

Greene Tweed Adds Cryogenic Leak and Supercritical CO₂ Capabilities to Testing Portfolio

Expanded in-house validation helps customers reduce technical risk, accelerate qualification, and build confidence in critical applications

LANSDALE, PA, UNITED STATES, September 3, 2026 /EINPresswire.com/ -- [Greene Tweed](#), a global leader in advanced materials and high-performance sealing solutions, has broadened its world-class testing infrastructure with cryogenic leak and supercritical CO₂ rapid gas decompression (RGD) testing capabilities. These investments expand Greene Tweed's support for today's mission-critical industries, including semiconductor, aerospace, and energy, while preparing customers for emerging opportunities in hydrogen and carbon capture, utilization and storage (CCUS).



Supercritical CO₂ RGD Test Equipment

As operating systems become more complex and environments more demanding, the need for advanced testing and validation has grown. Together, the new capabilities Greene Tweed has introduced bring more advanced validation in-house, helping support customers earlier in the design cycle and respond more quickly to evolving application requirements.

"Expanding our in-house testing and validation capabilities marks a significant milestone in growing Greene Tweed's technical leadership, and reflects where our customers and markets are heading," said Magen Buterbaugh, President and CEO. "These strategic investments strengthen our ability to tackle complex, high-stakes challenges alongside our customers, while accelerating the journey from development to deployment."

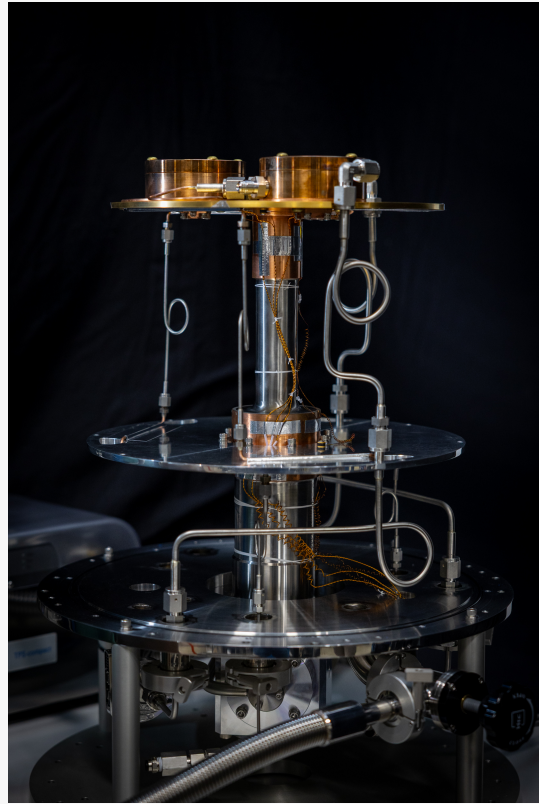
Greene Tweed's cryogenic leak testing system evaluates sealing performance at temperatures as low as 4 Kelvin (-269°C / -452°F) with a tolerance of +/-0.08 Kelvin using a high-vacuum chamber,

specialized thermal shielding, and highly sensitive helium leak detection technology capable of reading helium flow down to $5\text{E-}12 \text{ atm}\cdot\text{cc/s}$. This extends the company's internal cryogenic testing range to reflect conditions in cryogenic semiconductor etch processes, aerospace and space systems, and emerging liquid hydrogen applications. For customers developing components for ultra-low-temperature environments, the system provides application-relevant insight into seal behavior before solutions such as Avalon® 40 and Avalon® 56 enter the field.

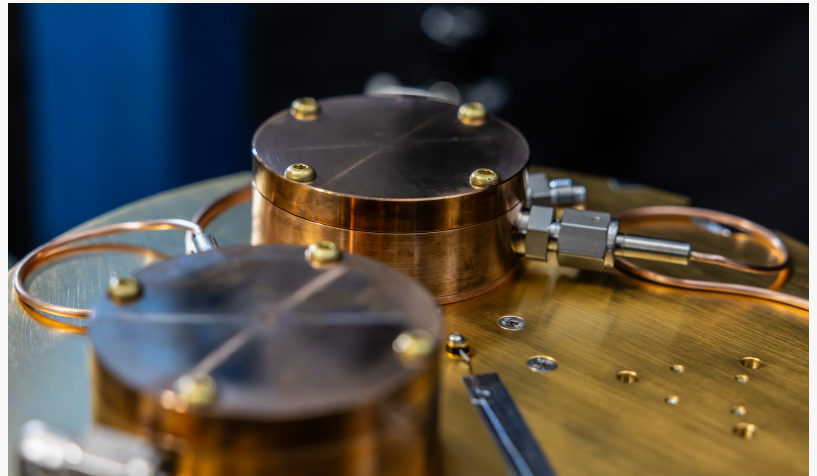
Greene Tweed also added supercritical CO_2 RGD to its testing portfolio, supporting the rapidly growing CCUS market. The in-house testing process evaluates materials and sealing solutions under harsh supercritical CO_2 conditions aligned with industry standards, such as ISO 23936-2 or custom application conditions up to 350°C and 5,000 PSI. This allows Greene Tweed to generate performance data quickly, with highly accurate results for valves, pipelines, compressors, storage vessels, and other CCUS infrastructure, accelerating qualification timelines for existing and next-generation materials.

"The next generation of semiconductor, aerospace, hydrogen, and CCUS technologies are pushing the boundaries of material science," said Cory Massey, Senior Manager of Product Engineering and Simulation. "Greene Tweed is investing in our testing capabilities now, to provide the future cutting-edge material applications demanded by our customers' most extreme, can't-fail operating conditions."

For more information about Greene Tweed's engineering, testing, and material science capabilities, visit: <https://www.gtweed.com/contact-us/>.



GT Cold Finger-Team-Testing-Equipment



GT Cold Finger Team Testing Equipment

About Greene Tweed

Greene Tweed is a leading global manufacturer of high-performance thermoplastics, composites, seals, and engineered components that outperform and outlast in the world's harshest environments. For 160 years, we have served clients in semiconductor, oil and gas, aerospace, defense, chemical and pharmaceutical processing, and other industries where failure is not an option. Greene Tweed products are sold and distributed worldwide. For additional information, call +1.215.256.9521, or visit our website at www.gtweed.com.

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