PALAS®

AQ GUARD

INDOOR AIR QUALITY MEASUREMENT

Measure Precisely. Assess Risks. Take Action.

Made in Germay

How Could AQ Guard Help You Right Now?

In which rooms must air filters be used? How effective are air purifiers? Do other measures need to be taken? AQ Guard supports you in answering these questions.

Exhaled aerosols are very small and remain in the air for a very long time. Pathogens can attach to these airborne, tiny particles beforehand and are exhaled with them.

A person suffering from lung disease exhales a multiple of aerosols than a healthy person. People who are near an infected person can breathe in these aerosols and become infected. This can be particularly problematic in poorly ventilated indoor environments.

AQ Guard observes CO_2 concentration while measuring particle size distribution and concentration. This provides an accurate and reliable assessment of indoor air quality and infection risk.

Whether in schools, businesses, restaurants or other buildings, AQ Guard provides operators and visitors with an objective assessment of air quality and infection risk based on scientific studies and methods.

Application Examples

CLASSROOMS

OFFICES

CONFERENCES AND LECTURES

RESTAURANTS

EVENTS

(INDOOR) LEISURE ACTIVITIES

Simulation and Measurement as a Foundation for Decision-Making

With **AQ Guard** and its “Indoor Air Hygiene Professional“ package Palas offers a software solution for sustainable, professional assessment of indoor air hygiene.

By combining CO_2 and particle counting (from a size of 150 nm upwards), an infection risk is determined for a specific room and usage situation (e. g. classroom, conferences).

With the help of artificial particles generated by an aerosol generator, effectiveness tests for room air cleaners can also be carried out directly on site (real room situation) – even if no people are present. This allows air hygiene concepts to be placed on a solid foundation and the requirement for room air cleaners to be determined. Up to four **AQ Guards** can be integrated at the same time for evaluation purposes.

Latest technology

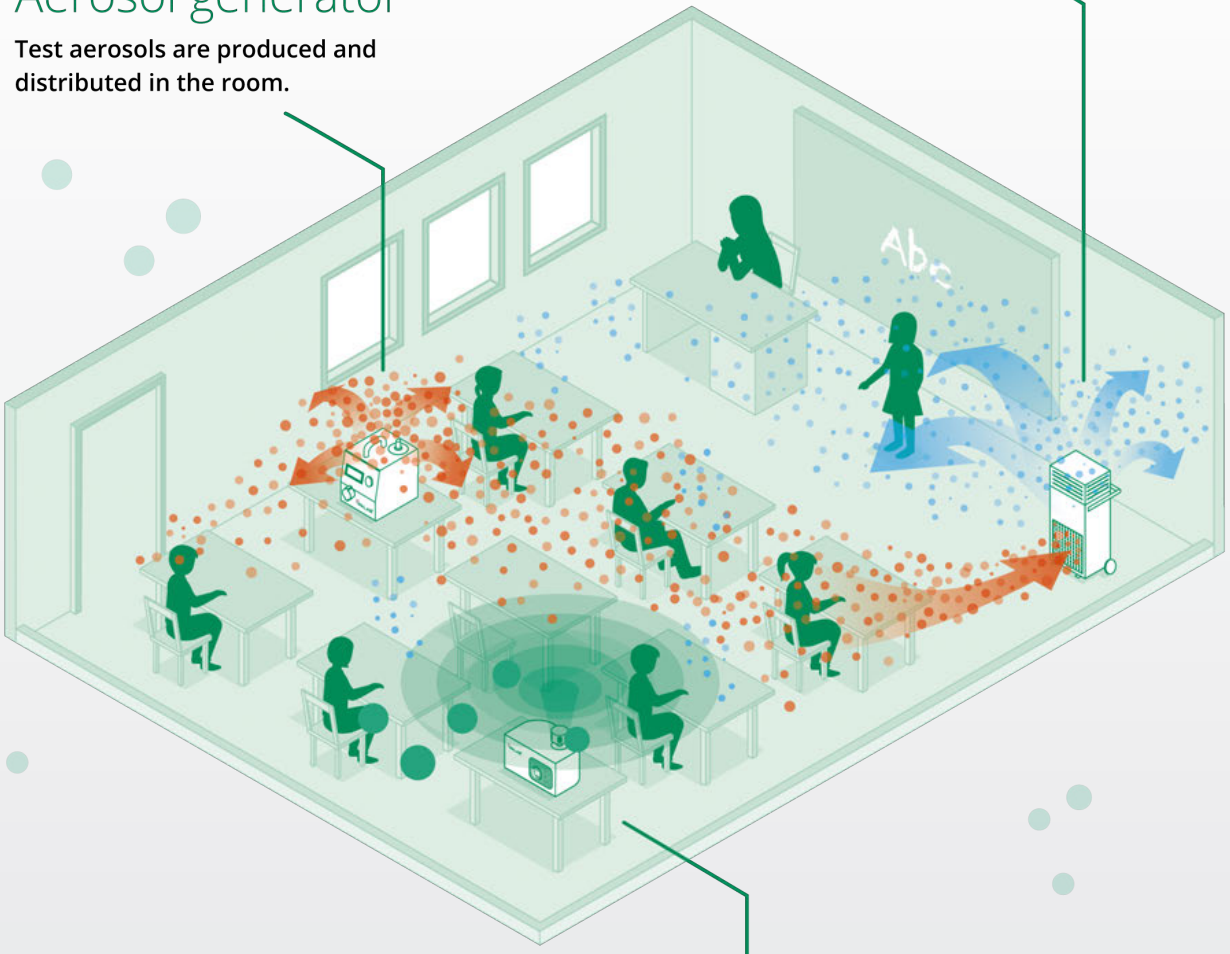
- Determination of air quality index based on measurement of particulate matter, CO_2 and volatile organic compounds (VOC)
- Infection risk estimation via combined analysis of CO_2 and particle measurement data with high efficiency: even for the smallest particles
- High accuracy through advanced algorithms based on scientific findings

