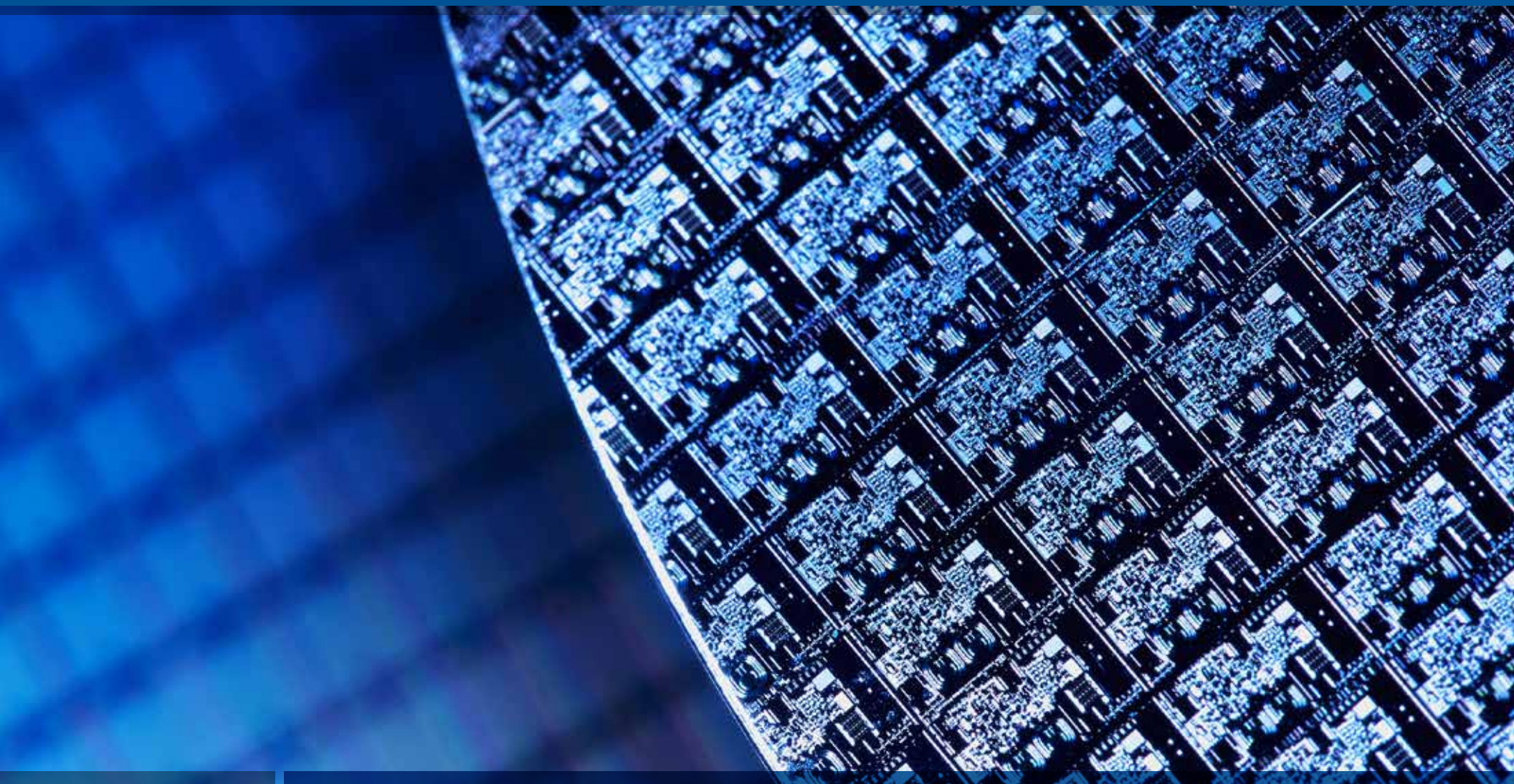


**SEMICONDUCTOR** ENGINEERED SOLUTIONS FOR DEMANDING ENVIRONMENTS®





# Inside the world's most critical and demanding applications, you'll find innovative solutions from Technetics Group.

From designing and manufacturing complex front-end wafer process assemblies including pedestals and electrostatic chucks, and BELFAB® edge-welded metal bellows with lifelong solutions for critical actuating, Technetics Group is your globally trusted source for engineered solutions, including sealing solutions, components and surface technologies that are custom-designed to meet your exact specifications.

## WE THRIVE ON CHALLENGE

We're experts at designing solutions for applications in the world's most demanding environments. Our products support industries that are vital to the well being of people all over the world, including semiconductor, nuclear, power generation, aerospace, oil and gas, pharmaceutical, and industrial turbines. In these markets, details are essential to safety and reliability. That is why we remain dedicated to providing the utmost dependability and customized solutions from inception through installation, inspection and service.



