



VACGEN

www.vacgen.com



PRODUCT OVERVIEW

Vacuum Components

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Vacuum Components

Engineered Solutions for Vacuum Technology

Build to print or design and prototyping, through to series production, we can support your requirements in vacuum technology. We specialise in design, engineering, CNC machining, welding and clean room assembly.

With over 50 years industry experience, our core competence is in the expert design, engineering, manufacture and clean-room assembly of chambers and manipulation subsystems.

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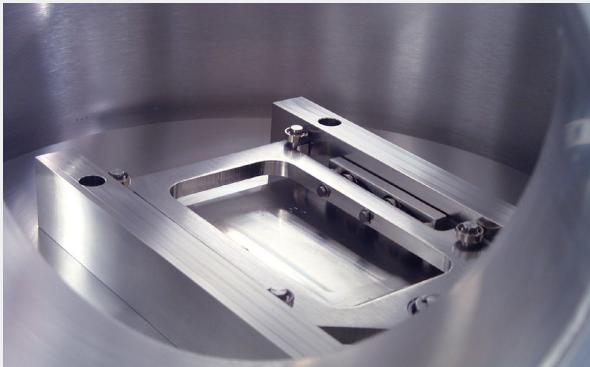
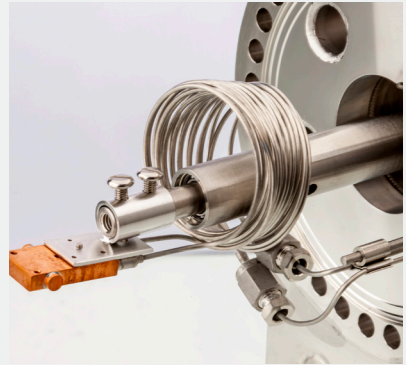
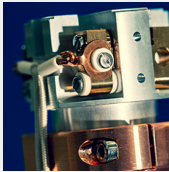
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About Us

Since 1964, VACGEN (VG) has been the name synonymous with high quality ultra high vacuum products and services. From the manufacture of the first UHV valve to some of the most advanced vacuum research systems built, over 50 years in the research and scientific industry has given us an incredible grounding in the needs of our customers, how we can support new projects through the design phase, delivered product and ongoing support.

VACGEN remains the partner of choice for the next generation of researchers, innovators and builders. From our UK high tech manufacturing base, our focus is on delivering enabling technologies and supporting our customers across industry and academia.

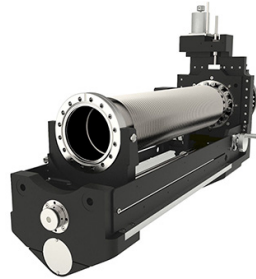
UKAS and BSI ISO 9001:2015 Accredited.

Sample Manipulation

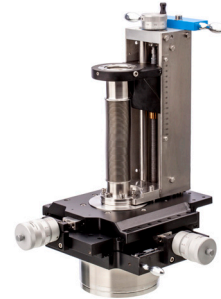
Our extensive range of customised Ultra High Vacuum (UHV) sample manipulators are designed specifically for vacuum systems. Precision movement and positioning of samples and substrates within a vacuum system is an essential process in material analysis or deposition.



Omni-ax

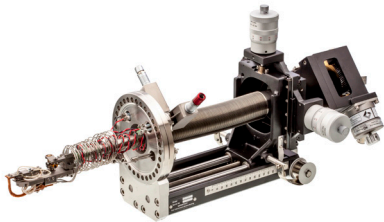


Omni-ax Widebore

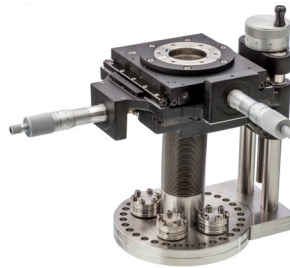


Trans-ax

Each VACGEN manipulator family offers unique characteristics, ensuring that users have access to the widest possible range of stability, cost-effectiveness, and process conditions.



HPT



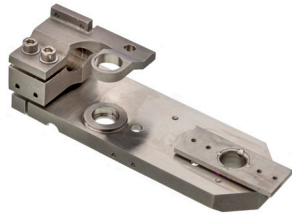
Miniax



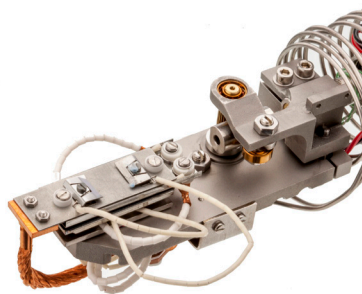
Triax

Manipulation Accessories

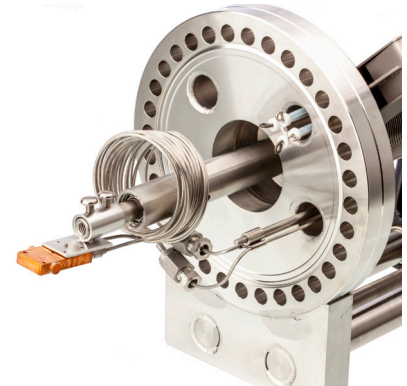
Manipulation accessories are customised to the individual application. Rotary drives, sample holders, sample heating and cooling can be added to the manipulator.



