

Calibration terms and conditions Lighthouse Worldwide Solutions Benelux B.V.

General

- All mentioned prices are excluding readjustment of the sensors, unless otherwise stated in the quote. Particle counter calibration prices are including readjustment (cleaning of particle counters is excluded).
- Lighthouse Benelux uses calibration methods as described in its Quality Management System. These calibration methods can be provided on request.
- Costs and risk of shipping equipment to and from Lighthouse Benelux will be for the customer.
- Lighthouse Benelux shall not maintain/calibrate equipment that is not free from chemical and / or toxic substances which could harm the staff of Lighthouse Benelux. If equipment could be contaminated, this should always be notified by the customer.
- Accredited and/or traceable calibrations are carried out in line with the specific request of measurement points made by the customer. If there is no specific request, Lighthouse Benelux will use standard measurement points.
- Accredited and/or traceable calibrations are carried out in line with the specific request of tolerances made by the customer. If there is no specific request, Lighthouse Benelux will use standard tolerances. The methods for the statement of compliance which are used for calibration are explained later in this document. The used statement of conformity will be indicated on the certificate.
- Lighthouse Benelux uses by default a calibration period of one year, which will be indicated on the calibrated equipment and on the certificate. If this is not desired, Lighthouse Benelux shall be notified about this in advance.
- By default, a calibration sticker is attached to the calibrated equipment. The sticker contains the certificate number, date of calibration, due date and initials of the engineer who performed the calibration. If this is not desired, Lighthouse Benelux shall be notified about this in advance.
- Certificates are by default in English and include measurement results, if applicable including “as found” and “as left” measurement data.
- Repairs up to €100,- will be automatically performed and billed without consulting the customer. The economic value of the device is considered.
- For repairs over €100,- Lighthouse Benelux will always contact the customer and with agreement of the customer proceed with the repair. If the customer decides not to proceed with the repair, investigation costs could be charged.
- If the equipment is found outside its tolerance and it cannot be adjusted/repared, Lighthouse Benelux will mark the equipment with the text "Attention Check certificate before use". The service report and certificate will also make note of this.
- All instruments are registered in our calibration management system, allowing Lighthouse Benelux to trigger customers when the equipment is due for next calibration.
- Measurement data should be downloaded from the equipment before calibration/maintenance. Lighthouse Benelux cannot be held responsible for lost data.
- Lighthouse Benelux accepts no liability for damage or loss during transport/shipment of equipment.
- Instruments for calibration should be shipped to the following address:
Lighthouse Worldwide Solutions Benelux BV
t.a.v. Calibration department
Expeditiweg 31B
6657 KM Boven-Leeuwen
The Netherlands

On-site calibrations

- During on-site calibrations a contact person shall be present and available. Name of this contact person shall be known before calibration work is started.
- A PC / terminal must be available during calibration to check / readout sensors of the monitoring system.
- A parking space for the mobile calibration laboratory shall be available with a 230VAC power supply less than 25 meters away. The mobile calibration laboratory needs an overhead clearance of at least 3.00 metres.
- If work permits are required, then this will be conveyed as such by the customer.
- In case the calibration work is cancelled while the calibration engineers are already on-site, at least the traveling costs (man-hours and mileage) will be charged.
- Calibrations will be performed during office hours (8:30h – 17:00h), unless otherwise stated in the quote.
- Waiting hours will be charged. During a waiting hour no productive work can be carried out, due to circumstances, for example work permits, sensors that are not available, no access to rooms, etc. The customer will be informed, if this is the case.
- Calibration engineers will not apply (temporary) changes to the system for calibration and/or system modifications. Changes will only be made at the explicit request and under the responsibility of the customer.
- All sensors must be freely accessible for calibration. The customer shall provide material (e.g. platform/stepladder) in case equipment is not or very difficult to reach.
- Calibrations will be performed on separate sensors, unless otherwise stated in the quote. For in-loop calibration there will be a surcharge.