Room air purifier

A virus filter system ensures purified air.

Aerosol generator

Test aerosols are produced and distributed in the room.



Aerosol spectrometer

Permanent monitoring of the air quality by the AQ Guard.

Technical Features

Measuring priciple	Optical light scattering of single particles
Reported data	$PM_{2.5}$, T, rH, P With IAHP-Package installed: PM_1, PM_4, PM_{10}, TSP, C_N, particle size distribution, Infection Risk Index, Air Quality Index
Measurement range (number C_N)	0–20,000 particles/cm^3
Measurement range (size)	0.175–20 µm With IAHP-Package installed: starting from 0.15 µm
Measurement range (mass)	0–20,000 µg/m^3
Size channels	32/decade
Time resolution	1 s, moving average configurable
Interfaces	USB 2.0, Ethernet (LAN), Wi-Fi
Power supply	12 V, supplied power supply, alternatively operable with external battery (not included)
Installation conditions	-20–+50 °C
Dimensions (H • W • D)	175 • 280 • 140 mm
Weight	2.4 kg
Optional	PAG 1000 aerosol generator, software for room analysis with more than one AQ Guard in a network

Subject to technical changes

More Measurement Devices

... for use in regulatory environmental measurement.

The aerosol spectrometer **FIDAS® 200** continuously analyzes the fine dust particles present in the ambient air and, like the functionally identical variants FIDAS® 200 E and FIDAS® 200 S, is certified according to the EN 16450, EN 15267-1 and -2 guidelines.

... for mobile fine dust measurements.

Whether fine dust contamination in the air, dust contamination at workplaces or effectiveness measurement at air filters: **FIDAS® FROG** covers many application possibilities as a powerful aerosol spectrometer.

As an aerosol technology expert, Palas® Germany is committed to providing users with solutions for the generation, conditioning, measurement and analysis of aerosol particles. Based on the unique advantages of its own technology, Palas® developed a variety of application cases in ambient air quality monitoring, particle filtration performance testing and various scientific research fields. Palas Instruments (Shanghai) Co., Ltd. is a wholly owned subsidiary of Hong Kong Palas (Asia) Limited. As one of the global branches of Palas GmbH, it has legally obtained the Palas trademark authorized by Palas GmbH in Exclusive use rights in China and Asia.

As a company that has passed the ISO 9001:2015 quality management system certification, Palas®'s test rig solutions can execute particle filtration performance tests for filter media and filter elements according to applicable international, national and regional standards. In terms of environmental protection, Palas®'s equipment meets the requirements of multiple environmental monitoring standards (EN 15267, EN 16450, HJ653, GBZ/T 192.6, etc.) for indoor and ambient PM2.5, PM10, particle number size distribution monitoring and analysis.

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