

# tool install



## Achieving optimal facility design through highly proficient equipment and production integration.

Over the past 30 years, SSOE's integrated tool install team has completed hundreds of programming, basebuild, and tool install design projects involving 200mm, 300mm, and even preliminary first-of-its-kind (FoK) 450mm tools. Tool install has, in fact, become one of our core competencies. We have successfully applied our carefully developed customized solutions to multiple projects, including hookup design and turnkey construction support for the installation of an FoK 450mm wafer handle / sorter tool at a research and development (R&D) university. Our specialized internal processes have consistently met stringent client expectations, showcasing the high standards we set for our project deliverables.

Because SSOE has evolved with the industry, our tool install team is uniquely qualified and highly proficient in semiconductor, solar, and life science tool install design. We have provided tool and installation services, including complete turnkey tool install and semiconductor equipment manufacturer packages for FoK tools, for world leaders in areas of lithography tools original equipment manufacturers (OEMs), pure gas and chemical system controls, R&D, and solar and semiconductor tool OEMs.

Our flexibility and creativity allow us to accommodate incomplete data and address constantly changing specifications within tight timelines. Our principal-in-charge model lends continuity and a depth of experience to projects.



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## Project Delivery / Functional Teams

SSOE's innovative lead-centric model significantly streamlines project delivery for dynamic, time-critical tool install projects. Under this model, members of the SSOE tool install design team provide direct support to the Design Lead, who is the single point of contact between the team and the client. This communication model allows us to efficiently share functional area issues, communicate design status, and ultimately leads to a successful project.

SSOE's multidiscipline leads further enhance project efficiency because they understand technical details of the whole package. Our leads communicate across teams to solve interdisciplinary challenges without impact to client deliverables.

Our project execution plan incorporates SSOE best practices tailored for semiconductor and industrial projects. Our knowledge and experience provide consistent, reliable project delivery and allow us to quickly respond to the needs of our clients throughout the project lifecycle.

## Turnkey Services

SSOE provides complete turnkey tool install services for research labs, semiconductor, and process development areas.

## Retrofit Services

When it comes time for retrofit of an assembly line, SSOE is perfectly positioned to assist because we know the tool install business and equipment. Our experienced teams are also available for uninstall projects.

## Quality Program

Our quality program outdoes our competition. For each functional area, the design lead drives the design process, manages communication between team and client, carefully monitors quality, and keeps projects on track. Quality checklists, project indicator reports, and our principal-in-charge and lead-centric models provide consistency and continual focus on quality services.

[www.ssoe.com/tool](http://www.ssoe.com/tool)

## Process Areas

- Die prep
- Dry / Wet etch
- Epitaxial / Diffusion
- Mask
- Metrology
- Photo lithography
- Planar
- Sort / Assembly / Test
- Thin film

## Services We Provide

- Construction management
- Detailed design
- Facilities design / P&ID production
- Feasibility studies
- Industrial engineering support
- Maintenance access for support equipment
- Master planning
- Material procurement
- Preliminary engineering
- Site studies / Structural analysis
- Start-up services
- Subfab layout
- Systems capacity matrix
- Tool / Pedestal move-in, placement, and hook-up
- Tool ramps
- Tool support and vibration pedestal design
- Validation

