

VACUUBRAND Devices

Information

The calibration of vacuum gauges is performed in the accredited calibration laboratory of VACUUBRAND GMBH + CO KG at the Wertheim location. The calibration laboratory is accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018. The calibration certificates thus document the metrological traceability to national standards for the representation of units in accordance with the International System of Units (SI).

The vacuum gauges are calibrated by direct comparison with a reference standard according to DIN ISO 3567:2015 from 10^{-3} mbar to 1100 mbar, and upon customer request in the measuring range from 1100 mbar to 1300 mbar using an in-house procedure. For Pirani vacuum gauges, ISO 19685:2017 is additionally considered, and for capacitive membrane vacuum gauges, ISO 20146:2019 is taken into account. ISO 27893:2011 is applied to determine the measurement uncertainty. The pressure medium is nitrogen.

Standard Calibration

In a standard calibration, the calibration range is calibrated according to the measuring range specified in the operating instructions of the calibration item. This applies only within the accredited range from 10^{-3} mbar to 1300 mbar.

The calibration laboratory uses 5 measuring points per pressure decade at the points 1, 2, 4, 6 and 8.

Performance of Calibration Service

The calibration item is calibrated in the condition as delivered.

If, according to the assessment of the calibration laboratory, the calibration item can be improved by adjusting the alignment points, an adjustment will be performed after the initial calibration. Subsequently, a final calibration is carried out. The results of the initial and final calibration as well as information about the adjustment are documented in the calibration certificate.

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Calibration Item

- 1 Type designation:
- 2 Serial number:
- 3 Installation position (axis / connection flange):
- 4 Adjustment of the calibration item: No adjustment Can be performed without consultation after completed initial calibration
- 5 Language selection for the calibration certificate:
- 6 Address in calibration certificate:

- 7 Optional: Recalibration interval in calibration certificate:
- 8 Additional information for the calibration certificate e.g. test equipment number:

If you would like a customer-specific calibration, please additionally fill out the following points:

- 9 Desired calibration range (hPa, mbar]:
- 10 Specification of special points:

Repair – Maintenance – Return – Calibration

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Please note

Every employer (user) is responsible for the health and safety of his employees. This also applies to service personnel performing repair, maintenance, return or calibration. The safety of employees and environmental protection are equally important when handling hazardous or harmful substances.

The **health and safety clearance form** is intended to inform the contractor about any possible contamination hazard of the device and forms the basis for the risk assessment.

For devices which have been in contact with biological substances of risk level 2 contact the VACUUBRAND service before dispatching the device. These devices have to be completely disassembled and cleaned by the user prior to shipment. Do not return any devices which have been in contact biological substances of risk level 3 or 4. (For classification of biological substances into risk groups please refer to regulations with Safety and Health Protection at Workplaces Involving Biological Agents (Biological Agents Ordinance - BioStoffV)).

Devices that have been in contact with biological substances of risk levels 3 or 4 cannot be checked, maintained or repaired. Also decontaminated devices from risk level 3 or 4 must not be returned to VACUUBRAND due to a residual risk.

The same conditions apply to on-site work.

Procedure

Comment

Send a completed copy of the health and safety clearance form to VACUUBRAND in advance.

No repair, maintenance, return or calibration is possible unless a correctly completed health and safety clearance form is provided. Returned devices are rejected if applicable. Send a completed copy of the health and safety clearance form signed by the user to us in advance. The declaration must arrive before the equipment. Enclose a second completed copy with the product.

Remove all components from the device that are no original VACUUBRAND components.

VACUUBRAND will not be responsible for lost or damaged components that are non-original.

Drain the device and clean it.

Drain all fluids and residues from the device completely.

Seal all device inlets and outlets.

Close all openings airtight, especially if the device has been exposed to hazardous substances.

Ship the device and notify the forwarder.

Pack the device properly. Mark the package completely. Enclose the completed health and safety clearance form. Notify the forwarder of any possible contamination, if required. Adhere to the applicable transport regulations.

Attach a copy of the health and safety clearance form to the outside of the device package.

Attach a copy of the completed health and safety clearance form to the outside of the package.

You decide not to have the product repaired?

If you do not wish a repair on the basis of our quotation, the device may be returned in disassembled stage and at your expense.

Scrapping and waste disposal.

Dispose of the equipment and any components removed from it safely and in accordance with all local and national safety and environmental requirements. Particular care must be taken with components and waste oil which have been contaminated with hazardous substances from your processes. Do not incinerate fluoroelastomer seals and O-rings. You may authorize us to dispose of the equipment at your expense. Otherwise we return the device at your expense.

- 1 Device (Model):
- 2 Serial number:
- 3 Reason for return / malfunction:

- 4 Substances (air, gases, liquids, solids, biological material, e. g. bacteria, viruses) in contact with the device / which have been pumped:

- 5 Risk level of the used biological material: none 1 2* 3** 4**
* Contact the VACUUBRAND service before dispatching the device.
** Devices which have been in contact with biological substances of risk level 3 or 4 cannot be checked, maintained or repaired.
Also decontaminated devices must not be returned to VACUUBRAND due to a residual risk.
- 6 Radioactive contamination: yes no
- 7 Prior to return to the factory the device has been emptied and cleaned of possible process residues: yes no
Description of the cleaning method and the test / verification procedure:

- 8 Protective measures required for service staff:

Legally binding declaration on behalf of the company

We assure

- for the returned device that all substances, which have been in contact with the device are listed in section 4
- the cleaning, if performed, was executed by an appropriately authorized and qualified professional
- all applicable measures listed under „Repair - Maintenance - Return - Calibration“ have been observed
- if the product intended for return transport is contaminated with hazardous substances, the transport regulations applicable to the return transport of hazardous goods (in particular packaging regulations) have been complied with
- all information in this health and safety clearance form is true, specific and complete.

The sender shall be liable for damage to property and personal injury resulting from incorrect, unspecific, incomplete or omitted information in this health and safety clearance form and shall indemnify VACUUBRAND from any claims as regards damages from third parties in the corresponding extent. We are aware that we are also directly liable for injuries or damages suffered by third parties, particularly VACUUBRAND employees entrusted with the handling/repair of the equipment in accordance with German tort law.

Name:	Company:
Date:	Job title:
E-Mail:	Company stamp: (optional)
Phone number:	
Signature or digital signature:	