

Mobile Air Cleaners

There is a lot of talk at the moment about the use/efficiency of mobile air cleaners. Our experts have looked at the topic already and have reached the following conclusion in accordance with the expert opinions of the German Statutory Accident Insurance Association DGUV, the Federal Institute for Occupational Safety and Health BAUA, the Federal Ministry of Labor and Social Affairs BMAS, and other specialists:

The use of mobile air cleaners can only ever be an accompanying measure and is to be considered of secondary importance compared to proper ventilation.

The HGP of the UP advises against the purchase and operation of mobile air cleaners and recommends regular ventilation by opening windows and doors (users should air out rooms thoroughly for short periods at frequent intervals using cross ventilation), as stated in the hygiene concept of the UP. Rooms should be aired out in this manner for 5 to 15 minutes as frequently as possible. If outside temperatures permit, courses should be held (in whole or in part) with open windows. At the very least, the room should be aired out before and after a course for approximately 10-15 minutes with both windows and doors wide open.

The same applies, of course, to office spaces, where the necessary exchange of air and the supply of fresh air can be ensured in an even better and more effective way by the users without difficulty by opening the windows and doors (airing out rooms thoroughly for short periods at frequent intervals using cross ventilation).

The UP ventilation engineer clarifies that the use of mobile air cleaners in UP seminar rooms is only suitable as a partial supplement to intensive window ventilation. In rooms that are ventilated by a central building ventilation system, mobile air cleaners are completely unsuitable.

Air cleaners are offered with various technical approaches. The Commission for Indoor Air Hygiene at the German Federal Environmental Agency rejects the treatment of airborne substances with ozone or UV light for health and safety reasons. Ozonization and UV-induced reactions of organic substances can release unpredictable secondary compounds into the room air.

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Room air cleaners with filtration do effectively remove particles from the air, which has an effect comparable to good ventilation. For this to be effective with regard to COVID19, the air purifiers must have at least one effective HEPA filter (H13/14). Since room air cleaners generate turbulent mixed air, a **sufficient absence of particles can only be guaranteed for the air in the immediate outflow area**. At greater distance, however, the air flow can mix with contaminants originating from the room and thus distribute them in an uncontrolled manner. Such an air cleaner would therefore have to be positioned in such a way that the HEPA-purified air is inhaled immediately (VDMA). For these reasons, the use in seminar rooms is not feasible and cannot be controlled. The air cleaners will also need to be thoroughly cleaned and disinfected according to the manufacturer's specifications. The HEPA filters require extensive maintenance and care and must also be replaced according to the manufacturer's instructions. Full filter efficiency is achieved only when the filters are practically new.

A compelling summary is provided by Prof. Moriske of the Federal Environment Agency in a news report:

https://www.rbb-online.de/supermarkt/sendungen/20200921_2015/mobile-luftfilter-geraete-zur-luftreinigung-was-bringen-sie-im-kampf-gegen-corona-experten-skeptisch.html

His summary is as follows:

“So these air cleaners are only useful as a supplement or in rooms where one simply cannot ventilate via windows, for whatever reason, and where there is no centrally controlled ventilation system either. This may make sense in individual cases, but please never use this as a substitute for active ventilation.”

Any departments or units of the UP that are thinking about purchasing an air cleaning device are asked to please contact the HGP (Ventilation Technology Unit/“Lüftungstechnik”) or the Occupational Safety Unit BEFORE making a purchase so as to determine whether or not it makes sense to buy such a device based on the conditions of the room.

Further information (only in German):

[Mobile Raumluftreiniger können Fensterlüftung nicht ersetzen](#) (press release by the DGUV)

[MLR als ergänzende Infektionsschutzmaßnahme?](#) (publication by the BMAS)

[Hinweise der DGUV zum ergänzenden Einsatz von Luftreinigern zum Infektionsschutz in der SARS-CoV-2-Epidemie](#)