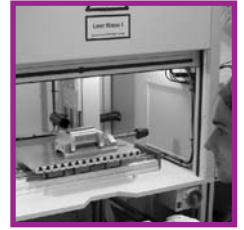


Service for Vacuum Technology

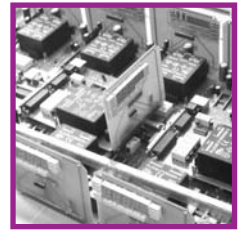
Customer Specific
Finishing and Marking



Testing Services for
Vacuum Products



Vacuum Gauges and Controls



Vacuum Lines
Concept, Control and Service



Repair and Maintenance
of Vacuum Equipment



Training for the Application of
Mass Spectrometers



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Customer Specific Finishing and Marking

Cleaning of Vacuum Components



All stainless steel vacuum components pass a cleaning process which they leave free of grease and oil. The preliminary de-greasing is followed by the next cleaning step with bio-degradable alkaline cleaner. The components are rinsed with demineralised water and are hot air dried or are blown dry with oil and dust free compressed air. Besides the cleaning of stainless steel, we are able to clean components of aluminium, copper and ceramic, too.

We also offer additional drying in our vacuum oven or ozone cleaning for specific applications.

Electropolishing



Our production line includes machinery for electropolishing which enables us to de-burr, smooth and polish surfaces. Using special technologies we are able to achieve a completely clean metal surface and a reduced gas desorption rate.

Electropolished components are characterised by better corrosion resistance and reduced wear of high stressed components.

Bakeout in the Vacuum Oven



Vacuum ovens are available to degas and temper vacuum components. They can be used for treatments up to temperatures of 300 °C and a pressure of 10^{-5} mbar. The result of the process can be controlled and documented in-situ by means of residual gas analysis.

Customer Specific Finishing and Marking

Labelling and Laser Marking



All products can be marked with an order code, a charge number and if required with a barcode to guarantee quality and traceability of the product. As an optional feature the marking of the product can be laser engraved.

Your company logo or personalised label (private label) can also be added to the product if requested.

Clean Room Packaging



All products are packed carefully after the cleaning process in order to preserve the achieved cleanliness and freedom from oil and grease. Additional clean room packaging (ISO-class 7) can be carried out on request. The order codes of these products are marked with the addition CRP. It is also possible to deliver the products with protective gas packaging. These options can be arranged for custom products anytime .

The clean room packaging service is also available for your products if they meet certain preconditions.

Kit Packaging



We can offer kit packaging according to your packing list for your convenience.

Assembly of Components



Standard and special components can be assembled in house. The assembly can also be carried out in cleanroom ISO-class 7 and at separate assembly work stations of ISO-class 5. The assembly can be leak tested and delivered along with an inspection document if requested.

Leak Test



We use dry operating leak testers by Adixen for leak testing. All products are leak tested up to leakage rates $<10^{-9}$ mbar l/s. Leak tests up to $<10^{-10}$ mbar l/s can be carried out on request. All leak tests are documented and filed. A leak test printout can be provided if required.

Residual Gas Analysis, Mass Spectrum Analysis



VACOM has an own RGA service area.
We offer:

- Qualified outgassing measurement - quantitative and qualitative residual gas analysis
- RGA measurement up to 2×10^{-14} mbar partial pressure and a mass number of 200 amu
- Characterisation of the outgassing behaviour of vacuum components - from small probes to vacuum chambers
- Residual gas analysis also in combination with probe heating
- Detection of pressure increase in vacuum systems
- Residual gas analysis and leak detection also in situ at the customer's vacuum system

Vacuum Comparison Measurement



Our measuring equipment enables us to offer the service of vacuum comparison measurements which meet the DKD tested "Normal". This service can be carried out in our laboratories as well as directly at your vacuum system. The results are documented for you in printouts.

