

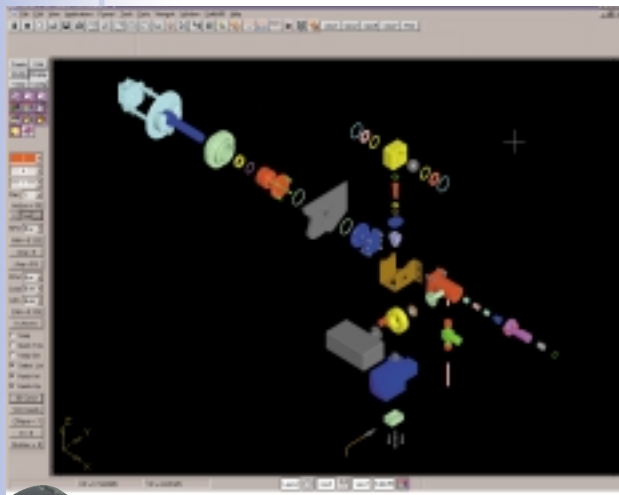


# SCIENTIFIC INSTRUMENT SERVICES, INC.

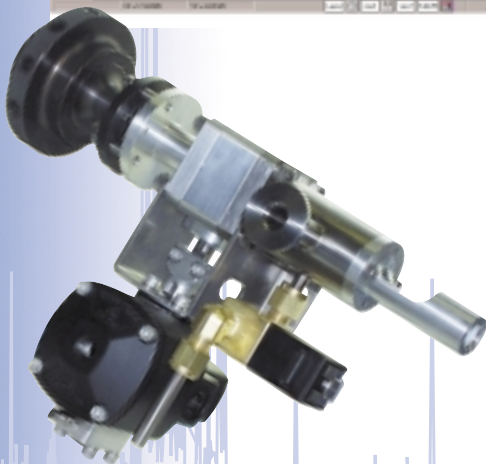
## Design and Engineering

**O**ur team of scientists, engineers and machining specialists provide a unique combination of skills and experience that sets us apart from other companies. With extensive experience in scientific instrumentation, vacuum science, ion optics, engineering and manufacturing we understand your requirements.

A key element of our design and engineering is our CAD/CAM (computer aided design and manufacturing) group. These talented people work with our scientists, or yours, to develop designs that are optimized for performance and manufacturability. Our state-of-the-art three dimensional design software can be used to translate your specifications into the quality parts and assemblies that you require. We can receive your data electronically, maximizing efficiency, and minimizing delays.

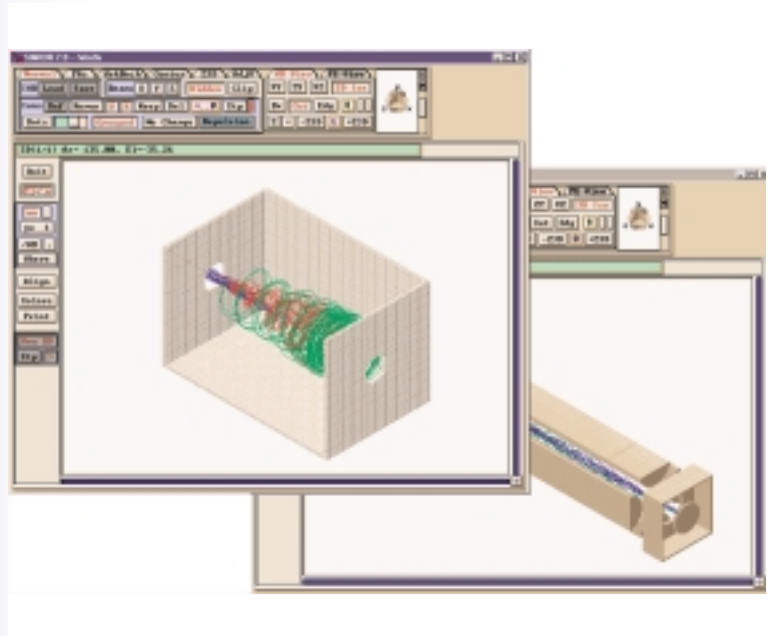


- *Experienced Scientists and Engineers*
- *SIMION Ion Optics Design Software*
- *CADKEY Three Dimensional Design Software*
- *Gibbs Manufacturing Software*
- *Confidentiality*



## Engineering

We use SIMION, the industry standard for electron and ion optics simulation, to design and simulate the movement of ions within electrostatic and magnetic fields. We have utilized this software to design and develop mass spectrometer filaments and ion sources, time of flight (TOF) instruments and detectors, ion traps, ICR cells and much more. The information gained in this modeling can then be combined with our computer aided design capabilities to design and develop complete ion sources and detectors for a wide variety of instrumentation.



We continue to be intensively involved in research and development in the area of filament design and testing for mass spectrometers. Custom testing chambers and mass spectrometers are used for the testing of filaments for a variety of parameters such as lifetime, emission and performance. We are investigating filament materials, shapes, coatings and various pre-treatments of filaments. This experience allows us to improve filament and source designs for you, our customers.



From complete design and development projects, to contract machining and assembly, our experienced personnel speak your language, understand your requirements and will work with you to exceed your expectations, reduce your costs, and provide value to your customers. And rest assured that all customer designs and specifications are held in the strictest confidence.