**Lid Assemblies**  
\*C10 Polymer Machining, System Integration, Advanced Testing

**Electrostatic Chuck Pedestal Assemblies**  
\*BELFAB® Edge-Welded Bellows, Thin Film PVD/CVD Coatings, E-Beam Welding, Brazing, System Integration, Advanced Testing, Refurbishment

**Wafer Handling**  
\*BELFAB® Edge-Welded Bellows, Polymer Wafer Carriers, Polymer Fabricated Enclosures

**Chamber Sealing**  
HELICOFLEX® Spring Energized Metal Seals, C-FLEX™ Metal Seals, E-FLEX™ Metal Seals, O-FLEX™ Metal Seals, Machined Seals

**Facility Plates, Cathodes, Base Plates**  
\*Vertically Integrated Machining, Complex Metal Machining, E-Beam Welding, Brazing, System Integration, Advanced Testing

**\*Process Kit Components**  
Advanced Textures & Coatings, Machined Polymers

**\*Lift Assemblies & Slit Valve Actuators**  
BELFAB® Edge-Welded Bellows, E-Beam Welding, Sub-System Integration

**Heater Pedestal Assemblies**  
\*BELFAB® Edge-Welded Bellows, ALF Passivation, E-Beam Welding, Brazing, System Integration, Advanced Testing

**UHV, High Temperature**  
\*BELFAB® Edge-Welded Bellows, HELICOFLEX® Spring Energized Metal Seals, C-FLEX™ Metal Seals, E-FLEX™ Metal Seals, O-FLEX™ Metal Seals, Machined Seals

## Precisely engineered components for a market reliant on precision.

The semiconductors behind today's technology are rapidly evolving. Urgency is critical to the industries we serve, as well as to our own engineers and sales staff. They understand your needs and respond with innovative solutions combined with impeccable customer service and responsiveness.

We have extensive bellows design knowledge with top-down operational excellence, and have produced over 500,000 bellows and over 12,000 new and refurbished pedestals. We are a key/preferred supplier to leading equipment OEMs and fabs thanks to our quick-turn prototyping, on-time delivery and strict process control. Technetics Group has class 100, 1,000 and 10,000 certified clean rooms on-site.

## Semiconductor applications include:

*Bellows Upper Level Assemblies  
Chamber Process Kit Components  
Chamber Sub-System Assemblies  
Feedthroughs  
Gate Valves  
Leak Detectors  
Pedestal Assemblies  
Ultra High Vacuum  
Vertically Integrated Machining  
Wafer Handling*

### SUPERIOR SERVICE AND SUPPORT

Your relationship with Technetics Group does not simply end with the sale of a product. Our engineering and service teams will work with you to ensure that our products meet your highest performance standards. Design issues are solved through finite element analysis, as well as through test-bed simulation of your application, hardware and operating parameters.



## High-performance solutions engineered by a world leader in semiconductor chamber technologies.

In the demanding semiconductor market, product performance, high yield and low cost-of-ownership are critical. PVD, CVD and Etch process systems can be designed for improved yield and longer life because our engineers work with you to provide design solutions and advanced pedestal coatings that improve reliability, minimize particle generation and enhance thermal uniformity.

### ELECTROSTATIC CHUCK PEDESTALS

Technetics Group designs and manufactures complex front-end wafer-process assemblies, including pedestals/electrostatic chucks improved with advanced coatings. Fully tested assemblies are delivered to your integration point, final test facility or to any depot for spares consumption. Technetics Group also refurbishes chamber sub-systems to high performance condition.

### SUBSYSTEM SOLUTIONS

We can be your solution for chamber sub assemblies including source assemblies. Our in house texturing of the process kit components help expand the life of the unit.





# A leading manufacturer of PTFE and engineered plastic solutions.



PLASTIC FABRICATION AND ASSEMBLIES



POLYMER MACHINING



PTFE MACHINING



CUSTOM COMPONENTS



HIGH PERFORMANCE POLYMER SHAPES



PTFE SHAPES MOLDING



PTFE SEALING

## METAL SOLUTIONS

Technetics Group offers a powerful lineup of metal seals and components, custom-engineered specifically for your semiconductor applications. We have built our reputation on a foundation of total quality achievement. Our seals are made specifically for your application and are designed to be your pinnacle solution. We offer metal, abrasible, brush, inflatable and polymer seals, as well as sealing systems and assemblies.



HELICOFLEX® SPRING ENERGIZED METAL SEALS



O-FLEX™ METAL SEALS



C-FLEX™ METAL SEALS



DELTA SEALS



BELFAB® CUSTOM EDGE-WELDED METAL BELLOWS

## ADVANCED TEXTURES, COATINGS AND CRITICAL WELDS

Our extensive experience in advanced texturing and critical welding allows us to create a custom-engineered solution for your application. We offer advanced texturing services for nearly any material, including ceramics, metal and glass, and advanced welding capabilities, including e-beam, orbital and laser deep welds.



ADVANCED TEXTURES



ADVANCED ASSEMBLIES



E-BEAM WELDING

For more information on how Technetics Group affects the semiconductor industry, visit [technetics.com/semiconductor](http://technetics.com/semiconductor).

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