm requirements, dramatically reducing our customers' total cost of ownership. With 19 Advanced Technology Cleaning Centers located in 9 countries, **QuantumClean** provides unsurpassed cleaning capability worldwide. Our Advanced Technology Cleaning Centers are designed, constructed and managed for the specific purpose of providing exceptional semiconductor tool part cleaning, coating, surface treatment and restoration services.



Capabilities

As a global partner to semiconductor wafer fabs, OEMs & OPMs, we provide process enabling solutions including:

- Ultra-clean parts – new & recycle
- Global leader in high purity diffusion Quartz/SiC Cleaning
- Cleaning to an end-point specification
- Quartz repair and fabrication
- Proprietary life-extending coatings
- Texturing to optimize performance
- Complete copper segregation
- Part refurbishment & kitting
- Precious metal recovery
- Failure analysis
- On-site support
- Dedicated MBE chamber cleaning facility and expertise
- Logistics and specialized packaging
- Sophisticated, customer-accessible parts tracking and data collection system
- Alignment of our technology roadmap with customers
- Extensive R&D and applications engineering support resources

Fab areas served include:

- ALD, CVD, Diffusion, Etch, Implant, Photolithography, PVD

QuantumClean is the only parts cleaner validated by analytical data generated by **ChemTrace®** laboratories.

Partner/Solution

QuantumClean continues to develop innovative process ideas and methods for customers' unique part cleaning challenges. We are committed to providing solutions to help achieve cost savings, rapid turnaround times and the highest quality finished products possible. We look forward to collaborating with you to define additional methods for continuous improvement.



Global Locations

QuantumClean

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USA

Fremont, CA
San Jose, CA
Phoenix, AZ
Hillsboro, OR
Irving, TX
Carrollton, TX
Colorado Springs, CO
Scarborough, ME

Europe/Middle East

Glenrothes, Scotland
Celbridge, Ireland
Son, Netherlands
Kiryat Gat, Israel

Asia

Hsinchu, Taiwan
Tainan, Taiwan
Pyeongtaek-si, Republic of Korea
Hwaseong-si, Republic of Korea
Pal-tan, Republic of Korea
Singapore
Xi'an, China