

Mas-Q-Check

For the protection of your employees:
testing of protective masks in only one minute before daily use



Look to this video how it works: [Mas-Q-Check](#)

Description

The Mas-Q-Check was developed by Palas to subject protective masks to a quick, simple and yet meaningful test before use. A particle counting measurement device is used, which is able to detect efficiencies in the size range of viruses and bacteria.

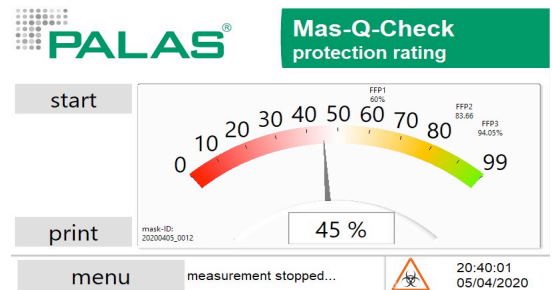
The system can also be used for training purposes as it immediately shows the efficiency of protective masks.

Two versions are available:

- **Mas-Q-Check Basic** with a volume flow of 10 l/min
- **Mas-Q-Check Professional** with a volume flow of 95 l/min (pictured)

Functionality:

The mask is placed on the test head before use. Using a high-resolution aerosol spectrometer, the **particle contamination** (size and quantity) in the ambient air is **measured**. Afterwards the device switches automatically and determines the value of the particle contamination behind the protective mask. This can be repeated automatically several times. The ratio of the two measured values is used to **determine the degree of protection** of the protective mask. A simple display immediately shows whether the mask can be used.



Degree of protection:

The degree of protection provided by a respirator depends on the **filtration effect** of the mask material as well as the **correct fit** on the head. Leakage can occur (i.e. air passes the material and enters behind the mask unfiltered), which affects the protective effect means of the test on the standard head with the Mas-Q-Check, both effects are **simulated simultaneously** and the real protective effect of the mask against particles in the outside air is measured. The result shows the degree of protection in comparison to the FFP Class of the mask on the test head. Optional on display is the efficiency for **different particle sizes**. SO the degree of protection may vary with regard to the particle size.

Quality of the measurement:

The Mas-Q-Check works in suction mode with a volume flow of either 10 l/min or 95 l/min, defined according to **EN149** or **EN143**, which corresponds to the maximum human breath. The measurement of particle contamination in the room and after the breathing mask is carried out by means of a high-resolution aerosol spectrometer, which precisely measures particle sizes **from 140 nm to 10 µm**. Thus, the protective effect of viruses is also determined. The size of droplets when coughing, for example, can be up to 5 µm or larger and is therefore fully detected by this measuring device during the test. the Mas-Q-Check, safe on-site testing of respiratory masks is therefore possible **automatically within 1 minute**.

Benefits

- Self-explanatory operation
- Quick easy and exact measurement of the degree of protection of masks on site
- Quality control of masks in daily use
- Real evaluation of the degree of protection from filtration efficiency and leakage combined.
- Highly resolved measurement result in the range of 140 nm up to 10 µm
- Fully automated test
- Evaluation of the degree of protection in comparison to the FFP class, optional display with regard to particle size
- Clear distinction of protection degree in the size range of viruses and bacteria and above

Datasheet

<i>Parameter</i>	<i>Description</i>
Measurement range (size)	0.14 – 10 µm
Measuring principle	Optical Light-scattering
Measurement range (number CN)	0- 20,000 particles/cm ³
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Power consumption	approx. 200 W
User interface	Touch screen, 800 • 480 pixel, 7"
Reported data	Protection class filter mask
Volume flow (clean air)	10 l/min, 95 l/min

Applications

- Confirmation of the degree of protection of masks
- Confirmation of the protection of employees working in medical environment
- Training to show the correct use of masks with direct measurement of the degree of protection
- Evaluation of the real degree of protection in comparison of the FFP Class