Material Testing

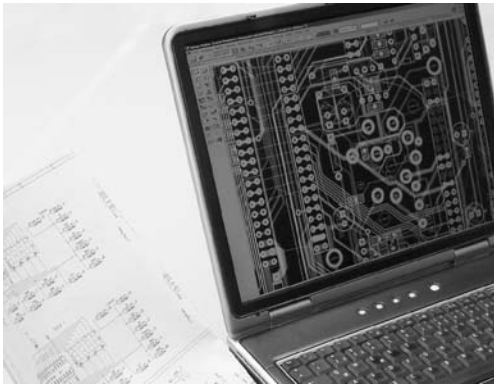


VACOM has its own material testing laboratory including special test equipment for metals. Amongst other equipment, a spectrometer is used for material inspection.

We can also offer the service of chemical analysis of stainless steel, aluminium and copper samples.

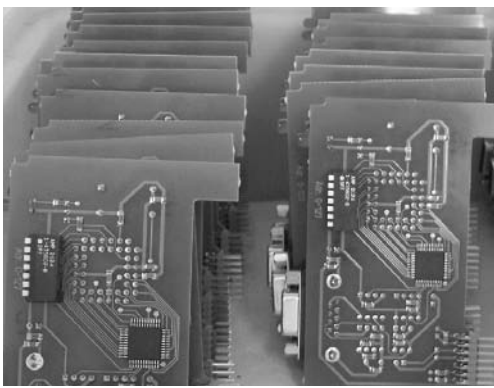
An optical durometer is also available for the quality control of materials. The hardness test is carried out under proof load according to Vickers. The measurement can be made on different materials - also on thin-walled and small components.

Product Development and Service



Research, development and the production of measuring gauges and controls are part of our core expertise. Much valuable experience has been obtained from our close association with industry and research.

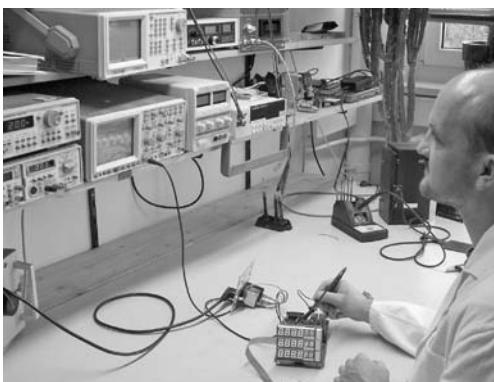
Our product range includes devices for vacuum measurement, read out and control systems for vacuum gauges, pumping station controllers, controls for mass flow controllers and titanium sublimation pumps. Some of these devices are optionally equipped with the ProfiBus-DP system or can be supplied with other bus systems.



In addition to our own product range we develop and manufacture devices for well known OEM customers who are active in the field of vacuum technology. Do you have specific ideas for a new device? Do not hesitate to ask us - we would be delighted to discuss the details with you. Samples and small series can be provided.

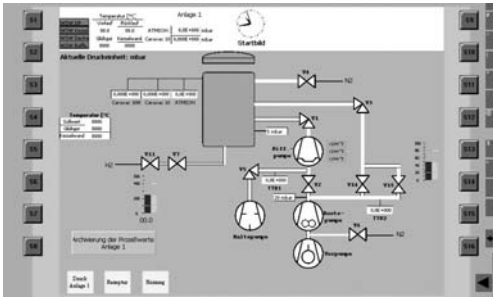


All devices produced by VACOM for measuring and controlling undergo frequent quality checks during their fabrication in addition to a final complete testing procedure. All test results and measurements are recorded and filed.



We offer repair and maintenance services not only for our own products but also for those of other manufacturers. All repairs are carried out according to certified standards.

Concept and Control



We can design vacuum lines according to your specific needs and use controlling concepts based on various microcontrollers and the SIEMENS SPS S7.

Based on latest construction and manufacturing techniques and the qualified knowledge and experience of our engineers and technicians we are able to bring a variety of projects to a successful conclusion.