Explanation traceable and ISO17025

- **Traceable** calibration: An **traceable** certificate we guarantee the traceability of the used reference equipment and materials to national and international standards. On request, this traceability can be provided.
- ISO17025 calibration: An ISO17025 calibration certificate does not only guarantee the traceability of the used reference equipment and materials to national and international standards, but also that the measurement method is validated, the uncertainty budget contains the correct factors and that this is verified by an independent and objective party, the RvA (Raad van Accreditatie). This Dutch national accreditation body is a co-signatory to the ILAC and IAF Multilateral Recognition Arrangements. Statements of conformity issued by bodies accredited by the RvA are therefore accepted worldwide. Our accreditation number is K166. <https://www.rva.nl/scopes/details/K166>

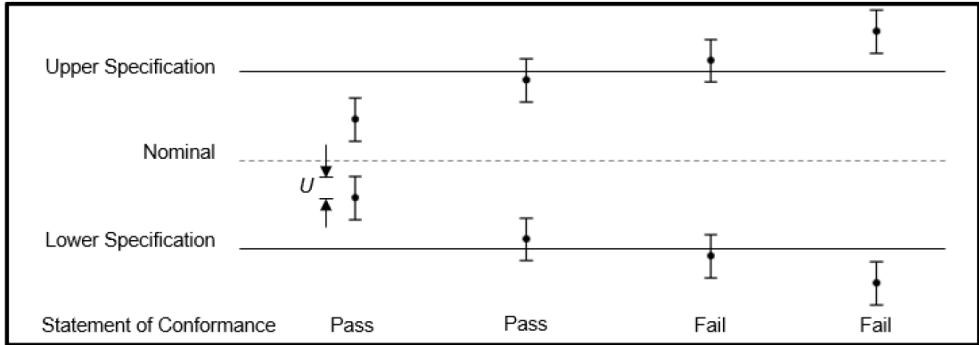
Statement of conformity

Binary statement of conformity (simple acceptance rule)

A binary statement of conformity (simple acceptance rule), as described in ILACG8:09/2019, is used for all traceable calibrations.

Pass: The measured values are below the tolerance limit.
Fail: The measured values are above the tolerance limit.

A visual representation of the binary statement of conformity (simple acceptance rule) can be found below.



$U = 95\%$ expanded measurement uncertainty

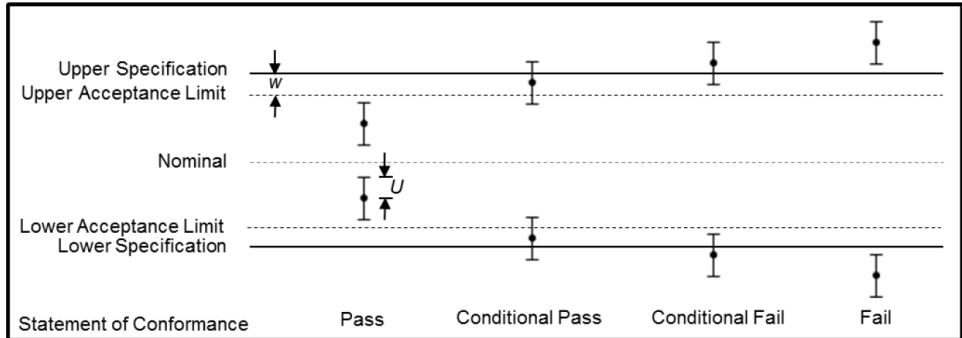
ISO21501-4:2018 prescribes a binary statement of conformity (simple acceptance rule) for particle counter calibration.

Non-binary statement of conformity (guard band w =Uncertainty)

A non-binary statement of conformity (guard band w =Uncertainty) as described in ILACG8:09/2019 is used for all accredited calibrations, except for particle counter calibration.

Pass: The measured values were observed in tolerance at the points tested.
Conditional pass: The measured values were observed in tolerance at the points tested. However, a portion of the expanded measurement uncertainty intervals about one or more measured values exceeded tolerance. When the measured result is close to the tolerance, the specific false accept risk is up to 50%.
Conditional fail: One or more measured values were observed out of tolerance at the points tested. However, a portion of the expanded measurement uncertainty intervals about one or more measured values were in tolerance. When the measured result is close to the tolerance, the specific false reject risk is up to 50%.
Fail: One or more measured values were observed out of tolerance at the points tested. The specific false reject risk is up to 2.5%.

A visual representation of the non-binary statement of conformity (guard band w =Uncertainty) can be found below.



$U = 95\%$ expanded measurement uncertainty