



EST. 2025

Thermal vacuum & space simulation infrastructure across the full lifecycle

COMPANY & CAPABILITY OVERVIEW

info@deepvac.space

www.deepvac.space

Garbsen · Germany

WHO WE ARE

More than a chamber manufacturer — a system provider for intelligent test infrastructure.

Founded in 2025, Deepvac designs, builds, upgrades and supports thermal vacuum and space simulation systems for aerospace, research and high-tech environments. We combine vacuum technology, thermal engineering, control systems, automation, data acquisition and lifecycle services into robust infrastructure for demanding qualification workflows.

VALUE PROPOSITION

Integrated Lifecycle Partner

Concept development, system design, manufacturing, installation, commissioning, maintenance and long-term support — from one engineering partner.

Vendor-Independent

Retrofit, troubleshooting, subsystem integration and upgrades for existing and legacy thermal vacuum systems, independent of the original chamber manufacturer.

Custom System Delivery

Turnkey systems, modular upgrades, application-specific mechanical design, custom control systems, on-site engineering, remote monitoring and service-based solutions.

CORE CAPABILITY AREAS

01 Thermal Vacuum Systems

Standard and custom TVAC systems, special test setups, thermal plates, cryogenic shrouds, chamber concepts and application-specific thermal vacuum infrastructure.

02 Retrofit & Modernization

Control, thermal and vacuum upgrades, sensor and interface modernization, obsolescence management and legacy system improvement.

03 Control, Data & Automation

PLC-based control systems, HMI development, automation logic, test recipes, ramp and soak profiles, alarm and interlock logic, data logging and remote monitoring.

04 Engineering & Subsystem Integration

Chamber assemblies, interfaces, fixturing, support structures, feedthroughs, electrical/gas/fluid interfaces, internal cameras, thermal imaging, RGA and QCM integration.

05 Testing, Commissioning & Operations

Thermal vacuum testing, test-campaign support, FAT and SAT support, commissioning, operator training, test documentation, reports and dashboards.

06 Lifecycle Support & Troubleshooting

Maintenance, repair, chamber cleaning and contamination control, fault analysis, thermal and vacuum troubleshooting, spare parts and service agreements.

STRENGTHS · DIFFERENTIATORS · CUSTOMER FIT

TECHNICAL STRENGTHS

- TVAC system engineering
- Custom PLC, HMI and data-driven automation
- Mechanical design for chambers, fixtures and interfaces
- LN₂/GN₂ thermal control and mechanical cooling
- Integration of sensors, feedthroughs and diagnostics

WHY DEEPPVAC

- Engineering-led system design
- Vendor-independent retrofit capability
- Strong capability in complex custom solutions
- Long-term lifecycle support and partnership
- Modular systems designed for upgrades
- Proven industrial components and OEM subsystems

CUSTOMER FIT

- Space companies and NewSpace teams
- Research institutes and universities
- Environmental and qualification test labs
- Aerospace, electronics and high-tech manufacturers
- Operators of existing and legacy TVAC systems

INTELLIGENT CONTROL & DATA

Robust control, structured data, AI-supported insight.

Deepvac combines robust control architecture, structured data acquisition and optional AI-supported functions to improve transparency, repeatability and lifecycle performance. Applications include test analytics, predictive maintenance, remote access and advanced control optimization.

SITE & DIRECTIONS



Located at Leibniz University Hannover · Institute for Technical Combustion, Garbsen

ADDRESS

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HOW TO GET THERE

PUBLIC TRANSPORT

From Hannover main station take line 1, 2, 3, 7, 8, or 9 to "Kröpcke". At "Kröpcke" change to line 4 in the direction of Garbsen and travel to the "Schönebecker Allee" stop (duration: approx. 23 min). From the "Schönebecker Allee" stop, follow Schönebecker Allee in the direction of the highway bridge or take the shuttle bus 404. After crossing the A2 highway, the Institut is on the left hand side.

BY CAR

Leave the A2 motorway at the "Herrenhausen" exit. Follow the federal road B6 towards Nienburg. Follow the main road B6 to the Café del Sol (left hand) and Möbel Hesse (right hand) and turn into the street "An der Universität" shortly after the speedometer on the left-hand turn lane.

AFFILIATION & FUNDING



Leibniz
Universität
Hannover

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EXIST

on the basis of a decision
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Let's talk.

Discuss your TVAC system, retrofit project or test campaign with us.

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