Sample Holders



Sample Heating

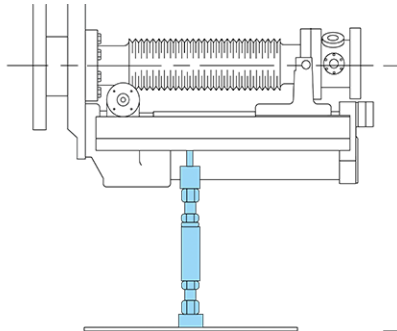


Liquid Nitrogen Cooling

Motor controllers are designed to power the various motorised vacuum components. XY modules can be used in conjunction with multiple components to provide movement in the X and Y axes. Support stands are designed to take the heavy load of the manipulator when mounted in a horizontal plane.



Motor Controllers



Support Stands



XY Modules

Magnetic Transfer

Transfer Probes are used to transport samples or instruments within the vacuum chamber over long distances. The magnetically coupled probes are designed for high power, smooth transfer and are fitted with Samarium Cobalt magnets which do not have to be removed during bakeout.



The MLD and MLRD range contain an additional bearing housing for high accuracy and high repeatability. The MLRD offers separate linear and rotary motions with an independent shaft for the rotary motion, this offers precise 360° continuous rotation of the secondary movement.



MLRV



MLD



MLRD

Non-Magnetic Transfer

The rack and pinion design provides an accurate means of linear and rotary motion into the vacuum chamber. These devices are magnet free and designed for applications requiring low magnetic permeability. Transfer probes are used to transport samples or instruments within the vacuum chamber over long distances.



Rotary Platforms

Rotary platforms provide a means of rotary translation into the vacuum vessel without compromising on vacuum integrity. Differentially pumped rotary feedthroughs (DPRF) are of annular construction to enable a probe or similar device to be inserted into a UHV environment and rotated. The RP100 with 100mm clear bore is designed primarily for use in Cryostat applications, as the large bore size can be fitted to the Omniax Widebore.



Linear Drives

UHV linear drives can be used for a range of applications, such as inserting plasma diagnostic equipment into the main chamber or small distance travel moving electron optics nearer to a loaded sample. Our product range of UHV linear drives utilise high quality edge-welded bellows and have a linear motion range from 25mm to 150mm.



Rotary Drives

UHV rotary drives are used where a vacuum process requires a sample or components to be accurately rotated within the vacuum chamber. This can range from something as simple as spinning an attenuating chopper wheel, to accurately moving a sample to face from one analyser to another.



Hollow Linear Drives

UHV Linear Transfer Mechanisms (LTM) can be used for a range of applications such as inserting a plasma diagnostic probe with high level of accuracy into the chamber. Our product range of UHV linear drives utilise high quality edge-welded bellows and have a linear motion range from 25mm to 600mm.



LTM Linear Transfer Mechanism



LTM Wide Bore



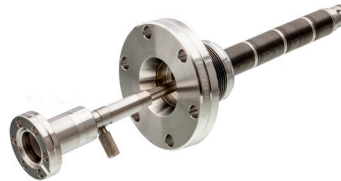
TR Long Stroke Transfer

Wobble Sticks

Wobble sticks enable simple hand operated movements to be transmitted through the wall of the vacuum vessel. All our wobble sticks are mounted onto a 70mm OD flange and are capable of being baked without dismantling. Ideally located at all interchange points in the vacuum system, where a sample must be transferred for example, between a transport device and a sample holder.



WS Flag



WH Hollow



PG Pincer

Vacuum Valves

Vacuum valves are compact valves used to isolate or control the pressure within a UHV vacuum system including leak valves, right hand valves and valve accessories.



We supply a comprehensive range of ultra-high vacuum (UHV) valves, from all-metal right hand angles for true UHV applications, to ultra-fine controllable leak valves which have been designed for fine pressure control with extremely low hysteresis. A range of niche gate valves can be adapted for many customer applications.



Right-Angle Valve



LVM Leak Valve



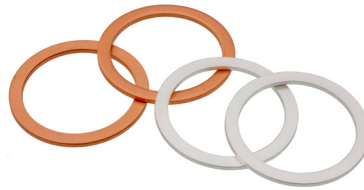
Gate Valve

Auxiliary Components

Our range of high quality and reliable UHV accessory products for prototype development and general laboratory use cases including all vacuum chambers and associated applications.



Flanges



Gaskets



Viewports

VACGEN supply a wide range of auxiliary products including viewports, flanges and gaskets, ion gauges, UHV fittings and sublimation pumps.



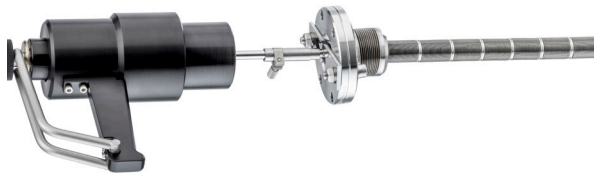
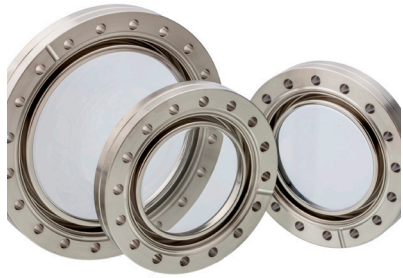
Feedthroughs



Fittings



Ion Gauges



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