Maintenance and Modernisation

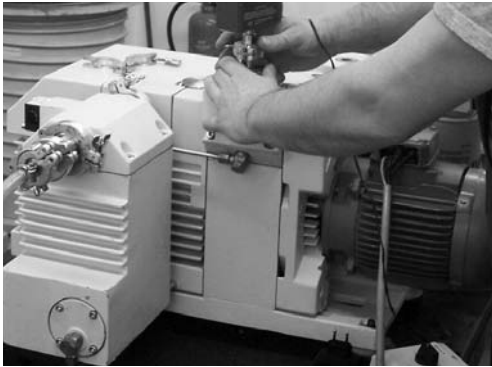


Our service includes the modernisation, remodelling and transfer of vacuum lines, as well as servicing and maintenance of such. Our technicians are equipped with all necessary manufacturing devices and spare parts to rapidly correct faults or to process maintenance or repairs. If you prefer your machinery to be repaired at your location, costs for packaging and transportation will be saved and equipment will be ready for use without any further delay.

Our technicians will consult you in case of technical difficulties or if you are planning to make changes. We would be pleased to provide an opinion and to give an estimate for the maintenance or modernisation of your system.

We also would be pleased to support you with the implementing of a new system and the training of your employees.

Vacuum Pumps



Experienced vacuum mechanics work in our mechanics workshop. They repair and service components of various manufacturers as long as they are not contaminated. For this reason you will have to send a complete and signed contamination declaration with your components to be repaired or attended. Please download the necessary form from our homepage www.vacom-vacuum.com. We will send you an estimate after inspection.

We service and repair rotary vane pumps, roots vacuum boosters, diaphragm pumps and piston pumps from various manufacturers in our workshops in Jena (Germany) and Leuven (Belgium). In addition we service turbopumps by Adixen in our workshop in Belgium. All of our work is documented and filed in our service and repair reports.

Vacuum Valves



VACOM is an authorised service partner for valves of the companies SMC and HVA and is the only company offering services for SMC gate valves in the whole of Europe. The work is carried out under clean room conditions.

Diaphragm Bellows



Numerous flexible elements of diaphragm bellows, which are subject to high stress and strains, are used in many vacuum lines for instance in the semiconductor industry. We offer cost-efficient repairs for these bellows on short notice. Please always send a complete and signed contamination declaration with your products. The form can be downloaded from our homepage www.vacom-vacuum.com.

A detailed drawing or sketch is necessary (a photo is preferable) for an offer to be made. You could also directly send a sample or the bellows itself for the estimate. In this case please contact us before sending the sample or bellows. You will receive a cross-company document number so that goods will reach the right destination quickly and work can be started.

Magnetofluid Feedthroughs



During straining processes magnetofluid feedthroughs are very likely to be damaged.

We repair magnetofluid feedthroughs of all manufacturers.

Coating / Refurbishment of X-Ray Anodes of Surface Analysis Systems

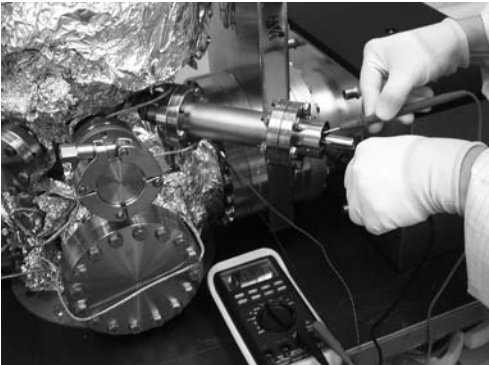


We offer a coating service for x-ray anodes used in surface analysis systems of leading manufacturers. Twin- and monochromator anodes can be recoated with different materials with a specified layer thickness:

Standard coating: Mg, Al
Special coating: Au, Ti, Si, Zr, Yt, Ag
in any configuration

Barrier layers for the protection of high stressed anodes and an enhanced lifetime are possible in addition to the recoat. Furthermore we can carry out a full re-tip, a cathode replacement and rebuild as well as a full replacement source for some instruments.

Mass Spectrometers - Repair, Maintenance and Training



VACOM is the authorised service partner for mass spectrometers of the trademark Dycor[®] by Ametek[®]. Maintenance and repair complement our qualified technical advisory service.

Wear parts such as filaments, complete ionisation assemblies and selected circuit boards for DYCOR[®] LC-D und DYCOR[®] Dymaxion are available ex stock.

Furthermore we provide training for mass spectrometer handling. Different devices are available for demonstration purposes.

